

Oracle® Retail Back Office

Installation Guide

Release 12.0.11

April 2010

Copyright © 2010, Oracle and/or its affiliates. All rights reserved.

Primary Author: Bernadette Goodman

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this software or related documentation is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, the following notice is applicable:

U.S. GOVERNMENT RIGHTS Programs, software, databases, and related documentation and technical data delivered to U.S. Government customers are "commercial computer software" or "commercial technical data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, duplication, disclosure, modification, and adaptation shall be subject to the restrictions and license terms set forth in the applicable Government contract, and, to the extent applicable by the terms of the Government contract, the additional rights set forth in FAR 52.227-19, Commercial Computer Software License (December 2007). Oracle USA, Inc., 500 Oracle Parkway, Redwood City, CA 94065.

This software is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications which may create a risk of personal injury. If you use this software in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure the safe use of this software. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software in dangerous applications.

Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

This software and documentation may provide access to or information on content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.

Value-Added Reseller (VAR) Language

Oracle Retail VAR Applications

The following restrictions and provisions only apply to the programs referred to in this section and licensed to you. You acknowledge that the programs may contain third party software (VAR applications) licensed to Oracle. Depending upon your product and its version number, the VAR applications may include:

- (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, Oracle Retail Demand Forecasting, Oracle Retail Regular Price Optimization, Oracle Retail Size Profile Optimization, Oracle Retail Replenishment Optimization applications.
- (ii) the **MicroStrategy** Components developed and licensed by MicroStrategy Services Corporation (MicroStrategy) of McLean, Virginia to Oracle and imbedded in the MicroStrategy for Oracle Retail Data Warehouse and MicroStrategy for Oracle Retail Planning & Optimization applications.
- (iii) the **SeeBeyond** component developed and licensed by Sun Microsystems, Inc. (Sun) of Santa Clara, California, to Oracle and imbedded in the Oracle Retail Integration Bus application.
- (iv) the **Wavelink** component developed and licensed by Wavelink Corporation (Wavelink) of Kirkland, Washington, to Oracle and imbedded in Oracle Retail Mobile Store Inventory Management.
- (v) the software component known as **Crystal Enterprise Professional and/or Crystal Reports Professional** licensed by SAP and imbedded in Oracle Retail Store Inventory Management.
- (vi) the software component known as **Access Via™** licensed by Access Via of Seattle, Washington, and imbedded in Oracle Retail Signs and Oracle Retail Labels and Tags.
- (vii) the software component known as **Adobe Flex™** licensed by Adobe Systems Incorporated of San Jose, California, and imbedded in Oracle Retail Promotion Planning & Optimization application.
- (viii) the software component known as **Style Report™** developed and licensed by InetSoft Technology Corp. of Piscataway, New Jersey, to Oracle and imbedded in the Oracle Retail Value Chain Collaboration application.
- (ix) 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.

You acknowledge and confirm that Oracle grants you use of only the object code of the VAR Applications. Oracle will not deliver source code to the VAR Applications to you. Notwithstanding any other term or condition of the agreement and this ordering document, you shall not cause or permit alteration of any VAR Applications. For purposes of this section, "alteration" refers to all alterations, translations, upgrades, enhancements, customizations or modifications of all or any portion of the VAR Applications including all reconfigurations, reassembly or reverse assembly, re-engineering or reverse engineering and recompilations or reverse compilations of the VAR Applications or any derivatives of the VAR Applications. You acknowledge that it shall be a breach of the agreement to utilize the relationship, and/or confidential information of the VAR Applications for purposes of competitive discovery.

The VAR Applications contain trade secrets of Oracle and Oracle's licensors and Customer shall not attempt, cause, or permit the alteration, decompilation, reverse engineering, disassembly or other reduction of the VAR Applications to a human perceivable form. Oracle reserves the right to replace, with functional equivalent software, any of the VAR Applications in future releases of the applicable program.

Contents

| | |
|--|------|
| Send Us Your Comments | xi |
| Preface | xiii |
| Audience..... | xiii |
| Related Documents | xiii |
| Customer Support..... | xiii |
| Review Patch Documentation | xiv |
| Oracle Retail Documentation on the Oracle Technology Network | xiv |
| Conventions | xiv |
| 1 Pre-installation Tasks | |
| Determine the Back Office Distribution | 1-1 |
| Check Oracle Retail Merchandise Operations Management Version | 1-1 |
| Check Database Requirements | 1-2 |
| Required Settings for Database Installation..... | 1-2 |
| Check Store Server Requirements | 1-2 |
| Hardware Requirements..... | 1-3 |
| Check Client PC and Web Browser Requirements | 1-3 |
| 2 Installation of the Oracle Stack on Windows | |
| Create a New OC4J Instance for Back Office | 2-1 |
| Expand the Back Office Distribution | 2-2 |
| Obtain the Third-Party Library File Required by Back Office | 2-3 |
| Run the Back Office Application Installer | 2-3 |
| Resolving Errors Encountered During Application Installation | 2-4 |
| Populate the Database Schema | 2-4 |
| Install Parameters | 2-5 |
| Manual Deployment Option | 2-5 |
| Backups Created by Installer | 2-6 |
| Import Initial Parameters | 2-6 |
| Importing Parameters Through the User Interface..... | 2-7 |
| Importing Parameters By Using an Ant Target..... | 2-7 |
| Load Optional Purge Procedures | 2-7 |
| Using the Back Office Application | 2-8 |

3 Installation of the IBM Stack on IRES

| | |
|--|-----|
| Expand the Back Office Distribution | 3-1 |
| Obtain Third-Party Library Files Required by Back Office | 3-2 |
| Installation Options | 3-3 |
| Run the Back Office Application Installer..... | 3-3 |
| Resolving Errors Encountered During Application Installation | 3-4 |
| Populate the Database Schema..... | 3-4 |
| Install Parameters | 3-4 |
| Configure MQ Series..... | 3-5 |
| Manual Deployment Option..... | 3-5 |
| Import Initial Parameters..... | 3-5 |
| Importing Parameters Through the User Interface..... | 3-6 |
| Importing Parameters By Using an Ant Target..... | 3-6 |
| Load Optional Purge Procedures | 3-6 |
| Using the Back Office Application | 3-7 |

4 Configuring the AccessVia Print Engine for Labels and Tags on the Oracle Stack

| | |
|--|-----|
| Configuring the Database for the AccessVia Print Engine | 4-1 |
| Configuring Oracle 10g..... | 4-2 |
| Setting Up the Directory Structure for Oracle Application Server | 4-3 |
| Creating the AccessVia Print Engine .ini File | 4-3 |
| .ini File Settings..... | 4-3 |
| .ini File Prototype | 4-4 |
| Configuring the AccessVia Files for Oracle Application Server | 4-6 |
| Setting the Path Variable for the AccessVia Print Engine..... | 4-6 |
| Testing the AccessVia Print Engine | 4-6 |
| Troubleshooting..... | 4-7 |
| MalformedURLException | 4-7 |

5 Configuring the AccessVia Print Engine for Labels and Tags on the IBM Stack

| | |
|--|-----|
| Configuring the Database for the AccessVia Print Engine | 5-1 |
| Configuring ODBC for DB2..... | 5-2 |
| Setting Up the Directory Structure for IBM WebSphere..... | 5-3 |
| Creating the AccessVia Print Engine .ini File..... | 5-3 |
| .ini File Settings..... | 5-3 |
| Setting the Library Path Variable for the AccessVia Print Engine | 5-5 |
| Testing the AccessVia Print Engine | 5-5 |
| Troubleshooting..... | 5-5 |
| MalformedURLException | 5-5 |

| | | |
|----------|---|-----|
| 6 | Configuration for Firefox Browser | |
| A | Appendix: Back Office Application Installer Screens for the Oracle Stack | |
| B | Appendix: Back Office Application Installer Screens for the IBM Stack | |
| C | Appendix: Installer Silent Mode | |
| D | Appendix: Reinstalling Back Office | |
| | Reinstalling Back Office on the Oracle Stack..... | D-1 |
| | Reinstalling Back Office on the IBM Stack | D-1 |
| E | Appendix: URL Reference | |
| | URLs for the Oracle Stack..... | E-1 |
| | JDBC URL for a Database | E-1 |
| | JNDI Provider URL for an Application | E-1 |
| | Deployer URI | E-2 |
| | URLs for the IBM Stack | E-2 |
| | JDBC URL for a Database | E-2 |
| | JNDI Provider URL for an Application | E-3 |
| F | Appendix: Common Installation Errors | |
| | Unreadable Buttons in the Installer | F-1 |
| | Installation Errors for the Oracle Stack Only | F-1 |
| | Oracle Application Server Forceful Shutdown..... | F-1 |
| | "Unable to get a deployment manager" Message..... | F-1 |
| | "Could not create system preferences directory" Warning..... | F-2 |
| | Installation Hangs at "Compiling EJB generated code" | F-2 |
| | "Failed to set the internal configuration" Message..... | F-3 |
| G | Appendix: Troubleshooting Problems on the Oracle Stack | |
| | Creating a New OC4J Instance for Back Office..... | G-1 |
| | Creating the Back Office Database Schema..... | G-2 |
| | Configuring the AccessVia Files for Oracle Application Server | G-3 |
| | Loading the Initial Data for Labels and Tags..... | G-3 |
| H | Appendix: Installation Data Load | |

List of Figures

| | | |
|------|---|------|
| A-1 | Introduction | A-1 |
| A-2 | Requirements..... | A-2 |
| A-3 | Data Source Details..... | A-2 |
| A-4 | Install Database Option..... | A-3 |
| A-5 | Default Locale..... | A-4 |
| A-6 | App Server ORACLE_HOME..... | A-4 |
| A-7 | Access Via Configuration | A-5 |
| A-8 | Mail Session Details..... | A-6 |
| A-9 | Application Server Details..... | A-7 |
| A-10 | Central Office JMS Server Integration | A-8 |
| A-11 | Central Office JMS Server Details..... | A-8 |
| A-12 | Install Parameters Options | A-9 |
| A-13 | Application Server RMI Port..... | A-10 |
| A-14 | Manual Deployment Option | A-11 |
| A-15 | Application Deployment Details..... | A-12 |
| A-16 | OC4J Administrative User..... | A-13 |
| A-17 | Value-Added Tax (VAT)..... | A-13 |
| A-18 | Installation Progress | A-14 |
| B-1 | Introduction | B-1 |
| B-2 | Requirements..... | B-2 |
| B-3 | Data Source Details..... | B-2 |
| B-4 | Install Database Option..... | B-3 |
| B-5 | Default Locale..... | B-4 |
| B-6 | App Server WAS_HOME | B-4 |
| B-7 | Access Via Configuration | B-5 |
| B-8 | Mail Session Details..... | B-6 |
| B-9 | Application Server Details..... | B-6 |
| B-10 | JMS Server Details..... | B-8 |
| B-11 | Central Office JMS Server Integration | B-9 |
| B-12 | Central Office JMS Server Details..... | B-10 |
| B-13 | Install Parameters Option..... | B-11 |
| B-14 | Configure MQ Series Option..... | B-12 |
| B-15 | MQ Series Directory | B-12 |
| B-16 | Manual Deployment Option | B-13 |
| B-17 | Application Deployment Details..... | B-14 |
| B-18 | Value-Added Tax (VAT)..... | B-15 |
| B-19 | Installation Progress | B-15 |

List of Tables

| | | |
|-----|---------------------------------|-----|
| 1-1 | Store Server Requirements | 1-2 |
|-----|---------------------------------|-----|

Send Us Your Comments

Oracle Retail Back Office Installation Guide, Release 12.0.11

Oracle welcomes customers' comments and suggestions on the quality and usefulness of this document.

Your feedback is important, and helps us to best meet your needs as a user of our products. For example:

- Are the implementation steps correct and complete?
- Did you understand the context of the procedures?
- Did you find any errors in the information?
- Does the structure of the information help you with your tasks?
- Do you need different information or graphics? If so, where, and in what format?
- Are the examples correct? Do you need more examples?

If you find any errors or have any other suggestions for improvement, then please tell us your name, the name of the company who has licensed our products, the title and part number of the documentation and the chapter, section, and page number (if available).

Note: Before sending us your comments, you might like to check that you have the latest version of the document and if any concerns are already addressed. To do this, access the new Applications Release Online Documentation CD available on My Oracle Support and www.oracle.com. It contains the most current Documentation Library plus all documents revised or released recently.

Send your comments to us using the electronic mail address:
retail-doc_us@oracle.com

Please give your name, address, electronic mail address, and telephone number (optional).

If you need assistance with Oracle software, then please contact your support representative or Oracle Support Services.

If you require training or instruction in using Oracle software, then please contact your Oracle local office and inquire about our Oracle University offerings. A list of Oracle offices is available on our Web site at www.oracle.com.

Preface

This Installation Guide describes the requirements and procedures to install this Oracle Retail Back Office, and the optional Labels and Tags module, release.

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 document in the Oracle Retail Back Office Release 12.0.11 documentation set:

- *Oracle Retail Back Office Operations Guide*
- *Oracle Retail Back Office Release Notes*

Customer Support

To contact Oracle Customer Support, access My Oracle Support at the following URL:

<https://support.oracle.com>

When contacting Customer Support, please provide the following:

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

Review Patch Documentation

When you install the application for the first time, you install either a base release (for example, 12.0) or a later patch release (for example, 12.0.11). If you are installing the base release, additional patch, and bundled hot fix releases, read the documentation for all releases that have occurred since the base release before you begin installation. Documentation for patch and bundled hot fix releases can contain critical information related to the base release, as well as information about code changes since the base release.

Oracle Retail Documentation on the Oracle Technology Network

Documentation is packaged with each Oracle Retail product release. Oracle Retail product documentation is also available on the following Web site:

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

(Data Model documents are not available through Oracle Technology Network. These documents are packaged with released code, or you can obtain them through My Oracle Support.)

Documentation should be available on this Web site within a month after a product release.

Conventions

The following text conventions are used in this document:

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

Pre-installation Tasks

This chapter describes the requirements that must be met before the 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 Back Office may work in other configurations, these are the configurations that are supported for this release.

Determine the Back Office Distribution

This document covers installation of two different product releases:

1. Oracle Retail Back Office (ORBO): Back Office application without the Labels and Tags module.
2. Oracle Retail Labels and Tags (ORLAT): Back Office application plus the Labels and Tags module.

The Oracle Retail Labels and Tags installation contains the full Oracle Retail Back Office installation. You should have one of the above distributions, but not both.

Check Oracle Retail Merchandise Operations Management Version

The integration with Oracle Retail Merchandise Operations Management requires version 12.0.11 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;
```
- When using the IBM DB2 database server, the default heap size is 256. Increase the heap size to at least 1024. For information on how to set the heap size, refer to your IBM DB2 documentation.

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 | IBM Stack |
|-----------------------------|--|---------------------|
| Hardware | x86-32 bit | x86-32 bit |
| Database | Oracle RDBMS 10g R2 (10.2.0.2) | DB2 Express v9.1 |
| Operating System | Windows 2003 Server | IBM IRES v2.1.4 |
| J2EE Application Server | Oracle Application Server 10g (10.1.3) Note: 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. | IBM WebSphere 6.1 |
| J2EE Application Server JVM | Sun 1.5.x | (included in WRS) |
| Messaging Provider | (included in Oracle Application Server) | IBM MQ Series 6.0.2 |
| System Management Agents | OEM Agents | OEM Agents |

Hardware Requirements

Specific hardware requirements for the machines running Oracle Retail Back Office depend on variables including the number of users and other applications running on the same machine.

Please note the following about the hardware requirements:

- The CPU requirement depends on variables including the operating system and middleware selected.
- Memory requirements and performance depend on variables including the number of active promotions and best deal calculations when Back Office is installed on the same machine as the Point-of-Service server.
- Disk size can vary based on the operating system and middleware requirements as well as the amount of data storage needed. Data storage depends on variables including the number of items and promotions defined, data retention period, and so on.

You need to determine your hardware requirements, based on the variables mentioned here, as well as any additional variables specific to your environment. For more information, contact Customer Support.

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

Installation of the Oracle Stack on Windows

Before proceeding, you must install the database and application server software. If you are installing Back Office with Labels and Tags, you must also install the AccessVia 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.

Note: J2EE_HOME refers to the directory
%ORACLE_HOME%\j2ee*<instancename>*

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.

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-12.0.11.zip` (or `ORLAT-12.0.11.zip`) file from the Back Office distribution.
2. Create a new staging directory for the Back Office application distribution (`ORBO-12.0.11.zip` or `ORLAT-12.0.11.zip`) file, for example, `c:\tmp\j2ee\orbo-inst\orbo-staging`.

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`.

3. Copy or upload `ORBO-12.0.11.zip` (or `ORLAT-12.0.11.zip`) to `<staging_directory>` and extract its contents. The following files and directories should be created under `<staging_directory>\ORBO-12.0.11:`

```
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-12.0.11` 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 Web site before running the Back Office application installer.

1. Download the `pager-taglib-2.0.war` file from the JSPTags Web site: <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.

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, `C:\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 Xceed, 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.

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 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.

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.

- 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, execute the `ws_ant load_sql` command in the `<INSTALL_DIR>\backoffice\configured-output\db` directory.

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

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`.

```
JAVA_HOME=%ORACLE_HOME%\jdk; PATH=%JAVA_HOME%\bin:$PATH; export PATH JAVA_HOME
```

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`.

```
JAVA_HOME=%ORACLE_HOME%\jdk; PATH=%JAVA_HOME%\bin:$PATH; export PATH JAVA_
HOME
```

- b. Grant RMI access permissions for the Back 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 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

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.

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. 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\BackOffice`
3. Set the `JAVA_HOME`, `ANT_HOME`, and `PATH` environment variables. See ["Creating the Back 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 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.

Installation of the IBM Stack on IRES

Before proceeding, you must install the database and application server software. For a list of supported versions, see [Chapter 1](#). If you are installing Back Office with Labels and Tags, you must also install and configure the AccessVia software. See [Chapter 5](#).

During installation, the Back Office database schema will be created and the Back 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 Back Office password processing. For information on how to determine the value you should use for this setting and how to set it for the application server, refer to your IBM WebSphere documentation.

Expand the Back Office Distribution

To extract the Back Office files:

1. Extract the `ORBO-12.0.11.zip` (or `ORLAT-12.0.11.zip`) file from the Back Office distribution.
2. Log into the UNIX server as the user who owns the IBM WebSphere installation. Create a new staging directory for the Back Office application distribution (`ORBO-12.0.11.zip` or `ORLAT-12.0.11.zip`), for example, `/tmp/j2ee/orbo-inst/orbo-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 `ORBO-12.0.11.zip` (or `ORLAT-12.0.11.zip`) to `<staging_directory>` and extract its contents. The following files and directories should be created under `<staging_directory>/ORBO-12.0.11:`

```
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-12.0.11` is referred to as `<INSTALL_DIR>`.

Obtain Third-Party Library Files Required by Back Office

The Back Office application uses the Pager Tag Library from JSPTags and the DB2 drivers from IBM. Before running the Back Office application installer, you must download the necessary files from the JSPTags Web site and the IBM Web site.

1. Download the `pager-taglib-2.0.war` file from the JSPTags Web site: <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 Web site: <http://www.ibm.com/software/data/db2/java/>. You need an IBM ID, which you can request from the Sign in screen, in order to log in to this Web site. Once logged in, download the latest version of the IBM Data Server Driver for JDBC and SQLJ.

Note: Oracle Retail Back 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 Back Office Application Installer

The installer will configure and deploy the Back Office application.

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

1. Change to the `<INSTALL_DIR>` directory.
2. Set the `JAVA_HOME` environment variable. `JAVA_HOME` should point to an installation of IBM Java2 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.

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
```

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.

- 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, execute the `ws_ant load_sql` command in the `<INSTALL_DIR>/backoffice/configured-output/db` directory.

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 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 Back Office before Back 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>` come from the `ant.install.properties` file.

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

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

Manual Deployment Option

The Back 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 Back Office ear file.

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

Import Initial Parameters

Note: If you did not choose to have the installer set the initial parameters, you must import an initial set of parameters before you can use Oracle Retail Back 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 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://<your 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/tmp/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 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.

Configuring the AccessVia Print Engine for Labels and Tags on the Oracle Stack

In order to use the Labels and Tags functionality of Back Office, you need to install the AccessVia product and configure the AccessVia Print engine.

Before configuring the AccessVia Print engine, you must have completed the following procedures:

- The installation and configuration of all prerequisite software including the AccessVia product and the database server.
- The installation of the database and creation of the database schema.
- The installation of the application server.
- The installation of the printer.

Configuring the AccessVia Print engine includes the following tasks:

- ["Configuring the Database for the AccessVia Print Engine"](#)
- ["Setting Up the Directory Structure for Oracle Application Server"](#)
- ["Creating the AccessVia Print Engine .ini File"](#)
- ["Configuring the AccessVia Files for Oracle Application Server"](#)
- ["Setting the Path Variable for the AccessVia Print Engine"](#)
- ["Testing the AccessVia Print Engine"](#)

In addition, to troubleshoot printing errors see ["Troubleshooting"](#).

Configuring the Database for the AccessVia Print Engine

Because Labels and Tags needs to access data from Back Office, AccessVia requires open database connectivity (ODBC) to the Back Office database. AccessVia stores template information in the following Back Office data tables:

- SGFORM—This table stores templates.
- SGELEM—This table stores template attributes.
- SGSQL—This table stores .zip files of SQL, which fetch template data at the time of printing.
- SGCONFIG—This table stores the paths for .ini files required by AccessVia.

Configuring Oracle 10g

Follow this procedure to configure Oracle 10g in a Windows environment.

To configure for Oracle 10g:

1. Extract the necessary files to %ORACLE_HOME%\BIN. These files are provided as part of your Oracle RDBMS 10g distribution.
 - If Oracle 10g instant client is used, extract the following files:
 - instantclient-basic-win32-10.1.0.4-20050513.zip
 - instantclient-odbc-win32-10.1.0.4-20050514.zip

WARNING: When Oracle Application Server is installed, files are placed into this directory. Do not overwrite any of these pre-existing files.

- If a full install of Oracle 10g was done, extract the oracle10g_win32\10g_win32_db.zip file.
2. Navigate to %ORACLE_HOME%\NETWORK\ADMIN and modify (or create) tnsnames.ora.

Oracle 10g will search for tnsnames.ora in the directory defined by the %TNS_ADMIN% environment variable. If that variable is not defined, create the %TNS_ADMIN% environment variable and set it to point to %ORACLE_HOME%\BIN. Copy the tnsnames.ora file to %ORACLE_HOME%\BIN.

Please note the following:

- The "DSN" or the "TSN Service Name" is SOL10G.
- The "DBQ" or the "Data Source Name" is sol10g.
- Make sure the Host and Port point to the location of the Oracle 10g database.
- The User ID and Password are defined elsewhere in the dsign.ini file and in ODBC Driver Configuration.

The following is an example of the tnsnames.ora file contents. Be certain that there are no leading spaces at the first SOL10G reference.

```
SOL10G =
(DESCRIPTION =
  (ADDRESS_LIST =
    (ADDRESS = (PROTOCOL = TCP)(HOST = utopia.oracle.com)(PORT = 1521))
  )
  (CONNECT_DATA =
    (SERVICE_NAME = sol10g)
  )
)
```

3. If you are using Oracle 10g instant client, execute the %ORACLE_HOME%\BIN\odbc_install.exe script.

4. Add the data source:
 - a. From the control panel, select **Administrative Tools**.
 - b. Open Data Sources (ODBC).
 - c. Select the **System DSN** tab.
 - d. Click **Add**.
 - e. Use the values entered in the `tnsnames.ora` file. For the user ID, enter the assigned database username.

Setting Up the Directory Structure for Oracle Application Server

The AccessVia program files and environment must be accessible to the application server. The directory that contains the files and libraries is referred to as `<AccessVia_install_dir>` for the remainder of this chapter.

Creating the AccessVia Print Engine .ini File

The AccessVia Print engine requires an .ini file for configuration. This file controls all AccessVia operations and includes the settings for printers, resource paths (fonts and graphics), data source to be used, and so on. For information on the file contents, see [".ini File Settings"](#).

The default name for the AccessVia .ini file is `design.ini`. That name is used to refer to it throughout this chapter.

To create the AccessVia configuration file:

1. Create an .ini file. For an example of an .ini file, see [".ini File Prototype"](#).
2. Save your .ini file at `<AccessVia_install_dir>\program`.

.ini File Settings

This file contains a series of settings:

- Path settings—These are used by the AccessVia APIs to fetch appropriate attributes at the time of printing. These paths, which are located in the `System Setup` section, lead to the directories described in ["Setting Up the Directory Structure for Oracle Application Server"](#).

`GraphicPath`, `FontPath`, and `ExePath` must point to individual folders. The remaining paths can point to a common folder because they are not used as often. In order for `UserPath` to be functional, Back Office must have write permission to the `dst` directory.

- `DataPath`—This must point to the folder that contains all the necessary data (data).
- `GraphicPath`—This must point to the folder that contains all images required for the print templates (images).
- `FontPath`—This must point to the folder that contains all the font files required by the print templates (fonts).
- `UserPath`—This must point to the user directory (`dst`).
- `ExePath`—This must point to the folder that contains all AccessVia .dll files (program).

- SystemPath—This must point to the folder that contains all necessary system files (system).
- WorkPath—This must point to the folder used by AccessVia APIs to write temp files during the printing process.
- Printer settings—These are the printer attributes. They are located in the Printer Setup section. Most of them are the same as the system printer settings. PrintToFile, PrintToFile, and PrinterName are the most important attributes; the remaining ones can use default settings.
 - PrinterPort=WS:
 - PrintFile=<<AccessVia_install_dir>>\temp\output.prn
 - PrintToFile=No. However, for initial testing, you can arrange for templates to be printed in an output file (PrintFile) by setting PrintToFile to Yes.
 - PrinterDriver=POSTSCRIPT. The AccessVia Print engine prefers PostScript printers to PCL printers.
 - PrinterName=Lexmark Optra T (or the default printer)
 - PortSetting1=172.16.34.12. This printer IP address has proven successful for Oracle Retail network printers.
 - PortSetting2=9100. This port has proven successful for Oracle Retail network printers.
- Data source settings—These provide AccessVia APIs with the location of templates and template data. These can be stored in the same place, in which case the two settings are identical. In the data sources, set the DSN name, database name, server name, user ID, and password correctly.
 - DATABASE—This is the data source for template data.
 - FORMATS—This is the data source for templates and template attributes.

.ini File Prototype

The following is an example of an .ini file.

```

;-----
;--- Database Connection Section -----
;-----
[DCM Global]
DataDriver=ODBC
ConnectRetry=4

;----- DATABASE Connection Properties -----
[DATABASE]
Enabled=True
DataDriver=ODBC
CONNECTION=DSN=SOL10G;UID=UserID;PWD=Password;DBQ=sol10g;DBA=W;APA=T;EXC=F;FEN=T;Q
TO=T;FRC=10;FDL=10;LOB=T;RST=T;GDE=F;FRL=F;BAM=IfAllSuccessful;NUM=NLS;DPM=F;MTS=T
;MDI=F;CSR=F;FWC=F;FBS=64000;TLO=0;
SCHEMA_SYS=<database user>

[SYSTEM]
Enabled=False

[FORMATS]

```

```
Enabled=False
;DataDriver=ODBC
;CONNECTION=DSN=quarrysb;DBALIAS=quarrysb
;CONNECTION=DSN=dsign;DBALIAS=DSIGN
;SCHEMA_SYS=<database user>

[IMPORTS]
Enabled=False

[EXPORTS]
Enabled=False

[STARTUP]
InitApp=No
;----- System Setup
DataPath=/opt/accessvia/dst/data
GraphicPath=/opt/accessvia/dst/images
FormatPath=/opt/accessvia/dst/
ExePath=/opt/accessvia/program/
SystemPath=/opt/accessvia/system/
FontPath=/opt/accessvia/dst/fonts/
WorkPath=/opt/accessvia/dst/
UserPath=/opt/accessvia/dst/

;----- Printer Setup
PrinterDriver=PS
;PrinterDriver=PM
;PrinterDriver=GDI
PrinterName=Lexmark Optra S
;PrinterName=\\oracleretailprintserv\COPYWEST-RM127,WinPrint,IP_172.16.34.12
;PrinterName=Generic PS
PrinterPort=WS:
;PrintToFile=Yes
PrintToFile=No
PrintFile=output.ps
PrintSpooler=
BumpPageX=0
BumpPageY=0
PaperTray=
PrintCopies=1
PrintMode=No
SignOffset=1
PrinterPortMode=NEW
PrinterOptimizationType=NONE
PageTotal=No
PortSetting1=172.16.34.12
PortSetting2=9100
PortSetting3=9600,n,8,1

;----- Messaging and Errors
ErrorLog=dsign.err
;Debug=No
;MessageMode=SILENT
;DebugMode=SILENT
Debug=Yes
MessageMode=EXTENSIVE
DebugMode=EXTENSIVE

FONTS
```

Configuring the AccessVia Files for Oracle Application Server

The Oracle Application Server looks for the database pointer in the SGCONFIG table. If it fails to find it, it looks into its current directory, %ORACLE_HOME%\j2ee\home. You can alter the behavior of AccessVia by updating the database appropriately:

1. Locate the SGCONFIG table.
2. For Oracle Application Server, make certain the FCONFIGPARAMVALUE column in the SCONFIG table is set to %ORACLE_HOME%\j2ee\home\dsign.ini or the location of the AccessVia.ini file, if it differs from that.
3. Set the parameter AccessViaIniFilePath = %ORACLE_HOME%\j2ee\home\dsign.ini.

Setting the Path Variable for the AccessVia Print Engine

The Path environment variable must point to the location of the AccessVia Print engine.

Note: The dll files in <AccessVia_install_dir>\program must be equivalent to the ones in %ORACLE_HOME%\BIN.

To modify the Path variable:

- Use the following command:

```
Set Path = %Path%;%ORACLE_HOME%;%ORACLE_HOME%\BIN;  
c:<AccessVia_install_dir>\program
```

- Use the control panel:
 1. Select **Start**, then **Control Panel**, and then **System**. The System Properties box opens.
 2. Select the **Advanced** tab.
 3. Click **Environment Variables**.
 4. Edit the Path variable to append the AccessVia Print engine location.

Testing the AccessVia Print Engine

After Back Office is installed and all of the previous steps have been completed, test the AccessVia Print engine.

To test AccessVia in Oracle 10g:

1. Compile the test program by executing the command <AccessVia_install_dir>\test\compileTest.bat. This file may need to be updated to meet your configuration.
2. Run the test program by executing <AccessVia_install_dir>\test\runTest.bat. This file may need to be updated to meet your configuration.

3. The template SALTEMP prints.
 - If you are getting lib not found, the required dll is not in the system path.
 - If you are getting unsatisfiedLinkerror, the dSIGN dlls and SDK dll do not match.

Troubleshooting

In the event of a failed attempt to print, the following error message may appear.

MalformedInputException

The templates required by AccessVia are included in a comma-separated .csv file. If that file fails to import, printing cannot occur and a MalformedInputException occurs.

To correct a MalformedInputException error:

1. Determine whether the application is using UTF-8 encoding by examining the environment variable that specifies locale (LANG or LC_ALL) to see if it ends with .UTF-8 (for example, en_US.UTF-8).
2. Remove the .UTF-8 suffix and set LANG to en_US.

Configuring the AccessVia Print Engine for Labels and Tags on the IBM Stack

In order to use the Labels and Tags functionality of Back Office, you need to install the AccessVia product and configure the AccessVia Print engine.

Before configuring the AccessVia Print engine, you must have completed the following procedures:

- The installation and configuration of all prerequisite software including the AccessVia product and the database server.
- The installation of the database and creation of the database schema.
- The installation of the application server.
- The installation of the printer.

Configuring the AccessVia Print engine includes the following tasks:

- ["Configuring the Database for the AccessVia Print Engine"](#)
- ["Creating the AccessVia Print Engine .ini File"](#)
- ["Setting the Library Path Variable for the AccessVia Print Engine"](#)
- ["Testing the AccessVia Print Engine"](#)

In addition, to troubleshoot printing errors see ["Troubleshooting"](#) in [Chapter 4](#).

Configuring the Database for the AccessVia Print Engine

Because Labels and Tags needs to access data from Back Office, AccessVia requires open database connectivity (ODBC) to the Back Office database. AccessVia stores template information in the following Back Office data tables:

- SGFORM—This table stores templates.
- SGELEM—This table stores template attributes.
- SGSQL—This table stores .zip files of SQL, which fetch template data at the time of printing.
- SGCONFIG—This table stores the paths for .ini files required by AccessVia.

Configuring ODBC for DB2

Follow this procedure to configure DB2 in a Linux environment. Before configuring, you must have completed the following procedures:

- The DB2 client software must be installed and configured.
- The database must be catalogued.
- DB2 CLI must be enabled.

To configure ODBC for DB2:

1. Create an `.odbc.ini` file:

- a. Find the home directory of the DB2 user.**

```
/home/<db2 user>
```

- b. Create the `.odbc.ini` file in that directory.**

```
/home/<db2 user>/.odbc.ini
```

- c. Add the following lines to the file:**

```
[ODBC Data Source]
<db2 instance>=IBM DB2 ODBC DRIVER
[<db2 instance>]
Driver=/home/<db2 user>/sqllib/lib/libdb2.so
Description=<DB2 ODBC Database>
```

2. Modify the `db2cli.ini` file:

- a. Find the `db2cli.ini` file.**

```
/home/<db2 user>/sqllib/cfg/db2cli.ini
```

- b. Add the following lines to the file:**

```
[SLM]
uid=<db2 user>
pwd=<password for db2 user>
autocommit=0
TableType=" 'TABLE', 'VIEW', 'SYSTEM TABLE' "
DBALIAS=<db2 instance>
DESCRIPTION=SLM
```

3. Set up the DB2 user profile:

- a. Find the `.profile` file.**

```
/home/<db2 user>/.profile
```

- b. Add the following lines to the file:**

```
#[IBM DB2 ODBC DRIVER]
Driver=/home/<db2 user>/sqllib/lib/libdb2.so
DB2INSTANCE=<db2 user>
export ODBCINI=/home/<db2 user>/.odbc.ini
```

4. Enable the DB2 user to connect to DB2 as a client. Run the following command:

```
./home/<db2 user>/sqllib/db2profile
```

5. Test the configuration:

At the command prompt, enter db2. The DB2 command prompt is displayed.

Setting Up the Directory Structure for IBM WebSphere

The AccessVia program files and environment must be accessible to the application server. The directory that contains the files and libraries is referred to as `<AccessVia_install_dir>` for the remainder of this chapter.

Creating the AccessVia Print Engine .ini File

The AccessVia Print engine requires an .ini file for configuration. This file controls all AccessVia operations and includes the settings for printers, resource paths (fonts and graphics), data source to be used, and so on. For information on the file contents, see ".ini File Settings".

The default name for the AccessVia .ini file is `dsign.ini`. That name is used to refer to it throughout this chapter.

To create the AccessVia configuration file:

1. Create an .ini file. For an example of an .ini file, see [.ini File Prototype](#) in [Chapter 4](#).
2. Save your .ini file at `<AccessVia_install_dir>\program` and `<AccessVia_install_dir>\test`.

.ini File Settings

This file contains a series of settings:

- Path settings—These are used by the AccessVia APIs to fetch appropriate attributes at the time of printing. These paths, which are located in the `System Setup` section, lead to the following directories in `<AccessVia_install_dir>`:

- `dst`—This is the user directory. It should include subdirectories for data, images, and fonts. The `FormatPath`, `WorkPath`, and `Userpath` for the `[STARTUP]` section of the .ini file lead to this directory.
 - `data`—The `DataPath` for the `[STARTUP]` section leads to this directory. Put all necessary data here.
 - `images`—The `GraphicPath` for the `[STARTUP]` section leads to this directory. Put all necessary graphic images here.
 - `fonts`—The `FontPath` for the `[STARTUP]` section leads to this directory. Put all necessary fonts here.

Default fonts are stored in the system directory. If you choose to store your fonts in the `fonts` directory, make the appropriate reference in the `dsign.ini` file.

- `program`—The program directory must include all the AccessVia Print engine libraries. The libraries can be copied from the `<AccessVia_install_dir>` directory. The `ExePath` for the `[STARTUP]` section leads to this directory.

Add this directory to the system path so that all dll files will be public.

- `system`—The system directory must include all system files. The files can be copied from the `<AccessVia_install_dir>/windows/system` directory. The `SystemPath` for the `[STARTUP]` section leads to this directory.
- `test`—The test directory contains utilities to verify the ODBC and printing capabilities.

`GraphicPath`, `FontPath`, and `ExePath` must point to individual folders. The remaining paths can point to a common folder because they are not used as often. In order for `UserPath` to be functional, Back Office must have write permission to the `dst` directory.

- `DataPath`—This must point to the folder that contains all the necessary data (`data`).
- `GraphicPath`—This must point to the folder that contains all images required for the print templates (`images`).
- `FontPath`—This must point to the folder that contains all the font files required by the print templates (`fonts`).
- `UserPath`—This must point to the user directory (`dst`).
- `ExePath`—This must point to the folder that contains all AccessVia `.dll` files (`program`).
- `SystemPath`—This must point to the folder that contains all necessary system files (`system`).
- `WorkPath`—This must point to the folder used by AccessVia APIs to write temp files during the printing process.
- **Printer settings**—These are the printer attributes. They are located in the `Printer Setup` section. Most of them are the same as the system printer settings. `PrintFile`, `PrintToFile`, and `PrinterName` are the most important attributes; the remaining ones can use default settings.
 - `PrinterPort=WS:`
 - `PrintFile=<<AccessVia_install_dir>>/temp/output.prn`
 - `PrintToFile= No`. However, for initial testing, you can arrange for templates to be printed in an output file (`PrintFile`) by setting `PrintToFile` to `Yes`.
 - `PrinterDriver=POSTSCRIPT`. The AccessVia Print engine prefers PostScript printers to PCL printers.
 - `PrinterName=Lexmark Optra T` (or the default printer)
 - `PortSetting1=172.16.34.12`. This printer IP address has proven successful for Oracle Retail network printers.
 - `PortSetting2=9100`. This port has proven successful for Oracle Retail network printers.
- **Data source settings**—These provide AccessVia APIs with the location of templates and template data. These can be stored in the same place, in which case the two settings are identical. In the data sources, set the DSN name, database name, server name, user ID, and password correctly.
 - `DATABASE`—This is the data source for template data.
 - `FORMATS`—This is the data source for templates and template attributes.

Setting the Library Path Variable for the AccessVia Print Engine

The Library Path environment variable must point to the location of the AccessVia Print engine.

To modify the Library Path variable, use the following command:

```
export LD_LIBRARY_PATH = $LD_LIBRARY_PATH:<AccessVia_install_dir>/program
```

Testing the AccessVia Print Engine

After Back Office is installed and all of the previous steps have been completed, test the AccessVia Print engine.

To test AccessVia in DB2:

1. Compile the test program by executing the command
`<AccessVia_install_dir>/test/compileTest.sh`. This file may need to be updated to meet your configuration.
2. Run the test program by executing
`<AccessVia_install_dir>/test/runTest.sh`. This file may need to be updated to meet your configuration.
3. The template SALTEMP prints.
 - If you are getting lib not found, the required dll is not in the system path.
 - If you are getting unsatisfiedLinkerror, the dSIGN dlls and SDK dll do not match.

Troubleshooting

In the event of a failed attempt to print, the following error message may appear.

MalformedInputException

The templates required by AccessVia are included in a comma-separated .csv file. If that file fails to import, printing cannot occur and a MalformedInputException occurs.

To correct a MalformedInputException error:

1. Determine whether the application is using UTF-8 encoding by examining the environment variable that specifies locale (LANG or LC_ALL) to see if it ends with .UTF-8 (for example, en_US.UTF-8).
2. Remove the .UTF-8 suffix and set LANG to en_US.

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.



A

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, or the Back Office application with the Labels and Tags module, 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.

Note: When installing the Back Office application with the Labels and Tags module, the title on the installer screens is Labels and Tags Installer. The content of the screens is the same for either installer.

Figure A-1 Introduction

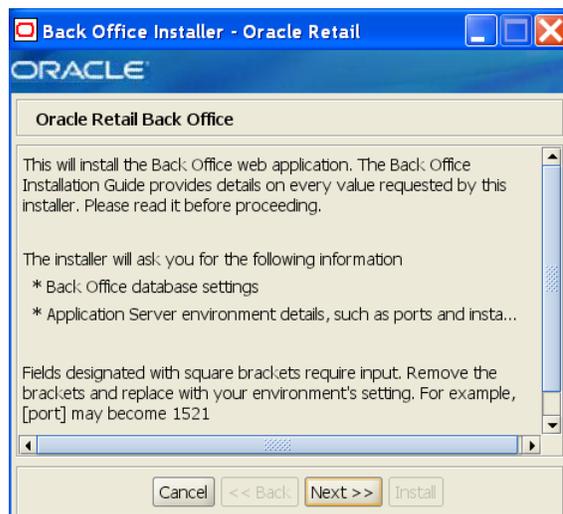


Figure A-2 Requirements

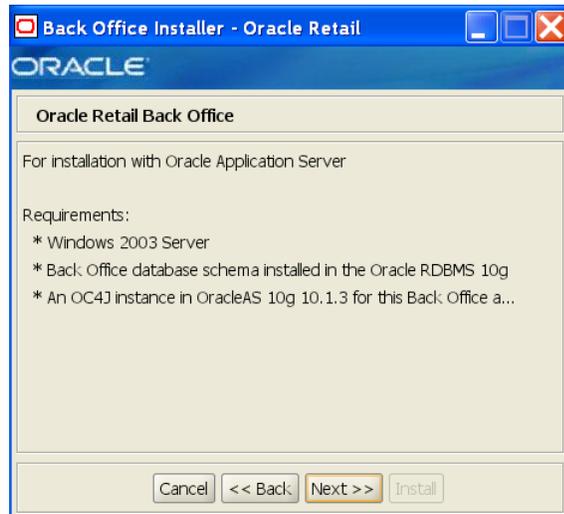
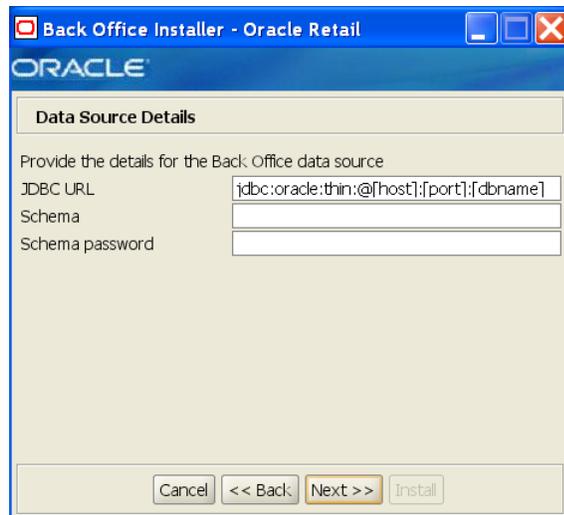


Figure A-3 Data Source Details



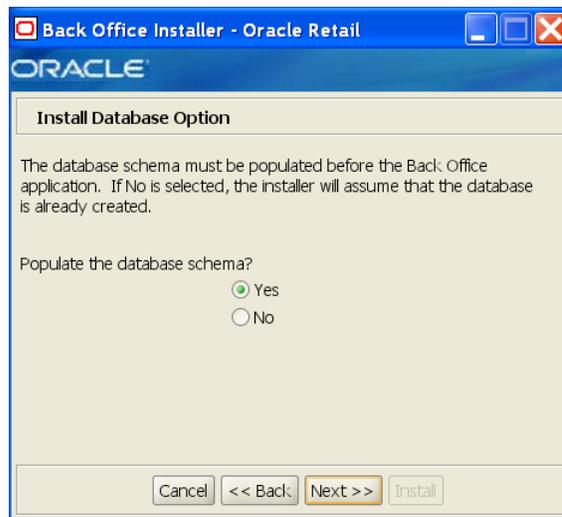
The fields on this screen are described in the following tables.

| Field Title | JDBC URL |
|-------------------|--|
| Field Description | URL used by the Back Office application to access the database schema. See 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 Back Office application. |
| Example | DBUSER |
| Notes | |

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

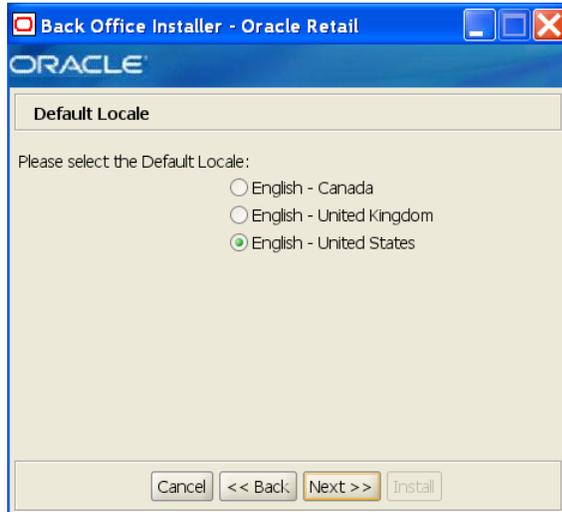
Figure A-4 Install Database Option



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 " Populate the Database Schema " in Chapter 2 for the manual steps you need to perform after the installer completes. |
| Example | Yes |
| Notes | |

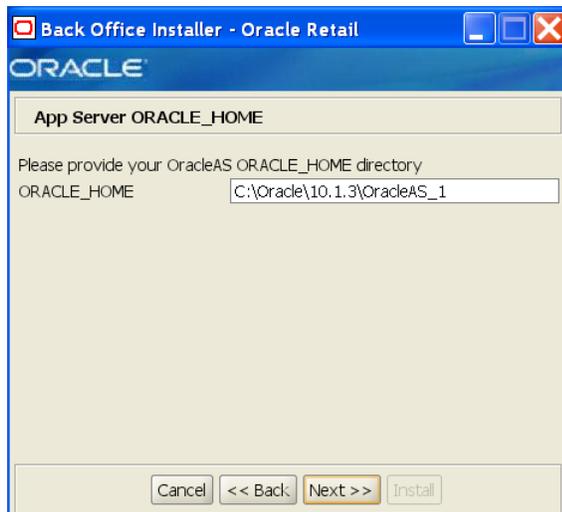
Figure A-5 Default Locale



The 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 - United States |
| Notes | |

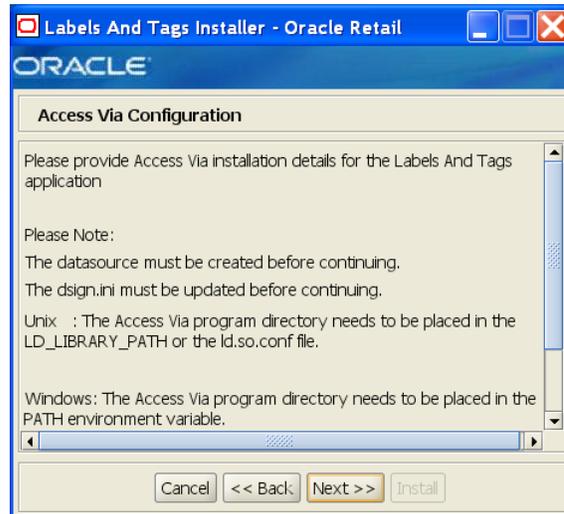
Figure A-6 App Server ORACLE_HOME



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 | C:\Oracle\10.1.3\OracleAS_1 |
| Notes | |

Figure A-7 Access Via Configuration

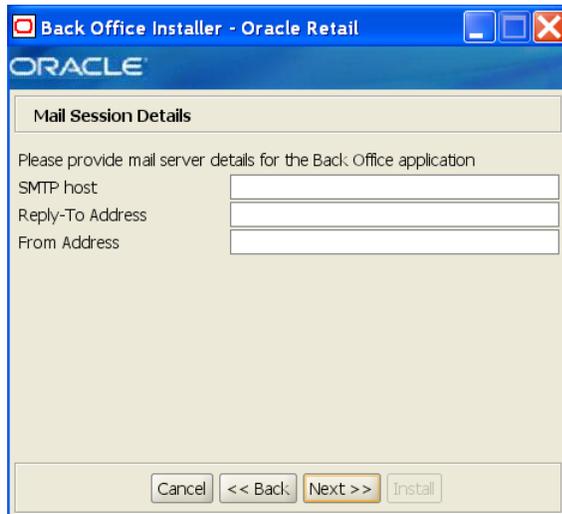


This screen is only displayed when installing Oracle Retail Back Office with the Labels and Tags module. The fields on this screen are described in the following tables.

| | |
|--------------------|-----------------------------|
| Field Title | dJava.jar Path |
| Field Description | Path to the dJava.jar file. |
| Example | c:\accessvia\dJava.jar |
| Notes | |

| | |
|--------------------|--|
| Field Title | dsign.ini Path |
| Field Description | Path to the AccessVia Print Engine configuration file. |
| Example | c:\accessvia\program\dsign.ini |
| Notes | |

Figure A-8 Mail Session Details



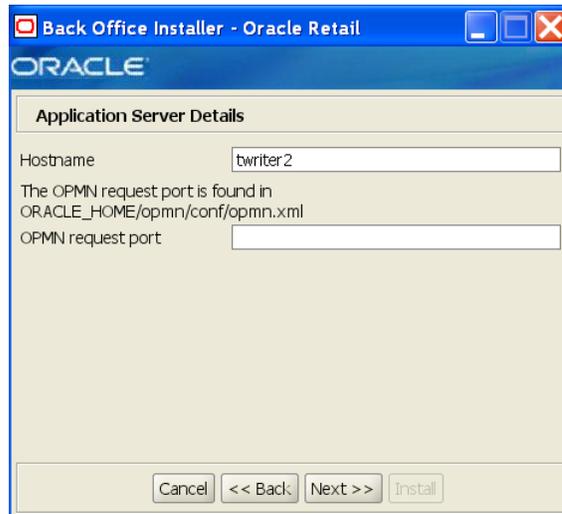
The fields on this screen are described in the following tables.

| 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 Back Office. |
| Example | donotreply@mycompany.com |
| Notes | |

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

Figure A-9 Application Server Details

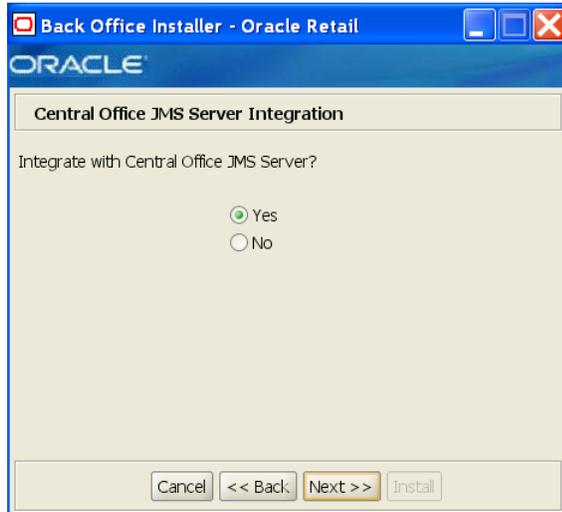


The fields on this screen are described in the following tables.

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

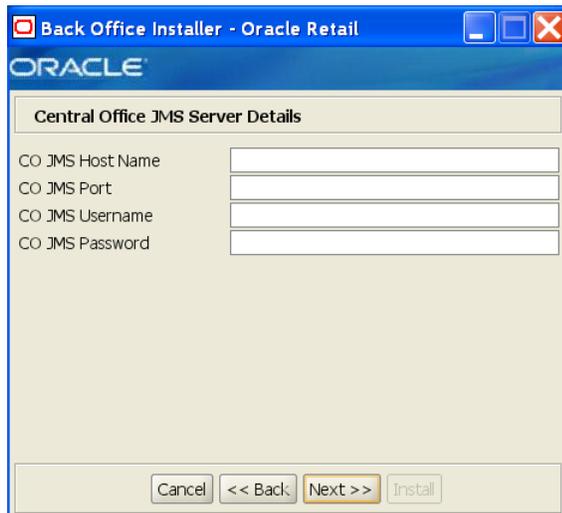
Figure A-10 Central Office JMS Server Integration



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.

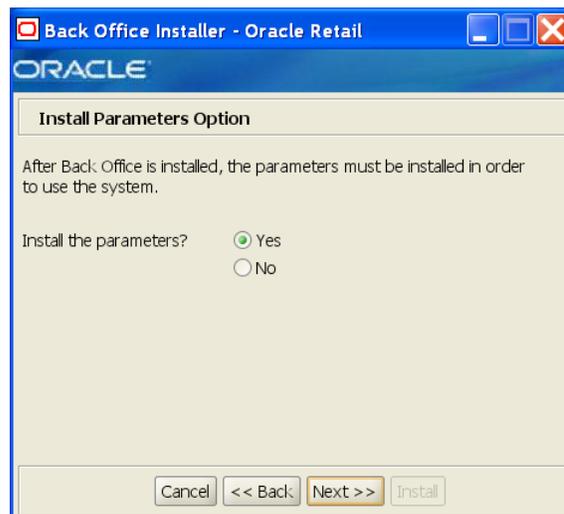
| Field Title | CO JMS Server Name |
|-------------------|--|
| Field Description | Name of the Central Office JMS server. Note: Always use the actual hostname and not the IP address or "localhost". There may be problems integrating with Point-of-Service if the actual hostname is not used. |
| Example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

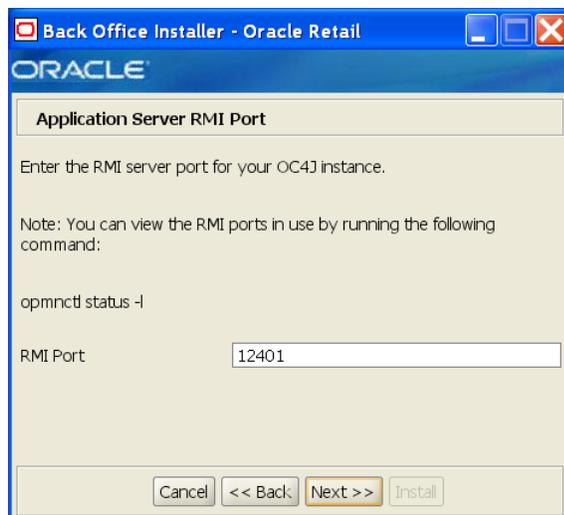
Figure A-12 Install Parameters Options



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 | |

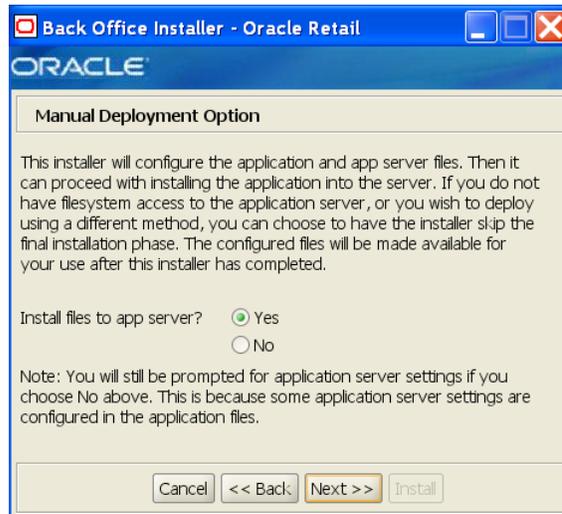
Figure A-13 Application Server RMI Port



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 | |

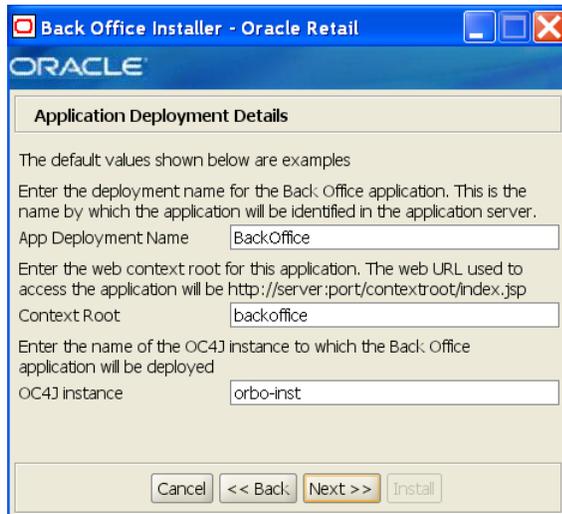
Figure A–14 Manual Deployment Option



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

Figure A-15 Application Deployment Details



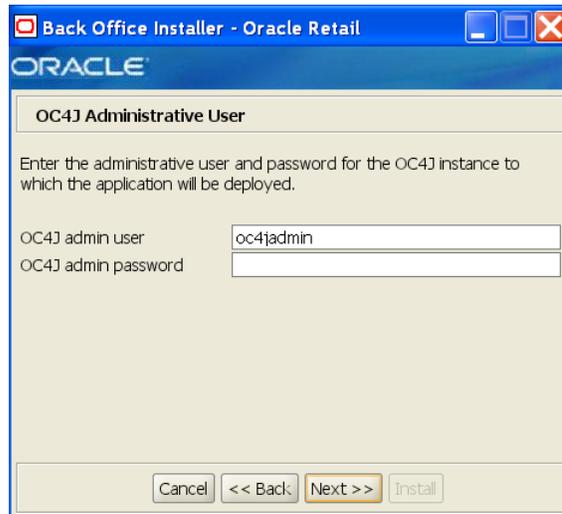
The fields on this screen are described in the following tables.

| 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 For Back Office with the Labels and Tags module, an example would be orlat-inst. |
| Notes | |

Figure A-16 OC4J Administrative User

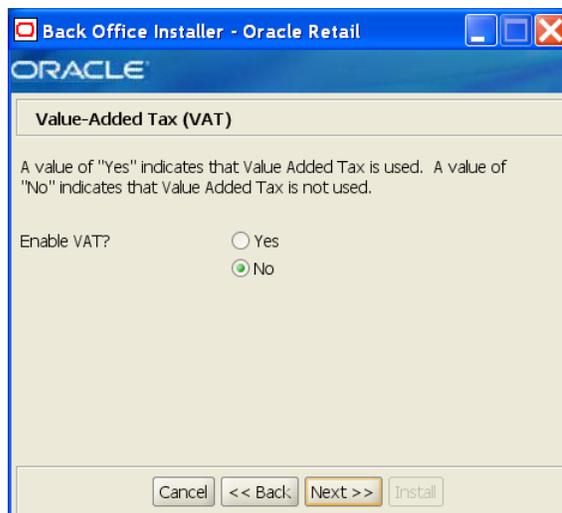


The fields on this screen are described in the following tables.

| 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 | |

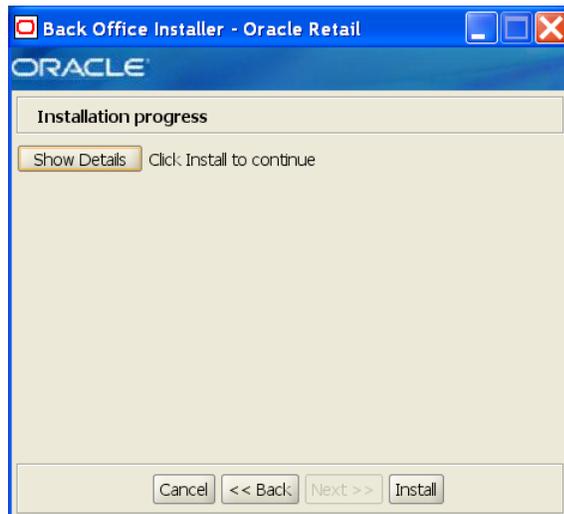
Figure A-17 Value-Added Tax (VAT)



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">■ To enable Back Office to use VAT, choose Yes.■ To not use VAT, choose No. |
| Example | No |
| Notes | |

Figure A-18 *Installation Progress*



B

Appendix: Back Office Application Installer Screens for the IBM Stack

You need the following details about your environment for the installer to successfully deploy the Back Office application, or the Back Office application with the Labels and Tags module, 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.

Note: When installing the Back Office application with the Labels and Tags module, the title on the installer screens is Labels and Tags Installer. The content of the screens is the same for either installer.

Figure B-1 Introduction

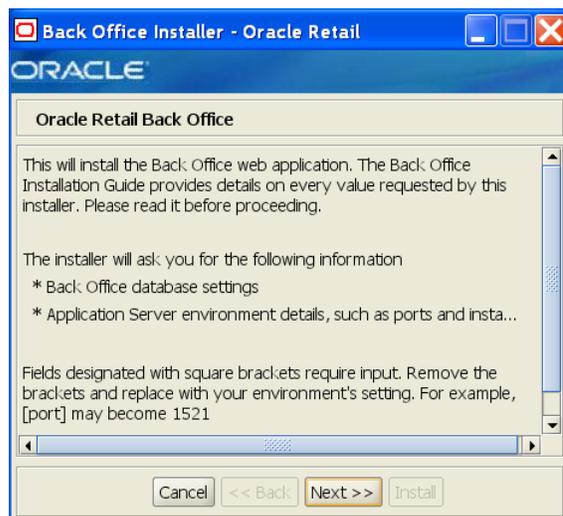


Figure B–2 Requirements

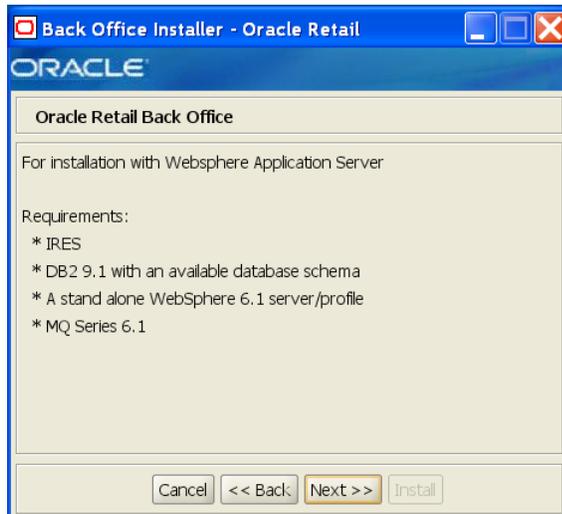
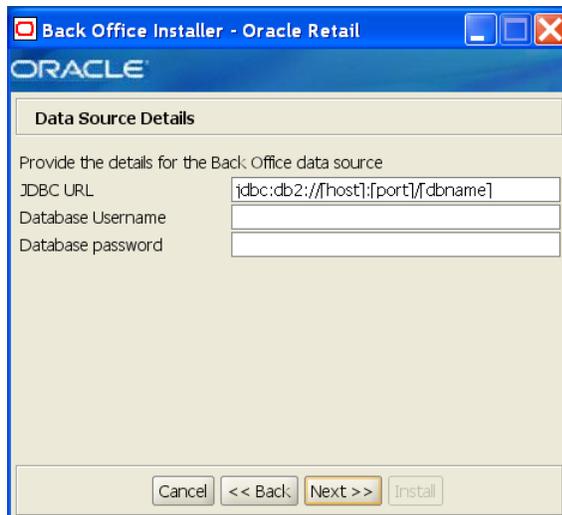


Figure B–3 Data Source Details



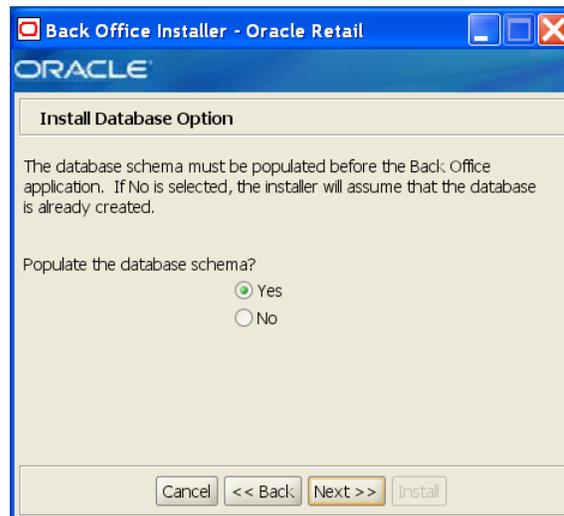
The fields on this screen are described in the following tables.

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

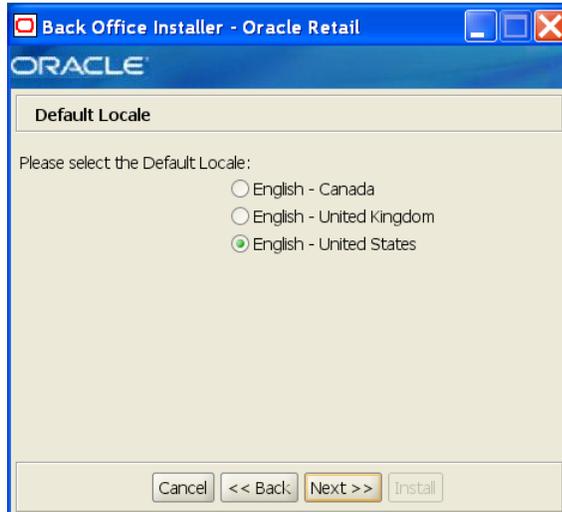
Figure B-4 Install Database Option



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 WebSphere 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 " Populate the Database Schema " in Chapter 3 for the manual steps you need to perform after the installer completes. |
| Example | Yes |
| Notes | |

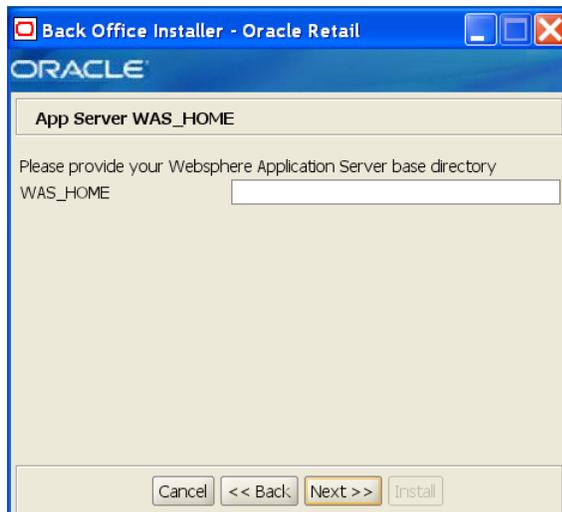
Figure B-5 Default Locale



The 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 - United States |
| Notes | |

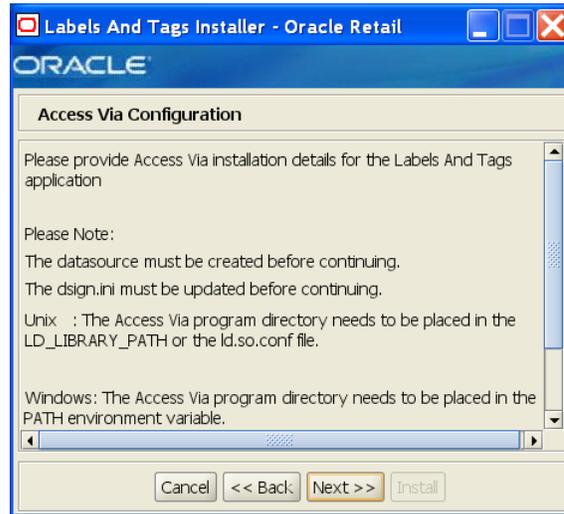
Figure B-6 App Server WAS_HOME



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 Access Via Configuration

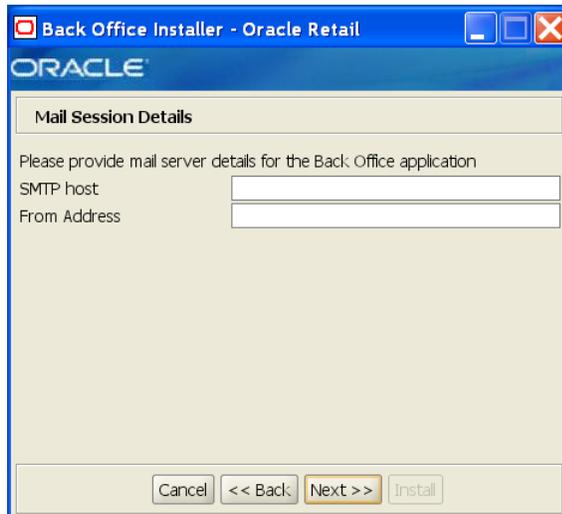


This screen is only displayed when installing Oracle Retail Back Office with the Labels and Tags module. The fields on this screen are described in the following tables.

| | |
|--------------------------|-----------------------------|
| Field Title | dJava.jar Path |
| Field Description | Path to the dJava.jar file. |
| Example | /opt/accessvia/dJava.jar |
| Notes | |

| | |
|--------------------------|--|
| Field Title | dsign.ini Path |
| Field Description | Path to the AccessVia Print Engine configuration file. |
| Example | /opt/accessvia/program/dsign.ini |
| Notes | |

Figure B-8 Mail Session Details

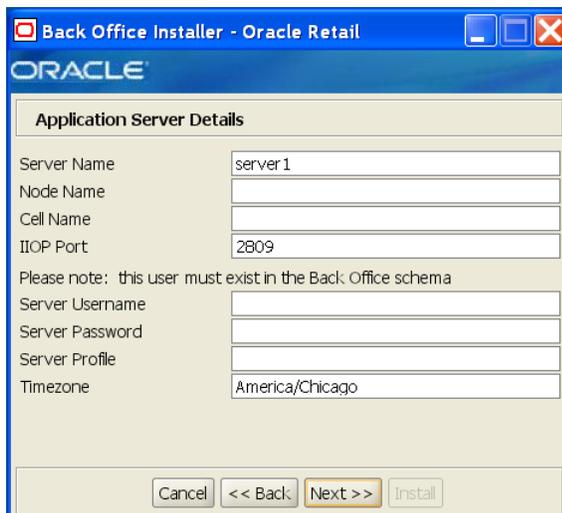


The fields on this screen are described in the following tables.

| 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 Back Office. |
| Example | donotreply@mycompany.com |
| Notes | |

Figure B-9 Application Server Details



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

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

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

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

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

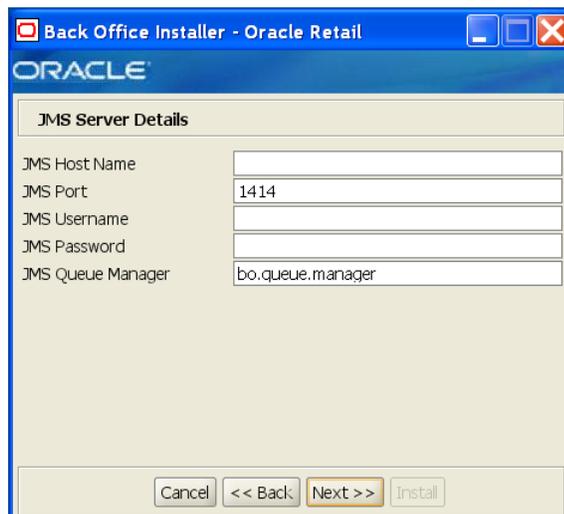
| Field Title | Server Username |
|--------------------|---|
| Field Description | User name for the WebSphere server. This user must exist in the Back Office schema. |
| Example | myuser |
| Notes | |

| 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-10 JMS Server Details



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

| Field Title | JMS Host 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 | |

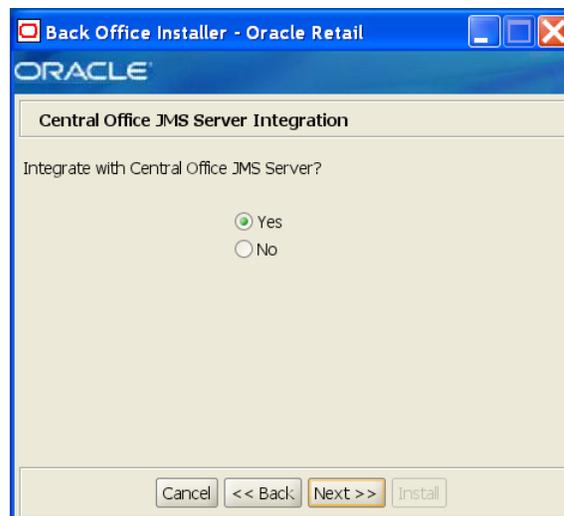
| Field Title | JMS Port |
|-------------------|-------------------------------------|
| Field Description | Port number used by the JMS server. |
| Example | 1414 |
| Notes | |

| Field Title | JMS Username |
|-------------------|---|
| Field Description | User name for the JMS server. This user must exist in the Back 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 | bo.queue.manager |
| Notes | |

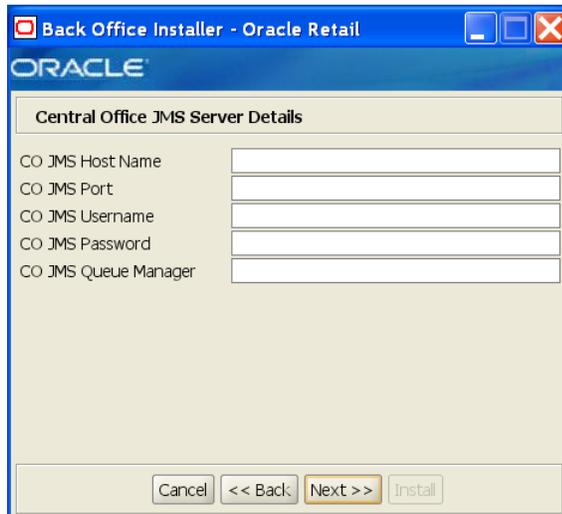
Figure B-11 Central Office JMS Server Integration



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 B-12 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. 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 | Server1 |
| Notes | |

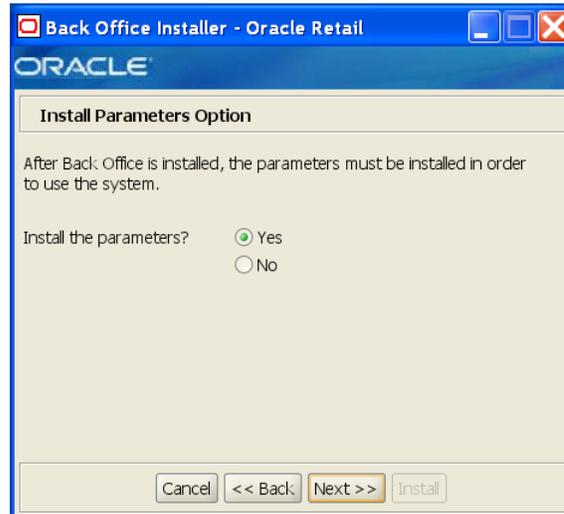
| Field Title | CO JMS Server Port |
|-------------------|--|
| Field Description | Port number used by the Central Office JMS server. |
| Example | 1414 |
| Notes | |

| Field Title | CO JMS Username |
|-------------------|---|
| Field Description | User name for the Central Office JMS server. This user must exist in the operating system where Central Office is running and the user must be in the <code>mqm</code> group. |
| Example | myuser |
| Notes | |

| Field Title | CO JMS Password |
|-------------------|--|
| Field Description | Password for the user name entered in the CO JMS Username field. |
| Example | mypassword |
| Notes | |

| | |
|--------------------|---|
| Field Title | CO JMS Queue Manager |
| Field Description | Name of the Central Office JMS queue manager. |
| Example | co.queue.manager |
| Notes | |

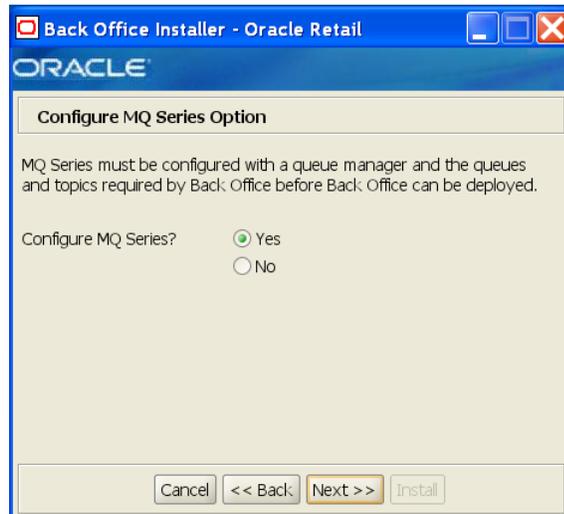
Figure B-13 *Install Parameters Option*



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

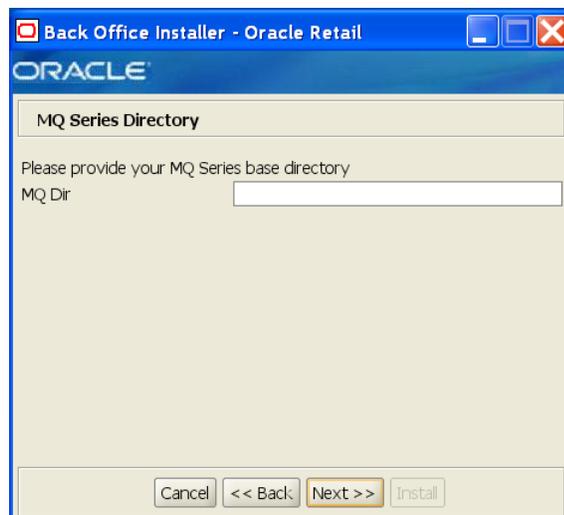
Figure B–14 Configure MQ Series Option



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 Back Office before Back 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 | |

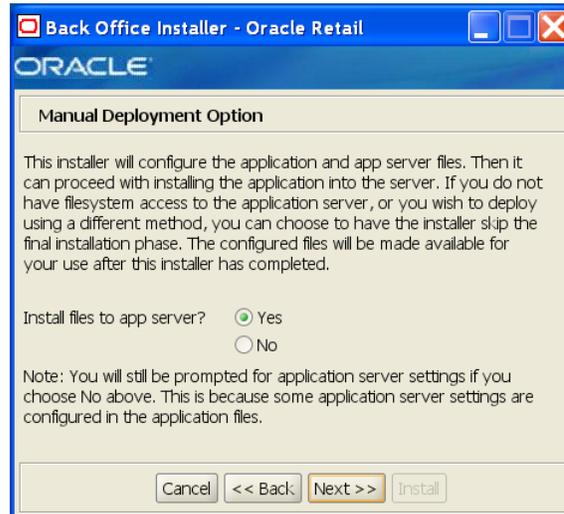
Figure B–15 MQ Series Directory



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 | |

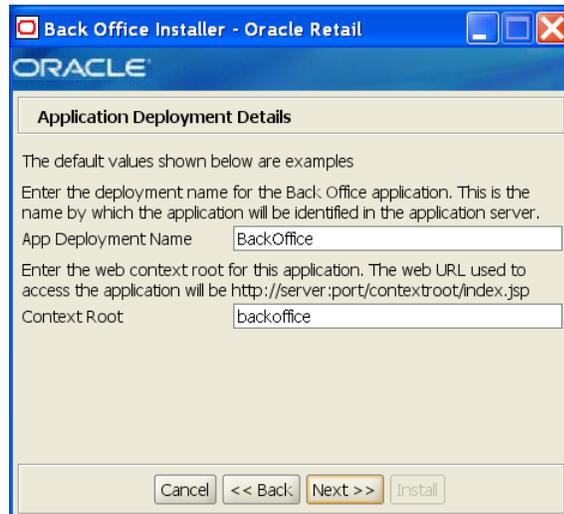
Figure B–16 Manual Deployment Option



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-17 Application Deployment Details

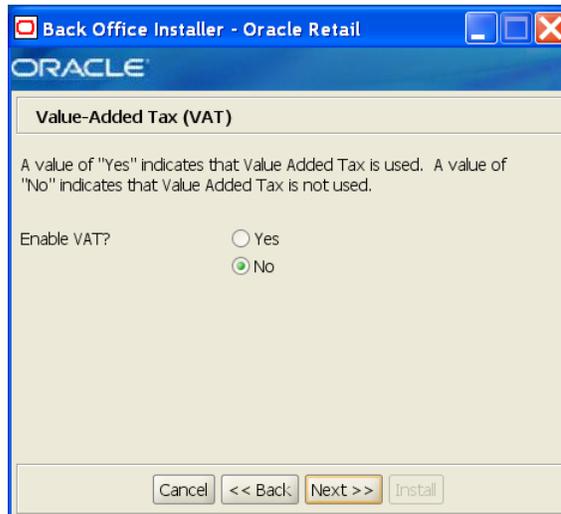


The fields on this screen are described in the following tables.

| 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 http://host:port/backoffice/index.jsp. |
| Example | backoffice |
| Notes | |

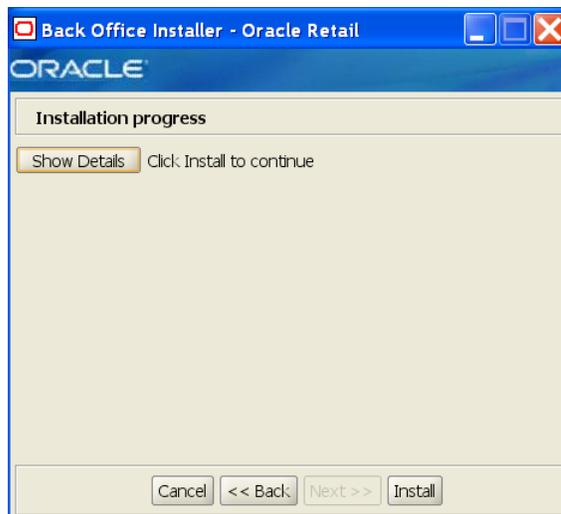
Figure B-18 Value-Added Tax (VAT)



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">■ To enable Back Office to use VAT, choose Yes.■ To not use VAT, choose No. |
| Example | No |
| Notes | |

Figure B-19 Installation Progress





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](#).

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/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`

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 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 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\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 `backofficeDBInstall.jar` file.

```
jar -xvf backofficeDBInstall.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 Back Office installation.
 - f. To enable VAT functionality, uncomment the `tax.enableTaxInclusive` property in the tax properties section.
7. 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`, `test_data`, and `load_reports`
 - `seed_data`: loads seed data
 - `test_data`: loads test data
 - `load_reports`: loads report data

For example: `ant load_sql`

To specifically load the report data, use the following command:

```
ant -f db.xml load_reports
```

Configuring the AccessVia Files for Oracle Application Server

To configure the files for the application server:

1. Copy `dJava.jar` to the `<AccessVia_install_dir>` directory and to the `%ORACLE_HOME%\j2ee\home\applib` directory.
2. Copy the `<AccessVia_install_dir>\program\dsign.ini` file to the `%ORACLE_HOME%\j2ee\home` directory.
3. Copy the dll files from `<AccessVia_install_dir>\program\` into `%ORACLE_HOME%\opmn\bin`.

Loading the Initial Data for Labels and Tags

This step is performed after configuring and testing the AccessVia print engine. To load the initial data, use `ant init_labels`. Verify the data load by printing a sample item label.

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 `build.xml` file.
4. Run the ant `load_reports` target in the `build.xml` file.
5. Restart the Back Office application.
6. Run the ant `load_parameters` target in the `build.xml` file.
7. If the Labels and Tags module is installed, run the ant `init_labels` 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.

