# Oracle® Retail Price Management

Installation Guide
Release 12.0.12
E29466-01

November 2012

ORACLE

Oracle® Retail Price Management Installation Guide, Release 12.0.12



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## Value-Added Reseller (VAR) Language

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# Contents

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Oracle Retail Price Management, Installation Guide, Release 12.0.12

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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.

## 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 Price Management Release 12.0.12 documentation set:

- *Oracle Retail Price Management Release Notes*
- *Oracle Retail Price Management Operations Guide*
- *Oracle Retail Price Management User Guide*
- *Oracle Retail Price Management Data Model*

## 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, 12.0) or a later patch release (for example, 12.0.12). If you are installing the base release, additional patch, and bundled hot fix releases, read the documentation for all releases that have occurred since the base release before you begin installation. Documentation for patch and bundled hot fix releases can contain critical information related to the base release, as well as information about code changes since the base release.

## Oracle Retail Documentation on the Oracle Technology Network

Documentation is packaged with each Oracle Retail product release. Oracle Retail product documentation is also available on the following Web site:
http://www.oracle.com/technology/documentation/oracle_retail.html

(Data Model documents are not available through Oracle Technology Network. These documents are packaged with released code, or you can obtain them through My Oracle Support.)

Documentation should be available on this Web site within a month after a product release.

## Conventions

**Navigate:** This is a navigate statement. It tells you how to get to the start of the procedure and ends with a screen shot of the starting point and the statement "the Window Name window opens."

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

# 1

# Preinstallation Tasks

RPM is a client-server-server application. Its client side code runs in a WebStart Java Virtual machine instance, while its server side code runs in the Oracle Application Server and accesses an Oracle Database server.

## Check Database Server Requirements

General Requirements for a database server running Oracle Retail Price Management include:

| Supported on: | Versions Supported: |
|---|---|
| Database Server OS | OS certified with Oracle Database 10gR2 Enterprise Edition. Options are:<br>▪ AIX 5.3, AIX 6.1 (Actual hardware or LPARs)<br>▪ Solaris 10 SPARC (Actual hardware or Logical Domains)<br>▪ HP-UX 11.23 (PA-RISC)<br>▪ Oracle Linux 4 Update 4 for x86-64<br>▪ Red Hat Enterprise Linux 4 Update 4 for x86-64<br>▪ Oracle Linux 5 for x86-64 (Actual hardware or Oracle virtual machine)<br>▪ Red Hat Enterprise Linux 5 for x86-64 (Actual hardware or Oracle virtual machine) |
| Database Server 10gR2 | Oracle Database 10g Release 2 Enterprise Edition (minimum 10.2.0.5 patchset required) with the following patches and components:<br>**Patches:**<br>▪ 10.2.0.5 patchset (8202632)<br>**Components:**<br>▪ Oracle Database 10g<br>▪ Oracle Partitioning<br>▪ Oracle Net Services<br>▪ Oracle Call Interface (OCI)<br>▪ Oracle Programmer<br>▪ Oracle XML Development Kit<br>▪ Optional Database Vault<br>**Other components:**<br>▪ Perl compiler 5.0 or later<br>▪ X-Windows interface |

| Supported on: | Versions Supported: |
|---|---|
| Database Server OS | OS certified with Oracle Database 11gR2 Enterprise Edition. Options are:<br>▪ AIX 5.3, AIX 6.1 (Actual hardware or LPARs)<br>▪ Solaris 10 SPARC (Actual hardware or Logical Domains)<br>▪ Oracle Linux 5 for x86-64 (Actual hardware or Oracle virtual machine).<br>▪ Red Hat Enterprise Linux 5 for x86-64 (Actual hardware or Oracle virtual machine). |
| Database Server 11gR2 | Oracle Database 11g Release 2 (11.2.0.2) Enterprise Edition with the following oneoff patches:<br>▪ 10170431 - CTWR CONSUMING LOTS OF CPU CYCLES<br>Apply the following patch to RDBMS home if ASM is used.<br>▪ 11808931 - MERGE REQUEST ON TOP OF 11.2.0.2.0 FOR BUGS 10410054 10422126<br>**Components:**<br>▪ Oracle Partitioning<br>▪ Optional Database Vault<br>▪ Examples CD<br>**Other components:**<br>▪ Perl compiler 5.0 or later<br>▪ X-Windows interface |

**Note:** The RPM database objects are bundled with the RMS database schema installer. For Release 12.0.12, RPM supports the following options for enhanced data security:

- RPM 12.0.12 supports enhanced data protection using Oracle Database Vault with Oracle Database 10g Release 2.
- Oracle Retail Sales Audit (ReSA) 12.0.12 supports transparent data encryption (TDE) with Oracle Database 10g Release 2 and the Advanced Security option.

See the *Oracle Retail Merchandising System Installation Guide* for more information about using these security options.

# Check Application Server Requirements

General requirements for an application server capable of running the RPM application include:

| Supported on: | Versions Supported: |
|---|---|
| Application Server OS | OS certified with Oracle Application Server 10g 10.1.3.4. Options are:<br>▪ AIX 5.3, AIX 6.1 (Actual hardware or LPARs)<br>▪ Solaris 10 SPARC (Actual hardware or Logical Domains)<br>▪ HP-UX 11.23 (PA-RISC)<br>▪ Oracle Linux 4 Update 4 for x86-64<br>▪ Red Hat Enterprise Linux 4 Update 4 for x86-64<br>▪ Oracle Linux 5 for x86-64 (Actual hardware or Oracle virtual machine)<br>▪ Red Hat Enterprise Linux 5 for x86-64 (Actual hardware or Oracle virtual machine) |
| Application Server | Oracle Application Server 10g 10.1.3.4 with Java 5.x or 6.x and the following patches:<br>▪ 5632264 (NEED UPDATED TIMEZONE FILES (VERSION 4) FOR MORE DST RULE CHANGES)<br>▪ 4601861 (NEED TO EXPOSE NZOS_SETIOSEMANTICS) |

**Note:** This release of RPM is only supported in a managed OC4J instance as part of OracleAS 10g. It is not supported on OC4J standalone

# Check Oracle Retail Software Dependencies

- RMS 12.0.12 must be installed prior to installing RPM.
- Security Manager (RSM) 12.0.4 must be installed prior to installing RPM.
- An eGate JMS server for the RPM task queue. The eGate JMS used by the RIB or a separate eGate JMS can be used for this. The JMS server must be running at the time of the RPM application installation. RPM application deployment will fail if JMS is down.

### Supported Oracle Retail Products

| Requirement | Version |
|---|---|
| Oracle Retail Merchandising System (RMS)/Oracle Retail Trade Management (RTM)/Oracle Retail Sales Audit (ReSA) | 12.0.12 |
| Oracle Retail Allocation | 12.0.12 |
| Oracle Retail Data Warehouse (RDW) | 12.0.10 |
| Oracle Retail Store Inventory Management (SIM) | 11.1.1 (at a minimum) |
| Oracle Retail Security Manager (RSM) | 12.0.4 |

### Supported Oracle Retail Integration Technologies

| Requirement | Version |
|---|---|
| Oracle Retail Extract, Transform and Load (RETL) | 12.0.11 |
| Oracle Retail Integration Bus (RIB) | 12.0.12 |
| Oracle Retail Service Layer (RSL) | 12.0.12 |

## Check Third-Party Software Dependencies

- Hibernate 2.1.8 must be downloaded and the hibernate2.jar file just be extracted. The RPM application installation procedure specifies how to install this file.

## Check Client PC and Web Browser Requirements

| Requirement | Version |
|---|---|
| Operating system | Windows 2000 or XP |
| Display resolution | 1024x768 or higher |
| Processor | 1GHz or higher |
| Memory | 512MBytes or higher |
| Networking | intranet with at least 10Mbps data rate |
| Oracle (Sun) Java Runtime Environment | 5.0 (1.5.0) or 5.0 Update 11 or higher (1.5.0_11 or higher) or 6.0 Update 12 or higher (1.6.0_12 or higher).<br>Version 5.x or 6.x should be used in conjunction with the java used for the application in the Application Server Requirements step above. |
| Browser | Microsoft Internet Explorer 7.0 or 8.0 |

# 2

# RAC and Clustering

Real Application Cluster Database and Oracle Application Server Clustering for Oracle Retail Price Matching has been validated to run only on Linux:

The Oracle Retail products have been validated against a 10.2.0.3 RAC database. When using a RAC database, all JDBC connections should be configured to use OCI connections rather than THIN connections. It is suggested that when using OCI connections, the Oracle Retail products database be configured in the tnsnames.ora file used by the Oracle Application Server installations.

Clustering for Oracle Application Server 10.1.3 is managed as an Active-Active cluster accessed through a hardware Load Balancer. It is suggested that a VirtualHost be added to the OAS 10.1.3 reflecting the Virtual Server Name configured in the load balancer. It is also suggested that the OC4J select method be configured to prefer the use of local OC4J instances. The Oracle Retail products are currently not validated to be distributable at the application level in an OAS 10.1.3 cluster.

Clustering for Oracle Application Server 10.1.2.0.2 is managed as an Active-Active cluster accessed through a hardware Load Balancer. It is suggested that the Web Cache installation included with OAS 10.1.2.0.2 be configured to reflect all application server Mid-Tier installations. Validation has been completed utilizing a RAC 10.2.0.3 Oracle Internet Directory database with the OAS 10.1.2.0.2 cluster.

**References for Configuration:**

- Oracle® Application Server High Availability Guide 10g Release 3 (10.1.3) Part Number B15977-02
- Oracle® Application Server High Availability Guide 10g Release 2 (10.1.2) Part Number B14003-05
- Oracle® Database Oracle Clusterware and Oracle Real Application Clusters Administration and Deployment Guide 10g Release 2 (10.2) Part Number B14197-03

# 3

# Database Installation Tasks

## RPM Schema

The RPM database tables are installed with the RMS database schema. RMS 12.0.12 is a prerequisite of the RPM 12.0.12 installation.

## RSM Schema

The RSM 12.0.4 application is a prerequisite of RPM 12.0.12. There were no database updates to RSM for this release.

# 4

# Application Installation

These instructions apply to new installations and upgrades. If you are upgrading a previous 12.0.x installation, the application installer upgrades the application and back up certain files from the previous installation (See Backups Created by the Installer from this section). To ensure that the previous installation is properly undeployed, you must provide the same application deployment name as the previous installation.

Before proceeding you must install Oracle Application Server 10g 10.1.3.4 plus the patches listed in Chapter 1 of this document. The RPM application will be deployed to an OC4J instance within the OracleAS10g installation.

It is assumed Oracle Database has already been configured and loaded with the appropriate RMS schema for your installation.

## Upgrade Oracle Application Server 10g

The RPM 12.0.12 release requires an upgrade of the application server from 10.1.3.0 to 10.1.3.4. Before running the RPM 12.0.12 application installer you need to patch your Oracle Application Server up to version 10.1.3.4 plus the patches listed in Chapter 1 of this document.

## Create a New OC4J Instance and Group for RPM

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

The RPM 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:** rpm-oc4j-instance

   rpm_group

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

   **Example:**
   $ORACLE_HOME/bin/createinstance
   –instanceName rpm-oc4j-instance –groupName rpm_group

   When prompted for the oc4jadmin password, provide the same administrative password you gave for the OracleAS 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=rpm_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.

## Configure Apache for JNLP Files

If this is the first WebStart application that is being installed in the HTTP server, you need to configure the **mime.types** file with the jnlp file type. If you are using the Apache distribution that is included with OracleAS, this file can be found under ORACLE_HOME/Apache/Apache/conf. Add the following line to the file:

```
application/x-java-jnlp-file          jnlp
```

Restart the Apache server for this change to take effect. If you do not add this line then jnlp files will be served as plain text and you will not be able to launch the application.

**Example:** $ORACLE_HOME/opmn/bin/opmnctl restartproc process-type=HTTP_Server

## Expand the RPM Application Distribution

1. Log into the UNIX server as the user who owns the OracleAS 10g installation. Create a new staging directory for the RPM application distribution (rpm12application.zip). There should be a minimum of 160 MB disk space available for the application installation files.

   **Example:** $ORACLE_HOME/j2ee/rpm-oc4j-instance/rpm-staging

   This location is referred to as INSTALL_DIR for the remainder of this chapter.

2. Copy rpm12application.zip to INSTALL_DIR and extract its contents.

## Provide the Hibernate Jar File

The RPM application requires the hibernate2.jar file to be installed. This file should be downloaded from http://www.hibernate.org and placed in the INSTALL_DIR/rpm/application/hibernate folder before the installer is launched. For RPM 12, Hibernate 2.1.8 should be used. You need to download the Hibernate distribution and extract the hibernate2.jar file from it.

The RPM application installer verifies that hibernate2.jar has been provided and that it is the correct version. If hibernate2.jar is missing or incorrect, the installer will not proceed.

The installer applies hibernate2.jar to the RPM application by placing it under the ORACLE_HOME/j2ee/<oc4j-instance-name>/applications/<app-name>/lib directory.

# Clustered Installations – Preinstallation Steps

Skip this section if you are not clustering the application server.

> **Note:** Previous releases of RPM required the OC4J instance names and OC4J group name to be identical. This is no longer the case, as OC4J grouping has changed between OAS 10.1.3.0 and 10.1.3.4.

If you are installing the RPM application to a clustered Oracle Application Server environment, there are some extra steps you need to take before running the RPM application installer. In these instructions, the application server node whose ORACLE_HOME you used for the RPM installer is referred to as the *master node*. All other nodes are referred to as the *remote nodes*.

1. On each node, create the RPM task queue and factories in the OC4J JMS server by modifying the $ORACLE_HOME/j2ee/<rpmoc4jinstance>/config/jms.xml file. At the bottom of this file, before the closing </jms-server> tag, add the definition for the RPM task queue.

   Example with rpmTaskQueue as the queue name:

   ```
   <queue name="rpmTaskQueue" location="jms/rpmTaskQueue"
       Persistence-file= »rpmTaskQueue.persistence.file »>
       <description>RPM Task Engine Queue</description>
   </queue>
   <queue-connection-factory location= »jms/Queue/myQCF » />
   <xa-queue-connection-factory location= »jms/Queue/myXAQCF » />
</jms-server>
   ```

   The RPM application installer asks you for this queue name. You must provide the same queue name that you used in jms.xml, without the jms/ prefix.

   Example: rpmTaskQueue

2. On each node, create the RPM XA wrapper object for the task queue by modifying $ORACLE_HOME/j2ee/<rpmoc4jinstance>/config/oc4j-connectors.xml. Nested within the OracleASjms connector, add this adminobject-config element:

   ```
<adminobject-config location="OracleASjms/rpmTaskQueue">
    <adminobject-
class>oracle.j2ee.ra.jms.generic.AdminObjectQueueImpl</adminobject-class>
    <config-property name="jndiName" value="jms/rpmTaskQueue"/>
    <config-property name="resourceProviderName" value="oc4jjms"/>
</adminobject-config>
   ```

3. All of the OC4J instances in the group should be restarted for the jms.xml and oc4j-connectors.xml changes to be picked up. Deployment of the RPM ear file will fail if the JMS queue cannot be found by OC4J.

   > **Example:** $ORACLE_HOME/opmn/bin/opmnctl @cluster restartproc ias-component=rpm_group

# Run the RPM Application Installer

Once you have an OC4J instance that is configured and started, you can run the RPM application installer. This installer configures and deploys the RPM application and Java WebStart client files.

> **Note:** Appendix A contains details on every screen and field in the application installer.

1. Make sure that the eGate JMS server is running. This server is needed for the task queue used by the RPM application. The application server verifies the JMS connection during deployment of the RPM ear file, and the deployment will fail if it cannot connect.
2. Change directories to INSTALL_DIR/rpm/application.
3. Set the ORACLE_HOME and JAVA_HOME environment variables. ORACLE_HOME should point to your OracleAS installation. JAVA_HOME should point to the Java 5.0 (1.5.0) JDK located at $ORACLE_HOME/jdk.
4. 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.
5. Run the install.sh script. This launches the installer. After installation is complete, a detailed installation log file is created: rpm12install.<timestamp>.log.

## Resolving Errors Encountered During Application Installation

If the application installer encounters any errors, it halts execution immediately. You can run the installer in silent mode so that you don't have to retype the settings for your environment. See Appendix B of this document for instructions on silent mode.

See Appendix C of this document for some common installation errors.

Since the application installation is a full reinstall every time, any previous partial installs are overwritten by the successful installation.

## Clustered Installations – Post-Installation Steps

If you are installing the RPM application to a clustered Oracle Application Server environment, there are some extra steps you need to take to complete the installation. In these instructions, the application server node whose ORACLE_HOME you used for the RPM installer is referred to as the *master node*. All other nodes are referred to as the *remote nodes*.

1. The RPM client files should be copied from the master node to each of the remote nodes under the same path as on the master node. For example, you should take the files under $ORACLE_HOME/Apache/Apache/rpm and copy them onto the remote nodes under the same path.
2. All jnlp files in the RPM client need to be modified so that the correct host name is used on each node.
3. The RPM batch files should be copied from the master node to each of the remote nodes under the same path as on the master node. You should take the $ORACLE_HOME/j2ee/<rpminstance>/rpm-batch directory and copy it onto the remote nodes under the same path.
4. The launchRpmBatch.sh script should be modified on each remote node to point to the local RPM instance. The RPM URL is set in the PROVIDER_URL variable. This script is located at $ORACLE_HOME/j2ee/<rpminstance>/rpm-batch/scripts/launchRpmBatch.sh.
5. By default, after installation all remote RPM instances are pointing to the RSM install on the master node. Update the RSM URL in the jndi_providers.xml file on each remote node so that each RPM instance uses its own local RSM instance. This file is located at $ORACLE_HOME/j2ee/<oc4jinstance>/applications/<rpmappname>/conf/retek/jndi_providers.xml.

6. All of the OC4J instances in the group should be restarted for the jndi_providers.xml changes to be picked up.

> **Example:** $ORACLE_HOME/opmn/bin/opmnctl @cluster restartproc ias-component=rpm_group

## Manual Deployment Option

Skip this section if you chose the default option of allowing the installer to complete installation to the application server.

The installer includes the option to configure the application locally and skip deployment to the application server. If this option is chosen, the installer makes the configured application files available under <INSTALL_DIR>/rpm/application/rpm12/configured-output/.

If you chose this installer option, you can complete the installation by following these steps:

1. Make sure there have not been any application server configuration changes since the installer was run. You can do this by comparing the backup files created by the installer in the staging area to the same files in the application server.

> **Example:** diff <INSTALL_DIR>/rpm/application/rpm12 /configured-output/appserver/ORACLE_HOME/j2ee/myinstance/config/jms.xml.200610300919 $ORACLE_HOME/j2ee/myinstance/conf/jms.xml

   If there are changes to the application server's configuration file, they should be merged into the local copy under configured-output before proceeding to the next step.

2. Inspect the contents of the <INSTALL_DIR>/rpm/application/rpm12/configured-output/appserver/ORACLE_HOME directory, and then overlay the files in the application server's ORACLE_HOME, using the same directory structure. This installs library files required by the application and required application server configuration changes.
3. Restart the OC4J instance(s) where RPM will be deployed.

> **Example:** $ORACLE_HOME/opmn/bin/opmnctl restartproc ias-component=rpm_group

4. Deploy the RPM ear file to the OC4J group using the Enterprise Manager web interface. The configured ear file is located at <INSTALL_DIR>/rpm/application/rpm12/configured-output/rpm12.ear. When deploying the ear file, you should provide the same application name you gave to the installer. These values were stored in the <INSTALL_DIR>/rpm/application/ant.install.properties file by the installer for later reference.

## Sign the RPM Client Configuration Jar File

There is some client-side configuration that the installer performs which results in a modified rpm_client_config.jar file after installation. Because of this, the jar file cannot be pre-signed by Oracle. The user must sign this jar file after the installer has completed.

To create an example key called "foo", the following command can be run:

```
$JAVA_HOME/bin/keytool –genkey –alias foo
```

This command prompts you for a keystore password along with organizational info.

Once complete, the keystore alias resides in the default location in the user's home directory (ie ~/.keystore). If you get an error message saying that the keystore has been tampered with, try renaming or deleting the ~/.keystore file and running the keytool command again.

If during execution of the installer you chose to manually copy the client files to the HTTP server, you should do so before signing the rpm_client_config.jar file.

The rpm_client_config.jar is located on the HTTP server under the 'lib' subdirectory of the RPM client destination directory. To sign the rpm_client_config.jar file using your alias and keystore, run the jarsigner utility.

**Example:** $JAVA_HOME/bin/jarsigner rpm_client_config.jar foo

If you are clustering the application server you need to copy the signed rpm_client_config.jar file to the same path under $ORACLE_HOME on all remote nodes.

Consult the "jarsigner" documentation from Sun for further information on the JAR signing process.

## Backups Created by Installer

The RPM application installer backs up previous batch, JMS bindings, and WebStart client 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.

**Examples:** rpm-batch.200605011726, sbynjndi.200605011726, rpm.200605011726

## Test the RPM Application

After the application installer completes you should have a working RPM application installation. To launch the application client, open a web browser and go to the rpm.jnlp file under the HTTP URL you provided during the installation.

**Example:** http://myhost:7777/rpm/rpm.jnlp

RPM also includes a status page application which can be used to verify the installation. For details see the *RPM Operations Guide*, under the Price Management Status Page section.

## RPM Batch Scripts

The RPM application installer configures and installs the batch scripts under ORACLE_HOME/j2ee/<instance>/rpm-batch.

> **Note:** Make sure that JAVA_HOME is set to the Java 5.0 (1.5.0) JDK located at $ORACLE_HOME/jdk from the application server before running the RPM batch programs

## Web Help Files

The application installer automatically copies the web help files to the proper location. They are accessible from the help links within the application.

## Re-Generating JMS Bindings with BindEGateJMSQueue.jar

The RPM application installer creates the ORACLE_HOME/j2ee/<oc4jinstance>/sbynjndi directory and runs the **BindEGateJMSQueue.jar** utility to bind its JMS queue. This file is located in the RPM application distribution under the rpm12/sbynjndi directory. Below are instructions on how to run this utility by itself at a later time to update the JMS host, port, and queue.

1. Set the JAVA_HOME environment variable so that it points to the Java 5.0 (1.5.0) JDK located at $ORACLE_HOME/jdk from the application server.
2. Change directories to ORACLE_HOME/j2ee/<oc4j instance>/sbynjndi and run BindEGateJMSQueue.jar:

   Usage: BindEGateJMSQueue -q <jms queue> -h <jms host> -p <jms port> -d <output directory>

   **jms queue**: Name of the JMS queue to use. This is not the full JNDI name of the queue. The JNDI name of the queue becomes jms/Generic/Queue/<jms queue>.

   **jms host**: eGate JMS server

   **jms port**: eGate JMS port

   **output directory**: directory where the .bindings files will be created.

   > **Example:** java –jar BindEGateJMSQueue.jar –q rpmTaskQueue –h jmshost –p 27053 –d $ORACLE_HOME/j2ee/rpm-oc4j-instance/sbynjndi

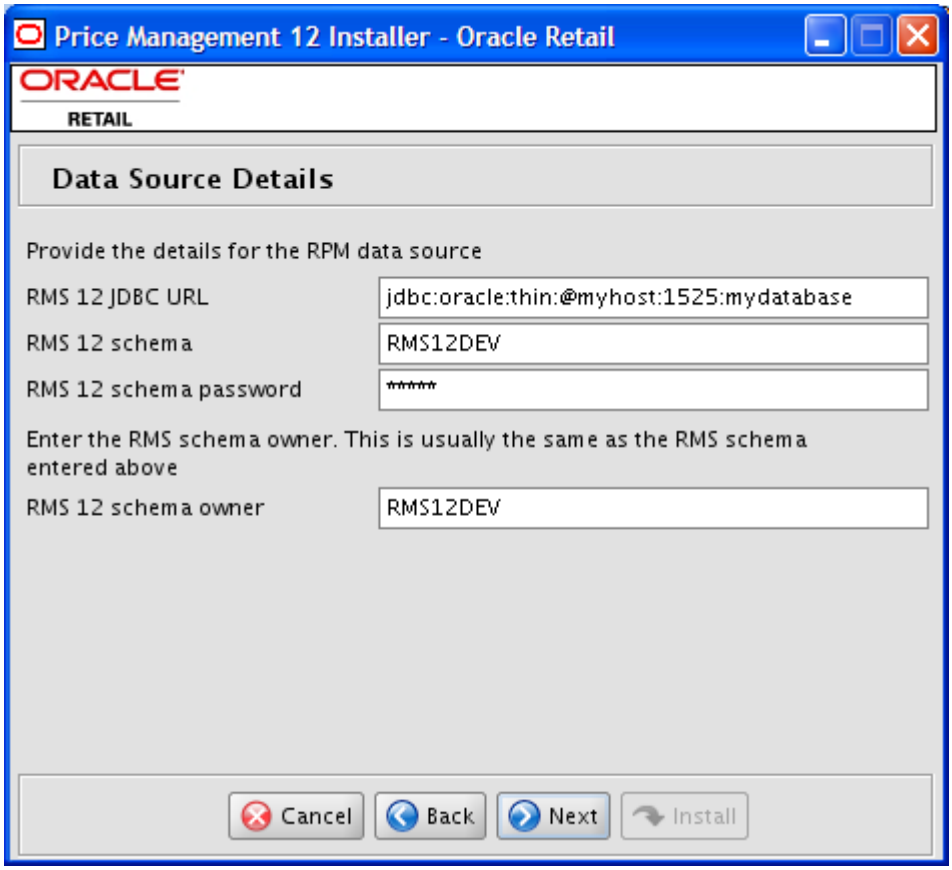
The RPM application uses these .bindings files to locate and communicate with the e*Gate JMS server.

# A

# Appendix: RPM Application Installer Screens

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

### Screen: Data Source Details




**Fields on this screen:**

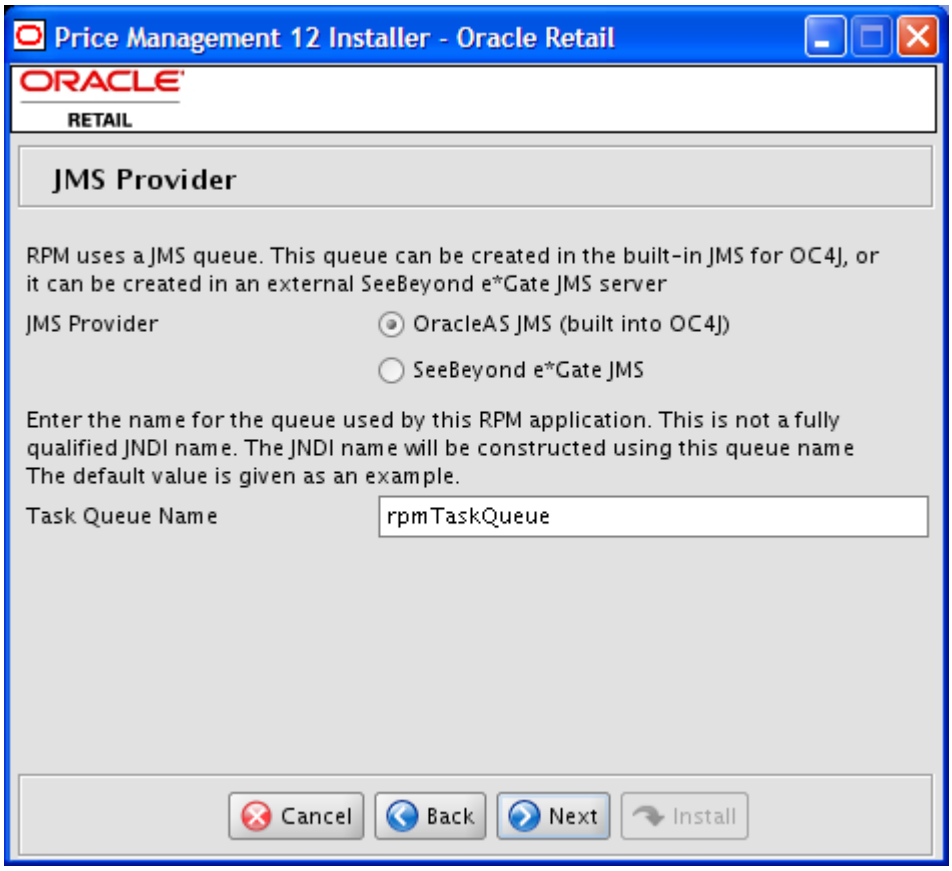
| | |
|---|---|
| **Field Title** | RMS 12 JDBC URL |
| **Field Description** | URL used by the RPM application to access the RMS database schema. See Appendix D: URL Reference for expected syntax.<br>**Note:** The RPM database tables are a part of the RMS schema. |
| **Destination** | data-sources.xml |
| **Example** | jdbc:oracle:thin:@myhost:1525:mydatabase |

| | |
|---|---|
| **Field Title** | RMS 12 schema |
| **Field Description** | Database user where the RMS database schema was installed. |
| **Destination** | data-sources.xml |
| **Example** | RMS12DEV |

| | |
|---|---|
| **Field Title** | RMS 12 schema password |
| **Field Description** | Password for the RMS schema user. |
| **Destination** | data-sources.xml |

| | |
|---|---|
| **Field Title** | RMS 12 schema owner |
| **Field Description** | Database user which owns the RMS tables. This is usually the same as the RMS 12 schema above. |
| **Destination** | rpm.properties |
| **Example** | RMS12DEV |

### Screen: JMS Provider

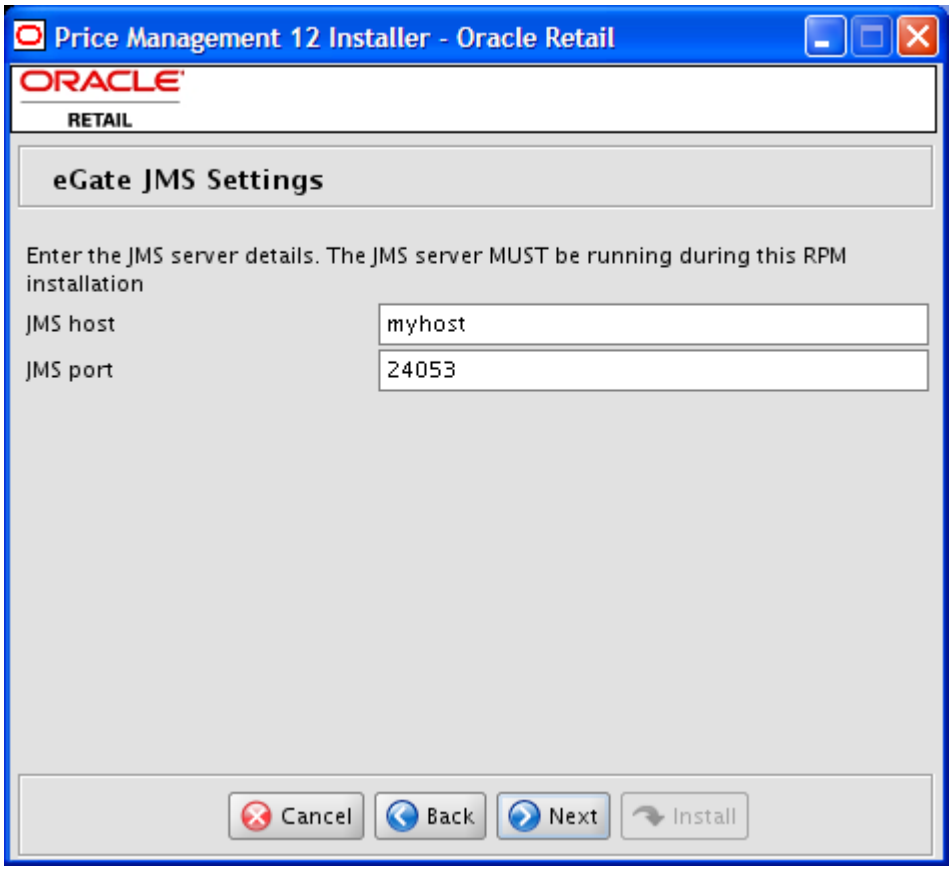



**Fields on this screen:**

| | |
|---|---|
| **Field Title** | JMS Provider |
| **Field Description** | RPM is compatible with two different JMS vendors: SeeBeyond e*Gate and the OC4J JMS. If you are running a SeeBeyond e*Gate JMS server for the RIB, you can use that same JMS server for RPM's JMS functionality. Alternatively, you can also use OracleAS JMS, which is the JMS server provided within OC4J. |
| **Example** | OracleAS JMS |

| | |
|---|---|
| **Field Title** | Task Queue Name |
| **Field Description** | Name by which the task queue will be identified. If this is a new RPM environment, choose a queue name that is not already in use in the JMS server. If you have already created the queue in the JMS server as part of the Clustering Pre-Install steps, you must provide the same name in this field (without the **jms/** prefix).<br>**Note:** This is not a complete JNDI name. The value provided will be appended to **jms/Generic/Queue/** (eGate) or **jms/** (OC4J) to form the full JNDI name for the queue. |
| **Destination** | system.properties, oc4j-connectors.xml, orion-ejb-jar.xml (platform-mdb.jar), input to BindEGateJMSQueue.jar (eGate) , jms.xml (OC4J) |
| **Example** | rpmTaskQueue |

### Screen: eGate JMS Settings

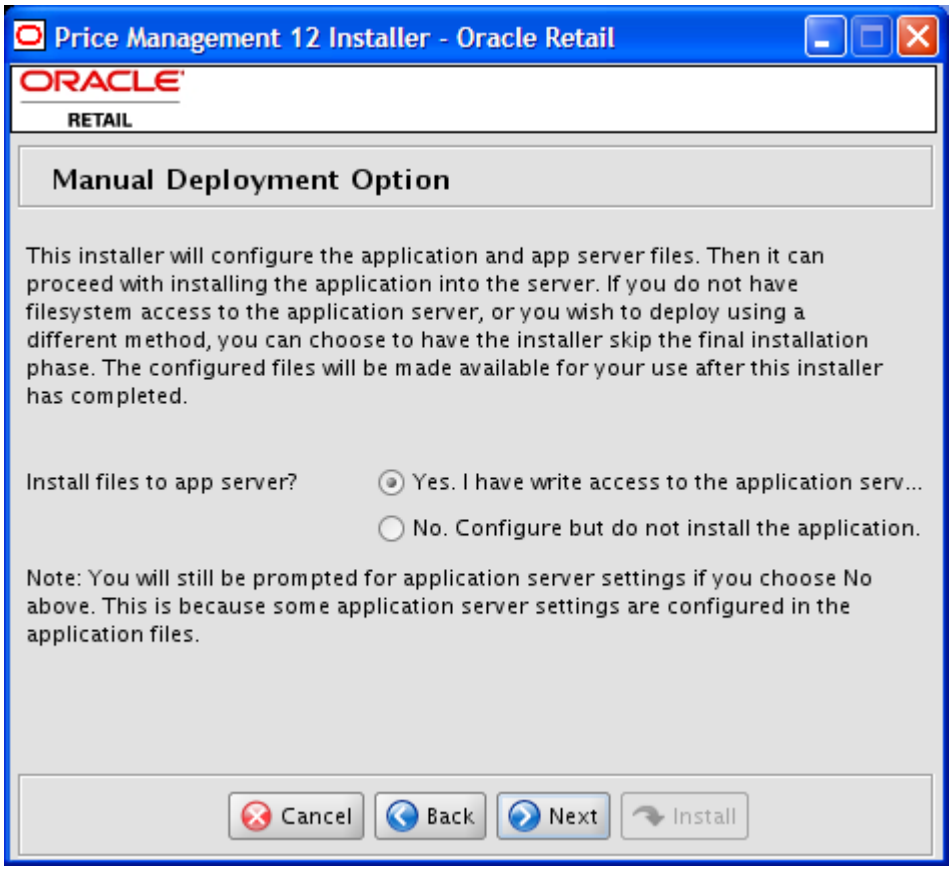



**Fields on this screen:**

| | |
|---|---|
| **Field Title** | JMS host |
| **Field Description** | hostname of the SeeBeyond e*Gate JMS server |
| **Destination** | input to BindEGateJMSQueue |
| **Example** | myhost |

| | |
|---|---|
| **Field Title** | JMS port |
| **Field Description** | JMS port of the SeeBeyond e*Gate JMS server |
| **Destination** | input to BindEGateJMSQueue |
| **Example** | 24053 |

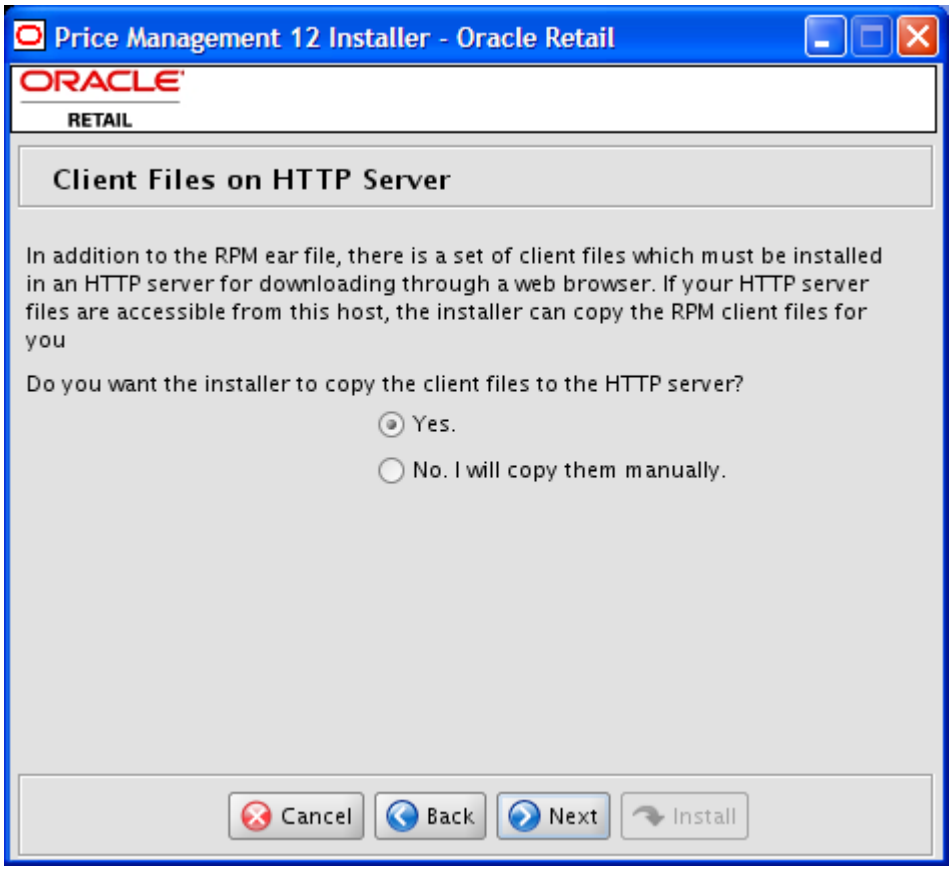
### Screen: Manual Deployment Option




**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 RPM files locally in the staging area. Then, at a later time, an administrator can manually copy over the RPM 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. |

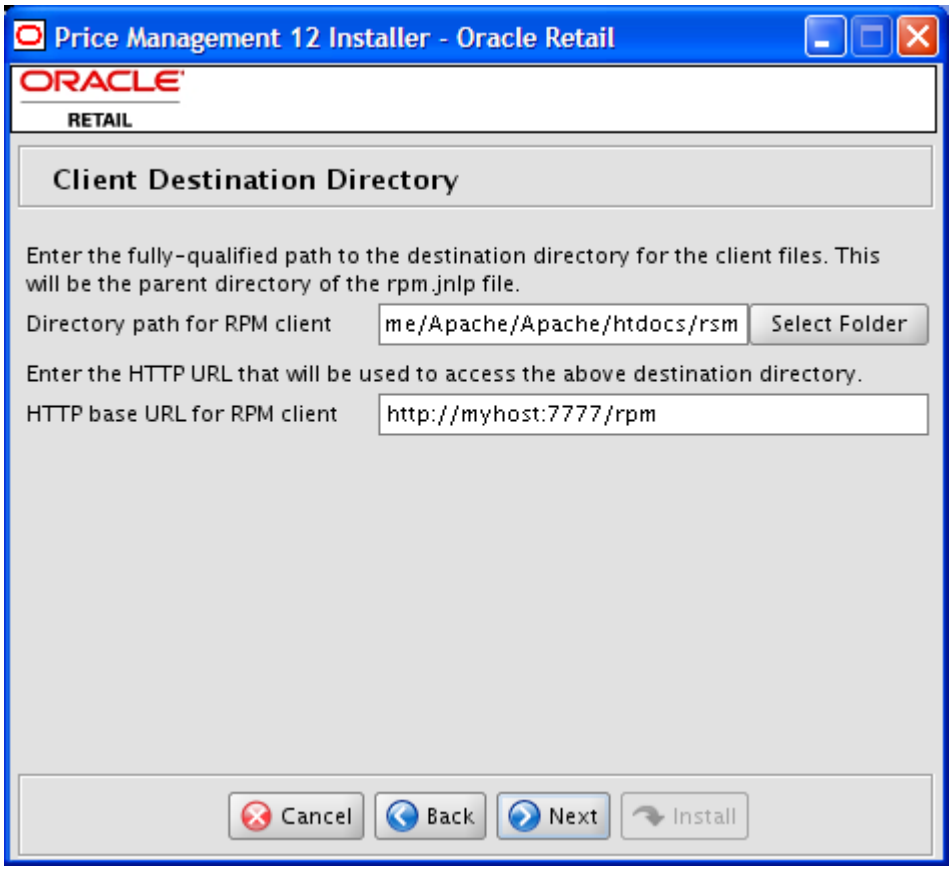
### Screen: Client files on the HTTP server




**Fields on this screen:**

| | |
|---|---|
| **Field Title** | Do you want the installer to copy the client files to the HTTP server? |
| **Field Description** | If the HTTP server that is serving the rpm.jnlp file is on the same host as the application server, then answer yes to this question so that the installer copies the client files to the HTTP server directories. The answer is usually yes since the RPM client files are usually installed to the Oracle Http Server that is a part of the same ORACLE_HOME as the OC4J instance running the RPM application.<br>If the HTTP server is on a separate host, then you will have to manually copy the client files over. Copy the contents of INSTALL_DIR/rpm/application/rpm12/webstart under a new folder on the HTTP server. |

### Screen: Client Destination Directory




**Fields on this screen:**

| | |
|---|---|
| **Field Title** | Directory path for RPM client |
| **Field Description** | This is the fully-qualified path to the location in the HTTP server where the RPM client files are to be installed. The directory provided will be the parent directory of rpm.jnlp.<br>By default, this path will point to an 'rpm' subdirectory of the document root of the Oracle Http Server that is a part of the OracleAS installation (ORACLE_HOME/Apache/Apache/htdocs).<br>This field is only shown if you selected "yes" to the previous question (Do you want the installer to copy the client files to the HTTP server?) |
| **Example** | /path/to/oracle/home/Apache/Apache/htdocs/rsm |

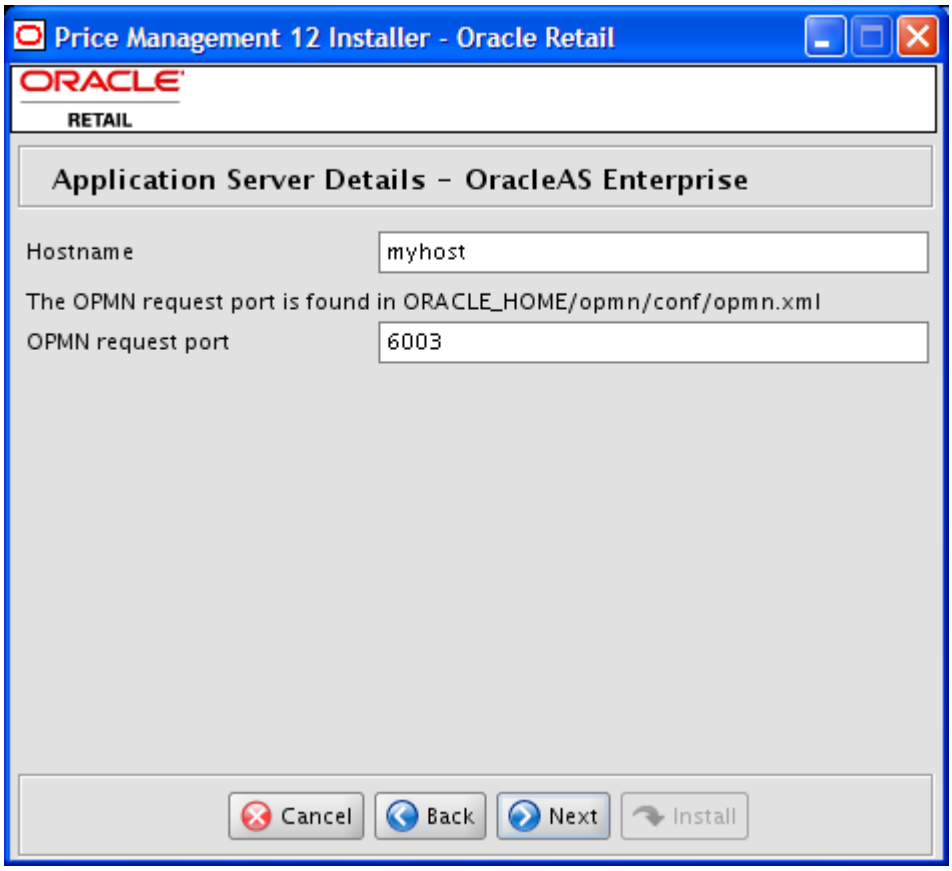
| | |
|---|---|
| **Field Title** | HTTP base URL for RPM client |
| **Field Description** | URL which you can use to locate the RPM client files using a web browser. This URL should lead to the same directory that was given for the Directory path for RPM client field above. If you chose not to have the installer copy the client files over, this URL should point to the location where you will manually copy them after the installer has completed.<br>See Appendix D: URL Reference for expected syntax.<br>This parameter can be changed later by modifying the *.jnlp files on the client side. |
| **Destination** | rpm.jnlp, rpmconfig.jnlp |
| **Example** | http://myhost:7777/rpm |

### Screen: OC4J Server Type: Managed or Standalone?


**Fields on this screen:**

| | |
|---|---|
| **Field Title** | Which type of OC4J server are you deploying to? |
| **Field Description** | A managed OC4J server is part of a larger Oracle App Server enterprise environment and is managed by OPMN.<br>A standalone OC4J server is a single instance installed by itself and is not controlled by OPMN.<br>This Oracle Retail application release is only supported on managed OC4J. |
| **Example** | managed |

### Screen: Application Server Details – OracleAS Enterprise

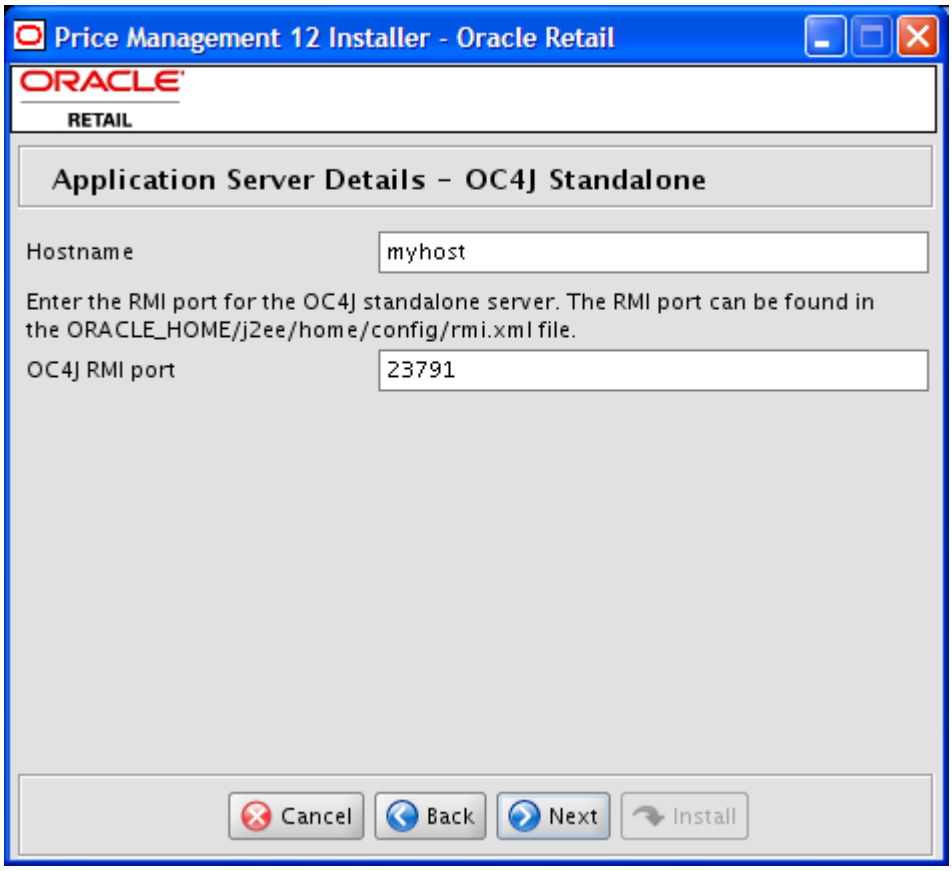



**Fields on this screen:**

| | |
|---|---|
| **Field Title** | Hostname |
| **Field Description** | Hostname of the application server |
| **Example** | myhost |

| | |
|---|---|
| **Field Title** | OPMN request port |
| **Field Description** | 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:<br><port local="6100" remote="6200" request="6003"/> |
| **Example** | 6003 |

### Screen: Application Server Details – OC4J Standalone

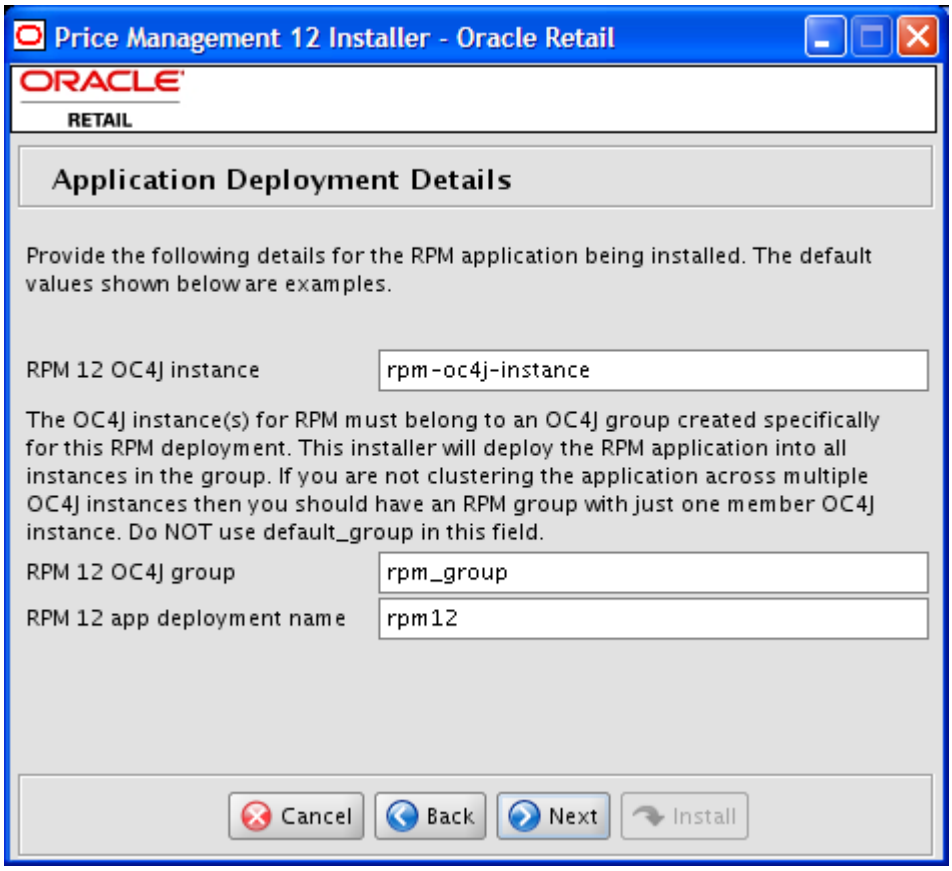



**Fields on this screen:**

| | |
|---|---|
| **Field Title** | Hostname |
| **Field Description** | Hostname of the application server |
| **Example** | myhost |

| | |
|---|---|
| **Field Title** | OC4J RMI port |
| **Field Description** | Port on which the standalone OC4J server listens for connections. This setting can be found in the ORACLE_HOME/j2ee/home/config/rmi.xml file.<br><rmi-server<br>xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:noNamespaceSchemaLocation="http://xmlns.oracle.com/oracleas/schema/rmi-server-10_0.xsd"<br>port="23791" |
| **Example** | 23791 |

### Screen: Application Deployment Details




**Fields on this screen:**

| | |
|---|---|
| **Field Title** | RPM 12 OC4J instance |
| **Field Description** | Name of the OC4J instance that was created for this RPM application. |
| **Example** | rpm-oc4j-instance |

| | |
|---|---|
| **Field Title** | RPM 12 OC4J group |
| **Field Description** | Name of the OC4J group that was created for this RPM application. The OC4J instance given for the RPM OC4J Instance field should be a member of this group.<br><br>The installer will deploy the RPM 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 RPM should be created instead. |
| **Example** | rpm_group |

| | |
|---|---|
| **Field Title** | RPM 12 app deployment name |
| **Field Description** | Name by which this RPM application will be identified in the application server |
| **Example** | rpm12 |

### Screen: Other Oracle Retail Applications – OracleAS Enterprise


**Fields on this screen:**

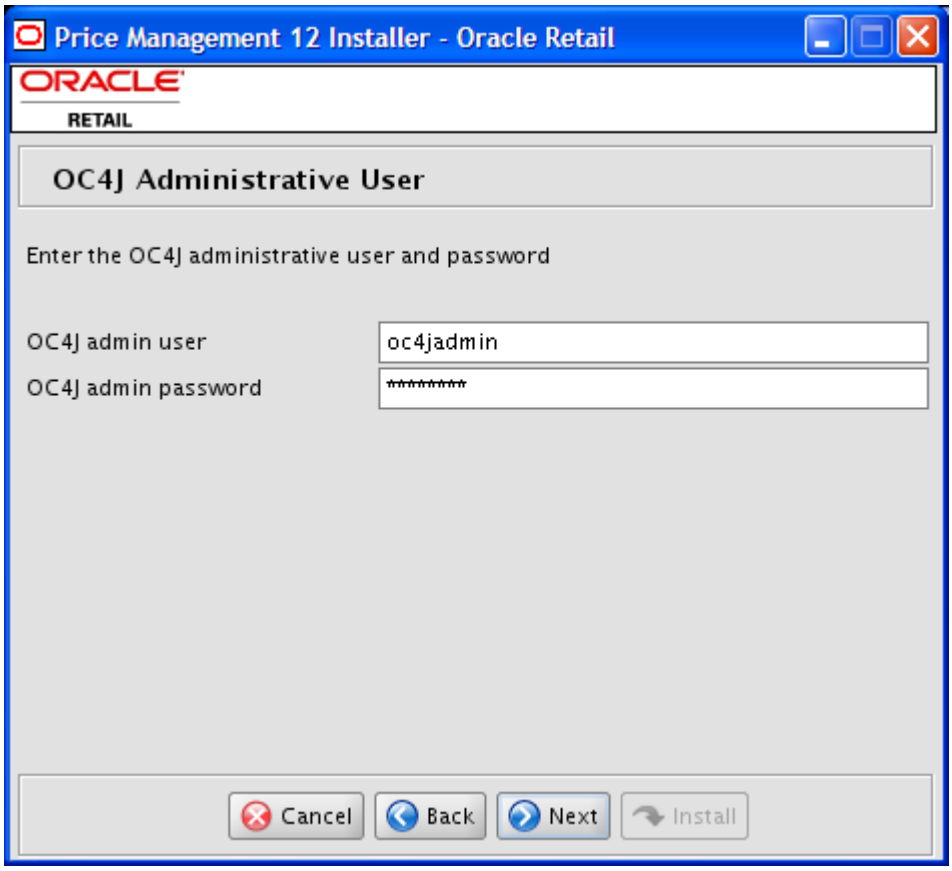
| | |
|---|---|
| **Field Title** | RSM 12 OC4J instance |
| **Field Description** | Name of the OC4J instance running the Security Manager (RSM) application. RSM is a requirement of RPM. |
| **Example** | rsm-oc4j-instance |

| | |
|---|---|
| **Field Title** | RSM 12 app deployment name |
| **Field Description** | Application deployment name of the Security Manager (RSM) application. |
| **Example** | rsm12 |

| | |
|---|---|
| **Field Title** | RIBforRPM 12 OC4J instance |
| **Field Description** | Name of the OC4J instance running the RIBforRPM application. RIBforRPM provides the connection between RPM and the RIB (Retail Integration Bus), and is optional. See the *RPM 12.0 Operations Guid*e for details on how to configure RPM without the RIB. |
| **Example** | rib-rpm-oc4j-instance |

| | |
|---|---|
| **Field Title** | RIBforRPM 12 deployment name |
| **Field Description** | Application deployment name of the RIBforRPM application. See the above note about RIBforRPM under RIBforRPM 12 OC4J Instance. |
| **Example** | rib-rpm |

### Screen: OC4J Administrative User

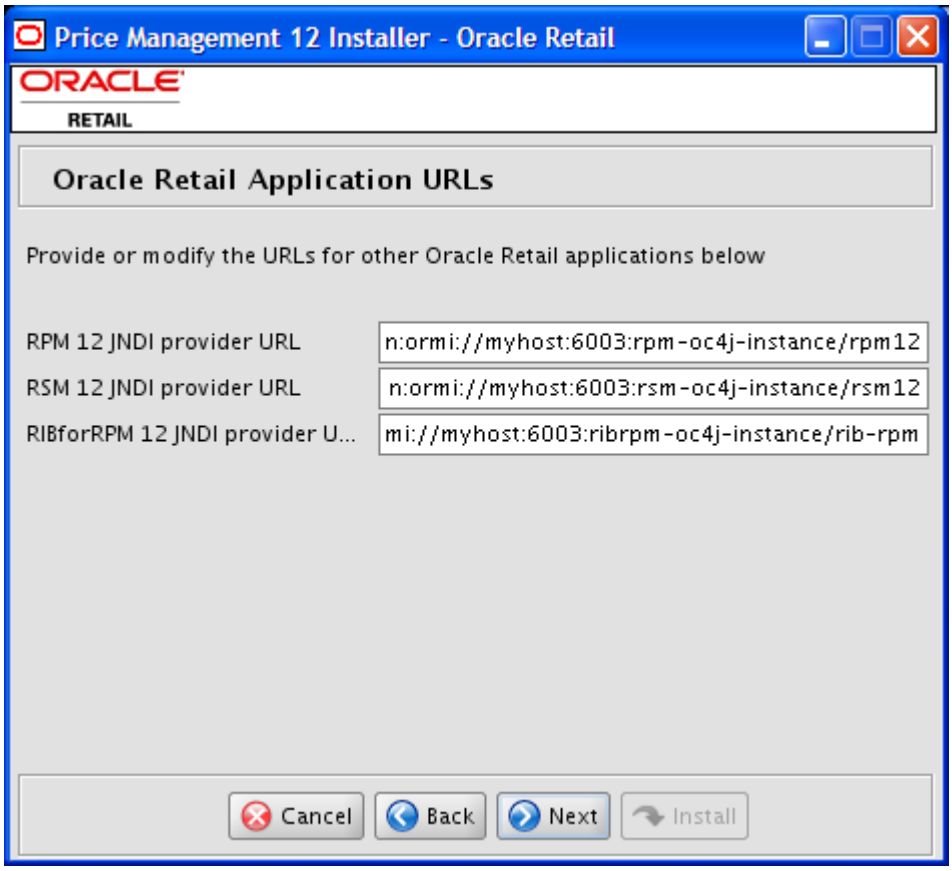



**Fields on this screen:**

| | |
|---|---|
| **Field Title** | OC4J admin user |
| **Field Description** | Username of the admin user for OC4J instance to which the RPM application is being deployed. |
| **Example** | oc4jadmin |

| | |
|---|---|
| **Field Title** | OC4J admin password |
| **Field Description** | Password for the OC4J admin user. You chose this password when you created the OC4J instance (managed OC4J) or when you started the instance for the first time (standalone OC4J). |

### Screen: Oracle Retail Application URLs




**Fields on this screen:**

| | |
|---|---|
| **Field Title** | RPM 12 JNDI provider URL |
| **Field Description** | URL which the RPM client uses to find the RPM application. See Appendix D: URL Reference for expected syntax. |
| **Destination** | rpm.jnlp, launchRpmBatch.sh |
| **Example** | opmn:ormi://myhost:6003:rpm-oc4j-instance/rpm12 |

| | |
|---|---|
| **Field Title** | RSM 12 JNDI provider URL |
| **Field Description** | URL which the RPM application uses to find the RSM application. See Appendix D: URL Reference for expected syntax. |
| **Destination** | jndi_providers.xml |
| **Example** | opmn:ormi://myhost:6003:rsm-oc4j-instance/rsm12 |

| | |
|---|---|
| **Field Title** | RIBforRPM 12 JNDI provider URL |
| **Field Description** | URL which the RPM application uses to find the RIBforRPM application. See Appendix D: URL Reference for expected syntax. RIBforRPM provides the connection between RPM and the RIB (Retail Integration Bus), and is optional. See the *RPM 12.0 Operations Guide* for details on how to configure RPM without the RIB. |
| **Destination** | jndi_providers.xml |
| **Example** | opmn:ormi://myhost:6003:rib-rpm-oc4j-instance/rib-rpm |

# B

# Appendix: Installer Silent Mode

## Repeating an Installation Attempt

In addition to the GUI and text interfaces of the RPM 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, follow these instructions:

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

> **Example:** install.sh silent

# C

# Appendix: Common Installation Errors

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

## SeeBeyond JMS Unavailable

**Error message:**

[1013AS_1.mspdev27] 06/04/29 23:23:46 Notification ==>application : rpm12 is in failed state

[1013AS_1.mspdev27] 06/04/29 23:23:46 Notification ==>Operation failed with error:

Could not connect to host: mspdev33, port: 27053

[Summary] There are total 1 instances in the operation.

[Summary] Operation failed on 1013AS_1.mspdev27

[Summary] Operation on cluster FAILED since 1 instanced failed!

**Solution:**

Make sure the SeeBeyond e*Gate JMS server is running and that you provide the correct JMS host and port values when you install RPM. Pay special attention to the input.taskqueue.jmshost and input.taskqueue.jmsport properties in ant.install.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).

## Keystore Errors When Signing rpm_client_config.jar

**Error message:**

keytool error: java.io.IOException: Keystore was tampered with, or password was incorrect

This message may be encountered when you use the **keytool** utility to create an alias for signing the rpm_client_config.jar file. This usually happens when the alias for which you are generating a key already exists in the keystore file.

**Solution:**

Delete or rename the ~/.keystore file and run the keytool command again. This creates a fresh keystore file.

## 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 with 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 **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).

## Left-Side Menu Buttons Missing in RPM Client

**Symptom:**

You can log into the RPM application but the left-side menus do not show up on the screen.

**Solution:**

The RSM (Security Manager) schema has not been loaded with RPM security data. There is a set of RPM data scripts that is shipped with RMS 12.0 (See Chapter 2 of this document). Run these scripts in the RSM schema and try logging into RPM again.

## "Could not create system preferences directory" Warning

**Symptom:**

The following text appears in the installer Errors tab:

```
May 22, 2006 11:16:39 AM java.util.prefs.FileSystemPreferences$3 run
WARNING: Could not create system preferences directory. System preferences are
unusable.
May 22, 2006 11:17:09 AM java.util.prefs.FileSystemPreferences
checkLockFile0ErrorCode
WARNING: Could not lock System prefs. Unix error code -264946424.
```

**Solution:**

This is related to Java bug 4838770. The /etc/.java/.systemPrefs directory may not have been created on your system. See http://bugs.sun.com for details.

This is an issue with your installation of Java and does not affect the Oracle Retail product installation.

## ConcurrentModificationException in Installer GUI

**Symptom:**

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

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

**Solution:**

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

## "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 rpm12.ear

**Symptom:**

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

07/12/19 10:53:17 Notification ==>Error while unpacking rpm12.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 10.1.3.4. Follow the workaround documented for this bug: in the opmn.xml file in $ORACLE_HOME/opmn/conf and 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.

# D

# Appendix: URL Reference

The application installers for the Price Management 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>

- `<host>`: hostname of the database server
- `<port>`: database listener port
- `<sid>`: system identifier for the database

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

## HTTP URL for a WebStart Client

Used within a web browser to access the application client.

Syntax: http://<host>:<port>/<path>

- `<host>`: hostname of the OracleAS environment
- `<port>`: HTTP port for the Oracle Http Server (OHS). This can be found in the Listen parameter in the ORACLE_HOME/Apache/Apache/conf/httpd.conf file, or in the output of opmnctl status –l.
- `<path>`: Path to the JNLP file, relative to the document root of the HTTP server. The document root for the Oracle Http Server is located at <ORACLE_HOME>/Apache/Apache/htdocs.

> **Example:**
> <ORACLE_HOME>/Apache/Apache/htdocs/rpm/rpm.jnlp

http://myhost:7777/rpm/rpm.jnlp

## 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>

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

> **Example:** opmn:ormi://myhost:6003:rpm-oc4j-instance/rpm12

**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>

- `<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/rpm_group

Syntax (standalone OC4J): deployer:oc4j:<host>:<port>

- `<host>`: hostname of the OracleAS environment
- `<port>`: 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

# E

# Appendix: Configuration Files

For the RPM application to work properly in an application server environment there are many configuration files that must be customized. Some of these files are configuration files of the Oracle Application Server and others are specific to the RPM application. The RPM application installer takes care of configuring all of these files so for a default install you will not need to manually inspect and fix the files listed in this appendix. However, for reference and troubleshooting purposes, here is a listing of the configuration files and parameters modified by the RPM application installer.

## Oracle Application Server Resource Configuration

The following files are part of Oracle Application Server and are modified by the RPM application installer.

### jms.xml

$ORACLE_HOME/j2ee/<rpm_instance>/config/jms.xml

If you select OracleAS JMS as the JMS provider for RPM then the installer adds these lines to the OC4J jms.xml file (reformatted for readability):

```
<queue name="rpmTaskQueue"
       location="jms/rpmTaskQueue"
       persistence-file="rpmTaskQueue.persistence.file">
     <description>RPM Task Engine Queue</description>
</queue>
<queue-connection-factory location="jms/Queue/myQCF"/>
<xa-queue-connection-factory location="jms/Queue/myXAQCF"/>
```

This is the definition within the JMS server in OC4J for the non-XA RPM task queue and the XA and non-XA JMS queue connection factories.

### oc4j-connectors.xml

$ORACLE_HOME/j2ee/<rpm_instance>/config/oc4j-connectors.xml

If you select OracleAS JMS as the JMS provider for RPM then the installer adds these lines to the OC4J oc4j-connectors.xml file (reformatted for readability):

```
<adminobject-config location="OracleASjms/rpmTaskQueue">
    <adminobject-
class>oracle.j2ee.ra.jms.generic.AdminObjectQueueImpl</adminobject-class>
    <config-property name="jndiName" value="jms/rpmTaskQueue"/>
    <config-property name="resourceProviderName" value="oc4jjms"/>
</adminobject-config>
```

This admin object is an XA wrapper for the RPM task queue defined in jms.xml.

# RPM Application Deployment Descriptors

## application.xml (J2EE standard)

Inside of rpm12.ear and deployed to $ORACLE_HOME/j2ee/<rpm_instance>/applications/<rpm_app>/META-INF/application.xml

If you select SeeBeyond as the JMS provider for RPM then the installer adds these lines to the application.xml deployment descriptor to add the rpm-egate-connector resource adapter module to the application:

```
<module>
    <connector>rpm-egate-connector.rar</connector>
</module>
```

## orion-application.xml (OC4J proprietary)

Inside of rpm12.ear and deployed to $ORACLE_HOME/j2ee/<rpm_instance>/applications/<rpm_app>/META-INF/orion-application.xml

If you select SeeBeyond as the JMS provider for RPM then the installer adds these lines to the orion-application.xml deployment descriptor to add the rpm-egate-connector resource provider.

```
<resource-provider name="rpm-egate-resource-provider"

class="com.evermind.server.deployment.ContextScanningResourceProvider">
    <description>eGate Resource Provider</description>
    <property name="java.naming.provider.url"
value="file://@deploy.taskqueue.parent.dir@/sbynjndi" />
    <property name="java.naming.factory.initial"
value="com.sun.jndi.fscontext.RefFSContextFactory" />
</resource-provider>
```

The **@deploy.taskqueue.parent.dir@** string is replaced by the filesystem path to RPM's sbynjndi directory which holds the .bindings file for SeeBeyond JMS.

## oc4j-connectors.xml (OC4J proprietary)

Inside of rpm12.ear and deployed to $ORACLE_HOME/j2ee/<rpm_instance>/applications/<rpm_app>/META-INF/oc4j-connectors.xml

If you select SeeBeyond as the JMS provider for RPM then the installer adds these lines to the oc4j-connectors.xml deployment descriptor to add the J2EE connector for the RPM eGate resource provider (reformatted for readability):

```
<connector name="rpm-egate-connector"
           path="rpm-egate-connector.rar">
    <config-property name="lookupMethod"
                     value="resourceProvider" />
    <config-property name="resourceProviderName"
                     value="rpm-egate-resource-provider" />
    <adminobject-config location="jms/Generic/Queue/@task.queue@">
        <adminobject-
class>oracle.j2ee.ra.jms.generic.AdminObjectQueueImpl</adminobject-class>
        <config-property name="jndiName"
                         value="Queues/@task.queue@" />
        <config-property name="resourceProviderName"
                         value="rpm-egate-resource-provider" />
    </adminobject-config>
</connector>
```

The **@task.queue@** string is replaced by the task queue name by the RPM application installer.

> **Note:** There are 2 oc4j-connectors.xml files: this one at the RPM application level, and another one at the OC4J instance level which is documented above in the **Oracle Application Server Resource Configuration** section of this appendix.

## data-sources.xml (OC4J proprietary)

Inside of rpm12.ear and deployed to $ORACLE_HOME/j2ee/<rpm_instance>/applications/<rpm_app>/META-INF/data-sources.xml

When the rpm12.ear file is deployed to OC4J it contains a configured data-sources.xml file modified by the installer. This file contains the database settings that are used by RPM. The installer configures the following lines in data-sources.xml (reformatted for readability):

```
<!-- Underlying connection pool for XA DataSource -->
<connection-pool name="RPMConnectionPool">
    <connection-factory
        factory-class="oracle.jdbc.pool.OracleDataSource"
        user="@data_source.user@"
        password="@data_source.password@"
        url="@data_source.url@">
    </connection-factory>
</connection-pool>

<!-- XA DataSource -->
<managed-data-source
    name="RPMXADataSource"
    connection-pool-name="RPMConnectionPool"
    jndi-name="jdbc/RPMXADataSource"/>

<!-- Non-XA DataSource -->
<native-data-source
    name="RPMNonXADataSource"
    jndi-name="jdbc/RPMNonXADataSource"
    description="RPM Non-XA DataSource"
    data-source-class="oracle.jdbc.pool.OracleDataSource"
    user="@data_source.user@"
    password="@data_source.password@"
    url="@data_source.url@">
</native-data-source>
```

The **@token.name@** strings are replaced with data source settings by the RPM application installer.

> **Note:** There are two data-sources.xml files: this one at the RPM application level, and another one at the OC4J instance level. RPM does not use the file at the OC4J instance level ($ORACLE_HOME/j2ee/<rpm_instance>/config/data-sources.xml)..
>
> **Note:** After deployment, the RPM data source settings are also modifiable through the Enterprise Manager in the ASControl application. See the **Data Source Configuration in Container** section in the RPM operations guide document.

## ra.xml (J2EE standard)

Inside of rpm-egate-connector.rar and deployed to $ORACLE_HOME/j2ee/<rpm_instance>/applications/<rpm_app>/rpm-egate-connector/META-INF/ra.xml

If you select SeeBeyond as the JMS provider for RPM then the installer configures the task queue name in the ra.xml resource adapter deployment descriptor.

```
<adminobject>
    <adminobject-interface>javax.jms.Queue</adminobject-interface>
    <adminobject-
class>oracle.j2ee.ra.jms.generic.AdminObjectQueueImpl</adminobject-class>
    <config-property>
        <config-property-name>jndiName</config-property-name>
        <config-property-type>java.lang.String</config-property-type>
        <config-property-value>Queues/@task.queue@</config-property-value>
    </config-property>
    <config-property>
        <config-property-name>resourceProviderName</config-property-name>
        <config-property-type>java.lang.String</config-property-type>
        <config-property-value>rpm-egate-resource-provider</config-property-value>
    </config-property>
</adminobject>
```

The **@task.queue@** string is replaced by the queue name by the RPM application installer.

## oc4j-ra.xml (OC4J proprietary)

Inside of rpm-egate-connector.rar and deployed to $ORACLE_HOME/j2ee/<rpm_instance>/applications/<rpm_app>/rpm-egate-connector/META-INF/oc4j-ra.xml

If you select SeeBeyond as the JMS provider for RPM then the installer updates the rpm-egate-connector.rar file with this file. However, there is nothing that is configured at install time for this file.

# RPM Application Configuration Files – Server Side

## rpm.properties

Inside of rpm12.ear and deployed to the following location:

`$ORACLE_HOME/j2ee/<rpm_instance>/applications/<rpm_app>/conf/rpm.properties`

This is the primary RPM application configuration file. It contains settings related to the database, security, and JMS.

```
schema_owner=@schema.owner@
security_source=RSM
delete_staged_rib_payloads=@delete.staged.rib.payloads@
hibernate_xa_resource=/hibernate.xa.cfg.xml
hibernate_non_xa_resource=/hibernate.non-xa.cfg.xml
xa_queue_connection_factory=@jms.queue.connection.factory.xa@
non_xa_queue_connection_factory=@jms.queue.connection.factory.non-xa@
xa_queue_for_publish=@jms.queue.task.xa@
non_xa_queue_for_publish=@jms.queue.task.non-xa@
queue_for_subscribe=@jms.queue.task.non-xa@
```

The **@token.name@** strings are replaced with settings based on user input by the RPM application installer.

`bundled_rsm_client=@bundled.rsm.client@`

To see the RSM application, set the value of the property bundled_rsm_client to true. The default is false.

## jndi_providers.xml

Inside of rpm12.ear and deployed to $ORACLE_HOME/j2ee/<rpm_instance>/applications/<rpm_app>/conf/retek/jndi_providers.xml

RPM uses the jndi_providers.xml file to locate the RSM and RIBforRPM applications that it integrates with. The JNDI provider URLs for these applications are placed in this file by the installer.

```
<provider app="rib-rpm" url="@rib.service.url@" factory="@rib.context.factory@">
       <jndi_name>com/retek/rib/binding/publisher/RIBMessagePublisher</jndi_name>
</provider>
<provider app="rsm" url="@rsm.service.url@" factory="@rsm.context.factory@"/>
```

The **@token.name@** strings are replaced with settings based on user input by the RPM application installer. The context factories will always be set to the OC4J setting of **oracle.j2ee.rmi.RMIInitialContextFactory**.

## log4j.xml

Inside of rpm12.ear and deployed to $ORACLE_HOME/j2ee/<rpm_instance>/applications/<rpm_app>/conf/log4j.xml

This log4j configuration file determines the log level of the RPM application. There are several places in this file where the installer sets the log level. The RPM application installer is hard-coded to always set a log level of ERROR. You can raise or lower this level by manually editing log4j.xml after deployment.

**Note:** RPM log messages are sent as console output from the OC4J server. This output is captured in the log files located under $ORACLE_HOME/opmn/logs. See the **Logging** section of the **Backend System Administration and Configuration** chapter of the RPM operations guide for more details.

# RPM Application Configuration Files – Batch Client Side

## launchRpmBatch.sh

Installed to $ORACLE_HOME/j2ee/<rpm_instance>/rpm-batch/scripts/launchRpmBatch.sh

launchRpmBatch.sh is the script that is invoked by every RPM batch program to set up the classpath of the batch client and connect to the RPM application running in OC4J. This file is a shell script but there is a configuration setting for the application URL that is modified by the installer.

```
PROVIDER_URL=-Djava.naming.provider.url=opmn:ormi://myhost:6003:rpm-oc4j-instance/rpm12
```

The PROVIDER_URL line above is modified by the RPM application installer to contain the JNDI provider URL for the RPM application. This is the setting that points the RPM batch client to the deployed RPM application in OC4J.

# RPM Application Configuration Files – GUI Client Side

## rpm.jnlp

Installed to $ORACLE_HOME/Apache/Apache/htdocs/rpm/rpm.jnlp, or an alternate location provided by the user to the installer.

This is the main JNLP file for the RPM GUI client. The RPM application installer configures this file with the URL information for both server and client.

The installer configures the HTTP URL to the RPM client files in the codebase attribute of the root level <jnlp> element:

```
<jnlp codebase="http://myhost:7777/rpm" spec="1.0+" href="rpm.jnlp">
The JNDI provider URL to the RPM application in OC4J is also configured in rpm.jnlp:
<property name="java.naming.provider.url" value="opmn:ormi://myhost:6003:rpm-oc4j-instance/rpm12"/>
<property name="NAMING_URL" value="opmn:ormi://myhost:6003:rpm-oc4j-instance/rpm12"/>
```

## rpmconfig.jnlp

Installed to $ORACLE_HOME/Apache/Apache/htdocs/rpm/rpmconfig.jnlp, or an alternate location provided by the user to the installer.

This is a secondary JNLP file that pulls the rpm_client_config.jar file into the RPM client classpath. This second JNLP file exists so that rpm_client_config.jar may be signed by any certificate and still be allowed by WebStart to run with the Oracle-signed jars listed in rpm.jnlp.

Just as in rpm.jnlp, the installer configures the HTTP URL to the RPM client files in the codebase attribute of the root level <jnlp> element:

```
<jnlp codebase="http://myhost:7777/rpm" spec="1.0+" href="rpmconfig.jnlp">
```