

Oracle® Retail Returns Management

Installation Guide

Release 2.0

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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 Returns Management Release 2.0 documentation set:

- *Oracle Retail Returns Management Release Notes*
- *Oracle Retail Returns Management Operations Guide*
- *Oracle Retail Returns Management User Guide*
- *Oracle Retail Returns Management Configuration Guide*

Customer Support

- <https://metalink.oracle.com>

When contacting Customer Support, please provide:

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

Review Patch Documentation

For a base release ("0" release, such as 12.0), Oracle Retail strongly recommends that you read all patch documentation before you begin installation procedures. Patch documentation can contain critical information related to the base release, based on new information and code changes that have been made since the base release.

Oracle Retail Documentation on the Oracle Technology Network

In addition to being packaged with each product release (on the base or patch level), all Oracle Retail documentation is available on the following Web site:

http://www.oracle.com/technology/documentation/oracle_retail.html

Documentation should be available on this Web site within a month after a product release. Note that documentation is always available with the packaged code on the release date.

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
<code>monospace</code>	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Application Overview

Customers try to return many types of products, for a wide variety of reasons. The procedure for managing this process may vary greatly from store to store and manager to manager, and perhaps even from cashier to cashier.

Oracle Retail Returns Management is a proactive, centralized, multi-channel solution that provides the ability to reduce overall return rates, prevent and catch return fraud, and improve customer service. It provides the following benefits:

- Definition and enforcement of consistent policies about returns and other types of transactions that may result in a customer refund.
- The customer, cashier, or manager can be informed of the reason why a return received a particular response. This can be done through online or printed messages.
- Patterns of customer return behavior can be studied to determine if a return merits return denial, or at least a prompt for manager approval at the point-of-return.
- Online research of customer and cashier return activity.
- Customer service overrides for denied returns can be granted, if necessary.

Application Components

The application is comprised of the following components:

- Multiple return policies and exception policies allow the retailer to centrally manage returns, using configurable rules that can be evaluated at the merchandise, customer, or location level to determine authorization. This provides quick adaptation to changes in business and seasonal conditions.
- Defined XML messages are sent from the point-of-return or other channel to trigger action in Oracle Retail Returns Management and an appropriate response message. This allows Oracle Retail Returns Management to be rapidly integrated to work with existing store and channel systems.
- An Analytic Engine checks Return Policies to evaluate the returnability of an item. Item returnability is determined by examining the item, customer, associate, and store in question. A real-time message is then sent advising the point-of-return on the most appropriate path to take.
- The Exception File is a constantly evolving knowledge base for preventing fraudulent returns by tracking which shoppers and cashiers have made exceptions to the defined return policy and therefore are at a higher risk of fraud.

- Return Tickets act as a Customer Service Record (CSR) that allows inquiry and audit of the trail of return activity for a given customer, associate, item, or store. This allows the retailer to handle customer service inquiries into which steps may have been taken to prevent return fraud.
- A web-based user interface for Loss Prevention, IT, Store Operations, Call Center, and field personnel to configure and manage the returns process.

Pre-installation Tasks

This chapter describes the requirements that must be met before the Oracle Retail Returns Management application can be installed.

Note: The Oracle stack and IBM stack are the configurations that were tested for this release. The components required for each stack are listed in this chapter. For each component, the product and the version that were used for testing are included. While Returns Management may work in other configurations, these are the configurations that are supported for this release.

Check Software Requirements

Oracle Retail Returns Management is packaged as an Enterprise Archive (.ear) file and must be deployed to a J2EE 1.4-compliant application server.

If you plan to use scripts to configure and deploy your application server, you must also install appropriate software for the scripts. For example, if you use Ant scripts developed by Oracle Retail, you should install Apache Ant 1.6.2 or later, or use the version of Apache Ant bundled with the application server.

Check Installer Requirements

The installer requires Java Development Kit (JDK) version 1.4.2 or higher.

Check Database Server Requirements

Table 2–1 lists the components required for a database server running Returns Management and the versions tested for this release.

Table 2–1 Database Server Requirements

Component	Oracle Stack	IBM Stack
Hardware	x86-64 bit	IBM pSeries
Operating System	Oracle Enterprise Linux R4	IBM IRES v2.1.2
Database	64-bit Oracle RDBMS 10g R2 (10.2.0.2)	64-bit IBM DB2v9.1

Required Settings for Database Installation

Note: Oracle Retail recommends that you have a qualified DBA install and configure your database prior to installing Oracle Retail Returns Management database schemas.

Note: When using the DB2 database server, Oracle Retail Returns Management requires a user temporary tablespace. Your DBA needs to configure the user temporary tablespace so that the database user for Oracle Retail Returns Management has access to it.

The following settings must be made during database creation:

- The database must be set to store data in UTF-8 encoding.
- When using the Oracle 10g database server, make the following changes to the system settings:

Note: These changes are only needed when using the Oracle 10g database server.

```
ALTER SYSTEM SET NLS_NUMERIC_CHARACTERS = '.,-' SCOPE=SPFILE;
ALTER SYSTEM SET NLS_DATE_FORMAT = 'YYYY-MM-DD' SCOPE=SPFILE;
ALTER SYSTEM SET NLS_TIMESTAMP_FORMAT = 'YYYY-MM-DD HH24:MI:SS.FF'
SCOPE=SPFILE;
```

Check Application Server Requirements

Table 2–2 lists the components required for an application server capable of running Returns Management and the versions tested for this release.

Table 2–2 Application Server Requirements

Component	Oracle Stack	IBM Stack
Hardware	x86-64 bit	IBM pSeries
Operating System	Oracle Enterprise Linux R4	IBM IRES v2.1.2
J2EE Application Server	32-bit Oracle Application Server 10g 10.1.3 Note: This release of Returns Management is only supported in a managed OC4J instance as part of Oracle AS 10g. It is not supported on OC4J standalone.	IBM WebSphere 6.1 Note: This release of Returns Management does not support a clustered environment.
J2EE Application Server JVM	Sun 1.5.x	IBM JDK 1.5.x
Java Development Kit (JDK)	Version 1.4.2 or higher	Version 1.4.2 or higher
Messaging Provider	(included in Oracle Application Server)	IBM MQ Server 6.0.2

Check Client PC and Web Browser Requirements

The general requirements for the client system include the following:

- Adobe Acrobat Reader or another application capable of rendering Portable Data Format (PDF) files

The following web browsers were tested for this release:

- Microsoft Internet Explorer 6 and Mozilla Firefox 1

Check Hardware Requirements

Specific hardware requirements for running Oracle Retail Returns Management depend on several variables:

- Transaction volume
- Returns data retention periods
- Expected number of users
- Number of other applications running on the same application server

[Table 2–3](#) lists hardware in the required categories which have been tested for this release in at least one configuration.

Table 2–3 *Supported Hardware*

Component	Oracle Stack and IBM Stack
Hardware	Dell 2650
CPU	Intel 2.8 GHz
Memory	1 GB

Installation of the Oracle Stack on Linux

Before proceeding, you must install the database and application server software. For a list of supported versions, see [Chapter 2](#).

During installation, the Returns Management database schema will be created and the Returns Management application will be deployed to an OC4J instance within the OracleAS 10g installation. The Java JDK that is included with the Oracle Application Server will be used to run the application.

Create a New OC4J Instance for Returns Management

The Returns Management application should be deployed to its own dedicated OC4J instance. For instructions on how to create a new OC4J instance, see Adding and Deleting OC4J Instances in the Reconfiguring Application Server Instances chapter of the Oracle Application Server Administrator's Guide.

Note: If an instance already exists for Returns Management, that instance must be deleted before the new instance is created.

To create a new OC4J instance:

1. Log onto the server, which is running your OracleAS 10g installation, as the user who owns the OracleAS 10g installation. Set your ORACLE_HOME environment variable to point to this installation.
2. Choose a name for the new OC4J instance. In the remainder of this installation guide, *orrm-inst* is used for the name.
3. Create this OC4J instance as documented in the Oracle Application Server Administrator's Guide, for example:

```
$ORACLE_HOME/bin/createinstance -instanceName orrm-inst
```

Note: When prompted for the oc4jadmin password, provide the same administrative password you gave for the OracleAS 10g installation. All OC4J instances running Oracle Retail applications must have the same oc4jadmin password.

Note: The jms and rmi port numbers should be set so that the numbers do not overlap between all the instances in your configuration.

The port numbers are defined in the `$ORACLE_HOME/opmn/conf/opmn.xml` file. The following is an example definition of the port numbers in that file.

```
<ias-component id="OC4J">
  <process-type id="home" module-id="OC4J" status="enabled">
    :
    <port id="rmi" range="12401-12401"/>
    <port id="jms" range="12601-12601"/>
    :
  </process-type>
  <process-type id="orrm-inst" module-id="OC4J" status="enabled">
    :
    <port id="rmi" range="12402-12402"/>
    <port id="jms" range="12602-12602"/>
    :
  </process-type>
</ias-component>
```

4. Increase memory for the new OC4J instance by modifying `$ORACLE_HOME/opmn/conf/opmn.xml`. Locate the OC4J instance you just created. Add the text, shown in bold in the following example, to the start-parameters section.

```
<process-type id="orrm-inst" module-id="OC4J" status="enabled">
  <module-data>
    <category id="start-parameters">
      <data id="java-options" value="-server -XX:PermSize=128m
-XX:MaxPermSize=256m -Djava.security.policy=$ORACLE_
HOME/j2ee/orrm-inst/config/java2.policy -Djava.awt.headless=true
-Dhttp.webdir.enabled=false"/>
    </category>
```

5. Set the `-userThreads` OC4J option by modifying `$ORACLE_HOME/opmn/conf/opmn.xml` similar to the previous step. Add the text shown in bold in the following example:

```
<process-type id="orrm-inst" module-id="OC4J" status="enabled">
  <module-data>
    <category id="start-parameters">
      <data id="java-options" value="-server -XX:PermSize=128m
-XX:MaxPermSize=256m -Djava.security.policy=$ORACLE_
HOME/j2ee/orrm-inst/config/java2.policy -Djava.awt.headless=true
-Dhttp.webdir.enabled=false"/>
      <data id="oc4j-options" value="-userThreads"/>
    </category>
```

6. Reload OPMN for this change to take effect.
`$ORACLE_HOME/opmn/bin/opmnctl reload`
7. Start the OC4J instance. You can do this through the Enterprise Manager web interface, or on the command line using the `opmnctl` utility:

```
$ORACLE_HOME/opmn/bin/opmnctl startproc
process-type=orrm-inst
```

8. Verify that the OC4J instance was fully started. If you are using the Enterprise Manager web interface, the instance should have a green arrow indicating that it is running. On the command line, verify that the instance has a status of "Alive".

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

If you are unable to start the 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.

9. Increase the transaction timeout for this OC4J instance:
 - a. Log into the Enterprise Manager application.
`http://<servername>:<portnumber>/em`
 - b. Click the OC4J instance that was just created.
`<orrm-inst>`
 - c. Click the Administration tab, and then the Transaction Manager (JTA) task.
 - d. Click the Administration tab of the Transaction Manager page.
 - e. Locate the Transaction Timeout field and increase it to at least 120 seconds.
 - f. Click **Apply** and then restart the OC4J instance.

Expand the Returns Management Distribution

To extract the Returns Management files:

1. Extract the `ORRM-2.00.zip` file from the Returns Management distribution `ORRM-2.00_EPD.zip` file.
2. Log into the UNIX server as the user who owns the OracleAS 10g installation. Create a new staging directory for the Returns Management application distribution (`ORRM-2.00.zip`), for example, `/tmp/orrm-staging`.

Note: There should be a minimum of 60 MB of disk space available for the application installation files.

3. Copy or upload `ORRM-2.00.zip` to the staging directory and extract its contents, preserving the file structure. The files and directories are extracted into the `ORRM-2.00` directory. The `ORRM-2.00` directory is referred to as `<INSTALL_DIR>` for the remainder of this chapter.

The following files and directories should be created under `<INSTALL_DIR>`:

```
ant/
ant-ext/
antinstall/
returnsmgmt/
external-lib/
installer-resources/
.preinstall.cmd
.preinstall.sh
.preinstall-oas.cmd
.preinstall-oas.sh
.preinstall-was.cmd
.preinstall-was.sh
ant.install.properties.sample.oas
```

```
ant.install.properties.sample
antinstall-config.xml
build.xml
checkdeps.cmd
checkdeps.sh
install.cmd
install.sh
prepare.xml
```

Create the Returns Management Database Schema

The scripts that create the Returns Management database schema can be run from the same staging directory as the application files. The database server can be on the same system as the application server or on a different system.

1. Create a user in the Oracle database.
2. Grant that user the following database privileges:

```
create role APP_ROLE;
```

```
grant CREATE TABLE, CREATE VIEW, CREATE SEQUENCE, CREATE SYNONYM, CREATE
CLUSTER, CREATE DATABASE LINK, ALTER SESSION to APP_ROLE;
```

```
grant CONNECT, RESOURCE, APP_ROLE, SELECT_CATALOG_ROLE to <db_user>;
```

3. Set the JAVA_HOME and ANT_HOME environment variables. You can use the JDK and Ant that are installed with the Oracle Application Server.

```
JAVA_HOME=$ORACLE_HOME/jdk
ANT_HOME=$ORACLE_HOME/ant
export JAVA_HOME ANT_HOME
```

4. Add \$JAVA_HOME/bin and \$ANT_HOME/bin to the front of the PATH environment variable.

```
PATH=$JAVA_HOME/bin:$ANT_HOME/bin:$PATH
export PATH
```

5. Change to the <INSTALL_DIR>/returnsmgmt/db directory.
6. Expand the returnsmgmtDBInstall.jar file.

```
jar xvf returnsmgmtDBInstall.jar
```

7. Modify db.properties.

- a. Verify that the following properties are set correctly:

```
db.product=oracle
```

```
db.app.server.product=oracleAS
```

- b. Uncomment the Oracle properties and comment out properties for the other database types such as DB2 and MS-SqlServer.

- c. Provide your database settings in the following property values:

```
db.user: database user under which tables will be created
```

```
db.password: password for db.user
```

```
db.jdbc-url: JDBC URL for your database
```

- d. Set the ora.home.dir property to point to your OracleAS 10g installation.

- e. Set the host name and port number for the `parameters.apphost` property to point to your Returns Management installation.

```
parameters.apphost=ormi://ORA_HOST_NAME:12401/ReturnsManagement
```

Change `ORA_HOST_NAME` to your host name. Change 12401 to the rmi port number for the Returns Management OC4J instance.

- f. In the `parameters.classpath` property, replace the semicolons used as separators with colons. UNIX systems require a colon.
8. Uncomment the following properties in `jndi/jndi.properties`.

```
java.naming.factory.initial=com.evermind.server.rmi.RMIInitialContextFactory
java.naming.security.principal=<user>
java.naming.security.credentials=<user>
```

9. Run one of the available Ant targets to create the database schema and load data:

- `load_sql`: creates tables and other objects; loads seed data and test data
- `seed_data`: loads seed data
- `test_data`: loads seed data and test data

For example, `ant load_sql`

Obtain Third-Party Library Files Required by Returns Management

The Returns Management application uses the Pager Tag Library from JSPTags. You must download the `pager-taglib.jar` file from the JSPTags website before running the Returns Management application installer.

1. Download the `pager-taglib-2.0.war` file from the JSPTags website:
<http://jsptags.com/tags/navigation/pager/download.jsp>
2. Extract the `pager-taglib.jar` file from the `WEB-INF/lib` subdirectory in the `pager-taglib-2.0.war` file. Copy `pager-taglib.jar` into
`<INSTALL_DIR>/external-lib/`.

Run the Returns Management Application Installer

Once you have an OC4J instance that is configured and started, you can run the Returns Management application installer. This installer will configure and deploy the Returns Management application.

The installer does not remove any previously installed copies of Returns Management. For information on reinstalling Returns Management, see [Appendix D](#).

Note: To see details on every screen and field in the application installer, see [Appendix A](#).

1. Change to the `<INSTALL_DIR>` directory.
2. Set the `ORACLE_HOME` and `JAVA_HOME` environment variables. `ORACLE_HOME` should point to your OracleAS 10g installation. `JAVA_HOME` should point to `$ORACLE_HOME/jdk`.

Note: The installer is not compatible with versions of Java earlier than 1.4.2.

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 or use the `install.sh` script.

Caution: Password fields are masked in GUI mode, but in text mode your input is shown in plain text in the console window.

4. Run the installer.
 - a. Log into the UNIX server as the user who owns the OracleAS 10g installation.
 - b. Change the mode of all `.sh` files to executable. For example:

```
chmod +x *.sh
```

- c. Run the `install.sh` script. This will launch the installer.

Note: The usage details for `install.sh` are shown below. The typical usage for GUI mode does not use arguments.

```
install.sh [text | silent oracle]
```

After installation is complete, a detailed installation log file is created:

```
<INSTALL_DIR>/orrm-install-app.<timestamp>.log
```

5. The installer leaves behind the `<INSTALL_DIR>/ant.install.properties` file for future reference and repeat installations. This file contains all the inputs you provided, including passwords. As a security precaution, make sure that the file has restrictive permissions.

```
chmod 600 ant.install.properties
```
6. Verify that the installer was able to delete the `$ORACLE_HOME/jdk/jre/lib/ext/security-360-ora.jar` file. This is a file that is temporarily created by the installer. If the installer was unable to delete the file, you must shut down all OC4J instances, delete the file manually, and start the OC4J instances back up again.

Note: If the installer is unable to delete this file, it prints a warning that instructs you to delete it manually. This warning also shows up at the end of the installer log file.

Resolving Errors Encountered During Application Installation

If the application installer encounters any errors, it will halt execution immediately. You can run the installer in silent mode so that you do not have to reenter the settings for your environment. For instructions on silent mode, see [Appendix C](#).

For a list of common installation errors, see [Appendix F](#).

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

Selecting the Default Locale

Limited locale support in Returns Management enables the date, time, and calendar to be displayed in the format for the selected default locale.

The default locale is defined in the

`$ORACLE_HOME/j2ee/<orrm_inst>/applib/application.properties` file.

To change the default locale, edit the following property:

`locale_Default=en_US`

- To select the locale for Canada, set the property to the following:

`locale_Default=en_CA`

- To select the locale for Great Britain, set the property to the following:

`locale_Default=en_GB`

- To select the local for the United States, set the property to the following:

`locale_Default=en_US`

Note: The only language currently supported is United States English.

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 will make the configured application files available under

`<INSTALL_DIR>/returnsmgmt/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.

```
diff ./returnsmgmt/configured-output/appserver/ORACLE_HOME/j2ee/
<instancename>/config/jms.xml.<date and time> $ORACLE_HOME/j2ee/
<instancename>/config/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>/returnsmgmt/configured-output/appserver/ORACLE_HOME` directory, and then overlay the files in the application server's `ORACLE_HOME` directory, using the same directory structure. This will install library files required by the application and required application server configuration changes.

3. Set JAVA_HOME and PATH environment variables to use the JDK located at \$ORACLE_HOME/jdk.

```
JAVA_HOME=$ORACLE_HOME/jdk; PATH=$JAVA_HOME/bin:$PATH; export PATH JAVA_HOME
```
4. Copy the
<INSTALL_DIR>/returnsmgmt/lib/oracle/security-360-ora.jar file to the \$ORACLE_HOME/jdk/jre/lib/ext/ directory.
5. Create the required JAAS configuration for Returns Management:
 - a. Set JAVA_HOME and PATH environment variables to use the JDK located at \$ORACLE_HOME/jdk.

```
JAVA_HOME=$ORACLE_HOME/jdk; PATH=$JAVA_HOME/bin:$PATH;  
export PATH JAVA_HOME
```
 - b. Grant RMI access permissions for the Returns Management application.

```
java -jar ../home/jazn.jar -grantperm com._  
360commerce.commerceservice.security.oracle.CustomPrincipal oracle_rmi_  
access com.evermind.server.rmi.RMIPermission login
```
6. Delete \$ORACLE_HOME/jdk/jre/lib/ext/security-360-ora.jar. You may need to shut down all OC4J instances to successfully delete this file.
7. Restart the OC4J instance where Returns Management will be deployed.

```
$ORACLE_HOME/opmn/bin/opmnctl restartproc process-type=orrm-inst
```
8. Deploy the Returns Management ear file using the Enterprise Manager web interface. The configured ear file is located at
<INSTALL_DIR>/returnsmgmt/configured-output/returnsmgmt.ear. When deploying the ear file, you should provide the same application name and context root you gave to the installer. These values were stored in the
<INSTALL_DIR>/ant.install.properties file by the installer for later reference.

Backups Created by Installer

The Returns Management application installer will back up modified application server files and directories by renaming them with a timestamp. This is done to prevent the removal of any custom changes you might have. These backup files and directories can be safely removed without affecting the current installation. For example, the file could be named jms.xml.200711011326.

Import Initial Parameters

Note: An initial set of parameters must be imported before you can use Returns Management. For more information on parameters, see the Oracle Retail Returns Management Configuration Guide.

This section provides an overview of the procedures for importing an initial set of parameters. You can import the parameters through the Returns Management user interface or by using an Ant target. You only need to use one of the procedures. The procedure for importing parameters through the application user interface is described in more detail in the Oracle Retail Returns Management User Guide.

These instructions assume you have already expanded the `returnsmgmtDBInstall.jar` file under the `<INSTALL_DIR>` directory as part of the database schema installation earlier in this chapter.

Importing Parameters Through the User Interface

To import the initial parameters through the user interface:

1. Open the Returns Management application in a web browser. The address is provided at the end of the installer output and in the log file.
`http://<servername>:<portnumber>/returnsmangement`
2. Log in to the application as user ID **pos** and password **pos**, or any other user ID that has full administrative rights.
3. Click the **Data Management** tab. The Available Imports screen appears.
4. To import the master parameter set, click the **File** link in the Import Parameters for Distribution row. Follow the instructions to import `parameterset.xml` from the `<INSTALL_DIR>/returnsmgmt/db` folder.
5. To import the initial set of Returns Management application parameters, click the **File** link in the Import Application Parameters row. Follow the instructions to import `returnsmgmt.xml` from the `<INSTALL_DIR>/returnsmgmt/db` folder.

Importing Parameters By Using an Ant Target

To import parameters using an Ant target:

1. Change to the `<INSTALL_DIR>/returnsmgmt/db` directory.
2. Edit the `db.properties` file. Verify that the following properties in the "Properties for Parameter Loading" section are set correctly. For information on setting the properties, see ["Create a New OC4J Instance for Returns Management"](#).
 - a. Verify that `ora.home.dir` points to your OracleAS 10g installation.
 - b. Verify that `parameter.apphost` points to the host name and port number for your Returns Management installation.
 - c. Verify that the separator used in the `parameters.classpath` property is set correctly for your host system. UNIX systems require a colon. Windows systems require a semi-colon.
3. Set the `JAVA_HOME`, `ANT_HOME`, and `PATH` environment variables. See ["Create the Returns Management Database Schema"](#) for the settings to be used.
4. Execute the following command:
`ant load_parameters`

Using the Returns Management Application

Note: When you are done installing Returns Management, log out and close the browser window. This ensures that your session information is cleared and prevents another user from accessing Returns Management with your login information.

After the application installer completes and you have run the initial parameter load, you should have a working Returns Management application installation. To launch the application, open a web browser and go to

`http://<servername>:<portnumber>/<context root>`

For example, `http://myhost:80/returnsmanagement`

Installation of the IBM Stack on IRES

Before proceeding, you must install the database, create the database schema, and install the application server software. For a list of supported versions, see [Chapter 2](#). A profile must also be created. For information on creating the profile, refer to your IBM WebSphere documentation.

During installation, the Returns Management database schema will be created and the Returns Management application will be deployed. The Java JDK that is included with the IBM WebSphere Application Server will be used to run the application.

Note: The Authentication Cache Timeout setting for the IBM WebSphere application server must be set correctly for Returns Management password processing. For information on how to determine the value you should use for this setting and how to set the value for the application server, refer to your IBM WebSphere documentation.

Expand the Returns Management Distribution

To extract the Returns Management files:

1. Extract the ORRM-2.00.zip file from the Returns Management distribution ORRM-2.00_EPD.zip file.
2. Log into the UNIX server as the user who owns the WebSphere AS installation. Create a new staging directory for the Returns Management application distribution (ORRM-2.00.zip), for example, /tmp/orrm-staging.

Note: There should be a minimum of 60 MB of disk space available for the application installation files.

3. Copy or upload ORRM-2.00.zip to the staging directory and extract its contents, preserving the file structure. The files and directories are extracted into the ORRM-2.00 directory. The ORRM-2.00 directory is referred to as `<INSTALL_DIR>` for the remainder of this chapter.

The following files and directories should be created under `<INSTALL_DIR>`:

```
ant/  
ant-ext/  
antinstall/  
returnsmgmt/  
external-lib/
```

```
installer-resources/  
.preinstall.cmd  
.preinstall.sh  
.preinstall-oas.cmd  
.preinstall-oas.sh  
.preinstall-was.cmd  
.preinstall-was.sh  
ant.install.properties.sample.oas  
ant.install.properties.sample  
antinstall-config.xml  
build.xml  
checkdeps.cmd  
checkdeps.sh  
install.cmd  
install.sh  
prepare.xml
```

Obtain Third-Party Library Files Required by Returns Management

The Returns Management application uses the Pager Tag Library from JSPTags and the DB2 drivers from IBM. Before running the Returns Management application installer, you must download the necessary files from the JSPTags website and the IBM website.

1. Download the `pager-taglib-2.0.war` file from the JSPTags website:
<http://jsptags.com/tags/navigation/pager/download.jsp>
2. Extract the `pager-taglib.jar` file from the `WEB-INF/lib` subdirectory in the `pager-taglib-2.0.war` file. Copy `pager-taglib.jar` into `<INSTALL_DIR>/external-lib/`.
3. Download the `db2_v9_db2driver_for_jdbc_sqlj.zip` file from the IBM website: <http://www.ibm.com/software/data/db2/java/>
4. Extract the `db2jcc.jar` and `db2jcc_license_cu.jar` files from the `db2_v9_db2driver_for_jdbc_sqlj` subdirectory in the `db2_v9_db2driver_for_jdbc_sqlj.zip` file. Copy `db2jcc.jar` and `db2jcc_license_cu.jar` into `<INSTALL_DIR>/external-lib/`.

Installation Options

During installation, there are options that enable you to select whether the installer completes parts of the installation or if you want to complete those parts manually. For information on the available options, see the following sections:

- ["Populate the Database Schema"](#)
- ["Install Parameters"](#)
- ["Configure MQ Server"](#)
- ["Manual Deployment Option"](#)

Run the Returns Management Application Installer

The installer will configure and deploy the Returns Management application. Before running the installer, verify that a profile has been created and the IBM WebSphere application server is running.

The installer does not remove any previously installed copies of Returns Management. For information on reinstalling Returns Management, see [Appendix D](#).

Note: To see details on every screen and field in the application installer, see [Appendix B](#).

1. Change to the `<INSTALL_DIR>` directory.
2. Set the `JAVA_HOME` environment variable. `JAVA_HOME` should point to an installation of IBM Java2. See [Chapter 2](#) for the supported version.

Note: The installer is not compatible with versions of Java earlier than 1.4.2.

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 or use the `install.sh` script.

Caution: Password fields are masked in GUI mode, but in text mode your input is shown in plain text in the console window.

4. Run the installer.
 - a. Log into the UNIX server as the user who owns the IBM WebSphere installation.
 - b. Change the mode of all `.sh` files to executable. For example:


```
chmod +x *.sh
```
 - c. Run the `install.sh` script. This will launch the installer.

Note: The usage details for `install.sh` are shown below. The typical usage for GUI mode does not use arguments.

```
install.sh [text | silent websphere]
```

After installation is complete, a detailed installation log file is created:
`<INSTALL_DIR>/orrm-install-app.<timestamp>.log`

5. The installer leaves behind the
`<INSTALL_DIR>/ant.install.properties` file for future reference and repeat installations. This file contains all the inputs you provided, including passwords. As a security precaution, make sure that the file has restrictive permissions.

```
chmod 600 ant.install.properties
```

Resolving Errors Encountered During Application Installation

If the application installer encounters any errors, it will halt execution immediately. You can run the installer in silent mode so that you do not have to reenter the settings for your environment. For instructions on silent mode, see [Appendix C](#).

For a list of common installation errors, see [Appendix F](#).

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

Selecting the Default Locale

Limited locale support in Returns Management enables the date, time, and calendar to be displayed in the format for the selected default locale.

The default locale is defined in the `<WAS_HOME>/profiles/<profile name>/properties/application.properties` file.

To change the default locale, edit the following property:

```
locale_Default=en_US
```

- To select the locale for Canada, set the property to the following:

```
locale_Default=en_CA
```

- To select the locale for Great Britain, set the property to the following:

```
locale_Default=en_GB
```

- To select the local for the United States, set the property to the following:

```
locale_Default=en_US
```

Note: The only language currently supported is United States English.

Populate the Database Schema

The database must be populated before configuring the application server. On the Install Database Option screen, you select whether the installer completes installation of the database schema and seed data or if you want to do this manually.

- If you chose Yes, you do not need to perform any further steps to populate the database. This is the default selection on the screen.
- If you chose No, the installer did not populate the database schema. If you want to manually populate the database schema execute the `ws_ant load_sql` command in the `<INSTALL_DIR>/returnsmgmt/configured-output/db` directory.

Install Parameters

The application parameters must be installed before the Returns Management application is fully operational. On the Install Parameters screen, you select whether the installer completes installation of the parameters or if you want to do this manually.

- If you chose Yes, you do not need to perform any further steps to install the parameters. This is the default selection on the screen.
- If you chose No, the installer did not install the parameters. For information on installing the parameters, see ["Import Initial Parameters"](#).

Configure MQ Server

MQ Server must be configured with a queue manager and the queues and topics required by Returns Management before Returns Management can be deployed. On the Configure MQ Server Option screen, you select whether the installer configures MQ Server or if you manually configure it. If MQ Server is installed on a different machine than the WebSphere server, you must manually configure MQ Server.

Use the following commands to configure MQ Server. `MQ_Install_Dir` is the directory where MQ Server was installed. The values for `<input.jms.server.queue>` and `<input.jms.server.port>` are found in the `ant.install.properties` file.

```
<MQ_Install_Dir>/bin/crtmqm    -q <input.jms.server.queue>
<MQ_Install_Dir>/bin/strmqm    <input.jms.server.queue>
<MQ_Install_Dir>/bin/runmqslr -m <input.jms.server.queue> -p
    <input.jms.server.port> -t tcp &
<MQ_Install_Dir>/bin/runmqsc    <input.jms.server.queue> <
    <INSTALL_DIR>/returnsmgmt/appserver/was/createq.dat

<MQ_Install_Dir>/bin/runmqsc    <input.jms.server.queue> <
    <MQ_Install_Dir>/java/bin/MQJMS_PSQ.mqsc
<MQ_Install_Dir>/bin/strmqbrk  -m <input.jms.server.queue>
```

Manual Deployment Option

The Returns Management application must be configured and then deployed to the WebSphere application server. On the Manual Deployment Option screen, you select whether the installer completes the installation to the application server.

- If you chose No, you do not need to perform any further steps to deploy the application. This is the default selection on the screen.
- If you chose Yes, the installer did not deploy the application. You must complete the installation by deploying the Returns Management ear file.

To deploy the application, log in to the WebSphere Administrative console. Deploy the ear file located in `<INSTALL_DIR>/returnsmgmt/ear`. Use the same application name and context root used for the installation. These values are available in the `<INSTALL_DIR>/ant.install.properties` file.

Import Initial Parameters

Note: If you did not choose to have the installer set the initial parameters, you must import an initial set of parameters before you can use Returns Management. For more information on parameters, see the Oracle Retail Returns Management Configuration Guide.

This section provides an overview of the procedures for importing an initial set of parameters. You can import the parameters through the Returns Management user interface or by using an Ant target. You only need to use one of the procedures. The procedure for importing parameters through the application user interface is described in more detail in the Oracle Retail Returns Management User Guide.

Importing Parameters Through the User Interface

To import the initial parameters through the user interface:

1. Open the Returns Management application in a web browser. The address is provided at the end of the installer output and in the log file.
`http://<servername>:<portnumber>/returnsmanagement`
2. Log in to the application as user ID **pos** and password **pos**, or any other user ID that has full administrative rights.
3. Click the **Data Management** tab. The Available Imports screen appears.
4. To import the master parameter set, click the **File** link in the Import Parameters for Distribution row. Follow the instructions to import `parameterset.xml` from the `<INSTALL_DIR>/returnsmgmt/configured-output/db` directory.
5. To import the initial set of Returns Management application parameters, click the **File** link in the Import Application Parameters row. Follow the instructions to import `returnsmgmt.xml` from the `<INSTALL_DIR>/returnsmgmt/configured-output/db` directory.

Importing Parameters By Using an Ant Target

To import parameters using an Ant target:

1. Change to the `<INSTALL_DIR>/returnsmgmt/configured-output/db` directory.
2. Execute the following command:
`ant load_parameters`

Using the Returns Management Application

Note: When you are done installing Returns Management, log out and close the browser window. This ensures that your session information is cleared and prevents another user from accessing Returns Management with your login information.

After the application installer completes and you have run the initial parameter load, you should have a working Returns Management application installation. To launch the application, open a web browser and go to

`http://<servername>:<portnumber>/context root`

For example, `http://myhost:9080/returnsmanagement`

Note: The installer created and started the MQ queue manager. If you restart WebSphere, you must also restart the MQ queue manager.

Configuration for Firefox Browser

When Returns Management is viewed from the Firefox browser, displayed graphs may not be updated correctly when you change users. To avoid this problem, disable image caching.

To disable image caching:

1. In the browser's address bar, enter **about:config**.
2. Scroll to the entry `browser.cache.memory.enable` and double-click it. A dialog box appears.
3. Change the value in the dialog box to **false**.
4. Click **OK**.
5. Restart the browser.

A

Appendix: Returns Management Application Installer Screens for the Oracle Stack

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

For each field on a screen, a table is included in this appendix that describes the field. If you want to document any specific information about your environment for any field, a Notes row is provided in each table for saving that information.

Figure A-1 Introduction

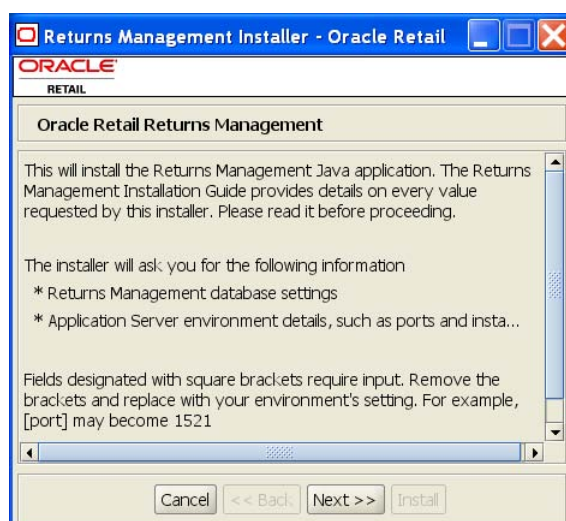


Figure A–2 Requirements

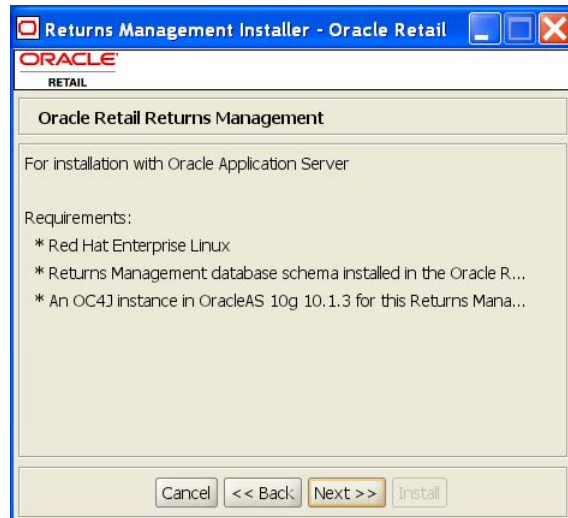
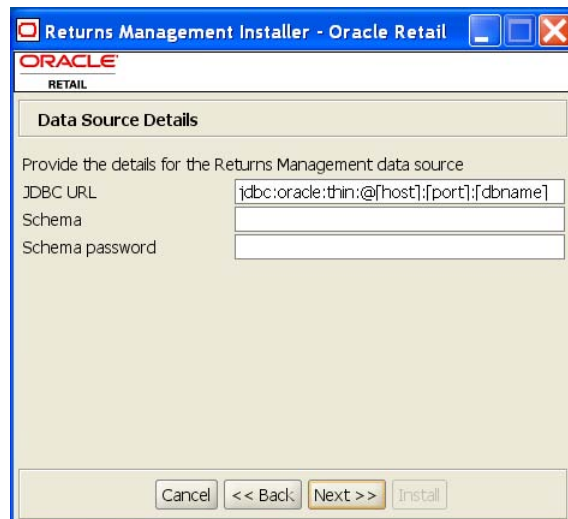


Figure A–3 Data Source Details



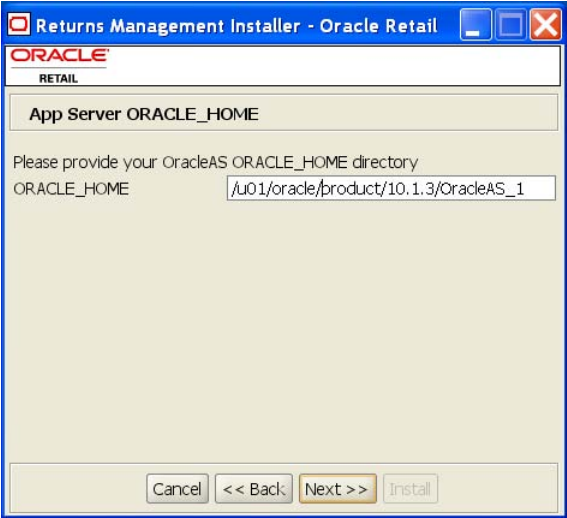
The fields on this screen are described in the following tables.

Field Title	JDBC URL
Field Description	URL used by the Returns Management application to access the database schema. See Appendix E for the expected syntax.
Example	jdbc:oracle:thin:@myhost:1521:mydatabase
Notes	

Field Title	Schema
Field Description	Database schema user used by the Returns Management application.
Example	DBUSER
Notes	

Field Title	Schema password
Field Description	Password for the Returns Management schema user.
Notes	

Figure A-4 App Server ORACLE_HOME



The field on this screen is described in the following table.

Field Title	ORACLE_HOME
Field Description	ORACLE_HOME directory for the Oracle Application Server installation.
Example	/u01/oracle/product/10.1.3/OracleAS_1
Notes	

Figure A–5 Mail Session Details

Returns Management Installer - Oracle Retail

ORACLE
RETAIL

Mail Session Details

Please provide mail server details for the Returns Management application

SMTP host

Reply-To Address

From Address

Cancel << Back Next >> Install

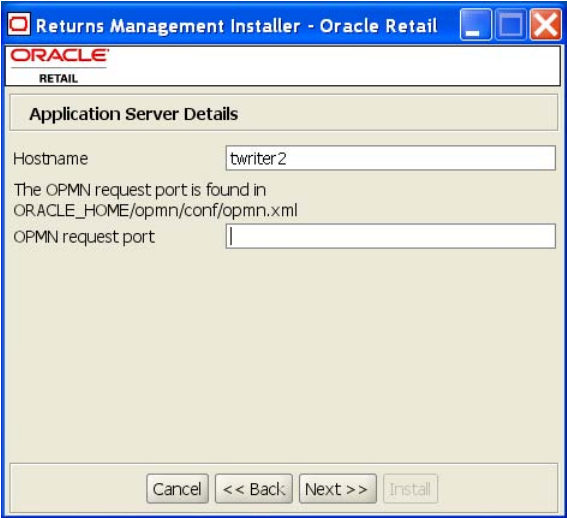
The fields on this screen are described in the following tables.

Field Title	SMTP host
Field Description	Host where the SMTP server is running.
Example	mail.mycompany.com
Notes	

Field Title	Reply-To Address
Field Description	Reply-to address in e-mails generated by Returns Management.
Example	donotreply@mycompany.com
Notes	

Field Title	From Address
Field Description	From address in e-mails generated by Returns Management.
Example	donotreply@mycompany.com
Notes	

Figure A-6 Application Server Details



The fields on this screen are described in the following tables.

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: <port local="6100" remote="6200" request="6003"/>
Example	6003
Notes	

Figure A-7 Manual Deployment Option



The field on this screen is described in the following table.

Field Title	Install files to app server?
Field Description	<p>By default, the installer will deploy the ear file and copy files under the application server ORACLE_HOME. This screen gives you the option to leave ORACLE_HOME unmodified and configure the application in the staging area for use in a manual installation at a later time. This option can be used in situations where modifications to files under ORACLE_HOME must be reviewed by another party before being applied.</p> <p>If you choose No, see "Manual Deployment Option" in Chapter 3 for the manual steps you need to perform after the installer completes.</p>
Example	Yes
Notes	

Figure A–8 Application Deployment Details

Returns Management Installer - Oracle Retail

Application Deployment Details

The default values shown below are examples

Enter the deployment name for the Returns Management application. This is the name by which the application will be identified in the application server.

App Deployment Name

Enter the web context root for this application. The web URL used to access the application will be http://server:port/contextroot/index.jsp

Context Root

Enter the name of the OC4J instance to which the Returns Management application will be deployed

OC4J instance

The fields on this screen are described in the following tables.

Field Title	App Deployment Name
Field Description	Name by which this Returns Management application will be identified in the application server.
Example	ReturnsManagement
Notes	

Field Title	Context Root
Field Description	Path under the HTTP URL that will be used to access the Returns Management application. For example, a context root of 'returnsmanagement' will result in the application being accessed at http://host:port/returnsmanagement/.
Example	returnsmanagment
Notes	

Field Title	OC4J Instance
Field Description	Name of the OC4J instance that was created for this Returns Management application.
Example	orrm-inst
Notes	

Figure A–9 OC4J Administrative User

The screenshot shows a window titled "Returns Management Installer - Oracle Retail". Inside, there's a section for "OC4J Administrative User". It instructs the user to "Enter the administrative user and password for the OC4J instance to which the application will be deployed." There are two input fields: "OC4J admin user" with the value "oc4jadmin" and "OC4J admin password" which is empty. At the bottom, there are buttons for "Cancel", "<< Back", "Next >>", and "Install".

The fields on this screen are described in the following tables.

Field Title	OC4J admin user
Field Description	Username of the admin user for OC4J instance to which the Returns Management 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.
Notes	

Figure A–10 Installation Progress

The screenshot shows a window titled "Returns Management Installer - Oracle Retail". Inside, there's a section for "Installation progress". It contains a "Show Details" button and the text "Click Install to continue". At the bottom, there are buttons for "Cancel", "<< Back", "Next >>", and "Install".

B

Appendix: Returns Management Application Installer Screens for the IBM Stack

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

For each field on a screen, a table is included in this appendix that describes the field. If you want to document any specific information about your environment for any field, a Notes row is provided in each table for saving that information.

Figure B-1 Introduction

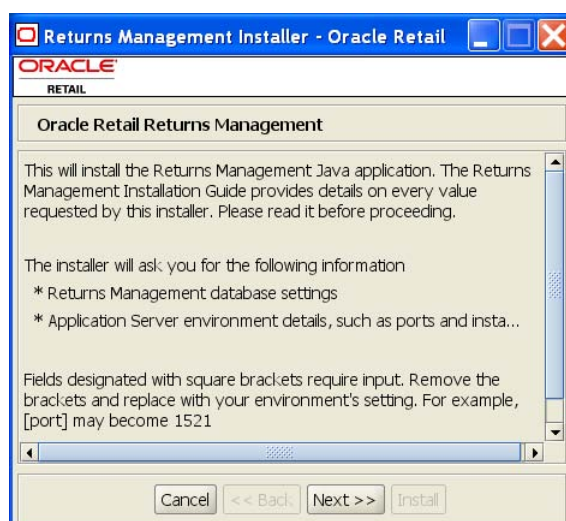


Figure B–2 Requirements

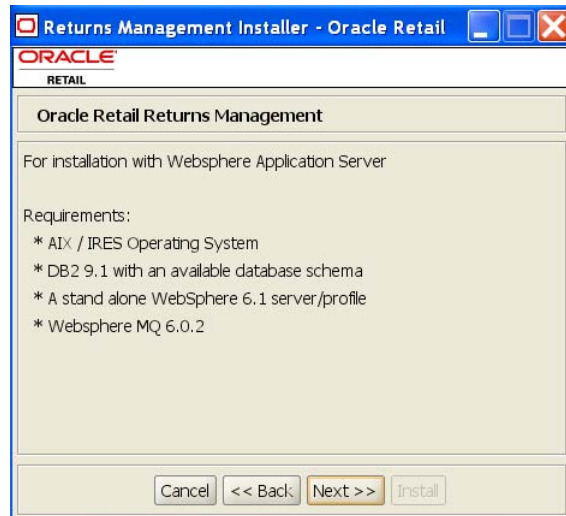
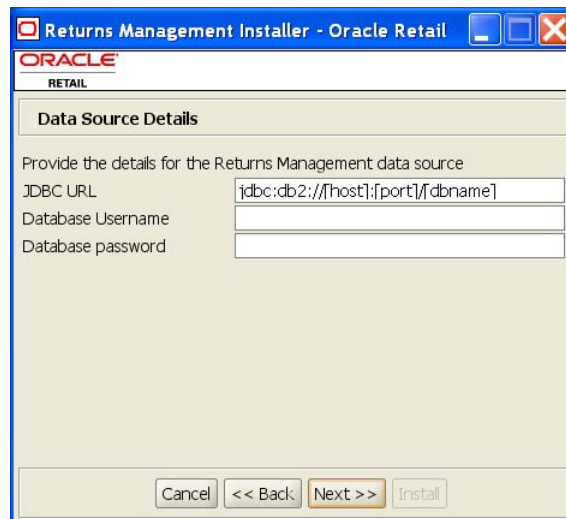


Figure B–3 Data Source Details



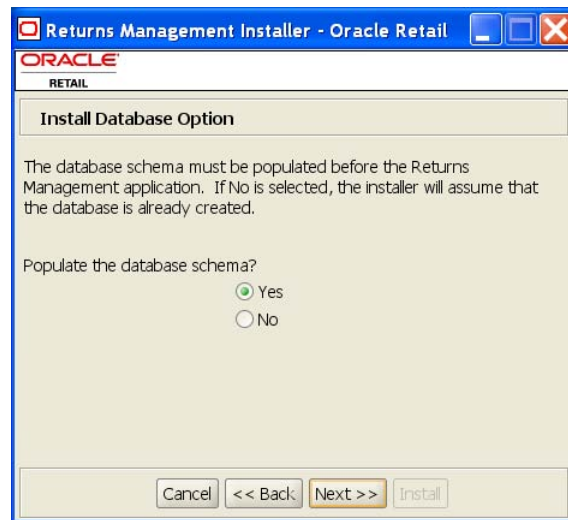
The fields on this screen are described in the following tables.

Field Title	JDBC URL
Field Description	URL used by the Returns Management application to access the database schema. See Appendix E for the expected syntax.
Example	jdbc:db2://myhost:50000/mydb
Notes	

Field Title	Database Username
Field Description	Database schema user used by the Returns Management application.
Example	DBUSER
Notes	

Field Title	Database password
Field Description	Password for the Returns Management schema user.
Notes	

Figure B-4 Install Database Option



The field on this screen is described in the following table.

Field Title	Populate database schema?
Field Description	<p>The database schema must be populated before WebSphere can be configured for Returns Management. This screen gives you the option to leave the database schema unmodified and populate the database schema manually. For example, you choose No if the database is already created.</p> <p>If you choose No, see "Populate the Database Schema" in Chapter 4 for the manual steps you need to perform after the installer completes.</p>
Example	Yes
Notes	

Figure B–5 App Server WAS_HOME

Returns Management Installer - Oracle Retail

ORACLE
RETAIL

App Server WAS_HOME

Please provide your Websphere Application Server base directory
WAS_HOME

Cancel << Back Next >> Install

The field on this screen is described in the following table.

Field Title	WAS_HOME
Field Description	Base directory for the WebSphere Application Server installation.
Example	/opt/IBM/WebSphere/AppServer
Notes	

Figure B–6 Mail Session Details

Returns Management Installer - Oracle Retail

ORACLE
RETAIL

Mail Session Details

Please provide mail server details for the Returns Management application

SMTP host

From Address

Cancel << Back Next >> Install

The fields on this screen are described in the following tables.

Field Title	SMTP host
Field Description	Host where the SMTP server is running.
Example	mail.mycompany.com
Notes	

Field Title	From Address
Field Description	From address in e-mails generated by Returns Management.
Example	donotreply@mycompany.com
Notes	

Figure B-7 Application Server Details

The fields on this screen are described in the following tables.

Field Title	Server Name
Field Description	Name of the WebSphere server.
Example	server1
Notes	

Field Title	Node Name
Field Description	Name of the WebSphere node.
Example	myhostNode01
Notes	

Field Title	Cell Name
Field Description	Name of the WebSphere cell.
Example	myhostNode01Cell
Notes	

Field Title	IIOP port
Field Description	IIOP/BOOTSTRAP_ADDRESS port of the WebSphere server. This port can be found in the <code><WAS_HOME>/profiles/<profile name>/properties/portdef.props</code> file.
Example	2809
Notes	

Field Title	Server Username
Field Description	User name for the WebSphere server. This user must exist in the Returns Management schema.
Example	myuser
Notes	

Field Title	Server Password
Field Description	Password for the WebSphere server.
Example	mypassword
Notes	

Field Title	Server Profile
Field Description	Name of the WebSphere profile.
Example	AppSrv01
Notes	

Field Title	Timezone
Field Description	Time zone where this server is running.
Example	America/Chicago
Notes	

Figure B–8 JMS Server Details

Oracle Retail
RETAIL

JMS Server Details

JMS Server Name
JMS Port
JMS Username
JMS Password
JMS Queue Manager

Cancel << Back Next >> Install

The fields on this screen are described in the following tables.

Field Title	JMS Server Name
Field Description	Name of the JMS server. Note: Always use the actual hostname and not the IP address or "localhost". There may be problems integrating with Oracle Retail Point-of-Service if the actual hostname is not used.
Example	myhost
Notes	

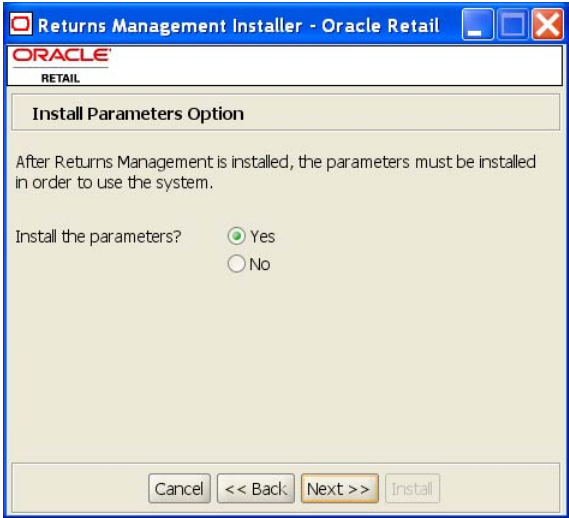
Field Title	JMS Server Port
Field Description	Port number used by the JMS server.
Example	1414
Notes	

Field Title	JMS Username
Field Description	User name for the JMS server. This user must exist in the operating system. It must be the same user that is used for WebSphere MQ.
Example	mqm
Notes	

Field Title	JMS Password
Field Description	Password for the JMS server.
Example	mqm
Notes	

Field Title	JMS Queue Manager
Field Description	Name of the JMS queue manager.
Example	rm.queue.manager
Notes	

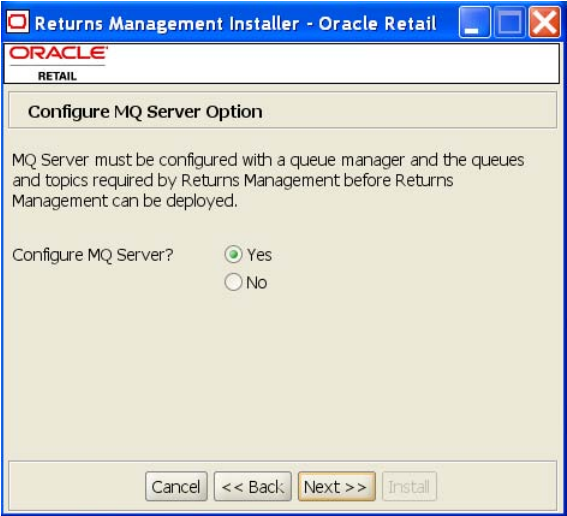
Figure B–9 Install Parameters Option



The field on this screen is described in the following table.

Field Title	Install the parameters?
Field Description	The application parameters must be set up before Returns Management can be used. This screen gives you the option to set up the parameters manually. If you choose No, see "Install Parameters" in Chapter 4 for the manual steps you need to perform after the installer completes.
Example	Yes
Notes	

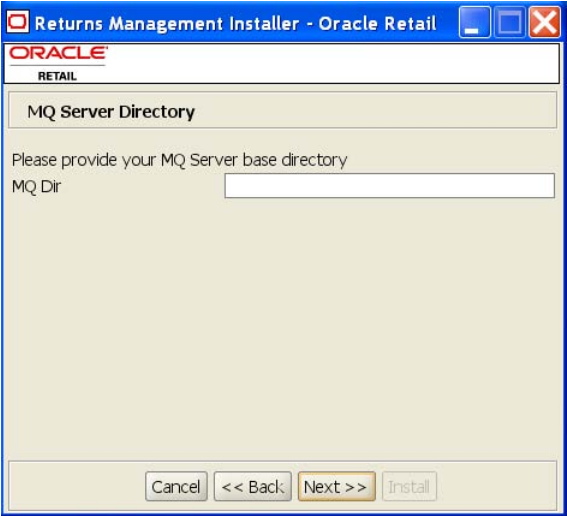
Figure B–10 Configure MQ Server Option



The field on this screen is described in the following table.

Field Title	Configure MQ Server?
Field Description	MQ Server must be configured with a queue manager and the queues and topics required by Returns Management before Returns Management can be deployed. This screen gives you the option to configure MQ Server manually. If you choose No, see "Configure MQ Server" in Chapter 4 for the manual steps you need to perform after the installer completes.
Example	Yes
Notes	

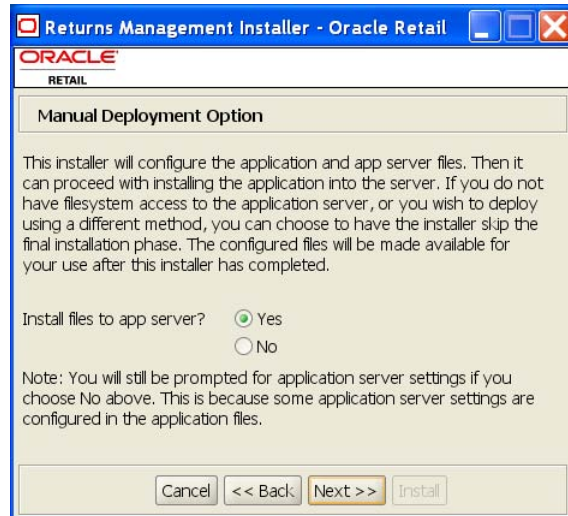
Figure B–11 MQ Server Directory



This screen is only displayed if **Yes** is selected on the Configure MQ Server Option screen. The field on this screen is described in the following table.

Field Title	MQ Dir
Field Description	Base directory for MQ Server.
Example	/opt/mqm
Notes	

Figure B–12 Manual Deployment Option



The field on this screen is described in the following table.

Field Title	Install files to app server?
Field Description	<p>By default, the installer will deploy the ear file. This screen gives you the option to configure the application in the staging area for use in a manual installation at a later time. This option can be used in situations where modifications to the deployed files must be reviewed by another party before being applied.</p> <p>If you choose No, see "Manual Deployment Option" in Chapter 4 for the manual steps you need to perform after the installer completes.</p>
Example	Yes
Notes	

Figure B–13 Application Deployment Details

Returns Management Installer - Oracle Retail

Application Deployment Details

The default values shown below are examples

Enter the deployment name for the Returns Management application. This is the name by which the application will be identified in the application server.

App Deployment Name: ReturnsManagement

Enter the web context root for this application. The web URL used to access the application will be http://server:port/contextroot/index.jsp

Context Root: returnsmanagement

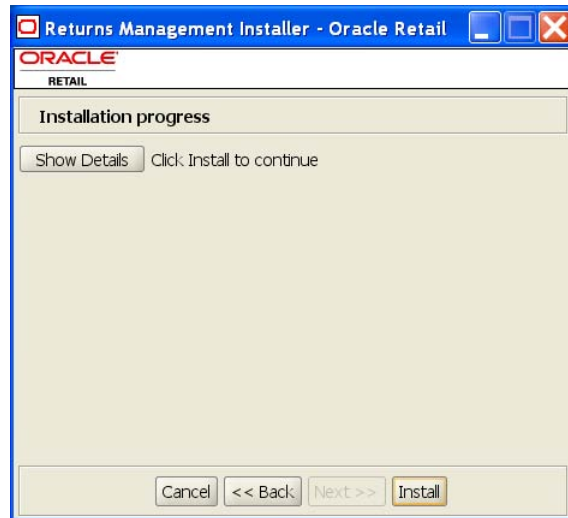
Buttons: Cancel, << Back, Next >>, Install

The fields on this screen are described in the following tables.

Field Title	App Deployment Name
Field Description	Name by which this Returns Management application will be identified in the application server.
Example	ReturnsManagement
Notes	

Field Title	Context Root
Field Description	Path under the HTTP URL that will be used to access the Returns Management application. For example, a context root of 'returnsmanagement' will result in the application being accessed at http://host:port/returnsmanagement/.
Example	returnsmanagement
Notes	

Figure B–14 *Installation Progress*



Appendix: Installer Silent Mode

In addition to the GUI and text interfaces of the Returns Management installer, there is a silent mode that can be run. This mode is useful if you wish to run a repeat installation without reentering the settings you provided in the previous installation. It is also useful if you encounter errors in the middle of an installation and wish to continue after resolving them.

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. In the second phase, 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.

```
install.sh [silent oracle | websphere]
```

Appendix: Reinstalling Returns Management

Returns Management does not provide the capability to uninstall and reinstall the application. If you need to run the Returns Management installer again, perform the following steps.

Reinstalling Returns Management on the Oracle Stack

To reinstall:

1. Stop the OC4J Returns Management instance.
2. Delete the instance.
3. Recreate the OC4J Returns Management instance.
4. Start the instance.
5. Run the Returns Management installer. For more information, see "[Run the Returns Management Application Installer](#)" in [Chapter 3](#).

Reinstalling Returns Management on the IBM Stack

To reinstall:

1. Stop the WebSphere application server in the profile that contains Returns Management.
2. Delete the profile.
3. Stop the WebSphere MQ queue manager (for example, `rm.queue.manager`) and listener.
4. Delete the queue manager.
5. Recreate the profile.
6. Start the WebSphere application server in the profile.
7. Run the Returns Management installer. For more information, see "[Run the Returns Management Application Installer](#)" in [Chapter 4](#).

Appendix: URL Reference

Both the database schema and application installers for the Returns Management product will ask for several different URLs. These include the following.

URLs for the Oracle Stack

The following URLs are used for the Oracle stack.

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

For example, `jdbc:oracle:thin:@myhost:1525:mysid`

JNDI Provider URL for an Application

Used for server-to-server calls between applications.

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

For 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

Used by the Oracle Ant tasks to deploy an application to an OC4J instance. 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>/<instance>`

- `<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 where the application will be deployed

For example, `deployer:cluster:opmn://myhost:6003/orrm-inst`

URLs for the IBM Stack

The following URLs are used for the IBM stack.

JDBC URL for a Database

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

Syntax: `jdbc:db2://<dbhost>:<dbport>/<dbname>`

- `<dbhost>`: hostname of the database server
- `<dbport>`: database listener port
- `<dbname>`: system identifier for the database

For example, `jdbc:db2://myhost:50000/mydatabase`

JNDI Provider URL for an Application

Used for server-to-server calls between applications.

Syntax: `corbaloc:iiop:<host>:<iiopport>`

- `<host>`: hostname of the WebSphere server
- `<iiopport>`: IIOP/BOOTSTRAP_ADDRESS port of the WebSphere server. This can be found in the `<WAS_HOME>/profiles/<profile_name>/properties/portdef.props` file.

For example, `corbaloc:iiop:myhost:2809`

Appendix: Common Installation Errors

This appendix describes some common errors encountered during installation of Returns Management.

Unreadable Buttons in the Installer

If you are unable to read the text within the installer buttons, it probably means that your `JAVA_HOME` points to a pre-1.4.2 JDK. Set `JAVA_HOME` to a Java development kit of version 1.4.2 or later and run the installer again.

Installation Errors for the Oracle Stack Only

The following errors only occur when installing for the Oracle Stack.

Oracle Application Server Forceful Shutdown

If an error occurs during installation, Oracle Application Server may not shutdown gracefully but will instead do a forceful shutdown. This is a known problem with Oracle Application Server.

You can use `opmnctl status` to check if the application server has stopped appropriately.

"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, password, or both
- 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 E](#)), `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](#)).

"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.

Installation Hangs at "Compiling EJB generated code"

Symptom:

The installer freezes for 10 minutes or more showing this as the last message:

```
[[myinstance.name] 06/11/17 16:51:57 Notification ==>Compiling EJB generated code
```

Solution:

Before cancelling the installation, check the OC4J log file. This file is usually located under `$ORACLE_HOME/opmn/logs` and is named after the OC4J instance. This could be a memory problem if you did not follow the steps to set the PermSize space. See ["Create a New OC4J Instance for Returns Management"](#) in [Chapter 3](#).

"Failed to set the internal configuration" Message

Symptom:

The following text appears in the log file:

```
07/03/19 14:34:51 *** (SEVERE) Failed to set the internal configuration of the
OC4J JMS Server with: XMLJMServerConfig[file:/u01/10.1.3/OracleAS_1/
j2ee/home/config/jms.xml]
```

Solution:

Check the OC4J log file. This file is usually located under `$ORACLE_HOME/opmn/logs` and is named after the OC4J instance. A `NameNotFoundException` for `jms/XAQueueConnectionFactory` appears in the log.

To resolve the problem, do the following:

1. Shutdown the application server.
2. Delete the `OracleAS_1/j2ee/<OC4J instance>/persistence/<OC4J instance>_default_group_1/*.lock` file.
3. Restart the application server.

Appendix: Returns Data Loader

The Oracle Retail Returns Management installation includes return ticket data, in XML format, which you can optionally load into the Returns Management database. There are several reasons why you would want to load this data:

- Once return tickets are loaded into the database, you can use the data to get familiar with those parts of the user interface that deal with return tickets, such as, searching for return tickets.
- Loading the return tickets acts as an end-to-end test of the Oracle Retail Returns Management software installation, from the web services interface up to the back-end database.
- The return ticket data is good sample data that can be used as a starting point for customization and experimentation with data relevant to your organization.

Using the Returns Data Loader

To use the returns data loader:

1. Change to the db directory.

- For Oracle Application Server, change to the
`<INSTALL_DIR>/returnsmgmt/db` directory.

If the `returnsManagementDBInstall.jar` file was not expanded as part of the installation, that jar file must be expanded to access the files needed to run the loader. For information on expanding the jar file, see "[Create the Returns Management Database Schema](#)" in [Chapter 3](#).

- For IBM WebSphere, change to the
`<INSTALL_DIR>/returnsmgmt/configured-output/db` directory.

2. Edit the part of the `db.properties` file that deals with the returns data loader.

Set the values of the properties as needed. Replace the host name `My_RM_Server` shown in the following example.

```
#####
# Properties for Returns Seed Data Loading
#####

# the host name where the seed data should be loaded
dataLoader.host=My_RM_Server
```

```
# the port number where the seed data should be loaded
# For Oracle Application Server, use the same port number used to log in after
# installation is complete
# WebSphere normally uses 9080
dataLoader.port=9080

# The URL shouldn't need to be modified unless the deployment location moves
dataLoader.url=http://${dataLoader.host}:${dataLoader.port}/retwebsvc/services/
ReturnsManager
```

3. Execute the following command:

```
ant load_returns_data
```

About 100 sample return requests and final result messages are sent to the Returns Management server. This step may take several minutes to complete.

This command sends some output to `DataTools.log` in the current directory. Ignore the warning message about attachment support, as the DataLoader does not need it to operate properly.

You can view the contents of the submitted XML messages in the `returns-data/tickets` directory. You can also modify the messages and resubmit them by repeating this step.