

Oracle® Retail Warehouse Management System
Installation Guide
Release 13.0.1

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Contents

Preface	vii
Audience	vii
Related Documents.....	vii
Customer Support.....	vii
Review Patch Documentation.....	vii
Oracle Retail Documentation on the Oracle Technology Network.....	vii
Conventions.....	viii
1 Preinstallation Tasks.....	1
Check Database Server Requirements	1
Verify Single Sign-On.....	1
Check Application Server Requirements.....	2
Check Web Browser and Client Requirements.....	2
Handheld Requirements	2
Supported Oracle Retail Products	3
Create a UNIX User Account to Install the Software.....	3
Create Staging Directory for RWMS Database Files	3
Create Staging Directory for RWMS Application Server Files	3
2 Database Installation Tasks.....	5
Create the RWMS Database.....	5
Create the Database	5
Create the Tablespaces	6
Create the Schema Owner	6
Additional Grant for the Schema Owner	6
Create RIB Objects	6
Create RIB Tables and Types.....	7
Create RIB Objects	7
Create RWMS Objects	7
Create RWMS types.....	7
Create RWMS Tables.....	7
Create RWMS Triggers	7
Create RWMS Database Objects	7
Validate all Invalid Objects.....	8
Insert Data for RWMS	8
Update additional RWMS Database Objects.....	8
Update additional RWMS Database Objects.....	8
Update additional Data for RWMS	9
Validate all Invalid Objects.....	9
3 Application Server Installation Tasks.....	11
Compile RWMS Oracle Forms and Reports.....	11
Environment Variables	11

RWMS Forms Installation.....	12
Help Installation.....	13
Configure Oracle Application Server 10g for RWMS	14
Install Oracle Configuration Manager	21
A Appendix: Oracle 10G Database Creation Scripts	23
B Appendix: Tablespace Creation Script.....	27
C Appendix: Sample Oracle Net Files for the Server.....	29
listener.ora.....	29
tnsnames.ora.....	30
D Appendix: Installation Order	31

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 in the Oracle Retail Warehouse Management System Release 13.0.1 documentation set:

- Oracle Retail Warehouse Management System Release Notes
- Oracle Retail Warehouse Management System Online Help
- Oracle Retail Warehouse Management System Data Model
- Oracle Retail Warehouse Management System Radio Frequency User Guide
- Oracle Retail Warehouse Management System User Interface User Guide
- Oracle Retail Warehouse Management System Operations Guide

Customer Support

<https://metalink.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

For a base release (".0" release, such as 13.0), Oracle Retail strongly recommends that you read all patch documentation before you begin installation procedures. Patch documentation can contain critical information related to the base release, based on new information and code changes that have been made since the base release.

Oracle Retail Documentation on the Oracle Technology Network

In addition to being packaged with each product release (on the base or patch level), all Oracle Retail documentation is available on the following Web site:

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

Documentation should be available on this Web site within a month after a product release. Note that documentation is always available with the packaged code on the release date.

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.”

Note: This is a note. It is used to call out information that is important, but not necessarily part of the procedure.

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

A [hyperlink](#) appears like this.

Preinstallation Tasks

Check Database Server Requirements

General Requirements for a database server running RWMS include:

Supported on:	Versions Supported:
Database Server OS	<p>OS certified with Oracle Database Server 10g version 10.1.2.2. Options are:</p> <ul style="list-style-type: none"> ▪ Oracle Enterprise Linux 4.5 x86-64 ▪ Solaris 10 (SPARC) ▪ HP-UX 11.23 (Itanium) ▪ AIX 5.3
Database Server	<p>Oracle Database 10g Release 2 Enterprise Edition (minimum 10.2.0.3 patchset required) with the following patches and components:</p> <p>Patches:</p> <ul style="list-style-type: none"> ▪ 5397953 (ORA-07445: [KKPAPITGETALL()+2152] [SIGSEGV] [ADDRESS NOT MAPPED TO OBJECT] [0X34]) ▪ 5648872 (SCHEDULER ORA-07445 [OPIDSA()+321] WHEN SETTING UP CHAIN TEST) ▪ 5921386 (WRONG RESULT WITH MERGE JOINT OUTER IN THE EXECUTION PLAN) <p>RAC Only</p> <ul style="list-style-type: none"> ▪ 5721821 (ORA-7445[KGLOBCL] OCCURED AND INSTANCE WENT DOWN) <p>Components:</p> <ul style="list-style-type: none"> ▪ Oracle Database 10g ▪ Oracle Partitioning ▪ Oracle Net Services ▪ Oracle Call Interface (OCI) ▪ Oracle Programmer ▪ Oracle XML Development Kit <p>x-Windows interface</p>

Verify Single Sign-On

If a Single Sign-On is to be used, verify the Oracle Infrastructure Server 10g version 10.1.2.2 server has been installed. Verify the Mid-Tier server hosting Oracle Forms is registered with the Infrastructure Oracle Internet Directory.

Check Application Server Requirements

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

Supported on:	Versions Supported:
Application Server OS	OS certified with Oracle Application Server 10g version 10.1.2.2. Options are: <ul style="list-style-type: none"> ▪ Oracle Enterprise Linux 4.5 x86-64 ▪ Solaris 10 (SPARC) ▪ HP-UX 11.23 (Itanium) ▪ AIX 5.3
Application Server	Oracle Application Server Forms and Reports 10g version 10.1.2.2 Patches: <ul style="list-style-type: none"> ▪ 5861907 (IAS 10.1.2.2 PATCHSET UPDATES ORACLEHOMEPROPERTIES.XML WITH WRONG ARU_ID & ARU_I) ▪ 5632264 (NEED UPDATED TIMEZONE FILES (VERSION 4) FOR MORE DST RULE CHANGES)

Check Web Browser and Client Requirements

General requirements for client running RWMS 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	1.4.2_06+
Microsoft Internet Explorer	version 5.5, 6.0 and higher

Handheld Requirements

Windows CE 5.0 handhelds with the following screen sizes

- Hand held: 240 x 320
- Wrist mount: 320 x 240
- Truck mount – full screen: 800 x 600
- Truck mount – half screen: 800 x 320

Software Required on Handhelds

- Remote Desktop Client (aka Microsoft Terminal Services Client)
- DataWedge (software provided by and maintained by Motorola for use with the barcode scanners)

Supported Oracle Retail Products

Requirement	Version
Oracle Retail Merchandising System (RMS)	13.0.1
SIM	13.0.1

Create a UNIX User Account to Install the Software

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 RWMS software

Create Staging Directory for RWMS Database Files

1. Log into the UNIX server as oretail.
2. Create a staging directory for the RWMS database installation software. There should be a minimum of 100 MB disk space available in this location.
3. Copy the rwms13dbserver.zip file from the CD/dbserverunix directory to the staging directory. This is referred to as STAGING_DIR for the remainder of this installation guide.
4. Change directories to STAGING_DIR and extract the rwms13dbserver.zip file.

Create Staging Directory for RWMS Application Server Files

1. Log into the application server as the oretail user.
2. Create a staging directory for the RWMS application installation software. There should be a minimum of 500 MB disk space available in this location.
3. Copy the file rwms13appserver.zip from the CD/appserverunix directory to staging directory. This is referred to as STAGING_DIR when installing application software.
4. Change directories to STAGING_DIR and extract the file rms13appserver.zip.
5. Make sure all scripts in STAGING_DIR/forms_scripts have at least execute permissions for the oretail user and its group (r-xr-x---

Database Installation Tasks

Create the RWMS Database

It is assumed that Oracle Enterprise Edition 10g, with all appropriate patches, has already been installed. If not, refer to “*Check Database Server Requirements*” in Chapter 1, “Preinstallation Tasks” before proceeding. Additionally, *INSTALL_DIR* in this section refers to the directory created in “Create Staging Directory for RWMS Database Files”, Chapter 1.

If a database has already been created, it is necessary to review the contents of this section to determine if all database components have been installed and configured properly. Refer also to Appendix A: Oracle 10G Database Creation Scripts.

Create the Database

1. Login to UNIX as the Oracle user. Typically, this is the user that owns the Oracle RDBMS software.
2. Create the Oracle recommended OFA directory structure for the database (datafile directories, adump, bdump, cdump, arch, create, exp, pfile, udump, utl_file_dir)
3. Place an entry in the oratab file for the database and execute oraenv to set the ORACLE_SID and ORACLE_HOME environment variables.
4. Copy STAGING_DIR/create_db/initrwm.ora to the \$ORACLE_HOME/pfile directory and rename it to init\${ORACLE_SID}.ora. Modify the parameters according to guidelines specified in this file.
5. Create a symbolic link from \$ORACLE_HOME/pfile/init\${ORACLE_SID}.ora to \$ORACLE_HOME/dbs/init\${ORACLE_SID}.ora.
6. Modify the STAGING_DIR/create_db/crdb1.sql file. Refer to comments in this file regarding modifications that need to be made.
7. Login to SQL*Plus as SYSDBA and execute STAGING_DIR/create_db/crdb1.sql. Review crdb1.log for errors and correct as needed.
8. Login to SQL*Plus as SYSDBA and execute STAGING_DIR/create_db/crdb2.sql. Review crdb2.log for errors and correct as needed.
9. Login to SQL*Plus as SYSDBA and execute STAGING_DIR/create_db/crdb3.sql. Review JServer.log, context.log and xdb_protocol.log for errors and correct as needed.
10. Configure the listener.
11. Confirm that these RWMS required packages exist and are valid:
DBMS_SESSION, DBMS_RANDOM, DBMS_LOCK, DBMS_AQ, DBMS_AQADM, DBMS_ALERT,
DBMS_PIPE, and DBMS_JOB

Create the Tablespaces

1. The STAGING_DIR/create_db/create_rwms_tablespaces.sql script contains the DDL for creating the required tablespaces. This script should be modified as appropriate for the intended environment. Refer to Appendix B: Tablespace Creation Script.
2. Login to SQL*Plus as SYSDBA and execute STAGING_DIR/create_db/create_rwms_tablespaces.sql.
3. Review create_rwms_tablespaces.log for errors and correct as needed.

Create the Schema Owner

Create an Oracle schema that will own the RWMS application.

Note: There is a 10 character limit on the schema owner.

1. Change directories to STAGING_DIR/utility
2. The create_user script relies on the empty roles, developer and wms_user, being created. Log into sqlplus as system and run the following command to create that role.

```
SQL> create role developer;  
SQL> create role wms_user;
```
3. Enter the following command to create the schema owner.

```
SQL> @create_user.sql
```

 - The following prompts occur:
 - Schema Owner – the Oracle user that owns all RWMS objects. Referred to in this install guide as RWMS13DEV
 - Password – the password for RWMS13DEV
 - Temp Tablespace – the temporary tablespace for RWMS13DEV
4. Check the log file create_user.log for any errors. This log file should be removed to prevent the password from being compromised.

Additional Grant for the Schema Owner

1. Change directories to STAGING_DIR/utility.
2. The rwms_owner_grants script grants specific grants needed by the RWMS schema owner. Log into sqlplus as 'sys as sysdba' and run the following command:

```
SQL> @rwms_owner_grants.sql
```
3. There will be a prompt for the schema owner (example: RWMS13DEV)
4. Check for any errors.

Create RIB Objects

Note: When running the scripts in this section the following errors may be encountered "ORA-04043 object XXXX does not exist" and "Warning: Type created with compilation errors". These errors can be ignored. The ORA errors are caused by dropping the item the script is about to create and the warnings are caused by dependencies on objects that get created later. The warnings are cleared when objects are revalidated later in the install.

Create RIB Tables and Types

1. Change directories to STAGING_DIR/rib_objects/ddl.
2. Log into sqlplus as RWMS13DEV and run the following command:
SQL> @rib13ddl.sql
3. Check the log file rib13ddl.log for any errors noting that ORA-04043 errors and warnings are to be ignored.

Create RIB Objects

1. Change directories to STAGING_DIR/rib_objects/db_objects.
2. Log into sqlplus as RWMS13DEV and run the following command:
SQL> @InstallAndCompileAllRibOracleObjects.sql
3. Verify that there are no invalid objects.

Create RWMS Objects

NOTE: Use a valid utf setting for your NLS_LANG (ex. AMERICA_AMERICAN.UTF8)

Create RWMS types

1. Change directories to STAGING_DIR/types.
2. Log into sqlplus as RWMS13DEV and run the following command:
SQL> @rwms13type.sql
3. Check the log file rwms13type.log for any errors

Create RWMS Tables

The warnings are cleared when objects are revalidated later in the install.

1. Change directories to STAGING_DIR/ddl.
2. Log into sqlplus as RWMS13DEV and run the following command:
SQL> @rwms13.sql
3. Check the log file rwms13.log for any errors.

Create RWMS Triggers

1. Change directories to STAGING_DIR/triggers.
2. Log into sqlplus as RWMS13DEV and run the following command:
SQL> @rwms13trg.sql
3. Check the log file rwms13trg.log for any errors.

Create RWMS Database Objects

1. Change directories to STAGING_DIR/db_objects1.
2. Log into sqlplus as RWMS13DEV and run the following command:
SQL> @rwms13dbo.sql
3. Check the log file rwms13dbo.log for any errors.

Validate all Invalid Objects

Note: Deadlocked objects may appear when running this script. This is expected. Run the script until no invalid objects remain.

1. Change directories to STAGING_DIR/utility.
2. Log into sqlplus as RWMS13DEV and run the following command:
SQL> @inv_obj_comp.sql
3. This script may need to be run more than once.

Insert Data for RWMS

1. Change directories to STAGING_DIR/data1.
2. Log into sqlplus as RWMS13DEV and run the following command:
SQL> @create_base_data.sql
3. Check the log file rwms_base_data.log for any errors.

Update additional RWMS Database Objects

1. Change directories to the STAGING_DIR/dbcs.
2. Log on to SQL* Plus as RWMS13DEV, and run the following command:
SQL> @patch1301dbcs.sql
3. Check the log file patch1301dbcs.log for any errors.

Update additional RWMS Database Objects

1. Change directories to the STAGING_DIR/db_objects2.
2. Log on to SQL* Plus as RWMS13DEV, and run the following command:
SQL> @patch1301rwms.sql
3. Check the log file patch1301rwms.log for any errors.

Update additional Data for RWMS

1. Change directories to the STAGING_DIR/data2.
2. Log on to SQL*Plus as RWMS13DEV, and run the following command:
SQL> @patch1301ctl.sql
3. Check the log file patch1301ctl.log for any errors.

Validate all Invalid Objects

Note: Deadlocked objects may appear when running this script. Run the script until no more invalid objects remain.

1. Change directories to STAGING_DIR/utility.
2. Log on to SQL*Plus as RWMS13DEV, and run the following command:
SQL> @inv_obj_comp.sql
You may need to run this script more than once.

Application Server Installation Tasks

Note: STAGING_DIR is the directory where the RWMS files are extracted from its zip file.

INSTALL_DIR is where the application will be run from.

It is assumed that Oracle Application Server 10g version 10.1.2.2 (OAS) has already been installed. If not, refer to “*Check Application Server Requirements*” in Chapter 1, Preinstallation Tasks before proceeding.

Compile RWMS Oracle Forms and Reports

Environment Variables

Note: ORACLE_HOME is the location where Oracle Application Server 10g (10.1.2.2) has been installed

1. The Tk2Motif.rgb file that is sent out with Oracle Application Server 10g (10.1.2.2) must be modified. It located at the following location:

\$ORACLE_HOME/guicommon/tk/admin

Make a copy of the file ORACLE_HOME/guicommon/tk/admin/Tk2Motif.rgb, and name it Tk2Motif.rgb_ORIG (for example).

Modify the file Tk2Motif.rgb file so that it contains the following line:

```
Tk2Motif*fontMapCs: iso8859-2=UTF8
```

2. Logon to the application server as the oretail user,
3. Set the DISPLAY variable to the IP address plus “:0.0” (ie: 10.1.1.1:0.0) of the application server.
4. Set the following variables:
 - All OS Platforms
 - PATH=\$ORACLE_HOME/bin:\$ORACLE_HOME/opmn/bin:\$ORACLE_HOME/dcm/bin:INSTALL_DIR/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/rwms/forms/bin:\$ORACLE_HOME/forms
 - REPORTS_PATH=INSTALL_DIR/rwms/reports/bin:\$ORACLE_HOME/forms
 - TK_UNKNOWN=\$ORACLE_HOME/guicommon/tk/admin
 - UP=<RWMS schema owner>/<RWMS schema password>@<RWMS database>

Note: Verify that TNS is set up correctly by using the UP variable to successfully log into the RWMS 13 schema.

Example: /u00/oracle> sqlplus \$UP

Default Directory Structure

1. Copy all the files and directories from STAGING_DIR to INSTALL_DIR
From the INSTALL_DIR:

```
>cp -R STAGING_DIR/* .
```
2. Assuming the RWMS default directory structure is going to be used, the following directories need to be created as follows if they do not already exist:
 - a. INSTALL_DIR/rwms (owner=rdmusr group=rdm permissions=775)
 - b. INSTALL_DIR/rwms/bin (owner=rdmusr group=rdm permissions=775)
 - c. INSTALL_DIR/rwms/reports (owner=rdmusr group=rdm permissions=775)
 - d. INSTALL_DIR/rwms/hostcomm/download (owner=rdmusr group=rdm permissions=775)
 - e. INSTALL_DIR/rwms/hostcomm/upload (owner=rdmusr group=rdm permissions=775)
 - f. INSTALL_DIR/rwms/hostcomm/sortation (owner=rdmusr group=rdm permissions=775)
 - g. INSTALL_DIR/rwms/bdump (owner=oracle group=dba permissions=775)
 - h. INSTALL_DIR/rwms/cdump (owner=oracle group=dba permissions=775)
 - i. INSTALL_DIR/rwms/create (owner=oracle group=dba permissions=775)
 - j. INSTALL_DIR/rwms/pfile (owner=oracle group=dba permissions=775)
 - k. INSTALL_DIR/rwms/udump (owner=oracle group=dba permissions=775)
 - l. INSTALL_DIR/rwms/extras (owner=oracle group=dba permissions=775)

RWMS Forms Installation

1. Copy all libraries (.pll files) from the INSTALL_DIR/rwms/forms/src directory to the INSTALL_DIR/rwms/forms/bin directory.
2. Change directories to INSTALL_DIR/rwms/forms/bin.
3. Run forms.pll.sh to compile all RWMS .pll's.
4. Check to make sure that each .pll file has a corresponding .plx (to ensure that all .pll's compiled successfully).

Note: message36.pll and stand36.pll do not create plx files.

5. Copy all forms (*.fmb files) from the INSTALL_DIR/rwms/forms/src directory to the INSTALL_DIR/rwms/forms/bin directory.
6. Run forms.fmb.sh to generate RWMS runtime forms – .fmx's.
7. Check to make sure that each form .fmb file has a corresponding .fmx file.

Note: gui_library.fmb does not create an fmx and does not compile.

8. Copy all menus (*.mmb files) from the `INSTALL_DIR/rwms/forms/src` directory to the `INSTALL_DIR/rwms/forms/bin` directory.
9. Run `menus.mmb.sh` to generate RWMS runtime menus (.mmx's).
10. Check to make sure that each .mmb file has a corresponding .mmx file.
11. Remove all .mmb files from `INSTALL_DIR/rwms/forms/bin`.

Reports (*.rdf)

1. Verify all *.rdf files are located in `INSTALL_DIR/rwms/reports/bin` directory.
2. Copy `label.prt` from `INSTALL_DIR/rwms/reports/bin` to `INSTALL_DIR/rwms/extras`.

Help Installation

RWMS 13 Web Help gets installed in an OC4J instance running under OAS. Since the RWMS application runs on 10.1.2 OAS the help is in the same Oracle Application Server.

If you know the Enterprise Manager address, skip this step.

To find the Enterprise Manager you need the server name and the HTTP port.

1. Once you have the server name, go to the `ORACLE_HOME/Apache/Apache/conf` directory.
2. In the file `httpd.conf`, search for "Port". Note the port number being used.
3. Using a web browser, type in the address `http://<server>:<port>`.
Substitute valid values for `<server>` and `<port>`.
4. The browser should display the OAS Welcome page.
5. Towards the lower right, there is a section called Oracle Application Server Logins. Click on the hyperlink "log on to Oracle Enterprise Manager 10g Application Server Control:"
6. Login using "ias_admin"
7. Select the appropriate standalone instance (OIDinfra is LDAP, Midtier is for forms, typically choose the Midtier)

If the instance for rwms help has been created and running, skip this step.

To create the instance for rwms help.

1. Click on Create OC4J Instance.
2. Enter "rwms_help_instance" (or other descriptive name) in the OC4J Instance Name box.
3. Click Create.
4. Click OK when complete.
5. Put a check in the box next to the rwms help instance.
6. Click Start to start the instance.

To deploy the rwms ear file.

1. Click on the rwms help instance.
2. Click on the Applications tab.
3. Click on Deploy EAR file.
4. For "J2EE Application" enter the location of the ear file or use the browse feature.
Note this is from the PC and not from the server.
5. Enter "rwms-help" for the Application Name.
6. Click Continue.

7. Enter “/rwms-help” for the Map to URL.
8. Click Finish.
9. Accept Defaults and click Deploy.

Configure Oracle Application Server 10g for RWMS

Note: The proper Oracle Application Server 10g (10.1.2.2) components must be started in order to run Oracle Forms applications.

Note: ORACLE_HOME refers to the location where Oracle Application Server 10g (10.1.2.2) Forms and Reports Services is installed.

Note: Prior to modifying Oracle Application Server 10g (10.1.2.2) Forms and Reports Services files, a backup of original files should be made.

1. Navigate to ORACLE_HOME/forms/admin/resource/US/ and copy the fmrweb.res file to a location that can easily be referenced from the location of the formsweb.cfg file.
2. Rename the fmrweb.res file. It is referred to as <key_mapping>.res file for the rest of this document.
3. Update the contents of the key_mapping.res file as specified below. Please note in a future step the <key_mapping>.res will be specified in the formsweb.cfg for all three RF devices and are accessed by the otherparams variable. The URL for the non RF portion of the application should not specify a key mapping file. The location of the <key_mapping>.res file must be specified by the otherparams variable in the formswebcfg file in order for it to be utilized. In order for key mapping changes to take effect the application server should be stopped and then restarted again. Changes to the <key_mapping>.res are as follows

The key mapping file is not capable of allowing users to utilize the function keys by pressing the actual function keys on the devices due to the interface layer of the remote desktop session. Instead users must press a combination of keys such as *ctrl+number* to access a function key. Below the key mapping file is for setting up the RF devices to require users to press *ctrl+number* in order to access the function keys. The combination of *key+#* can be changed to something other than what is provided below depending upon user preference and device limitations. The key for mapping keys is specified in the fmrweb.res file under the JAVA MODIFIERS NUMBERS. (In there the “0” states “None” but it actually is used for “ESC”.)

Replace the entire mappings section with the following:

```

9      : 0 : "Tab"           : 1 : "Next Field"
9      : 1 : "Shift+Tab"      : 2 : "Previous Field"
85     : 2 : "Ctrl+U"           : 3 : "Clear Field"
38     : 0 : "Up"                : 6 : "Up"
80     : 2 : "Ctrl+P"           : 6 : "Up"
40     : 0 : "Down"              : 7 : "Down"
76     : 2 : "Ctrl+L"           : 7 : "Down"
33     : 0 : "PageUp"           : 12 : "Scroll Up"
34     : 0 : "PageDown"         : 13 : "Scroll Down"
69     : 2 : "Ctrl+E"           : 22 : "Edit"
10     : 0 : "Return"           : 27 : "Return"
81     : 2 : "Ctrl+Q"           : 32 : "Exit"
112    : 2 : "Ctrl+k"           : 35 : "Show Keys"

```

```

49 : 2 : "Ctrl+1"      : 83 : "F1"
50 : 2 : "Ctrl+2"      : 84 : "F2"
51 : 2 : "Ctrl+3"      : 85 : "F3"
52 : 2 : "Ctrl+4"      : 86 : "F4"
53 : 2 : "Ctrl+5"      : 87 : "F5"
54 : 2 : "Ctrl+6"      : 88 : "F6"
55 : 2 : "Ctrl+7"      : 89 : "F7"
56 : 2 : "Ctrl+8"      : 90 : "F8"
57 : 2 : "Ctrl+9"      : 91 : "F9"
27 : 0 : "Esc"          : 82 : "F10"
86 : 1 : "Shift+V"      : 29 : "List of Values"

```

4. Update the ORACLE_HOME/Apache/Apache/conf/httpd.conf file by adding a listener for the port that your URL's will be accessing the environment through. Then list out the values for the alias's that the environment needs. Listed below is an example of what this should look like. The rwms_reptemp alias needs to match the value of REPORTS_TEMP that is set up in the .env file. All of these Alias's are referenced by the application and should not be renamed. Also the modules needed for launching and closing the RF devices need to exist in the path of the alias for rf_launch_value. The alias <icon_path> is dependent on the value for default.icons.iconpath=/<icon_path>/ in the ORACLE_HOME/forms/java/oracle/forms/registry/registry.dat file.

Listen 7878

```

<VirtualHost *:7878>
    ServerName <SERVER_NAME>
    ServerAlias <ServerName>.*
    DocumentRoot "<ORACLE_HOME>/Apache/Apache/htdocs"
    Alias /web_html/ "INSTALL_DIR/web_html/"
    Alias /<icon_path>/ "INSTALL_DIR/gif/"
    Alias /temp/ "INSTALL_DIR/temp/"
    Alias /rwms_reptemp/ "INSTALL_DIR/reptemp/"
    Alias /rf_launch_value/ "INSTALL_DIR/rf_launch/"
</VirtualHost>

```

5. Make a copy of the file ORACLE_HOME/forms/server/default.env and name it rwms.env (for example).
6. Modify the new file rwms.env by appending the location of the RWMS forms modules to the FORMS_PATH variable setting, and by adding the NLS_DATE_FORMAT and NLS_LANG variables to the end of this file. Additionally, the variable FORMS_REJECT_GO_DISABLED_ITEM=FALSE must also be added to rwms.env due to changes between Oracle Forms 6i and Oracle Forms 10g. Below are environmental specific values that need to be set. This file is referenced in the formsweb.cfg file for each URL specified by the envfile value. The REPORTS_TEMP value must match the value for the alias rwms_reptemp that is set in the httpd.conf file. The ORACLE_RWMS_REPORTS_SERVER needs to have a value that has to be the same as the name of environments intended reports .conf file. This file needs to be placed in the location specified in the formsweb.cfg file in order for it to be utilized.

Example:

```

FORMS_PATH=INSTALL_DIR/forms/bin:$ORACLE_HOME/forms
ORACLE_RWMS_REPORTS_HOST=http://<server_name>:7878/

```

```

ORACLE_RWMS_RWSERVER=reports/rwservlet

```

```
ORACLE_RWMS_REPORTS_SERVER=<report_server>+en  
vid=<rwms>  
  
REPORTS_TEMP=INSTALL_DIR/rwms/reptemp  
REPORTS_PATH=INSTALL_DIR/rwms/reports/bin:$ORACLE_HOME/forms  
  
ORACLE_RWMS_EXTRAS_PATH=INSTALL_DIR/rwms/extras  
NLS_DATE_FORMAT=DD-MON-RR  
NLS_LANG=AMERICAN_AMERICA.UTF8  
  
FORMS_REJECT_GO_DISABLED_ITEM=FALSE
```

7. Make an entry in the file ORACLE_HOME/network/admin/tnsnames.ora for the Oracle 10g database that was created in Chapter 2 (where the RWMS 13 schema resides). Appendix C: Sample Oracle Net Files for the Server contains a sample tnsnames.ora file entry for an Oracle 10g database; refer to the sample or following example for a proper entry in file ORACLE_HOME/network/admin/tnsnames.ora.
8. Modify the file formsweb.cfg located at ORACLE_HOME/forms/server. Create the RWMS environment section at the end of this file. Brackets ([] in the example below) distinguish a separate environment in this file. Variables to be set in the RWMS environment section of formsweb.cfg are: envfile (from step 2 above); width, height, and separateFrame applet parameters; and starting form for the RWMS application. There are a total of four environments that need to be created in the formsweb.cfg:
 - rwms
 - rwms_hh
 - rwms_tm
 - rwms_wr

Each URL has a separate launch form. The Hand Held, Wrist Mount and Truck Mount URLs have separate resource files. The resource files setup key mappings for each device to interact properly with RWMS. Each resource file needs to be created by copying the text for the specific resource file to a file and saving it.

When updating the formsweb.cfg to create the URLs, modify the variables below. All other variables need to be set as they are in the samples below:

- **userid** – The connection string intended for the applications to access
- **envfile** – Has to match the location of the environment file intended to be used
- **otherparams** – Has to match the location of the key mapping file intended to be used for the device. It also has a variable called usesdi that needs to be set YES in order to remove the title bar from the RF screens. NOTE: The GUI portion of the application will not set this and will use system defaults

GUI Example:

```
[rwms]  
  
envfile=$ORACLE_HOME/forms/server/rwms.env  
width=950  
height=685  
form=logon_scr.fmx
```

```

separateFrame=true
lookAndFeel=Oracle
colorScheme=swan
userid=rwms13dev/password@oracle_sid

```

Handheld Example:

[rwms_hh]

```

envfile=$ORACLE_HOME/forms/server/rwms.env
width=100%
height=100%
form=hh_intro_s.fmx
separateFrame=false
lookAndFeel=Oracle
colorScheme=swan
Logo=false
background=false
ShowMenuBar=false
ShowStatusBar=false
baseHTMLjinitiator=basejini.htm
baseHTML=base.htm
otherparams=term=$ORACLE_HOME/forms/server/key_mapping.res usesdi=YES
splashScreen=false
HTMLbodyAttrs=scroll="no" topmargin="0"
leftmargin="0" marginheight="0" marginwidth="0"
onload="window.moveTo(0,0);"
userid=rwms13dev/password@oracle_sid

```

Truck Mount Example:

[rwms_tm]

```

envfile=$ORACLE_HOME/forms/server/rwms.env
width=100%
height=100%
form=tm_intro_s.fmx
separateFrame=false
lookAndFeel=Oracle

```

```
colorScheme=swan
Logo=false
background=false
ShowMenuBar=false
ShowStatusBar=false
baseHTMLjinitiator=basejini.htm
baseHTML=base.htm
otherparams=term=$ORACLE_HOME/forms/server/k
eymapping.res usesdi=YES
splashScreen=false
HTMLbodyAttrs=scroll="no" topmargin="0"
leftmargin="0" marginheight="0" marginwidth="0"
onload="window.moveTo(0,0);"
userid=rwms13dev/password@oracle_sid
```

Wrist Mount Example:

```
[rwms_wr]
envfile=$ORACLE_HOME/forms/server/rwms.env
width=100%
height=100%
form=wr_intro_s.fmx
separateFrame=false
lookAndFeel=Oracle
colorScheme=swan
Logo=false
background=false
ShowMenuBar=false
ShowStatusBar=false
baseHTMLjinitiator=basejini.htm
baseHTML=base.htm
otherparams=term=$ORACLE_HOME/forms/server/k
eymapping.res usesdi=YES
splashScreen=false
HTMLbodyAttrs=scroll="no" topmargin="0"
leftmargin="0" marginheight="0" marginwidth="0"
onload="window.moveTo(0,0);"
userid=rwms13dev/password@oracle_sid
```

If Oracle Single Sign-On is to be used with RWMS, then

- Set ssoMode to true.
- If Resource Access Descriptors are allowed to be dynamically created, then set ssoDynamicResourceCreate to true.

Example: [rwms]

```
envfile=$ORACLE_HOME/forms/server/rwms.env
width=950
height=685
form=logon_scr.fmx
separateFrame=true
lookAndFeel=Oracle
colorScheme=swan
userid=rwms13dev/password@oracle_sid
ssoMode=true
ssoDynamicResourceCreate=true
```

9. Create a reports .conf file called rwms_reports_server.conf based on the <default_report_server>.conf file located in the following directory: ORACLE_HOME/reports/conf/. This file is used to set the REPORTS_PATH and NLS_LANG environment variables. In this file create the environment specific information listed below for the rwms environment. Multiple environments can access this .conf file to set specific settings for their reports. To do this – the .env files from the different environments have to reference the same reports .conf file and specify their own envid value.


```
<environment id="rwms">
  <envVariable name="REPORTS_PATH"
value="/projects/rwms13.0/dev/reports/user1:/projects/rwms13.0/dev/reports/bin
:/u00/webadmin/product/10.1.2.0.2_FULL/midtier/reports"/>
  <envVariable name="NLS_LANG" value="AMERICAN_AMERICA.UTF8"/>
</environment>
```
10. The close.htm, oracle_logo.jpg, and rwms_rf_menu.htm all need to be placed in the location specified by the rf_launch_value alias in the httpd.conf. The rwms_rf_menu.htm then needs to be configured to point to launch the correct URL's based on the names of the URL's in the formsweb.cfg file, and the port specified in the httpd.conf file. The variables that need to be changed are listed below.


```
var hh_device = "http://<Server_Name>:<port>/forms/frmservlet?config=rwms_hh";
var tm_device = "http://<Server_Name>:<port>/forms/frmservlet?config=rwms_tm";
var wr_device = "http://<Server_Name>:<port>/forms/frmservlet?config=rwms_wr";
var exit_script =
"http://<Server_Name>:<port>/rf_launch_value/close.htm";
```
11. Restart the Oracle HTTP Server through Oracle Enterprise Manager (OEM) for the new listener settings to take effect. The OEM URL was presented in the End of Installation window at the conclusion of the Oracle AS 10gR2 Forms and Reports Services installation. The default OEM URL should be http://server:1810.
12. Load RWMS in Forms 10gR2 mode by entering the following URL in a browser. Prior to testing, the Sun JRE 1.4.1+ plug-in needs to be installed on the client machine. The plug-in can be downloaded from http://java.sun.com/.
 - http://<server>:<port>/forms/frmservlet?config=<env>

- server = name or IP address of server where Oracle AS 10gR2 is running
- port = Value of the "Listen" setting in AS10G_ORACLE_HOME/Apache/Apache/conf httpd.conf (default value is 7778)
- env = name of the environment in brackets in formsweb.cfg (from step 7 above).

Example:

<http://server:7778/forms/frmservlet?config=rwms>

Note: The first time RWMS is accessed, the user will be prompted with the following security warning. Click Yes.



13. On the RWMS logon form, enter the appropriate Username/Password@Connect String information in the corresponding fields:
- Username = RWMS Schema Owner or additional Oracle user created
 - Password = Username password
 - Connect String = Oracle database created in Ch. 1

Example: Username: RWMS13DEV
Password: retek
Connect String: prod_db1

Install Oracle Configuration Manager

This Oracle Retail product has been instrumented for configuration discovery and collection by Oracle Configuration Manager (OCM). It is recommended that you take advantage of OCM in your environment. Please see MetaLink note 559539.1 for more information about OCM instrumentation in Oracle Retail products.

Installing OCM for RWMS:

1. Add this new RWMS application to the retail inventory:

Create or modify the

`$ORACLE_HOME/retail_inventory/oracle_retail_RWMSApp.properties` file. Add the following lines to this file, substituting where appropriate:

```
<IAS_name>.<RWMS_name>+RWMS_INSTALL_DATE=<yyyy-MM-dd
HH:mm:ss>
```

```
<IAS_name>.<RWMS_name>+RWMS_VERSION=13.0.0
```

Example:

```
OH101202_MIDTIER.mspdev69.rwms13inst1+RWMS_INST
ALL_DATE=2007-11-10 09:51:50
```

```
OH101202_MIDTIER.mspdev69.rwms13inst1+RWMS_VERS
ION=13.0.0
```

<IAS_name> refers to the name of the OAS 10.1.2.x application server. This name was set when the application server software was installed and can be found in the `$ORACLE_HOME/config/ias.properties` file in the `IASname` property.

<yyyy-MM-dd HH:mm:ss> refers to the date of RWMS installation. See example value above.

<RWMS_name> refers to a unique name to identify this RWMS forms installation. This is arbitrary and can be chosen at the time that this `oracle_retail_RWMSApp.properties` file is created.

Note: If there are multiple installations of RWMS using the same application server `ORACLE_HOME`, then there may be multiple sets of properties `oracle_retail_RWMSApp.properties` with different <RWMS_name> values.

The <IAS_name>.<RWMS_name> string used in this file becomes the OCM *target name* for this RWMS installation.

2. Determine whether or not the OCM collector has been installed in the application server `ORACLE_HOME`. Check for the existence of an `$ORACLE_HOME/ccr` directory containing the collector software. If there is already an OCM collector installed in this location then the rest of these steps can be skipped.
3. If there is not yet an OCM collector installed in the application server `ORACLE_HOME`, the Retail OCM Installer should be used to install it. Use the `retail-OCM-withAnt.zip` file included with the RWMS release and follow the instructions in Metalink Note 559539.1 to run the Retail OCM Installer independently.

Appendix: Oracle 10G Database Creation Scripts

```
#####
# Oracle 10.2.0.x Parameter file
#
# NOTES: Before using this script:
#   1. Change <datafile_path>, <admin_path>, <utl_file_path>, and <hostname>
#       values as appropriate.
#   2. Replace the word SID with the database name.
#   3. Size parameters as necessary for development, test, and production
#       environments.
# -----
# MAINTENANCE LOG
#
# Date      By          Parameter          Old/New          Notes
# +-----+ +-----+ +-----+ +-----+ +-----+
# 02/20/06 Oracle      NA                NA                creation
#
#####
# -----
# The following SGA parameters are CRITICAL to the performance of the
# database. The following settings are based on 1GB of allotted memory.
# The SGA is composed of:
#   db_cache_size, log_buffer, java_pool_size, large_pool_size, shared_pool_size
# -----
db_cache_size           = 256M
java_pool_size          = 150M          # 150M for initial db creation
log_buffer              = 10485760
shared_pool_size        = 350M          # 350M for initial db creation
shared_pool_reserved_size = 35M          # 10% of shared_pool_size
# -----
# The following parameters do not affect SGA size;
# -----
audit_file_dest          = <admin_path>/adump
background_dump_dest     = <admin_path>/bdump
compatible               = 10.2.0
control_files            = (<datafile_path>/control01.ctl
                          ,<datafile_path>/control02.ctl)
core_dump_dest           = <admin_path>/cdump
db_block_size            = 8192          # Default is 2k; adjust before
db creation, cannot change after db is created
db_file_multiblock_read_count = 16          # Platform specific (max io
size)/(block size)
db_name                  = SID
job_queue_processes      = 5            # Oracle Retail required;
number of cpu's + 1
local_listener           =
"(ADDRESS=(PROTOCOL=TCP)(HOST=<hostname>)(PORT=1521))"
nls_calendar             = GREGORIAN
nls_date_format          = DD-MON-RR   # Oracle Retail required; if
RDW database see later entry for proper format
nls_language             = AMERICAN    # Default
nls_numeric_characters   = "., "      # Should be explicitly set to
ensure all users/batch get the same results
```

```

nls_sort = BINARY # Should be explicitly set to
ensure all sessions get the same order
nls_territory = AMERICA # Default
open_cursors = 900 # Oracle Retail required
(minimum=900); default is 50
optimizer_features_enable = 10.2.0.1
optimizer_mode = CHOOSE # Oracle Retail required
pga_aggregate_target = 100M
plsql_optimize_level = 2 # 10g change; use this setting
to optimize plsql performance
plsql_debug = false # 10g change; use this setting
to optimize plsql performance
processes = 500 # Max number of OS processes
that can connect to the db
query_rewrite_enabled = TRUE # Oracle Retail required for
function-based indexes
session_cached_cursors = 900 # Oracle Retail required; 10g
uses to cache sql cursors in pl/sql
undo_management = AUTO
undo_retention = 1800 # Currently set for 30
minutes; set to avg length of transactions in sec
undo_tablespace = undo_ts
user_dump_dest = <admin_path>/udump
utl_file_dir = <utl_file_path>
workarea_size_policy = auto # Should be set to auto when
pga_aggregate_target is set

```

```

# *** Set these parameters for Oracle Retail Data Warehouse (RDW) database ***

```

```

#nls_date_format = DD-MON-RRRR # Required by
MicroStrategy
#query_rewrite_integrity = TRUSTED
#star_transformation_enabled = TRUE
#utl_file_dir = <Windows_utl_file_path>,
<UNIX_util_file_path>

```

```

# *** Archive Logging, set if needed ***

```

```

#log_archive_dest_1 = 'location=<admin_path>/arch/'
#log_archive_format = SIDarch_%r_%s%.log
#log_archive_max_processes = 1 # Default:1
#log_archive_min_succeed_dest = 1 # Default:1
#log_buffer = 262144 # Set to (512K or 128K)*CPUs
#log_checkpoint_interval = 51200 # Default:0 - unlimited
#log_checkpoint_timeout = 7200 # Default:1800 seconds

```

```

-----
--- Script: crdbl.sql
--- Execute as: sysdba
--- Note: Before running this script:
---         Modify <datafile_path> values.
---         Modify SID values.
---         Adjust sizes for redo logs, datafiles and tempfile
-----

```

```

spool crdbl.log
STARTUP NOMOUNT pfile=${ORACLE_HOME}/dbs/initSID.ora
CREATE DATABASE "SID"
        MAXDATAFILES 1000
        CHARACTER SET UTF8
        DATAFILE
            '<datafile_path>/system01.dbf' SIZE 500M AUTOEXTEND ON NEXT 100M MAXSIZE
2000M
        LOGFILE
            GROUP 1 ('<datafile_path>/redo1a.log') SIZE 1000M,
            GROUP 2 ('<datafile_path>/redo2a.log') SIZE 1000M,

```

```

GROUP 3 ('<datafile_path>/redo3a.log') SIZE 1000M
DEFAULT TEMPORARY TABLESPACE temp TEMPFILE '<datafile_path>/temp01.dbf' SIZE 5000M
EXTENT MANAGEMENT LOCAL UNIFORM SIZE 1M
UNDO TABLESPACE undo_ts DATAFILE '<datafile_path>/undo_ts01.dbf' SIZE 5000M
SYSAUX DATAFILE '<datafile_path>/sysaux01.dbf' SIZE 500M AUTOEXTEND ON NEXT 100M
MAXSIZE 2000M
;
exit
spool off

```

```

-----
---
--- Script:          crdb2.sql
--- Execute as:     sysdba in 10.1.0.2 databases or higher
--- Note:          This script installs the data dictionary views in addition to
---                granting necessary privileges to public.
-----

```

```

---
spool crdb2.log
REM # install data dictionary views:
PROMPT Running catalog.sql
@$ORACLE_HOME/rdbms/admin/catalog.sql;
PROMPT Running catblock.sql
@$ORACLE_HOME/rdbms/admin/catblock.sql;
PROMPT Running catproc.sql
@$ORACLE_HOME/rdbms/admin/catproc.sql;
PROMPT Running catoctk.sql
@$ORACLE_HOME/rdbms/admin/catoctk.sql;
PROMPT Running catrep.sql
@$ORACLE_HOME/rdbms/admin/catrep.sql;
PROMPT Running owminst.plb
@$ORACLE_HOME/rdbms/admin/owminst.plb;

REM * These privs needed for users to run proper grant code when creating users.
grant select on dba_jobs to public with grant option;
grant select on dba_roles to public with grant option;
grant select on dba_role_privs to public with grant option;
grant execute on dbms_ols to public with grant option;
grant execute on dbms_alert to public;
grant select_catalog_role to public;
grant execute_catalog_role to public;
grant execute on dbms_lock to public;
grant execute on dbms_ols to public;
grant execute on dbms_crypto to public;
grant select on dba_sys_privs to public with grant option;

```

```

REM * query rewrite privilege needed to create function-based indexes
grant query rewrite to public;

```

```

REM * dbms_system is needed for tracing
grant execute on sys.dbms_system to public;

```

```

PROMPT Creating PLAN table owned by SYSTEM
@$ORACLE_HOME/rdbms/admin/utlxplan.sql

```

```

PROMPT Creating public synonym for the plan table
create public synonym PLAN_TABLE for SYSTEM.PLAN_TABLE;

```

```

connect SYSTEM/manager
@$ORACLE_HOME/sqlplus/admin/pupbld.sql;
@$ORACLE_HOME/sqlplus/admin/help/hlpbld.sql helpus.sql;

```

```
spool off
exit
```

```
-----
---
--- Script:          crdb3.sql
--- Execute as:     sysdba in 10.1.0.2 databases or higher
--- Note:           This script installs java and xml components;
---                Do not change the order of the statements below due to
dependencies
-----
```

```
---
spool JServer.log
@$ORACLE_HOME/javavm/install/initjvm.sql;
@$ORACLE_HOME/xdk/admin/initxml.sql;
@$ORACLE_HOME/xdk/admin/xmlja.sql;
@$ORACLE_HOME/rdbms/admin/catjava.sql;
@$ORACLE_HOME/rdbms/admin/catexf.sql;
spool off
```

```
spool context.log
@$ORACLE_HOME/ctx/admin/catctx change_on_install SYSAUX TEMP NOLOCK;
connect CTXSYS/change_on_install
@$ORACLE_HOME/ctx/admin/defaults/dr0defin.sql AMERICAN;
spool off
```

```
spool xdb_protocol.log
connect / as sysdba
@$ORACLE_HOME/rdbms/admin/catqm.sql change_on_install SYSAUX TEMP;
spool off
```

```
@$ORACLE_HOME/rdbms/admin/utltp.sql
```

Appendix: Tablespace Creation Script

```

-----
---
--- Script:    create_rwms_tablespace.sql
--- Execute as: sysdba
--- Note:     Before running this script:
---           Modify <datafile_path> values.
---           Modify datafile storage parameters and sizes.
-----
spool create_rwms_tablespace.log

CREATE TABLESPACE DATA_SMALL
DATAFILE '<datafile_path>/data_small_01.dbf' SIZE 15M AUTOEXTEND ON MAXSIZE 2000M
EXTENT MANAGEMENT LOCAL UNIFORM SIZE 128K
SEGMENT SPACE MANAGEMENT AUTO
;
CREATE TABLESPACE INDEX_SMALL
DATAFILE '<datafile_path>/index_small_01.dbf' SIZE 15M AUTOEXTEND ON MAXSIZE 2000M
EXTENT MANAGEMENT LOCAL UNIFORM SIZE 128K
SEGMENT SPACE MANAGEMENT AUTO
;
CREATE TABLESPACE DATA_MEDIUM
DATAFILE '<datafile_path>/data_medium_01.dbf' SIZE 40M AUTOEXTEND ON MAXSIZE 2000M
EXTENT MANAGEMENT LOCAL UNIFORM SIZE 4M
SEGMENT SPACE MANAGEMENT AUTO
;
CREATE TABLESPACE INDEX_MEDIUM
DATAFILE '<datafile_path>/index_medium_01.dbf' SIZE 40M AUTOEXTEND ON MAXSIZE
2000M
EXTENT MANAGEMENT LOCAL UNIFORM SIZE 4M
SEGMENT SPACE MANAGEMENT AUTO
;
CREATE TABLESPACE DATA_LARGE
DATAFILE '<datafile_path>/data_large_01.dbf' SIZE 32792K AUTOEXTEND ON MAXSIZE
2000M,
       '<datafile_path>/data_large_02.dbf' SIZE 32792K AUTOEXTEND ON MAXSIZE 2000M
EXTENT MANAGEMENT LOCAL UNIFORM SIZE 32M
SEGMENT SPACE MANAGEMENT AUTO
;
CREATE TABLESPACE INDEX_LARGE
DATAFILE '<datafile_path>/index_large_01.dbf' SIZE 32792K AUTOEXTEND ON MAXSIZE
2000M,
       '<datafile_path>/index_large_02.dbf' SIZE 32792K AUTOEXTEND ON MAXSIZE 2000M
EXTENT MANAGEMENT LOCAL UNIFORM SIZE 32M
SEGMENT SPACE MANAGEMENT AUTO
;
CREATE TABLESPACE RETEK_INDEX
DATAFILE '<datafile_path>/retek_index01.dbf' SIZE 500M
AUTOEXTEND ON NEXT 500M MAXSIZE 2000M
EXTENT MANAGEMENT LOCAL
SEGMENT SPACE MANAGEMENT MANUAL
;
CREATE TABLESPACE RETEK_DATA
DATAFILE '<datafile_path>/retek_data01.dbf' SIZE 500M

```

```
AUTOEXTEND ON NEXT 500M MAXSIZE 2000M
EXTENT MANAGEMENT LOCAL
SEGMENT SPACE MANAGEMENT MANUAL
;
CREATE TABLESPACE LOB_DATA
DATAFILE '<datafile_path>/lob_data01.dbf' SIZE 50M
AUTOEXTEND ON NEXT 100M MAXSIZE 2000M
EXTENT MANAGEMENT LOCAL
SEGMENT SPACE MANAGEMENT MANUAL
;
```

Appendix: Sample Oracle Net Files for the Server

listener.ora

Below is a sample listener.ora file.

\$SID represents the name of the Oracle instance that contains the RWMS schema.

Note: This example illustrates the listener configuration required for external procedures. It does not include environment specific settings that may be needed. Consult Oracle Net Services guides for additional information.

```
#####
# File: listener.ora
# Desc: Oracle Net8 listener file.
# Notes: Modify <hostname>
#####

LISTENER =
  (DESCRIPTION_LIST =
    (DESCRIPTION =
      (PROTOCOL_STACK =
        (PRESENTATION = TTC)
        (SESSION = NS))
      (ADDRESS =
        (PROTOCOL = tcp)
        (HOST = <hostname>)
        (PORT = 1521))
      (ADDRESS =
        (PROTOCOL = IPC)
        (KEY = extproc_key))
    )
  )

SID_LIST_LISTENER =
  (SID_LIST =
    (SID_DESC =
      (PROGRAM = extproc)
      (SID_NAME = extproc_agent)
      (ENVS='EXTPROC_DLLS=ANY')
    )
    (SID_DESC =
      (SID_NAME = <$SID>)
      (ORACLE_HOME = <$ORACLE_HOME>)
    )
  )
)
```

tnsnames.ora

A tnsnames.ora file is required to connect to any Oracle database on your network. A sample tnsnames.ora is illustrated below. You need to modify it appropriately to your environment. The extproc_connection_data entry is required along with the LISTENER_EXTPROC entry in the listener.ora file to allow Oracle to access a UNIX shell library that is required by one of the stored procedures in the database.

retek01 specifies the name of the server where the listener is located.

RETEK specifies the name of the Oracle instance that contains the RWMS schema.

```
#####
# File: tnsnames.ora
# Desc: Oracle Net8 TNS Names file.
#####
RETEK =
  (DESCRIPTION =
    (ADDRESS = (PROTOCOL = TCP)(HOST = retek01)(PORT = 1521))
    (CONNECT_DATA = (SID = RETEK))
  )

RETEK.WORLD =
  (DESCRIPTION =
    (ADDRESS = (PROTOCOL = TCP)(HOST = retek01)(PORT = 1521))
    (CONNECT_DATA = (SID = RETEK))
  )

EXTPROC_CONNECTION_DATA =
  (DESCRIPTION =
    (ADDRESS = (PROTOCOL = IPC)(Key = extproc_key))
    (CONNECT_DATA = (SID = extproc_agent))
  )
```

Appendix: Installation Order

This section provides a guideline as to the order in which the Oracle Retail applications should be installed. If a retailer has chosen to use some, but not all, of the applications the order is still valid less the applications not being installed.

1. Oracle Retail Merchandising System (RMS), Oracle Retail Trade Management (RTM), Oracle Retail Sales Audit (ReSA)
2. Oracle Retail Service Layer (RSL)
3. Oracle Retail Extract, Transform, Load (RETL)
4. Oracle Retail Active Retail Intelligence (ARI)
5. Oracle Retail Warehouse Management System (RWMS)
6. Oracle Retail Allocation
7. Oracle Retail Invoice Matching (ReIM)
8. Oracle Retail Price Management (RPM)

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

9. Oracle Retail Central Office (ORCO)
10. Oracle Retail Back Office (ORBO) or Back Office with Labels and Tags (ORLAT)
11. Oracle Retail Store Inventory Management (SIM)

Note: During installation of SIM, you are asked for the AIP provider URL. Since AIP is installed after SIM, make a note of the URL you enter. If you need to change the AIP provider URL after you install AIP, you can do so by editing the `jndi_providers_ribclient.xml` file.

12. Oracle Retail Predictive Application Server (RPAS)
13. Oracle Retail Advanced Inventory Planning (AIP)
14. Oracle Retail Integration Bus (RIB)
15. Oracle Retail Point-of-Service (ORPOS)
16. Oracle Retail Mobile Point-of-Service (ORMPOS)
17. Oracle Retail Analytics Applications
18. Oracle Retail Data Warehouse (RDW)
19. Oracle Retail Workspace (ORW)