Oracle® Retail Central Office

Installation Guide

Release 12.0.2

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ORACLE®

Oracle Retail Central Office Installation Guide, Release 12.0.2

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Value-Added Reseller (VAR) Language

(i) the software component known as **ACUMATE** developed and licensed by Lucent Technologies Inc. of Murray Hill, New Jersey, to Oracle and imbedded in the Oracle Retail Predictive Application Server - Enterprise Engine, Oracle Retail Category Management, Oracle Retail Item Planning, Oracle Retail Merchandise Financial Planning, Oracle Retail Advanced Inventory Planning and Oracle Retail Demand Forecasting applications.

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(xi) the software component known as **DataBeacon™** developed and licensed by Cognos Incorporated of Ottawa, Ontario, Canada, to Oracle and imbedded in the Oracle Retail Value Chain Collaboration application.

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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 Central Office documentation set, Oracle Retail Strategic Store Solutions documentation set, or Oracle Application Server 10g documentation set:

- *Oracle Retail Central Office Release Notes*
- *Oracle Retail Central Office Operations Guide*
- *Oracle Retail Central Office User Guide*
- *Oracle Retail Strategic Store Solutions Configuration Guide*
- *Oracle Application Server 10g Administrator's 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.
italic	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 Oracle Retail Central Office 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 Central Office may work in other configurations, these are the configurations that are supported for this release.

Check Oracle Retail Merchandise Operations Management Version

The integration with Oracle Retail Merchandise Operations Management requires version 12.0.7 of the following products:

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

Check Database Server Requirements

Table 1–1 lists the components required for a database server running Central Office and the versions tested for this release.

Table 1–1 Database Server Requirements

Component	Oracle Stack	IBM Stack
Hardware	x86-64 bit	IBM pSeries
Operating System	Oracle Enterprise Linux R4	IBM IRES v2.1.4
Database	64-bit Oracle RDBMS 10g R2 (10.2.0.2)	64-bit IBM DB2v9.1

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:

> **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 1–2 lists the components required for an application server capable of running Central Office and the versions tested for this release.

Table 1–2 Application Server Requirements

Component	Oracle Stack	IBM Stack
Hardware	x86-64 bit	IBM pSeries
Operating System	Oracle Enterprise Linux R4	IBM AIX v5.3
J2EE Application Server	32-bit Oracle Application Server 10g 10.1.3 **Note:** This release of Central Office 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 Central Office does not support a clustered environment.
J2EE Application Server JVM	Sun 1.5.x	IBM JDK 1.5.x
Messaging Provider	(included in Oracle Application Server)	IBM MQ Series 6.0.2

Minimum Hardware Requirements

Specific hardware requirements for the machines running Oracle Retail Central Office depend on several variables including the number of users, number of stores/lanes, and other applications running on the same machine. A general guideline is shown in Table 1–3. These minimum requirements assume the database server and application server are not on the same physical server. These minimums may not deliver adequate performance based on the actual implementation.

Table 1–3 Minimum Hardware Requirements

Machine	CPU	Memory	Hard Drive
Central Office Server	2 CPU server with minimum 1 GHZ per CPU	4 GB per server	Two 160 GB + drives using RAID 0

Please note the following about the minimum hardware requirements:

- The CPU and memory requirements can vary based on the operating system and middleware selected.
- 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 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 Linux

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

During installation, the Central Office database schema will be created and the Central 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.

> **Note:** J2EE_HOME refers to the directory `ORACLE_HOME/j2ee/<instancename>`

Create a New OC4J Instance for Central Office

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

The Central 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.
2. Choose a name for the new OC4J instance. In the remainder of this installation guide, *<orco-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 <orco-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.

Port number definitions for the home instance:

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

Port number definitions for the Central 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=<orco-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 Central Office Distribution

To extract the Central Office files:

1. Extract the `ORCO-12.02.zip` file from the Central Office distribution.
2. Log into the UNIX server as the user who owns the OracleAS 10g installation. Create a new staging directory for the Central Office application distribution (`ORCO-12.02.zip`), for example, `/tmp/j2ee/orco-inst/orco-staging`.

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

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

3. Copy or upload `ORCO-12.02.zip` to *`staging_directory`* and extract its contents. The following files and directories should be created under *`staging_directory`*`/ORCO-12.02`:

   ```
   ant/
   ant-ext/
   antinstall/
   centraloffice/
   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*/ORCO-12.02 is referred to as <*INSTALL_DIR*>.

Obtain the Third-Party Library File Required by Central Office

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

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

> **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, for example, /opt/Oracle/10.1.3/OracleAS_1.
   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 `install.sh` to executable.

   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: `orco-install-app.<timestamp>.log`

5. The installer leaves behind the `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.

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>*`/centraloffice/configured_output/db` directory.

Install Parameters

The application parameters must be installed before the Central Office 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".

Additional Configuration Steps Required for Parameter Export

When a store is added to the enterprise store hierarchy or the default store number is not used, the `J2EE_HOME/config/jms.xml` file must be updated with the correct queue definitions. The queues used to export parameters to each store must reflect the current store hierarchy for the enterprise.

The installation is preconfigured to support the default store number 04241. The following example shows the queue definition for the default store.

```
default:
   <queue name="store_04241" location="jms/store_04241">
    <description/>
</queue>
```

For example, if you have three stores numbered 10000, 10001, and 10002, the queue definitions for these stores should look like the following definitions.

```
<queue name="store_10000" location="jms/store_10000">
    <description/>
</queue>
   <queue name="store_10001" location="jms/store_10001">
    <description/>
</queue>
   <queue name="store_10002" location="jms/store_10002">
    <description/>
</queue>
```

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*>/centraloffice/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 ./centraloffice/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*>/centraloffice/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*>/centraloffice/lib/oracle/security-360-ora.jar file to the $ORACLE_HOME/jdk/jre/lib/ext/ directory.

5. Create the required JAAS configuration for Central Office:

   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 Central Office application.

      ```
      java -jar ../home/jazn.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 successfully delete this file.

7. Restart the OC4J instance where Central Office will be deployed.

   ```
   $ORACLE_HOME/opmn/bin/opmnctl restartproc process-type=orco-inst
   ```

8. Deploy the Central Office ear file using the Enterprise Manager web interface. The configured ear file is located at <*INSTALL_DIR*>/centraloffice/configured-output/centraloffice.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 Central 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

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

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

These instructions assume you have already expanded the centralofficeDBInstall.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 Central Office application in a web browser. The address is provided at the end of the installer output and in the log file.

   http://*<your host name>*:*<your port number>*/centraloffice

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>*/centraloffice/db folder.
5. To import the initial set of Oracle Retail Central Office application parameters, click the **File** link in the Import Application Parameters row. Follow the instructions to import centraloffice.xml from the *<INSTALL_DIR>*/centraloffice/db folder.

Importing Parameters By Using an Ant Target

To import parameters using an ant target:

1. Change to the `<INSTALL_DIR>/centraloffice/configured-output/db` directory.
2. Edit the `db.properties` file. Update the following properties in the "Properties for Parameter Loading" section.
   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/CentralOffice
      ```

3. Set the JAVA_HOME, ANT_HOME, and PATH environment variables. See "Creating the Central Office Database Schema" in Appendix G 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 Central Office Operations Guide. If purge procedures are needed, run the available Ant target to load the data:

```
ant load_purge_procedures
```

Using the Central Office Application

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

After the application installer completes and you have run the initial parameter load, you should have a working Central Office application installation. To launch the application, open a web browser and go to `http://<servername>:<portnumber>/<context root>`

For example, http://myhost:9080/centraloffice

3

Installation of the IBM Stack on AIX

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 1.

During installation, the Central Office database schema will be created and the Central Office 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 Central Office 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 Central Office Distribution

To extract the Central Office files:

1. Extract the `ORCO-12.02.zip` file from the Central Office distribution.
2. Log into the UNIX server as the user who owns the OracleAS 10g installation. Create a new staging directory for the Central Office application distribution (`ORCO-12.02.zip`), for example, `/tmp/j2ee/orco-inst/orco-staging`.

   > **Note:** There should be a minimum of 60 MB of disk space available for the application installation files.
   >
   > The staging directory (*<staging_directory>*) can exist anywhere on the system. It does not need to be under `tmp`.

3. Copy or upload `ORCO-12.02.zip` to *<staging_directory>* and extract its contents. The following files and directories should be created under *<staging_directory>*`/ORCO-12.02`:

```
ant/
ant-ext/
antinstall/
centraloffice/
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>*/ORCO-12.02 is referred to as *<INSTALL_DIR>*.

Obtain Third-Party Library Files Required by Central Office

The Central Office application uses the Pager Tag Library from JSPTags and the DB2 drivers from IBM. Before running the Central Office 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_db2driver_for_jdbc_sqlj.zip file from the IBM website: http://www.ibm.com/software/data/db2/java/. Download the latest version of the IBM Data Server Driver for JDBC and SQLJ.

   Note: Oracle Retail Central Office supports IBM DB2v9.1. If you download a later version and encounter any problems, contact IBM support.

4. Extract the db2jcc.jar and db2jcc_license_cu.jar files from the db2_db2driver_for_jdbc_sqlj subdirectory in the db2_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 Series"
- "Manual Deployment Option"

Run the Central Office Application Installer

The installer will configure and deploy the Central Office application.

> **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 JAVA_HOME environment variable. JAVA_HOME should point to an installation of IBM Java2 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 IBM WebSphere installation.
   b. Change the mode of `install.sh` to executable.
   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: `orco-install-app.<timestamp>.log`
5. The installer leaves behind the `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
   ```

Centralized Transaction Retrieval Jar Files

If you chose No on the Manual Deployment Option screen, the installer deployed the Central Office application to the WebSphere Application Server as part of the installation process. During the deployment, the following files were created:

- *<WAS_INSTALL_DIR>*/profiles/*<AppSrvNN>*/installedApps/*<hostnameNodeNNCell>*/CentralOffice.ear/transaction-retrieval-ejb.jar
- *<WAS_INSTALL_DIR>*/profiles/*<AppSrvNN>*/installedApps/*<hostnameNodeNNCell>*/CentralOffice.ear/customer-retrieval-ejb.jar

If Oracle Retail Point-of-Service will be using Centralized Transaction Retrieval, these jar files will be required for the installation of the Point-of-Service server. For information on the Point-of-Service installation process, see the Oracle Retail Point-of-Service Installation Guide.

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.

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>*/centraloffice/configured_output/db directory.

Install Parameters

The application parameters must be installed before the Central Office 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 Series

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

Use the following commands to configure MQ Series. `MQ_Install_Dir` is the directory where MQ Series 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/runmqlsr -m <input.jms.server.queue> -p
    <input.jms.server.port> -t tcp &
<MQ_Install_Dir>/bin/runmqsc     <input.jms.server.queue> <
    <INSTALL_DIR>/centraloffice/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>
```

Additional Configuration Steps Required for Parameter Export

When a store is added to the enterprise store hierarchy or the default store number is not used, the queue for each store must be defined. The queues used to export parameters to each store must reflect the current store hierarchy for the enterprise. To create the queues, log in to the WebSphere Administrative console.

The installation is preconfigured to support the default store number 04241. The queue for the default store is `store_04241`.

For example, if you have three stores numbered 10000, 10001, and 10002, the queues for these stores could be named `store_10000`, `store_10001`, and `store_10002`.

Creating the Store Queues using an Input Data File

To create multiple queues using an input data file:

1. Create a text file (for example, `queues.txt`) with commands to create each queue. An example is shown below.

   ```
   DEFINE QLOCAL (store_10000) USAGE (NORMAL) DEFPSIST(YES)
   DEFINE QLOCAL (store_10001) USAGE (NORMAL) DEFPSIST(YES)
   DEFINE QLOCAL (store_10002) USAGE (NORMAL) DEFPSIST(YES)
   ```

2. Execute runmqsc with the text file as input:

   ```
   mqm@sunrise:/opt/mqm/bin > runmqsc co.queue.manager < queues.txt
   ```

Manual Deployment Option

The Central Office 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 Central Office ear file.

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

  As part of the deployment, jar files needed for Centralized Transaction Retrieval were created. For information on these files, see "Centralized Transaction Retrieval Jar Files".

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

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

These instructions assume you have already expanded the centralofficeDBInstall.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 Central Office application in a web browser. The address is provided at the end of the installer output and in the log file.

   http://*<your host name>*:*<your port number>*/centraloffice

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>*/centraloffice/db folder.

5. To import the initial set of Oracle Retail Central Office application parameters, click the **File** link in the Import Application Parameters row. Follow the instructions to import `centraloffice.xml` from the `<INSTALL_DIR>/centraloffice/db` folder.

Importing Parameters By Using an Ant Target

To import parameters using an ant target:

1. Change to the `<INSTALL_DIR>/centraloffice/configured_output/db` directory.
2. 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 Central Office Operations Guide. If purge procedures are needed, run the available Ant target to load the data:

```
ant load_purge_procedures
```

Using the Central Office Application

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

After the application installer completes and you have run the initial parameter load, you should have a working Central Office application installation. To launch the application, open a web browser and go to
`http://<servername>:<portnumber>/context root`

For example, http://myhost:9080/centraloffice

4

Configuration for Firefox Browser

When Central 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.

A

Appendix: Central Office Application Installer Screens for the Oracle Stack

You need the following details about your environment for the installer to successfully deploy the Central Office 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

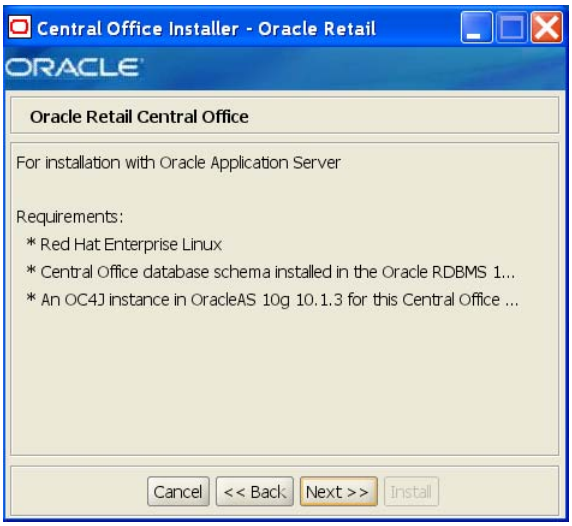
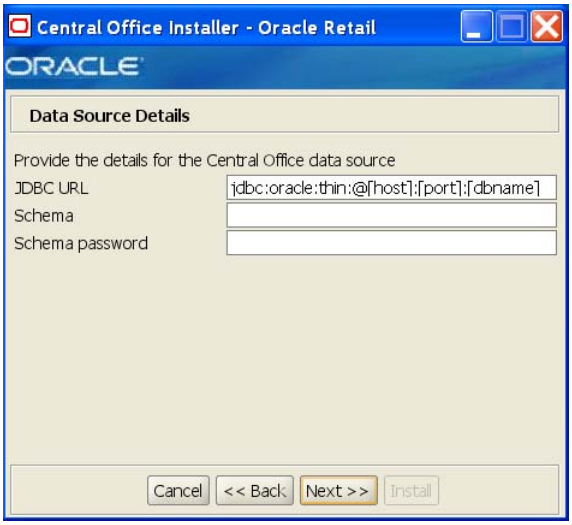


Figure A–3 Data Source Details



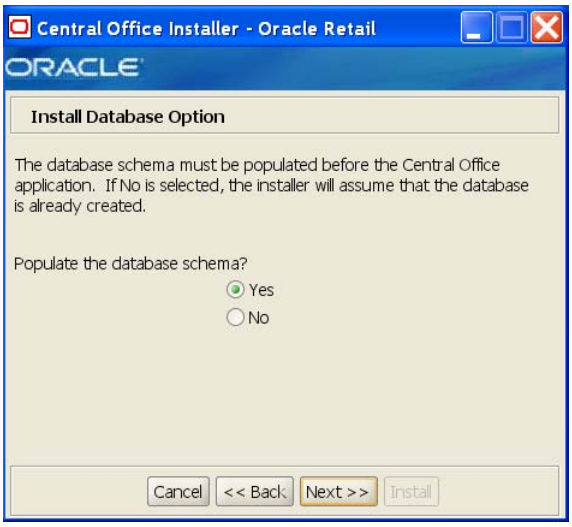
The fields on this screen are described in the following tables.

Field Title	JDBC URL
Field Description	URL used by the Central Office application to access the database schema. See Appendix E for the expected syntax.
Example	`jdbc:oracle:thin:@myhost:1525:mydatabase`
Notes	

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

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

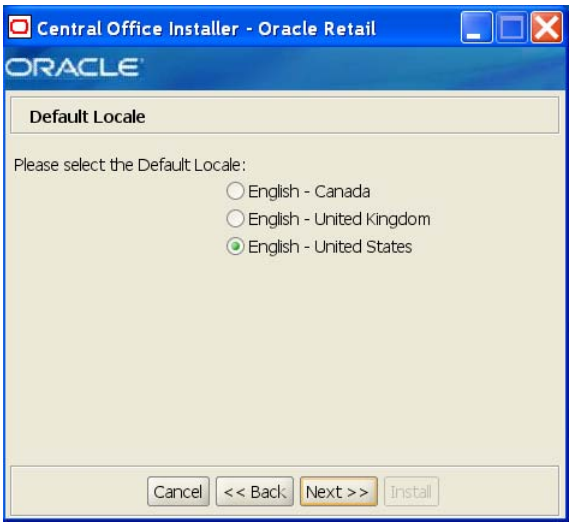
Figure A–4 Install Database Option



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

Field Title	Populate database schema?
Field Description	The database schema must be populated before Oracle Application Server can be configured for Central Office. 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. If you choose No, see "Populate the Database Schema" in Chapter 2 for the manual steps you need to perform after the installer completes.
Example	Yes
Notes	

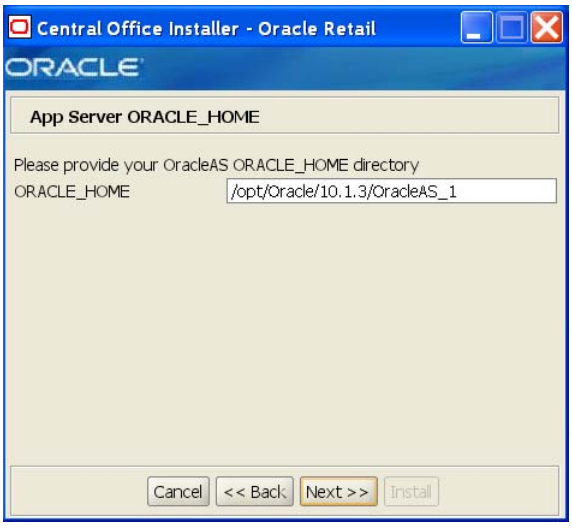
Figure A–5 Default Locale



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

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

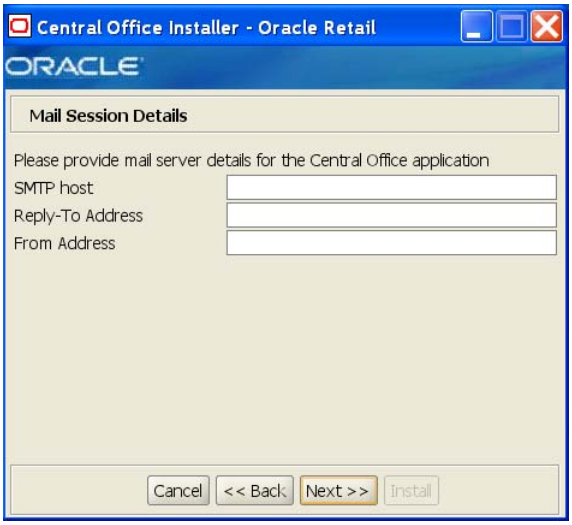
Figure A–6 App Server ORACLE_HOME



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	`/opt/Oracle/10.1.3/OracleAS_1`
Notes	

Figure A–7 Mail Session Details



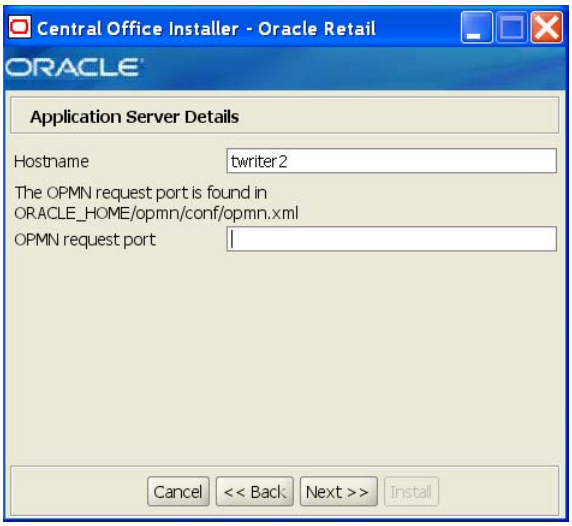
The fields on this screen are described in the following tables.

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 Central Office.
Example	`donotreply@mycompany.com`
Notes	

Field Title	From Address
Field Description	From address in e-mails generated by Central Office.
Example	`donotreply@mycompany.com`
Notes	

Figure A–8 Application Server Details

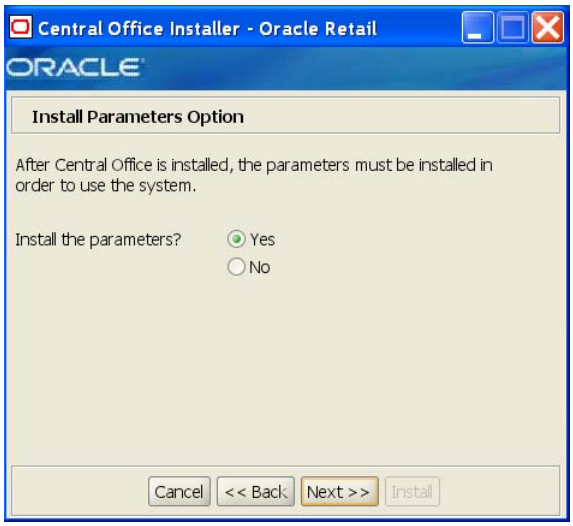


The fields on this screen are described in the following tables.

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	

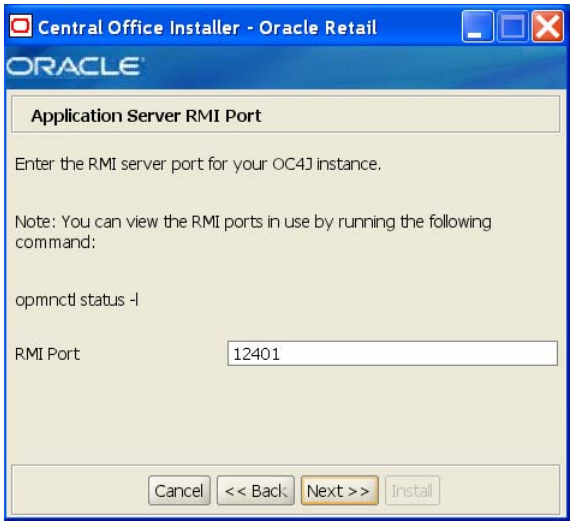
Figure A–9 Install Parameters Option



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 Central Office can be used. This screen gives you the option to set up the parameters manually. If you choose No, see "Import Initial Parameters" in Chapter 2 for the manual steps you need to perform after the installer completes.
Example	Yes
Notes	

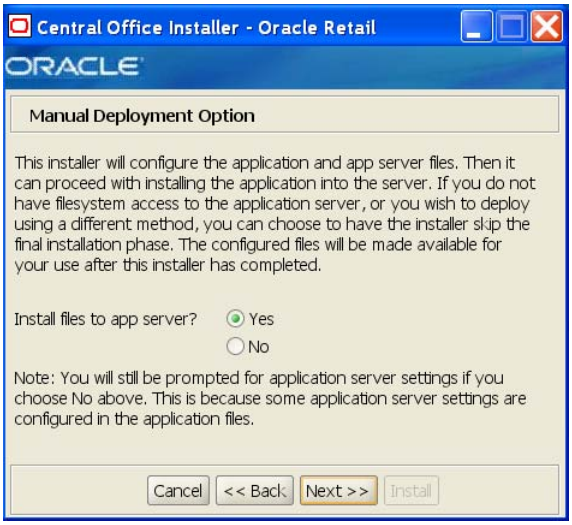
Figure A–10 Application Server RMI Port



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	12401
Notes	

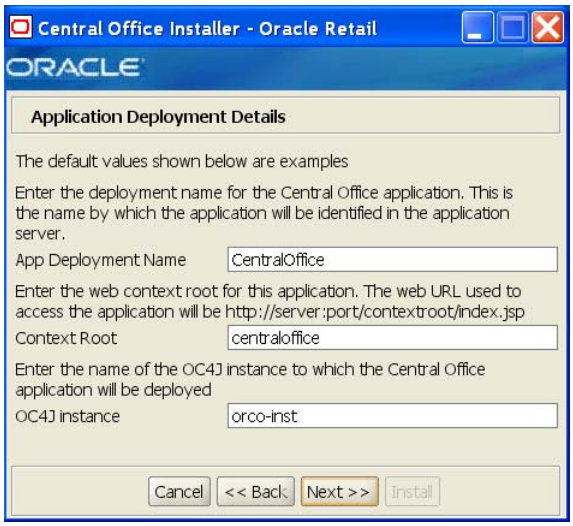
Figure A–11 Manual Deployment Option



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

Field Title	Install files to app server?
Field Description	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. If you choose No, see "Manual Deployment Option" in Chapter 2 for the manual steps you need to perform after the installer completes.
Example	Yes
Notes	

Figure A–12 Application Deployment Details



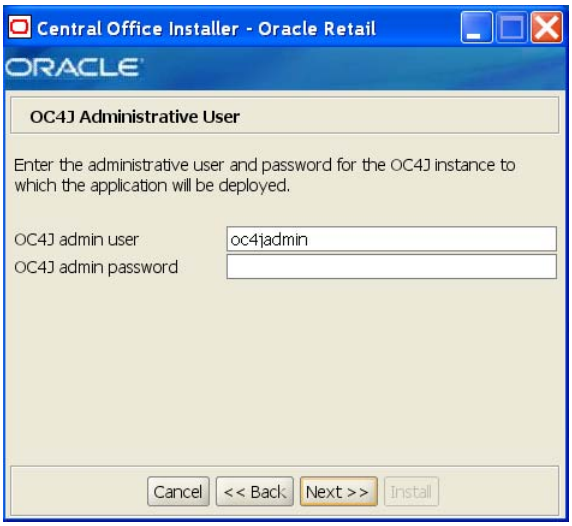
The fields on this screen are described in the following tables.

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

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

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

Figure A–13 OC4J Administrative User

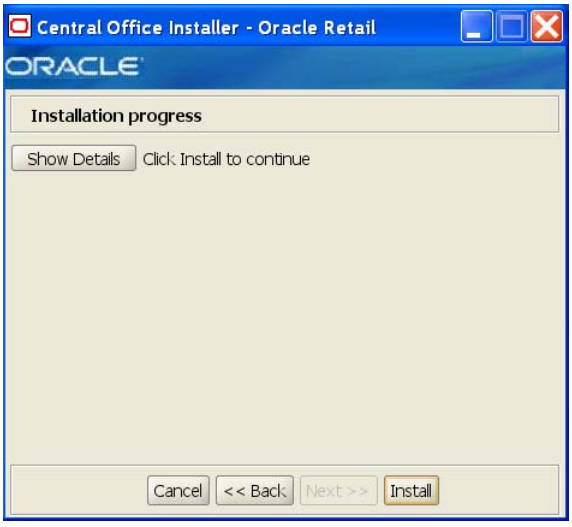


The fields on this screen are described in the following tables.

Field Title	OC4J admin user
Field Description	User name of the admin user for the OC4J instance to which the Central 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–14 Installation Progress



B

Appendix: Central Office Application Installer Screens for the IBM Stack

You need the following details about your environment for the installer to successfully deploy the Central Office 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

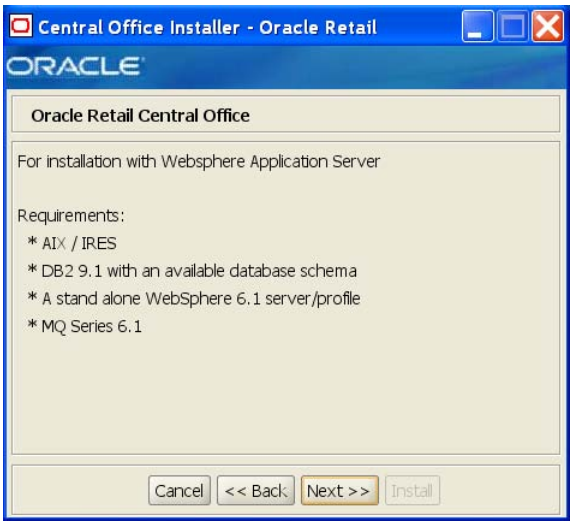
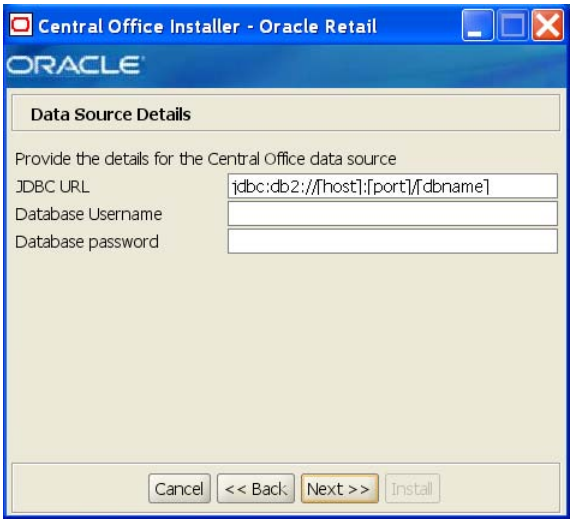


Figure B–3 Data Source Details



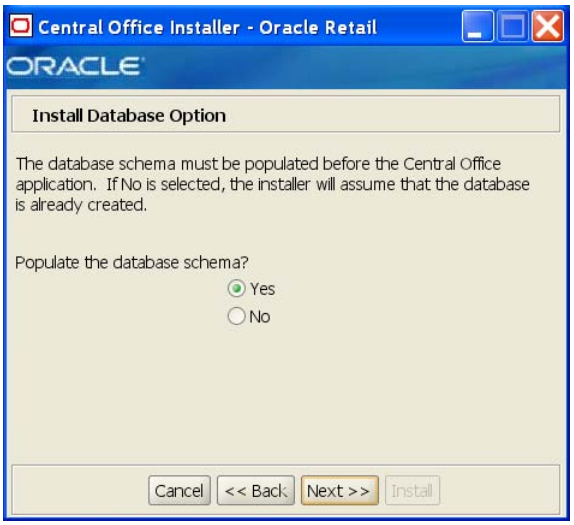
The fields on this screen are described in the following tables.

Field Title	JDBC URL
Field Description	URL used by the Central Office application to access the database schema. See Appendix E for the expected syntax.
Example	`jdbc:db2://myhost:50001/mydb`
Notes	

Field Title	Database Username
Field Description	Database schema user used by the Central Office application.
Example	DBUSER
Notes	

Field Title	Database password
Field Description	Password for the Central Office schema user.
Notes	

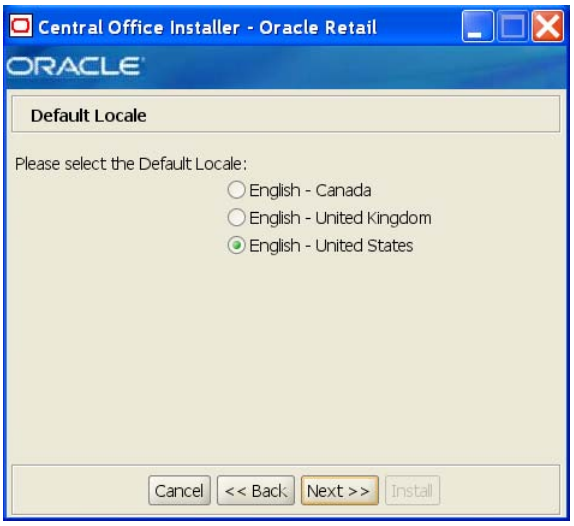
Figure B–4 Install Database Option



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

Field Title	Populate database schema?
Field Description	The database schema must be populated before WebSphere can be configured for Central Office. 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. If you choose No, see "Populate the Database Schema" in Chapter 3 for the manual steps you need to perform after the installer completes.
Example	Yes
Notes	

Figure B–5 Default Locale



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

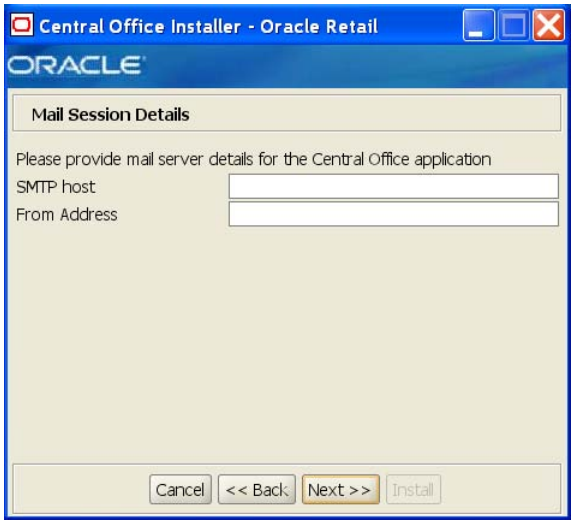
Field Title	Please select the Default Locale
Field Description	Limited locale support in Central Office enables the date, time, currency, and calendar to be displayed in the format for the selected default locale.
Example	English - United States
Notes	

Figure B–6 App Server WAS_HOME

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–7 Mail Session Details

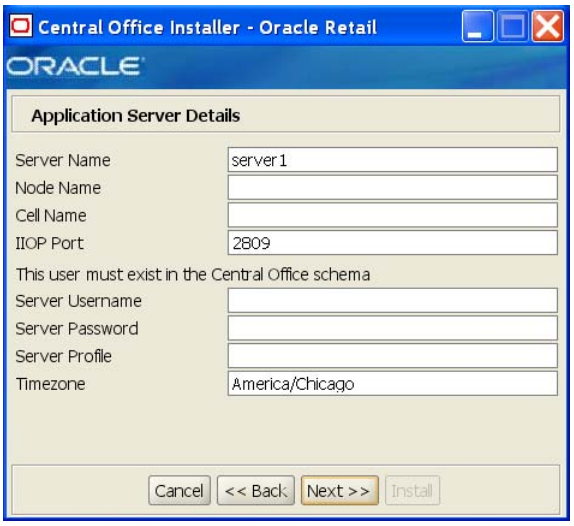


The fields on this screen are described in the following tables.

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 Central Office.
Example	`donotreply@mycompany.com`
Notes	

Figure B–8 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 *<WAS_HOME>*`/profiles/`*`<profile name>`*`/properties/portdef.props` file.
Example	2809
Notes	

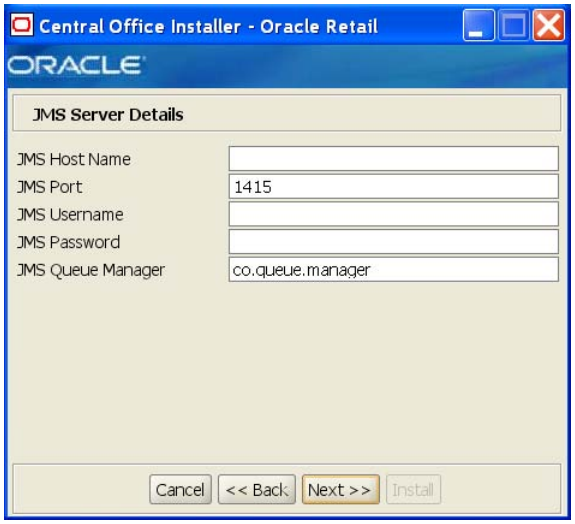
Field Title	Server Username
Field Description	User name for the WebSphere server. This user must exist in the Central Office schema.
Example	myuser
Notes	

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–9 JMS Server Details



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 Point-of-Service if the actual hostname is not used.
Example	myhost
Notes	

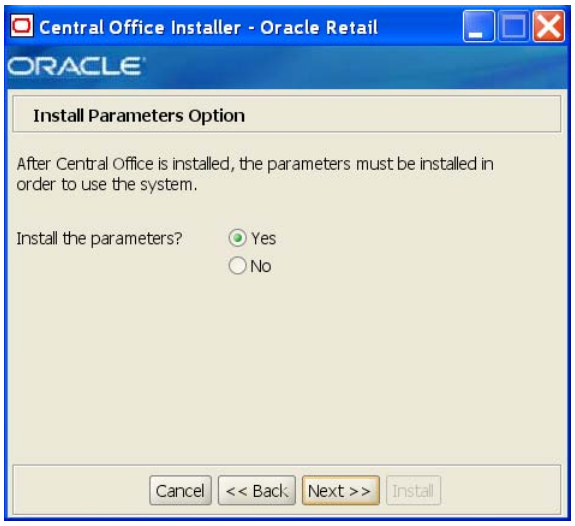
Field Title	JMS Server Port
Field Description	Port number used by the JMS server.
Example	1414
Notes	

Field Title	JMS Username
Field Description	User name for the JMS server. This user must exist in the Central Office schema.
Example	myuser
Notes	

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

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

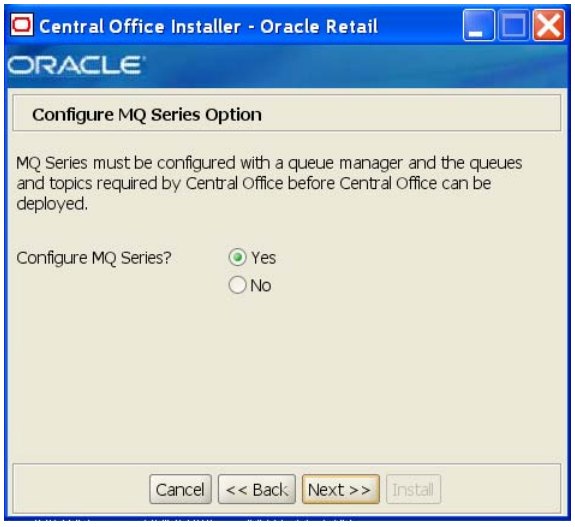
Figure B–10 Install Parameters Option



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 Central 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 3 for the manual steps you need to perform after the installer completes.
Example	Yes
Notes	

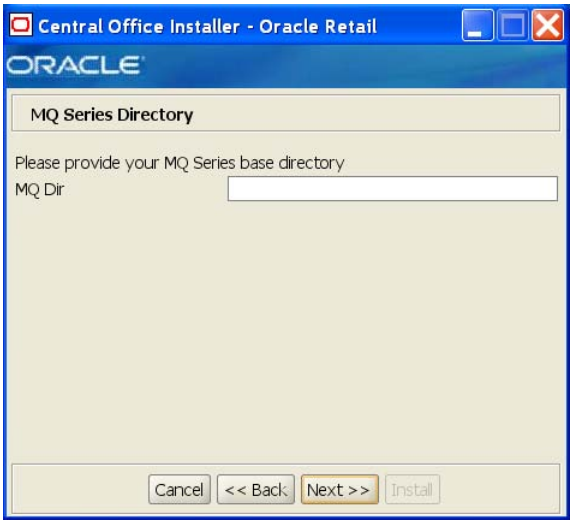
Figure B–11 Configure MQ Series Option



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

Field Title	Configure MQ Series?
Field Description	MQ Series must be configured with a queue manager and the queues and topics required by Central Office before Central Office can be deployed. This screen gives you the option to configure MQ Series manually. If you choose No, see "Configure MQ Series" in Chapter 3 for the manual steps you need to perform after the installer completes.
Example	Yes
Notes	

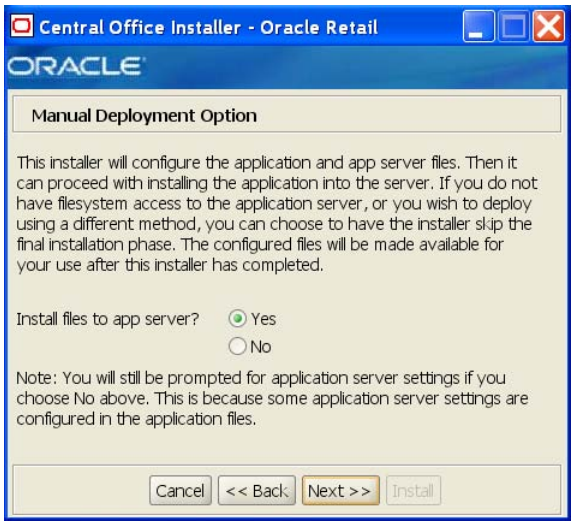
Figure B–12 MQ Series Directory



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

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

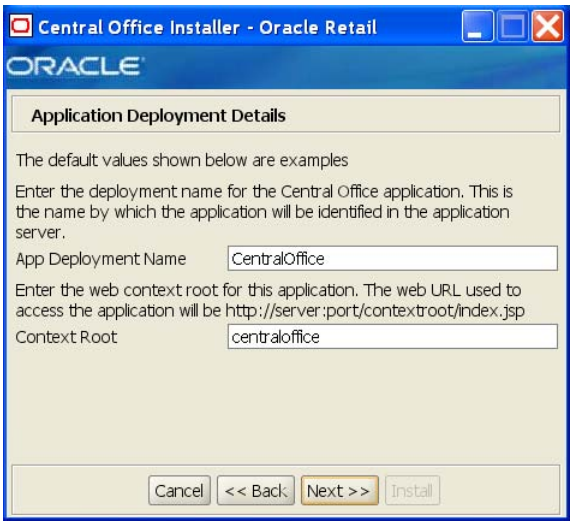
Figure B–13 Manual Deployment Option



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

Field Title	Install files to app server?
Field Description	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. If you choose No, see "Manual Deployment Option" in Chapter 3 for the manual steps you need to perform after the installer completes.
Example	Yes
Notes	

Figure B–14 Application Deployment Details

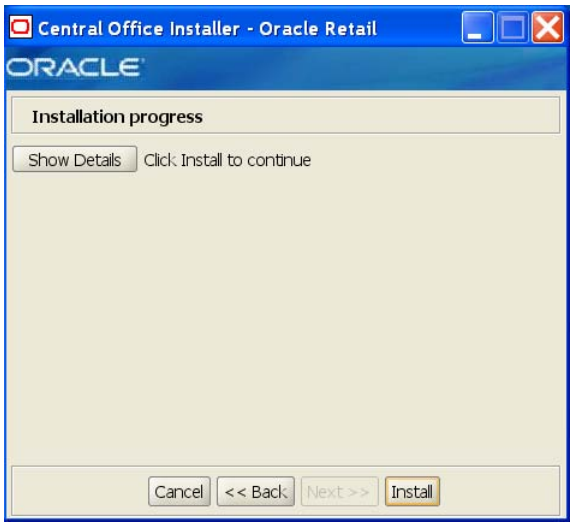


The fields on this screen are described in the following tables.

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

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

Figure B–15 Installation Progress



C

Appendix: Installer Silent Mode

In addition to the GUI and text interfaces of the Central 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]
   ```

D

Appendix: Reinstalling Central Office

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

Reinstalling Central Office on the Oracle Stack

To reinstall:

1. Stop the OC4J Central Office instance.
2. Delete the instance.
3. Recreate the OC4J Central Office instance.
4. Start the instance.
5. Run the Central Office installer. For more information, see "Run the Central Office Application Installer" in Chapter 2.

Reinstalling Central Office on the IBM Stack

To reinstall:

1. Stop the WebSphere application server and profile.
2. Delete the profile.
3. Stop the queue manager, `co.queue.manager`, and listeners.
4. Delete the queue manager.
5. Recreate the profile.
6. Start the WebSphere application server and profile.
7. Run the Central Office installer. For more information, see "Run the Central Office Application Installer" in Chapter 3.

E

Appendix: URL Reference

Both the database schema and application installers for the Central 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/orco-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`

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>:<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`

F

Appendix: Common Installation Errors

This appendix describes some common errors encountered during installation of Central 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 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 Central 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.

G

Appendix: Troubleshooting Problems on the Oracle Stack

This appendix contains information that may be useful if you encounter errors running Central 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 Central 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. Add the text, shown in bold in the following example, to the start-parameters section.

```
<process-type id="<orco-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/orco-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="<orco-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/orco-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 the OC4J instance that was just created.

      <orco-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 Central Office Database Schema

The scripts that create the Central 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.

To create the database schema:

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>*`/centraloffice/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.

```
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. Expand the `centralofficeDBInstall.jar` file.

```
jar -xvf centralofficeDBInstall.jar
```

6. 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 Central Office installation.

f. In the `parameters.classpath` property, replace the semicolons used as separators with colons. This is needed to run with UNIX systems.

7. Uncomment the following properties in `jndi.properties`.

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

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

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

For example, `ant load_sql`

H

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 Central 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 Central Office.

If you prefer to load only seed data:

1. Stop the Central Office application.
2. Change to the `<INSTALL_DIR>/centraloffice/db` directory.
3. Run the ant seed_data target in the `build.xml` file.
4. Restart the Central Office application.
5. Run the ant load_parameters target in the `build.xml` file.

> **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.