Oracle® Retail Service Layer Installation Guide

Release 13.0.3

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Contents

Pr	eface	vii
	Audience	vii
	Related Documents	vii
	Customer Support	vii
	Review Patch Documentation	vii
	Oracle Retail Documentation on the Oracle Technology Network	viii
	Conventions	viii
1	Preinstallation Tasks	1
	Prerequisites	1
	Check Application Server Requirements	1
	Check Oracle Retail Software Dependencies	1
2	Application Installation	3
	Create a New OC4J Instance and Group for RSLfor <app></app>	3
	Expand the RSLfor <app> Distribution</app>	4
	Run the RSLfor <app> Installer</app>	4
	Resolving Errors Encountered During Application Installation	4
	Backups Created by Installer	4
Α	Appendix: RSLfor <app> Installer Screens</app>	5
	Retail Service Layer 13 Installer Screens and Details	5
В	Appendix: Installer Silent Mode	13
	Repeating the Installation Process	13
С	Appendix: Common Installation Errors	15
	Unreadable Buttons in the Installer	15
	"Unable to get a deployment manager" Message	15
	"Could not create system preferences directory" Warning	16
	ConcurrentModificationException in Installer GUI	16
	"Couldn't find X Input Context" Warnings	16
	Error While Unpacking the rsl-rms.ear File	17
D	Appendix: URL Reference	19
	JDBC URL for a Database	19
	JNDI Provider URL for an Application	19
	Deployer URI	20

Preface

The Oracle Retail Service Layer development team delivers RSL "applications" only for non-Java/Java EE service providers such as RMS (Oracle Forms based). Other implementations of RSL exist but are bundled within other Oracle Retail Java EE applications and are installed as part of those applications. Currently RSL provides an implementation for integrating applications to RMS. RPM is the only Oracle Retail Java EE application that provides an implementation of RSL integrated with their application.

An application-specific version of RSL in a Java EE environment is referred to as RSLfor<*App*> (for this release only RSLforRMS). This application is packaged as an EAR file that must be deployed in an application server. Currently, RSL applications have been certified to install and execute in Oracle Application Server 10g.

Audience

This manual is designed for System Administrators, Developers, and Applications Support personnel installing the RSL for <app> implementation provided by the RSL team.

Related Documents

For more information, see the following documents in the Oracle Retail Service Layer Release 13.0.3 documentation set:

Oracle Retail Service Layer Release Notes

Customer Support

To contact Oracle Customer Support, access My Oracle Support at the following URL: 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

If you are installing the application for the first time, you install either a base release (for example, 13.0) or a later patch release (for example, 13.0.3) If you are installing a software version other than the base release, be sure to read the documentation for each patch release (since the base release) before you begin installation. Patch documentation can contain critical information related to the base release 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 (with the exception of the Data Model which is only available with the release packaged code):

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

Prerequisites

Check Application Server Requirements

Supported on:	Versions Supported:	
Application Server OS	UNIX based OS certified with Oracle Application Server 10g 10.1.3.4.	
	 Oracle Enteprise Linux 4 Patch 5 for Linux x86-64 	
	Solaris 10 (SPARC)	
	 HP-UX 11.31 (Integrity) 	
	• AIX 5.3	
Application Server	Oracle Application Server 10g 10.1.3.4 with the following patches:	
	5632264 (NEED UPDATED TIMEZONE FILES (VERSION 4) FOR MORE DST RULE CHANGES)	

Note: This release of RSLfor<App> is only supported in a managed OC4J instance as part of Oracle AS 10g. It is not supported on OC4J standalone

Check Oracle Retail Software Dependencies

Service Providing Application (for example, RMS) must have all of the RSL components installed (such as stored procedures, tables, and Oracle Objects). Refer to that application's installation guide for specifics.

Supported Oracle Retail Products

Integrates with:	Version
Oracle Retail Allocation (Client)	13.0.3
Oracle Retail Store Inventory Management (SIM)	13.0.3
Oracle Retail Merchandising System (RMS) (Server)	13.0.3
Oracle Retail Price Management (RPM) (Server)	13.0.3

Application Installation

Before proceeding, you must install Oracle Application Server 10g 10.1.3.4 as well as the patches listed in Chapter 1 of this document. The RSLfor<App> application will be deployed to an OC4J instance within the OracleAS10g installation.

Create a New OC4J Instance and Group for RSLfor<App>

Skip to the next section if you are redeploying to an existing OC4J group in Oracle Application Server 10.1.3.4.

The RSLfor<App> application must be deployed to its own dedicated OC4J group. For instructions on how to create a new OC4J group and instance(s), see *Adding and Deleting OC4J Instances* in the *Reconfiguring Application Server Instances* chapter of the *Oracle Application Server Administrator's Guide*.

- 1. Log into the server which is running your OracleAS10g installation. Set your ORACLE_HOME environment variable to point to this installation.
- **2.** Choose a name for the new OC4J instance and group.

Example:

rsl-oc4j rsl_group

Create this OC4J instance and group as documented in the *Oracle Application Server Administrator's Guide*.

Example:

\$ORACLE_HOME/bin/createinstance
-instanceName rsl-oc4j -groupName rsl_group

When prompted for the oc4jadmin password, provide the same administrative password you gave for the Oracle AS installation. All OC4J instances running Oracle Retail applications must have the same oc4jadmin password.

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

Example:

```
$ORACLE_HOME/opmn/bin/opmnctl @cluster
startproc ias-component=rsl_group
```

4. Verify that the OC4J group was fully started. If you are using the Enterprise Manager Web interface, the instance(s) should have a green arrow indicating that they are running. On the command line, verify that each instance has a status of "Alive."

Example:

```
$ORACLE_HOME/opmn/bin/opmnctl status
```

If you are unable to start an OC4J instance after several attempts, try increasing the startup timeouts in ORACLE_HOME/opmn/conf/opmn.xml. If that does not help, consult the Oracle Application Server documentation for further assistance.

Expand the RSLfor<App> Distribution

- 1. Log in to the UNIX server where Oracle AS is installed and determine where the RSL 13.0.3 application server file (RslServerPak13.0.3for<app><app_version>_eng_ga.tar) will be installed. There should be a minimum of 25 MB disk space available for the application installation files.
- **2.** Copy RslServerPak13.0.3for<app><app_version>_eng_ga.tar (located at CD/appserverunix) to a newly created staging directory on the UNIX server.
- **3.** Change directory to the location of RslServerPak13.0.3for<app><app_version>_eng_ga.tar and extract this file. This will create directory: /RSL1303for<App>.

RSL_INSTALL_HOME refers to the directory structure including the newly created /RSL1303for<App>

Example: /u00/product/10.1.3/OracleAS_2/RSL1301forRMS

Run the RSLfor<App> Installer

Configuration scripts are provided to deploy and configure the RSLfor<App> application in Oracle AS, including its JDBC DataSource and shared library using the OC4J command-line utility.

- 1. Change directory to RSL_INSTALL_HOME.
- 2. Set the ORACLE_HOME and JAVA_HOME environment variables. ORACLE_HOME should point to your Oracle AS installation. JAVA_HOME should point to the Java 5.0 (1.5.0) JDK located at \$ORACLE_HOME/jdk.
- **3.** If you are using an X server, such as Exceed, set the DISPLAY environment variable so that you can run the installer in GUI mode (recommended). If you are not using an X server, or the GUI is too slow over your network, unset DISPLAY for text mode.
- **4.** Run the rsl-installer.sh script. This launches the installer. After installation is complete, a detailed installation log file is created: rsl13install.<timestamp>.log in the RSL_INSTALL_HOME/.retail-installer directory.
- 5. After the script has successfully run, verify that the application is running and the Oracle DataSource was configured properly by logging into the Oracle Enterprise Manager 10g Application Server Control.

Resolving Errors Encountered During Application Installation

If the application installer encounters any errors, it halts execution immediately.

See Appendix: Common Installation Errors in this document for some common installation errors.

Since the application installation is a full re-install every time, any previous partial installs will be overwritten by the successful installation.

Backups Created by Installer

The RSLfor<App> application installer backs up previous installations by renaming them with <timestamp> suffixes. This is done to prevent the removal of any custom changes you might have. These backup directories can be safely removed without affecting the current installation.

Example: rsl-rms.200605011726

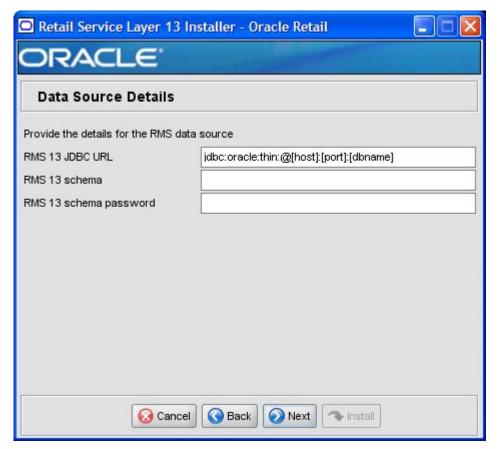
Appendix: RSLfor<App> Installer Screens

Retail Service Layer 13 Installer Screens and Details

You need the following details about your environment for the installer to successfully deploy the RSLfor<App> application. Depending on the options you select, you may not see some screens or fields.

The following screens are for the RSLforRMS installer.

Screen: Data Source Details



Fields on this Screen

Field Title	RMS 13 JDBC URL
Field Description	URL used by RSLfor <app> to access the RMS database schema. See Appendix D: URL Reference for expected syntax.</app>
Destination	data-sources.xml
Example	jdbc:oracle:thin:@myhost:1525:mydatabase

Field Title RMS 13 schema

Field Description Database user where the RMS database schema was installed.

Description

Destination

data-sources.xml

Example RMS13

Field Title RMS 13 schema password

Field Description Password for the RMS schema user.

Destination data-sources.xml

Screen: Manual Deployment Option



Fields on this screen:

Field Title Install files to app server?

Field Description If you do not have write access under ORACLE_HOME, you can still use the installer to gather your settings and configure the RSLfor<App> files locally in the staging area. Then, at a later time, an administrator can manually copy over the RSLfor<App> files and deploy the ear file. If you select this option, instructions are printed to the console and the installer log file for the steps needed to complete the installation.

Example Yes

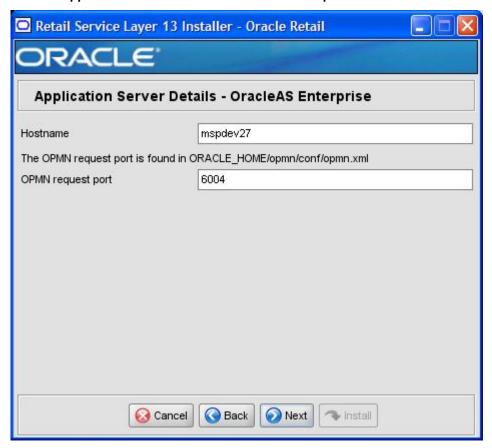
Screen: OC4J Server Type: Managed or Standalone



Fields on this screen:

Field Title	To what type of OC4J server are you deploying?
Field Description	A managed OC4J server is part of a larger Oracle App Server enterprise environment and is managed by OPMN.
•	A standalone OC4J server is a single instance installed by itself and is not controlled by OPMN.
	This Oracle Retail application release is only supported on managed OC4J.
Example	managed

Screen: Application Server Details - OracleAS Enterprise



Fields on this screen:

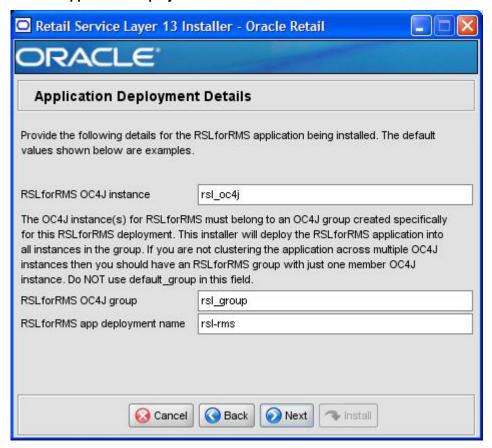
Field Title	Hostname
Field Description	Hostname of the application server
Example	myhost
Field Title	OPMN request port
Field Description	The port on which OPMN listens for requests to forward on to OC4J instances. This port can be found in the ORACLE_HOME/opmn/conf/opmn.xml file: <pre></pre>
	\sim poit iocai— 0100 Temote— 0200 Tequest= 0004 />

Example

6004

it as the default value.

Screen: Application Deployment Details



Fields on this screen:

Field Title	RSLforRMS OC4J instance
Field Description	Name of the OC4J instance that was created for this RSLfor <app> application.</app>
Example	rsl_oc4j

RSLforRMS OC4J group **Field Title** Name of the OC4J group that was created for this RSLfor<App>application. The **Field** OC4J instance given for the RSLfor<App> OC4J Instance field should be a Description member of this group. The installer will deploy the RSLfor<App> application to all OC4J instances which are members of this group. For this reason, you should not use default_group. A new group dedicated to RSLfor<App> should be created instead. rsl_group

Example

Field Title RSLforRMS app deployment name

Field Name by which this RSLfor<App> application will be identified in the

Description application server.

Example rsl-rms

Screen: OC4J Administrative User



Fields on this screen:

Field Title	OC4J admin user
Field Description	Username of the admin user for OC4J instance to which the RSLfor <app>application is being deployed.</app>
Example	oc4jadmin
Field Title	OC4J admin password

Appendix: Installer Silent Mode

Repeating the Installation Process

In addition to the GUI and text interfaces of the RSLfor<App> installer, there is a silent mode that can be run. This mode is useful if you wish to run a repeat installation attempt without going through the installer screens again.

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, perform the following procedure:

- 1. Edit the RSL_INSTALL_HOME/ .retail-installer/ant.install.properties file and correct any invalid settings that may have caused the installer to fail in its previous run.
- **2.** Run the installer again with the silent argument.

Example:

rsl-installer.sh silent

Appendix: Common Installation Errors

This section provides some common errors encountered during installation of RSLfor<App>.

Unreadable Buttons in the Installer

If you are unable to read the text within the installer buttons, it could mean that your JAVA_HOME is pointed to an older version of the JDK than is supported by the installer. Set JAVA_HOME to \$ORACLE_HOME/jdk from the Oracle Application Server 10.1.3 installation and run the installer again.

"Unable to get a deployment manager" Message

Symptom:

The application installer quits and displays the following error message:

[oracle:deploy] Unable to get a deployment manager.

[oracle:deploy]

[oracle:deploy] This is typically the result of an invalid deployer URI format being supplied, the target server not being in a started state or incorrect authentication details being supplied.

[oracle:deploy]

[oracle:deploy] More information is available by enabling logging -- please see the Oracle Containers for J2EE Configuration and Administration Guide for details.

Solution:

This error can be caused by any of the following conditions:

- OC4J instance provided is not running.
- Incorrect OC4J instance name provided
- Incorrect OC4J administrative username and/or password
- Incorrect OPMN request port provided.

Make sure that the OC4J instance is running, and then check the RSL_INSTALL_HOME/.retail-installer/ant.install.properties file for entry mistakes. Pay close attention to the input.deployer.uri (see Appendix D: URL Reference), input.oc4j.instance, input.admin.user, and input.admin.password properties. If you need to make a correction, you can run the installer again with this file as input by running silent mode (see Appendix B of this document).

"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 checkLockFileOErrorCode

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.

ConcurrentModificationException in Installer GUI

Symptom:

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

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.

"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.

Error While Unpacking the rsl-rms.ear File

Symptom:

The following text appears in the console window during execution of the installer:

07/12/19 10:53:17 Notification ==>Error while unpacking rsl-rms.ear java.util.zip.ZipException: error in opening zip file

Solution:

This is a known bug (BugID 6330834) related to Solaris and NFS in Oracle Application Server 10.1.3.3.

Follow the workaround below documented for this bug.

In the opmn.xml file in \$ORACLE_HOME/opmn/conf, add the following parameter to the java-options for the instance you are installing:

-Doc4j.autoUnpackLockCount=-1

After making this change you should reload OPMN, restart the affected OC4J instance(s), and retry the retail application installation.

Appendix: URL Reference

The application installers for the RSLfor<App> product will ask for several different URLs. These include the following.

JDBC URL for a Database

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

Syntax

jdbc:oracle:thin:@<host>:<port>:<sid>

where:

- <host> is the hostname of the database server.
- <port> is the database listener port.
- <sid> is the system identifier for the database.

Example:

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

JNDI Provider URL for an Application

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

Syntax

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

where:

- <host> is the hostname of the OracleAS environment
- <port> is the OPMN request port of the OracleAS environment. This can be found in the <ORACLE_HOME>/opmn/conf/opmn.xml file.
- <instance> is the name of the OC4J instance running the application
- <app> is the deployment name for the application.

Example:

opmn:ormi://myhost:6003:rsl-oc4j/rsl-rms

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

Deployer URI

The deployer URI is used by the Oracle ANT tasks to deploy an application to an OC4J group. The application installer does not ask the user for this value; it is constructed based on other inputs and written to the ant.install.properties file for input to the installation script. For repeat installations using silent mode, you may need to correct mistakes in the deployer URI in ant.install.properties.

Note: There are several different formats for the deployer URI depending on your cluster topology. Consult the Deploying with the OC4J Ant Tasks chapter of the *OC4J Deployment Guide* for further details.

Syntax (managed OC4J)

deployer:cluster:opmn://<host>:<port>/<group>

where:

- <host>: hostname of the OracleAS environment
- <port>: OPMN request port of the OracleAS environment. This can be found in the <ORACLE_HOME>/opmn/conf/opmn.xml file.
- <group>: Name of the OC4J instance where the application will be deployed.

Example: deployer:cluster:opmn://myhost:6003/rsl_group

Syntax (standalone OC4J)

deployer:oc4j:<host>:<port>

where:

- <host> is the hostname of the OracleAS environment
- <port> is the RMI port of the OC4J server. This can be found in the ORACLE_HOME/j2ee/home/config/rmi.xml file.

Example:

deployer:oc4j:myhost:23791