

Oracle® Retail Merchandising System

Installation Guide

Release 13.1.4

E22225-01

March 2011

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Send Us Your Comments

Oracle Retail Merchandising System, Installation Guide, Release 13.1.4

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 Sales Audit (ReSA) User Guide and Online Help*
- *Oracle Retail Merchandising Batch Schedule*

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

Preinstallation Tasks

Note: The RMS installer provides the option to configure multiple application deployment methods. See Appendix G: 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 13.1.3.1
- RMS 13.1.3.2
- RMS 13.1.3.3
- RMS 13.1.3.4
- RMS 13.1.3.5
- RMS 13.1.3.6

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
- Data sparcity
- Application features utilized
- Length of time history is retained

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

Check Database Server Requirements

General Requirements for a database server running RMS include:

Supported on:	Versions Supported:
Database Server OS	OS certified with Oracle Database 11gR1 and 11gR2 Enterprise Edition. Options are: <ul style="list-style-type: none">▪ 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, minimum TL1 (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 11gR1	<p data-bbox="743 268 1430 331">Oracle Database Enterprise Edition 11gR1 (minimum patchset 11.1.0.7) with the following patches:</p> <ul data-bbox="743 338 1430 884" style="list-style-type: none"> <li data-bbox="743 338 1430 369">▪ 6890831 – 11.1.0.7 patchset. <p data-bbox="743 375 834 407">Oneoffs:</p> <ul data-bbox="743 413 1430 884" style="list-style-type: none"> <li data-bbox="743 413 1430 497">▪ 7036284 (LOADJAVA RUN IN A DV ENVIRONMENT CANNOT LOAD CLASSES WITH A NAME LONGER THAN 128) <li data-bbox="743 504 1430 567">▪ 7378322 (ORA-00600: internal error code, arguments: [6704], [1], [532241], [532237]) <li data-bbox="743 573 1430 657">▪ 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 <li data-bbox="743 663 1430 747">▪ 7697360 (RAC only) ORA-00600: internal error code, arguments: [k2vcbk_6], Database crashed during transaction recovery. <li data-bbox="743 753 1430 816">▪ 9969679 MERGE REQUEST ON TOP OF 11.1.0.7.0 FOR BUGS 8596022 9582272 <li data-bbox="743 823 1430 886">▪ 6269507 After EXPDP and IMPDP the package name in the dba_source change from lower case <p data-bbox="743 892 889 924">Components:</p> <ul data-bbox="743 930 1430 1213" style="list-style-type: none"> <li data-bbox="743 930 1430 961">▪ Oracle Database 11g <li data-bbox="743 968 1430 999">▪ Oracle Partitioning <li data-bbox="743 1005 1430 1037">▪ Oracle Net Services <li data-bbox="743 1043 1430 1075">▪ Oracle Call Interface (OCI) <li data-bbox="743 1081 1430 1113">▪ Oracle Programmer <li data-bbox="743 1119 1430 1150">▪ Oracle XML Development Kit <li data-bbox="743 1157 1430 1188">▪ Optional Database Vault <li data-bbox="743 1194 1430 1226">▪ Examples CD <p data-bbox="743 1232 954 1264">Other components:</p> <ul data-bbox="743 1270 1430 1388" style="list-style-type: none"> <li data-bbox="743 1270 1430 1302">▪ Perl compiler 5.0 or later <li data-bbox="743 1308 1430 1339">▪ X-Windows interface <li data-bbox="743 1346 1430 1388">▪ ANSI compliant C-compiler (certified with OS and database version).

Supported on:	Versions Supported:
Database Server 11gR2	<p data-bbox="732 268 1430 331">Oracle Database 11g Release 2 (11.2.0.1) Enterprise Edition with the following oneoff patches:</p> <ul data-bbox="732 338 1430 653" style="list-style-type: none"> <li data-bbox="732 338 1430 394">▪ 9130054: MASSIVE ORA-2051 SIGNALLED DURING SOA TEST AGAINST 11.2.0.1 DATABASE. <li data-bbox="732 401 1430 428">▪ 9100882: SOA: ORA-600[KGHFRE3] SIGNALLED. <li data-bbox="732 434 1430 491">▪ 9010222: APPS ST 11G ORA-00600 [KKSFBC-REPARSE-INFINITE-LOOP]. <li data-bbox="732 497 1430 554">▪ 9932143: [CTS] 3 FAILURES IN JMS/AQ RUN DIDN'T GET EXPECTED MSG BACK AND REDELIVERED FLAG. <li data-bbox="732 560 1430 653">▪ 9582272 - ORA-600 [KKDLREADONDISKDEFVAL: ERROR] OCCURS WHEN ALTER TRIGGER IS EXECUTED. <p data-bbox="732 659 1430 716">The following two patches work together to correct a JDBC issue:</p> <ul data-bbox="732 722 1430 848" style="list-style-type: none"> <li data-bbox="732 722 1430 779">▪ 9367425: PROCESS CRASHED WHEN USING 11GR2 JDBC/OCI. <li data-bbox="732 785 1430 848">▪ 9495959: HANG WHEN TWO THREADS TRY TO CREATE THE ENV HANDLE AT THE SAME. <p data-bbox="732 854 1430 882">Components:</p> <ul data-bbox="732 888 1430 961" style="list-style-type: none"> <li data-bbox="732 888 1430 915">▪ Oracle Partitioning <li data-bbox="732 921 1430 961">▪ Examples CD <p data-bbox="732 968 1430 995">Other components:</p> <ul data-bbox="732 1001 1430 1144" style="list-style-type: none"> <li data-bbox="732 1001 1430 1029">▪ Perl compiler 5.0 or later <li data-bbox="732 1035 1430 1062">▪ X-Windows interface <li data-bbox="732 1068 1430 1144">▪ 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 Application Server Requirements

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

Supported on:	Versions Supported:
Application Server OS	<p>OS certified with Oracle Application Server 10g version 10.1.2.3 and Oracle Business Intelligence Publisher 10.1.3.4.</p> <p>Options are</p> <ul style="list-style-type: none"> ▪ 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, minimum TL1 (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	<p>Oracle Application Server Forms and Reports 10g version 10.1.2.3</p> <p>Patches:</p> <ul style="list-style-type: none"> ▪ 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)	13.1.4
Oracle Retail Allocation	13.1.4
Oracle Retail Invoice Matching (ReIM)	13.1.4
Oracle Retail Store Inventory Management (SIM)	13.1.4
Oracle Retail Warehouse Management System (RWMS)	13.1.4
Oracle Retail Data Warehouse (RDW)	13.1.4
Oracle Retail Merchandise Financial Planning (MFP)	13.2
Oracle Retail Demand Forecasting (RDF)	13.2
Oracle Retail Grade	13.2
Oracle Retail Advanced Inventory Planning (AIP)	13.1.2
Oracle Retail Strategic Store Solutions	13.1.4

Supported Oracle Retail Integration Technologies

Integration Technology	Version
Oracle Retail Extract, Transform and Load (RETL)	13.1.3
Oracle Retail Integration Bus (RIB)	13.1.4
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 accelerator 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 <i>Oracle® Application Integration Architecture 2.5: Installation and Upgrade Guide</i> 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 <i>Oracle® Application Integration Architecture 2.5: Installation and Upgrade Guide</i> 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.

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 RAC database. 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 a RAC 11.1.0.7 Oracle Internet Directory database 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

Patch Installation

The database portion of RMS can be upgraded from release 13.0.2 to release 13.1.4. It can also be upgraded from any major patch release after 13.0.2 (for example 13.1.1) and any hotfix 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 *Oracle Retail Upgrade Guide* (Doc ID 837368.1) at My Oracle Support (formerly MetaLink).

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

RMS Database Installation—Patch

There are two different methods to use for installing the RMS 13.1.4 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 13.1.4, please use the 13.0.1 installer to apply the 13.0.2 patch, and the 13.1.4 patch installer packaged in this release to apply the 13.1.4 patch.

Note: If any RMS, RPM, ReIM or Allocation hotfixes have been applied to the schema after 13.1.3 other than the hotfix bundles (13.1.3.1, 13.1.3.2, 13.1.3.3, 13.1.3.4, 13.1.3.5, and 13.1.3.6), be aware that using the installer or controller scripts to apply the 13.1.4 patch can have unexpected results. You will need to decide if it is safe to run all the scripts in the patch, or if the scripts need to be selectively run.

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

Option 1: Patch RMS Database using the Patch Installer

The RMS 13.1.4 database schema patch installer may be used to apply the RMS 13.1.4 patch to a schema from 13.0.2 or any of the 13.1.x patches or hotfix bundles. The installer should only be used to apply the patch if the schema being patched does not contain customizations or hotfixes. The patch may also be applied outside of the installer by calling the controller scripts directly. *See* Option 2: Patch RMS Database using Controller Scripts later in this chapter for details on this method.

Before you apply the RMS 13.1.4 patch:

- Make a backup of all your objects and database schema.
- Determine which patches and hotfix bundles have already been installed.
- Review the enclosed RMS 13.1.4 Release Notes (rms-1314-rn.pdf).

Create Staging Directory for RMS Database Schema Files

1. Log into the database server as oretail.
2. Create a staging directory for the MOM 13.1.4 Patch. There should be a minimum of 400 MB disk space available in this location.
3. Copy the mom-dbpatch.zip file from the RMS 13.1.4 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 to 13.1.4 Database Patching Steps

You will need to perform the following step only if you are applying the 13.1.4 Patch to a RMS 13.0.2 schema. If applying the 13.1.4 Patch to a RMS 13.1 schema or later, skip to the section titled "Update RMS 13.1 Database 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

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 hotfixes you want to apply. If you are patching from 13.1.3 and want to go to 13.1.4, 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 13.1.4 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 hotfix bundles released after 13.1.3 and you want to go to 13.1.4, you can begin patching with the next hotfix bundle in the sequence. For example, if you have already applied hotfix bundles 13.1.3.1, you will need to apply 13.1.3.2, 13.1.3.3, and so on up to the 13.1.4 deltas. For this example, this section in the default scripts:

```
echo "Running RMS 13.1.3.1 controller"
cd ../../13.1.3.1/rms/
./rms_controller.ksh DBO N
STATUS=$?
if [ $STATUS -eq 1 ];
then
    exit 1
fi
```

Should be edited to:

```
#echo "Running RMS 13.1.3.1 controller"
#cd ../../13.1.3.1/rms/
#./rms_controller.ksh DBO N
#STATUS=$?
```

```
#if [ $STATUS -eq 1 ];
#then
# exit 1
#fi
```

You can apply patches and hotfix bundles released previous to and including 13.1.3 by uncommenting the corresponding sections.

Run the RMS Database Schema Patch Installer

Note: Appendix A contains 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 13.1.4 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 hotfix bundle (for example 13.1.3.1), this path will be DB_PATCH_DIR/rms/dbschemapatch/mom-

dbpatch/<version>/<product>. If you are applying multiple patches or hotfix bundles (for example, to get from 13.1.3.1 to 13.1.4), 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 13.1.4 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 K: Inserting New Languages.

Additional Steps

The calendar.sql needs to be run only for customers doing a new full installation of 13.1 and 13.1.4 patch.

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/13.1.4/rms/install_scripts.
4. Log into 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 hotfixes in the schema then certain statements in the patch may result in errors. In this situation it is better to investigate where the conflicts are and fix the SQL scripts accordingly.

Before you apply the RMS 13.1.4 patch:

- Make a backup of all your objects and database schema.
- Determine which patches and hotfix bundles have already been installed
- Review the enclosed RMS 13.1.4 Patch Release Notes (rms-1314-rn.pdf).

Create Staging Directory for RMS Database Schema Files

1. Log into the database server as oretail.
2. Create a staging directory for the MOM 13.1.4 Patch. There should be a minimum of 400 MB disk space available in this location.
3. Copy the mom-dbpatch.zip file from the RMS 13.1.4 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 to 13.1.4 Database Patching Steps

You will need to perform the following step only if you are applying the 13.1.4 Patch to a RMS 13.0.2 schema. If applying the 13.1.4 Patch to a RMS 13.1 schema or later, skip to the section titled “Run the RMS Database Controller Scripts”.

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

1. Change directories to DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/.
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. 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. The patches should be run in the following order: RMS, RPM, ReIM, Alloc_RMS, and Allocation. If you are patching from 13.0.2 and want to get to 13.1.4, you need to run all the patches from DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/ (13.1, 13.1.1, 13.1.1.1, and so on up to the 13.1.4 deltas) If you are patching from 13.1.3 and want to get to 13.1.4, you need to apply all the hotfix bundles released after 13.1.3 (13.1.3.1, 13.1.3.2, and so on up to the 13.1.4 deltas). If you have already applied any of the hotfix bundles released after 13.1.3, you can begin patching with the next hotfix bundle in the sequence. For example, if you have already applied hotfix bundle 13.1.3.1, you will need to apply 13.1.3.2, 13.1.3.3, and so on up to the 13.1.4 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.

Additional Steps

The calendar.sql needs to be run only for customers doing a new full installation of 13.1 and 13.1.4 patch.

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/13.1.4/rms/install_scripts.
4. Log into SQL*Plus as the RMS schema owner (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 13.1.4 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 13.1.4 Batch patch:

- Make a backup of all your Batch files.
- Review the enclosed RMS 13.1.4 Patch Release Notes (rms-1314-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

1. Log into the database server as oretail.
2. Create a staging directory for the RMS 13.1.4 Batch Patch. There should be a minimum of 40 MB disk space available in this location.
3. Copy the rms1314batchpatch.zip file from the RMS 13.1.4 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 rms1314batchpatch.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

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 `staging.dir` and `patch.to.version` properties.

Property Name	Description
<code>installer.dir</code>	The directory where the installer files are located under <code>STAGING_DIR</code> . <i>Example: /opt/rms/batch</i>
<code>patch.to.version</code>	The version want to patch to <i>Example: 13.1.4</i>

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:

1. Copy `oramake` from `BATCH_PATCH_DIR/to` `STAGING_DIR/batch/rms13/oracle/lib/src/`.

Run Batch Installer

Note: Appendix B contains details on every screen and field in the batch installer.

1. Change directories to STAGING_DIR/rms/batch. This directory was created when the rms13batch.zip file was expanded under STAGING_DIR.
2. Source the oraenv script to set up the Oracle environment variables (ORACLE_HOME, ORACLE_SID, PATH, etc)

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

Verify the ORACLE_HOME and ORACLE_SID variables after running this script.

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

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

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

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 F: 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

1. Log into the database server as oretail.
2. Create a staging directory for the RMS 13.1.4 Batch Patch. There should be a minimum of 25 MB disk space available in this location.
3. Copy the rms1314batchpatch.zip file from the RMS 13.1.4 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 rms1314batchpatch.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 13.1.4 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:\$LDPATH
- OBJECT_MODE=64
- LINK_CNTRL=L_PTHREADS_D7

HP:

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

Solaris:

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

Linux:

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

Compile Batch Libraries

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 13.1.4 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 librettek.log
```
 - For other platforms use:

```
make -f retek.mk retek rms resa 2>&1 | tee librettek.log
```Check the `librettek.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

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 13.1.4 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.
 - 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.
4. Create batch programs.
 - a. 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
```

- b.** Check the srcall.log file for errors.
- 5.** Install the batch programs.
`make -f mts.mk install`

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

Copy RETL Code

- 1.** 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 13.1.4 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

- 1.** 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 13.1.4 deltas. For example, starting with 13.1.1, followed by 13.1.1.1, 13.1.1.2, and so on.

Application Server Installation Tasks—Patch

There are two different methods to use for installing the RMS 13.1.4 Application. Option 1 uses the installer to apply the patch. Option 2 compiles the RMS toolset and forms directly.

Note: If the 13.1.4 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 13.1.4 patch:

- Make a backup of all your forms and library files.
- Review the enclosed RMS 13.1.4 Patch Release Notes (rms-1314-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

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 950 MB disk space available in this location.
3. Copy the file rms1314apppatch.zip from the RMS 13.1.4 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 rms1314apppatch.zip. This creates an app-patch subdirectory under APP_PATCH_DIR.
5. If you don't 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

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 `staging.dir` and `patch.to.version` properties.

Property Name	Description
---------------	-------------

<code>staging.dir</code>	The directory where the installer files are located under <code>STAGING_DIR</code> . Example: <code>/opt/rms/application</code>
<code>patch.to.version</code>	The version want to patch to Example: <code>13.1.4</code>

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: Appendix C contains details on every screen and field in the application installer.

1. Logon 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 (10.1.2.2) 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. Refer to the *Oracle Retail Merchandising Installation Test Cases* document; Doc ID 845148.1 on My Oracle Support (formerly MetaLink).

Option 2: Compile RMS Toolset and Forms Directly

Create Staging Directory for RMS Application Patch Files

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 950 MB disk space available in this location.
3. Copy the file rms1314apppatch.zip from the RMS 13.1.4 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 rms1314apppatch.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

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 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 13.1.4 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 will remove 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):

- message45.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

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 13.1.4 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

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

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

Oracle Enterprise Manager 10g
Application Server Control

Farm > Application Server: 1012_MIDTIER.mspdev89.us.oracle.com

Page Refreshed Jun 1, 2009 12:05:04 PM

General

Status: Up
Host: mspdev89.us.oracle.com
Version: 10.1.2.2.0
Installation Type: Business Intelligence and Forms
Oracle Home: /u00/webadmin/product/10.1.2_FULL/midtier
Farm: ODIRR02

CPU Usage

Application Server (1%)
Idle (93%)
Other (6%)

Memory Usage

Application Server (3% 1,025MB)
Free (13% 3,302MB)
Other (72% 8,651MB)

System Components

Select Name	Status	Start Time	CPU Usage (%)	Memory Usage (MB)
<input type="checkbox"/> Forms	↑	May 2, 2009 8:32:33 AM	0.00	0.00
<input type="checkbox"/> home	↑	May 2, 2009 8:32:33 AM	0.00	66.86
<input type="checkbox"/> HTTP_Server	↑	May 2, 2009 8:12:32 AM	0.21	192.89
<input type="checkbox"/> OC4J_BI_Forms	↑	May 2, 2009 8:32:33 AM	0.00	118.77
<input type="checkbox"/> OC4J_Portal	↑	May 2, 2009 8:32:33 AM	0.00	215.73
<input type="checkbox"/> Portal_portal	↑	N/A	N/A	N/A
<input type="checkbox"/> Reports_Server_rsp_mspdev89_1012_MIDTIER	↑	N/A	N/A	N/A
<input type="checkbox"/> rms_help_instance	↑	May 2, 2009 8:32:33 AM	0.00	56.53
<input type="checkbox"/> rms_help_instance	↑	May 2, 2009 8:32:33 AM	0.00	72.77
<input type="checkbox"/> Web Cache	↑	May 2, 2009 8:12:32 AM	0.00	67.25
<input type="checkbox"/> Management	↑	May 2, 2009 8:12:08 AM	0.52	234.66

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

Oracle Enterprise Manager 10g
Application Server Control

Farm > Application Server: 1012_MIDTIER.mspdev89.us.oracle.com > OC4J: rms_help_instance

Page Refreshed Jun 1, 2009 12:06:43 PM

General

Status: Up
Start Time: May 2, 2009 8:32:03 AM
Virtual Machines: 1

JDBC Usage

Open JDBC Connections: 0
Total JDBC Connections: 0
Active Transactions: 0
Transaction Commits: 0
Transaction Rollbacks: 0

Status

CPU Usage (%) 0.02
Memory Usage (MB) 56.53
Heap Usage (MB) 4.17

Response - Servlets and JSPs

Active Sessions: 0
Active Requests: 1
Request Processing Time (seconds): 0.005
Requests per Second: 0.07

Response - EJBs

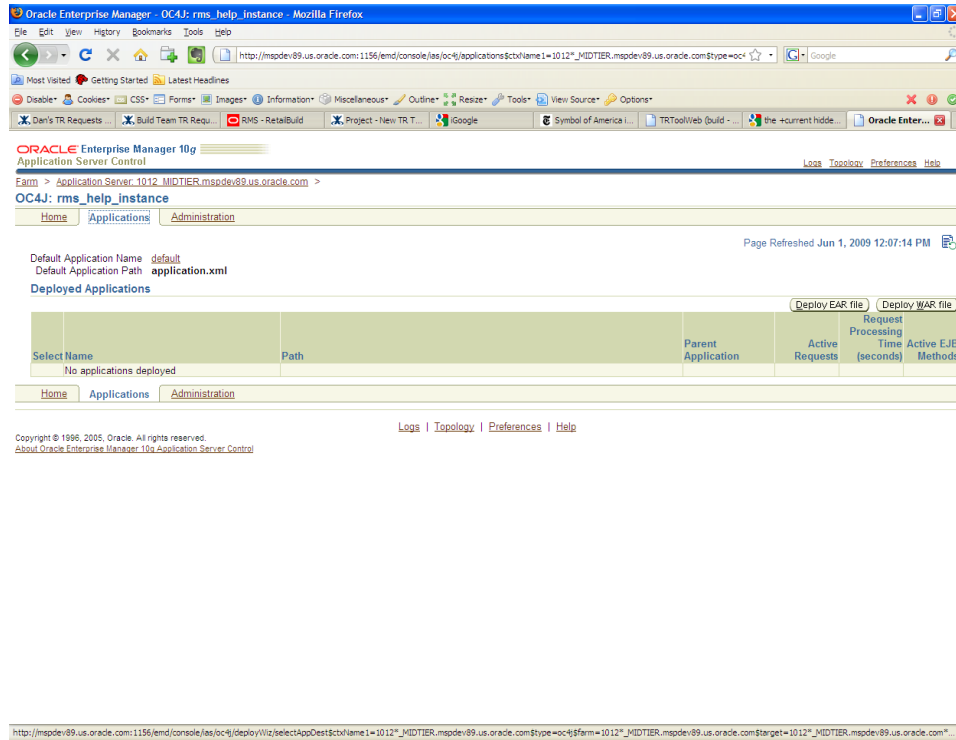
Active EJB Methods: 0
Method Execution Time (seconds): 0.00
Method Execution Rate (per second): 0.00

Related Link: All Metrics

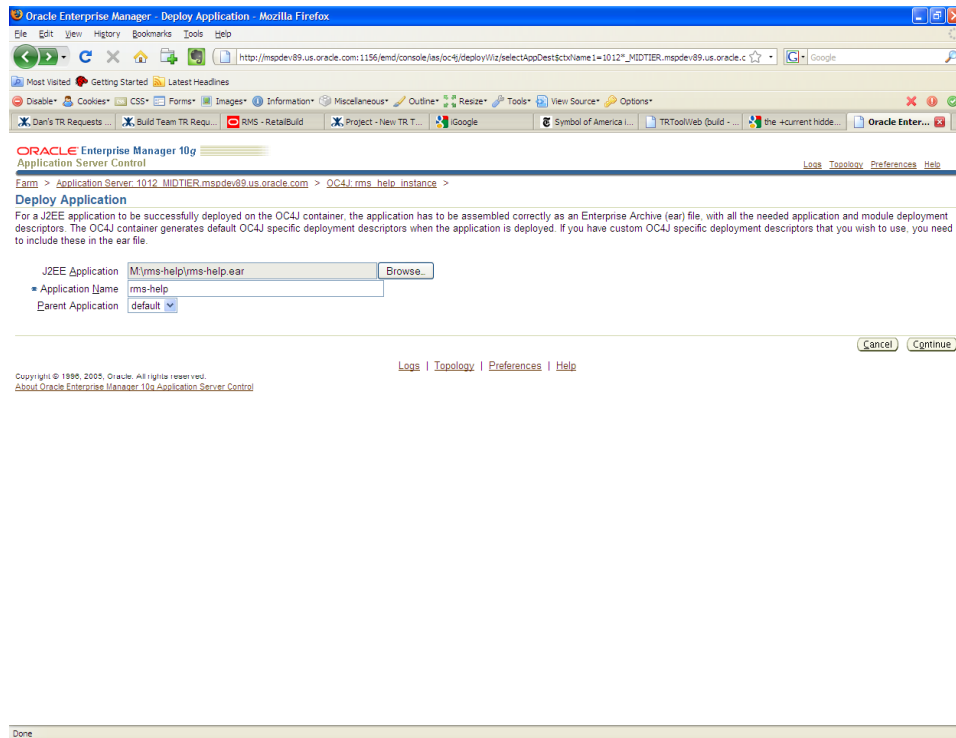
Home Applications Administration

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About Oracle Enterprise Manager 10g Application Server Control

3. Click on the applications tab.

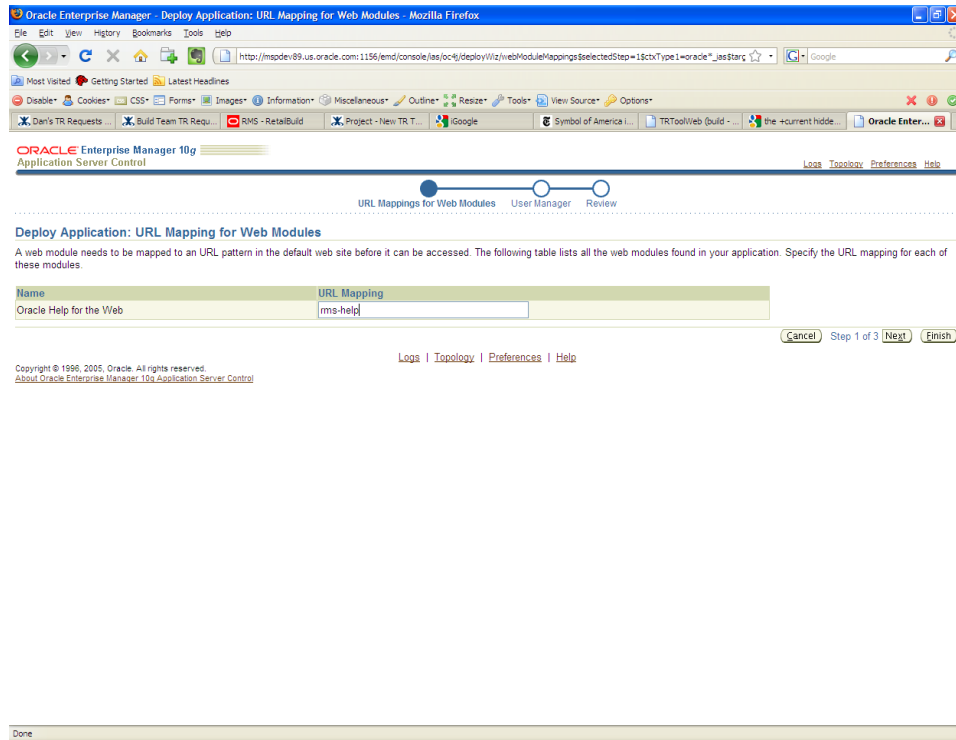


4. Click the **Deploy EAR File** button.
5. Click in the box entitled **J2EE Application** and browse to APP_PATCH_DIR/ app-patch/<version>/online-help/rms-help.ear the ear file that will be deployed.
6. Enter **rms-help** for the application name, and click Continue.

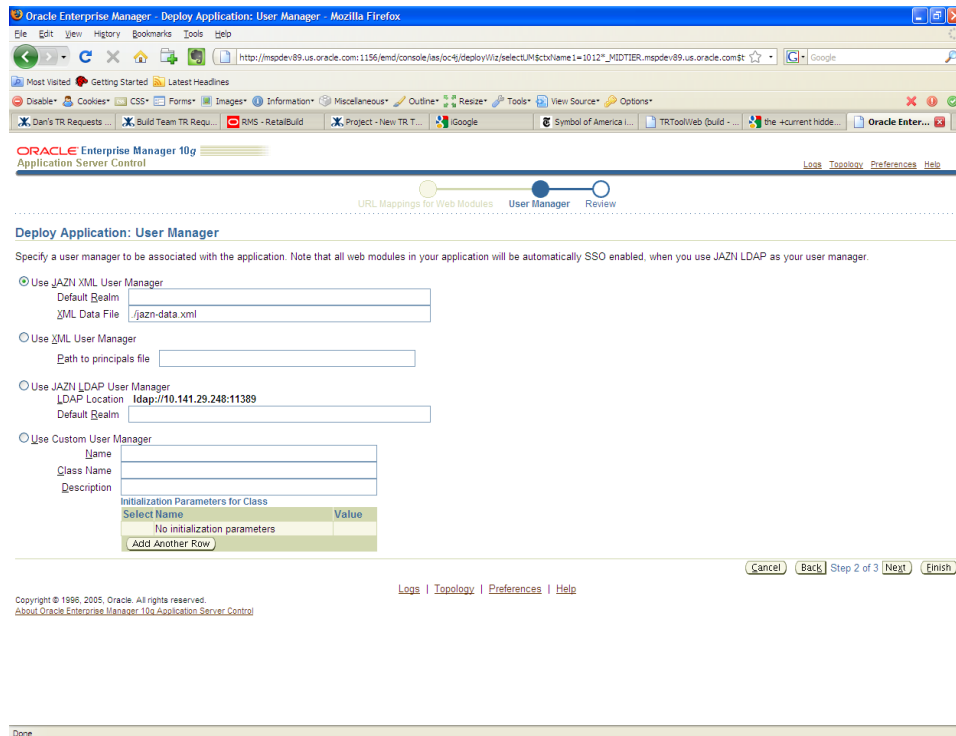


7. Enter **rms-help** in the URL-mapping text box. This sets the context root for the online help files. Click Next.

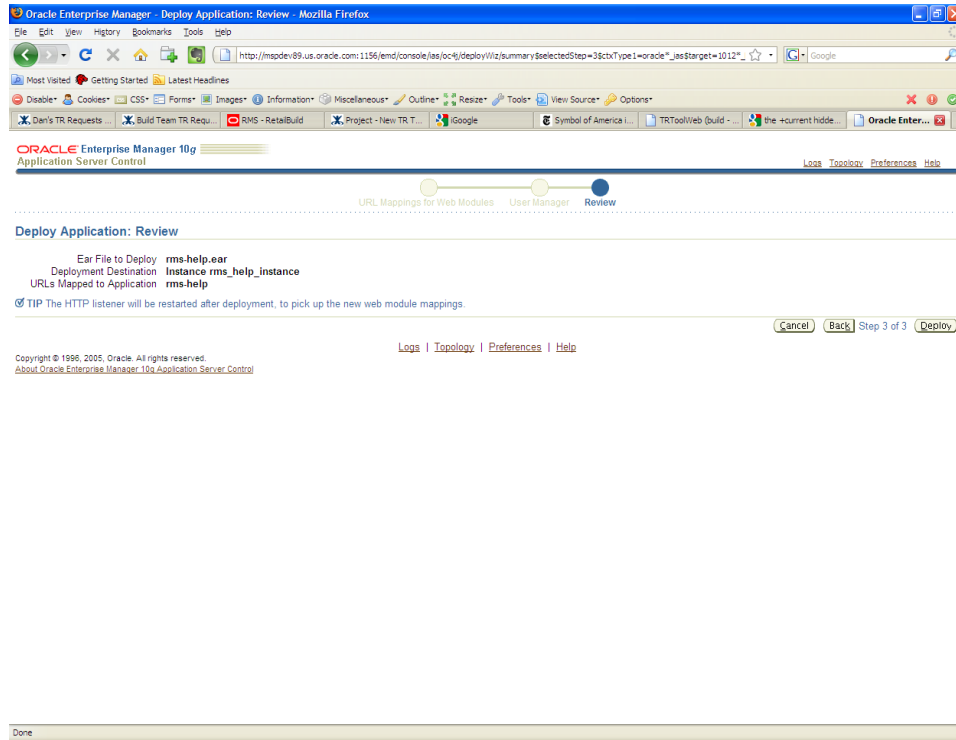
Note: Using anything other than `rms-help` will prevent the `rms` application from accessing the help files



8. Leave the default values in place, and click Next.



9. Review the deployment properties, and click Deploy.



- A progress screen will appear while the application is being 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: rms1314apppatch.zip in the reports directory. To install the report files manually, copy them from the RMS application patch APP_PATCH_DIR/app-patch/<version>/reports to the reports directory created during RMS installation. This step should be done with each version in order of earliest to latest patch starting at 13.1.1 and ending with the 13.1.4 deltas (for example, starting with 13.1.1, followed by 13.1.1.1, 13.1.1.2, and so on).

Data Migration

Included in the 13.1.4 release is a tool responsible for upgrading preexisting 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 13.1.4 Database patch. If you already ran this Data Migration tool during or after the 13.1 release, you do not need to run it again.

Before running the RMS 13.1 Data Migration Tool:

- Make a backup of all your objects and database schema.
- Check that RMS has at least 13.1 installed.
- Review the enclosed RMS 13.1.4 Patch Release Notes (rms-1314-rn.pdf).

Configure RMS Data Migration Tool

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 (i.e. more than 500,000 rows), follow 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, it is not advisable to run this insert query:

```
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

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 need to rebuild synonyms for any additional RMS users. See the chapter “Set up Additional RMS Users” for instructions on creating these synonyms.

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

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.

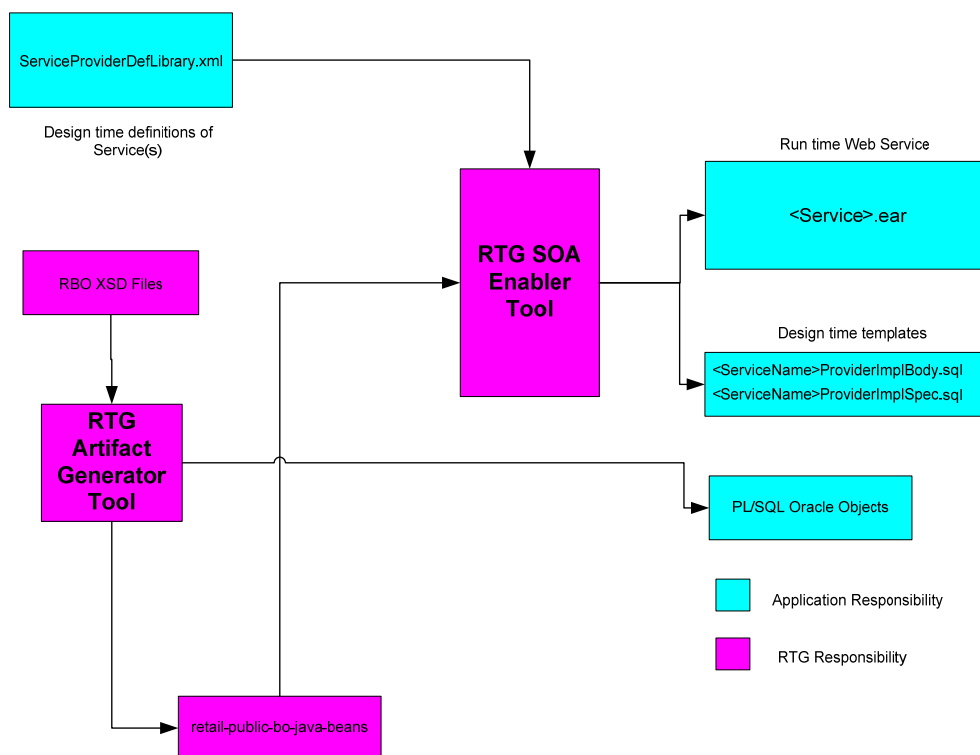
Web Services Installation

Overview

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 endpoints 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 13.1.4 patch:

- Determine which patches and hotfix bundles have already been installed.
- Review the enclosed RMS 13.1.4 Release Notes (rms-1314-rn.pdf).

Extract Web Services Files

Note: If you have already applied the Web Services from the 13.1.1.3 hotfix bundle, you have the latest updates and can skip this chapter.

1. Create a directory under the Batch INSTALL_DIR to hold the webservices files. This will be referred to as 'Web Service Objects'.
2. Copy the rms1314webservices.zip file from the RMS 13.1.4 release to INSTALL_DIR/'Web Service Objects'.
3. Unzip rms1314webservices.zip from INSTALL_DIR/'Web Service Objects'.

Setup Environment

Note: If you have already applied the Web Services from the 13.1.1 patch release, you can skip to the section titled "WebLogic 10.3 Administration Console Installation Process".

1. 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

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 missing.jar dbwsclientsws.jar
dbwsclient102.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 missing.jar
dbwsclientsws.jar dbwsclient102.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 missing.jar dbwsclientsws.jar
dbwsclient102.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/ProcessGLAccountValidationRetailReqABCSImplConsumer_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
ProcessGLAccountValidationRetailReqABCImplConsumer.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
ProcessGLAccountValidationRetailReqABCImplConsumer.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/ProcessGLAccountValidationRetailReqABCImplConsumer_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/ProcessGLAccountValidationRetailReqABCImplConsumer_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 autodeployment 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 both Administration Console and Autodeployment 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

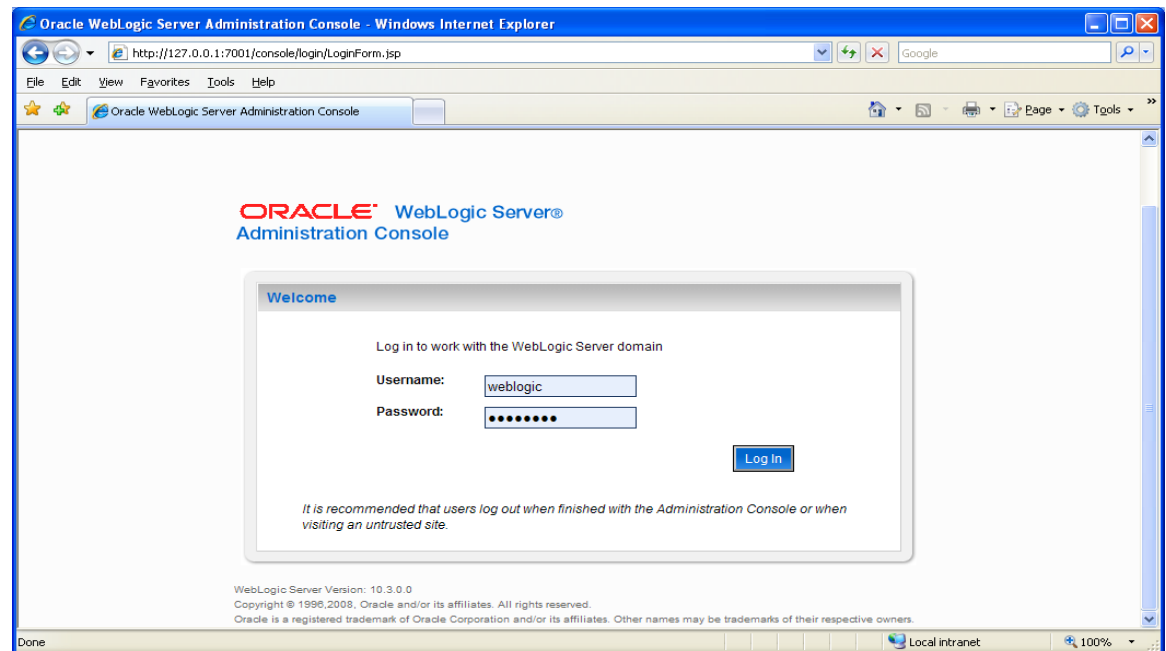
Creating a new domain in WebLogic 10.3

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

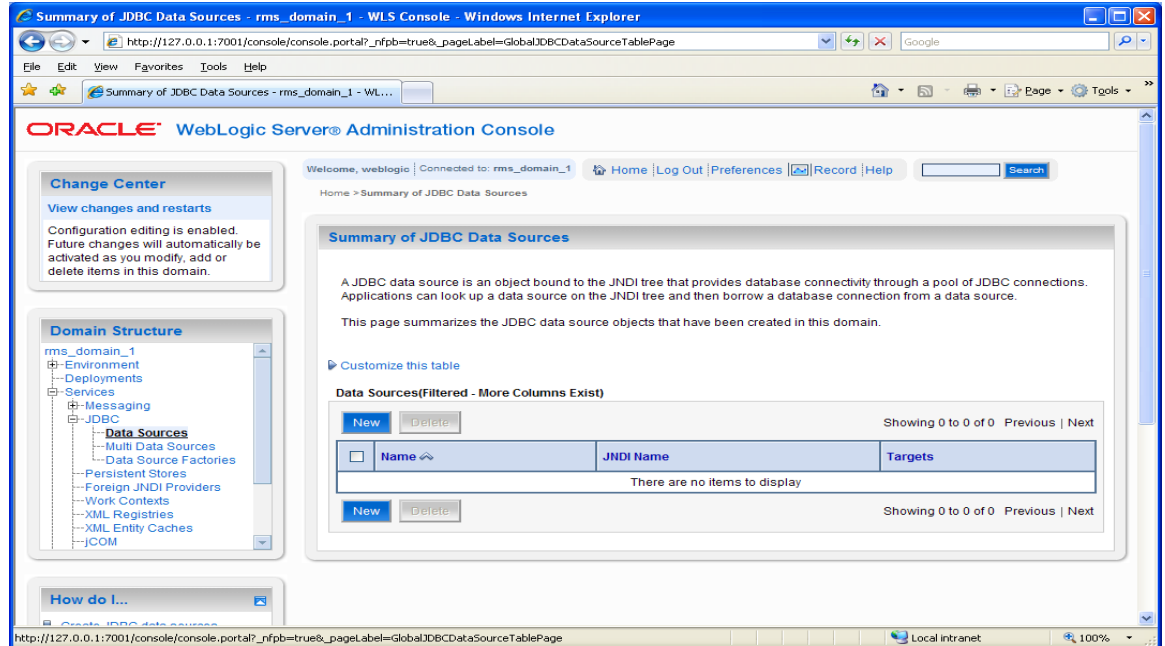
<http://edocs.bea.com/common/docs103/configwiz/newdom.html>

Creating a JDBC data source in WebLogic 10.3

- Login to the Weblogic administration console. Use the URL `http://<host>:<listen port>/console/login/LoginForm.jsp`.

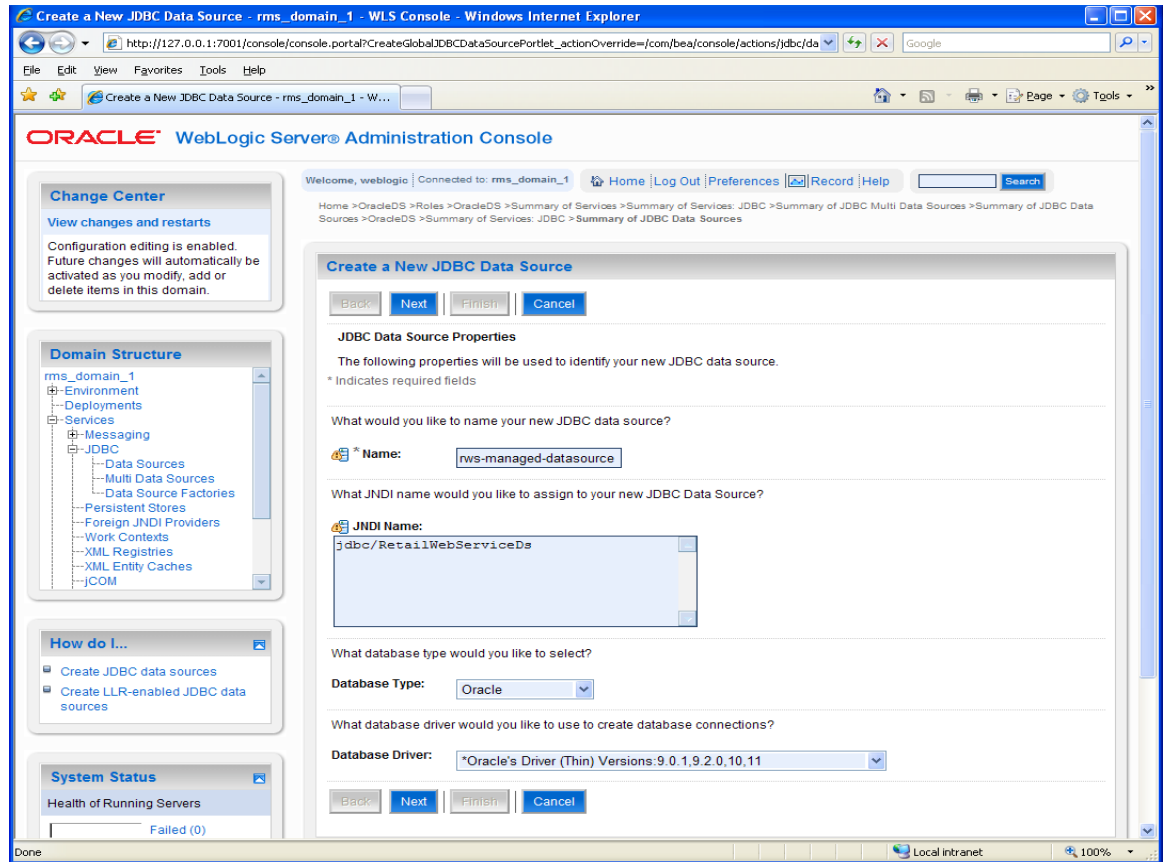


- Navigate the domain structure tree to Services/JDBC/Data Sources.

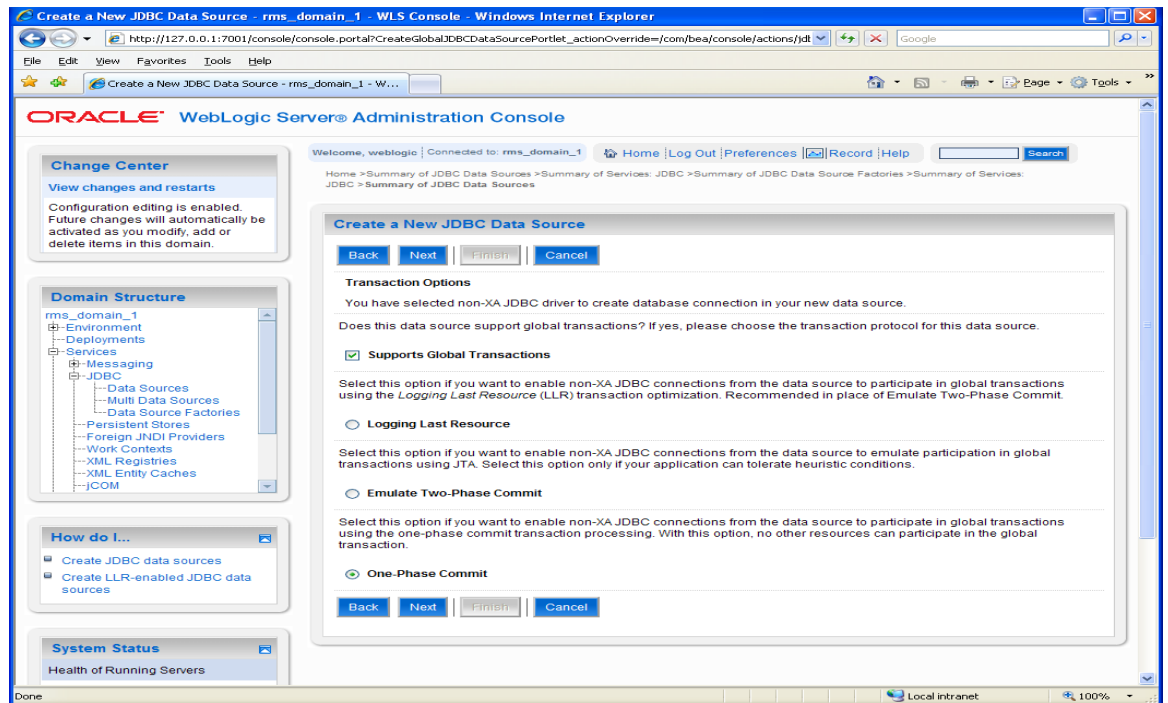


3. Click the New button to start creating the new Data Source. Enter the required information. You may choose any name for the data source in the Name field.

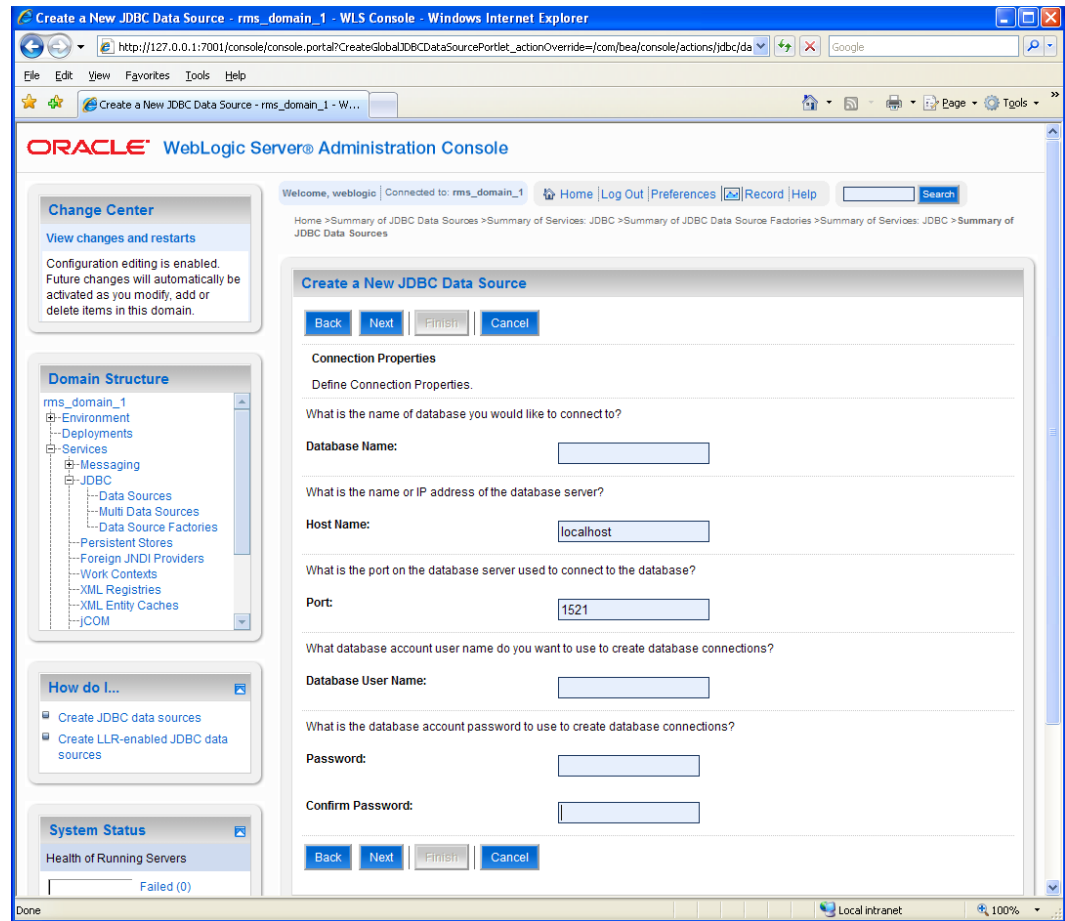
Note: The JNDI name must be set to “jdbc/RetailWebServiceDs”. The generated code for the service will use this JNDI name to lookup the data source



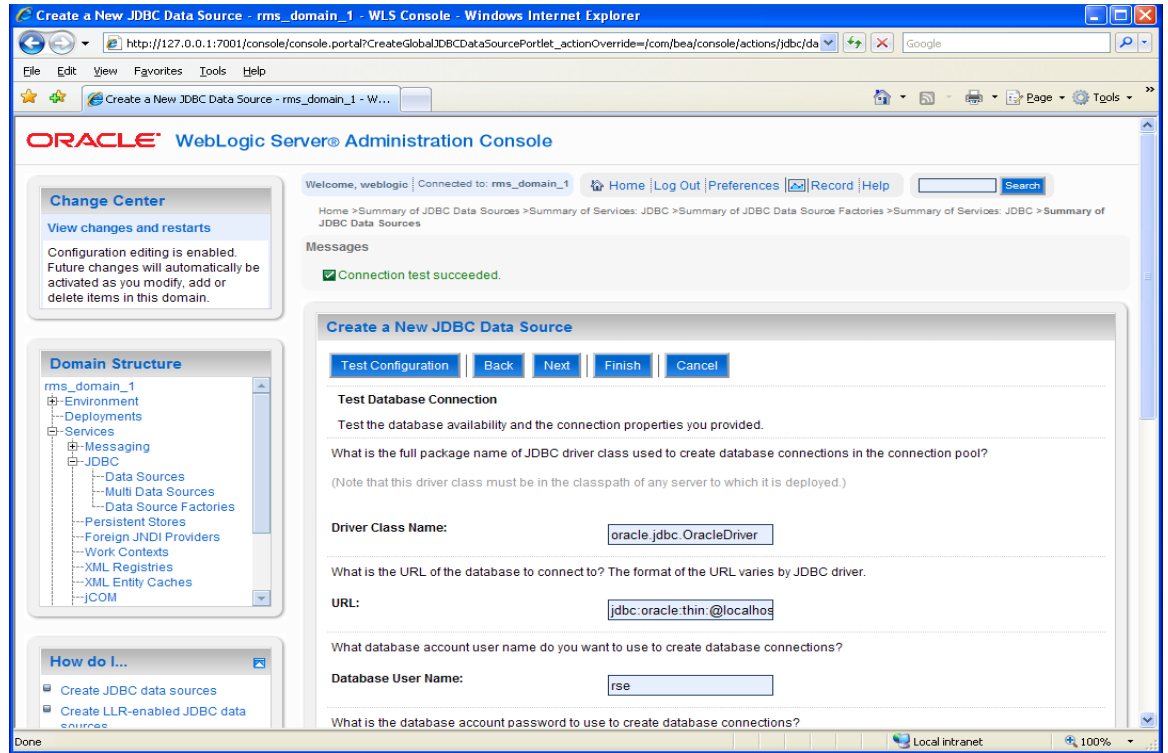
4. Select the transaction options for your data source and click Next.



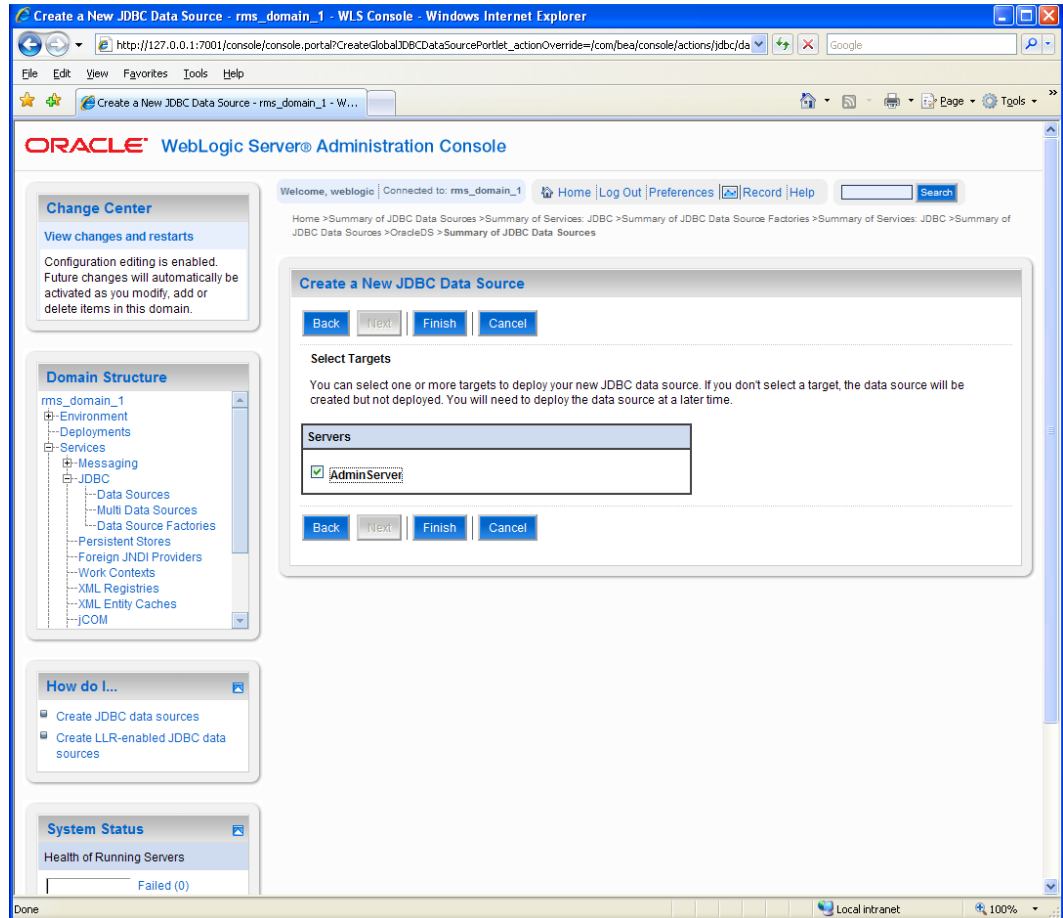
5. Enter the database name and user information for your data source and click Next.



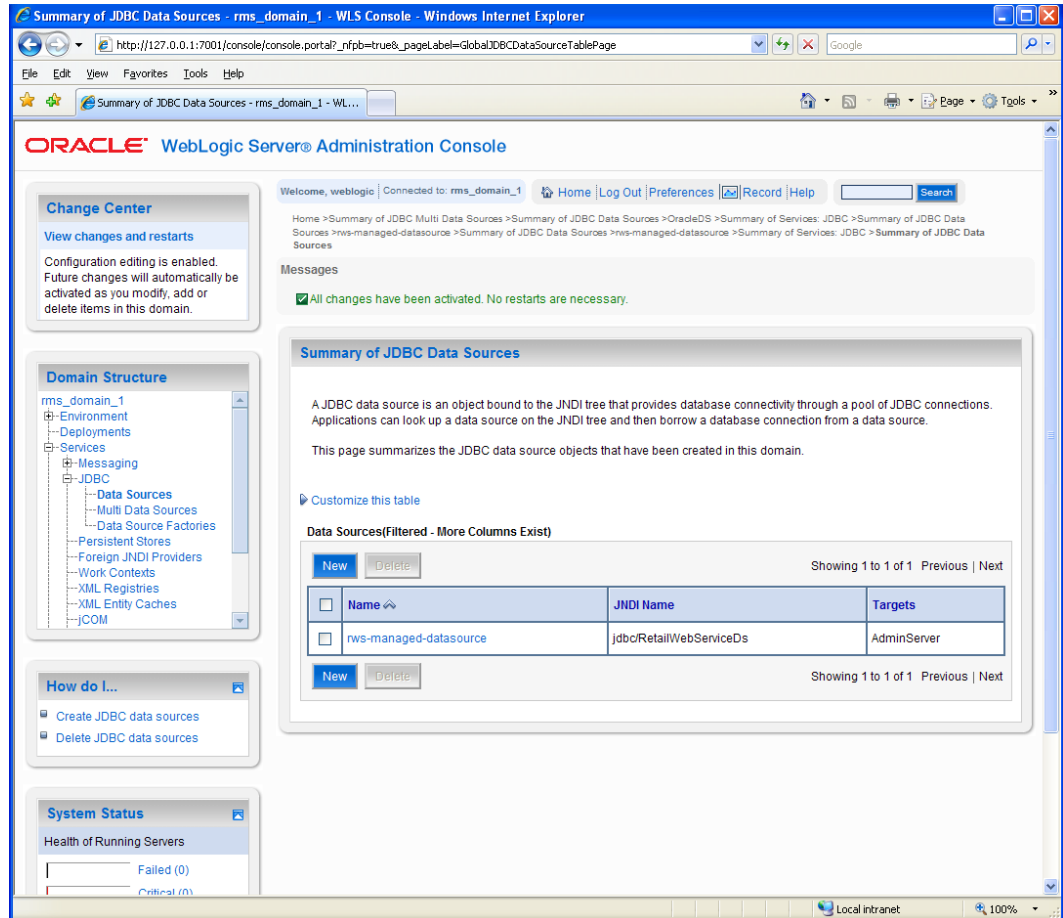
6. This screen will display the connection information for your data source. Use the Test Configuration button to ensure the connection information is correct. You will see a message "Connect test succeeded" if everything is correct.



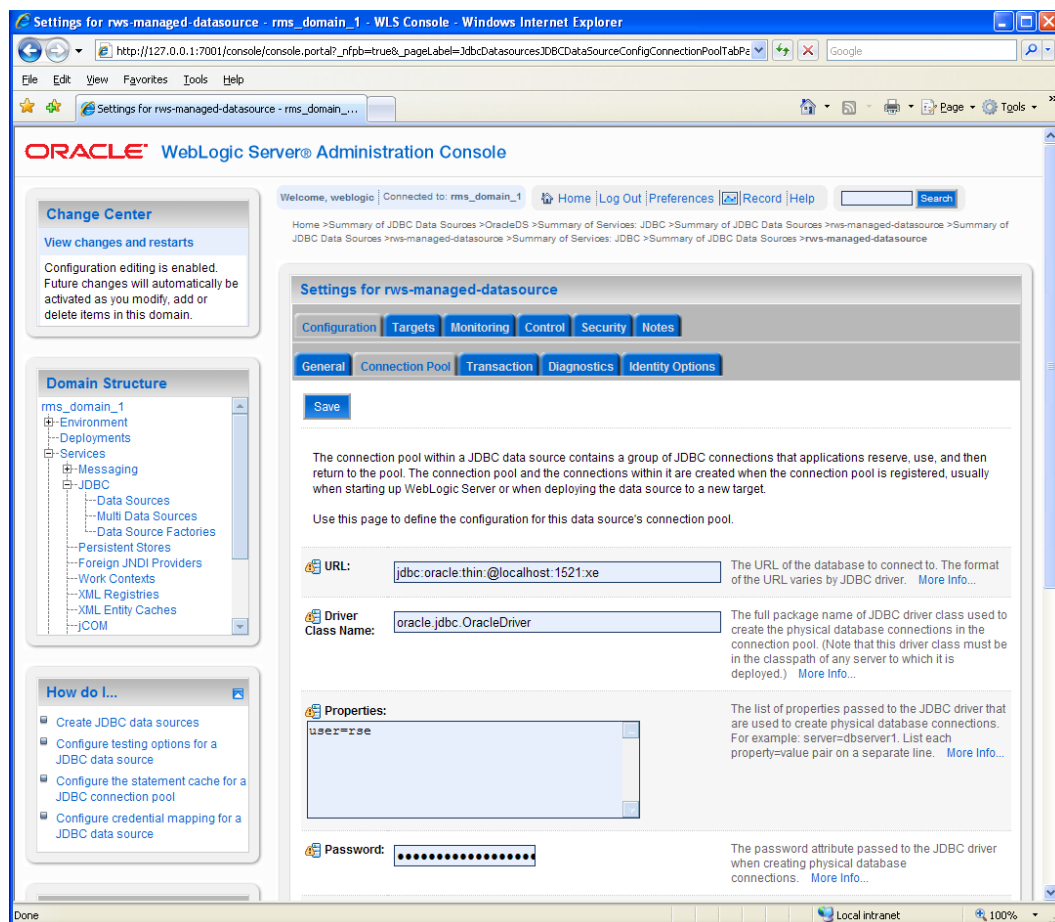
7. Click the Next button and select a server to deploy the data source to. This is not necessary at this point if you want to deploy the data source to a server at a later time.



8. Click the Finish button to complete the data source setup. This will display the data sources page, and the new data source will be present.



- Click on the new data source to see its properties page. You will see that a default connection pool is created for the data source. Click the Connection Pool tab to view the connection pool properties.



10. Here you will see the generated JDBC connection URL for the data source. The Oracle URL is of the 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>))).

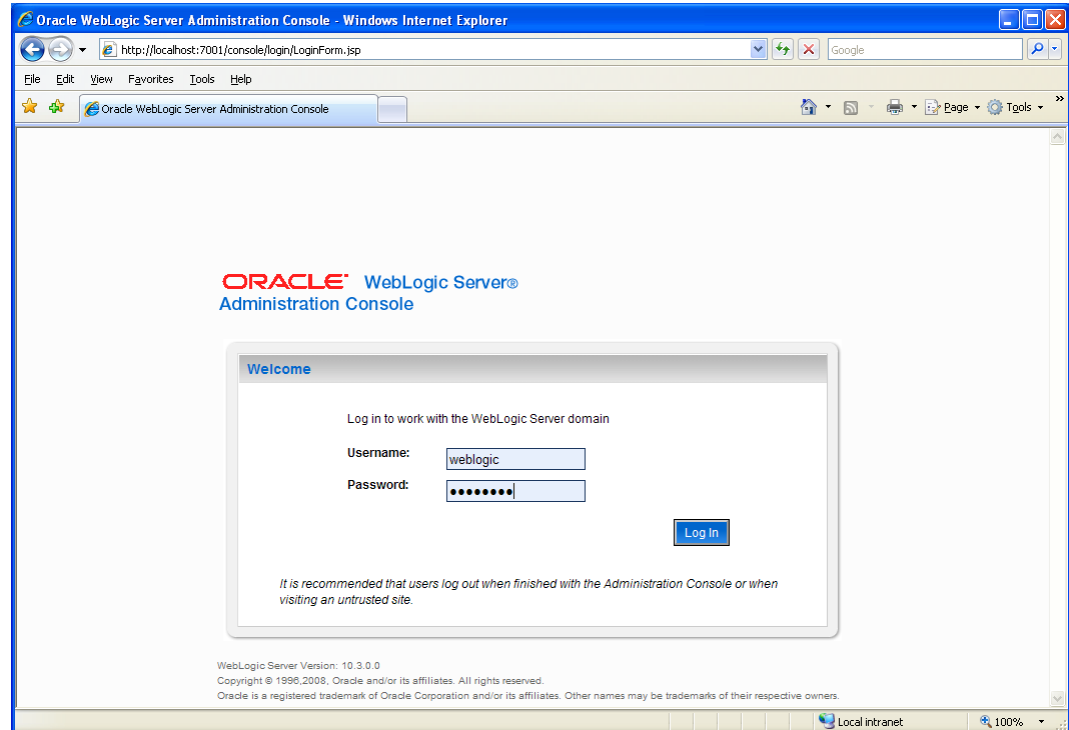
Example: jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS_LIST=(ADDRESS=(PROTOCOL=TCP)(HOST=mspvip72)(PORT=1521))(ADDRESS=(PROTOCOL=TCP)(HOST=mspvip73)(PORT=1521))(LOAD_BALANCE=yes))(CONNECT_DATA=(SERVICE_NAME=dvolr02)))

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.

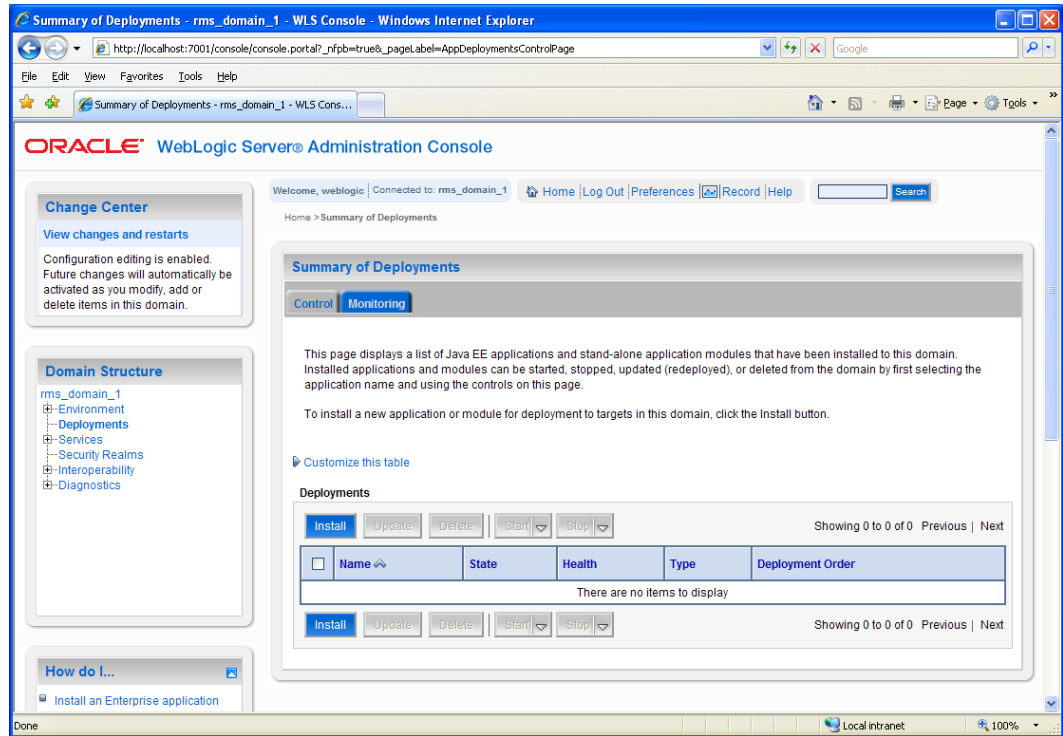
- **Inactive Connection Timeout:** This property is available in the advanced section of the connection pool configuration. Set the value of this property to 60 seconds.
- **Remove Infected Connections Enabled:** This check box must be unchecked.

WebLogic 10.3 Administration Console Installation Process

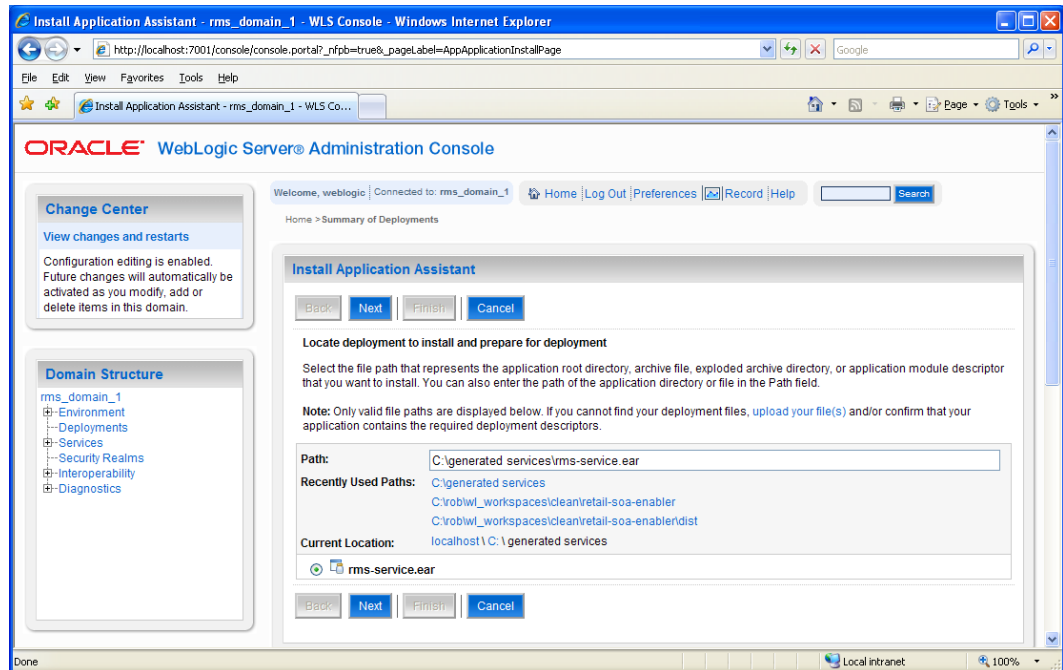
1. Login to the administration console using the URL `http://<host>:<listen port>/console/login/LoginForm.jsp`.



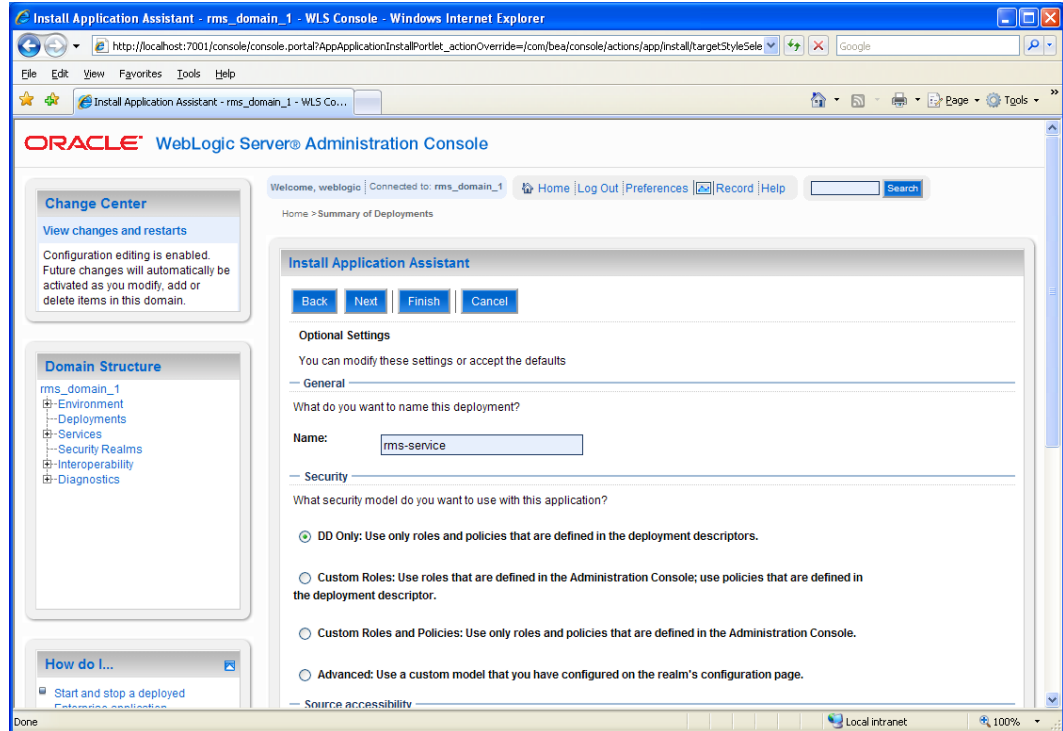
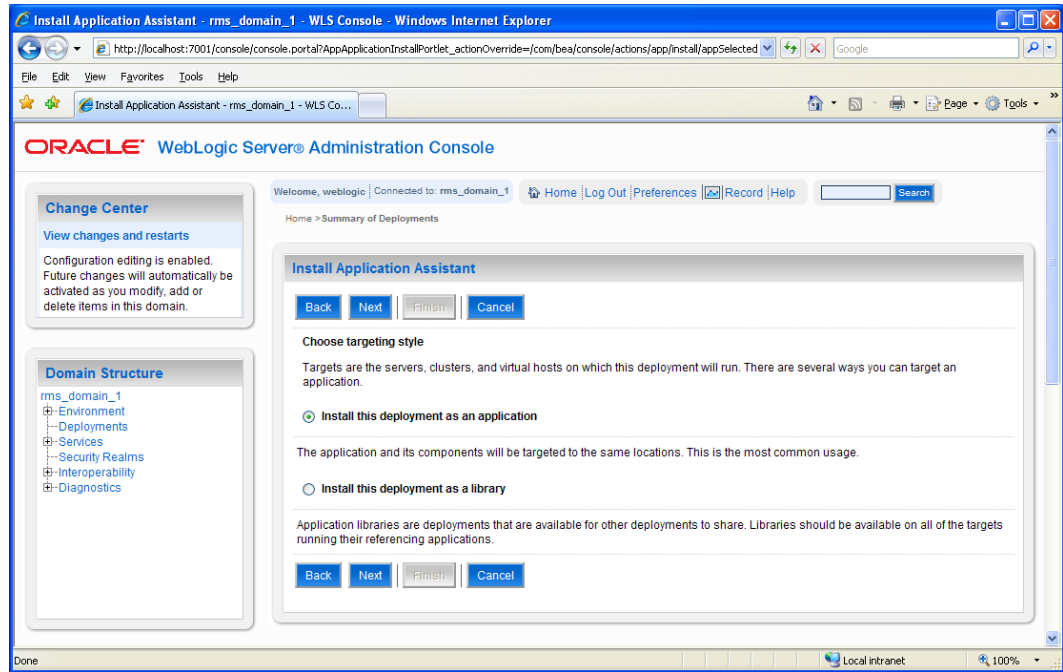
2. Click on the the Configure Applications link to access the deployments page.



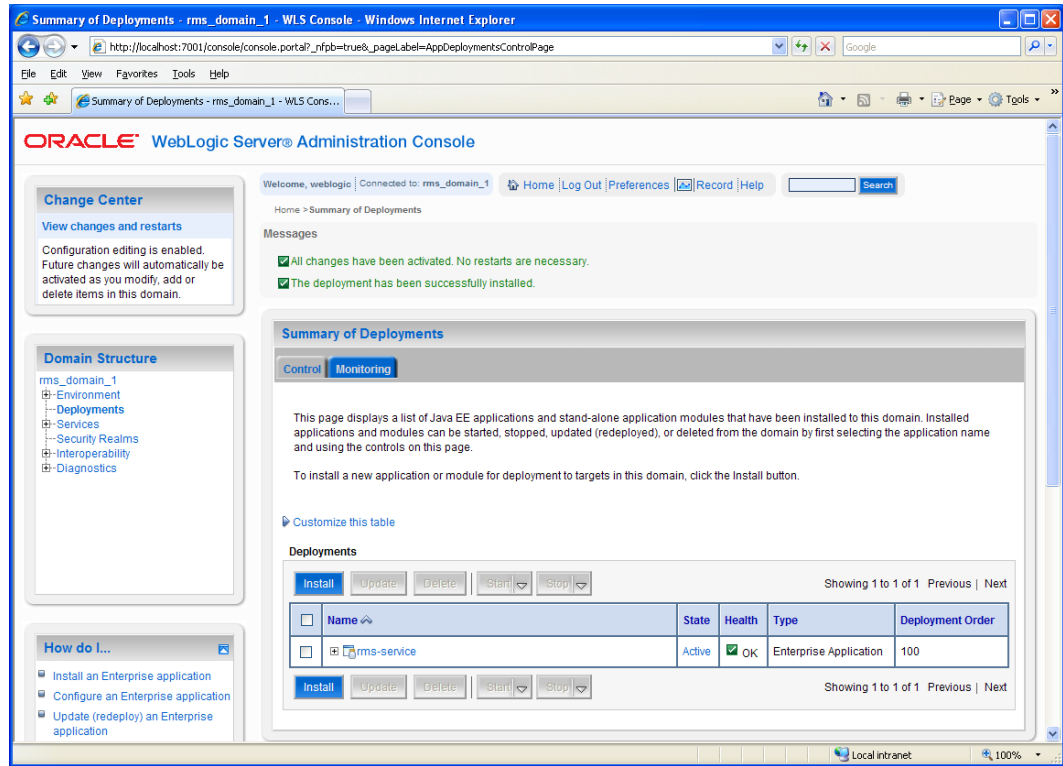
3. Click on the Install button and navigate to the directory containing the .ear file.



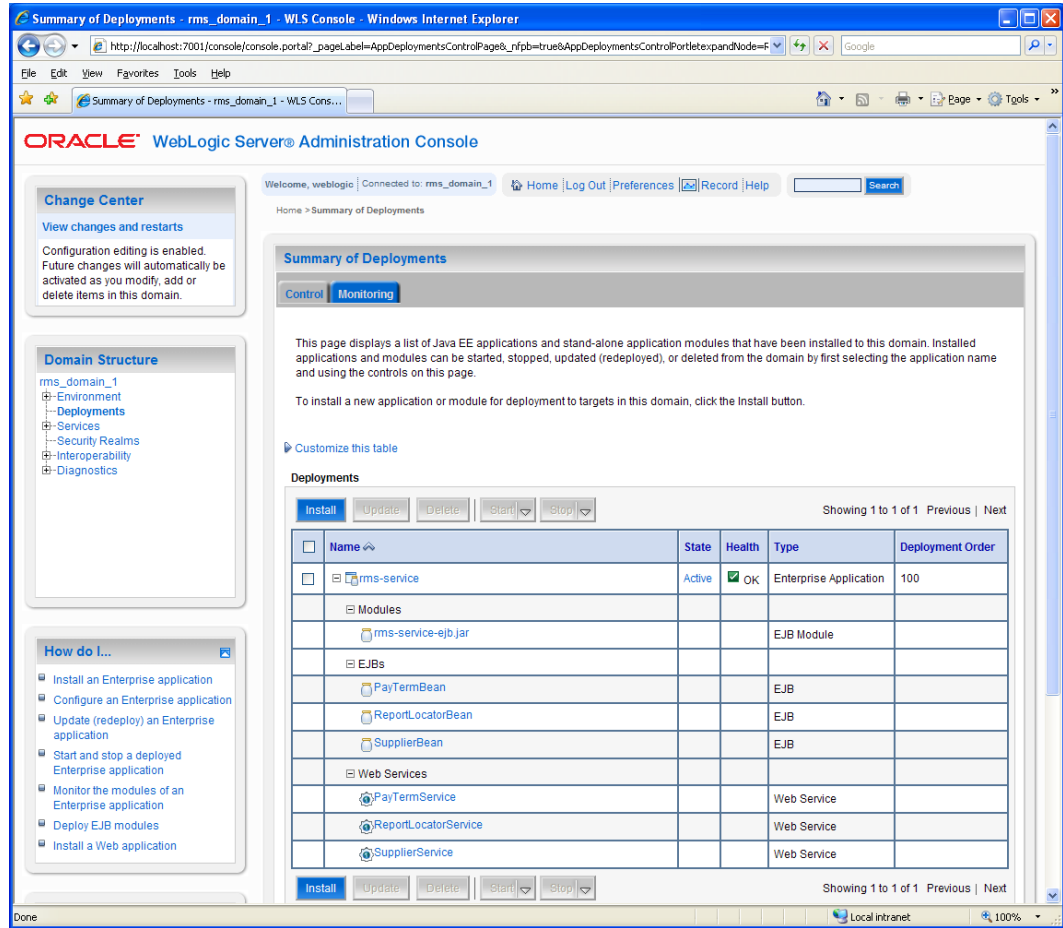
4. Click on the Next button. Verify that Install as an application is selected. Click Next again.



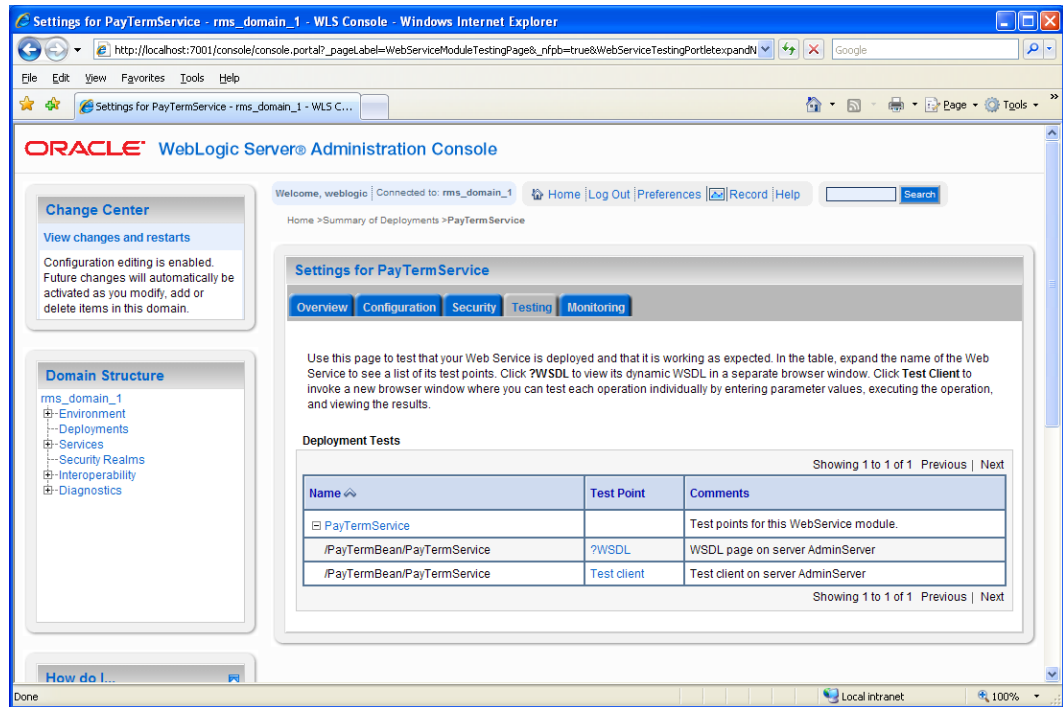
5. Click Finish to deploy the application. The application should now be deployed.
6. Restart the weblogic instance.



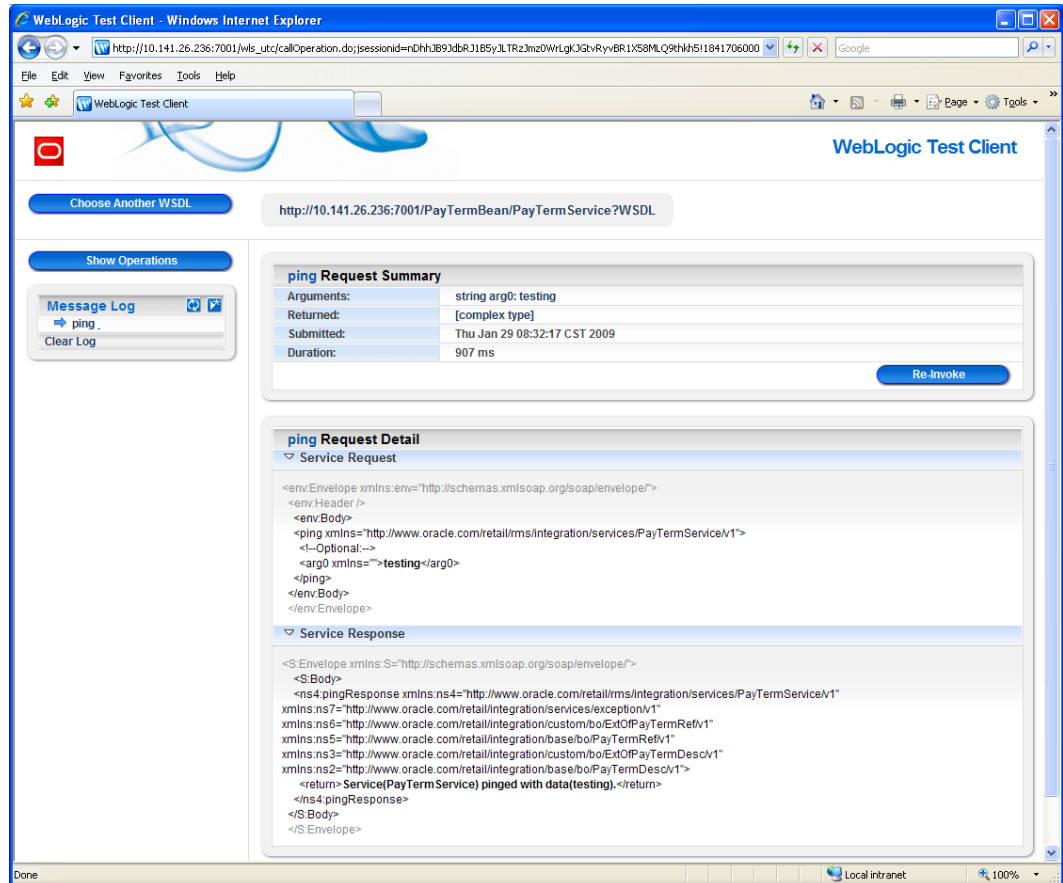
7. Expand the deployment tree, and verify the EJBs and Web Services.



- Click on the link for one of the services. Then click the Testing tab and expand the service tree. You will see options to view the dynamically generated WSDL being used, and a Test Client for the service. Click the Test Client link.



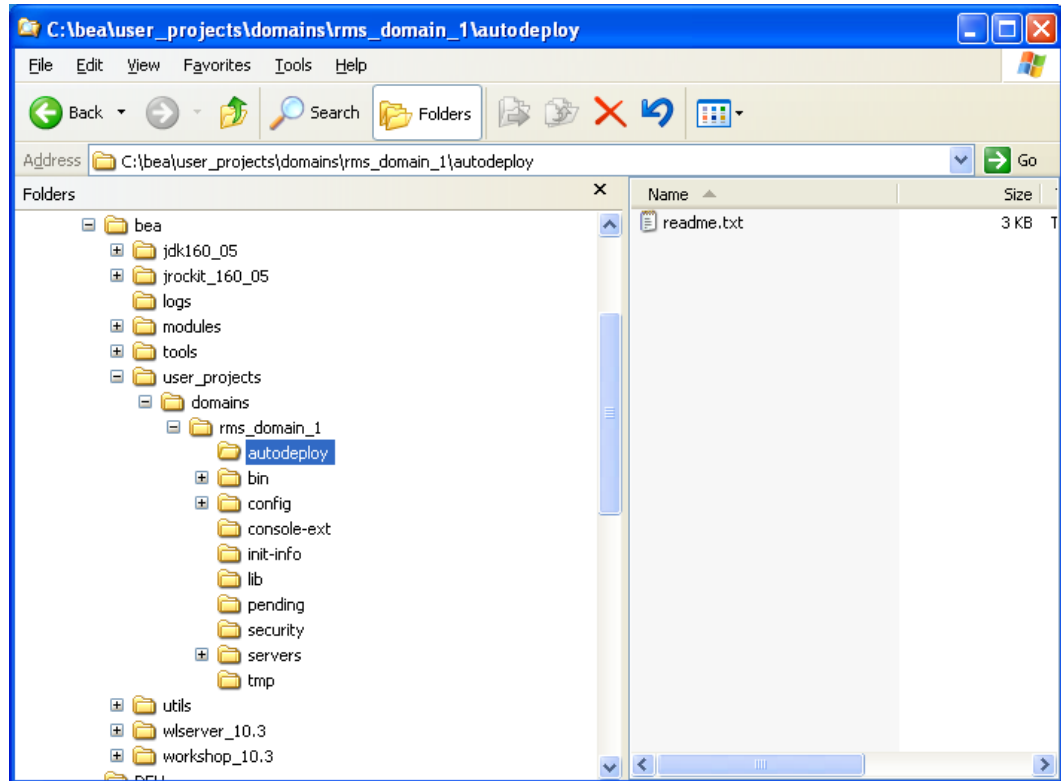
- Test the “ping” method of the service. You should see a valid response if the service is responding.



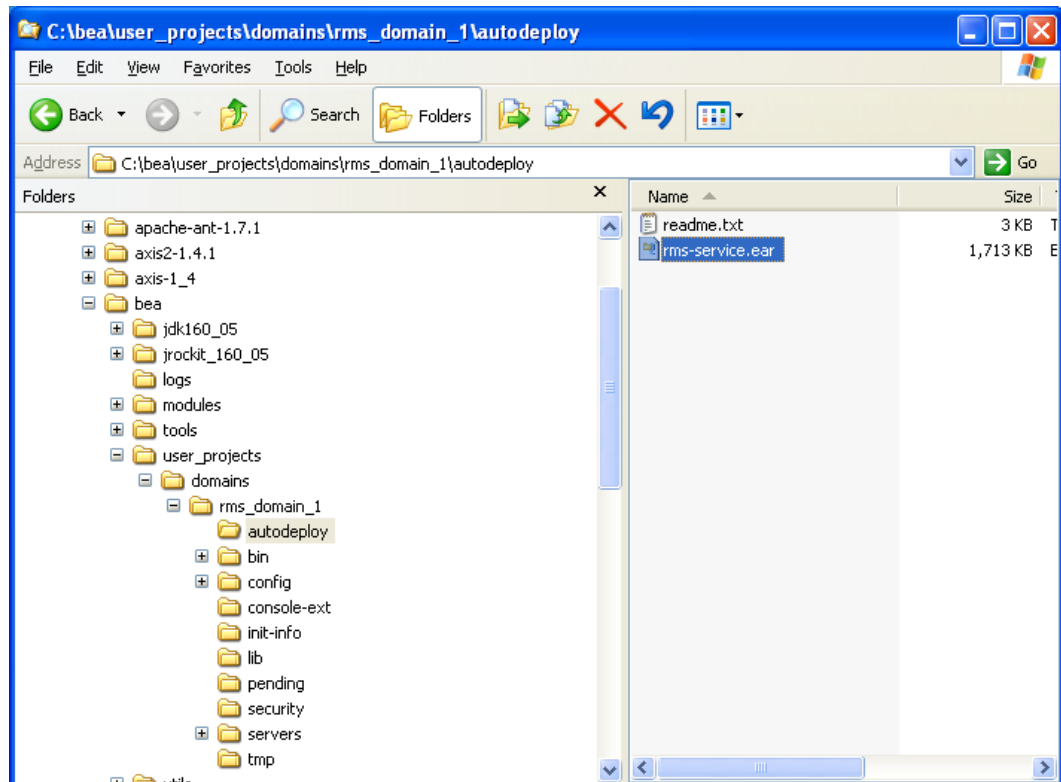
10. Testing the other methods of this service with the default values will likely result in a schema validation exception being returned. The exception will list the fields that do not conform to the schema. Once the values are changed to conform to the schema, the service will attempt to call the PL/SQL implementation layer.

WebLogic 10.3 Autodeploy Installation Process

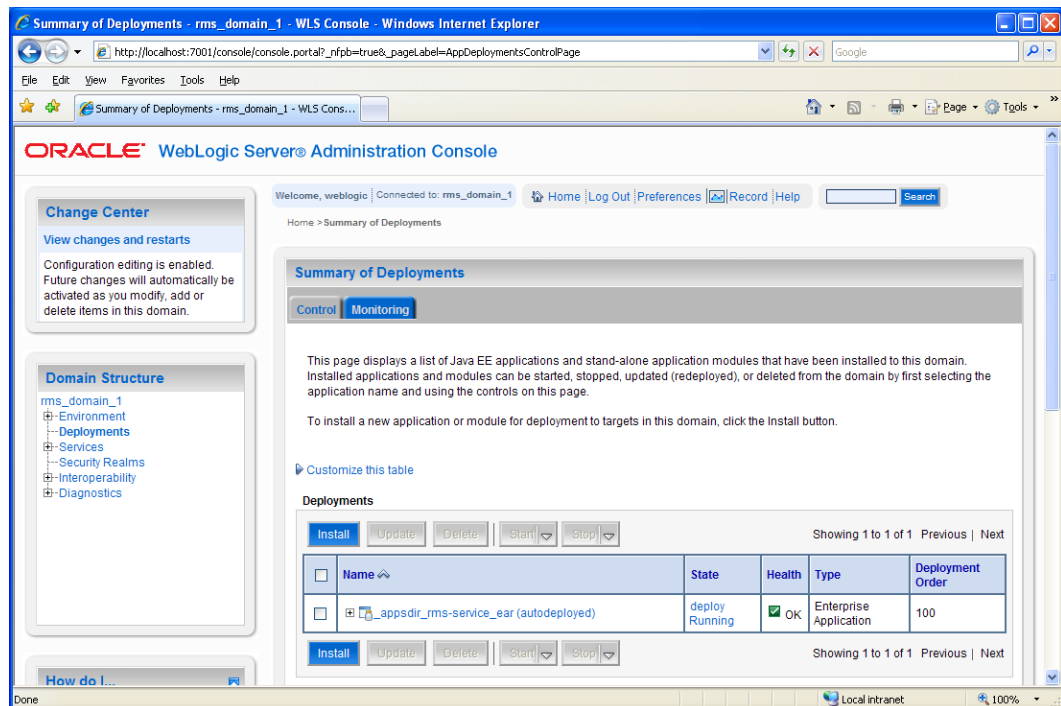
1. Start WebLogic server. Locate the autodeploy directory under your WebLogic domain directory.



2. Drop the rms-service.ear file in the autodeploy directory. This will automatically deploy the application.



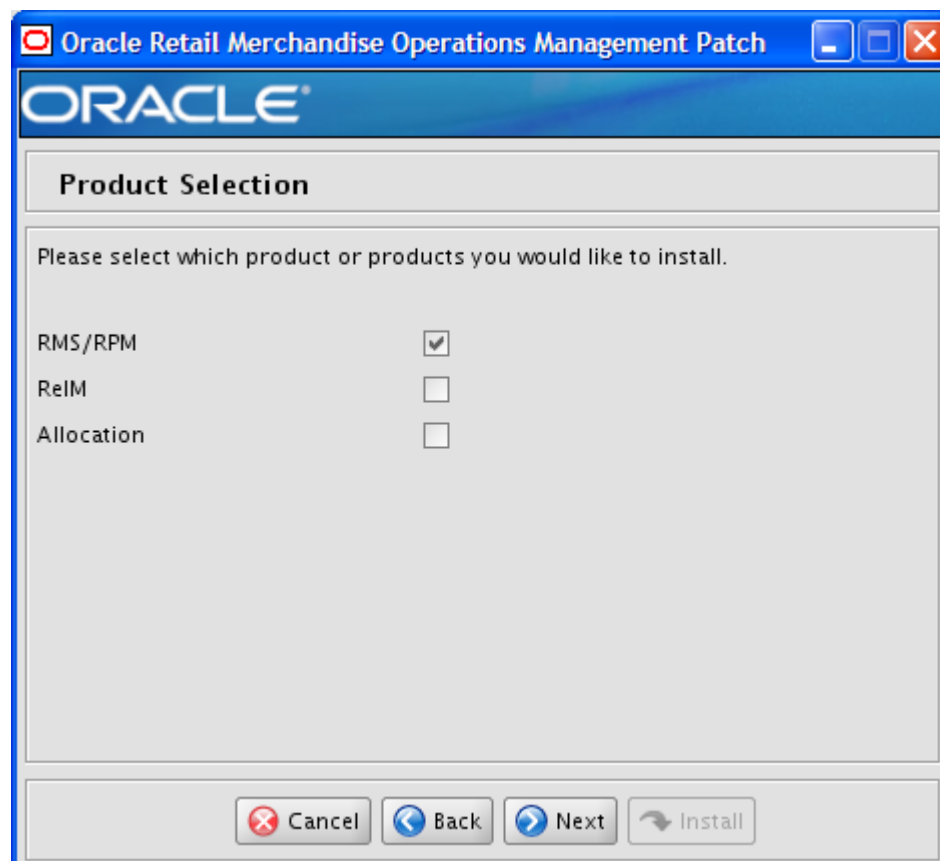
- Log in to the administration console and click on the Configure Applications link. The new deployment will be listed under its default name with a suffix of (autodeployed).



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



Fields on this screen:

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

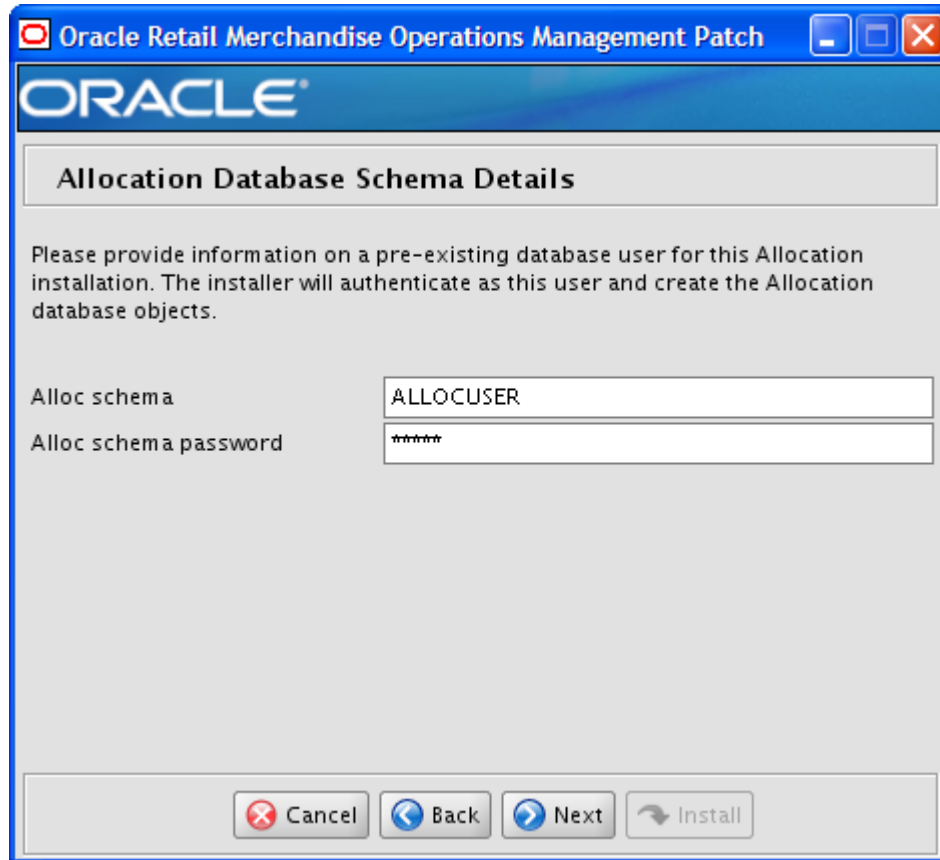
Screen: RMS Database Schema Details

Fields on this screen:

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



Fields on this screen:

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

DBA User

Please provide the username and password of a database account that has sufficient privileges to create the Allocation user and synonyms between the Allocation user and RMS user. Example: SYSTEM. This user is referred to as the Allocation DBA user by this installer.

DBA user

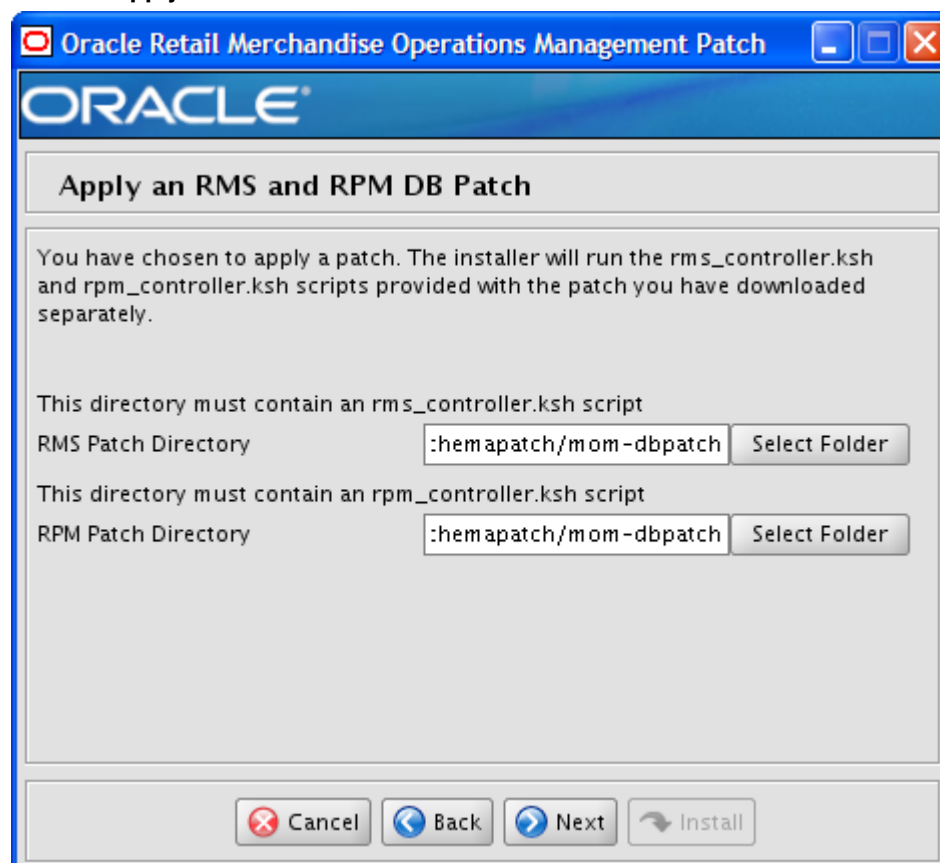
DBA user password

Fields on this screen:

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.

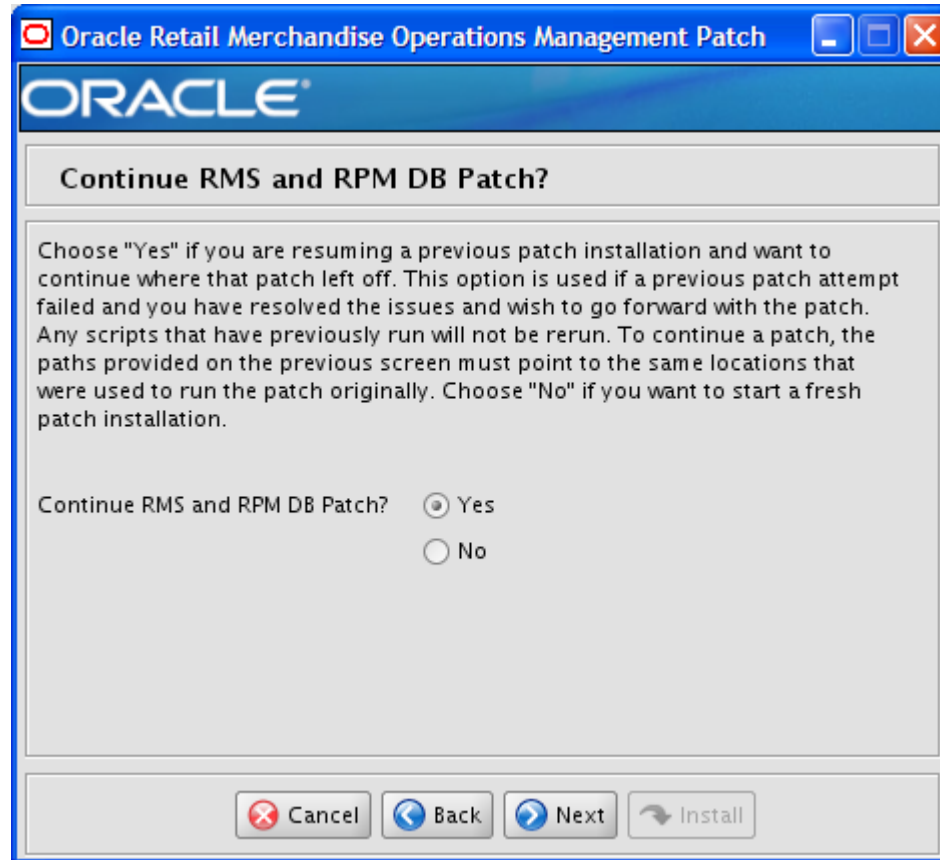
Screen: Apply an RMS and RPM DB Patch



Fields on this Screen:

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.

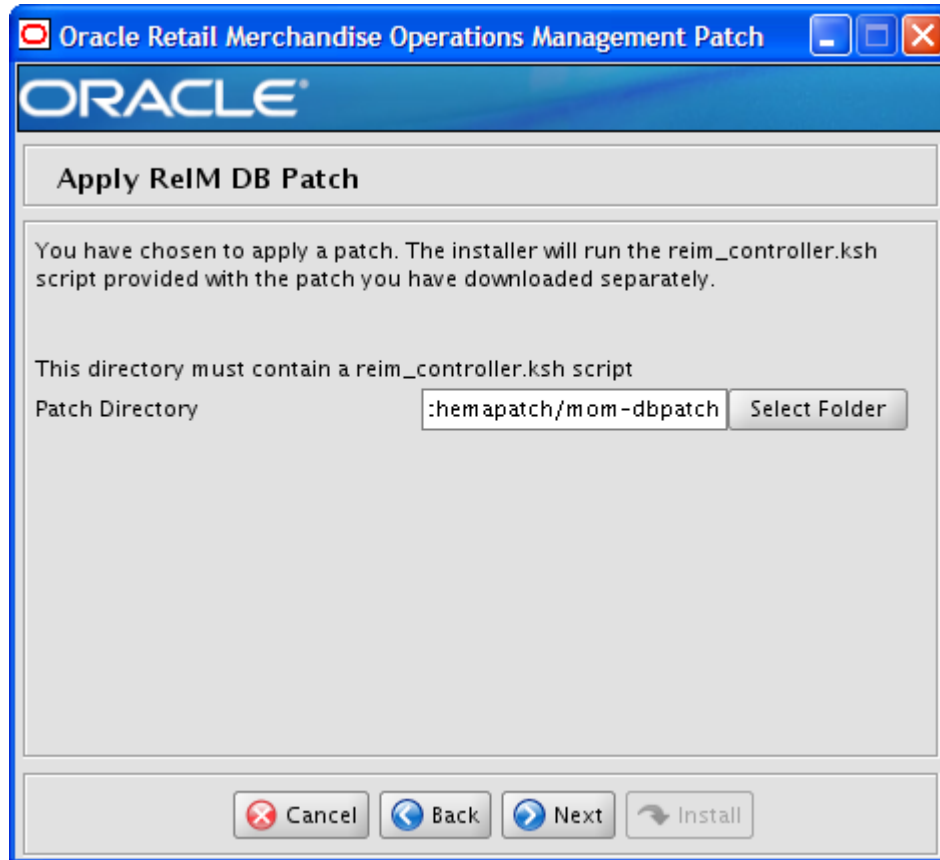
Screen: Continue RMS and RPM DB Patch



Fields on this Screen:

Field Title	Continue RMS and RPM DB Patch?
Field Description	<p>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 will start from the beginning.</p> <p>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", this directory will be cleared, and you will not be able to continue this patch in the future.</p>

Screen: Apply ReIM DB Patch



Fields on this Screen:

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

Continue ReIM DB Patch?

Choose "Yes" if you are resuming a previous patch installation and want to continue where that patch left off. This option is used if a previous patch attempt failed and you have resolved the issues and wish to go forward with the patch. Any scripts that have previously run will not be rerun. To continue a patch, the path provided on the previous screen must point to the same location that was used to run the patch originally. Choose "No" if you want to start a fresh patch installation.

Continue ReIM DB Patch? Yes No

Cancel Back Next Install

Fields on this Screen:

Field Title	Continue ReIM DB Patch?
Field Description	<p>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 will start from the beginning.</p> <p>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", this directory will be cleared, and you will not be able to continue this patch in the future.</p>

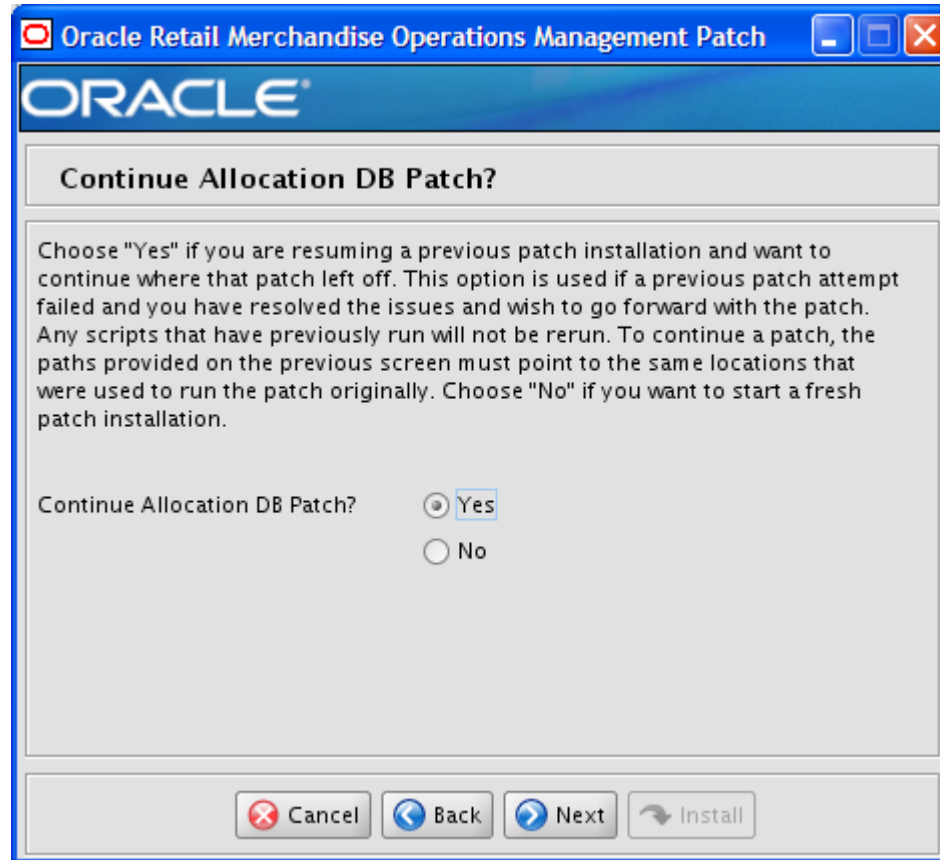
Screen: Apply Allocation DB Patch



Fields on this Screen:

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



Fields on this Screen:

Field Title	Continue Allocation DB Patch?
Field Description	<p>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.</p> <p>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.</p>

Appendix: RMS Batch Installer Screens

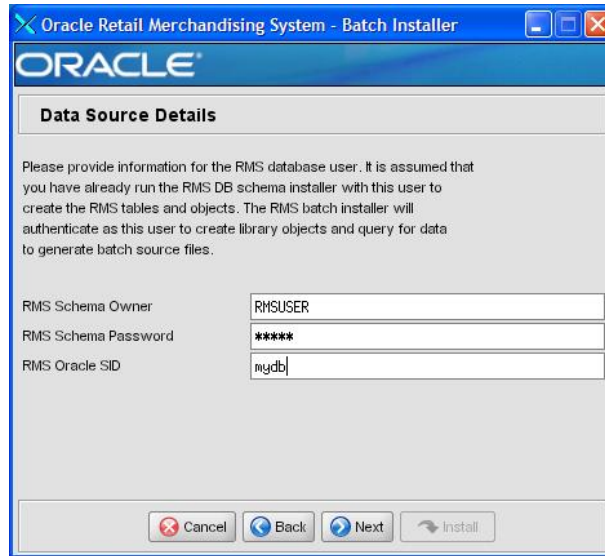
You need the following details about your environment for the installer to successfully compile and install the RMS batch programs. Depending on the options you select, you may not see some screens or fields.

Screen: Welcome



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

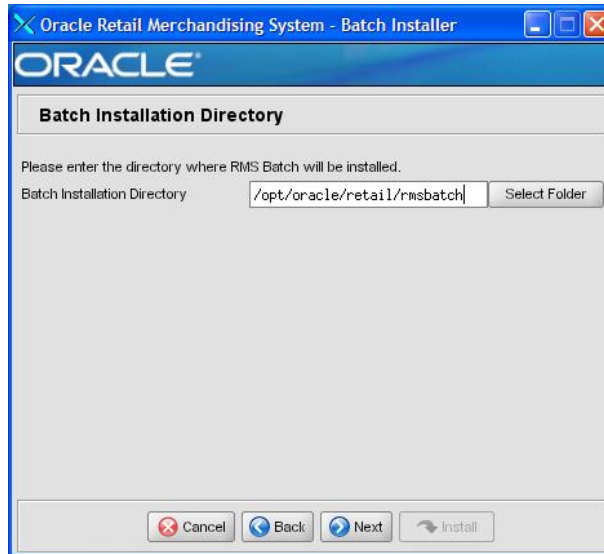
Screen: DataSourceDetails



Fields on this Screen:

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

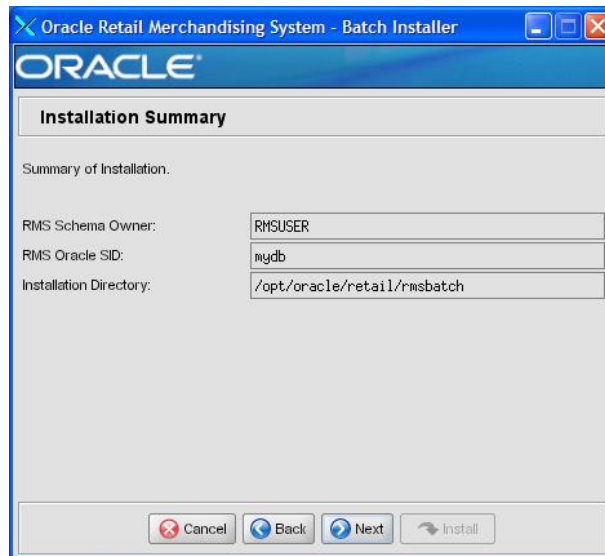
Screen: Batch Installation Directory



Fields on this Screen:

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



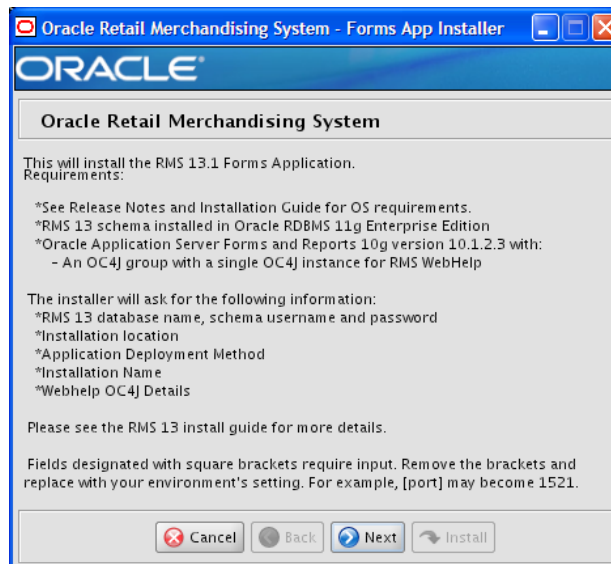
Fields on this Screen:

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 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

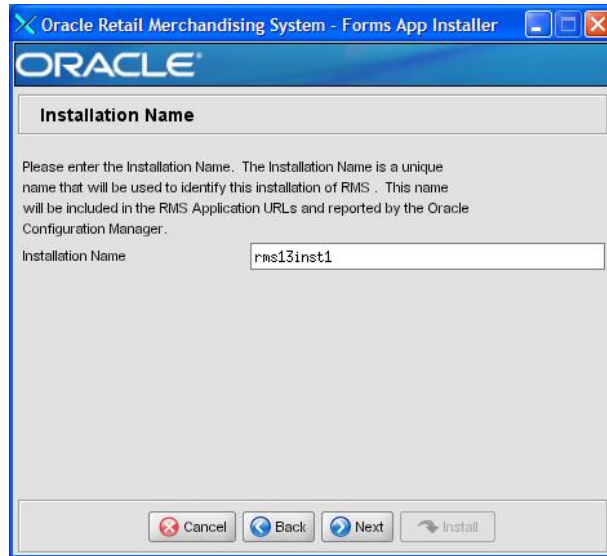
Fields on this Screen:

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**Fields on this Screen:**

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

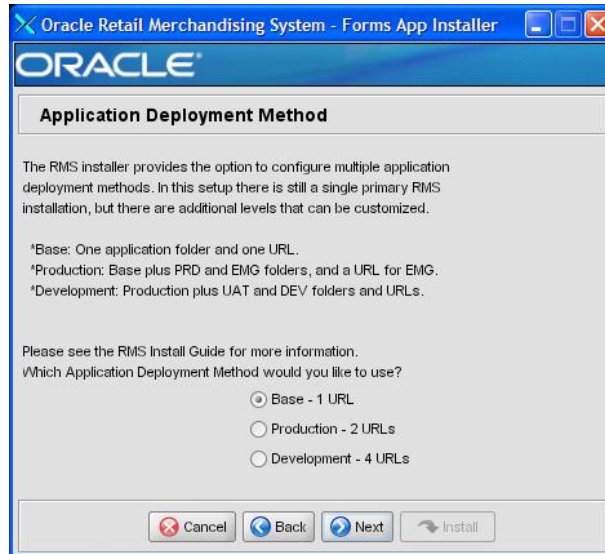
Screen: Installation Name



Fields on this Screen:

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



Fields on this Screen:

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

Oracle Retail Merchandising System - Forms App Installer

ORACLE

Webhelp Installation Details

RMS webhelp provides enhanced accessibility and usability of product documentation. The installation of webhelp requires a running OC4J instance. If an OC4J instance has not been configured or is not running, please see the documentation on pre-installation setup requirements.

OC4J Admin User:

OC4J Admin Password:

OC4J Instance Name:

Buttons: Cancel, Back, Next, Install

Fields on this Screen:

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**Fields on this Screen:**

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

Installation Summary	
Summary of Installation.	
RMS Schema Owner:	wade_rms1
RMS Database:	dvols17
Installation Directory:	/u00/webadmin/rmsapp
Installation Name:	rms13inst
Deployment Method:	Base
Admin User:	oc4jadmin
OC4J Instance Name:	rms_help_instance
Install OCM:	true

Fields on this Screen:

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.

Appendix: Installer Silent Mode

Repeating an Installation Attempt

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

JDBC URL for a Database

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

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

<sid>: system identifier for the database

Example: jdbc:oracle:oci:@mysid

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

<host>: hostname of the database server

<port>: database listener port

<sid>: system identifier for the database

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

LDAP Server URL

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

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

<host>: hostname of the directory server

<port>: LDAP server port

Example: ldap://myhost:389

JNDI Provider URL for an Application

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

OracleAS :

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

<host>: hostname of the OracleAS environment

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

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

<app>: Deployment name for the application.

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

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

WebSphere:

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

`<host>`: hostname of the WebSphere environment

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

Example: `iiop://myhost:2809`

Appendix: Common Installation Errors

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

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.

“Could not create system preferences directory” Warning

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.

“Couldn't find X Input Context” Warnings

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:

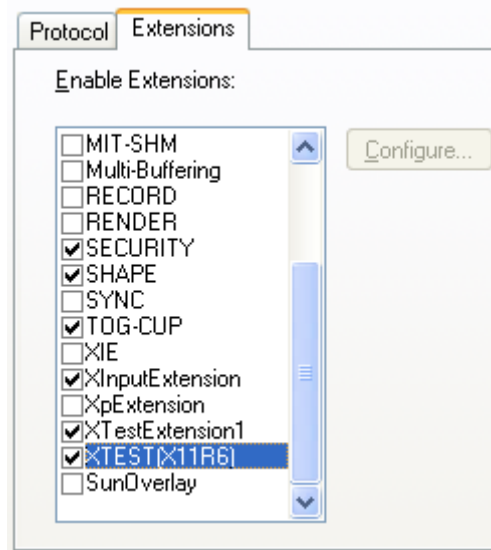
```
XTEST extension not installed on this X server: Error 0
```

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 exec 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 exec 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=$SUP module_type=form module=FORM_OR_MENU
```

RIB Errors

At random times, the RIB will get certain errors such as GETNEXT(?,?,?,?,?) 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 deallocated in the end of the previous step).
4. Bringing up the RIB OAS in question

“Error Connecting to Database URL”

Symptom:

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

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

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

Solution:

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

```
Error connecting to database URL <url> as user <user>
java.lang.Exception: UnsatisfiedLinkError encountered when using the Oracle
driver.
```

Please check that the library path is set up properly or switch to the JDBC thin client.

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

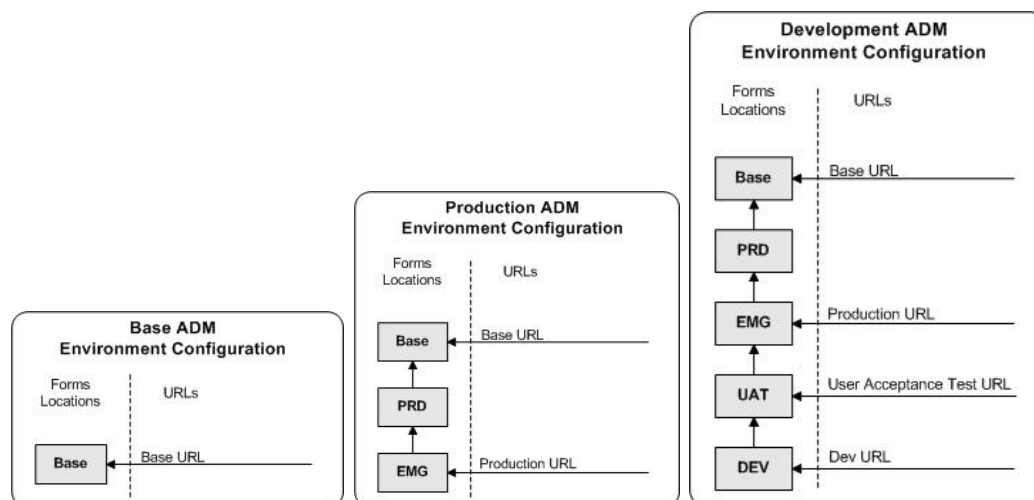
```
<STAGING_DIR>/rms/dbschema/common/preinstall.sh and toggle the variable
“use32bit” to “true” if it is set to “false” or vice versa. This setting is dependant on the
JRE that is being used.
```

Appendix: Application Deployment Method

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

The installer provides three choices for cascading environment configuration:

- Base: A standard RMS base installation with one application installation folder, and one URL.
- Production: Base plus two additional forms directories for PRD and EMG and an additional URL for EMG.
- Development: Production plus two additional forms directories for UAT and DEV and two additional URLs for UAT and DEV.



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

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

Appendix: 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 and via LDIF scripts as well. Documentation on this may be found in the My Oracle Support document; Doc ID: 244526.1.

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>

1. Create a ‘sqlnet.ora’ in ‘\$ORACLE_HOME/network/admin’ of the database similar to the below entry:

```
ENCRYPTION_WALLET_LOCATION=
  (SOURCE = (METHOD = FILE)
   (METHOD_DATA =
    (DIRECTORY = /etc/ORACLE/WALLETS/oracle)))
```

2. Create the directory. It should have minimal directory permissions (700 in UNIX/Linux) so that only the Oracle software owner (usually ‘oracle’) has access to it.

```
# mkdir -pv /etc/ORACLE/WALLETS/oracle
# chown -R oracle:oinstall /etc/ORACLE/*
# chmod -R 700 /etc/ORACLE/*
```

3. Create a wallet using the command below. This also adds the TDE master encryption to the wallet.

```
SQL> alter system set encryption key identified by
      "wallet_password";
```

4. Confirm if wallet is created and check if open:

```
SQL> select * from v$encryption_wallet;
```

```
WRL_TYPE  WRL_PARAMETER          STATUS
-----
file      /etc/ORACLE/WALLETS/oracle  OPEN
```

5. Change the file permission of the wallet file to the minimum of ‘600’:

```
$ chmod 600 /etc/ORACLE/WALLETS/oracle/ewallet.p12
```

6. Optional: To use an auto-open wallet (which does not require the “wallet_password” to be given upon database startup to make the TDE master encryption key available to the database), execute the following command:

```
$ orapki wallet create -wallet <wallet_location> -auto_login
```

7. Optional: A local auto-open wallet only auto-opens on the server it has been created on, providing the best compromise between security (as it can be stolen with the encrypted data files, but does not provide the TDE master encryption key on a foreign server) and ease-of-use:

```
$ orapki wallet create -wallet <wallet_location> -auto_login_local
```

8. When no (local) auto-open wallet has been created, the wallet password needs to be given to open the wallet after a database restart:

```
SQL> startup mount
SQL> alter system set encryption wallet open identified by
      "wallet_password";
SQL> alter database open;
```

9. Optional: To migrate the TDE column encryption master encryption key from the Oracle Wallet to a Hardware Security Module, please see the Transparent Data Encryption Best Practices document available from: <http://www.oracle.com/technetwork/database/options/advanced-security/index-099011.html>.

Implementing TDE Column Encryption:

TDE column encryption allows the encryption of sensitive data stored in application table columns, like credit card numbers, social security numbers, driver license numbers, first and last names etc. It is available in Oracle 10gR2 (10.2.0.4 or 10.2.0.5 is recommended) and Oracle 11gR1 (11.1.0.7 is recommended).

1. Connect to the database as the RMS schema owner and run 'enable_resa_tde.sql' to encrypt the columns

Example:

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

2. Attestation: Confirm the columns are encrypted:

```
SQL> select * from dba_encrypted_columns;
```

OWNER	TABLE_NAME	COLUMN_NAME	ENCRYPTION_ALG	SALT
RMS01	SA_TRAN_TENDER	CC_NO	AES 192 bits key	YES
RMS01	SA_TRAN_TENDER_REV	CC_NO	AES 192 bits key	YES
RMS01	SA_ERROR	ORIG_CC_NO	AES 192 bits key	YES
RMS01	SA_ERROR_WKSHT	ORIG_CC_NO	AES 192 bits key	YES
RMS01	SA_ERROR_REV	ORIG_CC_NO	AES 192 bits key	YES
RMS01	SA_ERROR_TEMP	ORIG_CC_NO	AES 192 bits key	YES

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>

Starting with Oracle 11.1.0.7, the TDE master encryption key can be centrally managed in a Hardware Security Module (HSM). Currently, HSMs from BULL, Safenet, Thales, and Utimaco are certified to provide centralized key management for Oracle Transparent Data Encryption. In Oracle 11gR2, the unified master key for TDE can be migrated from the Oracle Wallet to a Hardware Security Module.

Appendix: RMS RETL Instructions

This Appendix summarizes the RETL program features utilized in the RMS Extractions (RMS ETL). More information about the RETL tool is available in the latest RETL Programmer's Guide. More information about RMS ETL is available in the RMS ETL operations guide.

Configuration

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 RETL Programmer's Guide. RMS ETL reads data, creates, deletes and updates tables. (This is to ensure that weekly sales data is not pulled multiple times on subsequent extractions.) If these permissions are not set up properly, extractions will fail.

Environment variables

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

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

rmse_config.env

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

```
export DENAME=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 13.1.4 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 are only for customers who wish to have a primary language of English and a secondary language of any combination of the supported languages. The scripts are UTF-8 encoded. We recommend installing them into a database that has been set to UTF-8.

1. Change directories to DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/13.1.4/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> @rms1314_secondary_<lang>.sql
```
4. Check the log file rms1314_secondary_<lang>.log for any errors.

Note: Multiple secondary languages can be added to a primary language install 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 2 or 3 letter country code based on what was chosen previously.

1. Change directories to `DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/13.1.4/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> @rms1314_primary_<lang>.sql
```
4. Check the log file `rms1314_primary_<lang>.log` for any errors.

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

Appendix: 11G Database Parameter Change

Starting in RMS 13.1, if the RIB JMS and the Retail application run in the same database, the processes parameter should be set at 2000 in the init\$ORACLE_SID.ora file (commonly known as the pfile).

```
processes          = 2000
```

Appendix: RMS Policies with Database Vault

Before Getting Started

1. Make sure RMS 12.0.11 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

1. Unzip the file DBVault_RMS_scripts_Release.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 10.2.0.4 as documented in the Database Vault Installation Guide
6. Login to the database as Data Vault Manager
 - a. Run the script setup/RMSDBA_USER.sql
 - b. Run the script setup/RMSDBA_GRANTS_VAULT_MGR.sql
7. Login to the database as SYSDBA
 - 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 RMSI Application Protection Realm authorizations.
 - d. For tuning, RMSDBA_SARKARS for example, can be added to the Enterprise Manager Administrators and do tuning.
9. Login to the database with the Database Vault manager
 - 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. Login to the database with the Database Vault Administrator (owner)
 - a. Run the script
create_policies/CREATE_RMS_DBV_POLICIES.sql.

11. While testing the security policies if you need to remove them you Login to the database with the Database Vault Administrator (owner)
 - a. Run the script


```
delete_policies/ DELETE_RMS_DBV_POLICIES.sql
```
12. While testing the security policies if you need to diable them you Login to the database with the Database Vault Administrator (owner)
 - a. Run the script


```
disable_policies/ DISABLE_RMS_DBV_POLICIES.sql
```
13. While testing the security policies if you need to enable them you Login to the database with the Database Vault Administrator (owner)
 - a. Run the script


```
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:

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

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. :

Authorized with Rule Set Protection Type	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 Restricted	Not Restricted



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 at 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)