

Oracle® Retail Invoice Matching
Installation Guide
Release 12.0.7

March 2008

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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 12.0.7 documentation set:

- Oracle Retail Invoice Matching Operations Guide
- Oracle Retail Invoice Matching Release Notes
- Oracle Retail Invoice Matching Data Model
- Oracle Retail Merchandising Batch Schedule

Customer Support

<https://metalink.oracle.com>

When contacting Customer Support, please provide the following:

- Product version and program/module name
- Functional and technical description of the problem (include business impact)
- Detailed step-by-step instructions to re-create
- Exact error message received
- Screen shots of each step you take

Conventions

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

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

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

A hyperlink appears like this.

Pre-Installation Tasks

Check Application Server Requirements

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

- UNIX based OS certified with Oracle Application Server 10g 10.1.3.3. Options include AIX 5.2, AIX 5.3, Solaris 9 (Sparc), and HP-UX 11.23 (PARISC).
- Oracle Application Server 10g 10.1.3.3 with the following patches:
 - 5632264 (NEED UPDATED TIMEZONE FILES (VERSION 4) FOR MORE DST RULE CHANGES)
 - 5398506 (RUNTIME EXCEPTION DID NOT ROLLBACK MESSAGE ON EGATE (SEEBEYOND) TOPIC)

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

- Oracle Enterprise Linux Requirements

Operating System Version:

- Oracle Enterprise Linux 4 Update 4 for x86-64
- Minimum kernel version kernel-smp-2.6.9-42.0.0.1.EL.x86_64

Oracle RDBMS

- Oracle RDBMS 10g Release 2 Enterprise Edition for Linux x86-64
- Minimum 10.2.0.3 patchset
- Patches:
 - 5397953 (ORA-07445: [KKPAPITGETALL()+2152] [SIGSEGV] [ADDRESS NOT MAPPED TO OBJECT])
 - 5921386 WRONG RESULT WITH MERGE JOINT OUTER IN THE EXECUTION PLAN

Oracle Application Server

- Oracle Application Server 10g Release 2 (10.1.2.0.2) for Linux x86
- Oracle Application Server 10g Release 3 (10.1.3.3) for Linux x86

Oracle Retail Invoice Matching

- Configured with “No RIB” option

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
Sun JRE	5.0 (1.5.0)
Microsoft Internet Explorer	5.5 or higher

Supported Oracle Retail Products

Requirement	Version
Oracle Retail Merchandising System (RMS)/Oracle Retail Trade Management (RTM)/Oracle Retail Sales Audit (ReSA)	12.0.7
Oracle Retail Data Warehouse (RDW)	12.0

RAC and Clustering

Real Application Cluster RDBMS and Oracle Application Server Clustering for Oracle Retail Invoice 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 10.1.2.2 is managed as an Active-Active cluster accessed through a hardware Load Balancer. It is suggested that the Web Cache installation included with OAS 10.1.2.2 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 10.1.2.2 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

Database Installation Tasks

Before applying the ReIM 12.0.7 patch:

- There are no database updates in this patch.
- Ensure that ReIM 12.0.6 and RMS 12.0.7 are installed.
- Review the enclosed ReIM 12.0.7 Patch Release Notes (reim-1207-rn.pdf).

Application Installation UNIX (Sun Solaris/AIX/HP-UX)

These instructions apply to new installations and upgrades. If you are upgrading a previous 12.0.x installation, the application installer will upgrade 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 and context root as the previous installation.

Before proceeding you must install Oracle Application Server 10g 10.1.3.3 plus the patches listed in the Chapter 1 of this document. The ReIM application will be deployed to an OC4J instance within the OracleAS10g installation.

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

Upgrade Oracle Application Server 10g

The ReIM 12.0.7 release requires an upgrade of the application server from 10.1.3.0 to 10.1.3.3. Before running the ReIM 12.0.7 application installer you will need to patch your Oracle Application Server up to version 10.1.3.3 plus the patches listed in Chapter 1 of this document.

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 10.1.3.3

The ReIM 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 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-instance
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-instance -groupName reim_group

3. 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.

4. 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
```

5. 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
```

6. 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

1. Log into the UNIX server as the user who owns the OracleAS 10g installation.
2. Create a new staging directory for the ReIM application distribution (`reim12application.zip`). There should be a minimum of 50 MB disk space available for the application installation files.

```
Example: $ORACLE_HOME/j2ee/reim-oc4j-  
instance/reim-staging
```

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

3. Copy `reim12application.zip` to `INSTALL_DIR` and extract its contents.

Clustered Installations – Pre-Install 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 10.1.3.3.
```

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 B contains details on every screen and field  
in the application installer.
```

1. Change directories to `INSTALL_DIR/reim/application`.
2. Set the `ORACLE_HOME` and `JAVA_HOME` environment variables. `ORACLE_HOME` should point to your AS10g installation. `JAVA_HOME` should point to the Java 5.0 (1.5.0) JDK located at `$ORACLE_HOME/jdk`.
3. If you are using an X server such as Exceed, set the `DISPLAY` environment variable so that you can run the installer in GUI mode (recommended). If you are not using an X server, or the GUI is too slow over your network, unset `DISPLAY` for text mode.

4. Run the `install.sh` script. This launches the installer. After installation is completed, a detailed installation log file is created: `reim12install.<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 C of this document for instructions on silent mode.

See Appendix E of this document for a list of common installation errors.

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

Clustered Installations – Post-Install 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 whose `ORACLE_HOME` you used for the ReIM installer is referred to as the *master node*. All other nodes are referred to as the *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/<reiminstance>/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/reim12/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/reim12/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/reim12/configured-output/reim12.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.200605011726

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>.

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

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/rettek/reim.

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

ReIM Batch Scripts

The ReIM application installer configures and installs the batch scripts under ORACLE_HOME/j2ee/<instance>/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 5.0 (1.5.0) installation located at \$ORACLE_HOME/jdk

Example: REIMHOME=J2EE_HOME/applications/reim
JAVA_HOME=/u00/webadmin/product/10.1.3/OracleAS_
1/jdk

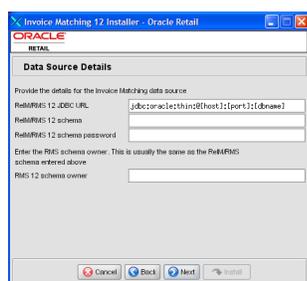
Web Help Files

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

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: Data Source Details



Fields on this screen:

Field Title	ReIM/RMS 12 JDBC URL
Field Description	URL used by the ReIM application to access the ReIM/RMS database schema. See <i>Appendix D: URL Reference</i> for expected syntax.
Destination	reim.properties
Example	jdbc:oracle:thin:@myhost:1525:mydatabase
Notes	
Field Title	ReIM/RMS 12 schema
Field Description	RMS database user for accessing the ReIM tables. This should match what was given in the <i>RMS 12 schema</i> field of the ReIM database installer.
Destination	reim.properties
Example	RMS12USER
Notes	

Field Title	ReIM/RMS 12 schema password
Field Description	Password for the JDBC username. This should match what was given in the <i>ReIM 12 schema password</i> field of the ReIM database installer.
Destination	reim.properties
Notes	

Field Title	RMS 12 schema owner
Field Description	Database user which owns the RMS and ReIM tables. This will usually have the same value as the <i>ReIM/RMS 12 schema</i> field above.
Destination	reim.properties
Example	RMS12USER
Notes	

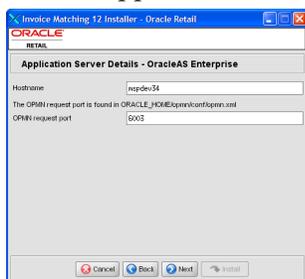
Screen: OC4J Server Type: Managed or Standalone?



Fields on this screen:

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

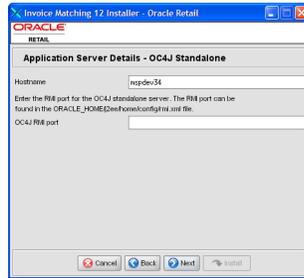
Screen: Application Server Details – OracleAS Enterprise



Fields on this screen:

Field Title	Hostname
Field Description	Hostname of the application server
Example	myhost
Notes	
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:
	<code><port local="6100" remote="6200" request="6003"/></code>
Example	6003
Notes	

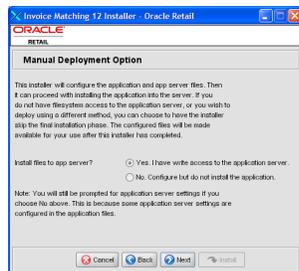
Screen: Application Server Details – OC4J Standalone



Fields on this screen:

Field Title	Hostname
Field Description	Hostname of the application server
Example	myhost
Notes	
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.
Example	<pre><rmi-server xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:noNamespaceSchemaLocation="http://xmlns.oracle.com/oracleas/schema/rmi-server-10_0.xsd" port="23791"</pre>
Notes	

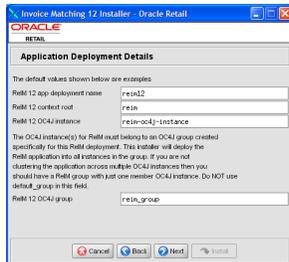
Screen: Manual Deployment Option



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 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.
Destination	
Example	
Notes	

Screen: Application Deployment Details



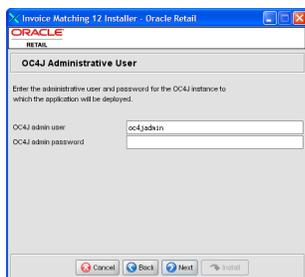
Fields on this screen:

Field Title	ReIM 12 app deployment name
Field Description	Name by which this ReIM application is identified in the application server
Example	reim12
Notes	
Field Title	ReIM 12 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	reim
Notes	

Field Title	ReIM 12 OC4J instance
Field Description	Name of the OC4J instance that was created for this ReIM application.
Example	reim-oc4j-instance
Notes	

Field Title	ReIM 12 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
Notes	

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 ReIM application is being deployed.
Example	oc4jadmin
Notes	

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).
Notes	

Appendix: Installer Silent Mode

Repeating an Installation Attempt

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.

Example: `install.sh silent`

Appendix: URL Reference

Both the database schema and application installers for the Invoice Matching product will ask 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.

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`

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.

“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 C of this document).

“Could not create system preferences directory” Warning

Symptom:

The following text appears in the installer Errors tab:

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