Oracle® Retail Fiscal Management and Brazil Localization
Installation Guide
Release 13.2.7
E51794-01

March 2014

ORACLE®

Oracle® Retail Fiscal Management and Brazil Localization Installation Guide, Release 13.2.7

Value-Added Reseller (VAR) Language

Oracle Retail VAR Applications

The following restrictions and provisions only apply to the programs referred to in this section and licensed to you. You acknowledge that the programs may contain third party software (VAR applications) licensed to Oracle. Depending upon your product and its version number, the VAR applications may include:

(i) the **MicroStrategy** Components developed and licensed by MicroStrategy Services Corporation (MicroStrategy) of McLean, Virginia to Oracle and imbedded in the MicroStrategy for Oracle Retail Data Warehouse and MicroStrategy for Oracle Retail Planning & Optimization applications.

(ii) the **Wavelink** component developed and licensed by Wavelink Corporation (Wavelink) of Kirkland, Washington, to Oracle and imbedded in Oracle Retail Mobile Store Inventory Management.

(iii) the software component known as **Access Via™** licensed by Access Via of Seattle, Washington, and imbedded in Oracle Retail Signs and Oracle Retail Labels and Tags.

(iv) the software component known as **Adobe Flex™** licensed by Adobe Systems Incorporated of San Jose, California, and imbedded in Oracle Retail Promotion Planning & Optimization application.

You acknowledge and confirm that Oracle grants you use of only the object code of the VAR Applications. Oracle will not deliver source code to the VAR Applications to you. Notwithstanding any other term or condition of the agreement and this ordering document, you shall not cause or permit alteration of any VAR Applications. For purposes of this section, "alteration" refers to all alterations, translations, upgrades, enhancements, customizations or modifications of all or any portion of the VAR Applications including all reconfigurations, reassembly or reverse assembly, re-engineering or reverse engineering and recompilations or reverse compilations of the VAR Applications or any derivatives of the VAR Applications. You acknowledge that it shall be a breach of the agreement to utilize the relationship, and/or confidential information of the VAR Applications for purposes of competitive discovery.

The VAR Applications contain trade secrets of Oracle and Oracle's licensors and Customer shall not attempt, cause, or permit the alteration, decompilation, reverse engineering, disassembly or other reduction of the VAR Applications to a human perceivable form. Oracle reserves the right to replace, with functional equivalent software, any of the VAR Applications in future releases of the applicable program.

Contents

Send Us Your Comments

Oracle Retail Fiscal Management and Brazil Localization Installation Guide, Release 13.2.7.

Oracle welcomes customers' comments and suggestions on the quality and usefulness of this document.

Your feedback is important, and helps us to best meet your needs as a user of our products. For example:

- Are the implementation steps correct and complete?
- Did you understand the context of the procedures?
- Did you find any errors in the information?
- Does the structure of the information help you with your tasks?
- Do you need different information or graphics? If so, where, and in what format?
- Are the examples correct? Do you need more examples?

If you find any errors or have any other suggestions for improvement, then please tell us your name, the name of the company who has licensed our products, the title and part number of the documentation and the chapter, section, and page number (if available).

> **Note:** Before sending us your comments, you might like to check that you have the latest version of the document and if any concerns are already addressed. To do this, access the Online Documentation available on the Oracle Technology Network Web site. It contains the most current Documentation Library plus all documents revised or released recently.

Send your comments to us using the electronic mail address: retail-doc_us@oracle.com

Please give your name, address, electronic mail address, and telephone number (optional).

If you need assistance with Oracle software, then please contact your support representative or Oracle Support Services.

If you require training or instruction in using Oracle software, then please contact your Oracle local office and inquire about our Oracle University offerings. A list of Oracle offices is available on our Web site at www.oracle.com.

Preface

Oracle Retail Installation Guides contain the requirements and procedures that are necessary for the retailer to install Oracle Retail products.

Audience

This Installation Guide is written for the following audiences:

- Database administrators (DBA)
- System analysts and designers
- Integrators and implementation staff

Related Documents

You can find more information about this product in these resources:

- *Oracle Retail Fiscal Management and Brazil Localization Installation Guide*
- *Oracle Retail Fiscal Management/RMS Brazil Localization Implementation Guide*
- *Oracle Retail Fiscal Management User Guide and Online Help*
- *Oracle Retail Fiscal Management Data Model*
- *Oracle Retail Merchandising Batch Schedule*

Also see the documentation library for Oracle Business Intelligence Enterprise Edition at this URL: http://www.oracle.com/technology/documentation/bi_ee.html

Customer Support

To contact Oracle Customer Support, access My Oracle Support at the following URL:

https://support.oracle.com

When contacting Customer Support, please provide the following:

- Product version and program/module name
- Functional and technical description of the problem (include business impact)
- Detailed step-by-step instructions to re-create
- Exact error message received
- Screen shots of each step you take

Review Patch Documentation

When you install the application for the first time, you install either a base release (for example, 13.2) or a later patch release (for example, 13.2.7). If you are installing the base release or additional patch releases, read the documentation for all releases that have occurred since the base release before you begin installation. Documentation for patch releases can contain critical information related to the base release, as well as information about code changes since the base release.

Improved Process for Oracle Retail Documentation Corrections

To more quickly address critical corrections to Oracle Retail documentation content, Oracle Retail documentation may be republished whenever a critical correction is needed. For critical corrections, the republication of an Oracle Retail document may at times **not** be attached to a numbered software release; instead, the Oracle Retail document will simply be replaced on the Oracle Technology Network Web site, or, in the case of Data Models, to the applicable My Oracle Support Documentation container where they reside.

This process will prevent delays in making critical corrections available to customers. For the customer, it means that before you begin installation, you must verify that you have the most recent version of the Oracle Retail documentation set. Oracle Retail documentation is available on the Oracle Technology Network at the following URL:

http://www.oracle.com/technetwork/documentation/oracle-retail-100266.html

An updated version of the applicable Oracle Retail document is indicated by Oracle part number, as well as print date (month and year). An updated version uses the same part number, with a higher-numbered suffix. For example, part number E123456-**02** is an updated version of a document with part number E123456-**01**.

If a more recent version of a document is available, that version supersedes all previous versions.

Oracle Retail Documentation on the Oracle Technology Network

Documentation is packaged with each Oracle Retail product release. Oracle Retail product documentation is also available on the following Web site:

http://www.oracle.com/technetwork/documentation/oracle-retail-100266.html

(Data Model documents are not available through Oracle Technology Network. These documents are packaged with released code, or you can obtain them through My Oracle Support.)

Documentation should be available on this Web site within a month after a product release.

Conventions

Navigate: This is a navigate statement. It tells you how to get to the start of the procedure and ends with a screen shot of the starting point and the statement "the Window Name window opens."

```
This is a code sample
    It is used to display examples of code
```

1

Preinstallation Tasks

> **Note:** For 13.2.7 Brazil localization, RMS/ORFM is now integrated to a new third party PL/SQL engine provided by Synchro. The new tax engine needs to be installed in the same database but in a separate schema. The installation for the Synchro Tax Engine is covered in the installation guide provided by Synchro. There is no upgrade path for existing live customers on Taxweb to Synchro. Therefore, any existing live customer on 13.2.6 Taxweb cannot install Synchro. Synchro installation is only for new customers on 13.2.7.
>
> The installation for Taxweb remains the same as in 13.2.6 . Any existing live customers on 13.2.6 can only upgrade to a 13.2.7 Taxweb installation.
>
> Customers who are going to use the Synchro Tax Engine, do not need to install RTIL. RTIL installation is required only for the Taxweb Tax Engine.
>
> The option to choose Synchro or Taxweb as the tax engine provider will be available only during the 13.2.7 patch install not for the previous patches.

> **Note:** The RMS installer provides the option to configure multiple application deployment methods. See Appendix H: Application Deployment Method in the *Oracle Retail Merchandising System Installation Guide* to help determine your deployment approach.

Patch Contents

Patch releases include all defect fixes that have been released through bundled hot fix releases since the last patch release. Patch releases may also include new defect fixes and enhancements that have not previously been included in any bundled hot fix release.

Implementation Capacity Planning

There is significant complexity involved in the deployment of Oracle Retail applications, and capacity planning is site specific. Oracle Retail strongly suggests that before installation or implementation you engage your integrator (such as the Oracle Retail Consulting team) and hardware vendor to request a disk sizing and capacity planning effort.

Sizing estimates are based on a number of factors, including the following:

- Workload and peak concurrent users and batch transactions
- Hardware configuration and parameters
- Data sparcity
- Application features utilized
- Length of time history is retained

Additional considerations during this process include your high availability needs as well as your backup and recovery methods.

Check Database Server Requirements

ORFM requires that the RMS 13.2.7 database schema be installed. See the *Oracle Retail Merchandising System Installation Guide* for the supported database server requirements.

General Requirements for a database server running ORFM include:

Supported on:	Versions Supported:
Database Server OS	OS certified with Oracle Database 11gR2 Enterprise Edition. Options are: - Oracle Linux 5 for x86-64 (Actual hardware or Oracle virtual machine). - Red Hat Enterprise Linux 5 for x86-64 (Actual hardware or Oracle virtual machine). - Oracle Linux 6 for x86-64 (Actual hardware or Oracle virtual machine). - Red Hat Enterprise Linux 6 for x86-64 (Actual hardware or Oracle virtual machine). - AIX 6.1 (Actual hardware or LPARs) - AIX 7.1 (Actual hardware or LPARs) - Solaris 11 SPARC (Actual hardware or logical domains) - HP-UX 11.31 Integrity (Actual hardware, HPVM, or vPars)

Supported on:	Versions Supported:
Database Server 11gR2	Oracle Database Enterprise Edition 11gR2 (11.2.0.3) with the following specifications: **Components:** ▪ Oracle Partitioning ▪ Examples CD (Formerly the companion CD) **Oneoff Patches:** ▪ 13036331: ORA-01031 INSUFFICIENT PRIVILEGES WHEN GRANTING EXECUTE ON DBMS PACKAGES. **Other components:** ▪ Perl 5 or later ▪ X-Windows interface ▪ ANSI compliant C-compiler (certified with OS and database version).

Check Supported Application Server Requirements

General requirements for an application server capable of running ORFM include the following.

> **Note:** Files required for Oracle Configuration Manager (OCM) are removed after OPatch is used to patch a WebLogic server. This will not cause the product installers to fail, but will cause OCM installation to fail. To work around this issue back up the content of the $ORACLE_HOME/utils/ccr/lib directory prior to applying a patch using OPatch, and recopy the content back after you apply any patches. ORACLE_HOME is the location where WebLogic has been installed.

Supported on	Versions Supported
Application Server OS	OS certified with Oracle Fusion Middleware 11g Release1 (11.1.1.6). Options are: • Oracle Linux 5 for x86-64 (Actual hardware or Oracle virtual machine). • Red Hat Enterprise Linux 5 for x86-64 (Actual hardware or Oracle virtual machine). • Oracle Linux 6 for x86-64 (Actual hardware or Oracle virtual machine). • Red Hat Enterprise Linux 6 for x86-64 (Actual hardware or Oracle virtual machine). • AIX 6.1 (Actual hardware or LPARs) • AIX 7.1 (Actual hardware or LPARs) • Solaris 11 SPARC (Actual hardware or logical domains) • HP-UX 11.31 Integrity (Actual hardware, HPVM, or vPars)

Supported on	Versions Supported
Application Server	Oracle Fusion Middleware 11g Release 1 (11.1.1.6) **Components:** ▪ Oracle WebLogic Server 11g Release 1 (10.3.6) ▪ Oracle Forms Services 11g Release 2 (11.1.2.1) with Oneoff Patches 17448420: MANIFEST ATTRIBUTE ERROR IN JAVA CONSOLE WHILE RUNNING FORMS URL WITH 7U45_B11 Java: ▪ JDK 1.7.0+ 64 bit **IMPORTANT:** If there is an existing WebLogic installation on the server, you must upgrade to WebLogic 10.3.6. All middleware components associated with WebLogic server should be upgraded to 11.11.6 and ORACLE Forms must have new install to 11gR2 forms (11.1.2.1).. Back up the weblogic.policy file ($WLS_HOME/wlserver_10.3/server/lib) before upgrading your WebLogic server, because this file could be overwritten. Copy over the weblogic.policy backup file after the WebLogic upgrade is finished and the post patching installation steps are completed. **Optional (SSO required)** ▪ Oracle Identity Management 11gR1 (11.1.1.6) optionally with Oracle Access Manager 11gR1 (11.1.1.5) using OSSO agent. Must have separate WebLogic 10.3.5 for Oracle Access Manager 11g. **Other components:** ▪ Oracle BI Publisher 11g (11.1.1.7)

Verify Single Sign-On

If ORFM is not being deployed in a Single Sign-On environment, skip this section.

If Single Sign-On is to be used, verify the Oracle Identity Management (OIM/IDM) 11gR1 version 11.1.1.6 has been installed along with the components listed in the above Application Server requirements section. Verify the HTTP Server is registered with the Oracle Access Manager (OAM) 11gR1 as a partner application.

> **Note:** Oracle Application Server (OAS) 10.1.4 Single Sign-On is only supported for existing installations, this support may be dropped in a future 13.2.X patch release.

Check Supported Web Browser and Client Requirements

General requirements for client running RMS include the following.

Requirement	Version
Operating system	Windows 7
Display resolution	1024x768 or higher
Processor	2.6GHz or higher
Memory	1GByte or higher
Networking	intranet with at least 10Mbps data rate
Oracle (Sun) Java Runtime Environment	1.7.0+
Browser	Microsoft Internet Explorer version 9.0 or Mozilla Firefox ESR 17.0.3+

> **Note:** Oracle Retail does not recommend or support installations of ORFM with less than 256 kb bandwidth available between the PC client location (store and warehouse locations) and the data center at which the application server resides. Attempting to utilize less than 256 kb total available bandwidth causes unpredictable network utilization spikes, and performance of the ORFM screens degrades below requirements established for the product. The 256 kb requirement provides reasonable, predictable performance and network utilization.

Supported Oracle Retail Products

Product	Version
Oracle Retail Merchandising System (RMS)	13.2.7
Oracle Retail Store Inventory Management (SIM)	13.2.7
Oracle Retail Warehouse Management System (RWMS)	13.2.7

Supported Third-Party Products

Product	Version
TaxWeb Tax Rules (The Tax Rules software is a product of TaxWeb Compliance Software S.A.)	▪ taxinterface-132.18.jar ▪ taxcomponent-18.28.3.jar ▪ taxrules.jar **Note:** ORFM/RTIL was tested with above mentioned versions. Please contact TaxWeb for the latest compatible release (http://www.taxweb.com.br).
Synchro	**SPED** – Synchro Solução Fiscal 6.0 or higher with "Kit SPED Fiscal v2.9" Kit Integração Oracle Retail x Fiscal 1.2 or Higher **NFE** – DFe Manager 2.2 or Higher Conector DFe Padrão version 2.2 Build 05 or Higher Kit Integração Oracle Retail x Nfe version 1.0 or Higher **Tax Integration** -- Kit Integração Oracle Retail x Expert Fiscal version 1.0 or Higher Kit Expert Fiscal latest Version

Supported Oracle Retail Integration Technologies

Integration Technology	Version
Oracle Retail Integration Bus (RIB)	13.2.7

Supported Oracle Applications

Requirement	Version
Oracle E-Business Suite Financials	Oracle E-Business Suite 12.1.3 integration is supported using the Oracle Retail Financial Integration for Oracle Retail Merchandising Suite and Oracle E-Business Suite Financials. See the *Oracle® Retail Financial E-Business Suite Integration Solution Implementation/Operations Guide* for specific version information.

Note: The following integration points are not supported for ORFM/RMS Brazil Localization, but they are supported with non-Brazil RMS:

PeopleSoft Enterprise Financials integration using the Oracle Retail Merchandising Integration Pack for PeopleSoft Enterprise Financials: Financial Operations Control in Oracle Application Integration Architecture 2.5.

2

RAC and Clustering

The Oracle Retail Merchandising has been validated to run in two configurations on Linux:

- Standalone WebLogic and Database installations
- Real Application Cluster Database and WebLogic Clustering

The Oracle Retail products have been validated against an 11.2.0.3 RAC database. When using a RAC database, all JDBC connections should be configured to use THIN connections rather than OCI connections

Clustering for WebLogic Server 10.3.6 is managed as an Active-Active cluster accessed through a Load Balancer. Validation has been completed utilizing a RAC 11.2.0.3 Oracle Internet Directory database with the WebLogic 10.3.6 cluster. It is suggested that a Web Tier 11.1.1.7 installation be configured to reflect all application server installations if SSO will be utilized.

References for Configuration:

- Oracle Fusion Middleware High Availability Guide 11g Release 1 (11.1.1) Part Number E10106-09
- Oracle Real Application Clusters Administration and Deployment Guide 11g Release 2 (11.2) Part Number E16795-11

3
Patch Installation

The database portion of ORFM can be patched to release 13.2.7. This guide details the steps needed to perform a patch installation of ORFM.

To succesfully complete the ORFM 13.2.7 patch, installers from the RMS 13.2, ORFM 13.2, RMS 13.2.7 and ORFM 13.2.7 releases must be run in a specific sequence.
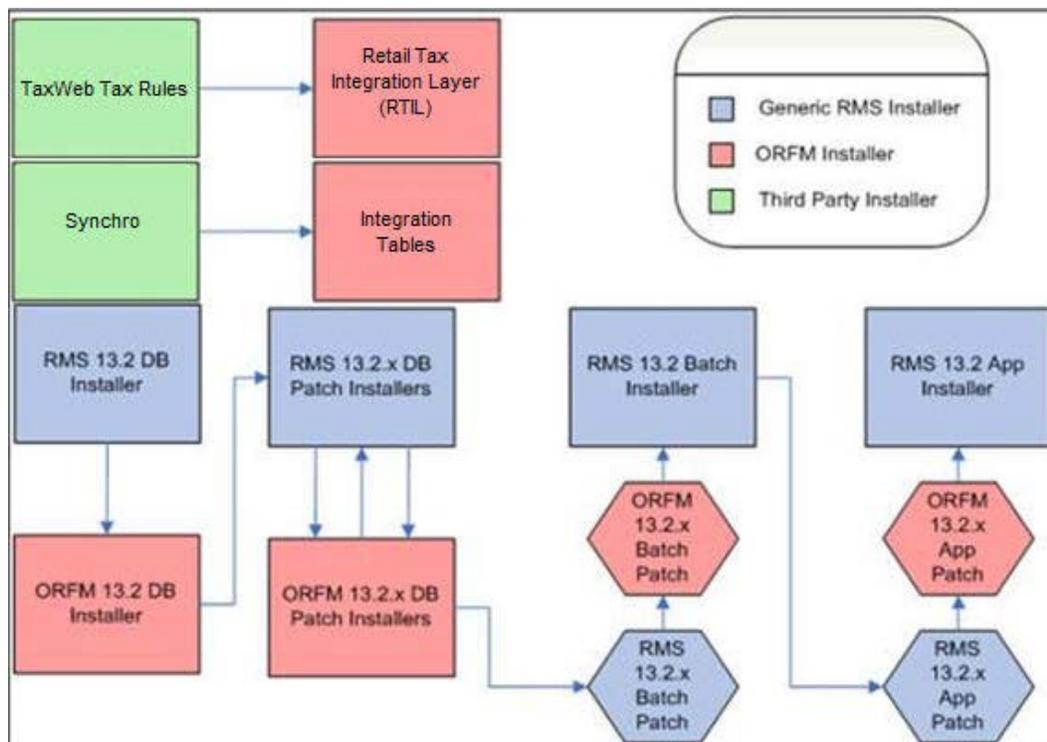
This guide explains the steps needed to perform an installation of RMS/ORFM. These chapters should be followed in order:

- Chapter 4 - RTIL Installation Tasks—Patch
- Chapter 5 - Database Installation Tasks—Patch
- Chapter 6 - Batch Installation Tasks—Patch
- Chapter 7 - Application Installation Tasks—Patch
- Chapter 8 - Reports Installation Tasks—Patch

RTIL Installation Tasks—Patch

> **Note:** This chapter should be used if you are installing or have installed Taxweb. Please skip this chapter if you are using Synchro.

Before proceeding, you must install Oracle WebLogic Server 11g Release 1 (10.3.6) and patches listed in Chapter 1, Preinstallation Tasks. The RTIL application is deployed to a WebLogic Managed server within the WebLogic installation.

Install Managed Server in WebLogic

Before running the application installer, you must install a managed server for the RTIL application in WebLogic if it was not created during the domain installation.

1. Log in to the Administration Console.
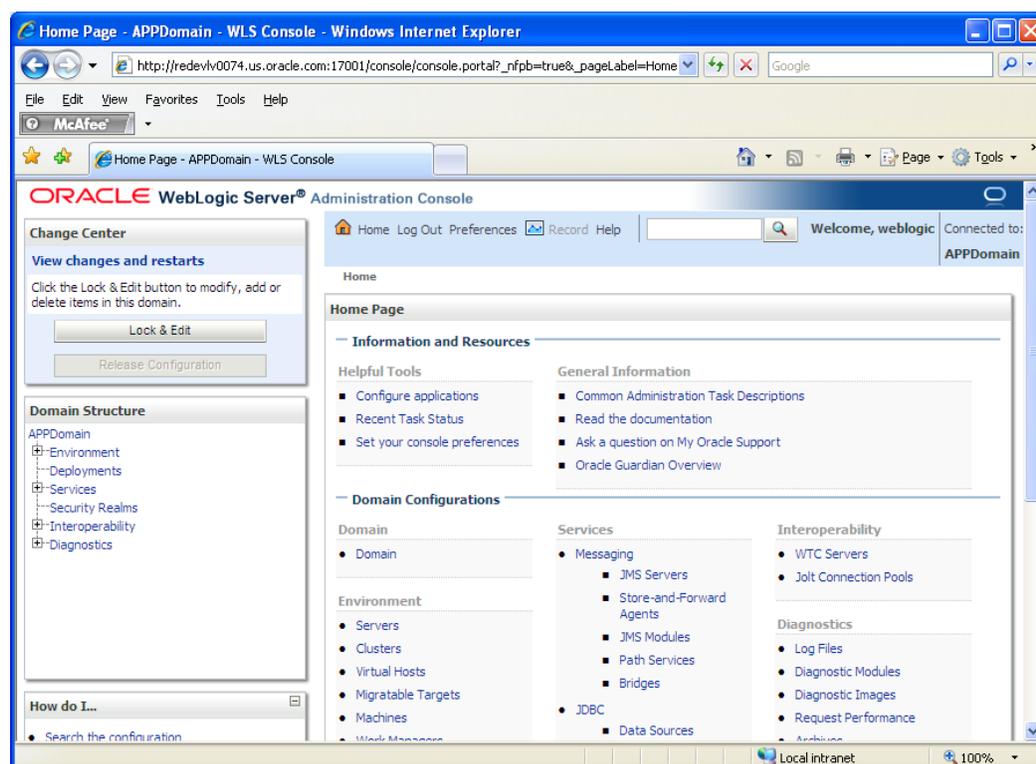
2. Click **Lock & Edit**.

3. Navigate to Environment > Servers. Select new tab of the servers on the right side.
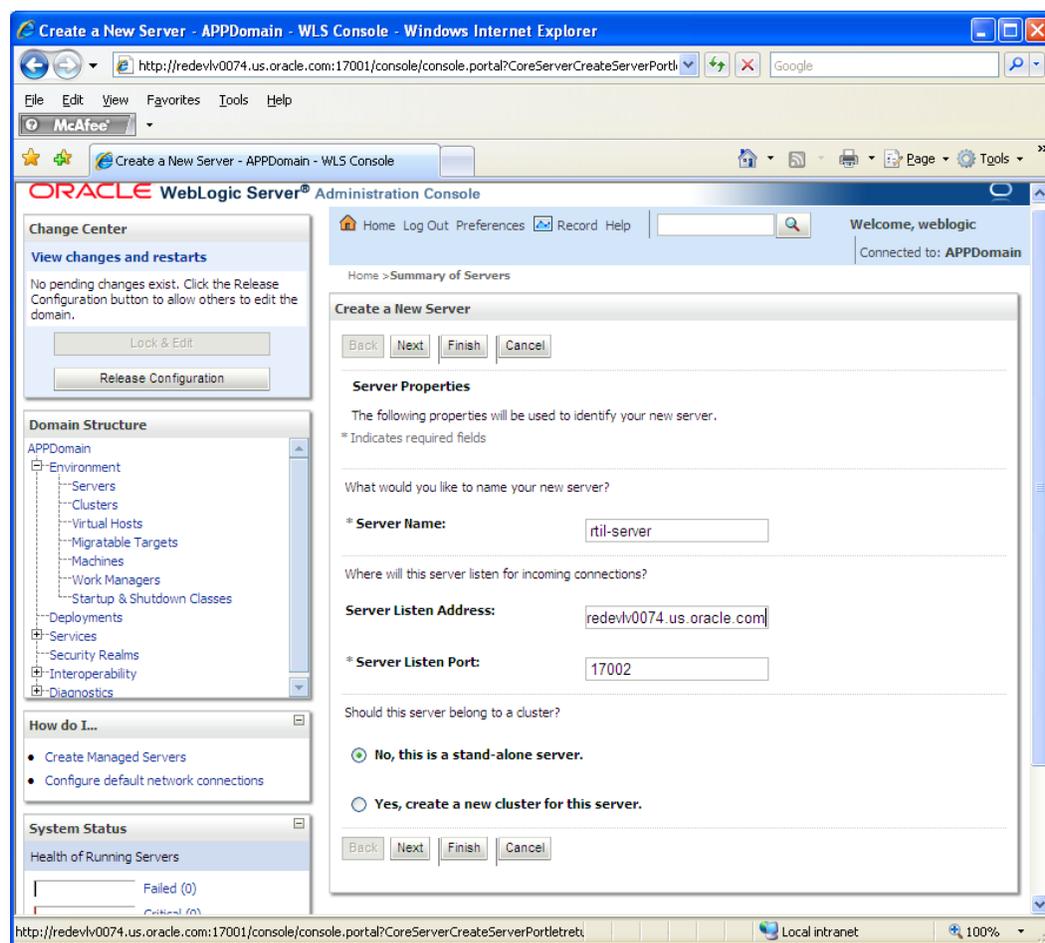
4. Set the following variables:

- **Server Name**: This value should be specific to your targeted application (for example, rtil-server).

- **Server Listen Address**: <weblogic server>
  (for example, redevlv0074.us.oracle.com)

- **Server Listen Port**: A free port. Check for availability.

  A suggestion is to increment the AdminServer port by two and keep incrementing by two for each managed server (for example, 17003, 17005, 17007, and so on.)

5. Click **Next**.
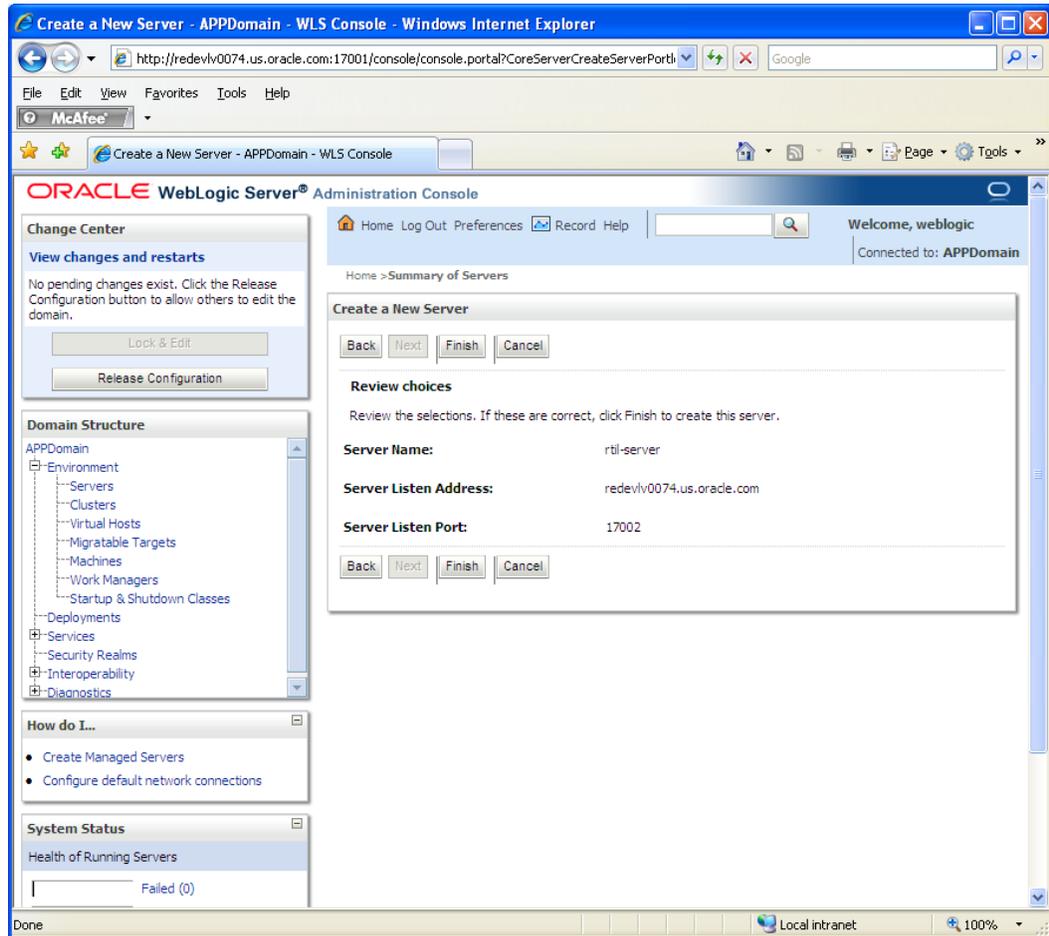
6. Click **Finish**.

7. Click **Activate Changes** on the left side. Once the changes are activated, the State of the rtil-server should change to SHUTDOWN status.

Install Node Manager

Install Node Manager if it was not created during domain install. The node manager is required so that the managed servers can be started and stopped through the admin console. Only one node manager is needed per WebLogic installation.

1. Log in to the Administration Console.
2. Click **Lock & Edit**. Navigate to Environments->Machines. Click **New**.
3. The following page is displayed. Set the following variables:
   - **Name**: Logical machine name
   - **Machine OS**: UNIX
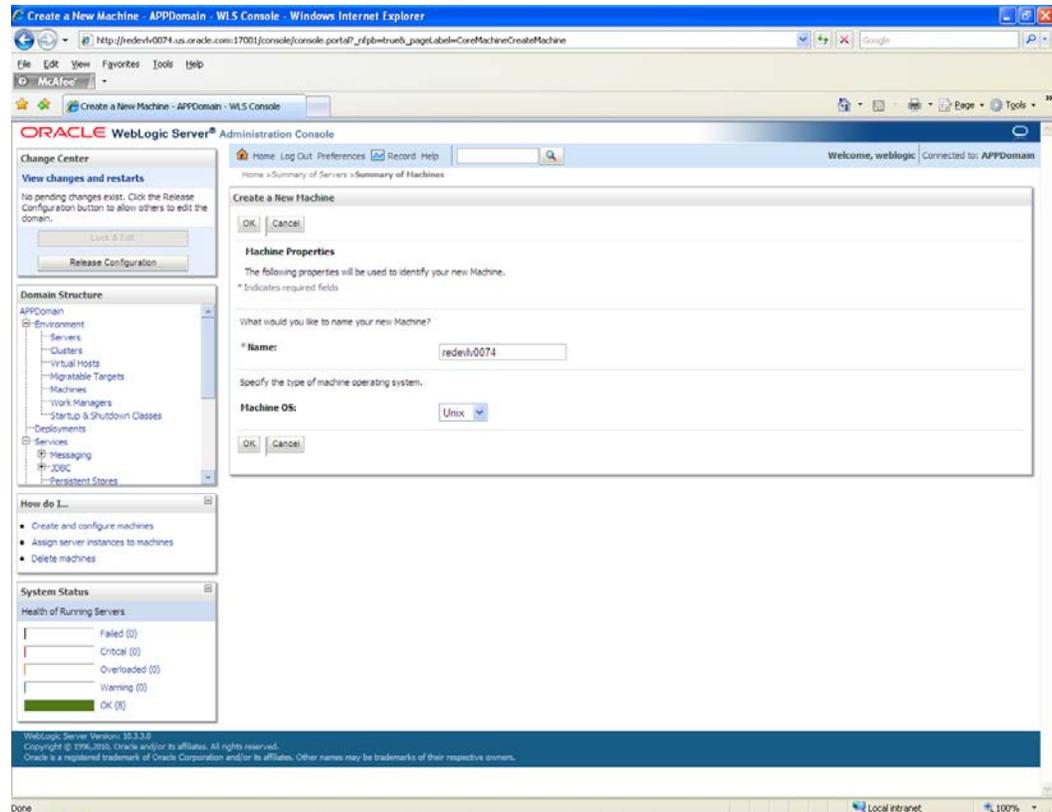
4. Click **OK** to activate the changes.

5. Click the machine created.

6. Click the Node Manager tab and update the details below.

    - **Type**: Plain
    - **Listen Address**: <weblogic server> (for example, redevlv0074.us.oracle.com)
    - **Listen Port**: Assign a port number. The default port is 5556.
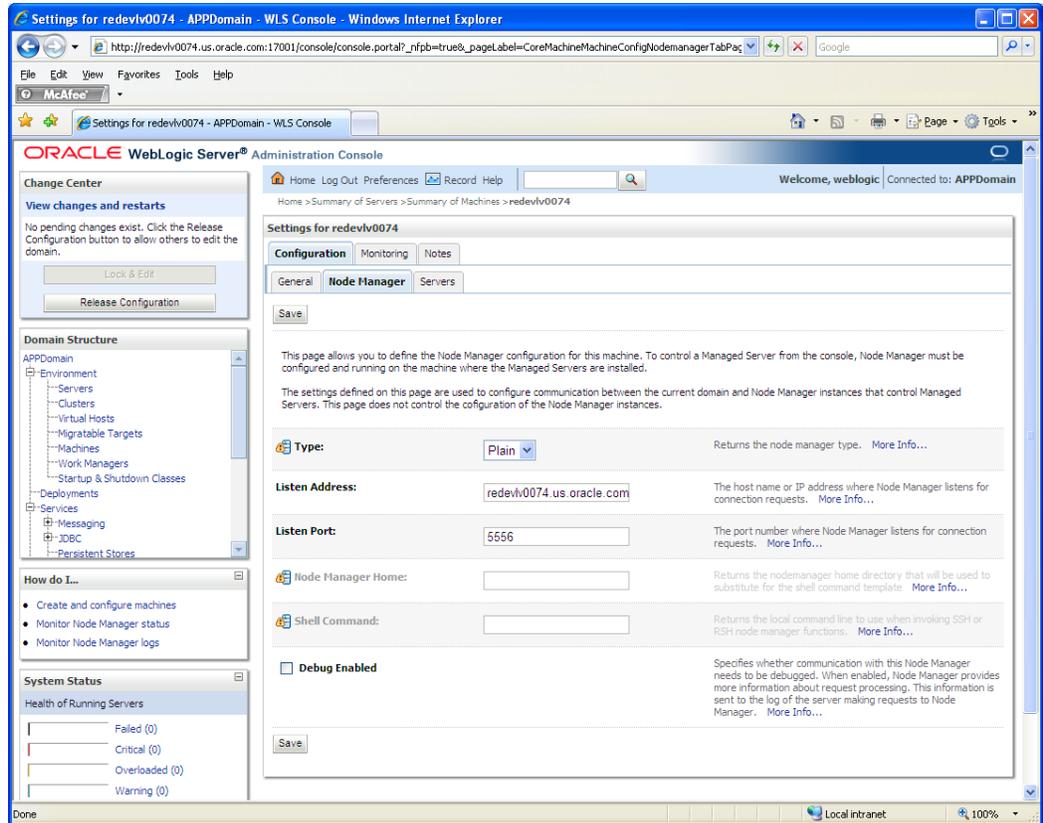
7. Click **Save**.
8. Click **Activate Changes**.
9. Click **Lock & Edit**.

10. Navigate to Environments > machines. Click the machine name. Select the **Servers** tab. Click **Add**.
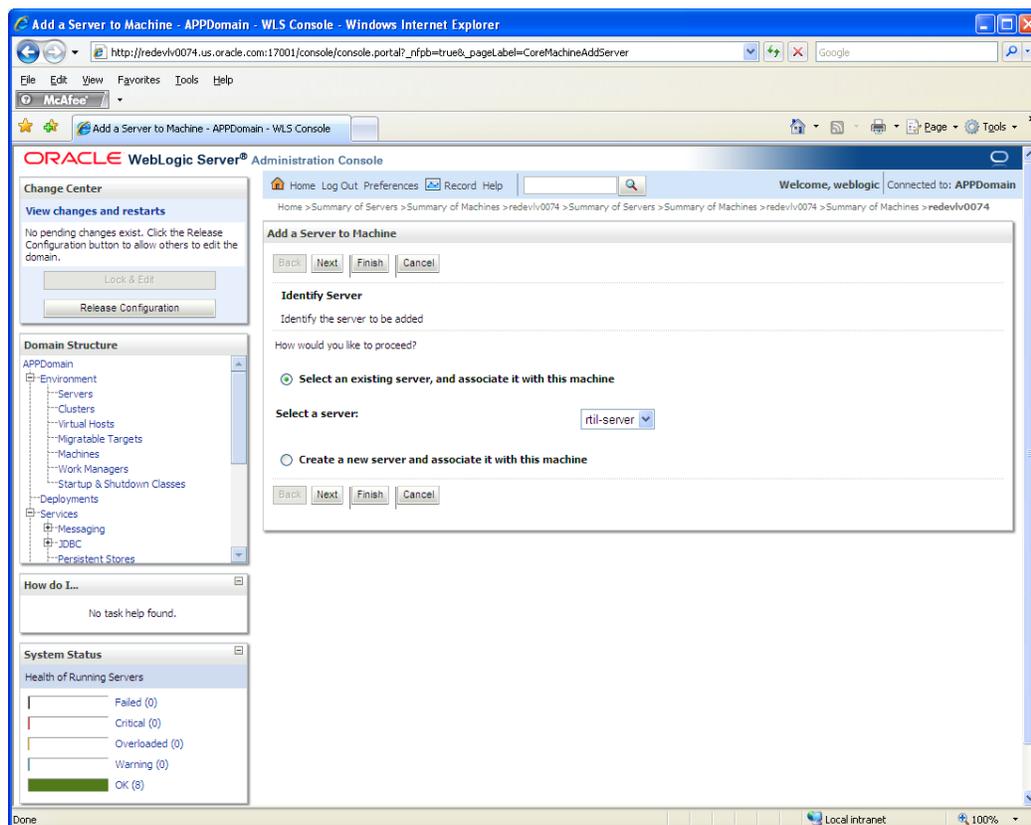
11. Add the managed servers that need to be configured with the Nodemanager. Save changes.

- From the drop down select the managed server to be added to nodemanager
- Server: <app-server> (for example: rtil-server)

12. Click **Next.** Click **Finish**.

13. To activate changes the server must be stopped as follows:

<WLS_HOME>/user_projects/domains/<domain name>/bin/ stopManagedWebLogic.sh rtil-server ${server_name}:${server_port}

14. Go to each managed server that is being added to the machine and click the Server Start tab. In the Class Path box, add the following:

```
<full-path-to-domain>/servers/<managed-server>
```

For example:
```
/u00/webadmin/product/10.3.x/WLS/user_projects/domains/rtil_domain/servers/
rtil-server
```

15. Click **Save**.

16. Click **Activate Changes**.

Start the Managed Servers

To start the managed servers, complete the following steps.

1. Start the Node Manager from the command line.

    ```
    <WLS_HOME>/wlserver_10.3/server/bin startNodeManager.sh
    ```

    After the Node Manager is started, the managed servers can be started through the admin console.

2. Navigate to Environments > Servers. Select <app-server> (for example, rtil-server server managed server). Click the Control tab.

3. Click **Start** to start the managed server.

Extract TaxRules

For the rules to be extracted as individual Java serialized files, extraction requires about about 7 GB of free space on the file system. The amount of space required depends on the number of tax rules in the taxweb drop and must be verified in the taxweb installation document.

> **Note:** TaxRules extraction is done through a Java utility, which requires about 5 GB of RAM for the extraction. The amount of space depends on the number of tax rules in the taxweb drop and must be verified in the taxweb installation document.

TaxRules extraction can be done in one environment, where the extracted folder that contains rules can be transferred to all the RTIL deployment boxes independently. If this method is chosen, the deployment environment is not required to have five 5 GB of RAM available.

To extract TaxRules, do the following:

1. Create a folder/directory (for example, taxweb-slim).

    > **Note:** This directory should be created outside of WebLogic domain directory with read permission for all users (or at least for the Weblogic domain user).

2. Transfer the taxrules.jar, taxcomponent.jar and the log4j-1.2.15.jar to taxweb-slim folder. The above mentioned jars are present in the TaxWeb Tax Rules bundle delivered by TaxWeb

3. From the command prompt, run the following commands inside the taxweb-slim folder.

    ```
    $ jar -xf taxrules.jar
    $ java -Xmx6120m -cp log4j-1.2.15.jar:taxcomponent.jar:.
    erija.taxrules.test.ondemand.RulesToDir
    ```

    > **Note:** Verify that a rules folder is created with individual rules in sub directory. (more than 1 GB).

Verify taxcomponent.conf

Verify the following entries in taxcomponent.conf file.

- onDemand=true
- dataFiles=<absolute path of the folder created in step a (ex: taxweb-slim)>
- withDBAcess=true
- driverClass=jndi
- url=<jndi of the taxweb datasource>

Install TaxWeb Tax Rules

> **Important:** The TaxWeb installation instructions provided in this chapter are for reference only and are subject to change per TaxWeb requirements. In all cases, the installation guide provided by TaxWeb is considered the master document.

TaxWeb Tax Rules is a third party tax rules engine that is actively used within the Brazilian market. TaxWeb Tax Rules is a Java application. The binary distribution is made available as a set of Java Archive (jar) files.

Within the Oracle Retail suite, TaxWeb Tax Rules is integrated with RMS and ORFM through RTIL. To install TaxWeb Tax Rules so that it integrates with Oracle Retail applications, complete the following steps.

1. Be sure Oracle Database 11g Release 2 is installed, as TaxWeb Tax Rules requires it for its application schema installation and configuration.
2. Install the jar files in the lib folder of the WebLogic domain in which RTIL will be deployed.
3. Install the data source configuration file (taxcomponent.conf) in the config folder of the WebLogic domain in which RTIL will be deployed.
4. Configure the data source in the WebLogic domain.

For detailed information about installation and how to configure the Tax Rules application and data source, refer to the installation guide provided by TaxWeb Tax Rules.

> **Important:** If there is an existing Tax Rules database user from a previously installed release, it should not be used. Drop and recreate the user with scripts from the Tax Rules release supported for 13.2.7.

Install TaxWeb Tax Rules .jar Files

Copy the list of mentioned jars from the TaxWeb Tax Rules bundle delivered by TaxWeb to the lib folder of the Weblogic domain in which RTIL will be deployed.

- commons-logging-api.jar
- log4j-1.2.15.jar
- javaee-api-5.0-1.jar
- commons-logging-1.1.1.jar
- taxinterfaces.jar
- taxrules.jar
- commons-dbcp-1.3.jar
- commons-pool-1.5.5.jar
- log4j.jar
- commons-beanutils-1.7.jar
- commons-io-2.0.1.jar
- commons-collections-3.2.1.jar
- commons-lang-2.4.jar
- commons-beanutils-1.8.3.jar
- ojdbc5.jar
- taxcomponent.jar

> **Note :** All the above mentioned jars are used and owned by the TaxWeb Tax Rules application. In subsequent releases, jars may be added or removed by TaxWeb. See the *Oracle Retail Fiscal Management/RMS Brazil Localization Implementation Guide* for details on redeploying your .jar files.

Install Datasource Configuration File

The prerequisite for this step is the availability of a TaxWeb Tax Rules schema which should be installed based on the TaxWeb Tax Rules installation guide. The datasource should be created in the WebLogic domain in which RTIL will be installed. Please refer to the TaxWeb Tax Rules installation guide for data source creation details.

The configured datasource name should be included in the taxcomponent.conf file supplied in the TaxWeb Tax Rules distribution and placed in the config folder of the Weblogic domain in which RTIL will be deployed.

Expand the RTIL Application Distribution

To expand the RTIL application distribution, complete the following steps.

1. Create a new staging directory for the RTIL application distribution (rtil13application.zip).

   > **Example:**
   > <WLS_HOME> /user_projects/domain/<domain_name>/
   > servers/<rtil-server>/rtil-staging

   This location is referred to as STAGING_DIR for the remainder of this chapter.

2. Copy rtil13application.zip to STAGING_DIR and extract its contents.

Run the RTIL Application Installer

Once you have a WebLogic instance that is configured and started, you can run the RTIL application installer. This installer configures and deploys the RTIL application.

> **Note:** See Appendix: ORFM RTIL Installer Screens for details on every screen and field in the RTIL application installer.

> **Note:** It is recommended that the installer be run as the same UNIX account that owns the WebLogic application server ORACLE_HOME files.

1. Change directories to STAGING_DIR/rtil/application. This directory was created when the rtil13application.zip file was expanded under STAGING_DIR.

2. Set and export the following environment variables.

Variable	Description	Example
ORACLE_HOME	The location where Weblogic has been installed	ORACLE_HOME= /u00/webadmin/product/10.3.3/WLS export ORACLE_HOME
WEBLOGIC_ DOMAIN_HOME	The location where the Weblogic domain has been installed	WEBLOGIC_DOMAIN_HOME=$ORACLE_ HOME/user_projects/domains/AppDomain/ export WEBLOGIC_DOMAIN_HOME
JAVA_HOME	Location of a Java 7.0 (1.7.0+) JDK. 64 bit. For Linux and Solaris OS only). This should be set to the Java being used by the Weblogic server.	JAVA_HOME= /u00/webadmin/java/jdk1.7 export JAVA_HOME
DISPLAY	Address and port of X server on desktop system of user running installation. Optional for RTIL application installer.	DISPLAY=<IP address>:0 export DISPLAY

3. If you are using an X server (such as Exceed), set the DISPLAY environment variable so that you can run the installer in GUI mode (recommended). If you are not using an X server, or the GUI is too slow over your network, do not set DISPLAY for text mode.

4. Run the install.sh script. This launches the installer. After installation is complete, a detailed installation log file is created (rtil13install.<timestamp>.log).

> **Note:** The typical usage for GUI mode is no arguments.
>
> ./install.sh [text | silent]

> **Note:** If you are running the installer on AIX7.1, please set and export ANT_OPTS variable with "-Xmso1024k -Xss1024k", prior to launching the installer. For example, assuming korn, bourne, or bash shell:
>
> ANT_OPTS="-Xmso1024k –Xss1024k"
>
> export ANT_OPTS

5. The installer leaves behind the ant.install.properties file for future reference and repeat installations. This file contains inputs you provided. As a security precaution, make sure that the file has restrictive permissions.

> **Example:** `chmod 600 ant.install.properties`

6. Once the installer is finished, open a web browser and navigate to the URL reported at the end if the installer logs. You should see this text, which indicates RTIL was installed succesfully:

    `E|invocationKey not present`

Post Install Steps

1. Once RTIL installation is complete, set the JTA transaction timeout to 1000 seconds in the WebLogic Admin console.
    - To override the default JTA timeout, log in to the WebLogic admin console. Navigate to Services > JTA link to go to the Configuration section.
    - Replace the default timeout of 30 seconds with 1000.
    - For the changes to take effect, bounce the WebLogic Server (for the domain).
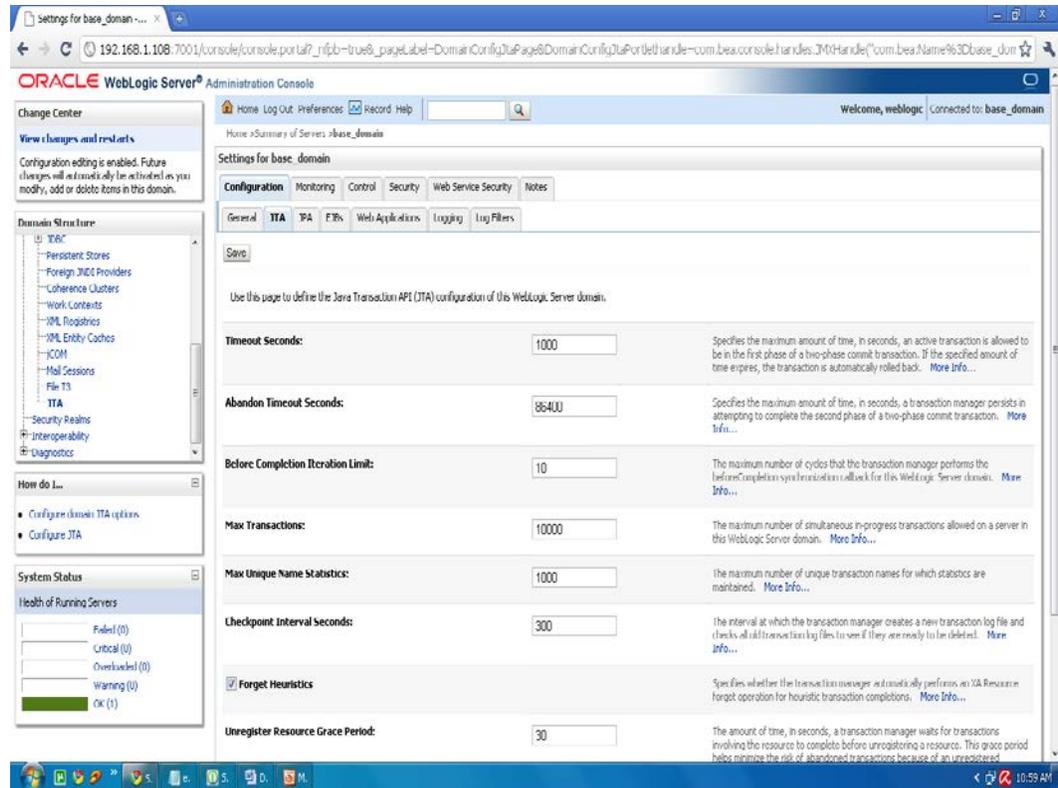
2. Once RTIL installation is complete, configure Xmx and Xms values in the WebLogic Admin console.

    a. Log in to the **admin console**.
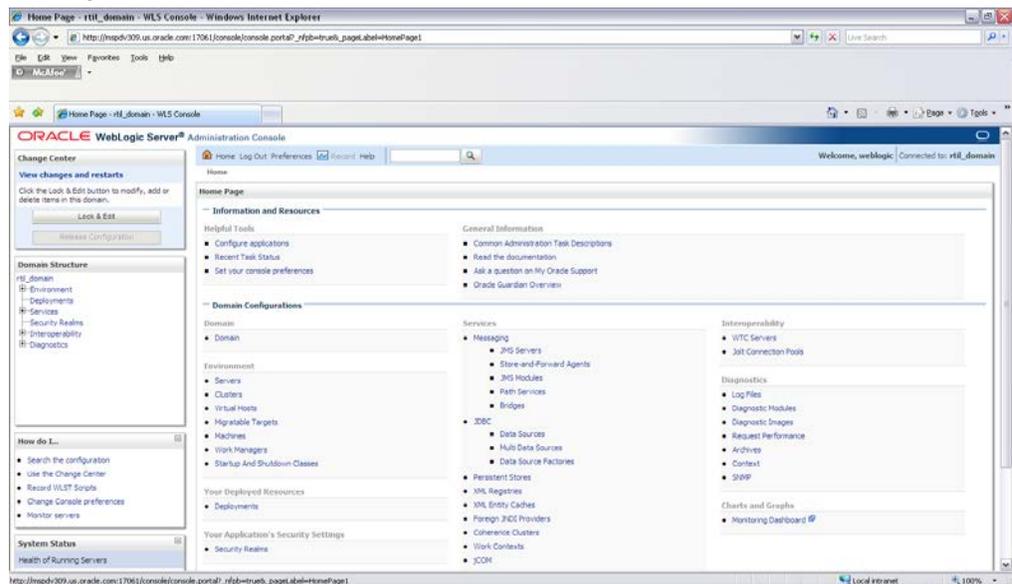
    b. Click **Lock & Edit**.

c. Navigate to Servers -> RTIL Managed Server (for example, rtil-server).

d. Click the Server Start tab under configuration.

e. Change the Xmx and Xms values to 2048m.
For example: -Xmx2048m -Xms2048m -XX:MaxPermSize=256m

f. Save the configuration.

g. Click **Activate Changes**.
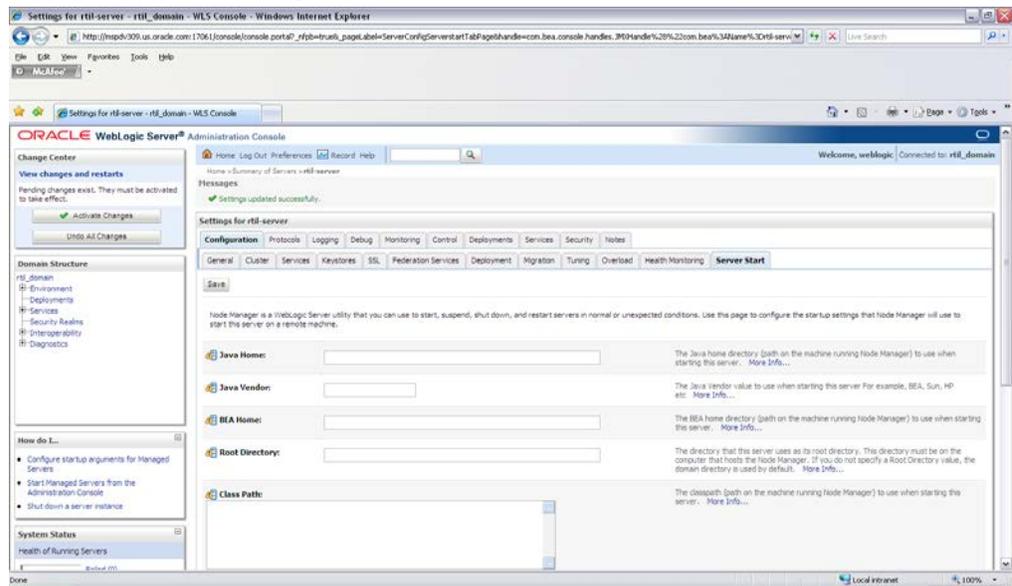
h. Navigate to Environment → Servers.

i. Click the Control Tab, under Summary of Servers.
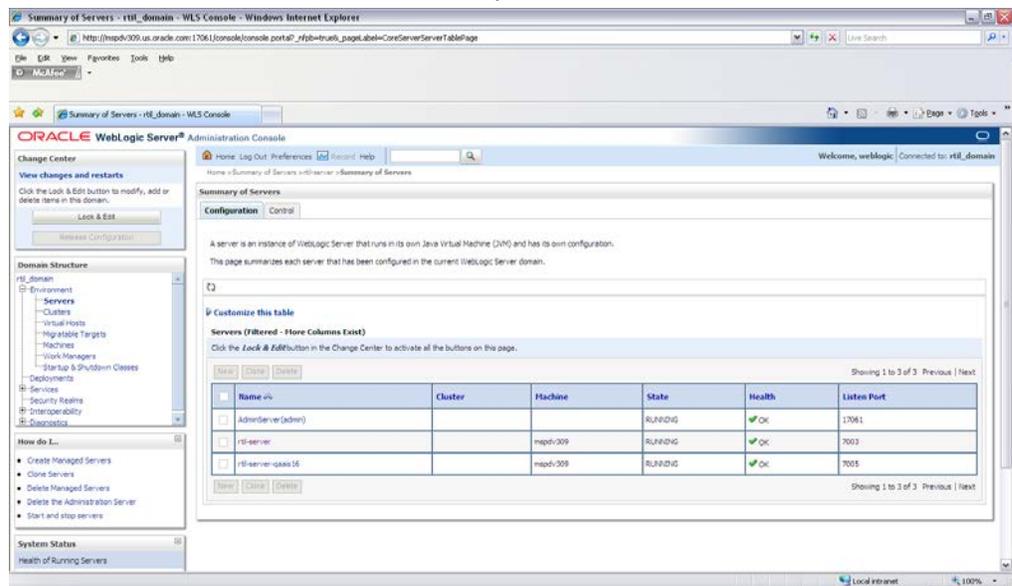
j. Restart RTIL Managed Server.

> **IMPORTANT!** IF THE FOLLOWING STEP IS NOT DONE,
> IT WILL RESULT IN A NON-WORKING APPLICATION!
> Add the following in the RTIL database to configure the
> RTIL URL in the WebService Consumer.

Log in to the RMS database schema as an RMS user.

Add a record in the retail_service_report_url table with the following column values.

Column Name	Value
RS_CODE	RTIL
RS_NAME	Retail Tax Integration Layer
RS_TYPE	S
URL	<RTIL URL> (for example, http://<rtilhostname:port>/rtil-web/invokeApp
SERVER	<RTIL_SERVER_NAME>
PORT	<PORT_NUMBER> (for example, 17002)

Resolving Errors Encountered During Application Installation

If the application installer encounters any errors, execution is halted immediately. You can run the installer in silent mode so that you do not have to retype the settings for your environment. See "Appendix: Installer Silent Mode" for silent mode instructions.

See "Appendix: Common Installation Errors" for common installation errors.

Because full application installation is required every time, any previous partial installations are overwritten by the successful installation.

Database Installation Tasks—Patch

There are two different methods to use for installing the ORFM 13.2.7 database schema patch. Option 1 uses the installer to apply the patch. Option 2 uses the patch controller scripts directly.

> **Note:** If any ORFM hotfixes have been applied to the schema after 13.2, be aware that using the installer or controller scripts to apply the 13.2.7 patch can have unexpected results. You will need to decide if it is safe to run all the scripts in the patch, or if the scripts need to be selectively run.

> **Note:** If you are patching from 13.2.2 and you have not already run the Data Migration utility in a previous release, this utility should be run after applying the 13.2.2 patch and before applying any later patches (for example 13.2.3). See the chapter "Data Migration," for details.

> **Note:** If you have manually applied the required hotfix 11071552, you will encounter errors when running the ORFM 13.2.1 database schema patch. See Appendix G: Common Installation Errors for the workaround and more details.

> **Note:** Shutdown any applications that may be using the RMS schema (for example RIB) before applying a schema patch.

RMS/ORFM Database Patch Sequence

It is very important that the RMS and ORFM database patches are run in the correct sequence. Use the following sequence to determine the order to apply RMS and ORFM patches. Running patches out of sequence can cause installation errors.

1. RMS 13.2 DB Upgrade
2. ORFM 13.2 DB Install
3. RMS 13.2.1 DB Patch
4. ORFM 13.2.1 DB Patch
5. RMS 13.2.2 DB Patch
6. ORFM 13.2.2 DB Patch
7. RMS 13.2.3 DB Patch
8. ORFM 13.2.3 DB Patch
9. RMS 13.2.3.1 DB Patch

10. RMS 13.2.3.2 DB Patch
11. ORFM 13.2.3.2 DB Patch
12. RMS 13.2.3.3 DB Patch
13. RMS 13.2.4 DB Patch
14. ORFM 13.2.4 DB Patch
15. RMS 13.2.5 DB Patch
16. ORFM 13.2.5 DB Patch
17. RMS 13.2.6 DB Patch
18. ORFM 13.2.6 DB Patch
19. RMS 13.2.7 DB Patch
20. ORFM 13.2.7 DB Patch

Option 1: Patch ORFM Database using the Patch Installer

The ORFM 13.2.7 database schema patch installer may be used to apply the ORFM 13.2.7 patch to a schema from 13.2. The installer should only be used to apply the patch if the schema being patched does not contain customizations or hotfixes. The patch may also be applied outside of the installer by calling the controller scripts directly. See Option 2: Patch ORFM Database using Controller Scripts later in this chapter for details on this method.

Before you apply the ORFM 13.2.7 patch:

- Make a backup of all your objects and database schema.
- Determine which patches and hot fix bundles have already been installed.
- Make sure the required RMS and ORFM schema patches have been applied. Refer to the section, "RMS/ORFM Database Patch Sequence," for details.
- Review the enclosed 13.2.7 Release Notes (rms-1327-rn.pdf).
- Review each of the enclosed defect documents.
- Make sure any applications that connect to the RMS schema are shut down. This includes RPM, ReIM, Allocation, RIB, and anything else that could be using the schema.

Create Staging Directory for ORFM Database Schema Files

To create a staging directory for ORFM database schema files, complete the following steps.

1. Log into the database server as a user that can connect to the RMS database.
2. Create a staging directory for the ORFM 13.2.7 patch.
3. Determine if you are patching a Taxweb environment or a Synchro environment.
4. Copy the appropriate DB patch zip file from the ORFM 13.2.7 release to the staging directory. If you are patching a Taxweb environment, you should copy orfm1327dbpatch-taxweb.zip. If you are patching a Synchro environment, you should copy orfm1327dbpatch-synchro.zip. This is referred to as DB_PATCH_DIR when patching a database schema.
5. Change directories to DB_PATCH_DIR and extract the DB patch zip file. This creates a orfm/dbschemapatch-taxweb or orfm/dbschemapatch-synchro subdirectory under DB_PATCH_DIR

Run the ORFM Database Schema Patch Installer

To run the ORFM database schema patch installer, complete the following steps.

> **Note:** See Appendix: ORFM Database Patch Installer Screens for details about the screens and fields in the ORFM database schema patch installer.

1. Change directories to DB_PATCH_DIR/orfm/dbschemapatch-taxweb or DB_PATCH_DIR/orfm/dbschemapatch-synchro.

2. Source the oraenv script to set up the Oracle environment variables (such as ORACLE_HOME, ORACLE_SID, PATH).

> **Example:** prompt$. oraenv
> ORACLE_SID = [] ? mydb
> prompt$

Verify the ORACLE_HOME and ORACLE_SID variables after running this script.

> **Example:** prompt$ echo $ORACLE_HOME
> /u00/oracle/product/mydbversion
> prompt$ echo $ORACLE_SID
> mydb

3. Set and export the following environment variables. These variables are needed in addition to the environment variables set by the oraenv script above.

Variable	Description	Example
NLS_LANG	Locale setting for Oracle database client	NLS_LANG=AMERICAN_AMERICA.UTF8 export NLS_LANG
DISPLAY	Address and port of X server on desktop system of user running install. Optional for dbschema installer	DISPLAY=<IP address>:0 export DISPLAY

4. If you are going to run the installer in GUI mode using an X server, you need to have the XTEST extension enabled. This setting is not always enabled by default in your X server. See Appendix: Common Installation Errors for details.

5. If the patch installer has already been run in this location you may wish to back up the ant.install.properties file. The settings from the ORFM 13.2.7 patch install will be refreshed with the latest input every time the installer runs.

6. Run the install.sh script to start the installer.

> **Note:** Below are the usage details for install.sh. The typical usage for GUI mode is no arguments.
>
> install.sh [text | silent]

> **Note:** If you are running the installer on AIX7.1, please set and export ANT_OPTS variable with "-Xmso1024k -Xss1024k", prior to launching the installer. For example, assuming korn, bourne, or bash shell:

> ANT_OPTS="-Xmso1024k -Xss1024k"
>
> export ANT_OPTS

7. On the Apply a Patch page for each product, provide the path to the corresponding controller ksh script. This path will be DB_PATCH_DIR/orfm/dbschemapatch-<taxweb or synchro>/ **orfm-dbpatch** /<version>/orfm. This directory should contain a orfm_controller.ksh file, which the installer runs to apply the ORFM 13.2.7 Patch.

8. The installer leaves behind the ant.install.properties file for future reference and repeat installations. This file contains inputs you provided. As a security precaution, make sure that the file has restrictive permissions.

> **Example:** `chmod 600 ant.install.properties`

Option 2: Patch ORFM Database using Controller Scripts

While the installer can be used to apply the entire ORFM database patch, there are situations in which it is better to run the patch directly with the scripts released in the patch. The installer calls start-all ksh scripts named orfm_controller.ksh which run all of the files in the patch. If there are any customizations or hotfixes in the schema then certain statements in the patch may result in errors. In this situation it is better to investigate where the conflicts are and fix the SQL scripts accordingly.

Before you apply the ORFM 13.2.7 patch:

▪ Make a backup of all your objects and database schema.

▪ Determine which patches and hotfix bundles have already been installed

▪ Make sure the required RMS and ORFM schema patches have been applied. Refer to the section **RMS/ORFM Database Patch Sequence** for details.

▪ Review the enclosed 13.2.7 Patch Release Notes (rms-1327-rn.pdf).

Create Staging Directory for RMS Database Schema Files

To create a staging directory for RMS database schema files, complete the following steps.

1. Log into the database server as a user that can connect to the RMS database.

2. Create a staging directory for the ORFM 13.2.7 patch.

3. Determine if you are patching a Taxweb environment or a Synchro environment.

4. Copy the appropriate DB patch zip file from the ORFM 13.2.7 release to the staging directory. If you are patching a Taxweb environment, you should copy orfm1327dbpatch-taxweb.zip. If you are patching a Synchro environment, you should copy orfm1327dbpatch-synchro.zip. This is referred to as DB_PATCH_DIR when patching a database schema.

5. Change directories to DB_PATCH_DIR and extract the DB patch zip file. This creates a orfm/dbschemapatch-taxweb or orfm/dbschemapatch-synchro subdirectory under DB_PATCH_DIR

Run the RMS Database Controller Scripts

To run the RMS database controller scripts, complete the following steps.

1. Change directories to DB_PATCH_DIR/orfm/dbschemapatch-<taxweb or synchro>/orfm-dbpatch/.

2. Source the oraenv script to set up the Oracle environment variables (ORACLE_HOME, ORACLE_SID, PATH, and so on).

Example:	prompt$. oraenv
	ORACLE_SID = [] ? mydb
	prompt$

3. Verify the ORACLE_HOME and ORACLE_SID variables after running this script.

Example:	prompt$ echo $ORACLE_HOME
	/u00/oracle/product/mydbversion
	prompt$ echo $ORACLE_SID
	mydb

4. Set and export the NLS_LANG environment variable.

Example:	NLS_LANG=AMERICAN_AMERICA.UTF8
	export NLS_LANG

5. For each version you want to patch, configure the individual controller.cfg files as follows:

- Copy DB_PATCH_DIR/orfm/dbschemapatch-<taxweb or synchro>/orfm-dbpatch /<version>/orfm/templates/controller.cfg to DB_PATCH_DIR/orfm/dbschemapatch-<taxweb or synchro>/orfm-dbpatch /<version>/orfm/controller.cfg

- Open the controller.cfg file you just created and replace the tokens for the following variables with the appropriate values:
    - **i.** Export PATCH_DIR= DB_PATCH_DIR/orfm/dbschemapatch-<taxweb or synchro>/orfm-dbpatch/<version>/orfm
    - **ii.** export SCHEMA_OWNER=<The name of the RMS schema>
    - **iii.** export MMUSER=< The name of the RMS schema >
    - **iv.** export ORACLE_SID=<SID for the database the MMUSER schema resides in>
    - **v.** export TNS_ADMIN=/path/to/wallet/files/dir/
    - **vi.** export UP=/@<Schema Owner Wallet Alias>

      Note: See Appendix: Setting Up Password Stores with Oracle Wallet for instructions to set up the database wallet.

6. For each version you wish to patch, cd to DB_PATCH_DIR/orfm/dbschemapatch-<taxweb or synchro>/orfm-dbpatch/<version>/orfm and run the following commands:

```
$ ./orfm_controller.ksh DBO Y
```

If the installation fails for any of the patches before completion, look at the logs in the DB_PATCH_DIR/orfm/dbschemapatch-<taxweb or synchro>/orfm-dbpatch/<version>/orfm/error and DB_PATCH_DIR/orfm/dbschemapatch-<taxweb or synchro>/orfm-dbpatch/<version>/orfm/log directories to determine the source of the error. You can continue the patch by rerunning the orfm_controller.ksh file, but only if the files generated in the DB_PATCH_DIR/orfm/dbschemapatch-<taxweb or synchro>/orfm-dbpatch/<version>/orfm/processed directory from the last patch attempt are still there. Any scripts that ran previously will be skipped. If you wish to start a new patch, delete all files in the DB_PATCH_DIR/orfm/dbschemapatch-<taxweb or synchro>/orfm-dbpatch/<version>/orfm/processed directory.

Batch Installation Tasks—Patch

There are two different methods to use for installing the ORFM 13.2.7 batch patch. Option 1 uses the RMS installer to apply patch. Option 2 compiles the batch directly.

Option 1: Use RMS Batch Installer to Patch

> **Note:** If using the RMS Batch Installer to apply the ORFM 13.2.7 patch, the RMS 13.2.7 and ORFM 13.2.7 batch patches should be applied at the same time. This section provides instructions on how to do this.

As shipped, the RMS 13.2 Batch installer will install and compile the batch programs for version 13.2. Patches for ORFM batch may be applied by copying the new source files and recompiling in place in the environment using the profile scripts created by the installer. This is the method to use if there is already an environment at the previous patch level. Go to the section "Option 2: Compile ORFM Batch Directly" for these instructions.

The installer method is only intended for new environments. Do not use the installer patching utility to attempt patching of batch in existing environments with the installer. If the patch is applied to customizations, they will be overwritten.

In this section, STAGING_DIR refers to the location where the RMS 13.2 Batch installer was originally expanded. The installer files from the original RMS 13.2 installation can be re-used or a new directory can be created with a fresh copy of the RMS 13.2 application installer.

Before you apply the RMS and ORFM 13.2.7 batch patches:

- Make a backup of all your Batch files.
- Review the enclosed 13.2.7 patch Release Notes (rms-1327-rn.pdf).

Before copying over any files:

- Note whether customizations have been made to the module. If so, then the customizations must be reapplied over the new version of the file (or the fix may need to be applied to the custom version of the code).
- Copy the original files to a different directory before copying over them in case they need to be referred to at a later date.

Create Staging Directory for RMS and ORFM Batch Patch Files

To create a staging directory for RMS and ORFM batch patch files, complete the following steps.

1. Log into the database server as a user that can connect to the RMS database.
2. Create a staging directory for the RMS 13.2.7 batch patch
3. Copy the rms1327batchpatch.zip file from the RMS 13.2.7 release to the staging directory. This is referred to as RMS_BATCH_PATCH_DIR when patching a database schema.

4. Change directories to RMS_BATCH_PATCH_DIR and extract the **rms1327batchpatch.zip** file. This creates a batch-patch subdirectory under RMS_BATCH_PATCH_DIR.

5. Create a staging directory for the ORFM 13.2.7 Batch Patch. This should be a different directory than RMS_BATCH_PATCH_DIR.

6. Copy the orfm1327batchpatch.zip file from the ORFM 13.2.7 release to the staging directory. This is referred to as ORFM_BATCH_PATCH_DIR when patching a database schema.

7. Change directories to ORFM_BATCH_PATCH_DIR and extract the **orfm1327batchpatch.zip** file. This creates a batch-patch subdirectory under ORFM_BATCH_PATCH_DIR.

8. Create a staging directory for the RMS batch installation software STAGING_DIR.

9. Copy the **rms13batch.zip** file from the RMS 13.2 release to the staging directory. This is referred to as STAGING_DIR when installing the RMS batch software.

10. Change directories to STAGING_DIR and extract the rms13batch.zip file. This creates an rms/batch subdirectory under STAGING_DIR.

Copy Batch Files

For new environments, the installer can be used to install and compile the batch programs at the latest patch level using the installer patching utility included with RMS and ORFM batch patches. The utility is located under RMS_BATCH_PATCH_DIR/batch-patch/patch-util and ORFM_BATCH_PATCH_DIR/batch-patch/patch-util. This utility will accept as input the RMS and ORFM patch files and add them to the RMS 13.2 Batch installer package. After running this utility, the RMS Batch installer can be used to install the environment, and they will install the latest version of each batch module.

Custom Modules

Custom source can be provided by the user in a folder named RMS_BATCH_PATCH_DIR/batch-patch/patch-util/custom and ORFM_BATCH_PATCH_DIR/batch-patch/patch-util/custom. The source code in this folder is applied last, after all patches have been applied.

Run the Installer Patching Utility

To run the installer patching utility, complete the following steps.

1. Set the JAVA_HOME environment variable to point to a JDK which is being used by WebLogic install.

2. Set the ANT_HOME environment variable to point to an Ant installation. There is one included with the RMS installer that can be used to do this.

   ANT_HOME=STAGING_DIR/rms/batch/ant

   export ANT_HOME

3. Change directories to RMS_BATCH_PATCH_DIR/batch-patch/patch-util/

4. Modify the patch.properties file. Set the installer.dir and patch.to.version properties.

Property Name	Description
installer.dir	The directory where the RMS installer files are located under STAGING_DIR. This directory will contain the install.sh file. Example: /opt/rms/batch
patch.to.version	The version you want to patch to Example: 13.2.7

5. Run the patch.sh script. This script will copy the RMS files from each patch from 13.2 up to the patch specified in the **patch.to.version** property. These files are copied into the RMS installer package.

6. Change directories to ORFM_BATCH_PATCH_DIR/batch-patch/patch-util/

7. Modify the patch.properties file. Set the installer.dir, patch.to.version, and tax.provider properties.

Property Name	Description
installer.dir	The directory where the RMS installer files are located under STAGING_DIR. This directory will contain the install.sh file. Example: /opt/rms/batch
patch.to.version	The version want to patch to Example: 13.2.7
tax.provider	Enter taxweb if you are installing against a Taxweb environment. Enter synchro if you are installing against a Synchro environment.

8. Run the patch.sh script. This script will copy the ORFM files from each patch from 13.2.0 up to the patch specified in the **patch.to.version** property. These files are copied into the RMS installer package.

Run RMS Batch Installer

To run the RMS batch installer, complete the following steps.

> **Note:** See "Appendix: RMS Batch Installer Screens" for details on every screen and field in the batch installer.

1. Change directories to STAGING_DIR/rms/batch. This directory was created when the rms13batch.zip file was expanded under STAGING_DIR.

2. Source the oraenv script to set up the Oracle environment variables (ORACLE_HOME, ORACLE_SID, PATH, etc)

> **Example:** prompt$. oraenv
> ORACLE_SID = [] ? mydb
> prompt$

Verify the ORACLE_HOME and ORACLE_SID variables after running this script.

> **Example:** prompt$ echo $ORACLE_HOME
> /u00/oracle/product/mydbversion
> prompt$ echo $ORACLE_SID
> mydb

3. Verify that the following executables are available from PATH: make, makedepend, cc, ar.

Example:	Here are some locations where makedepend is commonly found:
	Linux: /usr/X11R6/bin
	SUN: /usr/openwin/bin
	AIX: /usr/X11R6/bin
	HP-UX: /opt/imak/bin

Note: For environments running Solaris and Oracle RDBMS 11.2.0.3, ensure Sun Studio 12 compiler is in the path.
For example,
 export PATH=/vol.rtk/compilers/sunstudio12.1/bin:/usr/xpg4/bin:$PATH

4. Set and export the following environment variables. These variables are needed in addition to the environment variables set by the oraenv script above.

Property Name	**Description**	**Example**
DISPLAY	Address and port of X server on desktop system of user running install. Optional for batch installer	DISPLAY=<IP address>:0 export DISPLAY

5. If you are going to run the installer in GUI mode using an X server, you need to have the XTEST extension enabled. This setting is not always enabled by default in your X server. See Appendix: Common Installation Errors.

6. Run the install.sh script to start the installer.

> **Note:** Below are the usage details for install.sh. The typical usage for GUI mode is no arguments.
>
> ./install.sh [text | silent]

> **Note:** If you are running the installer on AIX7.1, please set and export ANT_OPTS variable with "-Xmso1024k -Xss1024k", prior to launching the installer. For example, assuming korn, bourne, or bash shell:
>
> ANT_OPTS="-Xmso1024k –Xss1024k"
>
> export ANT_OPTS

Depending on system resources, a typical RMS batch installation takes anywhere from 20 to 60 minutes.

The installer will ask for an installation directory. This is the destination directory for the RMS files. This directory is referred to as INSTALL_DIR for the remainder of this chapter. Do not provide an INSTALL_DIR that is located at or underneath STAGING_DIR.

7. After the installer is complete, you can check its log file: rms.batch.install.<timestamp>.log.

8. The installer leaves behind the ant.install.properties file for future reference and repeat installations. This file contains inputs you provided. As a security precaution, make sure that the file has restrictive permissions.

> **Example:** `chmod 600 ant.install.properties`

> **Note:** The object counts performed by the installer may be off due to the patch adding or removing modules. The installer warnings about this can be ignored

Resolving Errors Encountered During Batch Installation

The RMS batch installer is a full install that starts from the beginning each time it is run. If you encounter errors in your environment, after resolving the issue you can safely run the batch installer again to attempt another installation.

RETL

The RMS batch installer installs the RETL files under INSTALL_DIR /RETLfor<product>/rfx.

See Appendix: RMS RETL Instructions of this document for more information about RETL.

Data Conversion Scripts

The RMS batch installer installs the data conversion scripts under INSTALL_DIR /external/scripts. To complete the setup of these files, perform the following steps.

1. Create the following new directories:

    INSTALL_DIR/external/data

    INSTALL_DIR/external/logs

    The RMS Batch installer should have already created INSTALL_DIR/scripts.

2. Log into sqlplus as SYSTEM and run the following commands:
    ```
    SQL> create or replace directory rms13dev_ext_data as
    'INSTALL_DIR/external/data';
    SQL> create or replace directory rms13dev_ext_logs as
    'INSTALL_DIR/external/logs';
    ```

    > **Note:** You need to replace INSTALL_DIR with your INSTALL_DIR and you can rename the external data and log directory.

    > **Note:** The user that creates these directories owns them.

    > **Note:** The data and logs directories should be chmoded 777.

3. Log into sqlplus as SYSTEM and grant access to them by running the following commands:
    ```
    SQL> grant read on directory rms13dev_ext_data to public;
    SQL> grant read, write on directory rms13dev_ext_logs to public
    ```

4. Grant the following privileges to any other users who will be using data conversion.
    ```
    SQL> grant read on directory rms13dev_ext_data to RMS13DEVc;
    SQL> grant read, write on directory rms13dev_ext_logs to RMS13DEV;
    ```

Option 2: Compile ORFM Batch Directly

> **Note:** Warning messages may appear during the compilation of the batch. These warnings can be ignored if the batch executables are successfully generated.

Create Staging Directory for ORFM Batch Patch Files

To create a staging directory for RMS batch patch files, complete the following steps.

1. Log into the database server as a user that can connect to the RMS database.
2. Create a staging directory for the ORFM 13.2.7 batch patch.
3. Copy the orfm1327batchpatch.zip file from the ORFM 13.2.7 release to the staging directory. This is referred to as ORFM_BATCH_PATCH_DIR when patching a database schema.
4. Change directories to ORFM_BATCH_PATCH_DIR and extract the orfm1327batchpatch.zip file. This creates a batch-patch subdirectory under ORFM_BATCH_PATCH_DIR.

Set Environment Variables

> **Note**: INSTALL_DIR is the location where RMS 13 batch was installed.

To set environment variables, make sure the following variables are set. The RMS 13.2 batch installer should have created a batch.profile file located at INSTALL_DIR/batch.profile. This profile script can be used to set all environment variables listed below.

> **Example:** cd <INSTALL_DIR>
> . ./batch.profile

Variables set by batch.profile:

- PATH must include make, makedepend and the C compiler
- MMHOME=INSTALL_DIR/rms
- MMUSER=RMS Schema Owner
- ORACLE_HOME=Location of Oracle install
- ORACLE_SID=The Oracle Sid for the RMS database
- UP=/@< Schema Owner Wallet Alias >
- TNS_ADMIN=/path/to/wallet/files/dir/

AIX:

- LIBPATH=$ORACLE_HOME/lib:$MMHOME/oracle/lib/bin:$LDPATH
- OBJECT_MODE=64
- LINK_CNTRL=L_PTHREADS_D7

HP:

- SHLIB_PATH=$ORACLE_HOME/lib:$MMHOME/oracle/lib/bin:$SHLIB_PATH

Solaris:

- LD_LIBRARY_PATH=$ORACLE_HOME/lib:$MMHOME/oracle/lib/bin:$LD_LIBRARY_PATH

    > **Note:** For environments running Solaris and Oracle RDBMS 11.2.0.3, ensure Sun Studio 12 compiler is in the path.
    >
    > Example: export PATH=/vol.rtk/compilers/sunstudio12.1/bin:/usr/xpg4/bin:$PATH

Linux:

- LD_LIBRARY_PATH=$ORACLE_HOME/lib: $MMHOME/oracle/lib/bin:$LD_LIBRARY_PATH

    > **Note:** See "Appendix: Setting Up Password Stores with Oracle Wallet."

Compile Batch Libraries

To compile batch libraries, complete the following steps.

> **Note:** Verify that TNS is set up correctly by using the UP variable to successfully log in to the RMS 13 schema. For example, /u00/oracle> sqlplus $UP.

1. Copy the files from ORFM_BATCH_PATCH_DIR/batch-patch/<version>/<taxweb or synchro>/oracle/lib/src to INSTALL_DIR/oracle/lib/src. This step should be done with each version you want to apply in order of earliest to latest patch starting at 13.2.0 and ending with the 13.2.7 deltas.

2. Change directories to INSTALL_DIR/oracle/lib/src.

3. To make library dependencies run this command.

   ```
   make –f l10n_rmslib.mk depend 2>&1 | tee libdpnd.log
   ```

   Check the libdpnd.log file for errors.

4. To make batch libraries:

   ```
   make –f l10n_rmslib.mk 2>&1 | tee libretek.log
   ```

   Check the libretek.log file for errors.

5. To install batch libraries:

   ```
   make –f l10n_rmslib.mk install
   ```

   The batch libraries should now be in INSTALL_DIR/oracle/lib/bin.

Compile Batch Source Code

To compile batch source code complete the following steps.

1. Copy the files from ORFM_BATCH_PATCH_DIR/batch-patch/<version>/<taxweb or synchro>/oracle/proc/src to INSTALL_DIR/oracle/proc/src. This step should be done with each version you want to apply in order of earliest to latest patch starting at 13.2.0 and ending with the 13.2.7 deltas.

2. Change directories to INSTALL_DIR/oracle/proc/src.

3. Create dependencies.

   a. Run the following command:
   ```
   make -f l10n_br_rms.mk depend 2>&1 | tee srcdpnd.log
   ```
   b. Check the srcdpnd.log file for errors.

4. Create batch programs.

   a. Run the following command:
   ```
   make -f l10n_br_rms.mk 2>&1 | tee srcall.log
   ```
   b. Check the srcall.log file for errors.

5. Install the batch programs.
   ```
   make -f l10n_br_rms.mk install
   ```

The ORFM batch programs should now be in INSTALL_DIR/oracle/proc/bin.

Copy Data Conversion Scripts

Copy the files from ORFM_BATCH_PATCH_DIR/batch-patch/<version>/<taxweb or synchro>/external to INSTALL_DIR/external. This step should be done with each version you want to apply in order of earliest to latest patch starting at 13.2.0 and ending with the 13.2.7 deltas.

Application Installation Tasks—Patch

There are two different methods to use for installing the ORFM 13.2.7 application patch. Option 1 uses the RMS installer to apply the patch. Option 2 compiles the ORFM toolset and forms directly.

> **IMPORTANT**: If there is an existing WebLogic installation on the server, you must upgrade to WebLogic 10.3.6. All middleware components associated with WebLogic server should be upgraded to 11.1.1.6. A new forms 11gr2 install (11.1.2.1) will be needed along with the WebLogic upgrade.
>
> Back up the weblogic.policy file ($WLS_HOME/wlserver_10.3/server/lib) before upgrading your WebLogic server, because this file could be overwritten. Copy over the weblogic.policy backup file after the WebLogic upgrade is finished and the post patching installation steps are completed.

> **Note**: If the 13.2.7 database schema patch has been run, the entire set of toolsets and forms must be recompiled.

Option 1: Use RMS Application Installer to Patch

> **Note:** If using the RMS Application Installer to apply the ORFM 13.2.7 patch, the RMS 13.2.7 and ORFM 13.2.7 Application patches should be applied at the same time. This section provides instructions on how to do this.

As shipped, the RMS 13.2 Forms installer installs and compiles the forms for version 13.2. Patches for ORFM Forms may be applied by copying the new source files and recompiling in place in the environment using the profile scripts created by the installer. This is the method to use if there is already an environment at the previous patch level. Go to the section "Option 2: Compile ORFM Toolset and Forms Directly" for these instructions.

The installer method is only intended for new environments. Do not use the installer patching utility to attempt patching of forms in existing environments with the installer. If the patch is applied to customizations, they will be overwritten.

In this section, STAGING_DIR refers to the location where the RMS 13.2 application installer was originally expanded. A new directory should be created with a fresh copy of the RMS 13.2 application installer.

Before you apply the RMS and ORFM 13.2.7 patch:

- Make a backup of all your forms and library files.
- Review the enclosed 13.2.7 Release Notes (rms-1327-rn.pdf).

Before copying over any files:

- Note whether customizations have been made to the module. If so, then the customizations must be reapplied over the new version of the file (or the fix may need to be applied to the custom version of the code).

- Copy the original files to a different directory before copying over them in case they need to be referred to at a later date.

Create RMS Help Managed Server

Note: If rms help managed server is already installed, please skip this section.

1. Log in to the admin console.
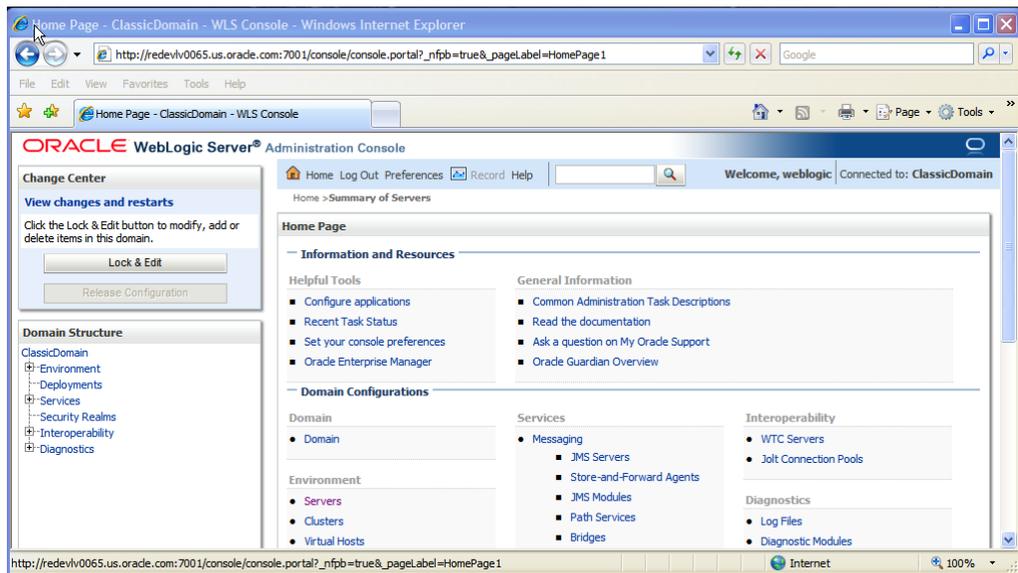
2. Click **Lock & Edit**.

3. Navigate to Environment > Servers and select new tab of the servers on the right side.
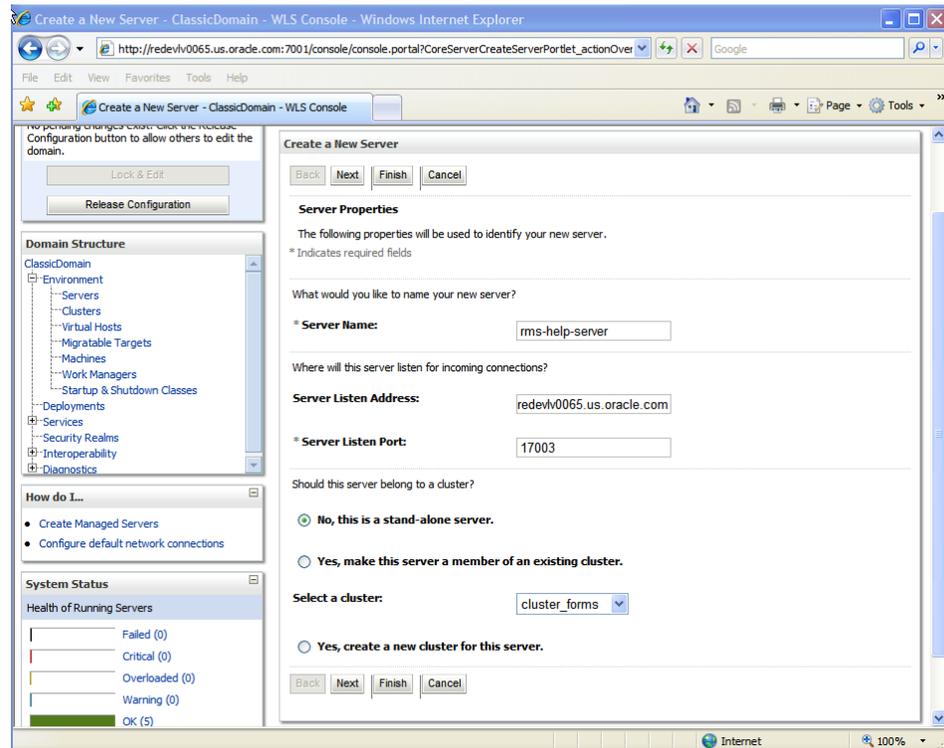
4. Set the following variables:

- **Server Name**: These should be some name specific to your application targeted (for example, rms-help-server).

- **Server Listen Address**: <weblogic server> (for example, redevlv0065.us.oracle.com)

- **Server Listen Port**: A free port; check for availability.

    A suggestion is to increment the AdminServer port by two and keep incrementing by two for each managed server (for example, 17003, 17005, 17007, and so on).

5. Click **Next**.

6. Click **Finish**.

7. Click **Activate Changes** on the left side.

Install Node Manager

Install Node Manager if it was not created during domain install. Node Manager is required so that the managed servers can be started and stopped through the admin console. Only one node manager is needed per WebLogic installation.

1. Log in to the admin console.

2. Click **Lock & Edit** button and navigate to Environments > Machines.

3. Click **New**.
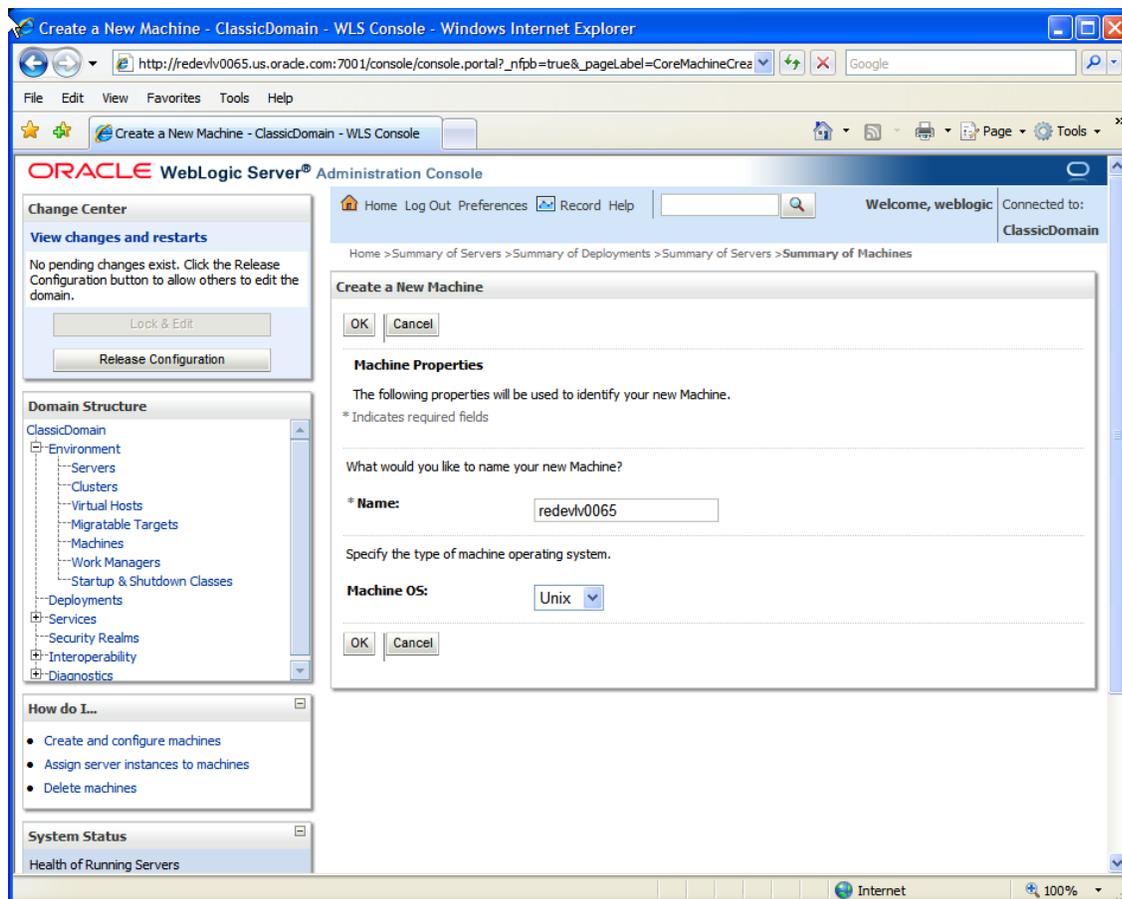
4. Set the following variables:
   - **Name**: Logical machine name
   - **Machine OS**: UNIX

5. Click **OK**.

6. Click on the machine created.

7. Click the Node Manager tab and update the details below.

- **Type:** Plain
- **Listen Address:** Machine IP (for example, redevlv0065.us.oracle.com)
- **Listen Port:** Node manager will be assigned a default port (for example, 5556)

8. Click **Save**.

9. Click **Activate Changes**.
10. Click **Lock & Edit**.

11. Navigate to Environments->machines->click on the machine name and select the Servers tab.

12. Click **Add**. Add the managed servers that need to be configured with NodeManager.
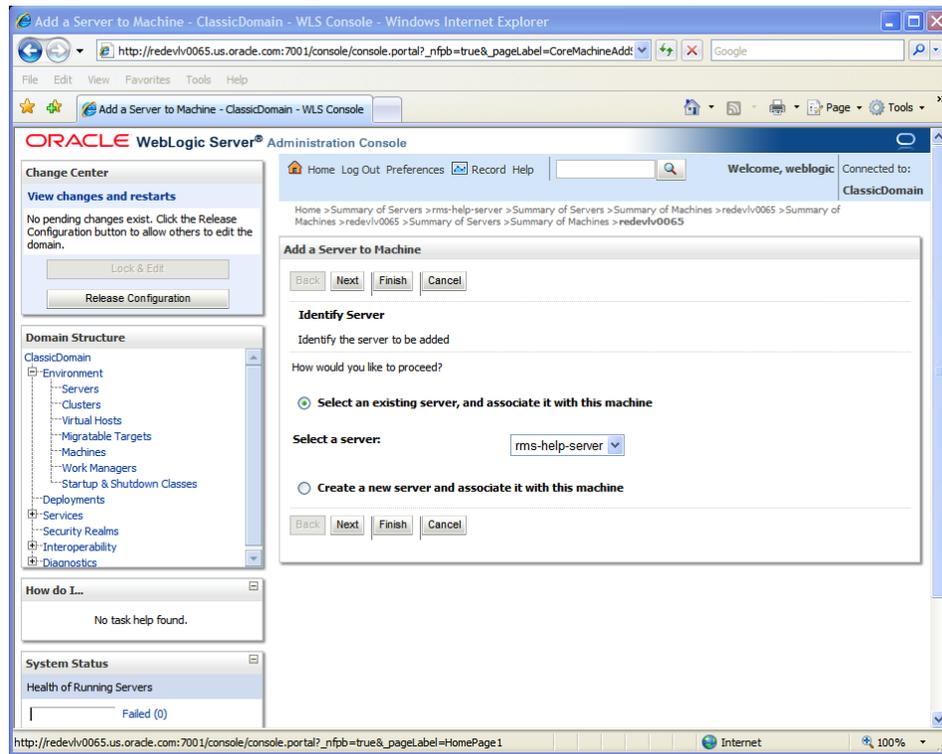
13. Set the following variables:

- Server: name of server previously created (for example, rms-help-server)

14. Click **Next**. Click **Finish**.

15. Click **Activate Changes**.

> **Note:** To activate changes the server must be stopped if it is running:
>
> $WLS_HOME/user_projects/domains/<domain-name>/bin/stopManagedWebLogic.sh <rms-help-server> ${server_name}:${server_port}
>
> Go to each managed server that is being added to the machine and click the Server Start tab. In the Class Path box, add the following:
>
> ```
> <full-path-to-domain>/servers/<managed-server>
> ```
>
> For example:
> ```
> /u00/webadmin/product/10.3.x/WLS/user_projects/domains/C
> lassicDomain/servers/rms-help-server
> ```

16. After the CLASSPATH changes are finished, click **Save.**

17. Click **Activate Changes**.

18. Start the Nodemanager from the server using the startNodeManager.sh at $WLS_HOME/wlserver_10.3/server/bin.

19. Edit the nodemanager.properties file at the following location with the below values:

$WLS_HOME/wlserver_10.3/common/nodemanager/nodemanager.properties

- SecureListener=false
- StartScriptEnabled=true
- StartScriptName=startWebLogic.sh.

20. The NodeManager must be restarted after making changes to the nodemanager.properties file.

> **Note:** The nodemanager.properties file is created after NodeManager is started for the first time. It is not available before that point.

Create Staging Directory for RMS and ORFM Application Patch Files

To create a staging directory for RMS and ORFM application patch files, complete the following steps.

1. Log on to your application server as a user with read and write access to the Weblogic files.

2. Create a staging directory for the RMS Application patch.

3. Copy the file rms1327apppatch.zip from the RMS 13.2.7 release to staging directory. This will be referred to as RMS_APP_PATCH_DIR when installing application software and reports.

4. Change directories to RMS_APP_PATCH_DIR and extract the file rms1327apppatch.zip. This creates an app-patch subdirectory under RMS_APP_PATCH_DIR.

5. Create a staging directory for the ORFM 13.2.7 application patch. This should be a different directory than RMS_APP_PATCH_DIR.

6. Copy the orfm1327apppatch.zip file from the ORFM 13.2.7 release to the staging directory. This is referred to as ORFM_APP_PATCH_DIR when patching a database schema.

7. Change directories to ORFM_APP_PATCH_DIR and extract the **orfm1327apppatch.zip** file. This creates an app-patch subdirectory under ORFM_APP_PATCH_DIR.

8. Create a staging directory for the RMS application installation software STAGING_DIR.

9. Copy the file rms13application.zip from the RMS 13. 2 release to staging directory. This will be referred to as STAGING_DIR when installing application software and reports.

10. Change directories to STAGING_DIR and extract the file rms13application.zip. This will create an rms/application subdirectory under STAGING_DIR.

Copy Forms and Library Patch Files

For new environments, the installer can be used to install and compile the forms at the latest patch level using the installer patching utility included with RMS and ORFM Forms patches. The utility is located under RMS_APP_PATCH_DIR/app-patch/patch-util and ORFM_APP_PATCH_DIR/app-patch/patch-util. This utility will accept as input the RMS and ORFM patch files and add them to the RMS 13.2 Forms installer package. After running this utility, the RMS Forms installer can be used to install the environment, and they will install the latest version of each batch module.

Custom Modules

Custom source can be provided by the user in a folder named RMS_APP_PATCH_DIR/app-patch/patch-util/custom and ORFM_APP_PATCH_DIR/app-patch/patch-util/custom. The source code in this folder is applied last, after all patches have been applied.

Run the Installer Patching Utility

To run the installer patching utility, complete the following steps.

1. Set the JAVA_HOME environment variable to point to a JDK.

2. Set the ANT_HOME environment variable to point to an Ant installation. There is one included with the RMS installer that can be used for this.

   ANT_HOME=<STAGING_DIR>/rms/application/ant

   export ANT_HOME

3. Change directories to RMS_APP_PATCH_DIR/app-patch/patch-util/

4. Modify the patch.properties file. Set the installer.dir and patch.to.version properties.

Property Name	Description
installer.dir	The directory where the installer files are located under STAGING_DIR. Example: /opt/rms/application. This directory will contain the install.sh file.
patch.to.version	The version want to patch to Example: 13.2.7

5. Run the patch.sh script. This script will copy the files from each patch from 13.2 up to the patch specified in the **patch.to.version** property. These files are copied into the installer package.

6. Change directories to ORFM_APP_PATCH_DIR/app-patch/patch-util/

7. Modify the patch.properties file.

Property Name	Description
installer.dir	The directory where the RMS installer files are located under STAGING_DIR. This directory will contain the install.sh file. Example: /opt/rms/application
patch.to.version	The version want to patch to Example: 13.2.7
tax.provider	Enter taxweb if you are installing against a Taxweb environment. Enter synchro if you are installing against a Synchro environment.

Variable	Description	Example
JAVA_HOME	Location of a Java 1.7.0+ JDK 64 bit. For Linux and Solaris OS only. This should be set to the Java being used by the Weblogic server.	JAVA_HOME= /u00/webadmin/java/jdk1.7 export JAVA_HOME
DISPLAY	Address and port of X server on desktop system of user running install. Required for forms application installer.	DISPLAY=<IP address>:0 export DISPLAY

4. To install the RMS application you need to be using an X server such as Exceed and have set the DISPLAY environment variable. The installer does not continue otherwise.

5. Run the install.sh script to start the installer.

> **Note:** Below are the usage details for install.sh. The typical usage for GUI mode is no arguments.
>
> ./install.sh [text | silent]

> **Note:** If you are running the installer on AIX7.1, please set and export ANT_OPTS variable with "-Xmso1024k - Xss1024k", prior to launching the installer. For example, assuming korn, bourne, or bash shell:
>
> ANT_OPTS="-Xmso1024k –Xss1024k"
>
> export ANT_OPTS

6. The Installer automatically sets additional environment variables based on the values of the environment variables set in step 3. At the end of the preinstall checks it will print out a summary containing these new environment variables:

> **Example:**
>
> MW_HOME=/u00/webadmin/product/10.3.x/WLS_ Forms
>
> ORACLE_HOME=/u00/webadmin/product/10.3.x/WLS_ Forms/as_1
>
> ORACLE_INSTANCE=/u00/webadmin/product/10.3.x /WLS_Forms/asinst_1
>
> DOMAIN_HOME=/u00/webadmin/product/10.3.3/WLS_ Forms/user_projects/domains/ClassicDomain
>
> WLS_INSTANCE=WLS_FORMS
>
> ORACLE_SID=mydb
>
> JAVA_HOME=/u00/webadmin/java/jdk1.7 (This should be set to the Java being used by Weblogic server.)

Verify that these environment variables are correct. If any of them are incorrect, you need to verify that the Weblogic shell scripts that set them are configured properly. Check the following scripts:

```
$DOMAIN_HOME/bin/setDomainEnv.sh
$WEBLOGIC_HOME/wlserver_10.3/common/bin/commEnv.sh
```

> **Example:**
>
> /u00/webadmin/product/10.3.x/WLS_Forms/user_ projects/domains/ClassicDomain/bin/setDomainEnv.sh
>
> /u00/webadmin/product/10.3.x/WLS_Forms/wlserver_ 10.3/common/bin/commEnv.sh

Depending on system resources, a typical installation takes anywhere from 45 minutes to two hours.

The installer asks for an installation directory. This is the destination directory for the RMS files. This directory will be referred to as INSTALL_DIR for the remainder of this chapter. Do not provide an INSTALL_DIR that is located at or underneath STAGING_DIR.

> **Note:** You may see the following warning repeated during installation:
>
> ```
>     [exec] Warning! One or more of your selected
> locales are not available.
>     [exec] Please invoke the commands "locale" and
> "locale -a" to verify your
>     [exec] selections and the available locales.
>     [exec]
>     [exec] Continuing processing using the "C" locale.
> ```
> Or
> ```
>     [exec] couldn't set locale correctly
> ```
> This warning can be ignored.

7. After the installation is complete, you can check its log file: INSTALL_DIR/base/log/rms.app.install.<timestamp>.log. The INSTALL_DIR/base/error will contain information about possible failed compilations.

8. The installer leaves behind the ant.install.properties file for future reference and repeat installations. This file contains inputs you provided. As a security precaution, make sure that the file has restrictive permissions.

> **Example:** `chmod 600 ant.install.properties`

> **Note:** The object counts performed by the installer may be off due to the patch adding or removing modules. The installer warnings about this can be ignored

9. If during the screens you chose not to have the installer automatically configure WebLogic, after the installation is complete follow the post installation tasks by making backups of the listed files and copying the required files to the specified location.

Example:

```
############################################################################
##                      WebLogic Configuration Tasks                     ##
############################################################################
Contact your WebLogic administrator and have them make backups of the following
files:

/u00/webadmin/product/10.3.x/WLS_Forms/user_projects/domains/ClassicDomain/config/
fmwconfig/servers/WLS_FORMS/applications/formsapp_11.1.2/config/forms/registry/ora
cle/forms/registry/Registry.dat
/u00/webadmin/product/10.3.x/WLS_Forms/user_projects/domains/ClassicDomain/config/
fmwconfig/servers/WLS_FORMS/applications/formsapp_11.1.2/config/formsweb.cfg

Have the WebLogic administrator stop WLS_FORMS and ohs1,
copy everything in /home/oretail/rms132/install/post
to /u00/webadmin/product/10.3.x/WLS_Forms to update the files
and then start WLS_FORMS and ohs1
for the changes to take effect.

example: cp -R * /u00/webadmin/product/10.3.x/WLS_Forms
```

Resolving Errors Encountered During Application Installation

In the event a form or menu does not compile, go to INSTALL_DIR/base/error and see which objects didn't compile. To try and manually recompile the object run INSTALL_DIR/base/forms.profile and run the following command:

```
# frmcmp.sh userid=$UP module_type=form module=FORM_OR_MENU
```

You can also safely rerun the installer to see if the form compiles.

> **Note:** If you rerun the installer, and choose to check the box **Configure WebLogic** in the installer screens, you may need to clean up duplicate entries in the WebLogic formsweb.cfg file.

Clustered Installations – Post-Installation Steps

If you are installing the RMS application to a clustered Oracle Application Server environment, there are some extra steps you need to take to complete the installation. In these instructions, the application server node with the ORACLE_HOME you used for the RMS application installer is referred to as *master node*. All other nodes are referred to as *remote nodes*.

To complete the RMS forms application install, the installer provided new versions of formsweb.cfg and the newly-created env files for the new RMS installation. The entries added to formsweb.cfg and env files for these new environments should be copied from the master node to the remote nodes.

> **Note:** The newly created env files will have a change to the FORMS_PATH variable as well as entries appended to the end of the file.

> **Note:** Do **NOT** copy the entire file from one node to another. Only copy the RMS entries modified in these files by the installer. There is node-specific information in this file that is different between ORACLE_HOME installations.

Oracle Configuration Manager

The Oracle Retail OCM Installer packaged with this release installs the latest version of OCM.

The following document is available through My Oracle Support (formerly MetaLink). Access My Oracle Support at the following URL:

`https://support.oracle.com`

Oracle Configuration Manager Installer Guide (Doc ID: 1071030.1)

This guide describes the procedures and interface of the Oracle Retail Oracle Configuration Manager Installer that a retailer runs at the beginning of the installation process.

OCM Documentation Link

`http://www.oracle.com/technology/documentation/ocm.html`

RMS Reports Copied by the Application Installer

The application installer copies RMS report files to INSTALL_DIR/base/reports. These files should be installed into BI Publisher as documented in the RMS Reports chapter of this document.

Test the RMS Application

Oracle Retail provides test cases that allow you to smoke test your installation. Refer to My Oracle Support document, *Oracle Retail Merchandising Installation Test Cases* (ID 1277131.1.1).

Option 2: Compile ORFM Toolset and Forms Directly

Option 2 entails compiling ORFM forms directly, as described below.

Create Staging Directory for ORFM Application Files

To create a staging directory for ORFM application files, complete the following steps.

1. Log into the application server as a user with read and write access to the WebLogic files.

2. Create a staging directory for the ORFM application installation software.

3. Copy the file orfm1327apppatch.zip from the ORFM 13.2.7 release to staging directory. This is referred to as ORFM_APP_PATCH_DIR when installing application software and reports.

4. Change directories to ORFM_APP_PATCH_DIR and extract the file orfm1327apppatch.zip.

Set Environment Variables

To set environment variables, complete the following steps.

> **Note**:
> INSTALL_DIR is the location where RMS 13 forms were installed.
>
> ORACLE_HOME is the location where Oracle WebLogic (10.3.6) has been installed.
>
> ORACLE_INSTANCE is the location where WebLogic has been installed and contains the executables to compile forms.

Make sure the following variables are set. The RMS 13.2 forms installer should have created a forms.profile file located at INSTALL_DIR/base/forms.profile. This profile script can be used to set all environment variables listed below.

> **Example:** cd <INSTALL_DIR>/base
> . ./forms.profile

Variables set by forms.profile are as follows.

- **All OS Platforms**
  - MMHOME=INSTALL_DIR/base
  - ORACLE_HOME= pathtoWebLogic/as_1
  - ORACLE_INSTANCE=/pathtoWebLogic/asinst_1
  - ORACLE_SID= The Oracle Sid for the RMS database
  - UP=/@< Schema Owner Wallet Alias >
  - TNS_ADMIN=/pathtowallet/files/dir/
  - NLS_LANG=AMERICAN_AMERICA.UTF8
  - DISPLAY=<IP address of X server>:0.0
  - PATH=$ORACLE_HOME/bin:$ORACLE_HOME/opmn/bin:$ORACLE_HOME/dcm/bin:INSTALL_DIR/base/forms_scripts:$PATH

- CLASSPATH=$ORACLE_HOME/jlib/importer:
  $ORACLE_HOME/jlib/debugger.jar:$ORACLE_HOME/jlib/utj.jar:$ORACLE_HOME/jlib/ewt3.jar:$ORACLE_HOME/jlib/share.jar:$ORACLE_HOME/jlib/dfc.jar:$ORACLE_HOME/jlib/help4.jar:$ORACLE_HOME/jlib/oracle_ice.jar:$ORACLE_HOME/jlib/jewt4.jar
- FORMS_BUILDER_CLASSPATH=$CLASSPATH
- FORMS_PATH=INSTALL_DIR/base/toolset/bin:INSTALL_DIR/rms/forms/bin:$ORACLE_HOME/forms
- TK_UNKNOWN=$ORACLE_INSTANCE/config/FRComponent/frcommon/guicommon/tk/admin
- PATH=$ORACLE_INSTANCE/bin:$PATH

> **Note:** See Appendix M: Setting Up Password Stores with Oracle Wallet in this document.

> **Note:** Verify that TNS is set up correctly by using the UP variable to successfully log in to the RMS 13 schema.
>
> **Example:** /u00/oracle> sqlplus $UP

- **AIX**
  - LD_LIBRARY_PATH=$ORACLE_HOME/lib:$ORACLE_HOME/lib32:$ORACLE_HOME/jdk/jre/lib
  - LIBPATH=$LD_LIBRARY_PATH
- **Linux**
  - LD_LIBRARY_PATH=$ORACLE_HOME/lib:$ORACLE_HOME/lib32:$ORACLE_HOME/jdk/jre/lib

Delete Obsolete Files

The following forms and menus are obsolete as of 13.2.2 and should be deleted from INSTALL_DIR if they exist.

```
INSTALL_DIR/base/forms/src/company.mmb
INSTALL_DIR/base/forms/src/ribapierr.fmb
INSTALL_DIR/base/forms/src/freclass.fmb
INSTALL_DIR/base/forms/src/l10ncnae.fmb
INSTALL_DIR/base/forms/src/tribsubs.fmb
INSTALL_DIR/base/forms/src/vfreclass.fmb
INSTALL_DIR/base/forms/bin/company.mmx
INSTALL_DIR/base/forms/bin/ribapierr.fmx
INSTALL_DIR/base/forms/bin/freclass.fmx
INSTALL_DIR/base/forms/bin/l10ncnae.fmx
INSTALL_DIR/base/forms/bin/tribsubs.fmx
INSTALL_DIR/base/forms/bin/vfreclass.fmx
```

ORFM Forms Installation

Instructions for ORFM forms installation are as follows.

1. Copy the files from ORFM_APP_PATCH_DIR/app-patch /<version>/ base/forms/src to INSTALL_DIR/base/forms/src. This step should be done with each version you want to apply in order of earliest to latest patch starting at 13.2.0 and ending with the 13.2.7 deltas.

2. Copy all libraries (.pll files) in the INSTALL_DIR/base/forms/src directory to the directories to the INSTALL_DIR/base/forms/bin directory.

3. Change directories to INSTALL_DIR/base/forms/bin.

4. Run forms.pll.sh to compile all RMS .pll's.

5. Check to make sure that each .pll file has a corresponding .plx (to ensure that all .pll's compiled successfully). Remove all newly created .plx files.

6. Copy all forms (*.fmb files) in the INSTALL_DIR/base/forms/src directory to the INSTALL_DIR/base/forms/bin directory.

7. Run forms.fm_fmb.sh (in INSTALL_DIR/base/forms/bin) to compile the RMS reference forms.

8. Remove all newly created fm_*.fmx files (reference forms should not have executable files).

9. Run forms.fmb.sh (in INSTALL_DIR/base/forms/bin) to generate RMS runtime forms – .fmx's.

10. Check to make sure that each non-reference form .fmb file has a corresponding .fmx file.

11. Remove all non-reference forms from INSTALL_DIR/base/forms/bin; the following syntax will leave all reference forms (fm_*.fmb) in the bin directory, while removing all other forms:

    > for PROG in `ls *.fmb | grep -v fm_`

    > do PROGNAME=`echo $PROG`

    > rm $PROGNAME

    > done

12. Copy all menus (*.mmb files) in the INSTALL_DIR/base/forms/src directory to the INSTALL_DIR/base/forms/bin directory.

13. Run menus.mmb.sh (in INSTALL_DIR/base/forms/bin) to generate RMS runtime menus – .mmx's.

14. Remove all .mmb files from INSTALL_DIR/base/forms/bin.

> **Note:** .err files may be created by the compilation scripts above. These files are logs of the compilation process and can be removed.

Install the Online Help

To install the online help, complete the following steps.

1. Log into the WebLogic instance to which online help will be installed.

2. Create a server if necessary. In this example, rms-help-server is being used.

3. Select **Deployments**.

4. If there is an existing "rms-help" deployment, it must be stopped and deleted. Check the box next to "rms-help" and click **Stop**->**Force Stop Now**. Click **Yes** on the next screen. Check the box next to "rms-help" and click **Delete.** On the next screen, click **Yes**. When finished deleting, bounce the rms-help-server.

5. Select **Deployments**.

6. Click **Install**.

7. Click in the **Path:** box and enter ORFM_APP_PATCH_DIR/app-patch/13.2.7 /online-help/rms-help.ear, the ear file that will be deployed.

8. Leave **Install this deployment as an application** selected. Click **Next**.

9. Select the rms-help-server created in Step 2. Click **Next**.

10. Leave rms-help for the application name. Click **Next**.

11. Verify settings. Click **Finish**.

12. Select **Deployments**.

13. Check the box next to rms-help and click **Start -> Servicing all Requests**

14. Click **Yes**

15. In the database, set the WEBHELP_SERVER column in the LANG table for the RMS schema owner to point to the RMS help server and port. For example, set it to http://redevlv0065.us.oracle.com:17003.

Reports Installation Tasks—Patch

RMS 13.2.7 reports now supports ONLY BiPublisher 11g.

Upgrading from BiPublisher 10g to 11g is not trivial. Among other things, the BiPublisher report program in 10g is the <report_name>.xdo file. In 11g, this <report_name>.xdo report file gets split into two new folders, a <report_name>.xdo folder along with a <report_name>.xdm folder. Both of these two new folders have report files within them. Your BiPublisher 10g reports programs will not work without a change in BiPublisher 11g.

> **Note:** If BIPublisher application 11g is already deployed to a bipublisher managed server in Weblogic, you can directly go to the "Manually Copy Reports to Install Directory" section. If not, continue with the "BI Server Component Installation Tasks".

BI Publisher 11g – BI Server Component Installation Tasks

Oracle BI Publisher is used as the main RMS, RWMS, REIM, and SIM reporting engine and can be used in conjunction with external printing solutions like label printing. This section describes the installation of Oracle BI Publisher as a server application within WebLogic 10.3.6. One deployment of BI Publisher can be used for any of the RMS, ORFM, RWMS, REIM, and SIM reports.

If you are installing BI Publisher as a part the Oracle BI EE suite(which you will if installing BI Publisher 11g), refer to the appropriate Fusion Middleware guides for the installation of the product in a WebLogic server environment.

BI Publisher 11g – Installation Process Overview

Installing the BI Publisher server as a standalone web application in a WebLogic server involves the following tasks:

1. Run RCU to create BI Publisher related database schemas and other db objects.

2. Install Oracle BI EE under an existing Weblogic Server (WLS) 10.3.6 and choose "software only install".

3. Configure Oracle BI EE, create default bifoundation_domain and configure component "Business Intelligence Publisher" only.

4. Select the BIPlatform schema for update of the ORACLE 11.2.0.3 DB

5. Configure ports and document and test the URL's that are created.

    The following post-installation tasks are involved once BI Publisher has been installed:

6. Configure the BI Publisher repository. Set security model, add users, assign roles, add reports, add printers, set repository path, set data source, etc.

7. Set up and copy the RMS BI Publisher Report Templates produced for RMS.

8. Set up for the RMS application specific configuration files to integrate BI Publisher with the RMS online app.

BI Publisher 11g – Install Oracle BI EE 11g

1. Run the Repository Creation Utility to create the BI Publisher-related database schemas and other database objects. Create the BIPlatform schema into an existing ORACLE 11.2.0.3 DB

   > **Note:** Download Repository Creation Utility software from http://www.oracle.com/technetwork/middleware/bi-enterprise-edition/downloads/bi-downloads-1525270.html. Install it on your desktop

2. Export your DISPLAY

   Example: Export DISPLAY=10.141.10.110:0.0

3. Go to $RCU_HOME/bin.

   Example: /linux/x86_64/ofm_11g/RCU_11.1.1.7/rcuHome/bin>

   ```
   Start RCU:  ./rcu
   ```
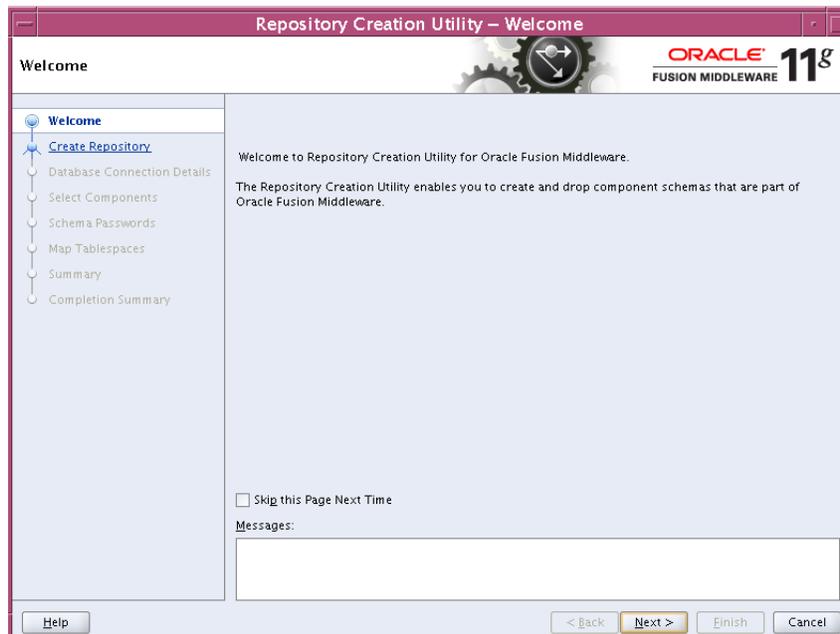

4. Click Next

5. Launch Oracle BI EE RCU Repository Creation Utility to create the Oracle BI EE schemas need for the Oracle BI EE BiPublisher installation. On this screen select "Create Repository".
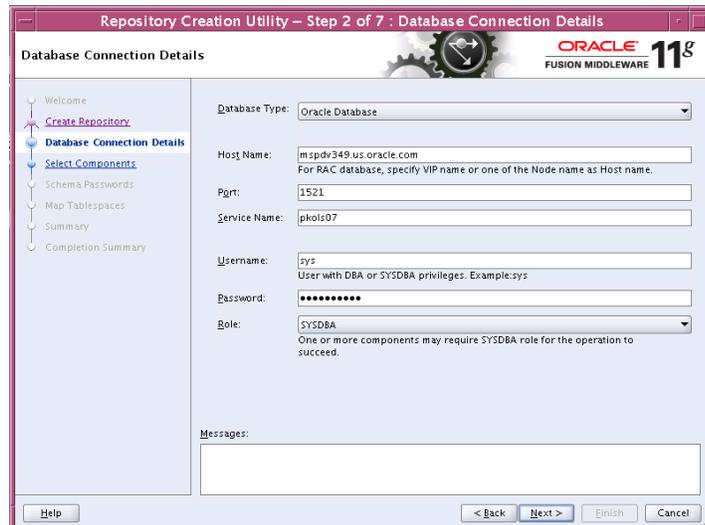
6. On the Database Connection Details screen, enter your Oracle Database information.
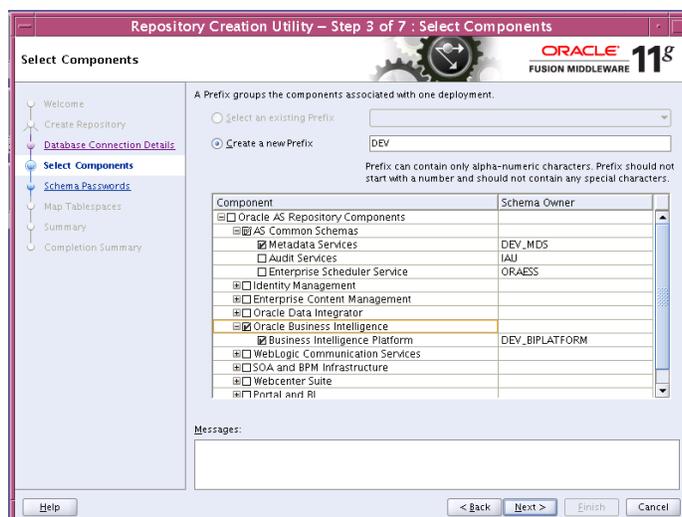
7. On the Select Components screen, select "Oracle Business Intelligence" check box.
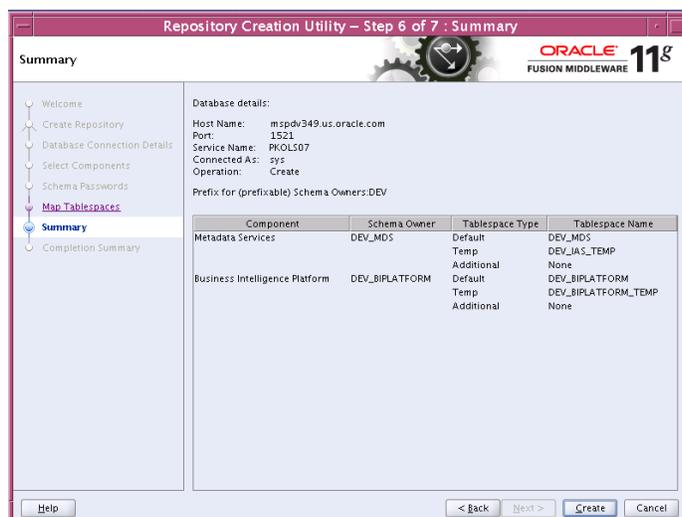
The Summary of the Components created by the RCU tool is displayed.

8. Install a new instance of Weblogic Server 10.3.6 or use an existing one. Having one Weblogic Server for Oracle BI EE-BiPublisher 11g related items is recommended.

9. Install Oracle BI EE and select "Software Only Install". You launch Oracle BI EE by going to OBIEE_INSTALL/obiee11.1.1.7/bishiphome/Disk1 and entering:

./runInstaller
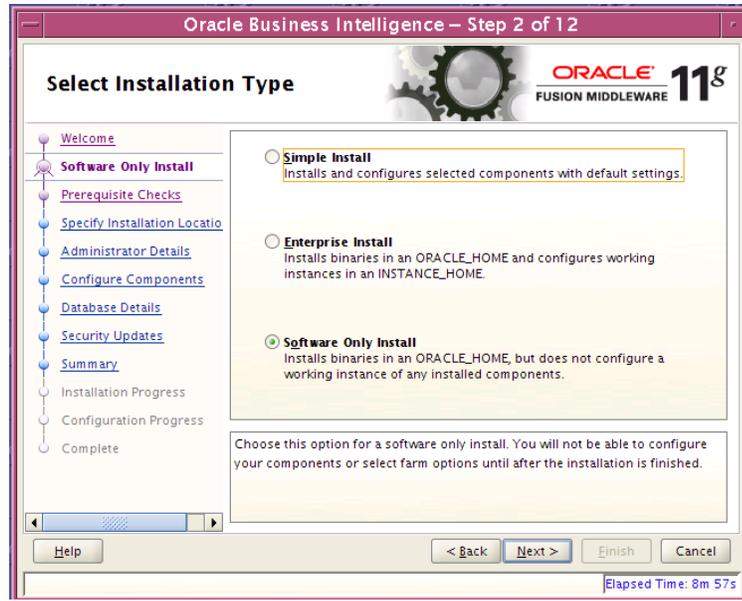
10. Configure Oracle BI EE, create default bifoundation_domain and configure component "Business Intelligence Publisher" only.
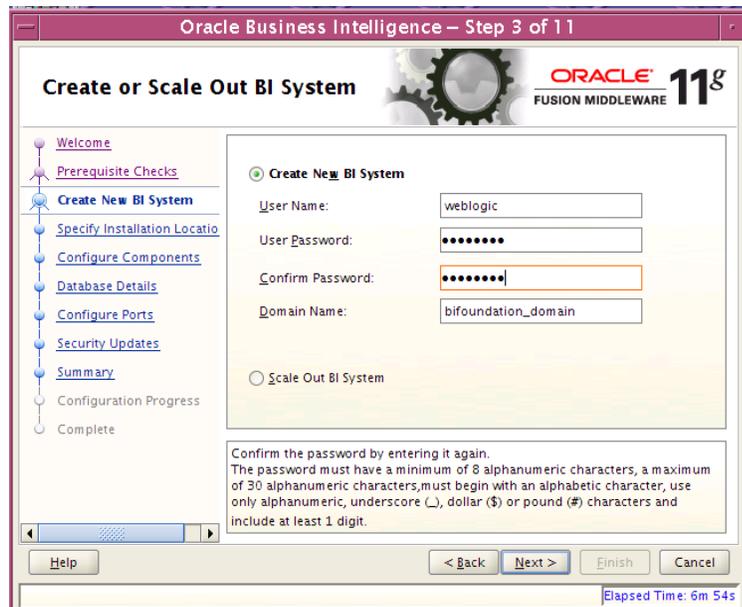
11. On the Create or Scale Out BI System screen, you are asked for the WebLogic password and provided with a recommended a Domain Name. Enter and confirm your WebLogic password and accept the recommended Domain Name; "bifoundation domain"

12. On the Configure Components screen, select only "Business Intelligence Publisher"

13. Configure your BI ports. This screen allows you to assign Oracle BI EE ports from the staticports.ini file.

This file is located in the Oracle BI EE software at:
/obiee11.1.1.7/bishiphome/Disk1/stage/Response/staticports.ini

14. Edit this file to make sure you will have the ports you want for your BiPublisher components. Otherwise the installer will assign default port numbers.

15. Document and test the URLs that are created.

This screen contains the URL's for the components that got installed.
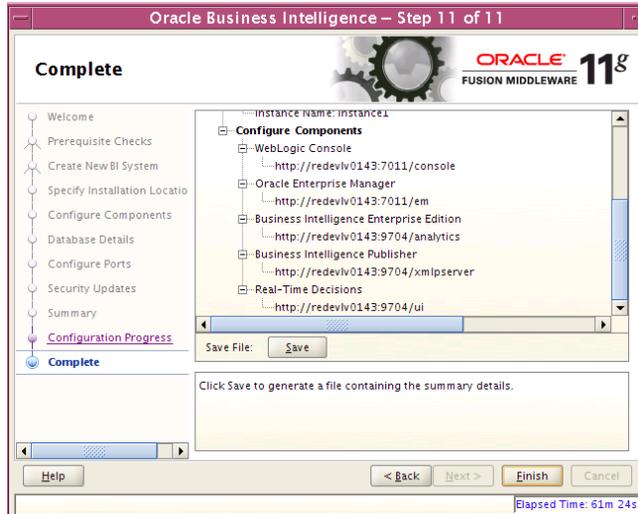
16. Save this screen, so that you know the right URL's for your installation.

17. To test your BI Publisher installation, launch xmlpserver. Login with the credentials you entered in your Oracle BI EE configuration (weblogic / password).
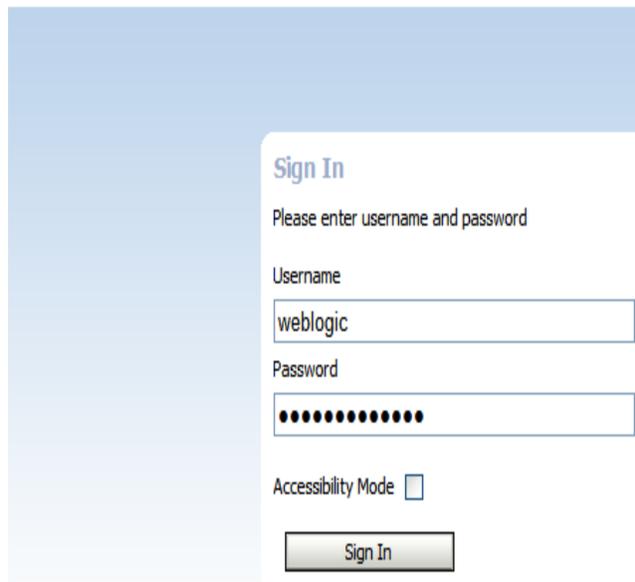
18. Post install steps: Configure the BI Publisher repository. After signon, select "Administration".

19. On the System Maintenance Section, press Server Configuration

20. Navigate to the Configuration Screen.

21. On this screen on the Configuration Folder section, enter the path to your repository. On the Catalog section enter Catalog Type: Oracle BI Publisher – File System from the drop down menu.

    This is the path you entered in the Configuration Section and Catalog Section:

    ```
    $OBIEE_HOME/WLS/user_projects/domains/bifoundation_domain/config/bipublisher/r
    epository
    ```

22. Restart the BI Publisher after this change.

23. Post install step: Set BI Publisher security model
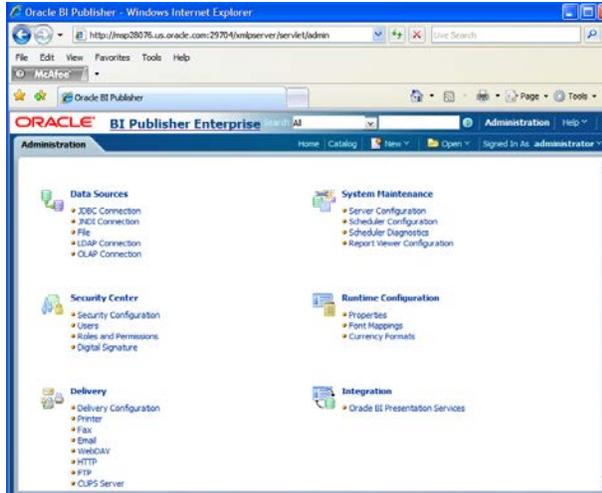
a. On the BI Publisher 11g Administration Screen, click Security Configuration from the Security Center.

b. Enable a superuser by checking the "Enable Local SuperUser" box and by entering name and password on the corresponding fields on this screen.

c. Mark "Allow Guest Access" check box. Enter "Guest" as Guest Folder Name

d. Scroll down the screen and locate the Authorization section:

e. Select BI Publisher Security from the Security Model list.:

f. The default user name for the BI Publisher Security Model is Administrator

g. On the password text field, enter a value that you can remember. It is going to be the password for Login to xmlpserver.

h. Save the changes and re-start the BI Publisher server.

i. Launch xmlpserver. To Login you must use the new credentials that you set up in the former step: Username: Administrator Password: password.

> **Note:** You will not be able to login to xmlpserver as weblogic any more because we have already changed the Security Model.

24. Post install step: Set the repository path.

   Example:
   /u00/webadmin/product/10.3.X/WLS/user_projects/domains/bifoundation_dom ain/config/bipublisher/repository In the Oracle BI EE file system you will find the repository in the following location:

   ```
   $OBIEE/wls/user_projects/domains/bifoundation_domain/config/bipublisher/reposi
   tory
   ```

   In the repository you will see the following directories:

   ▪ Admin
   ▪ DemoFiles
   ▪ Reports
   ▪ Tools
   ▪ Users

25. Post install step: Create role Bipub_default_role.

   a. From the xmlpserver Administration screen, scroll down to Security Center and click Roles and Permissions.

> **b.** On the Roles and Permissions screen, click the Create Role button.
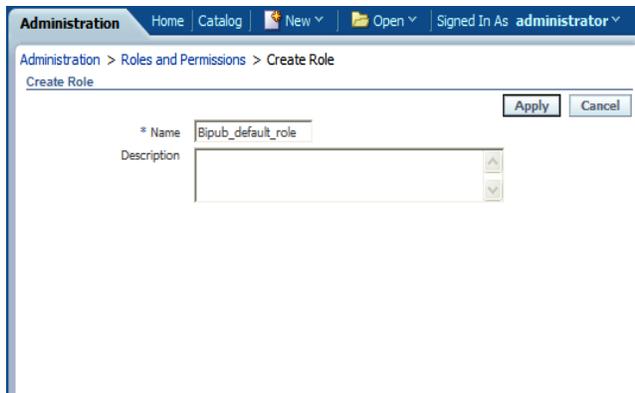
> **c.** Create the Bipub_default_role. Enter in Create Role Section name of the role.
>
> **d.** When the information has been entered press Apply changes.

26. Post install step: Assign BiPub system roles to the newly created Bipub_default_role.

> **a.** To assign BiPub system roles to the newly create Bipub_default_role, go to Security Center section and navigate to the Roles and Permissions screen:
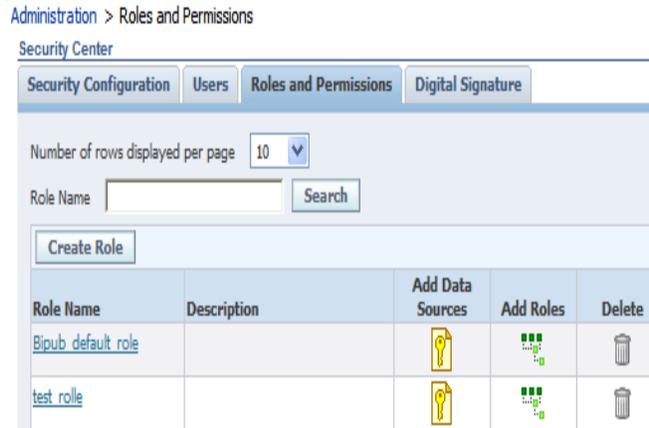
> **b.** On the Roles and Permissions screen you should see the new role created: "Bipub_default_role" . Add multiple roles to the Bipub_Default_Role by pressing the corresponding green icon on the Add Roles column
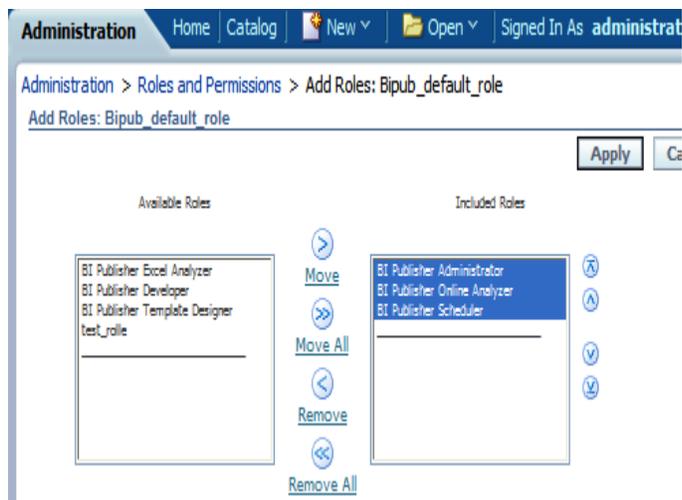
c. From the "Available Roles" panel, select the ones needed for your reports and move them to the "Included Roles" panel

d. Press the Apply button to save your changes.

27. Post install step: create Guest (XMLP_GUEST) user.

a. From the xmlpserver Administration screen scroll down to Security Center section and press Users to navigate to the next screen
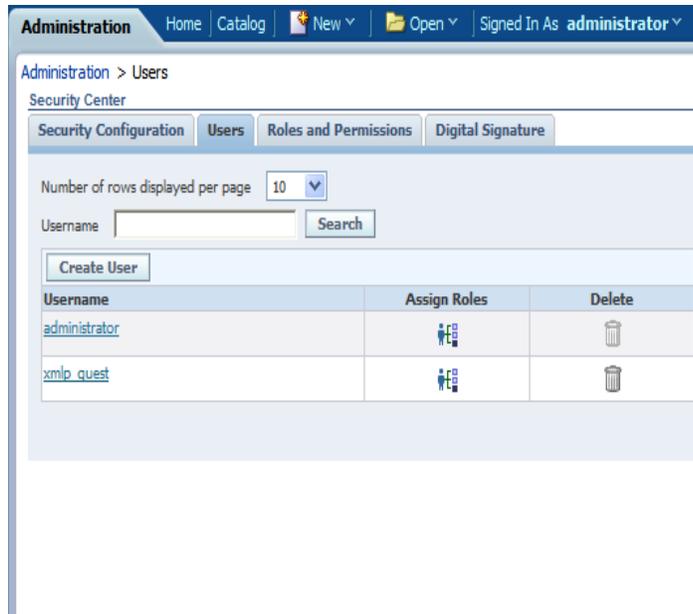
    b. Select the "Create User" button to create the "xmlp_guest" user and save the changes

28. Post install step: Adding the Bipub_default_role to XMLP_GUEST user.

    a. Open the Users section:
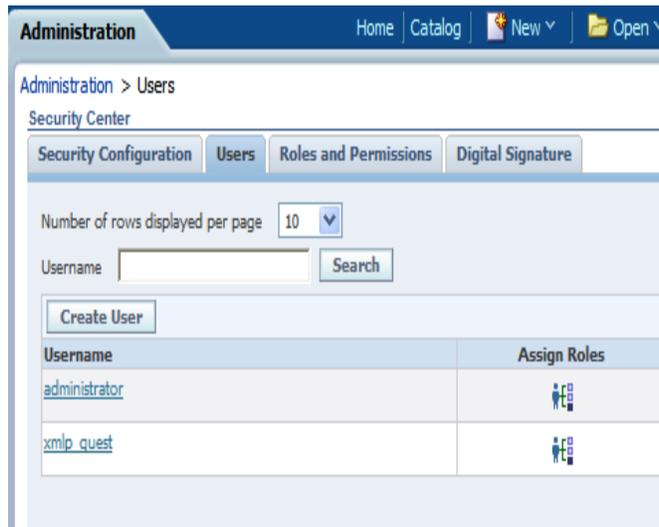
    b. For xmlp_guest user, press on the "Assign Roles" icon to navigate to the next screen:
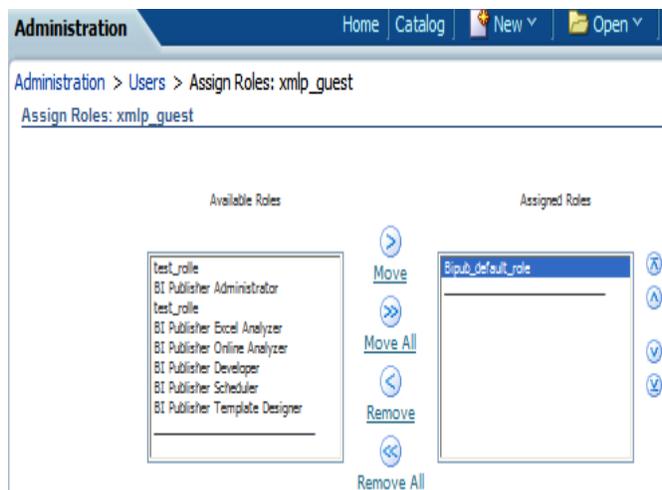
c. On the Assign Roles screen, select the BiPub_default_role from the Available Roles panel to the "Assigned Roles" panel and press the Apply button to save your changes.

29. Post install step: create folders. Complete the following steps.

a. Create the "Guest" and "RMS13" directories on the server and change directory into this directory and make sure the permission to these new folders are 755. Example assuming that /u00/webadmin is the root of the installation:

```
cd
/u00/webadmin/product/10.3.X/WLS/user_projects/domains/bifoundation_domain
/config/bipublisher/repository/Reports
mkdir
/u00/webadmin/product/10.3.X/WLS/user_projects/domains/bifoundation_domain
/config/bipublisher/repository/Reports/Guest
cd Guest
mkdir
/u00/webadmin/product/10.3.X/WLS/user_projects/domains/bifoundation_domain
/config/bipublisher/repository/Reports/Guest/RMS13
cd RMS13
```

BI Publisher 11g – Manually Copy Reports to Install Directory

If you followed the instructions under "Option 1: Use RMS Application Installer to Patch" in the chapter, "Application Installation Tasks—Patch," you can skip to the next section ("Installing the RMS/ORFM BI Publisher Templates.") If you followed "Option 2: Compile ORFM Toolset and Forms Directly," you must manually copy the reports to INSTALL_DIR.

1. If the directories INSTALL_DIR/base/reports/10g or INSTALL_DIR/base/reports/11g exist follow these steps. Otherwise, skip to step 2:

    a. Change directories to INSTALL_DIR/base/reports

    b. Remove the entire 10g directory if it exists. We will no longer ship 10g reports in future releases.

    c. Move all of the directories in INSTALL_DIR/base/reports/11g to INSTALL_DIR/base/reports

    d. Remove the empty INSTALL_DIR/base/reports/11g directory.

2. If the directories INSTALL_DIR/base/reports/10g or INSTALL_DIR/base/reports/11g do not exist, and the reports under INSTALL_DIR/base/reports/ are the 13.2.4 set of reports or earlier, delete all the directories under INSTALL_DIR/base/reports/. All reports that were a part of 13.2.4 and earlier releases are 10g reports that will be completely replaced by 11g reports included in the 13.2.5 and future releases.

3. Copy the reports from the ORFM application patch ORFM_APP_PATCH_DIR/app-patch/<version>/reports to INSTALL_DIR/base/reports.

BiPublisher 11g Installing the RMS BI Publisher Templates

In this section we will outline how the RMS/ORFM report templates are installed into the appropriate BI server repositories. BI_REPOSITORY refers to the BI Publisher reports repository.

11g example:
/u00/webadmin/product/10.3.X/WLS/user_projects/domains/bifoundation_domain/config/bipublisher/repository/RMS13/

Report files are placed in the directory - INSTALL_DIR/base/reports, and must be copied into the BI repository directory.

1. Locate the RMS directory to hold the reports under <BI_REPOSITORY>/Reports/Guest/RMS13.

2. Change directory to the proper directory: INSTALL_DIR/base/reports/. This directory contains subdirectories whose names reflect the names of report templates provided with RMS/ORFM.

3. Copy each report directory into the directory created above

```
    11g example,
cp –R *
/u00/webadmin/product/10.3.X/WLS/user_projects/domains/bifoundation_domain/config/
bipublisher/repository/Reports/Guest/RMS13
```

BiPublisher 11g – Configuring the RMS JDBC connection

Follow the below steps to configure JDBC connection for RMS Data Source name. This is the data source that RMS uses for RMS reports.

1. Log on with the default user ID and passwords for BI Publisher using the administrative user and password configured previously.

2. Click the **Admin** tab and select the **JDBC Connection** hyperlink in the Data Sources lists. The following screen is displayed.

3. Enter "RMS13" for the datasource name, and enter the appropriate details for the RMS data source. Once the data is entered, click Test Connection to test the connection. Connection string is similar to this example: jdbc:oracle:thin:@redevlv0064.us.oracle.com:1521:dvols72 syntax is jdbc:oracle:thin:@<hostname>:<port>:<dbsid>

4. Select **Allow Guest access** checkbox

5. Click **Apply** to save the information.

BI Publisher 11g – Verify Oracle BI Publisher Set Up for RMS Reports

Verify that Oracle BI Publisher has been set up correctly as follows:

1. Click the **Server Configuration** tab under the Administration menu. Under the Catalog section, the type should be set to: Oracle BI Publisher- File System and the path set to where the reports are located; REPORTS_DIR.
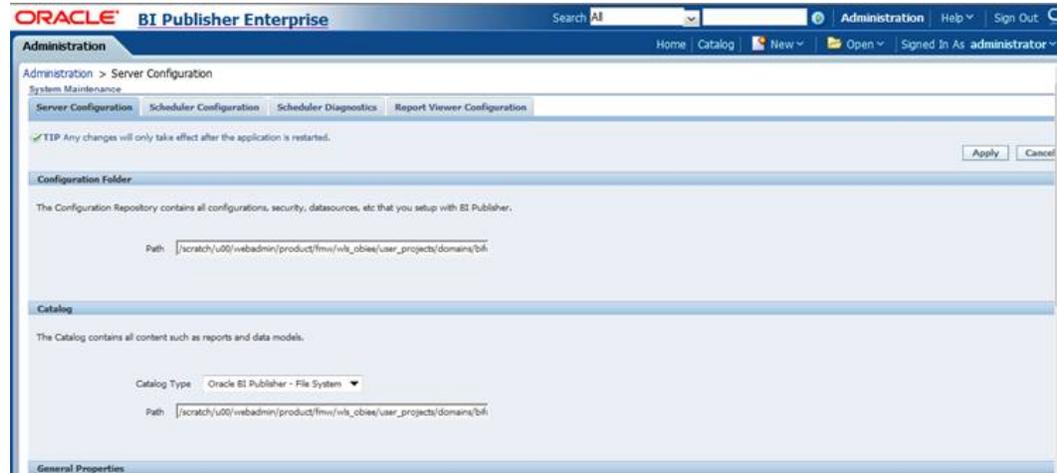
2. Change the following values in the <installation name>.env file located here: $WLS_HOME/user_projects/domains/<domain name>/config/fmwconfig/servers/WLS_FORMS/applications/formsapp_11.1.2/config/<installation name>/<installation name>.env

   - ORACLE_RMS_REPORTS_HOST=http://<server>:<port>/

     For example,
     ORACLE_RMS_REPORTS_HOST=http://redevlv0072.us.oracle.com:7003/

     ORACLE_RMS_RWSERVER=/<location to RMS directory>/

     Example, ORACLE_RMS_RWSERVER=xmlpserver/Guest/RMS13/

9

Data Migration

The 13.2.7 release includes a tool for upgrading preexisting data in the RMS schema, once 13.2.2 ORFM database scripts are executed. When ORFM is installed, your existing RMS data must be migrated to accommodate changes to the database caused by ORFM installation. Running the tool against schemas that have been patched to a version later than 13.2.2 may have unexpected results.

> **Note:** If you already ran the Data Migration tool during or after the 13.2.2 release, you do not need to run it again.

Before running the ORFM Data Migration Tool, do the following.

1. Make a backup of all your objects and database schema.
2. Ensure that ORFM 13.2.2 is installed.
3. Review the enclosed 13.2.7 upgrade Release Notes (rms-1327-rn.pdf).
4. Review each of the enclosed defect documents.
5. Run the l10nbrfisdnld.pc batch program. This program must to be run after RTIL has been installed.

Create Staging Directory for ORFM Data Migration Files

To create a staging directory for ORFM data migration files, complete the following steps.

1. Log in to the database server as a user that can connect to the RMS database.
2. Create a staging directory for the ORFM data migration files
3. Copy the orfm1327datamigration.zip file from the ORFM 13.2.7 release to the staging directory. This is referred to as STAGING_DIR when running the data migration tool.
4. Change directories to STAGING_DIR and extract the orfm1327datamigration.zip file. This creates a "master_controller" subdirectory under STAGING_DIR.

Configure ORFM Data Migration Tool

To configure the ORFM data migration tool, complete the following steps.

1. Change directories to STAGING_DIR/master_controller/rms/br.
2. Source the oraenv script to set up the Oracle environment variables (ORACLE_HOME, ORACLE_SID, PATH, etc).

> **Example:**   prompt$. oraenv
> ORACLE_SID = [] ? mydb
> prompt$

3. Verify the ORACLE_HOME and ORACLE_SID variables after running this script.

Example:	prompt$ echo $ORACLE_HOME
	/u00/oracle/product/mydbversion
	prompt$ echo $ORACLE_SID
	mydb

4. Set and export the NLS_LANG environment variable.

Example:	NLS_LANG=AMERICAN_AMERICA.UTF8
	export NLS_LANG

5. Set and export the TNS_ADMIN environment variable.

Example:	TNS_ADMIN=/path/to/wallet/files/dir/
	export TNS_ADMIN

6. Open the l10nbrcontroller.cfg file and replace the values variables as follows:

   a. Export PATCH_DIR=STAGING_DIR/master_controller/rms

   b. export SCHEMA_OWNER=<The name of the RMS schema>

   c. export MMUSER=/@< Schema Owner Wallet Alias >

   > **Note:** See Appendix K: Setting Up Password Stores with Oracle Wallet for how to set up database wallet.

   > **Note:** Verify that TNS is set up correctly by using the UP variable to successfully log in to the RMS 13 schema.
   >
   > **Example:** /u00/oracle> sqlplus $UP

7. Configure the following files in the STAGING_DIR/master_controller/rms/br/files directory with data from your existing RMS/ORFM schema for the migration. (Use the existing files as templates for how this data should be formatted. For descriptions of this data, see the *Oracle Retail Fiscal Management Data Model*.)

   ▪ competitor.dat

   This file is used to update the jurisdiction code for a given competitor. Attributes are:

   – Competitor

   – Jurisdiction Code

   ▪ country_atrib.dat

   This file is used to update the country attributes for Brazil. Attributes are:

   – Item costing tax inclusive indicator (Y/N)

   – Default cost for purchase orders, deals, cost components

   – Default location

   – Default location type

- vat_codes.dat

  This file is used to load the tax codes for Brazil. Attributes are:

  - Tax code
  - Tax code description
  - Indictor (Y/N), depending on whether the tax code is included in the calculation of the Negotiated Item Cost.

- addr.dat

  This file is used to update the jurisdiction code for a given supplier/partner/store/warehouse. Attributes are:

  - Address key
  - Jurisdiction code

- comphead.dat

  This file is used to update the jurisdiction code for a company. Attributes are:

  - company
  - Jurisdiction code

- comp_store.dat

  This file is used to update the jurisdiction code for a competitor store. Attributes are:

  - Competitor store
  - Jurisdiction code

- customer.dat

  This is used to update the jurisdiction code for a given customer. Attributes are:

  - Customer
  - Jurisdiction code

- ordcust.dat

  This file is used to update the jurisdiction code for a customer order. Attributes are:

  - Customer
  - Customer order sequence number
  - Jurisdiction code

- outloc.dat

  This file is used to update the jurisdiction code for a given outside location. Attributes are:

  - Outside location type
  - Outside location
  - Jurisdiction code

- rtv_head.dat

  This file is used to update the jurisdiction code for a RTV. Attributes are:

  - RTV order number
  - Jurisdiction code

- country_l10n_ext.dat

  This file is used to load the fiscal attributes for countries. Attributes are:

  – Country
  – Fiscal country
  – Fiscal code

- item_country_l10n_ext.dat

  This file is used to load the fiscal attributes for items. Attributes are:

  – Item
  – Country
  – Service ind
  – Merchandise origin
  – NCM
  – NCM characteristic
  – IPI
  – Pauta code
  – Service code
  – Federal service code
  – State_of_manufacture
  – Pharma_list_type

- outloc_l10n_ext.dat

  This file is used to load the fiscal attributes for outside locations. Attributes are:

  – Outside location type
  – Outside location
  – Taxpayer type
  – Address line 1
  – Address line 2
  – Address line 3
  – Neighborhood
  – Jurisdiction code
  – State
  – Country
  – Postal code
  – CPF
  – CNPJ
  – NIT
  – SUFRAMA
  – City inscription
  – State inscription
  – IPI contributor (Y/N)

- partner_l10n_ext.dat
  This file is used to load the fiscal attributes for partners. Attributes are:
  - Partner type
  - Partner
  - Taxpayer type
  - Address line 1
  - Address line 2
  - Address line 3
  - Neighborhood
  - Jurisdiction code
  - State
  - Country
  - Postal code
  - CPF
  - CNPJ
  - NIT
  - SUFRAMA
  - City inscription
  - State inscription
  - IPI contributor (Y/N)
  - ICMS contributor (Y/N)
  - PIS contributor (Y/N)
  - COFINS contributor (Y/N)
- store_l10n_ext.dat
  This file is used to load the fiscal attributes for stores. Attributes are:
  - Store
  - Taxpayer type
  - Address line 1
  - Address line 2
  - Address line 3
  - Neighborhood
  - Jurisdiction code
  - State
  - Country
  - Postal code
  - CPF
  - CNPJ
  - NIT
  - SUFRAMA
  - City inscription
  - State inscription
  - ISS contributor (Y/N)

- Rural producer (Y/N)
- IPI contributor (Y/N)
- ICMS contributor (Y/N)
- Matching operation type
- Control recovery of ST (Y/N)
- PIS contributor (Y/N)
- COFINS contributor (Y/N)

- sups_l10n_ext.dat

  This file is used to load the fiscal attributes for suppliers.
  - Supplier
  - Taxpayer type
  - Address line 1
  - Address line 2
  - Address line 3
  - Neighborhood
  - Jurisdiction code
  - State
  - Country
  - Postal code
  - CPF
  - CNPJ
  - NIT
  - SUFRAMA
  - City inscription
  - State inscription
  - ISS contributor (Y/N)
  - SIMPLES contributor (Y/N)
  - ST contributor (Y/N)
  - Rural producer (Y/N)
  - IPI contributor (Y/N)
  - ICMS contributor (Y/N)
  - PIS contributor (Y/N)
  - COFINS contributor (Y/N)
  - is_income_range_eligible
  - is_distr_a_manufacturer
  - icms_simples_rate

- wh_l10n_ext.dat

  This file is used to load the fiscal attributes for warehouses. Attributes are:
  - Warehouse
  - Taxpayer type
  - Address line 1
  - Address line 2

- – Address line 3
- – Neighborhood
- – Jurisdiction code
- – State
- – Country
- – Postal code
- – CPF
- – CNPJ
- – NIT
- – SUFRAMA
- – City inscription
- – State inscription
- – ISS contributor (Y/N)
- – Rural producer (Y/N)
- – IPI contributor (Y/N)
- – ICMS contributor (Y/N)
- – Matching operation type
- – Control recovery of ST (Y/N)
- – PIS contributor (Y/N)
- – COFINS contributor (Y/N)
- ▪ l10n_br_entity_trib_subs.dat

  This file is used to load the state inscriptions for suppliers/warehouses and stores. Attributes are:
  - – Supplier/Warehouse/Store
  - – Entity Type (SUPP/S/W)
  - – Country
  - – State
  - – State Inscription
- ▪ l10n_br_entity_cnae_codes.dat

  This file is used to load the CNAE codes for supplier/store/warehouse/company/ outside location/partner. Attributes are:
  - – Supplier/Store/Warehouse/Company/Outside location/ Partner
  - – Partner type/Outside location type
  - – Entity type
  - – Country
  - – CNAE code
  - – Primary indicator (Y/N)
- ▪ l10n_br_sup_tax_regime.dat

  This file is used to load the tax regime of the supplier. Attributes are:
  - – Supplier
  - – Tax_regime

Run the ORFM Data Migration Tool

To run the ORFM data migration tool, complete the following steps.

1. Change directories to STAGING_DIR/master_controller/rms/br.

2. If rerunning the data migration process, clear the contents of the "processed" directory.

3. Run prevalidation tool to ensure that the input files for the data migration tool is up to date:

   ```
   $ ./rms132_br_upgrade.ksh PREVALIDATION
   ```

4. Run migration tool.

   ```
   $ ./rms132_br_upgrade.ksh UPGRADE
   ```

5. Run migration cleanup tool to remove temporary data migration objects from the database.

   ```
   $ ./rms132_br_upgrade.ksh CLEANUP
   ```

6. Refer to the files in the **log** and **error** directory if there are problems during migration.

7. Rebuild synonyms for any additional RMS users.

Appendix: ORFM RTIL Installer Screens

You need the following details about your environment for the installer to successfully deploy the RTIL application. Depending on the options you select, you may not see some screens or fields.

Screen: Application Deployment Details

Field Title	RTIL 13 app deployment name
Field Description	Name by which this RTIL application is identified in the application server
Example	rtil13

Field Title	RTIL 13 server/cluster
Field Description	Name of the RTIL WebLogic managed server or cluster.
Example	rtil-server

Screen: WebLogic Administrative User

Field Title	Hostname
Field Description	Hostname of the application server
Example	redevlv0074

Field Title	WebLogic admin port
Field Description	Port number of admin console
Example	17001

Field Title	WebLogic admin user
Field Description	User name of the admin user for the WebLogic instance to which the ORFM application is being deployed.
Example	weblogic

Field Title	WebLogic admin password
Field Description	Password for the WebLogic admin user. You chose this password when you created the WebLogic instance or when you started the instance for the first time.

Screen: Log 4j logger Details

Field Title	Log4j Log Level
Field Description	Specifies the level at which the logging is enabled.
Example	INFO

Field Title	Output to STDOUT
Field Description	Specifies whether the logs should be routed to the console.

Field Title	Log4j logfile MaxFileSize (MB)
Field Description	Specifies the file size threshold beyond which the log file gets rolled over.
Example	5

Field Title	Log4j logfile MaxBackupIndex
Field Description	Specifies the number of rolled over log files that will be retained.
Example	30

Screen: Data Source Details

Field Title	RMS JDBC URL
Field Description	URL used by the application to access the RMS Database schema.
Example	jdbc:oracle:thin@mspdv314:1521:pkols05

Field Title	RMS schema user
Field Description	Database schema user for the application. This value should match the value in the RMS database schema field for the RMS DB installer.
Example	rms01

Field Title	RMS schema password
Field Description	Password for user, RMS Schema User

Appendix: ORFM Database Patch Installer Screens

You need the following details about your environment for the installer to successfully patch the ORFM/RMS database schema.

Screen: ORFM Database Schema Details

Field Title	ORFM/RMS schema
Field Description	Provide the RMS database user here. The installer logs into the database as this user to patch the RMS schema. This user must already exist in the database when the ORFM database schema patch installer is run.
Example	rms01

Field Title	ORFM/RMS schema password
Field Description	Database password for the RMS schema Owner.

Field Title	ORFM/RMS Oracle SID
Field Description	Oracle system identifier for the database where the ORFM patch will be applied.
Example	pkols05

The database settings provided are validated by the installer when you advance to the next screen.

Screen: Apply an ORFM DB Patch

Field Title	ORFM Patch Directory
Field Description	Provide the directory path to the ORFM patch you want to install. The installer runs only the patch you provide. **Note:** The directory you choose must contain an orfm_controller.ksh file.
Example	/pathto orfm/dbschemapatch/orfm-dbpatch/13.2.7/orfm **Note:** The patch option is intended for patches starting with 13.2.1.

Screen: Continue ORFM DB Patch

Field Title	Continue ORFM DB Patch?
Field Description	The patch process allows you to continue a previously run patch if it stopped before completion or failed. If Yes is selected, any scripts that were previously run for the ORFM patch will be skipped. If No is selected, the patch will start from the beginning. **Note:** To continue a patch, the content of the "processed" directories in the ORFM Patch Directory chosen on the previous screen must be the same as it was after the previous patch was stopped. If you choose No, this directory will be cleared, and you will not be able to continue this patch in the future.

C

Appendix: RMS Batch Installer Screens

You need the following details about your environment for the installer to successfully compile and install the RMS batch programs. Depending on the options you select, you may not see some screens or fields.

Screen: DataSource Details

Field Title	RMS Schema Owner
Field Description	Provide the RMS database user here. The installer will log into the database as this user to create RMS library objects and query for data to generate batch source files. This user must already exist in the database and have the RMS tables installed.
Example	rms01

Field Title	RMS Schema Password
Field Description	Database password for the RMS Schema Owner.

Field Title	RMS Oracle SID
Field Description	Oracle system identifier for the database where RMS will be installed
Example	pkols05

Screen: Oracle Wallet

Field Title	Oracle Wallet password
Field Description	This is the password for the wallet that will store the database credentials that were supplied in the previous screen.

Screen: Batch Installation Directory

Field Title	Batch Installation Directory
Field Description	Location where the installer will install the batch source and then compile it. This is the permanent location for the RMS batch programs.
Example	/opt/oracle/retail/rmsbatch

Appendix: RMS Application Installer Screens

Screen: Oracle Customer Information

For information about this screen, see the "Oracle Configuration Manager" section in the *Oracle Configuration Manager Installer Guide*.

Screen: Data Source Details

Field Title	RMS Schema Owner
Field Description	This is the same username that was used during the RMS Database Schema Installer.
Example	rms01

Field Title	RMS Schema Password
Field Description	This is the same password that was used during the RMS Database Schema Installer.

Field Title	RMS Oracle SID
Field Description	This is the same Oracle SID that was used during the RMS Database Schema Installer.
Example	pkols05

Screen: Oracle Wallet

Field Title	Oracle Wallet password
Field Description	This is the password for the wallet that will store the database credentials that were supplied in the previous screen.

Screen: Installation Name

Field Title	Installation Name
Field Description	This value is used in conjunction the Oracle Configuration Manager (OCM). It gives the installation a unique name so the OCM can identify different installations of RMS in the same WebLogic instance.
Example	rms13inst

Screen: Application Installation Directory

Field Title	Application Installation Directory
Field Description	The location where the RMS Application (toolset, forms and reports) will be installed. The RMS $MMHOME path will be a subdirectory of this directory, named base.
Example	/u00/webadmin/rms13inst

Screen: Application Deployment Method

Field Title	Which Environment Deployment Method would you like to use
Field Description	Select the Application Deployment Method you would like. See "Appendix: Application Deployment Method."
Example	Base – 1 URL

Screen: WebLogic Configuration

Field Title	Configure WebLogic
Field Description	Make the necessary configurations to the WebLogic server to be able to run RMS forms. If you choose No, these configurations should be done manually.
	Note: If you rerun the installer, and choose to check the box in the installer screens, Configure WebLogic, you may need to clean up duplicate entries in the WebLogic formsweb.cfg file.

Screen: WebLogic Administrative Details

Fields on this Screen:

Field Title	Hostname
Field Description	Hostname of the application server
Example	redevlv0065

Field Title	WebLogic Admin port
Field Description	Port number of the WebLogic AdminServer
Example	7001

Field Title	WebLogic Admin User
Field Description	Username of the admin user for WebLogic instance to which the RMS Webhelp application is being deployed.
Example	weblogic

Field Title	WebLogic Admin Password
Field Description	Password for the WebLogic admin user. You chose this password when you created the WebLogic instance.

Screen: Webhelp Installation Details

Field Title	WebLogic Help Server
Field Description	The WebLogic managed server that was created for the RMS Webhelp application.
Example	rms-help-instance

E

Appendix: Installer Silent Mode

In addition to the GUI and text interfaces of the RMS installer, there is a silent mode that can be run. This mode is useful if you wish to run a repeat installation without retyping the settings you provided in the previous installation. It is also useful if you encounter errors in the middle of an installation and wish to continue.

The installer runs in two distinct phases. The first phase involves gathering settings from the user. At the end of the first phase, a properties file named ant.install.properties is created with the settings that were provided. Then the second phase begins, where this properties file is used to provide your settings for the installation.

To skip the first phase and re-use the ant.install.properties file from a previous run, follow these instructions:

1. Edit the ant.install.properties file and correct any invalid settings that may have caused the installer to fail in its previous run.

2. Look for duplicate properties in the ant.install.properties file. Some properties are set on multiple pages to ensure default values when a page is only displayed under certain conditions. For example, if there are two instances of input.property.name, remove all but the last one.

3. Run the installer again with the **silent** argument.

> **Example:** install.sh silent

F

Appendix: URL Reference

This section provides URL reference information.

JDBC URL for a Database

Used by the Java application and by the installer to connect to the database.

Thick Client Syntax: jdbc:oracle:oci:@<sid>

<sid>: system identifier for the database

> **Example:** jdbc:oracle:oci:@mysid

Thin Client Syntax: jdbc:oracle:thin:@<host>:<port>:<sid>

<host>: hostname of the database server

<port>: database listener port

<sid>: system identifier for the database

> **Example:** jdbc:oracle:thin:@myhost:1521:mysid

LDAP Server URL

Used by the Java application to connect to the LDAP directory.

Syntax: ldap://<host>:<port>

<host>: hostname of the directory server

<port>: LDAP server port

> **Example:** ldap://myhost:389

JNDI Provider URL for an Application

Used by the application client to access the application running in the server. Also used by other applications for server-to-server calls.

OracleAS :

Syntax: opmn:ormi://<host>:<port>:<instance>/<app>

<host>: hostname of the OracleAS environment

<port>: OPMN request port of the OracleAS environment. This can be found in the <ORACLE_HOME>/opmn/conf/opmn.xml file.

<instance>: Name of the OC4J instance running the application

<app>: Deployment name for the application.

> **Example:** opmn:ormi://myhost:6003:rsm-oc4j-instance/rsm13

> **Note:** The JNDI provider URL can have a different format depending on your cluster topology. Consult the Oracle Application Server documentation for further details.

WebSphere:

Syntax: iiop://<host>:<port>

<host>: hostname of the WebSphere environment

<port>: BOOTSTRAP port of the WebSphere server that is running the application.

Example: iiop://myhost:2809

Appendix: Common Installation Errors

This section provides some common errors encountered during installation of RMS.

Installer Crashes, Producing Dump Files

Symptom:

When the installer is launched on AIX7.1, it may crash during navigation of the installer screens. The crash produces two binary dump files (core.<timestamp>.dmp, Snap.<timestamp>.trc) and a javacore text file (javacore.<timestamp>.txt).

Solution:

Set and export ANT_OPTS variable with "-Xmso1024k -Xss1024k", prior to launching the installer. For example, assuming korn, bourne, or bash shell:

ANT_OPTS="-Xmso1024k –Xss1024k"

export ANT_OPTS

Database Installer Hangs on Startup

Symptom:

When the database schema installer is run, the following is written to the console and the installer hangs indefinitely:

```
Running pre-install checks
Running tnsping to get listener port
```

Solution:

The installer startup script is waiting for control to return from the **tnsping** command, but tnsping is hanging. Type Control+C to cancel the installer, and investigate and solve the problem that is causing the **tnsping <sid>** command to hang. This can be caused by duplicate database listeners running.

Warning: Could not create system preferences directory

Symptom:

The following text appears in the installer Errors tab:

```
May 22, 2006 11:16:39 AM java.util.prefs.FileSystemPreferences$3 run
WARNING: Could not create system preferences directory. System preferences are
unusable.
May 22, 2006 11:17:09 AM java.util.prefs.FileSystemPreferences
checkLockFile0ErrorCode
WARNING: Could not lock System prefs. Unix error code -264946424.
```

Solution:

This is related to Java bug 4838770. The /etc/.java/.systemPrefs directory may not have been created on your system. See http://bugs.sun.com for details.

This is an issue with your installation of Java and does not affect the Oracle Retail product installation.

Warning: Couldn't find X Input Context

Symptom:

The following text appears in the console window during execution of the installer in GUI mode:

```
Couldn't find X Input Context
```

Solution:

This message is harmless and can be ignored.

Unresponsive Country and Currency Drop-Downs

Symptom:

In GUI mode, when you click on the drop-down list selection for the primary country or currency, the list does not appear, and this message appears in the console window:

```
XTEST extension not installed on this X server: Error 0
```

Solution:

To run the RMS installer in GUI mode you must have the XTEST extension enabled in your X server.

Enabling XTEST in Exceed:

1. Open Xconfig to edit Exceed configuration
2. Go to the X Server Protocol settings
3. Click on the Extensions tab
4. Make sure that the XTEST extension is selected:
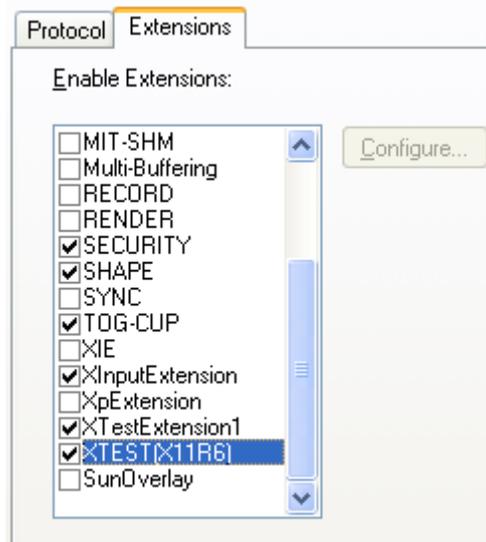
5. Restart the X Server and re-run the RMS installer.

Could not execl robot child process: Permission denied

Symptom:

When opening a drop-down list in GUI mode of the RMS installer, the installer freezes up and displays the following message in the console:

```
Couldn't execl robot child process: Permission denied
```

Solution:

As the owner of the database ORACLE_HOME (i.e. *oracle*), grant execute permissions to the awt_robot* files under $ORACLE_HOME/jdk/jre/lib. The database schema installer uses $ORACLE_HOME/jdk for its JAVA_HOME.

Example (using SUN Solaris):

```
chmod a+x $ORACLE_HOME/jdk/jre/lib/sparc/awt_robot
chmod a+x $ORACLE_HOME/jdk/jre/lib/sparcv9/awt_robot
```

ConcurrentModificationException in Installer GUI

Symptom:

In GUI mode, the errors tab shows the following error:

```
java.util.ConcurrentModificationException
          at
java.util.AbstractList$Itr.checkForComodification(AbstractList.java:448)
          at java.util.AbstractList$Itr.next(AbstractList.java:419)
… etc
```

Solution:

You can ignore this error. It is related to third-party Java Swing code for rendering of the installer GUI and does not affect the retail product installation.

FRM-30064: Unable to parse statement select while compiling fm_ituda.fmb

Symptom:

When running the application installer you get the following error:

```
FRM-30064: Unable to parse statement select vu.uda_desc,  vu.uda_id  from v_uda vu
where get_primary_lang = get_user_lang  and vu.display_type = 'LV' union all
select nvl(t.translated_value, vu.uda_desc),  vu.uda_id  from tl_shadow t,  v_uda
vu  where get_primary_lang != get_user_lang and upper(vu.uda_desc) = t.key(+) and
get_user_lang = t.lang(+) and vu.display_type = 'LV' order by 1.
ORA-28112: failed to execute policy function
Record Group RG_UDA_LOV
Form: FM_ITUDALST

FRM-30085: Unable to adjust form for output.

Form not created
```

Solution:

Disable the database filter policies by running drop_filter_policy.sql, run the application installer again and then run add_filter_policy.sql. Both files can be located with the database installer.

ORA-04031 (unable to allocate memory) error during database schema installation

Symptom:

When running the database schema installer you get the following error one or more times:

```
[ora:sqlplus] alter package
[ora:sqlplus] *
[ora:sqlplus] ERROR at line 1:
[ora:sqlplus] ORA-04031: unable to allocate 92120 bytes of shared memory ("shared
[ora:sqlplus] pool","unknown object","PL/SQL MPCODE","BAMIMA: Bam Buffer")
```

Solution:

There was not enough available memory in the shared pool on the database at the time of compilation. There are several choices to get past this error:

▪   Log into the database and attempt to recompile invalid objects in the database schema. Subsequent attempts to compile the same object(s) can be successful.

- Have a DBA increase the shared pool size on the database and re-run the installer from scratch on a new schema user.

X Error of failed request: BadWindow (invalid Window parameter)

Symptom:

When compiling forms during the application installation you receive this error one or more times:

```
X Error of failed request:  BadWindow (invalid Window parameter)
  Major opcode of failed request:  18 (X_ChangeProperty)
  Resource id in failed request:  0x1800002
  Serial number of failed request:  432
  Current serial number in output stream:  437
```

Solution:

This error occurs when there are too many requests made to the X server. If this error occurs manually recompile the form.

Example:

```
frmpcmp.sh userid=$UP module_type=form module=FORM_OR_MENU
```

RIB Errors

At random times, the RIB will get certain errors such as GETNXT(?,?,?,?,?,?,?) and/or ORA-21700 object does not exist or is marked for delete. This is very confusing because you may research and find that the object exists and is valid.

You must re-initialize the reference to reference an existing object. You do this by:

1. Bringing down the RIB OAS in question
2. Running /RIB_INSTALL_DIR>/InstallAndCompileAllRibOracleObjects.sql
3. Running another object validate script (ex: inv_obj_comp.sql) to make sure objects are valid (some may have deallocked in the end of the previous step).
4. Bringing up the RIB OAS in question

Error Connecting to Database URL

Symptom:

After entering database credentials in the installer screens and hitting next, a message pops up with an error like this:

```
Error connecting to database URL <url> as user <user>
details...
```

The message prevents you from moving on to the next screen to continue the installation.

Solution:

This error occurs when the installer fails to validate the user credentials you have entered on the screen. Make sure that you have entered the credentials properly. If you receive a message similar to this:

```
Error connecting to database URL <url> as user <user>
java.lang.Exception: UnsatisfiedLinkError encountered when using the Oracle
driver.
Please check that the library path is set up properly or switch to the JDBC thin
client.
```

It may mean that the installer is using the incorrect library path variables for the platform you are installing on. Open the file

<STAGING_DIR>/rms/dbschema/common/preinstall.sh and toggle the variable "use32bit" to "true" if it is set to "false" or vice versa. This setting is dependant on the JRE that is being used.

Multi-Threaded OCI Client Dumps Core after Reconnecting To Database

Symptom

If a multi-threaded Oracle client process that uses OCI to connect to a remote database loses connectivity with the database, it tries to reconnect and the client program continues to run. The program then dumps the core with the following stack trace, when Automatic Diagnostic Repository (ADR) is enabled.

```
skgfqio sdbgrfbibf_io_block_file dbgrfrbf_read_block_file dbgrmflrp_read_page
dbgrmblgmp_get_many_pages dbgrmmdrrmd_read_relation_meta_data
dbgrmmdora_open_record_access_full
dbgriporc_openrel_wcreate dbgrip_open_relation_access dbgrip_start_iterator
dbgrip_relation_iterator dbgruprac_read_adrctl...
```

Solution

Oracle Retail recommended you disable ADR (diag_adr_enabled=OFF, a sqlnet.ora parameter) while using multi-threaded OCI/OCCI application. diag_adr_enabled was introduced in Oracle 11g as a new method of tracing ADR. This will dump additional trace details.

Disabling 'diag_adr_enabled' does not disturb any functionality. Therefore, it can safely be unset by doing diag_adr_enabled=off in sqlnet.ora. However, if you still want tracing, you can have following parameters/variables set in sqlnet.ora:

```
trace_level_server=16 -- for server side NET tracing
trace_level_client=16 -- for client side NET tracing
```

For how to set traditional tracing, see the My Oracle Support document, "SQL*Net, Net8, Oracle Net Services - Tracing and Logging at a Glance" (ID 219968.1).

Forms Installer Fails on HP-UX

Symptom

Errors occur during Forms installer screens when run on HP-UX. When you click **Next** on the installer screen, "Data Source Details," the following error is issued: "No ocijdbc11 in java.library.path." The message prevents you from moving to the next screen.

Solution

This error message can be ignored. Verify that the data source details you entered are correct, and uncheck the box labeled **Test Data Source?** The installer screens will not attempt to validate the data source when you click **Next**. The installer will attempt to validate once again when installation starts, and the installer will fail if the credentials are incorrect.

ORFM DB Installer Fails on s11071552_extax_help_gtt_l10n_br.sql after applying hotfix 11071552

Symptom

When running the ORFM 13.2.1 database patch, it fails on the file s11071552_extax_help_gtt_l10n_br.sql:

```
    [exec] Executing file s11071552_extax_help_gtt_l10n_br.sql
    [exec] ORA Error while executing s11071552_extax_help_gtt_l10n_br.sql
  [delete] Deleting directory
/home/waschwar/RFM13.2.1/orfm/dbschemapatch/dblogs/.wallet

BUILD FAILED

/home/waschwar/RFM13.2.1/orfm/dbschemapatch/build.xml:385: The following error
occurred while executing this line:
/home/waschwar/RFM13.2.1/orfm/dbschemapatch/build.xml:236: The following error
occurred while executing this line:
/home/waschwar/RFM13.2.1/orfm/dbschemapatch/build.xml:175:
/home/waschwar/RFM13.2.1/orfm/dbschemapatch/orfm-
dbpatch/13.2.1/orfm/orfm_controller.ksh has failed.  Check error logs in
/home/waschwar/RFM13.2.1/orfm/dbschemapatch/orfm-dbpatch/13.2.1/orfm/error/ for
more details
```

If you look in the file s11071552_extax_help_gtt_l10n_br.err, it reports this error message:

```
Altering table EXTAX_HELP_GTT_L10N_BR
ALTER TABLE EXTAX_HELP_GTT_L10N_BR ADD PACK_NO VARCHAR2(25)
                                              *
ERROR at line 1:
ORA-01430: column being added already exists in table
```

Solution

This error occurs when running the ORFM 13.2.1 database schema patch after applying the required hotfix 11071552. This will fail because dbc's are not rerunable, and this hotfix contains dbcs that are called by the 13.2.1 patch. To resolve this issue, you must edit the DBC.dat file for ORFM 13.2.1 so that the dbcs contained in the hotfix 11071552 do not run during 13.2.1 installation.

1. Change directories to DB_PATCH_DIR/orfm/dbschemapatch/orfm-dbpatch/13.2.1/orfm/files.

2. Make a backup of the DBC.dat file:

        $ cp DBC.dat DBC.dat_ORIG

3. Open up DBC.dat in a text editor and remove the lines beginning in **s11071552 or s11071552a**:

```
s11071552_extax_help_gtt_l10n_br.sql
s11071552_extax_res_retail_det_l10n_br.sql
s11071552_extax_res_retail_l10n_br.sql
s11071552_extax_stg_retail_l10n_br.sql
s11071552a_extax_stg_retail_l10n_br.sql
s11071552_extax_res_cost_l10n_br.sql
s11071552_extax_res_cost_det_l10n_br.sql
s11071552_extax_stg_cost_l10n_br.sql
s11071552a_extax_stg_cost_l10n_br.sql
s11802380_fm_ap_stage_detail_hist.sql
s11802380_fm_ap_stage_head_hist.sql
s11802380_fm_fiscal_doc_complement_hist.sql
```

```
s11802380_fm_schedule_hist.sql
```

4. DBC.dat should now look like this:

```
s11802380_fm_ap_stage_detail_hist.sql
s11802380_fm_ap_stage_head_hist.sql
s11802380_fm_fiscal_doc_complement_hist.sql
s11802380_fm_schedule_hist.sql
```

5. Save and exit. The installation can be rerun after this is done. You should choose to continue the previous install when rerunning the installer.

GUI Screens Fail to Open When Running Installer

Symptom

When running the installer in GUI mode, the screens fail to open and the installer ends, returning to the console without an error message. The ant.install.log file contains this error:

```
Fatal exception: Width (0) and height (0) cannot be <= 0
java.lang.IllegalArgumentException: Width (0) and height (0) cannot be <= 0
```

Solution

This is an error encountered when Antinstaller is used in GUI mode with certain X Servers. To work around this issue, copy ant.install.properties.sample to ant.install.properties and rerun the installer.

H

Appendix: Application Deployment Method

The RMS installer provides the option to configure multiple application deployment methods. This is a setup where there is still a single primary RMS installation, but there are additional levels where customization can occur. This means multiple URLs configured in formsweb.cfg with cascading FORMS_PATH values.

The installer provides three choices for cascading environment configuration:

- **Base**: A standard RMS base installation with one application installation folder, and one URL.
- **Production**: Base plus two additional forms directories for PRD and EMG and an additional URL for EMG.
- **Development**: Production plus two additional forms directories for UAT and DEV and two additional URLs for UAT and DEV.
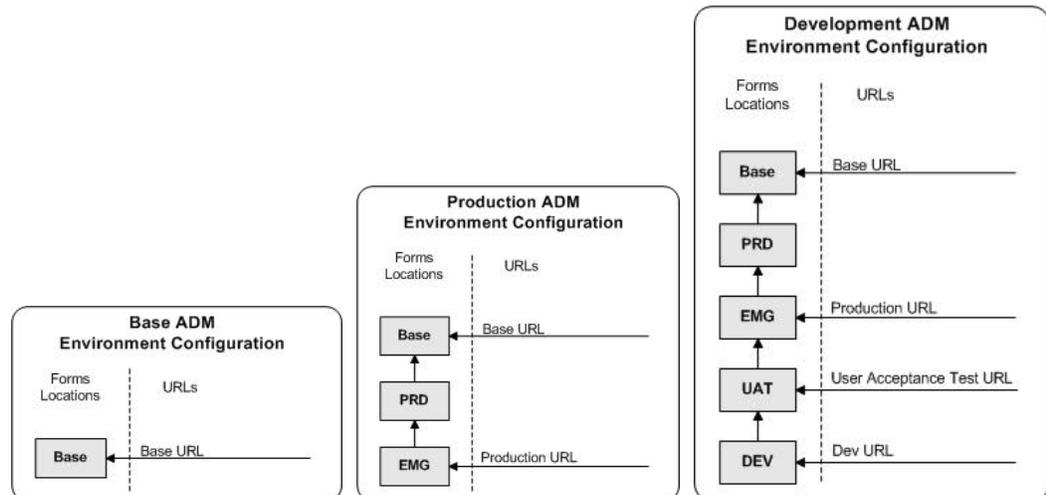
The above diagrams show how the application deployment method environment configurations are set up in the forms installation.

The installer creates the set of URLs, and empty directories for the other environments. All forms installed by this installer are placed in the "Base" environment. We are simply laying down the structure for customizations and fixes that the user can make after installation is complete.

Appendix: Oracle Single Sign-On for WebLogic

Single Sign-On (SSO) is a term for the ability to sign onto multiple Web applications via a single user ID/Password. There are many implementations of SSO. Oracle currently provides two different implementations: Oracle Single Sign-On (OSSO), and Oracle Access Manager (provides more comprehensive user access capabilities).

Most, if not all, SSO technologies use a session cookie to hold encrypted data passed to each application. The SSO infrastructure has the responsibility to validate these cookies and, possibly, update this information. The user is directed to log on only if the cookie is not present or has become invalid. These session cookies are restricted to a single browser session and are never written to a file.

Another facet of SSO is how these technologies redirect a user's Web browser to various servlets. The SSO implementation determines when and where these redirects occur and what the final screen shown to the user is.

Most SSO implementations are performed in an application's infrastructure and not in the application logic itself. Applications that leverage infrastructure managed authentication (such as deployment specifying Basic or Form authentication) typically have little or no code changes when adapted to work in an SSO environment.

What Do I Need for Oracle Single Sign-On?

The nexus of an Oracle Single Sign-On system is the Oracle Identity Management Infrastructure installation. This consists of the following components:

- An Oracle Internet Directory (OID) LDAP server, used to store user, role, security, and other information. OID uses an Oracle database as the back-end storage of this information.
- An Oracle HTTP Server 11g Release 1 as a front end to the Oracle WebLogic Server. The Oracle HTTP Server is included in the Oracle Web Tier Utilities 11g Release 1 (11.1.1).
- An Oracle Single Sign-On Plug-in, used to authenticate the user and create the OSSO session cookie. This is available in the Oracle Fusion Middleware 11g Web Tier Utilities (11.1.1.6) package. For Oracle Forms applications like RMS and RWMS, HTTP server will be used.
- The Delegated Administration Services (DAS) application in OID10g and Oracle Directory Services Manager (ODSM) application in OIM11g, used to administer users and group information. This information may also be loaded or modified via standard LDAP Data Interchange Format (LDIF) scripts.
- Additional administrative scripts for configuring the OSSO system and registering HTTP servers.

Additional WebLogic managed servers will be needed to deploy the business applications leveraging the OSSO technology.

Can Oracle Single Sign-On Work with Other SSO Implementations?

Yes, OSSO has the ability to interoperate with many other SSO implementations, but some restrictions exist.

Oracle Single Sign-on Terms and Definitions

The following terms apply to single sign-on.

Authentication

Authentication is the process of establishing a user's identity. There are many types of authentication. The most common authentication process involves a user ID and password.

Dynamically Protected URLs

A Dynamically Protected URL is a URL whose implementing application is aware of the OSSO environment. The application may allow a user limited access when the user has not been authenticated. Applications that implement dynamic OSSO protection typically display a Login link to provide user authentication and gain greater access to the application's resources.

Identity Management Infrastructure for 10g, Oracle Identity Management (OIM) and Oracle Access Manager (OAM) Oracle Access Manager (OAM) for 11g

If using OSSO 10g, The Identity Management Infrastructure is the collection of product and services which provide Oracle Single Sign-on functionality. For OSSO 10g, this includes the Oracle Internet Directory, an Oracle HTTP server, and the Oracle Single Sign-On services. The Oracle Application Server deployed with these components is typically referred as the Infrastructure instance.

If using SSO with OAM11g, Oracle Identity Management (OIM) 11g includes Oracle Internet Directory and ODSM. Oracle Access Manager (OAM) 11g should be used for SSO using osso agent. Oracle Forms 11g contains Oracle HTTP server and other Retail Applications will use WebTier11g for HTTP.

MOD_OSSO

mod_osso is an Apache Web Server module an Oracle HTTP Server uses to function as a partner application within an Oracle Single Sign-On environment. The Oracle HTTP Server is based on the Apache HTTP Server.

MOD_WEBLOGIC

mod_WebLogic operates as a module within the HTTP server that allows requests to be proxied from the Apache HTTP server to the WebLogic server.

Oracle Internet Directory

Oracle Internet Directory (OID) is an LDAP-compliant directory service. It contains user ids, passwords, group membership, privileges, and other attributes for users who are authenticated using Oracle Single Sign-On.

Partner Application

A partner application is an application that delegates authentication to the Oracle Identity Management Infrastructure. One such partner application is the Oracle HTTP Server (OHS) supplied with Oracle Forms Server or WebTier11g Server if using other Retail Applications other than Oracle Forms Applications. OHS or WebTier uses the MOD_OSSO module to configure this functionality.

All partner applications must be registered with the Oracle Single Sign-On server if using OSSO10g and all partner applications must be registered with Oracle Access Manager (OAM) 11g if using OAM11g for SSO implementation. An output product of this registration is a configuration file the partner application uses to verify a user has been previously authenticated.

Realm

A Realm is a collection users and groups (roles) managed by a single password policy. This policy controls what may be used for authentication (for example, passwords, X.509 certificates, and biometric devices). A Realm also contains an authorization policy used for controlling access to applications or resources used by one or more applications.

A single OID can contain multiple Realms. This feature can consolidate security for retailers with multiple banners or to consolidate security for multiple development and test environments.

Statically Protected URLs

A URL is considered to be Statically Protected when an Oracle HTTP server is configured to limit access to this URL to only SSO authenticated users. Any attempt to access a Statically Protected URL results in the display of a login page or an error page to the user.

Servlets, static HTML pages, and JSP pages may be statically protected.

> **Note:** Dynamically Protected URL and Statically Protected URL are within the context of the Oracle Software Security Assurance (OSSA). The static protection for URLs is a common JEE feature.

What Single Sign-On is not

Single Sign-On is NOT a user ID/password mapping technology.

However, some applications can store and retrieve user IDs and passwords for non-SSO applications within an OID LDAP server. An example of this is the Oracle Forms Web Application framework, which maps OSSO user IDs to a database logins on a per-application basis.

How Oracle Single Sign-On Works

Oracle Single Sign-On involves a couple of different components. These are:

- The Oracle Single Sign-On (OSSO) servlet, which is responsible for the back-end authentication of the user.
- The Oracle Internet Directory LDAP server, which stores user IDs, passwords, and group (role) membership.
- The Oracle HTTP Server associated with the Web application, which verifies and controls browser redirection to the OSSO servlet.
- If the Web application implements dynamic protection, then the Web application itself is involved with the OSSO system.

Statically Protected URLs

When an unauthenticated user accesses a statically protected URL, the following occurs:

1. The user's Web browser makes an HTTP request to a protected URL serviced by the Oracle HTTP Server (OHS).
2. The Oracle HTTP Server processses the request and routes it to the mod_oss module.
3. This module determines whether the user is already authenticated. If the authentication is required, it directs the browser to the OSSO server. The OSSO server checks for a secure cookie containing the authentication information. If the cookie is not found, the following occurs:
   a. The OSSO servlet determines the user must authenticate, and displays the OSSO login page.
   b. The user must sign in via a valid user ID and password. If the OSSO servlet has been configured to support multiple Realms, a valid realm must also be entered. The user ID, password, and realm information is validated against the Oracle Internet Directory LDAP server. The browser is then redirected back to the Oracle HTTP Server with the encrypted authentication credentials. It does NOT contain the user's password.
4. The mod_osso module then decrypts the user credentials and sets HTTP headers with relevant user attributes, marking the user's session as authenticated.
5. The mod_WebLogic module (within the Oracle HTTP Server) then forwards the request to the Oracle WebLogic Server.
6. The Oracle WebLogic Server then invokes the configured authentication providers that decode the headers and provide the user's role membership. In an OSSO implementation, ensure that the OSSO Identity Asserter is invoked and Oracle Internet Directory (OID) Authenticator is executed to provide the user's role membership.
7. Once the authentication is established, the relevant application logic is initiated and the response is sent back to the user through the Oracle HTTP Server.
   Because the Web browser session is now authenticated, subsequent requests in that session are not redirected to the OSSO server for authentication.

Dynamically Protected URLs

When an unauthenticated user accesses a dynamically protected URL, the following occurs:

1. The user's Web browser makes an HTTP request to a protected URL serviced by the Oracle HTTP Server (OHS). The Oracle HTTP server recognizes the user has not been authenticated, but allows the user to access the URL.

2. The application determines the user must be authenticated and send the Oracle HTTP Server a specific status to begin the authentication process.

3. The Oracle HTTP Server processes the request and routes it to the mod_oss module.

4. This module determines whether the user is already authenticated. If the authentication is required, it directs the browser to the OSSO server. The OSSO server checks for a secure cookie containing the authentication information. If the cookie is not found, the following occurs:

   a. The OSSO servlet determines the user must authenticate, and displays the OSSO login page.

   b. The user must sign in via a valid user ID and password. If the OSSO servlet has been configured to support multiple Realms, a valid realm must also be entered. The user ID, password, and realm information is validated against the Oracle Internet Directory LDAP server. The browser is then redirected back to the Oracle HTTP Server with the encrypted authentication credentials. It does NOT contain the user's password.

5. The mod_osso module then decrypts the user credentials and sets HTTP headers with relevant user attributes, marking the user's session as authenticated.

6. The mod_WebLogic module (within the Oracle HTTP Server) then forwards the request to the Oracle WebLogic Server.

7. The Oracle WebLogic Server then invokes the configured authentication providers that decode the headers and provide the user's role membership. In an OSSO implementation, ensure that the OSSO Identity Asserter is invoked and Oracle Internet Directory (OID) Authenticator is executed to provide the user's role membership.

8. Once the authentication is established, the relevant application logic is initiated and the response is sent back to the user through the Oracle HTTP Server.
   Because the Web browser session is now authenticated, subsequent requests in that session are not redirected to the OSSO server for authentication.

Single Sign-on Topology
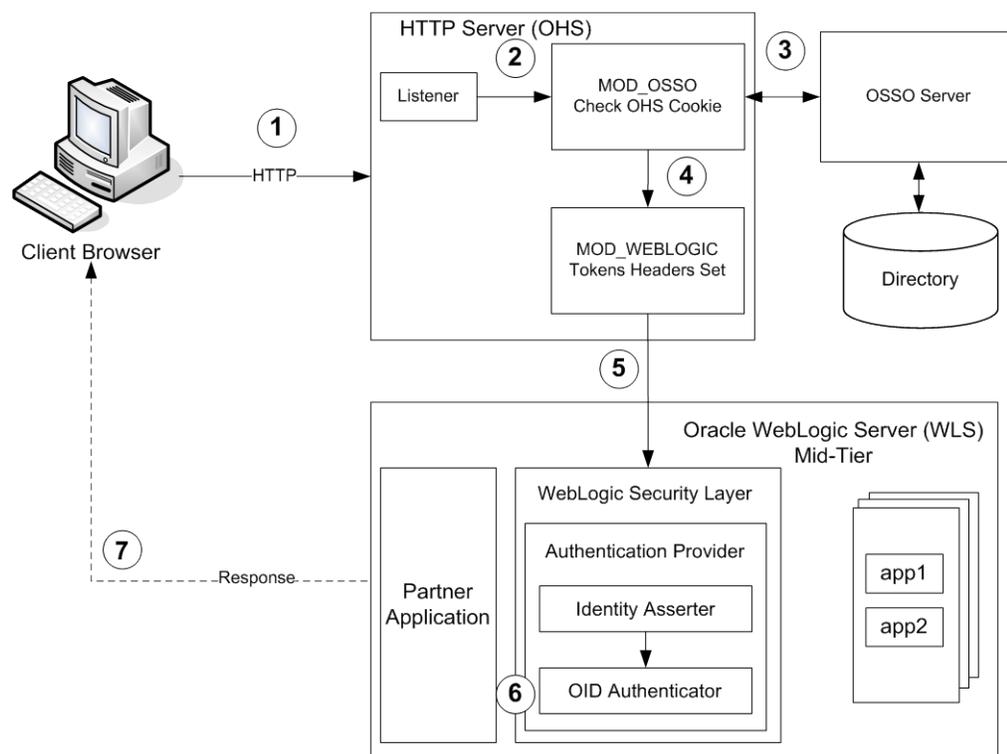
Installation Overview

Installing Oracle Single Sign-On 10g requires installation of the following:

1. Oracle Internet Directory (OID) LDAP server and the Infrastructure Oracle Application Server (OAS). They are typically installed using a single session of the Oracle Universal Installer and are performed at the same time. OID requires an Oracle relational database. If one is not available, the installer will install this as well.

    The Infrastructure OAS includes the Delegated Administration Services (DAS) application as well as the OSSO servlet. The DAS application can be used for user and realm management within OID.

2. Additional midtier instances (such as Oracle Forms 11g) for Oracle Retail applications based on Oracle Forms technologies (such as RMS). These instances must be registered with the Infrastructure OAS installed in step 1. For additional information on SSO 10g installation, see the Creating a High-Availability Environment Whitepaper (My Oracle Support Doc ID: 1311392.1).

3. Additional application servers to deploy other Oracle Retail applications and performing application specific initialization and deployment activities.

Installing Oracle Single Sign-On using OAM11g requires installation of the following:

1. Oracle Internet Directory (OID) ldap server and the Oracle Directory Services Manager. They are typically installed using the Installer of Oracle Identity Management 11gR1 (11.1.1.6). The ODSM application can be used for user and realm management within OID.

2. Oracle Access Manager 11gR1 (11.1.1.5) has to be installed and configured.

3. Additional midtier instances (such as Oracle Forms 11g) for Oracle Retail applications based on Oracle Forms technologies (such as RMS). These instances must be registered with the OAM installed in step 2.

4. Additional application servers to deploy other Oracle Retail applications and performing application specific initialization and deployment activities must be registered with OAM installed in step 2. For additional information on SSO 11g installation, see the Oracle Access Manager and Single Sign-On Whitepaper (My Oracle Support Doc ID 1492047.1).

Infrastructure Installation and Configuration

The Infrastructure installation for OSSO and Oracle Access Manager (OAM) is dependent on the environment and requirements for its use. Deploying an Infrastructure OAS or Oracle Access Manager (OAM) to be used in a test environment does not have the same availability requirements as for a production environment. Similarly, the Oracle Internet Directory (OID) LDAP server can be deployed in a variety of different configurations. See the *Oracle Application Server Installation Guide and the Oracle Internet Directory Installation Guide (if using OSSO 10g) for more details and Oracle Identity Management Installation Guide11g (if using OAM11).*

OID User Data

Oracle Internet Directory is an LDAP v3 compliant directory server. It provides standards-based user definitions out of the box.

The current version of Oracle Single Sign-On only supports OID as its user storage facility. Customers with existing corporate LDAP implementations may need to synchronize user information between their existing LDAP directory servers and OID. OID supports standard LDIF file formats and provides a JNDI compliant set of Java classes as well. Moreover, OID provides additional synchronization and replication facilities to integrate with other corporate LDAP implementations.

Each user ID stored in OID has a specific record containing user specific information. For role-based access, groups of users can be defined and managed within OID. Applications can thus grant access based on group (role) membership saving administration time and providing a more secure implementation.

OID with Multiple Realms

OID and OSSO can be configured to support multiple user Realms. Each realm is independent from each other and contains its own set of user IDs. As such, creating a new realm is an alternative to installing multiple OID and Infrastructure instances. Hence, a single Infrastructure OAS can be used to support development and test environments by defining one realm for each environment.

Realms may also be used to support multiple groups of external users, such as those from partner companies. For more information on Realms, see the *Oracle Internet Directory Administrators Guide*.

User Management

User Management consists of displaying, creating, updating or removing user information. There are two basic methods of performing user management: LDIF scripts and the Delegate Administration Services (DAS) application available for OID10g or Oracle Directory Services Manager (ODSM) available for OID11g.

OID DAS

The DAS application is a Web-based application used in OID10g is designed for both administrators and users. A user may update their password, change their telephone number of record, or modify other user information. Users may search for other users based on partial strings of the user's name or ID. An administrator may create new users, unlock passwords, or delete users.

The DAS application is fully customizable. Administrators may define what user attributes are required, optional or even prompted for when a new user is created.

Furthermore, the DAS application is secure. Administrators may also what user attributes are displayed to other users. Administration is based on permission grants, so different users may have different capabilities for user management based on their roles within their organization.

ODSM

Oracle Directory Services Manager (ODSM) is a Web-based application used in OID11g is designed for both administrators and users which enables you to configure the structure of the directory, define objects in the directory, add and configure users, groups, and other entries. ODSM is the interface you use to manage entries, schema, security, adapters, extensions, and other directory features.

LDIF Scripts

Script based user management can be used to synchronize data between multiple LDAP servers. The standard format for these scripts is the LDAP Data Interchange Format (LDIF). OID supports LDIF script for importing and exporting user information. LDIF scripts may also be used for bulk user load operations.

User Data Synchronization

The user store for Oracle Single Sign-On resides within the Oracle Internet Directory (OID) LDAP server. Oracle Retail applications may require additional information attached to a user name for application-specific purposes and may be stored in an application-specific database. Currently, there are no Oracle Retail tools for synchronizing changes in OID stored information with application-specific user stores. Implementers should plan appropriate time and resources for this process. Oracle Retail strongly suggests that you configure any Oracle Retail application using an LDAP for its user store to point to the same OID server used with Oracle Single Sign-On.

J

Appendix: RMS RETL Instructions

This Appendix summarizes the RETL program features utilized in the RMS Extractions (RMS ETL). More information about the RETL tool is available in the *Oracle Retail Extract, Transform, and Load Programmer's Guide*. More information about RMS ETL is available in the RMS ETL operations guide.

Configuration

The following are configuration instructions.

RETL

Before attempting to configure and run RMS ETL, install RETL version 10.3 or later which is required to run RMS ETL. Run the verify_retl script (included as part of the RETL installation) to ensure that RETL is working properly before proceeding.

RETL User and Permissions

RMS ETL should be installed and run as the RETL user. Additionally, the permissions should be set up as per the *Oracle Retail Extract, Transform, and Load Programmer's Guide*. RMS ETL reads data, creates, deletes and updates tables. (This is to ensure that weekly sales data is not pulled multiple times on subsequent extractions.) If these permissions are not set up properly, extractions will fail.

Environment Variables

In addition to the RETL environment variables (please see the Programmer's Guide for version of RETL), you need to set MMHOME to the base directory for RMS ETL. This is the top level directory that selected during the RMS Batch installation process. So in .kshrc you should add a line like the following:

```
export MMHOME=<base directory for RMS ETL>
```

rmse_config.env

There are a couple variables that will need to change depending upon local settings:

```
export DBNAME=pkols05
export RMS_OWNER=rms01
export BA_OWNER=rms01
```

Also, you will need to set the environment variable PASSWORD in either the rmse_config.env, .kshrc or some other location that can be included via one of those two means. For example, adding this line to the rmse_config.env will cause the password "bogus" to be used to log into the database: `export PASSWORD=pass1`

K

Appendix: Setting Up Password Stores with Oracle Wallet

As part of an application installation, administrators must set up password stores for database user accounts using Oracle Wallet. These password stores must be installed on the application database side. While the installer handles much of this process, the administrators must perform some additional steps.

A password store for the application and application server user accounts must also be installed; however, the installer takes care of this entire process.

About Password Stores and Oracle Wallet

Oracle databases have allowed other users on the server to see passwords in case database connect strings (username/password@db) were passed to programs. In the past, users could navigate to `ps -ef|grep <username>` to see the password if the password was supplied in the command line when calling a program.

To make passwords more secure, Oracle Retail has implemented the Oracle Software Security Assurance (OSSA) program. Sensitive information such as user credentials now must be encrypted and stored in a secure location. This location is called password stores or wallets. These password stores are secure software containers that store the encrypted user credentials.

Users can retrieve the credentials using aliases that were set up when encrypting and storing the user credentials in the password store. For example, if `username/password@db` is entered in the command line argument and the alias is called `db_username`, the argument to a program is as follows:

`sqlplus /@db_username`

This would connect to the database as it did previously, but it would hide the password from any system user.

After this is configured, as in the example above, the application installation and the other relevant scripts are no longer needed to use embedded usernames and passwords. This reduces any security risks that may exist because usernames and passwords are no longer exposed.

When the installation starts, all the necessary user credentials are retrieved from the Oracle Wallet based on the alias name associated with the user credentials.

There are two different types of password stores or wallets. One type is for database connect strings used in program arguments (such as `sqlplus /@db_username`). The other type is for Java application installation and application use.

Setting Up Password Stores for Database User Accounts

After the database is installed and the default database user accounts are set up, administrators must set up a password store using the Oracle wallet. This involves assigning an alias for the username and associated password for each database user account. The alias is used later during the application installation. This password store must be created on the system where the application server and database client are installed.

This section describes the steps you must take to set up a wallet and the aliases for the database user accounts. For more information on configuring authentication and password stores, see the *Oracle Database Security Guide*.

> **Note:** In this section, `<wallet_location>` is a placeholder text for illustration purposes. Before running the command, ensure that you specify the path to the location where you want to create and store the wallet.

To set up a password store for the database user accounts, perform the following steps:

5. Create a wallet using the following command:

```
mkstore -wrl <wallet_location> -create
```

After you run the command, a prompt appears. Enter a password for the Oracle Wallet in the prompt.

> **Note:** The `mkstore` utility is included in the Oracle Database Client installation.

The wallet is created with the auto-login feature enabled. This feature enables the database client to access the wallet contents without using the password. For more information, refer to the *Oracle Database Advanced Security Administrator's Guide.*

6. Create the database connection credentials in the wallet using the following command:

```
mkstore -wrl <wallet_location> -createCredential <alias-name> <database-user-
name>
```

After you run the command, a prompt appears. Enter the password associated with the database user account in the prompt.

7. Repeat Step 2 for all the database user accounts.

8. Update the sqlnet.ora file to include the following statements:

```
WALLET_LOCATION = (SOURCE = (METHOD = FILE) (METHOD_DATA = (DIRECTORY =
<wallet_location>)))
SQLNET.WALLET_OVERRIDE = TRUE
SSL_CLIENT_AUTHENTICATION = FALSE
```

9. Update the tnsnames.ora file to include the following entry for each alias name to be set up.

```
<alias-name> =
    (DESCRIPTION =
     (ADDRESS_LIST =
          (ADDRESS = (PROTOCOL = TCP) (HOST = <host>) (PORT = <port>))
        )
        (CONNECT_DATA =
           (SERVICE_NAME = <service>)
         )
    )
```

In the previous example, `<alias-name>`, `<host>`, `<port>`, and `<service>` are placeholder text for illustration purposes. Ensure that you replace these with the relevant values.

Setting Up Wallets for Database User Accounts

The following examples show how to set up wallets for database user accounts for the following applications:

- For RMS, RWMS, RPM Batch, RETL, RMS, RWMS, and ARI
- For Java Applications (SIM, ReIM, RPM, Alloc, RIB, RSL, AIP, RETL)

For RMS, RPM Plsql Batch, RETL DB, RWMS batch, and ARI

1. Create a new directory called wallet under your folder structure.

   ```
   cd /projects/rms13.2/dev/
   mkdir .wallet
   ```

   > **Note:** The default permissions of the wallet allow only the owner to use it, ensuring the connection information is protected. If you want other users to be able to use the connection, you must adjust permissions appropriately to ensure only authorized users have access to the wallet.

2. Create a sqlnet.ora in the wallet directory with the following content.

   ```
   WALLET_LOCATION =   (SOURCE =      (METHOD = FILE)     (METHOD_DATA =
   (DIRECTORY =  /projects/rms13.2/dev/.wallet)) )
   SQLNET.WALLET_OVERRIDE=TRUE
   SSL_CLIENT_AUTHENTICATION=FALSE
   ```

   > **Note**: WALLET_LOCATION must be on line 1 in the file.

3. Setup a tnsnames.ora in the wallet directory. This tnsnames.ora includes the standard tnsnames.ora file. Then, add two custom tns_alias entries that are only for use with the wallet. For example, `sqlplus /@dvols29_rms01user`.

   ```
   ifile = /u00/oracle/product/11.2.0.3/network/admin/tnsnames.ora

   dvols29_rms01user =
     (DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL = tcp)
     (host = mspdv311.us.oracle.com) (Port = 1521)))
       (CONNECT_DATA = (SID = dvols29) (GLOBAL_NAME = dvols29)))

   dvols29_rms01user.world =
     (DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL = tcp)
     (host = mspdv311.us.oracle.com) (Port = 1521)))
       (CONNECT_DATA = (SID = dvols29) (GLOBAL_NAME = dvols29)))
   ```

   > **Note**: It is important to not just copy the tnsnames.ora file because it can quickly become out of date. The ifile clause (shown above) is key.

4. Create the wallet files. These are empty initially.

   a. Ensure you are in the intended location.

   ```
   $ pwd
   /projects/rms13.2/dev/.wallet
   ```

   b. Create the wallet files.

   ```
   $ mkstore -wrl . -create
   ```

   c. Enter the wallet password you want to use. It is recommended that you use the same password as the UNIX user you are creating the wallet on.

   d. Enter the password again.

   Two wallet files are created from the above command:

   – ewallet.p12

   – cwallet.sso

5. Create the wallet entry that associates the user name and password to the custom tns alias that was setup in the wallet's tnsnames.ora file.

```
mkstore -wrl . -createCredential <tns_alias> <username> <password>
```

> **Example:** `mkstore -wrl . -createCredential`
> `dvols29_rms01user rms01user passwd`

6. Test the connectivity. The ORACLE_HOME used with the wallet must be the same version or higher than what the wallet was created with.

```
$ export TNS_ADMIN=/projects/rms13.2/dev/.wallet /* This is very import to use
wallet to point at the alternate tnsnames.ora created in this example */

$ sqlplus /@dvols29_rms01user

SQL*Plus: Release 11

Connected to:
Oracle Database 11g

SQL> show user
USER is "rms01user"
```

Running batch programs or shell scripts would be similar:

```
Ex: dtesys /@dvols29_rms01user
script.sh /@dvols29_rms01user

Set the UP unix variable to help with some compiles :

export UP=/@dvols29_rms01user
for use in RMS batch compiles, and RMS, RWMS, and ARI forms compiles.
```

As shown in the example above, users can ensure that passwords remain invisible.

Additional Database Wallet Commands

The following is a list of additional database wallet commands.

- Delete a credential on wallet

  ```
  mkstore -wrl . -deleteCredential dvols29_rms01user
  ```

- Change the password for a credential on wallet

  ```
  mkstore -wrl . -modifyCredential dvols29_rms01user rms01user passwd
  ```

- List the wallet credential entries

  ```
  mkstore –wrl . –list
  ```

  This command returns values such as the following.

  ```
  oracle.security.client.connect_string1
  oracle.security.client.user1
  oracle.security.client.password1
  ```

- View the details of a wallet entry

  ```
  mkstore –wrl . –viewEntry oracle.security.client.connect_string1
  ```

  Returns the value of the entry:

  ```
  dvols29_rms01user
  mkstore –wrl . –viewEntry oracle.security.client.user1
  ```

  Returns value of the entry:

  ```
  rms01user
  ```

  ```
  mkstore –wrl . –viewEntry oracle.security.client.password1
  ```

  Returns value of the entry:

  ```
  passwd
  ```

For Java Applications (SIM, ReIM, RPM, Alloc, RIB, RSL, AIP, RETL)

For Java application, consider the following:

- For database user accounts, ensure that you set up the same alias names between the password stores (database wallet and Java wallet). You can provide the alias name during the installer process.

- Document all aliases that you have set up. During the application installation, you must enter the alias names for the application installer to connect to the database and application server.

- Passwords are not used to update entries in Java wallets. Entries in Java wallets are stored in partitions, or application-level keys. In each retail application that has been installed, the wallet is located in <WEBLOGIC_DOMAIN_HOME>/retail/<appname>/config Example: mspdv351:[103x_WLS] /u00/webadmin/product/10.3.x/WLS/user_projects/ domains/132_mck_soa_domain/retail/reim13/config

- Application installers should create the Java wallets for you, but it is good to know how this works for future use and understanding.

- Scripts are located in <WEBLOGIC_DOMAIN_HOME>/retail/<appname>/retail-public-security-api/bin for administering wallet entries.

  Example:

  mspdv351:[103x_WLS] /u00/webadmin/product/10.3.x/WLS/user_projects/ domains/132_mck_soa_domain/retail/reim13/retail-public-security-api/bin

- In this directory is a script to help you update each alias entry without having to remember the wallet details. For example, if you set the RPM database alias to rms01user, you will find a script called update-RMS01USER.sh.

  > **Note:** These scripts are available only with application installed by way of an installer.

- Two main scripts are related to this script in the folder for more generic wallet operations: dump_credentials.sh and save_credential.sh.

- If you have not installed the application yet, you can unzip the application zip file and view these scripts in <app>/application/retail-public-security-api/bin.

  Example:

  mspdv351:[103x_WLS] /u00/webadmin/reim/application/retail-public-security-api/bin

update-<ALIAS>.sh

update-<ALIAS>.sh updates the wallet entry for this alias. You can use this script to change the user name and password for this alias. Because the application refers only to the alias, no changes are needed in application properties files.

Usage:

```
update-<username>.sh <myuser>
```

Example:

```
mspdev71:[103xWLS]
/u00/webadmin/product/10.3.x/WLS/user_projects/domains/java_domain/retail/rpm1
32test/retail-public-security-api/bin> ./update-RMS01USER.sh
usage: update-RMS01USER.sh <username>
<username>: the username to update into this alias.
Example: update-RMS01USER.sh myuser
Note: this script will ask you for the password for the username that you pass
in.
mspdev71:[103xWLS]
/u00/webadmin/product/10.3.x/WLS/user_projects/domains/java_domain/retail/rpm1
32test/retail-public-security-api/bin>
```

dump_credentials.sh

dump_credentials.sh is used to retrieve information from the wallet. For each entry found in the wallet, the wallet partition, the alias, and the user name are displayed. Note that the password is not displayed. If the value of an entry is uncertain, run save_credential.sh to resave the entry with a known password.

```
dump_credentials.sh <wallet location>
```

Example:

dump_credentials.sh /u00/webadmin/product/10.3.x/WLS/user_projects/domains/132_mck_soa_domain/retail/reim13/config

```
Retail Public Security API Utility
===============================================
```

Below are the credentials found in the wallet at the location:/u00/webadmin/product/10.3.x/WLS/user_projects/domains/132_mck_soa_domain/retail/reim13/config

```
===============================================

Application level key partition name:reim13
User Name Alias:WLS-ALIAS User Name:weblogic
User Name Alias:RETAIL-ALIAS User Name:retail.user
User Name Alias:LDAP-ALIAS User Name:RETAIL.USER
User Name Alias:RMS-ALIAS User Name:rms132mock
User Name Alias:REIMBAT-ALIAS User Name:reimbat
```

save_credential.sh

save_credential.sh is used to update the information in wallet. If you are unsure about the information that is currently in the wallet, use dump_credentials.sh as indicated above. You can add new or update using save_credential.sh as shown below:

```
save_credential.sh -a <alias> -u <user> -p <partition name>  -l <path of the
wallet file location where credentials are stored>
```

Example:

```
mspdv351:[103x_WLS]
/u00/webadmin/mock132_testing/rtil/rtil/application/retail-public-security-
api/bin> save_credential.sh -l
/u00/webadmin/product/10.3.x/WLS/user_projects/domains/132_mck_soa_domain/reta
il/reim13/config
-a RMS-ALIAS -p reim13 -u rms132mock

============================================
Retail Public Security API Utility
============================================

Enter password:
Verify password:
```

> **Note:** -p in the above command is for partition name. You must specify the proper partition name used in application code for each Java application.
>
> save_credential.sh and dump_credentials.sh scripts are the same for all applications. If using save_credential.sh to add a wallet entry or to update a wallet entry, bounce the application/managed server so that your changes are visible to the application. Also, save a backup copy of your cwallet.sso file in a location outside of the deployment path, because redeployment or reinstallation of the application will wipe the wallet entries you made after installation of the application. To restore your wallet entries after a redeployment/reinstallation, copy the backed up cwallet.sso file over the cwallet.sso file. Then bounce the application/managed server.

Usage

```
============================================
Retail Public Security API Utility
============================================
usage: save_credential.sh -au[plh]
E.g. save_credential.sh -a rms-alias -u rms_user -p rib-rms -l ./
 -a,--userNameAlias <arg>           alias for which the credentials
needs to be stored
 -h,--help                          usage information
 -l,--locationofWalletDir <arg>     location where the wallet file is
created.If not specified, it creates the wallet under secure-credential-wallet
directory which is already present under the retail-public-security-api/
directory.
 -p,--appLevelKeyPartitionName <arg>  application level key partition name
 -u,--userName <arg>                username to be stored in secure
credential wallet for specified alias*
```

How Does the Wallet Relate to the Application?

The ORACLE Retail Java applications have the wallet alias information you create in an <app-name>.properties file. Below is the reim.properties file. Note the database information and the user are presented as well. The property called datasource.credential.alias=RMS-ALIAS uses the ORACLE wallet with the argument of RMS-ALIAS at the csm.wallet.path and csm.wallet.partition.name = reim13 to retrieve the password for application use.

Reim.properties code sample:

```
datasource.url=jdbc:oracle:thin:@mspdv349.us.oracle.com:1521:pkols07
datasource.schema.owner=rms132mock
datasource.credential.alias=RMS-ALIAS
# ================================================================
# ossa related Configuration
#
# These settings are for ossa configuration to store credentials.
# ================================================================

csm.wallet.path=/u00/webadmin/product/10.3.x/WLS/user_projects/domains/132_mck_soa
_domain/retail/reim13/config
csm.wallet.partition.name=reim13
```

How Does the Wallet Relate to Java Batch Program Use?

Some of the ORACLE Retail Java batch applications have an alias to use when running Java batch programs. For example, alias REIMBAT-ALIAS maps through the wallet to REIM app user reimbat, already on the database. To run a ReIM batch program the format would be: reimbatchpgmname REIMBAT-ALIAS <other arguments as needed by the program in question>.

Setting up RETL Wallets

RETL creates a wallet under $RFX_HOME/etc/security, with the following files:

- cwallet.sso
- jazn-data.xml
- jps-config.xml
- README.txt

To set up RETL wallets, perform the following steps:

1. Set the following environment variables:
   - ORACLE_SID=<retaildb>
   - RFX_HOME=/u00/rfx/rfx-13.2.0
   - RFX_TMP=/u00/rfx/rfx-13.2.0/tmp
   - JAVA_HOME=/usr/jdk1.6.0_12.64bit
   - LD_LIBRARY_PATH=$ORACLE_HOME
   - PATH=$RFX_HOME/bin:$JAVA_HOME/bin:$PATH
2. Change directory to $RFX_HOME/bin.
3. Run setup-security-credential.sh.
   - Enter 1 to add a new database credential.
   - Enter the dbuseralias. For example, retl_java_rms01user.
   - Enter the database user name. For example, rms01user.
   - Enter the database password.

- ▪ Re-enter the database password.
- ▪ Enter D to exit the setup script.

4. Update your RETL environment variable script to reflect the names of both the Oracle Networking wallet and the Java wallet.

   For example, to configure RETLforRPAS, modify the following entries in `$MMHOME/RETLforRPAS/rfx/etc/rmse_rpas_config.env`.

   - ▪ The RETL_WALLET_ALIAS should point to the Java wallet entry:

     ```
     export RETL_WALLET_ALIAS="retl_java_rms01user"
     ```

   - ▪ The ORACLE_WALLET_ALIAS should point to the Oracle network wallet entry:

     ```
     export ORACLE_WALLET_ALIAS="dvols29_rms01user"
     ```

   - ▪ The SQLPLUS_LOGON should use the ORACLE_WALLET_ALIAS:

     ```
     export SQLPLUS_LOGON="/@${ORACLE_WALLET_ALIAS}"
     ```

5. To change a password later, run `setup-security-credential.sh`.

   - ▪ Enter 2 to update a database credential.
   - ▪ Select the credential to update.
   - ▪ Enter the database user to update or change.
   - ▪ Enter the password of the database user.
   - ▪ Re-enter the password.

Quick Guide for Retail Wallets

Retail App	Wallet Type	Wallet Location	Wallet Partition	Alias Name	User Name	Use	Create By	Alias Example	Notes
RMS batch	DB	<RMS batch install dir (MMHOME)>/.wallet	n/a	<Database SID>_<Database schema owner>	<rms schema owner>	Compile, execution	Installer	n/a	Alias hard-coded by installer
RMS forms	DB	<forms install dir>/base/.wallet	n/a	<Database SID>_<Database schema owner>	<rms schema owner>	Compile	Installer	n/a	Alias hard-coded by installer
ARI forms	DB	<forms install dir>/base/.wallet	n/a	<Db_Ari01>	<ari schema owner>	Compile	Manual	ari-alias	
RMWS forms	DB	<forms install dir>/base/.wallet	n/a	<Database SID>_<Database schema owner>	<rwms schema owner>	Compile forms, execute batch	Installer	n/a	Alias hard-coded by installer
RPM app	DB	<RPM batch install dir>/.wallet	n/a	<rms schema owner alias>	<rms schema owner>	Execute batch	Manual	rms-alias	
RWMS auto-login	JAVA	<forms install dir>/base/.javawallet							
			<RWMS Installation name>	<RWMS database user alias>	<RWMS schema owner>	RWMS forms app to avoid dblogin screen	Installer	rwms13inst	
			<RWMS Installation name>	BI_ALIAS	<BI Publisher administrative user>	RWMS forms app to connect to BI Publisher	Installer	n/a	Alias hard-coded by installer
AIP app	JAVA	<weblogic domain home>/retail/<deployed aip app name>/config							Each alias must be unique
			aip13	<AIP weblogic user alias>	<AIP weblogic user name>	App use	Installer	aip-weblogic-alias	
			aip13	<AIP database schema user alias>	<AIP database schema user name>	App use	Installer	aip01user-alias	

Retail App	Wallet Type	Wallet Location	Wallet Partition	Alias Name	User Name	Use	Create By	Alias Example	Notes
			aip13	\<rib-aip weblogic user alias\>	\<rib-aip weblogic user name\>	App use	Installer	rib-aip-weblogic-alias	
RPM app	JAVA	\<weblogic domain home\>/retail/\<deployed rpm app name\>/config							Each alias must be unique
			rpm13	\<rpm weblogic user alias\>	\<rpm weblogic user name\>	App use	Installer	rpm-weblogic-alias	
			rpm13	\<rms shema user alias\>	\<rms shema user name\>	App, batch use	Installer	rms01user-alias	
			rpm13	\<rpm application user one alias\>	\<rpm application user one name\>	App use	Installer	user1-alias	
			rpm13	\<rpm application user two alias\>	\<rpm application user two name\>	App use	Installer	user2-alias	
			rpm13	\<rpm batch user alias\>	\<rpm batch user name\>	App, batch use	Installer	rpmbatch-alias	
			rpm13	\<rib-rpm weblogic user alias\>	\<rib-rpm weblogic user name\>	App use	Installer	rib-rpm-weblogic-alias	
ReIM app	JAVA	\<weblogic domain home\>/retail/\<deployed reim app name\>/config							Each alias must be unique
			\<installed app name\>	\<reim weblogic user alias\>	\<reim weblogic user name\>	App use	Installer	weblogic-alias	
			\<installed app name\>	\<rms shema user alias\>	\<rms shema user name\>	App, batch use	Installer	rms01user-alias	
			\<installed app name\>	\<reim webservice validation user alias\>	\<reim webservice validation user name\>	App use	Installer	reimwebservice-alias	
			\<installed app name\>	\<reim batch user alias\>	\<reim batch user name\>	App, batch use	Installer	reimbatch-alias	

Retail App	Wallet Type	Wallet Location	Wallet Partition	Alias Name	User Name	Use	Create By	Alias Example	Notes
Alloc app	JAVA	<weblogic domain home>/retail/<deployed alloc app name>/config							Each alias must be unique
			<installed app name>	<alloc weblogic user alias>	<alloc weblogic user name>	App use	Installer	weblogic-alias	
			<installed app name>	<rms shema user alias>	<rms shema user name>	App use	Installer	rms01user-alias	
			<installed app name>	<rsl for rms weblogic user alias>	<rsl for rms weblogic user name>	App use	Installer	rsl-rms-weblogic-alias	
RSL app	JAVA	<RSL INSTALL DIR>/rsl-rms/security/config							Each alias must be unique
			rsl-rsm	<rsl weblogic user alias>	<rsl weblogic user name>	App use	Installer	weblogic-alias	
			rsl-rsm	<rms shema user alias>	<rms shema user name>	App use	Installer	rms01user-alias	
SIM app	JAVA	<weblogic domain home>/retail/<deployed sim app name>/config							
			rpm	<rpm weblogic user alias>	<rpm weblogic user name>	App use	Installer	rpm-weblogic-alias	
			rms	<rsl for rms weblogic user alias>	<rsl for rms weblogic user name>	App use	Installer	rsl-rms-weblogic-alias	
			rib-sim	<rib-sim weblogic user alias>	<rib-sim weblogic user name>	App use	Installer	rib-sim-weblogic-alias	
RETL	JAVA	<RETL home>/etc/security	n/a	<target application user alias>	<target application db userid>	App use	Manual	retl_java_rms01user	User may vary depending on RETL flow's target application

Retail App	Wallet Type	Wallet Location	Wallet Partition	Alias Name	User Name	Use	Create By	Alias Example	Notes
RETL	DB	\<RETL home>/.wallet	n/a	\<target application user alias>	\<target application db userid>	App use	Manual	\<db>_\<user >	User may vary depending on RETL flow's target application
RIB	JAVA	\<RIBHOME DIR>/deployment-home/conf/security							\<app> is one of aip, rfm, rms, rpm, sim, rwms, tafr
JMS			jms\<1-5>	\<jms user alias> for jms\<1-5>	\<jms user name> for jms\<1-5>	Integratio n use	Installer	jms-alias	
WebLogic			rib-\<app>-app-server-instance	\<rib-app weblogic user alias>	\<rib-app weblogic user name>	Integratio n use	Installer	weblogic-alias	
Admin GUI			rib-\<app>#web-app-user-alias	\<rib-app admin gui user alias>	\<rib-app admin gui user name>	Integratio n use	Installer	admin-gui-alias	
Application			rib-\<app>#user-alias	\<app weblogic user alias>	\<app weblogic user name>	Integratio n use	Installer	app-user-alias	Valid only for aip, rpm, sim
DB			rib-\<app>#app-db-user-alias	\<rib-app database schema user alias>	\<rib-app database schema user name>	Integratio n use	Installer	db-user-alias	Valid only for rfm, rms, rwms, tafr
Error Hospital			rib-\<app>#hosp-user-alias	\<rib-app error hospital database schema user alias>	\<rib-app error hospital database schema user name>	Integratio n use	Installer	hosp-user-alias	

Appendix: AIX Shared Library Bug Fix

The env_rdbms.mk file for Oracle 10g and higher includes defect 2143531, which was not fixed because there is a workaround. For the workaround, the following changes in bold and italics must need to be made to the $ORACLE_HOME/rdbms/lib/env_rdbms.mk file. Note that changes are made in both the BUILDLIB_WITH_CONTEXT and BUILDLIB_WITH_NO_CONTEXT functions.

```
-------------------------------------------
BUILDLIB_WITH_CONTEXT=generate_export_list() \
{ \
/bin/nm -X32_64 -B -h -g "$$1" | grep -v ' U ' | awk '{print $$3}' | \
egrep -v '^\.|^TOC' | sort | uniq ; \
}; \
generate_import_list() { \
LIB_NAME=$$1; \
IMP_FILE=$$2; \
\
cat ${ORACLE_HOME}/rdbms/lib/xa.imp | head -1 | awk '{print $$0, "." }' >
$${IMP_FILE}; \
/bin/nm -X32_64 -C -B -h -g $${LIB_NAME} | grep ' U ' | grep -v "::" | grep -v "("
| grep -v "\.cc" | awk '{print $$3}' | sed -e "s/\.//g
" | grep -v "^_" >> $${IMP_FILE}; \
}; \
\
generate_import_list "$(OBJS)" $(SHARED_LIBNAME).imp; \
generate_export_list $(OBJS) > $(SHARED_LIBNAME).exp; \
$(LD) -bnoentry -bM:SRE -bE:$(SHARED_LIBNAME).exp -bI:$(SHARED_LIBNAME).imp \
-o $(SHARED_LIBNAME) $(OBJS) -L$(ORACLE_HOME)/lib -lc_r -lm $(LLIBCLNTSH) $(MATHLIB)
-------------------------------------------
BUILDLIB_NO_CONTEXT=generate_export_list() \
{ \
/bin/nm -X32_64 -B -h -g "$$1" | grep -v ' U ' | awk '{print $$3}' | \
egrep -v '^\.|^TOC' | sort | uniq ; \
}; \
generate_import_list() { \
LIB_NAME=$$1; \
IMP_FILE=$$2; \
\
cat ${ORACLE_HOME}/rdbms/lib/xa.imp | head -1 | awk '{print $$0, "." }' >
$${IMP_FILE}; \
/bin/nm -X32_64 -C -B -h -g $${LIB_NAME} | grep ' U ' | grep -v "::" | grep -v "("
| grep -v "\.cc" | awk '{print $$3}' | sed -e "s/\.//g
" | grep -v "^_" >> $${IMP_FILE}; \
}; \
\
generate_import_list "$(OBJS)" $(SHARED_LIBNAME).imp; \
generate_export_list $(OBJS) > $(SHARED_LIBNAME).exp; \
$(LD) -bnoentry -bM:SRE -bE:$(SHARED_LIBNAME).exp -bI:$(SHARED_LIBNAME).imp \
-o $(SHARED_LIBNAME) $(OBJS) -L$(ORACLE_HOME)/lib -lc_r -lm $(LLIBCLNTSH) $(MATHLIB)
```

Appendix: Installation Order

This section provides a guideline as to the order in which the Oracle Retail applications should be installed. If a retailer has chosen to use only some of the applications, the order is still valid, less the applications not being installed.

> **Note:** The installation order is not meant to imply integration between products.

Enterprise Installation Order

1. Oracle Retail Merchandising System (RMS), Oracle Retail Trade Management (RTM), Oracle Retail Sales Audit (ReSA). Optional: Oracle Retail Fiscal Management (ORFM)

   > **Note:** ORFM is an optional application for RMS if you are implementing Brazil localization.

2. Oracle Retail Service Layer (RSL)
3. Oracle Retail Extract, Transform, Load (RETL)
4. Oracle Retail Active Retail Intelligence (ARI)
5. Oracle Retail Warehouse Management System (RWMS)
6. Oracle Retail Invoice Matching (ReIM)
7. Oracle Retail Price Management (RPM)

   > **Note:** During installation of RPM, you are asked for the RIBforRPM provider URL. Because RIB is installed after RPM, make a note of the URL you enter. To change the RIBforRPM provider URL after you install RIB, edit the remote_service_locator_info_ribserver.xml file.

8. Oracle Retail Allocation
9. Oracle Retail Central Office (ORCO)
10. Oracle Retail Returns Management (ORRM)
11. Oracle Retail Back Office (ORBO) or Back Office with Labels and Tags (ORLAT)
12. Oracle Retail Store Inventory Management (SIM)

    > **Note:** During installation of SIM, you are asked for the RIB provider URL. Because RIB is installed after SIM, make a note of the URL you enter. To change the RIB provider URL after you install RIB, edit the remote_service_locator_info_ribserver.xml file.

13. Oracle Retail Predictive Application Server (RPAS)
14. Oracle Retail Demand Forecasting (RDF)
15. Oracle Retail Category Management (CM)
16. Oracle Retail Replenishment Optimization (RO)
17. Oracle Retail Analytic Parameter Calculator Replenishment Optimization (APC RO)

18. Oracle Retail Regular Price Optimization (RPO)

19. Oracle Retail Merchandise Financial Planning (MFP)

20. Oracle Retail Size Profile Optimization (SPO)

21. Oracle Retail Assortment Planning (AP)

22. Oracle Retail Item Planning (IP)

23. Oracle Retail Item Planning Configured for COE (IP COE)

24. Oracle Retail Advanced Inventory Planning (AIP)

25. Oracle Retail Integration Bus (RIB)

26. Oracle Retail Point-of-Service (ORPOS)

27. Oracle Retail Markdown Optimization (MDO)

28. Oracle Retail Clearance Optimization Engine (COE)

29. Oracle Retail Analytic Parameter Calculator for Markdown Optimization (APC-MDO)

30. Oracle Retail Analytic Parameter Calculator for Regular Price Optimization (APC-RPO)

31. Oracle Retail Promotion Intelligence and Promotion Planning and Optimization (PI-PPO)

32. Oracle Retail Analytics

33. Oracle Retail Workspace (ORW)