Oracle® Fusion Applications

Installation Guide

11*g* Release 1 (11.1.1.5)

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Preface

The *Oracle Fusion Applications Installation Guide* provides information about setting up Oracle Fusion Applications Provisioning and using it to install and provision a new Oracle Fusion Applications environment. It includes specific instructions for installing prerequisite components; installing, configuring, and deploying applications product offerings; and deinstalling an environment.

Audience

This document is intended for users who are provisioning an Oracle Fusion Applications environment and installing product offerings for the first time and who are comfortable with system administration tasks such as installing Oracle Fusion Identity Management, setting up and configuring Oracle Database 11*g* (11.2.0.2), and applying patches on the computer where the product offerings will be installed. Users installing on a UNIX system need `root` access to run some of the scripts.

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Related Documents

For more information, see the following documents:

- *Oracle Fusion Applications Administrator and Implementor Roadmap*

- *Oracle Fusion Applications Concepts Guide*

- *Oracle Fusion Applications Administrator's Guide*

- *Oracle Application Server Administrator's Guide*

- *Oracle Fusion Applications Enterprise Deployment Guide*

- *Oracle Fusion Middleware Enterprise Deployment Guide for Oracle Identity Management (Oracle Fusion Applications Edition)*

- *Oracle Fusion Middleware Configuration Guide for Oracle Business Intelligence Applications*

- *Oracle Database Installation Guide* for your platform

- *Oracle Fusion Applications Common Implementation Guide*

- *Oracle Fusion Applications Patching Guide*

Conventions

The following text conventions are used in this document:

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

What's New in This Guide for Release 11.1.1.5

For Oracle Fusion Applications 11g Release 1 (11.1.2), there were no changes to this guide from the from the previous release.

New Features for Release 11.1.1.5

There were no changes to Oracle Fusion Applications Provisioning in this release.

1

Overview

This chapter introduces Oracle Fusion Applications Provisioning and discusses how its interrelated components orchestrate the installation, configuration, and deployment of Oracle Fusion Applications product offerings and their middleware dependencies.

It includes the following sections:

- What Is Provisioning?
- Provisioning Features
- Provisioning Roadmap
- Applications Topology: Oracle WebLogic Server Domains
- Oracle Fusion Applications Directory Structure
- Installation Guidelines
- What to Do Next

For general information about Oracle Fusion Applications, Oracle Database, and Oracle Fusion Middleware, see:

- *Oracle Fusion Applications Administrator and Implementor Roadmap*
- *Oracle Fusion Applications Concepts Guide*
- *Oracle Fusion Applications Administrator's Guide*
- *Oracle Application Server Administrator's Guide*
- *Oracle Database Installation Guide* for your platform
- *Oracle Fusion Applications Enterprise Deployment Guide*
- *Oracle Fusion Middleware Enterprise Deployment Guide for Oracle Identity Management* (Oracle Fusion Applications Edition)
- *Oracle Fusion Middleware Configuration Guide for Oracle Business Intelligence Applications*

1.1 What Is Provisioning?

With the growing complexity of modern enterprise applications, and the necessity of integrating those applications with other core enterprise components, many organizations find that setting up an applications environment unassisted challenges even the most seasoned system administrator. To meet this challenge, Oracle provides Oracle Fusion Applications Provisioning.

This section presents some background for understanding the provisioning process, and discusses the major components provisioned in a new Oracle Fusion Applications environment.

1.1.1 Terms and Definitions

Oracle Fusion Applications is a deployment of application product offerings built on Oracle Fusion Middleware technology stack components and connected to Oracle Database. A successful installation draws on a combination of the application and the middleware components, the database, as well as the installers, scripts, and utilities required to set up and configure them.

Oracle Fusion Applications Provisioning orchestrates the installation, configuration, and deployment of Oracle Fusion Applications product offerings. Its framework of installers, build files, and other utilities accesses configuration details from your customized provisioning plan and performs these actions:

- **Installation**: Lays down all the components needed to create an Oracle Fusion Applications environment.

- **Configuration**: Tailors components based on the applications topology, creates Managed Server instances and cluster members, and updates endpoints and virtual hosts.

- **Deployment**: Starts the Managed Servers and clusters and facilitates the actual use of product offerings.

The **provisioning repository** contains all the installers required to provision a new Oracle Fusion Applications environment. You download the repository from the Oracle Fusion Applications Product Media Package and extract the files to a location of your choice, for example *repository_location*/installers. The repository must be located on a networked drive or a shared hard disk so that it is accessible to all the hosts in your new environment.

The **Oracle Fusion Applications Provisioning installer** creates the provisioning framework in a location of your choice, for example *framework_location*/provisioning. The location must be on a networked drive or a shared hard disk. The installer (faprov) is included among the other installers in the provisioning repository.

The **Oracle Fusion Applications Provisioning framework** contains the ANT utilities, binaries, libraries, templates, and other utilities required to orchestrate the provisioning process. For example, it delivers the Provisioning Wizard.

The **Provisioning Wizard** is an interview process that collections information used to guide the various actions associated with provisioning a new applications environment.

The **provisioning plan** is a collection of configuration details you specify about installation locations, product offerings and middleware (technology stack) dependencies. In addition, you enter connection parameters for the database and identity management components that you set up as prerequisites. You use the Provisioning Wizard interview to create and execute the provisioning plan.

1.1.2 Provisioning Configuration

An installation of Oracle Fusion Applications is logically broken up into groups of features known as **product offerings**, which represent the highest-level collection of functionality that you can license and implement. A **provisioning configuration** is a collection of one or more product offerings.

Product offerings have interdependencies on companion applications (for example, Oracle Fusion Human Capital Management relies on Oracle Fusion Financials for payroll functionality), as well as middleware dependencies (for example, Oracle SOA Suite), required for runtime execution. Provisioning "knows" about all companion applications and middleware dependencies and displays them for you automatically during the provisioning plan creation. You specify configuration details (at the domain level) associated with offerings, companion applications, and middleware dependencies in the provisioning plan.

See Section 4.1.2 for details about provisioning configurations. See also "Introduction to Oracle Fusion Applications for System Administrators" in *Oracle Fusion Applications Administrator's Guide* for more information.

1.1.3 Oracle Fusion Middleware

Each Oracle Fusion Applications product family is deployed to an Oracle WebLogic Server domain in the Oracle Fusion Middleware technology stack. For information about the Oracle Fusion Middleware components that support that deployment, see "Oracle Fusion Middleware Components" in *Oracle Fusion Applications Concepts Guide*.

1.1.4 Oracle Database

An Oracle Fusion Applications environment requires a transaction database. You can install a single-instance Oracle Database Enterprise Edition by using the Provisioning Wizard, or you can install Oracle Real Application Clusters (Oracle RAC) by using the standard installation instructions. The database templates shipped with Oracle Fusion Applications describe the structure and features of the database, but do not contain any data.

For details about installing Oracle Database with the Provisioning Wizard, see Section 3.4. For instructions about installing a database manually, see Section 3.5.

Once you have installed a database, use the Oracle Fusion Applications Repository Creation Utility to create a repository of tablespaces and applications and middleware schemas, and load seed data and other required packages. For information about using this utility, see Section 3.8.

1.1.5 Oracle Identity Management

Oracle Identity Management is a core component and prerequisite for provisioning an Oracle Fusion Applications environment. It enables enterprises to manage the end-to-end lifecycle of user identities across all enterprise resources — both within and beyond the firewall. An installation of Oracle Fusion Applications relies on Oracle Identity Management components to provide Web Single-Signon capability and to act as the policy, credential, and identity store. Although the majority of these components fall within the prerequisite environment, the resource WebGate that acts as the proxy for user authentication must be provisioned along with the applications.

The Oracle Identity Management components required to be present in an Oracle Fusion Applications environment are:

- Oracle Access Manager (OAM): Provides identity administration and security functions, including Web Single-Signon, user self-service and self-registration, policy management, and delegated administration.

- Oracle Identity Manager (OIM): Coordinates the management activities and business processes for creating, modifying, and deleting user access rights.

- Oracle Virtual Directory (OVD): A LDAP-enabled service that provides a virtualized abstraction of one or more enterprise data sources in a single directory view.

- Oracle Internet Directory (OID): A general-purpose directory service that enables fast retrieval and centralized management of information about dispersed users and network resources.

See *Oracle Fusion Middleware Enterprise Deployment Guide for Oracle Identity Management (Oracle Fusion Applications Edition)* for more information.

1.1.6 Oracle Business Intelligence

Oracle Business Intelligence (BI) is a portfolio of technology and applications comprising an integrated toolset (for querying, reporting, analysis, alerts, mobile analytics, data integration and management, and desktop integration), as well as financial performance management, applications, operational business intelligence applications, and data warehousing.

Typically, Oracle Business Intelligence products are integrated with, and accessible from, other operational applications, such as Oracle Fusion Applications. This integration provides business metrics in the context of an organization's business function and industry.

The Oracle Business Intelligence products integrated with Oracle Fusion Applications include:

- Oracle Business Intelligence Enterprise Edition: A suite of business intelligence tools that delivers a full range of analytic and reporting capabilities.

  For more information, see *Oracle Fusion Middleware System Administrator's Guide for Oracle Business Intelligence Enterprise Edition*.

- Oracle Business Intelligence Applications: Uses Oracle Business Analytics Warehouse, a unified data repository for all customer-centric data that supports the analytical requirements of Oracle Business Intelligence Applications. Oracle Business Intelligence Applications supplies the warehouse database schema, as well as the logic that extracts data from the Oracle Fusion Applications transactional database and loads it to the warehouse.

  This product is configured and deployed during provisioning, but requires additional installation and configuration steps. See *Oracle Fusion Middleware Configuration Guide for Oracle Business Intelligence Applications* for details.

- Oracle Transactional Business Intelligence: An ad hoc query and self-service reporting solution offered to all Oracle Fusion Applications customers. Paired with Oracle BI Enterprise Edition, it provides business users with an easy-to-use interface for performing current state analysis of their business applications. Constructed queries and reports are executed in real time against the transactional schema supported by a layer of view objects. This product is configured and deployed during provisioning.

- Oracle Essbase: An online analytical processing (OLAP) server that provides an environment for deploying prepackaged applications or developing custom analytic and enterprise performance management applications.

- Oracle Business Intelligence Publisher: An enterprise reporting solution for authoring, managing, and delivering reports from multiple data sources in multiple formats via multiple channels.

For more information, see the "Managing Report Delivery Servers" chapter of Oracle Fusion Applications Administrator's Guide.

- Oracle Real-Time Decisions: A platform that combines both rules and predictive analytics to apply real-time business intelligence at the point of contact. It optimizes all interactions with your customers by infusing analytical decisions into each transaction.

  For more information, see *Oracle Fusion Middleware Administrator's Guide for Oracle Real-Time Decisions*.

1.2 Provisioning Features

Oracle Fusion Applications Provisioning is a full-featured process that provides all the tools you need to set up a repository of installers and installation-related processes, present product configurations that you can install in your environment, provide a means to collect configuration details about those offerings, and run the installation phases necessary to perform configuration and deployment tasks.

1.2.1 Oracle Fusion Applications Provisioning Repository

The Oracle Fusion Applications software provides a repository of installers, each called silently when needed to perform application-specific tasks during the provisioning of your new environment. During the creation of your provisioning plan, you indicate the location of the repository in the Provisioning Wizard interview.

The provisioning repository must be on a network drive that is visible to all hosts that you will associate with your Oracle Fusion Applications environment. See Section 2.3 for details.

1.2.2 Oracle Fusion Applications Provisioning Framework

The provisioning installer (`faprov`) creates the Oracle Fusion Applications Provisioning framework. It includes the following components:

- **Provisioning Wizard**: A question-and-answer interview that guides you through the process of installing a database, creating or updating a provisioning plan, and installing or deinstalling the components of an Oracle Fusion Applications environment.

- **Provisioning command-line interface (CLI)**: Used for starting the provisioning wizard and running installation phases on the primary, secondary, and DMZ hosts (when present).

- **Provisioning-related files and utilities**: Repository of ANT utilities, binary files, library files, templates, locations of saved provisioning plans and provisioning build scripts, and other provisioning utilities required for performing provisioning tasks. These utilities are installed in a location you choose, for example, *framework_location*/`provisioning`.

  See Section 2.4 for details.

1.2.3 Provisioning Wizard

The Provisioning Wizard steps you through all provisioning-related tasks. Using the wizard, you can install a transaction database, create or update a provisioning plan, provision a new environment, and deinstall an applications environment.

1.2.3.1 Install an Applications Transaction Database

You must install a database to hold transactional data *before* you create a provisioning plan. Then, you enter the database configuration values set up during the database installation in your provisioning plan. The provisioning process uses those values to connect your database to the new applications environment.

Select the **Install an Applications Transaction Database** option from the list of Provisioning Wizard options to create an empty, single-instance Oracle Database Enterprise Edition (11.2.0.2). Alternatively, you can create Oracle Database or Oracle Real Application Clusters (Oracle RAC) manually using the standard database creation instructions.

Regardless of the way you create the database, you must complete the process by running Oracle Fusion Applications Repository Creation Utility (Applications RCU) to create schemas and tablespaces, load seed data, and perform other database configuration tasks. See Chapter 3 for more information.

1.2.3.2 Create a New Applications Environment Provisioning Plan

By responding to the questions in this interview, you specify a provisioning configuration to install in a new environment. You save the configuration details for that environment in a provisioning plan, including information about credentials, applications and middleware hosts, and port values. You specify the location of this plan when you are ready to provision your new environment.

If you do not have all the information that you require to complete a plan, or you want to create a partial plan, you can stop at any time during the creation process and save the plan. When you are ready to continue, choose the **Update an Existing Provisioning Plan** option, page through the screens until you reach the place where you left off, and continue.

Note that the wizard does not recognize a partial plan as complete and ready to execute until you click **Finish** on the Summary interview screen. See Chapter 4 for more information.

1.2.3.3 Update an Existing Provisioning Plan

Select this option to add or change the details in a partially completed provisioning plan or to update a completed plan that has not yet been implemented. You can create a partial plan by clicking **Save** in the wizard, or by selecting **Cancel** and following the prompts to save a partial plan. When you want to continue, select the plan and page through the screens to the place where you stopped in any previous session. Complete the remaining interview screens. See Chapter 4 for more information.

1.2.3.4 Provision an Applications Environment

Select this option and specify the location of a provisioning plan as the first step in initiating the installation, configuration, and deployment of your product offerings. In a multiple-host environment, the installation is run on each host individually, in phase order. See Section 1.6 for more information about phases. See Chapter 5 for details about the installation process.

1.2.3.5 Deinstall an Applications Environment

By selecting this option, you indicate that you want to remove all the components installed using the wizard in an existing applications environment. You must run this process on all hosts.

During the deinstallation process, components that were installed using the Provisioning Wizard are removed. The database and the LDAP are *not* removed. You cannot partially deinstall an environment by selecting individual components. See Chapter 6 for more information.

1.2.4 Provisioning Plan

With the Provisioning Wizard question-and-answer interview tool, you specify one or more provisioning configurations and collect details associated with the product offerings in those configurations. These responses are the basis for creating a **provisioning plan**. This plan contains the structural outline of the applications environment topology that you are implementing. When you are ready to provision your environment, specify the location of the plan and initiate the installation process.

The wizard interview questions fall into the following general areas:

- Global and contextual

- Database configuration and application dependency

- Shared middleware services

Global and Contextual Questions

These questions set the context and define the focus of the questions to be asked later in the interview. The approach is to progressively refine the scope of the questions, starting with the most generic and narrowing down to a specific path based on the selected provisioning configurations. For example, the **Installation Location** screen captures global information about the location of installation and configuration directories, and the **Database Configuration** screen records information about the transactional database.

Application and Application Dependency Questions

The interview is tied directly to the provisioning of one or more product configurations. With the product configuration chosen, the interview guides you through the questions related to the product offerings and their dependencies. Dependencies include application and middleware products required by Oracle Fusion Applications, as well as details about your transaction database. For example, the **Domain Topology Configuration** screen collects information about the hosts where domains are to be deployed.

Shared Middleware Questions

At the conclusion of the application interview, you move to interview questions about middleware services that are shared across domains, for example, the **Web Tier Configuration**, **Load Balancer Configuration**, **Web Proxy Configuration**, **Identity Management Configuration**, and **IDM Database Configuration** screens.

1.2.5 Provisioning Configurations

During the creation of a provisioning plan, you select one or more offerings in any of the provisioning configurations listed in the wizard interview. During the actual provisioning process, all application and middleware products (components) associated with your selections are installed, configured, and deployed. However, only the Managed Servers for the product offerings that you selected are started.

Later, To start using an offering that was part of your initial provisioning configuration but has not yet been enabled, navigate to the Oracle Fusion Applications Setup Manager and start the Managed Servers for that offering.

For example, in the Oracle Fusion Customer Relationship Management configuration, there are two product offerings: Oracle Sales and Oracle Marketing. If you select only Oracle Sales, the Managed Servers for that offering are started when you provision your new environment. If you later decide to enable Oracle Marketing, you use the Oracle Fusion Applications Functional Setup Manager to do so. There is no need to run provisioning a second time.

See Section 4.1.2 for more information about provisioning configurations.

1.3 Provisioning Roadmap

Table 1–1 lists the high-level tasks included in the end-to-end provisioning processing flow.

Table 1–1   Provisioning Process Flow

Task	Description	Documentation
1. Verify system requirements and set up prerequisite components.	To provision a new environment, you must ensure that your system meets certain requirements and can connect to the prerequisite Oracle Identity Management components.	See Section 2.1.
2. Prepare your environment.	You may need to set some specific parameters to prepare your environment.	See Section 2.2.
3. Download the Oracle Fusion Applications repository.	You must obtain the Product Media Pack from Oracle E-Delivery or the Oracle Store. Unzip the provisioning repository to a location of your choice. The repository contains all the installers required for provisioning, including the provisioning framework installer (`faprov`).	See Section 2.3.
4. Install the provisioning framework.	Run `faprov` from the directory where you created the provisioning repository. The installer creates a directory for the framework components, for example, *framework_ location*/provisioning.	See Section 2.4.
5. Install a transaction database.	Your new environment must connect to a previously installed database. You can install the database using the Provisioning Wizard, or you can install it manually.	Chapter 3
6. Create a provisioning plan.	Start the Provisioning Wizard and respond to the questions in the interview to create a provisioning plan. You specify the product offerings to be installed and provide configuration details such as credentials, hosts, and ports.	Chapter 4
7. Provision a new environment.	Specify the location of the provisioning plan and start the installation, configuration, and deployment of the product offerings and their middleware dependencies. You use both the Provisioning Wizard and the command-line interface to perform an installation in a multiple-host environment.	Chapter 5
8. Complete the required postinstallation tasks.	The result of a successful installation is a fully operational applications environment. However, you may be asked to complete some manual tasks before you perform any product-specific functional setup tasks.	Section 5.6 and Section 5.7

1.4 Applications Topology: Oracle WebLogic Server Domains

The topology for an applications environment centers around a set of predefined Oracle WebLogic Server domains. The provisioning process creates these domains during the physical installation. It then deploys the product offerings that you select for installation in the associated product family domain. It also deploys common applications for use by all product offerings and their dependent middleware components.

After provisioning is complete, you can scale out middleware components, such as Oracle HTTP Server and Oracle SOA Suite, and product domains, such as Oracle Fusion Customer Relationship Management domain, Oracle Fusion Common domain, or Oracle Fusion Human Capital Management domain.

For more information about the enterprise deployment of domains and instructions about scale out, see *Oracle Fusion Applications Enterprise Deployment Guide*. This guide describes the recommended deployment of an Oracle Fusion Customer Relationship Management (CRM) domain.

A **WebLogic Server domain** is a logically related group of Oracle WebLogic Server resources that is managed as a unit. It consists of an Administration Server and one or more Managed Servers. A **Managed Server** hosts components and associated resources that constitute each product configuration. The domains are predefined to ensure that product offerings and their dependencies are always stored in a standardized arrangement.

In each domain, every Managed Server belongs to a cluster. **Clusters** are groups of Oracle WebLogic Servers that work together to provide scalability and high availability for applications. A cluster appears as a single Oracle WebLogic Server instance. The Managed Server instances that constitute a cluster can run on the same host or be located on different hosts. Applications are deployed to the cluster, which implies deployment to every Managed Server within the cluster.

See "Oracle WebLogic Server Domains Configuration" in *Oracle Fusion Applications Administrator's Guide* for more information.

1.5 Oracle Fusion Applications Directory Structure

In a discussion of Oracle Fusion Applications directory structures, unless stated otherwise, the term **home directory** refers to a directory that contains one or more Oracle Fusion Middleware homes or Oracle Fusion Applications homes. This directory has no functional significance other than as a grouping of related Oracle product offerings.

For a more information, see "Provisioned Oracle Fusion Applications Home Directories" in *Oracle Fusion Applications Administrator's Guide*.

1.5.1 Applications Base Directory

When an environment consists of multiple hosts, a central, shared provisioning installation directory is required so that the location is visible to all provisioned hosts. In order to achieve this setup, the use of full host names is required. Alias names are not recommended.

The top-level directory for the Oracle Fusion Applications binaries is the applications base. You specify a name for this directory at the time or provisioning, using the variable `APPLICATIONS_BASE`. This directory includes two mount points: `/net/mount1/appbase` for components that will remain read-only after provisioning, and `/net/mount2` (`APPLICATIONS_CONFIG`) to contain instances that

are configurable after provisioning. This structure aids performance issues and accommodates a "lock-down" of binaries after provisioning. It ensures that the configurable components remain available.

1.5.2 Oracle Fusion Applications Oracle Home Directory

The Oracle Fusion Applications Oracle home directory (*FA_ORACLE_HOME*) is located under the *APPLICATIONS_BASE*/fusionapps directory (*net/mount1/appbase*/fusionapps). The /fusionapps directory is an Oracle Fusion Applications Middleware home (*FA_MW_HOME*). Figure 1–1 shows this directory structure.

Figure 1–1   Oracle Fusion Applications Oracle Home
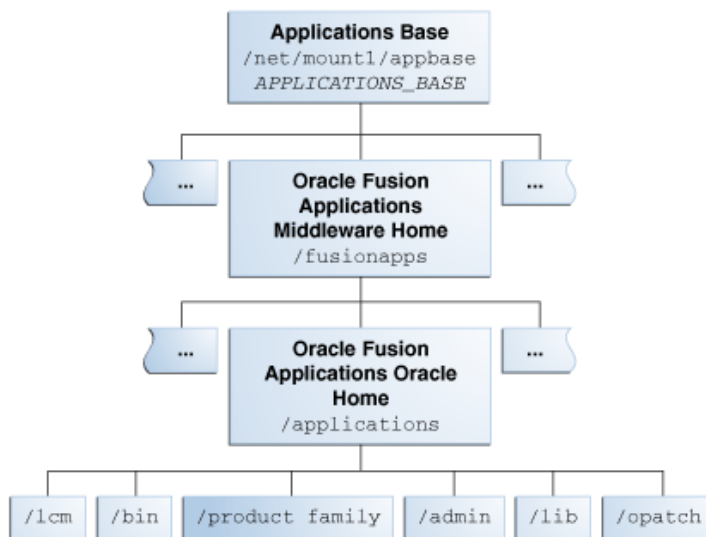
The Oracle home contains the following subdirectories:

- **/fusionapps/applications/lcm**: The life cycle management directory. Contains the patching framework artifacts in the following subdirectories:

    - **../ad/bin**: Patching framework software and executables, including C artifacts and configuration scripts, that set the environment and start the corresponding utility.

    - **../ad/java**: Java artifacts.

    - **../ad/db/sql**: Database artifacts and SQL files.

    - **../ad/lib**: Application libraries.

    - **../ad/template**: Configuration files or templates delivered and used by the patching framework during configuration activities.

- **/fusionapps/applications/bin**: Executables called by Enterprise Scheduler Service jobs.

- **/fusionapps/applications/*product_family***: Container directory for artifacts specific to a product configuration, for example, /ORACLE/fusionapps/fin.

- **/fusionapps/applications/admin**: Patching framework environment properties file (*FUSION_env_platform*.properties), Oracle Fusion Applications AutoPatch, and the patching logs, reports, and administration files. These files are required by Oracle Fusion Applications Patch Manager.

- **/fusionapps/applications/lib**: Applications-specific libraries.

- **/fusionapps/applications/OPatch**: Contains the OPatch utility called by Oracle Fusion Applications Patch Manager when patching middleware artifacts.

For complete information about patching your applications environment, see *Oracle Fusion Applications Patching Guide*.

1.5.3 Oracle Fusion Applications Product Family Directory

The Oracle Fusion Applications `.../product family` directory is located under the `net/mount1/appbase/`fusionapps/applications directory. This structure exists for each of the product configurations (product families) deployed in the Oracle Fusion Applications environment during provisioning. Figure 1–2 shows this directory structure.

Figure 1–2   Oracle Fusion Applications Product Family Directory
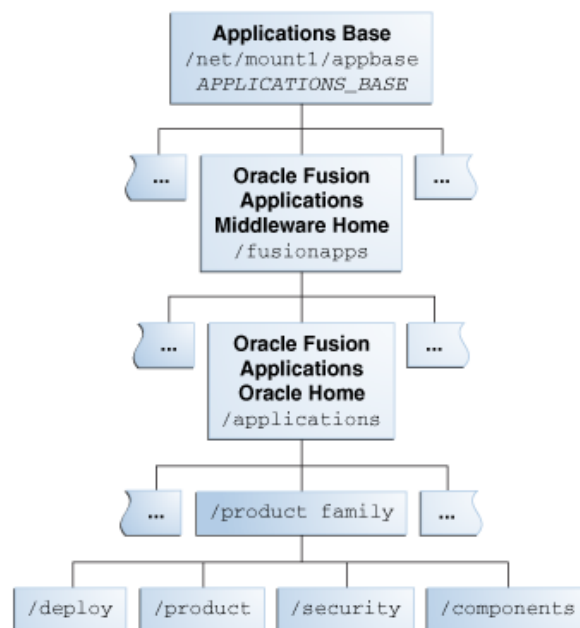
These subdirectories are located under the `.../product_family` directory:

- **/fusionapps/applications/*product_family*/*product***: Product grouping within a product family. For example, /fusionapps/applications/fin/ar.

  - **/db/plsql/**: PL/SQL packages and bodies for a given product, for example, .../fin/ar/db/plsql/arp_process_line.pkh.

  - **/db/sql/**: SQL scripts for a given product. For example, .../fin/ar/db/sql/ar_ar_rev_rec_typ_type.sql.

  - **/db/data/*lba*/US/**: Product-specific seed data files, striped by LBA. Note that sub-directories could exist in the top-level seed data directory because some LBAs can have sub-LBAs. For example, .../fin/ar/db/data/FinArCustomers/US/ArlookupTypeSD.xlf.

- **/fusionapps/applications/*product_family*/deploy**: Container directory for deployable artifacts, composites, Java EE applications (such as Oracle Application Development Framework and Oracle Enterprise Scheduler Service).

■ **/fusionapps/applications/***product family***/security/**: Product family directory containing security-related files.

1.6 Installation Guidelines

To install an applications environment efficently, it helps to know certain general characteristics of an applications installation and configuration. Planning which product offerings to choose, and what your topology will look like is the first step. This section suggests the information you may need in the planning phase, and presents an overview of an installation based on multiple hosts.

1.6.1 Planning for Provisioning

Before you create a provisioning plan for your new Oracle Fusion Applications environment, you should decide what your topology will look like, including what product offerings you want to install, port allocations, and the type and number of hosts that you will configure in the domains created for the product offerings. For example, Oracle recommends that you choose a separate host for each domain that will be installed. However, even in that scenario, some large product configurations must be split across multiple hosts.

For more information about the enterprise deployment of Oracle Fusion Applications product configurations, see the description how to deploy an Oracle Fusion Customer Relationship Management domain in *Oracle Fusion Applications Enterprise Deployment Guide*.

You must determine the necessasry system requirements to complete the provisioning of a new environment, based on how you will use the environment. For example, if you are installing a single-instance database for use as a test system, the requirements will differ from the installation of a multi-instance database to use for your production environment. You must also determine the access privileges for the database administrator (DBA) or system administrator who will perform the provisioning tasks.

You must supply directory locations, user names, and passwords associated with the prerequisite installations of Oracle Database and Oracle Identity Management components. These installations must be completed before you can create a provisioning plan.

For specific details about the information that you will need to complete a provisioning plan and successfully provision a new environment, review these sections before you begin:

■ Chapter 2. Note specifically the information about prerequisites, system requirements, and setting up a host in a demilitarized zone (DMZ).

■ Section 3.4 – Section 3.8

■ Section 4.3

■ Section 5.4

1.6.2 Introduction to Multiple-Host Installations

Oracle Fusion Applications must be provisioned on multiple hosts for a production deployment and installed from a shared drive that is accessible to all hosts. To properly install all the necessary components for an applications environment on multiple hosts, you must run the physical installation in phases across all hosts.

1.6.2.1 Types of Hosts in a Multiple-Host Environment

The way hosts are classified in a multiple-host environment determines the order in which you run the installation. Note the following definitions of the various types of hosts.

Primordial Host: The host that contains the Common domain (and specifically the Admin Server of the common domain). There is one, and only one, primordial host per shared drive.
Primary Host: The host on which the Administration Server of a domain runs.
Secondary Host: If a domain spans two physical servers, only the primary host runs the Administration Server for that domain.

1.6.2.2 Example of a Runtime Environment

One configuration for an Oracle Fusion Applications runtime environment is to use three hosts, all of which have access to a shared drive. In this arrangement, the components on each host might look like this:

- Host A, for Common and Oracle Fusion Customer Relationship Management.

- Host B, for Oracle Fusion Financials, Oracle Fusion Human Capital Management, and Oracle Business Intelligence.

- Host C, for Oracle Database.

- Shared Drive.

An Oracle Identity Management environment is installed on two servers and distributed as follows:

- Host 1, for Oracle Internet Directory and Oracle Virtual Directory.

- Host 2, for Oracle Identity Manager, Oracle Access Manager, Oracle SOA Suite.

See *Oracle Fusion Middleware Enterprise Deployment Guide for Oracle Identity Management (Oracle Fusion Applications Edition)* for more information.

1.6.2.3 Installation Phases

Installation actions are completed in phases, across all hosts, in a prescribed phase order. Each phase must be completed on all the hosts before you can run the next phase. For example, you must complete the preverify phase on hosts A, B, and C successfully before you run the install phase on any other host. Any one phase can run simultaneously on multiple hosts. For example, you can run the install phase on hosts A, B, and C simultaneously. Oracle recommends that you start the installation on the primordial host.

The provisioning installation phases are as follows (listed in phase order). See Section 5.1.2 for complete details.

- Preverify: Checks to see that the prerequisites for an installation are met.

- Install: Installs middleware and applications components and applies database patches shipped with provisioning (for databases created with the wizard).

- Preconfigure: Updates the Oracle Application Development Framework (Oracle ADF) configuration.

- Configure: Creates domains, Managed Servers, and clusters. Configures data sources and performs Node Manager registration of servers on the primordial and primary hosts.

- Configure-secondary: Performs the configuration actions on a primary or secondary host (or both), registers Managed Servers with the Node Manager on secondary hosts, and creates a web tier instance. If there are no primary or secondary hosts, or if there are only primary hosts, this phase runs, but takes no action.

- Postconfigure: Configures Oracle SOA Suite composite deployment and Oracle HTTP Server, and populates policies and grants. Configures middleware and applications that require servers to be online.

- Startup: Starts the Administration Server and Managed Servers on the current host. Performs online configuration, including global unique identifier (GUID) reconciliation and Financial/IPM configuration.

- Validate: Validates the deployment configuration and starts the Managed Servers.

1.7 What to Do Next

Before you can begin, you must prepare your environment for provisioning, download the provisioning repository, install the Oracle Fusion Applications Provisioning framework, and install and configure the prerequisite Oracle Database and Oracle Identity Management components. Go to Chapter 2 to get started.

2

Preparing for an Installation

This chapter describes the prerequisites for provisioning a new applications environment. It includes the following sections:

- Provisioning Prerequisites
- Preparing Your Applications Environment
- Creating the Provisioning Repository
- Installing the Provisioning Framework
- Managing Large Pages in the New Environment
- Setting Up a Demilitarized Zone (DMZ) for the Web Tier
- Deinstalling the Provisioning Framework
- What to Do Next

2.1 Provisioning Prerequisites

In order to provision a new Oracle Fusion Applications environment, you must ensure that your system meets certain requirements and that you perform the necessary prerequisite tasks in preparation for an installation of Oracle Fusion Applications product offerings.

2.1.1 System Requirements

This release of Oracle Fusion Applications relies on certified versions of Oracle Fusion Applications system requirements and supported platforms documentation 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.

2.1.2 Supported Platforms

Oracle Fusion Applications is supported on the following platforms:

- Linux x86-64
- Oracle Solaris
- IBM AIX on POWER Systems (64-Bit)
- Microsoft Windows x64 (64-Bit)

2.1.3 Installing Oracle Database

Oracle Fusion Applications requires Oracle Database (11.2.0.2) for storing transactional data. You can install either a single-instance Oracle Enterprise Edition Database or Oracle Real Application Clusters. See Chapter 3 for more information about database installations.

2.1.4 Installing Oracle Identity Management Components

Review this section to learn about Oracle Identity Management components required for Oracle Fusion Applications, review references to documentation about installing those components, and read about how to create a properties file that can supply default configuration parameters in your provisioning plan.

Note that during the Oracle Identity Management component installation, you must set up a super user in the identity store. This user has the administrative and functional setup privileges necessary for installation and provisioning. The user name you provide must correspond to the `uid` attribute in the identity store.

2.1.4.1 Required Components

These components must be installed and configured *specifically* for use with Oracle Fusion Applications.

- Two instances of Oracle Database (11.2.0.2). One for the Identity Store and the other for the Policy Store.

- Oracle Internet Directory 11*g* (OID)

- Oracle Virtual Directory 11*g* (OVD)

- Oracle Identity Manager 11*g* (OIM)

- Oracle Access Manager 11*g* (OAM)

> **Note:** The installers for OAM and OIM are included among the installers in the provisioning repository.

Follow the instructions in *Oracle Fusion Middleware Enterprise Deployment Guide for Oracle Identity Management (Oracle Fusion Applications Edition)* to install and configure these components. Keep a record of the configuration details. You must supply them to the Provisioning Wizard when you create your provisioning plan.

See Section 4.3 for information about the configuration details required by provisioning. For specific information about how provisioning links the Oracle Identity Management components and your new applications environment, see Section 4.1.3 and Section 5.1.3.

2.1.4.2 Using the IDM Properties File

A properties file (idmDomainConfig.param) is generated the first time you run the `idmConfigTool` during the installation and configuration of an Oracle Identity Management environment. Each time you make changes to that environment, the new information is appended to the properties file. This file includes the configuration values that you must supply to the Provisioning Wizard when you create a provisioning plan. These values must be included in your provisioning plan in order to integrate Oracle Identity Management components with an Oracle Fusion Applications environment. The `idmConfigTool` is located in *IAM_ORACLE_ HOME*/idmtools/bin. The properties file is created in:

IDM_ORACLE_HOME/idmtools/bin/idmDomainConfig.param.

See "Input to the Fusion Applications Provisioning Tool" in *Oracle Fusion Middleware Enterprise Deployment Guide for Oracle Identity Management (Oracle Fusion Applications Edition)*. Note that you must run `idmConfigTool` from the same location each time to prevent the creation of duplicate idmDomainConfig.param files that contain only partial information.

If *IDM_ORACLE_HOME*/idmtools/bin/idmDomainConfig.param is in a shared location, you can point the Provisioning Wizard to that location so that it can read the values directly from the file. If you do not have direct access, you can copy the file to an accessible location and point the wizard to that location. You specify the path to the properties file on the **Installation Location** screen when you create the provisioning plan.

2.1.4.3 Making Special gcc Libraries Available

Oracle Fusion Applications (WebGate component) requires special versions of `gcc` libraries to be installed. These library files must exist somewhere on the Linux system. You must specify the location of the files when you create a provisioning plan.

To make these libraries available, download them from `http://gcc.gnu.org`, as described in "Installing Third-Party GCC Libraries (Linux and Solaris Operating Systems Only)" in *Oracle Fusion Applications Middleware Installation Guide for Oracle Identity Management*. Make a note of the location so that you can supply it when you complete WebGate Library Location field on the **Installation Location** screen for your provisioning plan.

For more information, see also "GCC Run-Time Libraries for Linux and Solaris" at: `http://www.oracle.com/technetwork/middleware/ias/downloads/10gr3 -webgates-integrations-readme-154689.pdf`.

2.2 Preparing Your Applications Environment

Before creating your new environment, take note of the actions in this section that can help ensure a smooth installation.

2.2.1 Tune the Socket Buffer Size (AIX Only)

For IBM AIX on POWER Systems (64-Bit) platforms, run the following commands as the `root` user:

```
no -o rfc1323=1
no -o sb_max = 4194304
```

2.2.2 Set the SKIP_SLIBCLEAN Variable (AIX Only)

For IBM AIX on POWER Systems (64-Bit) platforms, the provisioning install phase installs the Oracle Database client and a database patch update. To prepare your environment for this action, set the SKIP_SLIBCLEAN environment variable as follows:

```
SKIP_SLIBCLEAN = TRUE;export SKIP_SLIBCLEAN;export
SKIP_SSLIBCLEAN
```

Run `/usr/sbin/slibclean` as `root`.

2.2.3 Check for the Required Solaris Patch

For Oracle Solaris platforms, ensure that the Solaris Operating System patch 144540-01 is installed on the servers. Do this for both Oracle Solaris on SPARC (64-Bit) and Oracle Solaris on x86-64 (64-Bit). Solaris OS patch 144540-01 can be obtained from My Oracle Support.

2.2.4 Increase the Open Files Limit

Increase the limit of open files to 16384 or higher for the operating system.

For Linux x86-64:

- Modify `/etc/security/limits.conf` to read as follows:

    - *FUSION_USER_ACCOUNT* `soft nofile 32767`

    - *FUSION_USER_ACCOUNT* `hard nofile 327679`

For Oracle Solaris on SPARC (64-Bit):

Edit `/etc/system` and set as follows:

```
set rlim_fd_cur=32767
```

```
set rlim_fd_max=327679
```

For IBM AIX on POWER Systems (64-Bit):

Modify `/etc/security/limits` defaults to read as follows:

```
fsize = -1
```

```
core = 2097151
```

```
cpu = -1
```

```
data = 1024000
```

```
rss = 512000
```

```
stack = -1
```

```
stack hard = -1
```

```
nofiles = 32767
```

```
nofiles hard = 327679
```

Typically, you would have max user processes set to 16384:

```
$ulimit -u
16384
```

2.2.5 Set Up the Server and the Shared Area Permissions (Windows x64)

For Microsoft Windows x64 (64-Bit) platforms, complete these steps on each host provisioned:

1. Create a `domain\user` that is part of the Administrators group.

2. Log in as the user that you created.

3. Run `secpol.msc` (security policy) and add the `domain\user` that you created to "Log on as service" under the Local Policies, User Rights Assignment option.

4. Create a *fusionapps* folder on a shared disk that is accessible to all hosts in the provisioned environment. The name of the *fusionapps* folder must not exceed eight characters.

5. Create a symbolic link to the *fusionapps* folder that you created in Step 4. Perform this step on all hosts to be provisioned. For example, at the MS-DOS prompt, type the following:

```
C:\>mklink /d C:\fusionapps \ComputerName\fusionapps
```

6. Confirm that a file or folder can be created through the C:*fusionapps* symbolic link from all hosts in the provisioned environment.

2.2.6 Set Up the Local Port Ranges

You must define your local port range to ensure that it does not overlap with the ports used by the Java Virtual Machines (JVMs) and other servers. This action avoids port conflicts during server startup. To view and modify localRange:

For Linux x86-64:

To view:

```
$cat /proc/sys/net/ipv4/ip_local_port_range
```

To modify:

```
$echo "16202 65535" > /proc/sys/net/ipv4/ip_local_port_range
```

For Oracle Solaris

To view:

```
#/usr/sbin/ndd /dev/tcp tcp_smallest_anon_port tcp_largest_anon_port
```

To Modify:

```
#/usr/sbin/ndd -set /dev/tcp tcp_smallest_anon_port 16202
```

```
#/usr/sbin/ndd -set /dev/tcp tcp_largest_anon_port 65535
```

For IBM AIX on POWER Systems (64-Bit):

To view:

```
#/usr/sbin/no -a | fgrep ephemeral
```

To modify:

```
#/usr/sbin/no -o tcp_ephemeral_low=16202 -o tcp_ephemeral_high=65535
```

Typically, the port range settings would be as follows:

```
$ /usr/sbin/no -a | fgrep ephemeral
    tcp_ephemeral_high = 65535
    tcp_ephemeral_low = 32768
    udp_ephemeral_high = 65535
    udp_ephemeral_low = 32768
```

For more information about setting port values, see "Viewing and Changing Ports for Components" in *Oracle Fusion Applications Administrator's Guide*.

2.2.7 Synchronize the System Clocks

All engine and data tier servers (including SIP) must accurately synchronize their system clocks to a common time source, to within one or two milliseconds. Large differences in system clocks can cause severe problems.

2.2.8 Support for File Locking (UNIX)

The shared drive (NFS or CIFS) must support file locking. For NFS Version 3, the advisory locking must be configured for the NFS mount. This applies to all UNIX platforms.

2.3 Creating the Provisioning Repository

The provisioning repository contains all the installers required to provision a new Oracle Fusion Applications environment. You download the repository from the Oracle Fusion Applications Product Media Package to a location of your choice (`repository_location`).

> **Note:** If you want to set up a demilitarized zone (DMZ) for the web tier in your new environment, see Section 2.6 before you create the repository.

2.3.1 Obtaining the Software

Oracle groups its software releases by product area. A **Product Media Pack** refers to those groupings. Each media pack may also include a zipped file containing electronic documentation files or "Quick Install" files, which facilitate the initial installation of the software.

> **Note:** For installations of Oracle Fusion Applications, you must have available the complete set of software contained in the product media pack. You cannot install from individual pieces. Therefore, if you need to install from media that is no longer available on Oracle E-Delivery, contact My Oracle Support to obtain the complete media pack.

Once you have completed the software licensing agreements, you can obtain the Oracle Fusion Applications software using one of these two methods:

- **Oracle E-Delivery**: Provides you with a readme document that helps you to determine which media you need to fulfill the license you have purchased. You download only the media you need. This is the default delivery method.

- **Oracle Store**: Provides a complete set of the software in DVD format. You use only the DVDs covered by your software licensing agreement.

Using either method, you can obtain the Oracle Fusion Applications Provisioning repository and gain access to the Oracle Fusion Applications documentation library.

2.3.2 Downloading from Oracle E-Delivery

Go to `http://edelivery.oracle.com/` and follow these instructions:

1. Complete the Export Validation process by entering basic identification information using 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.

2.3.3 Obtaining DVDs from Oracle Store

To order the Oracle Fusion Applications DVDs from the Oracle Store, go to http://oracle.com. Navigate to the Products and Services page. Click Oracle Applications and then Oracle Fusion Applications.

1. Log in as the operating system user with sufficient privileges to mount, unmount, and eject a DVD.

2. Each DVD in the media pack is assigned a unique name and typically contains only one zipped file. Insert the first DVD in the Oracle Fusion Applications Media Pack.

3. Extract the contents of the first DVD, and each of the remaining DVDs one by one to the same target directory. The directory must be on a networked drive or shared disk so that it is accessible and writable to all hosts in your 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.

2.4 Installing the Provisioning Framework

The Oracle Fusion Applications Provisioning installer (`faprov`) was delivered with the other installers in the provisioning repository. The purpose of `faprov` is to create the Oracle Fusion Applications Provisioning framework, which contains the following components:

- **Provisioning Wizard**: A question-and-answer interview that guides you through the process of installing a database, creating or updating a provisioning plan, and provisioning or deinstalling an Oracle Fusion Applications environment.

- **Provisioning command-line interface (CLI)**: Used for starting the wizard and running installation phases on the primary, secondary, and DMZ hosts (when present).

- **Provisioning-related files and utilities**: The ANT utilities, binary files, library files, templates, locations of saved provisioning plans and provisioning build

scripts, and other provisioning utilities required for performing provisioning tasks.

Because the provisioning installer is a customized version of the Oracle Universal Installer (OUI), its behavior closely resembles that of the OUI.

2.4.1 Run the Provisioning Installer

Run `faprov` from the directory where you created the provisioning repository, for example, *repository_location*/installers/faprov/Disk1. Use this command:

(UNIX) `runInstaller`

(Windows) `setup.exe`

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

2.4.2 Provisioning Installer Screens and Instructions

Table 2–1 lists the steps for running the provisioning framework installer. For examples of the interview screens, see Appendix A.

Table 2–1   Provisioning Framework Installation Screen Flow

Screen	Description and Action Required
Specify Inventory Directory (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. 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**.
	Click **OK** to continue.
Welcome	No action is necessary on this read-only screen.
	Click **Next** to continue.
Prerequisite Checks	Analyzes the host computer to ensure that specific operating system prerequisites have been met. If any prerequisite check fails, the screen displays a short error message at the bottom. Fix the issue that caused the error and click **Retry**.
	To ignore the error or warning message, click **Continue**. Click **Abort** to stop the prerequisite check process for all components.
	Click **Next** to continue.

Table 2–1   (Cont.) Provisioning Framework Installation Screen Flow

Screen	Description and Action Required
Specify Installation Location	In the **Location** field, specify where you want to install the provisioning framework. This is the location where the Provisioning Wizard and the start command for provisioning are installed. You can choose any location as long as it is on a shared disk in a location that is accessible to all hosts in your new environment.
	The installation process creates a logical directory called the Oracle home. This location is where software binaries will be stored. No runtime process can write to this directory. The directory must initially be empty.
	If you are performing the installation on a Windows operating system, ensure that the directory paths are valid and do not contain a double backslash (\\).
	Click **Next** to continue.
Installation Summary	Summarizes the selections that you have made during this installation session. To change this configuration before installing, select one of the screens from the left navigation pane or click **Back** to return to a previous screen. When you are satisfied with the details, click **Save** to create a text file (response file) to use if you choose to perform the same installation later.
	Click **Install** to begin installing this configuration.
Installation Progress	The progress indicator shows the percentage of the installation that is complete, and indicates the location of the installation log file.
	Click **Next** when the progress indicator shows 100 percent.
Installation Complete	Summarizes the installation just completed. To save the details to a text file, click **Save** and indicate a directory where you want to save the file.
	Click **Finish** to dismiss the screen and exit the installer.

2.4.3 Provisioning Framework Components

Table 2–2 shows the components in the `framework_location`/`provisioning` directory.

Table 2–2   Contents of the Provisioning Framework

Component Type	Component Name	General Use
ANT	ant	Java processes for installing binaries, configuring domains and subsystems (JDBD and SOA composites), deploying applications, and domain startup
Binary files	bin	Executable files, compiled programs, system files, spreadsheets, compressed files, and graphic (image) files
Library files	lib	Previously defined functions that have related functionality or are commonly used, stored in object code format
Location of saved provisioning plans	provisioning-plan	Location for completed or partially completed provisioning plans
Location of provisioning build scripts	provisioning-build	Location for build scripts that are available when called for during the provisioning of an environment
Location of templates	template	Start parameters, single sign-on configuration, and database templates
Location of utility files	util	Other provisioning utilities

2.5 Managing Large Pages in the New Environment

The goal of large page support is to optimize processor Translation-Lookaside Buffers. Beginning with Java SE 5.0, you can use a cross-platform flag for requesting large memory pages: `-XlargePages:exitOnFailure=true` works on all platforms that

support large pages. You can also use `-XX:+UseLargePages` for the same purpose. Both arguments are platform-generic.

See `http://www.oracle.com/technetwork/java/javase/tech/largememory-jsp-137182.html` for more information.

If your environment has large pages, add the largepages option as follows:

1. After you have created a provisioning repository, open `provisioning/provisioning-plan/fusionapps_start_params.properties`.

2. Append `-XlargePages:exitOnFailure=true` or `-XX:+UseLargePages` to the entry for your platform. Operating system entries are in the following form:

   `fusion.default.`*platform_name*`.memoryargs=`*existing_page_size*.

3. For Hotspot JVM only, use the `-XX:+UseLargePages` argument.

4. Run provisioning as usual.

2.6 Setting Up a Demilitarized Zone (DMZ) for the Web Tier

The web tier contains Oracle HTTP Server, which can be installed on the same shared file system (inside the firewall) as the other components, or exist on a host in a DMZ. If you install the web tier in a DMZ, the web tier host cannot be the same as any other host deployed, regardless of domain.

Installing the web tier in a DMZ enables you to impose more restrictions on communication within the portion of the system that is within the firewall, including the following:

- The DMZ host cannot access the shared storage that is accessible by the hosts within the firewall (in the *APPLICATIONS_BASE* area where the middleware homes are installed or the shared area).

- The DMZ host may not be able to communicate with the CommonDomain AdminServer through the firewall. If this is the case, web tier running on the DMZ is **non-managed**; that is, it is not associated with the CommonDomain running inside the firewall.

However, the *APPLICATIONS_BASE* file path and the directory structure under it remain the same on the DMZ host as for the other hosts that exist inside the firewall.

During the provisioning process, phase guard files are generated automatically to determine when a specific phase has been completed on a specific host. For systems that do not use a DMZ, these phase guard files are generated automatically under the shared *APPLICATIONS_CONFIG* area on the hosts inside the firewall.

To set up and configure your web tier on a DMZ host, go to `http://edelivery.oracle.com/` and follow these directions:

1. Copy the provisioning repository zipped files to a location on the web tier host to be designated as a demilitarized zone. Follow the instructions in Section 2.3.

2. Create an `installers/temp` directory.

3. Run the provisioning framework installer (`faprov`), as described in Section 2.4. You can create the framework in any location, or you can create it on the DMZ host.

4. Copy the provisioning framework (*framework_location*/provisioning) from the location where you installed it to the DMZ host. If you installed it initially on the DMZ host, no action is required.

5. Place the libstdc++.so.5 and libgcc_s.so.1 libraries in the installers directory.

6. When you create the provisioning plan for this environment, indicate this web tier configuration when prompted. See Section 4.3 for details.

7. Place a copy the provisioning plan on the DMZ host.

2.7 Deinstalling the Provisioning Framework

Deinstalling Oracle Fusion Applications involves removing the Oracle Fusion Applications Provisioning Oracle home. The deinstaller attempts to remove the Oracle home from which it was started, and removes only the software in the Oracle home.

Before you remove the Oracle Fusion Applications Provisioning Oracle home, ensure that it is not in use. After you remove the software, you will no longer be able to provision a new Oracle Fusion Applications environment.

2.7.1 Run the Provisioning Deinstaller

To start the deinstaller, navigate to (UNIX) *PROV_FRMWK_HOME*/oui/bin or (Windows) *PROV_FRMWK_HOME*\oui\bin. Start the deinstaller with this command:

(UNIX)

```
./runInstaller -deinstall
```

(Windows)

```
setup.exe -deinstall
```

On Windows operating systems, you can also start the deinstaller from the Start menu by selecting Programs; then select Oracle Fusion Applications Provisioning 11g-Home1, and finally Uninstall.

2.7.2 Deinstaller Screens and Instructions

Table 2–3 contains instructions for deinstalling the provisioning framework. For help with any of the interview screens, see Appendix A or click **Help** on any interview screen.

Table 2–3   Provisioning Deinstaller Screen Flow

Screen	Description and Action Required
Welcome	No action is required on this read-only screen.
	Click **Next** to continue.
Deinstall Oracle Home	Verify that the directory path is correct. Click **Save** to create a text file with the details of the configuration you are deinstalling. Click **Deinstall** to continue.
	On the **Warning** screen, select whether you want the deinstaller to remove the Oracle home directory in addition to removing the software. Click **Yes** to remove the software files and the provisioning Oracle home directory. Click **No** to remove only the software files, or click **Cancel** to return to the previous screen.
	If you clicked **No**, remove the framework software files manually. For example, you would use this syntax if the directory is /d1/oracle/provisioning:
	(UNIX)
	`cd /d1/oracle/provisioning`
	`rm -rf provisioning`
	(Windows)
	If the Oracle home directory is `C:\Oracle\Provisioning`, use a file manager window and navigate to the `C:\Oracle` directory. Right-click the `Provisioning` folder and select **Delete**.
Deinstallation Progress	Monitor the progress of the deinstallation. Click **Cancel** to stop the process. Click **Next** to continue.
Deinstallation Complete	Click **Finish** to dismiss the screen.

2.8 What to Do Next

You must install a transaction database before you create a provisioning plan. See Chapter 3 for complete information.

3

Installing a Transaction Database

This chapter describes how to install and configure a transaction database for use with an Oracle Fusion Applications environment. It also describes the Oracle Fusion Applications Repository Creation Utility, which creates a repository for applications schemas and tablespaces and loads seed data into the database.

It includes the following sections:

- Introduction to Transaction Databases
- Before You Begin
- Database Installation Requirements
- Installing Oracle Database Enterprise Edition with the Wizard
- Manually Installing Oracle Database Enterprise Edition or Oracle RAC
- Oracle Fusion Applications Repository Creation Utility
- Managing Tablespaces and Schemas
- Running the Oracle Fusion Applications Repository Creation Utility
- Using the Command-Line Interface
- Troubleshooting for Database Installations
- What to Do Next

3.1 Introduction to Transaction Databases

A **transaction database** holds the business transactions generated as you use your Oracle Fusion Applications products offerings. This chapter includes overview information related to installing Oracle Database (11.2.0.2).

3.1.1 Process Overview

You must install Oracle Database Enterprise Edition before you create a provisioning plan. 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, you can use the **Install an Applications Transaction Database** option in the Provisioning Wizard to install a single-node instance of Oracle Database Enterprise Edition. Or, you can install the database manually (interactively) if you are creating a production-scale, multiple-node database. Oracle Fusion Applications also supports Oracle Real Application Clusters (Oracle RAC).

To finish any database installation, you must use the Oracle Fusion Applications Repository Creation Utility (Applications RCU) to perform the following actions:

- Create Oracle Fusion Middleware schema and tablespace users and define the tables, views, and other artifacts that the schema user owns.

- Create empty tablespaces for Oracle Fusion Applications components and the schema owners. The owners do not own any tables or data initially.

- Import default seed data values for the schema users using Oracle Data Pump files.

See Section 3.6 for details about running the Applications RCU.

3.1.2 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.

3.1.3 Single-Node Databases

A single-node instance of Oracle Database Enterprise Edition is typically used for medium-sized installations, or for training and demonstrations. The Provisioning Wizard database installation interview collects details such as the database listener port and the location of the database home, the database software, the database files, the database password, and the global name of the database. The wizard performs prerequisite validation checks, reports the status of the checks, and summarizes the actions to be performed during the database installation.

3.1.3.1 Using the Provisioning Wizard Database Option

The wizard invokes the database build script and performs the following tasks:

- Installs database software.

- Generates an Oracle Universal Installer (OUI) response file based on the configuration that you specify.

- Accesses the provisioning repository and invokes the database installer in silent mode. If the applications environment does not meet the database installation requirements, the wizard terminates the process.

- Requests a copy of the nonseeded database template.

- Creates an instance of Oracle Database 11.2.0.2 using the configuration settings that you entered in the wizard interview, and the database template.

3.1.3.2 Database Installation Phases

The wizard performs the database installation in phases and reports progress during the installation:

- **Installation**: Runs the database installer to install only the software.

- **Preconfigure**: Applies patches to the installed database. The patches are located in the `repository_location`/installers/database/patch directory.

- **Configure**: Creates services used to connect to the database and applies the database template to set system parameters.

- **Postconfigure**: Performs any necessary postconfiguration steps.

- **Startup**: Starts any installed components that are not already started.

- **Validation**: Connects to the database to verify the integrity of the installation.

3.1.4 Multiple-Node Databases

Oracle Real Application Clusters (Oracle RAC) enables multiple database instances, linked by an interconnect, to share access to Oracle Database. This configuration enables you to increase the scale of your applications environment. This type of database is typically used for production environments.

For information about Oracle RAC, see "Oracle RAC Database Configuration for Oracle Fusion Applications Repositories" in *Oracle Fusion Applications Administrator's Guide*.

3.2 Before You Begin

You must read and understand the information in the following sources and perform any tasks outlined there before you begin a database installation:

- Chapter 1

- Chapter 2

- Section 3.3

The expectation is that the installation is performed by the database administrator (DBA) on the database host, and that these requirements are met:

- The person who installs the database must have `root` or `sudo` user privileges. However, Oracle Database should not be installed as `root` user.

- The Oracle Fusion Applications software packages must have been installed. Provisioning relies on the database installer to determine whether the system is adequate for the base database software.

> **Note:** It is a good practice to install only one database server on a given host. Each server can manage multiple database instances.

3.3 Database Installation Requirements

Oracle Database installations must meet specifications for Oracle Fusion Applications system requirements and supported platforms documentation. The Provisioning Wizard performs prerequisite validation checks to ensure that those requirements are met.

3.3.1 Minimum Installation Requirements

Oracle Fusion Applications requires Oracle Database Enterprise Edition or Oracle Real Application Clusters Database. If you are installing Oracle Database Enterprise Edition installer manually (not using the provisioning Wizard), the installation requires the enabling of specific components, several of which are selected by default:

- Oracle Partitioning (default)
- Oracle OLAP (default)
- Oracle Label Security (select for runtime requirements)
- Oracle Data Mining RDBMS Files (default)
- Oracle Real Application Testing (default)

To verify that your system meets all minimum requirements associated with the database, see *Oracle Database Installation Guide* for your platform for details.

3.3.2 Minimum Configuration Parameters for Oracle Database

Table 3–1 shows the commonly recommended initialization parameters.

Table 3–1 Recommended Initialization Parameters

Expected Database Size	Parameter Name	DB Default Value	Recommended Value
Small and large	audit_trail	DB	NONE
	plsql_code_type	INTERPRETED	NATIVE
	nls_sort	Derived from NLS_LANGUAGE	BINARY
	open_cursors	50	500
	session_cached_cursors	50	500
	_b_tree_bitmap_plans	TRUE	FALSE
Starter	sga_target	0	9 GB
	pga_aggregate_target	0	4 GB
	_fix_control	0	6708183:ON
	processes	100	5000
	undo tablespace	0	12 GB
	temp tablespace	0	9 GB
	redo log	0	3 2 GB Groups
Single-node, large	sga_target	0	18 GB
	pga_aggregate_target	0	8 GB

Table 3–1   (Cont.) Recommended Initialization Parameters

Expected Database Size	Parameter Name	DB Default Value	Recommended Value
	_fix_control	0	6708183:ON
	processes	100	5000
	undo tablespace	0	12 GB
	temp tablespace	0	9 GB
	redo log	0	3 2 GB Groups
2-node Oracle RAC	sga_target	0	18 GB
	pga_aggregate_target	0	8 GB
	_fix_control	0	6708183:ON
	processes	100	5000
	undo tablespace	0	12 GB
	temp tablespace	0	9 GB
	redo log	0	3 2 GB Groups

3.3.3 Prerequisite and Validation Checks

As a part of the provisioning process, the Provisioning Wizard performs prerequisite and validation checks. These validations must pass before you create a provisioning plan.

User Input Validations

The Provisioning Wizard:

- Validates the service name or global database name.

- Validates the installer location. In the preverify phase, validates that the database is present.

- Validates that the database password value and the password confirmation match.

- Performs specific user ID and password validations for all Oracle Fusion Middleware schema owners.

Preinstallation Validations

The Provisioning Wizard:

- Checks to see if the specified database file location has sufficient disk space for the initial database provisioning and performs an Oracle home space check.

- Performs a port availability check.

- Performs a platform check. There is no validation that specific platform packages have been installed.

Postinstallation Validations

The Provisioning Wizard ensures that a JDBC connection can be established.

3.4 Installing Oracle Database Enterprise Edition with the Wizard

You can install a single-node instance of Oracle Database Enterprise Edition using the Provisioning Wizard. The wizard uses the database template delivered with your

software. The database is initially empty. After the installation is complete, you must run the Applications RCU to create schemas and tablespaces.

3.4.1 Start the Provisioning Wizard

To start the Provisioning Wizard, do the following:

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. Run the following command on the primordial host:

   (UNIX)

   ```
   cd framework_location/provisioning/bin
   ./provisioningWizard.sh
   ```

   (Windows)

   ```
   framework_location\provisioning\bin
   provisioningWizard.bat
   ```

3.4.2 Wizard Interview Screens and Instructions

Table 3–2 shows the steps necessary to install a transaction database. For help with any of the interview screens, see Appendix B or click **Help** on any interview screen.

Table 3–2   Interview Flow for Database Installation

Screen	Description and Action Required
Welcome	No action is required on this read-only screen.
	Click **Next** to continue.
Installation Options	Presents the list of valid installation actions that you can perform using the wizard. Select **Install an Applications Transaction Database**.
	Click **Next** to continue.
Specify Security Updates	Set up a notification preference for security-related updates and installation-related information from My Oracle Support.
	■ **Email**: Enter your email address to have updates sent by this method.
	■ **I wish to receive security updates via My Oracle Support**: Select this option to have updates sent directly to your My Oracle Support account. You must enter your **My Oracle Support Password** if you select this option.
	Click **Next** to continue.
Database Install Configuration	Specify the configuration details for the database that you want to install. See Section 3.4.3 for details.
	Click **Next** to continue.

Table 3–2   (Cont.) Interview Flow for Database Installation

Screen	Description and Action Required
Prerequisite Checks	The **Prerequisite Checks** list shows each prerequisite check performed, and its status:
	■ **Block**: Processing has not yet started on this host for the named phase.
	■ **Clock**: Performing the build for a phase.
	■ **Check mark**: The build was completed successfully.
	■ **x** mark: The build has failed for this phase. You must correct the errors before you can continue.
	■ **Restricted** symbol: The validation process has stopped due to a failure within another process.
	Click an **x** or a **Restricted** symbol to display information about failures. Click the **Log** file for details about the validation. Fix any issues reported. Click **Retry** to run the prerequisite checks again. If recovery is necessary, see Section 3.10 for details.
	When prerequisite checking has finished with no errors, click **Next** to continue.
Summary	Click **Save** to create and save a text file to use as a record of this configuration. Click **Install** to start the installation.
	Note: Record the name and location of the file. You must supply these details when you create a provisioning plan.
Database Installation Progress	The progress of the installation phases is listed. See Section 3.1.3.2 for a description of the phases. 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 recovery is necessary, see Section 3.10 for details.
	Click **Next** to continue.
Installation Complete	Summarizes the actions and validations that were performed for this installation. Click **Save** to record the database summary information in a text file.
	Note: Be sure make a note of the name and location of this file. You must supply these details when you create a provisioning plan. Your system administrator may also need this information as they perform maintenance tasks.
	Click **Close** to dismiss the screen and exit the wizard.

3.4.3 Database Installation Parameters

On the **Database Install Configuration** interview screen, specify values for these database configuration parameters.

- **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 Section 2.2.5 for additional details. Note that the symbolic link is not necessary if the repository and the database are on the same node.

- **Oracle Base**: Enter the top-level directory for Oracle software installations. You can change the path based on your requirements.

- **Software Location**: Accept the default value or enter the Oracle home directory path that points to where you want the data files to reside. The directory path must not contain spaces.

- **Database File Location**: Accept the default value or enter the path to the .dbf, .dtl, and .log files.

- **OSDBA Group**: The UNIX operating system group that the database administrator is a member of. Displayed only if the platform detected by the installer is UNIX.

- **Global Database Name**: Enter a name to distinguish this database instance from other Oracle Database instances running on the same host. The name can be written as *database name* or *database name.domain name*. This is the database service name.

- **Administrative Password**: Specify a valid password. Retype the password to **Confirm**.

3.5 Manually Installing Oracle Database Enterprise Edition or Oracle RAC

Though Oracle Fusion Applications Provisioning automates the installation and configuration of a transaction database for use with Oracle Fusion Applications environments, you can manually install a single-node instance of Oracle Database or Oracle Real Application Clusters to meet your specific requirements.

To manually install and configure a transaction database, you must:

1. Install Oracle Database or Oracle RAC.

2. Apply database patches.

3. If installing an instance of Oracle Database, configure the database listener.

4. Create transaction database instances using Oracle Database Configuration Assistant (DBCA).

5. Start the database.

6. Complete any postinstallation tasks that are required by the database patches, as described in the readme files.

3.5.1 Installing Oracle Database or Oracle RAC

The first step in creating a custom transaction database instance is to install the database software.

3.5.1.1 How to Install Oracle Database

If you are installing Oracle Database manually (interactively) instead of using the Provisioning Wizard, see *Oracle Database Installation Guide* for your platform for instructions.

When performing the installation, ensure that the following components are enabled:

- Oracle Partitioning (default)

- Oracle OLAP (default)

- Oracle Label Security (select for runtime requirements)

- Oracle Data Mining RDBMS Files (default)

- Oracle Real Application Testing (default)

If these components are not enabled, application functionality will not work.

When performing the installation, choose the **Software Only** option. You will manually create the database instance and configure the database.

3.5.1.2 How to Install Oracle RAC

For complete information about installing and configuring Oracle RAC, see *Oracle Database Installation Guide* for your platform for instructions. This library contains installation guides for Oracle RAC, as well as Oracle Database installations for all platforms.

3.5.2 Applying Database Patches

An installation of Oracle Fusion Applications requires several database patches. When you install a database manually, you must apply these patches to your database before you run the Oracle Fusion Applications Repository Creation Utility. With Oracle Database, you must also apply the patches before you configure the database listener.

3.5.2.1 How to Apply Patches to Oracle Database

You use OPatch to apply patches to Oracle Database. For information about OPatch, see the *Oracle Universal Installer and OPatch User's Guide*.

1. Navigate to the database `ORACLE_HOME`/`OPatch` directory.

2. Invoke the OPatch command using the following parameters:

   ```
   ./opatch napply repository_location/installers/database/patch
   -skip_duplicate -skip_subset
   ```

The `repository_location` is the path to the directory that was created when you unzipped the product media pack.

3.5.2.2 How to Apply Patches to Oracle RAC

For information about applying patches to an Oracle RAC database instance, see the *Oracle Database 2 Day + Real Application Clusters Guide 11g Release 2*.

3.5.3 Configuring the Database Listener for Oracle Database

If you are using Oracle Database, you must configure the database listener as described in the Oracle 11*g* Release 2 Documentation Library. After you complete the configuration, start the database listener.

3.5.4 Creating a Transaction Database Instance

You can use the Oracle Database Configuration Assistant (DBCA) to create the transaction database from the database template that is shipped with Oracle Fusion Applications software. This template contains the database structure and features, but is not seeded. It is generic for use across platforms.

Instructions on database installation and configuration can be found in the Oracle 11*g* Release 2 Documentation Library.

If you choose to not use the database template, you must ensure that your database configuration parameters are aligned with the values specified in Section 3.3.2.

3.5.4.1 How to Create a Single-Node Oracle Database Instance from the Template

You use DBCA to manually create an instance of Oracle Database from the nonseeded database template that is shipped with Oracle Fusion Applications software.

To create a single-node Oracle Database instance:

1. Edit the nonseeded database template at *PROV_FRMWK_HOME*/provisioning/provisioning/template/dbca/empty_database_11.2.dbt and set the process initialization parameter to 3000 as shown in the following text:

```
<initParam name="processes"              value="5000"/>
```

2. Navigate to the database *ORACLE_HOME*/bin directory and execute the following command:

```
dbca -silent -createDatabase \
-templateName  PROV_FRMWK_HOME/provisioning/provisioning/template/dbca/empty_
database_11.2.large.dbt  \
-gdbName "ORACLE_SID" \
-sid "ORACLE_SID" \
-sysPassword "SYS_PASSWORD" \
-systemPassword "SYSTEM_PASSWORD" \
-emConfiguration "NONE" \
-characterSet "AL32UTF8" - \
-nationalCharacterSet "AL16UTF16" \
-variables ORACLE_BASE=ORACLE_BASE, ORACLE_HOME=ORACLE_HOME \
-initParams audit_trail=NONE \
-datafileDestination DATAFILE_LOC
```

Replace the following variables with the appropriate values:

- *PROV_FRMWK_HOME*: Home of Fusion Applications Provisioning framework.

- *ORACLE_SID*: Global database name of the Oracle Fusion Applications database.

- *SYS_PASSWORD*: Password for the SYS user. The SYS schema is the location of base tables and views.

- *SYSTEM_PASSWORD*: User SYSTEM password. The user can create additional tables and views.

- *ORACLE_BASE*: Top-level directory for the database installation.

- *ORACLE_HOME*: Oracle home of the database installation.

- *DATAFILE_LOC*: Physical location of the files that store the data of all logical structures in the database.

3.5.4.2 How to Create an Oracle RAC Database Instance from the Template

You use DBCA to manually create a database instance for each Oracle RAC node using the nonseeded database template that is shipped with Oracle Fusion Applications software.

To create an Oracle RAC database instance:

1. Edit the nonseeded database template at *PROV_FRMWK_HOME*/provisioning/provisioning/template/dbca/empty_database_11.2.dbt and set the process initialization parameter to 3000 as shown in the following text:

```
<initParam name="processes"              value="3000"/>
```

2. For each RAC node, navigate to the database *ORACLE_HOME*/bin directory of the RAC node and execute the following command:

```
dbca -silent -createDatabase \
-templateName  PROV_FRMWK_HOME/provisioning/provisioning/template/dbca/empty_
database_11.2.dbt  \
-gdbName "ORACLE_SID" \
-sid "ORACLE_SID" \
-sysPassword "SYS_PASSWORD" \
-systemPassword "SYSTEM_PASSWORD" \
-emConfiguration "NONE" \
-characterSet "AL32UTF8" - \
-nationalCharacterSet "AL16UTF16" \
-variables ORACLE_BASE=ORACLE_BASE, ORACLE_HOME=ORACLE_HOME \
-initParams audit_trail=NONE \
-datafileDestination DATAFILE_LOC \
-nodeinfo node1,node2
```

Replace the following variables with the appropriate values:

- *PROV_FRMWK_HOME*: Home of Fusion Applications Provisioning framework.

- *ORACLE_SID*: Global database name of the Oracle Fusion Applications database.

- *SYS_PASSWORD*: Password for the SYS user. The SYS schema is the location of base tables and views.

- *SYSTEM_PASSWORD*: User SYSTEM password. The user can create additional tables and views.

- *ORACLE_BASE*: Top-level directory for the database installation.

- *ORACLE_HOME*: Oracle home of the database installation.

- *DATAFILE_LOC*: Physical location of the files that store the data of all logical structures in the database.

3.5.5 Starting the Database

Refer to the Oracle 11*g* Release 2 Documentation Library for instructions on how to start the database.

3.5.6 Completing Postinstallation Tasks

After you have applied patches and started the database, check the patch readme files to determine whether you need to perform postinstallation tasks.

3.6 Oracle Fusion Applications Repository Creation Utility

The Oracle Fusion Applications Repository Creation Utility (Applications RCU) is a self-sufficient tool that runs from a graphical interface or from the command line. It creates applications-specific schemas and tablespaces for Oracle Database Enterprise Edition or Oracle Real Application Clusters.

3.6.1 Key Features

The Applications RCU components are included in the zipped Applications RCU file delivered in the provisioning framework. The Applications RCU offers these features:

- Integrates Oracle Fusion Middleware and Oracle Fusion Applications schema and storage definitions using declarative XML.

- Runs locally or remotely as a standalone tool.

- Lets you modify or use custom tablespaces for the default Oracle Fusion Applications schemas.

- Performs checks against both global and component-level prerequisites at runtime. If a prerequisite is not met, the Applications RCU may issue a warning and allow the procedure to continue (soft stop), or it may notify you that a prerequisite must be met (hard stop).

3.6.2 Functional Design

The Oracle Fusion Applications Repository Creation Utilities ships with predefined schemas, tablespaces, index tablespaces, temporary tablespaces, and a recommended configuration. It is built with a standard Bali JEWT-based graphical interface, compiled using existing Oracle installers. It is supported on Linux x86-64 and Microsoft Windows x64 (64-Bit) platforms.

The Applications RCU is designed to:

- Be completely self-contained. It has all the technical components necessary to perform the operations required (Oracle Client, binaries, scripts, data, and PL/SQL packages).

- Support Oracle Database 11.2.0.2 and database configurations such as ASM and Oracle RAC.

- Perform a silent execution.

- Operate on remote databases.

- Connect to an existing database, read existing tablespace definitions, and create schema owners and new tablespaces.

Some limitations of the Applications RCU are as follows:

- The database that you run it on must be empty. If applications-related schemas already exist, the option to modify them is grayed out.

- The Applications RCU does not provision delta schemas and does not perform database upgrades.

- The Applications RCU supports the import of full schemas only.

- The Applications RCU does not support the dropping of a component schema. You can, however, drop the entire instance directly through the database, if required.

3.7 Managing Tablespaces and Schemas

You use the Oracle Fusion Applications Repository Creation utility to create a repository of applications-specific schemas and tablespaces for Oracle Database.

3.7.1 How Does the Applications RCU Work?

Internally, the Applications RCU performs actions related to Oracle Fusion Middleware components and Oracle Fusion Applications components. In addition, the utility takes appropriate action to see that the tables are enabled to store repository resources.

Oracle Fusion Middleware Components

The Applications RCU loops through all the middleware components in the component definition file and applies the relevant ones to the database. For each component, the Applications RCU creates the appropriate middleware tablespace and schema user. After creating the schema user, it defines the tables, views, and other artifacts that the schema owner owns.

Oracle Fusion Applications Component

The Applications RCU creates empty tablespaces for the Oracle Fusion Applications components. It then creates the schema owners (for example, FUSION and FUSION RUNTIME). These schema owners are initially empty — they do not own any tables or data.

The Applications RCU employs Oracle Data Pump to import the seed data and the dump files containing tables, views, and other artifact definitions that belong to the schema users it has created. All dump files are packaged with the Applications RCU.

XML Schema Registration

When tables are created as part of an XML schema registration, by default the tables are enabled for hierarchy; that is, repository resources can be stored in the tables. A number of triggers are created for this purpose. If resources are created, updated, or deleted based on the registered XML schema, the corresponding `XMLtype` rows in the tables are inserted, updated, or deleted.

Tables are disabled for the hierarchy before they are exported in dumpfile mode because some of the special features that make these tables store 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 import of the dump files.

3.7.2 Schema Owners

Table 3–3 lists all schema owners for Oracle Fusion Middleware and Oracle Fusion Applications.

Table 3–3   Fusion Middleware and Fusion Applications Schema Owners

Component	Schema Owners
Fusion Applications	FUSION_DYNAMIC
	FUSION_RUNTIME
	FUSION_APM
	FUSION_AQ
	FUSION_BI
	FUSION_DQ
	FUSION_ODI_STAGE

Table 3–3   (Cont.) Fusion Middleware and Fusion Applications Schema Owners

Component	Schema Owners
AS Common Schemas ■ Enterprise Scheduler Service ■ Metadata Services	Include: ■ FUSION_ORA_ESS ■ CRM_FUSION_MDS_SOA ■ FIN_FUSION_MDS_SOA ■ HCM_FUSION_MDS_SOA ■ OIC_FUSION_MDS_SOA ■ PRC_FUSION_MDS_SOA ■ PRJ_FUSION_MDS_SOA ■ SCM_FUSION_MDS_SOA ■ SETUP_FUSION_MDS_SOA ■ FUSION_MDS ■ FUSION_MDS_ESS ■ FUSION_MDS_SPACES
Secure Enterprise Search	SEARCHSYS
Master and Work Repository	FUSION_ODI
Enterprise Content Management ■ Oracle Content Server 11*g* - Complete ■ Oracle Imaging and Process Management	Includes: ■ FUSION_OCSERVER11G ■ FUSION_IPM
Oracle Business Intelligence (Platform)	FUSION_BIPLATFORM
Oracle BI Applications Schemas ■ Oracle Transactional BI	Include: ■ FUSION_OTBI
WebLogic Server Communication Services ■ SIP Infrastructure Location Service ■ Presence ■ SIP Infrastructure Subscriber Data Service	Include: ■ FUSION_ORASDPLS ■ FUSION_ORASDPXDMS ■ FUSION_ORASDPSDS
SOA and BPM Infrastructure ■ User Messaging Service ■ SOA Infrastructure ■ SOA Infrastructure ■ SOA Infrastructure ■ SOA Infrastructure ■ SOA Infrastructure ■ SOA Infrastructure ■ SOA Infrastructure ■ SOA Infrastructure	Include: ■ FUSION_ORASDPM ■ CRM_FUSION_MDS_SOA ■ FIN_FUSION_MDS_SOA ■ HCM_FUSION_MDS_SOA ■ OIC_FUSION_MDS_SOA ■ PRC_FUSION_MDS_SOA ■ PRJ_FUSION_MDS_SOA ■ SCM_FUSION_MDS_SOA ■ SETUP_FUSION_MDS_SOA
WebCenter Suite ■ WebCenter Spaces ■ Portlet Producers ■ Activity Graph and Analytics ■ Discussions	Includes: ■ FUSION_WEBCENTER ■ FUSION_PORTLET ■ FUSION_ACTIVITIES ■ FUSION_DISCUSSIONS

3.8 Running the Oracle Fusion Applications Repository Creation Utility

Use the information in this section to prepare to run the Applications RCU and complete the wizard screens necessary to create schemas and tablespaces.

3.8.1 Getting Ready

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

- 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.

To prepare these files, complete these steps:

1. If you installed the database manually, apply all the patches located in the *repository_location*/installers/database/patch directory. See *Oracle Universal Installer and OPatch User's Guide* for instructions for applying patches to your database.

   If you installed the database using the Provisioning Wizard, the database patches were applied during the installation. No further action is required.

2. Ensure that you have enough disk space to complete the tablespace creation. See the *Oracle Database Installation Guide* for your platform for details.

3. Decide on three locations and create directories on the database server for storing Oracle Enterprise Scheduler Service (ESS) log files, Oracle Fusion Applications PL/SLQ log files, and OBIEE dump files. Make a note of these directories. You will need to enter the locations when you specify the values for APPLCP_FILE_DIR, APPLLOG_DIR, and the OBIEE Backup Directory in Section 3.8.5, "Managing Custom Variables."

4. Go to *repository_location*/installers/apps_rcu and locate the rcuHome_fusionapps_dbinstall.zip file. This file was staged when you created the installer repository.

5. Extract the contents of rcuHome_fusionapps_dbinstall.zip to a directory (APPS_RCU_HOME) on the database server. All dependent components that Applications RCU needs are included in this zipped file.

6. Create a temporary directory on the database server. Make a note of the location. You will need to enter this location when you specify a value for FUSIONAPPS_DBINSTALL_DP_DIR in Section 3.8.5, "Managing Custom Variables."

7. Locate and copy APPS_RCU_HOME/rcu/integration/fusionapps/export_fusionapps_dbinstall.zip to the directory you specified for FUSIONAPPS_DBINSTALL_DP_DIR.

8. Unzip export_fusionapps_dbinstall.zip to FUSIONAPPS_DBINSTALL_DP_DIR.

9. Go to APPS_RCU_HOME/rcu/integration/biapps/schema and locate the otbi.dmp file.

10. Copy otbi.dmp to FUSIONAPPS_DBINSTALL_DP_DIR (where you unzipped the contents of export_fusionapps_dbinstall.zip).

3.8.2 Starting the Applications RCU

Once you have completed the steps in the Getting Ready section, run Applications RCU from (UNIX) *APPS_RCU_HOME*/bin or (Windows) *APPS_RCU_HOME*\bin with the following command:

(UNIX) `./rcu`

(Windows) `rcu.bat`

> **Note:** The Applications RCU is available only on Linux and
> Windows platforms. On Windows systems, do not extract the rcu.zip
> file to a directory whose name contains spaces.

3.8.3 Wizard Screens and Instructions

Table 3–4 lists the steps for running the Applications RCU. For help with any of the
screens, see Appendix C or click **Help** on any screen.

Table 3–4   Running the Oracle Fusion Applications Repository Creation Utility

Screen	Description and Action Required
Welcome	No action is necessary on this read-only screen. Click **Skip this Page Next Time** if you do not want to see it the next time you log in to the Applications RCU.
	Click **Next** to continue.
Create Repository	Select **Create** to create and load component schemas into the database. See Section 3.7.2 for a list of schemas.
	Click **Next** to continue.
Database Connection Details	Specify the database connection details. See Section 3.8.4 for specifics.
	Click **Next** to continue.
Select Components	The Applications RCU retrieves the names of the Oracle Fusion Middleware and the Oracle Fusion Applications components. You cannot change the schema owner names. By default, all components are checked so that they are included in the prerequisite check process. Click **Next** to begin the process.
	When the progress bar reports 100 percent complete and all prerequisites report a check mark, click **OK**.
	Click **Next** to continue.
Schema Passwords	Specify the passwords for main and additional (auxiliary) schemas:
	■ **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. All schemas are visible. Retype to **Confirm**.
	Note the passwords you enter. You must supply them when you create a provisioning plan.
	Click **Next** to continue.
Custom Variables	Each Oracle Database directory object has a value represented by a physical directory on the database server. Custom variables are pre-defined, platform-specific directory objects that the Applications RCU creates. In the **Value** column, you specify a pre-existing physical directory (located on the database server) for each custom variable. See Section 3.8.5 for a list of variables.
	Click **Next** to continue.

Table 3–4   (Cont.) Running the Oracle Fusion Applications Repository Creation Utility

Screen	Description and Action Required
Map Tablespaces	If you want to start the tablespace create process without making any changes, click **Next** on this screen. A message informs you that any tablespaces that do not already exist will be created. Click **OK** to continue. The **Creating Tablespaces** progress screen appears. Click **OK** when the operation is completed.
	Or, view default tablespace mappings, change default and temporary tablespaces, view and change additional tablespaces, and manage tablespaces and datafiles (add, modify, or remove) before they are created. See Section 3.8.6.
	If you make changes, click **Next** when you are finished, then click **OK** to create the tablespaces. Click **OK** when the operation is complete.
Summary	Review the information and click **Create**. While the schemas are being created, the utility displays the **Repository Creation Utility – Create** screen, showing the creation progress.
	Typically, it takes 1 to 10 minutes to create each schema; however, the process may run for an additional half hour or more.
	To stop creating the schemas, click **Stop**.
Completion Summary	The Logfile column lists log file names. For more information, see Section 3.10.3.
	If errors are encountered during the Create operation, or if a Create operation fails for any component, the **Cleanup for failed components** check box appears on this page and is selected by default. If the check box is selected, the Applications RCU will perform cleanup operations for the components that failed. Click **Close** to dismiss the screen.

3.8.4 Specifying Database Connection Details

Specify information about the hosts and ports that you want to use for your database.

- **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**: This is the global database name. If you do not know it, see the `SERVICE_NAMES` parameter in the database initialization file. If it is not there, use the global name in `DB_NAME` and `DB_DOMAIN`. For Oracle RAC, specify the service name of one of the nodes, for example, `examplehost.exampledomain.com`.

- **User Name**: Supply the name of the user with DBA or SYSDBA privileges. The default user name with SYSDBA privileges is `SYS`.

- **Password**: Enter the password you set up for the database user.

- **Role**: Select Normal or SYSDBA. All schemas installed for Oracle Database require the `SYSDBA` role. For Oracle Internet Directory (OID) database schemas, use `SYS` and `SYSDBA`.

3.8.5 Managing Custom Variables

Enter a pre-existing physical directory on the database server where the custom variables for each component should be created.

- **FUSIONAPPS_DBINSTALL_DP_DIR**: The location 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.

- **KEYFLEXCOMBFILTER**: Location of the Filter XMLSchema. This variable is used for reloading components after patching. You can upload the variable to register it to the database. **Note**: You must specify a value, however, this functionality is obsolete in this release of Oracle Fusion Applications.

- **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 you 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.

3.8.6 Mapping Tablespaces

You can perform several operations from the **Map Tablespaces** screen including view, add, modify, or remove tablespaces. These actions are also available for additional tablespaces or datafiles.

3.8.6.1 Default Tablespace Mappings

In the Default Tablespace and Temp tablespace columns, click a cell to select from a list of available additional tablespace names. The default tablespaces are as follows:

- 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 that need 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.

3.8.6.2 Setting the Size of Tablespace Datafiles to Conserve Disk Space

The default out-of-the-box Oracle Fusion Applications tablespace sizes are not optimal, and larger than is necessary, so that they may take up more disk space than is necessary. You can update the sizes of the tablespace (datafiles) on the **Manage Tablespaces** screen, accessed from the **Map Tablespaces** screen in the Applications RCU interface.

Table 3–5 lists the sizes of the optimal and out-of-the-box (OOTB) tablespaces. You must make changes during the running of Oracle Fusion Applications Repository Utility Creation.

Table 3–5   Tablespace Optimal and OOTB Sizes

Tablespace Name	Optimal Size (MB)	Out-of-the-Box Size (MB)
FUSION_DYN_TX	20	500
FUSION_IAS_ORASDPM_AQ	20	500
FUSION_TEMP	6144	1024
FUSION_TS_AQ	200	500
FUSION_TS_ARCHIVE	20	1024
FUSION_TS_DQ	20	2048
FUSION_TS_INTERFACE	750	300
FUSION_TS_MEDIA	20	500
FUSION_TS_NOLOGGING	20	200
FUSION_TS_QUEUES	20	500
FUSION_TS_SEED	3200	2048
FUSION_TS_SUMMARY	20	1024
FUSION_TS_TOOLS	7700	1024
FUSION_TS_TX_DATA	4450	20480

Table 3–5   (Cont.) Tablespace Optimal and OOTB Sizes

Tablespace Name	Optimal Size (MB)	Out-of-the-Box Size (MB)
FUSION_TS_TX_IDX	3400	6144

3.8.6.3 Changing Default and Temporary Tablespace Names

To change the default tablespace name for a component, select the name in the Default Tablespace column, and then select the name that you want to use from the list. You can have your components use any number of tablespaces to suit your configuration.

Follow the same procedure to change a temporary tablespace for a component by selecting a tablespace name from the Temp Tablespace list.

3.8.6.4 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 to select a tablespace.

Click **OK** when you are finished.

3.8.6.5 Managing Tablespaces and Datafiles

Click **Manage Tablespaces** to add, modify, or remove tablespaces. Only tablespaces that have not yet been created can be modified or removed. Existing tablespaces are visible, but cannot be modified or removed.

Only tablespaces used by a component are created. You can specify a new tablespace, but unless it is used by a component, it will not be created.

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

- **Name**: Specify a new name for the tablespace.

- **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.

To **Add** a tablespace, specify the same details as for modifying one. Select a tablespace from the navigation tree 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 the Size of a Datafile

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**).

4. Click **OK** when you have configured all the tablespaces to return to the Map Tablespaces screen.

Click **OK** to dismiss the screen.

3.9 Using the Command-Line Interface

You can run the Applications RCU from the command line instead of using the graphical interface. This section includes instructions for using command-line operations.

3.9.1 Command-Line Operations

The syntax for the Applications RCU command-line interface is as follows:

(UNIX) rcu [-silent|-interactive] *command options*

(Windows) rcu.bat [-silent|-interactive] *command options*

Table 3–6 lists and describes the command-line options.

Table 3–6   Applications RCU Command-Line Interface Syntax

Option	Description
-createRepository	Use this command to create a repository.
-compInfoXMLLocation	Location of the ComponentInfo.xmlfile.
	The default location is *APP_RCU_HOME*/rcu/config (UNIX) or *APP_RCU_HOME*\rcu\config (Windows).
-storageXMLLocation	Location of the StorageInfo.xmlfile.
	The default location is *APP_RCU_HOME*/rcu/config (UNIX) or *APP_RCU_HOME*\rcu\config (Windows).
-databaseType	Type of database to which you are connecting. Oracle is the only valid option.
-connectString	Credentials for connecting to the database.
	For Oracle Database, the syntax is *host:port:sid*.
-dbuser	Database user name, for example, SYS.
-dbrole	Database user role, for example, SYSDBA for the SYS user.
-unicodeSupport	Options are: Yes|No. Default is Yes. Applicable only for the SQLServer database type.
-skipCleanupOnFailure	Skip the clean up of files if the creation of a component fails.

Table 3–6   (Cont.) Applications RCU Command-Line Interface Syntax

Option	Description
`-useSamePasswordForAllSchemaUsers`	Options are `true`|`false`. Default is `false`.
`-selectDependentsForComponents`	Options are `true`|`false`. Default is `false`.
`-variables`	Comma-separated list in `variablename=value` format. Should be specified before `-component`.
`-schemaPrefix`	Prefix to be used for the schema. Not used for Oracle Fusion Applications schemas.
`-component`	IDs of the components that you want to add. To specify a single component, use the format: `-component component_ID` For example: `-component CRM_FUSION_ MDS_SOA`. To specify multiple components, add the components separated by a space.
`-tablespace component_name`	Use only if a tablespace already exists.
`-tempTablespace component_name`	Use only if a temp tablespace already exists.

Table 3–7 lists the variables picked up by the Applications RCU from the environment. If an environment variable is not set, it uses the default value.

Table 3–7   Applications RCU Environment Variables

Variable	Description
`RCU_LOG_LOCATION`	Location of the Applications RCU log file. Default: `ORACLE_HOME`/rcu/log
`RCU_TIMESTAMP_LOG_DIR`	Create a timestamped directory. Options are: `true`|`false`. Use the format `logdir.yyyy-MM-dd_HH-MM`. Default: `true`
`RCU_LOG_NAME`	Name of the Applications RCU log file. Default: `rcu.log`
`RCU_LOG_LEVEL`	Determines the level of the log. Options are: `SEVERE`|`ERROR`|`NOTIFICATION`|`TRACE`. Default: `ERROR`

3.9.2 Creating Schemas and Tablespaces from the Command Line

An example of the full syntax for creating an schemas and tablespaces from the command line is as follows. It uses UNIX command-line syntax.

```
$rcu -silent -createRepository -connectString "host:port:sid" -dbUser sys -dbRole
sysdba -skipcleanUpOnFailure Yes
-component CRM_FUSION_MDS_SOA -component CRM_FUSION_ORABAM
-component CRM_FUSION_SOAINFRA -component FIN_FUSION_MDS_SOA
-component FIN_FUSION_SOAINFRA -component FSCM_FUSION_ORABAM
-component FUSION_ACTIVITIES -component FUSION_BIPLATFORM
-component FUSION_DISCUSSIONS -component FUSION_IPM -component FUSION_MDS
-component FUSION_MDS_ESS -component FUSION_MDS_SPACES
-component FUSION_OCSERVER11G -component FUSION_ORASDPLS -component FUSION_ORASDPM
-component FUSION_ORASDPSDS -component FUSION_ORASDPXDMS -component FUSION_ORA_ESS
-component FUSION_OTBI -component FUSION_PORTLET -component FUSION_WEBCENTER
-component HCM_FUSION_MDS_SOA -component HCM_FUSION_ORABAM
-component HCM_FUSION_SOAINFRA -component OIC_FUSION_MDS_SOA
```

```
-component OIC_FUSION_SOAINFRA -component PRC_FUSION_MDS_SOA
-component PRC_FUSION_SOAINFRA -component PRJ_FUSION_MDS_SOA
-component PRJ_FUSION_SOAINFRA -component SCM_FUSION_MDS_SOA
-component SCM_FUSION_SOAINFRA -component SETUP_FUSION_MDS_SOA
-component SETUP_FUSION_SOAINFRA -component SEARCHSYS -component FUSIONAPPS
```

3.10 Troubleshooting for Database Installations

This section contains troubleshooting tips for database installation and Applications RCU operations. It is divided into sections for general tips and sections about log files and cleanup features.

3.10.1 General Troubleshooting Tips

If you encounter an error during the creation of applications schemas and tablespaces, take note of the following:

- Oracle Fusion Applications release notes may contain additional information about this release.

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

- Ensure that your database is up and running.

- If you experience a failure in RCU during the creation of the tablespaces and loading of the Fusion schemas, you must start from the beginning by installing an empty database or using the Database Configuration Assistant. there is no drop option.

- Clean up these areas before you redo the installation:

  - /tmp

  - old log file directories

  - /oraInventory folder contents

  - ORACLE_HOME (or remove the ORACLE_HOME if you need to re-use the directory

- If you entered incorrect information on one of the Applications RCU screens, use the navigation pane on the left side of the graphical interface to return to that screen.

- If an error occurred while the Applications RCU was running:

  1. Note the error and review the Applications RCU log files.

  2. Correct the issue that caused the error. Depending on the type of error, you can either continue with your operation or restart the Applications RCU.

  3. Continue or restart the Applications RCU to complete the desired operation.

3.10.2 Database Installation Log Files

The database installation log file reports what happened during each of the phases in a database installation. Click a log file symbol on the **Database Installation Progress** screen in the Provisioning Wizard to view the log file for that phase.

3.10.3 Applications RCU Log Files

Log files describe what happened during the schema and tablespace creation process, including any failures that occurred. The main Applications RCU log file (rcu.log) is written to (Linux) *APP_RCU_HOME*/rcu/log/logdir.*date_timestamp* or (Windows) *APP_RCU_HOME*\rcu\log\logdir.*date_timestamp*. For example, the log file on a Linux operating system is:

```
APP_RCU_HOME/rcu/log/logdir.2010-01-02_03-00/rcu.log
```

The custom_comp_create_tbs.log file lists the PL/SQL statements that created the tablespaces.

In the `fusionapps` schema, three types of log files are created:

- **fusionapps.log**: Lists the PL/SQL that was run.

- **fusionapps_runimport.log**: The Oracle Data Pump import log file.

- **fusionapps_verify.log**: Lists verification errors if objects created are not what was expected.

In addition to the general log files, each component writes a log file of its own. The file name is in the form of *component_name*.log. For example, the log file for the `BIAPPS_OTBI_RUNIMPORT` component is biapps_otbi_runimport.log. All component log files are written to the same directory as the main log file.

Table 3–8 lists the log files in alphabetical order, by component name.

Table 3–8   Applications RCU Log File Names

Component Log File Name
biapps_otbi_runimport.log
crm_fusion_mds_soa.log
crm_fusion_orabam.log
crm_fusion_soainfra.log
fin_fusion_mds_soa.log
fin_fusion_soainfra.log
fscm_fusion_orabam.log
fusion_activities.log
fusionapps.log
fusion_biplatform.log
fusion_discussions.log
fusion_ipm.log
fusion_ocserver11g.log
fusion_ora_ess.log
fusion_orasdpls.log
fusion_orasdpm.log
fusion_orasdpsds.log
fusion_orasdpxdms.log
fusion_otbi.log
fusion_mds.log
fusion_mds_ess.log
fusion_mds_spaces.log

Table 3–8   (Cont.) Applications RCU Log File Names

Component Log File Name
`fusion_portlet.log`
`fusion_webcenter.log`
`hcm_fusion_mds_soa.log`
`hcm_fusion_orabam.log`
`hcm_fusion_soainfra.log`
`oic_fusion_mds_soa.log`
`oic_fusion_soainfra.log`
`prc_fusion_mds_soa.log`
`prc_fusion_soainfra.log`
`prj_fusion_mds_soa.log`
`prj_fusion_soainfra.log`
`scm_fusion_soainfra.log`
`scm_fusion_mds_soa.log`
`searchsys.log`
`setup_fusion_mds_soa.log`
`setup_fusion_soainfra.log`

3.10.4 Preverification Failure (Windows)

You may encounter the following error while running the preverification phase on Windows systems:

```
"C:\repository_location/installers/database/Disk1/setup.exe":
CreateProcess error=740, The requested operation requires
elevation at
java.lang.ProcessBuilder.start(ProcessBuilder.java:460)
```

If you receive this error, disable User Account Control (UAC) or log in as a Local Administrator to the machine where the Provisioning Wizard is not functioning properly.

See http://technet.microsoft.com for more information about UAC.

3.10.5 Using the Cleanup Feature

If there is a failure in creation of the tablespaces or schemas for any component, the **Cleanup for failed components** check box appears on the **Completion Summary** screen. Select this option to clean up tablespaces and schemas for the failed components.

If an environment (such as the database server) is running out of space, correct it and rerun the software. Any components that are not applied successfully are still enabled (not grayed out) in the interface. Rerun the Applications RCU as described in Section 3.8.

3.11 What to Do Next

When you have completed the database installation and the schema and tablespace creation, you are ready to create a provisioning plan for your new applications environment.

Follow the instructions in Chapter 4. You must create a provisioning plan and be ready to supply its location before you can provision an environment.

4

Creating a New Provisioning Plan

This chapter describes the process of creating a provisioning plan for a new Oracle Fusion Applications environment using the Provisioning Wizard interview process. It includes the following sections:

- Introduction to Provisioning Plans
- Before You Begin
- Creating a Provisioning Plan
- Updating an Existing Provisioning Plan
- What to Do Next

4.1 Introduction to Provisioning Plans

Oracle Fusion Applications Provisioning orchestrates the physical installation and configuration of the product offerings that you choose and deploys those offerings and their dependent middleware components to predetermined Oracle WebLogic Server domains. Provisioning needs certain conditions to perform the installation tasks: the provisioning repository of installers, the provisioning framework, and a provisioning plan.

When you create a provisioning plan, you choose provisioning configurations and specify the configuration details for the product offerings and their dependent middleware components. You save the plan and specify its location when you are ready to use it to provision a new environment.

4.1.1 How Does the Provisioning Plan Work?

You must have downloaded the provisioning repository, installed the provisioning framework, and installed a database and the identity management components before you can create a provisioning plan. See Section 2.1.

Once the prerequisite setup is complete, you run the Provisioning Wizard and select the **Create a New Applications Environment Provisioning Plan** option. During the plan interview process, you choose product offerings to install. The wizard "knows" which middleware dependencies must be installed for each product offering, and which host must be provisioned first. It detects common products that each offering relies on, as well as the presence of the transaction database and identity-related components, and prompts for the appropriate configuration parameters.

Using a question and answer interview format, the wizard collects information about:

- Provisioning configurations (product offerings)

- Node Manager credentials and installation and configuration directories

- Database connections and schema passwords

- Host names and ports for the offerings and their middleware dependencies

- Common configuration details for components, such as web tier, virtual hosts, email, and security

Once you complete the provisioning plan, save it. Then, when you are ready to perform the physical installation, choose the **Provision a New Environment** option from the Provisioning Wizard and indicate the location of the plan. The wizard uses the details in the plan as a guide to what must be retrieved from the provisioning repository.

4.1.2 Selecting Product Offerings

An installation of Oracle Fusion Applications is logically broken up into groups of features known as **product offerings**, which represent the highest-level collection of functionality that you can license and implement. A **provisioning configuration** is a collection of one or more product offerings.

Product offerings have interdependencies on companion applications (for example Oracle Fusion Human Capital Management relies on Oracle Financials payroll), as well as middleware dependencies (for example, Oracle SOA Suite) required for runtime execution. The wizard prompts for applications and middleware configuration details at the domain level.

When you select individual product offerings within a configuration instead of selecting all offerings within the configuration, the wizard starts the Managed Servers *only for the offerings that you selected*. However, because the interdependent details for the entire configuration are included in the plan, you can "turn on" additional functionality later by using the Oracle Fusion Applications Functional Setup Manager to start the other Managed Servers. See *Oracle Fusion Applications Information Technology Management, Implement Applications Guide*.

The provisioning configurations are as follows:

- Oracle Fusion Customer Relationship Management (Sales and Marketing)

- Oracle Fusion Financials (Financials, Oracle Fusion Procurement, and Oracle Fusion Projects)

- Oracle Fusion Human Capital Management (Workforce Deployment, Workforce Development, and Compensation Management)

- Oracle Fusion Supply Chain Management (Product Management, Order Orchestration, Material Management and Logistics)

You can also choose several standalone product offerings. For this group of offerings, only the direct dependencies are installed, configured, and deployed:

- Customer Data Hub

- Enterprise Contracts

- Fusion Accounting Hub

- Oracle Fusion Incentive Compensation

4.1.3 Wizard Actions for Oracle Identity Management Components

During the Provisioning Wizard interview process, the wizard collects information that is necessary to connect to the Oracle Identity Management components you have previously installed and configured. This information includes:

- The user designated as the Super User. This user must already exist in the policy store.

- The existence of the system administrators group. This information determines if the group was created during the Oracle Identity Management component installation and configuration process, or if it needs to be created during provisioning.

- The distinguished name (DN) of the system administrators group (if it exists).

- The authenticator that will serve as the LDAP identity store: Oracle Internet Directory (OIDAuthenticator) or Oracle Virtual Directory (OVDAuthenticator).

4.1.4 Creating Installation-Specific Plans

There are numerous scenarios for the environments you can create — from a small demonstration system, to a full production system provisioned on multiple hosts. The Provisioning Wizard can accommodate the creation of provisioning plans for specific environments so that you can create a separate plan for each type of environment.

4.1.5 Updating a Plan

Frequency, details for a provisioning plan are not final, and so cannot be specified during a single pass through the Provisioning Wizard interview. Or, a completed plan has not been implemented, and requires changes before it is. The wizard options include the choice to save a partially completed plan and update it later. Note that a plan is not complete or available for provisioning until you click **Finish** on the **Summary** screen.

However, once you select product offerings and save them in a plan, regardless of whether it is partially or fully complete, you cannot update or change the product offerings in that plan. To add or change the mix of offerings, you must create a new plan and specify the new or additional offerings.

4.2 Before You Begin

Before you create a provisioning plan, you must have completed the following tasks:

1. Read and understand the concepts in Chapter 1.

2. Perform the prerequisite tasks outlined in Chapter 2.

3. Install a transaction database as described in Chapter 3.

4.3 Creating a Provisioning Plan

Complete the wizard interview screens and save the plan in a location that is accessible to the various installers. Record the location, as you must supply it when you provision the environment.

> **Note:** The wizard warns if it cannot connect to the database or any of the hosts specified in the plan and if any of the passwords are not valid. If this warning represents an exception, you can ignore it and continue creating the plan. However, you *must* fix all issues flagged in the warnings before you start to provision an environment. You cannot successfully run provisioning until all validations have passed.

4.3.1 Start the Provisioning Wizard

To start the Provisioning Wizard, do the following:

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. Run the following command on the primordial host:

   (UNIX)

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

   ```
   ./provisioningWizard.sh
   ```

   (Windows)

   ```
   cd framework_location\provisioning\bin
   ```

   ```
   provisioningWizard.bat
   ```

4.3.2 Wizard Interview Screens and Instructions

Table 4–1 shows the steps necessary to create a provisioning plan using the Provisioning Wizard. For help with any of the interviews, see Appendix D or click **Help** on any Provisioning Wizard interview screen.

Table 4–1   Creating a Provisioning Plan

Screen	Description and Action Required
Welcome	No action is required on this read-only screen. Click **Next** to continue.
Installation Options	Presents the list of valid installation actions that you can perform using the wizard. Select **Create a New Applications Environment Provisioning Plan**. Click **Next** to continue.
Specify Security Updates	Set up a notification preference for security-related updates and installation-related information from My Oracle Support. You can receive the notifications in two ways: ■ **Email**: Enter your email address to have updates sent by email. ■ **I wish to receive security updates via My Oracle Support**: Select this option to have updates sent directly to your My Oracle Support account. You must enter your **My Oracle Support Password** if you select this option. Click **Next** to continue.
Provisioning Configurations	Select one or more offerings, either within a configuration, or from the list of standalone product offerings. See Section 4.1.2 for details. Click **Details** in the message pane to see a breakdown of servers for each offering. Once you click **Next**, you cannot change the selections on this screen. To make changes, click **Cancel**, open a new wizard session, and create a new plan.
Plan Description	Enter information to describe this plan. This description is not associated in any way with the executable plan file, or the summary file, that you save when you finish creating this plan. ■ **Plan Name**: Specify a name to identify this plan. ■ **Plan Version**: Assign a version number to this plan. The version is intended for documentation only. ■ **Created By**: Defaults to the operating system user who invoked the wizard. Set when the plan is initially created and cannot be modified for the current plan. ■ **Created Date**: Defaults to the date that the plan was originally created and saved. Set when the plan was originally created and cannot be modified for the current plan. ■ **Plan Description**: Provide a description of this plan. To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment. Click **Next** to continue.
Installation Location	Specify credentials for the Node Manager and supply the location of the various directories required for installation and configuration actions. See Section 4.3.3 for the list of parameters. To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment. Click **Next** to continue.

Table 4–1   (Cont.) Creating a Provisioning Plan

Screen	Description and Action Required
System Port Allocation	Accept the default values or set a custom value for the **Applications Base Port**. The application domain port ranges are derived from this value. If you change the base port value, the domain port ranges adjust accordingly. Ranges must not overlap and must be set in ascending order.
	The high and low port ranges are assigned by default to each domain in the **Application Domain Port Ranges** list. The default range allotment is 399. Each range is sequential, in ascending order, for example; 11601 – 12000 is a valid range.
	For port range validation rules, see Section 4.3.4.
	Ports listed under **Other Ports** are not derived from the **Applications Base Port** value. These "individual" ports can be defined using custom port values.
	To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.
	Click **Next** to continue.
Database Configuration	Enter the database parameters that 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 (Oracle RAC). If a **Single Instance Database**, enter:
	■ **Host Name**: The name of the host where the database is installed.
	■ **Port**: The listening port for the database.
	■ **Service Name:** The global database name for the database that you installed. Used to distinguish this database instance from other instances of Oracle Database running on the same host.
	If you have installed Oracle RAC, select **Real Application Clusters Database** and enter the **Service Name** that you specified when you installed this database.
	Click **Add** to create a new row in the table for each instance. Select a row and click **Remove** to delete it. Enter the following values for the previously installed database:
	■ **Host Name**: The name of the host for each Oracle RAC instance.
	■ **Port**: The listening port of the database.
	■ **Instance Name**: The name of the Oracle RAC instance used to manage this database.
	To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.
	Click **Next** to continue.
Schema Passwords	The database that you installed contains preloaded schemas required for runtime execution. Select one of the following options and enter the database schema passwords set up when you installed 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. This option is the default.
	■ **Use a different password for each account**: Select this option if you set up individual passwords for each **Account**. Password values were set up for Fusion Applications and AS Common Schemas. Enter those values in the **Password** field.
	To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.
	Click **Next** to continue.
ODI Password Configuration	Enter the ODI Supervisor **Password** that you created when you installed Oracle Data Integrator. This screen does not appear if you selected Oracle Fusion Financials or Financial Control and Reporting as product offerings.
	To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.
	Click **Next** to continue.

Table 4–1 (Cont.) Creating a Provisioning Plan

Screen	Description and Action Required
Domain Topology Configuration	To determine the flow for the remaining wizard interview screens, choose one of the options. Note that all hosts must use the same operating system; that is, you cannot install "domain1" on Windows and "domain2" on Linux. See Section 4.3.5 for details. To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment. Click **Next** to continue.
Common Domain	**Note**: Individual domain screens appear only if you selected the **One host per application and middleware component** option on the **Domain Topology Configuration** screen. Specify values for this domain and its middleware dependencies. All hosts must use the same operating system and share a common mount point for network storage. The host specified for the Admin Server is the default for all servers. You can change the default. ■ **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 values on the **System Port Allocation** screen. You can edit port values. However, they must be unique within the domain and fall within the range previously specified. For example, in a range of 7401 to 7800, a value of 8444 generates an error. ■ **Secure Port**: The SSL port for internal communications. You can edit individual port values if a conflict occurs. ■ **UCM Intradoc Server Port**: Port where the Universal Content Management Server listens. ■ **InBound Refinery Server Port**: Used for calling top-level services. To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment. Click **Next** to continue.
Product Family Domains	**Note**: Individual domain screens appear based on which options you select on the **Domain Topology Configuration** screen. For example, the **Incentive Compensation Domain** screen does not appear unless you selected that product offering for installation. All product family domain screens prompt for the same types of values. Specify values for this domain and its middleware dependencies. All hosts must use the same operating system and share a common mount point for network storage. The host specified for the Admin Server is the default for all servers. You can change the default. ■ **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 values on the **System Port Allocation** screen. You can edit port values. However, they must be unique within the domain and fall within the range previously specified. For example, in a range of 7401 to 7800, a value of 8444 generates an error. ■ **Secure Port**: The SSL port for internal communications. You can edit individual port values if a conflict occurs. **Note**: See Section 4.3.6 for Oracle Business Intelligence configuration requirements. To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment. Click **Next** to continue.

Table 4–1   (Cont.) Creating a Provisioning Plan

Screen	Description and Action Required
Web Tier Configuration	Use this screen to configure Oracle HTTP Server and choose a virtual host type. You can deploy the web tier to a host inside the firewall, or outside the firewall (demilitarized zone, known as DMZ).
	See Section 4.3.7 for the list of parameters.
	To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.
	Click **Next** to continue.
Virtual Hosts Configuration	Provisioning determines the application domains to be deployed based on your product offering choices and lists them on this screen. Specify domain-specific values for the type of virtual host mode that you selected on the **Web Tier Configuration** screen.
	See Section 4.3.8 for the list of parameters.
	To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.
	Click **Next** to continue.
Load Balancer Configuration	Load balancing enables you to distribute a workload evenly across two or more hosts, network links, CPUs, hard drives, or other resources. Check **Load Balancing Enabled** to take advantage of this feature, and specify:
	■ **Internal Load Balancer Configuration**: The host and port for the internal Virtual IP (VIP).
	■ **External Load Balancer Configuration**: The host and port for external Virtual IP (VIP). It must have a publicly available address to be usable.
	To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.
	Click **Next** to continue.
Web Proxy Configuration	Create **Proxy Settings** to enable users who want to use a proxy server to connect to the Internet. See Section 4.3.9 for details. Take note of the special instructions for Oracle Customer Relationship Management customers.
	To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.
	Click **Next** to continue.
Identity Management Configuration	Provisioning loads roles, policies, and application IDs that you created during the prerequisite Oracle Identity Management installation. To share the identity management environment across multiple Oracle Fusion Applications installations, and make the policies and roles accessible to all environments, you must populate identity management configuration details during the first installation.
	See Section 4.3.11 for the list of parameters. See also Section 4.3.10 for information about Distinguished Names conventions.
	To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.
	Click **Next** to continue.

Table 4–1   (Cont.) Creating a Provisioning Plan

Screen	Description and Action Required
Access and Policy Management Configuration	Configure Oracle Fusion Applications for integration with existing Oracle Access Manager components.
	See Section 4.3.12 for the list of parameters.
	To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.
	Click **Next** to continue.
IDM Database Configuration	Enter the configuration details that you specified when you installed the database for Oracle Identity Manager (OIM).
	See Section 4.3.13 for the list of parameters.
	To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.
	Click **Next** to continue.
Summary	Displays the applications and middleware components that will be installed when you perform a physical installation using this plan. Includes details such as required disk space and the installation locations.
	See Section 4.3.14 for a description of the parameters.
	Click **Finish** to save the plan. The plan is complete and can be used as the basis for provisioning of a new environment.

4.3.3 WebLogic Server Node Manager Credentials and Installation Locations

Specify credentials for the Node Manager and supply the location of the various directories required for installation and configuration actions on the **Installation Location** screen.

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 Section 2.2.5 for additional details. Note that a symbolic link is not necessary if the repository and the database are on the same node.

- **Oracle Fusion Application Home**: Enter the directory path to the Oracle home that you specified when you installed the provisioning framework. This is the Fusion Applications Oracle home. It is the `root` directory for all Oracle Fusion Applications and Oracle Fusion Middleware products.

  In a Windows environment, this name cannot exceed eight characters, and must be a symbolically linked directory. See Section 2.2.5 for additional details.

- **Application Configuration Directory**: This directory is automatically populated based on the value you specify in the **Oracle Fusion Applications Home** field. It is the path to the directory where the configuration files for the domain will be written. For Windows, the location must be a symbolically linked directory. See Section 2.2.5 for additional details.

- **Enable Local Application 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 Application Config Directory**: Specify the location for the local domain directory you want to set up. This field is required if you selected **Enable Local Application Configuration**. The specified directory must initially be empty.

- **WebGate Library Location**: Oracle Fusion Applications (WebGate component) requires special versions of `gcc` libraries to be installed. These library files must exist somewhere on the Linux system. To make these libraries available, download them from `http://gcc.gnu.org`, as described in "Installing Third-Party GCC Libraries (Linux and Solaris Operating Systems Only)" in *Oracle Fusion Applications Middleware Installation Guide for Oracle Identity Management*.

  In Linux x86-64 (64-Bit) and Oracle Solaris environments, enter the location where you installed the libraries. This field does not appear for Microsoft Windows x64 (64-Bit) or IBM AIX on POWER Systems (64-Bit).

  For more information, see also "GCC Run-Time Libraries for Linux and Solaris" at: `http://www.oracle.com/technetwork/middleware/ias/downloads/10gr3-webgates-integrations-readme-154689.pdf`.

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.

- **Default IDM Configuration Using IDM Properties File**: Select this check box if you want the values on the **Identity Management Configuration** screen and the **Access and Policy Management Configuration** screen to default to the values in the IDM properties file (idmDomainConfig.param). See Section 2.1.4.2 for more information about this file.

- **IDM Properties file**: Enter the location of the (idmDomainConfig.param) file, for example, *IDM_ORACLE_HOME*/idmtools/bin/idmDomainDonfig.param.

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 (_).

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 these values:

- *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.

4.3.4 Port Allocation

The values entered on any of the common domain or product domain screens are validated against the ports ranges that you set up on this screen.

For more information about setting port values, see "Viewing and Changing Ports for Components" in the *Oracle Fusion Applications Administrator's Guide*.

Validation rules for port ranges are as follows:

- The number of ports per domain varies according to the number of applications and middleware components installed. You can calculate the minimum port range (sum of standard and secure ports required for all components), or you can set the range to the upper boundary for the largest domain.

- Port ranges must not overlap. Gaps between the ranges are acceptable.

- Port ranges must be in ascending order. For example, 11601 – 12000 is a valid order.

- The lowest port value must be less than the highest port value of each domain.

- The value must be unique within a domain.

- If you create multiple plans for the same IP subnet, you could introduce port conflicts in the multicasting addresses set for clusters across plans. Examine and resolve such port conflicts before you execute a provisioning plan.

- Ephemeral or dynamic ports for the operating system must be set to a port range between 32768 and 61000.

4.3.5 Domain Topology Configuration

To determine the flow for the remaining wizard interview screens, choose one of the following options:

- **One host for all domains**: Select this option to specify the **Host Name** to provision all applications domains and their middleware dependencies on a single host. The wizard continues the interview at the **Web Tier Configuration** screen when you click **Next**.

- **One host per domain**: Select this option and then select a **Host Name** for each domain to be created. Provisioning installs and configures the Managed Servers for each **Application Domain** and the middleware dependencies 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**: Select this option to specify the 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 select the last option, you cannot change the selections on this screen once you click **Next**. You must click **Cancel**, open a new wizard session, and create a new plan to change the configuration domain topology later.

4.3.6 Oracle Business Intelligence Configuration

Oracle Business Intelligence products are integrated with, and accessible from, Oracle Fusion Applications. Products include:

- Oracle Business Intelligence Enterprise Edition

- Oracle Business Intelligence Applications

- Oracle Transactional Business Intelligence

- Oracle Essbase

- Oracle Business Intelligence Publisher

- Oracle Real-Time Decisions

Enter the **Host** where you want Oracle Business Intelligence products to be installed. You specified an **RPD** password on the **Installation Location** screen. Provisioning creates this password and makes it available so that Oracle Business Intelligence Applications and Oracle Transactional Business Intelligence can access the metadata repository in your new environment.

4.3.7 Web Tier Configuration

You can create virtual hosts on a single web tier. There are three options (IP-based, name-based, and port-based) for each domain that is created during installation. The values assigned during installation are derived from the default HTTP port that you name on this screen.

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 Section 2.6.

- **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 (the 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.

4.3.8 Virtual Hosts Configuration

Specify the configuration parameters for the domains to be installed on the virtual hosts that you selected on the **Web Tier Configuration** screen.

If you selected **IP Based**, specify the following information for each application domain listed:

- **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. 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 to be used for this external virtual host. The host:port should be visible from outside the firewall.

If you selected **Name Based**, specify the following information for each domain listed:

- **Internal.Name**: The DNS name for this internal virtual host. For example, for Oracle Fusion Financials, the name might be `fin-internal`.

- **External.Name**: The DNS name for this external virtual host. For example, for Oracle Fusion Financials, the name might be `fin`.

If you selected **Port Based**, specify the following information for each domain listed:

- **Internal Port**: The port that is visible only from inside the firewall for this domain.

- **External Port**: The port that is visible from outside the firewall for this domain.

4.3.9 Web Proxy Configuration

Create **Proxy Settings** to enable users who want to use a proxy server to connect to the Internet.

- **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** on this screen 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 are enabled and 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.

4.3.10 Distinguished Names

A Distinguished Name (DN) identifies an entry in a Lightweight Directory Access Protocol (LDAP) directory. Because directories are hierarchical, DNs identify the entry by its location as a path in a hierarchical tree (much as a path in a file system identifies a file). Generally, a DN begins with a specific common name, and proceeds with increasingly broader areas of identification until the country name is specified.

Table 4–2 provides definitions for distinguished name components (defined in the X.520 standard).

Table 4–2   Distinguished Name Components

Component	Definition
Common Name (CN)	Identifies the person or object defined by the entry. For example, `cn=John Doe`. Or `cn=corpDirectory.example.com`.
Organizational Unit (OU)	Identifies a unit within the organization. For example, `ou=scm`.
Organization (O)	Identifies the organization where the entry resides. For example, `o=My Corporation`.
Locality (L)	Identities the place where the entry resides. The locality can be a city, county, township, or any other geographic region. For example, `l=Your City`.
State of Province Name (ST)	Identifies the state or province in which the entry resides. For example, `st=Your State`.
Country (C)	Identifies the name of the country where the entry resides. For example, `c=US`
Domain Component (DC)	Identifies the components of a domain. For example, if the domain is example.com, the domain components would be: `dc=example, dc=com`.

4.3.11 Identity Management Configuration

For more information about using Oracle Identity Management in an applications environment, see Section 2.1.4.

4.3.11.1 Managing Nonseeded Environments

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

- jps-config-jse.xml – located in the domain.

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

 Copy the files to the following location:

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

4.3.11.2 Wizard Interview Flow

Enter the parameters necessary to integrate applications with a previously installed Oracle Identity Management infrastructure. If you chose to use the values in the IDM properties file (idmDomainConfig.param) on the **Installation Location** screen, they appear as defaults in the corresponding fields. You can replace the default values if your original configuration has changed. See Section 2.1.4.

- **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.

- **Enable Seeding of Security Data**: Controls the uploading of Oracle Fusion Applications security policies and user credentials into the Lightweight Directory Access Protocol (LDAP) as a part of provisioning. This option is selected by default. Deselecting it disables this action during provisioning.

- **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).

- **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 Enabled SSL**: Select this option if your identity store is SSL-enabled and if the required certificates are provided in the IDM keystore file.

- **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 Administrator User Name**: Enter the name you set up as the OIM administrator.

- **OIM 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 Endpoint Host**: 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.

  Enter the HTTP termination address of Oracle Access Manager. Terminates at either a load balancer or the Oracle HTTP Server.

- **OIM Endpoint Port**: The port where the endpoint host listens.

- **OIM Endpoint Enabled SSL**: Select this option if the endpoint host is SSl-enabled.

- **IDM Keystore File**: Enter the location of the JKS keystore containing the certificates for the Oracle Identity Management components. If SSL is not enabled, you can supply a "dummy" .jks file name. The file can be of any type, with or without content. Validation is only for the existence of the file.

- **IDM Keystore Password**: Enter the password that you set up for the IDM Keystore File. If you set up a "dummy" file, enter a "dummy" password. It can be of any format, as there is no validation other than for its existence.

4.3.12 Access and Policy Management Configuration

Enter the parameters necessary to integrate applications with a previously installed Oracle Identity Management infrastructure. If you chose to use the values in the IDM properties file (idmDomainConfig.param) on the **Installation Location** screen, they appear as defaults in the corresponding fields. You can replace the default values if your original configuration has changed. See Section 2.1.4.

Oracle Access Manager Configuration

- **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**: Enter 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.

- **OAM Simple Mode Passphrase**: Enter the passphrase that you set up to secure the communication with the OAM Server. Required only if the mode is specified as **Simple**.

- **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

- **OPSS Policy Store Host**: Enter the host name for OID where Oracle Platform Security Services (OPSS) policies are to be seeded.

- **OPSS Policy Store Port**: Number of the OID port for the OPSS policy store.

- **OPSS Policy Store Secure Port**: The secure port for OID.

- **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**: Enter the Distinguished Name of the node that you set up to be used as the OPSS policy root.

- **Create OPSS Policy Store JPS Root Node**: Enabled only if the **Enable Seeding of Security Data** check box on the **Identity Management Configuration** screen is selected. Select this option to create the OPSS JPS Root Node.

- **OPSS Policy Store SSL Enabled**: Select this option if the OID used for storing OPSS policies is SSL-enabled and the required certificates are provided in the IDM keystore.

4.3.13 IDM Database Configuration

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

- **Host Name**: The name of the host where the OIM database is installed.

- **Port**: The listening port for the database.

- **Service Name**: A unique Oracle Fusion Applications name for the OIM database.

If you have installed Oracle RAC, select **Real Application Clusters Database** and enter the **Service Name** that you specified when you installed this database.

Click **Add** to create a new row for each instance. Select a row and click **Remove** to delete the row. Enter the following information for each instance:

- **Host Name**: The name of the host for each Oracle RAC instance.

- **Port**: The listening port of the database.

- **Instance Name**: The name of the Oracle RAC instance used to manage this database.

Enter the database schema owner and password that you set up to store the Oracle Metadata Services (MDS) Repository data for the Oracle Web Services Policy Manager.

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

- **Schema Owner Password**: The password for the MDS schema.

For more information about using Oracle Identity Management in an applications environment, see Section 2.1.4.

4.3.14 Summary

Verify that the installation represented on this screen is what you expected. Click **Back** to return to the interview screens that require changes. If you are satisfied with the details presented here, complete the following information:

- **Provisioning Plan Name**: Specify a unique file name for this plan. This is the executable file that you supply to the wizard when prompted.

- **Provisioning Summary**: Specify a unique name for the summary details file. You cannot use this file to execute the plan.

- **Directory**: Enter the directory where you want to save this plan and the summary file. Choose a location that is visible to all servers accessing shared storage. Ensure that the location is not read-only.

Record the name of the plan and its location. You may want to supply it to your system administrator to use when performing system maintenance tasks.

4.4 Updating an Existing Provisioning Plan

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

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

1. Start the Provisioning Wizard and choose **Create a New Applications Environment Provisioning Plan** 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 plan. Creates a partial plan.

   - **Exit**: Exits the wizard without saving any details. Does not create a partial plan.

   - **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 plan.

4. Choose **Save and Exit**. The partial plan is saved in the directory where you started the wizard.

5. When you are ready to add more details to the plan, start the Provisioning Wizard and choose **Update an Existing Provisioning Plan**. Specify the **Provisioning Plan** location, or click **Browse** to navigate to the partial plan.

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 as described in Table 4–1 until you finish the process.

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

You can also update a completed plan if it has not been implemented. Note that once you select product offerings for a partial or completed plan, you cannot change the mix by updating the plan. You must start a new wizard session and create a new plan.

4.5 What to Do Next

Once you have saved the provisioning plan, you can return to the **Installation Options** screen and select the **Provision an Applications Environment** option to perform the physical installation. Or, you can create another plan to use for another type of installation, for example, to create a test or demonstration environment.

- To create another provisioning plan, repeat the tasks Section 4.3. Save the new plan.

- To use a provisioning plan to provision a new environment, go to Chapter 5.

5

Provisioning a New Applications Environment

This chapter describes in detail the tasks necessary to perform a physical installation, configuration, and deployment of the product offerings that you specified in your provisioning plan. It includes the following sections:

- Introduction to the Applications Installation Process
- Using the Command-Line Interface
- Before You Begin
- Performing the Installation
- Troubleshooting the Provisioning Process
- Postinstallation Tasks
- What to Do Next

5.1 Introduction to the Applications Installation Process

In the provisioning plan that you created, you specified the configuration details necessary to run a physical installation of Oracle Fusion Applications product offerings. For full-scale environments, typically the offerings must be provisioned on multiple hosts, and the installation must be run from a shared drive that is accessible to all hosts.

The installation process is run in phases, in an assigned order. You must complete each phase, in order, on each host, before you move to the next phase. All phases must be completed successfully on all the hosts in your environment to create a fully operational applications environment.

5.1.1 Types of Hosts in a Multiple-Host Environment

The number of hosts and their purpose determines the order in which you provision the applications environment.

Primordial host: Location of the Common domain (specifically the Administration Server of the Common domain). Only one primordial host exists in each domain.
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 for any application reside when they are not on the same host as the Administration Server of the same domain. Typically used when a domain spans two physical servers.

DMZ host: A host that cannot access the shared storage within the firewall is said to be in a demilitarized zone (DMZ). Typically used to install Oracle HTTP Server so that restrictions on communication with components within the firewall can be enforced. See Section 2.6 for more information.

5.1.2 Installation Phases

Provisioning provides scripts that read from the provisioning plan and take action for each installation **phase** (target). As each phase is run, its progress is tracked on a related screen in the Provisioning Wizard user interface.

Installation phases and the names of the tracking screens are as follows:

- **Preverify**: Checks to see that all prerequisites are present. Tracked on the **Prerequisite Checks** screen.

- **Install**: Installs applications, middleware, and database components. Creates the applications Oracle home directory. Tracked on the **Installation** screen.

- **Preconfigure**: Prepares application 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. Tracked on the **Preconfigure** screen.

- **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 domains. Tracked on the **Configure** screen.

- **Configure-secondary**: Performs the configure actions on a primary or secondary host or both. If there is no primary or secondary host, or if there is only a primary host, this phase runs, but takes no action. Tracked on the **Configure Secondary** screen.

- **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. Tracked on the **Postconfigure** screen.

- **Startup**: Starts the Administration Server and Managed Servers for each domain on the host where you are running this phase. Tracked on the **Startup** screen.

- **Validate**: Performs a variety of postprovisioning validations, such as server and application availability, successful loading of identity credentials, and validation of data source. Tracked on the **Validation** screen.

> **Note:** Actions related to Oracle Identity Management components are performed only in specific phases. See Section 5.1.3 for details.

A cleanup and restore phase runs automatically if a failure occurs:

Cleanup: Shuts down processes started during a failed phase and performs the necessary cleanup actions. If the automated cleanup fails, you must manually stop all processes except the Node Manager on all hosts including OPMN and Java EE processes before you can run the restore action. Note, however, that you must stop *all* processes if you are running the cleanup action on the configure phase.

Restore: The necessary restore actions required for a given provisioning phase. This action deletes and restores the instance directory, and, if necessary (and available), restarts the Common domain Administration Server and Oracle HTTP Server.

See Section 5.5.3 for more information about cleanup and restore actions.

5.1.3 Installation Phase Actions for Oracle Identity Management Components

During installation, the Provisioning Wizard performs actions that are associated with the Oracle Identity Management components you installed previously. This section contains a summary of those actions, arranged by the installation phase where the action is performed.

Installation phases

The wizard performs the following actions:

- Preverify phase

  Verifies the existence of the system administrators group (if it was declared as existing during the wizard interview) and the existence of the designated super user in the identity store.

- Preconfigure phase

  Prepares the Oracle Identity Management components for configuring as follows:

  - Uploads the LDIF files to the identity store. These files contain entries that represent the application administrator groups used to update the identity store.

  - Creates the system administrator group (according to what is indicated in the interview).

  - Makes the super user a member of the administrators group and all the application family directory groups.

  - Seeds the bootstrap of `AppID` and gives it membership in the system administrator group.

- Configure phase

  Configures the Oracle Identity Management components as follows:

  - Creates the Oracle Fusion Applications domains using the default Oracle WebLogic Server template, with the bootstrap `AppID` as an administrator.

  - Disables the default authenticator and enables the LDAP authenticator.

  - Starts the Oracle WebLogic Server domain using the bootstrap `AppID`.

- Postconfigure phase

  Following configuration, the system administrator groups are assigned the appropriate enterprise roles at the product family level. As a result, the super user has:

  - Administrator privileges for all Oracle WebLogic Server domains and all middleware

  - Functional setup privileges for all Oracle Fusion Applications offerings

  - Administration privileges to Oracle Fusion Applications offerings, excluding transactional privileges

5.1.4 Provisioning a New Environment on Multiple Hosts

To provision a new environment, you start the Provisioning Wizard on the primordial host, make a selection from the options menu, and indicate the location of the provisioning plan. The wizard presents a review of the details in the plan on a series of interview screens.

You can make changes to most of the provisioning plan details on the interview screens. However, you cannot make any changes to the product offerings. You must create a new plan to change the offering mix.

Once you have completed the preverify phase successfully on all the hosts in your environment, and clicked **Next** to start the install phase on the primordial host, you can no longer modify any sections of the provisioning plan.

Run the phases *in order*, and complete *each* phase on *all* hosts in your environment before you begin the next phase. The Provisioning Wizard enables you to monitor the progress and success of each phase across all hosts.

> **Note:** If you set up a separate DMZ host for your web tier, you must open a separate terminal session for that host and run all provisioning phases (except the preverify phase). You cannot view the build processes on the DMZ host on the primordial host interface because the DMZ host does not have access to the shared network drive.

For example, if you have three hosts — Host A (primordial host), Host B (primary host) and Host C (secondary host) — the process of provisioning those hosts works like this:

1. Open a terminal session on Host A, Host B, and Host C. Log in to each host.

2. Start the Provisioning Wizard on Host A, select **Provision an Applications Environment**, and specify the location of the provisioning plan.

3. Page through the wizard screens and make any necessary changes to the plan details displayed. If you selected to view individual domain details on the **Provisioning Configuration** screen, those screens are also added to the interview. Review the summary of installation actions that will be taken for this plan.

4. When you click **Next** on the **Summary** screen, the wizard initiates the preverify phase on Host A and displays the **Prerequisite Checks** screen. You can track the progress of this phase on this screen.

5. From the command line on the Host B and Host C terminal sessions, enter the syntax to run the preverify phase. (You do not have to wait for a phase to run to completion on the primordial host before you start the same phase on any of the other hosts.)

6. View the results of the preverify phase for all hosts on the **Prerequisite Checks** screen. The **Next** button will not be enabled until the preverify phase has been completed successfully on all hosts. Click **Back** to navigate through previous screens to fix errors. You must resolve all errors before you can continue.

> **Note:** Once you click **Next** to move to the **Installation** screen (the **install** phase), you can no longer go back to previous screens.

7. When there are no errors, click **Next** to initiate the install phase on Host A.

8. From the command line on the Host B and Host C terminal sessions, enter the syntax to run the install phase.

9. View the results on the **Installation** screen on Host A. When the phase has been completed successfully on all hosts, click **Next** on the Installation screen to initiate the next phase and display the next tracking screen. The phases are listed in Section 5.1.2.

10. Repeat this process for the remaining phases until all have been completed successfully.

> **Note:** A full backup of the provisioning and configuration state is performed automatically at the end of all successfully completed phases.

5.1.5 Performing a Manual Backup

You may want to perform a manual backup, for example, if the automated backup after a phase should fail.

Note: Run these commands for each phase, preverify through postconfigure, and for each host in the environment.

For Linux x86-64:

```
/bin/tar -C $APPLICATIONS_CONFIG/instance -cf $APPLICATIONS_CONFIG/restart/backup_
phase_name/instance.tar .
```

If local configuration is enabled, also run these commands for each host:

```
/bin/tar -C $LOCAL_CONFIG/domains -cf $APPLICATIONS_CONFIG/restart/backup_local_
phase_name/hostname/domains/localdomains.tar .

/bin/tar -C $LOCAL_CONFIG/applications -cf $APPLICATIONS_CONFIG/restart/backup_
local_phase_name/hosthame/applications/localapplications.tar .

/bin/tar -C $LOCAL_CONFIG/biinst -cf $APPLICATIONS_CONFIG/restart/backup_local_
phase_name/hostname/biinst/BIInstance.tar .
```

For Microsoft Windows x64 (64-Bit):

```
cd $APPLICATIONS_CONFIG/instance
$REPOSITORY\provisioning\util\zip.exe -r $APPLICATIONS_CONFIG\restart\backup_
phase_name\instance.zip .
```

If local configuration is enabled, also run these commands for each host:

```
cd $APPLICATIONS_CONFIG\domains\
$REPOSITORY\provisioning\util\zip.exe -r $APPLICATIONS_CONFIG\restart\backup_
local_phase_name\hostname\domains\localdomains.zip .

cd $APPLICATIONS_CONFIG/applications\
$REPOSITORY\provisioning\util\zip.exe -r $APPLICATIONS_CONFIG\restart\backup_
local_phase_name\hostname\applications\localapplications.zip .

cd $APPLICATIONS_CONFIG/biinst\
$REPOSITORY\provisioning\util\zip.exe -r $APPLICATIONS_CONFIG\restart\backup_
local_phase_name\hostname\biinst\BIInstance.zip .
```

For Oracle Solaris:

```
/bin/tar -cEf $APPLICATIONS_CONFIG/restart/backup_phase_name/instance.tar -C
$APPLICATIONS_CONFIG/instance .
```

If local configuration is enabled, also run these commands for each host:

```
/bin/tar -cEf $APPLICATIONS_CONFIG/restart/backup_local_phase_
name/hostname/domains/localdomains.tar -C $LOCAL_CONFIG/domains .
```

```
/bin/tar -cEf $APPLICATIONS_CONFIG/restart/backup_local_phase_
name/hostname/applications/localapplications.tar -C $LOCAL_CONFIG/applications .
```

```
/bin/tar -cEf $APPLICATIONS_CONFIG/restart/backup_local_phase_
name/hostname/biinst/BIInstance.tar -C $LOCAL_CONFIG/biinst .
```

For IBM AIX on POWER Systems (64-Bit):

```
cd $APPLICATIONS_CONFIG
/usr/bin/pax -wEf $APPLICATIONS_CONFIG/restart/backup_phase_name/instance.pax -x
pax $APPLICATIONS_CONFIG/instance .
```

If local configuration is enabled, also run these commands for each host:

```
/usr/bin/pax -wEf $APPLICATIONS_CONFIG/restart/backup_local_phase_
name/hostname/domains/localdomains.pax $LOCAL_CONFIG/domains .
```

```
/usr/bin/pax -wEf $APPLICATIONS_CONFIG/restart/backup_local_phase_
name/hostname/applications/localapplications.pax $LOCAL_CONFIG/applications .
```

```
/usr/bin/pax -wEf $APPLICATIONS_CONFIG/restart/backup_local_phase_
name/hostname/biinst/BIInstance.pax $LOCAL_CONFIG/biinst .
```

5.2 Using the Command-Line Interface

The installation phases on the primary and secondary hosts are run from the command line, using specific arguments to further define the necessary actions.

5.2.1 Adding Arguments to Phase Commands

Table 5–1 shows valid arguments used when running installation phases.

Table 5–1 Command-Line Syntax for Phase Arguments

Syntax	Description
path_to_script	Directory path to the location of the build scripts. This directory was set up when you installed the provisioning framework, for example *framework_location*/provisioning.
-plan	You must provide the location of a previously saved provisioning plan. Input is: *provisioning_plan_location*
-target	Indicates that the script should run a specific installation phase (target). Any *phase_name* is a valid argument, for example, -target perverify.

Table 5–1   (Cont.) Command-Line Syntax for Phase Arguments

Syntax	Description
`-ignoreSysPrereqs`	Options: `true`|`false`
	Default: `false`. `-ignoreSysPrereqs true` is the same as `-ignoreSysPrereqs` 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.
	Can be used as an argument with both the `provisioningWizard` and the `runprovisioning` commands. If specified with `runprovisioning -target install`, the 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.
`-invPtrLoc`	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 2.4.2.
	For example, the `runProvisioning` command with this argument would be:
	(UNIX) *path_to_script*/runProvisioning.sh `-invPtrLoc /home/oracle/oraInst.loc` or (Windows) *path_to_script*\runProvisioning.bat `-invPtrLoc \home\oracle\oraInst.loc`.

5.2.2 Running the Installation Phases

Table 5–2 shows the command-line syntax for running the various installation phases.

Table 5–2   Installation Phase Syntax

Phase (Target)	Command Syntax
Preverify	(UNIX) *path_to_script*/runProvisioning.sh `-plan` *provisioning_plan_location* `-target preverify`
	(Windows) *path_to_script*\runProvisioning.bat `-plan` *provisioning_plan_location* `-target preverify`
Install	(UNIX) *path_to_script*/runProvisioning.sh `-plan` *provisioning_plan_location* `-target install`
	(Windows) *path_to_script*\runProvisioning.bat `-plan` *provisioning_plan_location* `-target install`
Preconfigure	(UNIX) *path_to_script*/runProvisioning.sh `-plan` *provisioning_plan_location* `-target preconfigure`
	(Windows) *path_to_script*\runProvisioning.bat `-plan` *provisioning_plan_location* `-target preconfigure`
Configure	(UNIX) *path_to_script*/runProvisioning.sh `-plan` *provisioning_plan_location* `-target configure`
	(Windows) *path_to_script*\runProvisioning.bat `-plan` *provisioning_plan_location* `-target configure`
Configure-secondary	(UNIX) *path_to_script*/runProvisioning.sh `-plan` *provisioning_plan_location* `-target configure-secondary`
	(Windows) *path_to_script*\runProvisioning.bat `-plan` *provisioning_plan_location* `-target configure-secondary`

Table 5–2 (Cont.) Installation Phase Syntax

Phase (Target)	Command Syntax
Postconfigure	(UNIX) *path_to_script*/runProvisioning.sh -plan *provisioning_plan_location* -target postconfigure
	(Windows) *path_to_script*\runProvisioning.bat -plan *provisioning_plan_location* -target postconfigure
Startup	(UNIX) *path_to_script*/runProvisioning.sh -plan *provisioning_plan_location* -target startup
	(Windows) *path_to_script*\runProvisioning.bat -plan *provisioning_plan_location* -target startup
Validate	(UNIX) *path_to_script*/runProvisioning.sh -plan *provisioning_plan_location* -target validate
	(Windows) *path_to_script*\runProvisioning.bat -plan *provisioning_plan_location* -target validate
Cleanup	(UNIX) *path_to_script*/runProvisioning.sh -plan *provisioning_plan_location* -target cleanup-*phase_name*
	(Windows) *path_to_script*\runProvisioning.bat -plan *provisioning_plan_location* -target cleanup-*phase_name*
Restore	(UNIX) *path_to_script*/runProvisioning.sh -plan *provisioning_plan_location* -target restore-*phase_name*
	(Windows) *path_to_script*\runProvisioning.bat -plan *provisioning_plan_location* -target restore-*phase_name*

5.3 Before You Begin

Before you begin the physical installation, ensure that you have completed:

- All setup details as described in Chapter 2

- All installation tasks associated with your transaction database as described in Chapter 3

- A provisioning plan with the required configuration details as described in Chapter 4

In addition, you must be able to employ enough terminal sessions to enable you to move between running each phase on the primordial host (using the Provisioning Wizard) and running the phases on the primary and secondary hosts (using the command line).

5.4 Performing the Installation

To provision your environment, you start the Provisioning Wizard and page through the installation screens to initiate each phase and monitor the build processes.

> **Note:** If you ignored any warnings during the creation of the provisioning plan, you must fix all issues stated in the warnings before you can successfully provision an environment. You can make those changes in this installation interview. The wizard saves the changes to your original plan and proceeds with the new instructions. All validations must pass before you can run the **install** phase.

5.4.1 Start the Wizard and Prepare to Install

Ensure that you created the inventory pointer file (oraInst.loc) when you installed the provisioning framework. If you created the file in /etc, you can ignore the

-invPtrLoc command line argument. If you created the file in another location, you must add the -invPtrLoc argument to the command line syntax and indicate the location of the inventory. See Section 2.4.2 and Section 5.2.

To start provisioning your new environment:

1. Open a terminal session and log in to the primordial host.

2. Open a terminal session and log in to each of the other hosts in your environment, including the DMZ host (if present).

3. 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%
   ```

4. Run the following command on the primordial host:

   (UNIX)

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

   ```
   ./provisioningWizard.sh
   ```

   (Windows)

   ```
   cd framework_location\provisioning\bin
   ```

   ```
   provisioningWizard.bat
   ```

5.4.2 Installation Process Flow

Table 5–3 illustrates the steps required to provision a new environment on multiple hosts. Notice that once you run the first phase (preverify) on all hosts, the steps to run the remaining phases are the same. Move to each subsequent phase, in the assigned order.

> **Note:** In the table, UI denotes a step performed in the Provisioning Wizard, and CLI denotes a step performed on the command line.

For help with any of the Provisioning Wizard screens, see Appendix E or click **Help** on any Provisioning Wizard interview screen.

Table 5–3   Provisioning a New Applications Environment

Interface (UI or CLI)	Action Required
UI: Welcome Screen	No action is required on this read-only screen.
	Click **Next** to continue.
UI: Installation Options Screen	Presents the list of valid installation options that you can perform using the Provisioning Wizard. Select **Provision an Applications Environment**.
	Enter the path in the **Provisioning Plan** field to the plan you want to use to provision the environment. Or click **Browse** to navigate to the plan location.
	Click **Next** to continue.
UI: Plan Description Screen	This is the information you entered when you initially created the provisioning plan It is not associated in any way with the executable plan file, or the summary file, that you saved when you finished creating this plan. You can change the plan name, version, and description before you run provisioning, if you like.
	■ **Plan Name**: Specify a name to identify this plan.
	■ **Plan Version**: Assign a version to this plan. Version numbers are intended only for documentation purposes.
	■ **Created By**: Defaults to the operating system user who invoked the wizard. Set when the plan is initially created and cannot be modified for the current plan.
	■ **Created Date**: Defaults to the date that the plan was originally created and saved. Set when the plan was originally created and cannot be modified for the current plan.
	■ **Plan Description**: Provide a description of this plan.
	Click **Next** to continue.
UI: Installation Location Screen	Displays the credentials for the Node Manager and the directory locations you entered in the provisioning plan. If these values have changed, make corrections on this screen. See Section 5.4.3 for details.
	Click **Next** to continue.
UI: Review Provisioning Configuration Screen	Lists the wizard interview screens where you originally specified domain-specific parameters for this provisioning plan. You can make changes to this information if necessary.
	Note: If you ignored any warnings during the creation of this provisioning plan, you must fix all issues stated in the warnings before you can successfully provision an environment. Select any of the screens displayed here to make changes for a product domains with warnings. All validations must pass before you can run the **install** phase.
	You cannot add or delete product offerings to this provisioning plan. To change product offerings, you must create a new plan.
	Select one or more options from the list. When you click **Next**, the screens you select are added to the flow. Note that if you return to this screen after running the preverification checks, those verification checks are invalidated. You must run the preverify phase again.
	Click **Next** to continue.
UI: Summary Screen	Review the information displayed to ensure that the installation details are what you intend. To make changes, click **Back** to return to previous screens in the interview.
	Click **Next** to initiate the **preverify** phase on the primordial host. The wizard displays the **Prerequisite Checks** screen. It also creates a current copy of this provisioning plan and saves it in the directory indicated in the message pane. Click **Next** to continue.

Table 5–3 (Cont.) Provisioning a New Applications Environment

Interface (UI or CLI)	Action Required
UI: Prerequisite Checks Screen	The **preverify** phase performs prerequisite checks for Oracle Fusion Applications provisioning on the primordial host. The host is marked with a **Home** symbol in the **Host** column. The **Domains** column lists the domains that are being deployed.
	Once you initiate this phase on the primary and secondary hosts (from the command line), the build processes for those hosts are also shown. The **Status** column indicates the progress of each phase for each host:
	■ **Block**: Processing has not yet started on this host for the named phase.
	■ **Clock**: Performing the build for a phase.
	■ **Check mark**: The build was completed successfully.
	■ **x** mark: The build has failed for this phase. You must correct the errors before you can continue.
	■ **Restricted** symbol: The validation process has stopped due to a failure within another process.
	Click an **x** or a **Restricted** symbol to display messages about failures. Click the host-level **Log** file for details about this phase. Click a build **Log** file to see details specific to that build.
	You can make changes to the interview screens and rerun the **preverify** phase as many times as it is necessary. Click **Retry** to rerun this phase if errors are reported. You must fix all errors before you continue. See Section 5.5.3 for details.
CLI and UI: Run the preverify phase on primary and secondary hosts from the command line and monitor progress in the UI.	In the terminal session for the primary and secondary host, run the **preverify** phase with this command:
	(UNIX) *path_to_script*/runProvisioning.sh -plan *provisioning_plan_location* -target preverify
	(Windows) *path_to_script*\runProvisioning.bat -plan *provisioning_plan_location* -target preverify
	Note: Phases can run in parallel on all hosts. However, each **new** phase must be run sequentially; that is, you cannot start a new phase until the previous one has been completed successfully on all the hosts in your environment.
	Monitor the progress of the preverify phase using the **Prerequisite Checks** screen on the primordial host. Click **Retry** to rerun this phase if errors are reported. See Section 5.5.3 for details.
	When this phase is complete with no errors on all hosts, click **Next**. The wizard starts the install phase on the primordial host and displays the Installation screen.
	Note: Once you click **Next**, you can no longer modify the provisioning plan.
UI: Installation Screen	Displays the progress of the **install** phase on the primordial host. Build messages and **Log** icons track the progress for all phases in the same manner as described for the preverify phase.
CLI and UI: Run the install phase on the primary, secondary, and DMZ (if present) hosts and monitor the progress in the UI.	In the terminal session, run the **install** phase on the primary, secondary, and the DMZ host (if present) with this command:
	(UNIX) *path_to_script*/runProvisioning.sh -plan *provisioning_plan_location* -target install
	(Windows) *path_to_script*\runProvisioning.bat -plan *provisioning_plan_location* -target install
	Monitor the progress on the Installation screen on the primordial host.
CLI and UI: Copy the webtier_dmz_artifacts.zip file to the DMZ host (if present).	After the **install** phase is complete, copy the webtier_dmz_artifacts.zip file from *APPLICATIONS_BASE/* directory on the non-DMZ host to *APPLICATIONS_BASE/* directory on the DMZ host (if present).
	Click **Next** to initiate the **preconfigure** phase on the primordial host. The wizard displays the **Preconfigure** screen.
UI: Preconfigure Screen	Displays the progress of the **preconfigure** phase on the primordial host.
CLI and UI: Run the preconfigure phase on the primary, secondary, and DMZ (if present) hosts and monitor the progress in the UI.	In the terminal session, run the **preconfigure** phase on the primary, secondary, and the DMZ host (if present) with this command:
	(UNIX) *path_to_script*/runProvisioning.sh -plan *provisioning_plan_location* -target preconfigure
	(Windows) *path_to_script*\runProvisioning.bat -plan *provisioning_plan_location* -target preconfigure
	Monitor the progress on the **Preconfiguration** screen on the primordial host.

Table 5–3 (Cont.) Provisioning a New Applications Environment

Interface (UI or CLI)	Action Required
CLI: Recopy the provisioning plan to the DMZ host (conditional)	If you selected not to seed identity management details when you created the provisioning plan (on the **Identity Management Configuration** screen), you must recopy the plan to the DMZ host. This is necessary because during the **preconfigure** phase, the plan is updated with the administrator password (from LDAP). This new information must be available on the DMZ host.
UI and CLI: Initiate the remaining phases (in order) on the primordial, primary, secondary, and DMZ (if present) hosts.	Once the **preconfigure** phase reports a successful completion on each host in your environment, return to the primordial host and click **Next** to initiate the next phase. As each new phase is started on the primordial host, on the command line, enter the command to run that phase on the primary, secondary, and DMZ host (if present) on the command line. See Table 5–2 for a list of all the phases, and the command-line syntax. The associated screens, in phase order, are as follows: ▪ **Configure** (**configure** phase) ▪ **Configure Secondary** (**configure-secondary** phase) ▪ **Postconfigure** (**postconfigure** phase) ▪ **Startup** (**startup** phase) Once the phases are complete with no errors, click **Next** on the **Startup** screen to initiate the **validate** phase and then start this phase on the other hosts.
UI: Validation	When the validate phase is complete with no errors on all hosts, click **Next**.
UI: Installation Complete	This screen displays the configuration of the new environment. Click **Finish**. The wizard automatically saves a summary file that describes this installation. The file is saved to the provisioning plan directory as follows: `framework_location/provisioning/provisioning-plan/provisioning_plan_name-timedate.summary`.

Note that if you are provisioning a new environment on a single host, you can ignore the steps that run from the command line. Each phase starts automatically on the primordial host when you click **Next**.

5.4.3 Installation Location Details

The wizard displays the Node Manager credentials and the locations of the various directories you entered when you created this provisioning plan. You can change these values, if necessary.

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 Section 2.2.5 for additional details. Note that a symbolic link is not necessary if the repository and the database are on the same node.

- **Oracle Fusion Application Home**: Enter the directory path to the Oracle home that you specified when you installed the provisioning framework. This is the Fusion Applications Oracle home. It is the `root` directory for all Oracle Fusion Applications and Oracle Fusion Middleware products.

In a Windows environment, this name cannot exceed eight characters, and must be a symbolically linked directory. See Section 2.2.5 for additional details.

- **Application Configuration Directory**: This directory is automatically populated based on the value you specify in the **Oracle Fusion Applications Home** field. It is the path to the directory where the configuration files for the domain will be written. For Windows, the location must be a symbolically linked directory. See Section 2.2.5 for additional details.

- **Enable Local Application 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 Application Config Directory**: Specify the location for the local domain directory you want to set up. This field is required if you selected **Enable Local Application Configuration**. The specified directory must initially be empty.

- **WebGate Library Location**: Oracle Fusion Applications (WebGate component) requires special versions of `gcc` libraries to be installed. These library files must exist somewhere on the Linux system. To make these libraries available, download them from `http://gcc.gnu.org`, as described in "Installing Third-Party GCC Libraries (Linux and Solaris Operating Systems Only)" in *Oracle Fusion Applications Middleware Installation Guide for Oracle Identity Management*.

  In Linux x86-64 (64-Bit) and Oracle Solaris environments, enter the location where you installed the libraries. This field does not appear for Microsoft Windows x64 (64-Bit) or IBM AIX on POWER Systems (64-Bit).

  For more information, see also "GCC Run-Time Libraries for Linux and Solaris" at: `http://www.oracle.com/technetwork/middleware/ias/downloads/10gr3-webgates-integrations-readme-154689.pdf`.

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.

- **Default IDM Configuration Using IDM Properties File**: Select this check box if you want the values on the **Identity Management Configuration** screen and the **Access and Policy Management Configuration** screen to default to the values in the IDM properties file (idmDomainConfig.param). See Section 2.1.4.2 for more information about this file.

- **IDM Properties file**: Enter the location of the (idmDomainConfig.param) file, for example, *IDM_ORACLE_HOME*/idmtools/bin/idmDomainDonfig.param.

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 (_).

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 these values:

- *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.

5.5 Troubleshooting the Provisioning Process

There are various resources available to help with errors that occur during the provisioning of a new Oracle Fusion Applications environment.

5.5.1 General Troubleshooting Tips

If you encounter an error during the creation of applications schemas and tablespaces:

- Oracle Fusion Applications release notes may contain additional information about the latest updates.

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

- If you entered incorrect information on one of the installation screens, return to that screen by clicking **Back** until you see the screen.

5.5.2 Provisioning Log Files

Log files contain information about both normal and problematic events. They can help you diagnose and address some problems yourself. For example, log messages that state that a service cannot be reached might indicate a hardware failure.

If you discover a more complex issue, My Oracle Support personnel may use log files to trace the execution code paths of relevant requests as part of diagnosing the problem. Log files are particularly helpful if your Oracle Fusion Applications environment contains custom code that needs debugging, especially when using a debugger is not feasible (such as on a production system).

During each provisioning phase, the Provisioning Wizard writes the actions of the build processes to a log file created for each domain. Click the **Log** file icon to see details and error messages. In the log file, you can search for a specific text string, or

move forward and backward through the content. The wrap feature enables text to be easily printed, or even forwarded by email.

Provisioning writes log files to the following location:

(UNIX)

APPLICATIONS_BASE/logs/provisioning/*host_name*

(Windows)

APPLICATIONS_BASE\logs\provisioning*host_name*.

This shared location is accessible from all hosts, and contains the following log files:

- runProvisioning-default-main.log: The main log file.

- runProvisioning-*phase_name*.log: The main log file for a given phase, containing the output and error streams. These logs are used by the wizard to keep track of internal information. For example, for runProvisioning-preverify.log, each provisioning thread then writes its own log to runProvisioning-*product_family-phase_name*.log.

- runProvisioning-*product_family-phase_name*.log: Displayed in the Provisioning Wizard as a **Log** icon for preconfigure, configure, configure-secondary, postconfigure, and startup phases. The files contain detailed information about the phase. For example, runProvisioning-fin-preverify.log contains information about the preverify actions taken while creating the Oracle Fusion Financials domain.

Note: Because all reference roles must be provided in each product log file, you should expect to see duplicate reference role entries.

Provisioning also relies on the Oracle Universal Installer (OUI), which writes log files as follows:

(UNIX)

Oracle_Inventory_Location/logs

(Windows)

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

If you do not know the location of the Oracle Inventory directory, you can find it at /etc/oraInst.loc (UNIX) or (Windows) C:\Program Files\Oracle\Inventory\logs.

Note that *APPLICATIONS_BASE* is the root directory under which the provisioned environment resides. With the exception of the web tier host, this physical location must be on a shared drive.

In addition to log file locations discussed in this section, note these log file locations associated only with the preconfigure, configure, configure-secondary, postconfigure, and startup phases:

- Oracle WebLogic Server:

  (UNIX) *app.config.dir*/domains/*host_name/domain_name*/servers/*server_name*/logs

  (Windows) *app.config.dir*\domains*host_name\domain_name*\servers*server_name*\logs

- Oracle WebLogic Server Node Manager:

(UNIX) *APPLICATIONS_BASE*/fusionapps/wlserver_
10.3/common/nodemanager/*host_name*/

(UNIX) *APPLICATIONS_BASE*\fusionapps\wlserver_
10.3\common\nodemanager*host_name*\

5.5.3 Recovery After Failure

The wizard performs automated cleanup and recovery actions. If those processes cannot clean up and restore your session, you can perform the actions manually.

See "Starting and Stopping Components in the Oracle Fusion Applications Environment" in *Oracle Fusion Applications Administrator's Guide* for complete instructions for stopping and starting components.

5.5.3.1 Automated Cleanup and Recovery

Recovery is intended to be systemwide. If a failure occurs on one server, cleanup and recovery steps must be performed on all servers. During the installation, errors may occur during the running of any of the installation phases. If you must use the abort feature, you may need to perform some cleanup tasks as well.

A **Retry** button is available on each provisioning phase interview screen to initiate cleanup on the primordial host for that phase. Initiating the retry operation affects the full phase, beginning with the primordial host. If additional cleanup is required, the wizard indicates what cleanup tasks are required, enables the **Continue** button, and waits for you to click **Continue** when the additional cleanup is complete. If no additional cleanup is required, the **Continue** button remains disabled, and the wizard starts executing the restore action.

Restart hosts are the hosts where cleanup and restore actions must be run so that the wizard can start the next installation phase. If you have enabled the local application configuration, all hosts are restart hosts and will require cleanup for certain phases (like configure and postconfigure). If you have *not* enabled local application configuration, the restart hosts are: the primordial host, the web tier host, the BI host, and the Oracle Fusion Supply Chain Management-Global Order Processing host. See Section 4.3.3 for information about the location of local application configurations.

The wizard detects restart hosts that require cleanup and displays a message informing you of the host names. You must perform the cleanup action from the command line on these hosts before you can initiate any restore action. Command-line syntax for the cleanup action takes the following form:

(UNIX) *path_to_script*/runProvisioning.sh -plan *provisioning_plan_
location* -target cleanup-*phase_name*

(Windows) *path_to_script*\runProvisioning.bat -plan *provisioning_
plan_location* -target cleanup-*phase_name*

The command-line syntax for the restore action takes the following form:

(UNIX) *path_to_script*/runProvisioning.sh -plan *provisioning_plan_
location* -target restore-*phase_name*

(Windows) *path_to_script*\runProvisioning.bat -plan *provisioning_
plan_location* -target restore-*phase_name*

These actions are available for the preverify, install, preconfigure, configure-secondary, postconfigure, startup, and validate phases. They are also available for shutdown and deinstall actions.

5.5.3.2 Running Cleanup and Restore

When a failure occurs during one of the provisioning phases, do the following:

1. Click **Retry** to run the cleanup action on the primordial host (Common domain host).

2. If your environment contains additional hosts, the wizard displays a message giving you the names of the other hosts.

3. Run the cleanup action from the command line on the other hosts in the terminal session. This can be done in parallel.

   (UNIX) *path_to_script*/runProvisioning.sh -plan *provisioning_plan_location* -target cleanup-*phase_name*

   (Windows) *path_to_script*\runProvisioning.bat -plan *provisioning_plan_location* -target cleanup-*phase_name*

4. Click **Continue**. If all cleanup steps are completed on *all* hosts where required, the wizard starts the restore action on the primordial host or prompts you to complete steps that have not been completed. Click **Continue** again when finished to start the restore action on the primordial host.

5. If your environment contains other hosts, the wizard displays a message giving you the names of the other hosts.

   Note: On Windows, do not open files in the top-level provisioning directory or any of its descendent directories before you run the restore action.

   ---

6. Run the restore action from the command line on the other hosts from the terminal session for each host. This action can run in parallel.

   (UNIX) *path_to_script*/runProvisioning.sh -plan *provisioning_plan_location* -target restore-*phase_name*

   (Windows) *path_to_script*\runProvisioning.bat -plan *provisioning_plan_location* -target restore-*phase_name*

7. Click **OK** on the primordial host to start the next phase. The wizard displays the same messages as described in Step 4 if all additional hosts have not been restored.

5.5.3.3 Handling Cleanup Failures

The automated cleanup and restore actions cannot handle every type of failure. Sometimes manual steps are needed. This is true, for example, when the configure phase fails and any of the following situations exists:

- Node Manager is not yet configured

- Node Manager is configured with an invalid trust key

- Administration Server is not yet registered with the Node Manager

- Administration Server is not running

Under any of these circumstances, the Node Manager will not be able to shut down the Administration Server and the Managed Servers during cleanup-*phase_name*. You must manually shut down all servers before you continue with the restore-*phase_name*.

1. Shut down web tier processes, if any, with this command: (UNIX) `WT_ CONFIG`/bin/opmnctl shutdown. To remove the Windows Service, run `C:\sc delete OracleProcessManager_CommonDomain_webtier`.

   Note: Applies to `cleanup-configure`, `cleanup-configure-secondary`, and `cleanup-postconfigure`.

2. Shut down BI processes, if any, by running (UNIX) `BI_CONFIG_ HOME`/bin/opmnctl shutdown. To remove the Windows Service, run `C:\sc delete OracleProcessManager_BIInstance`. 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 11g* for more information.

   Note: This applies to `cleanup-configure`, `cleanup-configure-secondary`, and `cleanup-postconfigure`.

3. Shut down Global Order Promising (GOP) (if provisioned) with this command: (UNIX) `gop_instance_base`/bin/opmnctl shutdown. To remove Windows service, run: (Windows) `sc delete GlobalOrderPromisingServer1`.

   Note: This applies to `cleanup-postconfigure`.

4. Shut down Informatica Identity Resolution (IIR) processes, if any, by running these two scripts *in the order listed*:

   a. `APPLICATIONS_BASE`/informaticaIR/bin/idsdown

   b. `APPLICATIONS_BASE`/informaticaIR/bin/lidown

   Note: This applies to `cleanup-postconfigure`, if IIR is provisioned.

5. Shut down Java EE processes using the method recommended for the Oracle WebLogic Server. See "Starting and Stopping Java EE Applications Using WLST" in *Oracle Fusion Applications Administrator's Guide* for details.

   Note: This applies to `cleanup-configure`, `cleanup-configure-secondary`, and `cleanup-postconfigure`.

6. You do not have to shut down the Node Manager unless it was not configured properly.

Errors during cleanup of a target produce messages that inform you of the error and display the contents of the associated log file. If you scroll through a message, you can view additional messages, including the manual steps that you should take to fix the problem.

Note that failures during `cleanup-install` require specific cleanup tasks as follows:

1. Run the Oracle Universal Installer deinstall process for each component against the same `oraInventory` that provisioning uses. See the *Oracle Universal Installer and OPatch User's Guide* for information.

2. Delete the install phase guards. You can find them under `APPLICATIONS_ BASE`/instance/phaseguards/.

3. (Windows) Delete the following key from the Windows registry before re-running provisioning:

   ```
   HKEY_LOCAL_
   MACHINE/SOFTWARE\Wow6432Node\oblix\oblixNetPoint\10.1.4\
   WebGate\install_directory
   ```

If this step is not completed, WebGate will not be installed properly and will generate the following error during the configure-secondary phase:

```
webgate-build.xml:928: The directory
appbase\webgate\access\oblix\apps\common\bin does not exist.
```

5.5.3.4 Handling Remnant Processes

Provisioning cannot reliably stop all grandchild processes associated with failures during the running of a phase. Occasionally, remnant process are present after a failure. Oracle recommends that you manually check and stop all remnant processes that start from the *APPLICATIONS_BASE* and the *framework_location*/provisioning folder, except for Node Manager and the Provisioning Wizard.

Take this action after you complete the cleanup action for any phase, and before you run a restore action for that phase. Without this additional cleanup action, you may experience unwanted interference with the restore action and subsequent rerun logic. This is especially true for long-running child processes such as LDAP policy migration.

You can identify remnant processes in the *APPLICATIONS_BASE* as follows:

(Linux) `ps -ef | grep APPLICATIONS_BASE/folder_name`

(Windows) `wmic process get Processid,Commandline,Description | find APPLICATIONS_BASE/folder_name`

You can identify remnant processes in the *framework_location*/provisioning folder as follows:

(Linux) `ps -ef | grep framework_location/provisioning/folder_name`

(Windows) `wmic process get Processid,Commandline,Description | find framework_location/provisioning/folder_name`

Remember, do *not* stop the Node Manager and UI processes.

5.5.3.5 Handling Restore Failures

If the automated restore operation fails, you must complete these manual steps for all phases, except as noted:

1. Delete the restart phase guard (*phase_name*.grd) file associated with the failure. It is located under *APPLICATIONS_BASE*/restart/.

2. You must restore the `instance/` directory from the backup, located as follows:

   (UNIX) *APPLICATIONS_BASE*/restart/backup_*phase_name/*instance.tar

   (Windows) *APPLICATIONS_BASE* \restart\backup_*phase_name*\instance.zip

   (IBM AIX on POWER Systems (64-Bit) *APPLICATIONS_BASE*/restart/backup_*phase_name/*instance.pax

   Follow these steps to restore the `instance/` directory:

   (UNIX)

   `rm -rf CONFIG_HOME`

   `mkdir CONFIG_HOME`

   `tar -xfv path_to_instance.tar/instance.tar -C CONFIG_HOME`

(Windows)

```
rm -rf CONFIG_HOME
```

```
mkdir CONFIG_HOME
```

```
cd CONFIG_HOME
```

```
framework_location\provisioning\util\unzip.exe path_to_
instance.zip\instance.zip -d .
```

(IBM AIX on POWER Systems 64-Bit)

```
rm -rf CONFIG_HOME
```

```
mkdir CONFIG_HOME
```

```
cd $CONFIG_HOME
```

```
pax -rEf path_to_instance.pax/instance.pax -x pax -p e
```

3. When a local application configuration has been enabled, you must manually restore the `localdomains` and `localapplications` configuration directories on every *local_application_config_host*:

   (UNIX) *APPLICATIONS_BASE*/restart/backup_*phase_name/local_application_config_host*/localdomains.tar and...

   (UNIX) *APPLICATIONS_BASE*/restart/backup_*phase_name/local_application_config_host*/localapplications.tar

   (Windows) *APPLICATIONS_BASE*\restart\backup_*phase_name\local_application_config_host*\localdomains.zip and...

   (Windows) *APPLICATIONS_BASE*\restart/backup_*phase_name\local_application_config_host*\localapplications.zip

   (IBM AIX on POWER Systems 64-Bit) *APPLICATIONS_BASE*/restart/backup_*phase_name/local_application_config_host*/localdomains.pax and...

   (IBM AIX on POWER Systems 64-Bit) *APPLICATIONS_BASE*/restart/backup_*phase_name/local_application_config_host*/localapplications.pax

   In addition, restore the following file related to Oracle Business Intelligence:

   (UNIX) *APPLICATIONS_BASE*/restart/backup_*phase_name/local application_config_host*/biinst/BIInstance.tar

   (Windows) *APPLICATIONS_BASE*\restart\backup_*phase_name\local application_config_host*\biinst\BIInstance.zip

   (IBM AIX on POWER Systems 64-Bit) *APPLICATIONS_BASE*/restart/backup_*phase_name/local application_config_host*/biinst/BIInstance.pax

4. For `restore-configure-secondary` and `restore-postconfigure` only, start the CommonDomain Administration Server. See "Starting an Administration Server Using WLST and Node Manager" in Table 3-1 of *Oracle Fusion Applications Administrator's Guide* for complete instructions for stopping and starting components.

5. For `restore-postconfigure` only, start Oracle HTTP Server by running *WT_CONFIG_HOME*/bin/opmnctl startall. Oracle HTTP Server must be started from the host where it is installed. It cannot be started from any other host.

6. For `restore-configure` and `restore-postconfigure`, check the restore logs to see if the BI schema restore operation is complete. Perform the restore operation for the database contents first.

7. To restore the BI schema from backup, perform the following actions:

   a. Drop all tables in `FUSION_BIPLATFORM`, if you have not done so already. Drop only the tables — not the schema user.

   b. Run the following stored procedure as the `FUSION_BIPLATFORM` user. For `restore-configure`, use biplatform-preconfigure.dmp as the *v_dump_file_name*. For `restore-postconfigure`, use biplatform-configure-sec.dmp:

   ```
   DECLARE
   v_schema_name VARCHAR2(30) := 'FUSION_BIPLATFORM';
   v_directory VARCHAR2(30) := 'FUSIONAPPS_PROV_RECOVERY_DIR';
   v_dump_file_name VARCHAR2(30) := <biplatform-preconfigure.dmp or
   biplatform-configure-sec.dmp>;
   v_unique_job_name VARCHAR2(50) := <unique identifying job name e.g. Manual
   BI
   Schema Restore>;
   v_temp_schema_name VARCHAR2(40) := 'IN ('''  ||  v_schema_name || ''')';
   v_handle NUMBER;
   v_job_state VARCHAR2(30);
   BEGIN
   v_handle :=
   DBMS_DATAPUMP.open('IMPORT','TABLE',NULL,v_unique_job_name,'COMPATIBLE');
   DBMS_DATAPUMP.add_file(v_handle,v_dump_file_name,v_directory);
   DBMS_DATAPUMP.metadata_filter(v_handle,'SCHEMA_EXPR',v_temp_schema_name);
   DBMS_DATAPUMP.start_job(v_handle);
   DBMS_DATAPUMP.wait_for_job(v_handle,v_job_state);
   DBMS_DATAPUMP.detach(v_handle);
   END;
   ```

If LDAP cleanup fails, perform the following manual tasks:

1. For the preconfigure phase, complete these tasks:.

   - Undo member assignments on Administrators, Operators, and Monitors group nodes.

   - Remove AppIDUsers node under user base distinguished name.

   - Remove AppIDGroups node under group base distinguished name.

   - Remove FusionGroups node under group base distinguished name.

   - Remove Administrators, Operators, and Monitors groups under group base distinguished name (if you created them in the provisioning plan).

   - Remove jpsroot (if you enable it in the provisioning plan).

2. For the configure phase, remove the `cn=JPSContext` node (with its children) under the jpsroot node from the policy store LDAP if seeding is enabled. Perform this task on the primordial host.

3. For the postconfigure phase, remove all nodes under jpsroot and recreate the container nodes as well as OPSS credentials that were created in the configure phase:

   - Remove all nodes under jpsroot node.

   - Create a temporary bootstrap domain and bring up its Administration Server.

- Run `reassociateSecurityStore` for that domain with `join=false` to create a fresh policy domain on LDAP.

- Since the work completed in the configure phase is undone by the deletion of the policy domain during cleanup, seed OPSS credentials.

- Bring down the bootstrap domain's Administration Server and delete the domain from the file system.

- You cannot register this domain with Node Manager. Use the command line to bring up this server.

Rerun `restore-postconfigure` after you fix any issues. If this does not resolve the issues, you should start from the beginning.

5.5.4 Preverification Failure (Windows)

You may encounter the following error while running the preverification phase on Windows systems:

```
"C:\repository_location/installers/database/Disk1/setup.exe":
CreateProcess error=740, The requested operation requires
elevation at
java.lang.ProcessBuilder.start(ProcessBuilder.java:460)
```

If you receive this error, disable User Access Control (UAC) or log in as a Local Administrator to the machine where the Provisioning Wizard is not functioning properly.

See http://technet.microsoft.com/en-us/library/dd759070.aspx for information about disabling UAC.

5.5.5 Canceling an Installation in Progress

You can interrupt the installation process while it is in progress by clicking **Cancel**, or by clicking the **x** icon next to a build that has failed. If you click **Cancel**, all processes running in the background are terminated and put in a **Failed** status.

You can start the wizard again after you initiate a **Cancel** action. The wizard detects that the installation has been partially completed, and presents you with two options:

- Resume from where you left off. The wizard asks if you want to resume. Click **Yes**.

    The wizard takes you to the screen where you clicked **Cancel** and created the failure. Restart the installation at that point by clicking the **Retry** button. The wizard performs cleanup and recovery actions for you.

- Clean up the errors manually and rerun the **Provision a New Applications Environment** option for the provisioning plan from the beginning.

5.6 Postinstallation Tasks

Once you have successfully completed the installation phases on all the hosts in your environment, you may need to perform postinstallation tasks. For example, you may need to apply applications or middleware related patches.

5.6.1 Apply Patches to Your New Environment

For general information about applying patches to an applications environment, see *Oracle Fusion Applications Patching Guide*.

5.6.2 Register Node Manager as a Service (Linux x86-64 Only)

You can register the Node Manager process as a service. This requires starting the process as a user other than `root`. Complete this task as follows:

1. Create a file containing the following property:

   ```
   provisioning.setup.common.core.node.manager.linux.user=user
   name
   ```

2. Run the following command from each host in an environment with Managed Servers. This installs a "nodemanager-*n*" script under `/etc/init.d`. Provide the location of the file that you created in the previous step.

   ```
   sudo ./runProvisioning.sh -plan provisioning_plan_location
   -override location_of_property_file -target configure-root
   ```

   The script is configured using `chkconfig` to start automatically at run level 5.

   Note: If there are multiple installs on the same machine from different middleware homes, you might see more than one script under `/etc/init.d` (named "nodemanager-*n*").

5.6.3 Configure Oracle HTTP Server for Privileged Port (UNIX Only)

The TCP/IP port numbers below 1024 are special in that only processes with `root` privileges are allowed to listen on those ports. By default, Oracle HTTP Server runs as a non-root user (the user that installed Oracle Fusion Middleware).

If you plan to run Oracle HTTP Server on a privileged port (for example, port 80), you must enable Oracle HTTP Server to run as `root`. See "Viewing and Changing Ports for Components" in *Oracle Fusion Applications Administrator's Guide*.

5.6.4 Create upgradeLDAPUsersForSSO.props

Create a file called upgradeLDAPUsersForSSO.props with the following contents. This file is only for the IDSTORE user.

```
IDSTORE_DIRECTORYTYPE: OID
IDSTORE_HOST: idstore.mycompany.com
IDSTORE_PORT: 3060
IDSTORE_ADMIN_USER: cn=IDRWUSER,cn=users,cd=mycompany,dc=com
IDSTORE_USERSEARCHBASE: cn=Users,dc=mycompany,dc=com
IDSTORE_GROUPSEARCHBASE: cn=groups,dc=mycompany,dc=com
PASSWORD_EXPIRY_PERIOD: 7300
```

The `IDRWUser` is the read-write user created for provisioning:

```
IDM_ORACLE_HOME/idmtools/bin/idmConfigTool.sh
-upgradeLDAPUsersForSSO input file=upgradeLDAPUsersForSSO.props
log_file=upgradeLDAPUsersForSSO.out
```

5.6.5 Add Privileges to IDStore and Policy Store Entities

Additional privileges must be given to the entities that are created during provisioning for the IDStore and the Policy Store. To add these privileges, following these steps from the IDM domain:

1. Set the environment variables: *MW_HOME*, *JAVA_HOME*, *IDM_HOME*, and *ORACLE_ HOME*. Set *IDM_HOME* to IDM_ORACLE_HOME. Set *ORACLE_HOME* to IAM_ORACLE_ HOME.

2. Create a properties file as follows:

   ```
   IDSTORE_HOST: idstore.mycompany.com
   IDSTORE_PORT: 389
   IDSTORE_BINDDN: cn=orcladmin
   IDSTORE_USERSEARCHBASE: cn=Users,DC=mycompany,dc=com
   IDSTORE_SEARCHBASE: dc=mycompany,dc=com
   IDSTORE_GROUPSEARCHBASE: cn=Groups,dc=mycompany,dc=com
   POLICYSTORE_HOST: policystore.mycompany.com
   POLICYSTORE_PORT:  389
   POLICYSTORE_BINDDN: cn=orcladmin
   POLICYSTORE_CONTAINER: cn=FAPolicies
   ```

3. Perform postprovisioning configuration as follows:

   (Linux x86-64)

   ```
   idmConfigTool.sh -postProvConfig input_file=idm.props
   ```

   (Windows)

   ```
   idmConfigTool.bat -postProvConfig input_file=idm.props
   ```

5.6.6 Reconcile Users and Roles from the IDStore into OIM

The automatic incremental reconciliation processing can bring users and roles records from the IDStore into Oracle Identity Manager. However, in order for this processing to work correctly, you must perform a full reconciliation (RECON) *immediately* after provisioning is complete.

To perform a full reconciliation, complete the following tasks:

1. Disable the following jobs:

   - LDAP User Create and Update Reconciliation
   - LDAP User Delete Reconciliation
   - LDAP Role Membership Reconciliation
   - LDAP Role Create and Update Reconciliation
   - LDAP Role Delete Reconciliation
   - LDAP Role Hierarchy Reconciliation
   - Fusion Applications Role Category Seeding

2. Run the following jobs *in the order listed*:

   a. LDAP User Create and Update Full Reconciliation

   b. LDAP Role Create and Update Full Reconciliation

   c. LDAP Role Hierarchy Full Reconciliation

   d. LDAP Role Membership Full Reconciliation

3. Re-enable the reconciliation jobs that were disabled in Step 1.

5.6.7 Delete BI Restart Files

To delete the restart files for Business Intelligence (BI), log in to the database using schema user ID FUSION_BIPLATFORM and run the following PL/SQL command:

```
BEGIN
utl_file.fremove ('FUSIONAPPS_PROV_RECOVERY_DIR','biplatform-preconfigure.dmp');
END fremove;
BEGIN
utl_file.fremove ('FUSIONAPPS_PROV_RECOVERY_DIR','biplatform-configure-sec.dmp');
END fremove;
```

If you encounter any issues when running this command, you can delete the files by logging in to the database host machine and deleting the restart files as follows:

1. Navigate to the location that is specified by the directory object FUSIONAPPS_ PROV_RECOVERY_DIR. To find the location, use this PL/SQL statement:

```
select DIRECTORY_PATH from ALL_DIRECTORIES where DIRECTORY_
NAME = 'FUSIONAPPS_PROV_RECOVERY_DIR';
```

2. Delete biplatform-preconfigure.dmp and biplatform-configure-sec.dmp.

5.7 What to Do Next

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

5.7.1 Manage User Passwords for Login Access to Applications Components

For complete information about setting up and managing passwords for your new environment, see "Securing Oracle Fusion Applications" and "Provisioning Identities" in *Oracle Fusion Applications Administrator's Guide*

5.7.2 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 listed here:

- *Oracle Fusion Applications Information Technology Management, Implement Applications Guide*

- *Oracle Fusion Applications Common Implementation Guide*

- *Oracle Fusion Applications Post-Installation Guide*

- Product-specific Oracle Fusion Applications implementation guides

6

Deinstalling an Applications Environment

This chapter describes the actions necessary to remove an existing Oracle Fusion Applications environment from your system. It includes step-by-step instructions and provides important information about the ramifications of taking this action. It includes the following sections:

- Introduction to Deinstalling Environments
- Before You Begin
- Deinstallation Using the Wizard
- Deinstallation Using the Command Line
- Postdeinstallation Tasks

6.1 Introduction to Deinstalling Environments

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

Note the following characteristics of the deinstallation process:

- You must run the deinstall process on *all* hosts. 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 same host (primordial) where you started it at the time of installation. You can monitor the process on all hosts using the primordial host interface.

- All binaries, regardless of patch level, are removed.

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

6.2 Before You Begin

Always use the provisioning deinstall option (the Provisioning Wizard option or the command line) rather than simply deleting the *APPLICATIONS_BASE*, *APPLICATIONS_CONFIG*, and the `oraInventory` directories manually. This is especially important for the web tier. Two of its instances share the same `oraInventory` location.

Before you begin the deinstallation process, complete these tasks:

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. If the servers are configured as Windows services, stop the services before deinstalling the software. See "Stopping an Oracle Fusion 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 that are 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 11g* for more information.

5. Shut down Global Order Promising (GOP) (if provisioned): (UNIX) `gop_instance_base/bin/opmnctl shutdown`. To remove the Windows service, run: `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 the *Oracle Fusion Applications Administrator's Guide* for more information.

6.3 Deinstallation Using the Wizard

To perform a deinstallation using the Provisioning Wizard, start the wizard and complete the deinstallation interview screens.

6.3.1 Start the Provisioning Wizard

To start the Provisioning Wizard, do the following:

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. Run the following command on the primordial host:

   (UNIX)

   `cd framework_location/provisioning/bin`

```
./provisioningWizard.sh
```

(Windows)

```
cd framework_location\provisioning\bin

provisioningWizard.bat
```

6.3.2 Wizard Interview Screens and Instructions

Table 6–1 shows the steps necessary to deinstall an Oracle Fusion Applications environment with the Provisioning Wizard. For help with any of the interview screens, see Appendix F or click **Help** on any Provisioning Wizard interview screen.

Table 6–1   Deinstalling an Applications Environment

Screen	Description and Action Required
Welcome	No action is required on this read-only screen.
	Click **Next** to continue.
Installation Options	Presents a list of valid installation actions that you can perform using the Provisioning Wizard. Select **Deinstall an Applications Environment**.
	Enter the directory path in the **Provisioning Plan** field to the plan associated with the environment you want to deinstall. Or click **Browse** to navigate to the plan location.
	Click **Next** to continue.
Summary	Displays the application and middleware components to be deinstalled. The processes associated with these components must be shut down manually. See Section 6.2 for details.
	Click **Deinstall** to begin deinstalling the applications and middleware components.
Deinstallation Progress	The deinstallation process runs on the primordial host. You must deinstall from the command line on any primary or secondary hosts provisioned in your environment. See Section 6.4 for more details.
	The following symbols help track the deinstall progress:
	■ **Block**: Processing has not yet started on this host for the named phase.
	■ **Clock**: Performing the build for a phase.
	■ **Check mark**: The build was completed successfully.
	■ **x** mark: The build has failed for this phase. You must correct the errors before you can continue.
	■ **Restricted** symbol: The validation process has stopped due to a failure within another process.
	Click an **x** or a **Restricted** symbol to display information about failures. Select the icon in the **Log** column to view host-level details. If there is a **Log** file icon beside a build message, you can select that file to see the details of that build.
	If the deinstallation fails, a **Retry** button is enabled, allowing you to try the deinstall again. See Section 5.5.3 for information about retry, cleanup, and restore actions.
	Click **Next** to continue.
Deinstallation Complete	Review the list of components removed from this environment. Click **Save** to create a text file that contains the details.
	See Section 6.5 for information about manual tasks necessary to complete the deinstallation process.
	Click **Finish** to dismiss the screen.

6.4 Deinstallation Using the Command Line

If you have provisioned a primary or secondary host, you must run the deinstall on those hosts from the command line, using the same procedure that you used during provisioning. 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 -plan` *`plan_location`* `-target deinstall`

(Windows) `runProvisioning.bat -plan` *`plan_location`* `-target deinstall`

If the web tier has been deployed in a DMZ, you must run the Oracle Universal Installer (OUI) manually on that host to deinstall. See *Oracle Universal Installer and OPatch User's Guide*.

6.5 Postdeinstallation Tasks

The remaining cleanup tasks are as follows:

(UNIX)

1. Remove the Entries from Services.

2. Remove the Entries from the inetd.conf 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.

7

Installing Desktop Applications

This chapter describes the Oracle Fusion Applications Desktop Installer, its installation, and its uses. It includes the following sections:

- Introduction to the Desktop Installer
- Before You Begin
- Running the Desktop Installer Wizard

7.1 Introduction to the Desktop Installer

Oracle Fusion Applications provides a suite of client-side products that are installed on a local Windows-based computer and run from the desktop, connecting to a server only as is necessary. Access to this product functionality is faster, uses less bandwidth, and reduces security risks.

7.1.1 Client-Side Applications

Oracle Fusion Applications includes these client-side products for use on the Windows operating system:

- Oracle Hyperion Smart View for Office: Provides a common Microsoft Office interface designed specifically for Oracle enterprise performance management (EPM). With SmartView, you can view, import, manipulate, distribute, and share data in Microsoft Excel, Word, and PowerPoint interfaces. See Smart View Extensions and Utilities at:

  `http://www.oracle.com/technetwork/middleware/bi-foundation/downloads/index-088403.html`

- Oracle Hyperion Financial Reporting Studio: A powerful tool for designing and presenting analytic data graphically. You can design traditional financial report formats such as cash management reports, profit and loss statements, and balance sheets. You can also design nontraditional formats for financial or analytic data that include text and graphics.

- Oracle Application Development Framework 11*g* Desktop Integration: Extends the Oracle Application Development Framework (Oracle ADF) into the world of desktop applications like Microsoft Excel. Application developers can rapidly develop integrated spreadsheets that enable users to access and edit critical business data.

- Microsoft Project Integration: A plug-in to Microsoft Project.

7.1.2 Desktop Installer

The Oracle Fusion Applications Desktop Installer (Desktop Installer) aggregates the client-side applications into a single suite installer so that you can select which of the applications you want to install. The installer is based on the Microsoft Windows installer and uses the InstallShield interface. It needs only minimal configuration details.

The installer creates a directory called `%PROGRAM_FILES%\Oracle\FusionApps` and installs each application in a separate subdirectory:

- `\SmartView`: Smart View

- `\FRStudio`: Financial Reporting Studio

- `\ADFi`: Oracle Application Development Framework 11*g* Desktop Integration

- `\MSPIntg`: Microsoft Project Integration plug-in

At a high level, the installer offers two installation options: Complete or Custom. The complete installation installs all applications components by default. A custom installation lets you select individual applications.

7.1.3 Desktop Installer Features

The Oracle Fusion Applications Desktop Installer performs necessary validations, offers a silent installation option, and enables recovery if the installation process is interrupted.

7.1.3.1 Recovery After a Failure

If an installation failure occurs, the Desktop Installer can detect previously installed components and move to the next uninstalled product upon restart. For example, suppose that you are installing all the client-side applications and the installation fails before they are all installed. The InstallShield Wizard displays the **Installation Interrupted** screen.
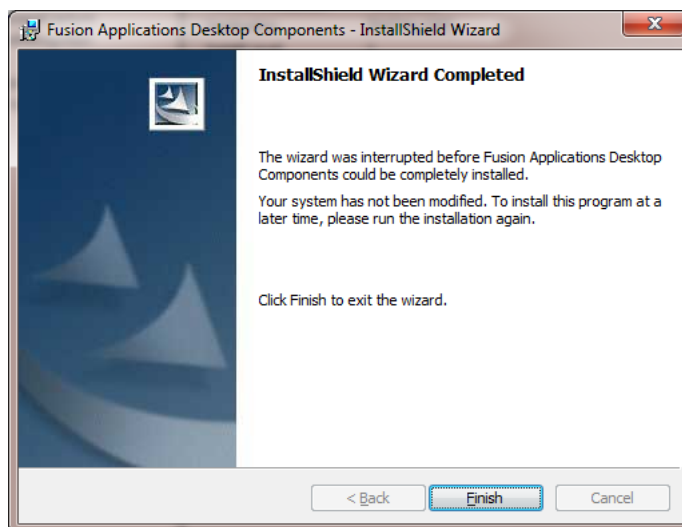
Click **Finish**. Resolve the issue and restart the Desktop Installer. It detects which applications were successfully installed and notes their location. When you restart, you can no longer select those installed applications. You can, however, select the uninstalled applications and continue from that point.

7.1.3.2 Command-Line Parameters

The `setup.exe` command can accept a number of parameters. Using these parameters, you can specify actions such as whether to run `setup.exe` silently or display the wizard.

Table 7–1 lists the command-line parameters. For more information, go to:

http://kb.flexerasoftware.com

Table 7–1   Command-line Parameters

Parameter	Description
`/r`	Record mode. Runs the Desktop Installer wizard and records the information specified on the screens in a response (properties) file. The file (setup.iss) is created in the current directory by default.
	To run the Desktop Installer in silent mode you must create a response file.
`/s`	Silent mode. Runs the Desktop Installer in the background, using the responses contained in the setup.iss file in the same directory. For example, `C:\ setup.exe /s /f1 `*`path_to_`*`  `*`response_file`*.
`/f1`	Specifies an alternate file name or location for the response file. For example, `setup.exe /s /f1"C:\Temp\mysetup.iss"`.
	You must specify an absolute path. Using a relative path may give unpredictable results. The `/f1` option can be used both when creating a response file with the `/r` option and when using a response file with the `/s` option.
`/f2`	The log file (setup.log) is created by default in the same directory (with the same name) as the response file. This enables you to specify an alternative log file location and file name. For example, `setup.exe /s /f2"C:\mysetuplog.log"`.

> **Note:**   Command-line options must be specified with no space between the option and its parameter. For example, `setup.exe /s /f1 `*`file name`* has no space between `/f1` and *`file name`*.

7.1.3.3 Uninstall

You can uninstall a previously installed application by running the `setup.exe` command and adding the `/uninst` parameter. It causes `setup.exe` to execute on the event handler function `OnUninstall`. The default code uninstalls the previously installed product.

7.1.3.4 Record Mode

You can run the Desktop Installer in record mode (`/r`) to invoke the Desktop Installer wizard and record the actions specified in a response file. This file can be used as a template so that subsequent installations can be run by invoking a silent installation and specifying the response file. No further user intervention is required.

Running the installer in record mode displays all the runtime dialog screens in the wizard, and stores the data specified there in the response file (setup.iss). The response file is created in the system's Windows folder. You can add parameters to change the name and location of this file.

7.1.3.5 Silent Mode

If you run the Desktop Installer in silent mode, the installer runs in the background using parameters passed to it in the response file created when you ran setup.exe in record mode (/r). You specify the name and location of this file on the command line. Once the process starts, no further user intervention is required.

7.2 Before You Begin

Ensure that your desktop computer meets the prerequisites to run the Oracle Fusion Applications Desktop Installer and install the applications components. You should have sufficient disk space, and have previously installed and configured the following third-party software:

- Microsoft Windows XP Professional SP3 or Windows 7

- .NET Framework 3.5.1

- Microsoft Excel 2007 or above

- Microsoft Office Project

- Microsoft Internet Explorer 7 or above

7.3 Running the Desktop Installer Wizard

To run the Desktop Installer, complete the following steps:

1. Go to Tools in the Oracle Fusion Applications Navigator menu and select Download Desktop Integration Installer.

2. Indicate a location for the download.

3. When the download is complete, run the Desktop Installer wizard with the following command, adding command line parameters as needed. For example, adding /r creates a response file in the default directory.

   ```
   setup.exe /r
   ```

4. Complete the Desktop Installer screens.

   Table 7–2 contains instructions for running the Desktop Installer.

Table 7–2   Desktop Installer Screens and Required Actions

Screen	Description and Action Required
InstallShield Splash Screen	Displays a progress bar as the Oracle Fusion Applications desktop applications are compressed in preparation for the installation. When the compression process is complete, the **Welcome** screen appears.
	No action is required to continue.
Welcome Screen	Displays a standard welcome message.
	Click **Next** to start the installation.
Installation Type Screen	Provides an option to select the installation type. Select one of these two options:
	■ **Complete**: Installs all the Oracle Fusion Applications desktop applications by default.
	■ **Custom**: Enables you to choose the applications to install.
	Click **Next** to continue.
Installation Location Screen	Accept the default location for the desktop applications folder, or click **Change** to modify the location.
	Click **Next** to continue.

Table 7–2   (Cont.) Desktop Installer Screens and Required Actions

Screen	Description and Action Required
Components to Install Screen	If you selected a custom installation, this screen presents the applications that are available for installation. Select from the following list: ■　Smart View ■　Financial Reporting Studio ■　Microsoft Project Integration ■　ADFi Based on your choices, the **Feature Description** panel displays the disk space required to install the selected applications on your local hard drive. Indicate if you want to change the **Install to** location by clicking **Change**. Specify the new path. Click **Next** to continue.
Ready to Install Screen	Confirms that the installer is ready to begin the installation. To review or change any of the installation information, click **Back**. Click **Install** to start the installation.
Installation Progress Screen	The **Status** bar tracks the installation progress. The progress bar reports 100% complete when the installation is finished. Click **Next** to continue.
InstallShield Wizard Completed Screen	Confirms that the installation has succeeded. Click **Finish** to dismiss the screen and exit the wizard.

A

Provisioning Framework Screens

This appendix presents screens used to install and deinstall the Oracle Fusion Applications Provisioning framework components. It includes the following sections:

- Installation Screens
- Deinstallation Screens

A.1 Installation Screens

To install the provisioning framework, complete the information on these screens:

- Specify Inventory Directory (UNIX Only)
- Welcome
- Prerequisite Checks
- Specify Installation Location
- Installation Summary
- Installation Progress
- Installation Complete

A.1.1 Specify Inventory Directory (UNIX Only)

If this is your first Oracle installation on this host, you must specify the location of the **I**nventory 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 you want to grant 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. 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**.

Click **OK** to continue.

A.1.2 Welcome

No action is required on this read-only screen.

Click **Next** to continue.

A.1.3 Prerequisite Checks
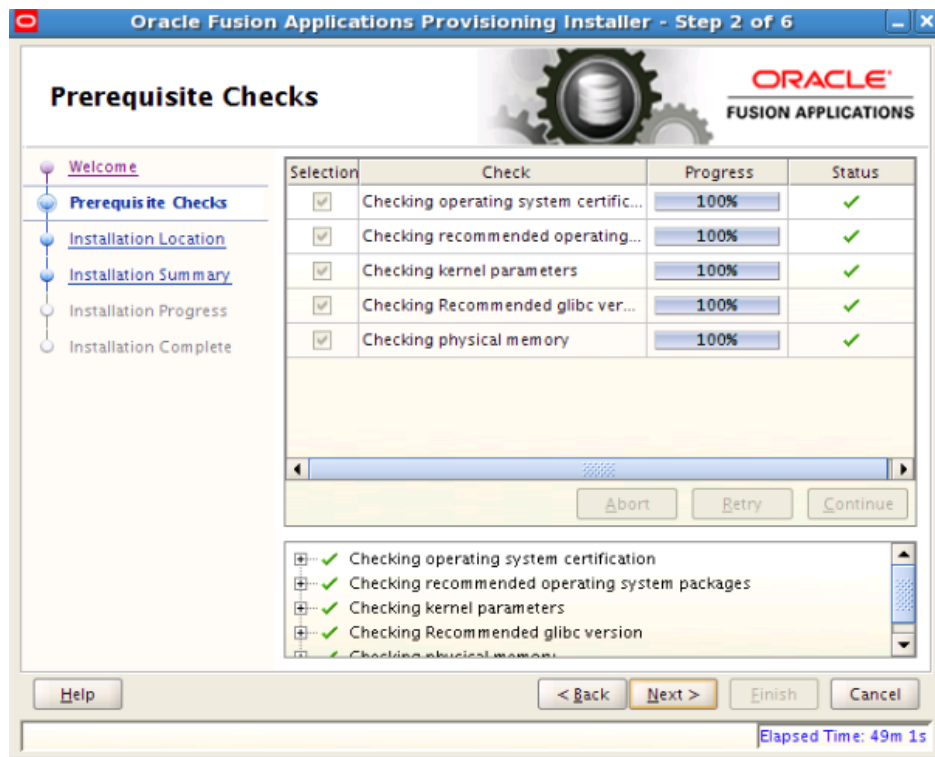
Analyzes the host computer to ensure that specific operating system prerequisites have been met. If any prerequisite check fails, the screen displays a short error message at the bottom. Fix the error and click **Retry**.

To ignore the error or warning message, click **Continue**. Click **Abort** to stop the prerequisite check process for all components.

Click **Next** to continue.

A.1.4 Specify Installation Location

Specify the **Location** where you want to install the provisioning framework. This is the location where the Provisioning Wizard and the start command for provisioning are installed. You can choose any location as long as it is on a shared disk that is accessible to all hosts in your new environment.

The installation process creates a logical directory called the Oracle home. This location is where software binaries will be stored. No runtime process can write to this directory. The directory must initially be empty.

If you are performing the installation on a Windows operating system, ensure that the directory paths are valid and do not contain a double backslash (\\).

Click **Next** to continue.

A.1.5 Installation Summary

Summarizes the selections that you have made during this installation session. To change this configuration before installing, select a screen from the left navigation pane or click **Back** to return to a previous screen. When you are satisfied with the details, click **Save** to create a text file (response file) to use if you choose to perform the same installation later.

Click **Install** to begin installing this configuration.

A.1.6 Installation Progress
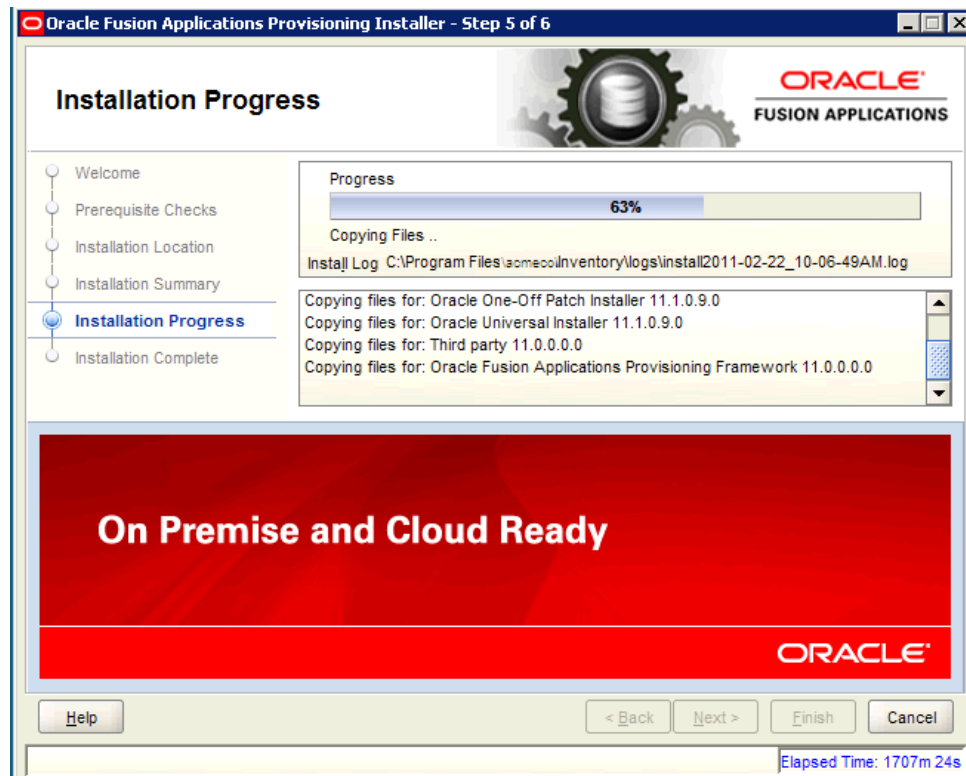
The progress indicator shows the percent of the installation that is complete, and indicates the location of the installation log files. No user action is required.

When the progress indicator indicates 100 percent, click **Next** to continue.

A.1.7 Installation Complete
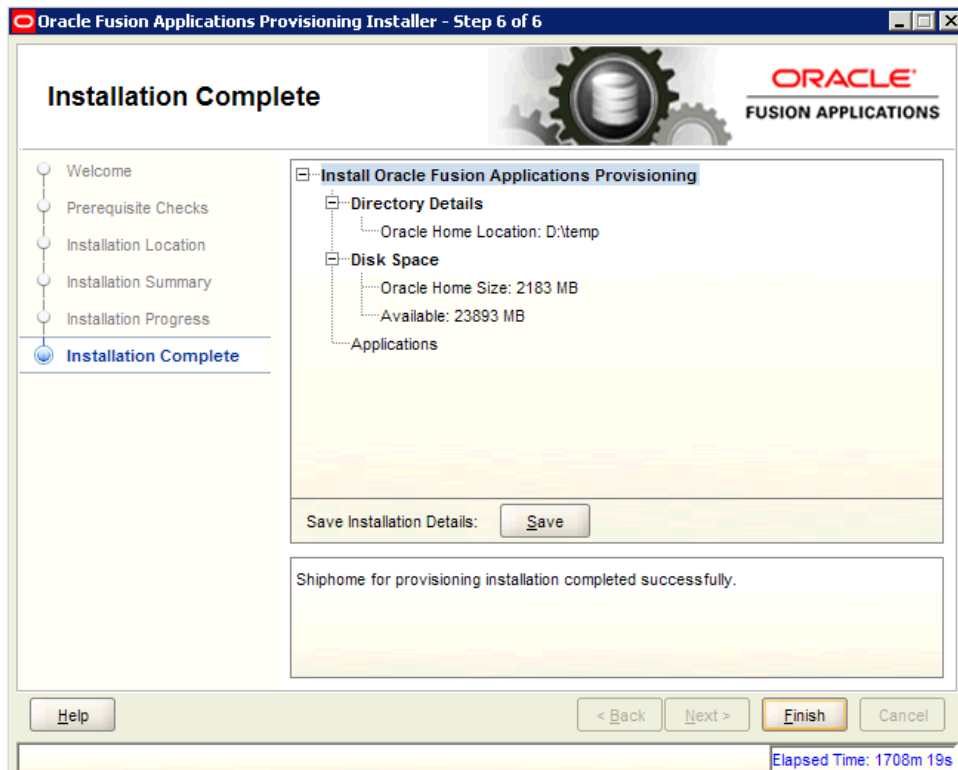
Summarizes the installation that was just completed. To save the details to a text file, click **Save** and indicate a directory where you want to save the file.

Click **Finish** to dismiss the screen and exit the installer.

A.2 Deinstallation Screens

In order to deinstall the provisioning framework, complete the information on these screens:

- Welcome

- Deinstall Oracle Home

- Deinstallation Progress

- Deinstallation Complete

A.2.1 Welcome

No action is required on the read-only screen.

Click **Next** to continue.

A.2.2 Deinstall Oracle Home

Verify that the directory path is correct. Click **Save** to create a text file with the details of the configuration you are deinstalling.

Click **Deinstall** to continue. On the **Warning** screen, click **Yes** to remove the software files and the provisioning Oracle home directory. Click **No** to remove only the software files, or **Cancel** to return to the previous screen.

If you clicked **No**, remove the files manually. For example, if the provisioning framework directory is /d1/Oracle/Provisioning, you would use this syntax:

(UNIX)

```
cd /d1/oracle/provisioning
rm -rf provisioning
```

(Windows)

If the Oracle home directory is C:\Oracle\Provisioning, use a file manager window and navigate to the C:\Oracle directory. Right-click the Provisioning folder and select **Delete**.

A.2.3 Deinstallation Progress
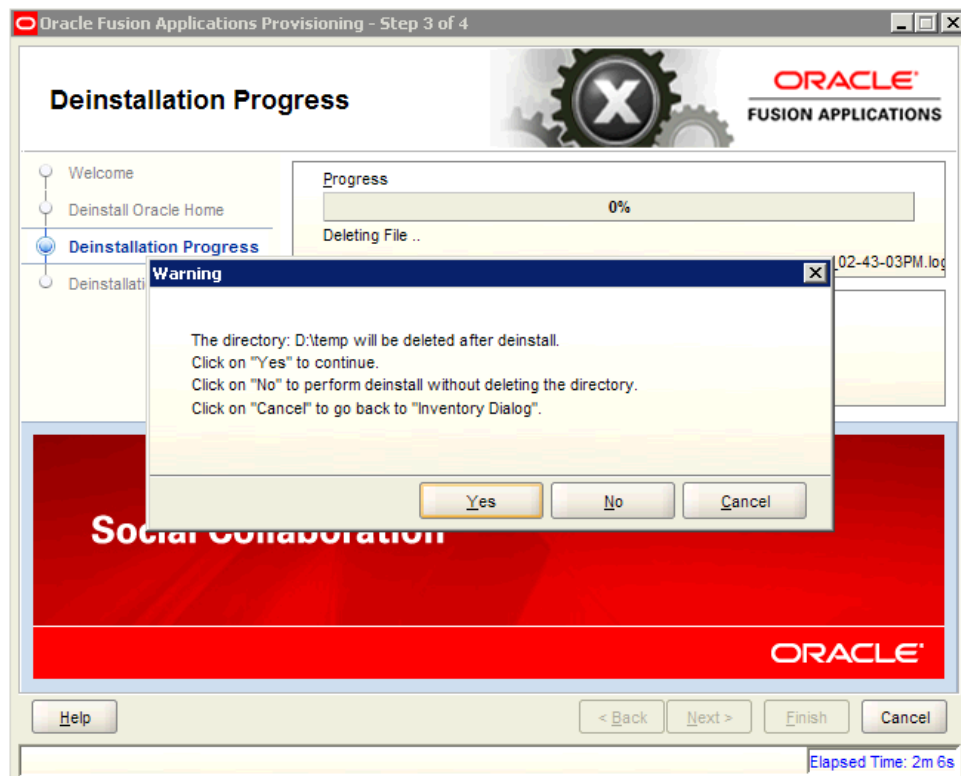
Monitor the progress of the deinstallation. Click **Cancel** to stop the process.

Click **Next** to continue.

A.2.4 Deinstallation Complete
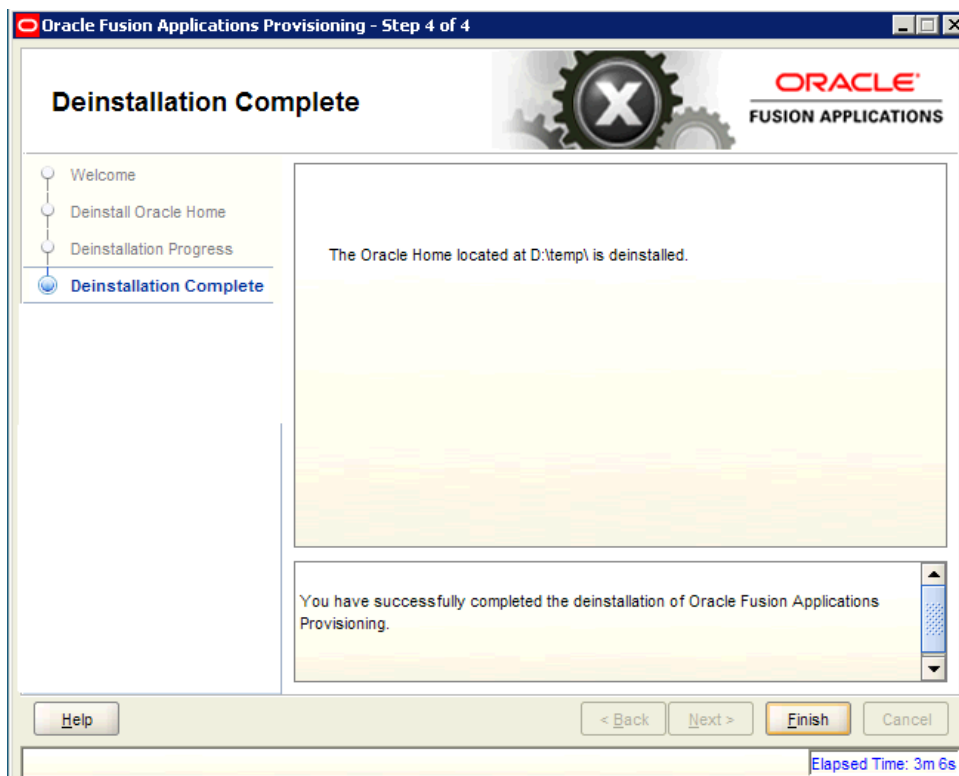
Review the summary of your deinstallation and the components that were deinstalled. Click **Finish** to exit.

B

Install Transaction Database Screens

This appendix presents the Provisioning Wizard screens in the Database Installation interview and describes the purpose of each of the following screens:

- Welcome
- Installation Options
- Specify Security Updates
- Database Install Configuration
- Prerequisite Checks
- Summary
- Database Installation Progress
- Installation Complete

B.1 Welcome

No action is required on this read-only screen.

Click **Next** to continue.

B.2 Installation Options
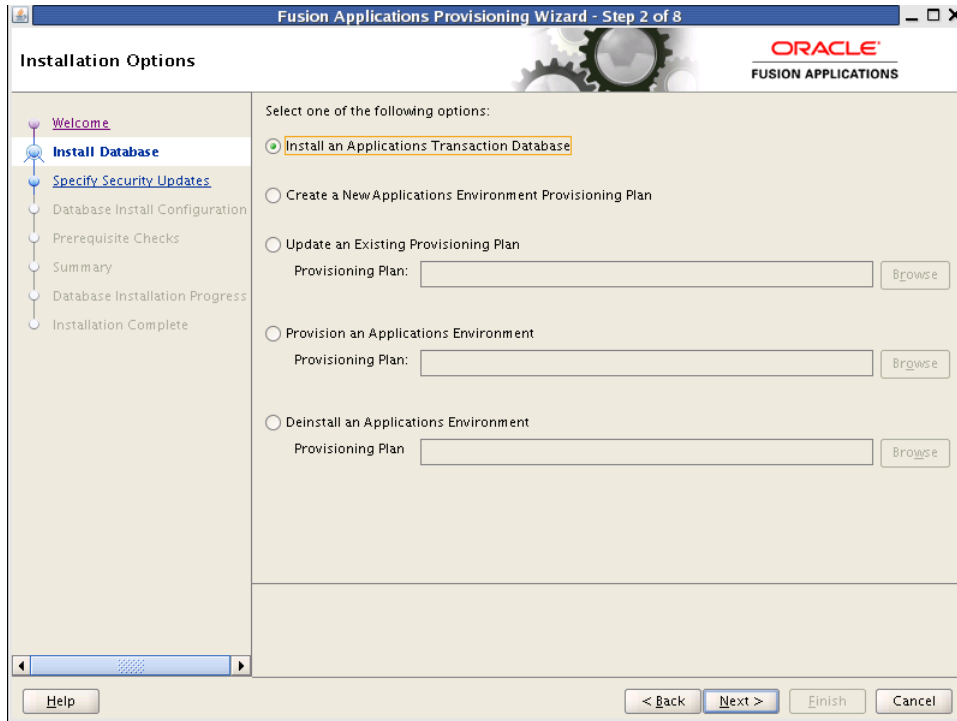
Select the task that you want to perform from the list of options. When prompted, enter a directory path in the **Provisioning Plan** field to access completed plan to use as the base for one of the actions. Or, click **Browse** to navigate to the plan location.

- **Install an Applications Transaction Database**: Install an empty, single-instance Oracle Database Enterprise Edition using the nonseeded database template shipped with this release.

- **Create a New Applications Environment Provisioning Plan**: Create a provisioning plan for a new Oracle Fusion Applications environment.

- **Update an Existing Provisioning Plan**: Add or change details in a completed plan that has not yet been implemented or in a partially completed provisioning plan.

- **Provision an Applications Environment**: Initiate and track the processes that install, configure, and deploy product offerings in a new Oracle Fusion Applications environment.

- **Deinstall an Applications Environment**: Remove applications and middleware components from an existing applications environment.

Click **Next** to continue.

B.3 Specify Security Updates

Set up a notification preference for security-related updates and installation-related information from My Oracle Support.

- **Email**: Specify your email address to have updates sent by this method.

- **I wish to receive security updates via My Oracle Support**: Select this option to have updates sent directly to your My Oracle Support account. You must enter your **My Oracle Support Password** if you select this option.

Click **Next** to continue.

B.4 Database Install Configuration

Specify information about the database that you want to install:

- **Database Listener Port**: 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. Symbolic links are described in *Oracle Fusion Applications Installation Guide*. Note that a symbolic link is not necessary if the repository and the database are on the same node.

- **Oracle Base**: Enter the top-level directory for Oracle software installations. You can change the path based on your requirements.

- **Software Location**: Accept the default value or enter the Oracle home directory path that points to where you want the data files to reside. The directory path must not contain spaces.

- **Database File Location**: Accept the default value or enter the path to the .dbf, .dtl, and .log files.

- **OSDBA Group**: The UNIX operating system group that the database administrator is a member of. Displayed only if the platform detected by the installer is UNIX.

- **Global Database Name**: Enter a name to distinguish this database instance from other Oracle Database instances running on the same host. The name can be written as *database name* or *database name.domain name*. This is the database service name.

- **Administrative Password**: Specify a valid password. Retype it to **Confirm**.

Click **Next** to continue.

B.5 Prerequisite Checks
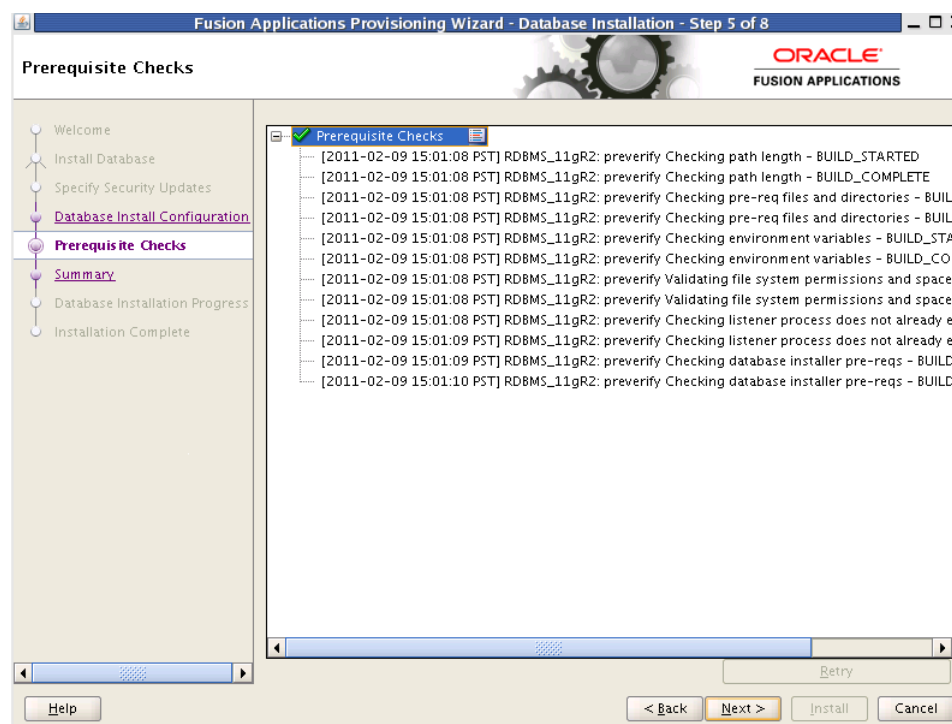
The **Prerequisite Checks** list shows each prerequisite check performed, and its status:

- **Block**: Processing has not yet started on this host for the named phase.
- **Clock**: Performing the build for a phase.
- **Check mark**: The build was completed successfully.
- **x** mark: The build has failed for this phase. You must correct the errors before you can continue.
- **Restricted** symbol: The validation process has stopped due to a failure within another process.

Click an **x** or a **Restricted** symbol to display information about failures. Click the **Log** file for details about the validation.

Fix any issues reported, and click **Retry** to run the prerequisite checks again. See "Troubleshooting for Database Installation" in the *Oracle Fusion Applications Installation Guide* for information about recovery after failure.

When prerequisite checking is complete with no errors, click **Next** to continue.

B.6 Summary
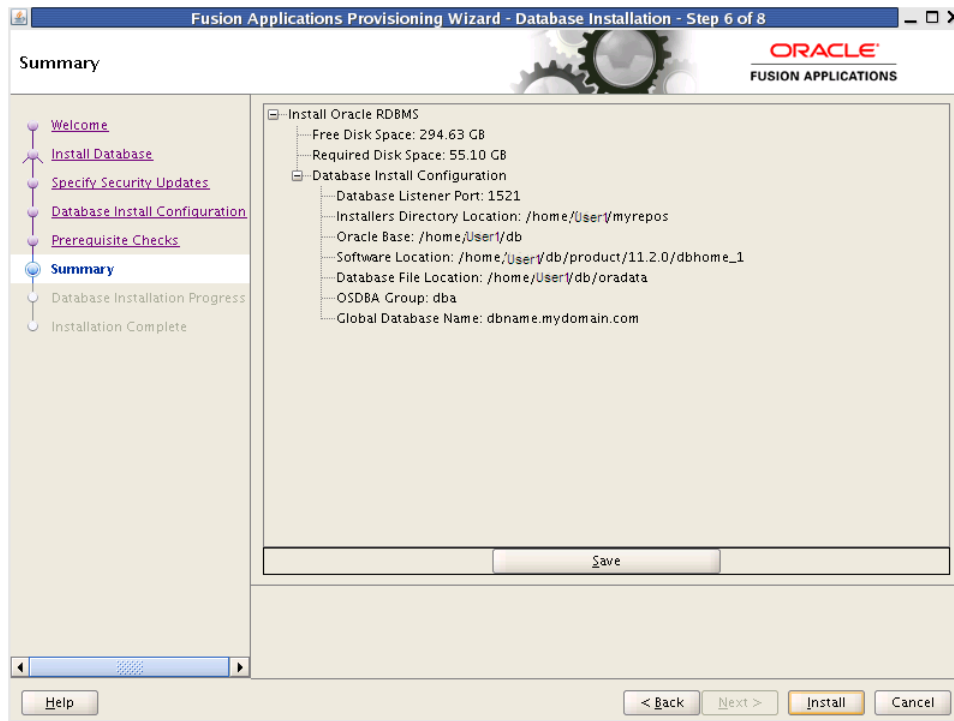
Click **Save** to create and save a text file to use as a record of this configuration.

Note: Record the file name and its location. You must supply these details when you create a provisioning plan.

Click **Install** to begin the installation.

B.7 Database Installation Progress
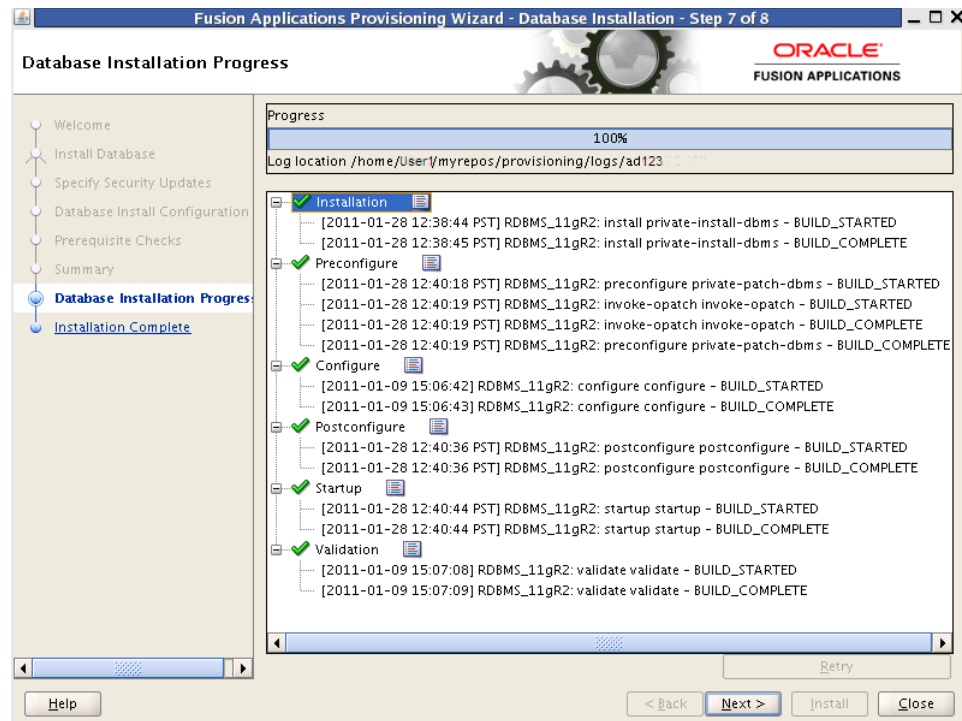
The installation **Progress** is reported by phase:

- **Installation**: Runs the database installer to install the software.

- **Preconfigure**: Applies patches to the installed database. The patches are located in the `repository_location/installers/database/patch` directory.

- **Configure**: Creates services used to connect to the database and applies the database template to set system parameters.

- **Postconfigure**: Performs any necessary postconfigure steps.

- **Startup**: Starts any installed components that are not already started.

- **Validation**: Connects to the database to verify the integrity of the installation.

The progress of the installation phases is listed. A message appears after the installation phase is complete directing you to run `root.sh`. Follow this instruction and click **OK** when you are finished 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*.

Click **Next** to continue.

B.8 Installation Complete
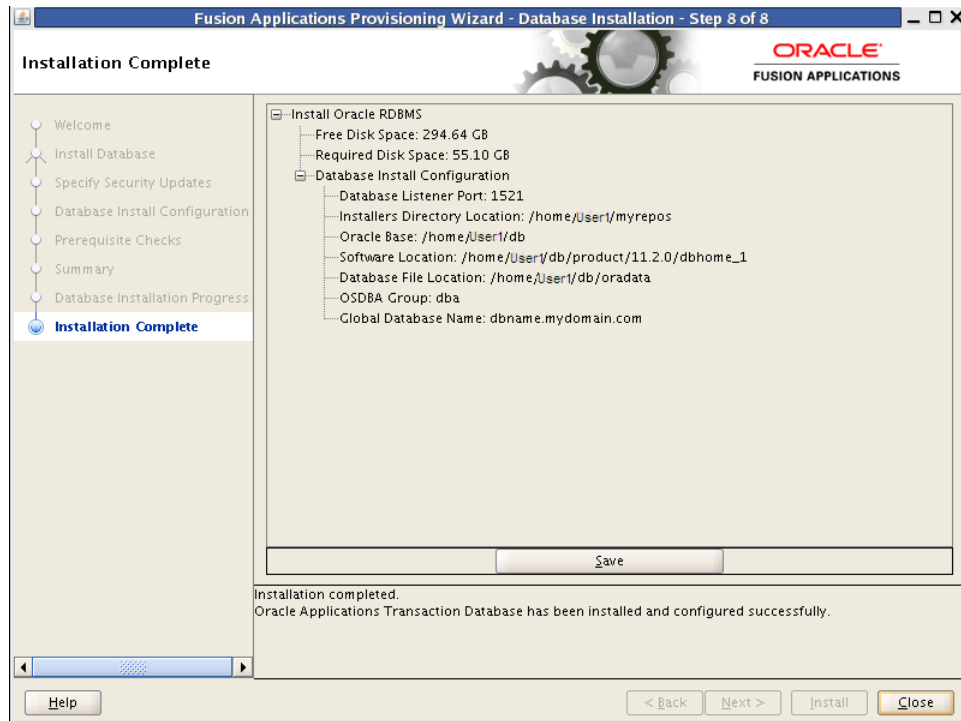
Summarizes the actions and validations that were performed for this installation. Click **Save** to record the database summary information in a text file.

Record the name and location of this file. You must supply these details when you create a provisioning plan. Your system administrator may also need this information as they perform maintenance tasks.

Click **Close** to dismiss the screen and exit the wizard.

C

Oracle Fusion Applications RCU Screens

This appendix presents the Oracle Fusion Applications Repository Creation Utility (Applications RCU) creation interface and describes the purpose of each of the following screens:

- Welcome
- Create Repository
- Database Connection Details
- Select Components
- Schema Passwords
- Custom Variables
- Map Tablespaces
- Summary
- Completion Summary

C.1 Welcome
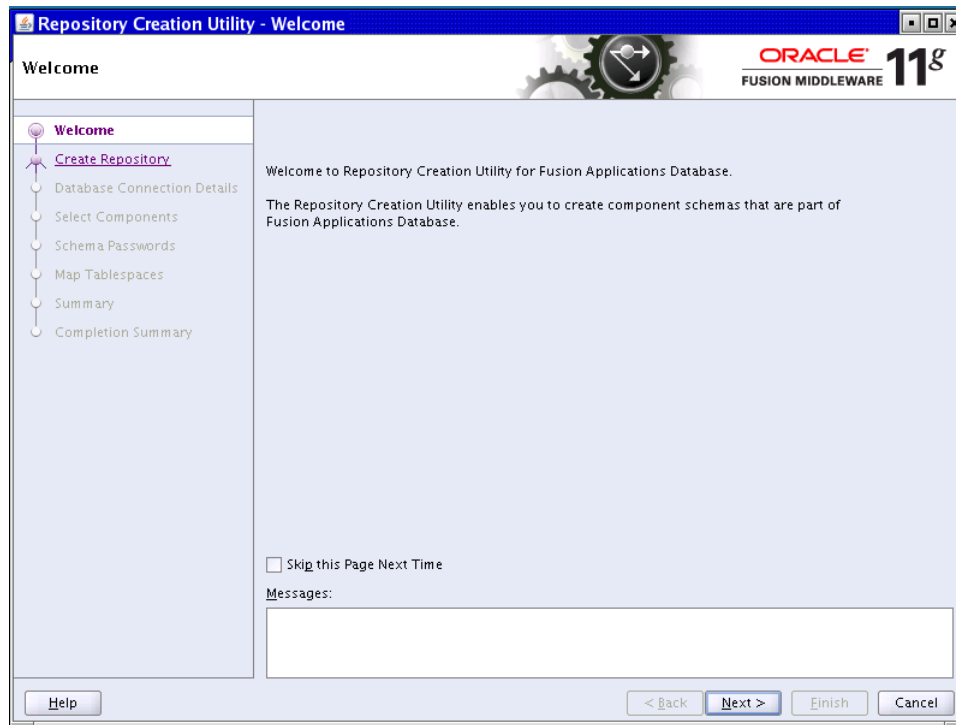
No action is necessary on this standard read-only screen. Click **Skip this Page Next Time** if you do not want to see it the next time you log in to the Applications RCU.

Click **Next** to continue.

C.2 Create Repository
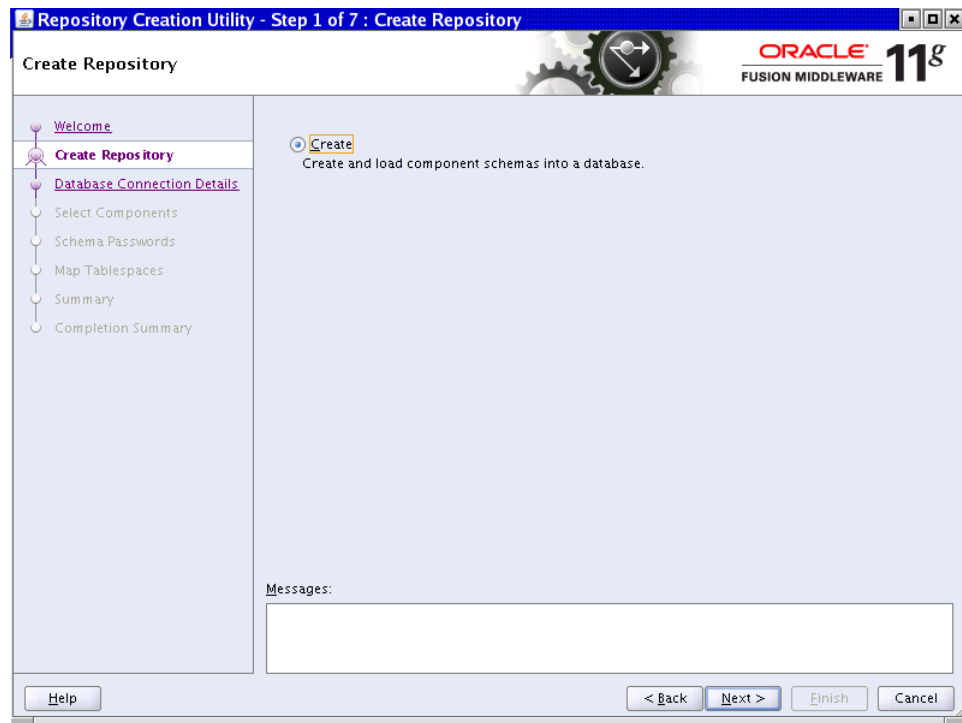
Select **Create** to create and load component schemas into the database.

Click **Next** to continue.

C.3 Database Connection Details
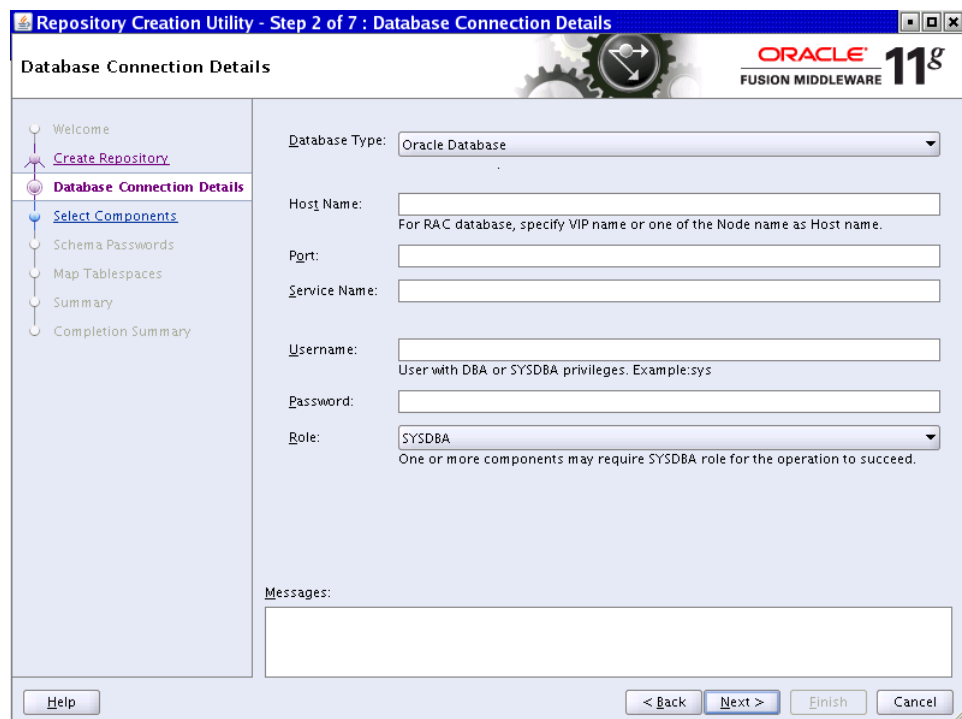
For Oracle Database, specify the following connection credentials:

- **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**: This is the global database name. If you do not know it, see the `SERVICE_NAMES` parameter in the database initialization file. If it is not there, use the global name in `DB_NAME` and `DB_DOMAIN`. For Oracle RAC, specify the service name of one of the nodes, for example, `examplehost.exampledomain.com`.

- **User Name**: Supply the name of the user with DBA or SYSDBA privileges. The default user name with SYSDBA privileges is `SYS`.

- **Password**: Enter the password you set up for the database user.

- **Role**: Select Normal or SYSDBA. All schemas installed for Oracle Database require the `SYSDBA` role. For Oracle Internet Directory (OID) database schemas, use `SYS` and `SYSDBA`.

Click **Next** to continue.

C.4 Select Components
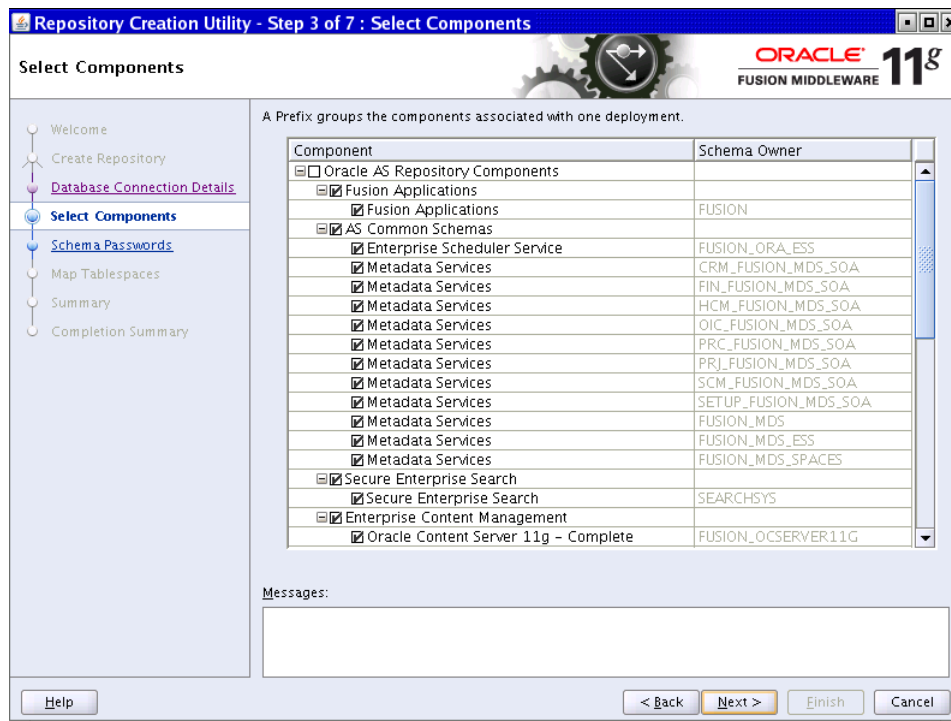
The Applications RCU retrieves the names of the Oracle Fusion Middleware and Oracle Fusion Applications components. You cannot change the schema owner names on this screen. By default, all components are checked so that they are included in the prerequisite check process. Click **Next** to begin the process.

The Applications RCU verifies the global prerequisites. When the progress bar reports 100 percent complete and all prerequisites report a check mark, click **OK**.

Click **Next** to continue.

C.5 Schema Passwords

To specify the passwords for main and additional (auxiliary) schemas, select one of the following options:

- **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. All schemas are visible. Retype to **Confirm**.

Note the passwords that you enter. You must supply them when you create a provisioning plan.

Click **Next** to continue.

C.6 Custom Variables
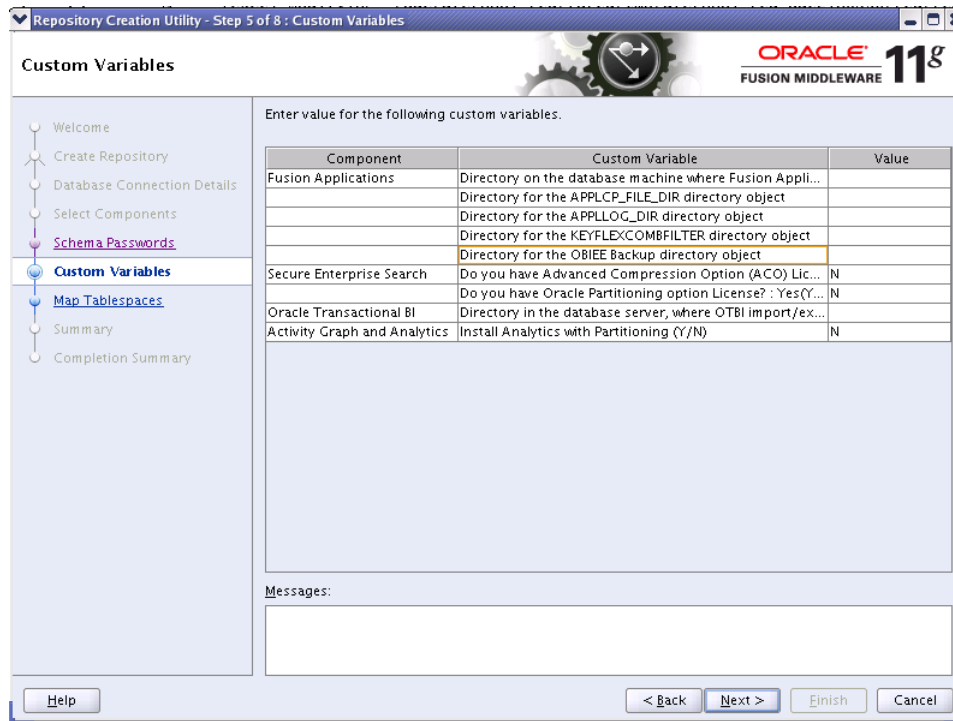
In the **Value** column, enter a pre-existing physical directory on the database server where the custom variables for each component should be created.

Fusion Applications

- **FUSIONAPPS_DBINSTALL_DP_DIR**: The directory on the database server where you unzipped export_fusionapps_dbinstall.zip 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 file from Oracle Fusion Applications PL/SQL procedures, on the database server. Ensure that the database owner has read-write privileges.

- **KEYFLEXCOMBFILTER**: Location of the Filter XMLSchema. This variable is used for reloading components after patching. You can upload the variable to register it to the database. **Note**: You must specify a value for this property, however, its function is obsolete in this release of Oracle Fusion Applications.

- **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 you 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.

Click **Next** to continue.

C.7 Map Tablespaces
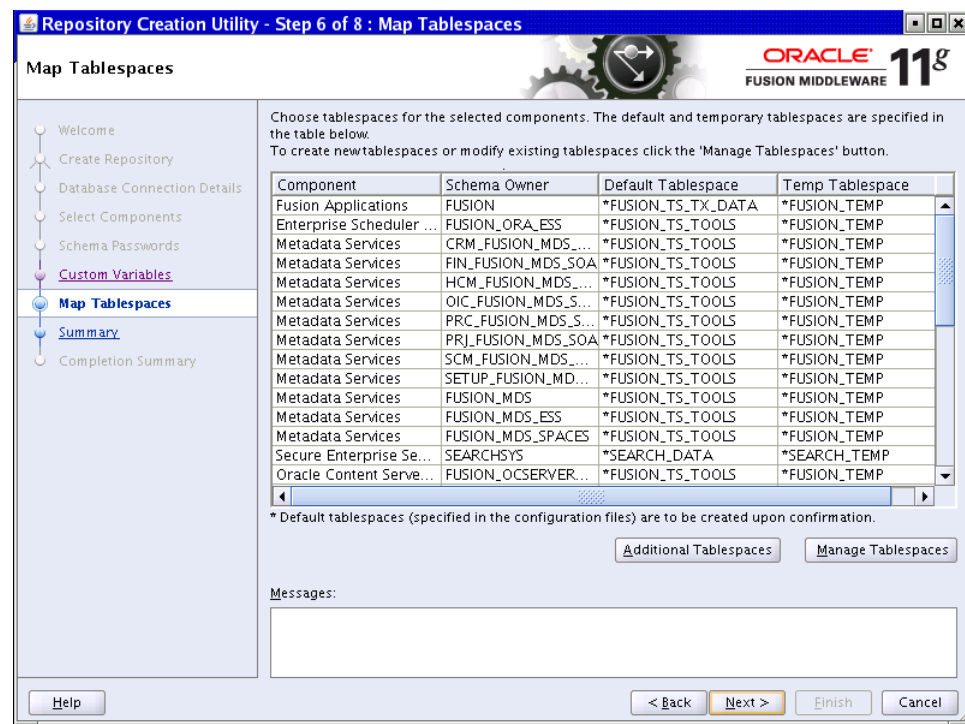
If you want to start the tablespace create process without making any changes, click **Next** on this screen. A message informs you that any tablespaces that do not already exist will be created. Click **OK** to continue. The **Creating Tablespaces** progress screen appears. Click **OK** when the operation is completed.

However, before you create the tablespaces, you can perform the following operations:

- Change Default and Temporary Tablespaces

- View and Change Additional Tablespaces

- Manage Tablespaces and Datafiles (add, modify, or remove)

To view default and temporary tablespaces, click a tablespace cell in the Default Tablespace or Temp tablespace column. A list of default tablespace names appears.
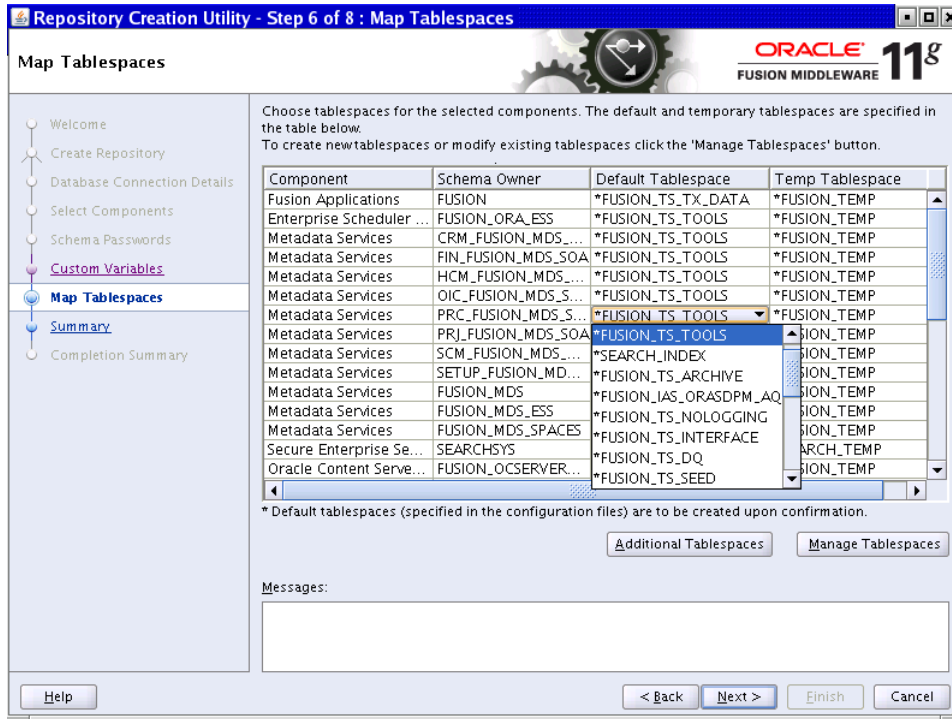
The default values are as follows:

- `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 that need 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.

C.7.1 Change Default and Temporary Tablespaces

To change the default tablespace for a component, select the tablespace name in the Default Tablespace column, and then select the tablespace name you want to use from the list. You can assign components to use any number of default tablespaces.

To change a temporary tablespace for a component, select a tablespace name in the Temp Tablespace column, and then select the tablespace name from the list.

C.7.2 View and Change Additional Tablespaces

When components have additional tablespaces associated with their schemas, the **Additional Tablespaces** button is active. Click to view or modify additional tablespaces.
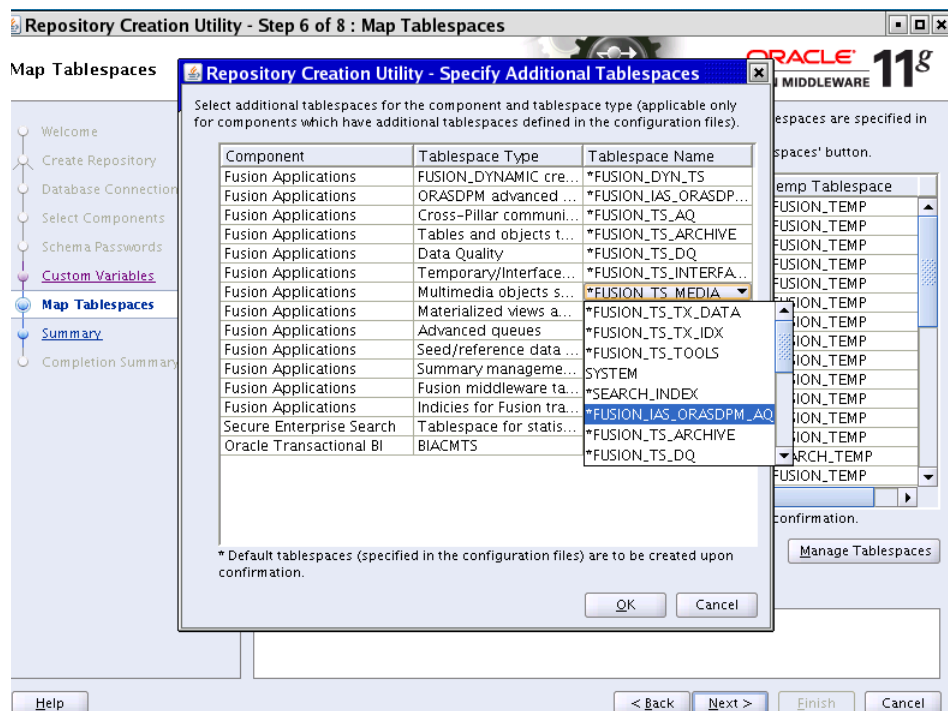
To change a tablespace, click in the Tablespace Name column and select the tablespace from the list.

Click **OK** when you are finished.

C.7.3 Manage Tablespaces and Datafiles

Click **Manage Tablespaces** to add, modify, or remove tablespaces.
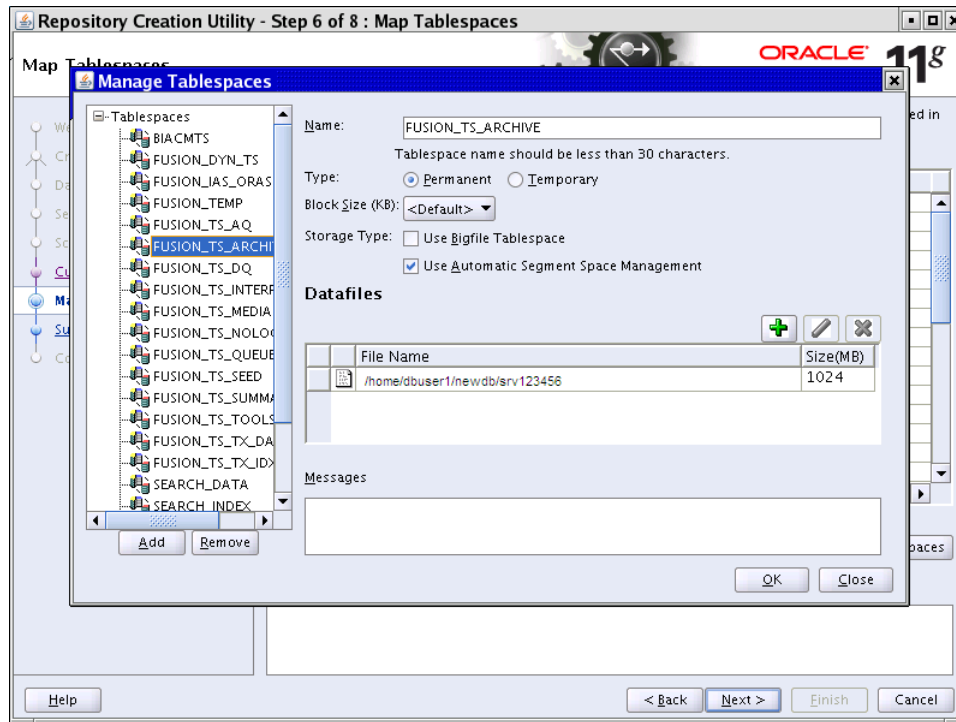
Only tablespaces that have not yet been created can be modified or removed. Existing tablespaces are visible, but grayed out. You can specify a new tablespace, but unless it is used by a component, it will not be created.

Select a tablespace from the navigation tree and make changes where necessary:

- **Name**: Specify a new name for the tablespace.

- **Type**: Indicate whether this tablespace is temporary or permanent.

- **Block Size**: Specify 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.

To **Add** a tablespace, specify the same details as for modifying one. Select a tablespace name from the navigation tree 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 the maximum size, specify a value in the **Maximum Size** field.

Select a datafile and click the **pencil** icon. Modify the details 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**).

4. Click **OK** when you have configured all the tablespaces to return to the Map Tablespaces screen.

Click **OK** to dismiss the screen.

C.8 Summary
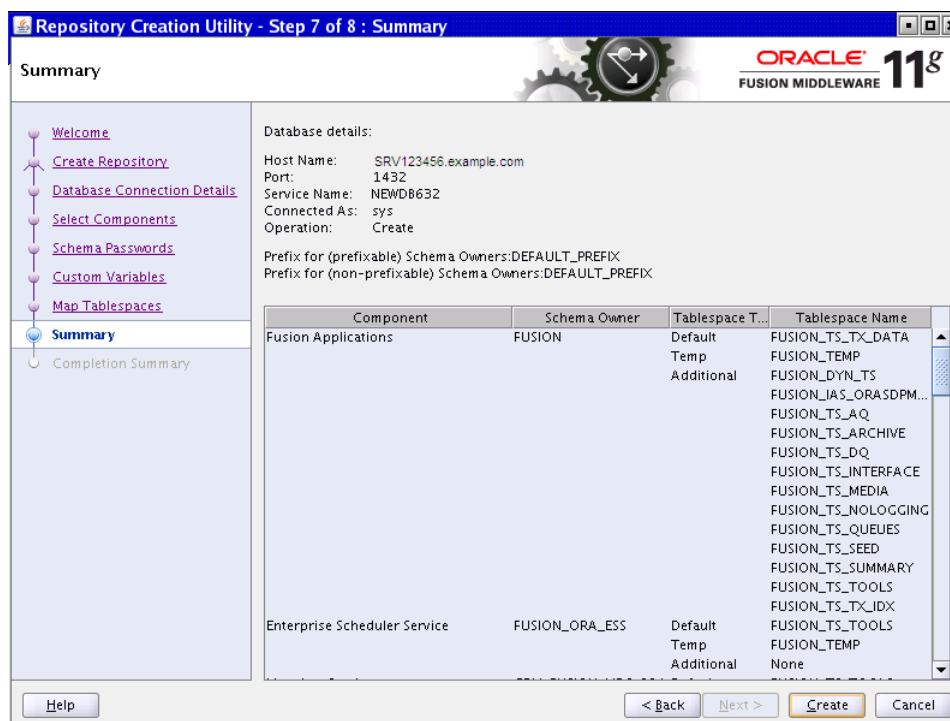
Review the information you have specified. If it is what you expected, click **Create** to begin creating schemas. The Applications RCU displays the **Repository Creation Utility – Create** screen, showing the schema creation process.

Typically, it takes 1 to 10 minutes to create each schema; however, the entire process may run for an additional half hour or more.
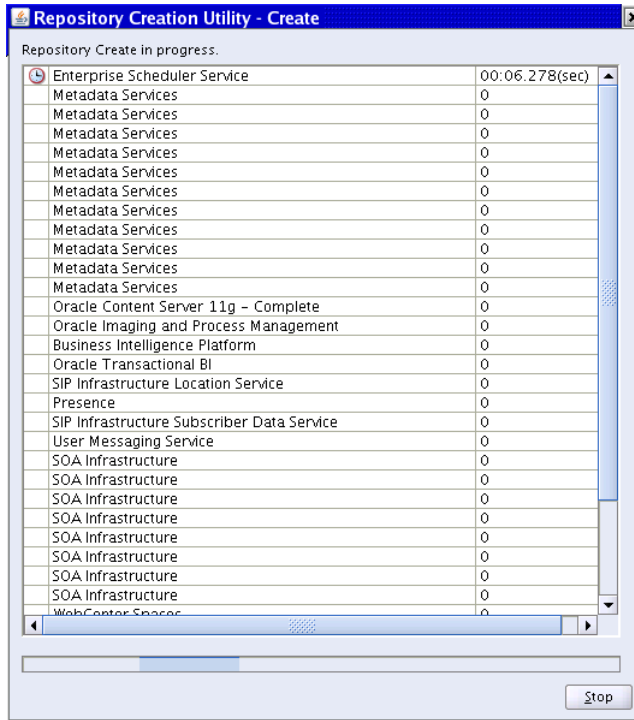
A **Clock** indicates which schema creation is in progress. A **Check** indicates that the schema has been created successfully. To stop creating the schemas, click **Stop**.

C.9 Completion Summary
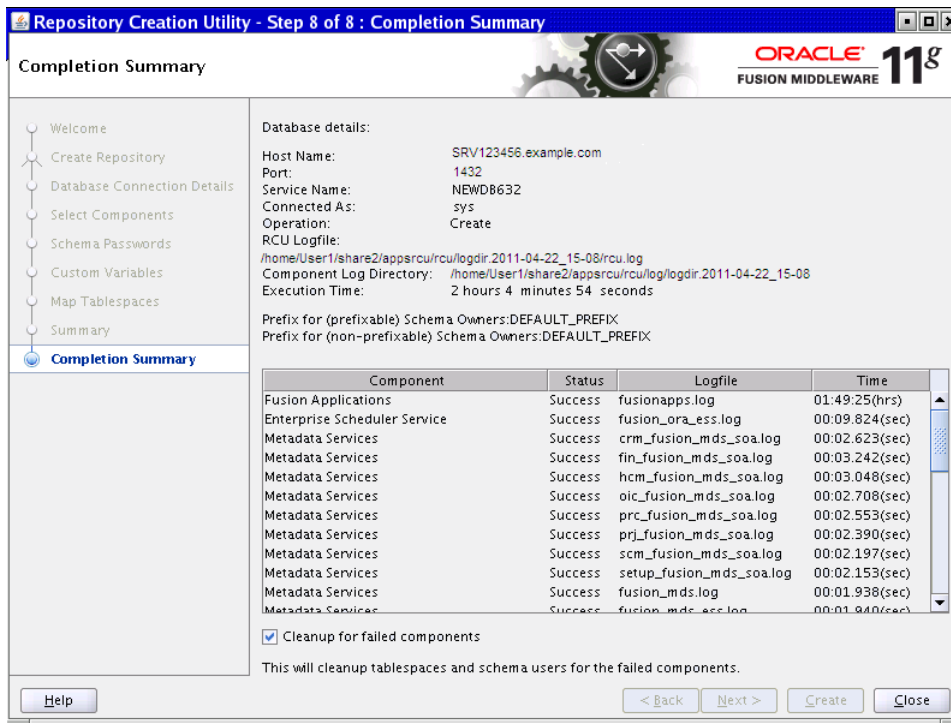
The names of the log files for each component are listed in the Logfile column. The main Applications RCU log (rcu.log) and the component log files are written to the following directory:

(UNIX)

APP_RCU_HOME/rcu/log/logdir.*date_timestamp*.log

(Windows)

APP_RCU_HOME\rcu\log\logdir.*date_timestamp*

If problems were encountered during the **Create** operation, check the log files for details. For more information about log files, see "Troubleshooting for Database Installations" in *Oracle Fusion Applications Installation Guide*.

If errors occur during the **Create** operation, or if the operation fails for any component, the **Cleanup for failed components** check box appears on this page and is selected by default. If you leave the check box selected, the Applications RCU automatically performs cleanup actions for the components that failed.

Click **Close** to dismiss the screen and exit the Applications RCU.

D

Create a New Provisioning Plan Screens

This appendix contains descriptions of the interview screens in the Create a New Applications Environment Provisioning Plan option. These screens include:

- Welcome
- Installation Options
- Specify Security Updates
- Provisioning Configurations
- Plan Description
- Installation Location
- System Port Allocation
- Database Configuration
- Schema Passwords
- ODI Password Configuration
- Domain Topology Configuration
- Common Domain
- Customer Relationship Management Domain
- Financial Domain
- Human Capital Management Domain
- Incentive Compensation Domain
- Procurement Domain
- Projects Domain
- Supply Chain Domain
- Business Intelligence Configuration
- Web Tier Configuration
- Virtual Hosts Configuration
- Load Balancer Configuration
- Web Proxy Configuration
- Identity Management Configuration
- Access and Policy Management Configuration

- [IDM Database Configuration](#)

- [Summary](#)

D.1 Welcome

No action is necessary on this read-only screen.

Click **Next** to continue.

D.2 Installation Options

Select the task that you want to perform from the list of options. When prompted, enter a directory path in the **Provisioning Plan** field to access a completed plan to use as a base for one of the actions. Or, click **Browse** to navigate to the plan location.

- **Install an Applications Transaction Database**: Install an empty, single-instance Oracle Database Enterprise Edition using the nonseeded database template shipped with this release.

- **Create a New Applications Environment Provisioning Plan**: Create a provisioning plan for a new Oracle Fusion Applications environment.

- **Update an Existing Provisioning Plan**: Add or change details in a completed plan that has not yet been implemented or in a partially completed provisioning plan.

- **Provision an Applications Environment**: Initiate and track the processes that install, configure, and deploy product offerings in a new Oracle Fusion Applications environment.

- **Deinstall an Applications Environment**: Remove applications and middleware components from an existing applications environment.

Click **Next** to continue.

D.3 Specify Security Updates

Set up a notification preference for security-related updates and installation-related information from My Oracle Support. This information is optional.

- **Email**: Specify your email address to have updates sent by this method.

- **I wish to receive security updates via My Oracle Support**: Select this option to have updates sent directly to your My Oracle Support account. You must enter your **My Oracle Support Password** if you select this option.

Click **Next** to continue.

D.4 Provisioning Configurations

Select one or more offerings, either within a configuration, or from the list of standalone product offerings.

You can select individual product offerings within a configuration, without selecting all available offerings. When you do, provisioning starts the Managed Servers *only for the offerings that you selected*. However, because you have specified interdependent details for the entire configuration, you can "turn on" additional functionality later by using the Oracle Fusion Applications Functional Setup Manager to start the other Managed Servers.

Click **Details** in the message pane to see a breakdown of servers for each offering.

Once you click **Next**, you cannot change the selections on this screen. To make changes, click **Cancel**, open a new wizard session, and create a new plan.

Click **Next** to continue.

D.5 Plan Description

Enter descriptive information for this plan. This description is not associated in any way with the executable plan file, or the summary file, that you save at the end of the provisioning plan creation process.

- **Plan Name**: Specify a name to identify this plan.

- **Plan Version**: Assign a version number to keep track of changes that you made to a plan. This information is for documentation only.

- **Created By**: Defaults to the operating system user who invoked the wizard. Set when the plan is initially created and cannot be modified for the current plan.

- **Created Date**: Defaults to the date that the plan was originally created and saved. Set when the plan was originally created and cannot be modified for the current plan.

- **Plan Description**: Provide a description of this plan.

To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.

Click **Next** to continue.

D.6 Installation Location

Specify credentials for the Node Manager and supply the location of the various 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 the Server and the shared Area Permissions" in *Oracle Fusion Applications Installation Guide*. Note that a symbolic link is not necessary if the repository and the database are on the same node.

- **Oracle Fusion Application Home**: Enter the directory path to the Oracle home that you specified when you installed the provisioning framework. This is the Fusion Applications Oracle home. It is the `root` directory for all Oracle Fusion Applications and Oracle Fusion Middleware products.

  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.*

- **Application Configuration Directory**: This directory is automatically populated based on the value you specify in the **Oracle Fusion Applications Home** field. It is the path to the directory where the configuration files for the domain will be written. 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 Application Configuration**: Select this check box if you want Managed Servers to run 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 Application Config Directory**: Specify the location for the local domain directory that you want to set up. This field is required if you selected **Enable Local Application Configuration**. The specified directory must initially be empty.

- **WebGate Library Location**: Oracle Fusion Applications (WebGate component) requires special versions of `gcc` libraries to be installed. These library files must exist somewhere on the Linux system. To make these libraries available, download them from `http://gcc.gnu.org`, as described in "Installing Third-Party GCC Libraries (Linux and Solaris Operating Systems Only)" in *Oracle Fusion Applications Middleware Installation Guide for Oracle Identity Management*.

  In Linux x86-64 (64-Bit) and Oracle Solaris environments, enter the location where you installed the libraries. This field does not appear for Microsoft Windows x64 (64-Bit) or IBM AIX on POWER Systems (64-Bit).

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.

- **Default IDM Configuration Using IDM Properties File**: Select this check box if you want the values on the **Identity Management Configuration** screen and the **Access and Policy Management Configuration** screen to default to the values in the IDM properties file (idmDomainConfig.param). See "Creating a Properties File" in *Oracle Fusion Applications Installation Guide* for details.

- **IDM Properties file**: Enter the location of the (idmDomainConfig.param) file, for example, *IDM_ORACLE_HOME*/idmtools/bin/idmDomainDonfig.param.

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 (_).

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 these values:

- *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.

Click **Next** to continue.

D.7 System Port Allocation

Accept the default values or set a custom value for the **Applications Base Port**. The application domain port ranges are derived from this value. If you change the base port value, the domain port ranges adjust accordingly. Ranges must not overlap and must be set in ascending order.

High and low port ranges are assigned by default to each domain in the **Application Domain Port Ranges** list. The default range allotment is 399. Each range is arranged sequentially in ascending order; for example, 11601 – 12000 is a valid range.

The values entered on any of the common domain or product domain screens are validated against the ports ranges that you set up on this screen.

Validation rules for port ranges are as follows:

- The number of ports per domain varies according to the number of applications and middleware components installed. You can calculate the minimum port range (sum of standard and secure ports required for all components), or you can set the range to the upper boundary for the largest domain.

- Port ranges must not overlap. Gaps between the ranges are acceptable.

- Port ranges must be in ascending order. For example, 11601 – 12000 is a valid order.

- The lowest port value must be less than the highest port value of each domain.

- The value must be unique within a domain.

- If you create multiple plans for the same IP subnet, you could introduce port conflicts in the multicasting addresses set for clusters across plans. Examine and resolve such port conflicts before you execute a provisioning plan.

- Ephemeral or dynamic ports for the operating system must be set to a port range between 32768 and 61000.

Ports listed under **Other Ports** are not derived from the **Applications Base Port** value. These "individual" ports can be defined using custom port values.

To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.

Click **Next** to continue.

D.8 Database Configuration

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

- **Host Name**: The name of the host where the database is installed.

- **Port**: The listening port for the database.

- **Service Name:** The global database name for the transaction database that you installed. Used to distinguish this database instance from other instances of Oracle Database running on the same host.

If you have installed a multi-instance database based on Oracle RAC, select **Real Application Clusters Database** and enter the **Service Name** that you specified when you installed this database.

Click **Add** to create a new row for each instance. Select a row and click **Remove** to delete it. Enter the following values for the previously installed database:

- **Host Name**: The name of the host for each Oracle RAC instance.

- **Port**: The listening port of the database.

- **Instance Name** - the name of the Oracle RAC instance used to manage this database.

To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.

Click **Next** to continue.

Note: The wizard warns if it cannot connect to the database. If this warning represents an exception, you can ignore it and continue creating the plan. However, you *must* fix all issues before you start to provision an environment. You cannot successfully run provisioning until all validation have passed.

D.9 Schema Passwords
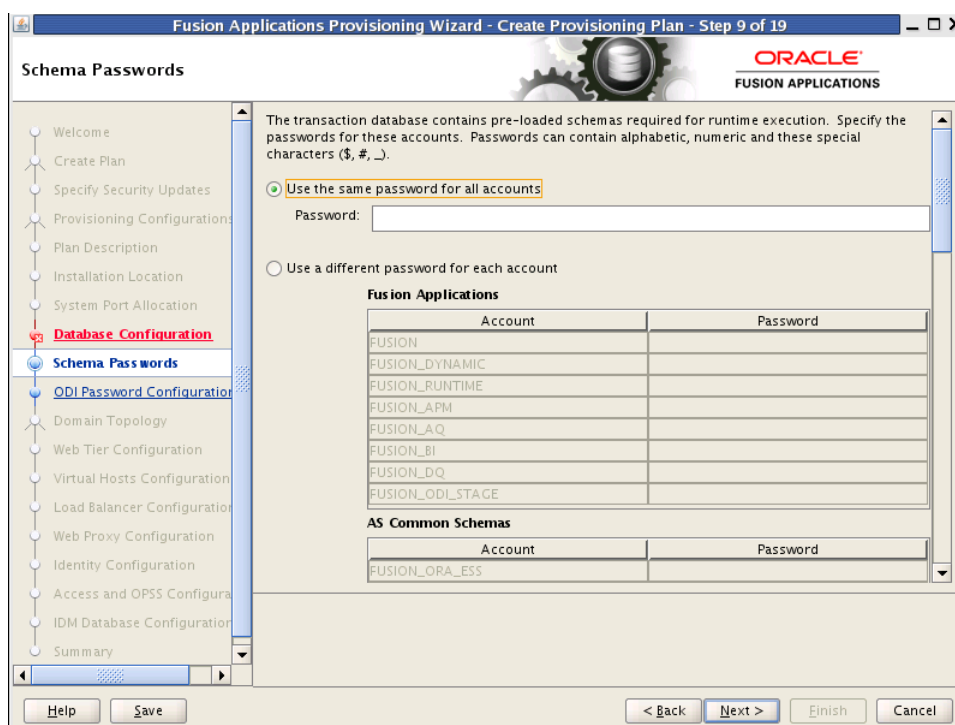
The database that you installed contains preloaded schemas required for runtime execution. Select one of the following options and enter the database schema passwords that you set up when you installed the database:

- **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. This option is the default.

- **Use a different password for each account**: Select this option if you set up individual passwords or each **Account**. Password values were set up for Fusion Applications and AS Common Schemas. Enter those values in the **Password** field.

To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.

Click **Next** to continue.

Note: The wizard warns if the passwords 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 plan. However, you *must* fix all issues before you start to provision an environment. You cannot successfully run provisioning until all validation have passed.

D.10 ODI Password Configuration
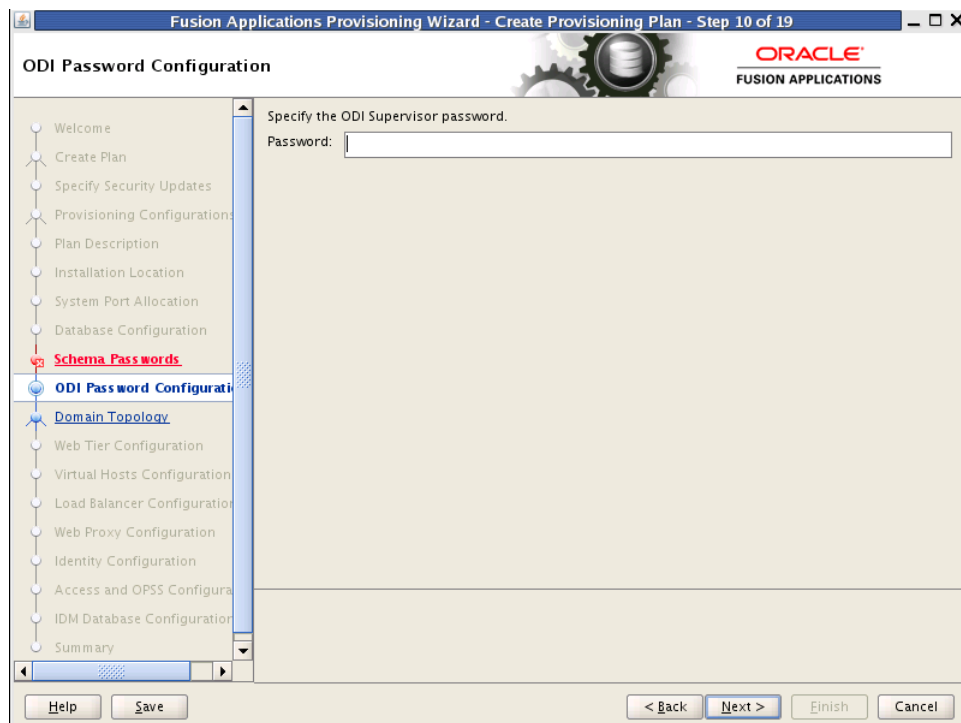
Enter the ODI Supervisor **Password** that you created when you installed Oracle Data Integrator. This screen does not appear if you selected Oracle Fusion Financials or Financial Control and Reporting as product offerings.

To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.

Click **Next** to continue.

D.11 Domain Topology Configuration
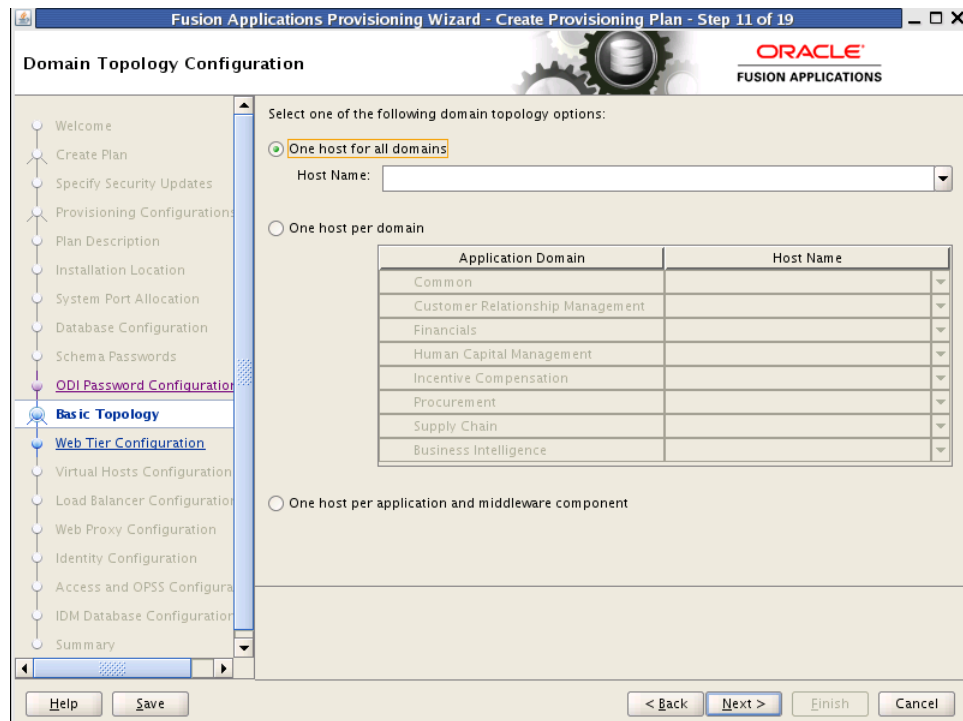
To determine the flow for the remaining wizard interview screens, choose one of the following options. Note that all hosts must use the same operating system. You cannot install "domain1" on Windows and "domain2" on Linux.

- **One host for all domains**: Select this option to specify the **Host Name** to provision all applications domains and their middleware dependencies on a single host. The wizard continues the interview at the **Web Tier Configuration** screen when you click **Next**.

- **One host per domain**: Select this option and then select a **Host Name** for each domain to be created. Provisioning installs and configures the Managed Servers for each **Application Domain** and the middleware dependencies 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**: Select this option to specify the 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 select the last option, you cannot change the selections on this screen once you click **Next**. You must click **Cancel**, open a new wizard session, and create a new plan to change the configuration domain topology later.

To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.

Click **Next** to continue.

D.12 Common Domain

Specify values for this domain and its middleware dependencies. All hosts must use the same operating system and share a common mount point for network storage. The host specified for the Admin Server is the default for all servers. You can change the default.

■   **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 values on the **System Port Allocation** screen. You can edit port values. However, they must be unique within the domain and fall within the range previously specified. For example, in a range of 7401 to 7800, a value of 8444 generates an error.

■   **Secure Port**: The SSL port for internal communications. You can edit individual port values if a conflict occurs.

■   **UCM Intradoc Server Port**: Port where the Universal Content Management Server listens.

■   **InBound Refinery Server Port**: Used for calling top-level services.

To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.

Click **Next** to continue.

D.13 Customer Relationship Management Domain

Specify values for this domain and its middleware dependencies. All hosts must use the same operating system and share a common mount point for network storage. The host specified for the Admin Server is the default for all servers. You can change the default.

- **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 values on the **System Port Allocation** screen. You can edit port values. However, they must be unique within the domain and fall within the range previously specified. For example, in a range of 7401 to 7800, a value of 8444 generates an error.

- **Secure Port**: The SSL port for internal communications. You can edit individual port values if a conflict occurs.

To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.

Click **Next** to continue.

D.14 Financial Domain

Specify values for this domain and its middleware dependencies. All hosts must use the same operating system and share a common mount point for network storage. The host specified for the Admin Server is the default for all servers. You can change the default.

- **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 values on the **System Port Allocation** screen. You can edit port values. However, they must be unique within the domain and fall within the range previously specified. For example, in a range of 7401 to 7800, a value of 8444 generates an error.

- **Secure Port**: The SSL port for internal communications. You can edit individual port values if a conflict occurs.

To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.

Click **Next** to continue.

D.15 Human Capital Management Domain

Specify values for this domain and its middleware dependencies. All hosts must use the same operating system and share a common mount point for network storage. The host specified for the Admin Server is the default for all servers. You can change the default.

■ **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 values on the **System Port Allocation** screen. You can edit port values. However, they must be unique within the domain and fall within the range previously specified. For example, in a range of 7401 to 7800, a value of 8444 generates an error.

■ **Secure Port**: The SSL port for internal communications. You can edit individual port values if a conflict occurs.

To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.

 Click **Next** to continue.

D.16 Incentive Compensation Domain

Specify values for this domain and its middleware dependencies. All hosts must use the same operating system and share a common mount point for network storage. The host specified for the Admin Server is the default for all servers. You can change the default.

- **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 values on the **System Port Allocation** screen. You can edit port values. However, they must be unique within the domain and fall within the range previously specified. For example, in a range of 7401 to 7800, a value of 8444 generates an error.

- **Secure Port**: The SSL port for internal communications. You can edit individual port values if a conflict occurs.

To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.

Click **Next** to continue.

D.17 Procurement Domain

Specify values for this domain and its middleware dependencies. All hosts must use the same operating system and share a common mount point for network storage. The host specified for the Admin Server is the default for all servers. You can change the default.

- **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 values on the **System Port Allocation** screen. You can edit port values. However, they must be unique within the domain and fall within the range previously specified. For example, in a range of 7401 to 7800, a value of 8444 generates an error.

- **Secure Port**: The SSL port for internal communications. You can edit individual port values if a conflict occurs.

To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.

Click **Next** to continue.

D.18 Projects Domain

Specify values for this domain and its middleware dependencies. All hosts must use the same operating system and share a common mount point for network storage. The host specified for the Admin Server is the default for all servers. You can change the default.

- **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 values on the **System Port Allocation** screen. You can edit port values. However, they must be unique within the domain and fall within the range previously specified. For example, in a range of 7401 to 7800, a value of 8444 generates an error.

- **Secure Port**: The SSL port for internal communications. You can edit individual port values if a conflict occurs.

To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.

 Click **Next** to continue.
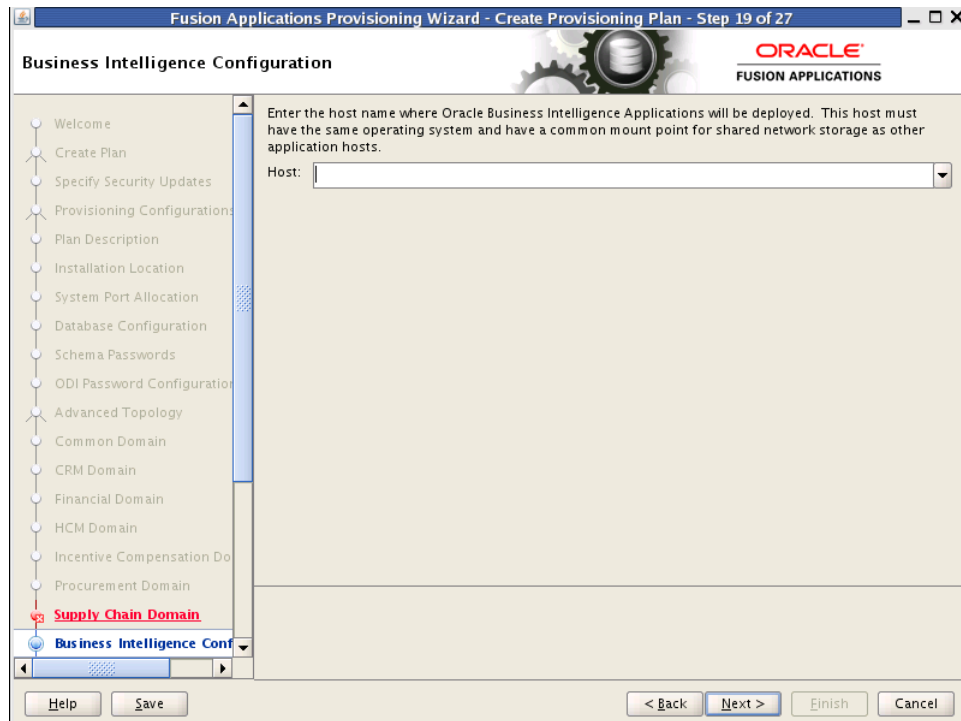
D.19 Supply Chain Domain

Specify values for this domain and its middleware dependencies. All hosts must use the same operating system and share a common mount point for network storage. The host specified for the Admin Server is the default for all servers. You can change the default.

- **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 values on the **System Port Allocation** screen. You can edit port values. However, they must be unique within the domain and fall within the range previously specified. For example, in a range of 7401 to 7800, a value of 8444 generates an error.

- **Secure Port**: The SSL port for internal communications. You can edit individual port values if a conflict occurs.

To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.

Click **Next** to continue.

D.20 Business Intelligence Configuration

Oracle Business Intelligence products are integrated with, and accessible from, Oracle Fusion Applications. Products include:

- Oracle Business Intelligence Enterprise Edition

- Oracle Business Intelligence Applications

- Oracle Transactional Business Intelligence

- Oracle Essbase

- Oracle Business Intelligence Publisher

- Oracle Real-Time Decisions

Enter the **Host** where you want Oracle Business Intelligence products to be installed. You specified an **RPD** password on the **Installation Location** screen. Provisioning creates this password and makes it available so that Oracle Business Intelligence Applications and Oracle Transactional Business Intelligence can access the metadata repository in your new environment.

To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.

Click **Next** to continue.

D.21 Web Tier Configuration

Use this screen to configure Oracle HTTP Server and choose a virtual host type. You can deploy the web tier to a host inside the firewall, or outside the firewall (demilitarized zone, known as DMZ).

You can create virtual hosts on a single web tier. There are three options (IP-based, name-based, and port-based) for each domain that is created during installation. The values assigned during installation are derived from the default HTTP port that you name on this screen.

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 the 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.

    - **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.

    The default is to create an IP-based host.

- **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.

To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.

Click **Next** to continue.

D.22 Virtual Hosts Configuration

Specify the configuration parameters for the domains to be installed on the virtual hosts that you selected on the **Web Tier Configuration** screen.

If you selected **IP Based**, specify the following information for each application domain listed:

- **Internal Name**: The host name or IP address where the web tier listens on the internal virtual host for this domain.

- **Internal Port**: Port for this internal virtual host. 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**: Port to be used for this external virtual host. The host:port should be visible from outside the firewall.

If you selected **Name Based**, specify the following information for each domain listed:

- **Internal.Name**: The DNS name for this internal virtual host. For example, for Oracle Fusion Financials, the name might be `fin-internal`.

- **External.Name**: The DNS name for this external virtual host. For example, for Oracle Fusion Financials, the name might be `fin`.

If you selected **Port Based**, specify the following information for each domain listed:

- **Internal Port**: The port that is visible only from inside the firewall for this domain.

- **External Port**: The port that is visible from outside the firewall for this domain.

To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.

Click **Next** to continue.

D.23 Load Balancer Configuration

Load balancing enables you to distribute a workload evenly across two or more hosts, network links, CPUs, hard drives, or other resources. Check **Load Balancing Enabled** to take advantage of this feature, and specify:

- **Internal Load Balancer Configuration**: The host and port for the internal Virtual IP (VIP).

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

To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.

Click **Next** to continue.

D.24 Web Proxy Configuration

Create **Proxy Settings** to enable users who want to use a proxy server to connect to the Internet.

■ **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** on this screen 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 are enabled and 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.

To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.

Click **Next** to continue.

D.25 Identity Management Configuration

Provisioning loads the roles, policies, and application IDs that you created when you installed and configured the Oracle Identity Management environment. To share the identity management environment across multiple Oracle Fusion Applications installations and make the policies and roles accessible to all environments, populate identity management configuration details during the first installation.

If you chose to use the values in the IDM properties file (idmDomainConfig.param) on the **Installation Location** screen, they appear as defaults in the corresponding fields.

- **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.

- **Enable Seeding of Security Data**: Controls the uploading of Oracle Fusion Applications security policies and user credentials into the Lightweight Directory Access Protocol (LDAP) as a part of provisioning. This option is selected by default. Deselecting it disables this action during provisioning.

- **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).

- **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 Enabled SSL**: Select this option if your identity store is SSL-enabled and if the required certificates are provided in the IDM keystore file.

- **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 Administrator User Name**: Enter the name you set up as the OIM administrator.

- **OIM 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 Endpoint Host**: 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.

  Enter the HTTP termination address of Oracle Access Manager. Terminates at either a load balancer or the Oracle HTTP Server.

- **OIM Endpoint Port**: The port where the endpoint host listens.

- **OIM Endpoint Enabled SSL**: Select this option if the endpoint host is SSl-enabled.

- **IDM Keystore File**: Enter the location of the JKS keystore containing the certificates for the Oracle Identity Management components. If SSL is not enabled, you can supply a "dummy" .jks file name. The file can be of any type, with or without content. Validation is only for the existence of the file.

- **IDM Keystore Password**: Enter the password that you set up for the IDM Keystore File. If you set up a "dummy" file, enter a "dummy" password. It can be of any format, as there is no validation other than for its existence.

To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.

Click **Next** to continue.

D.26 Access and Policy Management Configuration

Enter the parameters for integrating Oracle Fusion Applications with a previously installed Oracle Identity Management infrastructure. If you chose to use the values in the IDM properties file (idmDomainConfig.param) on the **Installation Location** screen, they appear as defaults in the corresponding fields. You can replace the defaults if your original configuration has changed.

Oracle Access Manager Configuration

- **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**: Enter 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.

- **OAM Simple Mode Passphrase**: Enter the passphrase that you set up to secure the communication with the OAM Server. Required only if the mode is specified as **Simple**.

- **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

- **OPSS Policy Store Host**: Enter the host name for OID where Oracle Platform Security Services (OPSS) policies are to be seeded.

- **OPSS Policy Store Port**: Number of the OID port for the OPSS policy store.

- **OPSS Policy Store Secure Port**: The secure port for OID.

- **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**: Enter the Distinguished Name of the node that you set up to be used as the OPSS policy root.

- **Create OPSS Policy Store JPS Root Node**: Enabled only if the **Enable Seeding of Security Data** check box on the **Identity Management Configuration** screen is selected. Select this option to create the OPSS JPS Root Node.

- **OPSS Policy Store SSL Enabled**: Select this option if the OID used for storing OPSS policies is SSL-enabled and the required certificates are provided in the IDM keystore.

To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.

Click **Next** to continue.

D.27 IDM Database Configuration

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

- **Host Name**: The name of the host where the OIM database is installed.

- **Port**: The listening port for the database.

- **Service Name**: The unique name for the OIM database.

If you have installed a multi-instance database based on Oracle RAC, select **Real Application Clusters Database** and enter the **Service Name** that you specified when you installed this database.

Click **Add** to create a new row for each instance. Select a row and click **Remove** to delete the row. Enter the following information for each instance:

- **Host Name**: The name of the host for each Oracle RAC instance.

- **Port**: The listening port of the database.

- **Instance Name**: The name of the Oracle RAC instance used to manage this database.

Enter the database schema and password that you set up 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 to be used by the Oracle Web Services Policy Manager.

- **Schema Owner Password**: The password for the MDS schema.

To stop creating this plan and resume later, click **Save**. This action creates a partial plan. A partial plan cannot be used to provision an environment.

Click **Next** to continue.

D.28 Summary
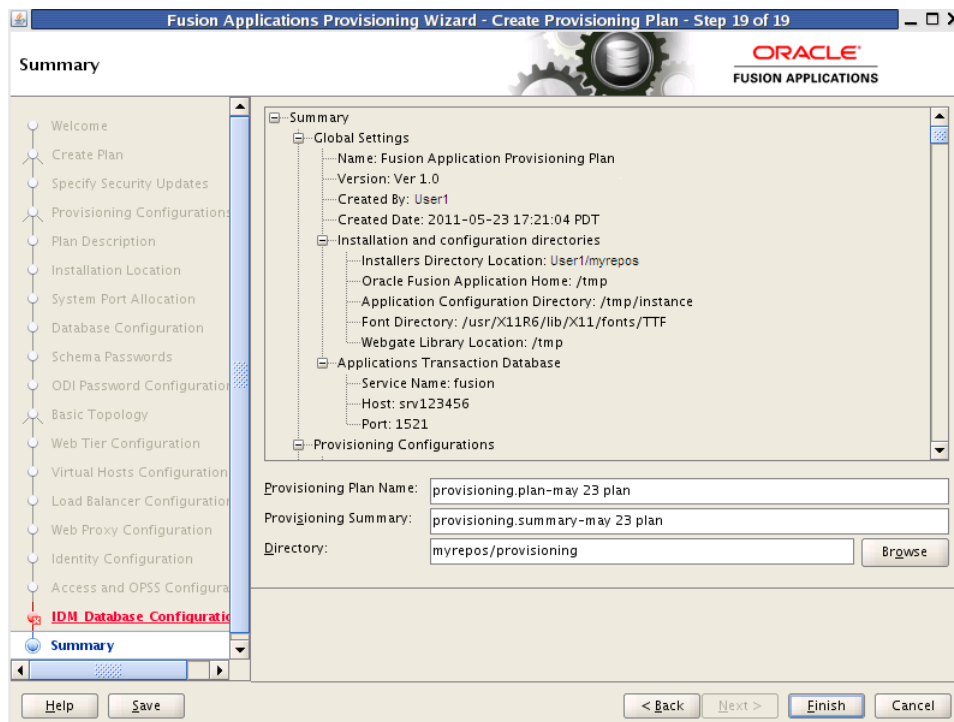
Verify that the installation represented on this screen is what you expected. Click **Back** to return to the interview screens that require changes. If you are satisfied with the details presented here, complete the following information:

- **Provisioning Plan Name**: Specify a unique file name for this plan. This is the executable file that you supply to the wizard when prompted for other options.

- **Provisioning Summary**: Specify a unique name for the summary details file. You cannot use this file to execute the plan.

- **Directory**: Enter the directory path where you want to save this plan and the summary file. Choose a location that is visible to all servers accessing shared storage. Make sure the location is not read-only.

Record the name of the plan and its location. You may want to supply it to your system administrator to use when performing system maintenance tasks.

Click **Finish** to save the plan and the summary.

E

Provision an Applications Environment Screens

This appendix presents the Provisioning Wizard interview screens for the Provision an Applications Fusion Applications Environment option and describes the purpose of each of the following screens:

- Welcome

- Installation Options

- Plan Description

- Installation Location

- Review Provisioning Configuration

- Summary

- Prerequisite Checks

- Installation

- Preconfigure

- Configure

- Configure Secondary

- Postconfigure

- Startup

- Validation

- Installation Complete

E.1 Welcome

No action is necessary on this read-only screen.

Click **Next** to continue.

E.2 Installation Options

Select the task that you want to perform from the list of options. When prompted, enter a directory path in the **Provisioning Plan** field to access a completed plan to use as a base for one of the actions. Or, click **Browse** to navigate to the plan location.

- **Install an Applications Transaction Database**: Install an empty, single-instance Oracle Database Enterprise Edition using the nonseeded database template shipped with this release.

- **Create a New Applications Environment Provisioning Plan**: Create a provisioning plan for a new Oracle Fusion Applications environment.

- **Update an Existing Provisioning Plan**: Add or change details in a completed plan that has not yet been implemented or in a partially completed provisioning plan.

- **Provision an Applications Environment**: Initiate and track the processes that install, configure, and deploy product offerings in a new Oracle Fusion Applications environment.

- **Deinstall an Applications Environment**: Remove applications and middleware components from an existing applications environment.

Click **Next** to continue.

E.3 Plan Description

Specify descriptive information to identify this plan. This description is not associated in any way with the executable plan file, or the summary file, that you save at the end of the provisioning plan creation process.

- **Plan Name**: Specify a name to identify this plan.

- **Plan Version**: Assign a version number to the plan.

- **Created By**: Defaults to the operating system user who invoked the wizard. Set when the plan is initially created and cannot be modified for the current plan.

- **Created Date**: Defaults to the date that the plan was originally created. Set when the plan was originally created and cannot be modified for the current plan.

- **Plan Description**: Provide a description of this plan.

Click **Next** to continue.

E.4 Installation Location

Specify credentials for the Node Manager and supply the location of the various 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 the Server and the shared Area Permissions" in *Oracle Fusion Applications Installation Guide*. Note that a symbolic link is not necessary if the repository and the database are on the same node.

- **Oracle Fusion Application Home**: Enter the directory path to the Oracle home that you specified when you installed the provisioning framework. This is the Fusion Applications Oracle home. It is the `root` directory for all Oracle Fusion Applications and Oracle Fusion Middleware products.

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.*

- **Application Configuration Directory**: This directory is automatically populated based on the value you specify in the **Oracle Fusion Applications Home** field. It is the path to the directory where the configuration files for the domain will be written. 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 Application Configuration**: Select this check box if you want Managed Servers to run 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 Application Config Directory**: Specify the location for the local domain directory that you want to set up. This field is required if you selected **Enable Local Application Configuration**. The specified directory must be empty.

- **WebGate Library Location**: Oracle Fusion Applications (WebGate component) requires special versions of `gcc` libraries to be installed. These library files must exist somewhere on the Linux system. To make these libraries available, download them from `http://gcc.gnu.org`, as described in "Installing Third-Party GCC Libraries (Linux and Solaris Operating Systems Only)" in *Oracle Fusion Applications Middleware Installation Guide for Oracle Identity Management*.

  In Linux x86-64 (64-Bit) and Oracle Solaris environments, enter the location where you installed the libraries. This field does not appear for Microsoft Windows x64 (64-Bit) or IBM AIX on POWER Systems (64-Bit).

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.

- **Default IDM Configuration Using IDM Properties File**: Select this check box if you want the values on the **Identity Management Configuration** screen and the **Access and Policy Management Configuration** screen to default to the values in the IDM properties file (idmDomainConfig.param). See "Creating a Properties File" in *Oracle Fusion Applications Installation Guide* for details.

- **IDM Properties file**: Enter the location of the (idmDomainConfig.param) file, for example, *IDM_ORACLE_HOME*/idmtools/bin/idmDomainDonfig.param.

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 (_).

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 these values:

- *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.

Click **Next** to continue.

E.5 Review Provisioning Configuration

Lists the wizard interview screens where you originally specified domain-specific parameters for this provisioning plan. You can make changes to this information if necessary.

Note: If you ignored any warnings during the creation of this provisioning plan, you must fix all issues stated in the warnings before you can successfully provision an environment. Select any of the screens displayed here to make changes for a product domains with warnings. All validations must pass before you can run the **install** phase.

You cannot add or delete product offerings to this provisioning plan. To change product offerings, you must create a new plan.

Select one or more options from the list. When you click **Next**, the screens you select are added to the flow. Note that if you return to this screen after running the preverification checks, those verification checks are invalidated. You must run the preverify phase again.

Click **Next** to continue.

E.6 Summary

Review the information displayed to ensure that the installation details are what you intend. To make changes, click **Back** to return to previous screens in the interview.

Click **Next** to initiate the **preverify** phase. The wizard displays the **Prerequisite Checks** screen, and creates a current copy of this plan. The plan is saved in the directory indicated in the message pane.

Click **Next** to continue.

E.7 Prerequisite Checks
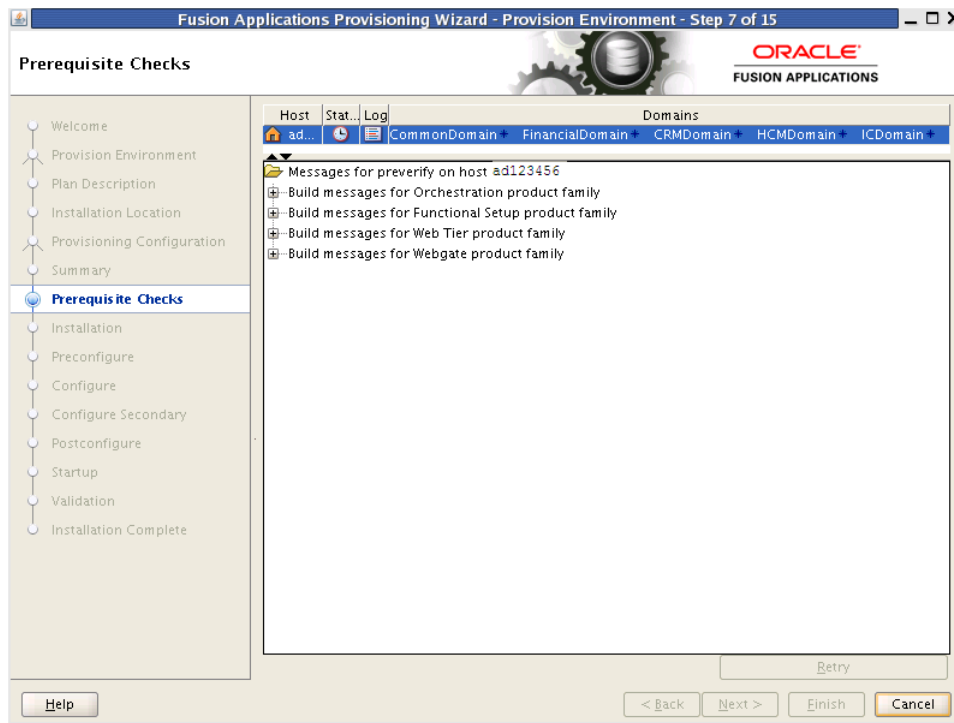
The **preverify** phase checks to see that all prerequisites are present on the host where you run the phase. The primordial host is marked with a **Home** symbol in the **Host** column. The **Domains** column lists the domains that are being deployed.

In the terminal session for the primary and secondary host (if present), run the **preverify** phase with this command:

(UNIX) *path_to_script*/runProvisioning.sh -plan *provisioning_plan_ location* -target preverify

(Windows) *path_to_script*\runProvisioning.bat -plan *provisioning_ plan_location* -target preverify

Note: This phase can run in parallel on all hosts and is tracked on this screen. Each **new** phase must run sequentially; that is, you cannot start a new phase until the previous phase has been completed successfully on all the hosts.

The **Status** of each build on each host is indicated by one of these icons:

- **Block**: Processing has not yet started on this host for the named phase.

- **Clock**: Performing the build for a phase.

- **Check mark**: The build was completed successfully.

- **x** mark: The build has failed for this phase. You must correct the errors before you can continue.

- **Restricted** symbol: The process has stopped due to a failure within another process.

Click an **x** or a **Restricted** symbol to display information about failures. Click the host-level **Log** file for details about this phase. Click a build **Log** file to see details specific to that build.

You can make changes to the interview screens and rerun the **preverify** phase as many times as is necessary. Click **Retry** to rerun this phase if errors are reported. You must fix all errors before you continue. See "Troubleshooting the Provisioning Process" in *Oracle Fusion Applications Installation Guide* for details about recovery from failures.

Note: Once you click **Next** on this screen, you can no longer modify the provisioning plan.

Click **Next**. The wizard starts the **install** phase on the primordial host and displays the **Installation** screen.

E.8 Installation
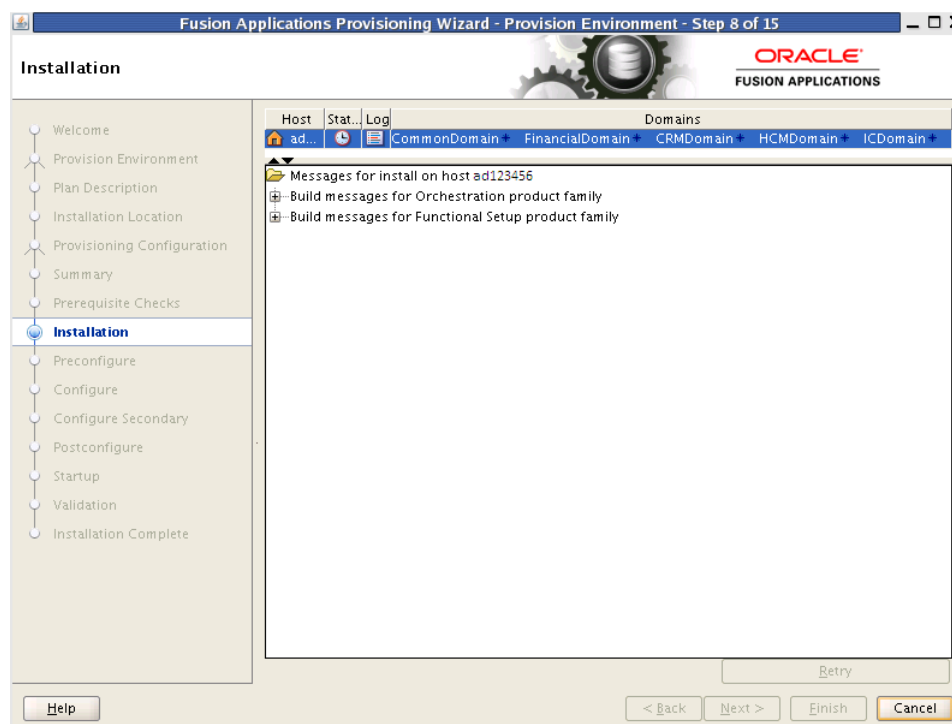
The **install** phase installs the Oracle Fusion Applications, Oracle Fusion Middleware, and Oracle Database products. The primordial host is marked with a **Home** symbol in the **Host** column. The **Domains** column lists the domains deployed in the new environment.

In the terminal session for the primary, secondary, and DMZ host (if present), run the **install** phase with this command:

(UNIX) *path_to_script*/runProvisioning.sh -plan *provisioning_plan_location* -target install

(Windows) *path_to_script*\runProvisioning.bat -plan *provisioning_plan_location* -target install

Note: This phase can run in parallel on all hosts and is tracked on this screen. Each **new** phase must run sequentially; that is, you cannot start a new phase until the previous phase has been completed successfully on all the hosts.

The **Status** of each build on each host is indicated by one of these icons:

■   **Block**: Processing has not yet started on this host for the named phase.

■ **Clock**: Performing the build for a phase.

■ **Check mark**: The build was completed successfully.

■ **x** mark: The build has failed for this phase. You must correct the errors before you can continue.

■ **Restricted** symbol: The process has stopped due to a failure within another process.

Note: You cannot view the build processes on the DMZ host on the primordial host interface because the DMZ host does not have access to the shared network drive.

Click an **x** or a **Restricted** symbol to display information about failures. Click the host-level **Log** file for details about this phase. Click a build **Log** file to see details specific to that build.

Click **Retry** to rerun this phase if errors are reported. You must fix all errors before you continue. See "Troubleshooting the Provisioning Process" in *Oracle Fusion Applications Installation Guide* for details about recovery from failures.

Note: If a DMZ host is present, copy the webtier_dmz_artifacts.zip file from the `APPLICATIONS_BASE`/ directory on the non-DMZ host to the `APPLICATIONS_ BASE`/ directory on the DMZ host.

Click **Next**. The wizard starts the **preconfigure** phase on the primordial host and displays the **Preconfigure** screen.

E.9 Preconfigure
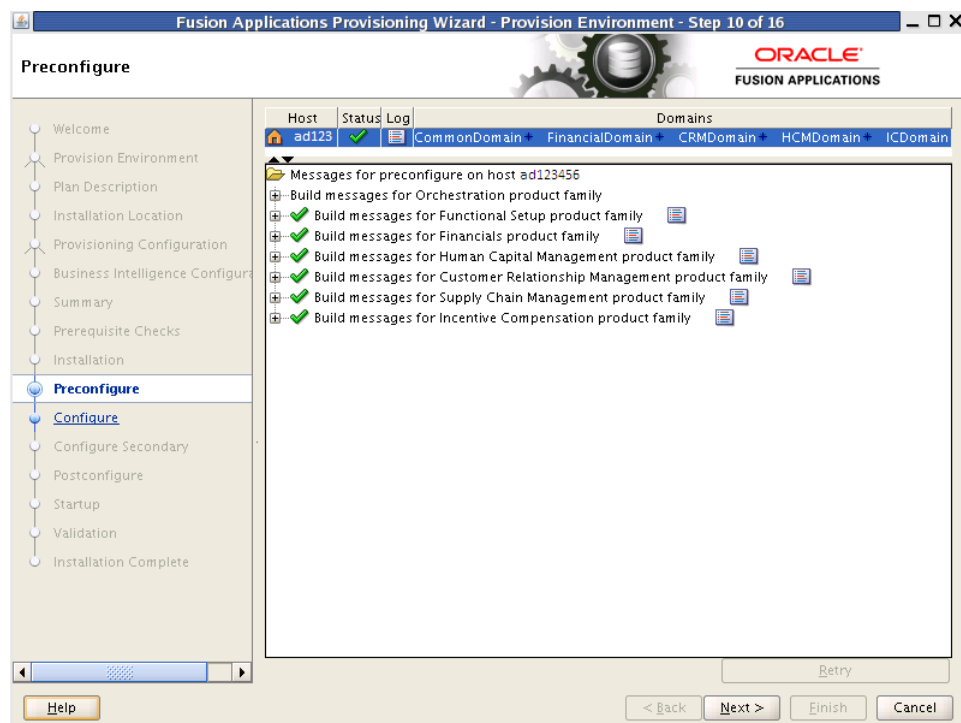
The **preconfigure** phase prepares application and middleware components for deployment and creates `appid` users and groups. It modifies the Oracle Application Development Framework (Oracle ADF) configuration file to use the database, based on Oracle Metadata Services (MDS) in the applications enterprise archive (EAR) files. It also updates the connections.xml file in all applications EAR files with endpoint

information. The primordial host is marked with a **Home** symbol in the **Host** column. The **Domains** column lists the domains deployed in the new environment.

In the terminal session for the primary, secondary, and DMZ host (if present), run the **preconfigure** phase with this command:

(UNIX) *path_to_script*/runProvisioning.sh -plan *provisioning_plan_ location* -target preconfigure

(Windows) *path_to_script*\runProvisioning.bat -plan *provisioning_ plan_location* -target preconfigure

Note: This phase can run in parallel on all hosts and is tracked on this screen. Each **new** phase must run sequentially; that is, you cannot start a new phase until the previous phase has been completed successfully on all the hosts.

The **Status** of each build on each host is indicated by one of these icons:

- **Block**: Processing has not yet started on this host for the named phase.
- **Clock**: Performing the build for a phase.
- **Check mark**: The build was completed successfully.
- **x** mark: The build has failed for this phase. You must correct the errors before you can continue.
- **Restricted** symbol: The process has stopped due to a failure within another process.

Note: You cannot view the build processes on the DMZ host on the primordial host interface because the DMZ host does not have access to the shared network drive.

Click an **x** or a **Restricted** symbol to display information about failures. Click the host-level **Log** file for details about this phase. Click a build **Log** file to see details specific to that build.

Click **Retry** to rerun this phase if errors are reported. You must fix all errors before you continue. See "Troubleshooting the Provisioning Process" in *Oracle Fusion Applications Installation Guide* for details about recovery from failures.

Note: If a DMZ host is present, recopy the provisioning plan to the DMZ host.

Click **Next**. The wizard starts the **configure** phase on the primordial host and displays the **Configure** screen.

E.10 Configure
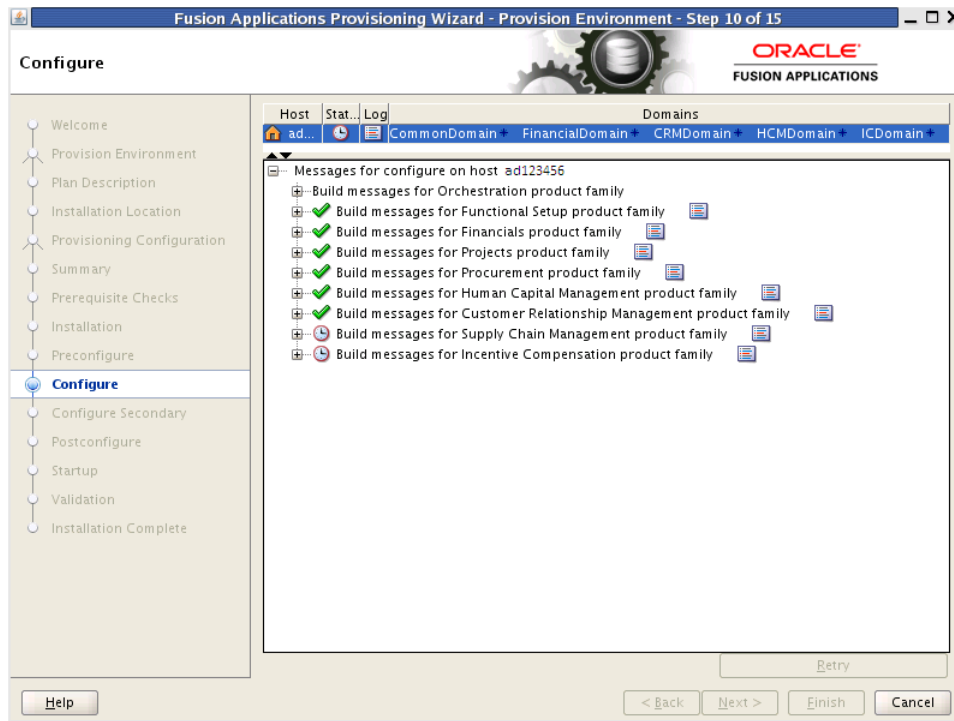
The **configure** phase creates Oracle WebLogic Server domains, Managed Servers, and clusters for Oracle Fusion Applications; applies templates; creates and configures data sources, queues, and topics; configures middleware (wiring); and deploys applications product offerings to domains. The primordial host is marked with a **Home** symbol in the **Host** column. The **Domains** column lists the domains deployed in the new environment.

In the terminal session for the primary, secondary, and DMZ host (if present), run the **configure** phase with this command:

(UNIX) *path_to_script*/runProvisioning.sh -plan *provisioning_plan_location* -target configure

(Windows) *path_to_script*\runProvisioning.bat -plan *provisioning_plan_location* -target configure

Note: This phase can run in parallel on all hosts and is tracked on this screen. Each **new** phase must run sequentially; that is, you cannot start a new phase until the previous phase has been completed successfully on all the hosts.

The **Status** of each build on each host is indicated by one of these icons:

- **Block**: Processing has not yet started on this host for the named phase.
- **Clock**: Performing the build for a phase.
- **Check mark**: The build was completed successfully.
- **x** mark: The build has failed for this phase. You must correct the errors before you can continue.
- **Restricted** symbol: The process has stopped due to a failure within another process.

Note: You cannot view the build processes on the DMZ host on the primordial host interface because the DMZ host does not have access to the shared network drive.

Click an **x** or a **Restricted** symbol to display information about failures. Click the host-level **Log** file for details about this phase. Click a build **Log** file to see details specific to that build.

Click **Retry** to rerun this phase if errors are reported. You must fix all errors before you continue. See "Troubleshooting the Provisioning Process" in *Oracle Fusion Applications Installation Guide* for details about recovery from failures.

Click **Next**. The wizard starts the **configure-secondary** phase on the primordial host and displays the **Configure Secondary** screen.

E.11 Configure Secondary
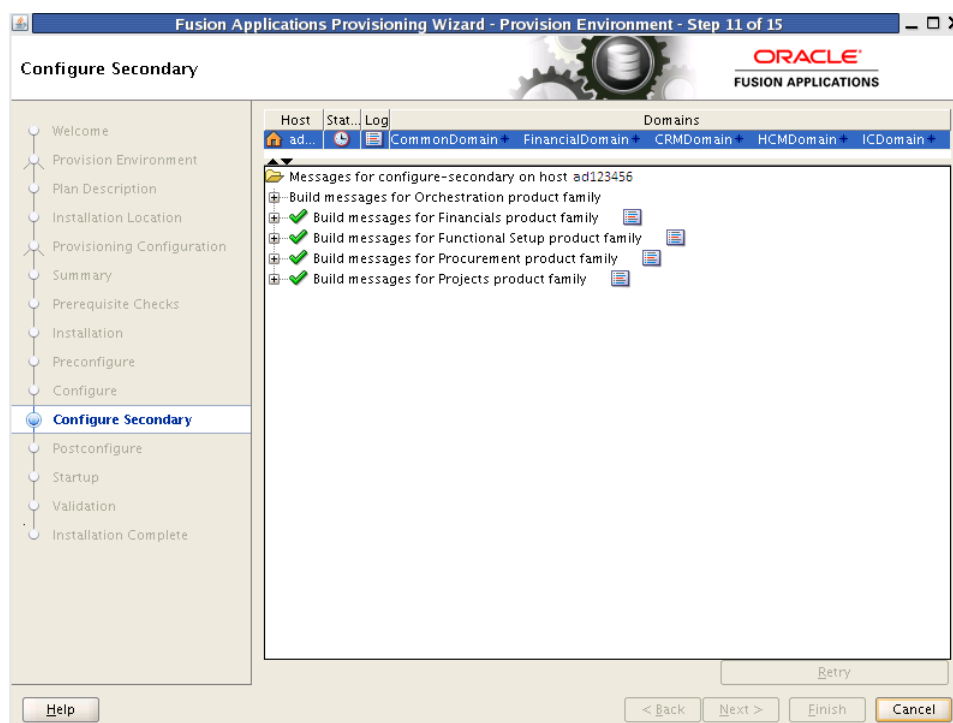
The **configure-secondary** phase performs configure actions on the primary and secondary host, if either is present. It there is no primary or secondary host, the phase runs, but takes no action. The **Domains** column lists the domains deployed in the new environment.

In the terminal session for the primary, secondary, and DMZ host (if present), run the **configure-secondary** phase with this command:

(UNIX) *path_to_script*/runProvisioning.sh -plan *provisioning_plan_location* -target configure-secondary

(Windows) *path_to_script*\runProvisioning.bat -plan *provisioning_plan_location* -target configure-secondary

Note: This phase can run in parallel on the primary and secondary hosts and is tracked on this screen. Each **new** phase must run sequentially; that is, you cannot start a new phase until the previous phase has been completed successfully on all the hosts.

The **Status** of each build on each host is indicated by one of these icons:

- **Block**: Processing has not yet started on this host for the named phase.

- **Clock**: Performing the build for a phase.

- **Check mark**: The build was completed successfully.

- **x** mark: The build has failed for this phase. You must correct the errors before you can continue.

- **Restricted** symbol: The process has stopped due to a failure within another process.

Note: You cannot view the build processes on the DMZ host on the primordial host interface because the DMZ host does not have access to the shared network drive.

Click an **x** or a **Restricted** symbol to display information about failures. Click the host-level **Log** file for details about this phase. Click a build **Log** file to see details specific to that build.

Click **Retry** to rerun this phase if errors are reported. You must fix all errors before you continue. See "Troubleshooting the Provisioning Process" in *Oracle Fusion Applications Installation Guide* for details about recovery from failures.

Click **Next**. The wizard starts the **postconfigure** phase on the primordial host and displays the **Postconfigure** screen.

E.12 Postconfigure
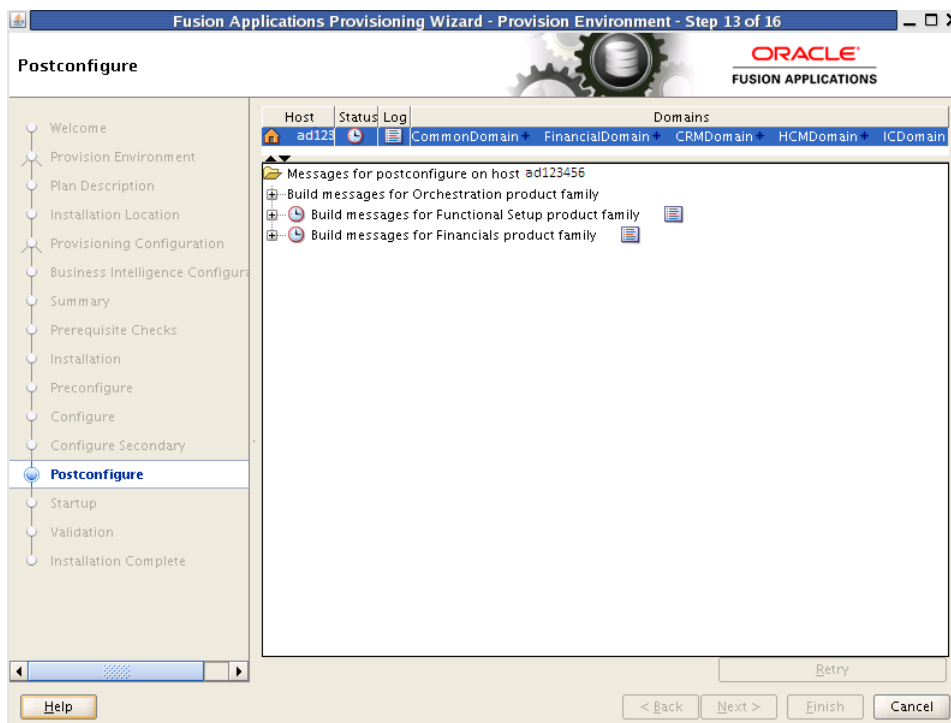
The **postconfigure** phase performs online tasks, such as configuring the Node Manager, SOA composite deployment, establishing Oracle HTTP Server wiring, seeding policies, and setting up postdeployment security configuration. The primordial host is marked with a **Home** symbol in the **Host** column. The **Domains** column lists the domains deployed in the new environment.

In the terminal session for the primary, secondary, and DMZ host (if present), run the **postconfigure** phase with this command:

(UNIX) *path_to_script*/runProvisioning.sh -plan *provisioning_plan_location* -target postconfigure

(Windows) *path_to_script*\runProvisioning.bat -plan *provisioning_plan_location* -target postconfigure

Note: This phase can run in parallel on all hosts and is tracked on this screen. Each **new** phase must run sequentially; that is, you cannot start a new phase until the previous phase has been completed successfully on all the hosts.

The **Status** of each build on each host is indicated by one of these icons:

- **Block**: Processing has not yet started on this host for the named phase.
- **Clock**: Performing the build for a phase.
- **Check mark**: The build was completed successfully.
- **x** mark: The build has failed for this phase. You must correct the errors before you can continue.
- **Restricted** symbol: The process has stopped due to a failure within another process.

Note: You cannot view the build processes on the DMZ host on the primordial host interface because the DMZ host does not have access to the shared network drive.

Click an **x** or a **Restricted** symbol to display information about failures. Click the host-level **Log** file for details about this phase. Click a build **Log** file to see details specific to that build.

Click **Retry** to rerun this phase if errors are reported. You must fix all errors before you continue. See "Troubleshooting the Provisioning Process" in *Oracle Fusion Applications Installation Guide* for details about recovery from failures.

Click **Next**. The wizard starts the **startup** phase on the primordial host and displays the **Startup** screen.

E.13 Startup
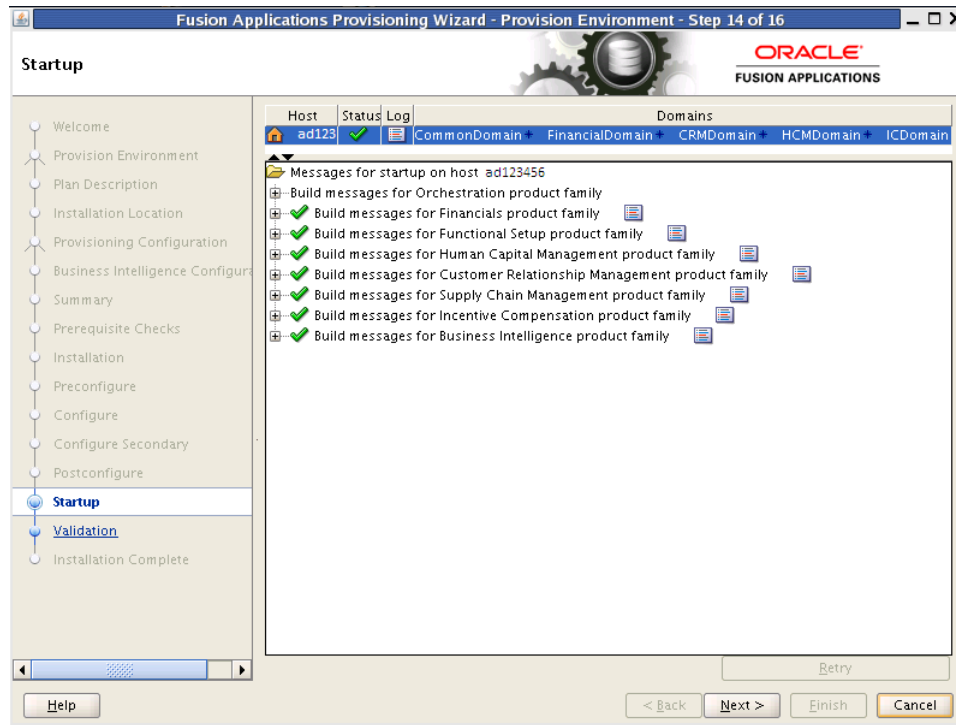
The **startup** phase starts the Administration Server and Managed Servers for each domain on the host. The primordial host is marked with a Home symbol in the **Host** column. The **Domains** column lists the domains deployed in the new environment.

In the terminal session for the primary, secondary, and DMZ host (if present), run the **startup** phase with this command:

(UNIX) *path_to_script*/runProvisioning.sh -plan *provisioning_plan_location* -target startup

(Windows) *path_to_script*\runProvisioning.bat -plan *provisioning_plan_location* -target startup

Note: This phase can run in parallel on all hosts and is tracked on this screen. Each **new** phase must run sequentially; that is, you cannot start a new phase until the previous phase has been completed successfully on all the hosts.

The **Status** of each build on each host is indicated by one of these icons:

- **Block**: Processing has not yet started on this host for the named phase.
- **Clock**: Performing the build for a phase.
- **Check mark**: The build was completed successfully.
- **x** mark: The build has failed for this phase. You must correct the errors before you can continue.
- **Restricted** symbol: The process has stopped due to a failure within another process.

Note: You cannot view the build processes on the DMZ host on the primordial host interface because the DMZ host does not have access to the shared network drive.

Click an **x** or a **Restricted** symbol to display information about failures. Click the host-level **Log** file for details about this phase. Click a build **Log** file to see details specific to that build.

Click **Retry** to rerun this phase if errors are reported. You must fix all errors before you continue. See "Troubleshooting the Provisioning Process" in *Oracle Fusion Applications Installation Guide* for details about recovery from failures.

Click **Next**. The wizard starts the **validate** phase on the primordial host and displays the **Validation** screen.

E.14 Validation
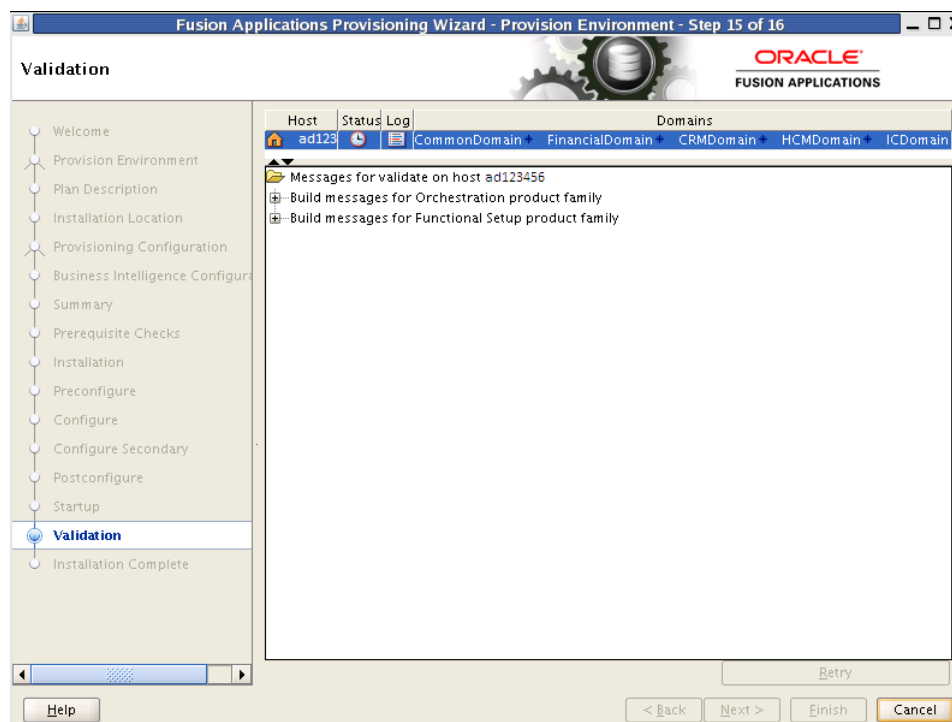
The **validate** phase performs a variety of postprovisioning validation tasks, such as server and application availability, successful loading of identity credentials, and validation of the data source. The primordial host is marked with a **Home** symbol in the **Host** column. The **Domains** column lists the domains deployed in the new environment.

In the terminal session for the primary and secondary host (if present), run the **validate** phase with this command:

(UNIX) *path_to_script*/runProvisioning.sh -plan *provisioning_plan_location* -target validate

(Windows) *path_to_script*\runProvisioning.bat -plan *provisioning_plan_location* -target validate

Note: This phase can run in parallel on all hosts and is tracked on this screen. Each **new** phase must run sequentially; that is, you cannot start a new phase until the previous phase has been completed successfully on all the hosts.

The **Status** of each build on each host is indicated by one of these icons:

- **Block**: Processing has not yet started on this host for the named phase.

- **Clock**: Performing the build for a phase.

- **Check mark**: The build was completed successfully.

- **x** mark: The build has failed for this phase. You must correct the errors before you can continue.

- **Restricted** symbol: The process has stopped due to a failure within another process.

Click an **x** or a **Restricted** symbol to display information about failures. Click the host-level **Log** file for details about this phase. Click a build **Log** file to see details specific to that build.

Click **Retry** to rerun this phase if errors are reported. You must fix all errors before you continue. See "Troubleshooting the Provisioning Process" in *Oracle Fusion Applications Installation Guide* for details about recovery from failures.

Once this phase has completed successfully on all hosts, click **Next** to continue.

E.15 Installation Complete

This screen displays the configuration of the new environment.

Click **Finish**. The wizard automatically saves a summary file that describes this installation. The file is saved to the provisioning plan directory as follows:

framework_location/provisioning/provisioning-plan/*provisioning_plan_name-timedate*.summary.

F

Applications Deinstallation Screens

This appendix presents the Provisioning Wizard screens in the Deinstall a Fusion Environment interview and describes the purpose of each of the following screens:

- Welcome

- Installation Options

- Summary

- Deinstallation Progress

- Deinstallation Complete

F.1 Welcome

No action is required on this read-only screen.

Click **Next** to continue.
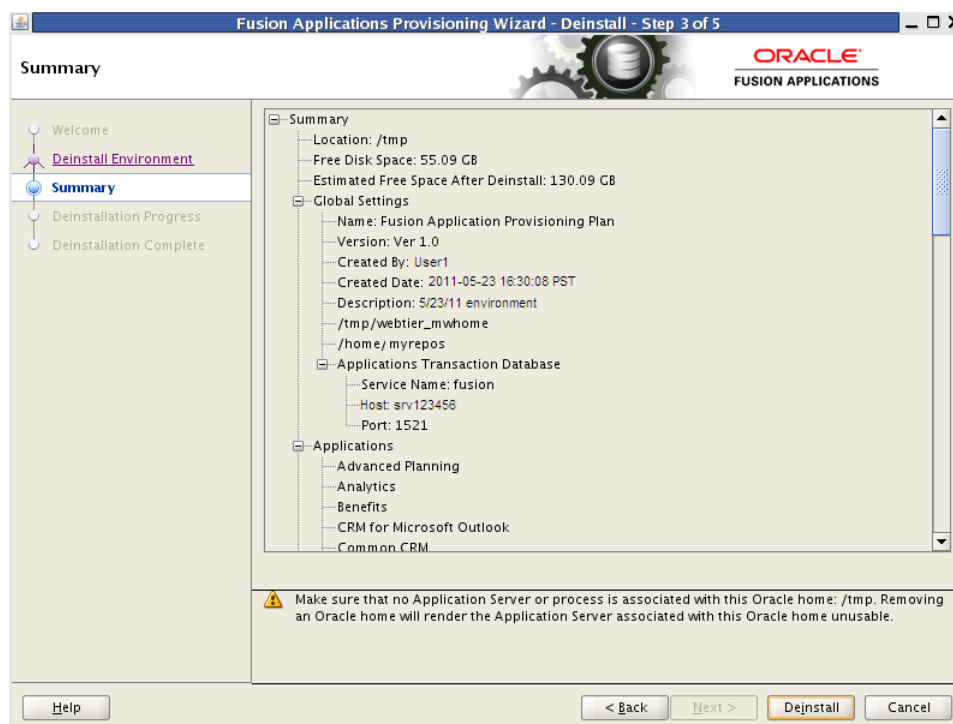
F.2 Installation Options

Select the task that you want to perform from the list of options. When prompted, enter a directory path in the **Provisioning Plan** field to access a completed plan to use as a base for one of the actions. Or, click **Browse** to navigate to the plan location.

- **Install an Applications Transaction Database**: Install an empty, single-instance Oracle Database Enterprise Edition using the nonseeded database template shipped with this release.

- **Create a New Applications Environment Provisioning Plan**: Create a provisioning plan for a new Oracle Fusion Applications environment.

- **Update an Existing Provisioning Plan**: Add or change details in a completed plan that has not yet been implemented or in a partially completed provisioning plan.

- **Provision an Applications Environment**: Initiate and track the processes that install, configure, and deploy product offerings in a new Oracle Fusion Applications environment.

- **Deinstall an Applications Environment**: Remove applications and middleware components from an existing applications environment.

Click **Next** to continue.

F.3 Summary

Review the list of components to be deinstalled. Before you begin the deinstallation process, you must shut down or stop the following processes:

1. Stop any processes that are running in the environment. See *Oracle Fusion Applications Administrator's Guide* for details about stopping and starting components in the Oracle Fusion Applications environment.

2. Shut down all Managed Servers, the Administration Server, and the Node Manager on all hosts. If the servers are configured as Windows services, stop the services before deinstalling the software. For details about starting and stopping processes, see *Oracle Fusion Applications Administrator's Guide*.

3. Stop the Oracle HTTP server with this command: `WT_CONFIG_HOME`/bin/opmnctl shutdown.

4. Stop the Oracle Business Intelligence components that are controlled by OPMN with this command: `BI_CONFIG_HOME`/bin/opmnctl shutdown. See *Oracle Fusion Middleware System Administrator's Guide for Oracle Business Intelligence Enterprise Edition 11g* for more information about using the OPMN commands.

5. Shut down Global Order Promising (GOP) (if provisioned): (UNIX) `gop_instance_base`/bin/opmnctl shutdown. To remove the Windows service, run: sc delete GlobalOrderPromisingServer1.

6. Stop the Java EE components using Oracle Enterprise Manage Fusion Middleware Control. See *Oracle Fusion Applications Administrator's Guide* for details.

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

Click **Deinstall** to begin deinstalling the applications and middleware components.

F.4 Deinstallation Progress
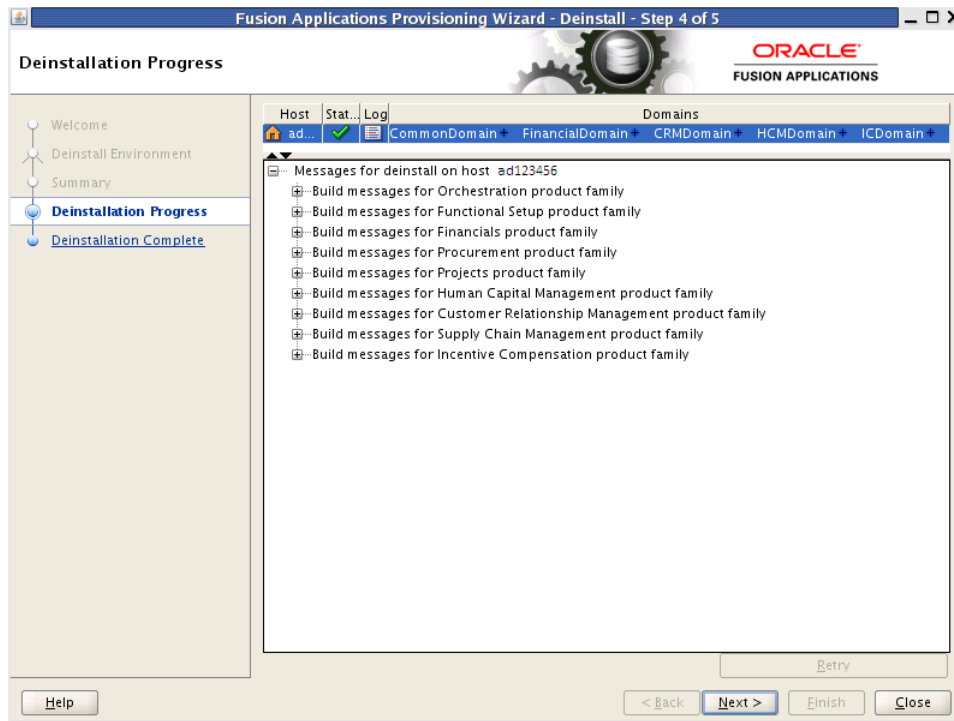
Like provisioning, you run deinstall on the primordial host first. If you have provisioned a primary or secondary host, you must deinstall that host from the command line. If the primordial host is no longer available, the entire deinstall process must be run from the command line.

Run the deinstall command as `root` (with administration privileges) using the following command:

(UNIX)

```
runProvisioning.sh -plan plan_location -target deinstall
```

(Windows)

```
runProvisioning.bat -plan plan_location -target deinstall
```

If the web tier has been deployed in a DMZ, you must run the Oracle Universal Installer (OUI) manually on the host to deinstall. See *Oracle Universal Installer and OPatch User's Guide*.

The following symbols help you track the deinstallation:

- **Block**: Processing has not yet started on this host for the named phase.

- **Clock**: Performing the build for a phase.

- **Check mark**: The build was completed successfully.

- **x** mark: The build has failed for this phase. You must correct the errors before you can continue.

- **Restricted** symbol: The validation process has stopped due to a failure within another process.

Click an **x** or a **Restricted** symbol to display information about failures. Select the icon in the **Log** column to view host-level details. If there is a **Log** file icon beside a build message, you can select that file to see the details of that build.

If the deinstallation fails, a **Retry** button is enabled, allowing you to try the deinstall again. See *Oracle Fusion Applications Installation Guide* for information about retry, cleanup, and restore actions.

Click **Next** to continue.

F.5 Deinstallation Complete

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

The remaining cleanup tasks are as follows:

(UNIX)

1. Remove the Entries from Services.

2. Remove the Entries from the inetd.conf file.

(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.

Click **Finish** to dismiss the screen.