Oracle® Retail Invoice Matching

Installation Guide
Release 13.1.9
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ORACLE

Oracle® Retail Invoice Matching Installation Guide, Release 13.1.9

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Value-Added Reseller (VAR) Language

Oracle Retail VAR Applications

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Contents

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Oracle Retail Invoice Matching, Installation Guide, Release 13.1.9

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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 Invoice Matching Release 13.1.9 documentation set:

- *Oracle Retail Invoice Matching Release Notes*

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, 13.1.9). If you are installing the base release or additional patch releases, read the documentation for all releases that have occurred since the base release before you begin installation. Documentation for patch releases can contain critical information related to the base release, as well as information about code changes since the base release.

Improved Process for Oracle Retail Documentation Corrections

To more quickly address critical corrections to Oracle Retail documentation content, Oracle Retail documentation may be republished whenever a critical correction is needed. For critical corrections, the republication of an Oracle Retail document may at times **not** be attached to a numbered software release; instead, the Oracle Retail document will simply be replaced on the Oracle Technology Network Web site, or, in the case of Data Models, to the applicable My Oracle Support Documentation container where they reside.

This process will prevent delays in making critical corrections available to customers. For the customer, it means that before you begin installation, you must verify that you have the most recent version of the Oracle Retail documentation set. Oracle Retail documentation is available on the Oracle Technology Network at the following URL:

`http://www.oracle.com/technetwork/documentation/oracle-retail-100266.html`

An updated version of the applicable Oracle Retail document is indicated by Oracle part number, as well as print date (month and year). An updated version uses the same part number, with a higher-numbered suffix. For example, part number E123456-**02** is an updated version of a document with part number E123456-**01**.

If a more recent version of a document is available, that version supersedes all previous versions.

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/technetwork/documentation/oracle-retail-100266.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
```

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Preinstallation Tasks

This chapter describes the tasks required prior to installation.

Patch Contents

Patch releases include all defect fixes that have been released through bundled hot fix releases since the last patch release. Patch releases may also include new defect fixes and enhancements that have not previously been included in any bundled hot fix release.

Requesting Infrastructure Software

If you are unable to find the necessary version of the required Oracle infrastructure software (database server, application server, WebLogic, etc.) on the Oracle Software Delivery Cloud, you should file a non-technical 'Contact Us' Service Request (SR) and request access to the media. For instructions on filing a non-technical SR, see My Oracle Support Note 1071023.1 – *Requesting Physical Shipment or Download URL for Software Media*.

Check Supported Database Server Requirements

General Requirements for a database server running Oracle Retail Invoice Matching include:

Supported on:	Versions Supported:
Database Server OS	OS certified with Oracle Database 11gR1 and 11gR2 Enterprise Edition. Options are: ▪ Oracle Linux 5 for x86-64 (Actual hardware or Oracle virtual machine). ▪ Red Hat Enterprise Linux 5 for x86-64 (Actual hardware or Oracle virtual machine). ▪ AIX 6.1, minimum TL1 (Actual hardware or LPARs) ▪ Solaris 10 Sparc (Actual hardware or Oracle VM Server for SPARC). ▪ HP-UX 11.31 Integrity (Actual hardware or HPVM)

Supported on:	Versions Supported:
Database Server 11gR1	Oracle Database Enterprise Edition 11gR1 with the following patches: ▪ 6890831 – 11.1.0.7 patchset. Oneoffs: ▪ 7036284 (LOADJAVA RUN IN A DV ENVIRONMENT CANNOT LOAD CLASSES WITH A NAME LONGER THAN 128) ▪ 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 BUGS 8596022 9582272 **Components:** ▪ Oracle Database 11g ▪ Oracle Partitioning ▪ Oracle Net Services ▪ Oracle Call Interface (OCI) ▪ Oracle Programmer ▪ Oracle XML Development Kit ▪ Optional Database Vault ▪ Examples CD **Other components:** ▪ Perl 5.0 or later ▪ X-Windows interface
Database Server 11gR2	Oracle Database 11g Release 2 (11.2.0.4) Enterprise Edition with the following oneoff patches: ▪ 18465025: MERGE REQUEST ON TOP OF 11.2.0.4.0 FOR BUGS 18016963 18302329. **Components:** ▪ Oracle Partitioning ▪ Optional Database Vault ▪ Examples CD **Other components:** ▪ Perl 5.0 or later ▪ X-Windows interface

Check Supported Application Server Requirements

General requirements for an application server capable of running the Oracle Retail Invoice Matching application include:

Supported on:	Versions Supported:
Application Server OS	OS certified with Oracle Application Server 10g 10.1.3.5. Options are: ▪ Oracle Linux 5 for x86-64 (Actual hardware or Oracle virtual machine). ▪ Red Hat Enterprise Linux 5 for x86-64 (Actual hardware or Oracle virtual machine). ▪ AIX 6.1, minimum TL1 (Actual hardware or LPARs) ▪ Solaris 10 Sparc (Actual hardware or Oracle VM Server for SPARC). ▪ HP-UX 11.31 Integrity (Actual hardware or HPVM)
Application Server	Oracle Application Server 10g 10.1.3.5 running with java 6.0_75 or higher, also with the following patch: ▪ 12965674: Null pointer exception when deploying applications at OC4J:

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

Verify Single Sign-On

If ReIM will not be deployed in a Single Sign-On environment, skip this section.

If Single Sign-On is to be used, verify the Oracle Infrastructure Server 10g version 10.1.2.3 server has been installed. Verify the OAS HTTP server is registered with the Infrastructure Oracle Internet Directory as a partner application.

Check Client PC and Web Browser Requirements

Requirement	Version
Operating system	Windows 2000 or XP
Display resolution	1024x768
Processor	minimum1GHz
Memory	minimum of 512MBytes
Networking	Intranet with at least 10Mbps data rate
Java	Oracle JRE 6.0 Update 75 or higher (1.6.0_75+)
Browser	Microsoft Internet Explorer version 8.x or 9.x Mozilla Firefox 17+

Supported Oracle Retail Products

Requirement	Version
Oracle Retail Merchandising System (RMS)/Oracle Retail Trade Management (RTM)/Oracle Retail Sales Audit (ReSA)	13.1.9
Oracle Retail Data Warehouse (RDW)	13.1.5
SIM (via RMS)	13.1.9

Supported Oracle Retail Integration Technologies

Requirement	Version
Oracle Retail Extract, Transform and Load (RETL)	13.1.9
Oracle Retail Integration Bus (RIB)	13.1.9

Supported Oracle Applications

Note: For integration with Oracle E-Business Suite, an Oracle Retail integration accelerator patch is available for download. This patch enables the integration between Oracle E-Business Suite and some Oracle Retail applications.

Requirement	Version
Oracle E-Business Suite (Accounts Payable)	12.0.4 Oracle E-Business Suite 12.0.4 integration is supported using an Oracle Retail integration accelerator patch. To implement this integration patch, download the hot fix associated with defect number 8733303. For support in implementing this integration, contact Oracle Customer Support and follow all typical Oracle Retail processes.
Oracle E-Business Suite (Accounts Payable)	Oracle Application Integration Architecture (AIA) Media Pack 2.5 Oracle E-Business Suite integration is supported using the Oracle Financial Operations Control Integration Pack for Oracle Retail Merchandising Suite and Oracle E-Business Suite Financials. See the *Oracle® Application Integration Architecture 2.5: Installation and Upgrade Guide* for specific version information.
PeopleSoft Enterprise Financials	Oracle Application Integration Architecture (AIA) Media Pack 2.5 PeopleSoft Enterprise Financials integration is supported using the Oracle Retail Merchandising Integration Pack for PeopleSoft Enterprise Financials: Financial Operations Control. See the *Oracle® Application Integration Architecture 2.5: Installation and Upgrade Guide* for specific version information.

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RAC and Clustering

Oracle Retail Invoice Matching has been validated to run in two configurations on Linux:

- Standalone Oracle Application Server and Database installations
- Real Application Cluster Database and Oracle Application Server Clustering

The Oracle Retail products have been validated against 11.1.0.7 and 11.2.0.4 RAC databases. 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 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 be configured to reflect all application server Mid-Tier installations. Validation has been completed utilizing RAC 11.1.0.7 and 11.2.0.4 Oracle Internet Directory databases with the OAS 10.1.2

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 Real Application Clusters Administration and Deployment Guide 11g Release 1 (11.1) Part Number B28254-07
- Oracle Real Application Clusters Administration and Deployment Guide 11g Release 2 (11.2) Part Number E16795-08

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ReIM Database

The ReIM database objects are bundled with the RMS database schema patch installer. To install the ReIM database objects see the chapter, "RMS Database Installation – Patch," in the *Oracle Retail Merchandising System Installation Guide*. Run the database schema patch installer, and select the ReIM option on the product selection page.

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Application Installation

These instructions apply to new installations and upgrades. If you are upgrading a previous 13.0.x installation, the application installer upgrades the application and backs up certain files from the previous installation (see Backups Created by the Installer from this chapter). To ensure that the previous installation is properly undeployed, you must provide the same application deployment name and context root as the previous installation.

Before proceeding you must install Oracle Application Server 10g 10.1.3.5 plus the patches listed in the Chapter 1 of this document. The ReIM application is deployed to an OC4J instance within the OracleAS10g installation.

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

Create a New OC4J Instance and Group for ReIM

Skip to the next section if you are redeploying to an existing OC4J group in Oracle Application Server 10.1.3.5

The ReIM application must be deployed to its own dedicated OC4J group. For instructions on how to create a new OC4J group and instances, see the *Adding and Deleting OC4J Instances* section in the *Reconfiguring Application Server Instances* chapter of the *Oracle Application Server Administrator's Guide*.

1. Log in to the server that is running your OracleAS installation. Set your ORACLE_HOME environment variable to point to this installation.
2. Choose a name for the new OC4J instance and group.

   Example: reim_oc4j

   reim_group

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

   Example:
   $ORACLE_HOME/bin/createinstance
   –instanceName reim_oc4j –groupName reim_group

3. Force OPMN to reload the configuration file.

   Example: $ORACLE_HOME/opmn/bin/opmnctl reload

4. When prompted for the oc4jadmin password, provide the same administrative password you gave for the AS10g installation. All OC4J instances running Oracle Retail applications must have the same oc4jadmin password.
5. 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=reim_group

6. Verify that the OC4J group is fully started. If you are using the Enterprise Manager Web interface, the instances 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

7. 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 ReIM Application Distribution

To expand the ReIM application distribution, do the following.

1. Log in to the UNIX server as the user who owns the OracleAS 10g installation. Create a new staging directory for the ReIM application distribution (reim13application.zip). There should be a minimum of 600 MB disk space available for the application installation files.

   Example: $ORACLE_HOME/j2ee/reim_oc4j/reim-staging

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

2. Copy reim13application.zip to INSTALL_DIR and extract its contents.

SSL Installations – Preinstallation Steps

Skip this section if you are not using the SSL for application server.

The goal of the following steps is to set up secure communication between the MOD_OC4J and the ReIM OC4J instance via the AJPS protocol.

Note: The following changes will make the Oracle Application Server work only with SSL, because In the current release, it is not possible for MOD_OC4J to selectively access some OC4J instances using AJP and others using AJPS. Once the Oc4jEnableSSL-on directive has been set in MOD_OC4J.CONF, AJPS will be used for all future communication to any OC4J instances.

Therefore, any applications which do not support SSL and are deployed in the same OAS will not work. It is recommended that you use a separate OAS installation for SSL configured applications.

The information presented in this section is intended as a supplement to the following product documentation:

Oracle Containers for J2EE Security Guide 10g (10.1.3.1.0)

B28957-01

http://docs.oracle.com/cd/B31017_01/web.1013/b28957.pdf

Chapter 15: SSL Communication with OC4J pages 15-1 through 15-24

> **Note:** Keep in mind that securing your OC4J instance will result that DMS does no longer work as DMS does NOT support AJPS and HTTPS protocol.
>
> Since DMS always makes requests to localhost, one workaround is to configure OC4Js to bind to only local host for AJP and HTTP requests when SSL is enabled.
>
> If you are using ajps for secure communication between the Oracle HTTP server and the Oracle Container 4 Java, the website name must be default-web-site.

3. For the ReIM application's OC4J instance, back up the server.xml and default-web-site.xml files.

```
%  cd  $ORACLE_HOME/j2ee/<instance-name>
%  cp –r config config.orig
%  cd config
%  cp server.xml server.xml.orig
%  cp default-web-site.xml default-web-site.xml.orig
```

4. This step is optional configuration change to MOD_OC4J, which will allow you to display to a browser the OC4J routing information that MOD_OC4J has dynamically discovered about the running OC4J instances, the ports those instance are using and the applications that those instances hold.

   a. First, backup the existing mod_0c4j.conf file:

   ```
   % cd  $ORACLE_HOME/Apache/Apache/conf
   % cp mod_oc4j.conf mod_oc4j.conf.orig
   ```

   b. Edit the "mod_0c4j.conf" , and within this file, between the <IfModule mod_oc4j.c> and </IfModule> tags, add the following:

   ```
   oc4jSet StatusUri /oc4j-status
   ```

   This will allow you to invoke the following URL:

   ```
   http://<your_host>:<your_port>/oc4j-status
   ```

   This URL will display the dynamic routing information about all the apps that MOD_OC4J has discovered.

5. Next use keytool to create a keystore with certificate based on the fully qualified name of the machine.

   It is required to use the keytool utility to export a certificate from the keystore using following command:

   ```
   %  keytool –export –file cert_file_name –keystore keystore_file_name –
   storepass <password> -alias <keystore_alias>
   ```

   Reference:

   http://docs.oracle.com/cd/B31017_01/web.1013/b28957/configssl.htm#CIHEBDBH
   Oracle Containers for J2EE Security Guide 10g (10.1.3.1.0)
   15 SSL Communication with OC4J
   Configure AJPS between OC4J and Oracle HTTP Server

See the steps describing the use of keytool contained within following note:
Note 152363.1 - How to Enable SSL in OC4J Standalone

6. Now make the OC4J instance use AJPS instead of AJP. First,modify default-web-site.xml and within <web-site> tag at the top of the file, locate the attribute definition: protocol="ajp13". To the left of this insert: secure="true" as shown below:

```
<web-site
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xsi:noNamespaceSchemaLocation="http://xmlns.oracle.com/oracleas/schema/web-site-10_0.xsd"
   port="12501" secure="true" protocol="ajp13" display-name="OC4J 10g (10.1.3) Default Web Site"
   schema-major-version="10" schema-minor-version="0"
>
```

At the bottom of the same file add the following <ssl-config> tag, located before the </web-site> tag:

```
<ssl-config
   keystore="/path/to/your/java.keystore"
   keystore-password="keyStorePasswd"
/>
```

7. Ensure OPMN assigns an "ajps" port value to out reim<instance-name>

Within "opmn.xml", modify the "default-web-site" entry within the reim<instance-name> xml entries and change the "ajp" to "ajps" as shown:

```
<port id="default-web-site" range="12501-12600" protocol="ajps"/>
```

After finishing the previous steps stop and start opmn and after starting the opmn instance, invoke "opmnctl status –l" and in the port section you should have "ajps" (rather than "ajp") and the expected port value.

At this point, the /oc4j-status (previously created) should show all the targets.

> **Note:** You will get an internal error attempting to access any page, because at this point we have made OC4J use SSL but have not configured MOD_OC4J to use SSL to talk to it, so the two cannot communicate.
>
> You will also notice if you look in $ORACLE_HOME/opmn/logs/opmn.log that there are "Ping Failures" and OC4J_AJPS is being killed and restarted once nearly every minute. This can be verified using "opmnctl status -l" which contains a column giving the "up time" for the container. Given that the OC4J_AJPS container is currently being identified as unresponsive and it will be restarted after three successive "ping" failures (20 seconds from each other), we will correct these two problems in the flowing steps.

8. First, configure OPMN with an SSL configuration that allows it to send AJPS requests to OC4J.
   a. Use the Oracle Wallet Manager tool to import the generated certificate (cert_file_name) from Step 3, into the wallet as a Trusted Certificate.
      The following technical document provides a thorough overview of how to achieve this:
      Note 341904.1 – Configuring HTTP Server to use SSL in Oracle Application Server 10g (10.1.2.XX)
   b. Add the same CA trusted root to the wallet.

> **Note:** When creating the wallet, ensure that the wallet is enabled for the "auto-login" feature.

Add an SSL configuration to OPMN, so OPMN can use SSL to invoke "pings" to the OC4J instance's AJPS port.
Edit the opmn.xml file and locate the "stop-parameters" section for the OC4J instance of interest:

```
<category id="stop-parameters">
<data id="java-options"
   value="-Djava.security.policy=$ORACLE_HOME/j2ee/AJPS/config/java2.policy
   -Djava.awt.headless=true -Dhttp.webdir.enable=false"/>
</category>
```

Immediately following the "stop-parameter" section, add the following new "security-parameters" section:

```
<category id="security-parameters">
   <data id="wallet-file" value="file:/path/to/wallet_dir"/>
   <data id="wallet-password" value="wallet_passwd"/>
</category>
```

> **Note:** The wallet-file is a path to a directory containing a file named "ewallet.p12" and does NOT include the "ewallet.p12" file name itself

9. After completing the previous steps, stop and start the opmn instance.
   a. Check the /oc4j-status page to verify that your applications have been discovered.
   b. Check the opmn.log and verify that there are no "Ping Failures".

While accessing the application you will still see "HTTP-500 Internal Server Error". Use the following steps to fix this error.

1. Enable MOD_OC4J to send requests to OC4J through AJPS.
2. Backup the mod_oc4j.conf file at ($ORACLE_HOME/Apache/Apache/conf/mod_oc4j.conf)

```
% cd $ORACLE_HOME/Apache/Apache/conf
% cp mod_oc4j.conf mod_oc4j.conf.orig
```

3. Within MOD_OC4J.CONF, between the "<IfModule mod_oc4j.c>" and "</IfModule>" add:

```
Oc4jEnableSSL on
Oc4jSSLWalletFile /path/to/wallet_dir
```

4. Restart all opmn process and invoke "opmnctl status –l", and in the port section of the result you will have "ajps" rather than "ajp" and expected port values and after 5mins if you repeat "opmnctl status –l" the uptime of application will not reset and will grow to 5 minutes and beyond.

   In addition, /oc4j-status page should have discovered all your applications and opmn.log should not have any "Ping Failures" and you should be able to access all your application pages from a browser.

After completing the previous steps use the "https" protocol and https port of HTTPServer in your browser to access the application.

Clustered Installations – Preinstallation Steps

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

There are no additional steps to take before running the installer for ReIM.

> **Note:** Previous releases of ReIM 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 10.1.3.5.

Run the ReIM Application Installer

Once you have an OC4J instance that is configured and started, you can run the ReIM application installer. This installer configures and deploys the ReIM application.

> **Note:** Appendix: ReIM Application Installer Screens contains details on every screen and field in the application installer.

> **Note:** It is recommended that the installer be run as the same UNIX account which owns the application server ORACLE_HOME files. This method takes full advantage of the installer's capabilities. If the installer is run as a different user, the Manual Deployment Option must be selected.

1. Change directories to INSTALL_DIR/reim/application.
2. Set the ORACLE_HOME and JAVA_HOME environment variables. ORACLE_HOME should point to your OAS 10g installation. JAVA_HOME should point to the Java 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 install.sh script. This launches the installer. After installation is completed, a detailed installation log file is created (reim13install.<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: Installer Silent Mode of this document for instructions on silent mode.

See Appendix: Common Installation Errors of this document for a list of common installation errors.

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

Oracle Configuration Manager

The Oracle Retail OCM Installer packaged with this release installs the latest version of OCM.

The following document is available through My Oracle Support. Access My Oracle Support at the following URL:

`https://support.oracle.com`

Oracle Configuration Manager Installer Guide (Doc ID: 835024.1)

This guide describes the procedures and interface of the Oracle Retail Oracle Configuration Manager Installer that a retailer runs near the completion of its installation process.

OCM Documentation Link

`http://www.oracle.com/technology/documentation/ocm.html`

Clustered Installations – Post-Installation Steps

If you are installing the ReIM 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 from which you used the ORACLE_HOME for the ReIM installer is the *master node*. All other nodes are *remote nodes*.

1. The ReIM 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/<instancename>/reim-batch directory and copy it onto the remote nodes under the same path.
2. 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=reim_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>/reim/application/reim13/configured-output/.

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

1. Inspect the contents of the <INSTALL_DIR>/reim/application/reim13/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, any required application server configuration changes, and the ReIM batch programs.
2. Restart the OC4J instance where ReIM will be deployed.

   Example: $ORACLE_HOME/opmn/bin/opmnctl @cluster restartproc ias-component=reim_group

3. Deploy the ReIM war file to the OC4J group using the Enterprise Manager web interface. The configured war file is located at <INSTALL_DIR>/reim/application/reim13/configured-output/reim13.war. When deploying the war file, you should provide the same application name you gave to the installer. These values were stored in the <INSTALL_DIR>/reim/application/ant.install.properties file by the installer for later reference.

Backups Created by Installer

The ReIM application installer backs up a previous batch script installation by renaming it from reim-batch to reim-batch.<timestamp>. 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: reim-batch.200803011726

Test the ReIM Application

After the application installer completes you should have a working ReIM application installation. To launch the application, open a web browser and go to http://host:httpport/contextroot/index.jsp. Use https if you have done a SSL installation.

Example: http://myhost:7777/reim/index.jsp

Oracle Retail provides test cases that allow you to smoke test your installation. Refer to the *Oracle Retail Merchandising Installation Test Cases* document (My Oracle Support Doc ID: 845148.1).

reim.properties

The reim.properties file contains most of the settings for the ReIM application. Many properties in this file are set by the installer to get a working application up and running, but you may want to modify other settings in this file.

You can find this file under ORACLE_HOME/j2ee/<instancename>/applications/<appname>/<appname>/WEB-INF/classes/com/retek/reim.

See the *ReIM Operations Guide* regarding the settings in reim.properties.

integration.properties

The integration.properties file contains most of the settings for the webservice financial integration. This file is set in place by the installer; however, it must be manually configured in order for webservices to function properly.

You can find this file under ORACLE_HOME/j2ee/<instancename>/applications/<appname>/<appname>/WEB-INF/classes/com/retek/reim.

See the *ReIM Operations Guide* regarding the settings in integration.properties.

ReIM Batch Scripts

The ReIM application installer configures and installs the batch scripts under ORACLE_HOME/j2ee/<instancename>/reim-batch.

The batch scripts are copies of the same generic file. Their file names determine which functionality is run.

The two settings that are needed for the scripts to run correctly are the REIMHOME and JAVA_HOME variables.

- REIMHOME = application directory created during deployment
- JAVA_HOME = Java installation located at $ORACLE_HOME/jdk

> **Example:** REIMHOME=J2EE_HOME/applications/reim
> JAVA_HOME=/u00/webadmin/product/10.1.3/OracleAS_1/jdk

Help Files

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

Single Sign-On

Skip this section if ReIM is not used within an Oracle Single Sign-On environment.

> **Note:** This section assumes the Oracle Application Server HTTP Server has already been registered with the Oracle Single Sign-On server through the regsso.sh script. See the Oracle Single Sign-On documentation for details.

If you are using ReIM in an Oracle Single Sign-On environment, then the ReIM root context must be protected. Edit the mod_osso.conf file, $ORACLE_HOME/Apache/Apache/conf/mod_osso.conf. The following lines should be inserted immediately before the line consisting of </IfModule>

```
<Location /reim>
   require valid-user
   AuthType Basic
</Location>

<Location /reim/javascript>
   require valid-user
   AuthType Basic
   Allow from All
   Satisfy any
</Location>

<Location /reim/images>
   require valid-user
   AuthType Basic
   Allow from All
   Satisfy any
</Location
```

5

ReIM Reports Installation

If they are part of the release, ReIM Reports are included in a reim13reports.zip archive. To install the reports files, unzip reim13reports.zip and copy its contents to the reports directory created during RMS installation. See the *Oracle Retail Merchandising System Installation Guide* for the instructions for initial setup of Oracle BI Publisher for ReIM reports

A

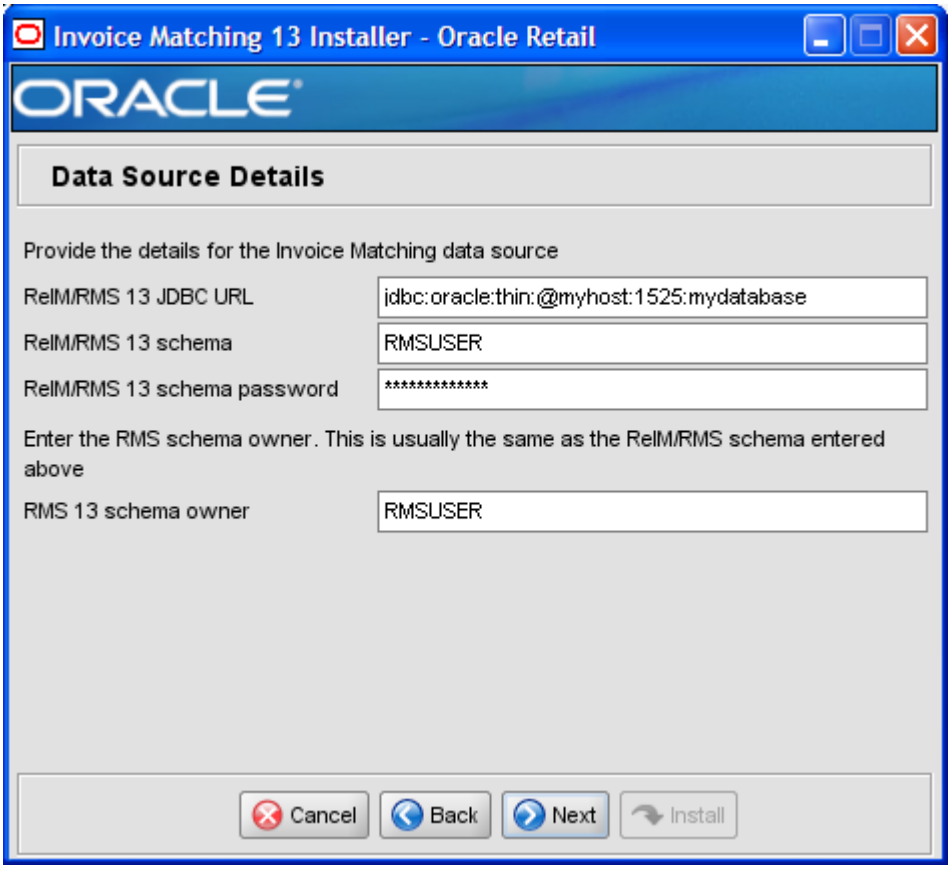
Appendix: ReIM Application Installer Screens

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

Screen: Security Details

Field Title	Enable SSL for ReIM?
Field Description	Choosing yes will deploy ReIM using SSL, and will configure ReIM to use SSL. In this case, SSL must be configured and enabled for the OAS and ReIM OC4J instance. Choosing no will deploy and configure ReIM without SSL.

Screen: Data Source Details



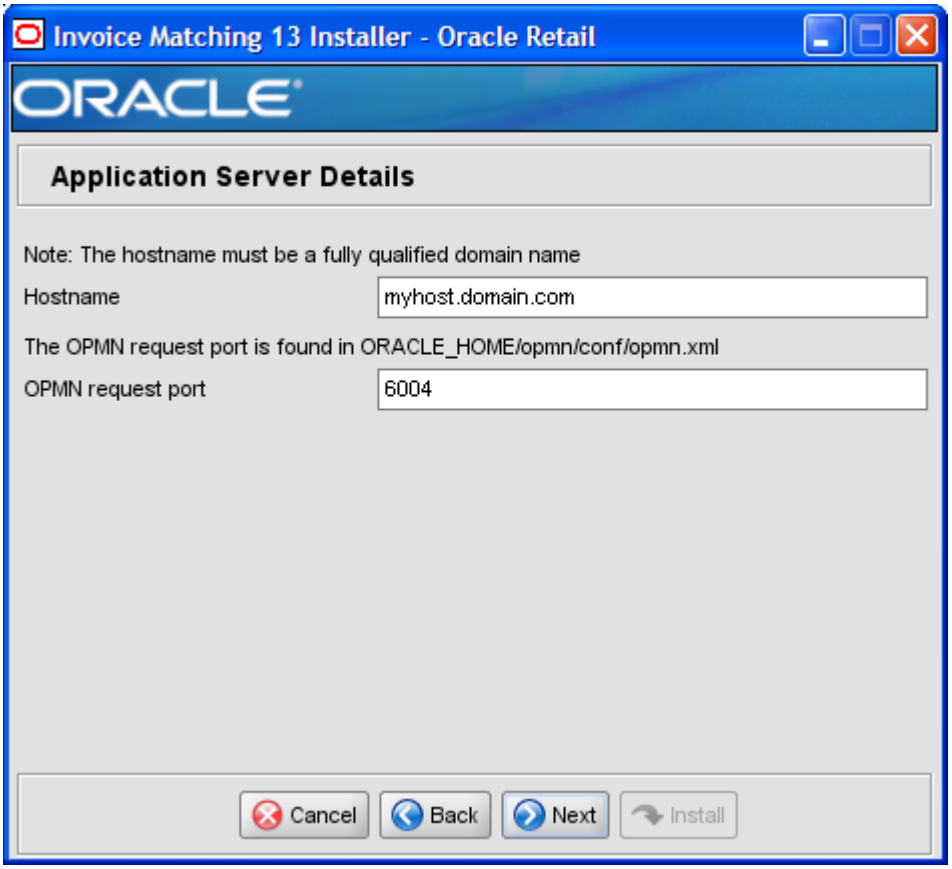
Field Title	ReIM/RMS 13 JDBC URL
Field Description	URL used by the ReIM application to access the ReIM/RMS database schema. See Appendix: URL Reference for expected syntax.
Destination	reim.properties
Examples	jdbc:oracle:thin:@myhost:1525:mydatabase jdbc:oracle:oci:@mydatabase

Field Title	ReIM/RMS 13 schema
Field Description	RMS database user for accessing the ReIM tables. This should match what was given in the *RMS 13 schema* field of the ReIM database installer.
Destination	reim.properties
Example	RMSUSER

Field Title	ReIM/RMS 13 schema password
Field Description	Password for the JDBC username. This should match what was given in the *ReIM 13 schema password* field of the ReIM database installer.
Destination	reim.properties

Field Title	RMS 13 schema owner
Field Description	Database user which owns the RMS and ReIM tables. This usually has the same value as the previous *ReIM/RMS 13 schema* field.
Destination	reim.properties
Example	RMSUSER

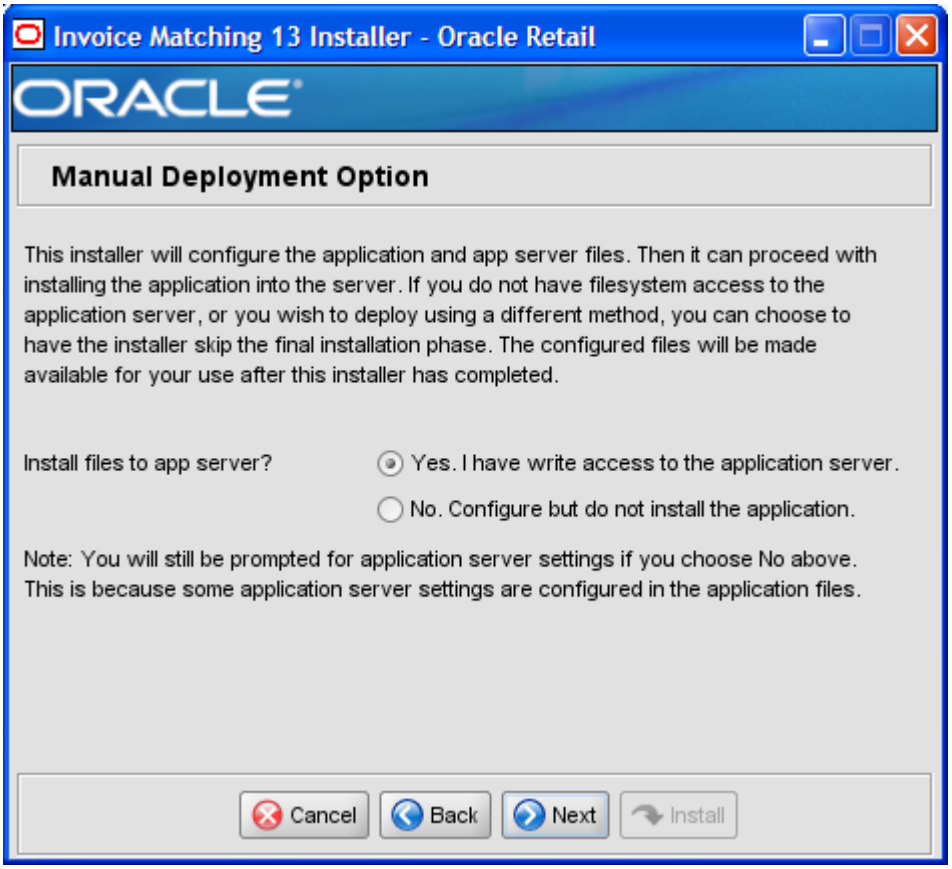
Screen: Application Server Details



Field Title	Hostname
Field Description	Hostname of the application server.
Example	myhost.domain.com
Notes	If you chose to enable SSL for ReIM, this hostname should be a fully qualified domain name.

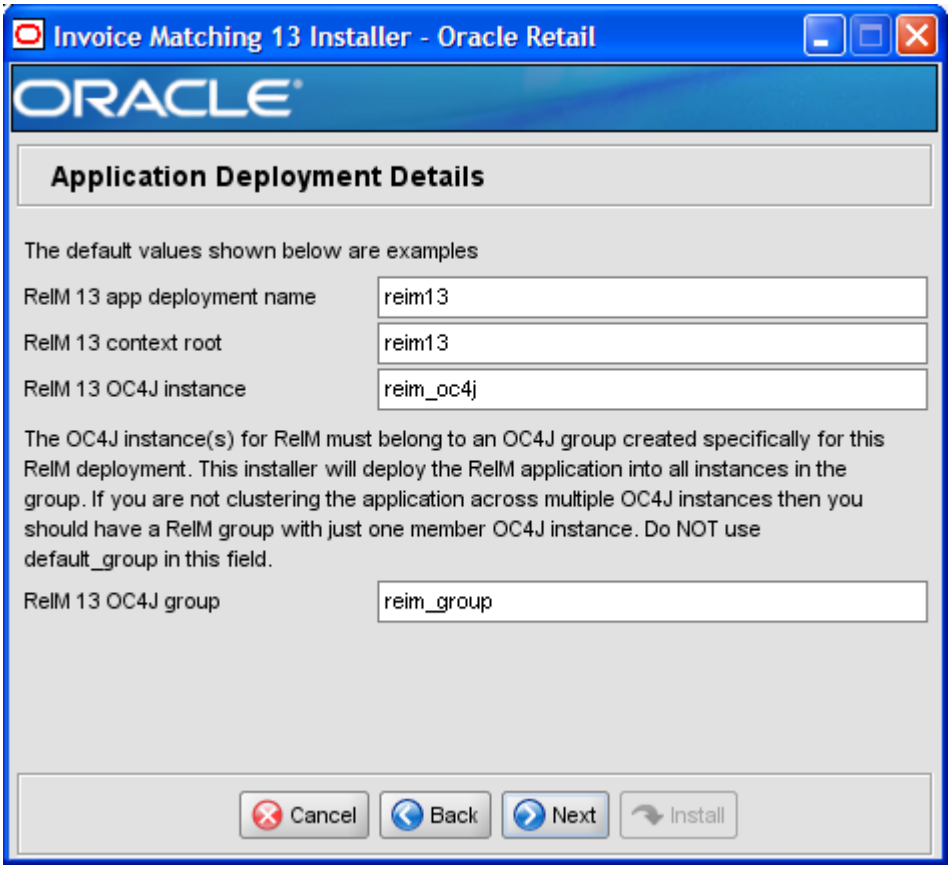
Field Title	OPMN request port
Field Description	Port on which OPMN listens for requests to forward on to OC4J instances. This port can be found in the ORACLE_HOME/opmn/conf/opmn.xml file: <port local="6100" remote="6200" request="**6003**"/> **Note:** The installer attempts to present a valid default value based on the ORACLE_HOME given.
Example	6004

Screen: Manual Deployment Option



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 ReIM files locally in the staging area. Then, at a later time, an administrator can manually copy over the ReIM files and deploy the war 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: Application Deployment Details



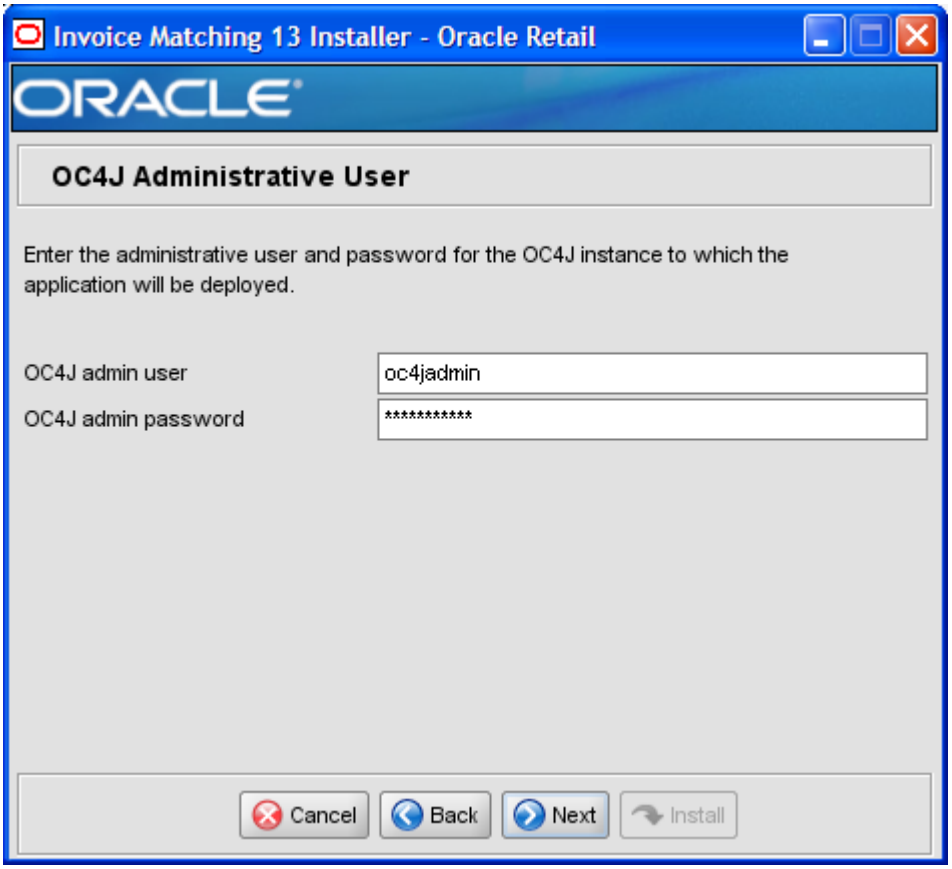
Field Title	ReIM 13 app deployment name
Field Description	Name by which this ReIM application is identified in the application server.
Example	reim13

Field Title	ReIM 13 context root
Field Description	Path under the HTTP URL that will be used to access the ReIM application. For example, a context root of reim results in the application being accessed at http://host:port/reim/index.jsp.
Example	reim13

Field Title	ReIM 13 OC4J instance
Field Description	Name of the OC4J instance that was created for this ReIM application.
Example	reim_oc4j

Field Title	ReIM 13 OC4J group
Field Description	Name of the OC4J group that was created for this ReIM application. The OC4J instance given for the ReIM OC4J Instance field should be a member of this group. The installer will deploy the ReIM 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 ReIM should be created instead.
Example	reim_group

Screen: OC4J Administrative User



Field Title	OC4J admin user
Field Description	Username of the admin user for OC4J instance to which the ReIM 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).

B

Appendix: Installer Silent Mode

In addition to the GUI and text interfaces of the ReIM 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 the previous run.
2. Run the installer again with the **silent** argument.

   ```
   install.sh silent
   ```

C

Appendix: URL Reference

Both the database schema and application installers for the Invoice Matching product asks for certain URLs. These include the following.

JDBC URL for a Database

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

Thick Client Syntax: jdbc:oracle:oci:@<sid>

<sid>: system identifier for the database.

> **Example:** jdbc:oracle:oci:@mysid

Thin Client 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

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.

> **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 group where the application will be deployed.

> **Example:**
> deployer:cluster:opmn://myhost:6003/reim_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

D

Appendix: Common Installation Errors

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

Database Installer Hangs on Startup

Symptom:

When the database schema installer is run, the following is written to the console and the installer hangs indefinitely:

```
Running pre-install checks
Running tnsping to get listener port
```

Solution:

The installer startup script is waiting for control to return from the **tnsping** command, but tnsping is hanging. Type Control+C to cancel the installer, and investigate and solve the problem that is causing the tnsping <sid> command to hang. This can be caused by duplicate database listeners running.

Unreadable Buttons in the Installer

If you are unable to read the text within the installer buttons, it 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.

Message: Unable to get a deployment manager

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: 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: Installer Silent Mode of this document).

Warning: Could not create system preferences directory

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.

Warning: Could not find X Input Context

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 Application Archive

Symptom:

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

```
07/12/19 10:53:17 Notification ==>Error while unpacking reim13.war
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 10.1.3.5. Follow the workaround documented for this bug: in the opmn.xml file in $ORACLE_HOME/opmn/conf to 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 instances, and retry the retail application installation.

E

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)