Oracle® Retail Merchandising System

Installation Guide
Release 13.1.5
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ORACLE

Oracle® Retail Merchandising System Installation Guide, Release 13.1.5

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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.

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Contents

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Oracle Retail Merchandising System, Installation Guide, Release 13.1.5

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 new Applications Release Online Documentation CD available on My Oracle Support and www.oracle.com. 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 Merchandising System Release Notes*
- *Oracle Retail Merchandising System Operations Guide*
- *Oracle Retail Merchandising System Data Model*
- *Oracle Retail Merchandising Batch Schedule*
- *Oracle Retail Merchandising Implementation Guide*

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, 13.1) or a later patch release (for example, 13.1.4). If you are installing the base release and additional patch and bundled hot fix releases, read the documentation for all releases that have occurred since the base release before you begin installation. Documentation for patch and bundled hot fix releases can contain critical information related to the base release, as well as information about code changes since the base release.

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/technology/documentation/oracle_retail.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
```

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Preinstallation Tasks

> **Note:** The RMS installer provides the option to configure multiple application deployment methods. See Appendix: Application Deployment Method 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. This patch release contains all fixes from the following bundled hot fix releases:

- RMS 13.1.4.1
- RMS 13.1.4.2
- RMS 13.1.4.3
- RMS 13.1.4.4

Check for the Current Version of the Installation Guide

Corrected versions of Oracle Retail installation guides may be published whenever critical corrections are required. For critical corrections, the rerelease of an installation guide may not be attached to a release; the document will simply be replaced on the Oracle Technology Network Web site.

Before you begin installation, check to be sure that you have the most recent version of this installation guide. Oracle Retail installation guides are available on the Oracle Technology Network at the following URL:

http://www.oracle.com/technology/documentation/oracle_retail.html

An updated version of an installation guide is indicated by 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 an installation guide with part number E123456-**01**.

If a more recent version of this installation guide is available, that version supersedes all previous versions. Only use the newest version for your installation.

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
- Amount of data
- Utilized features of the application
- 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 Supported Database Server Requirements

General Requirements for a database server running RMS include:

Supported on:	Versions Supported:
Database Server OS	OS certified with Oracle Database 11gR1 and 11gR2 (11.2.0.2) Enterprise Edition. Options are: - Oracle Enterprise Linux 5 Update 2 for x86-64 (actual hardware or Oracle virtual machine). - Oracle Enterprise Linux 5 Update 5 for x86-64 (actual hardware or Oracle virtual machine). - Red Hat Enterprise Linux 5 Update 2 (RHEL 5.2) for x86-64 (actual hardware or Oracle virtual machine). - Red Hat Enterprise Linux 5 Update 5 (RHEL 5.5) for x86-64 (actual hardware or Oracle virtual machine). - AIX 6.1 (actual hardware or LPARs). - Solaris 10 Sparc (actual hardware or Oracle VM Server for SPARC). - HP-UX 11.31 Integrity (actual hardware or HPVM).

Supported on:	Versions Supported:
Database Server	Oracle Database Enterprise Edition 11gR1 with the following patches: ■ 6890831: 11.1.0.7 patch set One offs: ■ 7036284: LOADJAVA run in a DV environment cannot load classes with a name longer than 128 characters. ■ 7378322 (ORA-00600: Internal error code, arguments [6704], [1], [532241], [532237] ■ 6800649: (AIX only) When non Oracle user uses client utilities sqlldr/sqlplus/impdp/expdp, core dump is generated. Need to "relink all" after applying the patch. ■ 7697360: (RAC only) ORA-00600: Internal error code, arguments [k2vcbk_6]. Database crashed during transaction recovery. ■ 9969679: Merge request on top of 11.1.0.7.0 for defects 8596022 and 9582272. ■ 6269507: After EXPDP and IMPDP, the package name in the dba_source changes from lowercase. **Components:** ■ Oracle Database 11g ■ Oracle Partitioning ■ Oracle Net Services ■ Oracle Call Interface (OCI) ■ Oracle Programmer ■ Oracle XML Development Kit ■ Optional Database Vault ■ Examples CD **Other components:** ■ Perl compiler 5.0 or later ■ X-Windows interface ■ ANSI compliant C-compiler (certified with OS and database version).
Database Server	Oracle Database 11g Release 2 (11.2.0.2) Enterprise Edition with the following one off patches: ■ 1017043: CTWR consumes a lot of CPU cycles. If ASM is used, apply the following patch to RDBMS: ■ 11808931: Merge request on top of 11.2.0.2.0 for defects 10410054 and 10422126. **Components:** ■ Oracle Partitioning ■ Optional Database Vault ■ Examples CD **Other components:** ■ Perl compiler 5.0 or later ■ X-Windows interface ■ ANSI compliant C-compiler (certified with OS and database version)

Verify Single Sign-On

If a Single Sign-On is to be used, verify the Oracle Infrastructure Server 10g version 10.1.2.3 server has been installed. Verify the Mid-Tier server hosting Oracle Forms is registered with the Infrastructure Oracle Internet Directory.

Check Supported Application Server Requirements

General requirements for an application server capable of running RMS include:

Supported on:	Versions Supported:
Application Server OS	OS certified with Oracle Application Server 10g version 10.1.2.3 and Oracle Business Intelligence Publisher 10.1.3.4.
	Options are:
	▪ Oracle Linux 5 Update 2 for x86-64 (Actual hardware or Oracle virtual machine).
	▪ Oracle Linux 5 Update 5 for x86-64 (Actual hardware or Oracle virtual machine).
	▪ Red Hat Enterprise Linux 5 Update 2 (RHEL 5.2) for x86-64 (Actual hardware or Oracle virtual machine).
	▪ Red Hat Enterprise Linux 5 Update 5 (RHEL 5.5) for x86-64 (Actual hardware or Oracle virtual machine).
	▪ AIX 6.1 (Actual hardware or LPARs)
	▪ Solaris 10 Sparc (Actual hardware or Oracle VM Server for SPARC)
	▪ HP-UX 11.31 Integrity (Actual hardware or HPVM)
Application Server	Oracle Application Server Forms and Reports 10g version 10.1.2.3
	Patches:
	▪ 7379122 MLR ON TOP OF 10.1.2.3 FOR CPUOCT2008

Check Web Browser and Client Requirements

General requirements for client running RMS include:

Requirement	Version
Operating system	Windows 2000 or XP
Display resolution	1024x768
Processor	Pentium processor (minimum 450 MHz)
Memory	minimum of 256 MB RAM
Java	Oracle JRE Plug-in 5.0 Update 11 (1.5.0_11) or 6.0 Update 12 (1.6.0_12)
Browser	Microsoft Internet Explorer version 6.x or 7.x

Supported Oracle Retail Products

Product	Version
Oracle Retail Active Retail Intelligence (ARI)	13.1.3
Oracle Retail Price Management (RPM)	13.1.5
Oracle Retail Allocation	13.1.5
Oracle Retail Invoice Matching (ReIM)	13.1.5
Oracle Retail Store Inventory Management (SIM)	13.1.5
Oracle Retail Warehouse Management System (RWMS)	13.1.5
Oracle Retail Data Warehouse (RDW)	13.1.5
Oracle Retail Merchandise Financial Planning (MFP)	13.2.1
Oracle Retail Demand Forecasting (RDF)	13.2.1
Oracle Retail Grade	13.2.1
Oracle Retail Advanced Inventory Planning (AIP)	13.2.0.2
Oracle Retail Strategic Store Solutions	13.1.5

Supported Oracle Retail Integration Technologies

Integration Technology	Version
Oracle Retail Extract, Transform and Load (RETL)	13.1.3
Oracle Retail Integration Bus (RIB)	13.1.5
Oracle Retail Service Layer (RSL)	13.1.4

Supported Oracle Applications

> **Note:** For integration with Oracle E-Business Suite, an Oracle
> Retail integration accelerator patch is available for
> download. This patch enables the integration between
> Oracle E-Business Suite and some Oracle Retail applications.

Requirement	Version
Oracle E-Business Suite (General Ledger and Accounts Payable)	12.0.4 Oracle E-Business Suite 12.0.4 integration is supported using an Oracle Retail integration accellerator patch. To implement this integration patch, download the hot fix associated with defect number 8733303. For support in implementing this integration, contact Oracle Customer Support and follow all typical Oracle Retail processes.
Oracle E-Business Suite (General Ledger and Accounts Payable)	Oracle Application Integration Architecture (AIA) Media Pack 2.5 Oracle E-Business Suite integration is supported using the Oracle Financial Operations Control Integration Pack for Oracle Retail Merchandising Suite and Oracle E-Business Suite Financials. See the *Oracle® Application Integration Architecture 2.5: Installation and Upgrade Guide* for specific version information.
PeopleSoft Enterprise Financials	Oracle Application Integration Architecture (AIA) Media Pack 2.5 PeopleSoft Enterprise Financials integration is supported using the Oracle Retail Merchandising Integration Pack for PeopleSoft Enterprise Financials: Financial Operations Control. See the *Oracle® Application Integration Architecture 2.5: Installation and Upgrade Guide* for specific version information.

Verify RMS and SIM Inventory Adjustment Reason Codes

SIM and RMS must have the same inventory adjustment reason codes to work properly, with the exception of the Pending Reason Code, which is used for internal purposes only.

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RAC and Clustering

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

- Standalone Oracle Application Server and Database installations
- Real Application Cluster Database and Oracle Application Server Clustering

The Oracle Retail products have been validated against an 11.1.0.7 and 11.2.0.2 RAC databases. When using a RAC database, all JDBC connections should be configured to use OCI connections rather than THIN connections. It is suggested that when using OCI connections, the Oracle Retail products database be configured in the tnsnames.ora file used by the Oracle Application Server installations.

Clustering for Oracle Application Server 10.1.3 is managed as an Active-Active cluster accessed through a hardware Load Balancer. It is suggested that a VirtualHost be added to the OAS 10.1.3 reflecting the Virtual Server Name configured in the load balancer. It is also suggested that the OC4J select method be configured to prefer the use of local OC4J instances. The Oracle Retail products are currently not validated to be distributable at the application level in an OAS 10.1.3 cluster.

Clustering for Oracle Application Server 10.1.2 is managed as an Active-Active cluster accessed through a hardware Load Balancer. It is suggested that the Web Cache installation included with OAS 10.1.2 be configured to reflect all application server Mid-Tier installations. Validation has been completed utilizing RAC 11.1.0.7 and 11.2.0.2 Oracle Internet Directory databases with the OAS 10.1.2 cluster.

References for Configuration:

- Oracle® Application Server High Availability Guide 10g Release 3 (10.1.3) Part Number B15977-02
- Oracle® Application Server High Availability Guide 10g Release 2 (10.1.2) Part Number B14003-05
- Oracle Real Application Clusters Administration and Deployment Guide 11g Release 1 (11.1) Part Number B28254-07
- Oracle Real Application Clusters Administration and Deployment Guide 11g Release 2 (11.2) Part Number E16795-08

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Patch Installation

The database portion of RMS can be upgraded from release 13.0.2 to release 13.1.5. It can also be upgraded from any major patch release after 13.0.2 (for example 13.1.1) and any hot fix bundle released after 13.1.1 (for example 13.1.1.5). This guide details the steps needed to perform a patch installation of RMS. For additional information on the 13.1 upgrade, see the My Oracle Support document, *Oracle Retail Upgrade Guide* (ID 837368.1).

The Oracle Retail Upgrade Guide describes the approach that this Oracle Retail application takes for the upgrading process, as well as this product's upgrade assumptions and considerations.

The following chapters document the patch process:

- Chapter 4: RMS Database Installation – Patch
- Chapter 5: Batch Installation Tasks – Patch
- Chapter 6: Application Server Installation Tasks – Patch
- Chapter 7: RMS Reports Installation – Patch
- Chapter 8: Data Migration
- Chapter 9: WebServices Installation

> **Note:** To complete installation of RMS 13.1.5, you must download and apply hot fix 13532618. The hot fix is available through My Oracle Support, document ID 13532618.

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RMS Database Installation-Patch

There are two methods for installing the RMS 13.1.5 database schema patch. Option 1 uses the installer to apply the patch. Option 2 uses the patch controller scripts directly.

> **Note:** The patching mechanism has been updated for the 13.1 release. Any patches that were released prior to 13.1 (For example, 13.0.1 and 13.0.2) will not be compatible with this installer. If you need to upgrade from 13.0.1 to 13.1.5, please use the 13.0.1 installer to apply the 13.0.2 patch, and the 13.1.5 patch installer packaged in this release to apply the 13.1.5 patch.

> **Note:** If any RMS, RPM, ReIM, or Allocation hot fixes have been applied to the schema other than the hot fix bundles, be aware that using the installer or controller scripts to apply the 13.1.5 patch can have unexpected results. You must decide if it is safe to run all the scripts in the patch, or if the scripts should be run selectively.

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

> **Note:** If upgrading from 13.0.2, a data migration step is required before installing any 13.1.x patches. You should run in this order: the 13.1 upgrade, the data migration tool, the desired 13.1.x patches. See "Data Migration" for details

> **Note:** If you are running the 13.1.4.2 hot fix bundle as part of the database installation, you must make sure all the cost events for RECLASS are processed and purged before the 13.1.4.2 patch is applied. Before running this patch, ensure that the table is empty and the existing data is already processed and purged in nightly batch. See "Appendix: Common Installation Errors" for details.

Option 1: Patch RMS Database using the Patch Installer

The RMS 13.1.5 database schema patch installer may be used to apply the RMS 13.1.5 patch to a schema from 13.0.2 or any of the 13.1.x patches or hot fix bundles. The installer should only be used to apply the patch if the schema being patched does not contain customizations or hot fixes. The patch may also be applied outside of the installer by calling the controller scripts directly. See "Option 2: Patch RMS Database using Controller Scripts" in this chapter for details on this method.

Before you apply the RMS 13.1.5 patch:

- Make a backup of all your objects and database schema.
- Determine which patches and hot fix bundles have already been installed.
- Review the enclosed *Oracle Retail Merchandising System Release Notes* (rms-1315-rn.pdf).

Create Staging Directory for RMS Database Schema Files

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

1. Log into the database server as oretail.
2. Create a staging directory for the MOM 13.1.5 Patch. There should be a minimum of 650 MB disk space available in this location.
3. Copy the mom-dbpatch.zip file from the RMS 13.1.5 release to the staging directory. This is referred to as DB_PATCH_DIR when patching a database schema.
4. Change directories to DB_PATCH_DIR and extract the mom-dbpatch.zip file. This creates a rms/dbschemapatch subdirectory under DB_PATCH_DIR

13.0.2 Database Patching Steps

You will need to perform the following step only if you are performing an upgrade from a RMS 13.0.2 schema. If applying the 13.1.5 Patch to a RMS 13.1 (or later) schema, skip to the section, "Run the RMS Database Schema Patch Installer."

Grant Permissions to RMS Schema

The RMS schema will need certain privileges granted to it. Log into the database as SYSTEM with sqlplus and grant these privileges by running the following command:

```
SQL> grant create job to <RMS schema>;
```

Replace <RMS schema> with the name of your RMS schema.

Edit controller ksh Scripts

To edit controller ksh scripts, do the following.

1. Change directories to DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch.
2. For each product you are going to patch, edit the corresponding <product>_controller.ksh.

   If you edit rms_controller.ksh, you must also edit rpm_controller.ksh and vice versa. alloc_controller.ksh and alloc_rms_controller.ksh must both be edited if patching Allocation. To edit these files, open up <product>_controller.ksh, and comment or uncomment the sections that perform the patches or hot fixes you want to apply. If you are patching from 13.1.4 and want to go to 13.1.5, you need to run all the patches from DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/ (13.1.4.1, 13.1.4.2, and so on up to the 13.1.5 deltas). For this example you would not need to edit the files (they should already be uncommented in the default scripts):

If you have already applied any of the hot fix bundles released after 13.1.4 and you want to go to 13.1.5, you can begin patching with the next hot fix bundle in the sequence. For example, if you have already applied hot fix bundles 13.1.4.1, you will need to apply 13.1.4.2, 13.1.4.3, and so on up to the 13.1.5 deltas. For this example, this section in the default scripts:

```
echo "Running RMS 13.1.4.1 controller"
cd ../../13.1.4.1/rms/
./rms_controller.ksh DBO N
STATUS=$?
if [ $STATUS -eq 1 ];
then
  exit 1
fi
```

Should be edited to:

```
#echo "Running RMS 13.1.4.1 controller"
#cd ../../13.1.4.1/rms/
#./rms_controller.ksh DBO N
#STATUS=$?
#if [ $STATUS -eq 1 ];
#then
#  exit 1
#fi
```

You can apply patches and hot fix bundles released previous to and including 13.1.4 by un-commenting the corresponding sections.

Run the RMS Database Schema Patch Installer

> **Note:** See "Appendix: RMS DB Patch Installer Screens" for details on screens and fields in the RMS database schema patch installer.

1. Change directories to DB_PATCH_DIR/rms/dbschemapatch.

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. 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 F: Common Installation Errors for more 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 RMS 13.1.5 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]

7. On the Apply a Patch page for each product, provide the path to the corresponding controller ksh script. If you are only applying a single patch or hot fix bundle (for example 13.1.4.1), this path will be DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/<version>/<product>. If you are applying multiple patches or hot fix bundles (for example, to get from 13.1.4.1 to 13.1.5), this will be DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch. This directory should contain a <product>_controller.ksh file (for example, rms_controller.ksh), which the installer runs to apply the RMS 13.1.5 Patch.

8. After the installer is complete, you can check its log file: rms-install-dbschema.<timestamp>.log.

> **Note:** The installer leaves behind the ant.install.properties file for future reference and repeat installations. This file contains all inputs you provided, including passwords. As a security precaution, make sure that the file has restrictive permissions.
>
> ```
> chmod 600 ant.install.properties
> ```

9. For instructions on installing the new languages included after the 13.1 release, see "Appendix: Inserting New Languages."

Download Hot Fix 13532618

To complete installation of RMS 13.1.5, you must download and apply hot fix 13532618. The hot fix is available through My Oracle Support, document ID 13532618.

Additional Steps

For customers doing a new, full installation of 13.1 and 13.1.5 patch, the calendar.sql must be run.

> **Note:** This file is not needed if you already have a working RMS calendar installed.

> **Note:** If this is not a first time installation, make sure you are not rerunning calendar.sql. If calendar.sql is run after having already been run, it will create data issues in the calendar and other dependent tables like month_data, week_data, etc. All installations done using the RMS Full DB installer run calendar.sql.

1. Make sure you have a backup of your RMS schema.
2. Delete the data from the calendar table.

> **Example:** SQL> delete from calendar;

3. Change directories to DB_PATCH_DIR/mom-dbpatch/13.1.5/rms/install_scripts.
4. Log in to SQL*Plus as the RMS schema owner (Example: RMSDEV) and run calendar.sql.

> **Example:** SQL> @calendar.sql;

Option 2: Patch RMS Database using Controller Scripts

While the installer can be used to apply the entire RMS 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 <product>_controller.ksh which run all of the files in the patch. If there are any customizations or hot fixes 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 RMS 13.1.5 patch:

- Make a backup of all your objects and database schema.
- Determine which patches and hot fix bundles have already been installed
- Review the enclosed RMS 13.1.5 Patch Release Notes (rms-1315-rn.pdf).

Create Staging Directory for RMS Database Schema Files

To create staging directory for RMS database schema files, do the following.

1. Log into the database server as oretail.
2. Create a staging directory for the MOM 13.1.5 Patch. There should be a minimum of 650 MB disk space available in this location.
3. Copy the mom-dbpatch.zip file from the RMS 13.1.5 release to the staging directory. This is referred to as DB_PATCH_DIR when upgrading a database schema.
4. Change directories to DB_PATCH_DIR and extract the mom-dbpatch.zip file. This creates a rms/dbschemapatch subdirectory under DB_PATCH_DIR

13.0.2 Database Patching Steps

You will need to perform the following step only if you are performing an upgrade from a RMS 13.0.2 schema. If applying the 13.1.5 patch to a RMS 13.1 schema or later, skip to the section, "Run the RMS Database Schema Patch Installer."

Grant Permissions to RMS schema

The RMS schema needs certain privileges granted to it. Log into the database as SYSTEM with sqlplus and grant these privileges by running the following command:

```
SQL> grant create job to <RMS schema>;
```

Replace <RMS schema> with the name of your RMS schema.

Run the RMS Database Controller Scripts

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

1. Change directories to DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/.
2. Source the oraenv script to set up the Oracle environment variables (such as ORACLE_HOME, ORACLE_SID, and PATH).

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 product and version you want to patch, configure the individual controller.cfg files. To do this:

    ▪ Copy DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch /<version>/<product>/templates/controller.cfg to DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch /<version>/<product>/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/rms/dbschemapatch/mom-dbpatch/<version>/<product>

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

    iii. export MMUSER=<The name of the schema to Patch >

    For RMS, RPM, ReIM, and Alloc_RMS, this will be the RMS schema

    For Alloc, this will be the Allocation schema

    iv. export PASSWORD=<password for the MMUSER schema>

    v. export ORACLE_SID=<SID for the database the MMUSER schema resides in>

6. If you are installing Allocation 13.1.4.1, do the following:

    a. Copy the following files:

    ```
    cp DB_PATCH_DIR/rms/dbschemapatch/mom-
    dbpatch/13.1.4.1/alloc/templates/dbc_scripts/*
    DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/13.1.4.1/alloc/dbc_scripts/

    cp DB_PATCH_DIR/rms/dbschemapatch/mom-
    dbpatch/13.1.4.1/alloc_rms/templates/dbc_scripts/*
    DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/13.1.4.1/alloc_rms/dbc_scripts/
    ```

    b. Edit DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/13.1.4.1/alloc/dbc_script/grant_alc_on_hand_qty_temp.sql by replacing @deploy.schema.owner@ with the RMS schema.

    c. Edit DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/13.1.4.1/alloc_rms/dbc_script/create_syn_rms.sql by replacing @deploy.datasource.username@ with the RMS schema and @deploy.schema.owner@ with the Allocation schema

The patches should be run in the following order: RMS, RPM, ReIM, Alloc_RMS, and Allocation. If you are patching from 13.1 and want to get to 13.1.5, you need to run all the patches from DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/ (13.1.1, 13.1.1.1, and so on up to the 13.1.5 deltas) If you are patching from 13.1.4 and want to get to 13.1.5, you need to apply all the hot fix bundles released after 13.1.3 (13.1.4.1, 13.1.4.2, and so on up to the 13.1.5 deltas). If you have already applied any of the hot fix bundles released after 13.1.4, you can begin patching with the next hot fix bundle in the sequence. For example, if you have already applied hot fix bundle 13.1.4.1, you will need to apply 13.1.4.2, 13.1.4.3, and so on up to the 13.1.5 deltas. The Alloc controller is used to apply the necessary Allocation patch to the Allocation schema, while the Alloc_RMS controller is used to apply the necessary Allocation patch to the RMS schema. While you can choose not to run any of the patches, all of the non-RMS patches depend on the RMS patch being run. If you patch RMS you should also patch RPM; there is also a dependency between Alloc_RMS/Alloc. For each product you wish to patch, cd to DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/<version>/<product> and run the following commands:

```
For RMS run: $ ./rms_controller.ksh DBO N
For RPM run: $ ./rpm_controller.ksh DBO Y
For ReIM run: $ ./reim_controller.ksh DBO Y
For Alloc_rms run: $ ./alloc_controller.ksh DBO Y
For Allocation run: $ ./alloc_rms_controller.ksh DBO Y
```

> **Note:** The controllers should be run in this order.

7. If the installation fails for any of the patches before completion, look at the logs in the DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/<version>/<product>/error and DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/<version>/<product>/log directories to determine the source of the error. You can continue the patch by rerunning the <product>_controller.ksh file, but only if the files generated in the DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/<version>/<product>/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/rms/dbschemapatch/mom-dbpatch/<version>/<product>/processed directory.

8. For instructions on installing the new languages included after the 13.1 release, see Appendix K: Inserting New Languages.

Download Hot Fix 13532618

To complete installation of RMS 13.1.5, you must download and apply hot fix 13532618. The hot fix is available through My Oracle Support, document ID 13532618.

Additional Steps

For customers doing a new full installation of 13.1 and 13.1.5 patch, the calendar.sql must be run.

> **Note:** This file is not needed if you already have a working RMS calendar installed.

> **Note:** If this is not a first time installation, make sure you are not rerunning calendar.sql. If calendar.sql is run after having already been run, it will create data issues in the calendar and other dependent tables like month_data, week_data, etc. All installations done using the RMS Full DB installer should run calendar.sql.

1. Make sure you have a backup of your RMS schema.
2. Delete the data from the calendar table.

> **Example:** SQL> delete from calendar;

3. Change directories to DB_PATCH_DIR/mom-dbpatch/13.1.4.4/rms/install_scripts.
4. Log into SQL*Plus as the RMS schema owner (for example, RMSDEV) and run calendar.sql.

> **Example:** SQL> @calendar.sql;

Batch Installation Tasks - Patch

There are two different methods to use for installing the RMS 13.1.5 batch patch. Option 1 uses the installer to apply patch. Option 2 compiles the batch directly.

Option 1: Use Batch Installer to Patch

As shipped, the RMS 13.1 Batch installer will install and compile the batch programs for version 13.1. Patches for RMS 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 RMS 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 13.1 Batch installer was originally expanded. The installer files from the original RMS 13.1 installation can be re-used or a new directory can be created with a fresh copy of the RMS 13.1 application installer.

Before you apply the RMS 13.1.5 Batch patch:

- Make a backup of all your Batch files.
- Review the enclosed RMS 13.1.5 Patch Release Notes (rms-1315-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 Batch Patch Files

To create staging directory for RMS batch patch files, do the following.

1. Log into the database server as oretail.
2. Create a staging directory for the RMS 13.1.5 Batch Patch. There should be a minimum of 50 MB disk space available in this location.
3. Copy the rms1315batchpatch.zip file from the RMS 13.1.5 release to the staging directory. This is referred to as BATCH_PATCH_DIR when patching a database schema.
4. Change directories to BATCH_PATCH_DIR and extract the rms1315batchpatch.zip file. This creates a batch-patch subdirectory under BATCH_PATCH_DIR.
5. If you do not already have one, create a staging directory for the RMS batch installation software or use the same staging directory as created in the database schema step above. There should be a minimum of 40 MB disk space available in this location.

6. Copy the rms13batch.zip file from the RMS 13. 1 release to the staging directory. This is referred to as STAGING_DIR when installing the RMS batch software.

7. 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 batch patches. The utility is located under BATCH_PATCH_DIR/batch-patch/patch-util. This utility will accept as input the RMS patch files and add them to the RMS 13.1 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 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.

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/batch/ant

    export ANT_HOME

3. Change directories to 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 installer files are located under STAGING_DIR. Example: /opt/rms/batch
patch.to.version	The version you want to patch to Example: 13.1.5

5. Run the patch.sh script. This script will copy the files from each patch from 13.1.1 up to the patch specified in the patch.to.version property. These files are copied into the installer package.

Update the oramake File

When compiling batch on certain platforms, the oramake file packaged with the 13.1 Batch installer may not work. Copy the provided oramake file into the 13.1 installer as follows:
Copy oramake from BATCH_PATCH_DIR/to STAGING_DIR/rms/batch/rms13/oracle/lib/src/.

Run Batch Installer

> **Note:** See Appendix: RMS Batch Installer Screens for details about 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

4. 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
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 for more details.

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]

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 all inputs you provided, including passwords. 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 J 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
   ```

Option 2: Compile RMS 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 RMS Batch Patch Files\

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

1. Log into the database server as oretail.
2. Create a staging directory for the RMS 13.1.5 Batch Patch. There should be a minimum of 50 MB disk space available in this location.
3. Copy the rms1315batchpatch.zip file from the RMS 13.1.5 release to the staging directory. This is referred to as BATCH_PATCH_DIR when patching the RMS Batch.
4. Change directories to BATCH_PATCH_DIR and extract the rms1315batchpatch.zip file. This creates a batch-patch subdirectory under BATCH_PATCH_DIR.

Set Environment Variables

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

Make sure the following variables are set. The RMS 13.1.5 batch installer should have created a batch.profile file located at INSTALL_DIR/batch.profile. This profile script can be used to set all of the 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
- PASSWORD=RMS Schema Owner Password
- ORACLE_HOME=Location of Oracle install
- ORACLE_SID=The Oracle Sid for the RMS database

AIX:

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

Linux:

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

Compile Batch Libraries

To compile batch libraries, do the following.

1. If they exist, copy the files from BATCH_PATCH_DIR/batch-patch/<version>/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 13.1.1 and ending with the 13.1.5 deltas. For example, starting with 13.1.1, followed by 13.1.1.1, 13.1.1.2, and so on.

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

3. To make library dependencies run one of the following commands:

   - For Linux use:

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

   - For other platforms use:

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

   Check the libdpnd.log file for errors

4. To make batch libraries:

   - For Linux use:

     ```
     make –f retek.mk –r retek rms resa 2>&1 | tee libretek.log
     ```

   - For other platforms use:

     ```
     make –f retek.mk retek rms resa 2>&1 | tee libretek.log
     ```

   Check the libretek.log file for errors

5. To install batch libraries:

   ```
   make –f retek.mk install
   ```

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

Compile Batch Source Code

To compile batch source code, do the following.

1. If they exist, copy the files from BATCH_PATCH_DIR/batch-patch/<version>/oracle/proc/src to INSTALL_DIR/oracle/proc/src. This step should be done with each version in order of earliest to latest patch starting at 13.1.1 and ending with the 13.1.5 deltas. For example, starting with 13.1.1, followed by 13.1.1.1, 13.1.1.2, and so on.

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

3. Create dependencies as follows.

   a. Run one of the following commands:

      - For Linux use:

        ```
        make –f mts.mk –r depend 2>&1 | tee srcdpnd.log
        ```

      - For other platforms use:

        ```
        make –f mts.mk depend 2>&1 | tee srcdpnd.log
        ```

b. Check the srcdpnd.log file for errors.Create batch programs as follows.

c. Run the following commands in the order stated.

– For Linux use:

```
make -f rms.mk -r PRODUCT_PROCFLAGS=dynamic=ansi ditinsrt
make -f mts.mk -r rms-ALL recs-ALL resa-ALL rtm-ALL fif-ALL 2>&1 | tee
srcall.log
```

– For other platforms use:

```
make -f rms.mk PRODUCT_PROCFLAGS=dynamic=ansi ditinsrt
make -f mts.mk rms-ALL recs-ALL resa-ALL rtm-ALL fif-ALL 2>&1 | tee
srcall.log
```

d. Check the srcall.log file for errors.

4. Install the batch programs.

```
make -f mts.mk install
```

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

Copy RETL Code

If they exist, copy the files from BATCH_PATCH_DIR/batch-patch/<version>/RETLfor<product> to INSTALL_DIR/RETLfor<product>. This step should be done with each version in order of earliest to latest patch starting at 13.1.1 and ending with the 13.1.5 deltas (for example, starting with 13.1.1, followed by 13.1.1.1, 13.1.1.2, and so on).

Copy Data Conversion Scripts

If they exist, copy the files from BATCH_PATCH_DIR/batch-patch/<version>/external to INSTALL_DIR/external. This step should be done with each version in order of earliest to latest patch starting at 13.1.1 and ending with the 13.1.5 deltas (for example, starting with 13.1.1, followed by 13.1.1.1, 13.1.1.2, and so on).

6

Application Server Installation Tasks—Patch

There are two methods to use for installing RMS 13.1.5.

Option 1 uses the installer to apply the patch. Option 2 compiles the RMS toolset and forms directly.

> **Note**: If the 13.1.5 database schema patch has been run, the entire set of toolsets and forms must be recompiled.

Option 1: Use Application Installer to Patch

As shipped, the RMS 13.1 Forms installer installs and compiles the forms for version 13.1. Patches for RMS 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 RMS 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 13.1 application installer was originally expanded. The installer files from the original RMS 13.1 installation can be re-used or a new directory can be created with a fresh copy of the RMS 13.1 application installer.

Before you apply the RMS 13.1.5 patch:

- Make a backup of all your forms and library files.
- Review the enclosed *Oracle Retail Merchandising System Release Notes* (rms-1315-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 Application Patch Files

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

1. Log into the application server as the oretail user.
2. Create a staging directory for the RMS Application patch. There should be a minimum of 1100 MB disk space available in this location.
3. Copy the file rms1315apppatch.zip from the RMS 13.1.5 release to staging directory. This will be referred to as APP_PATCH_DIR when installing application software and reports.
4. Change directories to APP_PATCH_DIR and extract the file rms1315apppatch.zip. This creates an app-patch subdirectory under APP_PATCH_DIR.

5. If you do not already have one, create a staging directory for the RMS application installation software or use the same staging directory as created in the database schema step above. There should be a minimum of 1100 MB disk space available in this location.

6. Copy the file rms13appserver.zip from the RMS 13. 1 release to staging directory. This will be referred to as STAGING_DIR when installing application software and reports.

7. Change directories to STAGING_DIR and extract the file rms13appserver.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 Forms patches. The utility is located under APP_PATCH_DIR/app-patch/patch-util. This utility will accept as input the RMS patch files and add them to the RMS 13.1 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 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=<INSTALL_DIR>/rms/application/ant

    export ANT_HOME

3. Change directories to 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
patch.to.version	The version want to patch to Example: 13.1.5

5. Run the patch.sh script. This script will copy the files from each patch from 13.1.1 up to the patch specified in the patch.to.version property. These files are copied into the installer package.

Run the RMS Application Installer

> **Note:** See Appendix: RMS Application Installer Screens for details about every screen and field in the application installer.

1. Log on to your application server as the oretail user.

2. Change directories to STAGING_DIR/rms/application. This directory was created when the rms13application.zip file was expanded under STAGING_DIR.

3. Set and export the following environment variables.

Variable	Description	Example
ORACLE_HOME	The location where Oracle Application Server 10g (10.1.2.3) has been installed.	ORACLE_HOME= /u00/webadmin/product/OAS/myversion/midtier export ORACLE_HOME
ORACLE_SID	The database/SID where the RMS schema resides	ORACLE_SID=mydb
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. 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]

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.

6. The RMS Application installer might launch the Retail OCM Installer automatically after it is finished with the RMS installation. You should opt out of the OCM install for this patch by clicking the Cancel button in the Retail OCM Installer.

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 all inputs you provided, including passwords. 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. 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:

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

/u00/webadmin/product/10.1.2.3_FULL/midtier/Apache/Apache/conf/httpd.conf
/u00/webadmin/product/10.1.2.3_FULL/midtier/forms/java/oracle/forms/registry/Regis
try.dat
/u00/webadmin/product/10.1.2.3_FULL/midtier/forms/server/formsweb.cfg
/u00/webadmin/product/10.1.2.3_FULL/midtier/forms/admin/resource/US/fmrweb.res
/u00/webadmin/product/10.1.2.3_FULL/midtier/forms/admin/resource/US/fmrweb.res_utf
8.res
Have the Oracle administrator copy everything in
/projects/rmsse/con/installs/app/post
to /u00/webadmin/product/10.1.2.3_FULL/midtier to update the files,
and then restart the application server for the changes to take effect.

example: cp -R * /u00/webadmin/product/10.1.2.3_FULL/midtier
```

Resolving Errors Encountered During Application Installation

In the event a form or menu does not compile, go to <INSTALL_LOCATION>/base/error and see which objects did not compile. To try and manually recompile the object run <INSTALL_LOCATION>/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.

Test the RMS Application

Oracle Retail provides test cases that allow you to smoke test your installation. See the My Oracle Support document, *Oracle Retail Merchandising Installation Test Cases* (ID 845148.1).

Option 2: Compile RMS Toolset and Forms Directly

Option two entails compiling the RMS toolset and forms directly, as follows.

Create Staging Directory for RMS Application Patch Files

To create a staging directory for RMS application patch files, do the following.

1. Log in to the application server as the oretail user.

2. Create a staging directory for the RMS Application patch. There should be a minimum of 1100 MB disk space available in this location.

3. Copy the file rms1315apppatch.zip from the RMS 13.1.5 release to staging directory. This will be referred to as APP_PATCH_DIR when installing application software and reports.

4. Change directories to APP_PATCH_DIR and extract the file rms1315apppatch.zip. This creates an app-patch subdirectory under APP_PATCH_DIR.

Set Environment Variables

> **Note**: INSTALL_DIR is the location where RMS 13 forms were installed.
> ORACLE_HOME is the location where Oracle Application Server 10g (10.1.2.3) has been installed.

Make sure the following variables are set. The RMS 13.1 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 of the environment variables listed below.

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

Variables set by forms.profile:

- **All OS Platforms**
  - 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_HOME/guicommon/tk/admin
  - UP=<RMS schema owner>/<RMS schema password>@<RMS database>

> **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

- **Solaris**
  - LD_LIBRARY_PATH=$ORACLE_HOME/lib:$ORACLE_HOME/jdk/jre/lib/sparc:$ORACLE_HOME/jdk/jre/lib/sparc/native_threads
- **HP-UX**
  - SHLIB_PATH=$ORACLE_HOME/lib32:$ORACLE_HOME/lib:$ORACLE_HOME/jdk/jre/lib/PA_RISC:$ORACLE_HOME/jdk/jre/lib/PA_RISC/server
- **AIX**
  - LD_LIBRARY_PATH=$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

RMS Toolset Installation

To install the RMS toolset, do the following.

1. Make a backup copy of the existing INSTALL_DIR/base/toolset and INSTALL_DIR/base/forms directories.

2. If they exist, copy the files from APP_PATCH_DIR/app-patch/<version>/toolset/src into INSTALL _DIR/base/toolset. This step should be done with each version in order of earliest to latest patch starting at 13.1.1 and ending with the 13.1.5 deltas.   For example, starting with 13.1.1, followed by 13.1.1.1, 13.1.1.2, and so on. If there were no files to copy in any of the versions, skip to the section, "RMS Forms Installation."

3. Copy all libraries (.pll files) from INSTALL _DIR/base/toolset/src directory to the INSTALL _DIR/base/toolset/bin directory.

4. Change directories to INSTALL _DIR/base/toolset/bin.

5. Verify that the PATH variable contains the path INSTALL_DIR/base/forms_scripts. The forms.profile script should have set this up already.

6. Run toolset.pll.sh to compile all Toolset .pll's. This script removes all newly created .plx files.

> **Note:** If the toolset.pll.sh script is not used and the libraries are compiled individually, then they must be compiled in the following order (which is noted in the toolset.pll.sh script):

- messge45.pll
- ariiflib.pll
- stand45.pll
- calend45.pll
- find45.pll
- item45.pll
- tools45.pll
- mblock45.pll
- mview45.pll

- nav45.pll
- work45.pll
- itnumtype.pll
- hierfilter.pll
- rmslib.pll

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

8. Run forms.fm_fmb.sh (in INSTALL_DIR/base/toolset/bin) to compile the Toolset reference forms. This script will remove all newly created fm_*.fmx files (reference forms should not have executable files).

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

10. Check to make sure that each non-reference form (.fmb file) has a corresponding .fmx file. forms.fmb.sh will remove all non-reference form .fmb files from INSTALL_DIR/base/toolset/bin.

> **Note:** Disregard fm_*.fmx files should they be created. These files should be removed. They should NOT exist in the INSTALL_DIR/base/toolset/bin directory.

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

12. Run menus.mmb.sh (in INSTALL_DIR/base/toolset/bin) to generate Toolset runtime menus – .mmx's.

13. Check to make sure that each .mmb file has a corresponding .mmx file. menus.mmb.sh removes all .mmb files from INSTALL_DIR/base/toolset/bin.

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

RMS Forms Installation

To install RMS forms, do the following.

1. If they exist, copy all the files from APP_PATCH_DIR/app-patch/<version>/ forms/src to INSTALL_DIR/base/forms/src. This step should be done with each version in order of earliest to latest patch starting at 13.1.1 and ending with the 13.1.5 deltas. For example, starting with 13.1.1, followed by 13.1.1.1, 13.1.1.2, and so on. If there were no files to copy in any of the versions, skip to the section, "Configuring Oracle Application Server 10g for RMS."

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. This script will remove all newly created .plx files.

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

6. Run forms.fm_fmb.sh (in INSTALL_DIR/base/rms/forms/bin) to compile the RMS reference forms. This script will remove all newly created fm_*.fmx files (reference forms should not have executable files).

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

8. Check to make sure that each non-reference form .fmb file has a corresponding .fmx file. forms.fmb.sh will remove all non-reference form .fmb files from INSTALL_DIR/base/forms/bin.

> **Note:** Disregard fm_*.fmx files should they be created.
> These files should be removed. They should NOT exist in
> the INSTALL_DIR/base/forms/bin directory.

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

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

11. Check to make sure that each .mmb file has a corresponding .mmx file. menus.mmb.sh will 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.

Configuring Oracle Application Server 10g for RMS

To configure Oracle Application Server 10g for RMS, do the following.

1. Open the rms .env file for your installation under ORACLE_HOME/forms/server/.

2. Check that the variable FORMS_USERNAME_CASESENSITIVE=1. If it does not, manually update this, or add the variable if it does not exist.

Create a New OC4J Instance for Webhelp

> **Note:** If you have already created an OC4J instance for
> Webhelp during a previous installation, skip to the section
> "Update Helpfile Installation."

The RMS Webhelp application must be deployed to its own dedicated OC4J instance. For instructions on how to create a new OC4J instance, see "Creating OC4J Instances on the Application Tier" in the "Installing and Configuring the myJ2EECompany Application Infrastructure" chapter of the *Oracle Application Server Enterprise Deployment Guide*.

1. Log into the server which is running your RMS installation. Set your ORACLE_HOME environment variable to point to this installation.

2. Choose a name for the new OC4J instance.

> **Example:** rms-help

3. Create this OC4J instance as documented in the *Oracle Application Server Enterprise Deployment Guide*.

4. Start the OC4J instance. You can do this through the Enterprise Manager web interface, or on the command line using the opmnctl utility.

> **Example:** $ORACLE_HOME/opmn/bin/opmnctl @cluster startproc ias-component=rms-help

5. Verify that the OC4J group was fully started. If you are using the Enterprise Manager web interface, the instance should have a green arrow indicating that it is running. On the command line, verify that the instance has a status of Alive.

> **Example:** $ORACLE_HOME/opmn/bin/opmnctl status
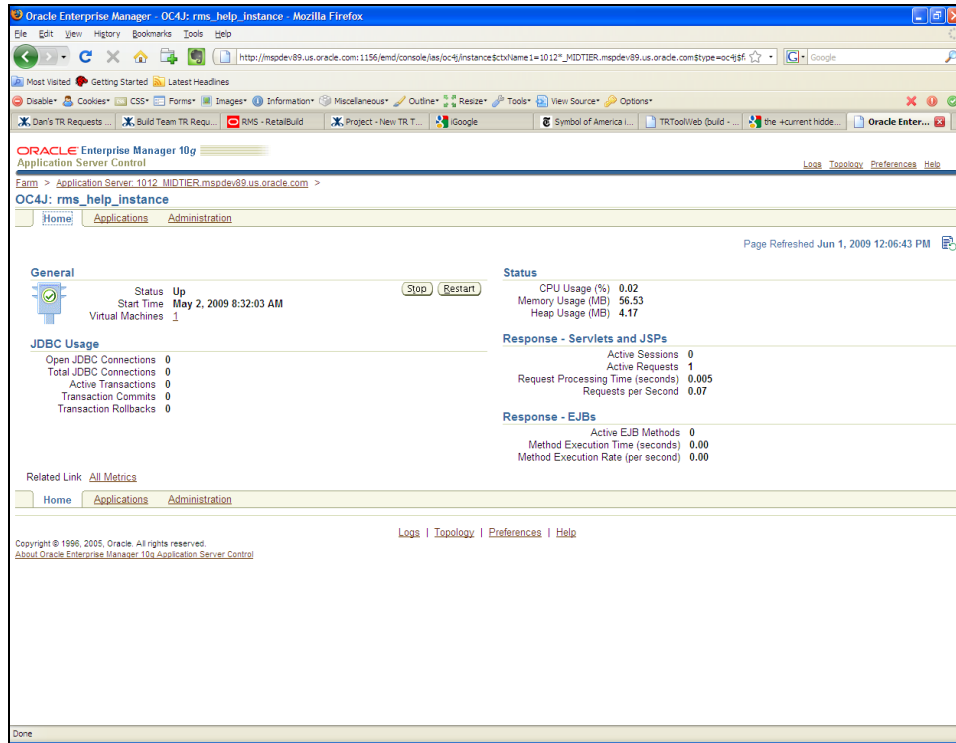
Update Helpfile Installation

Complete the following steps.

1. Log in to the Enterprise Manager for the 10.1.2 Oracle Application Server instance to which online help will be installed.

2. Click on the OC4J instance to which online help will be deployed. In this example, rms_help_instance is used.

3. Click the **applications** tab.
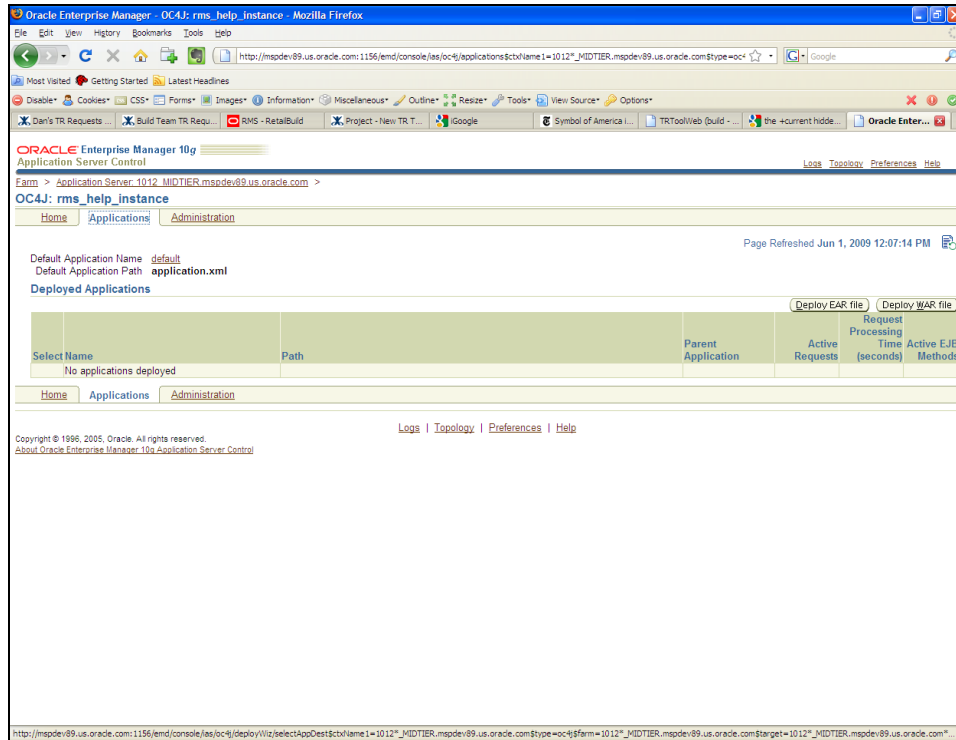
4. Click the **Deploy EAR File** button.

5. Click in the box entitled **J2EE Application** and browse to APP_PATCH_DIR/ app-patch/<version>/online-help/rms-help.ear the ear file that will be deployed.

6. Enter rms-help for the application name. Click **Continue**.
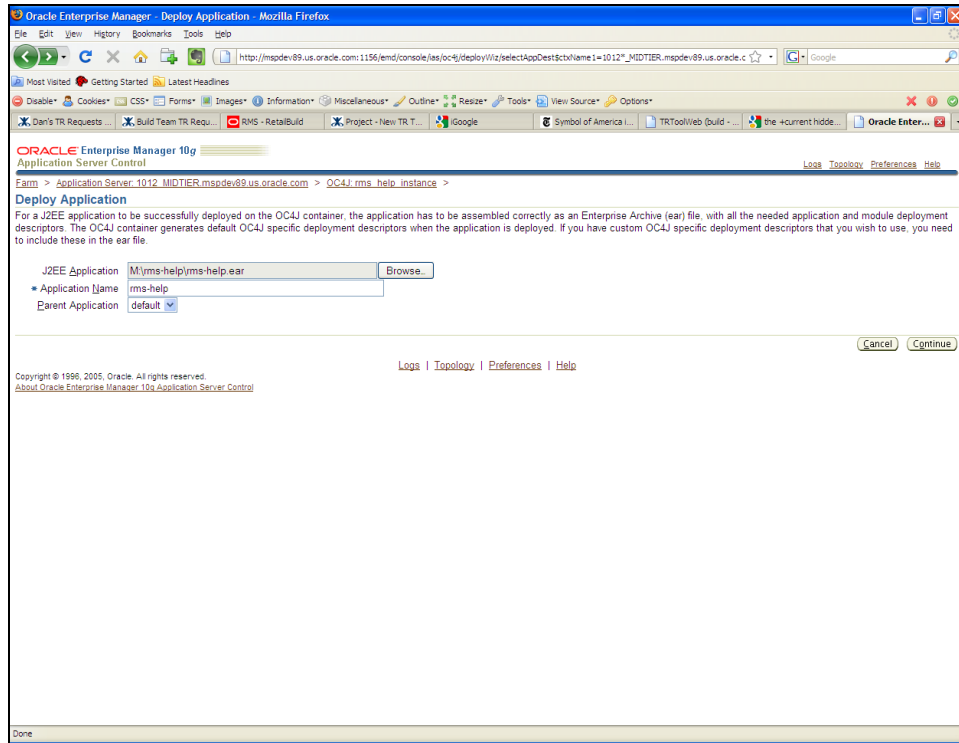
7. Enter rms-help in the URL-mapping text box. This sets the context root for the online help files. Click Next.

> **Note:** Using anything other than rms-help prevents the RMS application from accessing the help files.
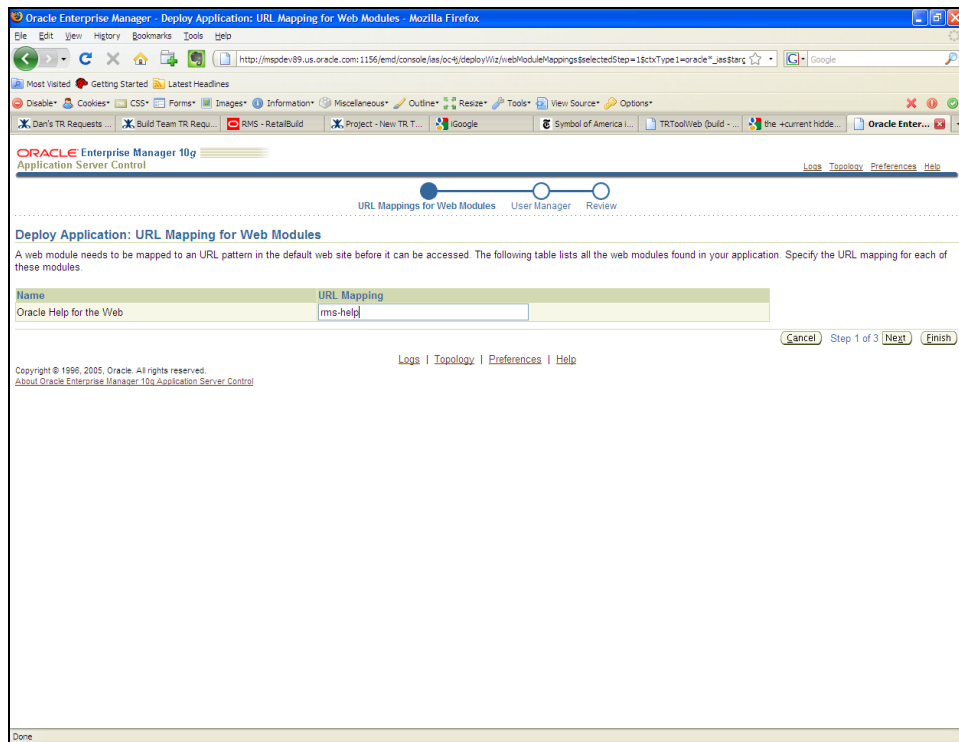
8. Leave the default values in place. Click **Next**.
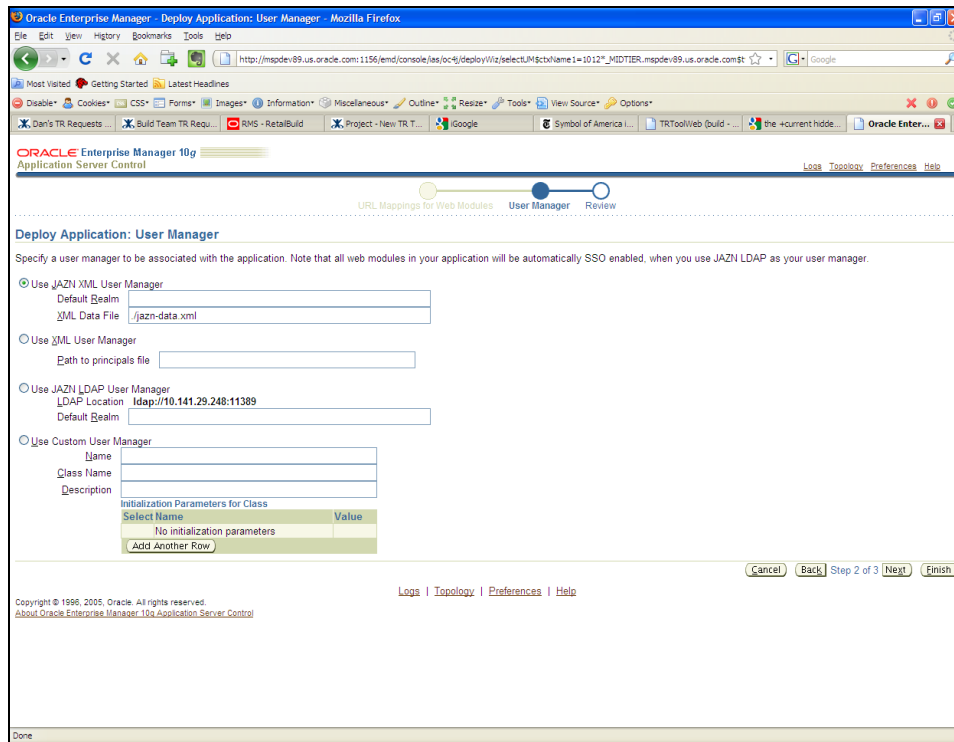
9. Review the deployment properties, and click Deploy.
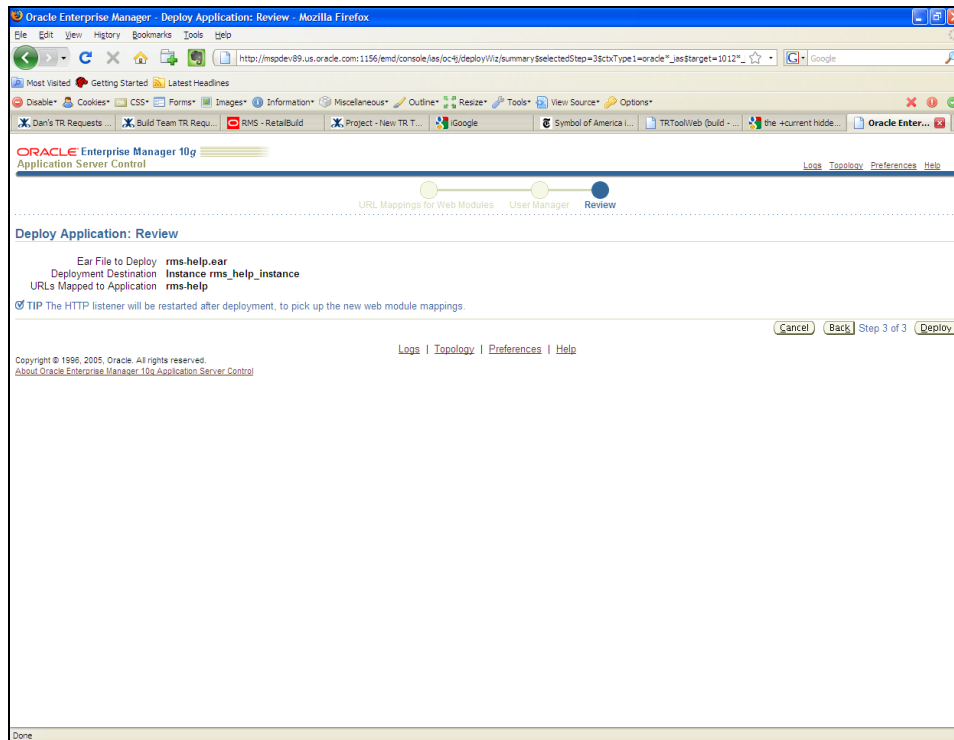
A progress screen appears as the application is deployed.

10. When the ear file has been successfully deployed, click **OK**.

RMS Reports Installation—Patch

RMS Reports are included in the RMS Application patch: rms1315apppatch.zip in the reports directory. To install the report files, follow the instructions below:

> **Note:** BI_REPOSITORY refers to the BI Publisher reports repository (for example, /u00/webadmin/RMS_BIP/xmlpserver/XMLP).
>
> BI_REPOSITORY must have already set as part of 13.1 RMS Reports installation. For more details, refer to the *Oracle Retail Merchandising System Installation Guide* and the *Oracle Retail Merchandising System Operations Guide* for the 13.1 release for how to set the BI_REPOSITORY.

Option 1: Install Reports After Running Application Installer

If you ran the RMS application installer to install the 13.1.5 patch, follow these steps to install RMS reports.

1. Locate the RMS directory, where the reports are under <BI_REPOSITORY>/Reports/Guest/RMS13.
   For example, /u00/webadmin/RMS_BIP/Reports/Guest/RMS13.

2. Change directory to INSTALL_DIR/base/reports created during the application install.

3. Copy the contents of this directory into the reports directory under BI_REPOSITORY.
   For example,
   cp -R * /u00/webadmin/RMS_BIP/xmlpserver/XMLP/Reports/Guest/RMS13/.

Option 2: Install Reports Manually

If you did not run the RMS application installer to apply the 13.1.5 patch, follow these steps to install RMS reports manually.

1. Locate the RMS directory, where the reports are under <BI_REPOSITORY>/Reports/Guest/RMS13.
   For example, /u00/webadmin/RMS_BIP/Reports/Guest/RMS13.

2. Change directory to APP_PATCH_DIR/app-patch/<version>/reports used for the application patch.

3. Copy the contents of this directory into the reports directory under BI_REPOSITORY.
   For example,
   cp -R * /u00/webadmin/RMS_BIP/xmlpserver/XMLP/Reports/Guest/RMS13/

   This step should be done for each release (in order of earliest to latest patch), starting at 13.1.1 and ending with the 13.1.5 deltas (for example, starting with 13.1.1, followed by 13.1.1.1, 13.1.1.2, and so on).

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Data Migration

Included in the 13.1.5 release is a tool responsible for upgrading pre-existing data in the RMS schema once 13.1 database upgrades are executed. If upgrading from 13.0.2, you will need to run this tool to upgrade your data after completing the 13.1 database patch. If you already ran the Data Migration tool during the 13.1 release, you do not need to run it again.

> **Note:** The data migration utility has only been tested against a 13.1 schema. If upgrading from 13.0.2, it should be run after the 13.1 db upgrade and before running any 13.1.x patches or hot fixes.

Before running the RMS 13.1 Data Migration Tool:

- Make a backup of all your objects and database schema.
- Check that RMS 13.1 installed.
- Review the enclosed *Oracle Retail Merchandising System Release Notes* (rms-1315-rn.pdf).

Configure RMS Data Migration Tool

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

1. Change directories to DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/13.1/rms.

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. If there is an existing controller.cfg in DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/13.1/rms/ from a previous running of the 13.1 upgrade and its contents are still valid, it can be reused. Otherwise, copy DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/13.1/rms/templates/controller.cfg to DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/13.1/rms/.

   Open the controller.cfg file you just created and replace the tokens for the following variables with the appropriate values:

     a. Export PATCH_DIR=DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/13.1/<product>

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

     c. export MMUSER=<The name of the RMS schema>

     d. export PASSWORD=<password for the MMUSER schema>

     e. export ORACLE_SID=<SID for the database the MMUSER schema resides in>

6. Configure the following files in the DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/13.1/rms/files directory with data from your existing RMS schema for the migration. Use the existing files as templates for how this data should be formatted.

> **Note:** For descriptions of this data, refer to the RMS 13.1 Data Model document (rms-131-dm.pdf).

- **store.dat**

  store.dat is used to update the time zone for a given store. To populate store.dat, use the query

  ```
  select store || '|' || 'EST' from store;
  ```

  And modify the time zone "EST" to represent the correct time zone for each store. You should retain the header "STORE|TIMEZONE_NAME" as it is in the sample store.dat.

- **elc_comp.dat**

  elc_comp.dat is used to update the system generated indicator for comp_id. To populate elc_comp.dat, use the query

  ```
  select comp_id || '|' || 'Y' from elc_comp;
  ```

  You should retain the header "COMP_ID|SYSTEM_GENERATED_IND" as it is in the sample elc_comp.dat.

- **system_options.dat**

  This updates the RMS system options (system_options). Replace the default values in the template system_options.dat file with the correct values for your schema. You should not update the first column.

- **sa_system_options.dat**

  This updates the sales audit system options (sa_system_options). Replace the default values in the template sa_system_options.dat file with the correct values for your schema. You should not update the first column.

- **ce_comp_min_max.dat**

  This inserts a new table "ce_comp_min_max." Replace the values in the template ce_comp_min_max.dat file with the correct values for your schema. You should retain the header, "COUNTRY_ID|COMP_ID|MIN_AMT|MAX_AMT|CURRENCY_CODE," as it is in the sample ce_comp_min_max.dat.

7. If the item_supp_country table contains a high volume of rows (for example, more than 500,000 rows), complete these steps:

     a. Enter the item, supplier, manufacturing country id and primary_manu_country_ind into a spreadsheet.

     b. Have your tech team load the data manually from the spreadsheet to upg_item_manu_country table. The load strategy will depend on the recommendation of the tech person, but Oracle highly recommends SQL Loader.

Otherwise, run the following insert statement into your RMS schema manually. You can modify the default values if necessary. If the item_supp_country table contains a high volume of rows, running this insert query is not recommended:

```
insert into upg_item_supp_manu_country select item,supplier,origin_country_id,
primary_country_ind from item_supp_country;
```

Run the RMS Data Migration Tool

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

1. Change directories to DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/13.1/rms.

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

3. Run prevalidation tool. This ensures that the input files for the data migration tool are up to date:

   ```
   $ ./rms_controller.ksh PREVALIDATION
   ```

4. Run migration tool.

   ```
   $ ./rms_controller.ksh UPGRADE
   ```

5. Run migration cleanup tool. This removes temporary data migration objects from the database.

   ```
   $ ./rms_controller.ksh CLEANUP
   ```

6. Refer to the files in the "log" and "error" dir for details if there are problems during migration.

7. You must rebuild synonyms for any additional RMS users.

Configure ReIM Data Migration Tool

If you choose to migrate ReIM data, follow these steps:

1. Change directories to DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/13.1/reim.

2. If there is an existing controller.cfg in DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/13.1/reim/ from a previous running of the 13.1 upgrade and its contents are still valid, it can be reused. Otherwise, copy DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/13.1/reim/templates/controller.cfg to DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/13.1/reim/

   Open the controller.cfg file you just created and replace the tokens for the following variables with the appropriate values:

   a. export PATCH_DIR=DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/13.1/<product>

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

   c. export MMUSER=<The name of the RMS schema>

   d. export PASSWORD=<password for the MMUSER schema>

   e. export ORACLE_SID=<SID for the database the MMUSER schema resides in>

Run the ReIM Data Migration Tool

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

1. Change directories to DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/13.1/reim.

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

3. Run migration tool.

    ```
    $ ./reim_controller.ksh UPGRADE
    ```

4. Run migration cleanup tool. This removes temporary data migration objects from the database.

    ```
    $ ./reim_controller.ksh CLEANUP
    ```

5. Refer to the files in the "log" and "error" dir for details if there are problems during migration.

6. You will need to rebuild synonyms for any additional RMS users. Create synonyms to the owner schema for all tables, views, sequences, functions, procedures, packages and types that the user has access to.

Web Services Installation

Some Oracle Retail applications; <app> (for example, RMS) use Oracle Objects for the PL/SQL API's. The tool generates a Web Service Provider layer between the external clients and the <app> API's to provide the Web Service functionality, such as faults, logging, and security, as well as the conversion from xml payloads to Oracle Objects.

The Retail Service Enabler (RSE) tool creates the appropriate Provider web service end-points as well as templates for the PL/SQL API's.

RSE Tool - PL/SQL Provider Service
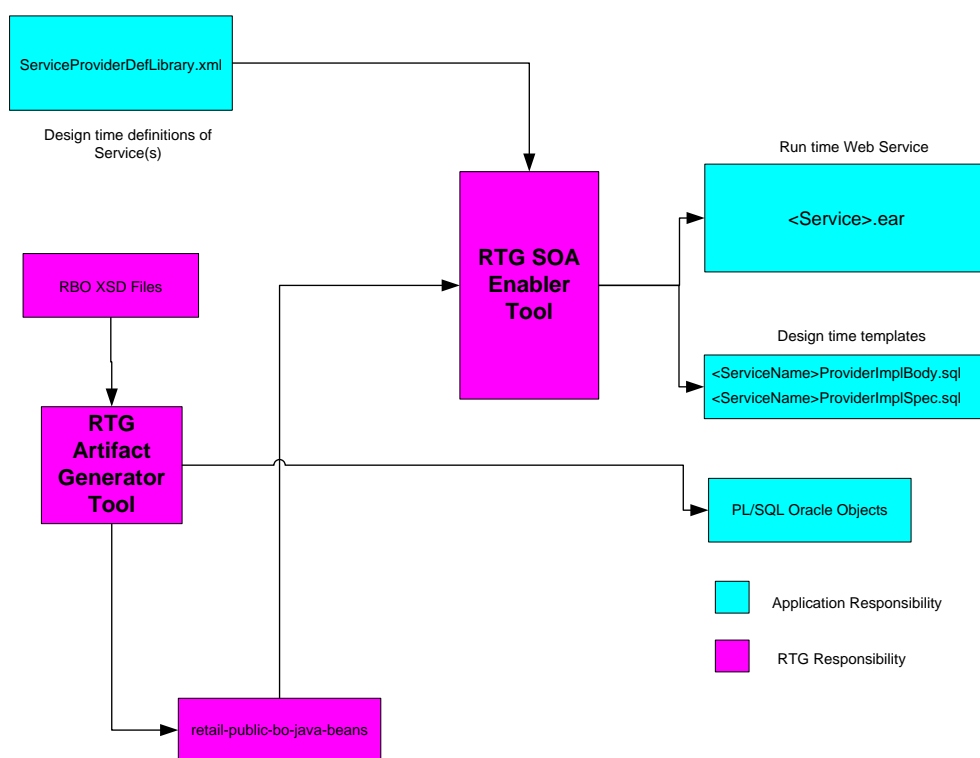
Example Contents of an <app>_PLSQLServiceProvider.zip

Before you apply the RMS 13.1.5 patch:

- Determine which patches and hot fix bundles have already been installed.
- Review the enclosed *Oracle Retail Merchandising System Release Notes* (rms-1315-rn.pdf).

Extract Web Services Files

To extract Web Services files, do the following.

1. Create a directory under the Batch INSTALL_DIR to hold the Web services files. This will be referred to as Web Service Objects.

2. Copy the rms1315webservices.zip file from the RMS 13.1.5 release to INSTALL_DIR/'Web Service Objects'.

3. Unzip rms1315webservices.zip from INSTALL_DIR/Web Service Objects.

Set up Environment

To set up the environment, do the following.

1. Source the oraenv script to set up the Oracle environment variables (for example, ORACLE_HOME, ORACLE_SID, and 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

2. 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
MMUSER	RMS schema owner	MMUSER=RMS13 export MMUSER
PASSWORD	Password for the RMS schema owner	PASSWORD=<RMS13 password> export PASSWORD

Drop Existing Java Code from RMS Database Schema

If you have an existing Web service installation in the RMS schema, you will need to drop the Java code from it before continuing.

```
dropjava -u $MMUSER/$PASSWORD@$ORACLE_SID -v missing11g.jar dbwsclientws.jar
dbwsclientdb11.jar

dropjava -u $MMUSER/$PASSWORD@$ORACLE_SID -v GetDrillBackForwardURLConsumer.jar

dropjava -u $MMUSER/$PASSWORD@$ORACLE_SID -v
ProcessGLAccountValidationRetailReqABCSImplConsumer.jar
```

If you encounter errors while dropping the Java, drop the individual classes.

> **Example:** dropjava -u
> $MMUSER/$PASSWORD@$ORACLE_SID
> oracle/retail/integration/services/consumer/G
> etURLWS/runtime/SourceSystem_Encoder

Loading Java Code to the RMS Database Schema

Web service installation involves loading java code to the RMS database schema itself. Perform the following procedures to load java code to the RMS database schema.

1. Increase ORACLE initialization parameter JAVA_POOL_SIZE. 150MB is recommended.

2. Run the following commands:

```
cd INSTALL_DIR/'Web Service Objects'/Consumer/lib

loadjava -u $MMUSER/$PASSWORD@$ORACLE_SID -v -r -f missing11g.jar
dbwsclientws.jar dbwsclientdb11.jar
```

3. Make sure the step above completes with 0 errors. If you encounter errors, run the following command, correct the error, and then repeat the steps above.

```
dropjava -u $MMUSER/$PASSWORD@$ORACLE_SID -v missing11g.jar dbwsclientws.jar
dbwsclientdb11.jar
```

4. Change the contents of the following files to your RMS schema owner name when seeing the value <USER>.

   - INSTALL_DIR/'Web Service Objects'/Consumer/sql/
     GetDrillBackForwardURLConsumer_grant.sql

   - INSTALL_DIR/'Web Service
     Objects'/Consumer/sql/ProcessGLAccountValidationRetailReqABCSImplCons
     umer_grant.sql

   > **Example:** Change all occurrence of <USER> to RMS schema
   > owner RMS01 in the files below:
   >
   > ```
   > dbms_java.grant_permission( '<USER>',
   > 'SYS:java.lang.RuntimePermission',  'setFactory', '' )
   > ```
   >
   > to
   >
   > ```
   > dbms_java.grant_permission( 'RMS01',
   > 'SYS:java.lang.RuntimePermission',  'setFactory', '' )
   > ```

5. Run the above files as the database sys user.

6. Perform the following commands to load java to the database:

```
cd ../jars

loadjava -u $MMUSER/$PASSWORD@$ORACLE_SID -v -r -f
GetDrillBackForwardURLConsumer.jar
```

7. Make sure the step above completes with 0 errors. If you encounter errors, run the following command, correct the error, and then repeat the step above.

```
dropjava -u $MMUSER/$PASSWORD@$ORACLE_SID -v
GetDrillBackForwardURLConsumer.jar
```

8. Perform the following commands to continue loading java to the database:

```
loadjava -u $MMUSER/$PASSWORD@$ORACLE_SID -v -r -f
ProcessGLAccountValidationRetailReqABCSImplConsumer.jar
```

9. Make sure the step above completes with 0 errors. If you encounter errors, run the following command, correct the error, and then repeat the step above.

```
dropjava -u $MMUSER/$PASSWORD@$ORACLE_SID -v
ProcessGLAccountValidationRetailReqABCSImplConsumer.jar
```

You do NOT create synonyms to each java object loaded as the synonyms were created in packages previously loaded pointing to the exposed java objects.

10. Run the following scripts to drop existing Web Service Objects. You can ignore error messages from these scripts.

   - ```
     INSTALL_DIR/'Web Service Objects'/Consumer/sql/
     GetDrillBackForwardURLConsumer_drop.sql
     ```
   - ```
     INSTALL_DIR/'Web Service
     Objects'/Consumer/sql/ProcessGLAccountValidationRetailReqABCSImplConsumer_
     drop.sql
     ```

11. Run the following against $MMUSER:

   - ```
     INSTALL_DIR/'Web Service Objects'/Consumer/sql/
     GetDrillBackForwardURLConsumer_create.sql
     ```
   - ```
     INSTALL_DIR/'Web Service
     Objects'/Consumer/sql/ProcessGLAccountValidationRetailReqABCSImplConsumer_
     create.sql
     ```
   - ```
     INSTALL_DIR/'Web Service Objects'/Provider/sql/
     PayTermServiceProviderImplSpec.sql
     ```
   - ```
     INSTALL_DIR/'Web Service Objects'/Provider/sql
     ```
   - ```
     ReportLocatorServiceProviderImplSpec.sql
     ```
   - ```
     INSTALL_DIR/'Web Service
     Objects'/Provider/sql/SupplierServiceProviderImplSpec.sql
     ```

Web Service installation Process – WebLogic

There are two ways of installing the Web service application, one using the WebLogic administration console and the other using the auto-deployment mechanism.

The following steps are performed in the installation:

- Meet or verify the prerequisites.
- Creating a domain for the application to run in.
- Deploy the rms-service.ear to the WebLogic instance.

Common Steps for Administration Console and Auto-deployment Mechanism Process

The following are common steps in the Administration Console and Auto-deployment Mechanism process.

Prerequisites

▪ WebLogic server is installed and domain has been created to host the application.

> **Note:** Every .ear file or ejb-jar file which contains the services should be deployed on its own weblogic instance. To avoid confusion the recommended naming convention for the WebLogic instance is the .ear file name with the extension _wls_instance, Eg - If the ear file name is rms-service.ear then the instance name would be rms-service_wls_instance

▪ The rms-service.ear file has been extracted from the above rms1311webservices.zip file

Creating a new domain in WebLogic 10.3

▪ The details of creating new WebLogic domains can be found in the WebLogic documentation here:

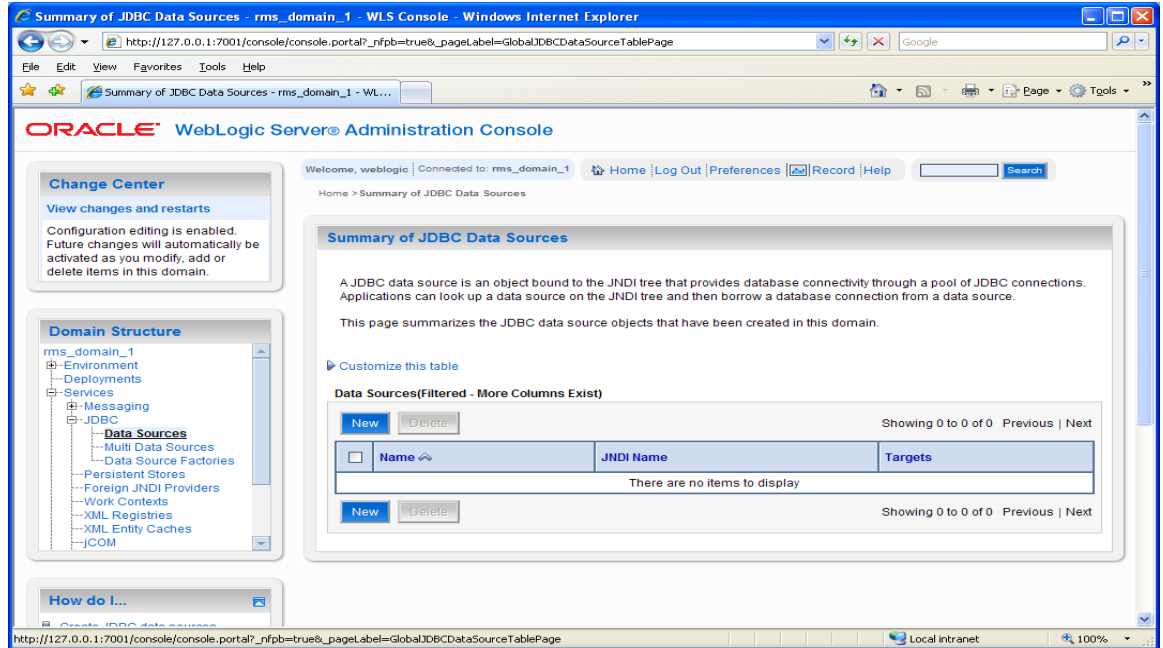`http://edocs.bea.com/common/docs103/configwiz/newdom.html`

Creating a JDBC data source in WebLogic 10.3

1. Log in to the Weblogic administration console. Use the URL http://<host>:<listen port>/console/login/LoginForm.jsp.
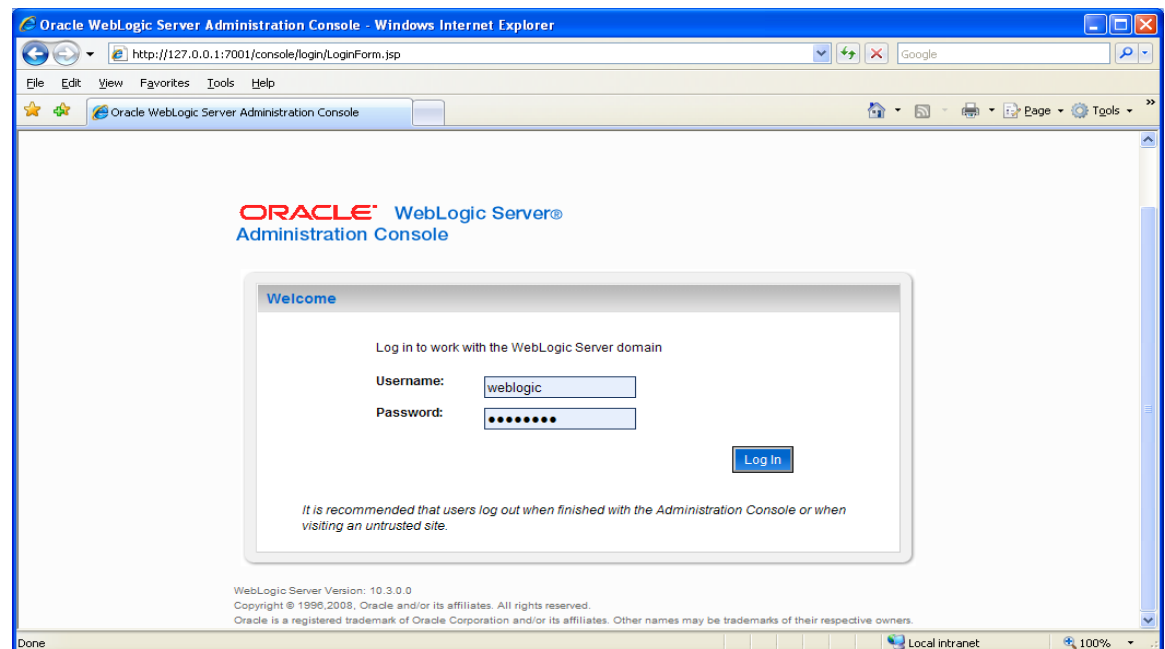
2. Navigate the domain structure tree to Services/JDBC/Data Sources.
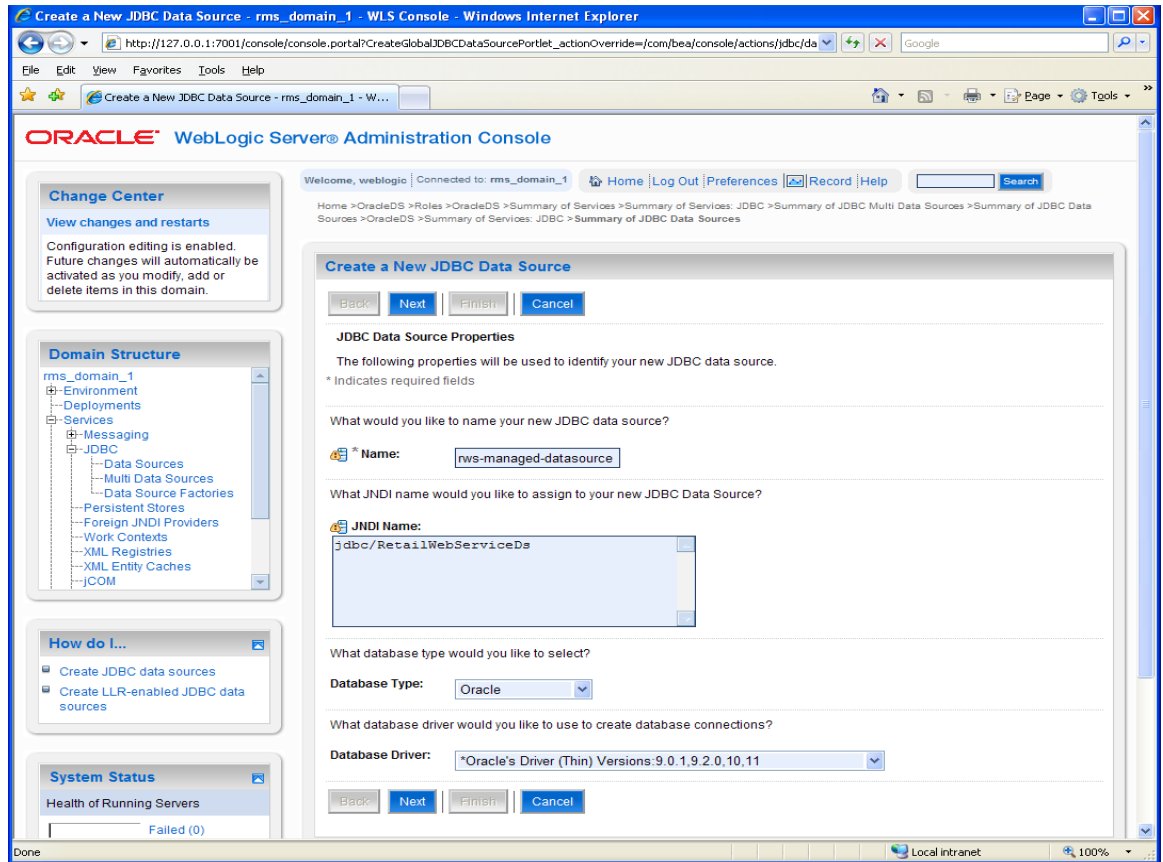
3. Click **New** to start creating the new Data Source. Enter the required information. You may choose any name for the data source in the Name field.

> **Note:** The JNDI name must be set to jdbc/RetailWebServiceDs. The generated code for the service will use this JNDI name to look up the data source.

4.   Select the transaction options for your data source and click **Next**.
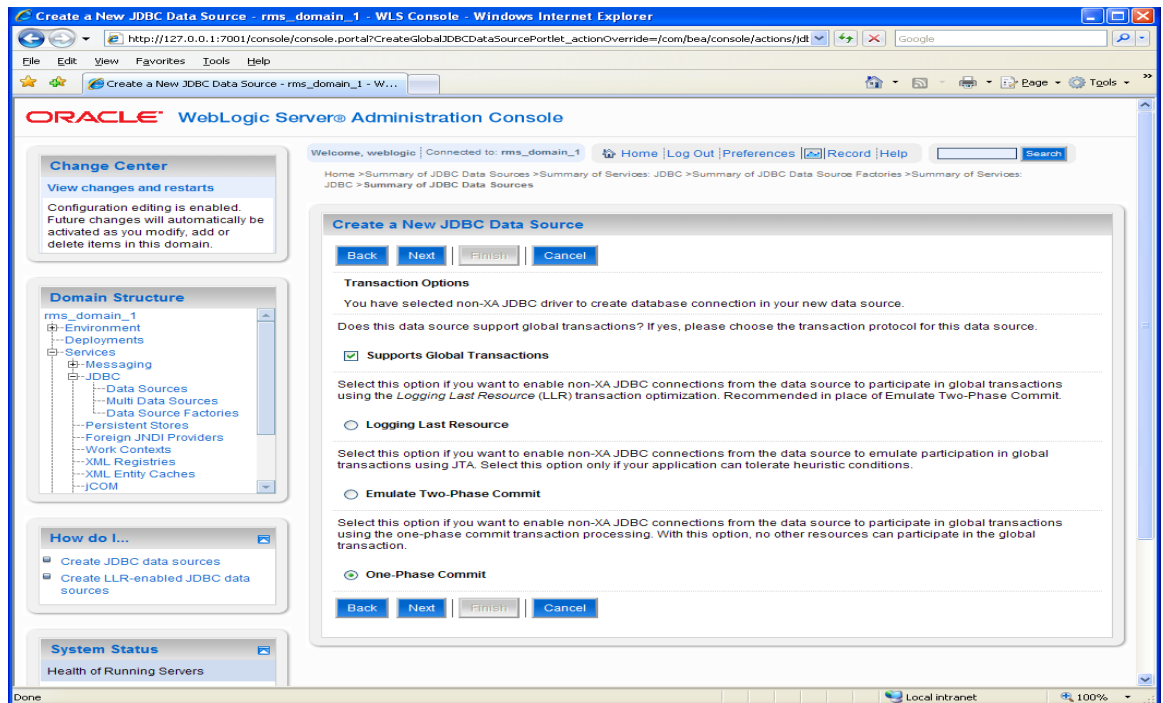
5. Enter the database name and user information for your data source and click **Next**.
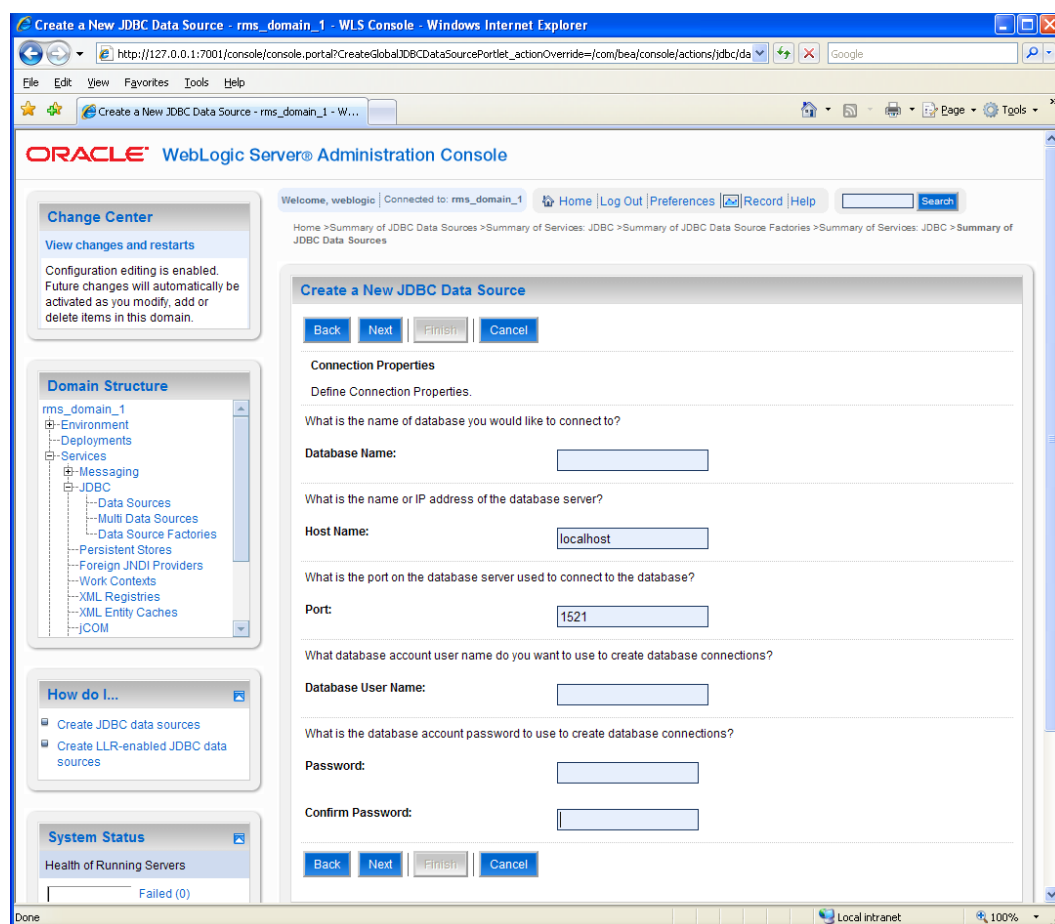
6. This screen will display the connection information for your data source. Use the Test Configuration button to ensure the connection information is correct. If everything is correct, the following message is displayed: "Connect test succeeded."
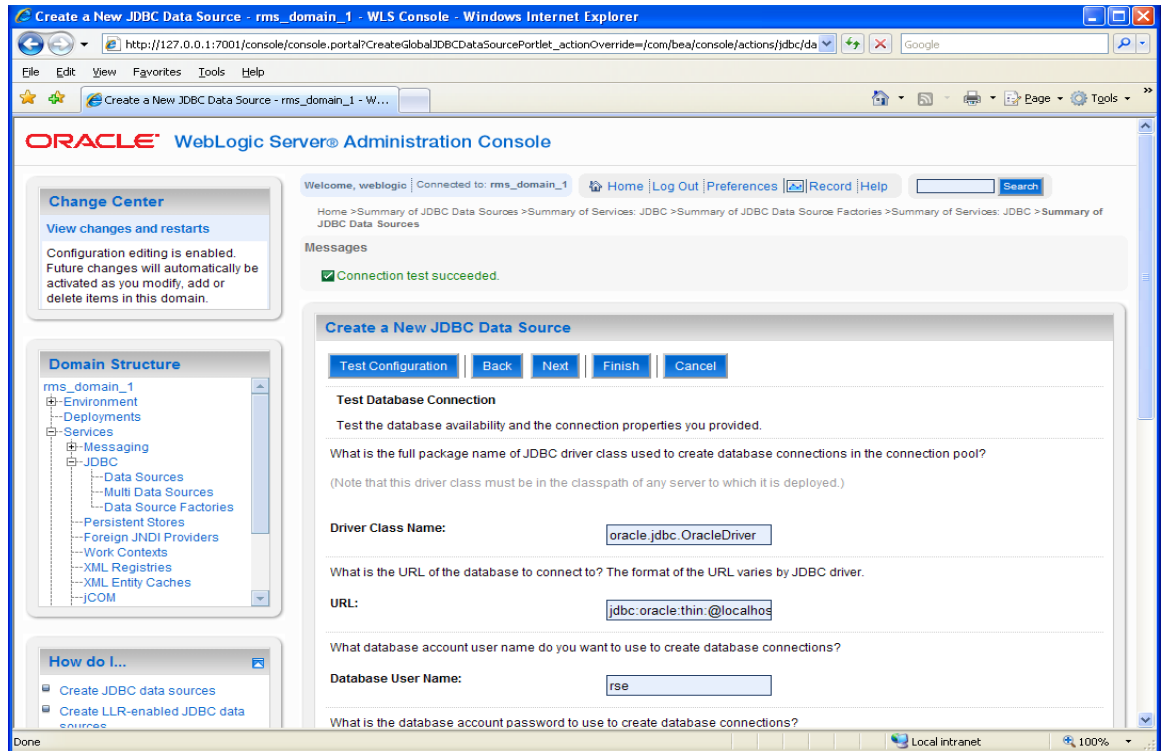
7. Click **Next** and select a server to deploy the data source to. This is not necessary at this point if you want to deploy the data source to a server at a later time.
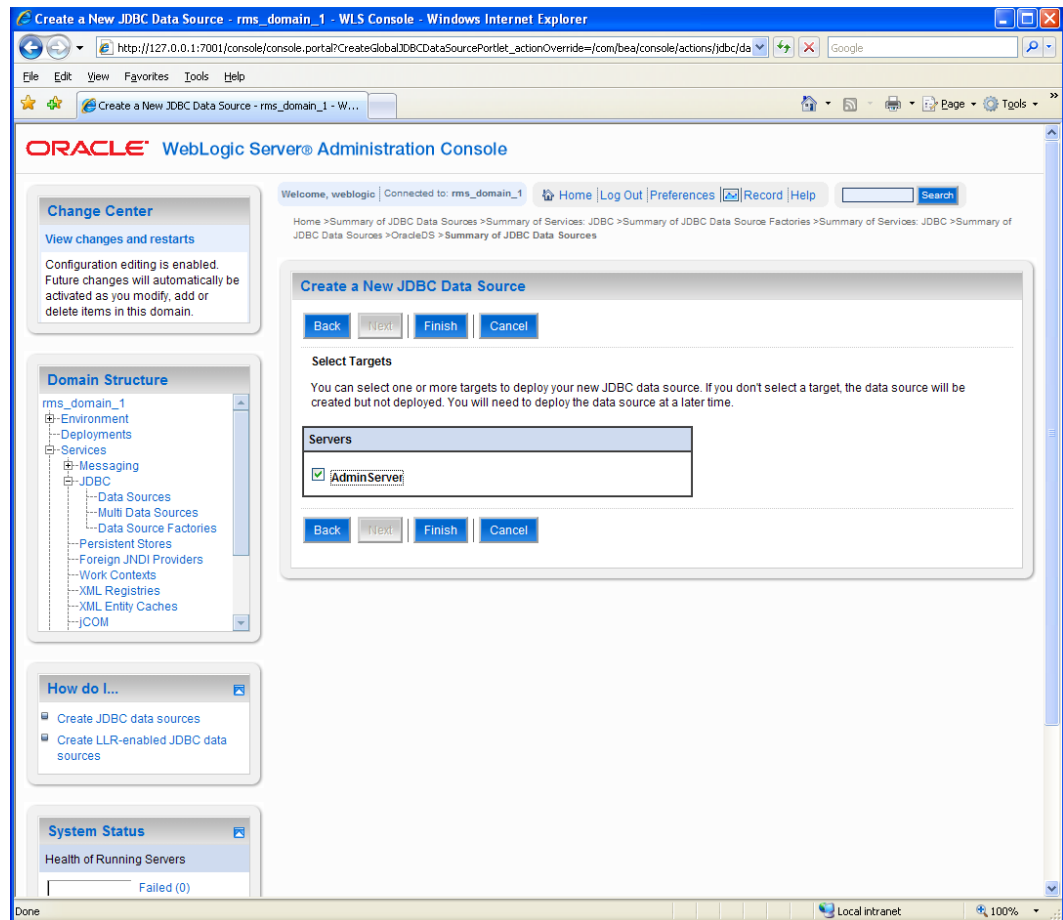
8. Click **Finish** to complete the data source setup. This will display the data sources page, and the new data source will be present.
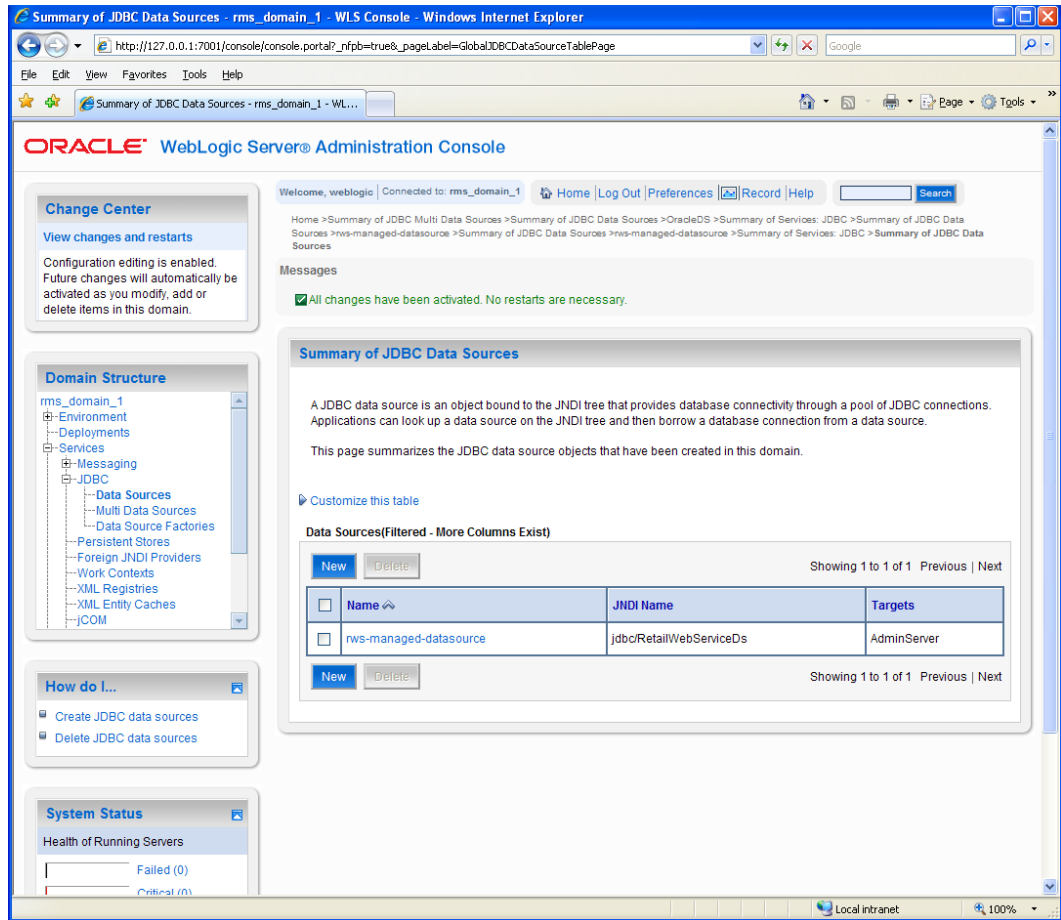
9. Click the new data source to see its properties page. A default connection pool is created for the data source. Click the **Connection Pool** tab to view the connection pool properties.
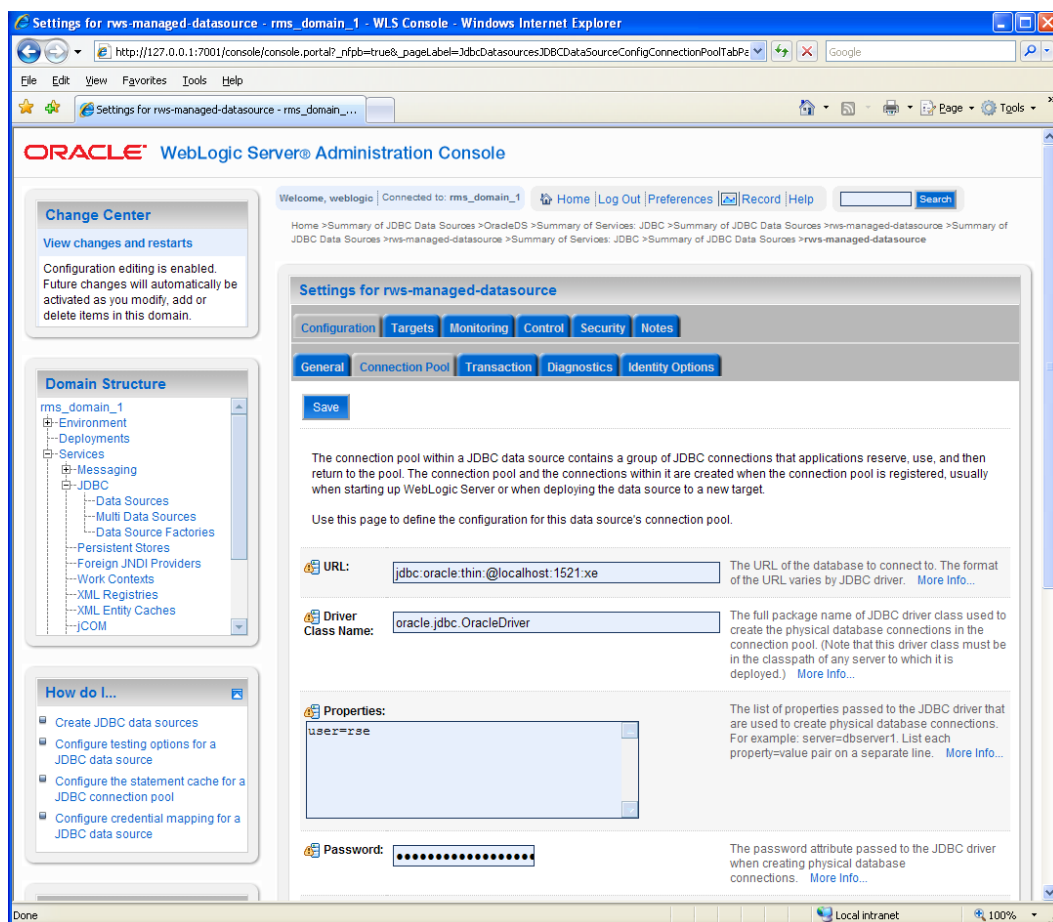
10. The generated JDBC connection URL for the data source is displayed. The Oracle URL is in this format (`jdbc:oracle:thin:@<hostname>:<port>:<sid>`).

Example:	`jdbc:oracle:thin:@localhost:1521:orc`

11. If the database is a RAC database the URL should be in the following format
`jdbc:oracle:thin:@(DESCRIPTION =(ADDRESS_LIST =(ADDRESS = (PROTOCOL = TCP)(HOST = <host>)(PORT = <port>))(ADDRESS = (PROTOCOL = TCP)(HOST = <host>)(PORT = <port>))(LOAD_BALANCE = yes))(CONNECT_DATA =(SERVICE_NAME = <sid>)))`.

Example:	`jdbc:oracle:thin:@(DESCRIPTION =(ADDRESS_LIST =(ADDRESS = (PROTOCOL = TCP)(HOST = mspvip72)(PORT = 1521))(ADDRESS = (PROTOCOL = TCP)(HOST = mspvip73)(PORT = 1521))(LOAD_BALANCE = yes))(CONNECT_DATA =(SERVICE_NAME = dvolr02)))`

12. In the configuration > connection pool tab of the data source, set the values for following properties:

- **Initial capacity:** Set the value to 20 connections. This value should be increased or decreased based on the expected load on the server.

- **Maximum capacity:** Set the value to 100 connections. This value should be increased or decreased based on the expected load on the server.

- **Capacity Increment:** Set the value to 20 connections. This value should be increased or decreased based on the expected load on the server.

- **Inactive Connection Timeout:** This property is availbe in the advanced section of the connection pool configuration. Set the value of this property to 60 seconds.
- **Remove Infected Connections Enabled:** This check box must be unchecked.

Install WebLogic 10.3 Administration Console Installation

To install the WebLogic 10.3 Administration Console, do the following:

1. Log in to the administration console using the URL http://<host>:<listen port>/console/login/LoginForm.jsp.
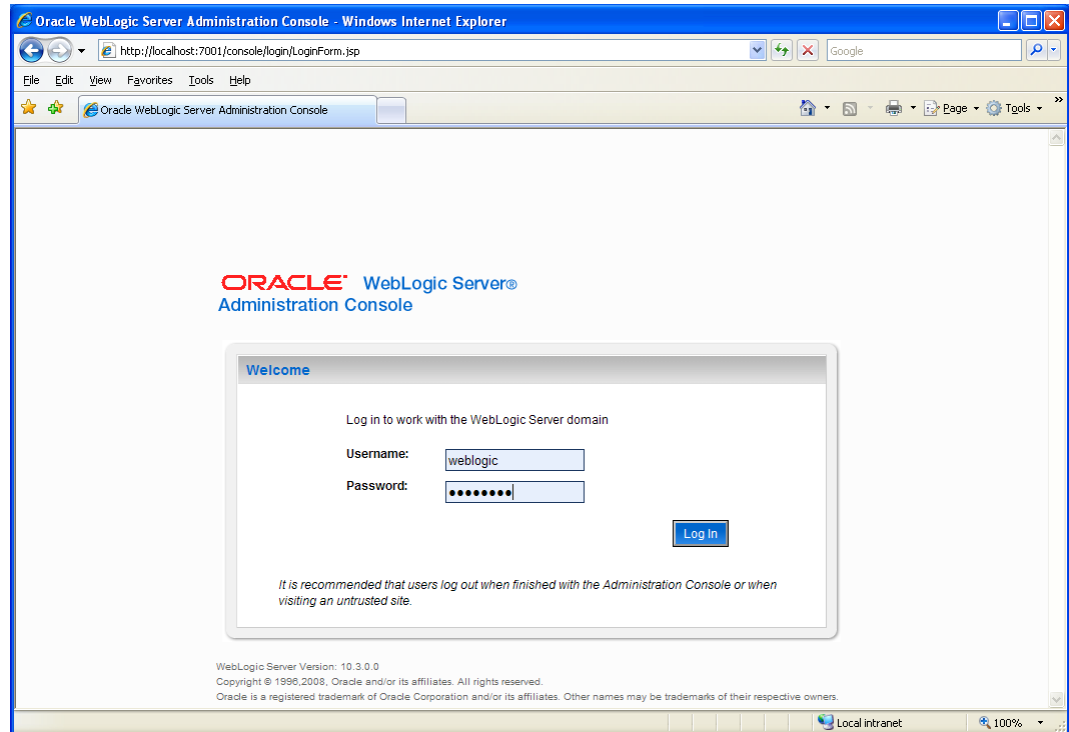
2. Click the **Configure Applications** link to access the deployments page.
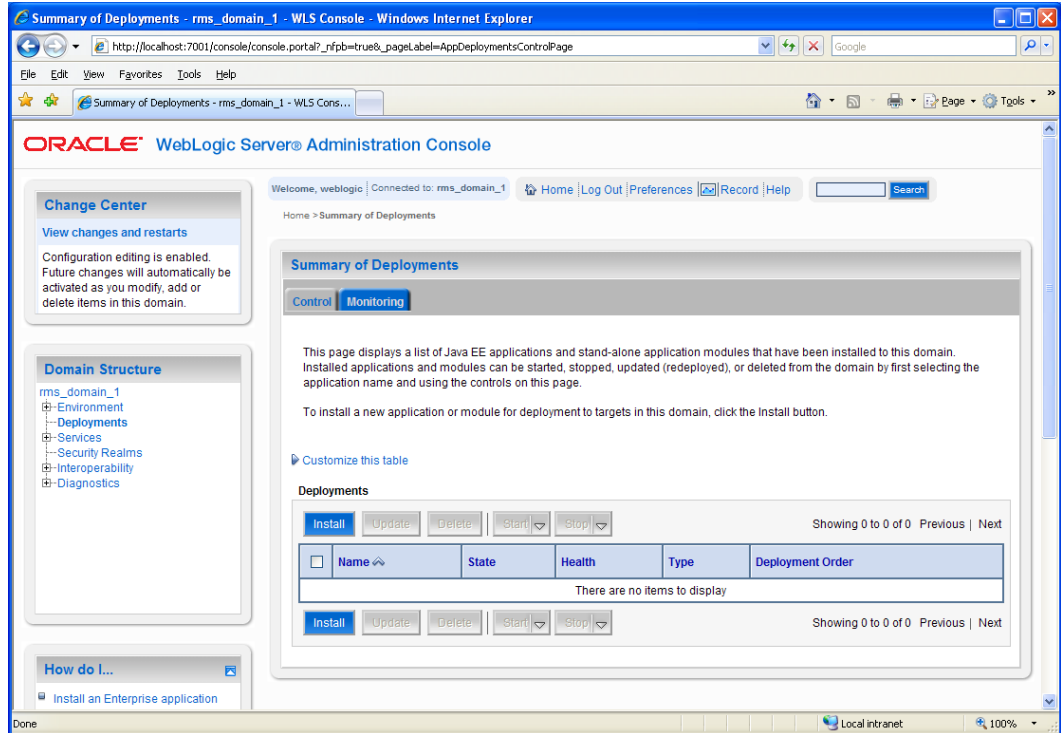
3. Click **Install** and navigate to the directory containing the .ear file.
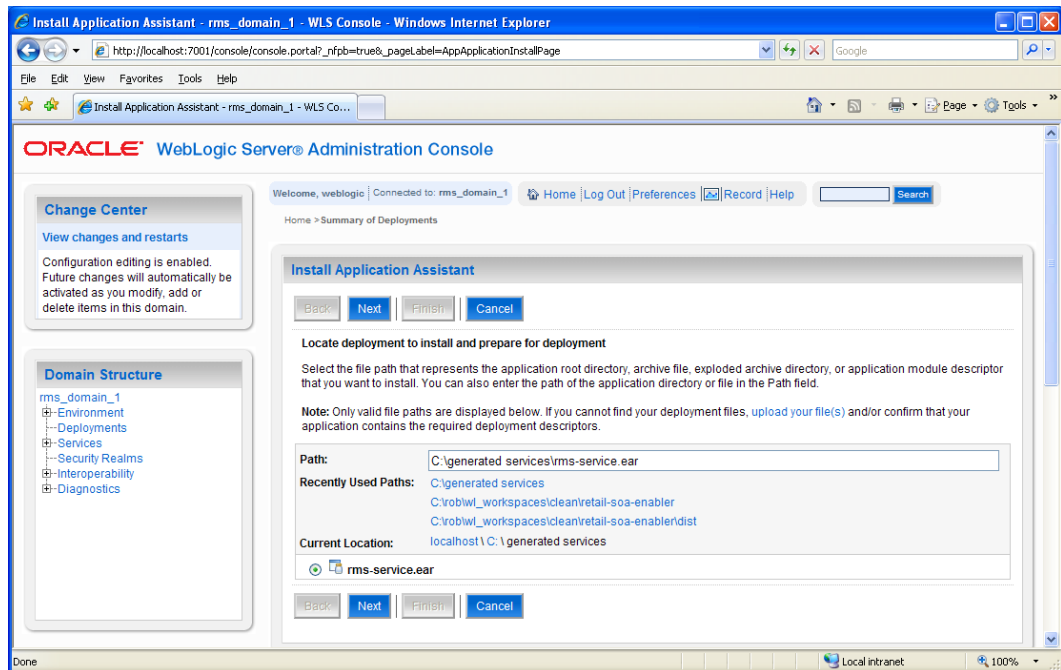
4. Click **Next**. Verify that **Install as an application** is selected. Click Next again.
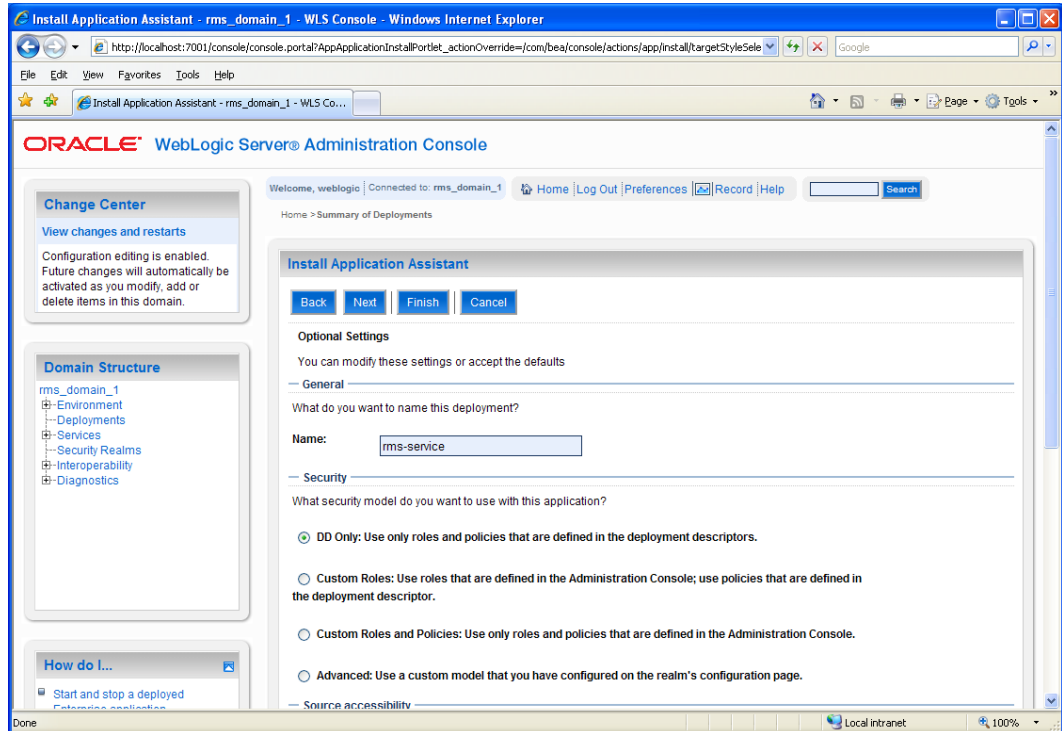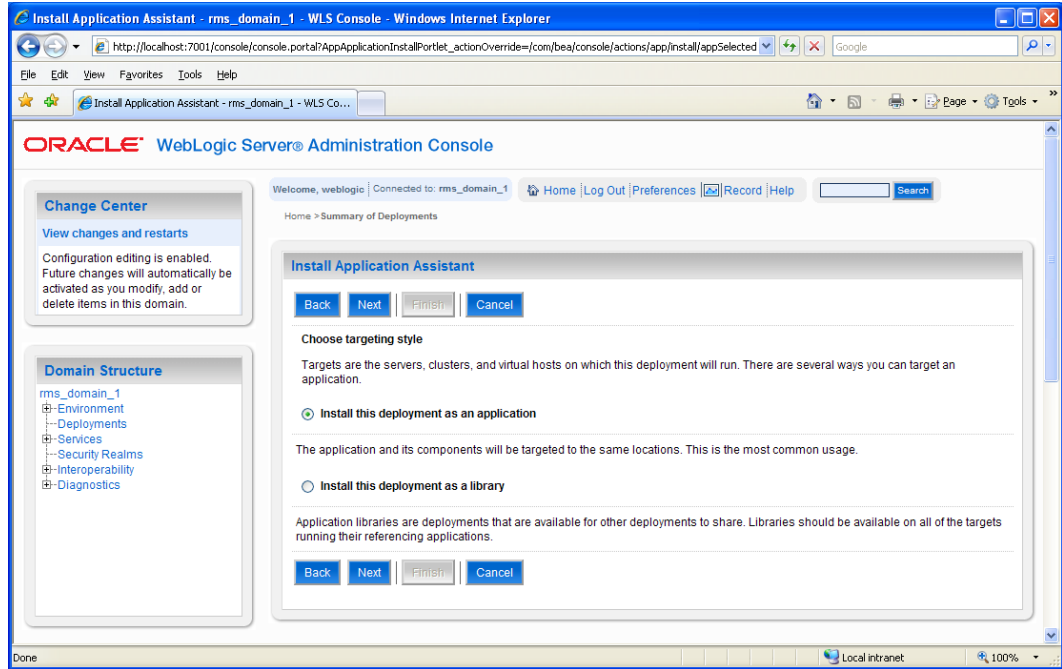
5. Click **Finish** to deploy the application. The application should now be deployed.
6. Restart the WebLogic instance.
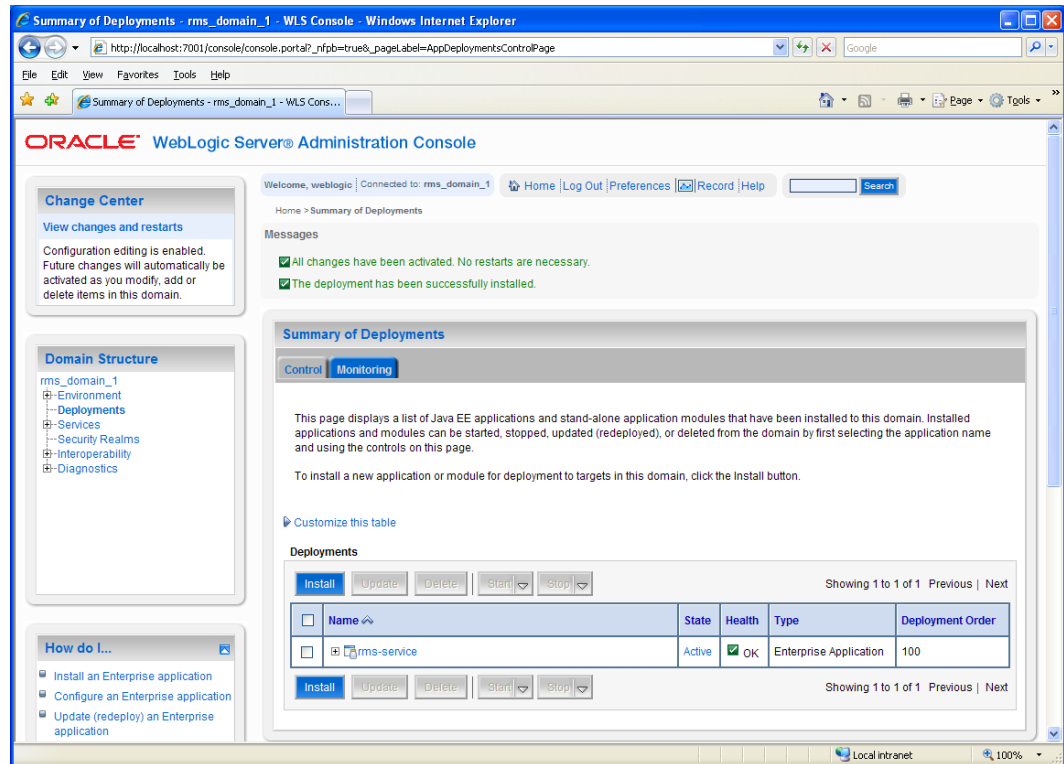
7. Expand the deployment tree, and verify the EJBs and Web Services.
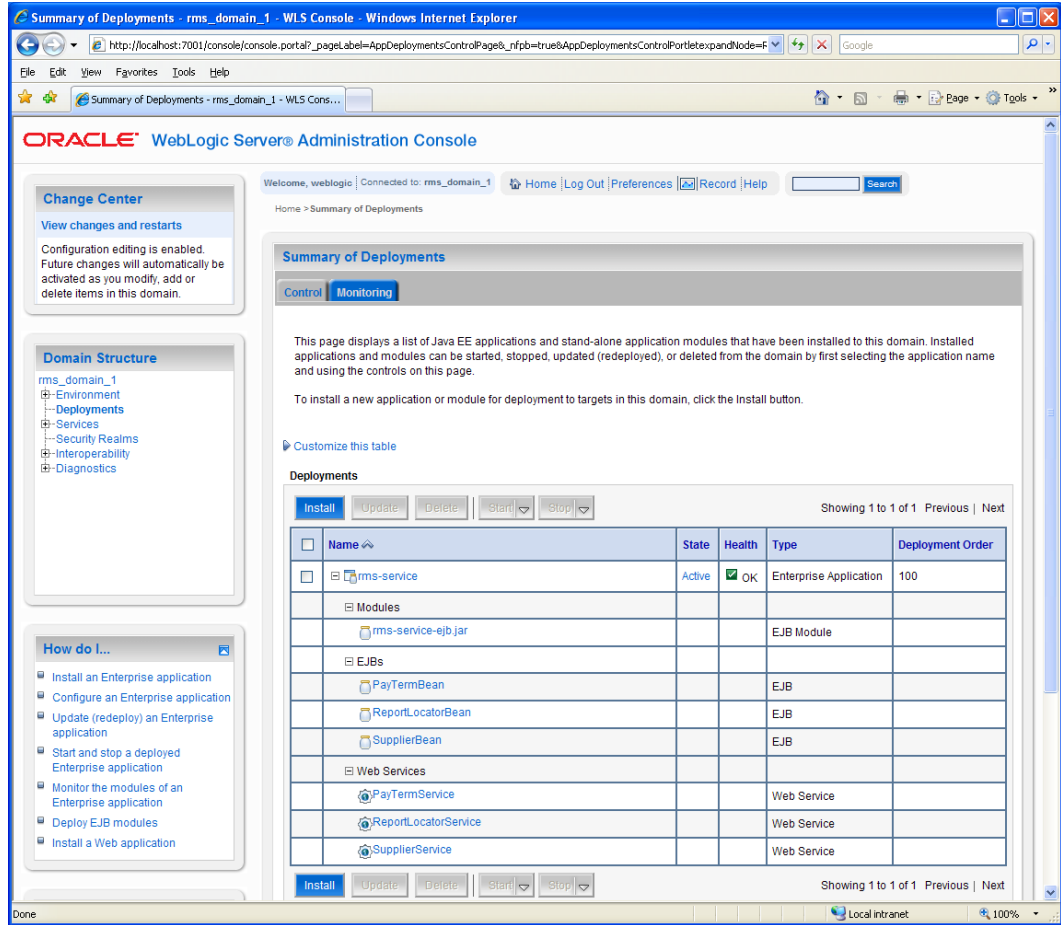
8. Click the link for one of the services. Click the Testing tab and expand the service tree. The options to view the dynamically generated WSDL being used, and a Test Client for the service, are displayed. Click the Test Client link.
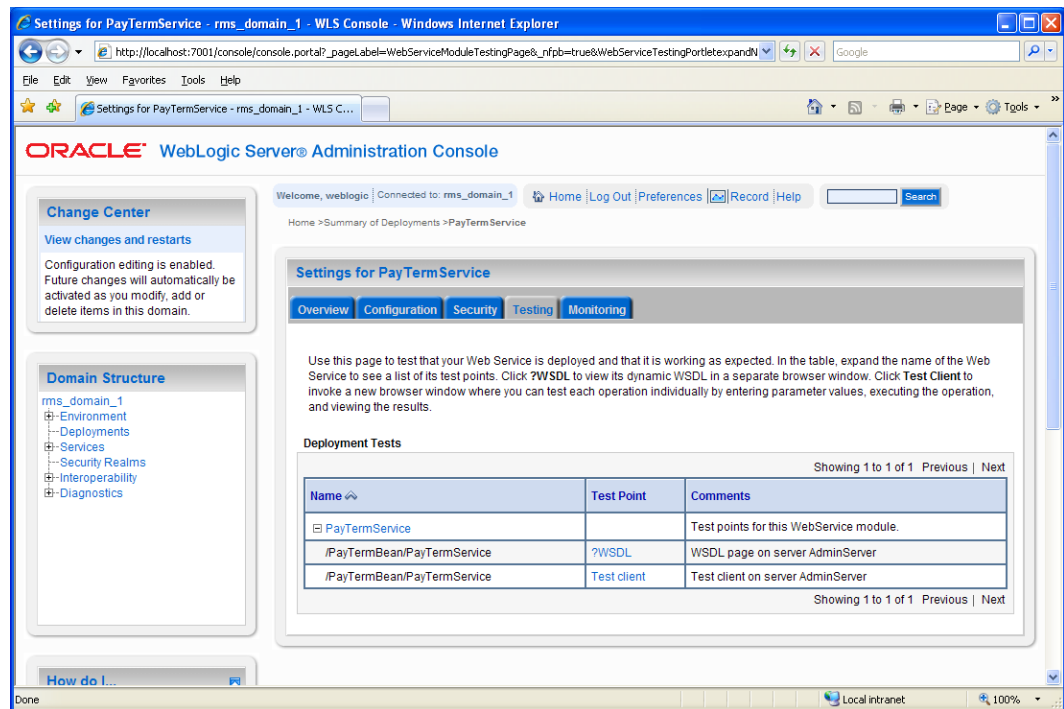
9. Test the "ping" method of the service. You should see a valid response if the service is responding.
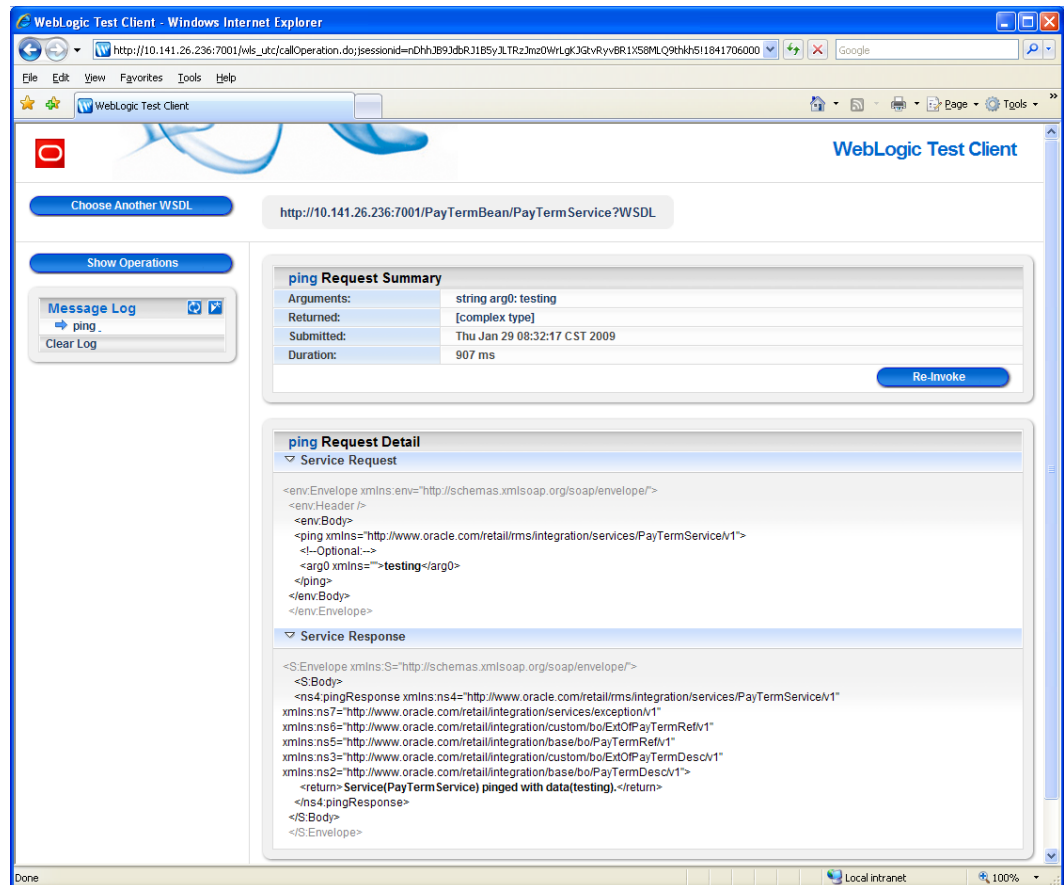
10. Testing the other methods of this service with default values may result in a schema validation exception. The exception lists the fields that do not conform to the schema. When the values are changed to conform to the schema, the service will attempt to call the PL/SQL implementation layer.

Install WebLogic 10.3 Autodeploy

To install WebLogic 10.3 Autodeploy, complete the following steps.

1. Start WebLogic server. Locate the autodeploy directory under your WebLogic domain directory.
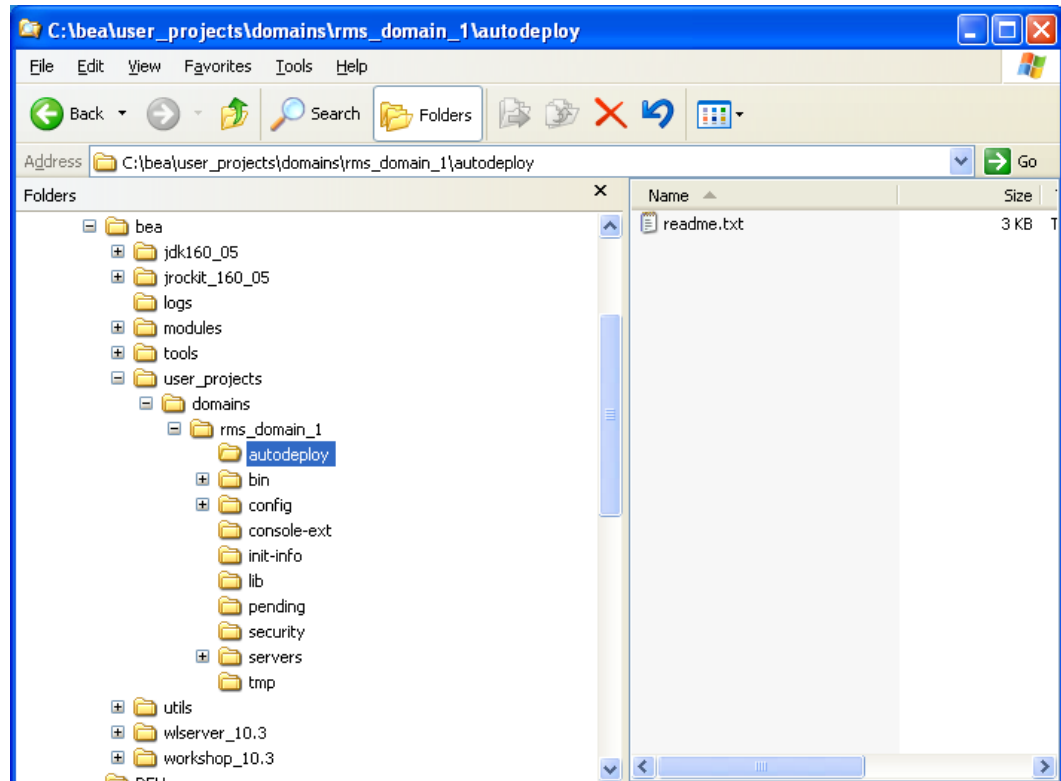
2. Drop the rms-service.ear file in the autodeploy directory. This will automatically deploy the application.
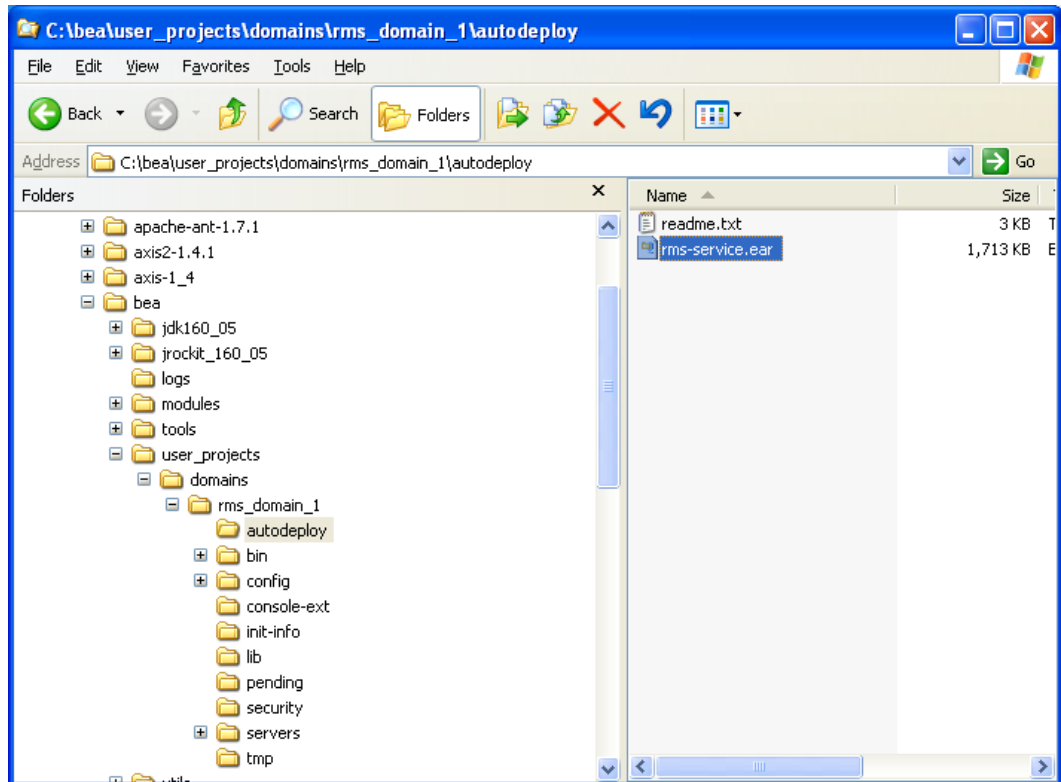
3. Log in to the administration console and click on the Configure Applications link. The new deployment is listed under its default name with a suffix of auto-deployed.
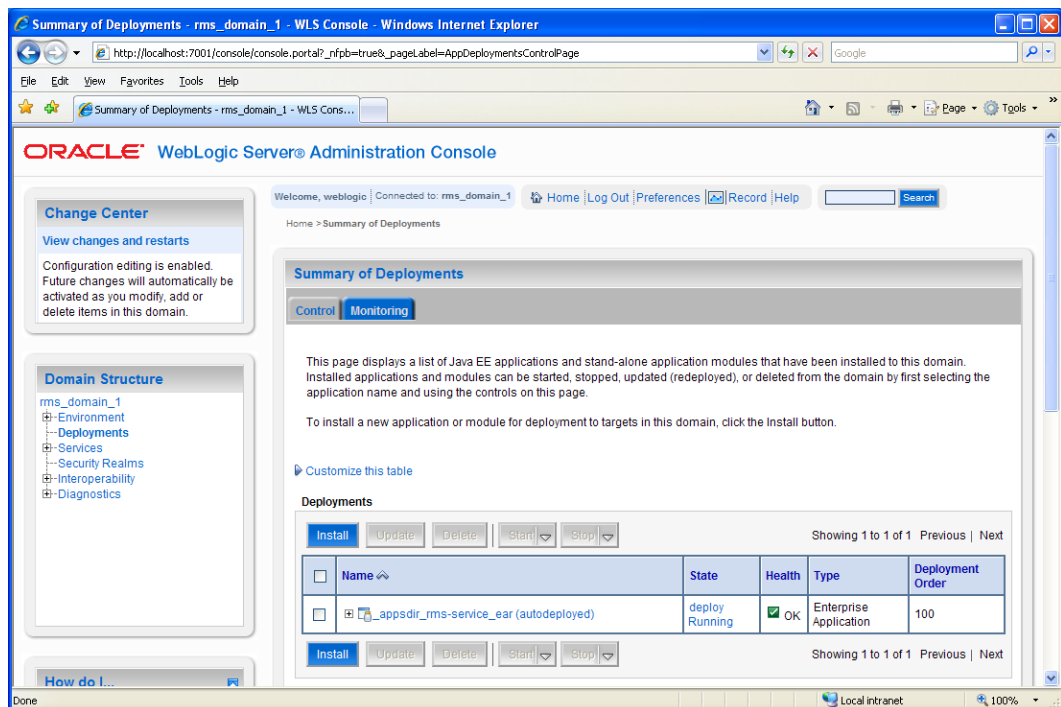
Appendix: RMS DB Patch Installer Screens

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

Screen: Product Selection
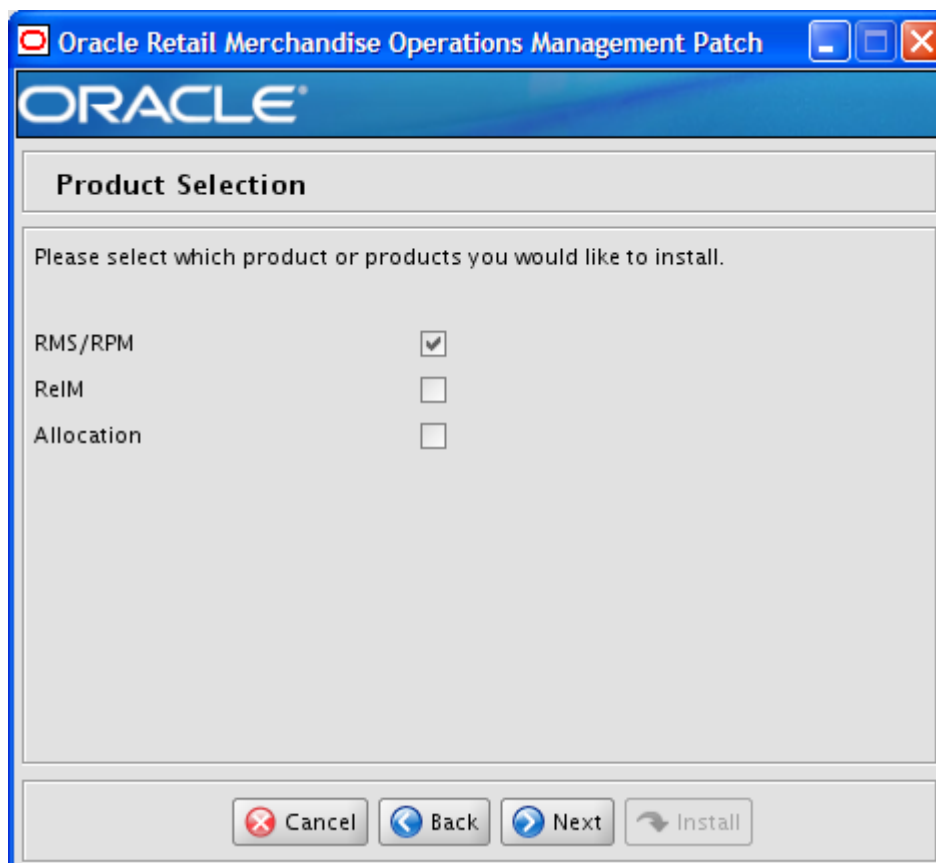
Field Title	Product Selection
Field Description	By default the RMS database schema patch installer creates the database objects for RMS/ReSA/RTM and RPM. Optionally, the database objects for ReIM and/or Allocation may be installed at the same time or later.
Example	RMS/RPM

Screen: RMS Database Schema Details

Field Title	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 RMS database schema patch installer is run.
Example	RMSUSER

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 the RMS patch will be applied.
Example	mydb

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

Screen: Allocation Database Schema Details

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

Field Title	Alloc schema password
Field Description	Database password for the Allocation user schema.

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

Screen: DBA User

Field Title	DBA user
Field Description	Provide a database user with sufficient privileges to create synonyms between other users. The installer logs into the database using this account and creates the synonyms needed between the RMS and Allocation users.
Example	SYSTEM

Field Title	DBA user password
Field Description	Database password for the DBA user.

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

Screen: Apply an RMS and RPM DB Patch
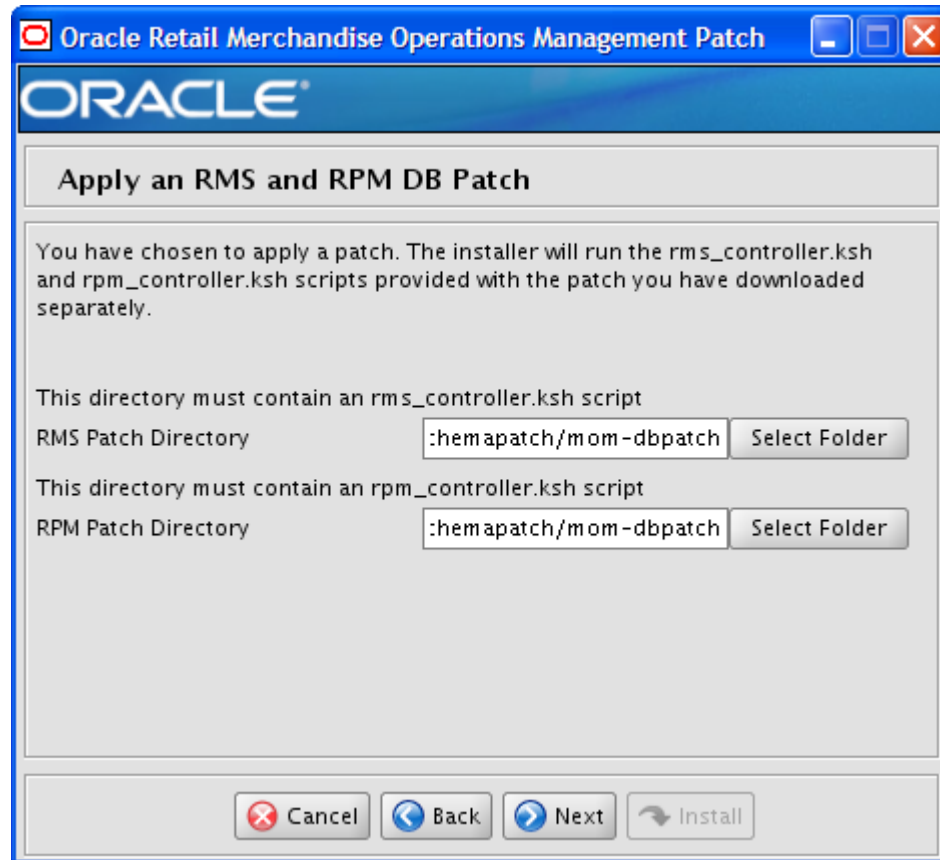
Field Title	RMS Patch Directory
Field Description	Provide the directory path to the RMS patch you want to install. The installer runs only the patch you provide. **Note:** The directory you choose must contain an rms_controller.ksh file.
Example	/path/to/rms/dbschemapatch/mom-dbpatch for all 13.1.x patches **Note:** The patch option is intended for patches starting with 13.1.

Field Title	RPM Patch Directory
Field Description	Provide the directory path to the RPM patch you want to install. The installer runs only the patch you provide. **Note:** The directory you choose must contain an rpm_controller.ksh file.
Example	/path/to/rms/dbschemapatch/mom-dbpatch for all 13.1.x patches **Note:** The patch option is intended for patches starting with 13.1.

Screen: Continue RMS and RPM DB Patch

Field Title	Continue RMS and RPM 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 RMS and RPM patch will be skipped. If No is selected, the patch starts from the beginning.
	Note: To continue a patch, the content of the processed directories in the RMS Patch Directory and RPM Patch Directory chosen on the previous screen must be the same as it was after the previous patch was stopped. If you choose No, the directory is cleared, and you cannot continue this patch in the future.

Screen: Apply ReIM DB Patch

Field Title	Patch Directory
Field Description	Provide the directory path to the ReIM patch you want to install. The installer runs only the patch you provide. **Note:** The directory you choose must contain a reim_controller.ksh file.
Example	/path/to/rms/dbschemapatch/mom-dbpatch for all 13.1.x patches **Note:** The patch option is intended for patches starting with 13.1.

Screen: Continue ReIM DB Patch

Field Title	Continue ReIM 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 ReIM patch will be skipped. If No is selected, the patch starts from the beginning. **Note:** To continue a patch, the content of the processed directory in the patch directory chosen on the previous screen must be the same as it was after the previous patch was stopped. If you choose No, the directory is cleared, and you cannot continue this patch in the future.

Screen: Apply Allocation DB Patch

Field Title	Alloc Patch Directory
Field Description	Provide the directory path to the patch for the Allocation schema you want to install. The installer runs only the patch you provide. The Alloc controller is used to apply the necessary Allocation patches to the Allocation schema. **Note:** The directory you choose must contain an alloc_controller.ksh file.
Example	/path/to/rms/dbschemapatch/mom-dbpatch for all 13.1.x patches **Note:** The patch option is intended for patches starting with 13.1.

Field Title	Alloc in RMS Patch Directory
Field Description	Provide the directory path to the Allocation patch for the RMS Schema you want to install. The installer runs only the patch you provide. The Alloc_RMS controller is used to apply the necessary Allocation patches to the RMS schema **Note:** The directory you choose must contain an alloc_rms_controller.ksh file.
Example	/path/to/rms/dbschemapatch/mom-dbpatch for all 13.1.x patches **Note:** The patch option is intended for patches starting with 13.1.

Screen: Continue Allocation DB Patch
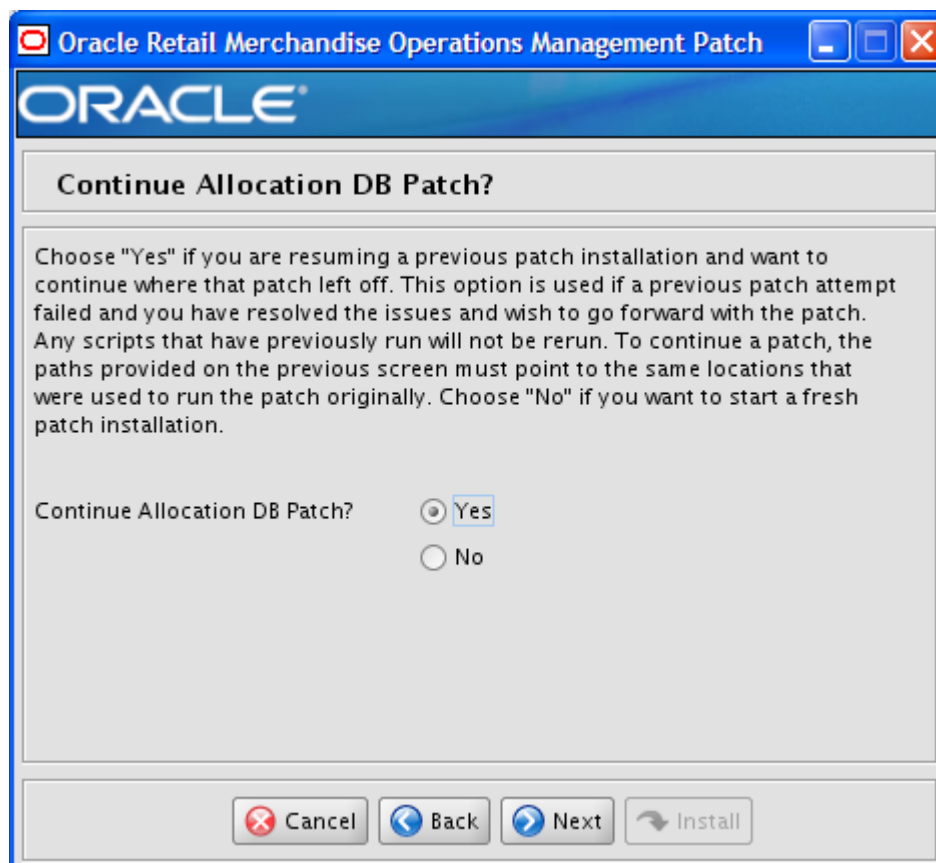
Field Title	Continue Allocation DB Patch?
Field Description	The patch process allows you to continue a previously run patch if it stopped before completion or failed. If Yes is selected, any scripts that were previously run for the Allocation patch in the Allocation and RMS schemas will be skipped. If No is selected, the patch will start from the beginning.
	Note: To continue a patch, the content of the processed directories in the Alloc Patch Directory and Alloc in RMS 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.

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. The options you select determine the screens and fields you see.

Screen: Welcome

There are no fields on this screen. The Welcome screen contains information about the RMS Batch Installer and prerequisites.

Screen: DataSourceDetails

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	RMSUSER

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	rmsdb

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

Screen: Summary
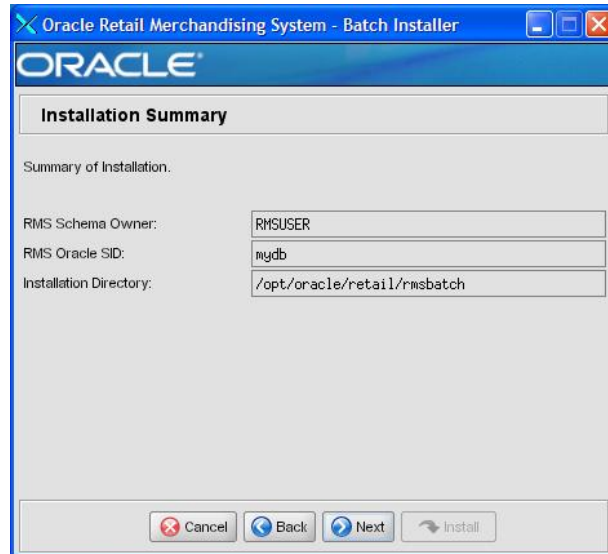
All of the fields on this summary screen are read-only. In the installer's GUI mode, this screen provides the opportunity to review inputs and go back to previous screens to correct them if necessary.

Once you advance forward from this screen, the installer connects to the database and validate that the RMS user exists before beginning installation.

Appendix: RMS Application Installer Screens

Screen: Welcome

There are no fields on this screen. The Welcome screen contains information about the RMS Application Installer and prerequisites.

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	RMS

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	Rmsdb

Screen: Application Installation Directory
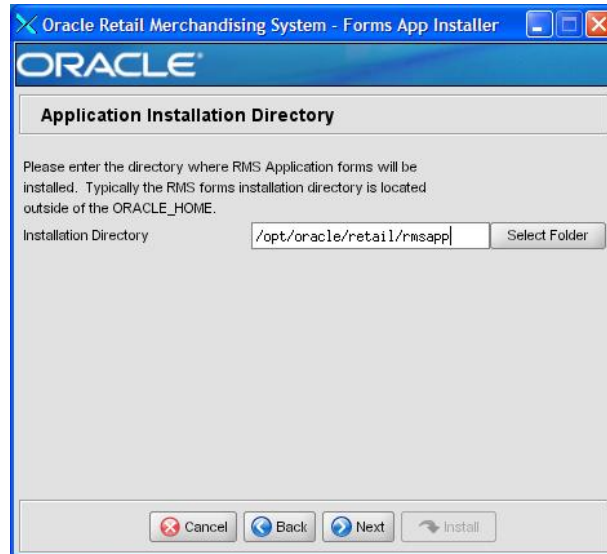
Field Title	Application Installation Directory
Field Description	The location where the RMS Application (toolset, forms and reports) will be installed. The RMS $MMHOME path will be a subdirectory of this directory, named base.
Example	/u01/oracle/retail

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 Oracle Application Server instance.
Example	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. Reference Appendix G for more information.
Example	Base

Screen: Webhelp Installation Details

Field Title	OC4J Admin User
Field Description	Username of the admin user for OC4J instance to which the RMS Webhelp application is being deployed.
Example	oc4jadmin

Field Title	OC4J Admin Password
Field Description	Password for the OC4J admin user. You chose this password when you created the OC4J instance.

Field Title	OC4J Instance Name
Field Description	Name of the OC4J instance that was created for the RMS Webhelp application.
Example	rms_help_instance

Screen: Install OCM

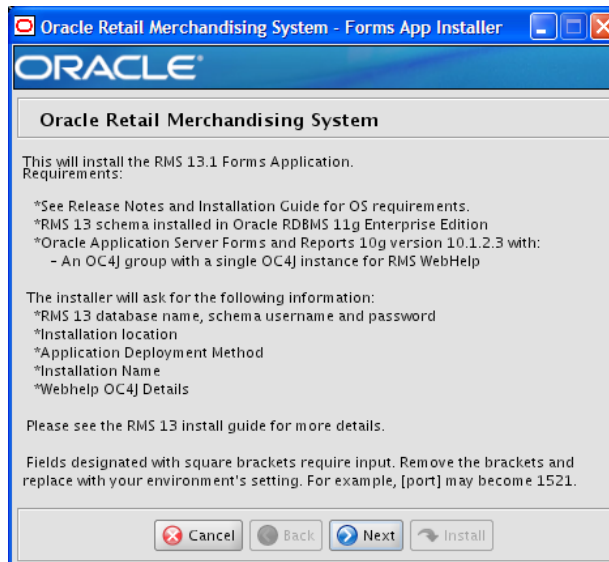| Field Title	Install OCM
Field Description	Install OCM checkbox. This field gives you the option to install or not install OCM. The default option is checked. It is highly recommended you install OCM if you meet the requirements.
Example	Checked/True

Screen: Summary

All of the fields on this summary screen are read-only. In GUI mode of the installer, this screen provides the opportunity to review inputs and go back to previous screens to correct them if necessary.

Once you advance forward from this screen, the installer connects to the database and validates that the RMS user exists before beginning installation.

D

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

Appendix: URL Reference

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

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.

Unreadable Buttons in the Installer

If you are unable to read the text within the installer buttons, it probably means that your JAVA_HOME is pointed to a pre-1.4.2 JRE or JDK. Set JAVA_HOME to a Java runtime environment of version 1.5 or later and run the installer again.

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: Could not 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:
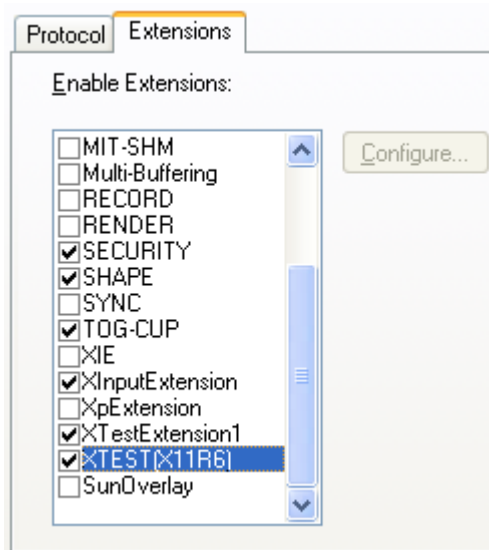
5. Restart the X Server and re-run the RMS installer.

Could not excel 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 False if it is set to True. This setting is dependent on the JRE that is being used.

RMS DB Installer Fails on s11680739_cost_event_reclass.sql

Symptom:

When running the RMS database patch, it fails on this file released as part of the 13.1.4.2 hot fix bundle:

 s11680739_cost_event_reclass.sql:

```
[exec] Executing file s11680739_cost_event_reclass.sql
[exec] ORA Error while executing s11680739_cost_event_reclass.sql
BUILD FAILED
```

If you look in the file s11680739_cost_event_reclass.err, it reports this error message:

```
Altering table COST_EVENT_RECLASS
ALTER TABLE COST_EVENT_RECLASS MODIFY ITEM VARCHAR2(25) NOT NULL
*
ERROR at line 1:
ORA-02296: cannot enable (RMS131MOCK.) - null values found
```

Solution:

You must make sure all the cost events for RECLASS are processed and purged before the 13.1.4.2 hot fix bundle is applied as part of a patch. The DBC script s11680739_cost_event_reclass.sql is altering the table COST_EVENT_RECLASS and adding PK on it. Ensure that before running this DBC the table is empty and the existing data is already processed and purged in nightly batch. The installation can be rerun after this is done. In the installer screens, choose to continue the previous installation when rerunning the installer.

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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.
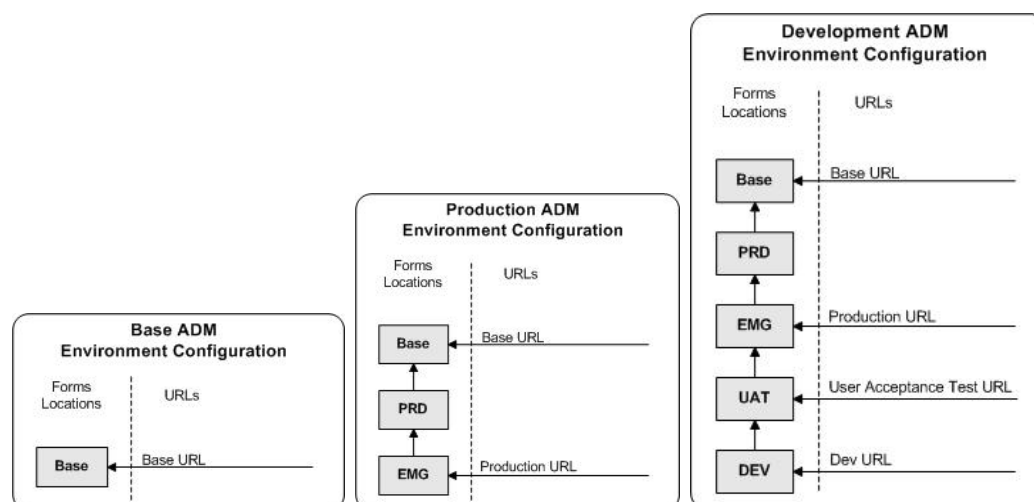
The above diagrams show how the application deployment method environment configurations are set up in the forms installation.

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.

H

Appendix: Single Sign-On Resource Access Descriptors

Oracle Forms applications such as RMS use database connections for authentication and authorization purposes. Oracle Single Sign-On, however, uses the Oracle Internet Directory (OID) user ID and password for this purpose. The Forms framework maps OID user IDs to database connections via information stored in Resource Access Descriptors (RADs). A user will have one RAD for each application accessed. RADs may be created by an administrator or by an LDIF script. Depending on the Oracle Internet Directory and/or the formsweb.cfg configuration, RADs may also be created by the user.

A user is prompted for the database connection information whenever formsweb.cfg file specifies ssoMode = true and createDynamicResources = true for an application and no valid RAD exists. RADs may become invalid when passwords have expired or have been changed.

RADs may be created by administrators or users via the Delegated Administration Services application.

> **Note:** Users can create new RADs only if one or more RADs already exist.

RADs may be created through LDIF scripts as well. See the My Oracle Support document, "How to Create and Copy SSO User Resources (RADs)" (ID 244526.1).

Appendix: RMS RETL Instructions

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

RETL

Before trying 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 (see the *Oracle Retail Extract, Transform, and Load Programmer's Guide* for version of RETL), you must 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=int9i
export RMS_OWNER=RMS13DEV
export BA_OWNER=rmsint1012
```

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`

Appendix: Inserting New Languages

A new language was added for the RMS 13.1.3 release, Croatian (hr). As the RMS dbschema installer does not support inserting new languages that have not already been installed, this section documents how to manually insert new languages as either primary or secondary languages. These steps should be done after installing the RMS 13.1.5 patch.

In this section <lang> represents the two or three-letter code for the language you wish to insert. This is the list of supported codes and the languages they represent:

- de - German
- es – Spanish
- el - Greek
- fr – French
- hu – Hungarian
- hr – Croatian
- it – Italian
- ja – Japanese
- ko – Korean
- nl – Dutch
- pl - Polish
- ptb – Brazilian Portuguese
- ru – Russian
- sv – Swedish
- tr - Turkish
- zhs – Simplified Chinese
- zht – Traditional Chinese

Insert Secondary Language Data

> **Note:** These scripts apply only for setups, where primary language is English and secondary languages are any combination of supported languages. Scripts are UTF-8 encoded. Installing them into a database that has been set to UTF-8 is recommended.

1. Change directories to DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/13.1.5/rms/lang/.
2. Set the sqlplus session so that the encoding component of the NLS_LANG is UTF8. For example AMERICAN_AMERICA.UTF8.

3. Log into sqlplus with the RMS schema and run the following command:
   ```
   SQL> @rms1315_secondary_<lang>.sql
   ```

4. Check the log file rms1315_secondary_<lang>. log for any errors.

> **Note:** Multiple secondary languages can be added to a primary language installation of English.

Insert Primary Language Data

> **Note:** These scripts are only for customers who wish to have a primary language of one of the non-English supported languages. Once you run one of these primary scripts, you will not be able to revert back to English as your primary language. The scripts are UTF-8 encoded. We recommend installing them into a database that has been set to UTF-8.

The following scripts will prompt for a country code and a currency code. Make sure you use the correct country code (2 or 3) based on what was chosen previously.

1. Change directories to DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/13.1.5/rms/lang/.

2. Set the sqlplus session so that the encoding component of the NLS_LANG is UTF8. For example AMERICAN_AMERICA.UTF8.

3. Log into sqlplus with the RMS schema and run the following command:
   ```
   SQL> @rms1315_primary_<lang>.sql
   ```

4. Check the log file rms1315_primary_<lang>. log for any errors.

> **Note:** Only one language can be set as the primary language for the system.

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Appendix: 11gR2 Database Parameter File

```
################################################################################
# Oracle 11.2.0.x Parameter file
#
# NOTES: Before using this script:
#        1.   Change <datafile_path>, <admin_path>, <utl_file_path>, <diag_path>
and <hostname>
#               values as appropriate.
#        2.   Replace the word SID with the database name.
#        3.   Size parameters as necessary for development, test, and production
environments.
# ------------------------------------------------------------------------
# MAINTENANCE LOG
#
# Date      By           Parameter          Old/New          Notes
# +------+ +---------+ +----------------+ +-------------+ +-------------+
#
#
################################################################################
# --------------------------------------------------------------------------------
# The policy is to give 60% for sga and 40% for PGA out of Memory Target at
startup
# --------------------------------------------------------------------------------
memory_target                            = 2000M
# --------------------------------------------------------------------------------
audit_file_dest               = <admin_path>/adump
compatible            = 11.2.0
control_files                            = (<datafile_path>/control01.ctl
                                          ,<datafile_path>/control02.ctl)
db_block_size             = 8192        # Default is 2k; adjust before db creation,
cannot change after db is created
db_cache_size             = <A mimumum starting value >
db_file_multiblock_read_count         = 16        # Platform specific (max io
size)/(block size)
db_name               = SID
diagnostic_dest                          = '<diag_path>'
java_pool_size            = 100M
job_queue_processes           = 5        # Oracle Retail required; number of
cpu's + 1
local_listener            =
"(ADDRESS=(PROTOCOL=TCP)(HOST=<hostname>)(PORT=1521))"
nls_calendar                             = GREGORIAN
nls_date_format               = DD-MON-RR # Oracle Retail required; if RDW
database see later entry for proper format
nls_language              = AMERICAN  # Default
nls_numeric_characters        = ".,"     # Should be explicitly set to ensure all
users/batch get the same results
nls_sort              = BINARY    # Should be explicitly set to ensure all
sessions get the same order
nls_territory             = AMERICA  # Default
open_cursors              = 900        # Oracle Retail required (minimum=900);
default is 50
plsql_optimize_level                     = 2          # 10g change; use this setting
to optimize plsql performance
processes             = 2000       # Max number of OS  processes that can connect
to the db
```

```
query_rewrite_enabled           = TRUE      # Oracle Retail required for function-
based indexes
session_cached_cursors                  = 900        # Oracle Retail required;
shared_pool_size        = <A minimum starting value >
shared_pool_reserved_size     = < 10% of the shared_pool_size >
undo_management         = AUTO
undo_retention          = 1800       # Currently set for 30 minutes; set to avg
length of transactions in sec
undo_tablespace         = undo_ts
utl_file_dir                            = <utl_file_path>
workarea_size_policy                    = auto         # Should be set to auto
when pga_aggregate_target is set
#
# ***  Set these parameters for Oracle Retail Data Warehouse (RDW) database ***
#nls_date_format             = DD-MON-RRRR  # Required by MicroStrategy
#query_rewrite_integrity              = TRUSTED
#star_transformation_enabled          = TRUE
#utl_file_dir                         = <Windows_utl_file_path>,
<UNIX_utl_file_path>
#
# ***  Archive Logging, set if needed  ***
#log_archive_dest_1                   = 'location=<admin_path>/arch/'
#log_archive_format           = SIDarch_%r_%s_%t.log
#log_buffer          = 10485760    # Set to (512K or 128K)*CPUs
#log_checkpoint_interval              = 51200     # Default:0 - unlimited
#log_checkpoint_timeout               = 7200      # Default:1800 seconds
```

Appendix: AIX Shared Library Bug Fix

The env_rdbms.mk file for Oracle 10g onward has Bug #2143531. This bug was not fixed because there is a workaround. For the workaround, the following changes in **bold/italic** need to be made to the $ORACLE_HOME/rdbms/lib/env_rdbms.mk file. Notice that changes are made in both the BUILD_WITH_CONTEXT and BUILD_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: Setting up Transparent Data Encryption

It is highly recommended that you familiarize yourself with the "Transparent Data Encryption Best Practices" document available from
http://www.oracle.com/technetwork/database/options/advanced-security/index-099011.html

Encryption can be setup at table column level or, if the database is on 11gR2, at tablespace level. Depending on the requirements of your environment, determine which option to implement. Shown below are the examples of both methods:

Configure a Wallet

1. Create a sqlnet.ora in $TNS_ADMIN of the database similar to the below entry:

```
ENCRYPTION_WALLET_LOCATION =
  (SOURCE = (METHOD = FILE)
    (METHOD_DATA =
      (DIRECTORY = /u00/oracle/admin/$ORACLE_SID/wallet)))
```

2. Create the directory as root:
```
# mkdir –p /u00/oracle/admin/<$ORACLE_SID>/wallet
```

   for example:

```
# mkdir –p /u00/oracle/admin/dvsss03/wallet
# chown –R oracle:dba /u00/
# chmod –R 700 /u00/
```

3. As a user with the alter system privilege, create the wallet:
```
SQL> ALTER SYSTEM SET ENCRYPTION KEY IDENTIFIED BY "password";
```

4. Confirm if the wallet is created and open (the TDE master encryption key has been created and inserted automatically):

```
SQL> SELECT * FROM V$ENCRYPTION_WALLET;

WRL_TYPE   WRL_PARAMETER                     STATUS___
file       /u00/oracle/admin/dvsss03/wallet  OPEN
```

   For the Oracle database to process encrypted data, the wallet needs to be opened after database startup; it stays open until closed or database shutdown:
```
SQL> ALTER SYSTEM SET ENCRYPTION WALLEY OPEN IDENTIFIED BY "password";
```

An auto-open wallet does not require a password to be given after database startup. For better security, there is also a local auto-open wallet which only auto-opens on the server it was created on:

```
$ cd /u00/oracle/admin/dvsss03/wallet
$ orapki wallet create –wallet . –auto_login_local
$ chmod 600 *
```

Implement TDE Column Encryption

To implement TDE Column Encyption, do the following.

1. Connect to the database as the RMS schema owner and run enable_resa_tde.sql to encrypt the columns with the recommended AES128 encryption algorithm and turning off the creation of an additional message authentication code (MAC) of the cipher text with nomac:

   For example:

   ```
   alter table SA_TRAN_TENDER modify (CC_NO ENCRYPT using 'AES128' 'nomac');
   alter table SA_TRAN_TENDER_REV modify (CC_NO ENCRYPT using 'AES128' 'nomac');
   alter table SA_ERROR modify (ORIG_CC_NO ENCRYPT using 'AES128' 'nomac');
   alter table SA_ERROR_WKSHT modify (ORIG_CC_NO ENCRYPT using 'AES128' 'nomac');
   alter table SA_ERROR_REV modify (ORIG_CC_NO ENCRYPT using 'AES128' 'nomac');
   alter table SA_ERROR_TEMP modify (ORIG_CC_NO ENCRYPT using 'AES128' 'nomac');
   ```

2. Confirm the columns in tables are encrypted:

   ```
   SQL> select * from user_encrypted_columns;
   ```

TABLE_NAME	COLUMN_NAME	ENCRYPTION_ALG	SALT__
SA_TRAN_TENDER	CC_NO	AES 128 bits key	YES
SA_TRAN_TENDER_REV	CC_NO	AES 128 bits key	YES
SA_ERROR	ORIG_CC_NO	AES 192 bits key	YES
SA_ERROR_WKSHT	ORIG_CC_NO	AES 192 bits key	YES
SA_ERROR_REV	ORIG_CC_NO	AES 192 bits key	YES
SA_ERROR_TEMP	ORIG_CC_NO	AES 192 bits key	YES

Encryption at Tablespace Level (11gR2)

TDE tablespace encryption:Once the wallet is configured, determine an encryption algorithm to be used for the encrypted tablespace and then create them. In this example, the recommended default of AES128 is used:

```
CREATE TABLESPACE RETEK_INDEX DATAFILE
'/u03/oradata/$ORACLE_SID/retek_index01.dbf' SIZE 100M AUTOEXTEND ON NEXT
100M MAXSIZE 3000M EXTENT MANAGEMENT LOCAL SEGMENT SPACE MANAGEMENT AUTO
ENCRYPTION DEFAULT STORAGE(ENCRYPT);

CREATE TABLESPACE RETEK_DATA DATAFILE
'/u03/oradata/$ORACLE_SID/retek_data01.dbf' SIZE 100M AUTOEXTEND ON MAXSIZE 3000M,
'/u03/oradata/$ORACLE_SID/retek_data02.dbf' SIZE 100M AUTOEXTEND ON MAXSIZE 3000M
SEGMENT SPACE MANAGEMENT AUTO ENCRYPTION DEFAULT STORAGE(ENCRYPT);

  CREATE TABLESPACE LOB_DATA DATAFILE
'/u03/oradata/$ORACLE_SID/lob_data01.dbf' SIZE 50M
  AUTOEXTEND ON NEXT 100M MAXSIZE 2000M EXTENT MANAGEMENT LOCAL SEGMENT SPACE
MANAGEMENT AUTO ENCRYPTION DEFAULT STORAGE(ENCRYPT);
```

Once the tablespaces have been created, the RMS data is ready to be imported/loaded.

> N**ote:** After encryption at the tablespace level or at the
> column level is implemented, it is absolutely essential to
> backup the contents in the wallet directory, otherwise, if
> they are lost you will not be able to access the table and/or
> the tablespaces.

For additional information on TDE, refer to:

http://www.oracle.com/technetwork/database/focus-areas/security/twp-transparent-data-encryption-bes-130696.pdf

For additional information on TDE, refer to:

http://www.oracle.com/technetwork/database/focus-areas/security/twp-transparent-data-encryption-bes-130696.pdf

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Appendix: RMS Policies with Database Vault

This appendix describes how to install RMS policies with database vault.

> Release 13.1.5 of RMS supports Database Vault on 11.1.0.7 as well as 11.2.0.2.
>
> Granting of rdbms_rls has been moved from script RMSDBA_GRANTS_VAULT_MGR.sql to script RMSDBA_GRANTS_SYS.sql. The correct scripts have been packaged in their respective Vault_policies_[RMSVersion_RDBMSVERSION] zipped files.
>
> This change has been made for scripts to work for 11.2.0.2. It has no impact on the steps through which RMS policies are installed between the two RDBMS versions.

Before getting started, do the following:

1. Make sure RMS 13.1.5 or higher is installed on a supported Oracle Database release.
2. Make sure the database has the Tablespace "TEMP" as a temporary Tablespace.
3. Note: At this point Database Vault should NOT be installed in the Oracle Home

Installation Steps

To complete installation, do the following.

1. Depending upon the version of RDBMS at your site, unzip the file Vault_policies_1315_11202.zip or Vault_policies_1315_11107.zip into a temporary directory.
2. Edit all the Database Vault API scripts and replace RMS01 with the RMS application owner schema name.
3. Add your specific administrator's database accounts to the rule 'Allow Non RMS Users for CONNECT command rule' in the file RMS_rule.sql under the create_policies directory and remove existing ones if they don't apply.
4. Read **all** the Database Vault API script comments for any additional instructions.
5. Install Oracle Database Vault release 11.1.0.7 or 11.2.0.2, as documented in the *Database Vault Installation Guide.*
6. Log in to the database as Data Vault Manager and do the following.
   a. Run the script setup/RMSDBA_USER.sql
   b. Run the script setup/RMSDBA_GRANTS_VAULT_MGR.sql
7. Log in to the database as SYSDBA and do the following.
   a. Run the script setup/RMSDBA_GRANTS_SYS.sql.
   b. Run the script setup/VAULT_MGR_PRIVILAGE.sql (Note: Please replace vault_mgr schema as per provided user)

8. Use RMSDBA for the following tasks:
   a. RMSDBA user is intended for on boarding of new RMS business users.
   b. Make sure you change the default password for RMSDBA user after you run this script
   c. Customers are encouraged to create personalized accounts for RMSDBA like: RMSDBA_SARKARS then add it to the RMSl Application Protection Realm authorizations.
   d. For tuning, RMSDBA_SARKARS for example, can be added to the Enterprise Manager Administrators and do tuning.
9. Log in to the database with the Database Vault manager and do the following.
   a. Run the script setup/TABLE.sql (Note:Please replace vault_owner schema as per provided user)
   b. Run the script setup/FUNCTION.sql
   c. Run the script setup/FUNCTION_PRIVILAGE.sql (Note: Please replace dvsys and vault_owner as per provided user)
10. Log in to the database with the Database Vault Administrator (owner) and run this script.

        create_policies/CREATE_RMS_DBV_POLICIES.sql.

11. While testing the security policies, you can log into the database with the Database Vault Administrator (owner) and run the following scripts as needed:
    - To remove security policies, run:

          delete_policies/ DELETE_RMS_DBV_POLICIES.sql

    - To disable security policies, run:

          disable_policies/ DISABLE_RMS_DBV_POLICIES.sql

    - To enable security policies, run:

          enable_policies/ ENABLE_RMS_DBV_POLICIES.sql

Description

The following security policies are installed:

RMS Application Protection Realm: This realm protects against unauthorized access by privileged users to business data. RMS users are allowed access through RMS application. RMSDBA has no SELECT access to RMS Data but is authorized to the realm to be able to board new RMS users and grant them the role developer.

This RMS application protection is complemented by the SELECT Command Rule and the CONNECT Command Rule. The SELECT Command Rule prevents RMSDBA user from having SELECT access to RMS business data. The CONNECT Command Rule ensures business users access through RMS Processes.

This realm secures all RMS objects and the RMS Role DEVELOPER. Only the RMS owner RMS01 and the RMSDBA are authorized. If you create your named RMS DBAs like RMSDBA_SARKARS, you can add them to the realm authorization and the SELECT Command Rule restriction. Before running these scripts in your environment make sure to change RMS01 to your RMS application owner schema name.

Select Command Rule: This command restricts Select access to business data owned by the RMS Application. It specifically disallows RMSDBA SELECT on RMS data using the rule set 'RMSDBA no SELECT on RMS data'. This is because RMSDBA is tasked to do on boarding of new RMS application users and does not need access to business data.

Connect Command Rule: This command controls access to the RMS database using the security policy (rule set) "User Access to RMS Application" as follows:

- Normal RMS application users are allowed access through the application tier.
- RMSDBA and other DBAs are allowed backend access but prevented from accessing RMS Data thanks to realm protection and the Select command rule.

The following is the RMS Application Protection Matrix. It summarizes the policies that are installed by the API scripts and the additional protections that can be added to the production.

Protection Type \ Authorized with Rule Set	RMS	RMSDBA	DBA & SYSTEM
Rms Realms	OWNER	OWNER	No Access
Select Command Rule	Not Restricted	Restricted Select Rule Set	No Access
Connect Command Rule	Rms Access Rule Set	Not Resctricted	Not Resctricted

ORACLE

Customers are encouraged to review the Oracle Technology Network examples on how to add protections to the production environment. This is done by adding command rules that restrict SQL commands like Drop Table, Truncate Table. These examples are available through the following link:

http://www.oracle.com/technology/deploy/security/database-security/database-vault/dbvb1.html

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 some, but not all, 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)
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 Allocation
7. Oracle Retail Invoice Matching (ReIM)
8. Oracle Retail Price Management (RPM)

> **Note:** During installation of RPM, you are asked for the RIBforRPM provider URL. Since RIB is installed after RPM, make a note of the URL you enter. If you need to change the RIBforRPM provider URL after you install RIB, you can do so by editing the jndi_provider.xml file.

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. Since RIB is installed after SIM, make a note of the URL you enter. If you need to change the RIB provider URL after you install RIB, you can do so by editing the jndi_providers_ribclient.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 (IPCOE)

24. Oracle Retail Advanced Inventory Planning (AIP)

25. Oracle Retail Integration Bus (RIB)

26. Oracle Retail Point-of-Service (ORPOS)

27. Oracle Retail Analytics Applications

28. Oracle Retail Data Warehouse (RDW)

29. Oracle Retail Workspace (ORW)