Oracle® Fusion Middleware

Installing Oracle Forms

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Oracle Fusion Middleware Installing Oracle Forms, 14.1.2.0.0

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Primary Author: Oracle Corporation

Contents

Preface

This document covers requirements, instructions, and troubleshooting tips for installing and configuring Oracle Forms.

Audience

This guide is intended for users who are installing Oracle Fusion Middleware for the first time and are comfortable running some system administration operations, such as creating users and groups, adding users to groups, and installing operating system patches on the computer where your products will be installed. Users in UNIX systems who are installing need `root` access to run some scripts.

Documentation Accessibility

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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

You can refer to the Oracle Fusion Middleware Library for additional information.

- For 14*c* Oracle Forms information, see Oracle Forms Documentation Library.
- Oracle Forms Developer Online Help, available from the Help menu in Oracle Forms Developer.
- For Oracle Forms technical papers and other resources, see Oracle.com.
- For upgrade information, see Fusion Middleware Upgrade Documentation.

- For release-related information, see Fusion Middleware Release Notes.

Conventions

The following text conventions are used in this document:

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

1

Installation and Configuration Overview

This chapter provides a summary and roadmap for Oracle Forms installation and configuration.

> **Note:**
>
> Although Oracle Reports is included in this release, it has been deprecated. Refer to the 12.2.1.3.0 Documentation Library for installation information specific to Oracle Reports.

The following sections are included

- Components Available for Installation
- Installation and Configuration Roadmap for Oracle Forms
- Installation and Configuration Roadmap for Standalone Form Builder

Components Available for Installation

The following key components are available:

- Oracle Forms
- Oracle Reports
- Oracle HTTP Server
- Oracle Enterprise Manager for Fusion Middleware

Installation and Configuration Roadmap for Oracle Forms

This roadmap provides an overview of the steps required to install Oracle Forms.

Review the tasks you have to perform for a typical Oracle Forms installation and configuration.

> **Note:**
>
> If you are planning to use the Standalone Form Builder installation option, see Table 1-2.

Table 1-1 Tasks in the Oracle Forms Installation

Step	Task	Description	Additional Information
1	Verify your system's environment	Ensure that your system environment meets the general installation requirements for Oracle Fusion Middleware and Oracle Forms.	Read the information provided in Preparing to Install.
2	Obtain the software	Obtain all necessary software to install and configure Oracle Forms.	The software required to install Oracle Forms is described in Obtaining the Oracle Fusion Middleware Software.
3	Install Oracle Java JDK (64-bit)	Oracle JDK is required for both installation and post-install operations.	Refer to the Fusion Middleware Certification Matrix to identify the needed certified Oracle JDK version.
4	Install Fusion Middleware Infrastructure and create an Oracle home	Oracle Forms requires an Oracle home directory for installation and a WebLogic Server domain during configuration.	Follow the steps described in Installing Fusion Middleware Infrastructure. Note that only specific versions of Oracle WebLogic Server are supported. You automatically obtain the correct version when you install the Fusion Middleware Infrastructure distribution for the current release. Additional information about certifying your environment is available in Reviewing Certification, System, and Interoperability Requirements.
5	Install Oracle Forms	Install the components using Oracle Universal Installer.	Follow the steps described in Installing Using Oracle Universal Installer.

Table 1-1 (Cont.) Tasks in the Oracle Forms Installation

Step	Task	Description	Additional Information
6	Run Repository Creation Utility	Create Oracle Fusion Middleware database schemas.	Follow the steps described in Using the Repository Creation Utility. **Note:** This step is not required if you plan to use the Oracle Forms Development domain template when you run the Configuration Wizard in step 7.

Table 1-1 (Cont.) Tasks in the Oracle Forms Installation

Step	Task	Description	Additional Information
7	Create and configure the WLS Domain using the Configuration Wizard	Use the Configuration Wizard to create a WLS Domain and configure the desired components. **Note:** Be sure to include Oracle HTTP Server (Collocated) if this environment will be integrated with Oracle Access Manager for SSO support.	Follow the steps described in Creating the WebLogic Domain Using the Configuration Wizard and Installing and Configuring Form Builder Standalone.

Table 1-1 (Cont.) Tasks in the Oracle Forms Installation

Step	Task	Description	Additional Information
8	Start servers to complete the configuration	Start the Node Manager then the WebLogic Admin Server. Once started, start any managed servers created during the Domain creation (for example, WLS_FORMS). This will complete the configuration process.	Follow the steps described in Starting and Stopping Servers in *Administering Server Startup and Shutdown for Oracle WebLogic Server*.

Note:

Refer to Installing and Configuring Oracle Forms for detailed installation instructions. Some components require post configuration steps in order to complete their setup process.

If you configured Oracle Reports in the

Table 1-1 (Cont.) Tasks in the Oracle Forms Installation

Step	Task	Description	Additional Information
		domain, refer to Provisioning a Machine for Reports post configuration steps.	
9	Verify your environment	Verify that your installation and configuration were successful.	Follow the steps described in Verifying the Installation and Configuration.

Installation and Configuration Roadmap for Standalone Form Builder

Review the tasks you have to perform if you are planning to use the Standalone Form Builder installation option.

> **Note:**
>
> This installation type does not include any runtime components and is intended for application development only. For development runtime testing, use either a full installation and WLS domain, that includes Forms, or configure the domain using the "Oracle Forms Development" domain template.
>
> The "Oracle Forms" and "Oracle Forms Development" templates include the design-time tools needed for application development alone with runtime components.

Table 1-2 Tasks in the Standalone Form Builder Installation

Task	Description	Additional Information
Verify your system's environment	Ensure that your system environment meets the general installation requirements for Oracle Fusion Middleware and Oracle Forms.	Read the information provided in Preparing to Install.
Obtain the software	Obtain all necessary software to install and configure Oracle Forms.	The software required to install Oracle Forms is described in Obtaining the Oracle Fusion Middleware Software.

Table 1-2 (Cont.) Tasks in the Standalone Form Builder Installation

Task	Description	Additional Information
Start the Oracle Forms installer	Start the Oracle Forms installer to install the software.	When you are ready to begin, see Starting the Oracle Forms Installer.
Install Standalone Form Builder	Install the components using Oracle Universal Installer.	Follow the steps described in Installing Using Oracle Universal Installer.
Configure Standalone Form Builder Using the Form Builder Configuration Wizard	Use Form Builder Configuration Wizard to configure your components.	Follow the steps described in Installing and Configuring Form Builder Standalone.
Verify your environment	Verify that your installation and configuration were successful.	Follow the steps described in Verifying the Installation and Configuration.

2

Installing and Configuring Oracle Forms

This chapter describes how to install and configure Oracle Forms.
The following topics are covered:

- Preparing to Install
- Installing Fusion Middleware Infrastructure
- Installing and Configuring Oracle Forms
- Installing Oracle Forms in Silent Mode
- Installing the Forms Application Deployment Services
- Installing and Configuring Form Builder Standalone
- Oracle Forms Accessibility Information

Preparing to Install

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

- Reviewing Certification, System, and Interoperability Requirements
- Understand Oracle Fusion Middleware Concepts
- Obtaining the Oracle Fusion Middleware Software
- About Installing Oracle Forms
- Overview of Installation and Configuration Steps

Reviewing Certification, System, and Interoperability Requirements

Oracle recommends that you use the Certification Matrix and System Requirements documents to verify that your environment meets the requirements for installation.

> **Note:**
>
> Environments that do not meet the minimum requirements may fail to install or fail to operate correctly after installation. In some cases, such failures may not be repairable without first completely removing and cleaning up after the failed attempt.

1. Verify that your environment meets certification requirements. Refer to the Oracle Fusion Middleware Supported System Configurations page and select the link for the version you are planning to install.
2. Use the system requirements document to verify that minimum configuration and software requirements are in place before beginning the installation. Refer to the System Requirements and Specifications document for Oracle Fusion Middleware 14*c* (14.1.2.0.0).
3. Verify 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 14c (14.1.2.0.0) Interoperability and Compatibility in *Understanding Interoperability and Compatibility*.

Understand Oracle Fusion Middleware Concepts

If you are new to Oracle Fusion Middleware, see About Key Oracle Fusion Middleware Concepts in *Understanding Oracle Fusion Middleware* to familiarize yourself with some of the concepts and terminology you will encounter.

Obtaining the Oracle Fusion Middleware Software

Depending on your specific needs, there are a number of places where you can download Oracle Fusion Middleware software.

For information about Oracle Fusion Middleware 14*c* (14.1.2.0.0), see the Oracle Fusion Middleware Download, Installation, and Configuration ReadMe.

Refer also to the certification requirements documentation, as described in Reviewing Certification, System, and Interoperability Requirements.

Both the server and the end-user machines must have Oracle Java installed to run an Oracle Forms application. The server will require the JDK distribution and the end-user machine can use either the JRE or JDK distribution, depending on your application needs. Oracle Java downloads are available from the Java SE Downloads page. Again, review the certification requirements documentation to ensure the appropriate version is downloaded and installed.

To install and configure Oracle Forms, download these software packages:

- The Fusion Middleware Infrastructure 14.1.2.0.0 distribution from the Oracle WebLogic Server Installers download page.

  > **Note:**
  >
  > Do not attempt to install and use any of the standalone WebLogic Server installations with Oracle Forms or Reports. The WebLogic Server version packaged with Fusion Middleware Infrastructure is the only supported WLS distribution.

- The Oracle Forms and Reports 14.1.2.0.0 software from Oracle Software Delivery Cloud. Download links can also be found at Oracle Forms Downloads.

About Installing Oracle Forms

For installations that require Fusion Middleware (FMW) Infrastructure, install the Oracle Forms software in the Oracle Home created with the FMW Infrastructure installation. If you are installing Oracle Forms and choosing the Form Builder Standalone option, create a new empty directory, as the standalone installation cannot coexist with Fusion Middleware Infrastructure in the same Home.

Oracle Forms and Reports 14.1.2.0.0 requires the use of Fusion Middleware Infrastructure 14.1.2.0.0.

Installing as a Non-Default User

On UNIX operating systems, the installation of Fusion Middleware products is owned and controlled by the same user (for example, "oracle"). The file permissions associated with this installation are configured to ensure the highest level of security possible, which by default are 700 (meaning all files are owned and accessible by the owner only).

Changing the default permissions settings will reduce the security of the installation and possibly your system. Therefore, making such a change is not recommended. If other users require access to particular files or executables, the UNIX `sudo` command (or other similar command) should be considered in lieu of changing file permissions.

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

On Windows operating systems, the user must be a member of the Windows Administrators group. This gives the user the proper permissions required to start and stop processes after the installation, including the Builders and other tooling.

> **Note:**
>
> For some operations, the use of an elevated DOS shell (as the Windows System Administrator user) is required. An elevated shell is not the same as being a member of the Windows Administrators group. This is most often the case on MS Windows “client” versions (such as Windows 11).
>
> Details related to when and how to use an elevated shell are described as needed in the content in this chapter. Refer to the Microsoft Windows documentation for additional information related to using elevated shells and other operating system specific features.

Overview of Installation and Configuration Steps

Here are the basic steps to complete the installation and configuration of Oracle Forms.

- Install the desired Oracle JDK.
- Install Fusion Middleware Infrastructure.
- Install Forms and Reports.
- Run Repository Creation Utility (RCU).

> **Note:**
>
> This step is not required if you are planning to use the "Oracle Forms Development" domain template in the next step.

- Run Configuration Wizard.
- Start all servers to complete configuration.
- If any of the Oracle Reports components were selected when running the Configuration Wizard, complete the steps in 2.4.7.3 Provisioning a Machine of *Installing Oracle Forms and Reports*, version 12.2.1.3.

> **Note:**
>
> All Oracle Reports installation and domain configuration options require a full Fusion Middleware Infrastructure installation and associated repository schemas (created with RCU). Therefore, a full installation and domain with associated repository schemas is required to use Oracle Reports with Oracle Forms.

Installing Fusion Middleware Infrastructure

Oracle Forms and Reports Services require Fusion Middleware Infrastructure, which creates the Oracle home directory during installation.

Review Preparing to Install for information about system requirements and finding the correct Fusion Middleware Infrastructure Installer.

Instructions for installing Fusion Middleware Infrastructure

Follow the Fusion Middleware Infrastructure Installer instructions, as described in Installing the Infrastructure Software. The Fusion Middleware Infrastructure installation must be completed so that an Oracle home directory is created. Refer to the FMW Infrastructure Installation instructions for complete details on how to perform the installation.

```
java -jar fmw_14.1.2.0.0_infrastructure_generic.jar
```

Do not create a WebLogic Server domain until after installing the Oracle Forms software into the same home directory. The instructions that follow cover the domain creation steps needed. Refer to the Fusion Middleware Infrastructure documentation for more detailed instructions as needed.

Installing and Configuring Oracle Forms

Perform a series of steps to install Oracle Forms and configure it using the Configuration Wizard. The Configuration Wizard creates the WebLogic Server Domain, which contains the Administration Server, Node Manager, managed servers, and other optional services like Forms Application Deployment Services (FADS) and Oracle HTTP Server (OHS).

The following sections are included:

- Starting the Oracle Forms Installer
- View the Installation Log Files
- Configuring Your Oracle Inventory (UNIX/Linux)
- Installing Using Oracle Universal Installer
- Using the Repository Creation Utility
- Creating the WebLogic Domain Using the Configuration Wizard
- Installing and Configuring Form Builder Standalone

Starting the Oracle Forms Installer

Navigate to the downloaded Forms compressed folder containing the installer files and extract the files. You can then launch the installer.

Some platforms may have multiple download files or disks, such as "Disk-1" and "Disk-2". You should extract all the files, for example executable `.exe` file, from the downloaded compressed (zipped) folder. If the downloaded compressed (zipped) folder contains another compressed (zipped) file, you should not extract that compressed file contained within the original compressed (zipped) folder. You should store all the extracted files from the compressed folder in the same directory before starting the installer.

For installations that require Fusion Middleware Infrastructure, install Fusion Middleware Infrastructure first as described in Installing Fusion Middleware Infrastructure.

Microsoft Windows

1. Extract the compressed folder (the exact file name may vary):
   `fmw_14.1.2.0.0_fr_win64_Disk1_1of1.zip`

   The following executable (`.exe`) file is extracted from the zip file:

   `setup_fmw_14.1.2.0.0_fr_win64.exe`
2. Launch the installer by either running it in an elevated DOS shell or by right-clicking it and selecting "Run as administrator".

UNIX/Linux

1. Extract the compressed folder (the exact file name may vary) with this command:
   `unzip fmw_14.1.2.0.0_fr_linux64_Disk1_1of1.zip`

   An executable `.bin` file is extracted from the compressed folder. You will use this file to start the installer.
2. Once extracted, run the installer to start the installation:
   `./fmw_14.1.2.0.0_fr_linux64.bin`

View the Installation Log Files

The installer writes log files to the *`Oracle_Inventory_Location`*`/log` (on UNIX operating systems) or *`Oracle_Inventory_Location`*`\logs` (on Windows operating systems) directory. See Installation Log Files for information about log files and their contents.

Configuring Your Oracle Inventory (UNIX/Linux)

If you are installing on a UNIX or Linux operating system, and if this is the first time any Oracle product is being installed on your system with the Oracle Universal Installer, you will be asked to provide the location of an inventory directory. This is where the installer will set up subdirectories and maintain inventory data for each Oracle product that is installed on this system.

Use the inventory screens in Table 2-1 to configure the inventory directory and group information.

Table 2-1 Inventory Directory and Group Screens

Screen	Description
Specify Inventory Directory	Specify the Oracle inventory directory and group permissions for that directory. The group must have write permissions to the Oracle inventory directory.
Inventory Location Confirmation	Run the `createCentralInventory.sh` script as `root`.

If you do not want to use the Oracle central inventory, you can create a file called `oraInst.loc` and in this file, include the full path of the inventory directory of your choice. For example, a typical `oraInst.loc` file would contain the following:

```
inventory_loc=/home/<username>/oraInventory
inst_group=group
```

Then, you can start the installer and point to the `oraInst.loc` file. For example:

```
./fmw_14.1.2.0.0_fr_linux64.bin -invPtrLoc /<location_of_oraInst.loc_file>
```

Installing Using Oracle Universal Installer

Follow these instructions to install Oracle Forms and Reports using the Oracle Universal Installer.

Invoke the Oracle Universal Installer as described in Starting the Oracle Forms Installer, then follow the prompts in the wizard. Refer to Table 2-2 for descriptions of the screens.

Table 2-2 Oracle Forms Installer Screens

Screen	Description
Welcome	Introduces you to the installer
Auto Updates	Allows you to choose to receive automatic software updates from Oracle Corporation for your components. Make the desired selection.
Installation Location	For full installations, select the Oracle Home created by the Fusion Middleware Infrastructure installation. If you are installing the Standalone Form Builder option, choose a new/empty Oracle Home path.
Installation Type	The default value is correct in most cases. Selecting **Forms and Reports Deployment** is the only option if installing into a Fusion Middleware Infrastructure Oracle Home. If installing into an empty Oracle Home, **Standalone Form Builder** is the only possible option.
JDK Selection	Choose the desired JDK for the installation. If you have an appropriate JDK installed on the machine it appears in the list. The JDK found in the Oracle Home is also listed.

Table 2-2 (Cont.) Oracle Forms Installer Screens

Screen	Description
Prerequisite Checks	A set of system prerequisite checks is performed before performing the installation. However, it is very important to ensure your system complies with the requirements provided by the Oracle Fusion Middleware System Requirements and Specifications guide for this version. **Note:** This prerequisite check will not test for all requirements. If this check fails, it may be necessary to exit the installer, fix the failures, then rerun the installer.
Installation Summary	Review the installation summary, then click **Install**. **Note:** If you plan to perform a silent installation in the future using the same selections made here, click **Save Response File** and save the file for later use.
Installation Progress	Shows the status of each step of the installation
Installation Complete	Shows the installation results

Using the Repository Creation Utility

Set up Repository Creation Utility (RCU) schemas for configuring Oracle Forms and Reports.

Note:

Running RCU is not required for domains that will be based on the Oracle Forms Development template.

After you install Oracle Fusion Middleware Infrastructure and create your Oracle home, start RCU from the `ORACLE_HOME/oracle_common/bin` directory and set up schemas.

Run `$ORACLE_HOME/oracle_common/bin/rcu.sh` (`rcu.bat` on MS Windows).. Unless otherwise noted, click **Next** to continue to the next screen.

Table 2-3 Schema Setup Steps

Screen	Description
Welcome	This screen introduces you to RCU.
Create Repository	Select **Create Repository**, then select **System Load and Product Load** (default). Database `sysdba` privileges are required.
Database Connection Details	Specify RCU database connection details. After you have provided all the necessary information, click **Next**. The **Checking Prerequisites** dialog appears showing the progress of prerequisites checking. When the database checking has completed without errors, click **OK** to close the dialog and go to the next screen. **Note:** You may be see a warning that explains the possible impact of not enabling the database "editions" option. If you are not familiar with this option, refer to Using Edition-Based Redefinition in the *Oracle Database Development Guide* for details.

Table 2-3 (Cont.) Schema Setup Steps

Screen	Description
Select Components	Select **Create new prefix**, then provide a unique schema prefix (such as `PROD`). You must remember the prefix and schema names for the components you are installing. It is recommended that you write down these values. Select **Oracle AS Repository Components** to select all components. The **Checking Prerequisites** dialog appears showing the progress of prerequisites checking. When it completes, click **OK** to close the dialog and go to the next screen.
Schema Passwords	In most cases, **Use same passwords for all schemas** (Default) is appropriate. Type the password in the **Password** field. If you would like to choose a different password for each of schema, choose one of the other options and enter the requested passwords. **Note:** Remember the passwords you enter on this screen. You will need this information during the configuration phase of the product installation.
Tablespaces	Use this screen to configure the desired tablespace mapping for the schemas being created. In most cases, the default settings are appropriate and no action is needed on this screen. When done, click **Next**. The **Repository Creation Utility** dialog appears prompting you to confirm that you want to create these tablespaces. Click **OK** to close the dialog and proceed. The **Creating Tablespaces** dialog appears showing the progress of tablespace creation. After the tablespaces are created, click **OK** to close this dialog and go to the next screen.

Table 2-3 (Cont.) Schema Setup Steps

Screen	Description
Summary	Verify the information on this screen. Click **Save Response File** if you want to perform a silent installation at a later time. Click **Create** to begin schema setup. A **System Load** progress dialog appears showing progress. The dialog closes when complete.
Completion Summary	Review the information on this screen to verify that the operation was completed successfully. Click **Close** to complete the schema setup and exit RCU.

Creating the WebLogic Domain Using the Configuration Wizard

The Configuration Wizard helps and simplifies the task of creating the needed WebLogic Server domain and configuring Oracle Forms and Reports.

> **Note:**
>
> To perform the configuration on Microsoft Windows, the Configuration Wizard must be run from an elevated Administrator DOS shell. On Unix/Linux, the shell session must be owned by the same user who performed the installation (such as `oracle`). Failure to follow this instruction may result in the configuration failing silently.

1. Run the Configuration Wizard using `config.sh` (`config.cmd` on Windows) located in the `ORACLE_HOME/oracle_common/common/bin` directory.
2. Work your way through the screens described in Table 2-4.

Table 2-4 Configuration Wizard Screens

Screen	Description
Create Domain	Choose **Create a new domain**, then type the desired domain home path. **Note:** It is recommended that the domain home not reside within the Oracle Home. Therefore, it is further recommended that "Oracle_Home" be removed from the default value or use a completely different location other than the one presented by default.
Templates	Choose **Create Domain Using Product Templates**. In the **Available Templates** box, select the desired components. For example, to configure Oracle Forms, select the template named "Oracle Forms – 14.1.2.0.0 [forms]". Do similar to choose for other desired components (such as Oracle Reports). **Note:** Any dependent templates are automatically selected. Dependent templates cannot be deselected. Commonly used templates: • Oracle Forms Application Deployment Services (FADS) • Oracle Forms • Oracle Reports Application • Oracle Reports Tools • Oracle Reports Server • Oracle Reports Bridge • Oracle HTTP Server **Note:** Refer to those individual component's documentation for more details.

Table 2-4 (Cont.) Configuration Wizard Screens

Screen	Description
Application Location	As mentioned for the domain location, it is recommended that the Application location not reside within the Oracle Home. Remove "Oracle_Home" from the default path or use a completely different location other than the one presented by default.
Administrator Account	Type in the desired WebLogic Domain administration user name and password. This information is needed to access Fusion Middleware Control and for starting and stopping servers on the command line. It will also be used for accessing other services like Forms Application Deployment Services (if selected in Templates) and others.
Domain Mode and JDK	For Domain Mode, select either **Development** or **Production**. To ensure the highest degree of security, selecting **Production** is recommended. If Production mode is selected, **Secure Mode** is also selected by default. This mode enables the use of SSL/TLS using a provided demo/example TLS certificate. However, that certificate should be replaced with a more appropriate certificate that is provided by a trusted and known certificate authority. Disabling secure mode is not recommended but can be helpful— for example in test environments where sensitive data is not accessed. Enable or disable the desired port types. For secure mode, SSL ports are enabled by default. The default JDK selection is appropriate for most configurations unless you need to use a different version the JDK than the one used to perform the installation.

Table 2-4 (Cont.) Configuration Wizard Screens

Screen	Description
Database Configuration Type	The default selections are appropriate for most cases. Enter the RCU DB host name, service name, port, schema owner, and schema password. Then click **Get RCU Configuration**. **Note:** The schema name consists of the prefix value you provided when RCU was run to create the infrastructure schemas followed by "_STB". For example, PROD_STB. You must include _STB when entering the value in the schema name field. Verify that there is a success message in the **Connection Result Log** panel. If there is no success message, check the database entries made in this step, then retry.
JDBC Component Schema	This step assumes each repository schema uses the same password. If not, type in the correct schema passwords as needed.
JDBC Component Schema Test	Testing begins automatically when this screen is displayed. If not, click **Test Selected Connections**. If there are any failures, carefully review the **Result Log** field, make corrections, then try again.
Advanced Configuration	Which boxes need to be selected on this screen depends on which templates were selected in a previous step. In most cases you will need to select these templates: • Administration Server • Node Manager • Topology • System Components Depending on the level of customization desired, other selections may be needed. The following four screens are displayed if you selected the entries recommended here.

Table 2-4 (Cont.) Configuration Wizard Screens

Screen	Description
Administration Server	In most cases, the default values should be appropriate. If you need to change the port numbers, use caution that you don't change a port to one that is already in use. **Note:** If Forms Application Deployment Services (FADS) was selected for inclusion in this domain, click the **Server Groups** poplist and select `WSMPM-MAN-SVR`.
Node Manager	Provide a Node Manager user name and password. This will be needed to start and stop managed servers and components on the command line.
Managed Servers	In most cases, the default values should be appropriate. If you need to change the port numbers, use caution that you don't change a port to one that is already in use. If you add managed servers, be sure to properly add them to the appropriate Server Group(s). Verify that each managed server includes the Server Group associated with that server (for example `FORMS-MAN-SVR` for `WLS_FORMS`) and `JRF-MAN-SVR`. **Note:** `JRF-MAN-SVR` may not be automatically selected. If it is not, add it by checking the `JRF-MAN-SVR` box in the Server Groups list then continue.
Clusters	In most cases, all the default values should be appropriate. However, you can add additional clusters here if required.
Server Templates	In most cases, the default values should be appropriate.
Dynamic Servers	In most cases, the default values should be appropriate.
Assign Severs to Cluster	Verify that servers are appropriately assigned to the desired cluster. In most cases, the default values should be appropriate. If not, use the left and right buttons to move the servers to the desired cluster(s).

Table 2-4 (Cont.) Configuration Wizard Screens

Screen	Description
Coherence Clusters	In most cases, the default values should be appropriate.
Machines	Use this screen to override the machine name or add additional machine names for extended domain scenarios (such as adding remote Forms nodes). In most cases, the default values should be appropriate.
Assign Servers to Machines	Move the AdminServer and any additional servers you may have previously created to the AdminServerMachine by selecting the AdminServerMachine node on the right, then clicking the top button for each server that needs to be moved. All entries should now appear in the right-side pane.
System Components	In most cases, the default values should be appropriate. If you added the HTTP Server (OHS) earlier, click **+Add**. In the **System Component** field, provide a name for the OHS component (such as `ohs1`), then select `OHS` from the **Component Type** list.
OHS Server	In most cases, the default values should be appropriate. If it's desirable to have a fully-qualified server.domain instead of "localhost", make the appropriate changes.
Assign System Components to Machines	Verify that all system components on the left are assigned to the appropriate machine on the right. Select **SystemComponent** on left and **AdminServerMachine** on right. Then click the right arrow to move all left side components to the right.
Configuration Summary	The Configuration Summary screen indicates what will be contained in the domain once created. If everything looks right, click **Create**.
Configuration Progress	This screen shows the progress of the domain creation. The process may take some time. How long it takes depends on many factors, including machine and network performance. If any errors occur, they will be presented. Unfortunately, some errors may not be correctable without deleting the Repository Schemas and starting over. Be careful not to interrupt this process or the connection between this environment and the database. When the domain is successfully created, click **Finish** to close the wizard.

3. Start the servers (Node Manager, Admin Server, and managed servers).
   - On Unix/Linux platforms, the shell used to start these servers the first time, must be the installation owner's (for example, `oracle`).

- On Microsoft Windows, the DOS shell used to start these servers the first time must have Administrator permissions.
  To enable an Administrator shell session, right-click the Command Prompt shortcut and select **Run as Administrator**. The shell that opens will indicate that it has Administrator privileges in its title bar.

Post Domain Creation Steps

- If you included Forms Application Deployment Services (FADS) in the domain, refer to Run FADS Post Configuration Steps to complete FADS setup.
- If you included Oracle Reports in the domain, complete the steps in 2.4.7.3 Provisioning a Machine of *Installing Oracle Forms and Reports*, version 12.2.1.3.
- If you included Oracle HTTP Server (OHS) in the domain, refer to Oracle Forms Configuration Helper Script in *Working with Oracle Forms* for information on how to integrate Forms with OHS.

Verifying the Installation and Configuration

After you complete the installation and configuration of Oracle Forms, verify it was successful by performing a series of tasks.

You can verify the status of your installation by performing the tasks in any combination.

- Reviewing the Installation Logs
- Reviewing the Domain Server Logs
- Checking the Installed Products and Product Versions
- Checking Component URLs
- Performing Basic Administration Tasks

Reviewing the Installation Logs

Check for the presence of installation log files in `logs` directory inside your Oracle Inventory directory.

On UNIX operating systems, if you do not know the location of your Oracle Inventory directory, you can find it in:

```
ORACLE_HOME/oraInst.loc
```

On Windows operating systems, the location for the inventory directory is:

```
C:\Program Files\Oracle\Inventory\logs
```

For information about installation log files, see Installation Log Files.

Reviewing the Domain Server Logs

You can check the domain server logs located in the `servers` directory inside the domain home directory.

On UNIX operating systems:

```
DOMAIN_HOME/servers/server_name
```

On Windows operating systems:

```
DOMAIN_HOME\servers\server_name
```

Checking the Installed Products and Product Versions

Check the installed products and product version numbers. The contents of your installation vary based on the options that you selected during the installation.

To check the products and product version numbers, run this command from the `ORACLE_HOME/OPatch` directory:

```
opatch lsinventory -detail
```

Checking Component URLs

The installed components have unique URLs somewhat based on selections made during domain creation.

Once the product has been installed and a domain created and its servers started, various URLs can be used to access or test these components. Exactly which URLs are relevant depend on which components were chosen during domain configuration. Also, whether or not they are accessible using an `SSL`/`TLS` port will depend on selections made during domain creation. Similarly, the ports for each request were also chosen during domain creation.

The Installation Complete screen contains URLs that can be used to access your installed and configured products, as described Table 2-5.

Table 2-5 Component URLs

Product or Component	Non-Secure Mode	Secure Mode
Oracle Fusion Middleware Control/Enterprise Manager	`http://<host>:7001/em`	`https://<host>:9002/em`
Oracle Forms	`http://<host>:9001/forms/frmservlet`	`https://<host>:9501/forms/frmservlet`
Oracle Forms Application Deployment Services	`http://<host>:7001/fadsui`	`https://<host>:7002/fadsui`
Reports Servlet Help	`http://<host>:9012/reports/rwservlet/help`	`https://<host>:9512/reports/rwservlet/help`
HTTP Server	`http://<host>:7777`	`https://<host>:4443`

Performing Basic Administration Tasks

After running the installer and configuration tool, all of your system components, the Administration Server, and Managed Servers should be manually started in order to complete the configuration process.

In the event that some of your servers or components are stopped unexpectedly, you can restart your Oracle Fusion Middleware environment by following the instructions, as described in Starting an Oracle Fusion Middleware Environment.

Your Oracle Fusion Middleware environment can also be stopped, as described in Stopping an Oracle Fusion Middleware Environment.

Installing Oracle Forms in Silent Mode

You can also install Oracle Forms from the command line in silent mode.

You can use the silent installation mode to bypass the need to monitor your product installation because no graphical output is displayed and no input by the user is required. To install Oracle Forms in silent mode, use the `-silent` flag on the command line when you start the installer.

> **Note:**
>
> Silent installation does not include configuration: You cannot configure Oracle Forms silently using the same silent installation commands and response file. In this release, product installation and configuration are separate processes. The Configuration Wizard cannot be run in silent mode (or used with response files) in this release.

See the following sections in *Installing Software with the Oracle Universal Installer* for details on silent mode:

- About Silent Installation
- About Response Files
- Running the Oracle Universal Installer in Silent Mode

After you have completed the installation in silent mode, configure Oracle Forms using the Configuration Wizard as described in these sections:

- Creating the WebLogic Domain Using the Configuration Wizard
- Installing and Configuring Form Builder Standalone

Deinstalling in Silent Mode

Follow the instructions in Running the Oracle Universal Installer for Silent Deinstallation, to deinstall Oracle Forms in silent mode.

Installing the Forms Application Deployment Services

The Forms Application Deployment Services (FADS) simplifies the process of packaging applications, deploying, configuring, and storing archived copies of the applications. Follow the instructions in this section to install and configure Forms Application Deployment Services (FADS) to an existing domain.

The following sections are included:

- Configuring Forms Application Deployment Services
- Run FADS Post Configuration Steps

Configuring Forms Application Deployment Services

After you have completed the installation steps, you can start configuring Forms Application Deployment Services applications by creating the domain.

You have to perform the following FADS application configuration steps in a Fusion Middleware domain:

- Setting up RCU Schema
- Applying the FADS Template to an Existing Forms Domain

Setting up RCU Schema

Add missing Repository Creation Utility (RCU) schemas when configuring a domain containing Oracle Forms or FADS. Configuring FADS requires the Repository's User Messaging Service (UMS) and its dependencies.

> **Note:**
>
> If this is a new installation and not an upgrade, you can skip this RCU Schema step. All the needed schemas should already be installed if you followed the installation instructions.

If this was an upgrade from a previous release, needed schemas may be missing and will need to be added.

To add the UMS schema to the domain repository:

1. After the installation of Oracle Fusion Middleware Infrastructure and the Oracle Forms and Reports software, run this command from `ORACLE_HOME/oracle_common/bin` to launch RCU:

   ```
   $ORACLE_HOME/oracle_common/bin/rcu.sh
   ```

   > **Note:**
   >
   > This example assumes that the ORACLE_HOME environment variable has already been set.

2. Work your way through the screens described in

Table 2-6 Schema Setup Steps

Screen	Description
Welcome	This screen introduces you to RCU.
Create Repository	Select **Create Repository**, then select **System Load and Product Load** (default).

Table 2-6 (Cont.) Schema Setup Steps

Screen	Description
Database Connection Details	Specify the desired repository database connection details and credentials to connect to the desired database. The user will need DBA privileges. When done, click **Next** to open the **Checking Prerequisites** dialog and start prerequisite checking. If the database checking passes without errors, click **OK** If a DB "editions" warning is shown, click **OK** to acknowledge it and continue. If you are not familiar with this database feature, refer to Using Edition-Based Redefinition in the *Database Development Guide* for details.
Select Components	Click **Select Existing Prefix** and choose the prefix used for the repository associated with this domain. Select **User Messaging Service (UMS)** to enable UMS. Click **Next** to start the prerequisite check. The **Checking Prerequisites** dialog is shown. When it is complete, click **OK** to close the dialog and go to the next screen.
Schema Passwords	Type in the desired password for this schema (UMS). If you chose to use the same password for the other schemas in this repository, it is recommended that you use that same password here.
Map Tablespaces	In most cases, there will be no reason to make changes to the tablespace assignments. If it is necessary do so here, then click **Next**. Click **OK** in the dialog to grant permission to create the selected tablespace. Click **OK** to acknowledge the summary of tasks about to be performed.
Summary	Verify the information on this screen, then click **Create** to begin the process. A **System Load** progress dialog window appears, showing the progress. The dialog window will close when complete.
Completion Summary	Review the information on this screen to verify that the operation was completed successfully. Click **Close** to complete the schema setup and close RCU.

Applying the FADS Template to an Existing Forms Domain

Apply the FADS extension template to an existing Forms domain using the Configuration Wizard.

> **Note:**
>
> Be sure that the Universal Messaging Service (UMS) repository schema exists before continuing. Refer to Setting up RCU Schema for adding UMS if the schema is missing.

1. Run the following command to start the Configuration Wizard:

   ```
   $ORACLE_HOME/oracle_common/common/bin/config.sh
   ```

2. Work your way through the screens of the wizard described in :

Table 2-7 Configuration Wizard Screens

Screen	Description
Create Domain	Select **Update an existing domain**, then type in the existing domain path. In most cases, the correct path will be entered by default. Verify that it is correct before continuing.
Templates	Select **Oracle Forms Application Deployment Service (FADS)** from the **Available Templates** box.
Database Configuration Type	In most cases, the default values are populated automatically and should be correct. If so, click **Get RCU Configuration** to load the schema details.
Component Datasources	Click **Next** to continue.
JDBC Test	A brief test is performed.
Advanced Configuration	Select **Deployments and Services**.
Deployments Targeting	a. In the **Deployment** list box, select `WSM-PM` under **AppDeployments**. b. In the **Deployment Targets** list box, select **AdminServer** then click the move right button. The `wsm-pm` entry should now also appear in the list on the right side.
Service Targeting	Click **Next** to continue.
Configuration Summary	Review the proposed changes, then click **Update**.
Configuration Progress	Click **Next** to continue.
End of Configuration	Review the results, then click **Finish**.

Start the Administration Server, when you finish updating the Forms domain, and then perform the post configuration task described in Run FADS Post Configuration Steps.

Run FADS Post Configuration Steps

After creating or updating your Forms domain or after patching, perform these steps.

> **Note:**
>
> If the domain was created with Secure Mode enabled and you plan to use the demo SSL/TLS certificate provided with the installation (not recommended for production use), set the following before executing the WLST commands provided below.
>
> For UNIX/Linux:
>
> ```
> export WLST_PROPERTIES="-
> Dweblogic.security.SSL.ignoreHostnameVerification=true -
> Dweblogic.security.TrustKeyStore=DemoTrust"
> ```
>
> For MS Windows
>
> ```
> set WLST_PROPERTIES="-
> Dweblogic.security.SSL.ignoreHostnameVerification=true -
> Dweblogic.security.TrustKeyStore=DemoTrust"
> ```

1. If you created or updated your Forms domain, start the Node Manager, then the Administration Server.
2. Run the appropriate commands below based on your situation:
   - If you created or updated your Forms domain, use:
     `$ORACLE_HOME/oracle_common/common/bin/wlst.sh $ORACLE_HOME/forms/fads/fads_config.py config`
   - If you applied a new Forms patch set or one-off, execute the FADS post configuration script with the `updateHostPort` arguments.
     `$ORACLE_HOME/oracle_common/common/bin/wlst.sh $ORACLE_HOME/forms/fads/fads_config.py updateHostPort <ADMINSERVER.DOMAIN> <ADMINSERVER PORT> <PATH TO DOMAIN HOME>`

     For example:

     ```
     $ORACLE_HOME/oracle_common/common/bin/wlst.sh $ORACLE_HOME/
     forms/fads/fads_config.py updateHostPort www.example.com
     7001 $MIDDLWARE_HOME/user_projects/applications/base_domain
     ```
3. Follow the prompts to complete the configuration.
4. Perform one of the following steps:
   - If you created or updated the Forms domain, restart the Node Manager, then the Administration Server, and Forms Managed Servers.
   - If you applied a new Forms patch set or one-off, complete other patching steps and then start the Node Manager, Administration Server, and Forms Managed Servers.

Installing and Configuring Form Builder Standalone

Install and configure the Form Builder Standalone environment.

To install the Form Builder Standalone software and configure the Form Builder Standalone environment:

1. Start the Installer as described in Starting the Oracle Forms Installer.
2. When prompted, install into a new and empty Oracle home.

> **Note:**
>
> Do not attempt to install it on top of Fusion Middleware Infrastructure.

3. From the Installation Type screen, select **Standalone Form Builder**.

   It should be selected by default if you properly chose an empty Oracle Home directory.
4. From the last screen of the installation wizard, select **Automatically Launch Forms Builder Configuration Wizard** to launch the configuration wizard when the installation is complete.

   You can also launch the Configuration Assistant manually from a command prompt.

> **Note:**
>
> On Unix/Linux, ensure the shell user is the same as the installation owner. On MS Windows, ensure that the shell user has elevated privileges.

On Unix, type in this command:

```
$ORACLE_HOME/forms/common/bin/config_builder.sh
```

> **Note:**
>
> Use `config_builder.cmd` on Microsoft Windows machines.

You can also specify the following arguments to perform a scripted or silent instance configuration:

- `autoconfig`: Use this to configure a new instance automatically. The new instance will be named `forms`*N* where *N* is a sequential number starting with 1. Each time the command is run against this Oracle home, *N* increments by 1. The new instance is automatically created in the Oracle home.
- `formBuilderInstance`: Use this argument in conjunction the `autoconfig` argument to specify the path of the instance location. Specifying this parameter overrides the auto-naming behavior of the `autoconfig` argument. The path should be a value that does not include directories with spaces.

Here is an example of the command usage:

```
config_builder.cmd autoconfig
formBuilderInstance=C:\myFormBuilder\inst1
```

If you do not specify any of these, the Configuration Wizard opens.

5. When prompted, enter a path and name for the Form Builder Instance path in the **Instance Configuration** screen, then click **Next**.

   For example:

   ```
   C:\Oracle\Middleware\bld_inst1
   ```

   After configuration is complete, the **Configuration Progress** screen shows a "Configuration Succeeded" message.

6. Click **Next** to proceed to the **End of Configuration** screen.

   This screen shows the Oracle Home and Form Builder Instance location.

7. Click **Finish** to exit the installer.

Oracle Forms Accessibility Information

This topic provides information about accessibility features and related information for Oracle Forms.

Oracle Forms Builder provides a range of features designed to support accessibility. While running Forms, you can configure your system and use features that support accessibility.

The Oracle Forms runtime is accessible if coded based on the instructions provided in Accessibility Features and Tips for Oracle Forms and Reports. This link also provides information about the minimum requirement that assistive technology must meet to run with Oracle Forms.

3

Upgrading Oracle Forms

This chapter describes how to upgrade Oracle Forms from version 12.2.1.4 or 12.2.1.19 to version 14.1.2.
To upgrade from a version prior to 12.2.1.4, follow one of these upgrade paths:

- First upgrade to version 12.2.1.4 or 12.2.1.19 by following the upgrade instructions in the target version of *Installing Oracle Forms* (12.2.1.4 or 12.2.1.19). Then, follow the steps provided in this section to upgrade to 14.1.2.0.0.
- Perform a new installation of 14.1.2.0.0 and manually configure the new environment, as required.

> **Note:**
>
> Although Oracle Reports is included in this release, it has been deprecated. Refer to the 12.2.1.3.0 Documentation Library for upgrade information specific to Oracle Reports.

These topics are covered:

Planning an Upgrade of Oracle Forms

Upgrading to version 14.1.2.0.0 is only supported when the starting version is 12.2.1.4 or 12.2.1.19.

Before you continue, it is recommended that you first create a backup of the existing Oracle Home and Domain.

When planning an upgrade, you will need to decide where to install the software. There are two options:

- Use the same Oracle Home path where the previous version is installed. This is referred to as an "in-place" upgrade.
- Use a new Oracle Home path. This is referred to as an "out-of-place" upgrade.

In-place upgrades assume you would like to continue to use the same Oracle Home directory path as used previously. In this case, you would rename the existing Oracle Home directory, install the new software in the directory path that was previously used, then copy over any required files from the backup (renamed) directory. Then run WLS Reconfiguration Wizard and Upgrade Assistant as instructed in this chapter.

Out-of-place upgrades are used when you want to install Oracle Forms in a new directory path. For this option, install the software as for a fresh installation into a new directory path. Then run WLS Reconfiguration Wizard and Upgrade Assistant as instructed in this chapter.

The exact steps you will need to complete may depend on the type of upgrade you are doing as well as your starting version. Review the sections in this chapter carefully to determine which procedures are required for your environment.

If your current version is earlier than 12.2.1.4, you need to first upgrade to 12.2.1.4 or 12.2.1.19 before proceeding. Refer to the appropriate version *Installing Oracle Forms* for information on how to upgrade to that version.

When you believe you have a working 12.2.1.4 or 12.2.1.19 environment, return to this document and continue.

Performing a Pre-Upgrade Readiness Check

To identify potential issues with the upgrade, Oracle recommends that you run a readiness check using the Upgrade Assistant before you start the upgrade process.

To run the pre-upgrade readiness check, refer to Running a Pre-Upgrade Readiness Check in *Upgrading with the Upgrade Assistant*.
When you run the Upgrade Assistant in `readiness` mode, it performs a pre-upgrade check on the schemas and component configurations associated with a domain. When completed, the readiness check generates a formatted, time-stamped readiness report so you can address potential issues before you attempt the actual upgrade.

Oracle recommends that you read this report thoroughly before performing an upgrade.

If no issues are detected, you can begin the upgrade process.

> **Note:**
>
> Be aware that the readiness check may not be able to discover all potential issues with your upgrade. An upgrade may still fail, even if the readiness check reports success. Be sure to also review the Oracle Fusion Middleware System Requirements and Specifications documentation to ensure your system is prepared to receive the new software version.

Back up Customized Files and the Domain

Before you start the upgrade, it is recommended that you create backup copies of any custom files you may have added to the Oracle Home. This might include, but is not limited to, custom Java JAR files and image files.

It is also recommended that the entire domain (for example, `<user_projects>/domains`) and its applications (for example, `<user_projects>/applications`) directories be copied and stored at least until it can be confirmed that the new installation is fully functional.

> **Note:**
>
> This new release contains numerous updates to settings that also existed in earlier versions with different values. Do not change setting values created by the installation unless you fully understand the impact of such changes. It also contains new entries that should not be removed.
>
> Also, some changes may not be recognized until the servers have been restarted.

Upgrading to Oracle Forms 14.1.2.0.0

Upgrade to Oracle Forms 14.1.2.0.0 by either installing the software in the same Oracle Home directory path ("in-place") or installing in a new Oracle Home directory path ("out-of-place"). After the upgrade, complete the applicable configuration steps.

Although using the out-of-place method may sometimes be necessary, it is generally not recommended. Some configuration files may not be automatically updated by the Reconfiguration Wizard and may need to be manually updated. Exactly which files may need to be manually updated depends on the level of customization previously performed.

To get the Oracle Fusion Middleware Infrastructure and Oracle Forms and Reports software, refer to Obtaining the Oracle Fusion Middleware Software.

This section includes these topics:

- Performing an In-Place Upgrade
- Performing an Out-of-Place Upgrade
- Completing the Upgrade

Performing an In-Place Upgrade

To perform an in-place upgrade, you'll back up the existing Oracle Home directory, install the latest versions of the required software in the existing directory, then copy over any required files from the backup directory.

The in-place approach is the preferred upgrade method as it allows you to keep the existing Oracle Home path and minimizes the amount of manual steps post-upgrade.

To perform an in-place upgrade, you'll first back up the existing Oracle Home directory by renaming it—for example, to `Oracle_Home_OLD`). Then, you'll install Fusion Middleware Infrastructure 14.1.2.0.0 and Oracle Forms and Reports 14.1.2.0.0 into the same directory path which previously represented the Oracle Home before renaming it.

After installing the software, copy any custom files from the renamed directory into the same directory of the new Home. For example, custom files in `\forms\java\` may need to be copied. This may also include the WLS domain (`user_projects`) if it was previously located in the Oracle Home. This must be moved into the new Home if it was previously located in the old Home. Do not move or copy the domain if it currently resides in a directory outside the Oracle Home.

Finally, use the Upgrade Assistant and Reconfiguration Wizard to upgrade the domain repository and configuration.

> **Note:**
>
> Do not copy any Oracle-provided files from the old version into the new Home. For example, do not copy Oracle-provided JARs or binary files. Doing so will cause the new installation not to function properly.

To perform an in-place upgrade:

1. Shut down all servers and processes associated with the Oracle Home being upgraded.
2. Rename the Oracle Home parent directory on this node. For example, `Oracle_Home_OLD`.
3. Install Fusion Middleware Infrastructure 14.1.2.0.0 using the same Oracle Home path as used previously before renaming it in step 2.
4. Install Oracle Forms and Reports 14.1.2.0.0 using the same Oracle Home path used in step 3.
5. If the WLS Domains directory (`user_projects`) and its subdirectories were located in the old Oracle Home, copy these directories to the new Oracle Home in the same location as they were previously.
6. If you haven't yet created a backup copy of the domain (`user_projects`), do it now before continuing.

   > **WARNING:**
   >
   > Once the Upgrade Assistant and/or Reconfiguration Wizard have been run their changes cannot be reversed.

7. Run the Upgrade Assistant to upgrade the domain schemas:
   a. Start the Upgrade Assistant:

      ```
      $ORACLE_HOME/oracle_common/upgrade/bin/ua
      ```

   b. Select **All Schemas Used By a Domain**.
   c. Type the path to the domain to be upgraded.
   d. On the **Prerequisite** screen, select all check boxes to acknowledge that you have complied with the noted prerequisites.
   e. When prompted for the DBA user name, enter a user with DBA privileges (for example `sys as sysdba`).
   f. Click **Connect**, then **Next** to continue.
   g. Continue to click **Next** until you reach the **WLS Schema** screen.
   h. If the schema user name is *<YOUR PREFIX>*`_WLS_RUNTIME`, change it to *<YOUR PREFIX>*`_WLS`, then continue.
8. Run the Reconfiguration Wizard:
   a. Start the Reconfiguration Wizard:

      ```
      $ORACLE_HOME/oracle_common/common/bin/reconfig.sh
      ```

   b. Type the path to the domain to be reconfigured (upgraded).

c. Continue clicking **Next** until you reach the **Database Configuration Type** screen.

d. Click **Get RCU Configuration** to load details from the associated schemas, then continue.

e. On the **Advanced Configuration** screen, select **Administration Server and Topology**.

f. On the **Administration Server** screen, verify that a value is set for **Listen Address**. If no value is set, select **All Local Addresses** from the list, then click **Next** to continue.

g. Continue until you reach the **Configuration Summary** screen, then click **Reconfig**.

9. Run the Upgrade Assistant again to complete the reconfiguration and upgrade of the domain:

   a. Start the Upgrade Assistant:

      ```
      $ORACLE_HOME/oracle_common/upgrade/bin/ua
      ```

   b. Select **All Configurations Used By a Domain**.

   c. Type the path to the domain to be upgraded.

   d. On the **Prerequisite** screen, select all check boxes to acknowledge that you have complied with the noted prerequisites.

   e. After the Examine phase has completed, click **Next**, then **Upgrade** to begin the processing.

10. Start the Node Manager, Admin Server, the managed servers, and any other system components (such as OHS).

> **Note:**
>
> Starting the servers for the first time after upgrading may take longer than usual. This is expected.

If you are upgrading in a multi-node environment, repeat all these steps for each additional node *except for step* 7. You do not need to upgrade domain schemas on each additional node.

After completing the installation and starting the servers, you can delete the `Oracle_Home_OLD` directories. However, before deleting, make sure you have copied any custom files needed from the `Oracle_Home_OLD` directory. It is recommended you not delete the previous Oracle Home until you have tested the new installation to confirm it is working correctly.

Once you have completed these steps, proceed to Completing the Upgrade.

Performing an Out-of-Place Upgrade

To perform an "out-of-place" upgrade, you'll install the software as for a fresh install, then use the WLS Reconfiguration Wizard and Upgrade Assistant to complete the upgrade.

The out-of-place upgrade lets you to change the location of the Oracle Home directory from its previous location. However, if the domain (`user_projects`) is located within the old Home, this directory structure must be retained indefinitely.

> **Note:**
>
> This method of upgrading may require you to edit some configuration files manually that cannot be updated by the Upgrade tooling. Exactly which files you need to update depends on which files you updated previously.

To perform an out-of-place upgrade, install Fusion Middleware Infrastructure 14.1.2.0.0 and Oracle Forms and Reports 14.1.2.0.0 into the same but new, empty directory path. Then copy any required custom files from the old Home into the new directory. This may include any custom files you previously had in the old Home (for example custom files in `\forms\java`). After you've done this, use the Upgrade Assistant and Reconfiguration Wizard to upgrade the domain repository and configuration.

> **Note:**
>
> Do not copy any Oracle-provided files from the old Home into the new Home. For example, do not copy Oracle-provided JAR or binary files. Doing so will cause the new installation not to function properly.

To perform an out-of-place upgrade:

1. Shut down all servers and processes associated with the Oracle Home being upgraded.
2. Install Fusion Middleware Infrastructure 14.1.2.0.0 into a new and empty directory on this node.
3. Install Oracle Forms and Reports 14.1.2.0.0 into the same Oracle Home path used in step 2.
4. If you haven't yet created a backup copy of the domain (`user_projects`), do it now before continuing.

   > **WARNING:**
   >
   > Once the Upgrade Assistant and/or Reconfiguration Wizard have been run their changes cannot be reversed.

5. Run the Upgrade Assistant to upgrade the domain schemas.
   a. Start the Upgrade Assistant:

      ```
      $ORACLE_HOME/oracle_common/upgrade/bin/ua
      ```

   b. Select **All Schemas Used By a Domain**.
   c. Type the path to the domain to be upgraded.
   d. On the **Prerequisite** screen, select all check boxes to acknowledge that you have complied with the noted prerequisites.
   e. When prompted for the DBA user name, enter a user with DBA privileges (for example `sys as sysdba`).
   f. Click **Connect**, then **Next** to continue.
   g. Continue to click **Next** until you reach the **WLS Schema** screen.

h. If the schema user name is *<YOUR PREFIX>*_WLS_RUNTIME, change it to *<YOUR PREFIX>*_WLS, then continue.

6. Run the Reconfiguration Wizard:
   a. Start the Reconfiguration Wizard:

      ```
      $ORACLE_HOME/oracle_common/common/bin/reconfig.sh
      ```

   b. Type the path to the domain to be reconfigured (upgraded).
   c. Continue clicking **Next** until you reach the **Database Configuration Type** screen.
   d. Click **Get RCU Configuration** to load details from the associated schemas, then continue.
   e. On the **Advanced Configuration** screen, select **Administration Server and Topology**.
   f. On the **Administration Server** screen, verify that a value is set for **Listen Address**. If no value is set, select **All Local Addresses** from the list, then click **Next** to continue.
   g. Continue until you reach the **Configuration Summary** screen, then click **Reconfig**.
7. Run the Upgrade Assistant again to complete the reconfiguration and upgrade of the domain:
   a. Start the Upgrade Assistant:

      ```
      $ORACLE_HOME/oracle_common/upgrade/bin/ua
      ```

   b. Select **All Configurations Used By a Domain**.
   c. Type the path to the domain to be upgraded.
   d. On the **Prerequisite** screen, select all check boxes to acknowledge that you have complied with the noted prerequisites.
   e. After the Examine phase has completed, click **Next**, then **Upgrade** to begin the processing.
8. Start the Node Manager, Admin Server, the managed servers, and any other system components (such as OHS) on the node.

> **Note:**
>
> Starting the servers for the first time after upgrading may take longer than usual. This is expected.

If you are upgrading in a multi-node environment, repeat all these steps for each additional node *except for step* 5. You do not need to upgrade the domain schemas on each additional node.

If the domain (`user_projects`) is located in the old Home, this directory structure must be retained and remain accessible. However, if the domain was not previously located within the old Home and the new installation has been tested and confirmed to be working properly, the old Home installation can be uninstalled then deleted. Do not delete the domain (`user_projects`) directory.

Once you have completed these steps, proceed to Completing the Upgrade.

Completing the Upgrade

After you upgrade Oracle Forms to 14.1.2.0.0, you may need to perform these additional steps depending on your configuration.

Forms Application Services (FADS) Configuration

If Forms Application Services (FADS) was configured in the environment, you will need to run the FADS configuration script (`fads_config.py`) with the upgrade option:

1. Run this command:
   `ORACLE_HOME/oracle_common/common/bin/wlst.sh fads_config.py upgrade`
2. Follow the prompts.

Userid Encryption

If the previous installation was upgraded from 12.2.1.3 then to 12.2.1.4 or 12.2.1.19, you will need to manually enable encryption for the `userid` parameter and grant access to the Forms application keystore.

> **Note:**
>
> These steps are not necessary if upgrading from 12.2.1.4 or 12.2.1.19.

To enable encryption for the `userid` parameter:

1. (Out-of-place upgrade only) Set the `forms.userid.encryption.enabled` server parameter to `true` for the Admin Server and the Forms managed servers.
   Refer to Customizing Domain Wide Server Parameters in *Administering Server Startup and Shutdown for Oracle WebLogic Server*.

   Here is a sample of the `setUserOverridesLate.sh` file (use `setUserOverridesLate.cmd` for Windows), where the `forms.userid.encryption.enabled` parameter is enabled:

```
echo ""
echo "*****************************************************"
echo "** Executing setUserOverridesLate.sh"
echo "*****************************************************"

# specify additional java command line options for all servers

EXTRA_JAVA_PROPERTIES="${EXTRA_JAVA_PROPERTIES} -
Dforms.userid.encryption.enabled=true"
export EXTRA_JAVA_PROPERTIES

echo "USER_MEM_ARGS=\"${USER_MEM_ARGS}\""
echo "EXTRA_JAVA_PROPERTIES=\"${EXTRA_JAVA_PROPERTIES}\""
echo ""
echo "*****************************************************"
echo "** End of setUserOverrideLate.sh"
echo "*****************************************************"
echo ""
```

2. Run the following commands using WLST (online mode) to provide grants to the forms application or mbeans to access the Forms application keystore:

```
connect("<ADMIN SERVER USERNAME>","<PASSWORD>","localhost:7001")

grantPermission(codeBaseURL="file:${common.components.home}/../forms/
provision/forms-config-mbeans.jar",
permClass="oracle.security.jps.service.keystore.KeyStoreAccessPermission",p
ermTarget="stripeName=formsapp,
keystoreName=formsks,alias=*", permActions="*")

grantPermission(codeBaseURL="file:${domain.home}/servers/$
{weblogic.Name}/tmp/_WL_user/formsapp_14.1.2/-",
permClass="oracle.security.jps.service.keystore.KeyStoreAccessPermission",
permTarget="stripeName=formsapp,
keystoreName=formsks,alias=*",permActions="*")
```

3. Restart the Node Manager, the Admin Server, and Forms managed server(s).

Post-Upgrade Steps after Upgrading Oracle Forms

After using the Upgrade Assistant to upgrade Oracle Forms, you'll need to perform a number of post-upgrade tasks.

Complete these tasks:

1. Regenerate the Forms application files (`fmx`, `mmx`, and `plx`) using the Forms compiler. Be sure to include the `compile_all=yes` option when generating the new executable modules.
2. If you previously customized the Forms context root (`/forms`) and/or customized the Forms app name (`/frmservlet`) you will need to run the Forms Configuration Helper Script in order to recreate such customizations.
   For more information, see Oracle Forms Configuration Helper Script in the *Working With Oracle Forms* guide.
3. Be sure to copy any custom files stored in the old Oracle Home into the corresponding directories of the new installation. This may include custom JAR files, custom files associated with WebUtil, and so on.
4. If you had Forms Application Deployment Services in your source domain, you are required to run the `fads_config.py` script with the upgrade option:
   a. Start the Admin Server.
   b. Run the `fads_config.py` passing in the upgrade option.
      If you created or updated your Forms domain, use:

      ```
      $ORACLE_HOME/oracle_common/common/bin/wlst.sh $ORACLE_HOME/
      forms/fads/fads_config.py upgrade
      ```

> **Note:**
>
> It may be necessary to stop the servers before copying the old files into the new directories in order for the new servers to become aware of their existence.

4

Deinstalling Oracle Forms

Follow the instructions in this chapter to deinstall Oracle Forms.
It is recommended that you always use the instructions provided in this chapter 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 chapter will ensure that the software is properly removed. If you need to remove a particular product component, you must remove the entire domain containing the component. It is not possible to remove a single product from a domain containing multiple products.

The following topics are covered:

Preparing to Deinstall Oracle Forms

Before deinstalling Oracle Fusion Middleware software components, you must stop all servers and processes associated with the Oracle home you are going to remove.

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

Dropping the Associated Repository

Before deinstalling Oracle Forms, drop the associated repository using the Repository Creation Utility.

> **Note:**
>
> Schemas should not be dropped if the associated domain will be used for other components. Only drop schemas when the domain is to be deleted. Dropping the repository schemas will also delete all data stored in them.

To drop the repository:

1. From a command prompt, navigate to the correct directory, then launch the Repository Creation Utility:

On UNIX/Linux:

```
cd ORACLE_HOME/oracle_common/bin
./rcu
```

On Windows:

```
cd ORACLE_HOME\oracle_common\bin
rcu.bat
```

2. From the utility, follow the prompts for Drop Repository.
   See Dropping Schemas in *Creating Schemas with the Repository Creation Utility* for more information.

Deinstalling the Software

This section contains instructions to start the product deinstaller and remove the Oracle Forms and Reports software.

When you start the deinstaller from Oracle home, be sure that no system components are using the Oracle home you want to remove.

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

Starting the Deinstallation Program

Run the Oracle Forms and Reports software deinstaller.

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

To start the deinstaller:

- On UNIX
  On the command line, enter the following commands:

  ```
  cd ORACLE_HOME/oui/bin
  ./deinstall.sh
  ```

- On Windows
  Do one of the following:
  - Use a file manager window to navigate to the `ORACLE_HOME\oui\bin` directory and double-click `deinstall.cmd`.
  - Open a command prompt and enter the following commands:

    ```
    cd %ORACLE_HOME%\oui\bin
    deinstall.cmd
    ```

  - From the **Start** menu, select **All Programs**, **Oracle**, **OracleHome**, then **Uninstall Oracle Software**, to open the **Oracle Forms Deinstaller**.

> **Note:**
>
> Rerun the deinstaller a second time to deinstall Fusion Middleware Infrastructure. Do not deinstall Fusion Middleware Infrastructure without first deinstalling Forms and Reports software.

Navigating the Deinstallation Screens

The deinstaller displays a series of screens to confirm the deinstallation.

If you need help on screens listed in the following table, click **Help** on the screen.

Table 4-1 Deinstallation Screens and Descriptions

Screen	Description
Welcome	Introduces you to the product deinstaller. The deinstallation Welcome screen contains a navigation pane on the left that summarizes the tasks the deinstaller will help you complete.
Deinstallation Summary	Shows the Oracle home directory and its contents that will be deinstalled. 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 during a silent deinstallation. See Running the Oracle Universal Installer for Silent Deinstallation in *Installing Software with the Oracle Universal Installer*. Click **Deinstall**, to begin removing the software.
Deinstallation Progress	Shows the deinstallation progress.
Deinstallation Complete	Appears when the deinstallation is complete. Review the information on this screen, then click **Finish** to close the deinstaller.

Removing the Oracle Home Directory Manually

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

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

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

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

Program Shortcuts and Registry on Windows Operating Systems

On Windows operating systems, you must manually remove program shortcuts from the `Start Menu\Programs` folder as well as any custom Windows Registry entries. The deinstaller does not remove them.

Removing Program Shortcuts

To remove the program shortcuts on Windows:

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

> **Note:**
>
> The program shortcuts and folder names on your system may be different; you have to remove them from `C:\ProgramData\Microsoft\Windows\Start Menu\Programs`.

3. Reboot your computer.

Deleting Windows Registry Entries

Custom entries added to `HKEY_CURRENT_USER\Software\Oracle\KEY_OracleHome<NUMBER>` are not automatically deleted by the deinstallation process. Such entries can be manually deleted as desired.

> **WARNING:**
>
> Improperly altering the Microsoft Windows Registry can result in damage to the operating system. Use extreme care when making changes to the Windows Registry. Creating a Registry backup is recommended before making any changes. Refer to the Microsoft Windows documentation for information on how to create and use Registry backups.

You should reboot your computer after you have finished removing custom entries to ensure proper cleanup.

Removing the Domain and Application Data

After you deinstall the software, you must manually remove your domain and application data.

To remove the domain and application data:

1. Remove your Domain home directory. Use your normal operating system commands to remove your Domain home directory, for example:

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

```
cd /home/Oracle/user_projects/domains

rm -rf frs_domain
```

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

2. Remove your Application home directory. For example:

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

   ```
   cd /home/Oracle/user_projects/applications

   rm -rf frs_domain
   ```

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

   ```
   <domain location="/home/Oracle/user_projects/domains/frs_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 deinstalled the software according to the instructions in this chapter, including manually removing the Oracle home directory.

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

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

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

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

  1. Select a different installation type. In this case, only the feature sets that do not exist in the Oracle home directory are installed.
  2. 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 during the deinstallation process, so if you try to reinstall into the same Oracle home, the installer does not allow it. Your options are to:

  1. Deinstall your software from the Oracle home as described in this chapter and then remove the Oracle home directory. After you deinstall the software and remove the Oracle home directory, you can reinstall and reuse the same Oracle home location,

using the instructions in Installing and Configuring Oracle Forms. Any domain or application data that was in the Oracle home must be re-created.

2. Select a different Oracle home directory.

5

About Oracle Reports

Although included in this release, Oracle Reports has been deprecated as of Fusion Middleware 12c Release 2 (12.2.1.3.0).

For more information on the deprecation, review Deprecation Notice for Oracle Reports in *Release Notes for Oracle Forms*.

Because no changes have been made to Oracle Reports in the 14.1.2.0.0 release, refer to the 12.2.1.3.0 Documentation Library for information on installing, configuring, and using Oracle Reports. Download and install the 14.1.2.0.0 version and refer to this section of the 12.2.1.3 Installation Guide. Ignore any suggestions of using the 12.2.1.3 software in the guide.

For Oracle Reports usage, administration, and report deployment information, refer to the Publish Reports to the Web with Oracle Reports Services book. Because no further enhancements are planned for Oracle Reports, Oracle recommends migrating from Oracle Reports to Analytics Publisher (previously BI-Publisher). For more information about Oracle Analytics Publisher, see this page.

A
Troubleshooting

This appendix describes solutions to common problems that you might encounter when installing Oracle Forms.
The following sections are included:

- General Troubleshooting Tips
- Installation and Configuration Log Files

If this Troubleshooting appendix does not solve the problem you encountered, try looking for a solution on My Oracle Support. You can also raise a service request, if you are unable to find a solution for your problem.

General Troubleshooting Tips

You may encounter errors during installing and configuring Oracle Forms.

Follow the tips to resolve the errors:

- To complete the configuration, an elevated Windows DOS shell must be run by a user who is a member of the Windows Administrator group. UNIX shells must be owned by the same user who performed the installation (for example, *oracle*). Failure to follow this instruction may result in the configuration failing silently.
- See Install and Configure in *Release Notes for Oracle Fusion Middleware Infrastructure* for the latest updates and issues related to Oracle Fusion Middleware product installation and configuration.
- Verify that your computer meets the requirements specified in the System Requirements and Specifications for Oracle Fusion Middleware 14*c* (14.1.2.0.0).
- Verify that your environment meets the certification requirements for your release and platform, as specified on the Oracle Fusion Middleware Supported System Configurations page.
- To review the latest Oracle Fusion Middleware Release Notes for other products, go to Oracle Fusion Middleware Library and select the documentation library for your specific product release to view the release notes.
- If you entered incorrect information on one of the installation screens, return to previous screen by clicking **Back** until you see the specific screen, or by using the navigation pane on the left side of the screen.
- If you encounter an error while the installer is copying or linking files:
  1. Note the error and review the installation log files.
  2. Remove the failed installation.
  3. Correct the issue that caused the error.
  4. Restart the installation.

Installation and Configuration Log Files

Log files are created when running the Oracle Forms installer and configuration tool.

The following log files contains information that can help you to troubleshoot problems during installation or configuration:

- Installation Log Files
- Configuration Log Files

Installation Log Files

The log files generated during your installation help you determine whether any problems occurred during installation.

The installer writes log files to the *Oracle_Inventory_Location*/log (on UNIX operating systems) or *Oracle_Inventory_Location*\logs (on Windows operating systems) directory. On UNIX operating systems, if you do not know the location of your Oracle Inventory directory, you can find it in the oraInst.loc file in the following directories (default locations):

- Linux: /etc/oraInst.loc
- HP-UX and Solaris: /var/opt/oracle/oraInst.loc

On Windows operating systems, the location for the inventory directory is C:\Program Files\Oracle\Inventory\logs.

The following installation log files are written to the log directory:

- install*date-time-stamp*.log
  This is the main log file.
- install*date-time-stamp*.out
  This log file contains the output and error streams during the installation.
- installActions*date-time-stamp*.log
  This file is used by the installer GUI to keep track of internal information.
- installProfile*date-time-stamp*.log
  This log file contains the overall statistics like time taken to complete the installation, also configuration, memory and CPU details.
- oraInstall*date-time-stamp*.log
  This log file contains the output stream of the copy session.

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

- timeTaken*date-time-stamp*.log
  This file contains information for the amount of time taken to move between screens (applicable for GUI installations only).
- time*date-time-stamp*.log
  This file contains time information for the copy session.

If you start the installer with the -printmemory parameter, the memory*date-time-stamp*.log file is created. This file contains memory usage information for the copy session.

Configuration Log Files

To create a log file of your configuration session, start the configuration tool with the `-log` option.

For specific operating systems use the following `-log` option.

On UNIX operating systems:

```
% ./config.sh -log=log_filename
```

On Windows operating systems:

```
G:\ config.cmd -log=log_filename
```

If you specify an absolute path with your *log_filename* then your log file will be created there. If you only specify a file name with no path, then the log files are created in the *ORACLE_HOME*`/common/bin` (on UNIX operating systems) or *ORACLE_HOME*`\common\bin` (on Windows operating systems) directory.