

Oracle® Retail Data Warehouse

Installation Guide

Release 13.1.5

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Oracle Retail Data Warehouse, Installation Guide, Release 13.1.5

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- 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?
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Preface

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

There are two ways a customer can be on RDW 13.1.5.

New RDW customers, who are installing RDW 13.1.5 for the first time, should follow the content of the RDW 13.1 Installation Guide.

If a customer is already on RDW 13.0.1, implementing the following two tasks will upgrade the product to RDW 13.1.5.

1. Upgrade to RDW 13.0.2 patch by following the *Oracle Retail Data Warehouse Installation Guide* for 13.0.2.
2. Refer to Chapter 7, “Upgrade RDW 13.0.2 to 13.1,” of the *Oracle Retail Data Warehouse Installation Guide* for how to upgrade from 13.0.2 to 13.1.

If a customer is already on RDW 13.0.2, applying Step 2 above upgrades the product to RDW 13.1.

Audience

This Installation Guide is written for the following audiences:

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

Related Documents

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

- *Oracle Retail Data Warehouse Data Model*
- *Oracle Retail Data Warehouse Release Notes*
- *Oracle Retail Merchandising Batch Schedule*
- Oracle Retail Extract, Transform, and Load documentation

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.”

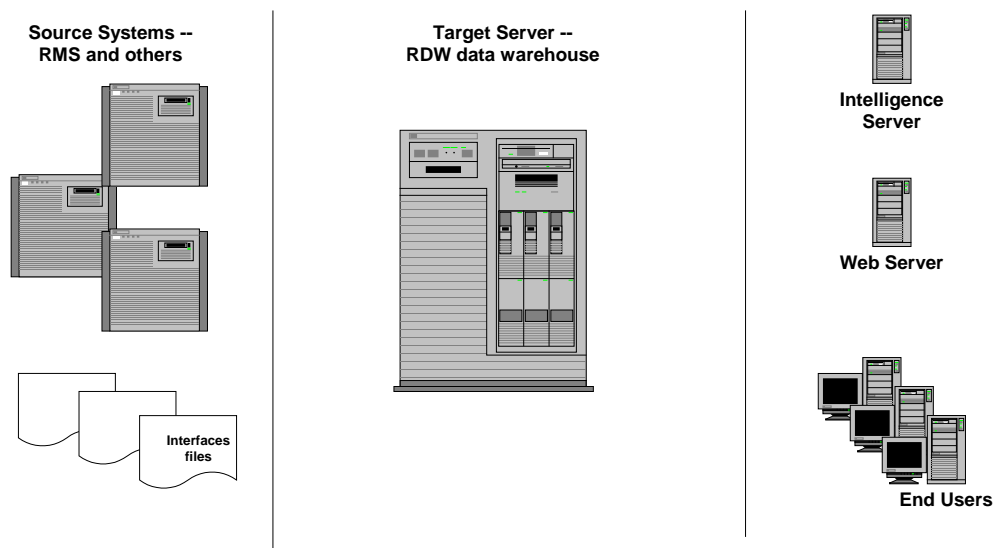
This is a code sample

It is used to display examples of code

Preinstallation Tasks

This release of RDW incorporates optional interfaces with these Oracle Retail products which can be sources for the data warehouse: Oracle Retail Merchandising System (RMS), Oracle Retail Invoice Matching (ReIM), and Oracle Retail Price Management (RPM). Additionally, the data warehouse can also operate as a standalone product and be fed from other legacy systems. If Oracle Retail applications are used as the source systems, follow the requirements in the installation guides for each of these applications. It is recommended that the source systems be on a separate server from the data warehouse which is considered the target server. Refer to Appendix A for more detailed information on RDW and database setup.

RDW Architecture on Oracle



Implementation Capacity Planning

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

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

- Workload and peak concurrent users and batch transactions
- Hardware configuration and parameters
- Amount of data
- Utilized features in the application
- Length of time history is retained

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

Check Supported Database Server Hardware Requirements

Hardware requirements for the data warehouse database server or target server include:

General Hardware Requirements	Minimum	Recommended
Memory	8GB	12GB+
Multi-processors	4 – highest MHz	8+ – highest MHz
CD-ROM drive (either local or network)		
Disk Space	300 GB	Site specific (refer to your RDW sizing information)
Swap Space	Equal to physical RAM	2.5 times the physical RAM

Note: This reflects the amount of space needed to install the database software, RETL software, as well as the RDW software, and still maintain an acceptable amount of usage on the UNIX file system. This may reflect external storage as well as internal, such as 50GB of internal space and a 250+ GB external RAID storage array.

Sizing Factors and other suggestions to factor into the selection of a data warehouse server include:

- Concurrent front-end user base. More concurrent users will require more database processing power from the server.
- DASD connectivity. Typically, it is better if the fiber channel connectivity to provide the maximum throughput to disk.
- Backup/Recovery requirements. Extra disks may be required for backup and recovery procedures.
- Server backplane speeds. Depending on the architecture of the server backplane (or comparable links), memory access and/or CPU utilization may be a factor in performance.
- Overall database size for the RDW. A capacity plan should be done for the database server and DASD requirements in general to assess how large the environment will need to be.

Note: These data warehouse server requirements should only be used as guidelines because they reflect the hardware used to run a small environment (approximately 200 gigabytes of data). Actual requirements can be somewhat smaller, or typically much larger, depending on the intended size of the RDW environment upon full implementation. Oracle can assist with making these determinations by providing information on database size estimates, server architecture, and so on.

Check Supported Database Server Requirements

General Requirements for a database server running RDW include:

Supported on:	Versions Supported:
Database Server OS	<p>OS certified with Oracle Database 11gR1 and 11gR2 (11.2.0.2) Enterprise Edition. Options are:</p> <ul style="list-style-type: none"> Oracle Enterprise Linux 5 Update 2 for x86-64 (actual hardware or Oracle virtual machine). Oracle Enterprise Linux 5 Update 5 for x86-64 (actual hardware or Oracle virtual machine). Red Hat Enterprise Linux 5 Update 2 (RHEL 5.2) for x86-64 (actual hardware or Oracle virtual machine). Red Hat Enterprise Linux 5 Update 5 (RHEL 5.5) for x86-64 (actual hardware or Oracle virtual machine). AIX 6.1 (actual hardware or LPARs) Solaris 10 Sparc (actual hardware or Oracle VM Server for SPARC). HP-UX 11.31 Integrity (actual hardware or HPVM)
Database Server	<p>Oracle Database Enterprise Edition 11gR1 with the following patches:</p> <ul style="list-style-type: none"> 6890831: 11.1.0.7 patch set. <p>One offs:</p> <ul style="list-style-type: none"> 7036284: LOADJAVA run in DV environment cannot load classes with a name longer than 28 characters. 7378322: ORA-00600: internal error code, arguments [6704], [1], [532241], [532237]. 6800649: (AIX only) When non Oracle user uses client utilities sqlldr/sqlplus/impdp/expdp, core dump is generated. Need to “relink all” after applying the patch. 7697360: (RAC only) ORA-00600: Internal error code, arguments [k2vcbk_6]. Database crashed during transaction recovery. 9969679: Merge request on top of 11.1.0.7.0 for defects 8596022 and 9582272. 6269507: After EXPDP and IMPDP the package name in the dba_source changes from lowercase. <p>Components:</p> <ul style="list-style-type: none"> Oracle Database 11g Oracle Partitioning Oracle Net Services Oracle Call Interface (OCI) Oracle Programmer Oracle XML Development Kit Examples CD (Formerly the companion CD) <p>Other components:</p> <ul style="list-style-type: none"> Perl compiler 5.0 or later X-Windows interface ANSI compliant C-compiler (certified with OS and database version).

Supported on:	Versions Supported:
Database Server	<p>Oracle Database 11g Release 2 (11.2.0.2) Enterprise Edition with the following one off patches:</p> <ul style="list-style-type: none">10170431: CTWR consumes a lot of CPU cycles. <p>If ASM is used, apply the following patch to RDBMS home.</p> <ul style="list-style-type: none">1180893: Merge request on top of 11.2.0.2.0 for defects 10410054 and 10422126. <p>Other components:</p> <ul style="list-style-type: none">Perl compiler 5.0 or laterX-Windows interfaceANSI compliant C-compiler (certified with OS and database version).

Verify Single Sign-On

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

Check Web Browser and Client Requirements

General requirements for client running RDW 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+
Browser	Microsoft Internet Explorer version 6.x or 7.x

Supported Oracle Retail Products

Requirement	Version
Oracle Retail Merchandising System (RMS)/Oracle Retail Oracle Retail Sales Audit (ReSA)	13.1.5
Oracle Retail Invoice Matching (ReIM)	13.1.5
Oracle Retail Price Management (RPM)	13.1.5

Supported Oracle Retail Integration Technologies

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

Additional Oracle Technologies

Integration Technology	Version
Oracle Business Intelligence Standard EditionOne	10.1.3.4.0
Oracle Business Intelligence Enterprise Edition	10.1.3.4.0

Create Staging Directory for RDW Patch Files

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

1. Log in to the database server as oretail.
2. Create a staging directory for the RDW patch software. There should be a minimum of 25 MB disk space available in this location.
3. Copy the rdw_1315.zip file from the RDW 13.1.5 release to the staging directory. This is referred to as STAGING_AREA when installing the patch. The installation directory, INSTALL_DIR, is the location of the latest RDW product (which is RDW 13.1.3, because there was no RDW 13.1.4 patch release).
4. Change directories to STAGING_AREA and extract the rdw_1315.zip file. This zip contains the following zip files:
 - rdw13.1.5-code.zip
 - rdw13.1.5-db.zip
 - rdw13.1.5-metadata.zip
5. Extract the zip files noted above before proceeding to the next chapter.

Database Schema Installation Tasks

It is assumed that Oracle 11g, with appropriate patches, has already been installed. If not, refer to Check Database Server Software Requirements in Chapter 1, “[Preinstallation Tasks](#),” before proceeding.

Before You Begin

Before you apply the RDW 13.1.5 patch, do the following.

- Make a backup of all your objects and database schema.
- Check that RDW 13.1.3, which is the latest patch release, is installed.
- Review the *Oracle Retail Data Warehouse Release Notes* (rdw-1315-rn.pdf).

Before copying over any files, do the following.

- Note whether customizations have been made to the module. If so, then the customizations must be reapplied over the new version of the module (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.

Update RDW Data

To update RDW data, do the following.

1. Change directories to STAGING_AREA/dbasql.
2. Log in to SQL*Plus as RDW13DM and run the following command:

```
SQL> @patch1315ctl.sql
```
3. Check the log file patch1315ctl.log for any errors.

Update RDW Language Data

To update RDW language data, do the following.

1. Change directories to STAGING_AREA/install.
2. Set the SQL*Plus session so that the encoding component of the NLS_LANG is UTF8. For example, AMERICAN_AMERICA.UTF8.
3. Log in to SQL*Plus as RDW13DM and run the following command:

```
SQL> @c11855111_supplier_parent_<lang>.sql
```

Where <lang> is the country code for the language you wish to install. The following are valid country codes:

- DE – German
- ES – Spanish
- FR – French
- IT – Italian
- JA – Japanese
- KO – Korean
- PT-BR – Brazilian Portuguese

- RU - Russian
- ZH – Simplified Chinese
- ZH-TW – Traditional Chinese

Update RETL Scripts

To update RETL scripts, do the following.

1. Change directories to STAGING_AREA/rfx/src.
2. Copy all the files from this directory to INSTALL_DIR/repl/rfx/src.

```
cp -R * INSTALL_DIR/repl/rfx/src
cp -R * INSTALL_DIR/repl/rfx/lib
```

Oracle BI Infrastructure Installation and Configuration Tasks

This chapter provides general installation instructions and recommended configuration considerations for Oracle Business Intelligence Enterprise Edition (BI EE).

Install Oracle Business Intelligence Enterprise Edition

For step-by-step instructions on how to install Oracle BI, see the Installing Oracle BI EE Infrastructure chapter of the *Oracle Business Intelligence Infrastructure Installation and Configuration Guide*.

Note: You must complete all the steps described in the [Database Schema Installation Tasks](#) chapter of this document before performing the following steps.

Install RDW 13.1.5 Repository and Verify Database Connection

Installing the RDW repository and setting up the database connection requires the following steps.

Install the Repository

To install the repository, do the following.

1. Stop the Oracle BI Server service.
Copy the Repository file (RDW.rpd) to the
<BI_INSTALL_DIRECTORY>/OracleBI/server/Repositorydirectory from
STAGING_AREA/rdw/rpd.
2. Verify or update the configuration file located at
<BI_INSTALL_DIRECTORY>/Oracle BI/server/Config/NQSConfig.INI. Add a
new line under the [REPOSITORY] section. For example:

```
[ REPOSITORY ]
Star = RDW.rpd, DEFAULT;
```
3. Other default repositories should be commented out in the NQSConfig.INI. For
example:

```
[ REPOSITORY ]
Star = RDW.rpd, DEFAULT;
#Star = Paint.rpd, DEFAULT;
```
4. Save and close NQSConfig.INI.
5. Start Oracle BI Server service.

Verify the Database Connection

Refer to the “Configuring Data Sources for Oracle Business Intelligence” chapter of the *Oracle Business Intelligence Infrastructure Installation and Configuration Guide* for additional details about the database connection.

1. Open RDW.rpd using the Oracle BI Server Administration tool.
2. In the Physical Layer, open the Connection Pool (RDW13) and specify the database name, user name, and password. Click **OK**.
3. Save the RDW.rpd file.
4. Test the Database connection by right clicking on any of the tables in the Physical Layer. Select View Data.

Appendix: RDW Code Tree

The following table describes the contents of each of the RDW code tree directories created during the RDW installation.

Path	Directory	Description
<base_directory>	dbasql	This directory contains all SQL scripts necessary to maintain the permissions for the database users.
<base_directory>	batch	Empty directory used for development and testing purposes only.
<base_directory>	data	This directory contains the text files that serve as the input to RDW RETL load modules. For users with Oracle Retail applications such as RMS, ReIM, etc, these text files can be generated in these source applications. The text files should be FTP from the source application to the RDW data directory. Directory is empty on installation.
<base_directory>	error	This directory holds all program error files, and status files. Directory is empty on installation.
<base_directory>	install	This directory contains all RETL modules and SQL scripts needed only at installation.
<base_directory>	log	This directory holds log files of program execution. Directory is empty on installation.
<base_directory>	rfx	This directory contains subdirectories for all the code and files related directly to RETL
<base_directory>/rfx	bookmark	This directory contains a file created during execution of each module to track the execution of the module. Files are deleted upon successful completion of module. Directory is empty on installation.
<base_directory>/rfx	etc	This directory contains files that hold variables used by RDW batch modules. The configuration file is found in this directory.
<base_directory>/rfx	include	This directory contains files that hold string language translations used by RDW batch modules.
<base_directory>/rfx	lib	This directory contains all RDW library code
<base_directory>/rfx	schema	This directory contains all RDW schema files used with each module.
<base_directory>/rfx	src	This directory contains RDW source code.

Appendix: 11gR2 Parameter File

The following parameter file is located at STAGING_AREA/create_db

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

```

plsql_optimize_level          = 2           # 10g change; use this setting
to optimize plsql performance
processes                     = 2000       # Max number of OS processes that can connect
to the db
query_rewrite_enabled         = TRUE       # Oracle Retail required for function-
based indexes
session_cached_cursors        = 900       # Oracle Retail required;
shared_pool_size              = <A minimum starting value >
shared_pool_reserved_size     = < 10% of the shared_pool_size >
undo_management                = AUTO
undo_retention                 = 1800      # Currently set for 30 minutes; set to avg
length of transactions in sec
undo_tablespace                = undo_ts
utl_file_dir                   = <utl_file_path>
workarea_size_policy           = auto      # Should be set to auto
when pga_aggregate_target is set
#
# *** Set these parameters for Oracle Retail Data Warehouse (RDW) database ***
#nls_date_format               = DD-MON-RRRR # Required by MicroStrategy
#query_rewrite_integrity       = TRUSTED
#star_transformation_enabled   = TRUE
#utl_file_dir                   = <Windows_utl_file_path>,
<UNIX_util_file_path>
#
# *** Archive Logging, set if needed ***
#log_archive_dest_1             = 'location=<admin_path>/arch/'
#log_archive_format             = SIDarch_%r_%s_%t.log
#log_buffer                     = 10485760 # Set to (512K or 128K)*CPUs
#log_checkpoint_interval        = 51200    # Default:0 - unlimited
#log_checkpoint_timeout         = 7200     # Default:1800 seconds

```

Appendix: Installation Order

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

Note: The installation order is not meant to imply integration between products.

Enterprise Installation Order

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

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

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

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

13. Oracle Retail Predictive Application Server (RPAS)
14. Oracle Retail Demand Forecasting (RDF)
15. Oracle Retail Category Management (CM)
16. Oracle Retail Replenishment Optimization (RO)
17. Oracle Retail Analytic Parameter Calculator Replenishment Optimization (APC RO)
18. Oracle Retail Regular Price Optimization (RPO)
19. Oracle Retail Merchandise Financial Planning (MFP)
20. Oracle Retail Size Profile Optimization (SPO)

21. Oracle Retail Assortment Planning (AP)
22. Oracle Retail Item Planning (IP)
23. Oracle Retail Item Planning configured for COE (IPCOE)
24. Oracle Retail Advanced Inventory Planning (AIP)
25. Oracle Retail Integration Bus (RIB)
26. Oracle Retail Point-of-Service (ORPOS)
27. Oracle Retail Analytics Applications
28. Oracle Retail Data Warehouse (RDW)
29. Oracle Retail Workspace (ORW)