Oracle® Fusion Applications

Upgrade Guide

11*g* Release 6 (11.1.6)

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Documentation for installers and system administrators that describes how to use RUP Installer and Language Pack Installer to upgrade Oracle Fusion Applications software between major releases.

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Oracle Fusion Applications Upgrade Guide, 11*g* Release 6 (11.1.6)

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Preface

This guide provides information about using RUP Installer and Language Pack Installer to upgrade your Oracle Fusion Applications software.

Audience

This guide is intended for system administrators who are responsible for performing Oracle Fusion Applications upgrade and Language Pack installation tasks.

Documentation Accessibility

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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 Fusion Applications Installation Guide*
- *Oracle Fusion Applications Patching Guide*
- *Oracle Fusion Applications Post-Installation Guide*
- *Oracle Fusion Middleware WebLogic Scripting Tool Command Reference*

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

The following topics introduce the new and changed features of the Oracle Fusion Applications upgrade process and other significant changes that are described in this guide, and provide pointers to additional information.

New and Changed Features for 11*g* Release 6 (11.1.6)

Oracle Fusion Applications 11*g* Release 6 (11.1.6) includes the following new and changed upgrade features for this document:

- Parallel processing of configuration assistants was added. See Section 1.4.7, "Parallel Configuration Assistants".
- The Health Checker utility automates several pre- and post-upgrade steps that were previously performed manually. See:
  - Section 1.5.1, "Pre-Upgrade Tasks Performed by Health Checker Before Down Time"
  - Section 1.5.2, "Pre-Upgrade Tasks Performed by Health Checker During Down Time"
  - Section 1.5.3, "Post-Upgrade Tasks Performed by Health Checker"
- The RUP Lite for RDBMS utility can be run in additional modes and automates several steps that were previously performed manually. See Section 1.6, "RUP Lite for RDBMS Utility".
- The following changes were made to the pre-upgrade steps that you perform before down time:
  - The step, Run Health Checker for Pre-Down Time Checks, replaced the following manual steps:
    - Confirm Installation of the Previous Release of Oracle Fusion Applications
    - Verify Your OPatch Version
    - Confirm Memory Settings
    - Confirm Host Names
    - Confirm the Local Port Range Value
    - Confirm Database Settings
    - Update Oracle Fusion Middleware Schema Credentials
  - The step titled "Verify OHS Instance Is Registered (Oracle VM Servers Only)" was removed.

    - The steps to run Health Checker were modified. See Section 2.1.13.
- Pre-upgrade steps were added to remove conflicting patches before you start the upgrade:
    - Find conflicting patches. See Section 2.1.15.
    - Remove conflicting patches. See Section 2.2.9.
- The following changes were made to the pre-upgrade steps that you perform during down time:
    - The step titled "Apply Mandatory Prerequisite RDBMS Patches" was renamed to "Update the Oracle Fusion Applications Database" and some of the steps changed.
    - The step titled "Run catmetx.sql" was updated to be run only if you do not run RUP Lite for RDBMS.
    - The step, "Run Health Checker for Down Time Checks" replaced the following manual steps:
        - Confirm the Database is Running and in Idle State
        - Confirm All Oracle Fusion Applications Patch Manager Processes Are Complete
        - Confirm All Oracle Fusion Applications AutoPatch Processes Are Complete
        - Confirm All AD Administration Sessions Are Complete
    - The step titled "Run the Inventory Cleanup Script" was removed because RUP Installer runs it.
    - The step titled "Upgrade JDK (Linux and Windows Platforms Only)" was removed.
    - The step, "Register Database Schema Information" was added.
    - Some steps in Section 2.2.12, "Run RUP Lite for OVM - Offline Mode (Oracle VM Hosts Only)" were updated.
- Configuration assistant log files were added. See Section 6.1.1, "Log Files for Configuration Assistants".

The following changes were made to the post-upgrade steps:

- Steps for Windows were removed from Section 4.1, "Upgrade the Web Tier Using RUP Lite for OHS".
- The step titled "Verify the Status of Servers and Deployed Applications" was removed.
- Added a step for Section 4.17, "Run Health Checker for Post-Upgrade Checks".

Oracle Fusion Applications Language Pack Installer includes the following new and changed upgrade features for this document.

- The steps to run Health Checker during pre-down time were modified. See Section 5.2.7, "Run Health Checker for Pre-Down Time Checks".
- The Health Checker utility replaced the following manual steps during pre-down time:
    - Confirm Memory Requirements
    - Confirm Host Names

    - Confirm the Local Port Range Value
    - Two of the steps under "Confirm Database Settings"
- The steps to run Health Checker during down time changed. See Section 5.3.2, "Run Health Checker for Down Time Checks".
- The Health Checker utility replaced the following manual steps during down time:
    - Confirm the Database is Running and in Idle State
    - Confirm All Oracle Fusion Applications Patch Manager Processes Are Complete
    - Confirm All Oracle Fusion Applications AutoPatch Processes Are Complete
    - Confirm All AD Administration Sessions Are Complete

Other Significant Changes in this Document for 11*g* Release 6 (11.1.6)

The *Oracle Fusion Applications Upgrade Guide* is new in 11*g* Release 6 (11.1.6). Following are the sections that were moved from the *Oracle Fusion Applications Patching Guide* to the *Oracle Fusion Applications Upgrade Guide*.

- Documentation related to using RUP Installer was previously included in Chapter 5 of the *Oracle Fusion Applications Patching Guide*. It is now included in several chapters in this guide.
- Documentation related to using Language Pack Installer was previously included in Chapter 6 of the *Oracle Fusion Applications Patching Guide*. It is now included in Chapter 5 of this guide.

1

Introduction to the Upgrade Process

This chapter provides an introduction to the process of upgrading Oracle Fusion Applications to Release 6 (11.1.6).

This chapter contains the following topics:

1.1 Upgrade Process Overview

Upgrading to Oracle Fusion Applications 11*g* Release 6 (11.1.6) requires that you run RUP Installer on an Oracle Fusion Applications 11*g* Release 5 (11.1.5) environment. You must complete all pre-upgrade tasks before you start RUP Installer. The pre-upgrade tasks are organized by those that you can run before your down time, followed by those that must be run during down time. After you upgrade by running RUP Installer in GUI or silent mode during down time, you must complete the post-upgrade tasks.

To proceed directly to the pre-upgrade tasks, see Chapter 2, "Preparing to Upgrade".

1.2 Language Upgrade Considerations

If you have installed any languages in addition to US English, you must upgrade each language after you run RUP Installer. For more information, see Chapter 5, "Maintaining Oracle Fusion Applications Languages".

1.3 RUP Installer Configuration Assistants

During the installation phase, RUP Installer copies all files for Release 6 (11.1.6) to the appropriate locations, such as Oracle Fusion Middleware home and Oracle Fusion Applications Oracle home. If any tasks fail during the installation phase, refer to

Section 6.2, "Troubleshooting Failures During the Installation Phase" for more information.

After the file copy completes, RUP Installer calls its first installer to update Oracle Fusion Applications Patch Manager and apply Oracle Fusion Middleware patches. When the first installer completes successfully, RUP Installer calls the second installer, which performs the Policy Store Analysis, as described in Table 3–3, " RUP Installer Screen Sequence for the Second Installer". Upon successful completion of the Policy Store Analysis, RUP Installer calls configuration assistants to perform the remaining tasks required to update and deploy artifacts to Oracle Fusion Applications. Depending on the contents of Release 6 (11.1.6), not all configuration assistants may run.

All mandatory configuration assistants must complete successfully before proceeding to the next configuration assistant. For more information, see Section 6.4, "General Troubleshooting During the Configuration Phase in GUI Mode".

Table 1–1 provides a list of configuration assistants that the first installer runs. The Retry Behavior and Troubleshooting column describes what RUP Installer does after a configuration assistant fails, you resolve the cause of the failure, and then select the **Retry** button in GUI mode or restart RUP Installer in silent mode. If available, links are provided to relevant troubleshooting sections.

Table 1–1 Configuration Assistants Run by Oracle Fusion Applications 11g Release 6 (11.1.6) RUP Installer Part 1 of 2

Name	Mandatory	Description	Retry Behavior and Troubleshooting
Configure Patch Manager	Yes	Configures Oracle Fusion Applications Patch Manager.	Starts from the beginning of the task.
Update Patch Manager	Yes	▪ Applies Oracle Fusion Applications Patch Manager Repository Patches ▪ Applies Oracle Fusion Applications Patch Manager Downloaded Patches, as described in Section 2.1.4, "Download Mandatory Post-Release 6 Patches"	Applies failed patches.
Reconfigure Patch Manager	Yes	Reconfigures Oracle Fusion Applications Patch Manager.	Starts from the beginning of the task.
Bootstrap Patch Manager	Yes	Updates the data model for Oracle Fusion Applications Patch Manager by running the `fapmgr bootstrap` command.	Starts from the beginning of the task. See Section 6.7, "Troubleshooting Bootstrapping Patch Manager".
Apply Middleware Patch Sets	Yes	Applies Oracle Fusion Middleware patch sets, which include schema changes and installers.	Installs failed patch sets.

Table 1–1 (Cont.) Configuration Assistants Run by Oracle Fusion Applications 11g Release 6 (11.1.6) RUP Installer Part 1 of 2

Name	Mandatory	Description	Retry Behavior and Troubleshooting
Apply Pre-PSA Middleware Patches	Yes	▪ Applies Pre-PSA Repository Patches ▪ Applies Pre-PSA Downloaded Patches, as described in Section 2.1.4, "Download Mandatory Post-Release 6 Patches" For more information, see Section 1.3.1, "Middleware Installers Invoked by the Apply Pre-PSA Middleware Patches Configuration Assistant" and Section 1.3.2, "Patches Not Supported by the Apply Pre-PSA and Post-PSA Middleware Patches Configuration Assistants".	Applies the failed patches. See Section 6.8, "Troubleshooting Applying Middleware Patches".
Verify Middleware PSA Schema Credentials	Yes	Verifies users and logins for schemas.	Starts from the beginning of the task.
Upgrade Middleware Schemas	Yes	Runs Oracle Fusion Middleware patch set assistants (PSA).	Runs failed tasks. See Section 6.10, "Troubleshooting Upgrading Middleware Schema".
Apply Post-PSA Middleware Patches	Yes	▪ Applies Post-PSA Repository Patches ▪ Applies Post-PSA Downloaded Patches, as described in Section 2.1.4, "Download Mandatory Post-Release 6 Patches" See Section 1.3.2, "Patches Not Supported by the Apply Pre-PSA and Post-PSA Middleware Patches Configuration Assistants".	Applies the failed patches. See Section 6.8, "Troubleshooting Applying Middleware Patches".
Extend Certificate Validity	Yes	Extends certificate validity by three years from the date of the upgrade.	Starts from the beginning of the task.
Apply Offline BI Metadata and Configuration Updates	Yes	Performs the deployment of the updated applications policies for Oracle Business Intelligence.	Retries failed steps.
Apply Domain Configuration	Yes	▪ Applies Startup Parameter Changes ▪ Updates logging configuration ▪ Updates trust file location ▪ Updates WebLogic standard out severity level ▪ Reassigns WSM-PM targets	Retries failed steps.
Propagate Domain Configuration	Yes	Unzips RUP Lite for Domain Configuration into *APPLICATIONS_CONFIG*/fapatch/admin/ruplitedomain/*version*. Updates properties in the RUP Lite env.properties file and prepares RUP Lite so you can run RUP Lite for Domain Configuration.	Starts from the beginning of the task. See Section 6.9, "Troubleshooting Failure During Propagating Domain Configuration".

Table 1–2 provides a list of configuration assistants that the second installer runs. The Retry Behavior and Troubleshooting column describes what RUP Installer does after a configuration assistant fails, you resolve the failure, and then select the **Retry** button in GUI mode or restart RUP Installer in silent mode. If available, links are provided to relevant troubleshooting sections. The second installer supports parallel processing of certain configuration assistants, which run in groups. For more information, see Section 1.4.7, "Parallel Configuration Assistants".

Table 1–2 Configuration Assistants Run by Oracle Fusion Applications 11g Release 6 (11.1.6) RUP Installer Part 2 of 2

Name	Mandatory	Description	Retry Behavior and Troubleshooting
Configure Patch Manager	Yes	Configures Oracle Fusion Applications Patch Manager.	Starts from the beginning of the task.
Bootstrap Patch Manager	Yes	Updates the data model for Oracle Fusion Applications Patch Manager by running the fapmgr `bootstrap` command.	Starts from the beginning of the task. See Section 6.7, "Troubleshooting Bootstrapping Patch Manager".
Offline Preverification	Yes	Performs the following validation checks while all servers are shut down: ■ Policy Store ■ Number of database workers ■ Database Content Upload ■ Business Process Management (BPM) Template ■ Oracle Data Integrator (ODI)	Runs failed steps.
Grant Privileges to Application Schemas	Yes	Grants system privileges to database users and creates base object privileges.	Runs the failed script.
Load Database Components	Yes	Uploads the database content packaged in Release 6 (11.1.6) to the database, such as database objects, seed data, and package headers and bodies.	Runs failed database commands. See Section 6.13, "Troubleshooting Loading Database Components".
Deploy Applications Policies (jazn-data.xml)	Yes	Deploys updated applications policies, based on your selections during the Policy Store Analysis step.	Deploys the failed stripes. See Section 6.14, "Troubleshooting Deployment of Applications Policies".

Table 1–2 (Cont.) Configuration Assistants Run by Oracle Fusion Applications 11g Release 6 (11.1.6) RUP Installer Part 2 of 2

Name	Mandatory	Description	Retry Behavior and Troubleshooting
Deploy BI Publisher Artifacts	Yes	Using Catalog Manager, performs the following steps: ■ Backs up BI Presentation Catalog under *FA_ORACLE_HOME*/admin/BIP/*version/language_code*, for example, *FA_ORACLE_HOME*/admin/BIP/11.1.5.0.0/en_US/webcat.zip. ■ Backs up captions under *FA_ORACLE_HOME*/admin/BIP/*version/language_code*/captions.zip. ■ Copies captions to the Oracle Business Intelligence repository. ■ Deploys BI Presentation Catalog to the Oracle Business Intelligence repository.	Starts from the beginning of the task. See Section 6.15, "Troubleshooting Deployment of BI Publisher Artifacts".
Import Oracle Data Integrator Repositories	Yes	■ Imports ODI topology. ■ Imports ODI model folders. ■ Imports ODI models. ■ Imports ODI projects. ■ Drops ODI error tables.	Imports failed data.
Create Grants/Synonyms on Application Database Objects	Yes	Creates synonyms between database objects and grants object privileges to database users.	Runs the failed script.
Update Impersonation Configuration	Yes	Updates the impersonation properties, imp.begin.url and imp.end.url, in jps_config.xml files across all domains.	Starts from the beginning of the task.
Deploy Data Security Grants	Yes	Performs GUID reconciliation in LDAP.	Starts from the beginning of the task.
Generate SOA Configuration Plan	Yes	Generates the configuration plan to be used for deploying SOA composites.	Starts from the beginning of the task.
Update Flexfield Configuration	Yes	Updates the FndSetup application for supporting new flexfields, new flexfield usages, and flexfield view links added by Oracle Fusion Applications products.	Starts from the beginning of the task.
Deploy BPM Templates	Yes	Deploys BPM templates to the Metadata Service (MDS) repository.	Deploys failed templates.
Generate ADF Domain Configuration Plan	Yes	Generates the Oracle ADF domain configuration plan in MDS to be used by Expression Language (EL) expressions in connections.xml.	Starts from the beginning of the task.
Apply Offline Setting Changes	Yes	Applies Oracle Fusion Applications environment configuration setting changes while all servers are shut down.	Retries failed domains.

Table 1–2 (Cont.) Configuration Assistants Run by Oracle Fusion Applications 11g Release 6 (11.1.6) RUP Installer Part 2 of 2

Name	Mandatory	Description	Retry Behavior and Troubleshooting
Verify Node Manager and OPMN Status	Yes	Verifies the status of the following processes: ▪ Node Managers ▪ BI OPMN Processes ▪ GOP OPMN Processes ▪ Web Tier Processes Do not exit out of RUP Installer during this configuration assistant.	Runs failed steps. See Section 6.17, "Troubleshooting Failure During Verifying Node Manager and OPMN Status".
Start All Admin Servers	No	Starts all Administration Servers.	Restarts failed Administration Servers. See Section 6.18, "Troubleshooting Server Start and Stop Failures".
Grant Application Role	Yes	Grants `SOA operator` privileges to the `HCM admin` role so BPM processes can be deployed.	Starts from the beginning of the task.
Apply Admin Server Online Setting Changes	Yes	Applies Oracle Fusion Applications environment configuration setting changes that are applicable to the Administration Servers.	Starts from the failed task.
Start All Servers	No	Starts all servers in all domains, including the BI servers. Also performs the `opmnctl` start for Oracle HTTP Server (OHS) and `BIInstance`.	Restarts failed servers. See Section 6.18, "Troubleshooting Server Start and Stop Failures".
Online Preverification	Yes	Performs steps described in Section 1.3.3, "Steps Performed During Online Preverification".	Runs failed steps. See Section 6.19, "EditTimedOutException Error During Online Preverification".
Generate OHS Reference Configuration File	No	Generates OHS configuration files for installed product families in the *FA_ORACLE_HOME*`/admin/OHS/patched_moduleconf` directory.	Starts from the beginning of the task.
Apply OWSM Configuration	Yes	Upgrades Oracle Web Services Manager (Oracle WSM) policies after backing up the policies.	Restores the backup of the policies and starts from the beginning of the task.
Apply SES Configuration Changes	No	Updates additional configuration updates to Oracle Secure Enterprise Search (SES) running on the Common Domain.	Starts from the beginning of the task.
Deploy SPE Inline Service Artifacts	No	Deploys SPE Inline Service Artifacts.	Retries the deployment.
Deploy Data Role (RGX) Templates	No	Deploys RGX Template artifacts to the Common Domain.	Deploys failed templates.

Table 1–2 (Cont.) Configuration Assistants Run by Oracle Fusion Applications 11g Release 6 (11.1.6) RUP Installer Part 2 of 2

Name	Mandatory	Description	Retry Behavior and Troubleshooting
Apply OAM Configuration	No	Applies changes to the Oracle Access Manager (OAM) configuration.	Starts from the beginning of the task. See Section 6.22, "Location of GRC Policies in the OAM Applications Domain".
Deploy Flexfields	No	Deploys flexfields to the domain that hosts the `FndSetup` application.	Starts from the beginning of the task.
Apply Online BI Metadata and Configuration Updates	Yes	Applies Oracle Business Intelligence metadata and configuration updates.	Starts from the beginning of the task. If you made any customizations to the Oracle BI Repository, the Oracle BI Presentation Catalog, or JAZN settings related to Oracle Business Intelligence, you must merge your changes. See Section 4.12, "Resolve Conflicts That Occurred During BI Metadata Updates".
Import Group Space Templates	No	Imports Group Space Templates.	Deploys failed templates.
SOA Preverification	Yes	Performs the steps described in Section 1.3.4, "Steps Performed During SOA Preverification". If you have customizations, you must manually merge them during this configuration assistant.	Retries failed steps. See Section 6.21, "Merging SOA Composite JDeveloper Customizations During SOA Preverification".
Deploy B2B Metadata	No	Deploys B2B metadata.	Deploys failed B2B artifacts.
Deploy SOA Shared Repository	Yes	Deploys SOA shared repository artifacts to available SOA servers.	Deploys failed SOA shared repository artifacts.
Deploy UpdateSOAMDS Composite	No	Deploys the `UpdateSOAMDS` composite to every domain.	Deploys the composite on domains that failed.
Deploy SOA Composites	No	Deploys SOA composites to the corresponding SOA servers and performs server management steps.	Deploys failed SOA composites. See Section 6.23, "Troubleshooting SOA Composite Deployment Failures".
Deploy SOA Resource Bundles	Yes	Deploys SOA resource bundles to the corresponding SOA servers.	Deploys failed SOA resource bundles.
Import Image Routing (IPM) Artifacts	No	Deploys IPM artifacts to the IPM server.	Retries failed IPM artifacts. See Section 6.24, "Failure During IPM Import".
Restart All SOA Servers	No	Restarts all SOA servers in the environment.	Starts at the beginning of the task.

Table 1–2 (Cont.) Configuration Assistants Run by Oracle Fusion Applications 11g Release 6 (11.1.6) RUP Installer Part 2 of 2

Name	Mandatory	Description	Retry Behavior and Troubleshooting
Apply Online Setting Changes	No	Applies Oracle Fusion Applications environment configuration setting changes during the online phase.	Starts from the failed task.
Generate RUP Lite for OHS	No	Generates the zip file that contains all files needed by RUP Lite for OHS to upgrade OHS.	Starts at the beginning of the task.
Apply Downloaded Patches	Yes	Applies the Oracle Fusion Applications patches that you downloaded in Section 2.1.4, "Download Mandatory Post-Release 6 Patches".	Applies failed patches.
Post Configuration	No	Reactivates SES Index Optimization and the ESS Server from inactive or quiescent mode.	Retries failed domains.

1.3.1 Middleware Installers Invoked by the Apply Pre-PSA Middleware Patches Configuration Assistant

The following installers are invoked by the **Apply Pre-PSA Middleware Patches** configuration assistant:

- Oracle Business Intelligence
- Oracle Common
- Oracle Data Integrator (ODI)
- Oracle Database Client
- Oracle Enterprise Content Management
- Oracle HTTP Server (OHS) - OHS may be installed either beside the rest of the Oracle Fusion Middleware in the Oracle Fusion Applications middle tier or on a separate DMZ machine. For either case, patching OHS requires extra steps after running RUP Installer. You must patch OHS using RUP Lite for OHS as described in Section 4.1, "Upgrade the Web Tier Using RUP Lite for OHS".
- Oracle Fusion Middleware Extensions for Applications
- Oracle Global Order Promising
- Oracle Secure Enterprise Search (SES)
- Oracle SOA Suite
- Oracle WebCenter Suite
- Oracle WebLogic Server
- Oracle Web Tier

1.3.2 Patches Not Supported by the Apply Pre-PSA and Post-PSA Middleware Patches Configuration Assistants

The following patches are not supported by the **Apply Pre-PSA** and **Post-PSA Middleware Patches** configuration assistants:

- Integrated Development Environment (IDE)

- OHS installed in the DMZ: You patch OHS as described in Section 4.1, "Upgrade the Web Tier Using RUP Lite for OHS".
- Database Server: You patch your database server using RUP Lite for RDBMS. For more information, see Section 2.2.4, "Update the Oracle Fusion Applications Database".
- Oracle Identity Management Server: You patch your IDM server by following the steps in Section 2.2.3, "Upgrade Oracle Identity Management Domain to 11g Release 6 (11.1.6)".

1.3.3 Steps Performed During Online Preverification

The following validation steps are performed during the **Online Preverification** configuration assistant, if Release 6 (11.1.6) contains artifacts related to the validation:

- Taxonomy URL
- Database validation
- Flexfield: Checks for the `HelpPortal` Managed Server in the Common Domain and for the successful deployment of the `FndSetup` application.
- OAM Configuration
- SES Admin Server URL
- SPE Inline Service: Checks if the Oracle CRM Performance application is deployed. If it is, the OracleRTD application must be deployed and at least one BI server must be running where the OracleRTD application is deployed.
- Data Role (RGX) Template: Checks if the Administration Server for the Common Domain is up.
- Group Space Template: Checks if the following Managed Servers are up: `WC_Spaces, WC_Collaboration, ucm_server1`.
- Oracle WSM validation

1.3.4 Steps Performed During SOA Preverification

The following validation steps are performed during the **SOA Preverification** configuration assistant:

- B2B Metadata: Checks if the Common Domain, SOA Managed Server, and the LDAP Server are up.
- SOA Shared Repository: Verifies the taxonomy, checks if the Administration Server is up, and checks for SOA_SERVER and SOA_PLATFORM readiness.
- `UpdateSOAMDS` SOA Composite: Verifies the taxonomy, checks if the Administration Server is up, and if the SOA platform is ready.
- SOA Resource Bundle: Verifies the taxonomy, checks if the Administration Server is up, and if the SOA platform is ready.
- SOA Composites: Performs the following validation steps:
  - Verifies the taxonomy.
  - Checks if the Administration Server is up.
  - Checks if the SOA platform is ready.
  - Checks if the base composite is deployed.

- Checks if the default revision is deployed.
- Checks if the new revision is not deployed.
- Checks whether the SOA composites that will be affected by the upgrade contain JDeveloper customizations. For more information, see Section 6.21, "Merging SOA Composite JDeveloper Customizations During SOA Preverification".

- Image Routing (IPM): Checks if the IPM server is up.

1.4 Installer User Interface

RUP Installer and Language Pack Installer provide a graphical user interface which allows you to control the behavior of the installer by the use of buttons, in cases where it encounters a failure. Note that the behavior of these buttons may vary, depending on whether it is a configuration assistant, or a step within a configuration assistant, that fails. The behavior also depends on whether a configuration assistant is mandatory. Each mandatory configuration assistants must complete successfully before proceeding to the next configuration assistant. For information about which configuration assistants are mandatory, see Section 1.3, "RUP Installer Configuration Assistants".

You can exit out of the installer in the event of a failure and restart from the point of failure. If a non-mandatory configuration assistant fails, and you continue to the next configuration assistant, you must restart the installer after it finishes the last configuration assistant. When you restart, the installer retries all failed configuration assistants. For more information about what to do when a configuration action fails, see Section 6.4, "General Troubleshooting During the Configuration Phase in GUI Mode".

An explanation of the usage of each button follows. Note that the buttons are available only in GUI mode, not in silent mode. For information about how to use the buttons during parallel processing of certain configuration assistants, see Section 1.4.7, "Parallel Configuration Assistants".

1.4.1 Abort Button

The **Abort** button allows you to skip a failed configuration assistant or step within a configuration assistant, and records the failure so it can be rerun when you restart the installation. After you abort a mandatory configuration assistant, the installer does not proceed and only the **Cancel** button is enabled. You must then resolve the cause of the failure and start the installer from this failure point. After you abort a non-mandatory configuration assistant, the installer proceeds to the next configuration assistant. This button is enabled only after a failure.

1.4.2 Cancel Button

The **Cancel** button allows you to stop an installer session after the failure of a mandatory action. This button is enabled only after a failure.

1.4.3 Close Button

The Windows **Close** button allows you to stop an installer session after a failure. This is enabled only after a failure.

1.4.4 Continue Button

The **Continue** button allows you to skip a a non-mandatory configuration assistant or failed step within a configuration assistant that is not mandatory, and records the failure. The installer then proceeds with the next step. When you rerun this installer session, the failed configuration actions are attempted again.

This button is enabled only for non-mandatory configuration assistants.

1.4.5 Next Button

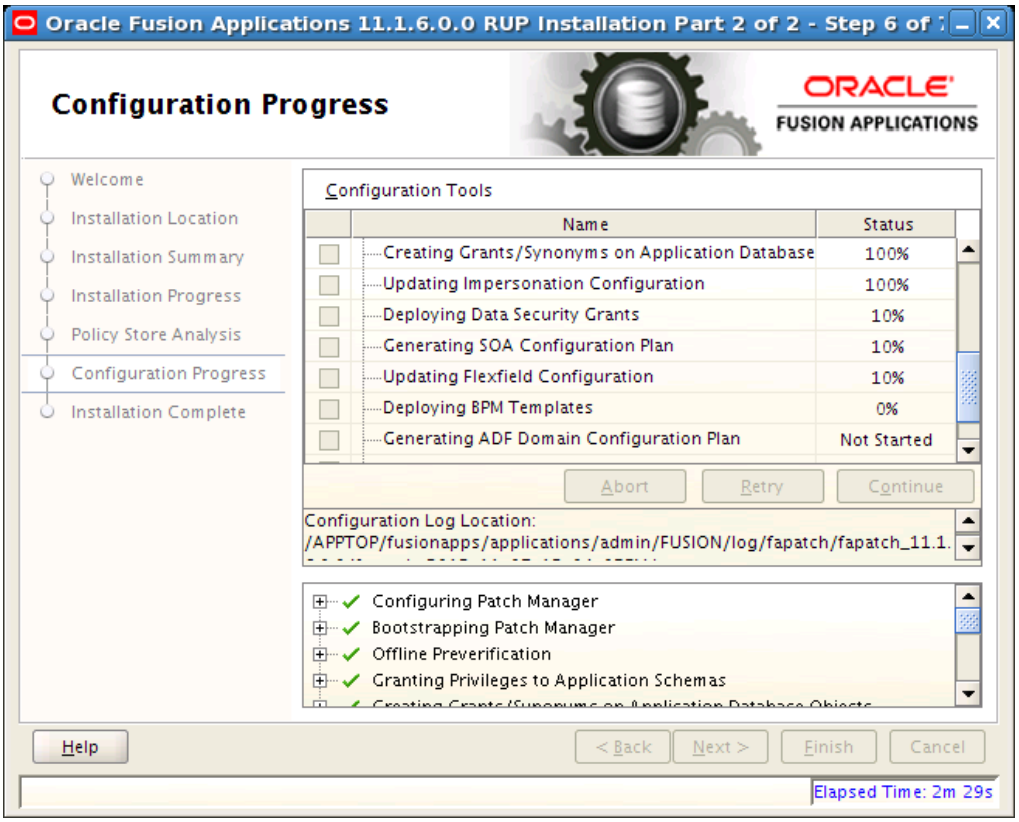
The **Next** button allows you to proceed to the next screen. This button is enabled only when all configuration assistants complete successfully in the current screen.

1.4.6 Retry Button

The **Retry** button allows you to rerun a failed configuration assistant, or a step within a configuration assistant. Use **Retry** when you know the cause of the failure and can resolve the issue during the current RUP Installer session.

1.4.7 Parallel Configuration Assistants

RUP Installer and Language Pack Installer support parallel processing of certain configuration assistants to improve performance. Parallel configuration assistants are organized by groups and all configuration assistants in a group start running at the same time. The installer proceeds to the next configuration assistant outside of the group, only after all parallel tasks in a group complete successfully. The following example depicts a group of configuration tasks that are running in parallel.



For information about what to do when one or more parallel tasks fail, see Section 6.4.2, "Troubleshoot Failures While Parallel Tasks Are Running".

1.5 Health Checker Utility

Health Checker is a command line utility that assists you in confirming that your system is in a state that would allow RUP Installer to run successfully. If Health Checker finds an issue that needs to be corrected, the description of the required corrective action displays on the console, in the Health Checker log file, and in an HTML summary report. This utility is delivered in the *REPOSITORY_LOCATION*/installers/farup/Disk1/upgrade/bin directory as hcplug.sh (Unix) and hcplug.cmd (Windows).

You run Health Checker before and after the upgrade. Health Checker calls plug-ins to perform its tasks. This section describes the tasks that Health Checker plug-ins run during the following phases of the upgrade process:

- Pre-Upgrade Tasks Performed by Health Checker Before Down Time
- Pre-Upgrade Tasks Performed by Health Checker During Down Time
- Post-Upgrade Tasks Performed by Health Checker

1.5.1 Pre-Upgrade Tasks Performed by Health Checker Before Down Time

You run Health Checker to perform the following tasks before down time:

- Verify Oracle Fusion Applications Version
- Verify the Compatibility of the OPatch Version in FA_ORACLE_HOME
- Verify Credentials in Oracle Directory Services Manager (ODSM)
- Verify Free and Total Memory
- Verify Open File Limit
- Verify Host Names (Unix Only)
- Verify Local Port Range Value
- Verify All Oracle Homes Are Registered in Central Inventory
- Verify DBMS_STATS Collection for MDS Schema in Oracle Fusion Applications Database
- Verify Flexfield Metadata
- Check For Unusable Indexes
- Check for Library Cache Load Lock
- Check for Repository Integrity

For more information, see Section 2.1.13, "Run Health Checker for Pre-Down Time Checks".

1.5.1.1 Verify Oracle Fusion Applications Version

This plug-in ensures that you have successfully installed 11*g* Release 5, (11.1.5.0.0).

1.5.1.2 Verify the Compatibility of the OPatch Version in FA_ORACLE_HOME

This plug-in verifies that your version of OPatch is compatible with Oracle Fusion Applications. If an incompatible version of OPatch exists in *FA_ORACLE_HOME*, errors can occur while applying patches and running RUP Installer.

1.5.1.3 Verify Credentials in Oracle Directory Services Manager (ODSM)

This plug-in verifies that a specific user, usually the `PolicyRWUser` user, is part of `cn=DirectoryAdminGroup`.

1.5.1.4 Verify Free and Total Memory

This plug-in verifies that the primordial host has enough memory for the upgrade. RUP Installer requires at least 6GB of free memory on the 64-bit domains to be available during the upgrade. RUP Installer also requires at least 6GB of free memory on the 64-bit primordial host that the installer is launched from, for the duration of the upgrade. This requirement of 6GB of free memory is in addition to the memory requirement for all servers, including the Administration Servers on the primordial host that is already up and running. Oracle also recommends at least 1GB of additional free memory on the primordial host during the upgrade as a safety net.

For example, if the BI domain is provisioned on the primordial host, then RUP Installer requires this 64-bit primordial host to have a minimum of 12GB of RAM. If you have two 64-bit hosts with the BI domain provisioned on a different host from the primordial host, then one host runs the Administration Server and the BI servers, while the other host runs RUP Installer, which requires a connection to the Administration Server that is running. If you run RUP Installer and the Administration Server on the same primordial host with insufficient memory, the Administration Server and Managed Servers may fail.

1.5.1.5 Verify Open File Limit

This plug-in verifies the open file limit. RUP Installer uses multiple workers for uploading database content. The number of workers used dictates the open file limit setting for the machine where you run the RUP Installer. To understand how the number of workers are calculated and the requirement for the open file limit setting for the workers, see "Patching Database Artifacts" in the *Oracle Fusion Applications Patching Guide*. For more information, see "Increase the Open Files Limit" in the *Oracle Fusion Applications Installation Guide*.

1.5.1.6 Verify Host Names (Unix Only)

This plug-in confirms that host names are correctly formatted in the `/etc/hosts` file. The `/etc/hosts` file is a network configuration file that associates IP addresses with host names and host alias names, if used. The following checks are performed by this plug-in:

- The /etc/hosts file contains an entry for the IP address 127.0.0.1, followed by the name `localhost`.
- The format of each host entry in `/etc/hosts` is `IP_address canonical_hostname [aliases]`. If the machine name is a logical host name and is different from the physical host name that is specified in `/etc/sysconfig/network`, the logical host name must be listed before the physical host.
- If the machine name is the same as the physical host name, there is no need to check the order of the host names.

1.5.1.7 Verify Local Port Range Value

This plug-in checks the local port range value in `/proc/sys/net/ipv4/ip_local_port_range`. The recommended value is `32768 61000`. If the range is set to any value below `32768`, a system process could potentially use a port that was assigned to one of the Managed Servers. Since RUP Installer requires all domains to be down, those ports are available for the system to use.

1.5.1.8 Verify All Oracle Homes Are Registered in Central Inventory

This plug-in verifies that the Oracle Business Intelligence, Global Order Processing, Web Tier, and Web Tier Common Oracle home directories are registered for use by Oracle Fusion Applications.

If you are upgrading from a previous release, Oracle homes are likely to be already registered properly. However, if this plug-in fails with an error, you must perform the corrective actions provided in the error message.

1.5.1.9 Verify DBMS_STATS Collection for MDS Schema in Oracle Fusion Applications Database

This plug-in confirms that `DBMS_STATS` has recently been run on the MDS schema in the Oracle Fusion Applications database. You must run `DBMS_STATS` on any schemas that are reported by Health Checker.

1.5.1.10 Verify Flexfield Metadata

This plug-in checks if there is a flexfields metadata violation that indicates that the Extensible Flexfields has a UI Page defined that references a flexfield context which has not been associated with the corresponding category or any of its parent categories.

1.5.1.11 Check For Unusable Indexes

This plug-in checks for unusable indexes in the Fusion schema of the Oracle Fusion Applications database.

1.5.1.12 Check for Library Cache Load Lock

This plug-in checks whether there are any database sessions that are holding a "library cache load lock" in the Fusion schema of the Oracle Fusion Applications database.

1.5.1.13 Check for Repository Integrity

This plug-in checks whether all required files are present in the repository and reports any missing files.

1.5.2 Pre-Upgrade Tasks Performed by Health Checker During Down Time

You run Health Checker during down time to confirm that there are no active processes that would interfere with the installer. Health Checker performs the following checks:

- Oracle Fusion Applications Patch Manager is not running
- Oracle Fusion Applications AutoPatch is not running in *FA_ORACLE_HOME* or *ATGPF_ORACLE_HOME*
- AD Administration is not running in *FA_ORACLE_HOME* or *ATGPF_ORACLE_HOME*

- No SQL sessions, jobs, or processes are running or are scheduled to be running against the database

For more information, see Section 2.2.6, "Run Health Checker for Down Time Checks".

1.5.3 Post-Upgrade Tasks Performed by Health Checker

You run Health Checker to perform the following post-upgrade tasks:

- Verify the Servers are Accessible
- Verify the Deployed Applications are Accessible
- Validate Whether Installed Languages Need to be Upgraded
- Verify Fusion IIR Setup (Oracle VM only)

For more information, see Section 4.17, "Run Health Checker for Post-Upgrade Checks".

1.5.3.1 Verify the Servers are Accessible

This plug-in confirms that all relevant Administration Servers and Managed Servers have a RUNNING status.

1.5.3.2 Verify the Deployed Applications are Accessible

This plug-in verifies that all deployed applications are up and running.

1.5.3.3 Validate Whether Installed Languages Need to be Upgraded

This plug-in verifies whether you have installed any languages in addition to US English. You must upgrade each installed language using Language Pack Installer.

1.5.3.4 Verify Fusion IIR Setup (Oracle VM only)

This plug-in verifies that InformaticaIR (IIR) is set up correctly on Oracle VM environments.

1.6 RUP Lite for RDBMS Utility

RUP Lite for RDBMS is a command line utility that performs the tasks required to update your Oracle Fusion Applications database before you upgrade.

RUP Lite for RDBMS can perform the following tasks in the following modes:

- **Validate mode:**
  - Validates database parameters as described in Table 1–3
- **Set database parameters mode:**
  - Sets database parameters to the values described in Table 1–3, if required
  - Restarts the database instance, if requested
- **Apply mode:**
  - Stops the listener and shuts down the database instance (optional)
  - Configures Oracle Configuration Manager (OCM) in disconnected mode, if required
  - Unzips Opatch, if it is available in *REPOSITORY_LOCATION*

- Applies patch set updates (PSUs) and one-off patches in *REPOSITORY_LOCATION*
- Applies downloaded one-off patches in the `11.1.6.0.0_post_repo_patches` directory
- Starts the listener and the database instance (optional)
- Runs `catbundle.sql` if any PSUs were applied
- Runs `catmetx.sql`

Table 1–3 displays the recommendations for tuning the database parameters. The `validate` mode of RUP Lite for RDBMS verifies whether these parameters contain the recommended value. The `setdbparameter` mode of RUP Lite for RDBMS updates the parameters to the recommended value.

Table 1–3 Recommended Values for Database Parameters

Parameter	Type	Location	Recommendation
DISK_ASYNCH_IO	Disk IO	Spfile/pfile	true
FILESYSTEMIO_OPTIONS	Disk IO	Spfile/pfile	unset so the database chooses a default value based on the platform
INBOUND_CONNECT_TIMEOUT_listener_name	Connection timeout	*TNS_ADMIN*/listener.ora	120
SQLNET.INBOUND_CONNECT_TIMEOUT	Connection timeout	*TNS_ADMIN*/sqlnet.ora	130

For more information, see Section 2.2.4, "Update the Oracle Fusion Applications Database".

1.7 RUP Lite for OVM Utility

The *RUP Lite for OVM* command line utility addresses the differences between a newly provisioned Oracle VM environment on the latest release and an Oracle VM environment provisioned in a previous release. You run RUP Lite for OVM only if you are running Oracle Fusion Applications in an Oracle VM environment that was created from the official releases of Oracle VM templates for Oracle Fusion Applications Release 2 (11.1.2) and higher. This utility is not applicable for any Oracle VM environments that are created using other methods.

You run RUP Lite for OVM in offline mode before RUP Installer runs, as described in Section 2.2.12, "Run RUP Lite for OVM - Offline Mode (Oracle VM Hosts Only)". After RUP Installer completes, you run RUP Lite for OVM in online mode, as described in Section 4.2, "Run RUP Lite for OVM - Online Mode (Oracle VM Hosts Only)", and then in post-root mode, as described in Section 4.3, "Run RUP Lite for OVM - Post-Root Mode (Oracle VM Hosts Only)".

RUP Lite for OVM implements several plug-ins that are designed specifically for Oracle VM environments. Each plug-in determines which nodes it needs to run on and whether it needs to be executed in offline, online, or post-root mode. Table 1–4 describes the plug-ins that are included in RUP Lite for OVM in offline mode.

Table 1–4 Offline Plug-ins for RUP Lite for OVM

Plug-in Name	Mandatory	Description
ValidateEnvironment	Yes	Checks if the node is a valid Oracle VM node. This plug-in always runs and has no properties.
SetupCredentials	Yes	Prompts for credentials and stores the results in a secure manner for other plug-ins to use. This plug-in always runs and only prompts for secure properties that are needed by other plug-ins that will run. If a plug-in does not run on the current node or is disabled, then its properties are not requested.
ApplyMemorySettings	No	Increases existing memory settings for WebLogic servers based on the latest Oracle recommendations and runs only on the `admin-apps` node. It updates settings to the higher of the current setting or the recommended setting. If recommended memory settings increase to a level where the Oracle VM's memory settings need to be increased, then the update to the Oracle VM must be done prior to running RUP Lite for OVM. Note that values that are higher in the environment compared to the reference values are not changed. Only lower values are increased.
SetServerPassphrase	Yes	Writes the following properties to `config.xml` on all nodes and domains using wlst commands: `server-private-key-pass-phrase-encrypted`, `custom-identity-key-store-pass-phrase-encrypted` , and `custom-trust-key-store-pass-phrase-encrypted`. This plugin runs only on the FA node because starting the servers populates these properties on each node.
GenerateOptimizedQueryPlans	Yes	Generates optimized query plans for Oracle MDS queries runs on the `admin-apps` node.
UpdateHTTPProxySettings	Yes	Adds `localhost` and `127.0.0.1` to the non-proxy list for all domains and runs on the `admin-apps` node.
UpdateWLSUmask	Yes	Updates the WLS umask in the WebLogic start scripts for each domain to allow Oracle Enterprise Manager Fusion Applications Control to manage incidents generated for each WebLogic server. It runs on the `admin-apps` node.
ConfigureODIAgent	Yes	Updates the ODIAgent settings in each domain that has ODI installed to point to the LBR host and port. It runs on the `admin-apps` node.

Table 1–5 describes the plug-ins that are included in RUP Lite for OVM in online mode.

Table 1–5 Online Plug-ins for RUP Lite for OVM

Plug-in Name	Mandatory	Description
ValidateEnvironment	Yes	Checks if the node is a valid Oracle VM node. This plug-in always runs and does not have any properties.

Table 1–5 (Cont.) Online Plug-ins for RUP Lite for OVM

Plug-in Name	Mandatory	Description
SetupCredentials	Yes	Prompts for credentials for online plug-ins and stores the results in a secure manner for other plug-ins to use. This plug-in always runs and only prompts for secure properties that are needed by other plug-ins that will run. If a plug-in does not run on the current node or is disabled, then its properties are not requested. You are prompted for the password twice.
UpdateSESDBConnection	Yes	Updates the SES instance with the correct database connection based on the values specified in `ovm-ha-deploy.properties`. This plug-in runs only on the secondary node.
DeployECSF	Yes	Deploys ECSF artifacts that are not yet deployed, such as search objects, search categories, and index schedules.
DisableWebchatConnections	Yes	Disables WebChat in Oracle WebCenter connections for environments that do not have WebChat installed.

Table 1–6 describes the plug-ins that are included in RUP Lite for OVM in post-root mode.

Table 1–6 Post-Root Plug-ins for RUP Lite for OVM

Plug-in Name	Mandatory	Description
RequireRoot	Yes	Sets the require root flag to true so that RUP Lite for OVM checks to ensure the root user is used for post-root mode.
ValidateEnvironment	Yes	Checks if the node is a valid Oracle VM node. This plug-in always runs and has no properties.
SetupCredentials	Yes	Prompts for credentials and stores the results in a secure manner for other plug-ins to use. This plug-in always runs and only prompts for secure properties that are needed by other plug-ins that will run. If a plug-in does not run on the current node or is disabled, then its properties are not requested.
UpdateResolvConf	No	Adds DNS name servers, search domains, and other options by updating `/etc/resolv.conf`. This plug-in runs on all nodes.
EnableEMRemoteMonitoring	Yes	Enables remote monitoring of NFS file systems from within Fusion Applications Control.
ModifyOutputOwner	Yes	Modifies RUP Lite output files to be owned by the applications user instead of root.

1.8 RUP Lite for OHS Utility

The *RUP Lite for OHS* command line utility upgrades WebGate, OHS, and *ORACLE_COMMON*. The following steps are performed by RUP Lite for OHS to accomplish this upgrade:

- Stop Oracle Process Manager and Notification Server (OPMN) processes and start the OPMN server.
- Apply OPatches from the repository to WebGate, OHS, and *ORACLE_COMMON*.

- Apply manually downloaded OPatches to WebGate, OHS, and *ORACLE_COMMON*.
- Update the OHS configuration files.
- Apply OHS settings changes.
- Start the OPMN server process.
- Reassociate OHS to the Common Domain.
- Start the OHS instance.

For more information, see Section 4.1, "Upgrade the Web Tier Using RUP Lite for OHS".

1.9 RUP Lite for BI Utility

The *RUP Lite for BI* command line utility automates changes to `BIInstance` configurations files required for Oracle Business Intelligence after upgrading. For more information, see Section 4.4, "Run RUP Lite for BI".

2

Preparing to Upgrade

This chapter describes tasks you must perform before you start the upgrade.

This chapter contains the following topics:

2.1 Pre-Upgrade Steps - Before Down Time

This section describes the following preparation steps for upgrading to Release 6, all of which can be performed before your scheduled down time.

2.1.1 Before You Begin

Before you begin the upgrade, you should have access to the following documentation:

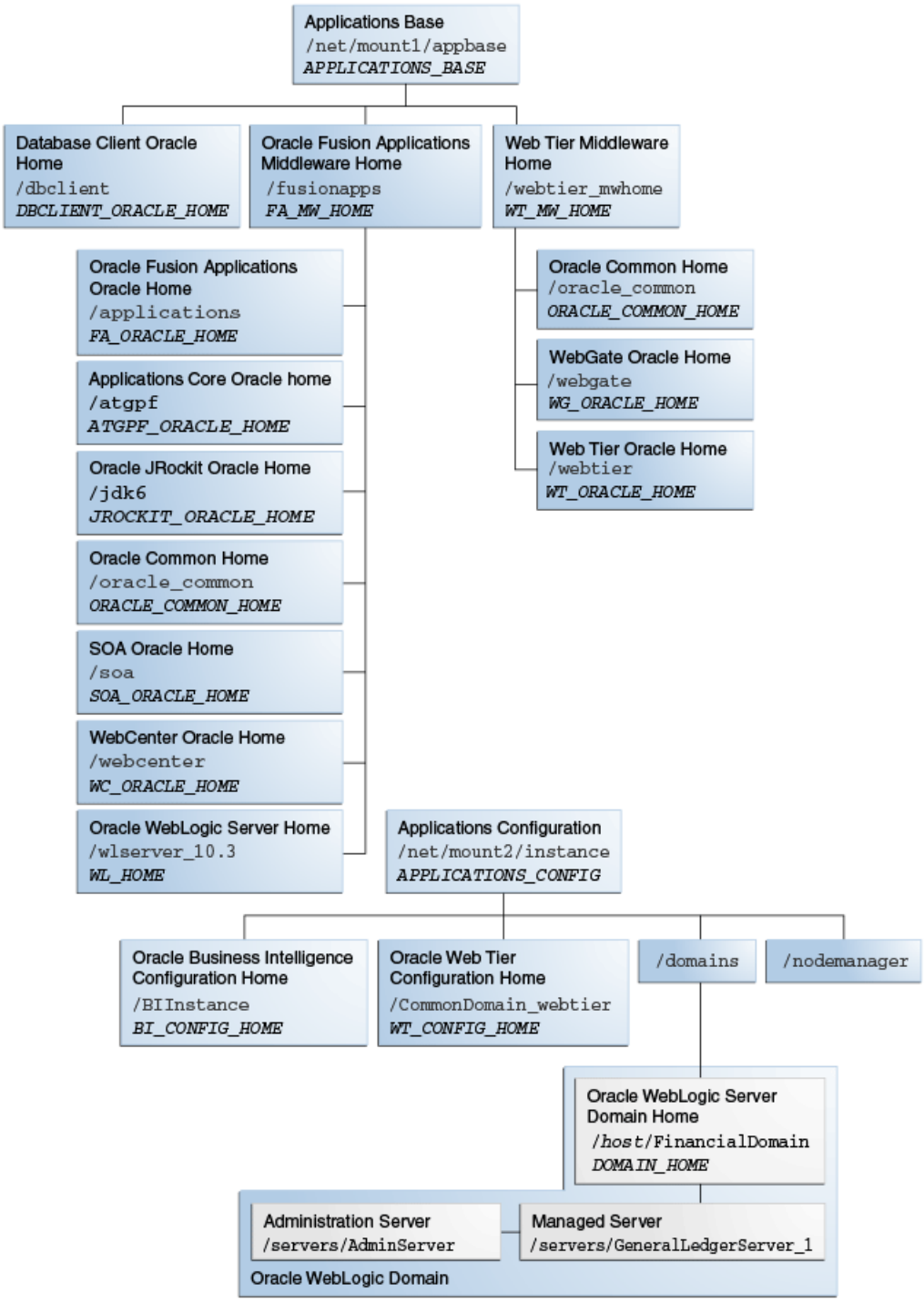
- RUP Installer documentation from the previous release
- Oracle Fusion Applications Release Notes, 11g Release 5 (11.1.5) for the previous release
- Oracle Fusion Applications Release Notes, 11g Release 6 (11.1.6) for the release you are upgrading to

You should also have a clear understanding of the following hosts and directories:

- **Primordial host**: The primordial host is where the Administration Server for the Common Domain runs
- ***APPLICATIONS_CONFIG***: The top-level directory for the Oracle Fusion Applications configuration files
- ***APPLICATIONS_BASE***: The top-level directory for the Oracle Fusion Applications binaries
- ***FA_ORACLE_HOME***: The directory named `applications`, located under the Oracle Fusion Applications Middleware home `fusionapps` directory

Figure 2–1 shows the relationship of the home directories using the Oracle Fusion Financials product family on a UNIX environment as an example. This figure does not show all subdirectories under *APPLICATIONS_BASE* and *APPLICATIONS_CONFIG*. For example, the *APPLICATIONS_CONFIG* directory contains several more directories for component-specific configuration files. Also, Oracle Database and Oracle Identity Management are not represented in this figure, as they are installed separately. For more information, see "Provisioned Oracle Fusion Applications Home Directories" in the *Oracle Fusion Applications Administrator's Guide*.

Figure 2–1 Relationship of Home Directories



2.1.2 Download the Release Repository

The release repository contains RUP Installer and Oracle Fusion Middleware patches that are required to upgrade to the next release in an existing Oracle Fusion Applications environment. You download the repository from the Oracle Fusion Applications Product Media Package to a location of your choice. This directory is referred to as *REPOSITORY_LOCATION*.

2.1.2.1 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.

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

- **Oracle Software Delivery Cloud Portal**: 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 Release repository and gain access to the Oracle Fusion Applications documentation library.

2.1.2.2 Downloading From the Oracle Software Delivery Cloud Portal

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 repository (in zipped format). You can download the repository to a location of your choice.
4. Extract the contents of all 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. The installers are normally located in the `installers` subdirectory under *`REPOSITORY_LOCATION`*.

> **Note:** Avoid creating the repository in a deeply nested directory on Windows. The Windows PATH variable has a limited size, and long directory names may cause it to overflow. For example, `c:\work\my_repository` is a better choice than `c:\Work\WorkInProgress\FusionApps\FusionAppsv1\Nov2011\tempfiles\my_repository`.

2.1.2.3 RUP Installers

Table 2–1 lists the installers in the repository.

Table 2–1 RUP Installers

Media Label Name	Staging Destination
RUP Installer	(Unix) *`REPOSITORY_LOCATION`*/installers/farup/Disk1/runInstaller (Windows) *`REPOSITORY_LOCATION`*\installers\farup\Disk1\setup.exe

2.1.3 Create a Repository for Post-Release 6 Patches

Create a directory named `11.1.6.0.0_post_repo_patches` in the parent directory of your *`APPLICATIONS_BASE`* directory. For example, if *`APPLICATIONS_BASE`* is `/u01/APPTOP`, the patch directory is `/u01/11.1.6.0.0_post_repo_patches`. For more information about the *`APPLICATIONS_BASE`* directory, see Section 2.1.1, "Before You Begin".

> **Note:** Oracle recommends you use this exact directory name and location because upgrade-related utilities will find it automatically. See Section 3.1, "Run RUP Installer" for more information. Downloading a patch to the incorrect directory could result in failure.

2.1.4 Download Mandatory Post-Release 6 Patches

RUP Installer can apply mandatory post-installation patches that are required by Oracle Fusion Applications if you download the patches from My Oracle Support before you start the upgrade. Note that this feature relates only to patches that are documented in Oracle Fusion Applications Release Notes, 11g Release 6 (11.1.6) and that are specifically required for Release 6 (11.1.6).

> **Note:** If there are no post-installation patches in Oracle Fusion Applications Release Notes, 11g Release 6 (11.1.6) when you run RUP Installer, there is no action required for this step.

Perform the following steps to download the patches:

1. Download patch 16065661 from My Oracle Support and unzip this patch to any directory. After unzipping, the patch directory contains two files, `PostRepoPatchDirs.zip` and `postRepoPatchDirsREADME.txt`.
2. Unzip `PostRepoPatchDirs.zip` in the `11.1.6.0.0_post_repo_patches` directory to create the directory structure for the patches you download.
3. Review the README file that was created when you unzipped `PostRepoPatchDirs.zip`, to learn how the subdirectories under the `11.1.6.0.0_post_repo_patches` directory map to the corresponding components, such as Oracle Fusion Middleware, database client, and database server components.
4. Refer to the Section titled "Upgrade Known Issues, Pre-Upgrade Known Issues, Mandatory Patches to be Downloaded" in Oracle Fusion Applications Release Notes, 11g Release 6 (11.1.6) to find any additional patches to be downloaded from My Oracle Support.

   Table 2–2 describes the types of patches that you download and where to find the list of patches in Oracle Fusion Applications Release Notes, 11g Release 6 (11.1.6).

Table 2–2 Mandatory Patches to be Downloaded

Type of Patches	Location in Oracle Fusion Applications Release Notes, 11g Release 6 (11.1.6)	Configuration Assistant or Utility That Applies Patches
Oracle Database	Upgrade Known Issues, Pre-Upgrade Known Issues, Mandatory Patches to be Downloaded, Oracle Database	RUP Lite for RDBMS

Table 2–2 (Cont.) Mandatory Patches to be Downloaded

Type of Patches	Location in Oracle Fusion Applications Release Notes, 11g Release 6 (11.1.6)	Configuration Assistant or Utility That Applies Patches
Oracle Fusion Middleware	Upgrade Known Issues, Pre-Upgrade Known Issues, Mandatory Patches to be Downloaded, Oracle Fusion Middleware	Apply Pre-PSA Middleware Patches and Apply Post-PSA Middleware Patches
Oracle HTTP Server (OHS)	Upgrade Known Issues, Pre-Upgrade Known Issues, Mandatory Patches to be Downloaded, Oracle HTTP Server (OHS)	RUP Lite for OHS
Oracle Fusion Applications	Upgrade Known Issues, Pre-Upgrade Known Issues, Mandatory Patches to be Downloaded, Oracle Fusion Applications	Apply Downloaded Patches

5. Download and unzip the patches listed in the Release Notes for Oracle Fusion Applications 11g Release 6 (11.1.6), into the appropriate subdirectory under the `11.1.6.0.0_post_repo_patches` directory, based on the mapping information in the README file described in Step 3. Downloading a patch to the incorrect directory could result in failure. Note that when you download the Oracle Fusion Applications patches, you must use the Patch Plan feature in My Oracle Support. If you cannot create a patch plan because you do not have Oracle Configuration Manager (OCM) configured, you can create the patch plan by running the script in Step 6.

   An excerpt from a sample My Oracle Support patch plan follows:

```
<results>
<generated_date in_epoch_ms="..."></generated_date>
<plan>
<name>patchplan</name>
<type>patch</type>
<description/>
<last_analyzed></last_analyzed>
<oracle_home></oracle_home>
<host_name></host_name>
<org_id></org_id>
<conflict_free_list>
<patch>
<id>6530099</id>
<name>6530099</name>
<abstract>db</abstract>
<status></status>
<platform></platform>
<release></release>
<language></language>
<install_step></install_step>
</patch>
<patch>
<id>16021106</id>
<name>16021106</name>
<abstract>db</abstract>
<status></status>
<platform></platform>
```

```
<release></release>
<language></language>
<install_step></install_step>
</patch>
<patch>
<id>6712</id>
<name>6712</name>
<abstract>soa</abstract>
<status></status>
<platform></platform>
<release></release>
<language></language>
<install_step></install_step>
</patch>
<patch>
<id>731301</id>
<name>731301</name>
<abstract>db</abstract>
<status></status>
<platform></platform>
<release></release>
<language></language>
<install_step></install_step>
</patch>
<patch>
<id>9912345</id>
<name>9912345</name>
<abstract>soa</abstract>
<status></status>
<platform></platform>
<release></release>
<language></language>
<install_step></install_step>
</patch>
<patch>
<id>11112</id>
<name>11112</name>
<abstract>db</abstract>
<status></status>
<platform></platform>
<release></release>
<language></language>
<install_step></install_step>
</patch>
</conflictfree_list>
</plan>
</results>
```

6. Run this step if you cannot create a My Oracle Support patch plan for the Oracle Fusion Applications patches. This step assumes that you have downloaded the patches as described in Step 5 without using the Patch Plan feature.

   The Perl script, `adCreateMosPlan.pl`, reads the patch metadata from the downloaded Oracle Fusion Applications patches to generate the patch plan file, `mosdownload.xml`. To run this script, use the Perl executable from *`APPLICATIONS_BASE`*`/dbclient/perl/bin` for Unix platforms and *`APPLICATIONS_BASE`*`\dbclient\perl\5.8.3\bin\MSWin32-x64-multi-thread` for Windows.

   Use the following command syntax to create the patch plan file:

   ```
   (Unix)
   ```

```
setenv PERL5LIB APPLICATIONS_BASE/dbclient/perl/lib/5.8.3:APPLICATIONS_
BASE/dbclient/perl/lib/site_perl/5.8.3/:
APPLICATIONS_BASE/dbclient/perl/lib/site_perl

$APPLICATIONS_BASE/dbclient/perl/bin/perl
$REPOSITORY_LOCATION/installers/farup/Disk1/upgrade/bin/adCreateMosPlan.pl
download_location_for_Oracle Fusion Applications_patches_only

(Windows)
SET PERL5LIB=APPLICATIONS_BASE\dbclient\perl\5.8.3;APPLICATIONS_
BASE\dbclient\perl\site\5.8.3\;APPLICATIONS_BASE\dbclient\perl\site

%APPLICATIONS_BASE%\dbclient\perl\5.8.3\bin\MSWin32-x64-multi-thread\perl
%REPOSITORY_LOCATION%\installers\farup\Disk1\upgrade\bin\adCreateMosPlan.pl
download_location_for_Oracle Fusion Applications_patches_only
```

2.1.5 Download Other Patches Required by the Upgrade

Download the following patches:

1. Download patch 14543240 to be used for finding conflicting patches, as described in Section 2.1.15, "Find Conflicting Patches".
2. Download the version of OPatch that is delivered in patch 6880880, version 11.2.0.3.3, which is used in Section 2.2.4.1, "Run RUP Lite for RDBMS".

2.1.6 Register Database Schema Information

Some new Release 6 features require that all database schemas be registered in the credential store. Perform the following steps to ensure that all database schemas are registered in the credential store. You can perform some of the steps in interactive mode or non-interactive mode. Steps 1 through 3 are the same for both modes.

1. Copy the following file to *FA_ORACLE_HOME* and unzip it there:

   ```
   REPOSITORY_LOCATION/installers/pre_install/pcubundle.zip
   ```

   If files already exist in this directory, run unzip in overwrite mode so that existing files are overwritten.

2. Ensure that the following files in the *FA_ORACLE_HOME*`/lcm/util/bin` directory have execute permission: `templateGen.sh`, `iniGen.sh`, `faschemasutil.sh`, and `schemaPasswordChangeTool.sh`.

3. Run the `templateGen` utility to create the `csf_template.ini` template file.

   ```
   (Unix)
   cd APPLICATIONS_BASE/fusionapps/applications/lcm/util/bin
   setenv JAVA_HOME java_home_location
   templateGen.sh -appbase APPLICATIONS_BASE

   (Windows)
   cd APPLICATIONS_BASE\fusionapps\applications\lcm\util\bin
   set JAVA_HOME=java_home_location
   templateGen.cmd -appbase APPLICATIONS_BASE
   ```

   For the -appbase argument, specify the complete directory path to the *APPLICATIONS_BASE* directory.

   The `templateGen` utility generates the following template files in the config directory:

   - `standard_template.ini`

- csf_template.ini

Complete this process by using interactive or non-interactive mode:

- Register Database Schema Information in Non-Interactive Mode
- Register Database Schema Information in Interactive Mode

For more information about the utilities used in this process, see "Changing Oracle Fusion Applications Passwords in the Oracle Database" in the *Oracle Fusion Applications Administrator's Guide*.

2.1.6.1 Register Database Schema Information in Non-Interactive Mode

Perform the following steps for non-interactive mode:

1. Make a copy of csf_template.ini from the *APPLICATIONS_BASE*/fusionapps/applications/lcm/util/config directory. In this example, the copy is named csf_plain.ini.
2. Manually edit csf_plain.ini as follows:
   - Add the correct value for the master_password property. This value must be 8 or more characters.
   - For each line that contains #text# or #password#, replace #text# or #password# with the correct values for your environment.

   Note: Do not alter csf_plain.ini beyond these changes, to prevent incorrect results.

3. Create an encrypted version of csf_plain.ini and delete the clear-text input file. This step requires an encryption tool, such as the lcmcrypt tool or the Linux gpg tool, that takes an encrypted file and a passphrase and writes the decrypted contents to the standard output. In the following example, the command reads the passphrase from the standard input and produces an encrypted output file, csf_plain.ini.enc.

   ```
   echo password | ./lcmcrypt.sh -encrypt -inputfile csf_plain.ini
   ```

4. Run iniGen.sh in non-interactive mode, which also requires a decryption tool, to take an encrypted file and a passphrase and write the decrypted contents to the standard output. iniGen.sh uses the value of the master_password property to encrypt all other passwords in the generated input file. It also alters the value of the master_password property back to master_password=ignore_me in the generated input file. Note that the master password you use in the command is the same password that should be added in csf_plain.ini, rather than "ignore_me" in non-interactive mode.

   The following example uses lcmcrypt:

   ```
   cd APPLICATIONS_BASE/fusionapps/applications/lcm/util/bin

   echo password | ./lcmcrypt.sh -decrypt -inputfile csf_plain.ini.enc |
   ./iniGen.sh -nonInteractive -templatefile ../config/csf_template.ini
   -outputfile ../config/csf_encrypted.ini -appbase APPLICATIONS_BASE
   ```

   The call to lcmcrypt reads the passphrase from the standard input and writes the clear text version of csf_plain.ini.enc to standard output, which is then piped to the standard input of iniGen.sh.

5. Run `schemaPasswordChangeTool.sh` to seed CSF keys, as shown in the following example:

```
cd APPLICATIONS_BASE/fusionapps/applications/lcm/util/bin

echo master_password | ./schemaPasswordChangeTool.sh -inputfile ../config/ csf_
encrypted.ini -appbase APPLICATIONS_BASE
```

The schema password change tool uses the master password from standard input to decrypt entries in the input file. The tool requires that the INTERNAL section have the `ini.type=CSF` property to run in CSF mode, which then inserts and updates only CSF entries.

2.1.6.2 Register Database Schema Information in Interactive Mode

Perform the following steps for interactive mode:

1. Run the `iniGen` command to create the `csf_encrypted.ini` input file.

Use the template file you created in Step 3, and write the `csf_encrypted.ini` input file to the same directory as the template file. Both of these files should be in the *APPLICATIONS_BASE*`/fusionapps/applications/lcm/util/config` directory. The `iniGen.sh` command prompts for all required values, including the password for all relevant database schemas. It also prompts for a master password for encrypting entries in the input file.

Note: If your `sys` password is different from other schema passwords, select **no** when responding to the following question: **"Do you want to update the same password for all schemas (yes/no)? default yes"**.

```
(Unix)
cd APPLICATIONS_BASE/fusionapps/applications/lcm/util/bin
./iniGen.sh -appbase APPLICATIONS_BASE -templatefile ../config/csf_template.ini
-outputfile ../config/csf_encrypted.ini

(Windows)
cd APPLICATIONS_BASE\fusionapps\applications\lcm\util\bin
iniGen.cmd -appbase APPLICATIONS_BASE -templatefile ..\config\csf_template.ini
-outputfile ..\config\csf_encrypted.ini
```

2. Ensure that the Common Domain Administration server is up. Then run the `schemaPasswordChangeTool` command to ensure all database schemas are registered in the credential store. This command prompts for a master password for decrypting entries in the input file.

```
(Unix)
cd APPLICATIONS_BASE/fusionapps/applications/lcm/util/bin
./schemaPasswordChangeTool.sh -appbase APPLICATIONS_BASE -inputfile
../config/csf_encrypted.ini

(Windows)
cd APPLICATIONS_BASE\fusionapps\applications\lcm\util\bin
schemaPasswordChangeTool.cmd -appbase APPLICATIONS_BASE -inputfile
..\config\csf_encrypted.ini
```

2.1.7 Confirm Database Settings

Refer to Release Notes for Oracle Fusion Applications 11g Release 6 (11.1.6) to verify that your database and Sql*Net tuning parameters are set properly to avoid timeout errors during the upgrade.

2.1.8 Confirm JDeveloper Customizations Can Be Merged

If you performed JDeveloper customizations to a SOA composite and then you deployed the composite to the SOA runtime, you must perform manual steps to merge your customizations during the installation. To ensure that your customizations can be merged successfully, review the recommendations in "Merging Runtime Customizations from a Previously Deployed Revision into a New Revision" in the *Oracle Fusion Applications Extensibility Guide* before you start RUP Installer.

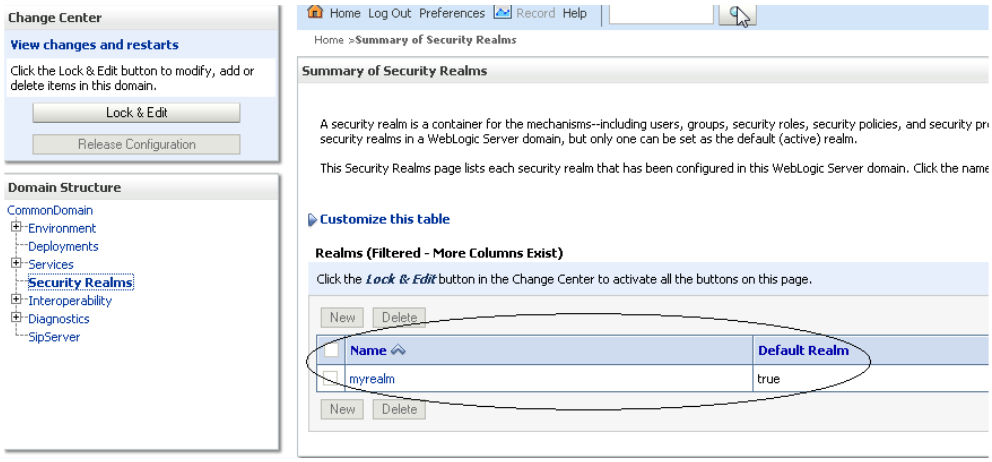
You will merge your customizations after the **SOA Preverification** configuration assistant fails during the installation. For more information, see Section 6.21, "Merging SOA Composite JDeveloper Customizations During SOA Preverification".

2.1.9 Maintain Versions of Customized BI Publisher Reports

Ensure that you have your own versions of any customized BI Publisher reports. If a release includes an update to a catalog object that was delivered with an Oracle Fusion application, the patch will overwrite any customizations applied to the original report. For more information, see "Before You Begin Customizing Reports" in the *Oracle Fusion Applications Extensibility Guide*.

2.1.10 Verify the Default Realm Name is myrealm

RUP Installer expects the default realm name to be `myrealm` for the Common Domain. Verify that you have not changed this value to any other name, because changing the name to anything other than `myrealm` causes RUP Installer to fail. Log in to the WLS Console for the Common Domain and click **Security Realms** on the domain structure pane. A list of realms displays, where you can verify that there is an entry for `myrealm` and that it is the default realm.



2.1.11 Save WebLogic Configuration Changes

RUP Installer makes WebLogic configuration changes using WebLogic Scripting Tool (WLST), which may overwrite any unsaved changes. Ensure that any pending WebLogic configuration changes are either activated or discarded. For more

information, see "Configuring Existing WebLogic Domains" in *Oracle Fusion Middleware WebLogic Scripting Tool Command Reference.*

2.1.12 Set Environment Variables

Set the `APPLICATIONS_BASE` and `REPOSITORY_LOCATION` environment variables. Set the `APPLICATIONS_BASE` environment variable to point to the directory that contains Oracle Fusion Applications. For example, if Oracle Fusion Applications is installed in `/server01/APPTOP/fusionapps`, then set the `APPLICATIONS_BASE` environment variable to `/server01/APPTOP`. Set the `REPOSITORY_LOCATION` environment variable to point to the root directory where the repository is staged, as described in Section 2.1.2, "Download the Release Repository".

Examples follow:

```
(Unix)
setenv APPLICATIONS_BASE /server01/APPTOP/
setenv REPOSITORY_LOCATION /server01/Release6Repo/

(Windows)
set APPLICATIONS_BASE=\server01\APPTOP\
set REPOSITORY_LOCATION=\server01\Release6Repo\
```

Note: Set these environment variables on all hosts that share the same *`APPLICATIONS_BASE`* before running all upgrade tools and utilities mentioned in this guide.

2.1.13 Run Health Checker for Pre-Down Time Checks

Run the Health Checker utility directly from *`REPOSITORY_LOCATION`* and from the primordial host. You can run these checks any number of times prior to your down time. Ensure that you set the environment variables described in Section 2.1.12, "Set Environment Variables".

For more information about Health Checker, see Section 1.5.1, "Pre-Upgrade Tasks Performed by Health Checker Before Down Time".

Run Health Checker using the following command syntax:

```
(Unix)
$REPOSITORY_LOCATION/installers/farup/Disk1/upgrade/bin/hcplug.sh -manifest
$REPOSITORY_LOCATION/installers/farup/Disk1/upgrade/config/PreDowntimeChecks.xml
[-DlogLevel=log_level]

(Windows)
%REPOSITORY_LOCATION%\installers\farup\Disk1\upgrade\bin\hcplug.cmd -manifest
%REPOSITORY_LOCATION%\installers\farup\Disk1\upgrade\config\PreDowntimeChecks.xml
[-DlogLevel=log_level]
```

Review the Health Checker log file or the HTML summary report to see if any errors occurred that require corrective action. The log file and the HTML summary are located in *`APPLICATIONS_CONFIG`*`/fapatch/logs/`*`release_version`*`/healthchecker`.

After you resolve the issue that caused the error, start Health Checker again to run the failed tasks. You must rerun Health Checker until there are no failed tasks. For more information, see Section 6.25, "Troubleshooting Health Checker Pre-Down Time Checks".

2.1.14 Register Oracle Homes in Central Inventory (Windows Only)

Oracle Provisioning records installation information about the following Oracle homes separately from information about other products: Oracle Business Intelligence (Oracle BI), Oracle Global Order Processing (GOP), Web Tier, and Web Tier Common Oracle home. RUP Installer expects information about all products to be recorded in the same place. For more information about home directories, see "Provisioned Oracle Fusion Applications Home Directories" in the *Oracle Fusion Applications Administrator's Guide*.

The following steps describe how to manually register all missing Oracle homes in central inventory.

1. Verify that the default Inventory Pointer file points to the central inventory on the primordial host on which RUP Installer runs. The default Inventory Pointer is located in the registry key, `\\HKEY_LOCAL_MACHINE\\Software\Oracle\inst_loc`.
2. Run `attachHome` from the BI Oracle home, for example, *APPLICATIONS_BASE*`\fusionapps\bi`.

   `(Windows)` *BI_HOME*`\oui\bin\attachHome.bat -jreLoc` *JAVA_HOME_LOCATION*

   Note: Rerunning the `ATTACH_HOME` command does not cause any issues.

3. Run `attachHome` from the GOP Oracle home, for example, *APPLICATIONS_BASE*`\fusionapps\gop`.

   `(Windows)` *GOP_HOME*`\oui\bin\attachHome.bat -jreLoc` *JAVA_HOME_LOCATION*

4. Run `attachHome` from the Web Tier Oracle home, for example, *APPLICATIONS_BASE*`\webtier_mwhome\webtier`.

   `(Windows)` *WEBTIER_HOME*`\oui\bin\attachHome.bat -jreLoc` *JAVA_HOME_LOCATION*

5. Run `attachHome` from the Web Tier Common Oracle home, for example, *APPLICATIONS_BASE*`\webtier_mwhome\oracle_common`.

   `(Windows)` *WEBTIER_COMMON_HOME*`\oui\bin\attachHome.bat -jreLoc` *JAVA_HOME_LOCATION*

6. Run `attachHome` from the Web Tier Webgate Oracle home, for example, *APPLICATIONS_BASE*`\webtier_mwhome\webgate`.

   `(Windows)` *WEBTIER_WEBGATE_HOME*`\oui\bin\attachHome.bat -jreLoc` *JAVA_HOME_LOCATION*

7. Run `attachHome` from the Oracle Common Oracle home, for example, *APPLICATIONS_BASE*`\fusionapps\oracle_common`.

   `(Windows)` *COMMON_HOME*`\oui\bin\attachHome.bat -jreLoc` *JAVA_HOME_LOCATION*

8. Register the dependency between the BI Oracle home and Oracle Common Oracle home.
   a. Back up the existing file, `C:\ProgramFiles\Oracle\Inventory\ContentsXML\inventory.xml`.
   b. Update this `inventory.xml` file as follows:

```
<HOME NAME="OH198367808" LOC="APPLICATIONS_BASE/fusionapps/bi" TYPE="O"
IDX="12">
   <DEPHOMELIST>
```

```
      <DEPHOME LOC="APPLICATIONS_BASE/fusionapps/oracle_common"/>
   </DEPHOMELIST>
</HOME>
```

9. Register the dependency between Web Tier Oracle home and Web Tier Common Oracle home.

   a. Back up the existing file, `C:\ProgramFiles\Oracle\Inventory\ContentsXML\inventory.xml`.

   b. Update this `inventory.xml` file as follows:

```
<HOME NAME="OH987588708" LOC="APPLICATIONS_BASE/webtier_mwhome/webtier"
TYPE="O" IDX="13">
   <DEPHOMELIST>
      <DEPHOME LOC="APPLICATIONS_BASE/webtier_mwhome/oracle_common"/>
   </DEPHOMELIST>
</HOME>
```

10. Verify that the central inventory now contains the correct GOP, BI, and Web Tier information. Open the `inventory.xml` file from the `ContentsXML` subdirectory in your central inventory directory using a text editor. Verify that there are entries for GOP and for BI, and that the BI entry lists the Oracle Common dependency you specified. Do the same for Web Tier information.

    Example entries in `inventory.xml`:

```
<HOME NAME="OH1109401105" LOC="APPLICATIONS_BASE/fusionapps/gop" TYPE="O"
IDX="11">
<HOME NAME="OH198367808" LOC="APPLICATIONS_BASE/fusionapps/bi" TYPE="O"
IDX="12">
   <DEPHOMELIST>
      <DEPHOME LOC="APPLICATIONS_BASE/fusionapps/oracle_common"/>
   </DEPHOMELIST>
</HOME>
<HOME NAME="OH987588708" LOC="APPLICATIONS_BASE/webtier_mwhome/webtier"
TYPE="O" IDX="13">
   <DEPHOMELIST>
      <DEPHOME LOC="APPLICATIONS_BASE/webtier_mwhome/oracle_common"/>
   </DEPHOMELIST>
</HOME>
<HOME NAME="OH1271096710" LOC="APPLICATIONS_BASE/webtier_mwhome/oracle_common"
TYPE="O" IDX="14">
   <REFHOMELIST>
      <REFHOME LOC="APPLICATIONS_BASE/webtier_mwhome/webtier"/>
   </REFHOMELIST>
</HOME>
```

2.1.15 Find Conflicting Patches

If you installed any post-Release 5 Oracle Fusion Middleware one-off patches on your Oracle Fusion Applications environment, they may conflict with patches in the Release 6 repository. To avoid this issue, you must obtain the list of conflicting patches, download the equivalent post-Release 6 one-off patches, and run the patch removal script.

Perform the following steps to obtain the list of conflicting patches:

1. Follow the instructions in the README.txt file of patch 14543240, which you downloaded in Section 2.1.5, "Download Other Patches Required by the Upgrade",

to run the script to obtain the list of conflicting patches. You must run this script on the following hosts: RDBMS, IDM, OHS, and the primordial host.

Keep a copy of the conflicting patches report for retrieval in the case of failure or restore. Note that the conflict checker maintains separate log files every time you run it by labeling the log directory with a timestamp.

2. Contact Oracle Support to obtain any post-Release 6 patches that provide equivalent functionality that will be lost if the conflicts are rolled back. Download these patches to the location mentioned in Section 2.1.4, "Download Mandatory Post-Release 6 Patches". You will run the patch removal script in Section 2.2, "Pre-Upgrade Steps - During Down Time".

2.1.16 Validate Domain Directories

If you followed steps to scaleout hosts, you may have added the Administration Server of the scaled out host to a new machine. This section provides the steps to temporarily add the Administration Server back to the originally provisioned machine so that all domain directories can be found by RUP Installer. During post-upgrade steps, you add the Administration Server back to the machine that was created during scaleout.

Perform the following steps to run the validation for domain directories and to temporarily update the machine for Administration Servers, if needed.

1. Unzip `validatedomains.zip` into any directory on the primordial host.
2. Run the `validatedomains` utility:

```
(Unix) ./validatedomains.sh APPLICATIONS_BASE
(Windows) validatedomains.bat APPLICATIONS_BASE
```

3. If the utility reports any domains that failed the validation, perform the following steps on the Administration Server of each of the reported domains:
   a. Log in to the WebLogic console for the domain.
   b. Navigate to Environment, then Machines.
   c. Find the machine that corresponds to the hostname for which the Administration Server was initially provisioned.
   d. Click on the machine and go to the Servers tab. Note that the Administration Server should not appears on the list of servers. If it does appear on the list, either this domain passed validation or this is not the originally provisioned machine for the Administration Server.
   e. Click **Lock & Edit** to make changes.
   f. Click **Add**.
   g. Select the AdminServer and click **Finish**.
   h. Click **Activate Changes** to apply the changes.

2.1.17 Verify Ownership and Permissions on Domains

Verify that all files under the `APPLICATIONS_CONFIG` directory are owned and readable by the operating system user who is running the upgrade.

2.2 Pre-Upgrade Steps - During Down Time

This section describes the following preparation steps for upgrading to Release 6, all of which must be performed during your system down time.

- Stop Index Schedules and Deactivate Index Optimization
- Verify the Status of Servers and Processes
- Upgrade Oracle Identity Management Domain to 11g Release 6 (11.1.6)
- Update the Oracle Fusion Applications Database
- Run "catmetx.sql"
- Run Health Checker for Down Time Checks
- Perform Required Backups
- Update JRE_MEMORY_OPTIONS (Windows Only)
- Remove Conflicting Patches From the Primordial Host
- Enable Anonymous Binds in Oracle Internet Directory
- Remove the /u01/lcm Directory (Oracle VM Hosts Only)
- Run RUP Lite for OVM - Offline Mode (Oracle VM Hosts Only)
- Confirm the OPSS Security Store is Running
- Start Servers That Were Added After Provisioning

2.2.1 Stop Index Schedules and Deactivate Index Optimization

This step is run by a shell script, `runSESDisableIndexOptimizer.sh` (`runSESDisableIndexOptimizer.bat` for Windows), located in the *REPOSITORY_LOCATION*`/installers/farup/Disk1/upgrade/bin` directory. The script calls the Oracle Secure Enterprise Search (Oracle SES) `searchadmin` utility in order to stop Index Schedules that have one of the following statuses: LAUNCHING, EXECUTING, STOPPING, or RUNNING. After all Index Schedules have been stopped, Index Optimization is disabled.

Ensure the environment variables described in Section 2.1.12, "Set Environment Variables" are set and then run the script from the primordial host. Primordial host is define in Section 2.1.1, "Before You Begin".

Use the following command syntax:

```
(Unix)
setenv JAVA_HOME java_home_location
$REPOSITORY_
LOCATION/installers/farup/Disk1/upgrade/bin/runSESDisableIndexOptimizer.sh

(Windows)
set JAVA_HOME=java_home_location
%REPOSITORY_
LOCATION%\installers\farup\Disk1\upgrade\bin\runSESDisableIndexOptimizer.bat
```

2.2.2 Verify the Status of Servers and Processes

This section contains steps to follow for all platforms. For Windows platforms, also follow the steps in Section 2.2.2.5, "Steps for Windows".

To prevent locks on patched objects and other data issues during patching, perform the following tasks.

- Stop All Servers
- Set the CrashRecoveryEnabled Property to False
- Stop the Node Manager and the OPMN Control Process
- Verify There are no Active ODI Sessions

2.2.2.1 Stop All Servers

Stop all servers and processes (including BI Presentation Servers), except the OPSS Security Store and the database, before starting the installation. If you want to use the `fastartstop` utility to do this, see "Understand Starting and Stopping with the fastartstop Utility" in the *Oracle Fusion Applications Administrator's Guide*.

2.2.2.2 Set the CrashRecoveryEnabled Property to False

You can skip this step if you successfully completed the steps in Section 2.2.2.1, "Stop All Servers" and all servers were cleanly shut down.

If servers were not cleanly shut down, set the `CrashRecoveryEnabled` property in `nodemanager.properties` to "false" for all domains by running the following command:

```
updateNMProperties.pl -appBase APPLICATIONS_BASE_location -preUpgrade [-verbose]
```

The `updateNMProperties.pl` script can be found in *`REPOSITORY_LOCATION`*`/installers/farup/Disk1/upgrade/bin`.

If the `updateNMProperties.pl` script fails in Windows, update the value of `CrashRecoveryEnabled` to "false" in *`FA_ORACLE_HOME`*`\instance\nodemanager\`*`host_name`*`\nodemanager.properties`.

2.2.2.3 Stop the Node Manager and the OPMN Control Process

Stop the Node Manager and the OPMN control process. All OHS and Web Tier processes, including the Apache processes, must also be stopped if you are not running OHS from a separate installation (DMZ or otherwise). (On Windows, stop the Node Manager and OPMN services and follow steps 1 and 2 in Section 2.2.2.5, "Steps for Windows".) Note that you must start the Node Manager for all domains and the OPMN control process after the first installer completes successfully and before proceeding to the second installer.

For more information, see "Stopping Node Manager" in *Oracle Fusion Middleware Node Manager Administrator's Guide for Oracle WebLogic Server*.

Use the following procedure to stop the OPMN control processes for Oracle Business Intelligence, GOP, and Web Tier (OHS). This procedure also stops all BI server processes, all GOP processes, and the OHS process.

> **Note:** There should be no Web Tier processes on this installation if you are running OHS from a separate installation (DMZ or otherwise). In this case, you do not need to stop the Web Tier processes.

1. Set *`ORACLE_INSTANCE`* to the location of the target Oracle instance directory.
2. Go to the `bin` directory under the target Oracle instance directory.

3. Run the `opmnctl` program from the current directory with the `stopall` command.

The following example is for Oracle Business Intelligence. Depending on whether **Local Applications Config** is enabled for your setup, `BIInstance` is located under either the **Applications Config** directory or the **Local Applications Config** directory of the BI host.

```
(Unix) setenv INSTANCE_HOME APPLICATIONS_CONFIG/BIInstance
cd $ORACLE_INSTANCE/bin
./opmnctl stopall

(Windows) set INSTANCE_HOME=APPLICATIONS_CONFIG\BIInstance
cd $ORACLE_INSTANCE\bin
.\opmnctl stopall
```

Example for GOP:

```
(Unix)setenv ORACLE_INSTANCE APPLICATIONS_CONFIG/gop_1
cd $ORACLE_INSTANCE/bin
./opmnctl stopall

(Windows) set INSTANCE_HOME=APPLICATIONS_CONFIG\gop_1
cd $ORACLE_INSTANCE\bin
.\opmnctl stopall
```

Example for Web Tier (OHS):

```
(Unix) setenv INSTANCE_HOME APPLICATIONS_CONFIG/CommonDomain_webtier
cd $ORACLE_INSTANCE/bin
./opmnctl stopall

(Windows) set INSTANCE_HOME=APPLICATIONS_CONFIG\CommonDomain_webtier
cd $ORACLE_INSTANCE\bin
.\opmnctl stopall
```

For more information about the location of *APPLICATIONS_CONFIG*, see Section 2.1.1, "Before You Begin".

For more information about concepts related to *ORACLE_HOME* and *ORACLE_INSTANCE*, refer to the "Understanding Oracle Fusion Middleware Concepts" chapter in the *Oracle Fusion Middleware Administrator's Guide*.

2.2.2.4 Verify There are no Active ODI Sessions

To verify there are no active ODI sessions, follow the steps in "Monitoring Executions Results" in the *Oracle Fusion Middleware Developer's Guide for Oracle Data Integrator*.

2.2.2.5 Steps for Windows

Perform the following steps before running RUP Installer on Windows.

1. Change the service type from Automatic to Manual for the following services: Node Manager, Web Tier, GOP, and BI. Restore the service type back to Automatic after the installation completes.
2. Stop the following services: Node Manager, Web Tier, GOP, and BI.
3. Reboot the Oracle Fusion Applications host.
4. Release Java Archive File Handles on System Process ID (PID) 4.

   On the Windows WebLogic Server, the Node Manager runs as a service. Since the *APPLICATIONS_BASE* of Oracle Fusion Applications is in a symbolic folder, some of

the jar file handles are loaded by Microsoft Windows System Process ID (PID) 4. The loaded file handles eventually cause Middleware patch application to fail when running RUP Installer. Before starting RUP Installer, make sure the Windows System Process ID (PID) 4 does not have handles to Oracle Fusion Applications jar files.

Check for file handles using the Windows utility Process Explorer. If file handles exist, make sure the Node Manager service is not running. If the file handles remain even after shutting down the Node Manager service, switch the Node Manager service from Automatic to Manual and reboot the machine to release the file handles.

5. Ensure that the `Server` service is up and running.
6. Increase the `shared_pool_size` in the `init.ora` file. If it seems large enough then improve segmentation in the shared pool by reserving part of the shared pool for large objects using the `SHARED_POOL_RESERVED_SIZE` parameter. The recommended value to start tuning is one third of the shared pool size. You can allow for large objects by using the `SHARED_POOL_RESERVED_MIN_ALLOC` parameter.

2.2.3 Upgrade Oracle Identity Management Domain to 11g Release 6 (11.1.6)

Perform the following steps to upgrade the Oracle Identity Management domain to 11*g* Release 6 (11.1.6):

1. Remove conflicting patches on all nodes in the Oracle Identity Management domain.

   To remove conflicting patches, run the patch removal script by following the instructions contained in the README.txt file in patch 14543240. You downloaded patch 14543240 in Section 2.1.5, "Download Other Patches Required by the Upgrade".

   Important: You must run the conflicting patch removal script on every node in the domain before you apply any upgrade patch. If you run this script at any time other than before upgrading, the system may be left in an unstable state. Specifically, you must run the script on each of the following nodes before applying any upgrade patch:

   - IDM Node
   - IAM Node
   - OHS Node

   You can learn more about each of the nodes in the domain by referring to the "Oracle Identity Management Overview" section of the *Oracle Fusion Applications Installation Guide* for 11*g* Release 6 (11.1.6).

   ---

2. Apply upgrade patches to each of the nodes in the Oracle Identity Management domain.

   To apply the upgrade patches, perform the steps in the "Oracle Identity Management Patches for the IDM Domain" section of the *Oracle Fusion Applications Installation Guide* for 11*g* Release 6 (11.1.6).

3. Determine if any additional mandatory patches are required and apply them.

   To determine if any additional patches are required for upgrading the Oracle Identity Management domain, refer to the "Additional Mandatory Patches for the

IDM Domain" section of the *Release Notes for Oracle Fusion Applications 11g Release 6 (11.1.6)*.

Important: If any additional patches are listed in that section of the Release Notes, you must apply them to upgrade the Oracle Identity Management domain.

---

4. Review known problems and perform workarounds.

   Known issues, and their workarounds, in each release are documented in the Release Notes. Review the known problems in Oracle Identity Management for this release and perform their workarounds by referring to each of the following sections in the *Release Notes for Oracle Fusion Applications 11g Release 6 (11.1.6)*:

   - Pre-Installation Known Issues
   - Installation Known Issues
   - Post-Installation Known Issues
   - Platform-Specific Known Issues
   - Upgrade Known Issues
   - Post Upgrade Known Issues
   - Run Time Environment Known Issues

2.2.4 Update the Oracle Fusion Applications Database

Note: Before you perform the steps in this section, you must remove any conflicting patches from the RDBMS host. Follow the steps in the README.txt file of patch 14543240 to run the script on the RDBMS host. You downloaded patch 14543240 in Section 2.1.5, "Download Other Patches Required by the Upgrade". Ensure that you run this script **only** before upgrading. If you run this script at any time other than before upgrading, the system may be left in an unstable state.

When you run RUP Installer, the patches you downloaded in Step 2, Section 2.1.15, "Find Conflicting Patches", will automatically apply.

Run the RUP Lite for RDBMS utility to perform the tasks required to update your Oracle Fusion Applications database before you upgrade. RUP Lite for RDBMS can be run in three modes: `validate`, `setdbparameters`, and `apply`. For more information, see Section 1.6, "RUP Lite for RDBMS Utility".

RUP Lite for RDBMS uses non-interactive OPatch calls to apply RDBMS patches. OPatch tries to install and configure Oracle Configuration Manager (OCM) if OCM has not already been installed and configured. This causes non-interactive OPatch calls to fail in some cases. To avoid this issue, Oracle recommends that you install OCM prior to running RUP Lite for RDBMS. If you plan to use OCM, you should configure it after you install it. If you do not plan to use OCM, you can either configure it in disconnected mode or let RUP Lite for RDBMS configure it. If you install OCM and do not configure it, RUP Lite for RDBMS will automatically configure it in disconnected mode. For more information, see "Installing Oracle Configuration Manager Using the Command Line Interface" in the *Oracle Configuration Manager Installation and Administration Guide*.

If you do not use Oracle Exadata Database Machine, run RUP Lite for RDBMS to automatically apply the mandatory Oracle Database patches mentioned in the "Oracle Database" section of Oracle Fusion Applications Release Notes, 11g Release 6 (11.1.6). This step applies Oracle Database patches that reside in both the *REPOSITORY_LOCATION* and the `11.1.6.0.0_post_repo_patches` directories, which you downloaded in Section 2.1.4, "Download Mandatory Post-Release 6 Patches". Follow the steps in Section 2.2.4.1, "Run RUP Lite for RDBMS".

If you use Oracle Exadata Database Machine, manually apply the patches listed in Section 2.2.4.4, "Apply Exadata Patches" followed by any patches you downloaded in Section 2.1.4, "Download Mandatory Post-Release 6 Patches". Do not run RUP Lite for RDBMS.

2.2.4.1 Run RUP Lite for RDBMS

If you are running Oracle Fusion Applications on a RAC database, follow the steps in Section 2.2.4.2, "Run RUP Lite for RDBMS in a RAC Database".

Perform the following steps to run RUP Lite for RDBMS in three modes: `validate`, `setdbparameters`, and `apply`:

1. Apply the version of OPatch that is delivered in patch 6880880, version 11.2.0.3.3, which you downloaded in Section 2.1.5, "Download Other Patches Required by the Upgrade".

2. Copy the `TPBundler.zip` file to any temporary directory, such as *work_dir* in the following example:

   ```
   cp REPOSITORY_LOCATION/installers/pre_install/TPBundler.zip work_dir
   ```

3. Unzip `TPBundler.zip` in the *work_dir* directory, which contains the following files after unzipping:

   ```
   createTPBundle.jar
   createTPBundle.cmd
   createTPBundle.sh
   ojdl.jar
   tpBundleConfig_DB.xml
   tpBundleConfig_IDM.xml
   tpBundleConfig_OHS.xml
   README.txt
   ```

4. The `createTPBundler` utility creates the RDBMS patch bundle, `DBPatches.zip`, and RUP Lite for RDBMS. This patch bundle contains the mandatory prerequisite patches that are delivered in *REPOSITORY_LOCATION* as well as any patches you may have downloaded.

   Use the following command syntax to run `createTPBundler`, which creates `DBPatches.zip` in a temporary directory, referred to as *work_dir* in the example. Note that *work_dir* must have read/write permissions.

   ```
   (Unix)
   sh createTPBundle.sh -shiphomelocation REPOSITORY_LOCATION -tempdir work_dir
   -target DB [-patchdownloadloc location_of_downloaded_patches]

   (Windows)
   createTPBundle.cmd -shiphomelocation REPOSITORY_LOCATION -tempdir work_dir
   -target DB [-patchdownloadloc location_of_downloaded_patches]
   ```

   The following options are available for `createTPBundler`:

   – `-shiphomelocation`: Location of the `createTPBundler` repository.

- `-tempdir`: Destination directory to which the generated zip file was copied.
- `-target`: Target against which the copy should be initiated. Valid values are IDM, DB, OH. Use the DB value.
- `-patchdownloadloc`: Location of the patch directory where you downloaded the patches in Section 2.1.4, "Download Mandatory Post-Release 6 Patches". Use this option only if you downloaded patches to a directory other than the default patch download directory, which is `11.1.6.0.0_post_repo_patches`.
- `-logfile`: Full path of the `createTPbundle` log file. The default is `createTPBundle.log` in the current directory.
- `-loglevel`: Log level for the `createTPbundler` utility. Valid values are SEVERE, WARNING, INFO, CONFIG, FINE, FINER, FINEST. The default value is INFO.

5. Copy `DBPatches.zip` to any temporary directory on the database server host.
6. Log in to the database server host.
7. Unzip `DBPatches.zip` to any temporary directory on the database server host. The following subdirectories and files exist after unzipping.

```
|-- DB_timestamp
    -- db_server_bundle
        |-- README.txt
        |-- bin
        |   |-- ruplite.bat
        |   |-- ruplite.sh
        |-- metadata
        |   |-- env.properties
        |   |-- installer.properties
        |   |-- plugin-metadata.txt
        |-- custom_db_server
        |    -- database
        |        -- patch
        |            -- downloaded one-off patches
        |-- db_server
        |   |-- database
        |       |-- opatch
        |       |    -- OPatch zip file
        |       |-- patch
        |       |    -- One-off patches in repository
        |       |-- psu
        |       |    -- Patch Set Updates in repository
        |-- db
        |   |--RUP Lite related files
        |-- lib
        |   |--RUP Lite related files
        |-- ruplite
        |   |--RUP Lite related files
        |-- techpatch
        |   |--TPU related files
```

8. Perform this step only if you are running RUP Lite for RDBMS on an Oracle VM environment.

   As the root user, change the permissions on the DB_*timestamp* subdirectory:

   ```
   chmod -R 777 DB_timestamp
   ```

   Exit out of root user to ensure that you do not perform the remaining steps as root.

9. Set executable permissions on `ruplite.sh`. (Unix only)

```
chmod -R 755 DB_timestamp/db_server_bundle/bin/ruplite.sh
```

10. Set the `JAVA_HOME` environment variable as shown in the following example:

```
(Unix)
setenv JAVA_HOME java_home_location (must be jdk6)

(Windows)
set JAVA_HOME=java_home_location (must be jdk6)
```

11. Update the following properties in the *work_dir*`/DB_`*timestamp*`/db_server_bundle/metadata/env.properties` file. Example values are shown.

    - ORACLE_SID=Use an instance name that belongs to the `fusionapps` database.
    - ORACLE_HOME=Use an Oracle home directory on which patches must be applied, such as `/u01/db/11.2.0.3`.
    - TNS_ADMIN=Use a valid `tns_admin` location, which is typically located under the grid infra and contains `listener.ora` and `sqlnet.ora` files.
    - LISTENER_NAME=Use a listener name.
    - PFILE=`/u01/db/11.2.0.3/dbs/init.ora`, for example. You can retrieve this value by running the following query:

      ```
      select NAME, VALUE from v$parameter where NAME like '%file%';
      ```

      Update the `PFILE` property if your database is started using pfile.
    - DBSERVER_RESTART=true or false.

      To minimize downtime, you can use "false" for `setdbparameters` mode, and "true" for `apply` mode.

      If `DBSERVER_RESTART` is set to "false", the database server, listener and other related services must be manually stopped before running RUP Lite in `apply` mode. Then after running RUP Lite in `apply` mode, you must manually run Steps a through d.

      If the value for this property is set to "true", RUP Lite automatically stops the listener and database before applying patches. In addition, RUP Lite automatically performs the following actions after applying patches when `DBSERVER_RESTART`=true:

      a. Start the database instance.

      b. Start the listener.

      c. Run `catbundle.sql` with arguments "psu apply" on non-windows and "winbundle apply" on windows.

      ```
      (Unix)
      $ORACLE_HOME/rdbms/admin/catbundle.sql psu apply

      (Windows)
      %ORACLE_HOME%\rdbms\admin\catbundle.sql winbundle apply
      ```

      For a list of `catbundle.sql` errors that can be ignored, see Section 6.28, "Ignorable Errors Reported by catbundle.sql".

      d. Run *ORACLE_HOME*`/rdbms/admin/catmetx.sql`.

      ```
      (Unix)
      ```

```
$ORACLE_HOME/rdbms/admin/catmetx.sql

(Windows)
%ORACLE_HOME%\rdbms\admin\catmetx.sql
```

12. Verify that the java version is 1.6 or above by using the following command:

    ```
    (Unix)
    $JAVA_HOME/bin/java -version

    (Windows)
    %JAVA_HOME%\bin\java -version
    ```

    If your version is lower, download 1.6 or a higher version from My Oracle Support.

13. Stop all user applications.

14. Change directory to the following location:

    `DB_timestamp/db_server_bundle/bin`

15. Run RUP Lite for RDBMS in `validate` mode. The database instance and listener must be up.

    ```
    (Unix) ruplite.sh validate
    (Windows) ruplite.bat validate
    ```

16. Review the log file, `output/logs/ruplitevalidate.log`, to confirm whether the database parameters contain the values you set in Step 11 and the values displayed in Table 1–3, " Recommended Values for Database Parameters". If any errors occurred, you can find them in this log file.

    If any of the parameters do not contain the recommended value, proceed to the next step to run RUP Lite for RDBMS in `setdbparameters` mode. If all parameters are correct, proceed to Step 19 to run RUP Lite for RDBMS in `apply` mode.

17. Run RUP Lite for RDBMS in `setdbparameters` mode. The database instance and listener must be up.

    ```
    (Unix) ruplite.sh setdbparameters
    (Windows) ruplite.bat setdbparameters
    ```

18. Review the log file, `output/logs/ruplitesetdbparameters.log`, to confirm whether the database parameters contain the values displayed in Table 1–3, " Recommended Values for Database Parameters". If any errors occurred, you can find them in this log file also.

19. Running RUP Lite for RDBMS in `apply` mode starts and stops only the Fusion Applications database listener and the database server. You must stop any other applications or processes that are running from the Oracle Fusion Applications home directory, except the OPSS Security Store, before you run RUP Lite for RDBMS. For more information, see "Starting and Stopping" in the *Oracle Fusion Applications Administrator's Guide*. Also confirm that the BI presentation servers are shut down.

    You can set the parameter `DBSERVER_RESTART` (available in `metadata/env.properties`) to "false" if you want to manually shut down the database, stop the listener before patching, and start it up after applying the patches. For Windows, if you set `DBSERVER_RESTART` to "false", follow the steps in Section 2.2.4.3, "Stop Services on Windows Before Running RUP Lite For RDBMS".

> **Note:** To avoid an issue with active files while patching, ensure that no applications or processes are running from the ORACLE_HOME that is referenced in metadata/env.properties. If DBSERVER_RESTART=true, you can ignore the database instance and listener processes because RUP Lite brings them down.

Run RUP Lite for RDBMS in apply mode.

```
(Unix) ruplite.sh
(Windows) ruplite.bat
```

20. Review the following log files located under the output/logs directory if any errors occurred:

    ruplitedb.log
    tp_property_editor_*timestamp*.log
    db_apply_downloaded_patches_*timestamp*.log
    db_apply_repository_patches_*timestamp*.log
    db_validate_downloaded_patches_*timestamp*.log
    db_validate_repository_patches_*timestamp*.log
    downloaded_patch_validate_results_*timestamp*.xml
    repository_patch_validate_results_*timestamp*.xml
    post_db_restart_actions_*timestamp*.log

    If RUP Lite for RDBMS fails, resolve the issue reported in the log files. When you restart a failed session, RUP Lite for RDBMS ignores the successful actions, starts with the failed action, and proceeds from that point.

    The post_db_restart_actions_*timestamp*.log file includes the output from catbundle.sql and catmetx.sql. For a list of catbundle.sql errors that can be ignored, see Section 6.28, "Ignorable Errors Reported by catbundle.sql".

21. If you set DBSERVER_RESTART to "false", perform the steps in Step 11, a. through d.

22. You must manually execute any manual steps that are documented in the README.txt file of the patches you applied with RUP Lite for RDBMS. RUP Lite for RDBMS does not execute manual steps from the README.txt file of the patch.

2.2.4.2 Run RUP Lite for RDBMS in a RAC Database

Perform the following steps to run RUP Lite for RDBMS in a RAC database. You must run RUP Lite for RDBMS on all available file systems. This may involve multiple hosts and nodes. Note that a single Oracle home can be shared by multiple nodes, and in this case, running RUP Lite on a single node of such a group is sufficient.

1. Follow Steps 1 through 10 in Section 2.2.4.1, "Run RUP Lite for RDBMS".

2. Stop all user applications that use the Oracle home directory being patched.

3. Update the following properties in the *work_dir*/DB_*timestamp*/db_server_bundle/metadata/env.properties file. Example values are shown.

    - ORACLE_HOME=Use an Oracle home directory on which patches must be applied, such as /u01/db/11.2.0.3.
    - ORACLE_SID=Use an instance name that belongs to the fusionapps database and is run against the ORACLE_HOME set in the previous property.
    - TNS_ADMIN=Use a valid tns_admin location, which is typically located under the grid infra and contains listener.ora and sqlnet.ora files.

- LISTENER_NAME=Use a listener name.
- PFILE=`/u01/db/11.2.0.3/dbs/init.ora`, for example. You can retrieve this value by running the following query:

  ```
  select NAME, VALUE from v$parameter where NAME like '%file%';
  ```

  Update the `PFILE` property if your database is started using pfile.
- DBSERVER_RESTART=false

  Note that the value of DBSERVER_RESTART must be "false".

4. Verify that the java version is 1.6 or above by using the following command:

   ```
   (Unix)
   $JAVA_HOME/bin/java -version

   (Windows)
   %JAVA_HOME%\bin\java -version
   ```

5. Change directory to the following location:

   `DB_`*`timestamp`*`/db_server_bundle/bin`

6. Run RUP Lite for RDBMS in `validate` mode. The database instance and listener must be up.

   ```
   (Unix) ruplite.sh validate
   (Windows) ruplite.bat validate
   ```

7. Review the log file, `output/logs/ruplitevalidate.log`, to confirm whether the database parameters contain the values you set in Step 3 and the values displayed in Table 1–3, " Recommended Values for Database Parameters". If any errors occurred, you can find them in this log file also.

   If any of the parameters do not contain the recommended value, proceed to the next step to run RUP Lite for RDBMS in `setdbparameters` mode. If all parameters are correct, proceed to Step 10.

8. Run RUP Lite for RDBMS in `setdbparameters` mode. The database instance and listener must be up.

   ```
   (Unix) ruplite.sh setdbparameters
   (Windows) ruplite.bat setdbparameters
   ```

9. Review the log file, `output/logs/ruplitesetdbparameters.log`, to confirm whether the database parameters contain the values displayed in Table 1–3, " Recommended Values for Database Parameters". If any errors occurred, you can find them in this log file also.

10. Shut down all Oracle RAC databases on all nodes in the cluster, even those that are sharing the same host. Database instances that are running could cause issues that prevent patches from applying successfully or you could receive errors because the patches update files that are in use.

    To shut down an Oracle RAC database, enter the following command in a command window, where `CRS_home` is the location of the Grid home directory and `sales` is the name of the database in the following example:

    ```
    (Unix)
    CRS_home/bin/srvctl stop database -d sales

    (Windows)
    ```

```
CRS_home\bin\srvctl stop database -d sales
```

11. Stop the listener that is running from all Oracle homes in the cluster, using the following command. Note that all services must be shut down if the OIM and OID databases are configured on same listener.

    ```
    (Unix)
    CRS_home/bin/srvctl stop listener [-l listener_name]

    (Windows)
    CRS_home\bin\srvctl stop listener [-l listener_name]
    ```

12. To avoid an issue with active files while patching, ensure that no applications or processes are running from the ORACLE_HOME that is referenced in `metadata/env.properties`.

13. Run RUP Lite for RDBMS in `apply` mode.

    ```
    (Unix) ruplite.sh
    (Windows) ruplite.bat
    ```

14. Review the following log files located under the `output/logs` directory if any errors occurred:

    ```
    ruplitedb.log
    tp_property_editor_timestamp.log
    db_apply_downloaded_patches_timestamp.log
    db_apply_repository_patches_timestamp.log
    db_validate_downloaded_patches_timestamp.log
    db_validate_repository_patches_timestamp.log
    downloaded_patch_validate_results_timestamp.xml
    repository_patch_validate_results_timestamp.xml
    post_db_restart_actions_timestamp.log
    ```

    If RUP Lite for RDBMS fails, resolve the issue reported in the log files. When you restart a failed session, RUP Lite for RDBMS ignores the successful actions, starts with the failed action, and proceeds from that point.

15. You must manually execute any manual steps that are documented in the `README.txt` file of the patches you applied with RUP Lite for RDBMS. RUP Lite for RDBMS does not execute manual steps from the `README.txt` file of the patch.

    If there is more than one ORACLE_HOME in the RAC database, you do not need to run SQL scripts again when patching the 2nd through the *n*th ORACLE_HOME, but you do need to perform any manual steps that update ORACLE_HOME.

16. RAC databases often share a single ORACLE_HOME for all RAC instances. If you have this configuration, continue to the next step.

    If you do not have this configuration, you must update the files in the other ORACLE_HOMEs for your RAC database. To update the other ORACLE_HOMEs, repeat Steps 4 through 8 in Section 2.2.4.1, "Run RUP Lite for RDBMS" for RAC instances with non-shared ORACLE_HOMEs. Then repeat Steps 3 through 16 in this section for all RAC instances. Note that this may involve multiple hosts and nodes.

17. Start the database.

18. Start the listener from all Oracle homes in the cluster. For Windows, start the services described Section 2.2.4.3, "Stop Services on Windows Before Running RUP Lite For RDBMS".

19. After the database is started, run the following commands:

```
(Unix)
cd $ORACLE_HOME/rdbms/admin
sqlplus /nolog
SQL> CONNECT / AS SYSDBA
SQL> @catbundle.sql psu apply
SQL> QUIT

(Windows)
cd %ORACLE_HOME%\rdbms\admin
sqlplus /nolog
SQL> CONNECT / AS SYSDBA
SQL> @catbundle.sql winbundle apply
SQL> QUIT
```

For a list of `catbundle.sql` errors that can be ignored, see Section 6.28, "Ignorable Errors Reported by catbundle.sql".

```
(Unix)
cd $ORACLE_HOME/rdbms/admin
sqlplus /nolog
SQL> CONNECT / AS SYSDBA
SQL> @catmetx.sql
SQL> QUIT

(Windows)
cd %ORACLE_HOME%\rdbms\admin
sqlplus /nolog
SQL> CONNECT / AS SYSDBA
SQL> @catmetx.sql
SQL> QUIT
```

2.2.4.3 Stop Services on Windows Before Running RUP Lite For RDBMS

For a Windows platform, the following services should be started and stopped by RUP Lite for RDBMS:

- OracleOraDb11g_home1TNSListenerLISTENER_<SID>
- OracleOraDb11g_home1ClrAgent
- OracleDBConsole<SID>
- OracleJobScheduler<SID>
- OracleService<SID>
- OracleMTSRecoveryService
- Windows Management Instrumentation
- Distributed Transaction Coordinator
- Oracle <SID> VSS Writer Service

If RUP Lite for RDBMS fails to stop or start a service, you can manually manage each service from the Control Panel. Select **Administrative Tools**, then **Services**. Right click on each service and choose the **Stop** or **Start** option.

2.2.4.4 Apply Exadata Patches

If you are on Linux64, Solaris Sparc64, or Solaris86-64 platforms and use the Oracle Exadata Database Machine, download and apply the quarterly database patch for your platform, the generic patches in the following list, and the list of specific patches for your platform from My Oracle Support.

2.2.4.4.1 Quarterly Database Patches Apply the quarterly database patch (Patch 14474780 - QUARTERLY DATABASE PATCH FOR EXADATA (OCT 2012 - 11.2.0.3.11) for your platform:

- Linux: p14474780_112030_Linux-x86-64.zip
- Solaris Sparc64: p14474780_112030_SOLARIS64.zip
- Solaris86-64: p14474780_112030_Solaris86-64.zip

2.2.4.4.2 Generic Exadata Patches Apply all of the following generic patches, which are not platform-specific:

- p12317925_112030_Generic.zip
- p13508115_112030_Generic.zip
- p14698700_112030_Generic.zip

2.2.4.4.3 Linux Exadata Patches Apply the following Exadata patches if you are on the Linux64 platform:

- p12552578_1120311ExadataDatabase_Linux-x86-64.zip
- p12646746_112030_Linux-x86-64.zip
- p12977501_112030_Linux-x86-64.zip
- p12985184_112030_Linux-x86-64.zip
- p13014128_112030_Linux-x86-64.zip
- p13078786_112030_Linux-x86-64.zip
- p13365700_112030_Linux-x86-64.zip
- p13404129_112030_Linux-x86-64.zip
- p13615767_1120311ExadataDatabase_Linux-x86-64.zip
- p13632653_112030_Linux-x86-64.zip
- p13714926_1120311ExadataDatabase_Linux-x86-64.zip
- p13902963_1120311ExadataDatabase_Linux-x86-64.zip
- p14029429_112030_Linux-x86-64.zip
- p14058884_112030_Linux-x86-64.zip
- p14164849_112030_Linux-x86-64.zip
- p14226599_112030_Linux-x86-64.zip
- p14499293_1120311ExadataDatabase_Linux-x86-64.zip
- p14653598_1120311ExadataDatabase_Linux-x86-64.zip
- p14679292_112030_Linux-x86-64.zip
- p14741727_1120311ExadataDatabase_Linux-x86-64.zip

- p14757709_1120311ExadataDatabase_Linux-x86-64.zip
- p14793338_1120311ExadataDatabase_Linux-x86-64.zip
- p14837414_1120311ExadataDatabase_Linux-x86-64.zip
- p15843238_1120311ExadataDatabase_Linux-x86-64.zip

2.2.4.4.4 Solaris Sparc64 Exadata Patches Apply the following Exadata patches if you are on the Solaris Sparc64 platform:

- p12552578_1120311ExadataDatabase_SOLARIS64.zip
- p12646746_112030_SOLARIS64.zip
- p12977501_112030_SOLARIS64.zip
- p12985184_112030_SOLARIS64.zip
- p13014128_112030_SOLARIS64.zip
- p13078786_112030_SOLARIS64.zip
- p13365700_112030_SOLARIS64.zip
- p13404129_112030_SOLARIS64.zip
- p13615767_1120311ExadataDatabase_SOLARIS64.zip
- p13632653_112030_SOLARIS64.zip
- p13714926_1120311ExadataDatabase_SOLARIS64.zip
- p13902963_1120311ExadataDatabase_SOLARIS64.zip
- p14029429_112030_SOLARIS64.zip
- p14058884_112030_SOLARIS64.zip
- p14164849_112030_SOLARIS64.zip
- p14226599_112030_SOLARIS64.zip
- p14499293_1120311ExadataDatabase_SOLARIS64.zip
- p14653598_1120311ExadataDatabase_SOLARIS64.zip
- p14679292_112030_SOLARIS64.zip
- p14741727_1120311ExadataDatabase_SOLARIS64.zip
- p14757709_1120311ExadataDatabase_SOLARIS64.zip
- p14793338_1120311ExadataDatabase_SOLARIS64.zip
- p14837414_1120311ExadataDatabase_SOLARIS64.zip
- p15843238_1120311ExadataDatabase_SOLARIS64.zip

2.2.4.4.5 Solaris 86 X64 Exadata Patches Apply the following Exadata patches if you are on Solaris X64 platform:

- p12552578_1120311ExadataDatabase_Solaris86-64.zip
- p12646746_112030_Solaris86-64.zip
- p12977501_112030_Solaris86-64.zip
- p12985184_112030_Solaris86-64.zip
- p13014128_112030_Solaris86-64.zip

- p13078786_112030_Solaris86-64.zip
- p13365700_112030_Solaris86-64.zip
- p13404129_112030_Solaris86-64.zip
- p13615767_1120311ExadataDatabase_Solaris86-64.zip
- p13632653_112030_Solaris86-64.zip
- p13714926_1120311ExadataDatabase_Solaris86-64.zip
- p13902963_1120311ExadataDatabase_Solaris86-64.zip
- p14029429_112030_Solaris86-64.zip
- p14058884_112030_Solaris86-64.zip
- p14164849_112030_Solaris86-64.zip
- p14226599_112030_Solaris86-64.zip
- p14499293_1120311ExadataDatabase_Solaris86-64.zip
- p14653598_1120311ExadataDatabase_Solaris86-64.zip
- p14679292_112030_Solaris86-64.zip
- p14741727_1120311ExadataDatabase_Solaris86-64.zip
- p14757709_1120311ExadataDatabase_Solaris86-64.zip
- p14793338_1120311ExadataDatabase_Solaris86-64.zip
- p14837414_1120311ExadataDatabase_Solaris86-64.zip
- p15843238_1120311ExadataDatabase_Solaris86-64.zip

2.2.5 Run "catmetx.sql"

If you do not update the database by running RUP Lite for RDBMS, run the following script as SYS user on all database instances to prevent issues during the Bootstrapping Patch Manager configuration task:

```
ORACLE_HOME/rdbms/admin/catmetx.sql
```

2.2.6 Run Health Checker for Down Time Checks

Run the Health Checker utility directly from *REPOSITORY_LOCATION* and from the primordial host. Ensure that you set the environments variables described in Section 2.1.12, "Set Environment Variables".

For more information about Health Checker, see Section 1.5.2, "Pre-Upgrade Tasks Performed by Health Checker During Down Time".

Run Health Checker using the following command syntax:

```
$REPOSITORY_LOCATION/installers/farup/Disk1/upgrade/bin/hcplug.sh -manifest
$REPOSITORY_
LOCATION/installers/farup/Disk1/upgrade/config/PreUpgradeDowntimeChecks.xml
[-DlogLevel=log_level]

(Windows)
%REPOSITORY_LOCATION%\installers\farup\Disk1\upgrade\bin\hcplug.cmd -manifest
%REPOSITORY_
LOCATION%\installers\farup\Disk1\upgrade\config\PreUpgradeDowntimeChecks.xml
[-DlogLevel=log_level]
```

Review the Health Checker log file or the HTML summary report to see if any errors occurred that require corrective action. The log file and the HTML summary are located in *APPLICATIONS_CONFIG*/fapatch/logs/*release_version*/healthchecker.

After you resolve the issue that caused the error, start Health Checker again to run the failed tasks. You must rerun Health Checker until there are no failed tasks.

For more information, see Section 6.26, "Troubleshooting Health Checker Down Time Checks".

2.2.7 Perform Required Backups

The following backups must be performed:

- Back Up Oracle Fusion Applications
- Back Up the OPSS Security Store
- Back Up Steps for Windows Platforms

2.2.7.1 Back Up Oracle Fusion Applications

Back up your entire Oracle Fusion Applications environment by following the steps in "Backing Up and Recovering Oracle Fusion Applications" in the *Oracle Fusion Applications Administrator's Guide*. You should also back up your central inventory.

For additional back up steps that are specific to Windows, refer to Section 2.2.7.3, "Back Up Steps for Windows Platforms".

2.2.7.2 Back Up the OPSS Security Store

RUP Installer upgrades all WLS domains to the 11gR1 PS5 MLR1 (11.1.1.6.1) level so you must perform the following backups. Perform your backups in directories from which you can restore. You can use any directory to back up the data, as long as you know where to restore the backup from.

1. **OPSS Security Store**

   Back up all data under the root node of the OPSS Security Store. To identify the root node in the Oracle Internet Directory hosting the OPSS Security store, use Fusion Applications Control and look at the Root Node Details pane under the Security Provider information. For more information, see "Reassociating with Fusion Middleware Control" in the *Oracle Fusion Middleware Application Security Guide*.

In case of an upgrade failure, restore this node entirely.

The `ldifwrite` and `bulkload` operations that follow must be performed on the system where the Oracle Internet Directory hosting the OPSS Security store resides.

- Set the following environment variables.

```
(Unix)
setenv ORACLE_HOME  OID_ORACLE_HOME
setenv ORACLE_INSTANCE  OID_INSTANCE_HOME

(Windows)
set ORACLE_HOME=OID_ORACLE_HOME
set ORACLE_INSTANCE=OID_INSTANCE_HOME
```

Example:

```
(Unix)
setenv ORACLE_HOME /u01/oid/oid_home
setenv ORACLE_INSTANCE /u01/oid/oid_inst

(Windows)
set ORACLE_HOME=\u01\oid\oid_home
set ORACLE_INSTANCE \u01\oid\oid_inst
```

- Create the backup.

  In the system where the Oracle Internet Directory is located, produce an LDIF file by running `ldifwrite` as illustrated in the following command. Note that you are prompted for the Operational Data Store (ODS) password.

```
OID_HOME/ldap/bin/ldifwrite connect="srcOidDbConnectStr"
basedn="cn=FAPolicies", c=us" ldiffile="srcOid.ldif"
```

  Example:

```
/u01/oid/oid_home/ldif/bin/ldifwrite connect="oidddb"
basedn="cn=FAPolicies" ldiffile="srcOid.ldif"
```

  This command writes all entries under the `cn=FAPolicies` node to the `srcOid.ldif` file. Once generated, move this file to the directory that was identified earlier, to hold all backup data.

- Perform the following steps if you need to restore the backup.
  - In the Oracle Internet Directory system, verify that there are no schema errors or bad entries by running `bulkload` as illustrated in the following command:

    ```
    OID_HOME/ldap/bin/bulkload connect="dstOidDbConnectStr" check=true
    generate=true restore=true file="fullPath2SrcOidLdif"
    ```

    If duplicate DNs (common entries between the source and destination directories) are detected, review them to prevent unexpected results.
  - Load data into the Oracle Internet Directory by running `bulkload` as illustrated in the following command:

    ```
    OID_HOME/ldap/bin/bulkload connect="dstOidDbConnectStr" load=true
    file="fullPath2SrcOidLdif"
    ```

For more information about the `bulkload` command, see "Performing Bulk Operations" in the *Oracle Fusion Middleware Administrator's Guide for Oracle Internet Directory*.

For more information about migrating Oracle Internet Directory, see "Migrating Large Volume Policy and Credential Stores" in the *Oracle Fusion Middleware Application Security Guide*.

2. **Bootstrap Wallet**

   Back up the `cwallet.sso file` in the *`DOMAIN_HOME`*`/config/fmwconfig/bootstrap` directory for **each WLS domain** in an Oracle Fusion Applications installation. You must take backups of each `cwallet.sso` file for each domain and when you restore, you must be careful to restore the correct file. For example, if you back up `cwallet.sso` from the Common Domain, then you must restore it in the Common Domain upon failure. If you back up `cwallet.sso` from the BI domain, you must restore it to the BI Domain upon failure.

2.2.7.3 Back Up Steps for Windows Platforms

Back up the Oracle Fusion Applications environment, including *`APPLICATIONS_BASE`*, inventory, registry entries, Oracle Identity Management, the database and the System environment PATH variable of the Oracle Fusion Applications host machine.

1. *`APPLICATIONS_BASE`* contains many files whose path is more than 256 characters. The Microsoft Windows Copy function is limited to copying only those files with a path of less than 256 characters. Therefore, many files fail to copy.

   Use Robust File Copy (Robocopy), which is available as part of the Windows Resource Kit, to copy *`APPLICATIONS_BASE`*. Use the following command:

   ```
   robocopy <source> <destination> /MIR > <file>
   ```

   Sample output from the `robocopy` command:

	Total	Copied	Skipped	Mismatch	FAILED	Extras
Dirs:	112640	112640	0	0	0	
Files:	787114	787114	0	0	0	
Bytes:	63.822 g	63.822 g	0	0	0	
Times:	2:22:20	2:19:00			0:00:00	0:03:19

2. Back up the inventory.

   Back up the inventory location referenced in the registry `HKEY_LOCAL_MACHINE\SOFTWARE\ORACLE\inst_loc`.

3. Back up the registry.

   Use `Regedit.exe` to back up the following registries related to Oracle Fusion Applications.

   - HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services
     - Web Tier service
     - BI Service
     - Node Manager service
   - HKEY_LOCAL_MACHINE\SOFTWARE\ORACLE
   - HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Oblix

4. Ensure that the System PATH has the following values:

```
C:\<APPLICATIONS_BASE>\dbclient\bin
C:\<APPLICATIONS_BASE>\webtier_mwhome\webtier\bin
C:\<APPLICATIONS_BASE>\webtier_mwhome\webtier\\bin
C:\<APPLICATIONS_BASE>\webtier_mwhome\webtier\opmn\lib
C:\<APPLICATIONS_BASE>\webtier_mwhome\webtier\perl\bin
C:\<APPLICATIONS_BASE>\fusionapps\bi\products\Essbase\EssbaseServer\bin
C:\<APPLICATIONS_BASE>\fusionapps\bi\bin
C:\<APPLICATIONS_BASE>\fusionapps\bi\opmn\bin
C:\<APPLICATIONS_BASE>\fusionapps\bi\opmn\lib
C:\<APPLICATIONS_BASE>\fusionapps\bi\perl\bin
```

   Add any of the previous values that are missing to the system PATH. Missing values cause failures in launching the OPMN services and BI Presentation Catalog deployment configuration assistants in RUP Installer.

5. Save the system PATH variable.

2.2.8 Update JRE_MEMORY_OPTIONS (Windows Only)

Append the following parameters to `JRE_MEMORY_OPTIONS` in *`REPOSITORY_LOCATION`*`\installers\fusionapps\Disk1\install\win64\oraparam.ini`:

```
"-Xmx512m -XX:+UnlockDiagnosticVMOptions -XX:InitialClassBlockMemory=100M"
```

2.2.9 Remove Conflicting Patches From the Primordial Host

1. Backup the existing *`ATG_HOME`*`/atgpf/lib/oracle.apps.fnd.applxdf.jar` file.
2. Follow the steps in the `README.txt` file of patch 14543240 to run the script to remove conflicting patches from the primordial host. You must run this script on the primordial host. You ran the script to find conflicting patches in Section 2.1.15, "Find Conflicting Patches".

> **Note:** Ensure that you run this script only before upgrading. If you run this script at any time other than before upgrading, the system may be left in an unstable state.

When you run RUP Installer, the patches you downloaded in step 3, Section 2.1.15, "Find Conflicting Patches" will automatically apply.

3. Restore *ATG_HOME*/atgpf/lib/oracle.apps.fnd.applxdf.jar from the backup to its original location.

2.2.10 Enable Anonymous Binds in Oracle Internet Directory

To prevent an error during the upgrade, you must temporarily enable anonymous binds in Oracle Internet Directory. To enable all anonymous binds on the Oracle Internet Directory instance with componentName oid1 using ldapmodify, run the following command:

```
ldapmodify -D cn=orcladmin -Q -p portNum -h hostname -f ldifFile
```

with an LDIF file such as the following example:

```
dn: cn=oid1,cn=osdldapd,cn=subconfigsubentry
changetype: modify
replace: orclAnonymousBindsFlag
orclAnonymousBindsFlag: 1
```

You can also use Oracle Enterprise Manager Fusion Middleware Control to enable anonymous binds. For more information, see "Managing Anonymous Binds" in the *Oracle Fusion Middleware Administrator's Guide for Oracle Internet Directory*. You will disable anonymous binds after the upgrade by setting the value of the orclAnonymousBindsFlag to 0.

2.2.11 Remove the /u01/lcm Directory (Oracle VM Hosts Only)

Remove the /u01/lcm directory from all nodes, as its contents have been moved in Release 6.

2.2.12 Run RUP Lite for OVM - Offline Mode (Oracle VM Hosts Only)

Perform the steps in this section only if you are running Oracle Fusion Applications in an Oracle VM environment that was created from the official releases of Oracle VM templates for Oracle Fusion Applications Release 2 (11.1.2) and higher. The content is not applicable for any Oracle VM environments that are created using other methods. For more information, see Section 1.7, "RUP Lite for OVM Utility".

Note: To ensure you are upgrading an OVM environment and before you run RUP Lite for OVM, confirm that the host related properties in *APPLICATIONS_BASE*/ovabext/deployfw/deployprops/ovm-ha-deploy.properties properly describe the physical machines in the environment. For IDM nodes, the location is /u01/ovmext/deployfw/deployprops/ovm-ha-deploy.properties.

Perform the following steps to run RUP Lite for OVM in offline mode on each node of your Oracle VM environment:

- Install the Repository
- Update the Properties File
- Run RUP Lite for OVM

- Repeat Steps On All Nodes Of Your Oracle VM Environment
- Troubleshoot RUP Lite for OVM

2.2.12.1 Install the Repository

Perform the following steps to install the Oracle Fusion Applications 11.1.6 Lifecycle Management Tools for Oracle VM Installer repository on the primordial host. This repository includes RUP Lite for OVM.

1. Copy `fasaaslcmtools.zip` from OVAB_HOME to the OVM nodes. OVAB_HOME is the top-level directory for the Oracle Virtual Assembly Builder that contains all of the software needed to deploy Oracle Fusion Applications as an Oracle VM instance.
2. Unzip `fasaaslcmtools.zip`.
3. RUP Lite for OVM is installed under `/u01/lcm/rupliteovm`. Run the installer as the Oracle user in silent mode, using the `ORACLE_HOME=/u01/lcm` option to specify the install location and using the `-invPrtLoc` option to override the inventory location, as shown in the following examples:

   - Admin host

     ```
     fasaaslcmtools/Disk1/runInstaller -jreLoc /u01/APPLTOP/fusionapps/jdk6
     -silent -invPtrLoc /u01/APPLTOP/fusionapps/applications/oraInst.loc ORACLE_
     HOME=/u01/lcm
     ```

   - APPOHS host

     ```
     fasaaslcmtools/Disk1/runInstaller -jreLoc /u01/APPLTOP/webtier_
     mwhome/webtier/jdk6 -silent -invPtrLoc /u01/APPLTOP/webtier_
     mwhome/webtier/oraInst.loc ORACLE_HOME=/u01/lcm
     ```

   - OID host

     ```
     fasaaslcmtools/Disk1/runInstaller -jreLoc /u01/oid/jrockit-jdk1.6.0_24
     -silent -invPtrLoc /u01/oid/oid_home/oraInst.loc ORACLE_HOME=/u01/lcm
     ```

   - OIM host

     ```
     fasaaslcmtools/Disk1/runInstaller -jreLoc /u01/oim/jrockit-jdk1.6.0_24
     -silent -invPtrLoc /u01/oim/oim_home/oraInst.loc ORACLE_HOME=/u01/lcm
     ```

   - AuthOHS host

     ```
     fasaaslcmtools/Disk1/runInstaller -jreLoc /u01/ohsauth/ohsauth_home/jdk6
     -silent -invPtrLoc /u01/ohsauth/ohsauth_home/oraInst.loc ORACLE_
     HOME=/u01/lcm
     ```

   - WebChat host

     ```
     fasaaslcmtools/Disk1/runInstaller -jreLoc /u01/APPLTOP/beehive_mwhome/jdk6
     -silent -invPtrLoc /u01/APPLTOP/beehive_mwhome/oraInst.loc ORACLE_
     HOME=/u01/lcm
     ```

2.2.12.2 Update the Properties File

Update the `env.properties` file under the `rupliteovm/metadata` directory with the required property values for all plug-ins used by RUP Lite for OVM. For information about the plug-ins, see Section 1.7, "RUP Lite for OVM Utility". If a plug-in does appear on this list, it does not have any properties.

- **SetupCredentials** (runs in offline and online mode)

The first property enables the validation of passwords by prompting twice for the required credentials. If you need to change the password in the wallet, set the second property to true. This allows you to overwrite the existing password for a specific plug-in the wallet.

```
ovm.plugin.SetupCredentials.enable_password_validation=true
ovm.plugin.SetupCredentials.enable_password_update=false
```

- **ApplyMemorySettings** (runs in offline mode)

  ```
  ovm.plugin.ApplyMemorySettings.enabled=true
  ```

- **SetServerPassphrase** (runs in offline mode)

  ```
  ovm.plugin.SetServerPassphrase.enabled=true
  ```

- **GenerateOptimizedQueryPlans** (runs in offline mode)

  ```
  ovm.plugin.GenerateOptimizedQueryPlans.enabled=true
  ```

- **UpdateHTTPProxySettings** (runs in offline mode)

  ```
  ovm.plugin.UpdateHTTPProxySettings.enabled=true
  ```

- **UpdateWLSUmask** (runs in offline mode)

  ```
  ovm.plugin.UpdateWLSUmask.enabled=true
  ```

- **ConfigureODIAgent** (runs in offline mode)

  ```
  ovm.plugin.ConfigureODIAgent.enabled=true
  ```

- **UpdateSESDBConnection** (runs in online mode)

  ```
  ovm.plugin.UpdateSESDBConnection.enabled=true
  ```

- **DeployECSF** (runs in online mode)

  ```
  ovm.plugin.DeployECSF.enabled=true
  ovm.plugin.DeployECSF.connection_timeout_seconds=300
  ```

- **DisableWebchatConnections** (runs in online mode)

  ```
  ovm.plugin.DisableWebchatConnections.enabled=true
  ```

- **UpdateResolvConf** (runs in post-root mode)

  If you have additional DNS servers, search domains, or want to set options such as timeout and attempt, set the following properties and run this plug-in.

  If no additional DNS servers, search domains or options are needed, disable this plug-in so it does not run.

  ```
  ovm.plugin.UpdateResolvConf.enabled=true

  # Optional additional dns name server IP addresses (comma delimited)
  #example: ovm.plugin.UpdateResolvConf.dns_servers=ip_adress,ip_address
  ovm.plugin.UpdateResolvConf.dns_servers=

  # Optional additional resolv.conf options (comma delimited)
  #example: ovm.plugin.UpdateResolvConf.options=timeout:1,attempts:2
  ovm.plugin.UpdateResolvConf.options=

  # Optional additional resolv.conf search domains (comma delimited)
  #example: ovm.plugin.UpdateResolvConf.search=example.com,x.example.com
  ```

```
ovm.plugin.UpdateResolvConf.search=
```

The `dns_servers property` is a comma separated list of IP addresses of the dns servers to add to the `/etc/resolv.conf` file.

- **EnableEMRemoteMonitoring** (runs in post-root mode)

```
ovm.plugin.EnableEMRemoteMonitoring.enabled=true
```

- Confirm that the `OVM_STORAGE_MOUNT` and `APPLTOP` properties in the `env.properties` file are set correctly, for example, `OVM_STORAGE_MOUNT=/u01` and `APPLTOP=/u01/APPLTOP`.

2.2.12.3 Run RUP Lite for OVM

Run RUP Lite for OVM as the applications user.

1. Set the *JAVA_HOME* directory, for example:

```
setenv JAVA_HOME /assemblybuild/jre
```

Examples of `jre` locations for other nodes follow:

- AuthOHS Node: `/u01/ohsauth/oracle_common/jdk`
- OIM Node: `/u01/oim/jrockit_160_24_D1.1.2-4`
- OID Node: `/u01/oid/oracle_common/jdk`

2. Run `ruplite.sh` in offline mode from the `rupliteovm` directory.

```
cd /u01/lcm/rupliteovm
bin/ruplite.sh offline
```

3. Respond to the following prompts, which will be stored in a wallet file in the `rupliteovm/output/wallet` directory.

```
RUP Lite Wallet Key: If a wallet already exists, enter the value for the
existing key. If the wallet does not exist, a
new one will be created using the key you provide.

The key must be at least 8 characters long and include at least one numeric
character.

ID Store RW User Password:
FA Admin Password:
```

If no plug-ins run that require secure properties, the wallet creation and access is skipped and you are not prompted for the wallet key.

4. For information about RUP Lite for OVM troubleshooting, see Section 2.2.12.5, "Troubleshoot RUP Lite for OVM".

2.2.12.4 Repeat Steps On All Nodes Of Your Oracle VM Environment

The Oracle Fusion Applications 11.1.6 Lifecycle Management Tools for Oracle VM Installer repository, including RUP Lite for OVM, only needs to be installed once for each set of nodes that share the `/u01` storage mount. The repository installation on the primordial host is accessible to all Oracle Fusion Applications nodes, including primary, secondary, and BI nodes, as well as any corresponding scaleout nodes. The repository must be installed separately in `/u01/lcm` for the OHS node, the IDM nodes, and the Webchat node, if they are enabled.

The shared installation location can be used to run RUP Lite for OVM from multiple machines. Logs and checkpoint files for each machine are created in machine specific subdirectories under RUP Lite's output directory, `/u01/lcm/rupliteovm/output`.

RUP Lite for OVM must be run on all nodes of the OVM environment.

2.2.12.5 Troubleshoot RUP Lite for OVM

Review the `rupliteovm/output/logs/ruplite.log` file to confirm there are no errors. You can also check rehydration framework logs under `/assemblybuilder/logs` or `/var/log` for any errors. Review the following troubleshooting information for specific plug-ins:

- **ValidateEnvironment**: If this plug-in fails, RUP Lite for OVM stops. You must resolve any errors reported in the log file and then run RUP Lite for OVM again.
- **SetupCredentials:** If this plug-in fails, RUP Lite for OVM stops. Typical causes of failure are an incorrect key for an existing wallet, or specifying a key for a new wallet that does not meet Oracle's minimum standards. You must resolve any errors reported in the log file and then run RUP Lite for OVM again.

  Note that you are prompted for the password twice and that both responses must be identical. If you need to change the password in the wallet, set the `ovm.plugin.SetupCredentials.enable_password_update property` to true. If this property is enabled, when the `SetupCredentials` plug-in reruns, you are given the option to overwrite the existing password for a particular plug-in, in the wallet. By default this feature is disabled.
- **ApplyMemorySettings**: Check the `fusionapps_start_params.properties` files in the environment, which are located under the `bin` directory of each domain. Ensure that the `minmaxmemory` settings in the files are at least as high as the settings in the template under the `ovm/metadata` directory that corresponds to the environment's topology.
- **SetServerPassphrase**: This plug-in is rerunnable. Verify this plug-in was successful by confirming that, under the `admin-apps` directory of the FA node, the `config.xml` files of each domain under each node contain the following properties:

  ```
  <server-private-key-pass-phrase-encrypted>encryption_
  string=</server-private-key-pass-phrase-encrypted>

  <custom-identity-key-store-pass-phrase-encrypted>encryption_
  string=</custom-identity-key-store-pass-phrase-encrypted>

  <custom-trust-key-store-pass-phrase-encrypted>encryption_
  string=</custom-trust-key-store-pass-phrase-encrypted>
  ```

- **GenerateOptimizedQueryPlans:** This plug-in is rerunnable. Verify this plug-in was successful by connecting to the database as **`fusion_mds`** and running the following command:

  ```
  SELECT TO_CHAR(last_analyzed, 'yyyy/mm/dd hh:mi:ss am') as last_analyzed FROM
  user_tables;
  ```

  The results should show that the tables were just analyzed.
- **UpdateHTTPProxySettings**: This plug-in is rerunnable. Verify that the `fusion.default.default.sysprops` property in `fusionapps_start_params.properties` of each domain contains *localhost* and 127.0.0.1 as part of non-proxy hosts.

- **UpdateWLSUmask**: This plug-in is rerunnable. Under each domain directory, verify that `bin/startWebLogic.sh` contains `umask 027` instead of `umask 037`. Also confirm that `init-info/startscript.xml` and `init-info/startscript-unsub.xml` do not contain any `umask 037` strings.
- **ConfigureODIAgent:** This plug-in is rerunnable. Verify this plug-in was successful by performing the following steps:
  1. Open the following URL: `http://`*`big_IP_internal_end_point_for domain:port`*`/odiconsole`
  2. Login as FAAdmin.
  3. Click **Browse**.
  4. Expand Topology, then Agents, and then Physical agents.
  5. Select an agent for a domain that has ODI installed, for example, `FusionCrmOdiAgent`.
  6. Right click the agent and select **View**. Confirm that the host name is the LBR host.

2.2.13 Confirm the OPSS Security Store is Running

Start the OPSS Security Store if it is not already running. The OPSS Security Store used here is an Oracle Internet Directory LDAP server instance. Before proceeding with the installation, the designated Oracle Internet Directory server instance must be up and running. If this server is not running prior to starting the installation, the related configuration assistants will fail. You must also start the IDM Domain Administration Server.

For more information about starting, see "Starting and Stopping Oracle Internet Directory" in the *Oracle Fusion Middleware Enterprise Deployment Guide for Oracle Identity Management (Oracle Fusion Applications Edition)*.

2.2.14 Start Servers That Were Added After Provisioning

If you added any servers, you must start the new servers at least once. This step is not required for a server that has already been started once since Provisioning.

2.3 What To Do Next

To proceed with the upgrade, see Chapter 3, "Upgrading to Oracle Fusion Applications 11g Release 6 (11.1.6)".

3

Upgrading to Oracle Fusion Applications 11*g* Release 6 (11.1.6)

This chapter describes the steps required to upgrade Oracle Fusion Applications to Release 6 (11.1.6).

This chapter contains the following topics:

- Run RUP Installer
- Run the Post RUP Installer Report
- What To Do Next

3.1 Run RUP Installer

RUP Installer must run during down time. Oracle recommends that you run RUP Installer from a machine that is co-located in the same subnetwork as the database server to maximize performance. You must run RUP Installer from the primordial host. Primordial host is defined in Section 2.1.1, "Before You Begin".

Ensure that the steps in Section 2.1, "Pre-Upgrade Steps - Before Down Time" and Section 2.2, "Pre-Upgrade Steps - During Down Time" are successfully completed.

RUP Installer supports GUI mode and silent mode. In GUI mode, you navigate through screens that display the progress of the upgrade, including log file locations and status messages. In silent mode, RUP Installer reports the progress of the upgrade as console output.

- Run RUP Installer in GUI Mode
- Run RUP Installer in Silent Mode

3.1.1 Run RUP Installer in GUI Mode

Perform the following steps to start RUP Installer from the command line, using specific options to further define the necessary actions. You must run RUP Installer from the primordial host.

> **Note:** If RUP Installer encounters errors, refer to Chapter 6, " Troubleshooting the Upgrade" before clicking any buttons in the RUP Installer user interface.

1. Set the *JAVA_HOME* environment variable as follows:

```
(Unix) setenv JAVA_HOME APPLICATIONS_BASE/fusionapps/jdk6
```

```
(Windows) set JAVA_HOME=APPLICATIONS_BASE\fusionapps\jdk6
```

2. Confirm the registration of the network location of *FA_ORACLE_HOME*.

   If the Oracle Fusion Applications Oracle home directory (*FA_ORACLE_HOME*), which is *APPLICATIONS_BASE*/fusionapps/applications, is registered in the central inventory with a /net path, then provide the oraInst.loc location including /net when starting RUP Installer. An example follows:

   ```
   (Unix only)
   $REPOSITORY_LOCATION/installers/farup/Disk1/runInstaller -jreLoc APPLICATIONS_
   BASE/fusionapps/jdk6/
   -invPtrLoc /net/APPLICATIONS_BASE/fusionapps/applications/oraInst.loc
   ```

   If not triggered with a /net path, RUP Installer copies the -invPtrLoc file to *FA_ORACLE_HOME*. In the example, this results in a copy of the file to itself, which then becomes an empty or zero byte file. As a result, the copy phase will fail when oracle_common patches are applied. For more information, see Section 6.2.4, "Inventory Pointer File is Empty".

3. Start RUP Installer.

   ```
   (UNIX)
   $REPOSITORY_LOCATION/installers/farup/Disk1/runInstaller -jreLoc
   APPLICATIONS_BASE/fusionapps/jdk6/ [-invPtrLoc FA_ORACLE_HOME/oraInst.loc]
   [-J-Dworkers=number_of_workers][-J-DlogLevel=level]
   [-J-DserverStartTimeout=timeout_period_for_server_in_seconds]
   [-J-DpatchDownloadLocation=patch_directory][-J-Dapplseed_
   validation=full][-debug]

   (Windows)%REPOSITORY_LOCATION%\installers\farup\Disk1\setup.exe -jreLoc
   APPLICATIONS_BASE/fusionapps/jdk6/ [-Dworkers=number_of_
   workers][-DlogLevel=level]
   [-DserverStartTimeout=timeout_period_for_server_in_seconds]
   [-DpatchDownloadLocation=patch_directory]
   [-Dapplseed_validation=full] [-debug]
   ```

   Table 3–1 shows valid options that can be used when running RUP Installer.

Table 3–1 RUP Installer command options

Option Name	Description	Mandatory
-jreLoc	Path where the Java Runtime Environment is installed. This option does not support relative paths, so you must specify the absolute path.	Yes.
-invPtrLoc	The location of an overriding inventory pointer file. If Oracle Fusion Applications Oracle home directory (*FA_ORACLE_HOME*), is registered in inventory with a /net path, then provide the location of oraInst.loc including /net in the path.	Recommended, use to override the default location of the inventory pointer file, located in /etc/oraInst.loc. This option can be used only on Unix platforms.

Table 3–1 (Cont.) RUP Installer command options

Option Name	Description	Mandatory
`-J-Dworkers` (`-Dworkers` for Windows)	The number of workers to use for uploading database content. If you provide a value for the number of workers that is outside the calculated range, you are prompted to provide a value that is within the optimal range. If you do not use this option, a calculated optimal value is used.	No, overrides the default number of workers calculated by RUP Installer.
`-J-DlogLevel` (`-DlogLevel` for Windows)	Records messages in the log file at the level you specify. Enter a value to override the default log level of `INFO`.	No, default value is `INFO`.
`-J-DserverStartTimeout` (`-DserverStartTimeout` for Windows)	Configures the timeout value for server in seconds.	No, overrides the default value for server timeout.
`-J-DpatchDownloadLocation` (`-DpatchDownloadLocation` for Windows)	The directory path where you downloaded mandatory prerequisite patches to be applied by RUP Installer. See Section 2.1.4, "Download Mandatory Post-Release 6 Patches".	Yes, if you downloaded mandatory patches. Provide the full directory path to the `11.1.6.0.0_post_repo_patches` directory.
`-J-Dapplseed_validation` (`-Dapplseed_validation` for Windows)	Enables full validations, so that all validations are triggered during seed data upload.	No, default value is partial.
`-debug`	Retrieves the debug information from RUP Installer.	No.

Table 3–2 and Table 3–3 illustrate the tasks that RUP Installer runs. For information about the user interface, see Section 1.4, "Installer User Interface". For information about troubleshooting RUP Installer errors, see Chapter 6, " Troubleshooting the Upgrade". For information about log files, see Section 6.1, "RUP Installer Log File Directories".

Table 3–2 RUP Installer Screen Sequence for the First Installer

Screen	Description and Action Required
Welcome	Appears when you start RUP Installer. This screen does not appear if you restart RUP Installer after a failure. The standard Welcome screen is read-only. It contains a navigation pane on the left-hand side that summarizes the steps the installer will take. Each item in the pane represents an installer screen, which contains prompts for the necessary information. Click **Next** to continue.
Installation Location	Specify the location of the existing Oracle Fusion Applications home (*`FA_ORACLE_HOME`*). Click **Next** to continue.

Table 3–2 (Cont.) RUP Installer Screen Sequence for the First Installer

Screen	Description and Action Required
Installation Summary	Summarizes the configuration that will be used during this installation session. It includes the Oracle home, required and available disk space, and the version of the release to be installed. Review the information displayed to ensure that the installation details are what you intend. To make changes before installing, click **Back** to return to previous screens in the interview. Click **Install** to accept this configuration and start the installation.
Installation Progress	Displays a progress indicator that shows the percentage of the installation phase that is complete and indicates the location of the installation log file. The installation phase consists of copying files to the appropriate Oracle homes that are related to configuration assistants that run during the first installer. When the installation progress indicator shows 100 percent, click **Next** to continue.
Configuration Progress	Displays a progress indicator that shows the percentage of the configuration phase that is complete. It displays each configuration assistant, including steps within configuration assistants, in the message pane as they are performed. Configuration assistants that could be included in the first installer's configuration phase are described in Table 1–1, " Configuration Assistants Run by Oracle Fusion Applications 11g Release 6 (11.1.6) RUP Installer Part 1 of 2". No additional user action is required in the Configuration Progress screen unless a failure occurs. For more information, see Section 6.4, "General Troubleshooting During the Configuration Phase in GUI Mode".
Installation Complete	Summarizes the installation just completed. If you want to save this configuration to a response file, click **Save**. For more information, see "How Response Files Work" in the *Oracle Database Installation Guide 11g Release 2 (11.2) for Linux*. To complete a successful installation of the first installer, click **Finish**. The **Finish** button is activated only if all mandatory configuration assistants completed successfully. If you want to rerun this session to resolve failed configuration assistants, click **Cancel.**

Table 3–2 (Cont.) RUP Installer Screen Sequence for the First Installer

Screen	Description and Action Required

Run RUP Lite for Domain Configuration	You must run RUP Lite for Domain Configuration on all servers that contain local domains before proceeding to the next screen. The first installer must complete successfully before you proceed to the second installer. Do not click **OK** until you complete this step.
	
	You can skip this step if the environment does not contain any local domains. Local domains are those that are hosted on the local storage of various hosts, rather than in shared storage. Note that this step is not required for Oracle VM environments, as Oracle VM environments do not use local domains.
	
	■ Log in to each remote machine.
	
	■ Set the *JAVA_HOME* environment variable:
	
	`(Unix) setenv JAVA_HOME APPLICATIONS_BASE/fusionapps/jdk6`
	
	`(Windows) set JAVA_HOME=APPLICATIONS_BASE\fusionapps\jdk6`
	
	■ Go to the directory that contains RUP Lite for Domain Configuration:
	
	`(Unix) cd APPLICATIONS_CONFIG/fapatch/admin/ruplitedomain/RUP_version/bin`
	
	`(Windows) cd APPLICATIONS_CONFIG\fapatch\admin\ruplitedomain\RUP_version\bin`
	
	■ Run RUP Lite for Domain Configuration. Note that RUP Lite cannot be run in parallel on remote servers and it does not have to be run from the primordial host where you started RUP Installer. It must be run on one server at a time.
	
	`(Unix) ./ruplite.sh`
	`(Windows) ruplite.bat`
	
	■ Ensure that you run RUP Lite for Domain Configuration on each server that contains local domains.
	
	Click **OK** to proceed to the second installer.

Table 3–3 RUP Installer Screen Sequence for the Second Installer

Screen	Description and Action Required

Welcome	Appears when the second installer starts.
	
	You must perform the following steps to start the Node Manager and OPMN server before proceeding to the next screen.
	
	■ To ensure that Node Manager does not automatically start servers, even if `crashRecovery` is enabled, remove all files that end with `.pid`, `.state`, and `.lck` from *`domain_home`*`/servers/`*`server_name`*.
	
	■ Start the Node Manager on all hosts that are part of the Oracle Fusion Applications provisioned system. For more information, see "Task 3: Start Node Manager" in *Oracle Fusion Applications Administrator's Guide*.
	
	■ Start the OPMN server for BI, GOP (if GOP is installed), and Web Tier. If you run the Web Tier (OHS) installed with the Oracle Fusion Applications middle tier, you can start it using the following steps. If you run the Web Tier on a separate machine, you may be able to run the steps below on the other machine. In either case, ensure that Web Tier (OHS) is up at this point.
	
	Example for BI: (note the usage of `start` instead of `startall`)
	
	`cd` *`APPLICATIONS_CONFIG`*`/BIInstance/bin`
	`./opmnctl start`
	
	Example for GOP: (note the usage of `start` instead of `startall`) Note that the OPMN server for GOP should be started from the machine that hosts the Advanced Planning Managed server. Start the OPMN server for GOP only if you have GOP installed.
	
	`cd` *`APPLICATIONS_CONFIG`*`/gop_1/bin`
	`./opmnctl start`
	
	Example for Web Tier: (note the usage of `start` instead of `startall`)
	
	`cd` *`APPLICATIONS_CONFIG`*`/CommonDomain_webtier/bin`
	`./opmnctl start`
	
	For more information about the location of *`APPLICATIONS_CONFIG`*, see Section 2.1.1, "Before You Begin".
	
	The BI and Web Tier processes managed by OPMN are started by RUP Installer during the **Starting All Servers** configuration assistant. The GOP processes managed by OPMN must be started using Fusion Applications Control after RUP Installer completes, as described in Section 4.8, "Start GOP Processes".
	
	Click **Next** to continue.

Installation Location	Specify the location of the existing Oracle Fusion Applications home (*`FA_ORACLE_HOME`*). Click **Next** to continue.
Installation Summary	Summarizes the configuration that will be used during this installation session. It includes the Oracle home, required and available disk space, and the version of the release to be installed. Review the information displayed to ensure that the installation details are what you intend. To make changes before installing, click **Back** to return to previous screens in the interview. Click **Install** to accept this configuration and start the second installer.

Table 3–3 (Cont.) RUP Installer Screen Sequence for the Second Installer

Screen	Description and Action Required
Installation Progress	Displays a progress indicator that shows the percentage of the installation phase that is complete and indicates the location of the installation log file. The installation phase consists of copying files that are related to configuration assistants run during the second installer to the appropriate Oracle homes. When the installation progress indicator shows 100 percent, click **Next** to continue.
Policy Store Analysis (Note that if you installed a Language Pack and chose to override the base English strings in the policy store, this screen does not display.)	Analysis is available for the following policy store stripes: hcm, crm, fscm, and obi. Select the stripes to be analyzed and then click **Run Analysis** to identify any conflicts or deletions. Only the stripes that will be updated by RUP Installer are enabled for analysis and the analysis could run for several minutes. After the analysis runs, review the results of the analysis to determine which deployment method RUP Installer will use for policy store changes to each stripe. Oracle recommends that you select **Apply safe changes only**. This is the safest method unless you have read and totally understood the consequences of the other three options. If you decide to resolve the conflicts or deletions before the actual JAZN upload from RUP Installer, you should run the Policy Store Analysis step again to get the most accurate analysis report. The choices for deployment method are: ■ Apply safe changes only (choose this method if there are no conflicts) ■ Apply all changes and overwrite customizations ■ Append additive changes ■ Manually resolve conflicts and upload changes using Authorization Policy Manager If you choose **Apply safe changes only** or **Append additive changes**, then you must review the results of the analysis to manually upload any changes not applied by RUP Installer after the upgrade is complete. If you choose **Apply all changes and overwrite customizations**, then you may need to reapply the customizations that are overwritten after the upgrade is complete. If you choose one of these options, click **Next** after you make your selection. If you choose **Manually resolve conflicts and upload changes using Authorization Policy Manager** (APM), you must pause the upgrade while you bring up the APM application and upload the changes. For more information, see the "Upgrading Oracle Fusion Applications Policies" chapter in the *Oracle Fusion Middleware Oracle Authorization Policy Manager Administrator's Guide (Oracle Fusion Applications Edition)*. Note the location of the following files: ■ Baseline file: *FA_ORACLE_HOME*/admin/JAZN/*stripe*/baseline ■ Patch file for fscm, crm, and hcm stripes: *FA_ORACLE_HOME/stripe*/deploy/system-jazn-data.xml ■ Patch file for the obi stripe: *FA_ORACLE_HOME*/com/acr/security/jazn/bip_jazn-data.xml When you complete this task in APM, shut down the APM application, return to RUP Installer, and click **Next**.

Table 3–3 (Cont.) RUP Installer Screen Sequence for the Second Installer

Screen	Description and Action Required
Configuration Progress	The second installer supports parallel processing of certain configuration assistants, which run in groups. For more information, see Section 1.4.7, "Parallel Configuration Assistants". This screen displays a progress indicator that shows the percentage of the configuration phase that is complete. It displays each configuration assistant, including steps within configuration assistants, in the message pane as they are performed. Configuration assistants that could be included in the second installer's configuration phase are described in Table 1–2, " Configuration Assistants Run by Oracle Fusion Applications 11g Release 6 (11.1.6) RUP Installer Part 2 of 2". Before the **Starting All Servers** configuration assistant, the **Verifying Node Manager and OPMN Status** configuration assistant checks for access to the Node Manager and the OPMN control process. This may fail if you did not start the Node Manager and OPMN processes after the completion of the first installer. Do not cancel and exit out of RUP Installer in response to this configuration assistant. For more information, see Section 6.17, "Troubleshooting Failure During Verifying Node Manager and OPMN Status". No additional user action is required in the Configuration Progress screen unless a failure occurs. For more information, see Section 6.4, "General Troubleshooting During the Configuration Phase in GUI Mode". Links to specific configuration assistant failures are available in Table 1–2.
Installation Complete	Summarizes the installation just completed. If you want to save this configuration to a response file, click **Save**. For more information, see "How Response Files Work" in the *Oracle Database Installation Guide 11g Release 2 (11.2) for Linux*. To complete a successful installation, click **Finish**. The **Finish** button is activated only if all mandatory configuration assistants completed successfully. If you want to rerun this session to resolve failed configuration assistants, click **Cancel.**

4. Proceed to Section 3.2, "Run the Post RUP Installer Report".

3.1.2 Run RUP Installer in Silent Mode

Perform the following steps to start RUP Installer in silent mode from the command line, using specific options to further define the necessary actions. You must run RUP Installer from the primordial host.

1. Create a response file named `silent.rsp` to be used in silent mode. This file can be located in any directory that is accessible while launching RUP Installer. An example follows:

```
ORACLE_HOME=/u01/APPLTOP/fusionapps/applications
CRM_SELECTED_JAZN_MIGRATION_TYPE=PATCH_POLICY
FSCM_SELECTED_JAZN_MIGRATION_TYPE=PATCH_POLICY
HCM_SELECTED_JAZN_MIGRATION_TYPE=PATCH_POLICY
OBI_SELECTED_JAZN_MIGRATION_TYPE=PATCH_POLICY
```

Note: The *stripe*_SELECTED_JAZN_MIGRATION_TYPE properties allow you to choose which deployment method RUP Installer will use for policy store changes to each stripe. The following choices are available:

- PATCH_POLICY: Apply safe changes only. This is the recommended method. Choose this method if there are no conflicts.
- MIGRATE_POLICY_OVERRIDE: Apply all changes and overwrite customizations.
- MIGRATE_POLICY_NO_OVERRIDE: Append additive changes.
- MIGRATE_POLICY_APM: Manually resolve conflicts and upload changes using Authorization Policy Manager (APM)

If you choose PATCH_POLICY or MIGRATE_POLICY_NO_OVERRIDE, then you must review the results of the analysis to manually upload any changes not applied by RUP Installer, based on the choice you selected, after the upgrade is complete. If you choose MIGRATE_POLICY_OVERRIDE, then you may need to reapply the customizations that are overwritten after the upgrade is complete.

If you choose MIGRATE_POLICY_APM, you must pause the upgrade while you bring up the APM application and upload the changes. For more information, see the "Upgrading Oracle Fusion Applications Policies" chapter in the *Oracle Fusion Middleware Oracle Authorization Policy Manager Administrator's Guide (Oracle Fusion Applications Edition)*. Note the location of the following files:

- Baseline file: *FA_ORACLE_HOME*/admin/JAZN/*stripe*/baseline
- Patch file for fscm, crm, and hcm stripes: *FA_ORACLE_HOME*/*stripe*/deploy/system-jazn-data.xml
- Patch file for the obi stripe: *FA_ORACLE_HOME*/com/acr/security/jazn/bip_jazn-data.xml

2. Set the *JAVA_HOME* environment variable as follows:

```
(Unix) setenv JAVA_HOME APPLICATIONS_BASE/fusionapps/jdk6

(Windows) set JAVA_HOME=APPLICATIONS_BASE\fusionapps\jdk6
```

3. Confirm the registration of the network location of *FA_ORACLE_HOME*.

   If the Oracle Fusion Applications Oracle home directory (*FA_ORACLE_HOME*), which is *APPLICATIONS_BASE*/fusionapps/applications, is registered in the central inventory with a /net path, then provide the oraInst.loc location including /net when starting RUP Installer. An example follows:

```
$REPOSITORY_LOCATION/installers/farup/Disk1/runInstaller -jreLoc APPLICATIONS_
BASE/fusionapps/jdk6/
-invPtrLoc /net/APPLICATIONS_BASE/fusionapps/applications/oraInst.loc -silent
-response location_of_response_file JAZN_EXIST=true
```

   If not triggered with /net path, RUP Installer copies the -invPtrLoc file to *FA_ORACLE_HOME*. In the example, this results in a copy of the file to itself, which then becomes an empty or zero byte file. As a result, the copy phase will fail when

oracle_common patches are applied. For more information, see Section 6.2.4, "Inventory Pointer File is Empty".

4. Run the following command to start the first installer in silent mode:

> **Note:** If RUP Installer encounter errors in silent mode during the first installer, it terminates the session. You must resolve the issue that caused the failure and then restart RUP Installer, using the same command you used previously. RUP Installer then restarts from the first failed task. For more information, see Section 6.5, "General Troubleshooting During the Configuration Phase in Silent Mode".

```
(UNIX)
$REPOSITORY_LOCATION/installers/farup/Disk1/runInstaller -jreLoc
APPLICATIONS_BASE/fusionapps/jdk6/ [-invPtrLoc FA_ORACLE_HOME/oraInst.loc]
-silent
-response location_of_silent.rsp_file JAZN_EXIST=true
[-J-Dworkers=number_of_workers][-J-DlogLevel=level]
[-J-DserverStartTimeout=timeout_period_for_server_in_seconds]
[-J-DpatchDownloadLocation=patch_directory][-waitForCompletion yes]
[-J-Dapplseed_validation=full][-debug]

(Windows)
%REPOSITORY_LOCATION%\installers\farup\Disk1\setup.exe -jreLoc
APPLICATIONS_BASE/fusionapps/jdk6/[-Dworkers=number_of_
workers][-DlogLevel=level] -silent
-response location_of_silent.rsp_file JAZN_EXIST=true
[-DserverStartTimeout=timeout_period_for_server_in_seconds]
[-DpatchDownloadLocation=patch_directory [-waitForCompletion yes]
[-Dapplseed_validation=full] [-debug]
```

Table 3–2 shows valid options that can be used when running RUP Installer in silent mode.

Table 3–4 RUP Installer command options in silent mode

Option Name	Description	Mandatory
-jreLoc	Path where the Java Runtime Environment is installed. This option does not support relative paths, so you must specify the absolute path.	Yes.
-invPtrLoc	The location of an overriding inventory pointer file. If Oracle Fusion Applications Oracle home directory (*FA_ORACLE_HOME*), is registered in inventory with a /net path, then provide the location of oraInst.loc including /net in the path.	Recommended, use to override the default location of the inventory pointer file, located in /etc/oraInst.loc. This option can be used only on Unix platforms.
-silent	Run RUP Installer in silent mode.	Yes.
-response	The location of the response file, silent.rsp.	Yes.
JAZN_EXIST	Required for the **Deploying Applications Policies** configuration task.	Yes, always set to true for silent mode.

Table 3–4 (Cont.) RUP Installer command options in silent mode

Option Name	Description	Mandatory
`-J-Dworkers` (`-Dworkers` for Windows)	The number of workers to use for uploading database content. If you provide a value for the number of workers that is outside the calculated range, you are prompted to provide a value that is within the optimal range. If you do not use this option, a calculated optimal value is used.	No, overrides the default number of workers calculated by RUP Installer.
`-J-DlogLevel` (`-DlogLevel` for Windows)	Records messages in the log file at the level you specify. Enter a value to override the default log level of `INFO`.	No, default value is `INFO`.
`-J-DserverStartTimeout` (`-DserverStartTimeout` for Windows)	Configures the timeout value for server in seconds.	No, overrides the default value for server timeout.
`-waitForCompletion`	Causes the installer to wait for the completion of all operations, including the configuration assistants, instead of spawning the Java engine and exiting.	No, default value is No.
`-J-DpatchDownloadLocation` (`-DpatchDownloadLocation` for Windows)	The directory path where you downloaded mandatory prerequisite patches to be applied by RUP Installer. See Section 2.1.4, "Download Mandatory Post-Release 6 Patches".	Yes, if you downloaded mandatory patches. Provide the full directory path to the `11.1.6.0.0_post_repo_patches` directory.
`-J-Dapplseed_validation` (`-Dapplseed_validation` for Windows)	Enables full validations, so that all validations are triggered during seed data upload.	No, default value is partial.
`-debug`	Retrieves the debug information from RUP Installer.	No.

5. After the first installer completes successfully, run RUP Lite for Domain Configuration on all servers that contain local domains. You can skip this step if the environment does not contain any local domains. Local domains are those that are hosted on the local storage of various hosts, rather than in shared storages.

   Note that this step is not required for Oracle VM environments, as Oracle VM environments do not use local domains.

   Perform the following steps:

   a. Log in to each remote machine.

      Set the *JAVA_HOME* environment variable:

      ```
      (Unix) setenv JAVA_HOME=APPLICATIONS_BASE/fusionapps/jdk6
      (Windows) set JAVA_HOME=APPLICATIONS_BASE\fusionapps\jdk6
      ```

   b. Go to the directory that contains RUP Lite for Domain Configuration:

      ```
      (Unix) cd APPLICATIONS_CONFIG/fapatch/admin/ruplitedomain/RUP_version/bin
      (Windows) cd APPLICATIONS_CONFIG\fapatch\admin\ruplitedomain\RUP_
      version\bin
      ```

c. Run RUP Lite for Domain Configuration. Note that RUP Lite cannot be run in parallel on remote servers and it does not have to be run from the primordial host where you started RUP Installer. It must be run on one server at a time.

```
(Unix) ./ruplite.sh
(Windows) ruplite.bat
```

Ensure that you run RUP Lite for Domain Configuration on each server that contains local domains.

6. Perform the following steps to start the Node Manager and the OPMN server for BI, GOP, and Web Tier.

a. To ensure that Node Manager does not automatically start servers, even if `crashRecovery` is enabled, remove all files that end with `.pid`, `.state`, and `.lck` from *`domain_home`*`/servers/`*`server_name`*.

b. Start the Node Manager on all hosts that are part of the Oracle Fusion Applications provisioned system. For more information, see "Task 3: Start Node Manager" in *Oracle Fusion Applications Administrator's Guide*.

c. Start the OPMN server for BI, GOP (if GOP is installed), and Web Tier. If you run the Web Tier (OHS) installed with the Oracle Fusion Applications middle tier, you can start it using the following steps. If you run the Web Tier on a separate machine, you may be able to run the steps below on the other machine. In either case, ensure that Web Tier (OHS) is up at this point.

Example for BI: (note the usage of `start` instead of `startall`)

```
cd APPLICATIONS_CONFIG/BIInstance/bin
./opmnctl start
```

Example for GOP: (note the usage of `start` instead of `startall`) Note that the OPMN server for GOP should be started from the machine that hosts the Advanced Planning Managed server. Start the OPMN server for GOP only if you have GOP installed.

```
cd APPLICATIONS_CONFIG/gop_1/bin
./opmnctl start
```

Example for Web Tier: (note the usage of `start` instead of `startall`)

```
cd APPLICATIONS_CONFIG/CommonDomain_webtier/bin
./opmnctl start
```

For more information about the location of *`APPLICATIONS_CONFIG`*, see Section 2.1.1, "Before You Begin".

The BI and Web Tier processes managed by OPMN are started by RUP Installer during the **Starting All Servers** configuration task. The GOP processes managed by OPMN must be started using Fusion Applications Control after RUP Installer completes, as described in Section 4.8, "Start GOP Processes".

7. Run the following command to start the second installer in silent mode:

Note: If RUP Installer encounter errors in silent mode during the second installer, it cancels the session. You must resolve the issue that caused the failure and then restart RUP Installer, using the same command you used to start the second installer. RUP Installer then restarts from the first failed task. For more information, see Section 6.5, "General Troubleshooting During the Configuration Phase in Silent Mode".

```
(UNIX)
$REPOSITORY_LOCATION/installers/fusionapps/Disk1/runInstaller -jreLoc
APPLICATIONS_BASE/fusionapps/jdk6[-invPtrLoc FA_ORACLE_HOME/oraInst.loc]
-silent
-response location_of_silent.rsp_file JAZN_EXIST=true
[-J-Dworkers=number_of_workers][-J-DlogLevel=level]
[-J-DserverStartTimeout=timeout_period_for_server_in_seconds]
[-J-DpatchDownloadLocation=patch_directory][-waitForCompletion yes]
[-J-Dapplseed_validation=full][-debug]

(Windows)%REPOSITORY_LOCATION%\installers\fusionapps\Disk1\setup.exe -jreLoc
APPLICATIONS_BASE/fusionapps/jdk6[-Dworkers=number_of_
workers][-DlogLevel=level] -silent
-response location_of_silent.rsp_file JAZN_EXIST=true
[-DserverStartTimeout=timeout_period_for_server_in_seconds]
[-DpatchDownloadLocation=patch_directory][-waitForCompletion yes]
[-Dapplseed_validation=full] [-debug]
```

8. Proceed to Section 3.2, "Run the Post RUP Installer Report".

3.2 Run the Post RUP Installer Report

Run the Post RUP Installer report to check for any errors or warnings that require attention and to confirm whether RUP Installer completed successfully. The Post RUP Installer report provides an overview of the configuration assistants that RUP Installer ran during the upgrade. It is generated in HTML and XML format and includes links to log files. The names of the report files are `PostRUPInstallerReport.html` and `PostRUPInstallerReport.xml`. The log file generated by this report is `PostRUPInstallerReport.log`. The report output and log files are located in the directory that you provide when you run the report.

The Post RUP Installer report displays the following information:

- **Configuration Assistant:** The name of the configuration assistant.
- **Attempts:** The number of times the configuration assistant ran.
- **Time Taken:** The duration of the configuration assistant in minutes and seconds.
- **Result:** The result of the configuration assistant, such as PASSED or FAILED.
- **Errors:** Any errors that were reported during the configuration assistant.
- **Log Files:** Link to log files for the configuration assistant.

Run the following command to generate the Post RUP Installer report:

```
(Unix)
FA_ORACLE_HOME/lcm/ad/bin/generatepostrupinstallationreport.sh -loglocation log_
location
[-reportlocation report_location -outputloglocation outputlog_location]
```

```
(Windows)
FA_ORACLE_HOME\lcm\ad\bin\generatepostrupinstallationreport.cmd -loglocation log_
location
[ -reportlocation report_location -outputloglocation outputlog_location]
```

Table 3–5 describes the command line options for the Post RUP Installer report.

Table 3–5 Command Line Options for the Post RUP Installer Report

Option Name	Mandatory	Description
-loglocation	Yes	The location of the RUP Installer log files, for example, *FA_ORACLE_HOME*/admin/FUSION/log/fapatch/fapatch_11.1.6.0.0.
-reportlocation	No	The location of the Post RUP Installer report in HTML and XML format. The file names are PostRUPInstaller_Report.html and PostRUPInstaller_Report.xml. The default location is equivalent to the value you provide for the -loglocation option.
-outputloglocation	No	The location of the Post RUP Installer report log file, named PostRUPInstaller_Report_Utility.log. The default value is equivalent to the value you provide for the -loglocation option.

The directory paths you provide for the -loglocation, -reportlocation, and -outputloglocation options must be existing directories.

3.3 What To Do Next

To complete the upgrade, proceed to Chapter 4, "Completing Post-Upgrade Tasks".

4

Completing Post-Upgrade Tasks

This chapter describes the tasks you must perform after you complete the steps in Chapter 3, "Upgrading to Oracle Fusion Applications 11g Release 6 (11.1.6)".

This chapter contains the following topics:

4.1 Upgrade the Web Tier Using RUP Lite for OHS

Perform the following steps to complete the Web Tier upgrade using RUP Lite for OHS. Note that you must run RUP Lite for OHS from the OHS host. For more information, see Section 1.8, "RUP Lite for OHS Utility".

1. Verify that the **Generating RUP Lite for OHS** configuration assistant was successful during the upgrade.

2. Create a secure directory on the OHS host, such as `/APPTOP/RUPLiteREPO`. Copy `webgate_installer_11.1.6.0.0.zip`, which was generated by the RUP Installer configuration assistant, **Generate RUP Lite for OHS**, to this secure directory.

   ```
   cp FA_ORACLE_HOME/admin/webgate_installer_11.1.6.0.0.zip /APPTOP/RUPLiteREPO
   ```

   Note that if the Web Tier is on a separate host, then copying the zip file may not work. In this case, you may need to ftp the zip file to the OHS host instead.

3. Unzip `webgate_installer_11.1.6.0.0.zip` into the `/APPTOP/RUPLiteREPO` directory, which is referred to as the RUP Lite for OHS repository, or *RUPLITE_REPO*, in the remaining steps.

4. Set the JAVA_HOME environment variable to the *java_home_location*

   ```
   (Unix) setenv JAVA_HOME java_home_location
   (Windows) set JAVA_HOME=java_home_location
   ```

5. Update the *RUPLITE_REPO*`/metadata/env.properties` file to set the environment variables required by RUP Lite for OHS. An example of `env.properties` follows:

   ```
   # WT_MW_HOME - Points to the Middleware home location where the web tier,
   # webgates and oracle_common are held
   # Example: /oracle/work/MW_HOME
   WT_MW_HOME=/APPTOP/webtier_mwhome

   # WT_ORACLE_HOME - Points to the web tier (OHS) home location (typically inside
   # your MIDDLEWARE_HOME)
   # Example: /oracle/work/MW_HOME/Oracle_WT1
   WT_ORACLE_HOME=/APPTOP/webtier_mwhome/webtier

   # WT_CONFIG_HOME - Points to the specific web tier (OHS) instance on which the
   # ruplite utility would be applied
   # Example: /oracle/work/MW_HOME/Oracle_WT1/instances/instance1
   WT_CONFIG_HOME=/APPTOP/instance/CommonDomain_webtier

   # OHS_INSTANCE_ID - This value is the name of the web tier (OHS) instance that
   is
   # going to be upgraded using the ruplite utility.
   # Please note that variable is not a path, but simply a string name of the
   # instance in question
   # Example: ohs1
   OHS_INSTANCE_ID=ohs1
   ```

   You can update *RUPLITE_REPO/metadata/env.properties* manually or you can use the `ruplite.plugin.SetEnv` plug-in.

   The command syntax for using the `ruplite.plugin.SetEnv` plug-in follows:

   ```
   (Unix)
   RUPLITE_REPO/bin/ruplite.sh -m ruplite.plugin.SetEnv VARIABLE1 VALUE1 VARIABLE2
   VALUE2 VARIABLE3 VALUE3

   (Windows)
   RUPLITE_REPO\bin\ruplite.bat -m ruplite.plugin.SetEnv VARIABLE1 VALUE1
   VARIABLE2 VALUE2 VARIABLE3 VALUE3
   ```

   An example of `ruplite.plugin.SetEnv` usage follows. Note that this should be run as one line with no carriage returns.

   ```
   (Unix)
   RUPLITE_REPO/bin/ruplite.sh -m ruplite.plugin.SetEnv WT_MW_HOME
   ```

```
/APPTOP/webtier_mwhome
WT_ORACLE_HOME /APPTOP/webtier_mwhome/webtier
WT_CONFIG_HOME /APPTOP/instance/CommonDomain_webtier
OHS_INSTANCE_ID ohs1
```

6. Follow the steps in the `README.txt` file of patch 14543240 to run the script to remove conflicting patches on the OHS host. You downloaded patch 14543240 in Section 2.1.5, "Download Other Patches Required by the Upgrade".

   Ensure that you run this script only before upgrading the OHS host. If you run this script at any time other than before upgrading, the system may be left in an unstable state.

7. Run RUP Lite for OHS from the OHS host:

   ```
   (Unix)
   cd RUPLITE_REPO
   bin/ruplite.sh

   (Windows)
   cd RUPLITE_REPO
   bin/ruplite.bat
   ```

   If this utility completes with errors or warnings, you must resolve the issue, and then run the utility again. When you restart the `ruplite` utility, all failed steps run again.

8. To verify that RUP Lite for OHS was successful, review the results in the following files:

   ```
   RUPLITE_REPO/ohs_bundle/techpatch/ohs/patch_validate_results.xml
   RUPLITE_REPO/ohs_bundle/techpatch/ohs_manual_download/patch_validate_
   results.xml
   ```

   These files are available only when there are patches in the downloaded patches directory, as described in Section 2.1.4, "Download Mandatory Post-Release 6 Patches".

   Note: If you have multiple instances of OHS, then you must repeat the steps in this section for each OHS instance. When you need to upgrade more than one Web Tier instance, one of two scenarios applies to your environment, as follows:

   - If the same *`RUPLITE_REPO`* needs to be used for more than one Web Tier instance, you must back up and remove the checkpoint file located in the *`RUPLITE_REPO`*`/output/checkpoint` directory before each upgrade.
   - If you copy and unzip the original *`RUPLITE_REPO`* to each Web Tier instance, there is no requirement to remove the checkpoint file.

   Ensure that you set the correct environment variable value for *`OHS_INSTANCE_ID`* before running the `ruplite` utility.

4.2 Run RUP Lite for OVM - Online Mode (Oracle VM Hosts Only)

Perform the steps in this section only if you are running Oracle Fusion Applications in an Oracle VM environment that was created from the official releases of Oracle VM templates for Oracle Fusion Applications Release 2 (11.1.2) and higher. The content is not applicable for any Oracle VM environments that are created using other methods.

Perform the following steps to run RUP Lite for OVM in online mode.

- Run RUP Lite for OVM in Online Mode
- Troubleshoot RUP Lite for OVM in Online Mode

4.2.1 Run RUP Lite for OVM in Online Mode

Run RUP Lite for OVM on each node of your Oracle VM environment, from the directory you created in Section 2.2.12.4, "Repeat Steps On All Nodes Of Your Oracle VM Environment". Note that you must run RUP Lite for OVM as the applications user.

1. Set the *JAVA_HOME* directory:

   ```
   setenv JAVA_HOME /assemblybuild/jre
   ```

   Examples of `jre` locations for other nodes follow:

   - authohs Node: `/u01/ohsauth/oracle_common/jdk`
   - oim Node: `/u01/oim/jrockit_160_24_D1.1.2-4`
   - oid Node: `/u01/oid/oracle_common/jdk`

2. Run `ruplite.sh` from the `rupliteovm` directory.

   ```
   cd /u01/lcm/rupliteovm
   bin/ruplite.sh online
   ```

3. For information about troubleshooting, see Section 4.2.2, "Troubleshoot RUP Lite for OVM in Online Mode".

4.2.2 Troubleshoot RUP Lite for OVM in Online Mode

Review the `rupliteovm/output/logs/ruplite.log` file to confirm there are no errors. You can also check rehydration framework logs under `/assemblybuilder/logs` or `/var/log` for any errors. Review the following troubleshooting information for specific plug-ins:

- **UpdateSESDBConnection:** This plug-in is rerunnable. The rehydration command this plug-in calls requires that all database schema passwords be registered in the credentials store. The credential store must contain an entry for `FUSION_DISCUSSIONS_CRAWLER`. The following error message appears in the `ruplite.log` file if this entry is missing:

  ```
  Executing Task:
  oracle.apps.fnd.provisioning.ovm.rehydratefw.cli.cmd.fasec.UpdateSESDBConnectio
  nCmd ... FAILED. [0m31s]
  An error occurred: An error occurred during command execution: A password could
  not be retrieved because:
  The deploy property 'credential.FUSION_DISCUSSIONS_CRAWLER.password' does not
  have a value.
  A value from the credential store could not be read or does not exist. A
  reference property was not provided.
  ```

  The Register Database Schema tool populates the credentials store with database schema passwords. For more information, see Section 2.1.6, "Register Database Schema Information".

  Perform the following steps to verify this plug-in was successful:

  1. Open the Oracle Secure Enterprise Search administration page.
  2. Go to the **Sources** tab.

3. Edit the **Announcements** data source.
4. Verify that **Source Configuration - Database Connection String** and **Authorization - Authorization Database Connection String** reflect the values for host, port, and service name from `ovm-ha-deploy.properties`. If the `faovm.ha.fusiondb.new.is.rac` property is set to false, the non-RAC port values will be used. If this property is set to true, the RAC port values will be used.

- **DeployECSF**: This plug-in is rerunnable. If your environment was originally provisioned before Release 5, you can verify that this plug-in was successful by confirming that the help object, schedule, and group being deployed are reported in the log file. You can also use Fusion Applications Control to connect to the Administration Server that hosts the search application and confirm that the Help instance artifacts are deployed.
- **DisableWebchatConnections:** This plug-in is rerunnable. If your environment has WebChat enabled this plug-in does not disable the connection.

4.3 Run RUP Lite for OVM - Post-Root Mode (Oracle VM Hosts Only)

Perform the steps in this section only if you are running Oracle Fusion Applications in an Oracle VM environment that was created from the official releases of Oracle VM templates for Oracle Fusion Applications Release 2 (11.1.2) and higher. The content is not applicable for any Oracle VM environments that are created using other methods.

Perform the following steps to run RUP Lite for OVM in post-root mode.

- Run RUP Lite for OVM in Post-Root Mode
- Troubleshoot RUP Lite for OVM in Post-Root Mode

4.3.1 Run RUP Lite for OVM in Post-Root Mode

Run RUP Lite for OVM in post-root mode on each node of your Oracle VM environment, from the directory you created in Section 2.2.12.4, "Repeat Steps On All Nodes Of Your Oracle VM Environment". Note that you must run RUP Lite for OVM as the root user.

1. Set the *JAVA_HOME* directory:

   ```
   setenv JAVA_HOME /assemblybuild/jre
   ```

   Examples of `jre` locations for other nodes follow:

   - authohs Node: `/u01/ohsauth/oracle_common/jdk`
   - oim Node: `/u01/oim/jrockit_160_24_D1.1.2-4`
   - oid Node: `/u01/oid/oracle_common/jdk`

2. Run `ruplite.sh` from the `rupliteovm` directory.

   ```
   cd /u01/lcm/rupliteovm
   bin/ruplite.sh post-root
   ```

3. For information about troubleshooting, see Section 4.3.2, "Troubleshoot RUP Lite for OVM in Post-Root Mode".

4.3.2 Troubleshoot RUP Lite for OVM in Post-Root Mode

Review the `rupliteovm/output/logs/ruplite.log` file to confirm there are no errors. You can also check rehydration framework logs under `/assemblybuilder/logs` or `/var/log` for any errors. Review the following troubleshooting information for specific plug-ins:

- **RequireRoot**: If this plug-in fails, the RUP Lite execution will stop.
- **UpdateResolvConf:** This plug-in is rerunnable. If a value already exists in the `/etc/resolv.conf` file, it will not be added again. If you remove a property value from `metadata/env.properties`, the value is not removed from `/etc/resolve.conf` by running the plug-in again.
- **EnableEMRemoteMonitoring**: This plug-in is rerunnable. Verify that `EM_MONITOR_ALL_DISKS` in `/oem/app/oracle/product/12c/agent_inst/sysman/config/emd.properties` is set to true.

4.4 Run RUP Lite for BI

The *RUP Lite for BI* utility automates changes to `BIInstance` configuration files required for Oracle Business Intelligence after upgrading.

RUP Lite for BI is located in *BI_ORACLE_HOME*`/biapps/tools/lib/biruplite.jar`. Before you run RUP Lite for BI, ensure that *BI_ORACLE_HOME* and *BI_DOMAIN_HOME* are configured properly with the correct permissions. For example, *BI_INSTANCE_HOME* must have read/write access for the user who runs RUP Lite for BI. *BI_ORACLE_HOME* is the Oracle home for BI, typically located at *APPLICATIONS_BASE*`/fusionapps/bi`. *BI_DOMAIN_HOME* is the home directory for the BI Domain, typically located at *APPLICATIONS_CONFIG*`/domains/`*host*`/BIDomain`, where *host* is the BI host.

Run RUP Lite for BI from the BI host. Note that if you are using a local domain environment, run RUP Lite for BI from the local domain machine.

1. Confirm that BI OPMN is up and running.
2. Set the *JAVA_HOME* environment variable to point to a location where the Java version is at least 1.6.

   ```
   (Unix) setenv JAVA_HOME APPLICATIONS_BASE/fusionapps/jdk6
   setenv PATH $JAVA_HOME/bin:$PATH

   (Windows) set JAVA_HOME=APPLICATIONS_BASE\fusionapps\jdk6
   set PATH=%JAVA_HOME\bin;%PATH%
   ```

3. Run RUP Lite for BI using the following command syntax:

   ```
   (Unix)
   java -jar BI_ORACLE_HOME/biapps/tools/lib/biruplite.jar BI_DOMAIN_HOME BI_
   ORACLE_HOME


   (Windows)
   java -jar BI_ORACLE_HOME\biapps\tools\lib\biruplite.jar BI_DOMAIN_HOME BI_
   ORACLE_HOME
   ```

   Example:

   ```
   cd /APPTOP/fusionapps/bi/biapps/tools/lib

   java -jar biruplite.jar
   /APPTOP/instance/domains/server04.mycompany.com/BIDomain /APPTOP/fusionapps/bi
   ```

Note: If you have multiple instances of `BIInstance`, then you must run RUP Lite for BI on each BI host.

If the utility encounters any errors, RuntimeException reports errors. The output from the utility also contains information about any errors. After you resolve the cause of the errors, you can rerun `biruplite.jar`.

If you have scaled out BI hosts, RUP Lite for BI attempts to update both `BIInstance` and `BIInstance1`, for example. RUP Lite for BI succeeds on `BIInstance`, but fails for `BIInstance1`. You can ignore the failure for the non-local instance as long as it succeeds on the local instance.

Follow these steps to validate that the utility was successful:

- Confirm that the `BIShared/Essbase/essbaseserver1/bin/esssql.cfg` file contains the property `ConvertUTF16toUTF8 1`.
- Confirm that the `BIInstance/config/OracleBIPresentationServicesComponent/coreapplication_obips1/instanceconfig.xml` file contains the property, `<UserprefCurrenciesConfigFile>/APPTOP/instance/BIInstance/config/OracleBIPresentationServicesComponent/coreapplication_obips1/userpref_currencies_OTBI.xml</UserprefCurrenciesConfigFile>`.

4.5 Invoke an Instance of SOA Composite

You must invoke the `UpdateSOAMDS` SOA composite on every domain if you made any flexfield changes, by following the steps described in "Task: Synchronizing Customized Flexfields in the MDS Repository for SOA" in the *Oracle Fusion Applications Extensibility Guide*.

4.6 Confirm Database Artifact Deployments Were Successful

Confirm that the deployment of artifacts updated during the **Load Database Components** configuration assistant were successful by reviewing the Diagnostics report and log files. For more information, see "Diagnostics Report" in the *Oracle Fusion Applications Patching Guide*.

4.7 Review Log Files for Errors or Exceptions

Confirm there are no unresolved errors or exceptions in the log files. For information about warnings and errors generated during the upgrade, see Section 3.2, "Run the Post RUP Installer Report". For information about resolving errors, see Chapter 6, " Troubleshooting the Upgrade".

4.8 Start GOP Processes

Perform the following steps to start the GOP processes. Note that the `opmnctl` process for `gop_1` should only be started on the host machine which contains the `AdvancedPlanning` Managed Server. Do not start it on the primordial host.

1. Proceed to Step 2 if your GOP processes have been previously configured and have run before.

If you are starting GOP processes for the first time, confirm that a datasource exists, in the form of XML files, under the *APPLICATIONS_BASE*/instance/gop_1/GOP/GlobalOrderPromisingServer1/datastore directory. Then run the RefreshOpDatastore ESS job by performing the following steps:

a. Ensure that the AdvancePlanning Managed Server is running in the SCM domain.

b. Invoke http://*scm - AdvancePlanning managedserver*:*port*/advancedPlanning/faces/MscCentralEssUi

c. In the bottom list applet click on **Actions**, then **Schedule New Process**.

d. Select **Search** under **Name**, and query for %Order%.

e. Select **Refresh Order Promising Data** and click **OK**.

f. Select all check boxes in the Process Details popup.

g. You can customize some options in the **Advanced** pane, but this is not mandatory.

h. Click **Submit** and note the process ID.

i. After you confirm that the process is complete, you should see information from the log file that is similar to the following example:

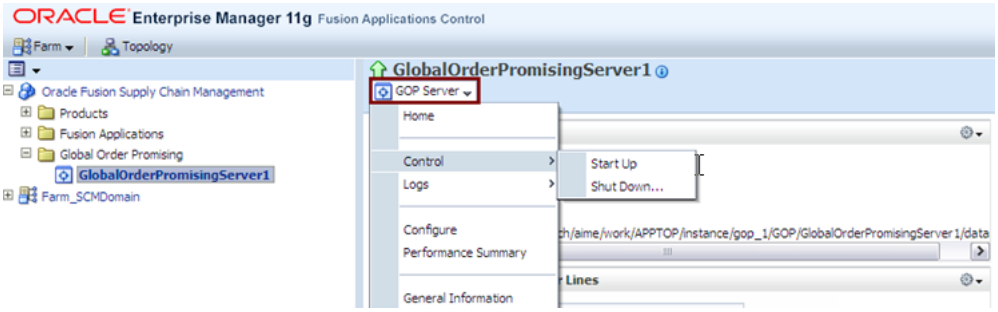
```
Running RefreshOpDatastore Job...
Got service proxy successfully.
Got callback url successfully.
Getting the job-parameters in the Map.
Added job parameters in the map
Web service sucessfully invoked
***** callback received *****
Return Status of job is SUCCESS
```

j. Proceed to Step 2.

2. Log in to Fusion Applications Control. For more information, see "Starting Fusion Applications Control" in the *Oracle Fusion Applications Administrator's Guide*.

3. Access GOP by navigating to **Oracle Fusion Supply Chain Management**, then **Global Order Promising**, then **GlobalOrderPromisingServer1**.

4. Click **GlobalOrderPromisingServer1** to open the GlobalOrderPromisingServer1 page.



5. Select **Control** from the menu, then **Start Up**.

4.9 Reload Custom Templates for BI Publisher Reports

Follow this step if you have customized BI Publisher reports.

Reload custom templates for BI Publisher reports on Oracle-delivered BI Publisher reports by following the steps in "Task: Upload the Template File to the Report Definition" in the *Oracle Fusion Applications Extensibility Guide*.

4.10 Review Policy Story (JAZN) Analysis Reports

Review the JAZN Analysis reports for potential conflicts and deletions that are not patched automatically by RUP Installer. The reports are located in the following directory:

FA_ORACLE_HOME/admin/JAZN/*stripe*/delta/report.txt

The *stripe* is crm, fscm, hcm, or obi.

Review the Modification section of the report to see the roles that RUP Installer did not update. For each conflict that displays in this report, you must evaluate and manually patch the role by using Oracle Authorization Policy Manager (APM). For more information, see "Upgrading Oracle Fusion Applications Policies" in the *Oracle Fusion Middleware Oracle Authorization Policy Manager Administrator's Guide (Oracle Fusion Applications Edition)*.

The following example shows a typical Application Role conflict that has been modified by both the patch and production, therefore it is not applied by RUP Installer.

```
MODIFICATION CONFLICTS
Artifact type: Application Role
Artifact Name: OBIA_PARTNER_CHANNEL_ADMINISTRATIVE_ANALYSIS_DUTY
Description: This artifact is modified at attribute level in patch version and
also in production.
```

Note the location of the following files for reference when using APM:

- Location of baseline files, where stripe is crm, fscm, hcm, or obi:

  FA_ORACLE_HOME/admin/JAZN/*stripe*/baseline

- Location of patch files for fscm, crm, and hcm stripes:

  FA_ORACLE_HOME/stripe/deploy/system-jazn-data.xml

- Location of patch files for the obi stripe:

  FA_ORACLE_HOME/com/acr/security/jazn/bip_jazn-data.xml

4.11 Perform Steps in Release Notes

Follow any post-upgrade steps mentioned in the Post-Upgrade Known Issues section of *Release Notes for Oracle Fusion Applications 11g Release 6 (11.1.6)*.

4.12 Resolve Conflicts That Occurred During BI Metadata Updates

RUP Installer updates the applications policies for Oracle Business Intelligence during the **Apply Offline BI Metadata and Configuration Updates** configuration assistant. When RUP Installer runs the **Apply Online BI Metadata and Configuration Updates** configuration assistant, it updates the Oracle BI Applications metadata in the Oracle BI repository and the Oracle BI Presentation Catalog for Oracle Fusion Transactional Business Intelligence and Oracle Business Intelligence Applications.

Note: This section refers to different Oracle BI directory paths. The BI Oracle home contains the binary and library files necessary for Oracle BI. *BI_ORACLE_HOME* represents the BI Oracle home in path names.

For more information about the Oracle BI directory structure, see "Oracle Business Intelligence Directory Structure" in *Oracle Fusion Middleware Upgrade Guide for Oracle Business Intelligence*.

Also, see "Understanding Oracle Fusion Middleware Concepts" in *Oracle Fusion Middleware Administrator's Guide* for information about the Fusion Middleware directory structure.

This section contains the following topics:

- Resolve Conflicts in Oracle BI Presentation Catalog
- Resolve Conflicts in Oracle Business Intelligence Policy Store

4.12.1 Resolve Conflicts in Oracle BI Presentation Catalog

When you run RUP Installer, the Oracle BI Metadata Update Tool overwrites all customizations to catalog objects in the Presentation Catalog with the new Oracle-supplied content and logs conflicts in a conflict report.

After RUP Installer completes, you must review the conflict report and decide whether you want to retain the new content or re-apply your customizations using a manual process.

Points to Consider

- The folders, `/shared/backup/shared` and `/shared/backup/system`, are created in the updated Presentation Catalog during the RUP Installer and the Metadata Update Tool process. You access these folders through the Folders pane of the Catalog page in the Oracle BI Enterprise Edition user interface, as described in the following procedure.

  Note: The `/shared/backup` folder should not exist before RUP Installer runs, because the updated Presentation Catalog file will not be copied to this folder if it already exists.

  As a precaution, to ensure the `/shared/backup` folder does not exist before RUP Installer runs, you can optionally create an environment variable called `webcat.force.restore`, which will overwrite the contents of an existing `/shared/backup` folder. This environment variable needs to be set in the shell prompt from where the installer is going to be invoked, using the command, `setenv webcat.force.restore true`.

- Conflicts that arise during RUP Installer and the Metadata Update Tool process are stored in the `/shared/backup/shared` folder in the updated Presentation Catalog. Object references that have conflicts are also stored in `/shared/backup/shared`.

To resolve conflicts in the Presentation Catalog:

1. Locate the conflict report named `update-conflict-report.txt`, which is stored in the folder, *`BI_SHARED_DIR`*`/.biapps_patch_storage/update/`*`Run_ID`*.

   A sample conflict report follows:

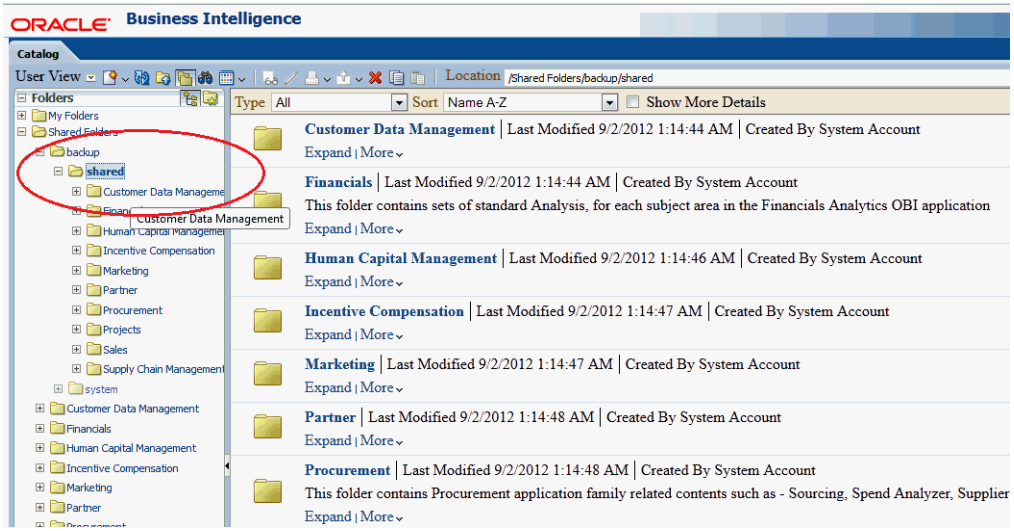
```
The webcat conflicts are :/shared/Financials/Payables/Payments/Report Components/Invoice Details for Discount Taken and Lost Report
/shared/Financials/Payables/Payments/Report Components/Payables Payment Exceptions
/shared/Financials/Receivables/Receivables to Ledger Reconciliation/Differences/Unapplied and Unidentified Differences Detail
/shared/Financials/Receivables/Receivables to Ledger Reconciliation/Receivables/Adjustments Detail
/shared/Incentive Compensation/_portal/Incentive Compensation Analyst Dashboard/Incentive Compensation Analyst Dashboard
/shared/Incentive Compensation/Transactional Analysis Samples/Report Components/Attainment Summary Dashboard Report
/shared/Incentive Compensation/Transactional Analysis Samples/Report Components/Attainment Summary Report
/shared/Incentive Compensation/Transactional Analysis Samples/Report Components/Commission Statement Detail Dashboard Report
/shared/Incentive Compensation/Transactional Analysis Samples/Report Components/Credit Details Participant Manager Report
/shared/Incentive Compensation/Transactional Analysis Samples/Report Components/Credit Details Report
/shared/Incentive Compensation/Transactional Analysis Samples/Report Components/Dispute Status and Histor
```

2. Sign in to Oracle Business Intelligence Enterprise Edition (Oracle BI EE).

   See "Signing In to Oracle BI Enterprise Edition" and "Navigating Oracle BI Enterprise Edition" in *Oracle Fusion Middleware User's Guide for Oracle Business Intelligence Enterprise Edition (Oracle Fusion Applications Edition)* for instructions on signing in and navigating in the Oracle BI EE user interface.

3. Click **Catalog** in the global header.

4. In the Folders pane, navigate to the Shared Folders/backup/shared folder.



5. Open an object that has a conflict. This object depicts the state of the object before RUP Installer and the Metadata Update Tool were run.

6. Open a second instance of Oracle BI EE and the Presentation Catalog.

7. Navigate to the Shared Folders folder.

8. Open the same object you opened in step 5. This object depicts the state of the object after RUP Installer and the Metadata Update Tool were run (and after the metadata updates were applied).

9. Compare the two objects and decide whether you want to retain the Oracle-supplied updated content or re-apply your customization from the previous version of the Presentation Catalog.

10. To re-apply your customization to an updated object, manually edit the object.

11. Repeat steps 5 through 10 for all objects that have conflicts.

4.12.2 Resolve Conflicts in Oracle Business Intelligence Policy Store

When you run RUP Installer, the Oracle BI Metadata Update Tool performs a safe upgrade on the Oracle Business Intelligence policy store, which means it updates only

the metadata content that does *not* conflict with your customizations. Updated content that conflicts with your customizations is not applied. Conflicts are listed in the Oracle BI Metadata Tool update report, located at *BI_SHARED_DIR*/.biapps_patch_storage/update/*Timestamp*/policystore_delta/report.txt.

This procedure provides instructions for overriding the customizations of the previous Oracle Business Intelligence policy store by applying the Oracle-supplied updated content. This procedure uses Oracle Authorization Policy Manager. For detailed information about upgrading Oracle Fusion Applications policies using Oracle Authorization Policy Manager, see "Upgrading Oracle Fusion Applications Policies" in the *Oracle Fusion Middleware Oracle Authorization Policy Manager Administrator's Guide (Oracle Fusion Applications Edition)*.

Note: You do not need to back up your existing policy store file, because the Metadata Update Tool process does not overwrite your customizations.

To resolve conflicts in the policy store:

1. Log in to the Authorization Policy Manager Administration Console.

   See "Getting Started With Oracle Authorization Policy Manager" in *Oracle Fusion Middleware Oracle Authorization Policy Manager Administrator's Guide (Oracle Fusion Applications Edition)* for instructions.

2. Navigate to the **Home** tab of the Policy Upgrade Management page.
3. Click **Patch Application** in the upper-left corner of the page to display the Patch Application dialog.
4. Select the appropriate application from the **Application** list.
5. In the **Patch File** field, specify the new patch file name and location, for example, *BI_ORACLE_HOME*/bifoundation/admin/provisioning/biapps-policystore.xml.
6. In the **Baseline** field, specify the previous policy store that was backed up by the Oracle BI Metadata Update Tool, for example, *BI_ORACLE_HOME*/.biapps_patch_storage_*UPGRADE_from_VERSION*/OH_BACKUP/bifoundation/admin/provisioning/biapps-policystore.xml.
7. Navigate to the **Patch Details** tab to view the policy store conflicts.

   See the sections titled "Analyzing Patch Differences" and "Resolving Changes and Conflicts" in the *Oracle Fusion Middleware Oracle Authorization Policy Manager Administrator's Guide (Oracle Fusion Applications Edition)* for instructions on taking the appropriate action regarding conflicts.

4.13 Perform Upgrade Steps for Oracle BI Applications

If you are deploying Oracle Business Intelligence Applications, then you must perform the post-installation or upgrade steps specified in "Roadmap for Installing, Setting Up, and Upgrading Oracle BI Applications" in the *Oracle Fusion Middleware Installation and Configuration Guide for Oracle Business Intelligence Applications*.

4.14 Disable Anonymous Binds in Oracle Internet Directory (OID)

Disable the anonymous binds that you enabled in Section 2.2.10, "Enable Anonymous Binds in Oracle Internet Directory".

1. Update the LDIF file so that the orclAnonymousBindsFlag has a value of 0.
2. Run the following command:

```
ldapmodify -D cn=orcladmin -Q -p portNum -h hostname -f ldifFile
```

For more information, see "Managing Anonymous Binds" in the *Oracle Fusion Middleware Administrator's Guide for Oracle Internet Directory*.

4.15 Set the CrashRecoveryEnabled Property to True

You can skip this step unless you performed the step in Section 2.2.2.2, "Set the CrashRecoveryEnabled Property to False". If you did perform this step, you must now set the `CrashRecoveryEnabled` property in the `nodemanager.properties` file to "true" for all domains by running the following command:

```
perl updateNMProperties.pl -appBase APPLICATIONS_BASE  -postUpgrade [-verbose]
```

The `updateNMProperties.pl` script can be found in *REPOSITORY_LOCATION*`/installers/farup/Disk1/upgrade/bin`.

If the `updateNMProperties.pl` script fails in Windows, update the value of `CrashRecoveryEnabled` to "true" in *FA_ORACLE_HOME*`\instance\nodemanager\`*host_name*`\nodemanager.properties`.

4.16 Add Administration Servers to the Machine Created During Scaleout

Perform the steps in this section only if the steps in Section 2.1.16, "Validate Domain Directories" found domains that did not pass validation.

1. Log in to the WebLogic console for the domain.
2. Navigate to Environment, then Machines.
3. Find the machine that was created manually in or the purposes of Administration Server high availability scaleout.
4. Click on the machine and go to the Servers tab.
5. Click **Lock & Edit** to make changes.
6. Click **Add**.
7. Select the Administration Server and click **Finish**.
8. Click **Activate Changes** to apply the changes.

4.17 Run Health Checker for Post-Upgrade Checks

Ensure that you set the environment variables described in Section 2.1.12, "Set Environment Variables". Confirm that your Oracle Fusion Applications database is running before you run Health Checker from the primordial host.

Use the following command syntax:

```
(Unix)
$APPLICATIONS_BASE/fusionapps/applications/lcm/hc/bin/hcplug.sh -manifest
$APPLICATIONS_BASE/fusionapps/applications/lcm/hc/config/PostDowntimeChecks.xml

(Windows)
%APPLICATIONS_BASE%\fusionapps\applications\lcm\hc\bin\hcplug.cmd -manifest
%APPLICATIONS_BASE%\fusionapps\applications\lcm\hc\config\PostDowntimeChecks.xml
```

Review the Health Checker log file or the HTML summary report to see if any errors occurred that require corrective action. The log file and the HTML summary are located in *APPLICATIONS_CONFIG*/fapatch/logs/*release_version*/healthchecker.

After you resolve the issue that caused the error, start Health Checker again to rerun failed tasks.

For more information, see Section 6.27, "Troubleshooting Health Checker Post-Upgrade Checks".

For more information about Health Checker, see Section 1.5.3, "Post-Upgrade Tasks Performed by Health Checker".

4.18 What To Do Next

If you have installed any languages in addition to US English, you must upgrade each installed language using Language Pack Installer. Proceed to Chapter 5, "Maintaining Oracle Fusion Applications Languages".

5

Maintaining Oracle Fusion Applications Languages

This chapter describes how to install and upgrade a set of languages in Oracle Fusion Applications 11*g* Release 6 (11.1.6).

This chapter contains the following topics:

5.1 Introduction to Language Maintenance in Oracle Fusion Applications

Oracle Provisioning and RUP Installer install and upgrade only the English language. To add a language or upgrade an existing language, use Language Pack Installer. If patches containing translatable artifacts were previously applied to this environment, you may apply the translated versions of each of those patches after you install the new language.

This section provides an introduction to the following concepts related to language packs:

5.1.1 Language Packs

A language pack for a given language and release contains artifacts at the specific release level that are translated to the specific language. Translated artifacts include Oracle Fusion Applications seed data that is uploaded into Oracle Fusion Applications database, SOA resource bundles, JEE resource bundles, LDAP data, Diagnostics Test Framework, and BI Presentation Catalog data. You install language packs with Language Pack Installer.

5.1.2 Language Pack Installer

Language Pack Installer enables you to add or upgrade a language in your Oracle Fusion Applications environment and delivers translated artifacts for that language. You can run Language Pack Installer in GUI mode or silent mode. In GUI mode, you proceed through the installation by providing information in the user interface when prompted. For more information, see Section 1.4, "Installer User Interface". In silent mode, progress is reported to the console.

5.1.3 Language in the Policy Store

The policy store can maintain attributes in only one language. If you want to override the base English strings in the policy store, you set the `-J-DupdateJAZNPolicyStore` option (`-DupdateJAZNPolicyStore` for Windows) to true when you install the Language Pack. The Description and Displayname are the two attributes which are translatable and are loaded in JAZN files in the language pack.

5.1.4 Language Pack Installer Configuration Assistants

During the installation phase, Language Pack Installer copies all files from the language pack to the appropriate locations, such as Oracle Fusion Middleware home and Oracle Fusion Applications Oracle home. After the file copy is completed, Language Pack Installer starts the Policy Store Analysis, as described in Table 5–5. Then Language Pack Installer calls configuration assistants to perform the remaining tasks required to update and deploy the artifacts included in the language pack. Language Pack Installer supports parallel processing of certain configuration assistants to improve performance. Parallel configuration assistants are organized by groups and all configuration assistants in a group start running at the same time. For more information, see Section 1.4.7, "Parallel Configuration Assistants".

If any tasks fail during the installation phase, refer to Section 6.2, "Troubleshooting Failures During the Installation Phase" for more information.

All mandatory configuration assistants must complete successfully before proceeding to the next configuration assistant. For more information, see Section 6.4, "General Troubleshooting During the Configuration Phase in GUI Mode" and Section 6.5, "General Troubleshooting During the Configuration Phase in Silent Mode".

Table 5–1 provides a list of possible configuration assistants, including steps within the configuration assistants. The Retry Behavior and Troubleshooting column describes what Language Pack Installer does after a configuration assistant fails and you select the **Retry** button or you restart Language Pack Installer in silent mode. If available, links are provided to relevant troubleshooting sections.

Table 5–1 Configuration Assistants Run by Language Pack Installer

Name	Mandatory	Description	Retry Behavior and Troubleshooting
Activate Language	Yes	Activates the language in the database.	Runs Activate Language again.

Table 5–1 (Cont.) Configuration Assistants Run by Language Pack Installer

Name	Mandatory	Description	Retry Behavior and Troubleshooting
Preverification	Yes	Performs the following validation checks: ■ Policy Store ■ Database Content Upload ■ Flexfields ■ LDAP Data (LDIF) ■ SOA Resource Bundle	Runs failed steps.
Synchronize Multilingual Tables	Yes	Runs the Maintain Multilingual Tables utility to maintain the tables related to the newly activated language. For more information, see "Maintaining Multi-lingual Tables" in the *Oracle Fusuion Applications Patching Guide*.	Restart from failure.
Apply Middleware Language Patches	Yes	■ Applies Language Repository Patches ■ Applies Language Downloaded Patches, as described in Section 5.2.3, "Download Mandatory Post-Installation NLS Patches".	Applies the failed patches. See Section 6.8, "Troubleshooting Applying Middleware Patches".
Stop BI Presentation Server	Yes	Stops the BI Presentation server.	Retries stopping the BI Presentation server.
Load Database Components	Yes	Uploads the database content packaged in the language pack to the database.	Runs failed database commands. See Section 6.13, "Troubleshooting Loading Database Components".
Deploy Applications Policies (jazn-data.xml)	Yes	Performs the deployment of the updated applications policies, based on your selections during the Policy Store Analysis task. This task runs only if you chose to override the base English strings in the policy store by using the `J-DupdateJAZNPolicyStore` option set to `true` when you install the language pack	Deploys the failed stripes. See Section 6.14, "Troubleshooting Deployment of Applications Policies".

Table 5–1 (Cont.) Configuration Assistants Run by Language Pack Installer

Name	Mandatory	Description	Retry Behavior and Troubleshooting
Deploy BI Publisher Artifacts	Yes	Using Catalog Manager: ■ Backs up BI Presentation Catalog under *FA_ORACLE_HOME*/admin/BIP/version/language_code/webcat.zip. ■ Backs up captions under *FA_ORACLE_HOME*/admin/BIP/version/language_code/captions.zip ■ Copies captions to the Oracle Business Intelligence repository. ■ Deploys BI Presentation Catalog to the Oracle Business Intelligence repository.	Starts from the beginning of the task. See Section 6.15, "Troubleshooting Deployment of BI Publisher Artifacts".
Deploy Flexfields	No	Deploys flexfields to the domain that hosts the FndSetup application.	Starts from the beginning of the task.
Deploy LDAP Data (LDIF)	No	Uploads LDIF XLIFF translations to the identity store	Retries failed XLIFF files.
Deploy SOA Resource Bundles	Yes	Deploys SOA Resource Bundles to the corresponding SOA servers.	Deploys failed SOA resource bundles.
Apply Downloaded Language Patches	Yes	Applies post-installation patches that you downloaded in the 11.1.6.0.0_post_repo_patches directory. See Section 5.2.3, "Download Mandatory Post-Installation NLS Patches".	Applies failed patches.

5.2 Pre-Upgrade Steps - Before Down Time

This section describes the following preparation steps for installing a language pack, all of which can be performed before your scheduled down time.

- Before You Begin
- Download the Language Pack Repository
- Download Mandatory Post-Installation NLS Patches
- Confirm Oracle Fusion Applications Installation is Complete
- Confirm Database Settings
- Maintain Versions of Customized BI Publisher Reports
- Run Health Checker for Pre-Down Time Checks

5.2.1 Before You Begin

Before you begin the language pack installation, you should have access to the following documentation:

- *Release Notes for Oracle Fusion Applications 11g Release 6 (11.1.6)* from the current release.
- Oracle Fusion Applications NLS release notes from the current release.

You should also have a clear understanding of the following directories:

- **Primordial host**: The primordial host is where the Administration Server for the Common Domain runs.
- ***APPLICATIONS_CONFIG***: The top-level directory for the Oracle Fusion Applications configuration files.
- ***APPLICATIONS_BASE***: The top-level directory for the Oracle Fusion Applications binaries.
- ***FA_ORACLE_HOME***: Directory named `applications`, located under the `fusionapps` Oracle Fusion Applications Middleware home.

For more information, see Figure 2–1, "Relationship of Home Directories".

5.2.2 Download the Language Pack Repository

The language pack repository contains the language pack installer, translated Oracle Fusion Middleware patches, and the Oracle Fusion Applications language pack contents that are required to install a language pack for a specific language or upgrade an installed language in an existing Oracle Fusion Applications environment. You download the repository from the Oracle Fusion Applications Product Media Package to a location of your choice. This directory is referred to as *`REPOSITORY_LOCATION`*.

5.2.2.1 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.

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

- **Oracle Software Delivery Cloud Portal**: 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 language pack repository.

5.2.2.2 Downloading from the Oracle Software Delivery Cloud Portal

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 language pack repository (in zipped format). You can download the repository to a location of your choice.
4. Extract the contents of all 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. The installers are normally located in the `installers` subdirectory under *`REPOSITORY_LOCATION`*.

> **Note:** You should avoid creating the repository in a deeply nested directory on Windows. The Windows PATH variable has a limited size, and long directory names may cause it to overflow. For example, `c:\work\my_repository` is a better choice than `c:\Work\WorkInProgress\FusionApps\FusionAppsv1\Nov2011\tempfiles\my_repository`.

5.2.2.3 Language Pack Installer

Table 5–2 list the installers in the language pack repository.

Table 5–2 Language Pack Installers

Media Label Name	Staging Destination
Language Pack Installer	(Unix) *`REPOSITORY_LOCATION/language_code`*`/installers//fusionapps/Disk1/runInstaller` (Windows) *`REPOSITORY_LOCATION\language_code`*`\installers\fusionapps\Disk1\Setup.exe` or *`REPOSITORY_LOCATION\language_code`*`\installers\fusionapps\Disk1\install\Win64\Setup.exe`

5.2.3 Download Mandatory Post-Installation NLS Patches

Language Pack Installer can apply mandatory post-installation patches that are required by Oracle Fusion Applications if you download the patches from My Oracle Support before you start the installation. Note that this feature relates only to patches that are documented in Oracle Fusion Applications NLS release notes and that are specifically required for the language pack you are installing.

> **Note:** If there are no post-installation patches in Oracle Fusion Applications NLS release notes when you run Language Pack Installer, there is no action required for this step.

Perform the following steps to download the patches:

1. If you are installing a language pack after an upgrade, proceed to Step 6 because you already performed some of the steps in this section, while following the steps in Section 2.1.4, "Download Mandatory Post-Release 6 Patches". Otherwise, proceed to Step 2.
2. Create a directory named `11.1.6.0.0_post_repo_patches` in the parent directory of your *`APPLICATIONS_BASE`* directory. For example, if *`APPLICATIONS_BASE`* is `/u01/APPTOP`, the patch directory is

/u01/11.1.6.0.0_post_repo_patches. For more information about the *APPLICATIONS_BASE* directory, see Section 2.1.1, "Before You Begin".

3. Download patch 16065661 from My Oracle Support and unzip the patch to any directory. After unzipping, the patch directory contains two files, PostRepoPatchDirs.zip and postRepoPatchDirsREADME.txt.

4. Unzip PostRepoPatchDirs.zip in the 11.1.6.0.0_post_repo_patches directory to create the directory structure for the patches you download.

5. Review the README file that was created when you unzipped PostRepoPatchDirs.zip, to learn how the subdirectories under the 11.1.6.0.0_post_repo_patches directory map to the corresponding components, such as Oracle Fusion Middleware, database client, and database server components.

6. Refer to Oracle Fusion Applications NLS release notes to find the patches to be downloaded from My Oracle Support.

   Table 5–3 describes the types of patches that you download and the configuration assistant that applies the patches.

Table 5–3 Mandatory Patches to be Downloaded

Type of Patches	Configuration Assistant That Applies Patches
Oracle Fusion Middleware	Apply Language Middleware Patches
Oracle Fusion Applications	Apply Downloaded Patches

7. Download and unzip the patches into the appropriate subdirectory under the 11.1.6.0.0_post_repo_patches directory, based on the mapping information in the README.txt file described in Step 5. A failure could result if you do not download a patch to the correct directory. Note that when you download the Oracle Fusion Applications patches, you must use the *Patch Plan* feature in My Oracle Support. If you cannot create a patch plan because you do not have Oracle Configuration Manager (OCM) configured, you can create the patch plan by running the script in Step 8.

8. Run this step if you cannot create a My Oracle Support patch plan. This step assumes that you have downloaded the patches as described in Step 7, without using the Patch Plan feature.

   The perl script, adCreateMosPlan.pl, reads the patch metadata from the downloaded patches to generate the patch plan file, mosdownload.xml. To run this script, use the Perl executable from *APPLICATIONS_BASE*/dbclient/perl/bin for Unix platforms and *APPLICATIONS_BASE*\dbclient\perl\5.8.3\bin\MSWin32-x64-multi-thread for Windows.

   Use the following command syntax to create the patch plan file:

```
(Unix)
setenv PERL5LIB $APPLICATIONS_BASE/dbclient/perl/lib/5.8.3:$APPLICATIONS_
BASE/dbclient/perl/lib/site_perl/5.8.3/:
$APPLICATIONS_BASE/dbclient/perl/lib/site_perl

$APPLICATIONS_BASE/dbclient/perl/bin/perl
$APPLICATIONS_BASE/fusionapps/applications/lcm/ad/bin/adCreateMosPlan.pl
patches_download_location

(Windows)
```

```
SET PERL5LIB=%APPLICATIONS_BASE%\dbclient\perl\5.8.3;%APPLICATIONS_
BASE%\dbclient\perl\site\5.8.3\;
%APPLICATIONS_BASE%\dbclient\perl\site

%APPLICATIONS_BASE%\dbclient\perl\5.8.3\bin\MSWin32-x64-multi-thread\perl
%APPLICATIONS_BASE%\fusionapps\applications\lcm\ad\bin\adCreateMosPlan.pl
patches_download_location
```

5.2.4 Confirm Oracle Fusion Applications Installation is Complete

If you are installing a language pack on a freshly installed Oracle Fusion Applications environment, ensure that you performed all tasks described in "Postinstallation Tasks" in the *Oracle Fusion Applications Installation Guide.*

If you are installing a language pack on an upgraded environment, ensure that you completed all tasks described in Chapter 4, "Completing Post-Upgrade Tasks".

In either case, you must also perform the steps in the "Post-Installation" section of *Release Notes for Oracle Fusion Applications 11g Release 6 (11.1.6)*.

5.2.5 Confirm Database Settings

Refer to *Release Notes for Oracle Fusion Applications 11g Release 6 (11.1.6)* for information about database tuning parameters, to avoid time out conditions during the installation.

5.2.6 Maintain Versions of Customized BI Publisher Reports

Ensure that you have your own versions of any customized BI Publisher reports. If a language pack includes an update to a catalog object that was delivered with an Oracle Fusion application, the patch will overwrite any customizations applied to the original report. For more information, see "Before You Begin Customizing Reports" in the *Oracle Fusion Applications Extensibility Guide*.

5.2.7 Run Health Checker for Pre-Down Time Checks

You must run Health Checker directly from *APPLICATIONS_BASE* and from the primordial host. You can run these checks any number of times prior to your down time.

For more information about Health Checker, see Section 1.5.1, "Pre-Upgrade Tasks Performed by Health Checker Before Down Time".

Perform the following steps to run Health Checker:

1. Download and apply patch 16068097 before running Health Checker for language packs. Follow the steps in the `README.txt` file in this patch.
2. Set the `APPLICATIONS_BASE` environment variable to point to the directory that contains Oracle Fusion Applications. For example, if Oracle Fusion Applications is installed in `/server01/APPTOP/fusionapps`, then set the environment variable `APPLICATIONS_BASE` to `/server01/APPTOP`.

   ```
   (Unix)
   setenv APPLICATIONS_BASE /server01/APPTOP/

   (Windows)
   SET APPLICATIONS_BASE=\server01\APPTOP\
   ```

3. Run Health Checker.

```
(Unix)
$APPLICATIONS_BASE/fusionapps/applications/lcm/hc/bin/hcplug.sh -manifest
$APPLICATIONS_BASE/fusionapps/applications/lcm/hc/config/PreDowntimeChecks.xml
[-DlogLevel=log_level]

(Windows)
%APPLICATIONS_BASE%\fusionapps\applications\lcm\hc\bin\hcplug.cmd -manifest
%APPLICATIONS_BASE%\fusionapps\applications\lcm\hc\config\PreDowntimeChecks.xml
[-DlogLevel=log_level]
```

Review the Health Checker log file or the HTML summary report to see if any errors occurred that require corrective action. The log file and the HTML summary are located in *APPLICATIONS_CONFIG*/fapatch/logs/*release_version*/healthchecker. Note that the following checks do not apply to Language Pack Installer and any errors that are reported for these checks can be ignored:

- Verify Oracle Fusion Applications Version
- Verify Free and Total Memory
- Check Repository Integrity

After you resolve the issue that caused the error, start Health Checker again to run the failed tasks. You must rerun Health Checker until there are no failed tasks.

For more information, see Section 6.25, "Troubleshooting Health Checker Pre-Down Time Checks".

5.3 Pre-Upgrade Steps - During Down Time

This section describes the following mandatory preparation steps for installing a language pack, all of which must be performed during your system down time. Language Pack Installer does not require any servers to be shut down. However, no users should be online, so it is still considered to be down time.

- Verify the Status of Servers and Processes
- Run Health Checker for Down Time Checks
- Enable Anonymous Binds in Oracle Internet Directory
- Back Up Oracle Fusion Applications
- Set the Repository Environment Variable
- Apply Mandatory Prerequisite Patches

5.3.1 Verify the Status of Servers and Processes

This section contains steps to follow for all platforms.

5.3.1.1 Confirm All Servers Are Running

Confirm that all servers are up and running before installing the language pack.

5.3.1.2 Confirm the OPMN Control Process and Node Manager Are Running

Confirm that the OPMN control process and Node Manager are running. If they are not running, follow the steps in Table 3–3, " RUP Installer Screen Sequence for the Second Installer" under "Welcome" to start them.

5.3.1.3 Start The OPSS Security Store

Start the OPSS Security Store if it is not already running. The OPSS Security Store used here is an Oracle Internet Directory LDAP server instance. Before proceeding with the installation, the designated Oracle Internet Directory server instance must be up and running. If this server is not running prior to starting the installation, the related configuration assistants will fail.

For more information about starting, see "Starting and Stopping Oracle Internet Directory" in the *Oracle Fusion Middleware Enterprise Deployment Guide for Oracle Identity Management (Oracle Fusion Applications Edition)*.

5.3.2 Run Health Checker for Down Time Checks

You must run Health Checker directly from *APPLICATIONS_BASE* and from the primordial host.

For more information about Health Checker, see Section 1.5.2, "Pre-Upgrade Tasks Performed by Health Checker During Down Time".

Perform the following steps to run Health Checker:

1. Set the APPLICATIONS_BASE environment variable to point to the directory that contains Oracle Fusion Applications. For example, if Oracle Fusion Applications is installed in /server01/APPTOP/fusionapps, then set the environment variable APPLICATIONS_BASE to /server01/APPTOP.

```
(Unix)
setenv APPLICATIONS_BASE /server01/APPTOP/

(Windows)
SET APPLICATIONS_BASE=\server01\APPTOP\
```

2. Run Health Checker.

```
$APPLICATIONS_BASE/fusionapps/applications/lcm/hc/bin/hcplug.sh -manifest
$APPLICATIONS_
BASE/fusionapps/applications/lcm/hc/config/PreUpgradeDowntimeChecks.xml
[-DlogLevel=log_level]

(Windows)
%APPLICATIONS_BASE%\fusionapps\applications\lcm\hc\bin\hcplug.cmd -manifest
%APPLICATIONS_
BASE%\fusionapps\applications\lcm\hc\config\PreUpgradeDowntimeChecks.xml
[-DlogLevel=log_level]
```

Review the Health Checker log file or the HTML summary report to see if any errors occurred that require corrective action. The log file and the HTML summary are located in *APPLICATIONS_CONFIG*/fapatch/logs/*release_version*/healthchecker.

After you resolve the issue that caused the error, start Health Checker again to run the failed tasks. You must rerun Health Checker until there are no failed tasks.

For more information, see Section 6.26, "Troubleshooting Health Checker Down Time Checks".

5.3.3 Enable Anonymous Binds in Oracle Internet Directory

To prevent an error during the language pack installation, you must temporarily enable anonymous binds in Oracle Internet Directory. To enable all anonymous binds

on the Oracle Internet Directory instance with `componentName oid1` using `ldapmodify`, run the following command:

```
ldapmodify -D cn=orcladmin -Q -p portNum -h hostname -f ldifFile
```

with an LDIF file such as the following example:

```
dn: cn=oid1,cn=osdldapd,cn=subconfigsubentry
changetype: modify
replace: orclAnonymousBindsFlag
orclAnonymousBindsFlag: 1
```

You can also use Oracle Enterprise Manager Fusion Middleware Control to enable anonymous binds. For more information, see "Managing Anonymous Binds" in the *Oracle Fusion Middleware Administrator's Guide for Oracle Internet Directory*. You will disable anonymous binds after the upgrade by setting the value of the `orclAnonymousBindsFlag` to 0.

5.3.4 Back Up Oracle Fusion Applications

Back up your entire Oracle Fusion Applications environment by following the steps in "Backing Up and Recovering Oracle Fusion Applications" in the *Oracle Fusion Applications Administrator's Guide*. You should also back up your central inventory.

For additional back up steps that are specific to Windows, refer to Section 2.2.7.3, "Back Up Steps for Windows Platforms".

5.3.5 Set the Repository Environment Variable

Set the `REPOSITORY_LOCATION` environment variable to point to the root directory where the repository is staged.

Examples follow:

```
(Unix)
setenv REPOSITORY_LOCATION /server01/LPRepo/

(Windows)
SET REPOSITORY_LOCATION=\server01\LPRepo\
```

> **Note:** Set this environment variable and the `APPLICATIONS_BASE` environment variable, described in Section 5.3.2, "Run Health Checker for Down Time Checks", on all hosts that share the same *`APPLICATIONS_BASE`* before executing all tools and utilities mentioned in this guide.

5.3.6 Apply Mandatory Prerequisite Patches

Download and apply any prerequisite patches listed in the Post-Installation and Post-Upgrade sections of *Release Notes for Oracle Fusion Applications 11g Release 6 (11.1.6)* prior to starting Language Pack Installer. Note that the only patches that need to be applied are those that have been added to the release notes since the last time you applied patches from this list.

5.4 Install or Upgrade a Language

Language Pack Installer does not require any servers to be shut down. However, no users should be online, so it is still considered to be down time. Oracle recommends

that language packs be installed from a machine that is co-located in the same subnetwork as the database server to maximize performance. You must run Language Pack Installer on the primordial host. Primordial host is defined in Section 5.2.1, "Before You Begin".

Ensure that the steps in Section 5.2, "Pre-Upgrade Steps - Before Down Time" and Section 5.3, "Pre-Upgrade Steps - During Down Time" are successfully completed before you start Language Pack Installer.

Language Pack Installer supports GUI mode and silent mode. In GUI mode, you navigate through screens that display the progress of the upgrade, including log file locations and status messages. In silent mode, Language Pack Installer reports the progress of the upgrade as console output.

- Run Language Pack Installer in GUI Mode
- Run Language Pack Installer in Silent Mode

Note: If Language Pack Installer encounter errors, refer to Section 5.6, "Troubleshoot Language Pack Installer Sessions" before clicking any buttons in the Language Pack Installer user interface.

5.4.1 Run Language Pack Installer in GUI Mode

Perform the following steps to run Language Pack Installer in GUI mode from the command line, using specific options to further define the necessary actions. You must run Language Pack Installer from the primordial host.

1. Set the *JAVA_HOME* environment variable as follows:

```
(Unix) setenv JAVA_HOME APPLICATIONS_BASE/fusionapps/jdk6

(Windows) set JAVA_HOME=APPLICATIONS_BASE\fusionapps\jdk6
```

2. Confirm registration of the network location of *FA_ORACLE_HOME*.

   If the Oracle Fusion Applications Oracle home directory (*FA_ORACLE_HOME*), which is *APPLICATIONS_BASE*/fusionapps/applications, is registered in the central inventory with a /net path, then provide the oraInst.loc location including /net when starting Language Pack Installer. An example follows:

```
(Unix only)
$REPOSITORY_LOCATION/installers/fusionapps/Disk1/runInstaller -jreLoc
APPLICATIONS_BASE/fusionapps/jdk6/
-invPtrLoc /net/APPLICATIONS_BASE/fusionapps/applications/oraInst.loc
```

   If not triggered with a /net path, Language Pack Installer copies the -invPtrLoc file to *FA_ORACLE_HOME*. This results in a copy of the file to itself, which then becomes an empty or zero byte file. As a result, the copy phase will fail when oracle_common patches are applied. For more information, see Section 6.2.4, "Inventory Pointer File is Empty".

3. Run the following command to start Language Pack Installer in GUI mode.

```
(UNIX) $REPOSITORY_LOCATION/installers/fusionapps/Disk1/runInstaller -addLangs
-jreLoc APPLICATIONS_BASE/fusionapps/jdk6
[-J-DpatchDownloadLocation=location_of_11.1.6.0.0_post_repo_patches_directory]
[-invPtrLoc FA_ORACLE_HOME/oraInst.loc]
[-J-Dworkers=number_of_workers][-J-DlogLevel=level]
[-J-DserverStartTimeout=timeout_period_for_server_in_seconds]
[-J-DupdateJAZNPolicyStore=true] [-debug]
```

```
(Windows) %REPOSITORY_LOCATION%\installers\fusionapps\Disk1\setup.exe -addLangs
-jreLoc APPLICATIONS_BASE\fusionapps\jdk6
[-DpatchDownloadLocation=location_of_11.1.6.0.0_post_repo_patches_directory]
[-Dworkers=number_of_workers][-DlogLevel=level]
[-DserverStartTimeout=timeout_period_for_server_in_seconds]
[-DupdateJAZNPolicyStore=true] [-debug]
```

Table 5–4 shows valid options that can be used when running Language Pack Installer.

Table 5–4 Language Pack Installer Command Line Options

Option Name	Description	Mandatory
`-addLangs`	Runs Language Pack Installer to install one language.	Yes
`-jreLoc`	Path where the Java Runtime Environment is installed. This option does not support relative paths, so you must specify the absolute path.	Yes
`-invPtrLoc`	The location of an overriding inventory pointer file. If the Oracle Fusion Applications Oracle home directory (*`FA_ORACLE_HOME`*), is registered in inventory with a `/net` path, then provide the location of `oraInst.loc` including `/net` in the path.	Recommended, use to override the default location of the inventory pointer file, located in `/etc/oraInst.loc`. This option can be used only on Unix platforms.
`-J-DpatchDownloadLocation` (`-DpatchDownloadLocation` for Windows)	The directory path where you downloaded mandatory prerequisite patches to be applied by Language Pack Installer. See Section 5.2.3, "Download Mandatory Post-Installation NLS Patches".	Yes, if you are applying downloaded patches. Provide the full path to the `11.1.6.0.0_post_repo_patches` directory.
`-J-Dworkers` (`-Dworkers` for Windows)	The number of workers to use for uploading database content. If you provide a value for the number of workers that is outside the calculated range, you are prompted to provide a value that is within the optimal range. If you do not use this option, a calculated optimal value is used.	No, overrides the default number of workers calculated by Language Pack Installer.
`-J-DserverStartTimeout` (`-DserverStartTimeout` for Windows)	Configures the timeout value for server in seconds.	No, overrides the default value for server timeout.
`-J-DlogLevel` (`-DlogLevel` for Windows)	Records messages in the log file at the level you specify. Enter a value to override the default log level of `INFO`.	No, default value is `INFO`.
`-J-DupdateJAZNPolicyStore=true` (`-DupdateJAZNPolicyStore=true` for Windows)	Updates the policy store with translated attributes so field descriptions, display names, and other attributes display their translated values.	No, use only when you do not want to use base English in the policy store.
`-debug`	Retrieve debug information from Language Pack Installer.	No.

Example 5–1 Language Pack Installation with no policy store translation

```
(Unix) $REPOSITORY_LOCATION/installers/fusionapps/Disk1/runInstaller -addLangs
-jreLoc APPLICATIONS_BASE/fusionapps/jdk6
-invPtrLoc FA_ORACLE_HOME/oraInst.loc
-J-DpatchDownloadLocation=location_of_11.1.6.0.0_post_repo_patches_directory

(Windows) %REPOSITORY_LOCATION%\installers\fusionapps\Disk1\setup.exe -addLangs
-jreLoc APPLICATIONS_BASE\fusionapps\jdk6
-DpatchDownloadLocation=location_of_11.1.6.0.0_post_repo_patches_directory
```

Example 5–2 Language Pack Installation with policy store translation

```
(Unix) $REPOSITORY_LOCATION/installers/fusionapps/Disk1/runInstaller -addLangs
-jreLoc APPLICATIONS_BASE/fusionapps/jdk6
-invPtrLoc FA_ORACLE_HOME/oraInst.loc -J-DupdateJAZNPolicyStore=true
-J-DpatchDownloadLocation=location_of_11.1.6.0.0_post_repo_patches_directory

(Windows) %REPOSITORY_LOCATION%\installers\fusionapps\Disk1\setup.exe -addLangs
-jreLoc APPLICATIONS_BASE\fusionapps\jdk6 -DupdateJAZNPolicyStore=true
-DpatchDownloadLocation=location_of_11.1.6.0.0_post_repo_patches_directory
```

Example 5–3 Language Pack installation when FA_ORACLE_HOME is registered with a /net path

```
(Unix) $REPOSITORY_LOCATION/installers/fusionapps/Disk1/runInstaller -addLangs
-jreLoc APPLICATIONS_BASE/fusionapps/jdk6
-invPtrLoc /net/APPLICATIONS_BASE/fusionapps/applications/oraInst.loc
-J-DpatchDownloadLocation=location_of_11.1.6.0.0_post_repo_patches_directory
```

Table 5–5 illustrates the tasks that Language Pack Installer runs. For information about troubleshooting Language Pack Installer errors and log files, see Section 5.6, "Troubleshoot Language Pack Installer Sessions".

Table 5–5 Language Pack Installer Screen Sequence

Screen	Description and Action Required
Welcome	Appears when you start Language Pack Installer. This screen does not appear if you restart Language Pack Installer after a failure. The standard Welcome screen is read-only. It contains a navigation pane on the left-hand side that summarizes the tasks the installer will take. Each item in the pane represents an installer screen, which contains prompts for the necessary information. Click **Next** to continue.
Installation Location	Specify the location of the existing Oracle Fusion Applications home (*FA_ORACLE_HOME*) where you want to install the language. Click **Next** to continue.
Installation Summary	Summarizes the selections you made during this installation session. It includes the Oracle home, required and available disk space, and the language to be installed. Review the information displayed to ensure that the installation details are what you intend. To make changes before installing, click **Back** to return to previous screens in the interview. Click **Install** to start installing this language.

Table 5–5 (Cont.) Language Pack Installer Screen Sequence

Screen	Description and Action Required
Installation Progress	Displays a progress indicator that shows the percentage of the installation phase that is complete and indicates the location of the installation log file. The installation phase consists of copying files from the language pack to the appropriate Oracle homes. When the installation progress indicator shows 100 percent, click **Next** to continue.
Policy Store Analysis (Note that this screen displays only when the `J-DupdateJAZNPolicyStore` option is set to `true` when you start Language Pack Installer.)	Analysis is available for the following policy store stripes: hcm, crm, fscm, and obi. Select the stripes to be analyzed and then click **Run Analysis** to identify any conflicts or deletions. Only the stripes that are included in the language pack are enabled for analysis and the analysis could run for several minutes. After the analysis runs, review the results of the analysis to determine which deployment method you want Language Pack Installer to use for policy store changes to each stripe. Oracle recommends that you select **Apply safe changes only**. This is the safest method unless you have read and totally understood the consequences of the other three options. If you decide to resolve the conflicts or deletions before the actual JAZN upload from Language Pack Installer, you should run the Policy Store Analysis step again to get the most accurate analysis report. The choices for deployment method are: ■ Apply safe changes only (choose this method if there are no conflicts) ■ Apply all changes and overwrite customizations ■ Append additive changes ■ Manually resolve conflicts and upload changes using Authorization Policy Manager. If you choose **Apply safe changes only** or **Append additive changes**, then you must review the results of the analysis to manually upload any changes not applied by Language Pack Installer with the choice you selected, after the installation is complete. If you choose **Apply all changes and overwrite customizations**, then you may need to reapply the customizations that are overwritten after the installation is complete. If you choose one of these options, click **Next** after you make your selection. If you choose **Manually resolve conflicts and upload changes using Authorization Policy Manager** (APM), you must pause the installation while you bring up the APM application and upload the changes. For more information, see the "Upgrading Oracle Fusion Applications Policies" chapter in the *Oracle Fusion Middleware Oracle Authorization Policy Manager Administrator's Guide (Oracle Fusion Applications Edition)*. Note the location of the following files: ■ Baseline file: *FA_ORACLE_HOME*`/admin/JAZN/`*stripe*`/baseline` ■ Patch file for fscm, crm, and hcm stripes: *FA_ORACLE_HOME*`/`*stripe*`/deploy/system-jazn-data.xml` ■ Patch file for the obi stripe: *FA_ORACLE_HOME*`/com/acr/security/jazn/bip_jazn-data.xml` When you complete this task in APM, shut down the APM application, return to Language Pack Installer, and click **Next**.

Table 5–5 (Cont.) Language Pack Installer Screen Sequence

Screen	Description and Action Required
Configuration Progress	Displays a progress indicator that shows the percentage of the configuration phase that is complete. It displays each configuration assistant in the message pane as it is performed. Configuration assistants that could be included in the configuration phase are described in Section 5.1.4, "Language Pack Installer Configuration Assistants". No additional user action is required in the Configuration Progress screen unless a failure occurs. For more information, see Section 6.4, "General Troubleshooting During the Configuration Phase in GUI Mode". Links to troubleshooting specific failures are available in Table 5–1.
Installation Complete	Summarizes the installation just completed. If you want to save this configuration to a response file, click **Save**. For more information, see "How Response Files Work" in the *Oracle Database Installation Guide 11g Release 2 (11.2) for Linux*. To complete a successful installation, click **Finish**. The **Finish** button is activated only if all mandatory configuration assistants completed successfully. If you want to rerun this session after you resolve failed configuration assistants, click **Cancel.**

4. Proceed to Section 5.5, "Complete the Post-Installation Tasks".

5.4.2 Run Language Pack Installer in Silent Mode

Perform the following steps to start Language Pack Installer in silent mode from the command line, using specific options to further define the necessary actions. You must run Language Pack Installer from the primordial host.

1. Create a response file named `silent.rsp` to be used in silent mode. This file can be located in any directory that is accessible while launching Language Pack Installer. An example silent.rsp file follows:

```
ORACLE_HOME=/u01/APPLTOP/fusionapps/applications
CRM_SELECTED_JAZN_MIGRATION_TYPE=PATCH_POLICY
FSCM_SELECTED_JAZN_MIGRATION_TYPE=PATCH_POLICY
HCM_SELECTED_JAZN_MIGRATION_TYPE=PATCH_POLICY
OBI_SELECTED_JAZN_MIGRATION_TYPE=PATCH_POLICY
```

Note: The *stripe*_SELECTED_JAZN_MIGRATION_TYPE property allow you to choose which deployment method Language Pack Installer will use for policy store changes to each stripe. The following choices are available:

- PATCH_POLICY: Apply safe changes only. This is the recommended method. Choose this method if there are no conflicts.
- MIGRATE_POLICY_OVERRIDE: Apply all changes and overwrite customizations.
- MIGRATE_POLICY_NO_OVERRIDE: Append additive changes.
- MIGRATE_POLICY_APM: Manually resolve conflicts and upload changes using Authorization Policy Manager (APM)

If you choose PATCH_POLICY or MIGRATE_POLICY_NO_OVERRIDE, then you must review the results of the analysis to manually upload any changes not applied by Language Pack Installer, based on the choice you selected, after the upgrade is complete. If you choose MIGRATE_POLICY_OVERRIDE, then you may need to reapply the customizations that are overwritten after the upgrade is complete.

If you choose MIGRATE_POLICY_APM, you must pause the upgrade while you bring up the APM application and upload the changes. For more information, see the "Upgrading Oracle Fusion Applications Policies" chapter in the *Oracle Fusion Middleware Oracle Authorization Policy Manager Administrator's Guide (Oracle Fusion Applications Edition)*. Note the location of the following files:

- Baseline file: *FA_ORACLE_HOME*/admin/JAZN/*stripe*/baseline
- Patch file for fscm, crm, and hcm stripes: *FA_ORACLE_HOME*/*stripe*/deploy/system-jazn-data.xml
- Patch file for the obi stripe: *FA_ORACLE_HOME*/com/acr/security/jazn/bip_jazn-data.xml

2. Set the *JAVA_HOME* environment variable as follows:

```
(Unix) setenv JAVA_HOME APPLICATIONS_BASE/fusionapps/jdk6

(Windows) set JAVA_HOME=APPLICATIONS_BASE\fusionapps\jdk6
```

3. Confirm the registration of the network location of *FA_ORACLE_HOME*.

   If the Oracle Fusion Applications Oracle home directory (*FA_ORACLE_HOME*), which is *APPLICATIONS_BASE*/fusionapps/applications, is registered in the central inventory with a /net path, then provide the oraInst.loc location including /net when starting Language Pack Installer. An example follows:

```
$REPOSITORY_LOCATION/installers/fusionapps/Disk1/runInstaller -addLangs -jreLoc
APPLICATIONS_BASE/fusionapps/jdk6/
-invPtrLoc /net/APPLICATIONS_BASE/fusionapps/applications/oraInst.loc -silent
-response location_of_response_file JAZN_EXIST=true
```

   If not triggered with a /net path, Language Pack Installer copies the -invPtrLoc file to *FA_ORACLE_HOME*. In the example, this results in a copy of

the file to itself, which then becomes an empty or zero byte file. As a result, the copy phase will fail when `oracle_common` patches are applied. For more information, see Section 6.2.4, "Inventory Pointer File is Empty".

4. Run the following command to start Language Pack Installer in silent mode:

> **Note:** If Language Pack Installer encounters errors in silent mode, it terminates the session. You must resolve the issue that caused the failure and then restart Language Pack Installer, using the same command you used previously. Language Pack Installer then restarts from the first failed task. For more information, see Section 6.5, "General Troubleshooting During the Configuration Phase in Silent Mode".

```
(UNIX) $REPOSITORY_LOCATION/installers/fusionapps/Disk1/runInstaller -addLangs
-jreLoc
APPLICATIONS_BASE/fusionapps/jdk6 [-invPtrLoc FA_ORACLE_HOME/oraInst.loc]
-silent
-response location_of_silent.rsp_file JAZN_EXIST=true
[-J-DpatchDownloadLocation=location_of_11.1.6.0.0_post_repo_patches_directory]
[-J-Dworkers=number_of_workers][-J-DlogLevel=level]
[-J-DserverStartTimeout=timeout_period_for_server_in_seconds] [-debug]

(Windows)
%REPOSITORY_LOCATION%\installers\fusionapps\Disk1\setup.exe -addLangs -jreLoc
APPLICATIONS_BASE\fusionapps\jdk6  -silent
-response location_of_silent.rsp_file JAZN_EXIST=true
[-DpatchDownloadLocation=location_of_11.1.6.0.0_post_repo_patches_directory ]
[-DserverStartTimeout=timeout_period_for_server_in_seconds]
[-Dworkers=number_of_workers][-DlogLevel=level][-debug]
```

Table 5–6 shows valid options that can be used when running Language Pack Installer in silent mode.

Table 5–6 Language Pack Installer Command Options in Silent Mode

Option Name	Description	Mandatory
`-addLangs`	Runs Language Pack Installer to install one language.	Yes
`-jreLoc`	Path where the Java Runtime Environment is installed. This option does not support relative paths, so you must specify the absolute path.	Yes
`-invPtrLoc`	The location of an overriding inventory pointer file. If the Oracle Fusion Applications Oracle home directory (*FA_ORACLE_HOME*) is registered in inventory with a `/net` path, then provide the location of `oraInst.loc` including `/net` in the path.	Recommended, use to override the default location of the inventory pointer file, located in `/etc/oraInst.loc`. This option can be used only on Unix platforms.
`-silent`	Run Language Pack Installer in silent mode.	Yes.
`-response`	The location of the response file, `silent.rsp`.	Yes.

Table 5–6 (Cont.) Language Pack Installer Command Options in Silent Mode

Option Name	Description	Mandatory
`-J-DpatchDownloadLocation` (`-DpatchDownloadLocation` for Windows)	The directory path where you downloaded mandatory prerequisite patches to be applied by Language Pack Installer. See Section 5.2.3, "Download Mandatory Post-Installation NLS Patches".	Yes, if you are applying downloaded patches. Provide the full path to the `11.1.6.0.0_post_repo_patches` directory.
`-J-DupdateJAZNPolicyStore=true` (`-DupdateJAZNPolicyStore=true` for Windows)	Updates the policy store with translated attributes so field descriptions, display names, and other attributes display their translated values.	No, use only when you do not want to use base English in the policy store.
`JAZN_EXIST`	Required for the **Deploying Applications Policies** configuration task.	Yes, set to true, only when J-DupdateJAZNPolicyStore=true.
`-J-Dworkers` (`-Dworkers` for Windows)	The number of workers to use for uploading database content. If you provide a value for the number of workers that is outside the calculated range, you are prompted to provide a value that is within the optimal range. If you do not use this option, a calculated optimal value is used.	No, overrides the default number of workers calculated by Language Pack Installer.
`-J-DserverStartTimeout` (`-DserverStartTimeout` for Windows)	Configures the timeout value for server in seconds.	No, overrides the default value for server timeout.
`-J-DlogLevel` (`-DlogLevel` for Windows)	Records messages in the log file at the level you specify. Enter a value to override the default log level of `INFO`.	No, default value is `INFO`.
`-debug`	Retrieve debug information from Language Pack Installer.	No

5. Proceed to Section 5.5, "Complete the Post-Installation Tasks".

5.5 Complete the Post-Installation Tasks

Perform the following required manual steps after Language Pack Installer completes successfully:

- Confirm Database Artifact Deployments Were Successful
- Review Log Files for Errors or Exceptions
- Bounce All Servers and Verify the Status of Deployed Applications
- Disable Anonymous Binds in Oracle Internet Directory (OID)
- Reload Custom Templates for BI Publisher Reports
- Review Policy Store (JAZN) Analysis Reports
- Perform Steps in NLS Release Notes

5.5.1 Confirm Database Artifact Deployments Were Successful

Confirm that all database artifact deployments were successful by reviewing the Diagnostics report and log files. For more information, see "Diagnostics Report" in the *Oracle Fusion Applications Patching Guide*.

5.5.2 Review Log Files for Errors or Exceptions

Confirm there are no unresolved errors or exceptions in the log files. For information about resolving errors, see Section 5.6, "Troubleshoot Language Pack Installer Sessions".

5.5.3 Bounce All Servers and Verify the Status of Deployed Applications

> **Note:** If you are installing more than one language in an environment, you need to bounce servers only once at the end of installing all languages in that environment, to minimize time spent bouncing servers.

1. Bounce all servers using the `fastarstop` script "bounce" option. For more information, see "fastartstop Syntax" and "Starting Examples with fastartstop" in the *Oracle Fusion Applications Administrator's Guide*.
2. Verify that all deployed applications are up and running. You can check this from Fusion Applications Control, or by reviewing the server side log files. For more information, see "Starting Fusion Applications Control" in the *Oracle Fusion Applications Administrator's Guide* or Table 5–7, " Log Directories for Language Pack Installer Activities".

5.5.4 Disable Anonymous Binds in Oracle Internet Directory (OID)

Disable the anonymous binds that you enabled in Section 5.3.3, "Enable Anonymous Binds in Oracle Internet Directory".

1. Update the LDIF file so that the `orclAnonymousBindsFlag` has a value of 0.
2. Run the following command:

```
ldapmodify -D cn=orcladmin -Q -p portNum -h hostname -f ldifFile
```

For more information, see "Managing Anonymous Binds" in the *Oracle Fusion Middleware Administrator's Guide for Oracle Internet Directory*.

5.5.5 Reload Custom Templates for BI Publisher Reports

Follow this step if you have customized BI Publisher reports.

Reload custom templates for BI Publisher reports on Oracle-delivered BI Publisher reports by following the steps in "Task: Upload the Template File to the Report Definition" in the *Oracle Fusion Applications Extensibility Guide*.

5.5.6 Review Policy Store (JAZN) Analysis Reports

Perform this step only if the `J-DupdateJAZNPolicyStore` option was set to true when you ran Language Pack Installer. For details about this step, see Section 4.10, "Review Policy Story (JAZN) Analysis Reports"

5.5.7 Perform Steps in NLS Release Notes

Perform any steps listed in the Post-Installation Tasks section of Oracle Fusion Applications NLS release notes.

5.6 Troubleshoot Language Pack Installer Sessions

For troubleshooting issues that are generic to both RUP Installer and Language Pack Installer, see Chapter 6, " Troubleshooting the Upgrade". See Table 5–7 for a list of log directories for Language Pack Installer activities.

Table 5–7 Log Directories for Language Pack Installer Activities

Log directory name	Description
APPLICATIONS_BASE/oraInstall_*timestamp*/log	Installation phase logs.
FA_ORACLE_HOME/admin/FUSION/log/fapatch/fapatch_*language*_11.1.6.0.0	Top level directory for Language Pack Installer logs.
FA_ORACLE_HOME/admin/FUSION/log/fapatch/fapatch_*language*_11.1.6.0.0/configlogs	Top level log directory for configuration assistants. A log file exists for each configuration assistant. For more information, see Section 6.1.1, "Log Files for Configuration Assistants".
FA_ORACLE_HOME/admin/FUSION/log/fapatch/fapatch_*language*_11.1.6.0.0/configlogs/PatchManager_DBPatch	Loading Database configuration assistant logs.
FA_ORACLE_HOME/admin/FUSION/log/fapatch/fapatch_*language*_11.1.6.0.0/configlogs/PatchManager_ActivateLanguage	Activate Language configuration assistant logs.
FA_ORACLE_HOME/admin/FUSION/log/fapatch/fapatch_*language*_11.1.6.0.0/configlogs/PatchManager_DownloadedPatches directory contains the following fapmgr multi apply logs: ▪ FAPMgr_Multiapply_apply_*timestamp*.log ▪ FAPMgr_Multiapply_DiagnosticsSummary_*timestamp*.html ▪ FAPMgr_Multiapply_DiagnosticsSummary_*timestamp*.xml	Apply Downloaded Language Patches configuration assistant logs.
FA_ORACLE_HOME/admin/FUSION/log/fapatch/fapatch_*language*_11.1.6.0.0/Startstop	StartStop utility logs.
FA_ORACLE_HOME/admin/FUSION/log/fapatch/fapatch_*language*_11.1.6.0.0/soalogs	Log files from SOA Composite activities. Note that SOA server logs are located under respective domains. For example, the SOA server logs for CommonDomain are under *APPLICATIONS_CONFIG*/domains/*hostname*/CommonDomain/servers/soa_server1/logs. For more information, see Section 6.23.1, "SOA Composite Log Files".

6

Troubleshooting the Upgrade

This chapter provides information to assist you in troubleshooting RUP Installer and Language Pack Installer sessions.

This chapter contains the following topics:

- Troubleshooting Health Checker Down Time Checks
- Troubleshooting Health Checker Post-Upgrade Checks
- Ignorable Errors Reported by catbundle.sql
- Performing Installation Verification Steps

6.1 RUP Installer Log File Directories

Table 6–1 contains a list of log directories for RUP Installer activities.

Table 6–1 Log Directories for RUP Installer Activities

Log directory name	Description
oracle_inventory/logs	Installation phase and Oracle Fusion Middleware patch set installation logs.
FA_ORACLE_HOME/admin/FUSION/log/fapatch/fapatch_11.1.6.0.0	Top level directory for RUP Installer logs.
FA_ORACLE_HOME/admin/FUSION/log/fapatch/fapatch_11.1.6.0.0/ARCHIVE/*timestamp*	Top level log directory where log files are moved when you retry the installation session.
FA_ORACLE_HOME/admin/FUSION/log/fapatch/fapatch_11.1.6.0.0/configlogs	Top level log directory for configuration assistants. A log file exists for each configuration assistant. For more information, see Section 6.1.1, "Log Files for Configuration Assistants".
FA_ORACLE_HOME/admin/FUSION/log/fapatch/fapatch_11.1.6.0.0/PatchManager_DBPatch	Database upload configuration assistant logs after failure or completion. For more information, see Section 6.1.2, "Log Files for the Database Upload Configuration Assistant".
APPLICATIONS_BASE/instance/BIInstance/diagnostics/logs	Oracle Business Intelligence logs.
FA_ORACLE_HOME/admin/FUSION/log/fapatch/fapatch_11.1.6.0.0/StartStop	StartStop utility logs. Note that server logs are located under respective domains. For example, the AdminServer log for CommonDomain is under *APPLICATIONS_CONFIG*/domains/*hostname*/CommonDomain/servers/AdminServer/logs.
FA_ORACLE_HOME/admin/FUSION/log/fapatch/fapatch_11.1.6.0.0/soalogs	SOA artifacts configuration assistant logs. Note that SOA server logs are located under respective domains. For example, the SOA server logs for CommonDomain are under *APPLICATIONS_CONFIG*/domains/*hostname*/CommonDomain/servers/soa_server1/logs. For more information, see Section 6.23.1, "SOA Composite Log Files".
FA_ORACLE_HOME/admin/FUSION/log/fapatch/fapatch_11.1.6.0.0/configlogs/PatchManager_DownloadedPatches	Applying Downloaded Patches configuration assistant logs.

6.1.1 Log Files for Configuration Assistants

During the configuration phase of the upgrade, each configuration assistant creates its own log file under the *FA_ORACLE_HOME*/admin/FUSION/log/fapatch/fapatch_*releasenumber*/configlogs directory. All messages that are generated during the configuration assistant processing are written to this log file. The only information related to configuration assistants that is written to the main log file, *FA_ORACLE_HOME*/admin/FUSION/log/fapatch/fapatch_*releasenumber*, are those messages that indicate that a configuration assistant started and the result of its processing, such as success or failure.

6.1.2 Log Files for the Database Upload Configuration Assistant

During the execution of the database upload configuration assistant, log files are created under the *FA_ORACLE_HOME*/admin/FUSION/log directory. Upon completion or failure of the database upload, the log files move to the *FA_ORACLE_HOME*/admin/FUSION/log/fapatch/fapatch_*releasenumber*/PatchManager_DBPatch directory. The current *releasenumber* is 11.1.6.0.0.

6.2 Troubleshooting Failures During the Installation Phase

Perform the following steps when an error occurs during the installation phase:

1. Click **Cancel** to exit out of the installer.
2. Review the log files to determine the cause of the failure. The log files reside in *oracle_inventory*/logs/install*timestamp*.log.
3. Resolve the cause of the failure.
4. Start the installer using the same command syntax that you used for the previous incomplete installation. For more information, see Section 3.1, "Run RUP Installer" or Section 5.4, "Install or Upgrade a Language". After canceling the previous installation and starting again, a pop up dialog displays, asking if you want to continue the previous incomplete installation. Select **Yes** to continue running the previous session. If the error is not recoverable, you must restore and restart from backup.
5. If you choose to continue with the failed installation, the installer opens at the screen where it was canceled. When canceled during the copy action, it relaunches in the Installation Summary screen. Click **Next** to navigate through the Installation Summary screen. When the Installation Progress screen displays, click **Install** to start the installation again.

Troubleshooting steps are described for the following specific failures that may occur during the installation phase:

- CFGLOG-00056: Exception caught while getting node-manager homes
- Invalid Oracle Home
- Error in Writing to File, Text File Busy
- Inventory Pointer File is Empty

6.2.1 CFGLOG-00056: Exception caught while getting node-manager homes

Problem

Within a few seconds of starting the installer, you receive the following message:

In the log file:

```
SEVERE: CFGLOG-00056 : Exception caught while getting node-manager homes
```

In the user interface:

```
CFGLOG-00052 : Error occurred while moving instance specific files
```

Solution

This failure is the result of having an incompatible version of OPatch in FA_ORACLE_HOME. To resolve the issue, download and apply patch 14044793, which contains the compatible version of OPatch.

6.2.2 Invalid Oracle Home

Problem

In the Installation Location page, you receive a message about entering an invalid Oracle home, even though the location displayed on the page is correct. The installer reads `/etc/oraInst.loc` to determine the location of the central inventory. Review the following settings:

Solution

To resolve this problem:

- Ensure that the `/etc/oraInst.loc` file on the machine where you are running the installer is pointing to the correct central inventory location.
- Ensure that the *FA_ORACLE_HOME* matches the values provided during provisioning. If a `/net/location` was provided as the Oracle home location during provisioning, the same `/net/location` that corresponds to *FA_ORACLE_HOME* should be provided during the installation. You can find this location by following these steps:
  - Open /etc/oraInst.loc and find the path to oraInventory, which is the central inventory, for example, `server01/appmgr/APPTOP/oraInventory`.
  - Change directory to the ContentsXML directory under the central inventory, for example, `server01/appmgr/APPTOP/oraInventory/ContentsXML`.
  - Open the `inventory.xml` file to find the correct directory path to *FA_ORACLE_HOME*.

6.2.3 Error in Writing to File, Text File Busy

Problem

During the installation phase of RUP Installer, you receive the following message on a Unix platform.

```
Error in writing to file
'/server01/APPLICATIONS_BASE/fusionapps/applications/lcm/ad/bin/adctrl'
(Text file busy)
```

Solution

To resolve this issue, perform the following steps.

1. Run the `lsof` command using the full directory path of the file that is busy.

   `/usr/bin/lsof` *`full_path_to_file`*

2. You should receive a list of process ids that are using the file. Kill each process using the appropriate command for your operating system.
3. After all processes are no longer running, click **Continue** in RUP Installer.

6.2.4 Inventory Pointer File is Empty

Problem

After running the installer, the contents of `oraInst.loc` were removed.

Solution

The installer always tries to copy the inventory pointer file specified by the `-invPtrLoc` option to the Oracle home on which the release is to be installed. If you specify an incorrect path for the `-invPtrLoc` file, the inventory pointer file could result in being an empty file. Review the following possible solutions for this issue:

- For best results, if you are using the `-invPtrLoc` option, use it with this value: *`FA_ORACLE_HOME`*`/oraInst.loc`. This avoids a situation where you may inadvertently exclude part of the directory path to the file, as in the case of using a mapped drive. For example, if Oracle home is registered in inventory with a `/net` path, such as `/net/home/oraInst.loc`, and you provide `/home/oraInst.loc` to the `invPtrLoc` option, the installer interprets the two paths as different. The end result is an empty inventory pointer file.
- If *`FA_ORACLE_HOME`* is registered in central inventory with a `/net` path, then you must include `/net` when specifying the location of the inventory pointer file with the `-invPtrLoc` option, for example, `-invPtrLoc /net/`*`directory_path`*`/oraInst.loc`.
- Restore from a backup copy of your `oraInst.loc` file in case the original file is damaged. You can find this in `/etc/oraInst.loc`.
- You can recover from this error by creating a new `oraInst.loc`. See the "Creating the oraInst.loc File" section in the relevant Oracle Database installation guide, for example, *Oracle Database Installation Guide, 11g Release 2 (11.2) for Linux*.

  Then click **Retry**.

6.3 Failure During Analysis of Applications Policies

Problem

A failure occurs during applications policy analysis.

Solution

Review the log file that is generated by each stripe. These log files are located under the main log directory, *`FA_ORACLE_HOME`*`/admin/FUSION/log/fapatch/fapatch_11.1.6.0.0/`*`timestamp`* and are named as follows:

- `fapatch_CRMJaznAnalysis_`*`timestamp`*.log
- `fapatch_FSCMJaznAnalysis_`*`timestamp`*.log
- `fapatch_HCMJaznAnalysis_`*`timestamp`*.log

- `fapatch_OBIJaznAnalysis_`*`timestamp`*`.log`

After you resolve the JAZN analysis error, retry the analysis for the failed stripe to confirm the issue is resolved.

6.4 General Troubleshooting During the Configuration Phase in GUI Mode

This section describes the following troubleshooting scenarios:

- Restart a Failed Installer Session
- Troubleshoot Failures While Parallel Tasks Are Running
- The Next Button Is Not Enabled During Configuration Assistants
- The OPSS Security Store Goes Down While the Installer is Running
- Failure During Opening of Wallet Based Credential Store
- FAINSTALL-0006: RUP Part 1 of version 11.1.6.0.0 already installed

6.4.1 Restart a Failed Installer Session

The installer can be restarted to rerun all failed configuration assistants as well as those configuration assistants that were not started from the previous session. When a configuration assistant or step fails, the Configuration Progress screen displays the location of the log file and the exception that caused the failure. You can also view the content of the log files that appear at the bottom of the screen to obtain detailed information to assist in diagnosing the cause of the failure.

If one or more failures occur during the configuration phase, after the final configuration assistant is complete, the following message displays:

Configuration is completed with errors, exit the installer by clicking the 'Cancel' button and retry the failed configurations.

Perform the following steps to rerun the installer and retry the failed configuration assistants:

1. Click **Cancel** to exit the installer.
2. Resolve the issues that caused the failure.
3. Start the installer using the same command syntax that you used for the previous incomplete installation.
4. A pop up dialog displays, asking if you want to continue the previous incomplete installation. Select **Yes** to continue running the previous session. If you select **No**, the installer starts from the beginning and it will fail, indicating that a release cannot be installed again in the same environment. You would then need to restore from your backup and restart the installer.
5. The Configuration Progress screen displays only the failed and remaining configuration assistants, and then runs these configuration assistants.
6. Assuming all configuration assistants complete successfully, click **Next** to go to the Installation Complete screen and then click **Finish** to end the session. If a configuration assistant fails again and you want to attempt to run the session again, click **Cancel** to save the session. If all configuration assistants were successful for the first installer, the second installer launches automatically. If all configuration assistants completed successfully, click **Finish** to end the session.

Note that Language Pack runs only one installer.

6.4.2 Troubleshoot Failures While Parallel Tasks Are Running

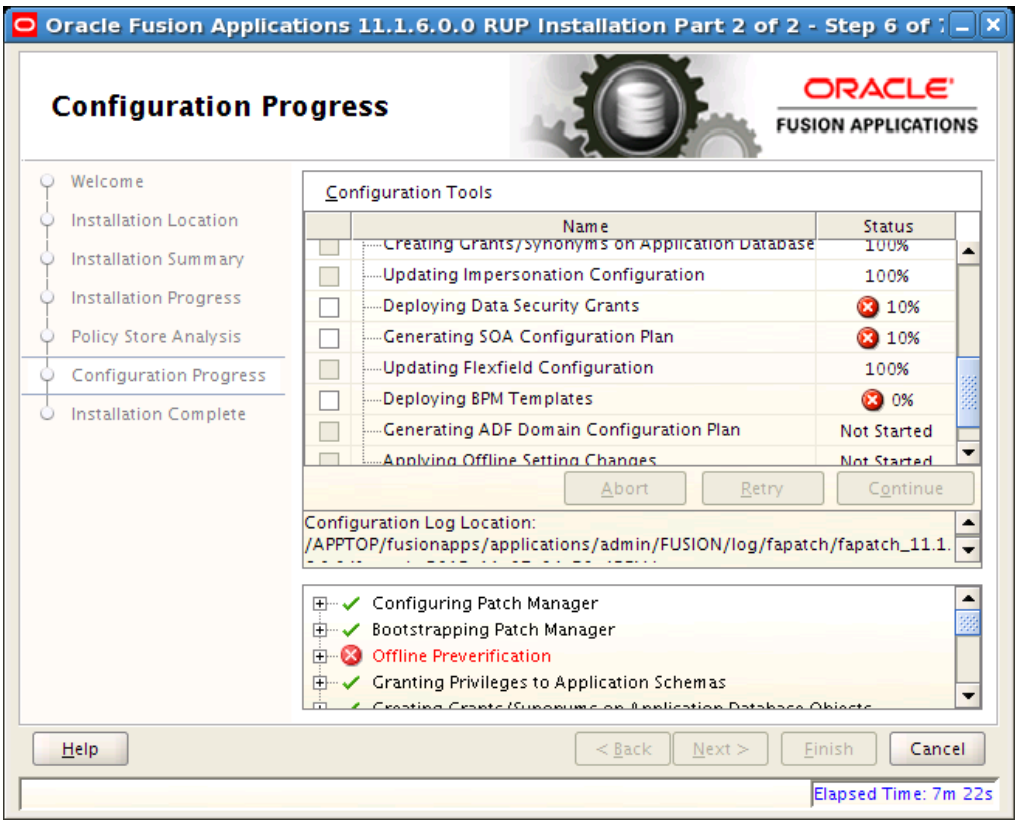
If one or more tasks in a group fail, you can select the failed tasks in any combination, and the **Abort**, **Retry**, and **Continue** buttons are enabled as appropriate for the selected tasks. For example, if two tasks in a group fail, and the first task allows you to select **Continue**, but the other task does not, then the **Continue** button is not enabled if you select both tasks.

You can process one or more failed tasks at a time. For example, if three tasks fail, you can retry one of them, and while it is running, you can abort the second task. Then you can retry the third task. When the first and third tasks finish processing, the next step depends on whether the second task is mandatory. If it is a mandatory task, the installer stops, and if it is non-mandatory the installer continues with the next task after the group. You can also pick two out of three or all three tasks and select **Retry**, **Abort,** or **Continue**, based on which buttons are enabled.

Note that all tasks in a group must either fail or complete successfully before the **Cancel** button is enabled.

The following example depicts a group of four configuration tasks that are running in parallel and three of the four tasks fail.

1. Four tasks were running in parallel. Three tasks fail and the remaining task is successful. Note that the **Abort**, **Retry**, and **Continue** buttons are not enabled because the check boxes for the failed tasks are not checked. In the case of failure, the check boxes are enabled for failed tasks only after all tasks in the group have either failed or completed successfully.



2. After you select the failed tasks, the **Abort**, and **Retry** buttons are enabled. The **Continue** button is not enabled because the failed tasks are mandatory.

3. After you resolve the cause of the failure and click **Retry,** the three failed tasks run in parallel again.

6.4.3 The Next Button Is Not Enabled During Configuration Assistants

Problem

On the Configuration Progress page of the installer, the **Next** button is enabled only when all configuration assistants are successful.

If you see that all your configurations are complete, and the **Next** button is not enabled, you encountered a configuration failure and continued to the next configuration assistant.

Solution

In this case, you must retry the failed configuration assistants by following these steps:

1. On the Configuration Progress page of the installer, click **Cancel**.
2. Restart the installer. All failed configuration assistants or steps rerun upon restart. For more information, see Section 6.4.1, "Restart a Failed Installer Session".

As long as a configuration assistant is not successful, the **Next** button remains disabled. It may be necessary to repeat the cancel and retry procedure until all configuration assistants are successful.

6.4.4 The OPSS Security Store Goes Down While the Installer is Running

Problem

The OPSS Security Store goes down while the installer is running.

Solution

Configuration tasks that are related to the OPSS Security Store will fail if the store goes down. Perform the following steps to recover:

1. Abort the failed configuration task.
2. Select **Cancel** to end the installer session.
3. Start the OPSS Security Store. For more information, see "Starting and Stopping Oracle Internet Directory" in the *Oracle Fusion Middleware Enterprise Deployment Guide for Oracle Identity Management (Oracle Fusion Applications Edition)*.
4. Start a new installer session. The installer resumes with the remaining tasks because you selected **Cancel**, which saves the session

6.4.5 Failure During Opening of Wallet Based Credential Store

Problem

The following error occurs during the configuration phase.

```
Reason:oracle.security.jps.service.credstore.CredStoreException: JPS-01050:
Opening of wallet based credential store failed.
Reason java.io.IO Exception: PKI-02002: Unable to open the wallet. Check password.
```

Solution

After you resolve the cause of the failure, or cancel the installation and then restart the installer. If the failure still occurs, refer to "Server with NFS-Mounted Domain Directory Fails to Start" in the *Oracle Fusion Middleware Application Security Guide* to further diagnose the failure.

6.4.6 FAINSTALL-0006: RUP Part 1 of version 11.1.6.0.0 already installed

Problem

After the first installer completes successfully in silent mode, you switched to GUI mode for the second installer and the following error is reported:

```
FAINSTALL-0006: RUP Part 1 of version 11.1.6.0.0 already installed.
```

Solution

Start the second installer from the *REPOSITORY_LOCATION*`/installers/fusionapps/Disk1` directory.

6.5 General Troubleshooting During the Configuration Phase in Silent Mode

The installer can be restarted to rerun all failed configuration tasks as well as those tasks that were not started from the previous session. When a mandatory configuration task or step fails in silent mode, the installer exits. After you resolve the

issue that caused the failure, restart the installer using the same command you used to start it. When the installer restarts, it restarts from the first failed task.

If any non-mandatory tasks fail in silent mode, the installer continues with the next configuration task and does not exit. You must review the logs to find any non-mandatory tasks that failed and then rerun the installer until all tasks complete successfully.

If you decide to run the installer in GUI mode, you must start it from the *REPOSITORY_LOCATION*/installers/farup/Disk1/ directory.

6.6 Recovering From an Installer Session That Was Shut Down

Problem

An installer session was shut down during the upgrade.

Solution

Perform the following steps:

1. Copy the `checkpoint.xml` file.
2. Restore your backup of *APPLICATIONS_BASE*.
3. Restore the `checkpoint.xml` file.
4. Start from the beginning of the upgrade.

6.7 Troubleshooting Bootstrapping Patch Manager

Problem

An error occurred during the **Bootstrapping Patch Manager** configuration assistant.

Solution

An error during **Bootstrapping Patch Manager** normally occurs only when the database is down. Ensure that the database is up and running. You can review the related log files in this location:

FA_ORACLE_HOME/admin/FUSION/log/configlogs/FAPatchManager_bootstrap_*timestamp*.log

6.8 Troubleshooting Applying Middleware Patches

This section provides the following troubleshooting information related to the **Applying Pre-PSA Middleware Patches** or **Applying Post-PSA Middleware Patches** configuration assistants:

- Log Files for Applying Middleware Patches
- Applying Post-PSA Middleware Patches Hangs
- Error Applying Database Client Patches

6.8.1 Log Files for Applying Middleware Patches

Problem

An error occurred during the **Applying Pre-PSA Middleware Patches** or **Applying Post-PSA Middleware Patches** configuration assistant.

Solution

Review the log file in the relevant location to find the cause of the error:

FA_ORACLE_HOME/admin/FUSION/log/fapatch/fapatch_11.1.6.0.0/configlogs/ApplyPrePSAMiddlewarePatches*timestamp*.log

FA_ORACLE_HOME/admin/FUSION/log/fapatch/fapatch_11.1.6.0.0/configlogs/ApplyPostPSAMiddlewarePatches*timestamp*.log

For specific OPatch failures, go to each of the individual Oracle home directories to find the details of the OPatch errors. For example, for a SOA failure, go to *APPLICATIONS_BASE*/fusionapps/soa/cfgtoollogs/opatch.

6.8.2 Applying Post-PSA Middleware Patches Hangs

Problem

The **Applying Post-PSA Middleware Patches** configuration assistant hangs.

Solution

This problem is most likely due to adpatch hanging as the result of the java worker not getting the database connection. You can resolve this issue by following the steps in Section 6.13, "Troubleshooting Loading Database Components". Run the commands from *ATGPF_ORACLE_HOME* instead of *FA_ORACLE_HOME*.

6.8.3 Error Applying Database Client Patches

Problem

The following error occurs:

```
OPatch cannot continue because it can't load library from the directory "<dbclient
Oracle Home>/oui/lib/linux64"
```

Solution

This error may occur if the OUI version in the database client Oracle home is 11.2 while the OUI version in Oracle Fusion Applications Oracle home (FA_ORACLE_HOME) is 11.1.

Perform the following steps to resolve this issue:

1. Go to the database client home.
2. Set the ORACLE_HOME environment variable to point to the database client Oracle home.
3. Apply the database client patches using the following command:

   ```
   $ORACLE_HOME/OPatch/opatch apply patch_location
   ```

4. Because the patches have now been manually applied, perform the following steps to continue with the upgrade:

   a. Go to the *FA_ORACLE_HOME*/fusionapps/applications/lcm/tp/config/RUP/FMW directory.

   b. Open the pre-psa-jobs.xml file for editing.

   c. Comment out the job with the name dbclient. An example of this job follows.

```
<!-- <job>
    <id>10</id>
    <target>FAMW</target>
    <component>
          <name>dbclient</name>
          <version>11.1.1.5</version>
    <component>
    <utility_name>opatch</utility_name>
    <patch_number>NA</patch_number>
    <command>%opatch% napply -silent -skip_duplicate -skip_subset
-oh %dbclient_home% -phBaseDir %dbclient_patch% -jre %jre_loc% -invPtrLoc
%oraInstLocFile%</command>
     <patch_location>NA</patch_location
</job>
```

6.9 Troubleshooting Failure During Propagating Domain Configuration

This section contains information about troubleshooting issues that may occur during the **Propagating Domain Configuration** configuration assistant. The following topics are discussed:

- Monitor the Propagating Domain Configuration Assistant
- Confirm the Configuration Assistant Was Successful
- WARs or EARs Not Accessible From The Primordial Host

6.9.1 Monitor the Propagating Domain Configuration Assistant

You can monitor the progress of this configuration assistant by reviewing log files in this location:

APPLICATIONS_CONFIG/fapatch/admin/ruplitedomain/*version*/output/logs

6.9.2 Confirm the Configuration Assistant Was Successful

To confirm this configuration assistant was successful, verify that the config/fusionapps_start_params.properties file exists under each local or non-admin split domain. Also ensure that the bin/setDomainEnv.sh file under each local or non-admin split domain contains the following row:

```
POST_CLASSPATH="${COMMON_COMPONENTS_HOME}/modules/oracle.appstrace_
11.1.1/appstrace.jar${CLASSPATHSEP}${POST_CLASSPATH}"
export POST_CLASSPATH
```

6.9.3 WARs or EARs Not Accessible From The Primordial Host

Problem

The **Propagating Domain Configuration** configuration assistant fails if there are WARs or EARs installed or deployed that are not accessible from the primordial host where RUP Installer is running. An example of the error caused by this condition follows:

```
<< read domain from
APPTOP/instance/domains/server.company.com/SCMDomain
<< write template to
APPTOP/instance/fapatch/admin/ruplitedomain/11.1.5.0.0/output/templates/SCMDomain.
jar
>>  fail: Unable to locate file:
/fusionapps/localdomain/domains/server.company.com/SCMDomain/datalens/datalens.war
>>  fail: write template to
"APPTOP/instance/fapatch/admin/ruplitedomain/11.1.5.0.0/output/templates/SCMDomain
.jar"

CFGFWK-60550:  Script execution aborted. The script may contain an error.
Unable to locate file:
/fusionapps/localdomain/domains/server.company.com/SCMDomain/datalens/datalens.war
```

Solution

To resolve this issue, you must undeploy or uninstall the WAR or EAR, which is `datalens.war` in this example. Then restart RUP Installer. After the upgrade has completed successfully, you can install or deploy the WAR or EAR.

6.10 Troubleshooting Upgrading Middleware Schema

Problem

An error occurred during the **Upgrading Middleware Schema** configuration assistant.

Solution

Review the log file in this location to find the cause of the error:

`fusionapps/oracle_common/upgrade/logs/psa`*`timestamp`*`.log`

Problem

The **Upgrading Middleware Schema** configuration assistant fails because *JAVA_HOME* cannot be found.

Solution

Set the *JAVA_HOME* and then manually run the upgrade for the failed schema, as shown in the following example:

```
export JAVA_HOME=/u01/APPLTOP/fusionapps/jdk6
/u01/APPLTOP/fusionapps/oracle_common/bin/psa -response
/u01/APPLTOP/fusionapps/applications/admin/FUSION/oui_resp/psa_response_crm.txt
```

6.11 Troubleshooting Applying Downloaded Patches

Problem

The **Applying Downloaded Patches** configuration assistant failed with the following error:

```
Stack Description: java.lang.RuntimeException:
PatchObject constructor: Input file
"/net/server01/Downloaded_Patches/atgpf/patch/1234567/etc
/config/inventory" does not exist.
```

Solution

This type of error occurs when you do not download the patches to the appropriate directory. To resolve this issue, copy the patches to the correct directory and retry the failed configuration assistant. For more information, see Section 2.1.4, "Download Mandatory Post-Release 6 Patches".

6.12 Failure During Granting Privileges

Problem

A failure occurred during either the **Grant Privileges to Application Schemas** or the **Creating Grants/Synonyms on Application Database Objects** configuration assistant.

Solution

You can find the cause of the failure by running the script manually as the `sysdba` user, using SQL*Plus or SQL*Developer. After you resolve the issue, click **Retry** in RUP Installer.

6.13 Troubleshooting Loading Database Components

This section contains information about troubleshooting issues that may occur during the **Loading Database Components** configuration assistant. Depending on the type of failure, you may need to review one or more of the log files in the following locations:

- *FA_ORACLE_HOME*`/admin/FUSION/log/fapatch/fapatch_11.1.6.0.0/PatchManager_DBPatch/`
  - `FAPatchManager_apply_`*timestamp*`.log`
  - `adpatch_apply_`*timestamp*`.log`
  - `adpatch_apply_`*timestamp*`_worker`*num*`.log`
- *ATGPF_HOME*`/admin/FUSION/log`

The following troubleshooting issues are described in this section:

- Error While Loading Database Components
- Database Failure While Loading Database Components
- Failure During AutoPatch Validation
- Flexfield Seed Data Upload Fails

6.13.1 Error While Loading Database Components

Problem

RUP Installer reports that one or more database workers failed during the **Loading Database Components** configuration assistant.

Solution

You must start AD Controller to manage the failed workers. After you resolve the issue that caused the workers to fail and you restart the failed worker, click **OK** in the dialog box and RUP Installer continues processing. For additional information, see "Troubleshooting Patching Sessions for Database Content" in the *Oracle Fusion Applications Patching Guide*.

6.13.2 Database Failure While Loading Database Components

Problem

Your database goes down while RUP Installer is running the **Loading Database Components** configuration assistant, and the options to **Abort** or **Retry** display. If you simply bring the database up and then click **Retry**, you may encounter the following error:

```
Failed to connect to the database as fusion with error:
No more data to read from socket
```

Solution

Perform the following steps to recover from this error:

1. Force the database patching session to fail.

   ```
   (Unix) FA_ORACLE_HOME/lcm/ad/bin/fapmgr.sh forcefail
   (Windows) FA_ORACLE_HOME\lcm\ad\bin\fapmgr.cmd forcefail
   ```

2. Start AD Controller.

   ```
   (UNIX) FA_ORACLE_HOME/lcm/ad/bin/adctrl.sh
   (Windows) FA_ORACLE_HOME\lcm\ad\bin\adctrl.cmd
   ```

   For more information, see "Starting AD Controller" in the *Oracle Fusion Applications Patching Guide*.

3. Follow this sequence of steps in AD Controller to manage the workers:

   a. Select **Tell manager that a worker failed its job** and enter **All** for all workers.

   b. Select **Tell worker to quit** and enter **All** for all workers. Note that this does not kill the workers. It sends a command to the worker to shutdown after it completes the current task.

   c. Wait for all workers to complete their tasks and shut down normally.

   d. If there are still some worker processes that do not shut down, kill those processes manually by selecting **Tell manager that a worker failed its job**. Then select **Tell manager that a worker acknowledges quit** and enter **All** for all workers.

   e. From your operating system, check for processes that are running `fapmgr`, `javaworker`, `adpatch`, `adadmin`, `sqlplus`, and `adworker`. If any exist, terminate them from your operating system.

f. Select **Tell worker to restart a failed job** and enter **All** for all workers.

4. Select **Retry** to restart RUP Installer.

6.13.3 Failure During AutoPatch Validation

Problem

AutoPatch validation fails with the following message:

```
An active adpatch or adadmin session was found. Complete or terminate the
active session to allow fapmgr to proceed.
```

Solution

Perform the following steps to resolve this error:

1. Run the `fapmgr forcefail` command to update the patching tables.

   (UNIX) *FA_ORACLE_HOME*/lcm/ad/bin/fapmgr.sh forcefail [-logfile *log file name*] [-loglevel *level*]

   (Windows) *FA_ORACLE_HOME*\lcm\ad\bin\fapmgr.cmd forcefail [-logfile *log file name*] [-loglevel *level]*

2. Run the `fapmgr abort` command from *FA_ORACLE_HOME* to find out if an Oracle Fusion Applications Patch Manager session must be cleaned up.

   (UNIX) *FA_ORACLE_HOME*/lcm/ad/bin/fapmgr.sh abort [-logfile *log file name*] [-logLevel *level*]

   (Windows) *FA_ORACLE_HOME*\lcm\ad\bin\fapmgr.cmd abort [-logfile *log file name*] [-logLevel *level*]

   If this command finds no failed session, proceed to Step 3.

3. Run the following commands from *ATGPF_ORACLE_HOME* to abandon any Applications Core patching sessions or AD Administration sessions that may be running:

   (Unix) *ATGPF_ORACLE_HOME*/lcm/ad/bin/adpatch.sh abandon=y interactive=n defaultsfile=ATGPF_ORACLE_HOME/admin/TWO_TASK/*defaults*.txt

   (Unix) *ATGPF_ORACLE_HOME*/lcm/ad/bin/adadmin.sh abandon=y interactive=n defaultsfile=ATGPF_ORACLE_HOME/admin/TWO_TASK/defaults.txt

   (Windows) *ATGPF_ORACLE_HOME*\lcm\ad\bin/adpatch.exe abandon=y interactive=n defaultsfile=ATGPF_ORACLE_HOME\admin\TWO_TASK\defaults.txt

   (Windows) *ATGPF_ORACLE_HOME*\lcm\ad\bin\adadmin.cmd abandon=y interactive=n defaultsfile=ATGPF_ORACLE_HOME\admin\TWO_TASK\defaults.txt

6.13.4 Flexfield Seed Data Upload Fails

Problem

When multiple seed data files are uploaded for the same flexfield but for different flexfield contexts, the upload tasks can fail due to locking issues. The failed tasks appear in the log file as the following error:

```
Loading failed with a JboException: JBO-25014: Another user has changed the
```

```
row with primary keyoracle.jbo.Key ...
```

Solution

AutoPatch defers any failed tasks to the end of the phase and reattempts the failed tasks only after attempting all tasks in the phase at least once. Usually, the flexfield seed data tasks that failed due to the locking issue succeed on subsequent attempts. You can ignore these errors if the flexfield seed data task succeeds on the retry. If the task remains in a failed state, you must use the AD Controller utility to retry the failed task.

For more information, see "Restarting a Failed Worker" in the *Oracle Fusion Applications Patching Guide*.

6.14 Troubleshooting Deployment of Applications Policies

This section contains information about troubleshooting issues that may occur during the **Deploying Application Policies** configuration assistant. Log files for this configuration assistant may be found in this location:

FA_ORACLE_HOME/admin/FUSION/log/fapatch/fapatch_11.1.6.0.0/fapatch_Deploying_Applications_Policies_(jazn-data.xml)_*timestamp*.log.

The following topics are discussed:

- Failure During Deploying Applications Policies
- Warning During Deploying Applications Policies
- Warning during Migrate Security Store
- IDM Server Failure During Deployment of Applications Policies

6.14.1 Failure During Deploying Applications Policies

Problem

A failure occurs during **Deploying Application Policies**.

Solution

When a failure occurs during **Deploying Application Policies**, you must restore only the stripe or system policy that has failed, from your backup. Use the OPSS `migrateSecurityStore` command with the appropriate source and destination arguments to perform the restore. Do not restore a stripe that has not failed. Review the JAZN deployment log file to determine the cause of the failure, `fapatch_Deploying_Applications_Policies_(jazn-data.xml)_`*timestamp*`.log`.

After you resolve the issue, restart RUP Installer by either selecting **Retry** in the same session or by exiting RUP Installer and restarting it.

For more information, see "Migrating with the Script migrateSecurityStore" in the *Oracle Fusion Middleware Application Security Guide*.

6.14.2 Warning During Deploying Applications Policies

Problem

The following warning occurs during **Deploying Application Policies**:

```
WARNING: Failed to validate the xml content. cvc-complex-type.2.4.a: Invalid
content was found starting with element 'property'. One of
'{"http://xmlns.oracle.com/oracleas/schema/11/jps-config-11_1.xsd":propertySetRef,
"http://xmlns.oracle.com/oracleas/schema/11/jps-config-11_1.xsd":extendedProperty,
"http://xmlns.oracle.com/oracleas/schema/11/jps-config-11_
1.xsd":extendedPropertySetRef,
"http://xmlns.oracle.com/oracleas/schema/11/jps-config-11_
1.xsd":serviceInstanceRef}'
is expected. Location: line 165 column 96.
WLS ManagedService is not up running. Fall back to use system properties for
configuration.
```

Solution

You can safely ignore this message as there is no functional impact of this warning and the deployment is successful.

6.14.3 Warning during Migrate Security Store

Problem

The following warning occurs during **Deploying Application Policies**:

```
FINE: Application policies already exists for application: fscm
oracle.security.jps.service.policystore.PolicyObjectAlreadyExistsException:
Cannot create application policy context "fscm".
        at
oracle.security.jps.internal.policystore.ldap.LdapPolicyStore.unsync_createApp
licationPolicy(LdapPolicyStore.java:833)
        at
oracle.security.jps.internal.policystore.ldap.LdapPolicyStore.createApplicatio
nPolicy(LdapPolicyStore.java:753)
        at
oracle.security.jps.internal.tools.utility.destination.apibased.JpsDstPolicy.c
lone(JpsDstPolicy.java:805)
```

Solution

You can safely ignore this message as there is no functional impact of this warning and the deployment is successful.

6.14.4 IDM Server Failure During Deployment of Applications Policies

Problem

The IDM Server goes down during **Deploying Application Policies** and the deployment fails.

Solution

Even if the **Retry** button is enabled, RUP Installer does not allow a retry after this type of failure. You must instead click **Cancel** and restore from your Oracle Identity Manager backup. Then restart RUP Installer.

6.15 Troubleshooting Deployment of BI Publisher Artifacts

Problem

The following error occurs if the BI Presentation servers are running during the deployment of BI Publisher artifacts:

```
java.lang.RuntimeException: Webcat patch file creation failed!
```

Solution

If you apply a release that contains BI Publisher artifacts, the BI Presentation servers must not be running. To resolve this issue, shut down the BI Presentation servers to release locks on the Oracle BI Presentation Catalog. For more information, see "fastartstop Syntax" in the *Oracle Fusion Applications Administrator's Guide*.

6.16 Troubleshooting Failure During Applying Offline Setting Changes

Problem

The **Applying Offline Setting Changes** configuration assistant fails during the "Update OID Authentication Provider Configuration" step. The log file shows that the installer fails while attempting to find OID Authenticator, as shown in the following example:

```
com.oracle.cie.domain.script.jython.WLSTException:
com.oracle.cie.domain.script.ScriptException: No
SecurityConfiguration!Realm!AuthenticationProvider object with
nameProjectsDomain!myrealm!OIDAuthenticator
```

Solution

The workaround is to edit the checkpoint file to allow the **Applying Offline Setting Changes** configuration assistant to continue, and apply the required settings changes manually to the `OVDAuthenticator` after RUP Installer completes successfully.

Perform the following steps:

1. Quit out of RUP Installer.
2. Find the checkpoint.xml file located at *APPLICATIONS_BASE*`/oraInventory/checkpoint/farup1/11.1.6.0.0/checkpoint.xml`.
3. Change the following element:

   ```
   <aggregate name="Applying Offline Setting Changes" status="fail">
   ```

   to:

   ```
   <aggregate name="Applying Offline Setting Changes" status="success">
   ```

4. Restart RUP Installer. Select **Yes** when asked if you would like to continue with a previous installation.
5. Manually apply the settings by performing the following steps for each failed domain:
   a. Edit the `ovdUpdate.py` script and change the `_domainPath` to point to your *APPLICATIONS_BASE* and domain path. The content of the script follows:

      ```
      _domainPath = '/APPTOP/instance/domains/fa-mycompany.com/HCMDomain'
      _ovdAuthenticatorPath =
      'SecurityConfiguration/HCMDomain/Realm/myrealm/AuthenticationProvider/OVDAu
      ```

```
thenticator'

readDomain(_domainPath)
cd(_ovdAuthenticatorPath)

set('ConnectTimeout',60)
set('ResultsTimeLimit',300000)
set('ParallelConnectDelay',1)
set('IgnoreDuplicateMembership',1)
set('UseRetrievedUserNameAsPrincipal',1)

updateDomain()
closeDomain()

print 'OVDAuthProvider successfully updated'
exit()
```

b. Edit the script so that the "HCMDomain" in the `_ovdAuthenticatorPath` is changed to the domain that you are configuring. You can find the domains on which the OID configuration failed by reviewing the `fapatch_Applying_Offline_Setting_Changes_`*`timestamp`*.log file. Search for the error, "No SecurityConfiguration!Realm!AuthenticationProvider object with name", to find the domains.

c. Start WLST.

d. Run the script using the syntax, `execfile(filePath/ovdUpdate.py)`, on those domains that failed the OID configuration.

6.17 Troubleshooting Failure During Verifying Node Manager and OPMN Status

Problem

The **Verifying Node Manager and OPMN Status** configuration assistant fails.

Solution

Do not cancel and exit out of RUP Installer in response to this configuration assistant failure. Perform the following steps to recover:

1. Review the node manager log files to determine the cause of the failure:

   `APPLICATIONS_CONFIG``/nodemanager/host_name/`

   Note that the *`APPLICATIONS_CONFIG`* value can be obtained from the *`APPLICATIONS_BASE`*`/fusionapps/faInst.loc` file.

2. After you resolve the issue that caused the failure, start the Node Manager on all hosts that are part of the Oracle Fusion Applications provisioned system. For more information, see "Task 3: Start Node Manager" in the *Oracle Fusion Applications Administrator's Guide*.

3. Restart the OPMN server for BI, GOP (if GOP is installed), and Web Tier. If you run the Web Tier (OHS) installed with the Oracle Fusion Applications middle tier, you can start it using the following steps. If you run the Web Tier on a separate machine, you may be able to run the steps below on the other machine. In either case, ensure that Web Tier (OHS) is up at this point.

   Example for BI: (note the usage of `start` instead of `startall`)

```
cd APPLICATIONS_CONFIG/BIInstance/bin
./opmnctl start
```

Example for GOP: (note the usage of `start` instead of `startall`) Note that the OPMN server for GOP should be started from the machine that hosts the Advanced Planning Managed server. Start the OPMN server for GOP only if you have GOP installed.

```
cd APPLICATIONS_CONFIG/gop_1/bin
./opmnctl start
```

Example for Web Tier: (note the usage of `start` instead of `startall`)

```
cd APPLICATIONS_CONFIG/CommonDomain_webtier/bin
./opmnctl start
```

For more information about the location of *APPLICATIONS_BASE* and *APPLICATIONS_CONFIG*, see Section 2.1.1, "Before You Begin".

The BI and Web Tier processes managed by OPMN are started by RUP Installer in the **Starting All Servers** configuration assistant. The GOP processes managed by OPMN must be started using Fusion Applications Control, as described in Section 4.8, "Start GOP Processes", after RUP Installer completes.

4. Fix any other environment issues before retrying the session. If RUP Installer exits for any reason, make sure that all node managers and OPMN processes are running. Contact Oracle Support Services to proceed out of this step if you have unresolved environment issues.
5. After you start the services, click **Retry** to proceed to the **Starting All Servers** configuration assistant. If the starting of servers times out, see Section 6.18, "Troubleshooting Server Start and Stop Failures".

Note: If GOP is not installed, the user interface reports "Success" for GOP OPMN status, but the log file reports: `GOP is not provisioned. Skipping check for OPMN status.`

6.18 Troubleshooting Server Start and Stop Failures

This section includes the following troubleshooting topics:

- General Server Failure Due to Time Out Failures
- Failure to Start BIServer
- Startup Failed for CommonDomain:OHSComponent (Oracle VM Only)

6.18.1 General Server Failure Due to Time Out Failures

Problem

A failure during the **Starting All Servers** configuration assistant typically happens when one of the servers times out and fails to start due to resource issues or application specific issues.

Solution

Various platforms and environment configurations can impact how long it will take all servers to start during the **Starting All Servers** configuration assistant. Although RUP

Installer waits an average amount of time for this configuration assistant to complete before it is marked as **Failed**, different platforms may require more time. It is not unusual to receive timeout errors in the log files if the starting of all servers for your environment requires more time than RUP Installer allows. If this configuration assistant fails, follow these steps:

1. Monitor the status of the servers by reviewing the messages in the server log files or on the console. The log file, *FA_ORACLE_HOME*/admin/FUSION/log/fapatch/fapatch_11.1.6.0.0/StartStop/fastartstop_*timestamp*.log, indicates which server started and failed to start.

   An example of messages for a server that timed out follows:

   ```
   Time out while performing Start for domain SCMDomain. Waited for 2400 seconds
   [2011-10-21T03:57:52.052--8:00] [fastartstop] [NOTIFICATION:1] [UTIL]
   [oracle.apps.startstop.util.MbeanUtil: runSSCommandOnDomain.868] [tid:37] Start
   operation is completed for domain SCMDomain. Please see SCMDomain.log for
   details.

   [2011-10-21T03:57:52.052--8:00] [fastartstop] [NOTIFICATION:1] [UTIL]
   [oracle.apps.startstop.invoke.StartStopTask: call.221] [tid:37] StartStopTask
   over for domain SCMDomain

   [2011-10-21T03:57:52.052--8:00] [fastartstop] [NOTIFICATION:1] [SST]
   [oracle.apps.startstop.invoke.StartStopTask: call.223] [tid:37] Finished the
   task for the Domain SCMDomain
   ```

2. Review the log files at the domain level to see a summary of the server status for that domain: *FA_ORACLE_HOME*/admin/FUSION/log/fapatch/fapatch_11.1.6.0.0/StartStop/*domain name_timestamp*.log.
3. Review the corresponding server logs for the failed servers under the following directory: *APPLICATIONS_CONFIG*/domains/*hostname/domain name*/servers/*server name*/logs.
4. After you determine and resolve the cause of the failure, return to RUP Installer and click **Retry**.
5. When all servers are up and running, including those that exceeded the timeout limit, click **Abort** in RUP Installer to move to the next configuration assistant.

6.18.2 Failure to Start BIServer

Problem

The following exception during the **Starting all Servers** configuration action indicates a failure in starting the BIServer:

```
Start all servers fails to start
Start operation on the component :coreapplication_obips1:, for the instance
:BIInstance: - FAILED
```

The coreapplication_obips1 server log file reports the following error:

```
ecid:]]
[2012-04-10T00:22:20.000-07:00] [OBIPS] [ERROR:16] []
[saw.security.odbcuserpopulationimpl.initialize] [ecid: ] [tid: ] Unable to
create a system user connection to BI Server during start up. Trying again.[[
File:odbcuserpoploaderimpl.cpp
Line:325
Location:
```

```
saw.security.odbcuserpopulationimpl.initialize
saw.catalog.local.loadCatalog
saw.subsystems.catalogbootstrapper.loadcatalog
saw.webextensionbase.init
saw.sawserver
ecid:]]
[2012-04-10T00:22:25.000-07:00] [OBIPS] [NOTIFICATION:1] [] [saw.sawserver]
[ecid: ] [tid: ] Oracle BI Presentation Services are shutting down.[[
File:sawserver.cpp
Line:706
Location:
saw.sawserver
ecid:
```

Solution

Perform the following steps to work around this issue.

1. Select **Retry**, which shuts down and starts `bi_server1`.
2. Monitor the `fastartstop` log files and the state of `bi_server1(BIDomain)`.
3. As soon as `bi_server1` restarts, as indicated by a RUNNING status, start the component `coreapplication_obiccs1` or all the components of type `OracleBIClusterControllerComponent` using `opmnctl`.

   Example syntax follows:

   ```
   */BIInstance/bin/opmnctl startproc ias-component=coreapplication_obiccs1
   ```

6.18.3 Startup Failed for CommonDomain:OHSComponent (Oracle VM Only)

Problem

The OHS diagnostic log contains the following error message:

```
No such file or directory:  Couldn't create accept lock
```

Solution

This issue could be the result of the hypervisors going down, resulting in bringing the Oracle VM servers down. Perform the following steps to resolve the error:

1. Find the entry for the lock file in `httpd.config`, for example:

   ```
   LockFile "/u101/ohs_inst1/diagnostics/logs/OHS/ohs1/http_lock"
   ```

2. Confirm whether the directory that contains the lock file exists.
3. Assuming this directory does not exist, create the directory.

6.19 EditTimedOutException Error During Online Preverification

Problem

The following error is reported during online preverification:

```
weblogic.management.mbeanservers.edit.EditTimedOutException
```

Solution

You may have to manually release the edit session. For more information, see "Resolving an EditTimedOutException Error" in the *Oracle Fusion Applications Patching Guide*.

6.20 OAM Configuration Step Fails Due to Special Characters in Password

If the OAM administrator password contains special characters, such as '#' or '&', the OAM Configuration step will fail. To work around this issue, you can manually validate that the OAM Administration Server host/port and surname/password are correct. After you manually validate this information, you can proceed with the upgrade by clicking **Continue**.

Perform the following steps to validate.

1. Get the OAM administrator user name and password from the credential store.
2. Run *APPLICATIONS_BASE*/fusionapps/oracle_common/common/bin/wlst.sh.
3. Run the following commands to connect to the Common Domain Administration Server and get the OAM administrator surname and password:

```
connect()
listCred(map='oracle.patching', key='FUSION_APPS_PATCH_OAM_ADMIN-KEY')
```

4. Get the OAM Administration Server host and port from the following properties in *APPLICATIONS_CONFIG*/fapatch/FUSION_prov.properties:
   - OAM_ADMIN_SERVER_HOST
   - OAM_ADMIN_SERVER_PORT
5. Use oamcfgtool.jar to confirm whether the OAM server can be invoked using the values found in the previous steps.

```
cd APPLICATIONS_BASE/fusionapps/oracle_common/modules/oracle.oamprovider_11.1.1

java -jar oamcfgtool.jar app_domain=crm web_domain=OraFusionApp
uris_file=APPLICATIONS_BASE/fusionapps/applications/crm/security/oam.conf
oam_aaa_mode=open_or_simple app_agent_password=password_for_
map="oracle.patching"
key="FUSION_APPS_PATCH_OAM_RWG-KEY"_in_credential_store
primary_oam_servers=oam_server1 oam_admin_server=http://OAM_admin_server_
host:port
oam_admin_username=username_for_FUSION_APPS_PATCH_OAM_ADMIN-KEY
oam_admin_password=password_for_FUSION_APPS_PATCH_OAM_ADMIN-KEY
oam_version=11 default_authn_scheme=FAAuthScheme
```

6. If the previous command is successful, the validation is successful. Click **Continue**.

6.21 Merging SOA Composite JDeveloper Customizations During SOA Preverification

If you performed JDeveloper customizations to a SOA composite and you deployed the composite to the SOA runtime, RUP Installer reports an error during **SOA Preverification**, which instructs you to take the newer version of the composite that is

in the release. You must then merge your customizations by performing the following steps.

1. If any customizations are detected, the SOA Preverification results display the SOA composite name, its location in the *FA_ORACLE_HOME*/*stripe*/deploy directory, and the requirement for you to merge JDeveloper customizations into the sca_*.jar file in *FA_ORACLE_HOME* before proceeding with RUP Installer. The *stripe* in the directory path refers to crm, hcm, fscm, and so on.
2. Open the custom SOA workspace and the customized version of the Fusion Applications SOA composite in JDeveloper using "Oracle Fusion Applications Developer". For more information, see "Customizing SOA Composite Applications with JDeveloper" in the *Oracle Fusion Applications Web User Interface Developer's Guide for Oracle Application Development Framework*.
3. Import the composite sca_*.jar file from *FA_ORACLE_HOME*/*stripe*/deploy into the project, for example revision 11.1.6.0.0, in JDeveloper. Make note of this revision number in the deployment window because you will need it in Step 8.
4. Restart JDeveloper in the Oracle Fusion Applications Administrator Customization role.
5. Verify that there are no errors in JDeveloper.
6. Verify that the changes introduced in both the customized version and the patched version are present.
7. Right-click the composite project in the Application Navigator, select **Deploy**, select the composite, click **Deploy to SAR**, and then click **Next**.
8. Manually change the value in **New Revision ID** to the revision from Step 3, for example, 11.1.6.0.0, and click **Finish**.
9. If the deployment folder is set to a location different from that of the *FA_ORACLE_HOME*/*stripe*/deploy directory, copy and replace the JAR in the location mentioned in the error message of this SOA Composite. If your file name is different, rename it to the original name. You must copy the jar in the correct format to *FA_ORACLE_HOME*/*stripe*/deploy. For example if you have sca_ContractsDeliverablePurchaseDocAttrReadComposite_rev11.1.6.0.0.jar in JDeveloper, then you must copy it back to the *FA_ORACLE_HOME*/*stripe*/deploy directory as sca_ContractsDeliverablePurchaseDocAttrReadComposite.jar.
10. To proceed with the installation, select **Retry**.

For more information about customizing SOA composites, see "Customizing and Extending SOA Components" in the *Oracle Fusion Applications Extensibility Guide*.

6.22 Location of GRC Policies in the OAM Applications Domain

The location of your Governance, Risk, and Compliance (GRC) policies varies, depending on your upgrade path to Release 6. GRC polices are located in the *grc* OAM application domain if your Oracle Fusion Applications environment was originally provisioned with either version 11.1.1.5 or 11.1.2, then upgraded to version 11.1.3, and then upgraded to version 11.1.4. If your environment was originally provisioned with version 11.1.3 and upgraded to version 11.1.4, your GRC policies are located in the *fs* OAM application domain.

6.23 Troubleshooting SOA Composite Deployment Failures

This section describes how to recover from failures during the **Deploying SOA Composites** configuration assistant. The following topics are described:

- SOA Composite Log Files
- Composite Revision is Already Deployed
- Wsm-pm Application is not Running in Domain (Solaris Only)
- Manually Deploying SOA Composites

6.23.1 SOA Composite Log Files

The following log files are generated by the deployment of SOA composites:

- Client side log files where individual domain logs reside: *FA_ORACLE_HOME*/admin/FUSION/log/fapatch/fapatch_11.1.6.0.0/soalogs
- Log files for the failed domain:
  - *APPLICATIONS_CONFIG*/domains/*hostname*/*domain name*/servers/*server name*/logs/soa_server1.log
  - *APPLICATIONS_CONFIG*/domains/*hostname*/*domain name*/servers/*server name*/logs/soa_server1.out
  - *APPLICATIONS_CONFIG*/domains/*hostname*/*domain name*/servers/*server name*/logs/soa_server1-diagnostic.log
  - *APPLICATIONS_CONFIG*/domains/*hostname*/*domain name*/servers/*server name*/logs/AdminServer.log

6.23.2 Composite Revision is Already Deployed

Problem

A failure message such as, `CFGEX-00062: Composite revision "default/composite name!11.1.6.0.0" is already deployed,` occurs.

An example of a complete error message follows:

```
[2011-12-30T04:24:38.613-08:00] [apps]
[ERROR] [] [oracle.apps.CRMDomain] [tid: 58]
[ecid: 0000JIEvTHGEGR9ZvdYBV11EzMvF00000c,0]
CFGEX-00073 : SOA composite "/u01/APP_TOP/fusionapps/applications/crm/deploy/sca_
ContractsTermLibTemplatesComposite.jar"
deployment failed for Domain "CRMDomain".[[
Action : See logs for details. oracle.as.install.
fapatchconfig.exception.PatchsetConfigException:
CFGEX-00073 : SOA composite "/u01/APP_TOP/fusionapps/applications/
crm/deploy/sca_ContractsTermLibTemplatesComposite.jar" deployment failed for
Domain "CRMDomain".
      ….
Caused by: oracle.as.install.fapatchconfig.exception.PatchsetConfigException:
CFGEX-00062 : Composite revision "default/
ContractsTermLibTemplatesComposite!11.1.6.0.0" is already deployed.
```

Solution

Normally, a failed SOA composite is undeployed by RUP Installer. However, if the failure of the deployment is due to SOA servers running out of memory, then RUP Installer cannot recover.To resolve this issue, you must manually undeploy the composite.

> **Note:** Ensure that you undeploy only the revision deployed by RUP Installer. Do not undeploy the previous version.

To undeploy, you can use WebLogic Server Tool (WLST) commands or Fusion Applications Control. For more information see Section 6.23.2.1, "Undeploy SOA Composites Using WLST Commands" and Section 6.23.2.2, "Undeploy SOA Composites Using Fusion Applications Control".

Then return to RUP Installer and select **Retry**.

6.23.2.1 Undeploy SOA Composites Using WLST Commands

Follow these steps to undeploy the composite using WLST commands:

1. Start WLST:

   ```
   (Unix) APPLICATIONS_BASE/soa/common/bin/wlst.sh
   (Windows) APPLICATIONS_BASE\soa\common\bin\wlst.cmd
   ```

2. Run the `sca_undeployComposite` command using the following syntax:

   ```
   sca_undeployComposite(serverURL, compositeName,
   revision, [user], [password], [partition])
   ```

   The variables have the following values:

   - `serverURL` contains the host and port of the SOA cluster Managed Server of the domain on which the SOA composite failed to deploy.
   - `compositeName` is the name of the composite to be undeployed.
   - `revision`, in the case of the Release 6, this should be 11.1.6.0.0 by default.

   Example:

   ```
   wls:/mydomain/ServerConfig>  sca_undeployComposite
   ("http://myhost10:7001",
   " ContractsDeliverablePurchaseAgrmntFlowComposite ", "11.1.6.0.0")
   ```

   You are prompted for the user name and password to execute the command.

   For more information, see "Oracle SOA Suite Custom WLST Commands" in the *Oracle Fusion Middleware WebLogic Scripting Tool Command Reference*.

6.23.2.2 Undeploy SOA Composites Using Fusion Applications Control

Perform the following steps to undeploy the composite using Fusion Applications Control:

1. In Fusion Applications Control, connect to the domain where the SOA composite failed to deploy. For more information, see "Starting Fusion Applications Control" in the *Oracle Fusion Applications Administrator's Guide*.
2. Navigate to Farm_*Domain*->soa-infra->default.
3. Locate the composite and revision, such as 11.1.6.0.0, as shown in this example:

```
ContractsDeliverablePurchaseAgrmntFlowComposite [11.1.6.0.0]
```

4. Right click on the composite and select **SOA deployment** > **Undeploy**.

6.23.3 Wsm-pm Application is not Running in Domain (Solaris Only)

Problem

The following error is reported during SOA Composite deployment on a Solaris platform:

```
CFGEX-00079 : Wsm-pm application is not running in domain "domain name"
```

You have already confirmed that the `wsm-pm` application is running on this domain.

Solution

Perform the following steps:

1. Log in to the failed domain and check the health of all managed servers and deployed applications.
2. Bounce all managed servers of the failed domains.
3. Exit RUP installer.
4. Restart RUP installer.

6.23.4 Manually Deploying SOA Composites

Problem

A customized SOA composite deployment fails during the upgrade, you must manually deploy this composite using WLST commands.

Solution

You must manually deploy a composite after a deployment failure.Perform the following steps to manually.

Perform the following steps. In this example, the composite, `FinAp,` is patched from revision 1.0 to revision 2.0 and the SAR file of revision 2.0 is in *`FA_ORACLE_HOME`*`/crm/deploy/sca_FinAp_rev2.0.jar`.

Note that the parameters are for illustration purposes only.

1. Refer to the Diagnostics report to find the name and location of the `sca_*.jar` file that was copied to *`FA_ORACLE_HOME`* by Oracle Fusion Applications Patch Manager. For more information, see "Diagnostics Report" in the *Oracle Fusion Applications Patching Guide*.
2. If the previous revision contained JDeveloper customizations, ensure that you deploy the patched revision with the merged JDeveloper customizations. Using the `sca_*.jar` file from Step 1, follow the JDeveloper customizations merge instructions that are described in Section 6.21, "Merging SOA Composite JDeveloper Customizations During SOA Preverification". Then use the merged sca_*.jar for Step 3.
3. Deploy the patched composite using the single patch composite command.

```
sca_patchComposite('SOA-Infra URL', user, password,
'/FA_ORACLE_HOME/crm/deploy//sca_FinAprev2.0.jar',
mergeLogFile='/tmp/merge-log.txt')
```

6.24 Failure During IPM Import

Problem

The configuration assistant for importing IPM artifacts fails with the following error:

```
importIPMApplication() & importIPMInput() WLST commands have not run
successfully
```

Solution

Follow the instructions in Steps 1 through 7 in "Prerequisites for the Deployment of IPM Artifacts" in the *Oracle Fusion Applications Patching Guide*. Then return to RUP Installer and select **Retry**.

6.25 Troubleshooting Health Checker Pre-Down Time Checks

If any plug-ins fail, Health Checker reports the failure in the log file and the HTML summary report, including the error message and suggested corrective actions. It then runs the remaining plug-ins. After all plug-ins have been attempted, Health Checker displays the location of the log file, which is *APPLICATIONS_CONFIG*/fapatch/logs/*release_version*/healthchecker/healthcheckplugin_*timestamp*.log. After you run Health Checker, review the log file or HTML summary. Log archives are stored in the *FA_ORACLE_HOME*/admin/FUSION/log/healthchecker/ARCHIVE directory.

After you resolve the issue that caused the error, start Health Checker again to run failed tasks. For more information, see Section 2.1.13, "Run Health Checker for Pre-Down Time Checks".

This section provides additional troubleshooting information for the following pre-down time plug-in failures:

- Verify OPatch Version Fails
- Verify Credentials in Oracle Directory Services Manager (ODSM) Fails
- Verify Free and Total Memory Fails
- Verify Open File Limit Fails
- Verify Host Names Fails
- Verify the Local Port Range Value Fails
- Verify Oracle Homes Registration in Central Inventory Fails
- Verify DBMS Stats Reports Schemas Fails
- Verify Flexfield Metadata Fails
- Check for Unusable Indexes Fails
- Check for Library Cache Load Lock Fails
- Check for Repository Integrity Fails

6.25.1 Verify OPatch Version Fails

Problem

The check to verify the OPatch version fails because you are using a version of OPatch that is not compatible with Oracle Fusion Applications.

Solution

Download the compatible version of Opatch, which is available on My Oracle Support under patch 14044793.

6.25.2 Verify Credentials in Oracle Directory Services Manager (ODSM) Fails

Problem

Health Checker reports the following error message:

```
User 'cn=PolicyRWUser' is not member of cn=DirectoryAdminGroup
```

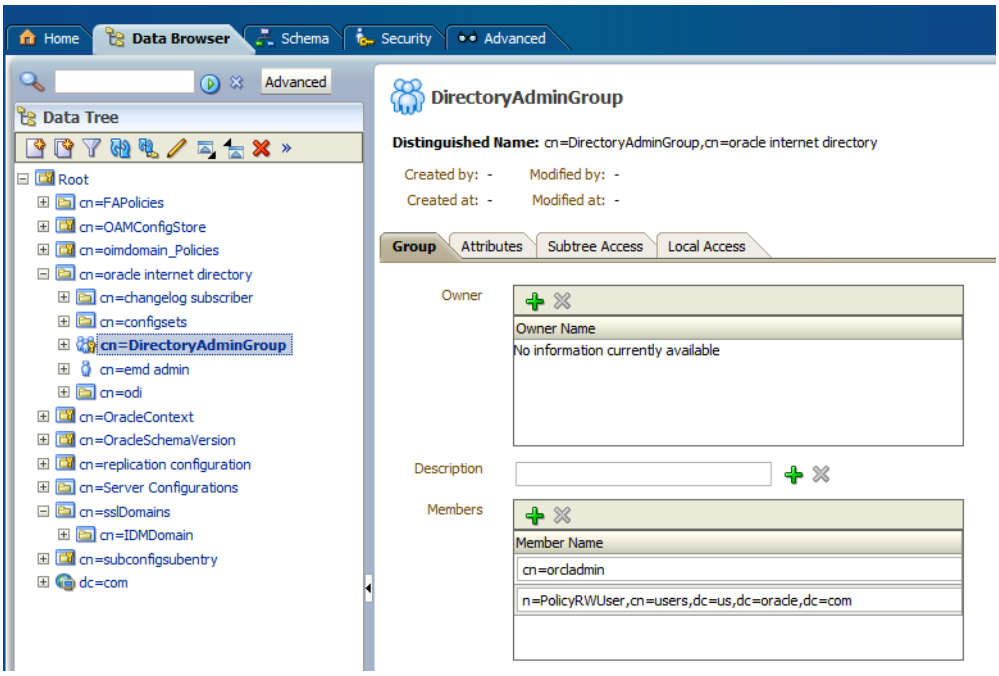
Solution

This error occurs if the `cn=PolicyRWUser` user is not part of `cn=DirectoryAdminGroup`. To resolve this issue, verify that the following credentials are present in ODSM by performing the following steps:

1. Log in to Oracle Internet Directory using ODSM: `http://`*ldap_host*`:`*port*`/odsm`, for example, `http://`*IDM_HOST*`:7005/odsm`. (Note that you cannot do this using `jexplorer`.)
2. Connect to a directory. Use the OID-OID connection, for example, where the User name is `cn=orcladmin`.
3. Go to the **Data Browser** tab. Go to the `cn=oracle internet directory` and within the `cn=oracle internet directory`, go to `cn=DirectoryAdminGroup`.
4. Verify that the following user entry is present in the Members section:

   ```
   cn=PolicyRWUser,cn=users,dc=us,dc=oracle,dc=com
   ```

   Note the value of `cn` is not case sensitive.
5. If the entry is not present, click the add [+] button in the Members section and add the entry. Then apply the changes.



6.25.3 Verify Free and Total Memory Fails

Problem

The verification of the free and total memory fails.

Solution

Configure the memory to meet the requirements for the upgrade.

6.25.4 Verify Open File Limit Fails

Problem

The verification of the open file limit fails.

Solution

Follow the steps under "Increase the Open Files Limit" in the *Oracle Fusion Applications Installation Guide*.

6.25.5 Verify Host Names Fails

Problem

The verification of host names fails.

Solution

For Unix platforms, log in with root access, and ensure that all of the following requirements are met:

1. The file, `/etc/hosts`, contains an entry for IP address 127.0.0.1, with the name `localhost` following it.
2. The format of each host entry in `/etc/hosts` is:

```
IP_address canonical_hostname [aliases}
```

Note that the usage of aliases is optional.

3. If the machine name is a logical host name and is different from the physical host name specified in the `/etc/sysconfig/network` file, then the entry for the logical host name must be listed before the physical host name in `/etc/hosts`.

   For more information, see "Edit Host Names (Unix)" in the *Oracle Fusion Applications Installation Guide*.

For Windows, perform the following steps:

1. Right click on the computer name, which is on the desktop.
2. Click on Properties, then Advanced System Settings, and then Computer Name.
3. Ensure the entries in `C:\Windows\System32\drivers\etc\hosts` are correct.

6.25.6 Verify the Local Port Range Value Fails

Problem

The verification of the local port range fails.

Solution

To set the correct local port range on a Unix environment, log in as the root user and run the following command:

```
echo "32768 61000" > /proc/sys/net/ipv4/ip_local_port_range
```

Run the following commands for 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
```

6.25.7 Verify Oracle Homes Registration in Central Inventory Fails

Problem

The verification of Oracle homes registration fails.

Solution

Oracle Provisioning records installation information about the following Oracle homes separately from information about other products: Oracle Business Intelligence (Oracle BI), Oracle Global Order Processing (GOP), Web Tier, and Web Tier Common Oracle home. RUP Installer expects information about all products to be recorded in the same place. For more information about home directories, see "Provisioned Oracle Fusion Applications Home Directories" in the *Oracle Fusion Applications Administrator's Guide*.

The following steps describe how to manually register the all missing Oracle homes in central inventory. Use the appropriate step(s) to resolve the error reported in the Health Checker log file.

1. Verify that the default Inventory Pointer file points to the central inventory on the primordial host on which RUP Installer runs. The default Inventory Pointer is in the following locations:

   - Unix: `/etc/oraInst.loc`
   - Solaris: `/var/opt/oracle/oraInst.loc`
   - Windows: located in the registry key, `\\HKEY_LOCAL_MACHINE\\Software\Oracle\inst_loc`

   Note: If the attachHome command hangs, see Section 6.25.7.1, "AttachHome Script Hangs".

2. Run `attachHome` from the BI Oracle home, for example, *APPLICATIONS_BASE*`/fusionapps/bi`.

   (Unix) *BI_HOME*`/oui/bin/attachHome.sh -jreLoc` *JAVA_HOME_LOCATION*
   (Windows) *BI_HOME*`\oui\bin\attachHome.bat -jreLoc` *JAVA_HOME_LOCATION*

3. Run `attachHome` from the GOP Oracle home, for example, *APPLICATIONS_BASE*`/fusionapps/gop`.

   (Unix) *GOP_HOME*`/oui/bin/attachHome.sh -jreLoc` *JAVA_HOME_LOCATION*
   (Windows) *GOP_HOME*`\oui\bin\attachHome.bat -jreLoc` *JAVA_HOME_LOCATION*

4. Run `attachHome` from the Web Tier Oracle home, for example, *APPLICATIONS_BASE*`/webtier_mwhome/webtier`.

   (Unix) *WEBTIER_HOME*`/oui/bin/attachHome.sh -jreLoc` *JAVA_HOME_LOCATION*
   (Windows) *WEBTIER_HOME*`\oui\bin\attachHome.bat -jreLoc` *JAVA_HOME_LOCATION*

5. Run `attachHome` from the Web Tier Common Oracle home, for example, *APPLICATIONS_BASE*`/webtier_mwhome/oracle_common`.

   (Unix) *WEBTIER_COMMON_HOME*`/oui/bin/attachHome.sh -jreLoc` *JAVA_HOME_LOCATION*
   (Windows) *WEBTIER_COMMON_HOME*`\oui\bin\attachHome.bat -jreLoc` *JAVA_HOME_LOCATION*

6. Run `attachHome` from the Web Tier Webgate Oracle home, for example, *APPLICATIONS_BASE*`/webtier_mwhome/webgate`.

   (Unix) *WEBTIER_WEBGATE_HOME*`/oui/bin/attachHome.sh -jreLoc` *JAVA_HOME_LOCATION*
   (Windows) *WEBTIER_WEBGATE_HOME*`\oui\bin\attachHome.bat -jreLoc` *JAVA_HOME_LOCATION*

7. Run `attachHome` from the Oracle Common Oracle home, for example, *APPLICATIONS_BASE*`/fusionapps/oracle_common`.

   (Unix) *COMMON_HOME*`/oui/bin/attachHome.sh -jreLoc` *JAVA_HOME_LOCATION*
   (Windows) *COMMON_HOME*`\oui\bin\attachHome.bat -jreLoc` *JAVA_HOME_LOCATION*

8. Register the dependency between the BI Oracle home and Oracle Common Oracle home. If the `runinstaller -updateHomeDeps` command hangs, see Section 6.25.7.2, "The setup.exe -updateHomeDeps Command Hangs".

   Run Oracle Universal Installer with the `-updateHomeDeps` option and pass a dependency list. The syntax for the dependency list is:

   ```
   HOME_DEPENDENCY_LIST={ORACLE_HOME:DEPENDENT_ORACLE_HOME}
   ```

   Example for Business Intelligence:

```
(Unix) BI_HOME/oui/bin/runInstaller -updateHomeDeps "HOME_DEPENDENCY_LIST=
{APPLICATIONS_BASE/fusionapps/bi:APPLICATIONS_BASE/fusionapps/oracle_common}"
-jreLoc JAVA_HOME_LOCATION

(Windows) BI_HOME\oui\bin\setup.exe -updateHomeDeps "HOME_DEPENDENCY_LIST=
{APPLICATIONS_BASE\fusionapps\bi:APPLICATIONS_BASE\fusionapps\oracle_common}"
-jreLoc JAVA_HOME_LOCATION
```

9. Register the dependency between Web Tier Oracle home and Web Tier Common Oracle home.

```
(Unix) WEBTIER_HOME/oui/bin/runInstaller -updateHomeDeps "HOME_DEPENDENCY_LIST=
{APPLICATIONS_BASE/webtier_mwhome/webtier:APPLICATIONS_BASE/webtier_
mwhome/oracle_common}"
-jreLoc JAVA_HOME_LOCATION

(Windows) WEBTIER_HOME\oui\bin\setup.exe -updateHomeDeps "HOME_DEPENDENCY_LIST=
{APPLICATIONS_BASE\webtier_mwhome\webtier:APPLICATIONS_BASE\webtier_
mwhome\oracle_common}"
-jreLoc JAVA_HOME_LOCATION
```

10. Verify that the central inventory now contains the correct GOP, BI, and Web Tier information. Open the `inventory.xml` file from the `ContentsXML` subdirectory in your central inventory directory using a text editor. You can find your central inventory directory by looking in the default Oracle Inventory pointer file mentioned in Step 1. Verify that there are entries for GOP and for BI, and that the BI entry lists the Oracle Common dependency you specified in Step 6. Do the same for Web Tier information. Ensure that you do not modify `inventory.xml` in any way, as this may corrupt your system.

    Example entries in `inventory.xml`:

```
<HOME NAME="OH1109401105" LOC="APPLICATIONS_BASE/fusionapps/gop" TYPE="O"
IDX="11">
<HOME NAME="OH198367808" LOC="APPLICATIONS_BASE/fusionapps/bi" TYPE="O"
IDX="12">
   <DEPHOMELIST>
      <DEPHOME LOC="APPLICATIONS_BASE/fusionapps/oracle_common"/>
   </DEPHOMELIST>
</HOME>
<HOME NAME="OH987588708" LOC="APPLICATIONS_BASE/webtier_mwhome/webtier"
TYPE="O" IDX="13">
   <DEPHOMELIST>
      <DEPHOME LOC="APPLICATIONS_BASE/webtier_mwhome/oracle_common"/>
   </DEPHOMELIST>
</HOME>
<HOME NAME="OH1271096710" LOC="APPLICATIONS_BASE/webtier_mwhome/oracle_common"
TYPE="O" IDX="14">
   <REFHOMELIST>
      <REFHOME LOC="APPLICATIONS_BASE/webtier_mwhome/webtier"/>
   </REFHOMELIST>
</HOME>
```

> **Note:** Rerunning the `ATTACH_HOME` command does not cause any issues.

6.25.7.1 AttachHome Script Hangs

If the `attachHome` script hangs, run `attachHome` with the following additional arguments: `-waitforcompletion -nowait`.

6.25.7.2 The setup.exe -updateHomeDeps Command Hangs

If the `runInstaller or setup.exe -updateHomeDeps` command hangs, run this command with the following additional arguments: `-waitforcompletion -nowait`.

6.25.8 Verify DBMS Stats Reports Schemas Fails

Problem

The verification for DBMS stats fails.

Solution

You must run `DBMS_STATS` on any schemas that are returned by Health Checker. Run the following statement in SQL*Plus as a privileged database user, such as, `SYS`.

```
execute dbms_stats.gather_schema_stats('<Schema Name>', cascade => true)
```

For more information see "Configuring Oracle Metadata Services" in the "Common" chapter of the *Oracle Fusion Applications Post-Installation Guide*.

For more information, see "Collecting Optimizer Statistics" in the *Oracle Fusion Applications Administrator's Guide*. This step optimizes the performance of starting servers.

6.25.9 Verify Flexfield Metadata Fails

Problem

The verification for flexfield metadata fails.

Solution

This plug-in fails if a flexfields metadata violation is reported. The reported violation indicates that the Extensible Flexfield has a UI Page defined that references a flexfield context which has not been associated with the corresponding category or any of its parent categories.

Run the following SQL script to delete the offending references:

```
DELETE
FROM   fusion.fnd_ef_ui_page_task_flows PE
WHERE  NOT EXISTS (SELECT 1
 FROM fusion.fnd_ef_category_contexts
 WHERE  context_code = PE.CONTEXT_CODE
 AND category_code IN
 (SELECT category_code
 FROM fusion.fnd_ef_categories_b
 WHERE ( hierarchy_label =
 (SELECT category_hierarchy_label
 FROM fusion.fnd_df_flexfields_b
 WHERE descriptive_flexfield_code =
PE.descriptive_flexfield_code))
START WITH category_code = PE.category_code CONNECT BY PRIOR
parent_category_code = category_code));
```

```
COMMIT;
```

6.25.10 Check for Unusable Indexes Fails

Problem

The check for unusable indexes fails.

Solution

Rebuild the unusable index using the following command:

```
ALTER INDEX index_name REBUILD
```

6.25.11 Check for Library Cache Load Lock Fails

Problem

The check for library cache load lock fails.

Solution

Kill the session this is holding the lock.

6.25.12 Check for Repository Integrity Fails

Problem

The check for repository integrity reports files missing from the repository.

Solution

Contact Oracle Support to resolve this issue.

6.26 Troubleshooting Health Checker Down Time Checks

If any plug-ins fail, Health Checker reports the failure in the log file and the HTML summary report, including the error message and suggested corrective actions. It then runs the remaining plug-ins. Health Checker displays the location of the log file, which is *APPLICATIONS_CONFIG*/fapatch/logs/*release_version*/healthchecker/healthcheckplugin_*timestamp*.log, after all plug-ins have been attempted. Review the log file or HTML summary after you run Health Checker. Log archives are stored in the *FA_ORACLE_HOME*/admin/FUSION/log/healthchecker/ARCHIVE directory.

After you resolve the issue that caused the error, start Health Checker again to run failed tasks. For more information, see Section 2.2.6, "Run Health Checker for Down Time Checks".

This section provides additional troubleshooting information for the following errors reported by the pre-upgrade plug-in:

- Found Active fapmgr Sessions
- Found Traces of AutoPatch in FA_ORACLE_HOME
- Found Traces of AD Administration in FA_ORACLE_HOME
- Found Traces of AutoPatch in ATGPF_ORACLE_HOME
- Found Traces of AD Administration in ATGPF_ORACLE_HOME

- Check for Processes That Are Not Complete

6.26.1 Found Active fapmgr Sessions

Problem

A Patch Manager (`fapmgr`) session is running or was previously interrupted.

Solution

Perform the following steps to `forcefail` and abandon the session:

1. Use the `fapmgr forcefail` command to update the patching tables.

   `(UNIX) FA_ORACLE_HOME/lcm/ad/bin/fapmgr.sh forcefail [-logfile log file name] [-loglevel level]`

   `(Windows) FA_ORACLE_HOME\lcm\ad\bin\fapmgr.cmd forcefail [-logfile log file name] [-loglevel level]`

   If the forcefail command returns "There are no active Oracle Fusion Applications Patch Manager sessions which can be forcibly failed", then skip the next step.

2. Use the `fapmgr abort` command to abandon the session, only if a session is active.

   `(UNIX) FA_ORACLE_HOME/lcm/ad/bin/fapmgr.sh abort [-logfile log file name] [-loglevel level]`

   `(Windows) FA_ORACLE_HOME/lcm\ad\bin\fapmgr.cmd abort [-logfile log file name] [-loglevel level]`

6.26.2 Found Traces of AutoPatch in FA_ORACLE_HOME

Problem

Health Checker found a file named `adpinit.rf9` in *`FA_ORACLE_HOME`*, which indicates that AutoPatch is running or was previously interrupted.

Solution

If Health Checker also found an active `fapmgr` session, then the corrective action you take in Section 6.26.1, "Found Active fapmgr Sessions" should also resolve the traces of AutoPatch. If `adpinit.rf9` is found and there are no active FAPMgr sessions, then you must manually remove `adpinit.rf9`, which is located in *`FA_ORACLE_HOME`*`/admin/restart`.

6.26.3 Found Traces of AD Administration in FA_ORACLE_HOME

Problem

Health Checker found a file named `adainit.rf9` in *`FA_ORACLE_HOME`*, which indicates that AD Administration is running or was previously interrupted.

Solution

Follow the steps in Section 6.26.1, "Found Active fapmgr Sessions" to forcefail and abandon any FAPMgr sessions.

The perform the following steps from *`FA_ORACLE_HOME`* to abandon the AD Administration session:

```
(Unix) lcm/ad/bin/adadmin.sh abandon=y interactive=n defaultsfile=FA_ORACLE_
HOME/admin/TWO_TASK/defaults.txt logfile=log_file_name

(Windows) lcm\ad\bin\adadmin.cmd abandon=y interactive=n defaultsfile=FA_ORACLE_
HOME\admin\LOCAL\defaults.txt logfile=log_file_name
```

The *TWO_TASK* and *LOCAL* values can be obtained from the FUSION_env.properties file.

6.26.4 Found Traces of AutoPatch in ATGPF_ORACLE_HOME

Problem

Health Checker found a file named adpinit.rf9 in *ATGPF_ORACLE_HOME*, which indicates that AutoPatch is running or was previously interrupted.

Solution

Run the following command from *ATGPF_ORACLE_HOME:* (This is the directory under *MW_HOME* that contains the Applications Core code. For more information, see "Running Oracle Fusion Applications AutoPatch" in the *Oracle Fusion Applications Patching Guide*.)

```
(Unix) lcm/ad/bin/adpatch.sh abandon=y interactive=n defaultsfile=ATGPF_ORACLE_
HOME/admin/TWO_TASK/defaults.txt logfile=log_file_name

(Windows) lcm\ad\bin\adpatch.cmd abandon=y interactive=n defaultsfile=ATGPF_
ORACLE_HOME\admin\LOCAL\defaults.txt logfile=log_file_name
```

The *TWO_TASK* and *LOCAL* values can be obtained from the ATGPF_env.properties file.

If adpinit.rf9 is still found after performing the steps in this solution, then you must manually remove adpinit.rf9, which is located in *ATGPF_ORACLE_HOME*/admin/restart.

6.26.5 Found Traces of AD Administration in ATGPF_ORACLE_HOME

Problem

Health Checker found a file named adainit.rf9 in *ATGPF_ORACLE_HOME*, which indicates that AD Administration is running or was previously interrupted.

Solution

Run the following command from *ATGPF_ORACLE_HOME:* (This is the directory under *MW_HOME* that contains the Applications Core code. For more information, see "Running Oracle Fusion Applications AutoPatch" in the *Oracle Fusion Applications Patching Guide*.)

```
(Unix) lcm/ad/bin/adadmin.sh abandon=y interactive=n defaultsfile=ATGPF_ORACLE_
HOME/admin/TWO_TASK/defaults.txt logfile=log_file_name

(Windows) lcm\ad\bin\adadmin.cmd abandon=y interactive=n defaultsfile=ATGPF_
ORACLE_HOME\admin\LOCAL\defaults.txt logfile=log_file_name
```

The *TWO_TASK* and *LOCAL* values can be obtained from the ATGPF_env.properties file.

If adainit.rf9 is still found after performing the steps in this solution, then you must manually remove adainit.rf9, which is located in *ATGPF_ORACLE_HOME*/admin/restart.

6.26.6 Check for Processes That Are Not Complete

Problem

One of the following processes exists: `adpatch, adadmin, adworker, oracle.apps.ad.worker.AdJavaWorker, oracle.apps.ad.fapmgr.FAPManager`.

Solution

If the session for the process was already cleaned up, manually terminate the process from the operating system.

6.27 Troubleshooting Health Checker Post-Upgrade Checks

If any plug-ins fail, Health Checker reports the failure in the log file and the HTML summary report, including the error message and suggested corrective actions. It then runs the remaining plug-ins. Health Checker displays the location of the log file, which is *`APPLICATIONS_CONFIG`*`/fapatch/healthchecker/healthcheckplugin_`*`timestamp`*`.log`, after all plug-ins have been attempted. After you run Health Checker, review the log file or HTML summary. Log archives are stored in the *`APPLICATIONS_CONFIG`*`/fapatch/healthchecker/ARCHIVE` directory.

After you resolve the issue that caused the error, start Health Checker again to run failed tasks. For more information, see Section 4.17, "Run Health Checker for Post-Upgrade Checks".

6.28 Ignorable Errors Reported by catbundle.sql

The following ignorable errors may be encountered while running the `catbundle.sql` script or its rollback script:

ORA-29809: cannot drop an operator with dependent objects

ORA-29931: specified association does not exist

ORA-29830: operator does not exist

ORA-00942: table or view does not exist

ORA-00955: name is already used by an existing object

ORA-01430: column being added already exists in table

ORA-01432: public synonym to be dropped does not exist

ORA-01434: private synonym to be dropped does not exist

ORA-01435: user does not exist

ORA-01917: user or role 'XDB' does not exist

ORA-01920: user name '<user-name>' conflicts with another user or role name

ORA-01921: role name '<role name>' conflicts with another user or role name

ORA-01952: system privileges not granted to 'WKSYS'

ORA-02303: cannot drop or replace a type with type or table dependents

ORA-02443: Cannot drop constraint - nonexistent constraint

ORA-04043: object <object-name> does not exist

ORA-29832: cannot drop or replace an indextype with dependent indexes

ORA-29844: duplicate operator name specified

ORA-14452: attempt to create, alter or drop an index on temporary table already in use

ORA-06512: at line <line number>. If this error follow any of above errors, then can be safely ignored.

ORA-01927: cannot REVOKE privileges you did not grant

6.29 Performing Installation Verification Steps

Perform the steps in "Verifying Installation" in the *Oracle Fusion Applications Post-Installation Guide*.

A

RUP Installer Screens

This appendix presents the RUP Installer interview screens and describes the purpose of each screen. The RUP Installer screens are presented in the following two sections:

- RUP Installer Screens for the First Installer
- RUP Installer Screens for the Second Installer

A.1 RUP Installer Screens for the First Installer

The first installer of RUP Installer includes the following screens:

- Welcome
- Installation Location
- Installation Summary
- Installation Progress
- Configuration Progress
- Installation Complete
- Run RUP Lite for Domain Configuration

A.1.1 Welcome

This screen appears when you start RUP Installer. This screen does not appear if you restart RUP Installer after a failure. The standard Welcome screen is read-only. It contains a navigation pane on the left-hand side that summarizes the steps the installer will take. Each item in the pane represents an installer screen, which contains prompts for the necessary information.

Click **Next** to continue.

A.1.2 Installation Location

Specify the location of the existing Oracle Fusion Applications home (*FA_ORACLE_HOME*).

Click **Next** to continue.

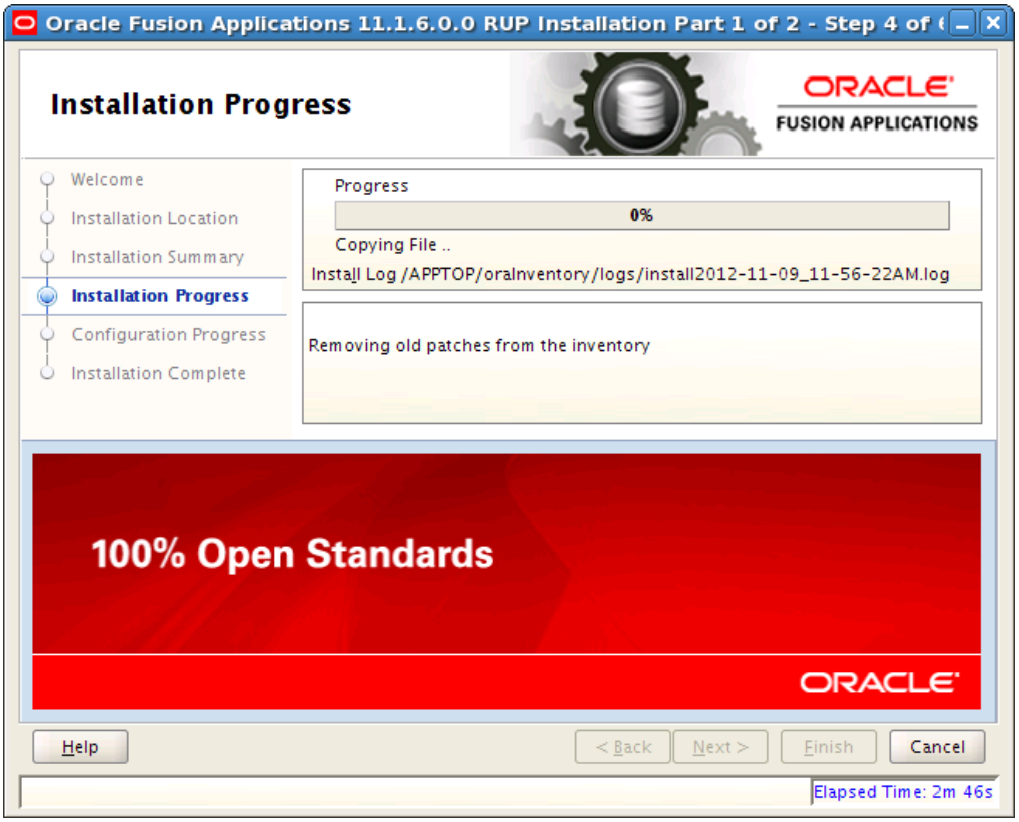
A.1.3 Installation Summary

This screen summarizes the configuration that will be used during this installation session. It includes the Oracle home, required and available disk space, and the version of the release to be installed. Review the information displayed to ensure that the installation details are what you intend.

To make changes before installing, click **Back** to return to previous screens in the interview.

Click **Install** to accept this configuration and start the installation.

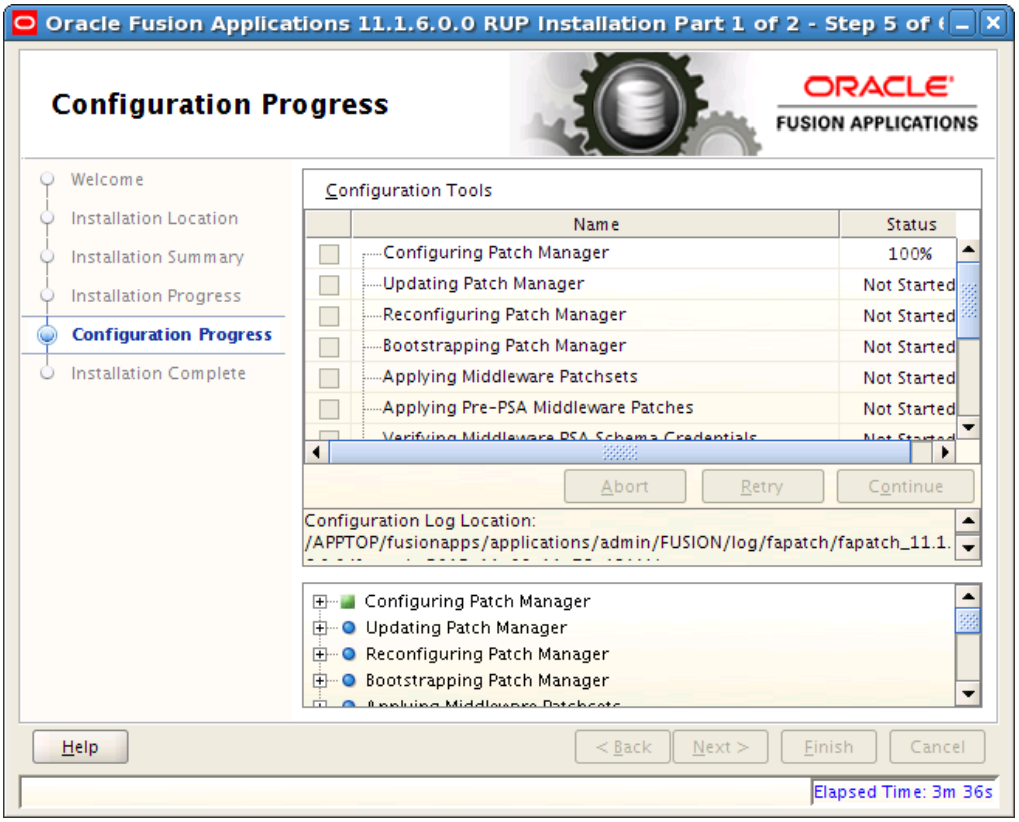
A.1.4 Installation Progress



This screen displays a progress indicator that shows the percentage of the installation phase that is complete and indicates the location of the installation log file. The installation phase consists of copying files to the appropriate Oracle homes that are related to configuration assistants that run during the first installer.

When the installation progress indicator shows 100 percent, click **Next** to continue.

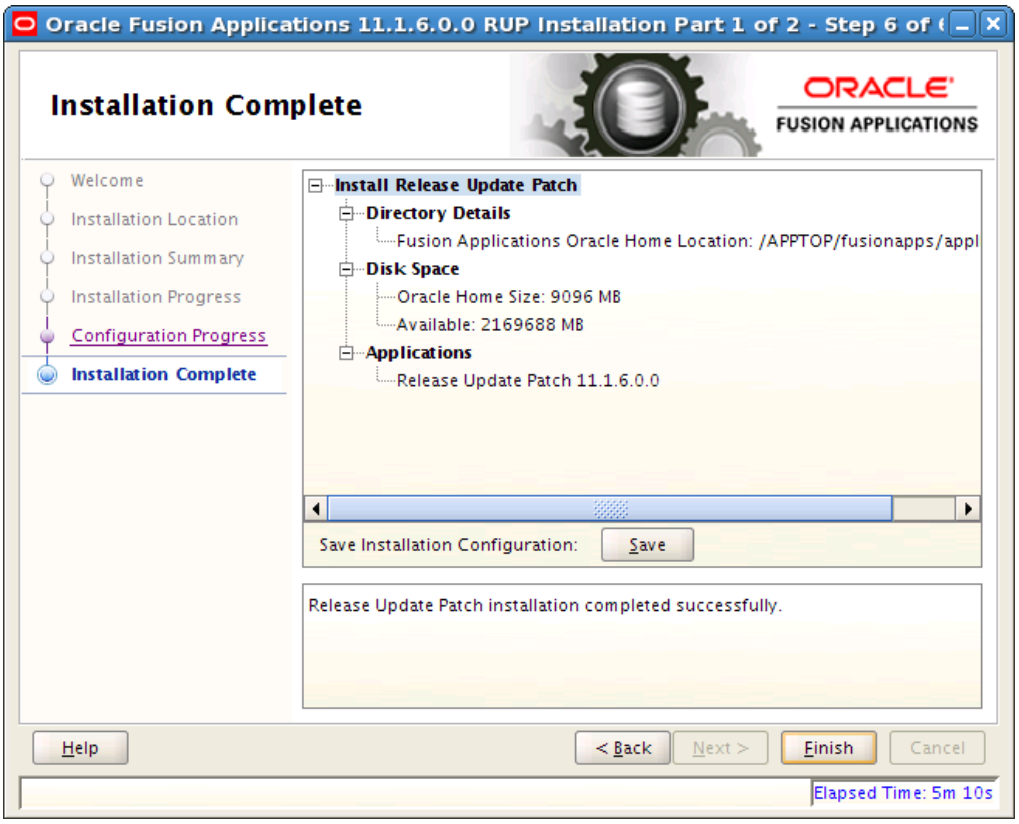
A.1.5 Configuration Progress



This screen displays a progress indicator that shows the percentage of the configuration phase that is complete. It displays each configuration assistant, including steps within configuration assistants, in the message pane as they are performed. Tasks that could be included in the first installer's configuration phase are described in Table 1–1, " Configuration Assistants Run by Oracle Fusion Applications 11g Release 1 (11.1.6.0.0) RUP Installer Part 1 of 2" in the *Oracle Fusion Applications Upgrade Guide*.

No additional user action is required in the Configuration Progress screen unless a failure occurs. For more information, see Section 6.4, "General Troubleshooting During the Configuration Phase in GUI Mode" in the *Oracle Fusion Applications Upgrade Guide*.

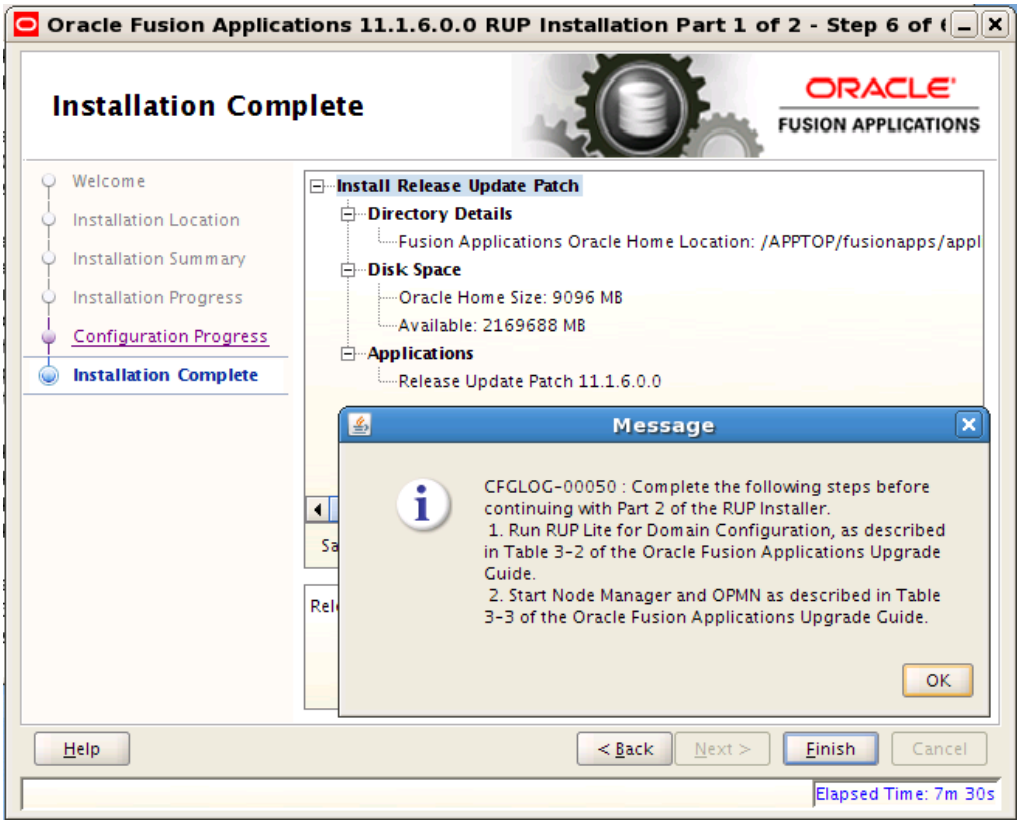
A.1.6 Installation Complete



This screen summarizes the installation just completed. If you want to save this configuration to a response file, click **Save**. For more information, see "How Response Files Work" in the *Oracle Database Installation Guide 11g Release 2 (11.2) for Linux*.

To complete a successful installation of the first installer, click **Finish**. The **Finish** button is activated only if all mandatory configuration assistants completed successfully. If you want to rerun this session to resolve failed configuration assistants, click **Cancel.**

A.1.7 Run RUP Lite for Domain Configuration



You must run RUP Lite for Domain Configuration on all servers that contain local domains before proceeding to the next screen. The first installer must complete successfully before you proceed to the second installer. Do not click **OK** until you complete this step.

You can skip this step if the environment does not contain any local domains. Local domains are those that are hosted on the local storage of various hosts, rather than in shared storage.

Note that this step is not required for Oracle VM environments, as Oracle VM environments do not use local domains.

1. Log in to each remote machine.

   Set the *JAVA_HOME* environment variable:

   ```
   (Unix) setenv JAVA_HOME APPLICATIONS_BASE/fusionapps/jdk6

   (Windows) set JAVA_HOME=APPLICATIONS_BASE\fusionapps\jdk6
   ```

2. Go to the directory that contains RUP Lite for Domain Configuration:

   ```
   (Unix) cd APPLICATIONS_CONFIG/fapatch/admin/ruplitedomain/RUP_version/bin

   (Windows) cd APPLICATIONS_CONFIG\fapatch\admin\ruplitedomain\RUP_version\bin
   ```

3. Run RUP Lite for Domain Configuration. Note that RUP Lite cannot be run in parallel on remote servers and it does not have to be run from the primordial host where you started RUP Installer. It must be run on one server at a time.

   ```
   (Unix) ./ruplite.sh
   ```

```
(Windows) ruplite.bat
```

Ensure that you run RUP Lite for Domain Configuration on each server that contains local domains.

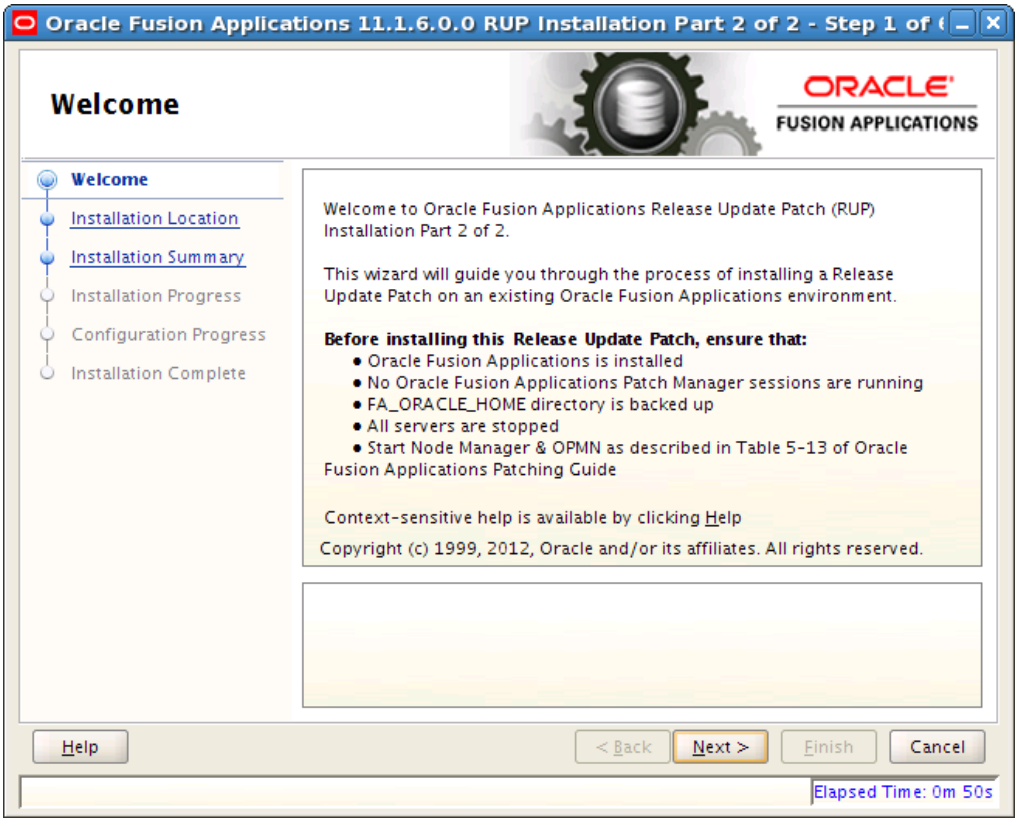
Click **OK** to proceed to the second installer.

A.2 RUP Installer Screens for the Second Installer

The second installer of RUP Installer includes the following screens:

- Welcome
- Installation Location
- Installation Summary
- Installation Progress
- Policy Store Analysis
- Configuration Progress
- Installation Complete

A.2.1 Welcome



This screen appears when the second installer starts.

You must perform the following steps to start the Node Manager and OPMN server before proceeding to the next screen.

- To ensure that Node Manager does not automatically start servers, even if `crashRecovery` is enabled, remove all files that end with `.pid`, `.state`, and `.lck` from `domain_home/servers/server_name`.
- Start the Node Manager on all hosts that are part of the Oracle Fusion Applications provisioned system. For more information, see "Task 3: Start Node Manager" in the *Oracle Fusion Applications Administrator's Guide*.
- Restart the OPMN server for BI, GOP (if you have GOP installed), and Web Tier. If you run the Web Tier (OHS) installed with the Oracle Fusion Applications middle tier, you can start it using the following steps. If you run the Web Tier on a separate machine, you may be able to run the steps below on the other machine. In either case, ensure that Web Tier (OHS) is up at this point.

  Example for BI: (note the usage of `start` instead of `startall`)

  ```
  cd APPLICATIONS_CONFIG/BIInstance/bin
  ./opmnctl start
  ```

  Example for GOP: (note the usage of `start` instead of `startall`) Note that the OPMN server for GOP should be started from the machine that hosts the Advanced Planning Managed server. Start the OPMN server for GOP only if GOP is installed.

  ```
  cd APPLICATIONS_CONFIG/gop_1/bin
  ./opmnctl start
  ```

  Example for Web Tier: (note the usage of `start` instead of `startall`)

  ```
  cd APPLICATIONS_CONFIG/CommonDomain_webtier/bin
  ./opmnctl start
  ```

  For more information about the location of *APPLICATIONS_CONFIG*, see Section 2.2.1, "Before You Begin" in the *Oracle Fusion Applications Upgrade Guide*.

The BI and Web Tier processes managed by OPMN are started by RUP Installer during the **Starting All Servers** configuration assistant. The GOP processes managed by OPMN must be started using Fusion Applications Control after RUP Installer completes, as described in Section 4.7, "Start the GOP Processes" in the *Oracle Fusion Applications Upgrade Guide*.

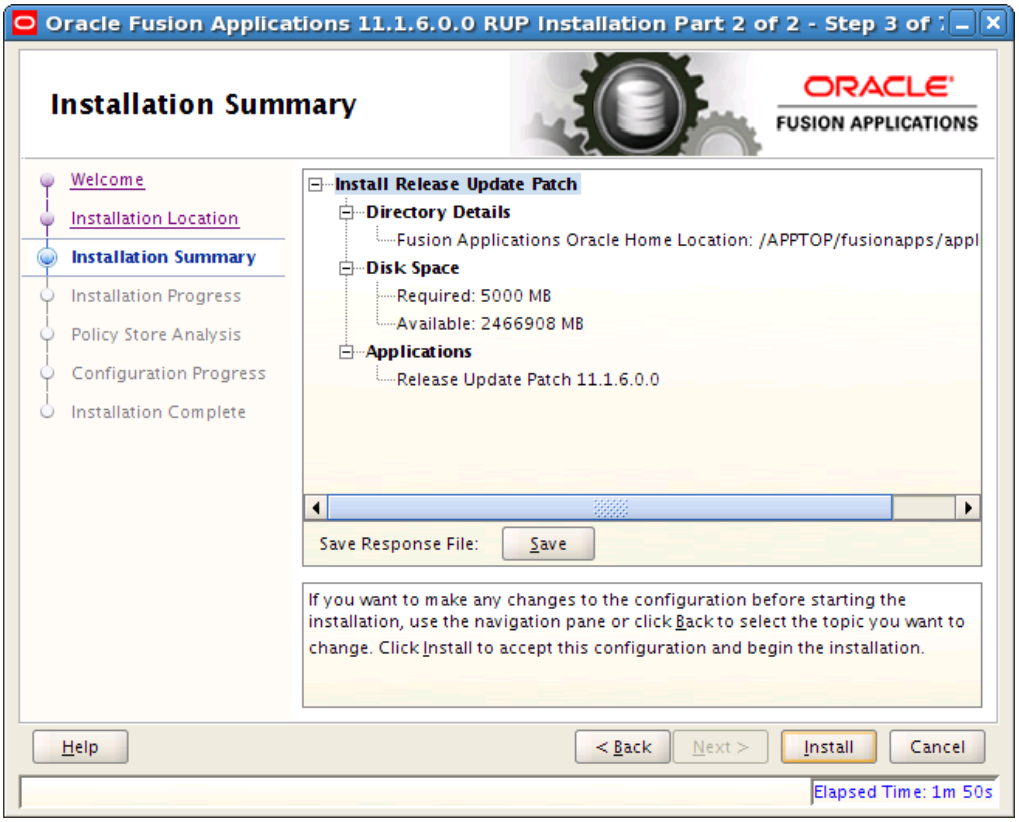
Click **Next** to continue.

A.2.2 Installation Location

Specify the location of the existing Oracle Fusion Applications home (*FA_ORACLE_HOME*).

Click **Next** to continue.

A.2.3 Installation Summary



This screen summarizes the configuration that will be used during this installation session. It includes the Oracle home, required and available disk space, and the version of the release to be installed. Review the information displayed to ensure that the installation details are what you intend.

To make changes before installing, click **Back** to return to previous screens in the interview.

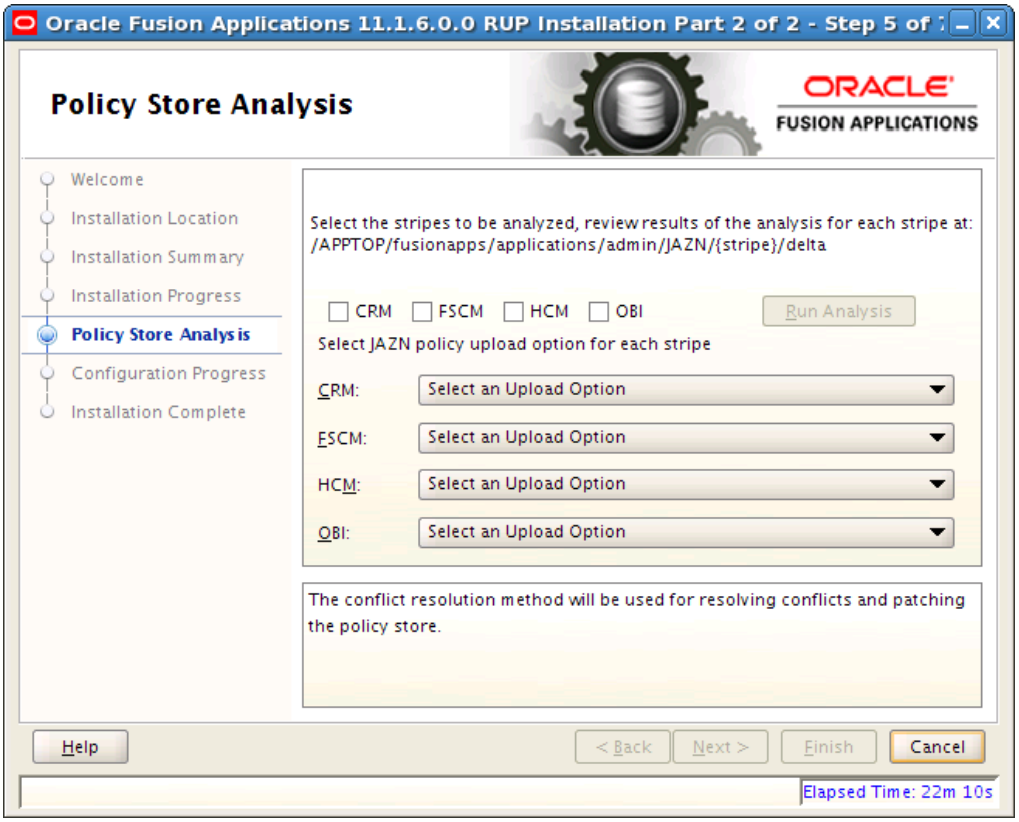
Click **Install** to accept this configuration and start the second installer.

A.2.4 Installation Progress

This screen displays a progress indicator that shows the percentage of the installation phase that is complete and indicates the location of the installation log file. The installation phase consists of copying files to the appropriate Oracle homes that are related to configuration assistants that run during the second installer.

When the installation progress indicator shows 100 percent, click **Next** to continue.

A.2.5 Policy Store Analysis



Note: If you installed a Language Pack and chose to override the base English strings in the policy store, this screen does not display during RUP installation.

Analysis is available for the following policy store stripes: hcm, crm, fscm, and obi. Select the stripes to be analyzed and then click **Run Analysis** to identify any conflicts or deletions. Only the stripes that will be updated by RUP Installer are enabled for analysis and the analysis could run for several minutes. After the analysis runs, review the results of the analysis to determine which deployment method RUP Installer will use for policy store changes to each stripe. Oracle recommends that you select **Apply safe changes only**. This is the safest method unless you have read and totally understood the consequences of the other three options. If you decide to resolve the conflicts or deletions before the actual JAZN upload from RUP Installer, you should run the Policy Store Analysis step again to get the most accurate analysis report. The choices for deployment method are:

- Apply safe changes only (choose this method if there are no conflicts)
- Apply all changes and overwrite customizations
- Append additive changes
- Manually resolve conflicts and upload changes using Authorization Policy Manager

If you choose **Apply safe changes only** or **Append additive changes**, then you must review the results of the analysis to manually upload any changes not applied by RUP Installer, after the installation is complete. If you choose **Apply all changes and**

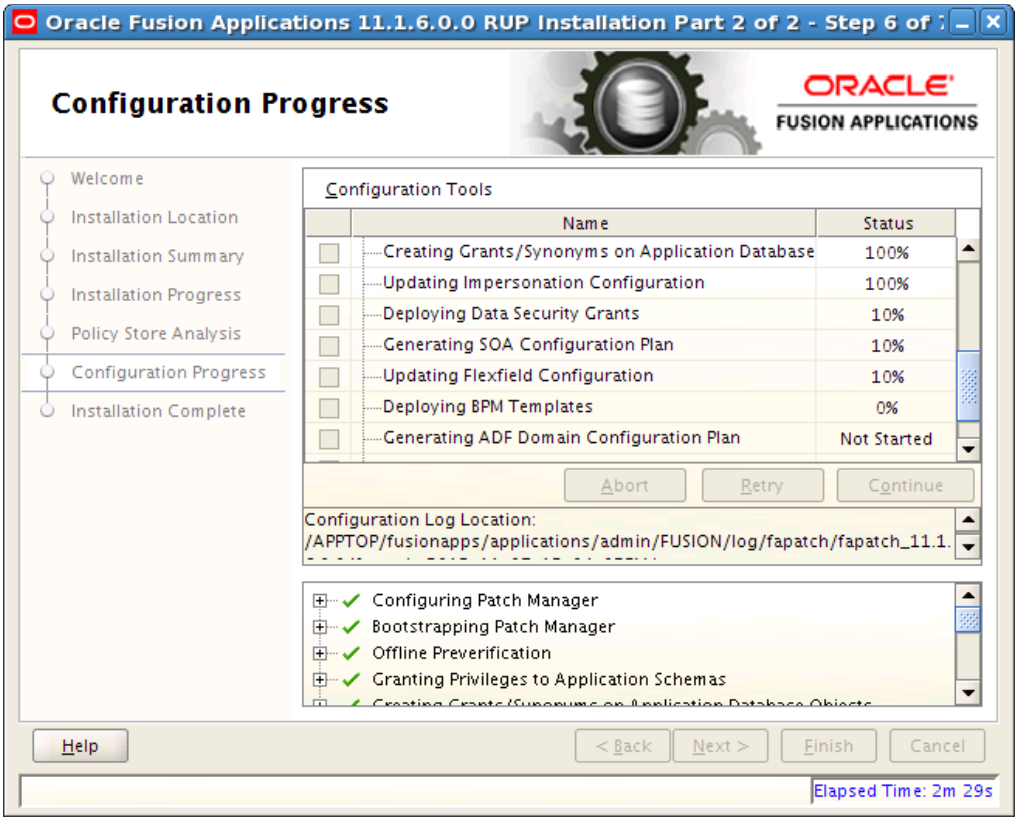
overwrite customizations, then you may need to reapply the customizations that are overwritten after the installation is complete. If you choose one of these options, click **Next** after you make your selection.

If you choose **Manually resolve conflicts and upload changes using Authorization Policy Manager** (APM), you must pause the installation while you bring up the APM application and upload the changes. For more information, see the "Upgrading Oracle Fusion Applications Policies" chapter in the *Oracle Fusion Middleware Oracle Authorization Policy Manager Administrator's Guide (Oracle Fusion Applications Edition)*. Note the location of the following files:

- Baseline file: *FA_ORACLE_HOME*/admin/JAZN/*stripe*/baseline
- Patch file for fscm, crm, and hcm stripes: *FA_ORACLE_HOME*/*stripe*/deploy/system-jazn-data.xml
- Patch file for the obi stripe: *FA_ORACLE_HOME*/com/acr/security/jazn/bip_jazn-data.xml

When you complete this task in APM, shut down the APM applications, return to RUP Installer, and click **Next**.

A.2.6 Configuration Progress



The second installer supports parallel processing of certain configuration assistants, which run in groups. For more information, see "Parallel Configuration Assistants" in the *Oracle Fusion Applications Upgrade Guide*.

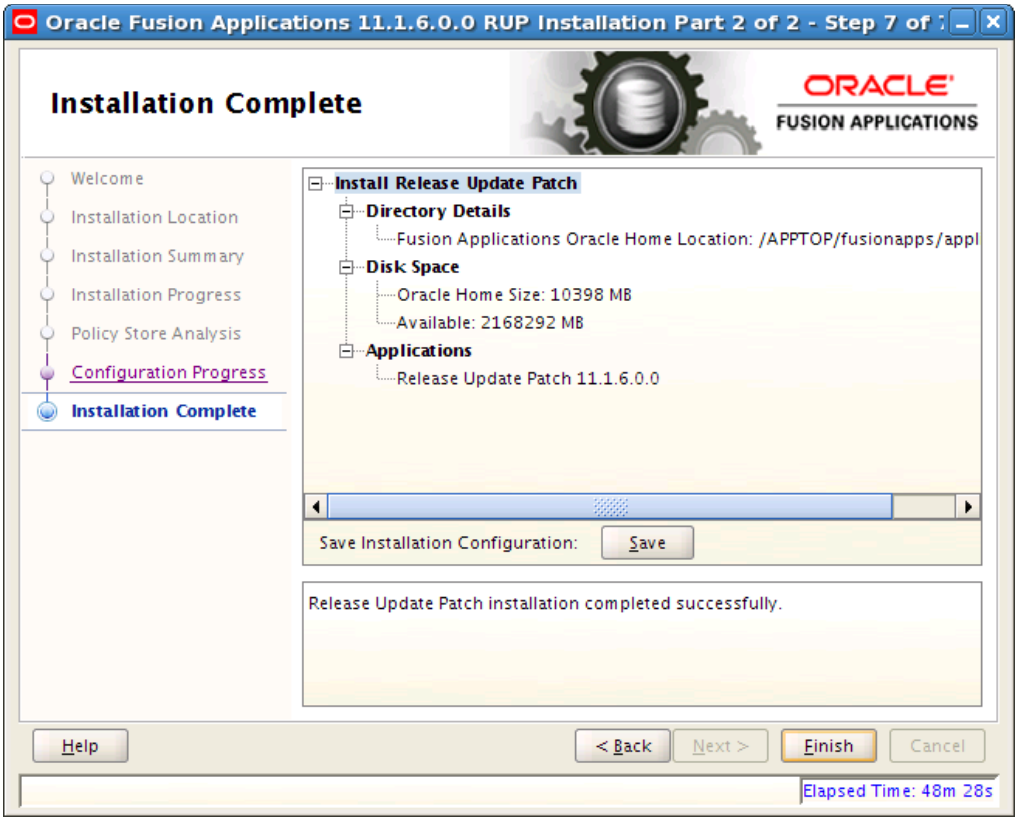
This screen displays a progress indicator that shows the percentage of the configuration phase that is complete. It displays each task, including steps within tasks, in the message pane as they are performed. Tasks that could be included in the

second installer's configuration phase are described in Table 1–2, " Configuration Assistants Run by Oracle Fusion Applications 11g Release 1 (11.1.6.0.0) RUP Installer Part 2 of 2" in the *Oracle Fusion Applications Upgrade Guide*.

Before the **Starting All Servers** task, the **Verifying Node Manager and OPMN Status** configuration assistant checks for access to the Node Manager and the OPMN control process. This may fail if you did not start the Node Manager and OPMN processes after the completion of the first installer. Do not cancel and exit out of RUP Installer in response to this task. For more information, see "Troubleshooting Failure During Verifying Node Manager and OPMN Status" in the *Oracle Fusion Applications Upgrade Guide*.

No additional user action is required in the Configuration Progress screen unless a failure occurs. For more information, see "General Troubleshooting During the Configuration Phase in GUI Mode" in the *Oracle Fusion Applications Upgrade Guide*.

A.2.7 Installation Complete



This screen summarizes the installation just completed. If you want to save this configuration to a response file, click **Save**. For more information, see "How Response Files Work" in the *Oracle Database Installation Guide 11g Release 2 (11.2) for Linux*.

To complete a successful installation, click **Finish**. The **Finish** button is activated only if all mandatory configuration assistants completed successfully. If you want to rerun this session to resolve failed configuration assistants, click **Cancel.**

B

Language Pack Installer Screens

This appendix presents the Language Pack Installer screens and describes the purpose of each of the following screens:

- Welcome
- Installation Location
- Installation Summary
- Installation Progress
- Policy Store Analysis
- Configuration Progress
- Installation Complete

B.1 Welcome

This screen appears each time you start Language Pack Installer. This screen does not appear if you restart Language Pack Installer after a failure. The standard Welcome screen is read-only. It contains a navigation pane on the left-hand side that summarizes the tasks the installer will take. Each item in the pane represents an installer screen, which contains prompts for the necessary information.

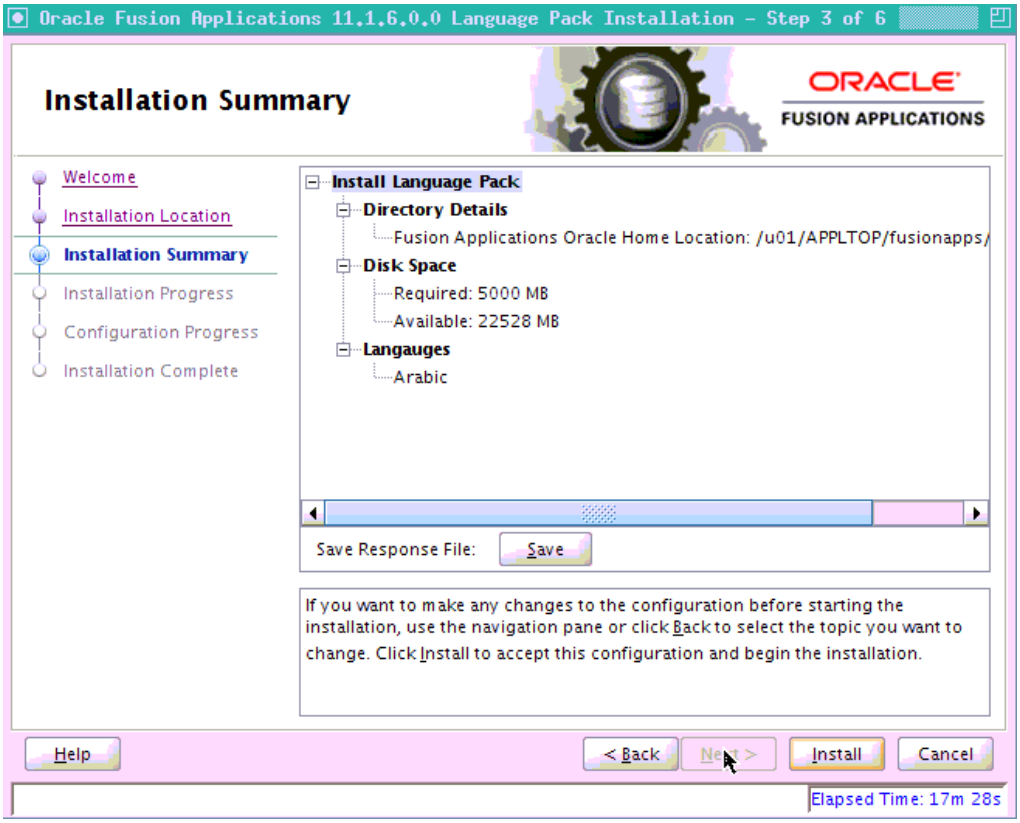
Click **Next** to continue.

B.2 Installation Location

Specify the location of the existing Oracle Fusion Applications home (*FA_ORACLE_HOME*) where you want to install the language.

Click **Next** to continue.

B.3 Installation Summary



Summarizes the selections you made during this installation session. It includes the Oracle home, required and available disk space, and the language to be installed. Review the information displayed to ensure that the installation details are what you intend.

To make changes before installing, click **Back** to return to previous screens in the interview.

Click **Install** to start installing this language.

B.4 Installation Progress

Displays a progress indicator that shows the percentage of the installation that is complete and indicates the location of the installation log file. The installation task consists of copying files from the Language Pack to the appropriate Oracle homes.

When the installation progress indicator shows 100 percent, click **Next** to continue.

B.5 Policy Store Analysis

Note: (This screen displays only when the `J-DupdateJAZNPolicyStore` option is set to `true` with the `runInstaller` command.

Analysis is available for the following policy store stripes: hcm, crm, fscm, and obi. Select the stripes to be analyzed and then click **Run Analysis** to identify any conflicts or deletions. Only the stripes that are included in the language pack are enabled for analysis and the analysis could run for several minutes. After the analysis runs, review the results of the analysis to determine which deployment method you want Language Pack Installer to use for policy store changes to each stripe. Oracle recommends that you select **Apply safe changes only**. This is the safest method unless you have read and totally understood the consequences of the other three options. If you decide to resolve the conflicts or deletions before the actual JAZN upload from Language Pack Installer, you should run the Policy Store Analysis step again to get the most accurate analysis report. The choices for deployment method are:

- Apply safe changes only (choose this method if there are no conflicts)
- Apply all changes and overwrite customizations
- Append additive changes
- Manually resolve conflicts and upload changes using Authorization Policy Manager.

If you choose **Apply safe changes only** or **Append additive changes**, then you must review the results of the analysis to manually upload any changes not applied by

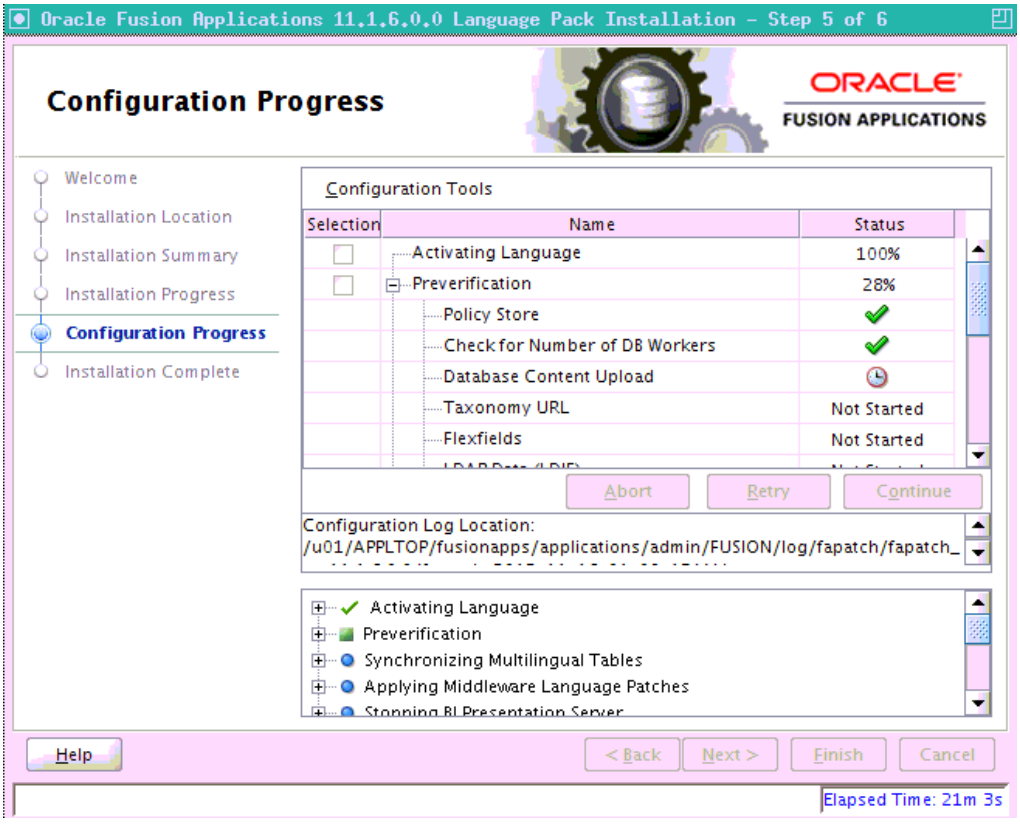
Language Pack Installer with the choice you selected, after the installation is complete. If you choose **Apply all changes and overwrite customizations**, then you may need to reapply the customizations that are overwritten after the installation is complete. If you choose one of these options, click **Next** after you make your selection.

If you choose **Manually resolve conflicts and upload changes using Authorization Policy Manager** (APM), you must pause the installation while you bring up the APM application and upload the changes. For more information, see the "Upgrading Oracle Fusion Applications Policies" chapter in the *Oracle Fusion Middleware Oracle Authorization Policy Manager Administrator's Guide (Oracle Fusion Applications Edition)*. Note the location of the following files:

- Baseline file: *FA_ORACLE_HOME*/admin/JAZN/*stripe*/baseline
- Patch file for fscm, crm, and hcm stripes: *FA_ORACLE_HOME*/*stripe*/deploy/system-jazn-data.xml
- Patch file for the obi stripe: *FA_ORACLE_HOME*/com/acr/security/jazn/bip_jazn-data.xml

When you complete this task in APM, shut down the APM application, return to Language Pack Installer, and click **Next**.

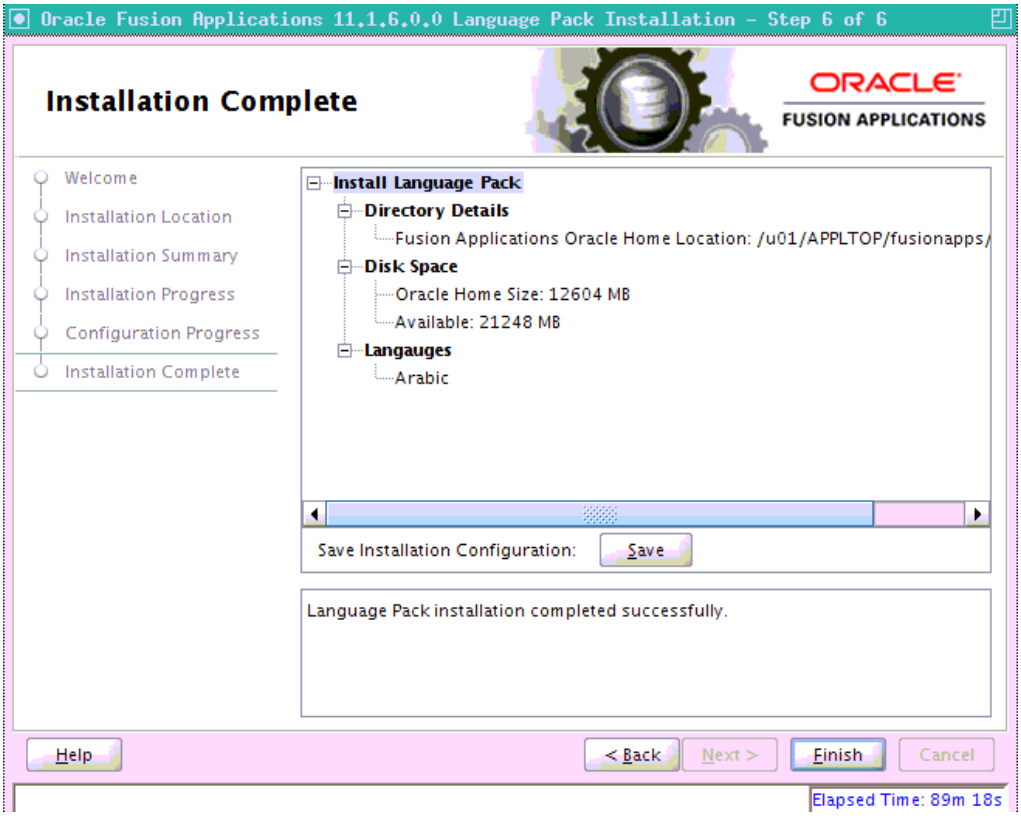
B.6 Configuration Progress



Displays a progress indicator that shows the percentage of the configuration that is complete. It displays each task in the message pane as it is performed. Tasks that could be included in the configuration phase are described in "Language Pack Installer Configuration Assistants" in the *Oracle Fusion Applications Upgrade Guide*.

No additional user action is required in the Configuration Progress screen unless a failure occurs. For more information, see "General Troubleshooting During the Configuration Phase in GUI Mode" in the *Oracle Fusion Applications Upgrade Guide*.

B.7 Installation Complete



Summarizes the installation just completed. If you want to save this configuration to a response file, click **Save**. For more information, see "How Response Files Work" in the *Oracle Database Installation Guide 11g Release 2 (11.2) for Linux*.

To complete a successful installation, click **Finish**. The **Finish** button is activated only if all mandatory tasks completed successfully. If you want to rerun this session after you resolve failed tasks, click **Cancel.**