

Oracle® Fusion Applications

Quick Installation Guide

11g Release 6 (11.1.6)

E16601-07

January 2013

This guide describes the provisioning of a new Oracle Fusion Applications environment. It contains the following sections:

- [Section 1, "What's New in This Guide"](#)
- [Section 2, "Installation Overview"](#)
- [Section 3, "Before You Begin"](#)
- [Section 4, "Provisioning Prerequisites and System Requirements"](#)
- [Section 5, "Creating a Response File"](#)
- [Section 6, "Provisioning a New Environment"](#)
- [Section 7, "Deinstalling an Oracle Fusion Applications Environment"](#)
- [Section 8, "Documentation Accessibility"](#)

Users of this guide should consult *Oracle Fusion Applications Installation Guide* for specific details.

1 What's New in This Guide

For 11g Release 6 (11.1.6), this guide has been updated as follows:

- Added information related to the **IDM Properties File** screen.
- Deleted FLEXCOMBFILTER, Simple OAM Passphrase, Secure Port field information.

2 Installation Overview

Oracle Fusion Applications is a deployment of application product offerings built on a technology stack of Oracle Fusion Middleware components and connected to Oracle Database. **Provisioning** is the process of installing, configuring, and deploying Oracle Fusion Applications product offerings and the supporting technology stack in an Oracle Fusion Applications environment. To prepare for provisioning, you need:

- A repository of installers required to provision a new applications environment.
- A framework of scripts, tools, and utilities to orchestrate the provisioning process.
- Oracle Database 11g 11.2.0.3 for applications transactional data.
- Oracle Identity Management 11g components to manage user identities.

The components installed, configured, and deployed during provisioning are:

- **Oracle Fusion Applications provisioning configurations:** The **product offerings** in a configuration are the highest-level collection of functionality that can be licensed and implemented.
- **Oracle Fusion Middleware components:** The technology stack that Oracle Fusion Applications product offerings are built on.
- **Oracle Business Intelligence components:** Oracle Transactional Business Intelligence is configured and deployed during provisioning. Installation and configuration requirements for additional components are documented in *Oracle Fusion Middleware Installation and Configuration Guide for Oracle Business Intelligence Applications*.

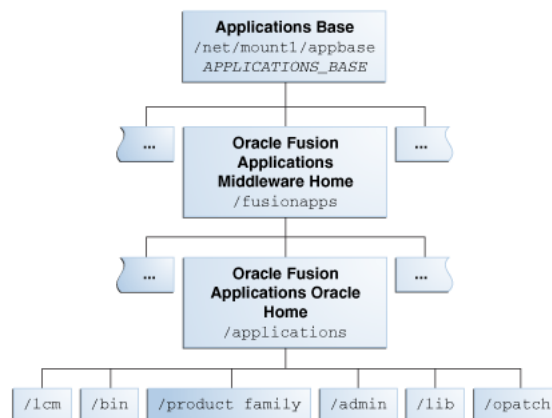
2.1 Oracle Fusion Applications Directory Structure

The top-level directory for the Oracle Fusion Applications binaries is the applications base. You specify a name for this directory at the time of provisioning. The base directory contains two mount points: `/net/mount1/appbase` (`APPLICATIONS_BASE`) for binaries that remain read-only after provisioning, and `/net/mount2` (`APPLICATIONS_CONFIG`) for instances that are configurable after provisioning.

Unless stated otherwise, a **home directory** may contain one or more Oracle Fusion Middleware homes or Oracle Fusion Applications homes. For a more information, see "Provisioned Oracle Fusion Applications Home Directories" in *Oracle Fusion Applications Administrator's Guide*.

The `APPLICATIONS_BASE/fusionapps/applications` directory is the Oracle Fusion Applications Oracle home. It contains subdirectories that are specific to Oracle Fusion Applications. For example, the `lcm` directory is the lifecycle management directory, which contains patching framework artifacts. The *product family* directory contains artifacts that are specific to a provisioning configuration.

Figure 1 Oracle Fusion Applications Oracle Home



2.2 Provisioning Roadmap

[Table 1](#) describes the order in which you need to perform provisioning tasks.

Table 1 Provisioning Process Flow

Task	Description
1. Verify system requirements and set up prerequisite components.	Ensure that your system meets certain requirements for the installation of Oracle Fusion Applications and Oracle Fusion Middleware components. See Section 4.1
2. Prepare your environment.	Your environment may require manual tasks to set certain parameters. See "Preparing Your Applications Environment" in <i>Oracle Fusion Applications Installation Guide</i> for details.
3. Download the Oracle Fusion Applications provisioning repository.	Download the repository from Oracle Software Delivery Cloud or Oracle Store and extract the files to the download directory. The repository includes the framework installer (faprov). See Section 4.2 .
4. Install the provisioning framework.	Run faprov to install the provisioning framework. See Section 4.3 .
5. Install Oracle Identity Management components.	You must install and configure these components and save the details to include in the response file. See Section 4.4 .
6. Install a transaction database.	Your new environment must connect to a previously installed Oracle Database. Install the database using the Provisioning Wizard or manually. See Section 4.5 and Section 4.6 . Run the Oracle Fusion Applications Repository Creation Utility to create schemas and tablespaces.
7. Create a response file.	Start the Provisioning Wizard and respond to the questions in the interview to create a response file. See Section 5.1 .
8. Provision a new environment.	Specify the location of the response file and run the Provisioning Wizard to install, configure, and deploy product offerings. You must run the wizard from the command line to install in a multiple-host environment. See Section 6.2 and Section 6.3 .
9. Complete the required postinstallation tasks.	The result of a successful installation is a fully operational applications environment. However, you may be asked to perform some manual tasks. See Section 6.4 .

3 Before You Begin

As you prepare to provision your new Oracle Fusion Applications environment, you should have made decisions about what topology is required, including the product offerings to install, port allocations, and the hosts you will configure.

You must determine the system requirements and Oracle Database requirements for your environment. For example, the requirements for a single-instance database used as a test system differ from those of a multiple-instance database used for production. You must also have determined access privileges for the DBA or system administrator who will be responsible for performing provisioning tasks. You must supply the directory locations, user names, and passwords associated with the prerequisite installations of Oracle Database and Oracle Identity Management components.

You can use this checklist as a guide for getting ready for provisioning.

Table 2 Provisioning Checklist

Information Needed	Notes	Resources
System requirements	Requirements for hardware, software, minimum disk space and memory, required system libraries, packages, and patches.	supported platforms documentation for Oracle Fusion Applications. See also <i>Oracle Fusion Applications release notes</i> .
Certified platforms	Supported on Linux x86-64, Microsoft Windows x64 (64-Bit), Oracle Solaris, and IBM AIX on POWER Systems (64-Bit).	supported platforms documentation for Oracle Fusion Applications. See also <i>Oracle Fusion Applications release notes</i> .

Table 2 (Cont.) Provisioning Checklist

Information Needed	Notes	Resources
Oracle Database configuration	Determine if you need a single- or multiple-instance database. Once installed, save the details for use when you create a response file.	Section 4.5 and Section 4.6
Oracle Identity Management configuration	Install the Identity Management components and save the details for use when creating a response file. Alternatively, create a properties file, which can supply default values during response file creation.	Section 4.4
Software licenses	Determine which product configurations you have licensed and where you want to download the provisioning repository of installers.	Oracle Software Delivery Cloud: http://edelivery.oracle.com Oracle Store: http://oracle.com
Type of web tier host	Determine if you want the web tier to be installed on the shared file system or on a host set up as a demilitarized zone.	"Setting Up a Demilitarized Zone (DMZ) for the Web Tier" in <i>Oracle Fusion Applications Installation Guide</i> .
Response file details	Provisioning configurations, Node Manager credentials, installation locations, database connections, schema passwords, host names, ports, and details for common components, such as web tier, virtual hosts, and web proxies.	Section 6.2
Functional setup	After provisioning, your functional experts must prepare individual offerings for use.	<i>Oracle Fusion Applications Common Implementation Guide</i>

3.1 Starting the Provisioning Wizard

Make a note of the commands necessary to start the Provisioning Wizard:

1. Set the `JAVA_HOME` environment variable to point to the JDK location in the provisioning repository, for example:

(UNIX)

```
export JAVA_HOME=repository_location/jdk6
export PATH=$JAVA_HOME/bin:$PATH
```

(AIX)

```
export JAVA_HOME=repository_location/jdk6
export PATH=$JAVA_HOME/bin:$PATH
export SKIP_ROOTPRE=TRUE
```

(Windows)

```
set JAVA_HOME=repository_location\jdk6
set PATH=%JAVA_HOME%\bin;%PATH%
```

2. Verify that the `LIBPATH` value is null.
3. Run the following command on the machine where you want the database to reside:

(UNIX)

```
cd framework_location/provisioning/bin
```

```
./provisioningWizard.sh  
(Windows)  
framework_location\provisioning\bin  
provisioningWizard.bat
```

4 Provisioning Prerequisites and System Requirements

This release of Oracle Fusion Applications relies on certified versions of supported platforms documentation for Oracle Fusion Applications for details about hardware and software, minimum disk space and memory requirements, required system libraries, packages, or patches, and minimum database requirements. Oracle Fusion Applications release notes may contain additional information.

4.1 Environment Setup Tasks

You may also need to perform some environment setup tasks before you begin. See "Preparing Your Applications Environment" in *Oracle Fusion Applications Installation Guide*.

4.2 Creating the Provisioning Repository

Go to <http://edelivery.oracle.com/> or the Oracle Store at <http://oracle.com> and select the Product Media Pack you have licensed. Download the provisioning repository of installers to a location of your choice. The repository contains all the installers required for provisioning a new environment.

Download the repository, for example, with the Oracle Software Delivery Cloud Portal, as follows:

1. Complete the Export Validation process by entering basic identification information on the online form.
2. On the Media Pack Search page, specify the product pack and platform to identify the media pack you want to download. If you do not know the name of the product pack, you can search for it using the license list.
3. Choose the appropriate media pack from the search results and download the provisioning repository (in zipped format). You can download the repository to a location of your choice.
4. Extract the contents of all the zipped files to the same target directory. The directory must be on a networked drive or shared disk so that it will be accessible to all the hosts in your new environment. By default, the unzip process places the installers in *repository_location/installers*.

Note: Be sure to create the repository location name so that unzipping the files does not run into the Windows MAX_PATH limitation.

4.3 Installing the Provisioning Framework

The Oracle Fusion Applications Provisioning installer (*faprov*) is delivered with the other installers in the provisioning repository. It installs the provisioning framework, which includes the Provisioning Wizard, a command line interface, and utilities, files, templates, build scripts, and other utilities required for provisioning.

Note:

- Run the Provisioning Wizard on the primordial host to create a provisioning response file. If you run the Provisioning Wizard on a non-primordial host to create a provisioning response file, the validation assumes that the host is the primordial host. Ensure that you interpret the validation errors correctly as they may not be applicable to the non-primordial host.
 - When provisioning a new environment, you should only run the Provisioning Wizard on the primordial host and the Provisioning Command-line Interface on non-primordial hosts.
-
-

Run `faprov` from the directory where you downloaded the provisioning repository, for example, `repository_location/installers/faprov/Disk1`.

1. Set the `JAVA_HOME` environment variable to point to the JDK location in the provisioning repository. For example:

(UNIX)

```
export JAVA_HOME=repository_location/jdk6
export PATH=$JAVA_HOME/bin:$PATH
```

(Windows)

```
set JAVA_HOME=repository_location\jdk6
set PATH=%JAVA_HOME%\bin;%PATH%
```

2. Use this command:

(UNIX) `runInstaller`

(Windows) `setup.exe`

The installer creates a directory (`.../provisioning`) for the framework components in any location you specify, for example, `framework_location/provisioning`.

4.3.1 Provisioning Installer Screens and Instructions

To install the provisioning framework:

1. **Specify Inventory Directory Screen (UNIX)**

If this is your first Oracle installation on this host, you must specify the location of the **Inventory Directory**. It is used by the installer to keep track of all Oracle products installed on this host. In the **Operating System Group Name** field, select the group whose members will be granted access to the inventory directory. All members of this group can install products on this host. Click **OK** to continue.

The **Inventory Location Confirmation** dialog prompts you to run the `inventory_directory/createCentralInventory.sh` script as root to create the `/etc/oraInst.loc` file. This file is a pointer to the central inventory and must be present for silent installations. It contains two lines:

```
inventory_loc=path_to_central_inventory
inst_group=install_group
```

The standard location for this file is `/etc/oraInst.loc`, but it can be created anywhere. The default location varies by platform. If you create it in a directory

other than /etc, you must include the `-invPtrLoc` argument and enter the location of the inventory when you run the `provisioningWizard` or the `runProvisioning` script.

If you do not have `root` access on this host but want to continue with the installation, select **Continue installation with local inventory**. Or, click **OK** to continue.

2. Welcome Screen

Click **Next**.

3. Prerequisite Checks Screen

Click **Retry** if a check fails. Click **Continue** to ignore warning messages. Click **Abort** to stop the installation. Click **Next** when checks are complete.

4. Specify Installation Location Screen

Oracle Home Directory: Specify the location for installing the provisioning framework. This is where the Provisioning Wizard and the provisioning start command are stored. You can choose any location, but it must be on a shared disk accessible to all hosts in your environment. The directory must initially be empty.

5. Installation Summary Screen

Click **Save** to create a text (response) file to use for a reinstall. Click **Install**.

6. Installation Progress Screen

Click **Next** when the progress bar shows 100% complete.

7. Installation Complete Screen

Click **Save** to create a text file with the details of the installation. Click **Finish**.

To to set up and configure the web tier on a host that is not accessible to the shared storage, see "Setting Up a Demilitarized Zone (DMZ) for the Web Tier" in *Oracle Fusion Applications Installation Guide*.

4.4 Installing Oracle Identity Management Components

Before you create a response file, you must install and configure the following Oracle Identity Management components *specifically* for use with Oracle Fusion Applications:

- Two instances of Oracle Database 11.2.0.3. One for Identity Store and one for Policy Store.
- Oracle Internet Directory 11g (OID)
- Oracle Virtual Directory 11g (OVD)
- Oracle Identity Manager 11g Release 1 (OIM)
- Oracle Access Manager 11g (OAM)

See *Oracle Fusion Middleware Enterprise Deployment Guide for Oracle Identity Management (Oracle Fusion Applications Edition)* for installation instructions. Keep a record of the configuration details. You must supply them to the Provisioning Wizard when you create your response file.

The installation and configuration of the identity management components creates the properties file (for example, `idmDomainConfig.param`). The `idmConfigTool` utility (located in `IAM_ORACLE_HOME/idmtools/bin`) creates the file in `IDM_ORACLE_HOME/idmtools/bin`. If this directory is in a shared location, you can indicate that

location to the Provisioning Wizard on the **IDM Properties File** screen when you create the response file. If it is not on a shared drive, copy the file to an accessible location and supply that path on the **IDM Properties File** screen.

4.5 Installing and Configuring a Transaction Database

You must install Oracle Database Enterprise Edition before you create a response file. The database must be created using the database template that is shipped with Oracle Fusion Applications software. The template contains the database structure and features, but is not seeded. It is generic for use across platforms.

For a small-scale, single-node database, use the **Install an Applications Transaction Database** option in the Provisioning Wizard. Or, you can install the database manually if you are creating a production-scale, multiple-node database. Oracle Fusion Applications also supports Oracle Real Application Clusters Database (Oracle RAC). See "Manually Installing Oracle Database Or Oracle RAC" in *Oracle Fusion Applications Installation Guide* and *Oracle Database Installation Guide* for your platform.

4.5.1 System Requirements

Oracle Database installations must meet specifications for supported platforms documentation for Oracle Fusion Applications. The Provisioning Wizard performs prerequisite validation checks to ensure that those requirements are met. Minimum configuration parameters and associated links are listed in "Database Installation Requirements" in *Oracle Fusion Applications Installation Guide*.

4.5.2 Database Installation Screens and Instructions

Note the following requirements when installing a transaction database on a Unix platform:

- Verify that the length of the PATH environment variable is less than 900 characters. Use this command to check the character count:

```
env | grep ^PATH= | wc -m
```

See [Section 3.1](#) to start the Provisioning Wizard. Then, complete these fields:

1. **Welcome Screen.** No action is necessary. Click **Next**.
2. **Specify Central Inventory Directory.** If this screen appears, see "Wizard Interview Screens and Instructions" in the *Oracle Fusion Applications Installation Guide* for more information.
3. **Installation Options Screen**
Select **Install an Applications Transaction Database**. Click **Next**.
4. **Specify Security Updates Screen**
 - **Email:** Specify your email address to receive security-related notifications.
 - **I wish to receive security updates via My Oracle Support:** Enter your **My Oracle Support Password** to have messages posted to your account.
5. **Database Install Configuration Screen**
 - **Database Listener Port:** The port number designated for the database server. The default port for Oracle Database is 1521.
 - **Installers Directory Location:** Enter the path to the *repository_location* directory you created when you downloaded the provisioning repository. For

Windows, the location must be a symbolically linked directory. See "Set Up Server and Shared Area Permissions" in *Oracle Fusion Applications Installation Guide* for additional details. Note that a symbolic link is not necessary if the repository and the database are on the same node.

- **Oracle Base:** The top-level directory for Oracle software installations.
- **Software Location:** The Oracle home directory path where the data files should reside. The path must not contain spaces.
- **Database File Location:** The path to the .dbf, .ctl, and .log files.
- **OSDBA Group:** The operating system group that the database administrator is a member of. Displayed only for UNIX platforms.
- **Global Database Name:** A name to distinguish this database from other database instances running on the same host. Use the format *database name* or *database name.domain name*. This is the database service name.
- **Administrative Password:** Enter a valid password. Retype it to **Confirm**.

6. Prerequisite Checks Screen

Lists each prerequisite check performed and its status. Click **x** or **Restricted** (symbol) to display failure messages. Click the **Log** icon for details.

Fix any issues, and click **Retry** to run the validation again. When it runs with no errors, click **Next**.

7. Summary Screen

Click **Save** to create a text file of configuration details. Note the file name. Click **Install**.

8. Database Installation Progress Screen

The wizard performs the database installation in phases:

- **Installation:** Runs the database installer to install the software.
- **Preconfigure:** Applies patches to the installed database. Patches are located in *repository_location/installers/database/patch*.
- **Configure:** Creates services used to connect to the database and applies the database template to set system parameters.
- **Postconfigure:** Performs necessary postconfigure steps.
- **Startup:** Starts installed components.
- **Validation:** Connects to the database to verify the integrity of the installation.

A message appears after the installation phase is complete directing you to run `root.sh`. Follow this instruction and click **OK** to continue the installation.

The central log file location is displayed below the **Progress** bar. Click a **Log** icon to view phase log files. Click **Retry** if a failure occurs. If a recovery action is necessary, see "Troubleshooting for Database Installations" in *Oracle Fusion Applications Installation Guide*.

9. Installation Complete Screen

Click **Save** to create a details file. Use this record to supply database details required in the response file. Click **Close**. See *Oracle Fusion Applications Installation Guide* for postinstallation information.

4.5.3 Completing Database Patch Postinstallation Tasks

After the Provisioning Wizard installs the database, the required database patches are automatically applied and the database is started. However, you must check the patch readme files to determine whether you need to perform postinstallation tasks manually as required by the database patches. Go to the *repository_location/installers/database/patch* directory to find the readme files. Any manual steps associated with the patches are typically located in a section called "Post-Install Instructions" or "Postinstallation."

You can aggregate all the readme files by running this script, depending on which database version you installed.

If you installed 11.2.0.3 database manually:

```
cat 'find repository_location/installers/database/patch/ -name  
"README.txt"' >> repository_location/PATCHES_README_ALL.txt
```

Use a text editor of your choice to view PATCHES_README_ALL.txt.

4.6 Creating Schemas and Tablespaces

An installation of Oracle Fusion Applications requires applications-specific schemas and tablespaces to be present in the database prior to provisioning. The Oracle Fusion Applications Repository Creation Utility (Applications RCU) manages this process. It is available on Linux x86-64 and Microsoft Windows x64 (64-Bit) platforms.

The Applications RCU performs these actions:

- Creates Oracle Fusion Middleware schema and tablespace users and defines tables, views, and other artifacts owned by the user.
- Creates empty tablespaces for Oracle Fusion Applications components, and creates the schema owners. The owners do not own any tables or data initially. For a complete list of schema owners, see "Schema Owners" in *Oracle Fusion Applications Installation Guide*.
- Imports default seed data values for schema users using Oracle Data Pump. Dump files are included in the provisioning framework.

Tables created as part of an XML schema registration are enabled for hierarchy by default — repository resources can be stored in the tables. If resources are created, updated, or deleted based on the registered XML schema, the corresponding XMLtype rows are also inserted, updated, or deleted.

Tables are disabled for the hierarchy before they are exported in dumpfile mode because some special features affecting the storing of resources may not be meaningful in the target database. Disabling the hierarchy drops some triggers so that they do not show up in the target database after the import of the dump files.

4.6.1 Oracle Data Pump

Oracle Data Pump provides high-speed, parallel, bulk data and metadata movement of Oracle Database contents. The Data Pump dump files (.dmp) that contain the table definitions are delivered as part of the provisioning framework installation to make them available to the Applications RCU.

When using Oracle Data Pump to import data and metadata for an Oracle RAC installation, note that the directory that holds the dump files must be accessible from all Oracle RAC nodes. In addition, keep the following considerations in mind:

- To use Data Pump or external tables in an Oracle RAC configuration, you must ensure that the directory object path is on a cluster-wide file system.

The directory object must point to shared physical storage that is visible to, and accessible from, all instances where Data Pump and/or external tables processes may run.

- The default Data Pump behavior is that worker processes can run on any instance in an Oracle RAC configuration. Therefore, workers on those Oracle RAC instances must have physical access to the location defined by the directory object, such as shared storage media.
- Under certain circumstances, Data Pump uses parallel query slaves to load or unload data. In an Oracle RAC environment, Data Pump does not control where these slaves run, and they may run on other instances in the Oracle RAC, regardless of what is specified for `CLUSTER` and `SERVICE_NAME` for the Data Pump job. Controls for parallel query operations are independent of Data Pump. When parallel query slaves run on other instances as part of a Data Pump job, they also require access to the physical storage of the dump file set.

4.6.2 Running the Applications RCU Wizard

In order for Applications RCU to work properly, you must locate three files and place their contents in specific locations to make them available to Applications RCU:

- `rcuHome_fusionapps_dbinstall.zip` – contains the Applications RCU components needed to run the utility.
- `export_fusionapps_dbinstall.zip` – contains the applications data files that the Applications RCU supplies to the database.
- `otbi.dmp` – contains the Business Intelligence (BI) data that the Applications RCU supplies to the database.

See "Getting Ready" in *Oracle Fusion Applications Installation Guide* for details about making these files available. Once you have completed the file-related preparation tasks, run the Applications RCU as follows:

1. From `APP_RCU_HOME/bin` (Linux) or `APP_RCU_HOME\bin` (Windows) use:

(UNIX) `./rcu`

(Windows) `rcu.bat`

2. **Welcome** Screen. No action is necessary. Click **Next**.

3. **Create Repository** Screen

Select **Create** to create and load schemas. Click **Next**. See "Schema Owners" in *Oracle Fusion Applications Installation Guide* for a list of schemas and owners.

4. **Database Connection Details** Screen

- **Database Type:** Select the database type.
- **Host Name:** Enter the name of the server where the database is running, for example, `myhost.mydomain.com`. For Oracle RAC, specify the VIP name or one of the node names.
- **Port:** The database port number. The default port number is 1521.
- **Service Name:** The global database name. If you do not know it, see the `SERVICE_NAMES` parameter in the database initialization file. Or, use the

global name in DB_NAME and DB_DOMAIN. For Oracle RAC, specify the service name of one of the nodes, written as `examplehost.exampledomain.com`.

- **User Name:** The user with DBA or SYSDBA privileges. The default name with SYSDBA privileges is `SYS`.
- **Password:** Enter the password you previously set up for the database user.
- **Role:** Select Normal or SYSDBA. All schemas for Oracle Database require SYSDBA. For Oracle Internet Directory database schemas, use `SYS` and SYSDBA.

5. Select Components Screen

The Applications RCU retrieves the names of all Oracle Fusion Middleware and Oracle Fusion Applications components and includes them in the prerequisite checking by default. You cannot change the schema owner names. Click **Next** to start prerequisite checking. When it runs with no errors, click **OK**. Click **Next**.

6. Schema Passwords Screen

Create passwords for main and additional (auxiliary) schemas. The passwords must be greater than seven characters.

- **Use same passwords for all schemas:** Specify a single password for both schemas. Retype to **Confirm**.
- **Use main schema passwords for auxiliary schemas:** Specify a different password to use for each main schema and for the associated auxiliary schema. Only the main schemas are visible. Retype the password to **Confirm**.
- **Specify different passwords for all schemas:** Specify a unique password for each main schema and its auxiliary schema. Retype to **Confirm**.

7. Custom Variables Screen

Enter the location of the platform-specific custom directory objects.

Fusion Applications

- **FUSIONAPPS_DBINSTALL_DP_DIR:** The directory on the database server where you unzipped `export_fusionapps_dbinstall.zip` and copied the `otbi.dmp` file.
- **APPLCP_FILE_DIR:** Used by Oracle Enterprise Scheduler to store the log and output files. Must be valid on the database server with read-write permissions to the database owner. For Oracle RAC, must point to a location that is shared across all nodes.
- **APPLLOG_DIR:** Location of the PL/SQL log files, from Oracle Fusion Applications PL/SQL procedures, on the database server. Ensure that the database owner has read-write privileges.
- **OBIEE Backup Directory:** Location of the Oracle Business Intelligence Enterprise Edition dump files. These files are used for enabling a restart action.

Secure Enterprise Search

- **Do you have Advanced Compression Option (ACO) License? Yes (Y) or No (N):** Default is No.
- **Do you have Oracle Partitioning option License? Yes (Y) or No (N):** Default is No.

Master and Work Repository

Note: The default values are the ONLY valid values. If you change any of these values, the ODI-related provisioning process will not work.

- **Master Repository ID:** Default = 501
- **Supervisor Password:** Default = None. You must enter the same password you set up as ODI SUPERVISOR in Applications RCU.
- **Work Repository Type:** (D) Development or (R). Default = D
- **Work Repository ID:** Default = 501
- **Work Repository Name:** Default = FUSIONAPPS_WREP
- **Work Repository Password:** Default = None. You must enter the same password set up as ODI SUPERVISOR in Applications RCU.

Oracle Transactional BI

- Directory on the database server where Oracle Transactional Business Intelligence import and export files are stored.

Activity Graph and Analytics

- **Install Analytics with Partitioning (Y/N):** Default is N.

8. Map Tablespaces Screen

To start the tablespace creation process without making changes, click **Next**. Click **OK** on the information screen. Click **OK** to continue. Click **OK** when the tablespaces are completed. Or, view, add, change or delete tablespaces before you start the creation process.

Default tablespace mappings

Click a cell in the Default Tablespace and Temp columns to see default mappings:

- FUSION_TEMP: For temporary tables.
- FUSION_DYN_TS: For dynamically generated PL/SQL statements.
- FUSION_IAS_ORASDPM_AQ: For advanced queuing JMS data and indexes.
- FUSION_TS_AQ: For advanced queuing JMS data and indexes.
- FUSION_TS_DQ: For data quality data and indexes.
- FUSION_TS_TOOLS: Associated with Oracle Fusion Middleware data and indexes.
- FUSION_TS_QUEUES: For advanced queuing and dependent tables and indexes.
- FUSION_TX_TX_DATA: For transactional data.
- FUSION_TS_TX_IDX: Indexes for transactional data.
- FUSION_TS_SEED: For seed or reference data and indexes.
- FUSION_TS_INTERFACE: For temporary or interface data and indexes.
- FUSION_TS_SUMMARY: For summary management objects.
- FUSION_TS_NOLOGGING: For materialized views and other temporary or scratch pad objects.
- FUSION_TS_ARCHIVE: For tables and objects that are no longer used.

- **FUSION_TS_MEDIA:** Contains multimedia objects such as text, video, and graphics.

For tablespaces to be created, the datafile defaults to %DATAFILE_LOCATION%\%sid%\%tablespace_name%.dbf. You can select from existing tablespaces if they are already defined in the database.

Changing Default and Temporary Tablespace

- Select the tablespace name in the Default Tablespace column and select the tablespace name you want to use from the list. Components can use any number of tablespaces.
- Repeat the steps to change a temporary tablespace by selecting a tablespace name from the Temp Tablespace list.

Viewing and Changing Additional Tablespaces

Some components have additional tablespaces associated with their schemas. If so, the **Additional Tablespaces** button is active. Click it to view or modify additional tablespaces. Click the Tablespace Name column and select a tablespace. Click **OK**.

Managing Tablespaces and Datafiles

Only tablespaces that have not yet been created can be modified or removed. Click **Manage Tablespaces** to begin. Tablespaces that are not used, will not be created.

To edit a tablespace, select it from the navigation tree. Complete the following:

- **Name:** Specify a new tablespace name.
- **Type:** Indicate whether this tablespace is temporary or permanent.
- **Block Size:** The block size (in kilobytes) to be used for data retrieval.
- **Storage Type:** Select **Use Bigfile Tablespace** if you have single large files. Select **Use Automatic Segment Space Management** to use bitmaps to manage free space within segments.

Click **Add** for a new tablespace and specify the same details as for modifying one. Select a tablespace and click **Remove** to prevent it from being created.

Manage Datafiles

Click the **Plus (+)** icon and complete the **Add Datafile** details:

- **File Name:** The name of the datafile.
- **File Directory:** The location where the datafile will reside.
- **Size:** The initial size of the datafile.
- **Automatically extend datafile when full (AUTOEXTEND):** Select this option to extend the datafile size automatically when it becomes full. In the **Increment** field, select the size by which the datafile should be increased.
- To limit maximum size, specify a value in the **Maximum Size** field.

Select a datafile and click the **pencil** icon. Modify the information on the **Edit Datafile** screen. Select a datafile and click the **X** icon to delete the file.

Edit a Datafile Size

To change the size of a tablespace:

1. Click a tablespace name to select it.

2. Click the **pencil** icon to bring up the **Edit Datafile** screen.
3. In the **Size** field, enter a new file size. For tablespaces with multiple data files, such as FUSION_TS_TX_DATA, you may delete the additional data files using the Remove Data File icon (X). For a list of optimum file sizes, see "Tablespace Optimal and OOTB Sizes" in *Oracle Fusion Applications Installation Guide*.
4. Click **OK** when you have configured all the tablespaces to return to the Map Tablespaces screen.

Click **OK** to dismiss the screen.

9. Summary Screen

Click **Create**. The **Repository Creation Utility – Create** screen appears. All errors are displayed. Fix the issues and click **Next**. Creation takes 1 to 10 minutes for each schema. It may take an additional half hour or more to finish the entire process.

After the schemas are created with no errors, click **OK**.

10. Completion Summary Screen

Component log files are created and stored along with the main Applications RCU log file (rcu.log) in (Linux) `APP_RCU_HOME/rcu/log/logdir.date_timestamp` or (Windows) `APP_RCU_HOME\rcu\log\logdir.date_timestamp`. The custom_comp_create_tbs.log file lists the PL/SQL statements that created the tablespaces.

In the fusionapps schema, three log files are created: fusion.log (lists PL/SQL), fusionapps_runimport.log (Oracle Data Pump import log), and fusionapps_verify.log (verification errors).

If errors are encountered for the **Create** operation, or for any component, the **Cleanup for failed components** check box is active and is selected by default. Applications RCU performs cleanup operations for the component that failed. See "Troubleshooting for Database Installations" in *Oracle Fusion Applications Installation Guide*.

5 Creating a Response File

To create a response file, use the Provisioning Wizard to specify installation, configuration, and deployment details for product offerings. For full details associated with creating a response file, see *Oracle Fusion Applications Installation Guide*.

Note: The wizard warns if it cannot connect to any of the hosts specified in the response file or if any of the passwords are not valid. You can ignore the warning if it represents an exception. However, you cannot successfully run provisioning until all validations have passed.

5.1 Create Response File Interview Screens and Instructions

See [Section 3.1](#) for the wizard start commands. During response file creation, you can click **Save** to create a partial response file to complete later.

1. **Welcome** Screen. No action is necessary. Click **Next**.

2. **Specify Central Inventory Directory.** If this screen appears, see "Wizard Interview Screens and Instructions" in the *Oracle Fusion Applications Installation Guide* for more information.

3. **Installation Options Screen**

Select **Create a New Applications Environment Response File**. Click **Next**.

4. **Specify Security Updates Screen**

- **Email:** Enter your email address to receive security updates by email.
- **I wish to receive security updates via My Oracle Support:** Enter your **My Oracle Support Password** to have messages posted to your account.

5. **Provisioning Configurations Screen**

Choose individual product offerings within a provisioning configuration, or an entire configuration. Provisioning starts the Managed Servers only for the offerings you select. Because inter-dependent details exist for the entire configuration, you can later "turn on" this additional functionality using the Oracle Fusion Applications Functional Setup Manager to start the associated Managed Servers.

Click **Details** to see the number of servers required for each offering. Once you click **Next**, you cannot change the product configuration. If you need to make changes, click **Cancel**, open a new wizard session, and create a new response file.

6. **Response File Description Screen (optional)**

Add descriptive information to this response file. The description is not associated in any way with the executable response file, or the summary file, that the wizard saves when you click **Finish** on the **Summary** screen.

7. **Installation Location Screen**

Provide credentials for the Node Manager and supply the location of the directories required for installation and configuration actions.

Node Manager Credentials

- **User Name:** Specify a user name for the Node Manager role.
- **Password:** Specify a password for the Node Manager and retype it in the **Confirm Password** field.

Provide locations of various directories that the administrator needs access to.

Installation and Configuration

- **Installers Directory Location:** Enter the path to the *repository_location* directory you created when you downloaded the provisioning repository. For Windows, the location must be a symbolically linked directory. See "Set Up Server and Shared Area Permissions" in *Oracle Fusion Applications Installation Guide* for additional details. Note that a symbolic link is not necessary if the repository and the database are on the same node.
- **Applications Base:** Enter the directory path to the applications base directory. The top-level directory for the Oracle Fusion Applications binaries is the applications base and is referred to as the *APPLICATIONS_BASE* directory (*net/mount1/appbase*). During creation of a provisioning plan in a Unix environment, ensure that the absolute file path of the *APPLICATIONS_BASE* directory does not exceed 59 characters before provisioning a new application environment.

In a Windows environment, this name cannot exceed eight characters, and must be a symbolically linked directory. See "Set Up the Server and the Shared Area Permissions" in *Oracle Fusion Applications Installation Guide*.

- **Applications Configuration:** This directory is automatically populated based on the value you specify in the **Applications Base** field. It is the path to the directory where the configuration files for the domain will be written. You can specify a different location of your choice instead of using the location automatically populated by the UI. For Windows, the location must be a symbolically linked directory. See "Set Up the Server and the Shared Area Permissions" in *Oracle Fusion Applications Installation Guide*.
- **Enable Local Applications Configuration:** Select this check box to run the Managed Servers from a non-networked (local) disk on the host, visible only to the processes running on that host. If you enable this option, the wizard copies the domain configuration from the shared location and places it on the local disk you specify. This configures all Managed Servers to run from the non-networked location.
- **Local Applications Configuration:** Specify the location for the local domain directory you want to set up. This field is required if you selected **Enable Local Applications Configuration**. The specified directory must exist and initially be empty on every host that participates in the domain topology. You must ensure the directory has sufficient disk space. During the Preverify phase, Provisioning displays an error if the local configuration directory does not have sufficient disk space.

Middleware Dependencies

- **Font Directory:** Appears only if you have selected Oracle Sales, Oracle Marketing, or Oracle Financials offerings. Enter the directory where the TrueType fonts are installed. The location varies on different operating systems, but is typically found here:
 - **Microsoft Windows x64 (64-Bit):** C : \WINDOWS\Fonts
 - **Linux x86-64:** /usr/X11R6/lib/X11/fonts/TTF
 - **Oracle Solaris:** /usr/X11R6/lib/X11/fonts/TrueType
 - **IBM AIX on POWER Systems (64-Bit):**
/usr/X11R6/lib/X11/fonts/TrueType

Some systems may not have TrueType fonts installed. If you cannot locate the fonts on your system, verify that they have been installed. In addition, you can use the fonts directory shipped as part of the JRE installed in the repository. Regardless of which path you specify, you must have access to .ttf (.TTF) files.

Oracle Business Intelligence Repository Password

RPD Password: Specify and **Confirm** a password to allow access to the metadata repository (RPD) for both Oracle Business Intelligence Applications and Oracle Transactional Business Intelligence. The password must be between 8 and 30 characters and contain at least one digit. It can include letters, numbers, pound sign (#), dollar sign (\$), or underscore (_). If you want to include two consecutive dollar signs (\$\$) in the RPD password, enter one additional dollar sign (\$) as the escape character before the second dollar sign in the password. This means you need to enter three dollar signs (\$\$\$) for this field in the Provisioning Wizard to indicate two consecutive dollar signs.

In addition, if you are provisioning an environment that is pointed to an existing seeded identity management infrastructure, the RPD password must match the one that you specified when identity management was seeded. Provisioning sets up this password, but does *not* actually access the repository.

If the environment created is Windows-based, the wizard prompts for:

- **Windows Domain\Windows User Name:** Specify a user name to use for running provisioning.
- **Windows Domain Password:** Specify a password for running provisioning. Retype the password to **Confirm** it.

8. Port Allocation Screen

Accept the default values or set custom values for the **Applications Base Port**. High and low ranges are assigned to the **Application Domain Port Ranges**. The default allotment is 399. Each range is sequential, in ascending order.

Ports listed under **Other Ports** are not derived from the Base Port value, but use customized port values. See "Port Allocation" in *Oracle Fusion Applications Installation Guide* for validation rules.

9. Database Configuration Screen

Enter the database parameters you established when you installed Oracle Database. The wizard validates whether the database you installed is a single instance of Oracle Database or Oracle Real Application Clusters (RAC). If a **Single Instance Database**, enter:

- **User Name (SYSDBA Role):** The user name of the `sysdba` role. This user name is used to upgrade schemas during the configuration phase. Note that the `sysdba` fields are not validated, so ensure that you enter the correct values.
- **Password:** The password of the `sysdba` role.
- **Host Name:** The name of the host where the database is installed.
- **Port:** The listening port for the database.
- **Service Name:** Global database name for the database that you installed. Distinguishes this database instance from other instances on the same host.

If you have installed Oracle RAC, select **Real Application Clusters Database** and enter the **Service Name** you specified when you installed the database. **Add** creates a row for new instances. **Remove** deletes a row. Enter the following values:

- **User Name (SYSDBA Role):** The user name of the `sysdba` role. This user name is used to upgrade schemas during the configuration phase. Note that the `sysdba` fields are not validated, so ensure that you enter the correct values.
- **Password:** The password of the `sysdba` role.
- **Host Name:** The name of the host for each Oracle RAC instance.
- **Port:** The listening port of the database.
- **Instance Name:** Name of the Oracle RAC instance for managing this database.

10. Schema Passwords Screen

Select an option and enter the schema passwords you set up for the database:

- **Use the same password for all accounts:** Select this option if you set up a single password for all accounts. Enter the value in the **Password** field.
- **Use a different password for each account:** Select this option if you set up individual passwords for each **Account**. Enter values in the **Password** field.

11. ODI Password Configuration Screen.

Enter the ODI Supervisor Password you created when you installed Oracle Data Integrator. This screen does not appear for Oracle Financials products.

12. Domain Topology Screen

Choose an option that represents the hosts in your environment to determine the domain-related screens to follow. Hosts must use the same operating system. You cannot install "domain1" on Windows and "domain2" on Linux.

- **One host for all domains:** Specify the **Host Name** to provision all components on a single host. The wizard continues the interview at the **Web Tier Configuration** screen when you click **Next**.
- **One host per domain:** Specify a **Host Name** for each of the domains to be provisioned. Provisioning installs and configures the Managed Servers for each **Application Domain** on the host that you specify. The wizard continues the interview at the **Web Tier Configuration** screen when you click **Next**.
- **One host per application and middleware component:** Specify a host for each application and middleware component individually. The wizard displays the **Common Domain** screen when you click **Next**, and includes all domain-specific screens in the interview.

If you choose the last option, you cannot change the topology selections once you click **Next**. You must click **Cancel**, open a new wizard session, and create a new response file.

13. Common Domain Screen and *Product_Family* Domain Screens

Note: These screens appear only if you select the **One host per application and middleware component** option on the **Domain Topology Configuration** screen.

All hosts must have the same operating system and a common mount point for shared network storage. The Admin Server host is the default for all servers.

- **Host Name:** Specify the host where you want to install and configure the Managed Servers for this domain.
- **Port:** Port for internal communications only. The wizard assigns values based on the port ranges (**System Port Allocation** screen). You can edit values, but they must be unique within the domain and fall with the range specified.
- **UCM Intradoc Server Port:** Port where the Universal Content Management Server listens. Used only in the Common domain.
- **InBound Refinery Server Port:** Port used for calling top-level services.

14. Business Intelligence Configuration Screen

Oracle Business Intelligence products are integrated with Oracle Fusion Applications and include: Oracle Business Intelligence Enterprise Edition, Oracle Business Intelligence Applications, Oracle Transactional Business Intelligence, Oracle Essbase, Oracle Business Intelligence Publisher, and Oracle Real-Time Decisions.

Enter the **Host** for these products. Provisioning creates the **RPD** password you specified on the **Installation Location** screen and makes it available for accessing the metadata repository in your new environment.

15. Web Tier Configuration Screen

Configure Oracle HTTP Server and choose a virtual host type.

Web Tier

- **Install Web Tier in DMZ:** Select this option if you set up a separate host for web tier installation as a demilitarized zone (DMZ). This host does not have access to the shared file system. It cannot be used for any other host deployed, regardless of domain. See "Setting Up a Demilitarized Zone (DMZ) for the Web Tier" in *Oracle Fusion Applications Installation Guide*.
- **Host:** Enter the name of the host where Oracle HTTP Server will be installed and configured.
- **Virtual Host Mode:** Select one of the following:
 - **IP Based:** Created on the basis of an IP or IP:host combination (default).
 - **Name Based:** Create new DNS entries, such as `fin.example.com` and `crm.example.com` to use as virtual hosts.
 - **Port Based:** Created based on the internal and external port for each domain.
- **Domain Name:** Specify a domain name (using the format *my.example.com*) to configure the domain in which Oracle Fusion Applications will receive requests. This value is also used as the default domain name for name-based virtual hosts.
- **HTTP Port:** The default port for the web tier. Should not require operating system administrator privileges.
- **HTTPS (SSL) Port:** Secure port for the web tier. Should not require operating system administrator privileges.

SMTP Server

- **Host:** Specify the host for email marketing. This field appears only if you selected the Oracle Fusion Customer Relationship Management offering.
- **Port:** Default port for the SMTP server.

16. Virtual Hosts Configuration Screen

Based on the **Web Tier Configuration** option, specify values for:

IP Based:

- **Internal Name:** The host name or IP address where the web tier listens on the internal virtual host for this domain.
- **Internal Port:** The port for this internal virtual host. Should be visible only from inside the firewall.
- **External Name:** The host name or IP address for the external virtual host for this domain or middleware dependency. The host:port should be visible from outside the firewall.
- **External Port:** The port for this external virtual host. The host:port should be visible from outside the firewall.

Name Based:

- **Internal.Name:** DNS name for this internal virtual host, for example, `fin-internal`.
- **External.Name:** DNS name for this external virtual host, for example, `fin`.

Port Based:

- **Internal Port:** The port that is visible from inside the firewall.
- **External Port:** The port that is visible from outside the firewall.

17. Load Balancer Configuration Screen

To take advantage of a load balancing configuration, check **Load Balancing Enabled** and specify:

- **Internal Load Balancer Configuration:** The host and port for the internal Virtual IP (VIP).
- **External Load Balancer Configuration:** The host and port of the external Virtual IP (VIP). It must have a publicly available address to be usable.

18. Web Proxy Configuration Screen

Create **Proxy Settings** to enable Internet connections through a proxy server:

- **Enable Web Proxy:** Select to enable proxy-related values to set up access to the Internet. **Note:** If you are a CRM customer and have a web proxy for external HTTP(S) traffic, you must select **Enable Web Proxy** and specify your web proxy configuration.
- **Web Proxy Host:** Enter the name of the host where the proxy server is installed.
- **Web Proxy Port:** The listening port assigned to the proxy server.
- **Enable Secure Web Proxy:** Select to have the proxy server SSL-enabled. If you select this check box, the **Secure Web Proxy Host** and **Secure Web Proxy Port** fields become mandatory.
- **Secure Web Proxy Host:** Enter the SSL host used for secure communications.
- **Secure Web Proxy Port:** Enter the SSL port used for internal communications.
- **No Proxy Hosts:** Defaults to hosts that are connected directly. If there are multiple hosts, they are listed and separated by a vertical bar (|). You can use a wildcard character (*) to specify hosts that should be bypassed. For example, `*.example.com` would bypass all hosts whose name ends with `.example.com`.
- **Proxy Server Requires Authentication:** To enable authentication for the proxy server, select this option.
- **User Name:** Enter the user name that you set up for accessing the proxy server.
- **Password:** Enter the password that you set up for accessing the proxy server.

19. IDM Properties File Screen

Select the IDM Properties file to load IDM configuration data. After you select the file, you can review the content and decide if you want to proceed with this file.

WARNING: You can review the file and select a different file if required on this screen. You cannot select an IDM properties file after you click Next, as the screen will display read-only fields.

- **Do not load IDM Configuration from IDM Properties file:** Select this option if you do not want to load the IDM configuration data from the IDM properties file.
- **Load IDM Configuration from IDM Properties file:** Select this check box if you want the values on the **Identity Management Configuration** screen and the **Access and Policy Management** screen to default to the values in the IDM Properties file. See "Creating a Properties File" in *Oracle Fusion Applications Installation Guide* for details.
- **IDM Properties file:** Enter the location of the IDM properties file.
- **IDM Properties file contents:** If you have selected a valid IDM properties file, the contents will be displayed. This field is read-only and cannot be modified.

Click **Next** to continue.

20. Identity Management Configuration Screen

Provisioning loads roles, policies, and applications IDs that you created during the Oracle Identity Management installation. To share the identity management environment across multiple Oracle Fusion Applications installations and make policies and roles accessible to all environments, populate identity management configuration details in the first installation. See [Section 4.4](#) for details.

For nonseeded environments, provide the following files from a previously provisioned environment that was seeded to the same Oracle Identity Management components that you are installing. The files are in `domain-home/config/fmconfig` or in a previously provisioned environment.

- `jps-config-jse.xml` – located in domain.
- `cwallet.sso` – copy this file from the same domain as the `jps-config-jse.xml`. It is located in:
`domain-home/config/fmwconfig/bootstrap/cwallet.sso`.

Copy the files to the following location:

```
repository_location/keystore
/jps-config-jse.xml
/bootstrap
/cwallet.sso
```

Enter values from the Oracle Identity Management infrastructure you previously installed. If you chose to use the values in the IDM properties file on the **IDM Properties File** screen, they appear as defaults in the corresponding fields. See [Section 4.4](#). You can replace the values if the original configuration has changed.

- **Super User Name:** Enter the name of an existing user that should be granted administrator and functional setup privileges. The `uid` attribute must be set to be the same as the `cn` attribute.
- **Create Administrators Group:** Indicate whether you created an "Administrators" group, whose members have specialized privileges for all Oracle Fusion Middleware components.

- **Create Monitors Group:** Indicate whether you created a "Monitors" group, whose members have read-only administrative privileges to Oracle WebLogic Server domains.
- **Create Operators Group:** Indicate whether you created an "Operators" group, whose members have Monitors privileges to Oracle WebLogic Server domains.
- **Identity Store Server Type:** Indicate the type of identity store that you set up: OID (Oracle Internet Directory) or OVD (Oracle Virtual Directory). If you select OVD, then the **Default to Identity Store** check box in Oracle Platform Security Services Configuration must be unchecked. Using OVD for policy store is not currently supported.
- **Use SSL to Communicate With Identity Store:** This feature is not enabled in this release.
- **Identity Store Host:** Enter the host or DNS name for your identity store LDAP service.
- **Identity Store Port:** The port assigned to the identity store.
- **Identity Store Secure Port:** The SSL port assigned to the identity store.
- **Identity Store User DN:** Enter the Distinguished Name of the user that you set up with read-write access to the LDAP.
- **Identity Store Password:** Enter the password that you set up for the user with read-write access to the LDAP.
- **Identity Store Read-only User DN:** Enter the Distinguished Name (DN) of the user that you set up with read-only access to the Identity Store LDAP.
- **Identity Store Read-only Password:** Enter the password that you set up for the identity store read-only user.
- **Identity Store User Name Attribute:** Choose the type of user name attribute that you configured in the identity store. Valid values are: user ID (uid), common name (CN), or email address.
- **Identity Store User Base DN:** Enter the root Distinguished Name assigned to the upload of applications user data. This is the root for all the user data in your identity store.
- **Identity Store Group Base DN:** Enter the root Distinguished Name for all the group data in your identity store.
- **OIM Admin Server Host:** Enter the name of the host where the OIM Administration Server is installed.
- **OIM Admin Server Port:** The port where the OIM Administration Server listens.
- **OIM Domain Administrator User Name:** Enter the name you set up as the OIM administrator.
- **OIM Domain Administrator Password:** Enter the password you set up for the OIM administrator.
- **OIM Managed Server Host:** Enter the virtual or real host name of the Oracle Identity Manager Managed Server where SPML callback and other OIM services are running.

- **OIM Managed Server Port:** Enter the virtual or real port where the Oracle Identity Manager Managed Server listens.
- **OIM HTTP Internal Endpoint URL:** The access point on the Oracle HTTP Server for Oracle Identity Manager services in an Oracle Identity Management enterprise deployment, or the Oracle Identity Manager Managed Server access point for a non-enterprise deployment. This URL is used for deployment.
Enter the HTTP termination address of Oracle Access Manager. Terminates at either a load balancer or the Oracle HTTP Server.
- **OIM HTTP(S) Internal Endpoint URL:** The access point to use for taxonomy. This is not used for deployment. Note that a non-secure connection is used unless you provide an HTTPS URL.

Note: The wizard warns if the Identity Store credentials are not valid and do not allow a connection to the database. If this warning represents an exception, you can ignore it and continue creating the response file. However, you *must* fix all issues before you start to provision an environment. You cannot successfully run provisioning until all validations have passed.

21. Access and Policy Management Configuration Screen

Enter values from the Oracle Identity Management infrastructure you previously installed. If you chose to use the values in the IDM properties file on the **IDM Properties File** screen, they appear as defaults in the corresponding fields. See [Section 4.4](#). You can replace the values if the original configuration has changed.

Oracle Access Manager Configuration

- **OAM Admin Server Host:** Enter the name of the host where the Administration Server for Oracle Access Manager exists.
- **OAM Admin Server Port:** Enter the port number for the Oracle Access Manager Administration Server.
- **OAM Administrator User Name:** Enter the name you assigned this user when you installed OAM.
- **OAM Administrator Password:** Enter the password you assigned this user when you installed OAM.
- **OAM AAA Server Host:** Enter the name of the proxy host where the Oracle Access Manager is installed.
- **OAM AAA Server Port:** The port number for the Oracle Access Manager listener on the OAM proxy host.
- **Access Server Identifier:** Name used to identify the Oracle Access Server.
- **Enable Second Primary Oracle Access Manager:** Select this check box to name a second Primary Oracle Access Manager for high availability.
- **Second Access Server Identifier:** This defaults to `aaa2`, the name of the second Primary Oracle Access Manager Server.
- **OAM Security Mode:** Enter the OAM transport security mode that you set up for this access server when you installed OAM. Values are **Simple** or **Open**. For IBM AIX on POWER Systems (64-Bit), you must use the Open mode for setup.
- **Webgate Password:** Specify a password for the Resource WebGate. It must contain at least eight alphanumeric characters and at least one digit or

punctuation mark. Retype to **Confirm** the password. If seeding of security data is disabled, the password must be the existing WebGate password.

Oracle Platform Security Services Configuration

- **Default to Identity Store:** The default values of this section depend on whether this field is enabled. If the checkbox is unchecked, which is the default, the **OPSS Policy Store Host**, **OPSS Policy Store Read-Write User Name** and **OPSS Policy Store Password** fields are empty by default and do not inherit values from your identity store. The **OPSS Policy Enabled SSL** checkbox defaults to be checked. **OPSS Policy Store Port** defaults to 3060 and **OPSS Policy Store Secure Port** defaults to 3131.

Note: If you check this check box, the Identity Store Server Type cannot be OVD and must be OID. Using OVD for policy store is currently not supported.

If you check this checkbox, the following fields inherit values from your identity store: **OPSS Policy Enabled SSL**, **OPSS Policy Store Host**, **OPSS Policy Store Port**, and **OPSS Policy Store Secure Port**.

A description of related fields follows:

- **Use SSL to communicate with OPSS Policy Store:** This feature is not enabled in this release.
- **OPSS Policy Store Host:** Enter the host name for OID where Oracle Platform Security Services (OPSS) policies are to be seeded if **Default to Identity Store** is unchecked. If **Default to Identity Store** is checked, this value defaults from your identity store.
- **OPSS Policy Store Port:** The number of the OID port for the OPSS policy store defaults to 3060 if **Default to Identity Store** is unchecked. If **Default to Identity Store** is checked, this value defaults from your identity store.
- **OPSS Policy Store Secure Port:** The number of the secure port for OID defaults to 3131 if **Default to Identity Store** is unchecked. If **Default to Identity Store** is checked, this value defaults from your identity store.
- **OPSS Policy Store Read-Write User Name:** Enter the Distinguished Name of the user that you set up with write privileges to the OPSS policy store.
- **OPSS Policy Store Password:** Enter the password that you set up for the OPSS policy store user with read-write privileges.
- **OPSS Policy Store JPS Root Node:** This is the Distinguished Name of the node to be used as the OPSS policy root for Oracle Fusion Applications. This field is read-only and the default value is set as `cn=FAPolicies`.
- **Create OPSS Policy Store JPS Root Node:** Select this option to create the OPSS JPS Root Node. For this release, this option must be enabled.

Identity Management Keystore Configuration

The IDM Keystore file and password value fields are enabled if either the Identity Store, the OPSS Store, or the OIM endpoint is SSL-enabled. These fields are populated by the values from the IDM properties file (for example, `idmDomainConfig.param`), if you have this file that contains these values. You can also edit these values if the fields are enabled.

- **IDM Keystore File:** Enter the location of the JKS keystore containing the certificates for the Oracle Identity Management components.
- **IDM Keystore Password:** Enter the password that you set up for the IDM Keystore File.

Note: The wizard warns if the OPSS Policy Store LDAP connection and the Keystore connection information is not valid and does not allow a connection to the database. If this warning represents an exception, you can ignore it and continue creating the response file. However, you *must* fix all issues before you start to provision an environment. You cannot successfully run provisioning until all validations have passed.

22. IDM Database Configuration Screen

Enter the parameters for Oracle Database that you installed for the Oracle Identity Manager (OIM). The wizard validates whether the database is a single instance of Oracle Database or Oracle Real Application Clusters (RAC). If a **Single Instance Database**, enter:

- **Host Name:** The name of the host where the OIM database is installed.
- **Database Port:** The listening port of the OIM database.
- **Service Name:** A unique name for the OIM database instance.

For Oracle RAC, select **Real Application Clusters Database**. Enter the **Service Name** you specified when you installed this database. **Add** rows for individual instances or click **Remove** to delete.

- **Host Name:** Enter the name of the host for each Oracle RAC instance.
- **Port:** The listening port of the OIM database.
- **Instance Name:** The name of the Oracle RAC instance used to manage this database.

Enter the database schema and password used to store the Oracle Metadata Services (MDS) Repository data for Oracle Web Services Policy Manager.

- **Schema Owner:** The owner of the MDS schema in the OIM database that is used by Oracle Web Services Policy Manager.
- **Schema Owner Password:** Enter the password for the MDS schema.

23. Summary screen

Click **Back** to return to previous screens. Enter a **Response File Name** (executable file) and a **Provisioning Summary** (text file for response file details). Specify a **Directory** that has read-write privileges and is visible to all servers accessing shared storage. Click **Finish** to save the files. Make a note of the location.

5.2 Updating a Response File

During the response file creation process, you can create a **partial response file**, which contains an incomplete set of configuration details. To create a partial response file, click **Save** at any point during the interview. When you are ready to continue with the response file, start the wizard and select **Update an Existing Response File** from the **Installation Options** screen. Page through the screens and continue where you left off.

Clicking **Cancel** is another way to create a partial response file, or, alternatively, exit the wizard without saving any response file details:

1. Start the Provisioning Wizard and choose **Create a New Applications Environment Response File** from the **Installation Options** screen.
2. Begin the interview process and continue to the point where you want to end the session. Click **Cancel**.
3. Choose one of the following options:
 - **Save and Exit:** Save the details that you have created for this response file. Creates a partial response file.
 - **Exit:** Exits the wizard without saving any details. Does not create a partial response file.
 - **Cancel:** Returns you to the **Welcome** screen in the wizard interview. Does not save the details that you have entered and does not create a partial response file.
4. Choose **Save and Exit**. The partial response file is saved in the directory where you started the wizard.
5. When you are ready to add more details to the response file, start the Provisioning Wizard and choose **Update an Existing Response File**. Specify the **Response File** location, or click **Browse** to navigate to the partial response file.
6. Page through the interview screens until you come to the point where you stopped the last session and move through the rest of the interview until you finish the process.

You can return to the wizard as many times as necessary to complete a partial response file. The wizard does not recognize a response file as being complete or valid until you have clicked **Finish** on the **Summary** screen.

Note that once you select product offerings for a partial or completed response file, you cannot update the product mix. You must start a new wizard session and create a new response file.

6 Provisioning a New Environment

The number of hosts and the way they are classified determines the order in which you provision your environment.

- **Primordial host:** Location of the Common domain (specifically the Administration Server of the Common domain). Only one primordial host exists per shared drive.
- **Primary host:** Location where the Administration Server for a domain runs. Only one primary host exists in a domain.
- **Secondary host:** Location where the Managed Servers of any application reside when they are not on the same host as the Administration Server of the same domain. Typically present, when a domain spans two physical servers.
- **DMZ host:** A host that cannot access the shared storage within the firewall. See "Setting Up a Demilitarized Zone (DMZ) for the Web Tier" in *Oracle Fusion Applications Installation Guide* for details.

Provisioning is run in **phases** (targets), in phase order. Phases can be run sequentially on multiple hosts, however *you must complete each phase successfully on all hosts before you can start the next phase*. You track phase status on the primordial host.

- **Preverify:** Checks to see that all prerequisites are present. Performs IDM-specific tasks. Tracking screen: **Prerequisite Checks**.

- **Install:** Installs applications, middleware, and database components. Creates the applications Oracle home directory. Tracking screen: **Installation**.
- **Preconfigure:** Prepares applications and middleware components for deployment and creates appid users and groups. Modifies the Oracle Application Development Framework (ADF) configuration file to use the database, based on Oracle Metadata Services (MDS) in the applications enterprise archive (EAR) files. Also updates the connections.xml file in all applications EAR files with endpoint information. Performs IDM-specific tasks. Tracking screen: **Preconfigure**.
- **Configure:** Creates and configures Oracle WebLogic Server domains, Managed Servers, and clusters; applies templates; creates and configures data sources, queues, and topics; configures middleware (wiring); and deploys applications product offerings to the domains. Performs IDM-specific tasks. Tracking screen: **Configure**.
- **Configure-secondary:** Performs configure actions on the primary or secondary hosts or both. If there are no primary or secondary hosts, or if there is only a primary host, the phase runs, but takes action only if it finds "other" hosts. Tracking screen: **Configure Secondary**.
- **Postconfigure:** Performs online tasks, such as configuring the Node Manager, deploying the Service-oriented Architecture (SOA) composite, establishing Oracle HTTP Server wiring, seeding policies, and setting up postdeployment security configuration. Performs IDM-specific tasks. Tracking screen: **Postconfigure**.
- **Startup:** Starts the Administration Server and Managed Servers for each domain on the host where you are running this phase. Tracking screen: **Startup**.
- **Validate:** Performs postprovisioning validations, including server and application availability, successful loading of security credentials, and checking for valid data source. Tracking screen: **Validation**.

See "Installation Phase Order for Oracle Identity Management Components" in *Oracle Fusion Applications Installation Guide* for Oracle Identity Management actions.

Two additional phases are related to cleanup and recovery actions:

- **Cleanup:** Shuts down processes started during a failed phase and performs cleanup actions. If a cleanup action fails, you must manually stop all processes (except the Node Manager) on all hosts, including OPMN and Java EE, before you can run **Restore**. If cleanup is required on the **configure** phase, all processes must be shut down with no exceptions.
- **Restore:** Performs necessary restore operations for a given provisioning phase. Deletes and restores the instance directory, and, if necessary (and available), restarts the Common domain Administration Server and Oracle HTTP Server.

See "Recovery After Failure" in *Oracle Fusion Applications Installation Guide*.

6.1 Backing Up the Installation

A full backup of the provisioning and configuration state is performed automatically at the end of all successfully completed installation phases. The backup is saved in `APPLICATIONS_BASE/restart/`. If the automated backup fails for any phase, you can perform a backup manually. See "Performing a Manual Backup" in *Oracle Fusion Applications Installation Guide*.

6.2 Provisioning Interview Screens and Instructions: Single-Host Install

To provision on a single host, start the Provisioning Wizard on the primordial host and complete the following information. See [Section 3.1](#) for the start commands.

1. **Welcome Screen.** No action is necessary.
2. **Specify Central Inventory Directory.** If this screen appears, see "Installation Process Flow" in the *Oracle Fusion Applications Installation Guide* for more information.
3. **Installation Options Screen**
Select **Provision an Applications Environment**. Specify the location of the **Response File** for this environment.
4. **Response File Description Screen**
Specify descriptive information about this response file. This description is not associated in any way with the executable response file, or the summary file, that the wizard saves when you finish creating this response file.
5. **Installation Location Screen**
Displays credentials and locations for this response file. Make changes, if needed.
6. **Review Provisioning Configuration Screen**
Check one or more provisioning configuration screens to add them to the interview. You cannot change an offering, but you can change configuration details. Click **Next** without selecting offerings to omit them from the interview.
NOTE: You must fix all issues stated in the warnings displayed during the response file creation before you can successfully provision an environment. Select the screens associated with the warnings to make them available for changes. All validations must pass before you can run the **install** phase.
7. **Summary Screen**
Click **Next**. The wizard initiates the **preverify** phase on the primordial host and displays the **Prerequisite Checks** screen. It also creates a current copy of this response file and saves it in the directory indicated in the message pane.
8. **Prerequisite Checks Screen**
Displays the build processes for **preverify**. When this phase is complete with no errors, click **Next** to initiate the **install** phase and display the **Installation** screen. In case of failures, click **Retry** to initiate cleanup and restore actions. You can rerun this phase as many times as necessary. However, you can no longer modify the response file once you click **Next**.
9. **Installation Screen**
Displays the builds for the **install** phase. When it is complete with no errors, click **Next** to initiate the **preconfigure** phase. Continue clicking **Next** to initiate subsequent phases (**configure**, **configure-secondary**, **postconfigure**, **startup**, and **validate**). The **Retry** button is active on tracking screens reporting failures.
10. **Validation Screen**
When all phases are completed with no errors, click **Next**.
11. **Installation Complete Screen.** Click **Finish**. A summary file is saved to:
`framework_location/provisioning/provisioning-responseFile/
provisioning_response_file_name-timedate.summary.`

6.3 Provisioning Screens and Instructions: Multiple-Host Installations

Complete the same screens as in [Section 6.2](#). Use the wizard to run provisioning on the primordial host. Use the command line for primary and secondary hosts.

Open a separate terminal session for each host. Run the wizard on the primordial host as described in [Section 3.1](#). Initiate each phase (in order) on the primary and secondary hosts with the `runProvisioning` command, adding arguments shown in [Table 3](#).

Table 3 Command-Line Syntax for Phase Arguments

Syntax	Description
<code>path_to_script</code>	Directory path to the provisioning repository location where the build scripts are located. This directory was set up when you installed the provisioning framework, for example <code>framework_location/provisioning</code> .
<code>-responseFile</code>	You must provide the location of a previously saved response file. Input is: <code>response_file_location</code>
<code>-target</code>	Indicates that the script should run a specific installation phase (target). Any <code>phase_name</code> is a valid argument, for example, <code>-target preverify</code> .
<code>-ignoreSysPrereqs</code>	Options: <code>true false</code> Default: <code>false</code> . <code>-ignoreSysPrereqs true</code> is the same as <code>-ignoreSysPrereqs</code> with no value. Adding this argument disables validation for database, schema, and hosts, and enables you to progress to the install phase without having to fix failure issues. Checks continue to be performed, but failures are ignored. Use for both the <code>provisioningWizard</code> and the <code>runprovisioning</code> commands. If specified with <code>runprovisioning -target install</code> , any Oracle Universal Installer exceptions are ignored. If you specify this argument for the preverify phase, you must specify it for all the remaining phases (install , preconfigure , configure , configure-secondary , startup , and validate). If it is not specified for the remaining phases, a phase guard exception will be raised.
<code>-invPtrLoc</code>	Specifies the location of the Oracle inventory directory, which is used by the installers to keep track of which Oracle products are installed on a host. See Section 4.3.1 . For example, the <code>runProvisioning</code> command would be: (UNIX) <code>path_to_script/runProvisioning.sh -invPtrLoc /home/oracle/oraInst.loc</code> or (Windows) <code>path_to_script\runProvisioning.bat -invPtrLoc \home\oracle\oraInst.loc</code> .

Run the phases in order, completing each phase on *every* host before you start the next phase. For example, you can run **preverify** on Host A, B, and C simultaneously, but you cannot click **Next** on the **Prerequisite Checks** screen to start **install** until **preverify** is been completed successfully on all hosts. You can monitor the progress of each phase on the primordial host.

In the following steps, the user interface notation (UI) describes actions on the primordial host. The CLI notation describes command-line actions on the other hosts.

1. Open a separate terminal session, for example, Host A, B, and C, and log in.

2. (UI) Start the Provisioning Wizard on Host A with the `provisioningWizard` command. See [Section 3.1](#). On the **Installation Options** screen, enter the path to the **Response File**, or click **Browse** and navigate to the response file.
3. (UI) **Response File Description** Screen
Change details if necessary. Changes to this screen, or to the **Installation Location** and **Review Provisioning Configuration** screens, are saved in a new response file, which will be used to provisioning this environment.
4. (UI) **Installation Location** Screen
Displays credentials and directories for this response file. Make changes, if needed.
5. (UI) **Review Provisioning Configuration** Screen
Select one or more provisioning configuration screens to make them available for changes in the interview. You cannot change add or delete an offering. Click **Next** without selecting any offerings to go directly to the **Summary** screen.
NOTE: You must fix all issues stated in the warnings displayed during the response file creation before you can successfully provision an environment. Select the screens associated with the warnings to make them available for changes. All validations must pass before you can run the **install** phase.
6. (UI) **Summary** Screen
Click **Next**. The wizard initiates the **preverify** phase on the primordial host and displays the **Prerequisite Checks** screen. It also creates a current copy of this response file and saves it in the directory indicated in the message pane.
7. (UI) **Prerequisite Checks** Screen
The wizard displays the build processes and their status for this phase.
8. (CLI and UI) In the terminal session on Host B and C, start **preverify** from the command line. Enter `preverify` for the `-target` argument.

(UNIX) `path_to_script/runProvisioning.sh -responseFile provisioning_response_file_location -target preverify`
(Windows) `path_to_script\runProvisioning.bat -responseFile provisioning_response_file_location -target preverify`

In case of failures, click **Retry** to initiate cleanup and restore actions. You can rerun this phase as many times as necessary. When it is complete with no errors, click **Next** to initiate the **install** phase and display the **Installation** screen. You can no longer modify the response file once you click **Next**.
9. (UI) **Installation** Screen
The wizard displays the build processes and their status for this phase.
10. (CLI and UI) In the terminal session on Host B and C, start **install** from the command line. Enter `install` for the `-target` argument.

(UNIX) `path_to_script/runProvisioning.sh -responseFile provisioning_response_file_location -target install`
(Windows) `path_to_script\runProvisioning.bat -responseFile provisioning_response_file_location -target install`

In case of failures, click **Retry** to initiate cleanup and restore actions. When **install** is completed on all hosts with no errors, click **Next** to initiate each subsequent

phase on Host A (UI), then B (CLI) and C (CLI). Use `preconfigure`, `configure`, `configure-secondary`, `postconfigure`, `startup`, and `validate` on Host B and C for the `-target` argument.

11. Validation Screen

When all phases are complete with no errors, click **Next**. See "Troubleshooting the Provisioning Process" in *Oracle Fusion Applications Installation Guide*.

12. Installation Complete Screen

Click **Finish**.

6.4 Postinstallation Tasks

Several postinstallation tasks must be performed after provisioning is complete. See "Postinstallation Tasks" in *Oracle Fusion Applications Installation Guide*.

6.5 What to Do Next

Your new Oracle Fusion Applications environment is complete and operational. You must now perform the necessary implementation and function setup tasks.

- Manage passwords for login access.

See "Securing Oracle Fusion Applications" and "Provisioning Identities" in *Oracle Fusion Applications Administrator's Guide*.

- Enable Product Offering Functionality

Before you can start using any of the product offerings you have installed, you must complete some common implementation tasks and enable the functionality of the offerings in your environment.

A large library of product-related documentation is available for use after provisioning. Some of the guides that you will find useful are:

- *Oracle Fusion Functional Setup Manager User's Guide*
- *Oracle Fusion Applications Common Implementation Guide*
- *Oracle Fusion Applications Post-Installation Guide*
- Product-specific Oracle Fusion Applications implementation guides

7 Deinstalling an Oracle Fusion Applications Environment

The deinstallation process removes components that were installed using the Provisioning Wizard. The database and LDAP are *not* removed.

- You must run the deinstall process on *all* hosts, starting with the primordial host. Use the Provisioning Wizard deinstall option for the primordial host, and the command line option for the primary and secondary hosts. *Products installed from the command line must be deinstalled from the command line.*
- Start the Provisioning Wizard on the primordial host. Monitor the deinstall from the primordial host interface.
- All binaries, regardless of patch level, are removed.

Note: You cannot partially deinstall an environment by selecting specific components.

7.1 Preparing to Deinstall

Use the provisioning deinstall option (Provisioning Wizard or the command line). Do not delete the `APPLICATIONS_BASE`, `APPLICATIONS_CONFIG`, and the `oraInventory` directories manually.

1. Stop any processes that are running in the environment.
2. Shut down all Managed Servers, the Administration Server, and the Node Manager on all hosts. Stop any Windows services before deinstalling the software. See "Stopping an Oracle Applications Environment" in *Oracle Fusion Applications Administrator's Guide*.
3. Stop Oracle HTTP Server with this command: `WT_CONFIG_HOME/bin/opmnctl shutdown`.
4. Stop the Oracle Business Intelligence components controlled by OPMN with this command: `BI_CONFIG_HOME/bin/opmnctl shutdown`. See "Using the OPMN Command Line to Start, Stop, Restart, and View the Status of System Components" in *Oracle Fusion Middleware System Administrator's Guide for Oracle Business Intelligence Enterprise Edition* for more information.
5. Shut down Global Order Promising (GOP) (if provisioned): (UNIX) `gop_instance_base/bin/opmnctl shutdown`. To remove Windows service, run: (Windows) `sc delete GlobalOrderPromisingServer1`.
6. Stop the Java EE components using Oracle Enterprise Manage Fusion Middleware Control. See "Starting and Stopping Java EE Applications Using WLST" in *Oracle Fusion Applications Administrator's Guide*.
7. Shut down Informatica Identity Resolution (IIR) (if provisioned) by running these commands in the order listed:
 - a. `APPLICATIONS_BASE/informaticaIR/bin/idsdown`
 - b. `APPLICATIONS_BASE/informaticaIR/bin/lidown`

See "Starting and Stopping Components in the Oracle Fusion Applications Environment" in *Oracle Fusion Applications Administrator's Guide* for more information.

7.2 Deinstall Interview Screens and Instructions

Start the Provisioning Wizard. See [Section 3.1](#). Then, complete these tasks:

1. **Welcome Screen.** No action is necessary.
2. **Specify Central Inventory Directory.** If this screen appears, see "Wizard Interview Screens and Instructions" in the *Oracle Fusion Applications Installation Guide* for more information.
3. **Installation Options Screen**
Select **Deinstall an Applications Environment**. Enter the directory path to the **Response File** you used for this environment.
4. **Summary Screen.** Review the summary and click **Deinstall**.
5. **Deinstallation Progress Screen**
Deinstalls components on the primordial host. Use the command line to deinstall on primary or secondary hosts (if present). Click the **x** or **Restricted** symbol to display error messages. Click the **Log** icon to review log information.

Click **Retry** to start the cleanup and restore actions if a failure occurs. When all actions are complete without errors, click **Next**.

6. Deinstallation Complete Screen

Click **Save** to create a text file that contains details. Click **Finish**.

7.3 Using the Command Line

Use the command line to deinstall if you have provisioned a primary or secondary host. If the primordial host is no longer available, the entire deinstall process must be run from the command line. Run the deinstall command as `root` (with administration privileges) as follows:

```
(UNIX) runProvisioning.sh -responseFile response_file_location  
-target deinstall
```

```
(Windows) runProvisioning.bat -responseFile response_file_  
location -target deinstall
```

7.4 Postdeinstallation Tasks

(UNIX)

1. If you set up processes to run as a service, then verify the `/etc/services` file and remove the corresponding Entries from the file.
2. If you set up processes to run as a service, then verify the `/etc/inetd.conf` file and remove the corresponding process Entries from the file.
3. Clean up or remove the `APPLICATIONS_BASE` directory

(Windows)

1. Remove Program Groups. You must also remove Program Groups from the Start Menu\Programs folder.
2. Reboot your system after you have finished removing all programs.

8 Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

Oracle Fusion Applications Quick Installation Guide, 11g Release 6 (11.1.6)
E16601-07

Copyright © 2011, 2013, Oracle and/or its affiliates. All rights reserved.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them

to us in writing.

If this is software or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, the following notice is applicable:

U.S. GOVERNMENT RIGHTS Programs, software, databases, and related documentation and technical data delivered to U.S. Government customers are "commercial computer software" or "commercial technical data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, duplication, disclosure, modification, and adaptation shall be subject to the restrictions and license terms set forth in the applicable Government contract, and, to the extent applicable by the terms of the Government contract, the additional rights set forth in FAR 52.227-19, Commercial Computer Software License (December 2007). Oracle America, Inc., 500 Oracle Parkway, Redwood City, CA 94065.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information on content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.

