

**Oracle® Retail Back Office**

Installation Guide

Release 12.0.3IN

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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. This installation guide covers the installation of Oracle Retail Back Office.

## 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 Back Office documentation set or Oracle Retail Strategic Store Solutions documentation set:

- *Oracle Retail Back Office Release Notes*
- *Oracle Retail Strategic Store Solutions Data Model*
- *Oracle Retail Back Office Installation Guide*
- *Oracle Retail Back Office User Guide*
- *Oracle Retail Strategic Store Solutions Configuration Guide*
- *Oracle Retail Strategic Store Solutions Implementation 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](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:

<b>Convention</b>	<b>Meaning</b>
<b>boldface</b>	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.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

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# Pre-installation Tasks

This chapter describes the requirements that must be met before the application can be installed.

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

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## Determine the Back Office Distribution

This document covers installation of the below mentioned product release:

- Oracle Retail Back Office (ORBO): Back Office application

## Check Oracle Retail Merchandise Operations Management Version

The integration with Oracle Retail Merchandise Operations Management requires version 12.0.5IN of the following products:

- Oracle Retail Merchandising System
- Oracle Retail Price Management
- Oracle Retail Sales Audit

## Check Database Requirements

For the database requirements, see [Table 1-1](#).

### Required Settings for Database Installation

The following settings must be made during database creation:

- The database must be set to UTF8.
- When using the Oracle 10g database server, make the following changes to the system settings:

```
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 Store Server Requirements

[Table 1-1](#) lists the general requirements for a store server capable of running Back Office and the versions tested for this release.

**Table 1-1 Store Server Requirements**

Component	Oracle Stack
Hardware	x86-32 bit
Database	Oracle RDBMS 10g R2 (10.2.0.2)
Operating System	Windows 2003 Server
J2EE Application Server	Oracle Application Server 10g (10.1.3) <b>Note:</b> This release of Back Office is only supported in a managed OC4J instance as part of OracleAS 10g. It is not supported on OC4J standalone.
J2EE Application Server JVM	Sun 1.5.x
Messaging Provider	(included in Oracle Application Server)
System Management Agents	OEM Agents

## Minimum Hardware Requirements

Specific hardware requirements for the machines running Oracle Retail Back Office depend on several variables including the number of users and other applications running on the same machine. A general guideline is shown in [Table 1-2](#). These minimum requirements assume the database server and application server are on the same physical server. These minimums may not deliver adequate performance based on the actual implementation.

**Table 1-2 Minimum Hardware Requirements**

Machine	CPU	Memory	Hard Drive
Store Server	1 GHz +	2 GB	160 GB

Please note the following about the minimum hardware requirements:

- The store server CPU requirement can vary based on the operating system and middleware selected.
- Memory performance can vary based on the number of active promotions and best deal calculations.
- Disk size can vary based on the operating system and middleware requirements as well as the amount of data storage needed. Data storage can vary based on the number of items and promotions defined, data retention period, and so forth.

## 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 Scalable Vector Graphics (SVG) and Portable Data Format (PDF) files

The following web browsers were tested for this release:

- Microsoft Internet Explorer 6 and Mozilla Firefox 1



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## Installation of the Oracle Stack on Windows

Before proceeding, you must install the database and application server software. For a list of supported versions, see [Chapter 1](#).

During installation, the Back Office database schema will be created and the Back Office application will be deployed to an OC4J instance within the OracleAS 10g installation. The Java JDK that is included with the Oracle Application Server (under %ORACLE\_HOME%\jdk) will be used to run the application.

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**Note:** J2EE\_HOME refers to the directory  
%ORACLE\_HOME%\j2ee\*<instancename>*

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### Create a New OC4J Instance for Back Office

You can skip this section if you are redeploying to an existing OC4J instance.

The Back Office application must 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](#).

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. You must use forward slash file separators when setting this variable.
2. Choose a name for the new OC4J instance. In the remainder of this installation guide, *<orbo-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 <orbo-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.

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**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.

Port number definitions for the home instance:

```
<port id="rmi" range="12401-12401"/>
<port id="jms" range="12601-12601"/>
```

Port number definitions for the Back Office instance:

```
<port id="rmi" range="12402-12402"/>
<port id="jms" range="12602-12602"/>
```

---

---

4. 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=<orbo-inst>
```

5. 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.

## Expand the Back Office Distribution

To extract the Back Office files:

1. Extract the `ORBO-12.03IN.zip` file from the Back Office distribution.
2. Create a new staging directory for the Back Office application distribution (`ORBO-12.03IN.zip`) file, for example, `c:\tmp\j2ee\orbo-inst\orbo-staging`.

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

The staging area (`<staging_directory>`) can exist anywhere on the system. It does not need to be under `ORACLE_HOME`.

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3. Copy or upload `ORBO-12.03IN.zip` to `<staging_directory>` and extract its contents. The following files and directories should be created under `<staging_directory>\ORBO-12.03IN`:

```
ant\
ant-ext\
antinstall\
backoffice\
external-lib\
```

```

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

```

For the remainder of this chapter, `<staging_directory>\ORBO-12.03IN` is referred to as `<INSTALL_DIR>`.

## Obtain the Third-Party Library File Required by Back Office

The Back Office application uses the Pager Tag Library from JSPTags. You must download the `pager-taglib.jar` file from the JSPTags website before running the Back Office 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 Back Office Application Installer

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

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

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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, for example, `C:\Oracle\10.1.3\OracleAS_1`.  
`JAVA_HOME` should point to `%ORACLE_HOME%\jdk`.

---



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

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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.

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

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4. Run the install.cmd script. This will launch the installer. After installation is complete, a detailed installation log file is created:  
orbo-install-app.<timestamp>.log.

---

---

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

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

---

---

5. 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.

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**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.

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## 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 B](#).

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

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

## 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.

- If you chose Yes, you do not need to perform any further steps to populate the Base database schema. This is the default selection on the screen.
- If you chose No, the installer will not populate the base database schema. If you want to manually populate the database, execute the ws\_ant load\_sql command in the <INSTALL\_DIR>\backoffice\configured-output\db directory. This target will create the base Point of Service database schema.

---

**Note:** For India L10N ddl changes, see [Creating the Back Office Database Schema](#) in **Appendix G**. It is mandatory to run these scripts, irrespective of the option selected in the Install Database Option screen.

---

## Install Parameters

The application parameters must be installed before the Back Office application is fully operational. On the Install Parameters screen, you select whether the installer completes installation of the parameters.

- 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 will not install the parameters. For information on installing the parameters, see "[Import Initial Parameters](#)".

---

**Note:** For India L10N related changes, see [Creating the Back Office Database Schema](#) in **Appendix G**. It is mandatory to run these scripts, irrespective of the option selected in the Install Parameters screen.

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## 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>\backoffice\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 .\backoffice\configured-output\appserver\%ORACLE_
HOME%\j2ee\myinstance\config\jms.xml.<date and time> %ORACLE_
HOME%\j2ee\myinstance\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>\backoffice\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 the JAVA\_HOME and PATH environment variables to use the JDK located at  
%ORACLE\_HOME%\jdk.

```
Set JAVA_HOME=%ORACLE_HOME%\jdk; Set PATH=%JAVA_HOME%\bin;%PATH%;
```

4. Copy the  
`<INSTALL_DIR>\backoffice\lib\oracle\security-360-ora.jar` file to the `%ORACLE_HOME%\jdk\jre\lib\ext\` directory.
5. Create the required JAAS configuration for Back Office:
  - a. Set `JAVA_HOME` and `PATH` environment variables to use the JDK located at `%ORACLE_HOME%\jdk`.  
`Set JAVA_HOME=%ORACLE_HOME%\jdk; Set PATH=%JAVA_HOME%\bin;%PATH%;`
  - b. Grant RMI access permissions for the Back Office application.  
`java -jar ..\home\jazz.jar -grantperm com._  
360commerce.commerceservice.security.oracle.CustomPrincipal oracle_rmi_  
access com.evermind.server.rmi.RMIPermission login`  
  
The `AbstractLoginModule` prompts you for the user name and password. Enter the same user name and password you entered on the OC4J Administrative User installer screen.
6. Delete `%ORACLE_HOME%\jdk\jre\lib\ext\security-360-ora.jar`. You may need to shut down all OC4J instances to be able to successfully delete this file.
7. Restart the OC4J instance where Back Office will be deployed.  
`%ORACLE_HOME%\opmn\bin\opmnctl restartproc process-type=<orbo-inst>`
8. Deploy the Back Office ear file using the Enterprise Manager web interface. The configured ear file is located at  
`<INSTALL_DIR>\backoffice\configured-output\backoffice.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 Back Office 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.200605011726`.

## Import Initial Parameters

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**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 Oracle Retail Back Office. For more information on parameters, see the Oracle Retail Strategic Store Solutions Configuration Guide.

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This section provides an overview of the procedures for importing an initial set of parameters. You can import the parameters through the Oracle Retail Back Office 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 Back Office User Guide.

These instructions assume you have already expanded the `backofficeDBInstall.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 Oracle Retail Back Office application in a web browser. The address is provided at the end of the installer output and in the log file.  

```
http:\\<host name>:<port number>\<context root>
```
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 **Admin** tab and then the **Job Manager** subtab. Click the **Available Imports** left navigation link. 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>\backoffice\db` folder.
5. To import the initial set of Oracle Retail Back Office application parameters, click the **File** link in the Import BackOffice Parameters row. Follow the instructions to import `backoffice.xml` from the `<INSTALL_DIR>\backoffice\db` folder.

## Importing Parameters By Using an Ant Target

To import parameters using an ant target:

1. Change to the `<INSTALL_DIR>\backoffice\configured-output\db` directory.
2. In the 'Generic DB Parameter Install - Used By Installer' section of the `db.properties` file, update the following properties:
  - a. Change `ora.home.dir` to your installation directory.  

```
ora.home.dir=C:\Oracle\10.1.3\OracleAS_1
```
  - b. Change `ORA_HOST_NAME` to your host name. Change 12401 to your port number.  

```
parameters.apphost=ormi:\\ORA_HOST_NAME:12401\BackOffice
```
3. Set the `JAVA_HOME`, `ANT_HOME`, and `PATH` environment variables. See ["Creating the Back Office Database Schema"](#) in [Appendix F](#) for the settings to be used.
4. Execute the following command:  

```
ant load_parameters
```

## Load Optional Purge Procedures

For information on the procedures provided for purging aged data, see the Oracle Retail Back Office Operations Guide. If purge procedures are needed, run the available Ant target to load the data:

```
ant load_purge_procedures
```

## Using the Back Office Application

---

---

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

---

---

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

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

For example, `http:\\myhost:8080\backoffice`

---

---

**Note:** Before viewing any reports for the first time after Back Office is installed, you must open the store. Opening the store creates data that is needed for Reports functionality to work correctly.

---

---

---

---

## Configuration for Firefox Browser

When Back Office 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.



---

## Appendix: Back Office Application Installer Screens for the Oracle Stack

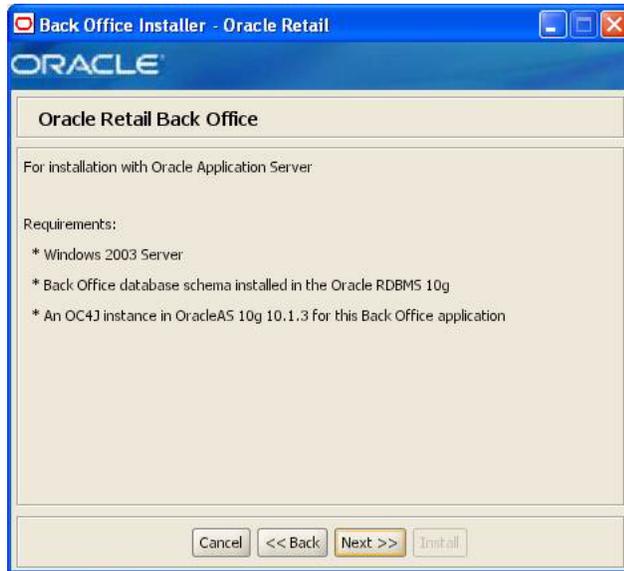
You need the following details about your environment for the installer to successfully deploy the Back Office application.

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.

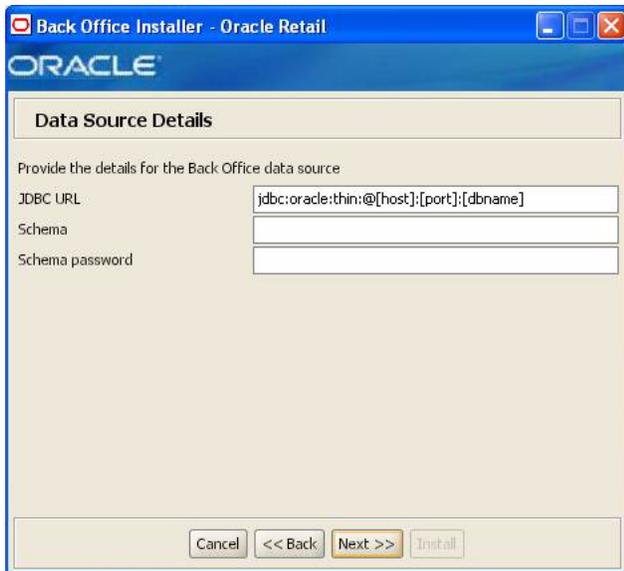
**Figure A-1 Introduction**



**Figure A-2 Requirements**



**Figure A-3 Data Source Details**



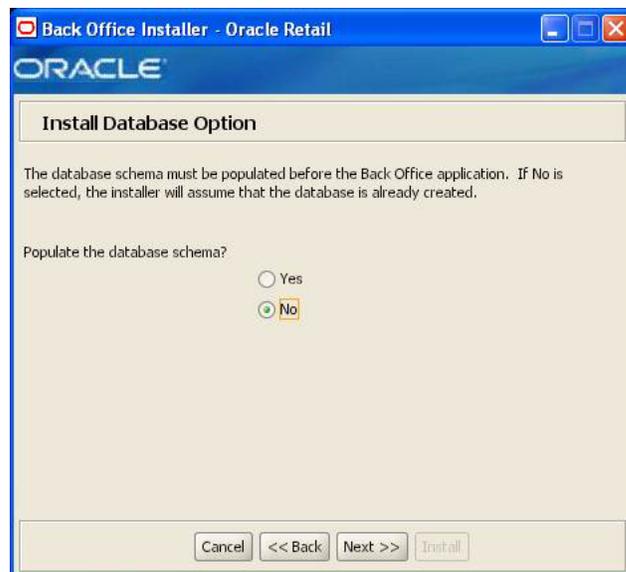
The fields on this screen are described in the following tables.

Field Title	JDBC URL
Field Description	URL used by the Back Office application to access the database schema. See <a href="#">Appendix D</a> for the expected syntax.
Example	jdbc:oracle:thin:@myhost:1525:mydatabase
Notes	

Field Title	Schema
Field Description	Database schema user used by the Back Office application.
Example	DBUSER
Notes	

Field Title	Schema password
Field Description	Password for the Back Office schema user.
Notes	

**Figure A-4 Install Database Option**

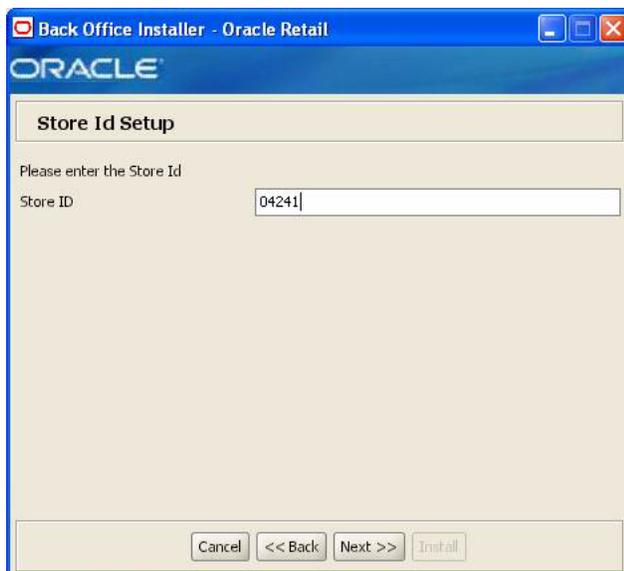


The field on this screen is described in the following table.

Field Title	Populate the database schema?
Field Description	The database schema must be populated before Oracle Application Server can be configured for Back Office. This screen gives you the option to leave the database schema unmodified and populate the database schema manually. This can be used if the database is already created.  If you choose No, see <a href="#">"Populate the Database Schema"</a> in <a href="#">Chapter 2</a> for the manual steps you need to perform after the installer completes.
Example	Yes

Field Title	Populate the database schema?
Notes	For India L10N ddl changes, see <a href="#">Creating the Back Office Database Schema</a> in Appendix G. It is mandatory to run these scripts.

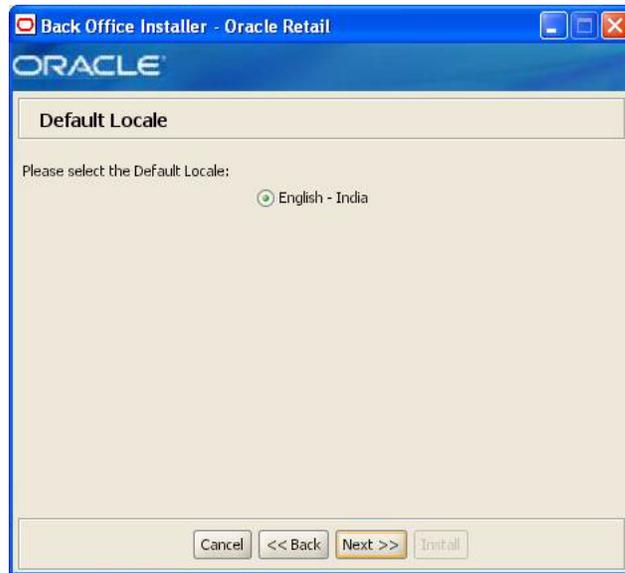
**Figure A-5 Store ID Setup**



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

Field Title	Please select the Store ID
Field Description	Enter the store ID for which you are configuring the Back Office.
Example	04241
Notes	04241 should be entered only if you are using the seed data setup; for integration with MOM use the appropriate store id being imported from MOM.

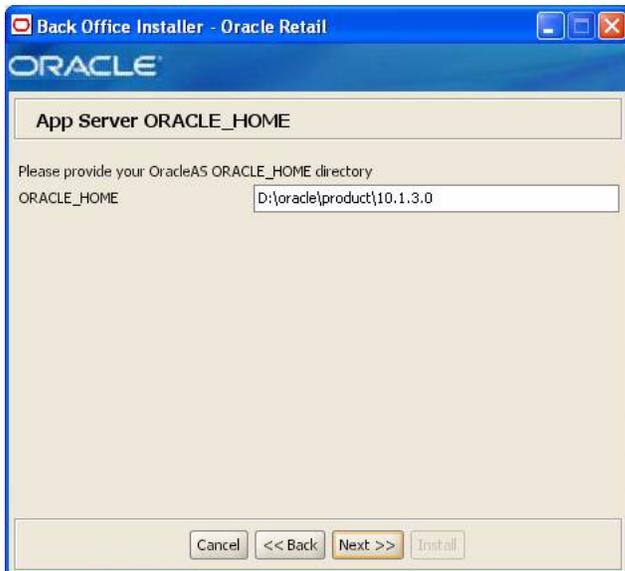
**Figure A-6 Default Locale**



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

Field Title	Please select the Default Locale
Field Description	Limited locale support in Back Office enables the date, time, currency, and calendar to be displayed in the format for the selected default locale.
Example	English
Notes	

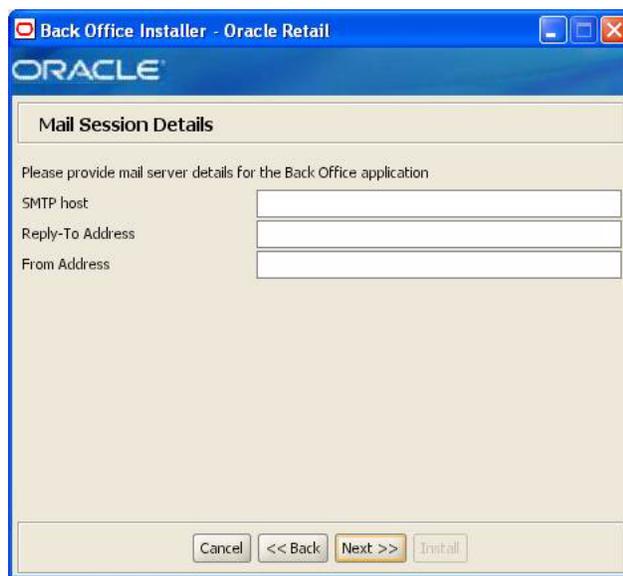
**Figure A-7 App Server ORACLE\_HOME**



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

<b>Field Title</b>	<b>ORACLE_HOME</b>
Field Description	ORACLE_HOME directory for the Oracle Application Server installation.
Example	C:\Oracle\10.1.3\OracleAS_1
Notes	

**Figure A-8 Mail Session Details**



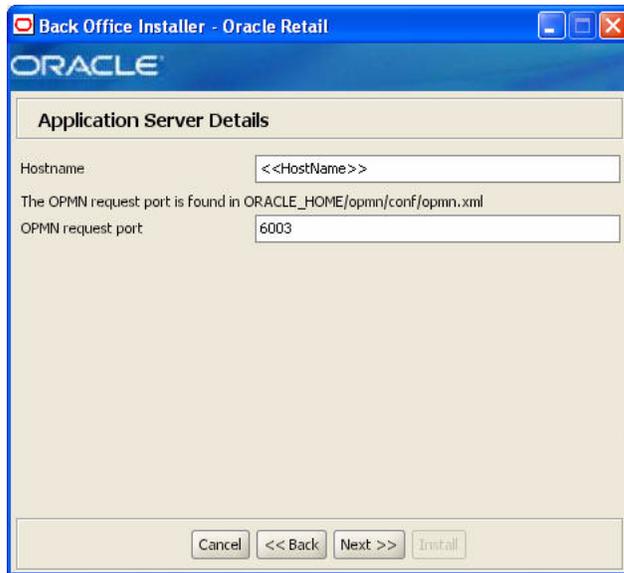
The fields on this screen are described in the following tables.

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

<b>Field Title</b>	<b>Reply-To Address</b>
Field Description	Reply-to address in e-mails generated by Back Office.
Example	donotreply@mycompany.com
Notes	

<b>Field Title</b>	<b>From Address</b>
Field Description	From address in e-mails generated by Back Office.
Example	donotreply@mycompany.com
Notes	

**Figure A-9 Application Server Details**

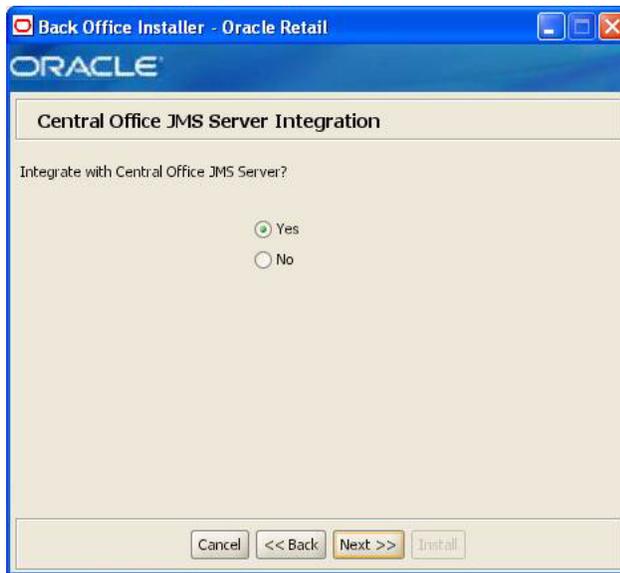


The fields on this screen are described in the following tables.

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: <code>&lt;port local="6100" remote="6200" request="6003" /&gt;</code>
Example	6003
Notes	

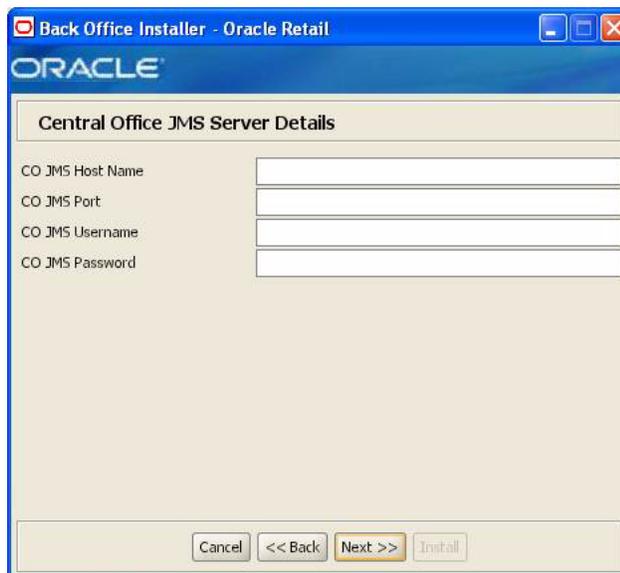
**Figure A-10 Central Office JMS Server Integration**



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

Field Title	Integrate with Central Office JMS Server?
Field Description	This screen gives you the option to integrate the Back Office application with a Central Office JMS server.
Example	Yes
Notes	

**Figure A-11 Central Office JMS Server Details**



This screen is only displayed if **Yes** is selected on the Central Office JMS Server Integration screen. The fields on this screen are described in the following tables.

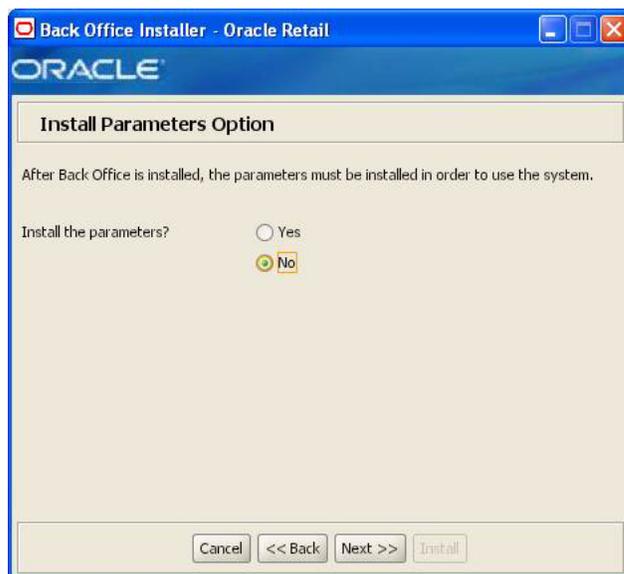
Field Title	CO JMS Server Name
Field Description	Name of the Central Office JMS server. <b>Note:</b> Always use the actual hostname and not the IP address or "localhost". There may be problems integrating with Point-of-Service if the actual hostname is not used.
Example	Server1
Notes	

Field Title	CO JMS Server Port
Field Description	Port number used by the Central Office JMS server.
Example	12602
Notes	

Field Title	CO JMS Username
Field Description	User name of the admin user for the OC4J instance to which the Central Office application is being deployed.
Example	myuser
Notes	

Field Title	CO JMS Password
Field Description	Password for the OC4J admin user. You chose this password when you created the OC4J instance.
Example	mypassword
Notes	

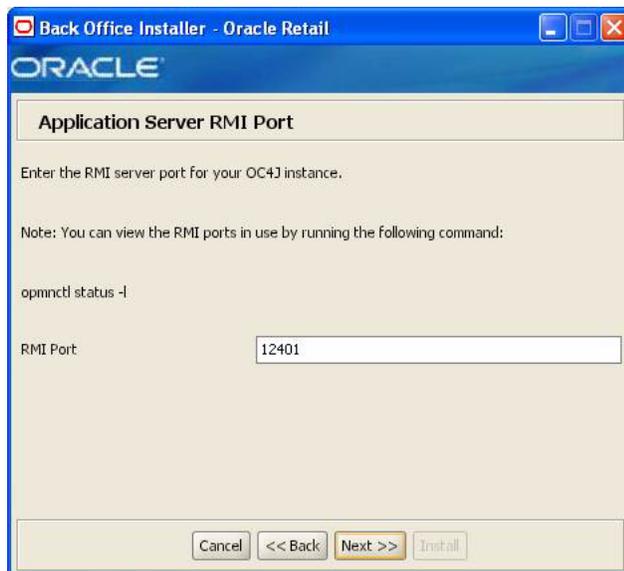
**Figure A-12 Install Parameters Options**



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 Back Office can be used. This screen gives you the option to set up the parameters manually. If you choose No, see "Install Parameters" in Chapter 2 for the manual steps you need to perform after the installer completes.
Example	Yes
Notes	Choose this install parameters as Yes only if you had chosen Yes option in the <b>Populate the Database Schema Installer</b> screen.

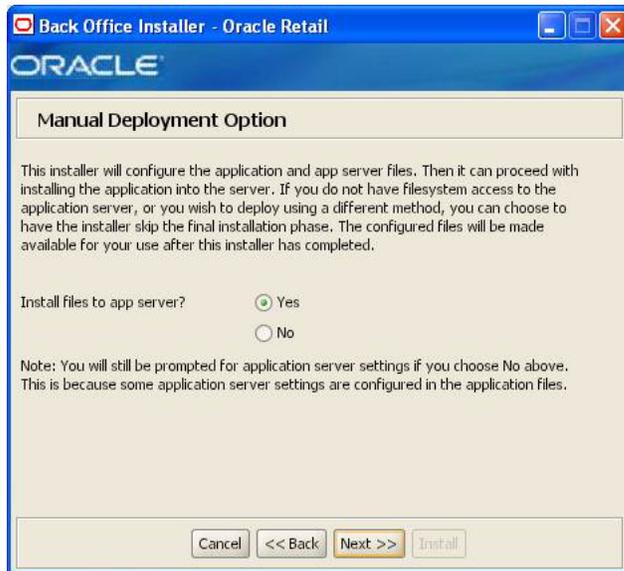
**Figure A-13 Application Server RMI Port**



This screen is only if **Yes** is selected for the Install the Parameters option. The field on this screen is described in the following table.

Field Title	RMI Port
Field Description	Port to be used for installing parameters. This port can be found in the ORACLE_HOME\opmn\conf\opmn.xml file.
Example	12402
Notes	

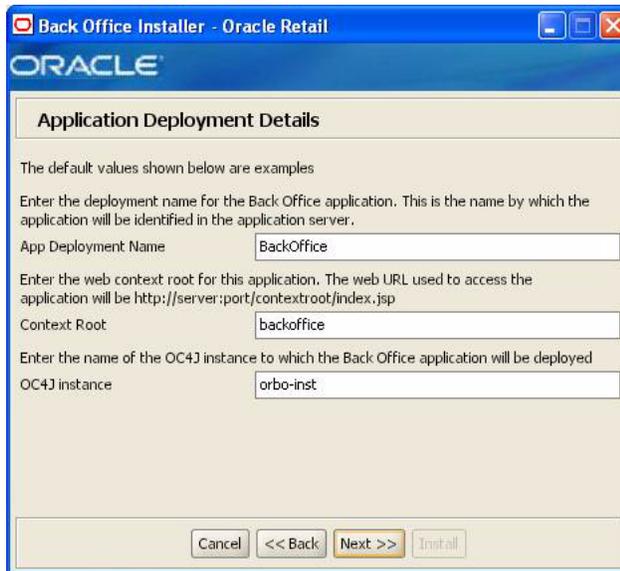
**Figure A-14 Manual Deployment Option**



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 <a href="#">"Manual Deployment Option"</a> in <a href="#">Chapter 2</a> for the manual steps you need to perform after the installer completes.</p>
Example	Yes
Notes	

**Figure A-15 Application Deployment Details**



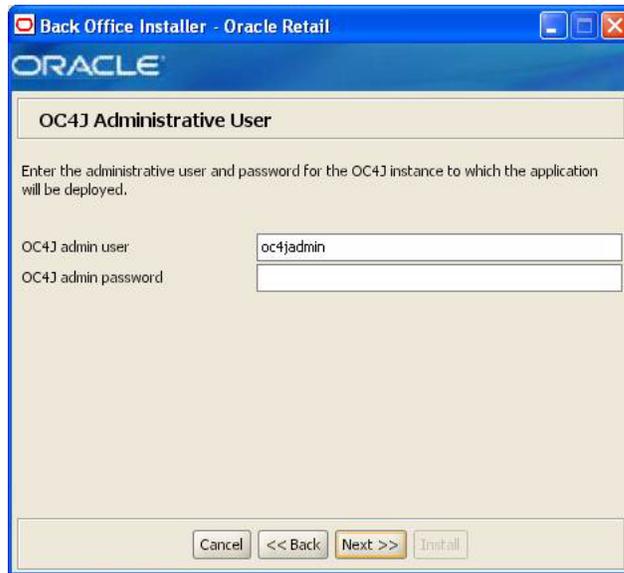
The fields on this screen are described in the following tables.

Field Title	App Deployment Name
Field Description	Name by which this Back Office application will be identified in the application server.
Example	BackOffice
Notes	

Field Title	Context Root
Field Description	Path under the HTTP URL that will be used to access the Back Office application. For example, a context root of 'backoffice' will result in the application being accessed at <code>http://host:port/backoffice/index.jsp</code> .
Example	backoffice
Notes	

Field Title	OC4J Instance
Field Description	Name of the OC4J instance that was created for this Back Office application.
Example	orbo-inst
Notes	

**Figure A-16 OC4J Administrative User**

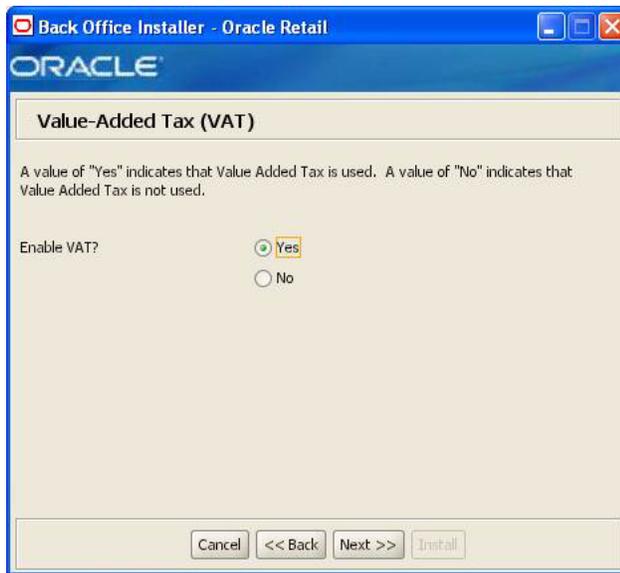


The fields on this screen are described in the following tables.

Field Title	OC4J admin user
Field Description	Username of the admin user for the OC4J instance to which the Back Office 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	

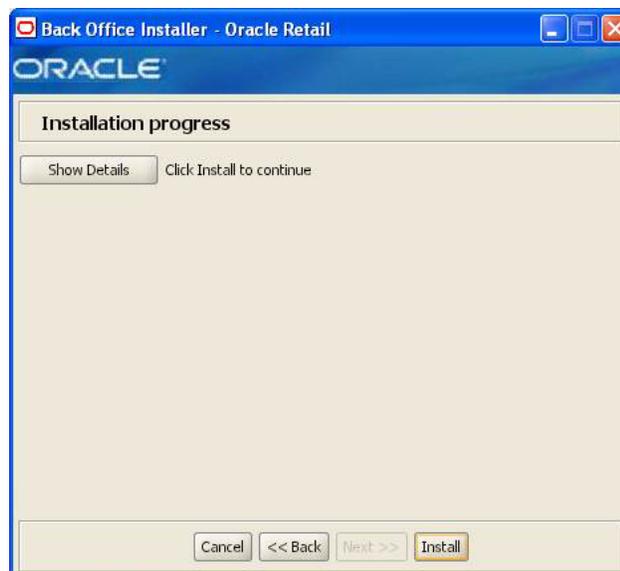
**Figure A-17 Value-Added Tax (VAT)**



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

Field Title	Enable VAT?
Field Description	Sets whether Value-Added Tax is used in Back Office. <ul style="list-style-type: none"><li>■ To enable Back Office to use VAT, choose Yes.</li><li>■ To not use VAT, choose No.</li></ul>
Example	No
Notes	For India L10N, this value has to be always true.

**Figure A-18 Installation Progress**



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---

## Appendix: Installer Silent Mode

In addition to the GUI and text interfaces of the Back Office installer, there is a silent mode that can be run. This mode is useful if you wish to run a new installation and use the settings you provided in a 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 Back Office

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

### Reinstalling Back Office on the Oracle Stack

To reinstall:

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

### Reinstalling Back Office on the IBM Stack

To reinstall:

1. Stop the WebSphere application server and profile.
2. Delete the profile.
3. Stop the queue manager, `bo.queue.manager`, and listeners.
4. Delete the queue manager.
5. Recreate the profile.
6. Start the WebSphere application server and profile.
7. Run the Back Office installer. For more information, see ["Run the Back Office Application Installer"](#) in [Chapter 3](#).



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---

## Appendix: URL Reference

Both the database schema and application installers for the Back Office 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/orbo-inst`

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.

For example, `deployer:oc4j:myhost:23791`

## JNDI Provider URL for an Application

Used for server-to-server calls between applications.

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

- `<host>`: hostname of the WebSphere server
- `<iioport>`: 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 Back Office.

### 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 occur only 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 D](#)), `input.oc4j.instance`, `input.admin.user`, and `input.admin.password` properties. If you need to make a correction, you can run the installer again with this file as input by running silent mode (see [Appendix B](#)).

## "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 Back Office"](#) in [Chapter 2](#).

## "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: XMLJMSServerConfig[file:/D:/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: Troubleshooting Problems on the Oracle Stack

This appendix contains information that may be useful if you encounter errors running Back Office for the first time after an install. These steps are performed by the installer. If you have problems, you may want to ensure the steps were successfully completed by the installer.

### Creating a New OC4J Instance for Back Office

You can skip this section if you are redeploying to an existing OC4J instance.

To create a new OC4J instance:

1. Increase memory for the new OC4J instance by modifying `%ORACLE_HOME%\opmn\conf\opmn.xml`. Locate the OC4J instance you just created, and add the text, shown in bold in the following example, to the `start-parameters` section.

```
<process-type id="<orbo-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/orbo-inst/config/java2.policy -Djava.awt.headless=true
-Dhttp.webdir.enabled=false"/>
    </category>
```

2. 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="<orbo-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/orbo-inst/config/java2.policy -Djava.awt.headless=true
-Dhttp.webdir.enabled=false"/>
      <data id="oc4j-options" value="-userThreads"/>
    </category>
```

3. Reload OPMN for this change to take effect.

```
%ORACLE_HOME%\opmn\bin\opmnctl reload
```

4. Increase the transaction timeout for this OC4J instance:
  - a. Log into the Enterprise Manager application.  
`http:\\<myhost>:<portnumber>\em`
  - b. Click on the OC4J instance that was just created.  
`<orbo-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.

## Creating the Back Office Database Schema

The scripts that create the Back Office 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 database:
 

```
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>;
```
2. Change to the `<INSTALL_DIR>\backoffice\configured-output\db` directory.
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.
 

```
Set JAVA_HOME=%ORACLE_HOME%\jdk; Set ANT_HOME=%ORACLE_HOME%\ant;
```
4. Add `%JAVA_HOME%\bin` and `%ANT_HOME%\bin` to the front of the `PATH` environment variable.
 

```
Set PATH=%JAVA_HOME%\bin;%ANT_HOME%\bin;%PATH%;
```
5. 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 vendors such as DB2 and MS-SqlServer.

- c. Provide your database settings in the following properties:
    - 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 `parameter.apphost` property to point to your Back Office installation.
  - f. To enable VAT functionality, uncomment the `tax.enableTaxInclusive` property in the tax properties section.
6. Run `seed_data` ant target in the `db.xml` to create the base database schema and load all the data required for Back Office to be completely operational. If you are integrating with the Merchandising Operations Management then do not run the `seed_data` ant target.
 

**Usage:** `ant -f db.xml seed_data`

---

**Note:** At this point, the India related data like MRP, Tax Category are not seeded. They will have default values like MRP as 0 and Tax Category as -1. For more details on the DDL changes for India L10N, refer the Data Model documentation.

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7. Run `integration_data` ant target in the `db.xml` to create the base database schema populate the minimum data required for Point of Service. If you are integrating with Merchandising Operations Management Products, then Back Office database schema needs to be built with the `integration_data` ant target.
 

**Usage:** `ant -f db.xml integration_data`
8. As part of ORBO installation, if the database schema were chosen to be populated, then seed data would have been loaded into Stores Database. To make `ddl` changes for IN L10N changes on top of the seeded data, run the `en_IN_setup_db` ant target in the `db.xml`.
 

**Usage:** `ant -f db.xml en_IN_setup_db`
9. The target `en_IN_setup_db` will run the `en_IN_create_schema`, `en_IN_create_view`, `en_IN_alter_schema`, and `en_IN_compile_package` targets and will make necessary changes for India L10N.
10. Run the ant target `load_reports` in the `build.xml` to load the reports required for Back Office.
 

**Usage:** `ant load_reports`
11. Run the ant target to install the parameters for Back Office.
  - Change to the `<INSTALL_DIR>\backoffice\configured-output\db` directory.
  - In the 'Generic DB Parameter Install - Used By Installer' section of the `db.properties` file, update the following properties:
    - Change `ora.home.dir` to your installation directory.  
`ora.home.dir=C:\Oracle\10.1.3\OracleAS_1`
    - Change `ORA_HOST_NAME` to your host name. Change 12401 to your port number.
      - a. `parameters.apphost=ormi:\\ORA_HOST_NAME:12401\BackOffice`

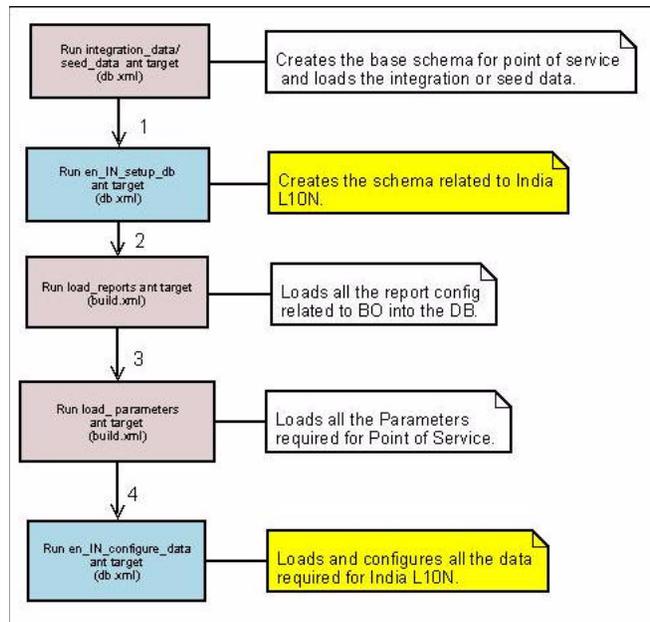
b. Execute the command `ant load_parameters`.

12. Run the `en_IN_configure_data` ant target in the `db.xml` to configure the INR currency and Geo Code.

**Usage:** `ant -f db.xml en_IN_configure_data`

Below is the sequence of steps which needs to be executed to build the database schema for ORPOS.

**Figure F-1 Sequence of Steps to Build Database Schema**



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## Appendix: Installation Data Load

By default when running the installer, all of your test data is loaded into the database. Depending upon your configuration, the system may attempt to send the test data to Back Office.

If your system sends the transactions, it may need to run for 15 minutes. The system will complete loading the test data before sending any new transactions to Back Office.

If you prefer to load only seed data:

1. Stop the Back Office application.
2. Change to the `<INSTALL_DIR>/backoffice/db` directory.
3. Run the ant `seed_data` target in the `db.xml` file.
4. Run the ant `en_IN_setup_db` target in the `db.xml` file.
5. Run the ant `load_reports` target in the `build.xml` file.
6. Restart the Back Office application.
7. Run the ant `load_parameters` target in the `build.xml` file.
8. Run the ant `en_IN_configure_data` target in `db.xml` file.

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**Note:** The corporate and store databases can be updated with seed data independently of each other. However, this should be done before starting the store server and bringing any Point-of-Service client online.

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