**Oracle® Retail Merchandising System**
Installation Guide
Release 13.0.4

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ORACLE®

Oracle® Retail Merchandising System Installation Guide, Release 13.0.4

### Value-Added Reseller (VAR) Language

### Oracle Retail VAR Applications

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

(i) the software component known as **ACUMATE** developed and licensed by Lucent Technologies Inc. of Murray Hill, New Jersey, to Oracle and imbedded in the Oracle Retail Predictive Application Server – Enterprise Engine, Oracle Retail Category Management, Oracle Retail Item Planning, Oracle Retail Merchandise Financial Planning, Oracle Retail Advanced Inventory Planning, Oracle Retail Demand Forecasting, Oracle Retail Regular Price Optimization, Oracle Retail Size Profile Optimization, Oracle Retail Replenishment Optimization applications.

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

(iii) the **SeeBeyond** component developed and licensed by Sun MicroSystems, Inc. (Sun) of Santa Clara, California, to Oracle and imbedded in the Oracle Retail Integration Bus application.

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

(v) the software component known as **Crystal Enterprise Professional and/or Crystal Reports Professional** licensed by SAP and imbedded in Oracle Retail Store Inventory Management.

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(viii) the software component known as **Style Report™** developed and licensed by InetSoft Technology Corp. of Piscataway, New Jersey, to Oracle and imbedded in the Oracle Retail Value Chain Collaboration application.

(ix) the software component known as **DataBeacon™** developed and licensed by Cognos Incorporated of Ottawa, Ontario, Canada, to Oracle and imbedded in the Oracle Retail Value Chain Collaboration application.

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# Contents

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Oracle Retail Merchandising System, Installation Guide, Release 13.0.4

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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

For more information, see the following documents:

- *Oracle Retail Merchandising System Release Notes*
- *Oracle Retail Merchandising System Data Model*
- *Oracle Retail Merchandising System Operations Guide (Volumes 1 - 3)*
- *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, 13.1.2). 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
```

# 1
## Preinstallation Tasks

## 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 10gR2 and 11gR2 | Versions Supported: |
|---|---|
| Database Server OS | OS certified with Oracle Database 10gR2 Enterprise Edition or Oracle Database 11g Release 2 Enterprise Edition. Options are:<br>▪ AIX 5.3<br>▪ AIX 6.1 TL04<br>▪ Solaris 10 (Sparc) (Actual hardware or Logical Domains)<br>▪ Oracle Enterprise Linux 4 Update 5 (x86-64)<br>▪ Red Hat Enterprise Linux 4 Update 5 (x86-64)<br>▪ Oracle Enterprise Linux 5 Update 3 (x86-64)<br>▪ Red Hat Enterprise Linux 5 Update 3 (x86-64)<br>▪ HP-UX 11.23 (Itanium 64-bit)<br>▪ HP-UX 11.31 (Itanium 64-bit) |
| Database Server (10gR2) | Oracle Database 10g Release 2 Enterprise Edition (10.2.0.4 patchset required) with the following components:<br>▪ Oracle Database 10g<br>▪ Oracle Partitioning<br>▪ Oracle Net Services<br>▪ Oracle Call Interface (OCI)<br>▪ Oracle Programmer<br>▪ Oracle XML Development Kit<br>▪ Database Vault (Optional)<br>▪ DBConsole (if Database Vault is installed)<br>▪ Companion CD<br>▪ ANSI compliant C compiler (certified with OS and database version)<br>**Patches:**<br>▪ 10.2.0.4 patchset: 6810189<br>▪ AIX oneoff patch:  6154596 (PRO*C THROWS PCC-2014 WHEN DIAGNOSTIC DIRECTIVE #WARNING IS USED).<br>**Database Vault specific patches:**<br>▪ 7639262 - TDE oneoff<br>▪ 757685 – Export/DBMS_STATS/ dbms_outln oneoff - Available on Linux (it is important to complete all steps of this patch).<br>**Others components:**<br>▪ Perl compiler 5.0 or later<br>▪ X-Windows interface |

| Supported on 10gR2 and 11gR2 | Versions Supported: |
|---|---|
| Database Server (11gR2) | Oracle Database 11g Release 2 (11.2.0.1) Enterprise Edition with the following components:<br>▪ Oracle Partitioning<br>▪ Example CD<br>▪ ANSI compliant C compiler (certified with OS and database version)<br>**Patches:**<br>▪ 9582272 - ORA-600 [KKDLREADONDISKDEFVAL: ERROR] OCCURS WHEN ALTER TRIGGER IS EXECUTED.<br>The following two patches need to be applied together in order to correct the JDBC bug:<br>▪ 9367425 -- PROCESS CRASHED WHEN USING 11GR2 JDBC/OCI<br>▪ 9495959 -- HANG WHEN TWO THREADS TRY TO CREATE THE ENV HANDLE AT THE SAME<br>**Others components:**<br>▪ Perl compiler 5.0 or later<br>▪ X-Windows interface |

# Verify Single Sign-On

If a Single Sign-On is to be used, verify the Oracle Infrastructure Server 10g 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 | OS certified with Oracle Application Server 10g 10.1.2.2. Options are: <br>▪ AIX 5.3 <br>▪ AIX 6.1 TL04 <br>▪ Solaris 10 (Sparc) (Actual hardware or Logical Domains) <br>▪ Oracle Enterprise Linux 4 Update 5 (x86-64) <br>▪ Red Hat Enterprise Linux 4 Update 5 (x86-64) <br>▪ Oracle Enterprise Linux 5 Update 3 (x86-64) <br>▪ Red Hat Enterprise Linux 5 Update 3 (x86-64) <br>▪ HP-UX 11.23 (Itanium 64-bit) <br>▪ HP-UX 11.31 (Itanium 64-bit) |
| Application Server | Oracle Application Server Forms and Reports 10g version 10.1.2.2 <br>Patches: <br>▪ 5861907 (IAS 10.1.2.2 PATCHSET UPDATES ORACLEHOMEPROPERTIES.XML WITH WRONG ARU_ID & ARU_I) <br>▪ 5632264 (NEED UPDATED TIMEZONE FILES (VERSION 4) FOR MORE DST RULE CHANGES) |

**Note:** If installing on HP, please refer to Metalink Note 367577.1.

## 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 |
| Sun JRE Plug-in | 1.4.1+ |
| Browser | Microsoft Internet Explorer version 7.0 |

## Supported Oracle Retail Products

| Product | Version |
| --- | --- |
| Oracle Retail Active Retail Intelligence (ARI) | 13.0.1 |
| Oracle Retail Price Management (RPM) | 13.0.4 |
| Oracle Retail Allocation | 13.0.4 |
| Oracle Retail Invoice Matching (ReIM) | 13.0.4 |
| Oracle Retail Store Inventory Management (SIM) | 13.0.4 |
| Oracle Retail Warehouse Management System (RWMS) | 13.0.4 |
| Oracle Retail Data Warehouse (RDW) | 13.0.2 |
| Oracle Retail Predictive Application Server (RPAS) | 13.0.4 |
| Oracle Retail Advanced Inventory Planning (AIP) | 13.0.4 |
| Oracle Retail Strategic Store Solutions (ORSSS) | 13.0.4 |

## Supported Oracle Retail Integration Technologies

| Integration Technology | Version |
| --- | --- |
| Oracle Retail Extract, Transform and Load (RETL) | 13.0.4 |
| Oracle Retail Integration Bus (RIB) | 13.0.4 |
| Oracle Retail Service Layer (RSL) | 13.0.4 |

## Supported Oracle Products

> **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.

| Integration Technology | Version |
| --- | --- |
| Oracle E-Business Suite | 12.0.4<br>For support in implementing this integration, contact Oracle Customer Support and follow all typical Oracle Retail processes. |
| PeopleSoft Enterprise Financials | 9.0<br>Oracle Retail applications can be integrated with PeopleSoft Enterprise Financials. See the *Oracle Application Integration Architecture 2.4: Installation and Upgrade Guide* for specific information on integrating your systems and supported versions. |

## Create a UNIX User Account to Install the Software

The following user should be created on both the application and database servers.

1. Create a UNIX group named "dev".

2. Create UNIX user named "oretail" and assign it to the "dev" group.  This user will install the RMS software.

# 2
# RAC and Clustering

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

- Standalone OAS and database installations
- Real Application Cluster database and Oracle Application Server Clustering

The Oracle Retail products have been validated against a 10.2.0.4 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 10.1.2.2 is managed as an Active-Active cluster accessed through a hardware Load Balancer. It is suggested that the Web Cache installation included with OAS 10.1.2.2 be configured to reflect all application server Mid-Tier installations. Validation has been completed utilizing a RAC 10.2.0.3 Oracle Internet Directory database with the OAS 10.1.2.2 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® Database Oracle Clusterware and Oracle Real Application Clusters Administration and Deployment Guide 10g Release 2 (10.2) Part Number B14197-03

# RMS Database Installation – Patch

There are two different methods to use for installing the RMS 13.0.4 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 13.0.4 release. Any patches that were released prior to 13.0.4 (For example, 13.0.2 and 13.0.3) will not be compatible with this installer. If you need to upgrade from 13.0.1 to 13.0.3, please use the 13.0.1 installer to apply the 13.0.3 patch, and the 13.0.4 patch installer packaged in this release to apply the 13.0.4 patch.

> **Note:** If any RMS, RPM, ReIM or Allocation hotfixes have been applied to the schema after 13.0.3 other than the hotfix bundles (13.0.3.x), be aware that using the installer or controller scripts to apply the 13.0.4 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 13.0.4 database schema patch installer may be used to apply the RMS 13.0.4 patch to a schema from 13.0.3 or any of the 13.0.3.x 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 13.0.4 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 13.0.4 Release Notes (rms-1304-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 13.0.4 Patch. There should be a minimum of 50 MB disk space available in this location.
3. Copy the mom-dbpatch.zip file from the RMS 13.0.4 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

## 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 13.0.3 and want to go to 13.0.4, you need to run all the patches from DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/ (13.0.3.1, 13.0,3.2, etc. to the 13.0.4 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 13.0.3 and you want to go to 13.0.4, you can begin patching with the next hotfix bundle in the sequence. For example, if you have already applied hotfix bundles 13.0.3.1 and 13.0.3.2, you will need to apply 13.0.3.3, 13.0.3.4, etc. to the 13.0.4 deltas. For this example, these sections in the default scripts:

```
echo "Running RMS 13.0.3.1 controller"
cd ../../13.0.3.1/rms/
./rms_controller.ksh DBO N
STATUS=$?
if [ $STATUS -eq 1 ];
then
  exit 1
fi

echo "Running RMS 13.0.3.2 controller"
cd ../../13.0.3.2/rms/
./rms_controller.ksh DBO N
STATUS=$?
if [ $STATUS -eq 1 ];
then
  exit 1
fi
```

   Should be edited to:

```
#echo "Running RMS 13.0.3.1 controller"
#cd ../../13.0.3.1/rms/
#./rms_controller.ksh DBO N
#STATUS=$?
#if [ $STATUS -eq 1 ];
#then
#  exit 1
#fi
```

```
#echo "Running RMS 13.0.3.2 controller"
#cd ../../13.0.3.2/rms/
#./rms_controller.ksh DBO N
#STATUS=$?
#if [ $STATUS -eq 1 ];
#then
#  exit 1
#fi
```

## 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<br>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<br>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 13.0.4 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 13.0.3.1), 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 13.0.3 to 13.0.4), 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 13.0.4 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
> ```

# 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 13.0.4 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 13.0.4 Patch Release Notes (rms-1304-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 13.0.4 Patch. There should be a minimum of 50 MB disk space available in this location.

3. Copy the mom-dbpatch.zip file from the RMS 13.0.4 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

## 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/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 13.0.3 and want to get to 13.0.4, you need to run all the patches from DB_PATCH_DIR/rms/dbschemapatch/mom-dbpatch/ (13.0.3.1, 13.0.3.2, etc. to the 13.0.4 deltas). If you have already applied any of the hotfix bundles released after 13.0.3, you can begin patching with the next hotfix bundle in the sequence. For example, if you have already applied hotfix bundles 13.0.3.1 and 13.0.3.2, you will need to apply 13.0.3.3, 13.0.3.4, etc. to the 13.0.4 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 dependancy 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.

# Batch Installation Tasks—Patch

There are two different methods to use for installing the RMS 13.0.4 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 13.0.1 Batch installer will install and compile the batch programs for version 13.0.1. 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 13.0.1 Batch installer was originally expanded. The installer files from the original RMS 13.0.1 installation can be re-used or a new directory can be created with a fresh copy of the RMS 13.0.1 application installer.

Before you apply the RMS 13.0.4 Batch patch:

- Make a backup of all your Batch files.
- Review the enclosed RMS 13.0.4 Patch Release Notes (rms-1304-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 13.0.4 Batch Patch. There should be a minimum of 30 MB disk space available in this location.
3. Copy the rms1304batchpatch.zip file from the RMS 13.0.4 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 rms1304batchpatch.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 35 MB disk space available in this location.
6. Copy the rms13batch.zip file from the RMS 13. 0.1 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 13.0.1 Batch installer package. After running this utility, the RMS Batch installer can be used to 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 |
| --- | --- |
| installer.dir | The directory where the installer files are located under STAGING_DIR. *Example: /opt/rms/batch* |
| patch.to.version | The version want to patch to *Example: 13.0.4* |

5. Run the patch.sh script. This script will copy the files from each patch from 13.0.1 up to the patch specified in the **patch.to.version** property. These files are copied into the installer package.

### Update the Batch installer scripts

When running the batch installer on certain platforms, the installer scripts packaged with the 13.0.1 Batch installer may not work, copy the provided preinstall.sh file into the 13.0.1 installer:

1. Copy preinstall.sh from BATCH_PATCH_DIR/common/ to STAGING_DIR/rms/batch/common/.

## 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 <br> 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 H 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 13.0.4 Batch Patch. There should be a minimum of 30 MB disk space available in this location.
3. Copy the rms1304batchpatch.zip file from the RMS 13.0.4 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 rms1304batchpatch.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 13.0.1 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/
- 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 13.0.1 and ending with the 13.0.4 deltas.  For example, start with 13.0.1, followed by 13.0.2, 13.0.3, 13.0.3.1, and so on.

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

3. To make library dependencies run one of the following commands:
   - For Linux use:
     ```
     make -f retek.mk -r depend 2>&1 | tee libdpnd.log
     ```
   - For other platforms use:
     ```
     make -f retek.mk depend 2>&1 | tee libdpnd.log
     ```
   Check the libdpnd.log file for errors

4. To make batch libraries:
   - For Linux use:
     ```
     make -f retek.mk -r retek rms resa 2>&1 | tee libretek.log
     ```
   - For other platforms use:
     ```
     make -f retek.mk retek rms resa 2>&1 | tee libretek.log
     ```
   Check the libretek.log file for errors

5. To install batch libraries:
   ```
   make -f retek.mk install
   ```
   The batch libraries should now be in INSTALL_DIR/oracle/lib/bin

## Compile Batch Source Code

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 13.0.1 and ending with the 13.0.4 deltas.   For example, start with 13.0.1, followed by 13.0.2, 13.0.3, 13.0.3.1, 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

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 13.0.1 and ending with the 13.0.4 deltas. For example, start with 13.0.1, followed by 13.0.2, 13.0.3, 13.0.3.1, and so on.

## Copy Data Conversion Scripts

If they exist, copy the files from BATCH_PATCH_DIR/batch-patch/<version>/external to INSTALL_DIR/external. This step should be done with each version in order of earliest to latest patch starting at 13.0.1 and ending with the 13.0.4 deltas. For example, start with 13.0.1, followed by 13.0.2, 13.0.3, 13.0.3.1 and so on.

**5**

# Application Server Installation Tasks—Patch

There are two different methods to use for installing the RMS 13.0.4 Application. Option 1 uses the installer to apply the patch. Option 2 compiles the RMS toolset and forms directly.

> **Note**: If the 13.0.4 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 13.0.1 Forms installer installs and compiles the forms for version 13.0.1. 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 13.0.1 application installer was originally expanded. The installer files from the original RMS 13.0.1 installation can be re-used or a new directory can be created with a fresh copy of the RMS 13.0.1 application installer.

Before you apply the RMS 13.0.4 patch:

- Make a backup of all your forms and library files.
- Review the enclosed RMS 13.0.4 Patch Release Notes (rms-1304-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 installation software. There should be a minimum of 600 MB disk space available in this location.
3. Copy the file rms1304apppatch.zip from the RMS 13.0.4 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 rms1304apppatch.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 820 MB disk space available in this location.

6. Copy the file rms13application.zip from the RMS 13.0.1 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 rms13application.zip. This will create an rms/application subdirectory under STAGING_DIR.

## Copy Forms and Library Patch Files

For new environments, the installer can be used to install and compile the forms at the latest patch level using the installer patching utility included with RMS 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 13.0.1 Forms installer package. After running this utility, the RMS Forms installer can be used to install the latest forms files.

## 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 |
| --- | --- |
| staging.dir | The directory where the installer files are located under STAGING_DIR. *Example: /opt/rms/application* |
| patch.to.version | The version want to patch to *Example: 13.0.4* |

5. Run the patch.sh script. This script will copy the files from each patch from 13.0.1 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 <br> 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 <br> 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 <br> 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/10.1.2.2_FULL/midtier/Apache/Apache/conf/httpd.conf
/u00/webadmin/product/10.1.2.2_FULL/midtier/forms/java/oracle/forms/registry/Regis
try.dat
/u00/webadmin/product/10.1.2.2_FULL/midtier/forms/server/formsweb.cfg
/u00/webadmin/product/10.1.2.2_FULL/midtier/forms/admin/resource/US/fmrweb.res
/u00/webadmin/product/10.1.2.2_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/10.1.2.2_FULL/midtier to update the files,
and then restart the application server for the changes to take effect.

example: cp -R * /u00/webadmin/product/10.1.2.2_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 installation software. There should be a minimum of 600 MB disk space available in this location.

3. Copy the file rms1304apppatch.zip from the RMS 13.0.4 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 rms1304apppatch.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 (10.1.2.2) has been installed.

Make sure the following variables are set. The RMS 13.0.1 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 13.0.1 and ending with the 13.0.4 deltas. For example, starting with 13.0.1, followed by 13.0.2, 13.0.3, 13.0.3.1, 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.

   > **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):

- messge45.pll
- ariiflib.pll
- stand45.pll
- calend45.pll
- find45.pll
- item45.pll
- tools45.pll
- mblock45.pll
- mview45.pll
- nav45.pll
- work45.pll
- itnumtype.pll
- hierfilter.pll
- rmslib.pll

7. Check to make sure that each .pll file has a corresponding .plx (to ensure that all .pll's compiled successfully).

8. Remove all newly created .plx files.

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

10. Run forms.fm_fmb.sh (in INSTALL_DIR/base/toolset/bin) to compile the Toolset reference forms.

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

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

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

> **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.

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

```
> for PROG in `ls *.fmb | grep -v fm_`
> do PROGNAME=`echo $PROG`
> rm $PROGNAME
> done
```

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

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

17. Check to make sure that each .mmb file has a corresponding .mmx file.

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

18. Remove all .mmb files from INSTALL_DIR/base/toolset/bin.

## 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 13.0.1 and ending with the 13.0.4 deltas. For example, start with 13.0.1, followed by 13.0.2, 13.0.3, 13.0.3.1, 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.

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

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

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

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

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

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

> **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.

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

```
> for PROG in `ls *.fmb | grep –v fm_`
> do PROGNAME=`echo $PROG`
> rm $PROGNAME
> done
```

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

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

14. Check to make sure that each .mmb file has a corresponding .mmx file.

15. 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.

### Verify and Update Helpfile Installation

Perform the following procedure to in stall the web_html.zip file provided with this RMS patch release.

1. Remove the old webhelp directory

> **Example:** rm –rf <INSTALL_DIR>/base/web_html/

2. Unzip web_html.zip from APP_PATCH_DIR/webhelp at this spot:

<INSTALL_DIR>/base/

Help file structure should be something similar to:
<INSTALL_DIR>/base/web_html/helpfiles/english/rms

**3.** Make sure that rhelp.pl has execute permissions:

> **Example:** chmod 755
> <INSTALL_DIR>/base/web_html/helpfiles/help/rhelp.pl

# 6
# RMS Reports Installation

RMS Reports are included in the RMS Application patch: rms1304apppatch.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 that contains reports in order of earliest to latest patch starting at 13.0.1 and ending with the 13.0.4 deltas. For example, start with 13.0.1, followed by 13.0.2, 13.0.3, 13.0.3.1 and so on.

A

# Appendix: RMS DB Patch Installer Screens

You need the following details about your environment for the installer to successfully patch the RMS database schema.
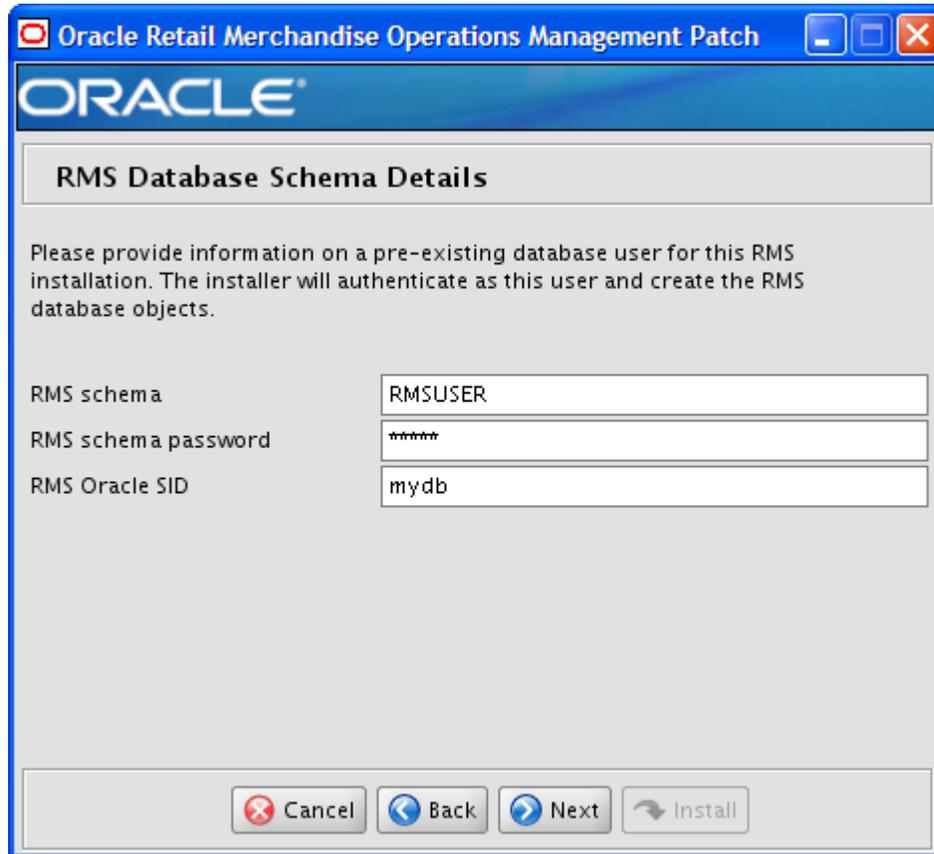
### Screen: Product Selection
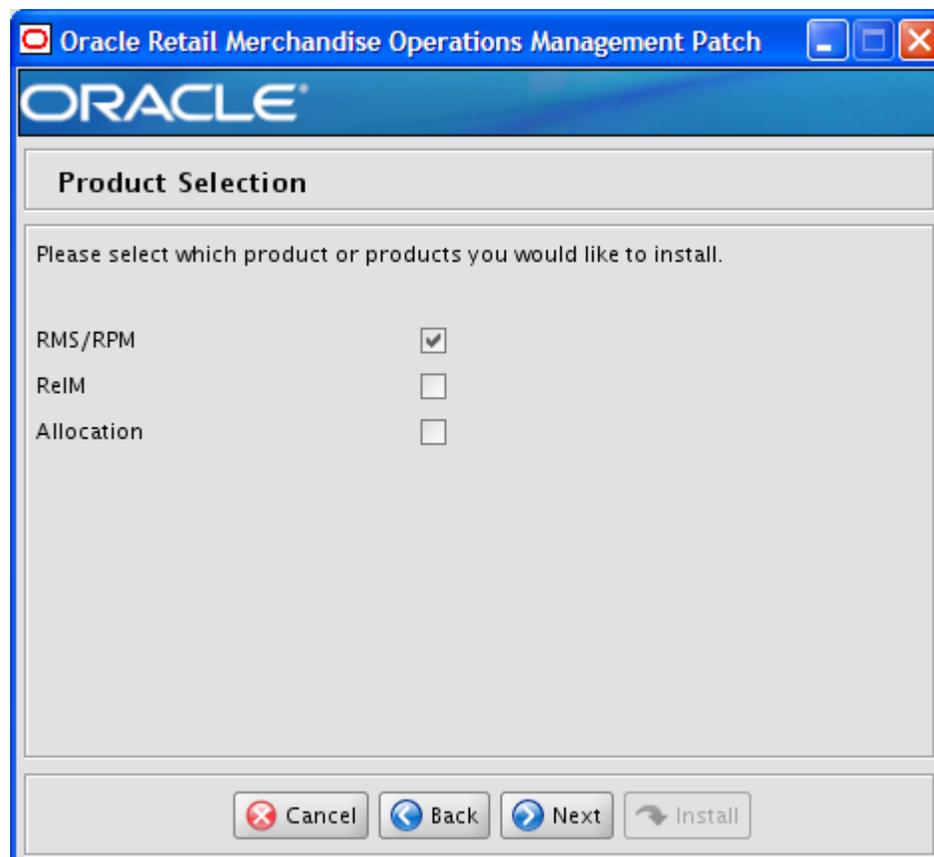


**Fields on this screen:**

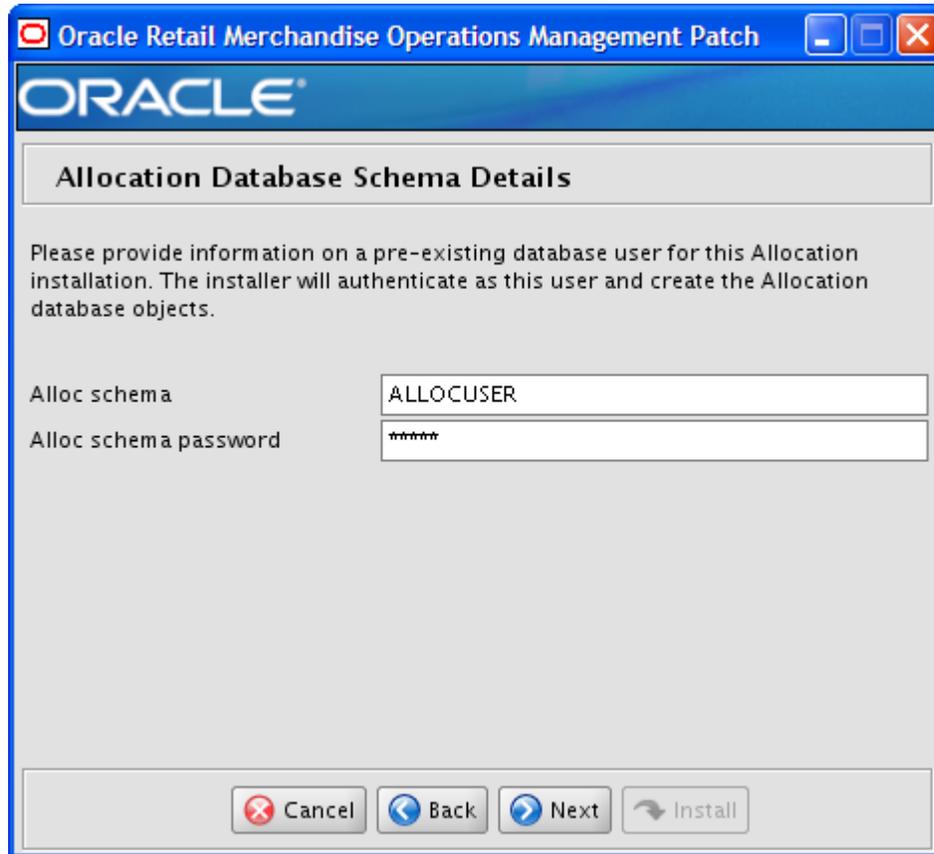| Field Title | Product Selection |
| --- | --- |
| **Field Description** | By default the RMS database schema patch installer creates the database objects for RMS/ReSA/RTM and RPM.  Optionally, the database objects for ReIM and/or Allocation may be installed at the same time or later. |
| **Example**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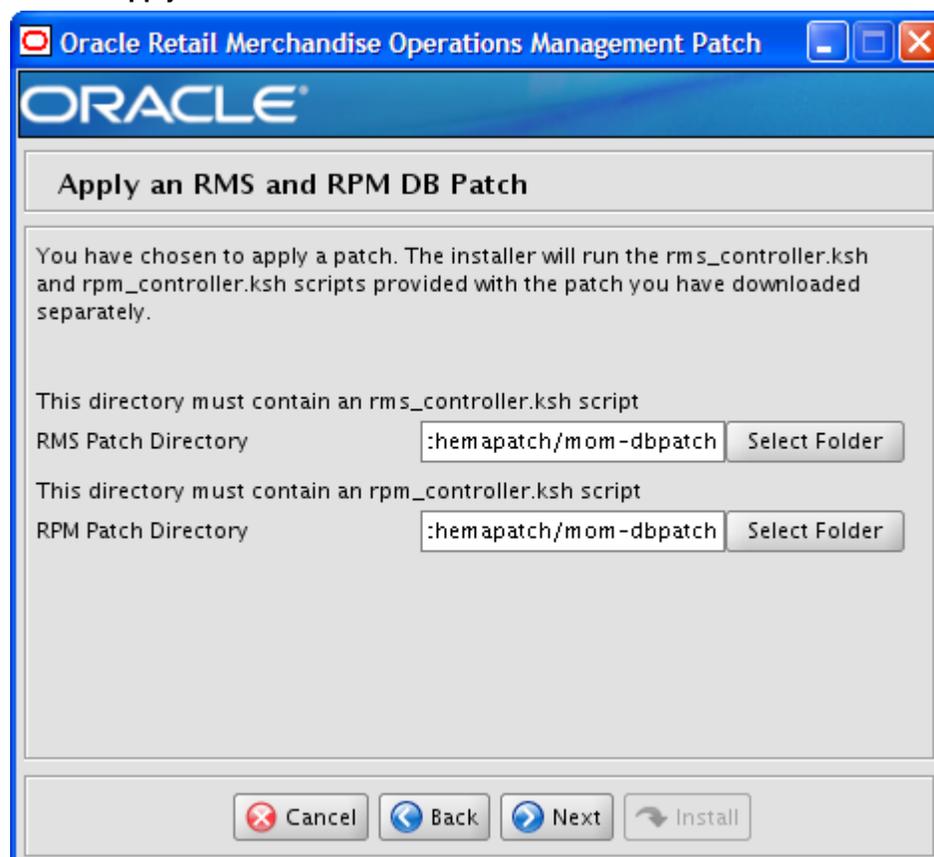
**Screen: DBA User**



**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.<br>**Note:** The directory you choose must contain an rms_controller.ksh file. |
| Example | /path/to/rms/dbschemapatch/mom-dbpatch for all 13.0.x patches<br>**Note:** The patch option is intended for patches starting with 13.0.3.1. |

| 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.<br>**Note:** The directory you choose must contain an rpm_controller.ksh file. |
| Example | /path/to/rms/dbschemapatch/mom-dbpatch for all 13.0.x patches<br>**Note:** The patch option is intended for patches starting with 13.0.3.1. |

**Screen: Continue RMS and RPM DB Patch**
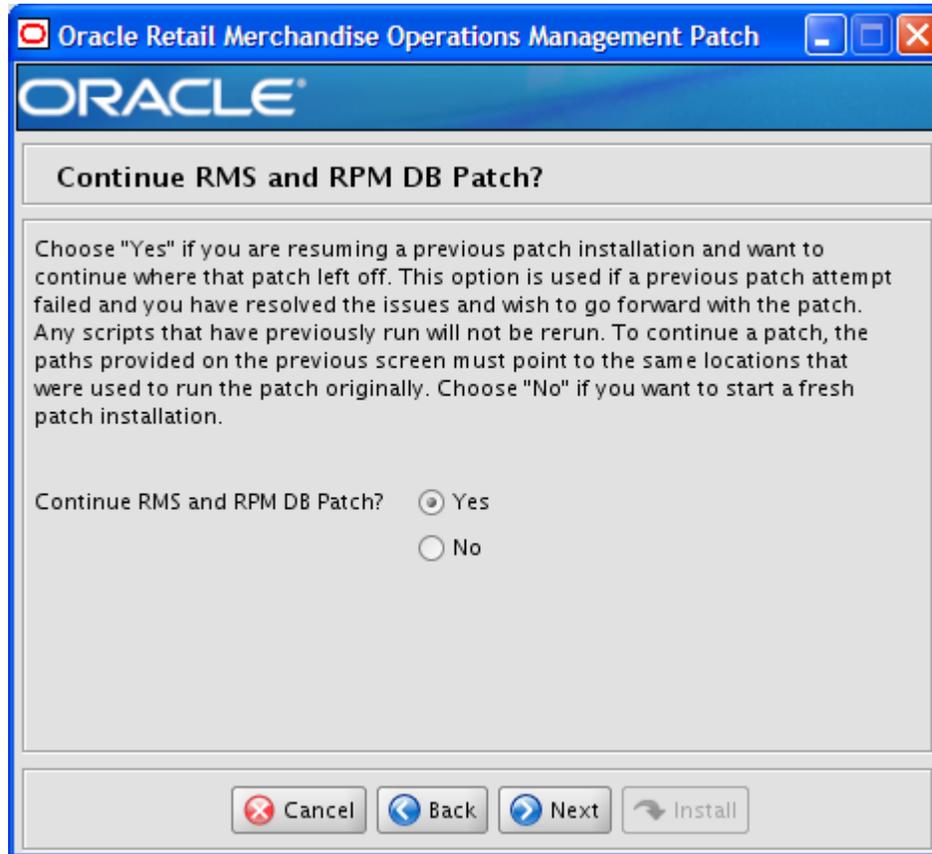


**Fields on this Screen:**

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

**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.<br>**Note:** The directory you choose must contain a reim_controller.ksh file. |
| **Example** | /path/to/rms/dbschemapatch/mom-dbpatch for all 13.0.x patches<br>**Note:** The patch option is intended for patches starting with 13.0.3.1. |

**Screen: Continue ReIM DB Patch**



**Fields on this Screen:**

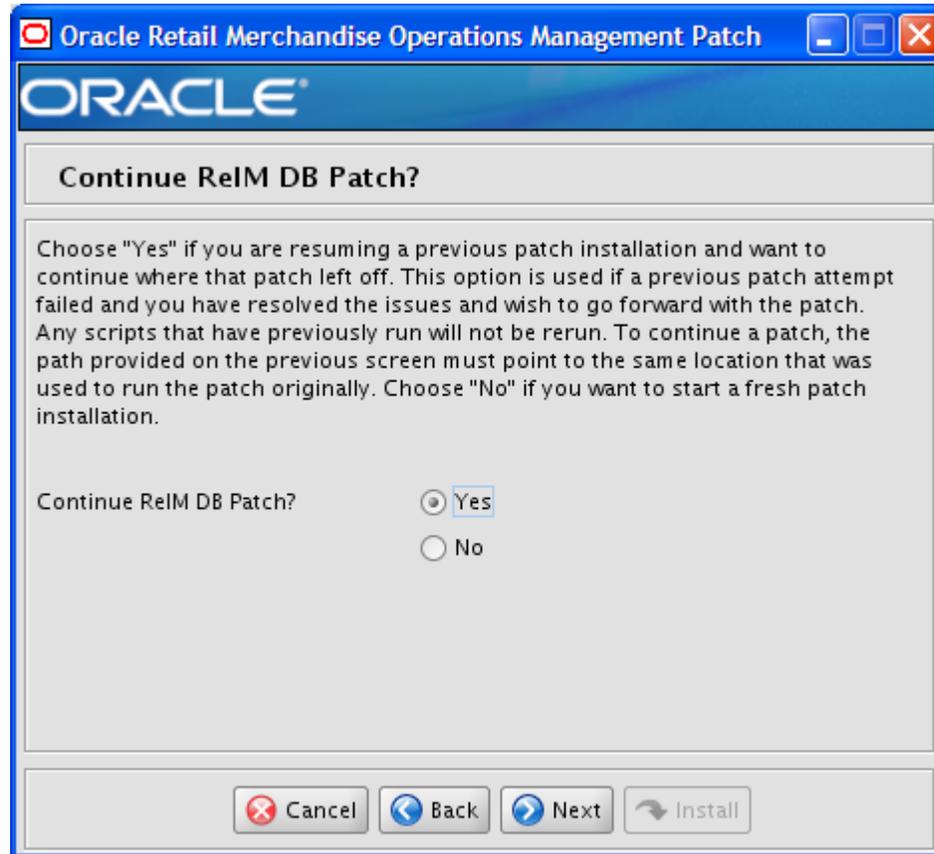| Field Title | Continue ReIM DB Patch? |
|---|---|
| **Field Description** | The patch process allows you to continue a previously run patch if it stopped before completion or failed.  If "Yes" is selected, any scripts that were previously run for the ReIM patch will be skipped.  If "No" is selected,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

### 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.<br>**Note:** The directory you choose must contain an alloc_controller.ksh file. |
| **Example** | /path/to/rms/dbschemapatch/mom-dbpatch for all 13.0.x patches<br>**Note:** The patch option is intended for patches starting with 13.0.3.1. |

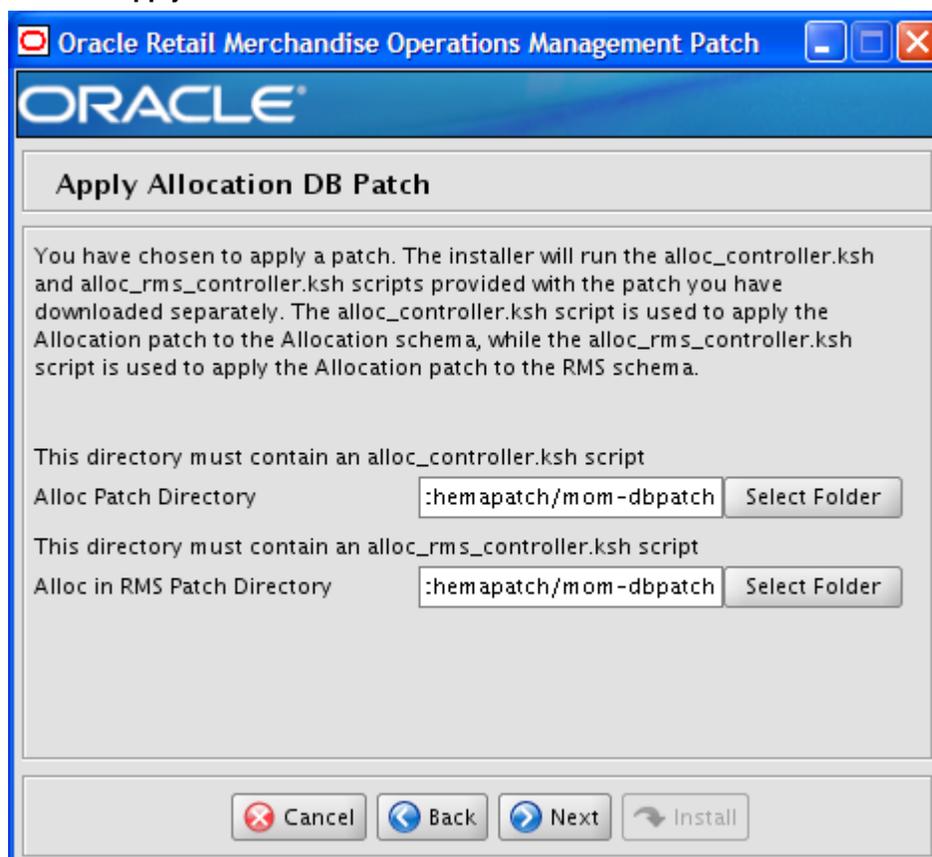| Field Title | Alloc in RMS Patch Directory |
|---|---|
| **Field Description** | Provide the directory path to the Allocation patch for the RMS Schema you want to install. The installer runs only the patch you provide. The Alloc_RMS controller is used to apply the necessary Allocation patches to the RMS schema<br>**Note:** The directory you choose must contain an alloc_rms_controller.ksh file. |
| **Example** | /path/to/rms/dbschemapatch/mom-dbpatch for all 13.0.x patches<br>**Note:** The patch option is intended for patches starting with 13.0.3.1. |

**Screen: Continue Allocation DB Patch**



**Fields on this Screen:**

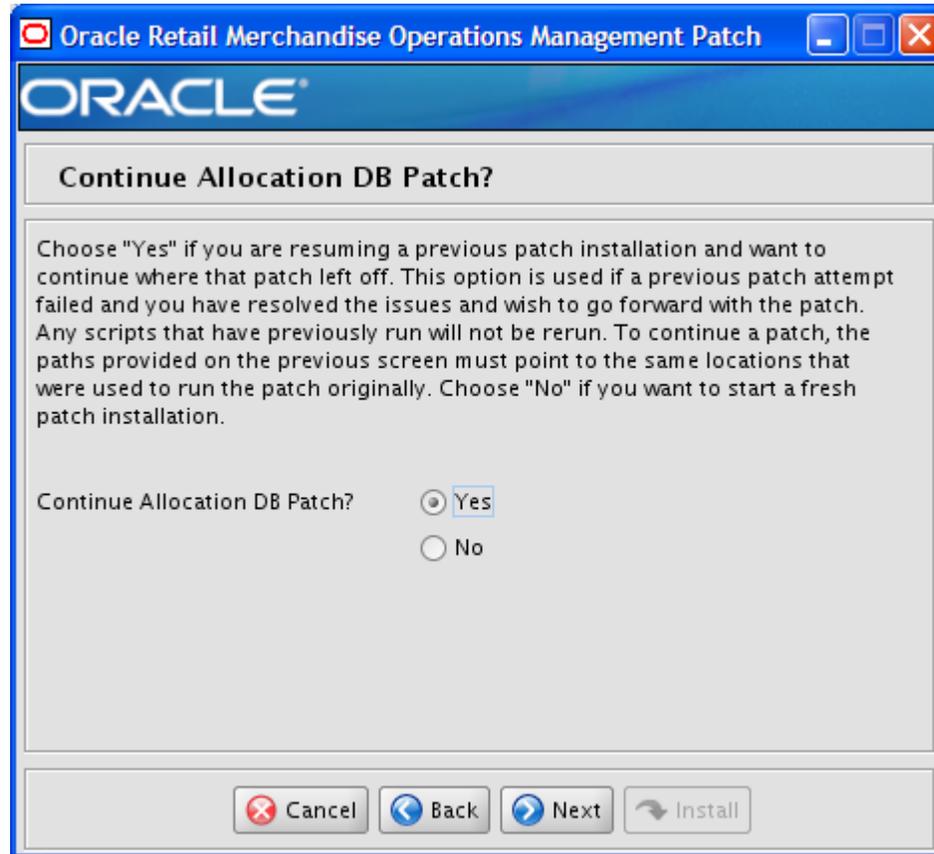| | |
|---|---|
| **Field Title** | Continue Allocation DB Patch? |
| **Field Description** | The patch process allows you to continue a previously run patch if it stopped before completion or failed. If "Yes" is selected, any scripts that were previously run for the Allocation patch in the Allocation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

# Appendix: RMS Batch Installer Screens

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

### 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** | mydb |

## 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 |

# C
# Appendix: RMS Application Installer Screens

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

## 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** | RMSUSER |

| | |
|---|---|
| **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** | mydb |

### 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.<br><br>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 E for more information. |
| **Example** | Base |

### 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.<br>You should choose to uncheck this and not install OCM for this patch, |
| **Example** | Checked/False |

# D

# 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: 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.
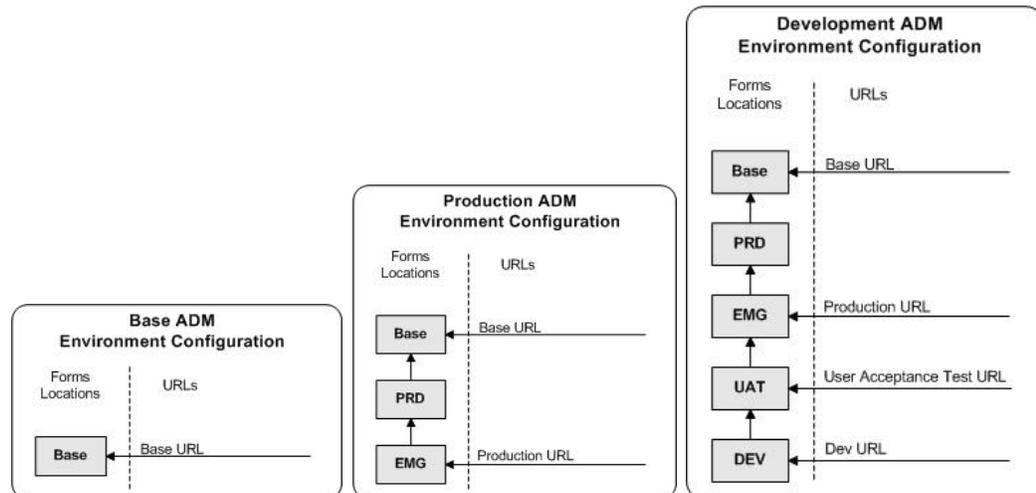


The above diagrams show how the application deployment method environment configurations are set up in the forms installation.

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: 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 1.4.2 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.

## ConcurrentModificationException in Installer GUI

**Symptom:**

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

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

**Solution:**

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

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

**Symptom:**

When running the application installer you get the following error:

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

FRM-30085: Unable to adjust form for output.

Form not created
```

**Solution:**

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

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

**Symptom:**

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

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

**Solution:**

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

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

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

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

**Symptom:**

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

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

**Solution:**

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

Example:

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

# RIB Errors

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

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

1. Bringing down the RIB OAS in question
2. Running /RIB_INSTALL_DIR>/InstallAndCompileAllRibOracleObjects.sql
3. Running another object validate script (ex: inv_obj_comp.sql) to make sure objects are valid (some may have 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 DB_PATCH_DIR/rms/dbschemapatch/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.

# G

# 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 Metalink document number 244526.1.

# 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 DBNAME=int9i
export RMS_OWNER=RMS13DEV
export BA_OWNER=rmsint1012
```

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

# Appendix: AIX Shared Library Bug Fix

For AIX 10.2.0.4 onward, update the $ORACLE_HOME/rdbms/lib/env_rdbms.mk file
with the changes below (in Bold).

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: Transparent Data Encryption

Oracle Transparent Data Encryption encrypts sensitive data on disk, ensuring data protection at the operating system and backup level.

Use the following procedure to configure transparent data encryption for ReSA.

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=/u00/oracle/admin/dvsss03/wallet)))
```

2. Create the directory under /u00/oracle/admin/ dvsss03

```
mkdir –p /u00/oracle/admin/ dvsss03
```

3. Create wallet with below command

```
ALTER SYSTEM SET ENCRYPTION KEY IDENTIFIED BY <Password>;
```

4. Confirm that the wallet is created and check if the wallet is open.

   Example:

   SELECT * FROM V$ENCRYPTION_WALLET;

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

5. 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);
alter table SA_TRAN_TENDER_REV modify (CC_NO ENCRYPT);
alter table SA_ERROR modify (ORIG_CC_NO ENCRYPT);
alter table SA_ERROR_WKSHT modify (ORIG_CC_NO ENCRYPT);
alter table SA_ERROR_REV modify (ORIG_CC_NO ENCRYPT);
alter table SA_ERROR_TEMP modify (ORIG_CC_NO ENCRYPT);
```

6. Confirm the columns in the tables are added for encryption.

   Example:

   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 |

**7.** Edit the crt_wallet_prc.sql script and insert your wallet password where specified.

```
create or replace procedure open_wallet
as
wallet_open exception;
pragma exception_init(wallet_open,-28354);
v_stmt varchar2(100);
v_password varchar2(20);
begin
  -- edit the following line to store your secret wallet password
  v_password := '<insert your password here>';
  v_stmt :='ALTER SYSTEM SET WALLET OPEN IDENTIFIED BY  "'||v_password||'"';
  execute immediate v_stmt ;
 exception
  when wallet_open then
    null;
end;
/
```

**8.** Connect to the database as sysdba and create the procedure and trigger to automatically start the wallet every time database is restarted

**a.** Run crt_wallet_prc.sql to create the procedure.

**b.** Run crt_wallet_trg.sql to create the trigger.

**9.** Restart the database and verify the wallet is OPEN

```
SQL> shutdown immediate;
Database closed.
Database dismounted.
ORACLE instance shut down.
SQL> startup
ORACLE instance started.

Total System Global Area  838860800 bytes
Fixed Size                  2044296 bytes
Variable Size             243273336 bytes
Database Buffers          591396864 bytes
Redo Buffers                2146304 bytes
Database mounted.
Database opened.
SQL> SELECT * FROM V$ENCRYPTION_WALLET ;

WRL_TYPE    WRL_PARAMETER                                                STATUS
--------------------------------------------------------------------------------
-------------------------------
file                       /u00/oracle/admin/dvsss03/wallet
OPEN
```

# K

# Appendix: RMS Policies with Database Vault

RMS 13.0.4 supports enhanced data protection using Oracle Database Vault with Oracle Database 10g Release 2. It is important to install a dedicated RDBMS home for database with DV installed. Use the following procedures to install Oracle Database Vault and set up your RMS policies.

## Before Getting Started

- Make sure RMS 13.0.4 or higher is installed on a supported Oracle Database release
- Make sure the database has the Tablespace "TEMP" as a temporary Tablespace.

> **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 by replacing 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 do not 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 RMSl 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).

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)

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)

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)

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.

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

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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