Oracle® Retail Back Office

Installation Guide, Volume 2 - IBM Stack

Release 13.4

E25261-01

December 2011

ORACLE®

Oracle Retail Back Office Installation Guide, Volume 2 - IBM Stack, Release 13.4

E25261-01

Primary Author: Bernadette Goodman

Value-Added Reseller (VAR) Language

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Contents

Send Us Your Comments xi

Preface xiii

Audience xiii
Documentation Accessibility xiii
Related Documents xiv
Customer Support xiv
Review Patch Documentation xv
Oracle Retail Documentation on the Oracle Technology Network xv
Conventions xv

1 Preinstallation Tasks

Check for the Current Version of the Installation Guide 1-1
Determine the Back Office Distribution 1-2
Check Supported Database Server Requirements 1-2
Required Setting for Database Installation 1-2
Check Supported Application Server Requirements 1-2
Check for SSL Certificate 1-3
Check that the Fonts Needed for Reports are Installed 1-3
Check Oracle Retail Software Dependencies 1-3
Check Third-Party Software Dependencies 1-3
Check Additional Oracle Technologies 1-4
Check Supported Client PC and Web Browser Requirements 1-4
Hardware Requirements 1-4
Implementation Guidelines for Security 1-4
Uptake Installation 1-5

2 Secure Configuration

Operating System 2-1
Additional Resource 2-2
Infrastructure/Middleware 2-2
Database 2-2
Application Server 2-2
Messaging 2-2

Network Considerations 2-3
Oracle Retail POS Suite Application Configuration 2-3
Technology Considerations 2-3
Wireless Technology 2-3
Application Specific Settings 2-3
Application Runtime Settings 2-4
Application Parameters 2-4
Temporary Password Length 2-4
Database Configuration 2-5
Integration with Other Applications 2-5
Scripts and Command Line Utilities 2-5
Purge Scripts 2-5

3 Installation of the IBM Stack on SLEPOS

Create the Database Schema Owner and Data Source Users 3-1
Expand the Back Office Distribution 3-2
Obtain Third-Party Library Files Required by Back Office 3-3
Set Up for Integration with Central Office and Returns Management 3-3
Enable Data Import 3-3
Oracle Configuration Manager 3-4
Installation Options 3-4
Database Install Options 3-4
Manually Create the Database Schema 3-5
Secure the JDBC for the IBM DB2 Database 3-6
Set up the JMS SSL Key Store 3-7
Install the Java Cryptography Extension (JCE) 3-7
Configure AccessVia for Labels and Tags 3-7
Run the Back Office Application Installer 3-8
Resolve Errors Encountered During Application Installation 3-8
Configure IBM WebSphere MQ 3-9
Manual Deployment of the Back Office Application 3-10
Install Parameters 3-10
Import Initial Parameters 3-11
Import Parameters Through the User Interface 3-11
Import Parameters by using an Ant Target 3-11
Load Templates for Labels and Tags 3-12
Load Optional Purge Procedures 3-12
Using the Back Office Application 3-12

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

Creating the AccessVia Print Engine .ini File 4-2
Configuring the Database for the AccessVia Print Engine 4-2
Configuring for IBM WebSphere 4-2
Adding Multiple Printers 4-4
Updating the AccessVia License File 4-4
Back Office Installation 4-5

Updating or Creating Templates 4-5
Configuring Multiple Printers 4-6
Testing the AccessVia Print Engine 4-6
AccessVia Print Engine .ini File 4-6
.ini File Settings 4-6
.ini File Example 4-7
Setting up a USB Printer in a Network 4-10
Troubleshooting Labels and Tags Problems on the IBM Stack 4-11

A Appendix: Installer Screens for the IBM Stack

B Appendix: Installer Silent Mode

C Appendix: Reinstalling Back Office

Reinstalling Back Office on the IBM Stack C-1

D Appendix: URL Reference

URLs for the IBM Stack D-1
JDBC URL for a Database D-1
JNDI Provider URL for an Application D-1

E Appendix: Common Installation Errors

Unreadable Buttons in the Installer E-1

F Appendix: Troubleshooting

Deployment Failure F-1

G Appendix: Labels and Tags

Importing Templates Larger than 4 MB G-1

H Appendix: Installation Order

Enterprise Installation Order H-1

List of Figures

A–1 Introduction A-1
A–2 Oracle Customer Information A-2
A–3 Oracle Customer Information A-3
A–4 Requirements A-3
A–5 License Agreement A-4
A–6 Supported Languages A-5
A–7 Enter Default Locale A-6
A–8 Integrate Applications A-7
A–9 Database Owner A-8
A–10 Data Source User A-9
A–11 Enable Secure JDBC A-10
A–12 Data Source SSL Configuration A-11
A–13 Enable DIMP A-12
A–14 DIMP Configuration A-13
A–15 Database Install Options A-14
A–16 Sample Dataset A-15
A–17 Back Office Administrator User A-16
A–18 Cryptology Settings A-17
A–19 Enter Store ID A-18
A–20 App Server WAS_HOME A-19
A–21 AccessVia Configuration A-20
A–22 Mail Session Details A-21
A–23 Application Server Details A-22
A–24 JMS Server Details A-23
A–25 Select JMS SSL Level A-24
A–26 Filter Based on Distinguished Name A-25
A–27 Distinguished Name Filter A-26
A–28 Central Office JMS Server Details A-27
A–29 Returns Management JMS Server Details A-28
A–30 Configure WebSphere MQ Option A-29
A–31 WebSphere MQ Directory A-30
A–32 JMS SSL Keystore Passwords A-31
A–33 Manual Deployment Option A-33
A–34 Application Deployment Details A-34
A–35 Install Parameters Option A-35
A–36 Load Templates Option A-36
A–37 Sample Template Data A-37
A–38 Value-Added Tax (VAT) A-38
A–39 Turn Off the Application Server's Non-SSL Port A-39
A–40 Logging Detail Options A-40
A–41 Installation Progress A-41
A–42 Installation Complete A-41

List of Tables

1–1 Database Server Requirements 1-2
1–2 Application Server Requirements 1-2
1–3 Labels and Tags Requirements 1-3
1–4 Supported Oracle Retail Products 1-3
1–5 Additional Oracle Technologies 1-4

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Oracle Retail Back Office Installation Guide, Volume 2 - IBM Stack, Release 13.4

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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 Online Documentation available on the Oracle Technology Network Web site. 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 http://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

Documentation Accessibility

Our goal is to make Oracle products, services, and supporting documentation accessible to all users, including users that are disabled. To that end, our documentation includes features that make information available to users of assistive technology. This documentation is available in HTML format, and contains markup to facilitate access by the disabled community. Accessibility standards will continue to evolve over time, and Oracle is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For more information, visit the Oracle Accessibility Program Web site at http://www.oracle.com/accessibility/.

Accessibility of Code Examples in Documentation

Screen readers may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, some screen readers may not always read a line of text that consists solely of a bracket or brace.

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Oracle customers have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/support/contact.html or visit http://www.oracle.com/accessibility/support.html if you are hearing impaired.

Related Documents

For more information, see the following documents in the Oracle Retail Back Office Release 13.4 documentation set:

- *Oracle Retail Back Office Installation Guide, Volume 1 - Oracle Stack*
- *Oracle Retail Back Office Release Notes*
- *Oracle Retail Back Office User Guide*
- *Oracle Retail POS Suite Configuration Guide*
- *Oracle Retail POS Suite Data Dictionary*
- *Oracle Retail POS Suite Data Model Differences*
- *Oracle Retail POS Suite Data Model ERWIN File*
- *Oracle Retail POS Suite Data Model Mapping File*
- *Oracle Retail POS Suite Entity Relationship Diagrams, Volume 1 - Subject Areas*
- *Oracle Retail POS Suite Entity Relationship Diagrams, Volume 2 - Overviews*
- *Oracle Retail POS Suite Implementation Guide, Volume 1 - Implementation Solutions*
- *Oracle Retail POS Suite Implementation Guide, Volume 2 - Extension Solutions*
- *Oracle Retail POS Suite Implementation Guide, Volume 4 - Oracle Retail Point-of-Service to Siebel Integration*
- *Oracle Retail POS Suite Licensing Information*
- *Oracle Retail POS Suite Operations Guide*
- *Oracle Retail POS Suite Security Guide*
- *Oracle Retail POS Suite 13.4/Merchandising Products Implementation Guide*

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, 13.4) or a later patch release (for example, 13.4.1). 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.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

1

Preinstallation Tasks

This chapter describes the requirements for the IBM stack that must be met before Oracle Retail Back Office can be installed.

> **Note:** This is the IBM stack configuration that was tested for this release. While Back Office may work in other configurations, this configuration was tested.

If you will be installing multiple Oracle Retail applications, see Appendix H for a guideline for the order in which the applications should be installed.

Check for the Current Version of the Installation Guide

Corrected versions of Oracle Retail installation guides may be published whenever critical corrections are required. For critical corrections, the rerelease of an installation guide may not be attached to a release; the document will simply be replaced on the Oracle Technology Network Web site.

Before you begin installation, check to be sure that you have the most recent version of this installation guide. Oracle Retail installation guides are available on the Oracle Technology Network at the following URL:

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

An updated version of an installation guide is indicated by part number, as well as print date (month and year). An updated version uses the same part number, with a higher-numbered suffix. For example, part number E123456-**02** is an updated version of an installation guide with part number E123456-**01**.

If a more recent version of this installation guide is available, that version supersedes all previous versions. Only use the newest version for your installation.

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.

Note: The Labels and Tags module requires AccessVia software.

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 Supported Database Server Requirements

Table 1–1 lists the general requirements for a database server running Oracle Retail Back Office and the versions supported for this release.

Table 1–1 Database Server Requirements

Supported on	Versions Supported
Operating System	IBM SLEPOS 11 SP1
Database	IBM DB2 9.7 (64-bit) from WRS 7.1 Standard Edition

Required Setting for Database Installation

During database creation, the database must be set to UTF8.

Check Supported Application Server Requirements

Table 1–2 lists the general requirements for an application server capable of running Back Office and the versions supported for this release.

Table 1–2 Application Server Requirements

Supported on	Version Supported
Operating System	IBM SLEPOS 11 SP1
J2EE Application Server	IBM WebSphere ND 7.0.0.15 from WRS 7.1 Standard Edition
J2EE Application Server JVM	IBM JRE 1.6
Messaging Provider	IBM WebSphere MQ 7.0.1.4 from WRS 7.1 Standard Edition
System Management Agent	IBM WebSphere Admin Console 7.0.0.15

Note: Back Office does not support a clustered environment.

Table 1–3 lists the general requirements for Labels and Tags and the versions supported for this release. This software is only needed if Back Office with the Labels and Tags module is being installed.

Table 1–3 Labels and Tags Requirements

Supported on	Version Supported
Print Engine for Labels and Tags	AccessVia 8.5 (includes the GD graphics library 2.0.0, POCO Foundation libraries, and Xerces 2.8.0)
Client software	IBM DB2 9.7 (includes unixODBC 2.3.0)

Check for SSL Certificate

Oracle Retail Back Office is accessed through a secure HTTP connection. The installation of an SSL Certificate is required on your application server. If the certificate is not installed, warnings are displayed when trying to access Oracle Retail Back Office.

For information on installing the SSL Certificate, refer to your application server documentation.

Check that the Fonts Needed for Reports are Installed

To correctly export reports from Oracle Retail Back Office to a PDF file, any fonts used in the PDF must exist in the application server JVM. To install fonts to the application server:

1. Stop the application server.
2. Copy any needed fonts to the library folder of the JRE used by the application server. The following is an example of the path name to the folder:

   ```
   <IBM WebSphere installation directory>/jdk/jre/lib/fonts
   ```

3. Start the application server.

Check Oracle Retail Software Dependencies

Table 1–4 lists the Oracle Retail products that Oracle Retail Back Office is integrated with and the required versions.

Table 1–4 Supported Oracle Retail Products

Integrates with	Version
Oracle Retail Central Office	13.4
Oracle Retail Point-of-Service	13.4
Oracle Retail Returns Management	2.4

Check Third-Party Software Dependencies

The `db2jcc.jar` and `db2jcc_license_cu.jar` files must be obtained from your IBM DB2 database server. For more information, see "Obtain Third-Party Library Files Required by Back Office" in Chapter 3.

Check Additional Oracle Technologies

Table 1–5 lists the Oracle technologies used by Oracle Retail Back Office and the required versions.

Table 1–5 Additional Oracle Technologies

Integrates with	Version
Oracle Business Intelligence Publisher for Retail Back Office	10.1.3.4 **Note:** This software is included in the Back Office distribution.

Check Supported Client PC and Web Browser Requirements

The general requirements for the client system include Adobe Acrobat Reader or another application capable of rendering Portable Data Format (PDF) files.

The following Web browsers are supported on Microsoft Windows XP SP2:

- Microsoft Internet Explorer 7
- Mozilla Firefox 3.6

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.

Implementation Guidelines for Security

Note: It is recommended that the passwords for key stores and trust stores are changed from the values set by default.

For information on implementing security, see the *Oracle Retail POS Suite Security Guide*. This guide describes specific security features and implementation guidelines for the POS Suite products.

Uptake Installation

This installation guide details the steps needed to perform a full installation of Oracle Retail Back Office Release 13.4. An uptake of Oracle Retail Back Office from the following releases to Release 13.4 can be done:

- Oracle Retail Back Office Release 12.0.0
- Oracle Retail Back Office Release 12.0.9
- Oracle Retail Back Office Release 13.0.1
- Oracle Retail Back Office Release 13.0.2
- Oracle Retail Back Office Release 13.1.1
- Oracle Retail Back Office Release 13.3.0

> **Note:** Uptake from Release 13.2.0 is not supported. Installation on the IBM stack was not supported for Release 13.2.0.

To assist in the uptake of Oracle Retail Back Office from one of these releases to Release 13.4, tools are available on My Oracle Support.

The following document is available through My Oracle Support. Access My Oracle Support at the following URL:

https://support.oracle.com

Oracle Retail Upgrade Guide **(Doc ID: 1073414.1)**

This guide contains the following information:

- List of the impacts of the Release 13.4 functional changes on the database schema.
- Description of the tools available to assist in the uptake of the database and code.

2

Secure Configuration

This chapter serves as a guide for administrators and anyone installing the product to securely configure Oracle Retail Back Office. To see a broader spectrum of security-related best practices for this application, see the *Oracle Retail POS Suite Security Guide*.

> **Note:** All the Oracle Retail POS Suite applications should follow the same practices for configuring a secure environment.

This chapter is intended for security administrators and anyone installing the products who will deploy and configure the Oracle Retail POS Suite applications. These users perform the following tasks:

- Install and deploy the applications
- Configure the applications
- Apply patches to the applications

It is assumed that the readers of this chapter have a general knowledge of administering the underlying technologies and the Back Office application.

The chapter begins with the operating system and moves through the supporting middleware to the Back Office application, and its connections with other resources.

> **Note:** The options set by default for the installer are the most secure selection. If you choose to not use any of the default selections, you need to consider the implications of that change on the security of your installed product.

Any references to Payment Card Industry Data Security Standard (PCI-DSS) requirements are from PCI-DSS version 2.0.

Operating System

To see the operating systems and browsers supported for this release of Back Office, see Chapter 1.

The Release 13.4 Oracle Retail POS Suite applications do not rely on insecure services or protocols. If the retailer or systems integrator customizes or extends the applications, these extensions must not rely on insecure services or protocols.

For more information about securing services and protocols, see the *Oracle Retail POS Suite Security Guide*.

Additional Resource

The Center for Internet Security has published benchmarks for securing your systems at the operating system level. You can find the benchmark for SUSE Linux (SLEPOS) at the following link:

http://benchmarks.cisecurity.org/en-us/?route=downloads.browse.category.benchmarks.os.linux.suse

Infrastructure/Middleware

To see the database and application server supported for this release of Back Office, see Chapter 1.

Database

For recommendations on securing the database as well as JDBC communications between the POS Suite applications and the database, see the *Oracle Retail POS Suite Security Guide*.

Do not store sensitive data on Internet-accessible systems. For example, your Web server and database server must not be on the same physical server. Oracle Retail POS Suite applications do not require the database server and Web server to be hosted on the same physical server machine.

For information about secure configuration of IBM DB2, see the *IBM DB2 9.7 Database Security Guide* at the following Web site:

ftp://public.dhe.ibm.com/ps/products/db2/info/vr97/pdf/en_US/DB2Security-db2sece971.pdf

Application Server

For information about secure configuration of IBM AIX Application Server, see the following documentation available at the following Web site:

- *WebSphere Application Server V7.0 Security Guide*:

  http://www.redbooks.ibm.com/abstracts/sg247660.html

- WebSphere Application Server V7 Advanced Security Hardening:

  http://www.ibm.com/developerworks/websphere/techjournal/1004_botzum/1004_botzum.html?ca=drs-

  http://www.ibm.com/developerworks/websphere/techjournal/1005_botzum/1005_botzum.html

Messaging

Secure JMS messaging configuration is specific to the application server. For information about securing the JMS messaging, see the *Oracle Retail POS Suite Security Guide*.

The Release 13.4 Oracle Retail POS Suite applications do not permit a user to send unencrypted sensitive data by end-user messaging technologies, such as e-mail. If you customize an application to permit sending sensitive data, by end-user messaging technologies, you must use a solution that renders the sensitive data unreadable or implements strong cryptography.

Back Office can send notifications of the results of a scheduled job to a designated e-mail address. The e-mail contains the job name entered by the end user. Therefore, the user must take care that the scheduled job name does not contain sensitive data.

Network Considerations

For recommendations on securing the network and other enterprise security considerations, see the *Oracle Retail POS Suite Security Guide*.

Oracle Retail POS Suite Application Configuration

This section covers secure configuration that is recommended for all Oracle Retail POS Suite applications.

Technology Considerations

These technologies should be considered.

Wireless Technology

Oracle Retail POS Suite applications are not designed as wireless applications. If wireless technology is used, you must adhere to PCI-DSS compliant wireless settings, per PCI-DSS Requirements 1.2.3, 2.1.1, and 4.1.1.

Application Specific Settings

The Release 13.4 Oracle Retail POS Suite applications enable out-of-the-box audit logging by default. These logs should not be disabled.

Application log files are configurable. If you modify the settings, you must ensure they are compliant with PCI-DSS requirements 10.2 and 10.3.

The POS Suite applications implement automated audit trails for all system components to reconstruct the following events:

- All actions taken by any individual with administrative privileges as assigned in the application
- Access to application audit trails managed by or within the application
- Invalid logical access attempts
- Use of application's identification and authentication mechanisms
- Initialization of the application audit logs
- Creation and deletion of system-level objects within or by the application

The Release 13.4 Oracle Retail POS Suite applications implement an automated audit trail logging of various events happening on the system. The audit trail logging is configured in the log4j configuration file maintained for each application. The various events that need to be logged and the file where the audit logging information will be captured are configured in the log4j configuration file.

Caution: Do not comment out any of the entries or prevent the logging from occurring.

For each event, the Oracle Retail Audit log service logs the point of Origination of the event. In addition, the audit log framework logs the Initialization of the Audit log itself.

The log files are created with the following names and in following locations:

File Name: BackOffice_audit.log

Location:

`$WAS_HOME/profiles/<Profile Name>/logs`

The following events should be captured at the system level:

- Login or logoff
- Start or stop a process
- Use of user rights
- Account administration
- Change the security policy
- Restart and shut down the system
- USB events and Mount andUnmount events
- Access a file or directory (create a file, remove a file, read a file, or change file descriptors)

Various tools are available to collect audit trail information. Audit trails should be maintained for the applications and for external system events.

Application Runtime Settings

After installation, these settings should be used.

Application Parameters

Set these application parameters before running Back Office.

Temporary Password Length The Temporary Password Length parameter is used to determine the length of system generated temporary passwords. This parameter resides in the application XML parameter file.

Caution: This parameter can be set to generate passwords to have a length between 7 and 12 characters. In order to comply with PCI-DSS section 8.5.10, the Oracle Retail POS Suite applications must not be modified to allow fewer than 7 characters.

Database Configuration Password policy settings are configured through the database. By default, the password policy is compliant with PCI-DSS section 8.5.

Caution: If you change the password policy, ensure the modified settings comply with the PCI-DSS.

Integration with Other Applications

The Oracle Retail POS Suite applications integrate through the use of Web services and Java RMI. For information about securing these interface protocols, see the *Oracle Retail POS Suite Security Guide*.

Scripts and Command Line Utilities

This section covers scripts and utilities used after installation.

Purge Scripts

The Release 13.4 Oracle Retail POS Suite applications come with stored procedures and scripts that permit a DBA to purge the databases of data that the retailer determines are no longer necessary to store. Access to these scripts should be restricted. For more information about the purge scripts, see the *Oracle Retail POS Suite Security Guide*.

3

Installation of the IBM Stack on SLEPOS

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

During installation, the Back Office database schema will be created and the Back Office application will be deployed. 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.

Create the Database Schema Owner and Data Source Users

The following recommendations should be considered for schema owners:

- Database administrators should create an individual schema owner for each application, unless the applications share the same data. In the case of Oracle Retail Back Office and Point-of-Service, the database schema owner are the same because these applications share a database.
- The schema owners should only have enough privileges to install the database.

For information on the best practices for passwords, see the *Oracle Retail POS Suite Security Guide*.

> **Note:** Do not delete the database schema owner after installation. When using Data Import (DIMP), the schema owner privileges are needed for DIMP processing which includes creating and dropping tables. For information on DIMP, see "Enable Data Import".

To create the database schema owner and database source users:

1. Log in using the database administrator user ID.
2. Create the schema owner user.

   ```
   CREATE SCHEMA <schema_name> AUTHORIZATION <schema_username>
   ```

3. Grant the privileges, shown in the following example, to the user.

   ```
   GRANT CREATETAB, BINDADD, CONNECT, IMPLICIT_SCHEMA ON DATABASE TO USER
   <schema_username>
   ```

4. Grant the following object level privileges to the schema owner user.

   ```
   GRANT CREATEIN, DROPIN, ALTERIN ON SCHEMA <schema_name> TO USER
   <schema_username> WITH GRANT OPTION
   ```

5. Create the data source user.

   ```
   CREATE SCHEMA <data_source_schema_name> AUTHORIZATION <data_source_username>
   ```

6. Grant the privileges, shown in the following example, to the data source user.

   ```
   GRANT CONNECT, IMPLICIT_SCHEMA ON DATABASE TO USER <data_source_username>
   ```

7. Grant the following object level privileges to the data source user.

   ```
   GRANT CREATEIN ON SCHEMA <data_source_schema_name> TO USER <data_source_
   username> WITH GRANT OPTION
   ```

The installer grants the data source user access to the application database objects. If you choose **No** on the Manual Deployment Option screen, you need to grant the access after the installer completes. For more information, see "Manual Deployment of the Back Office Application".

Expand the Back Office Distribution

To extract the Back Office files:

1. Extract the Back Office or Labels and Tags 13.4 distribution zip file.
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-13.4.zip` or `ORLAT-13.4.zip`), for example, `/tmp/orbo-staging`.

   Note: The staging directory (*<staging_directory>*) can exist anywhere on the system. It does not need to be under `tmp`.

3. Copy or upload `ORBO-13.4.zip` (or `ORLAT-13.4.zip`) to *<staging_directory>* and extract its contents. The following files and directories should be created under *<staging_directory>*`/ORBO-13.4`:

   ```
   ant\
   ant-ext\
   antinstall\
   backoffice\
   connectors\
   external-lib\
   installer-resources\
   ocm-integration\
   retail-public-security-api\
   .postinstall.cmd
   .postinstall.sh
   .preinstall.cmd
   .preinstall.sh
   .preinstall-oas.cmd
   .preinstall-oas.sh
   .preinstall-was.cmd
   .preinstall-was.sh
   .preinstall-wl.cmd
   .preinstall-wl.sh
   ```

```
antinstall-config.xml
build.xml
build-common.xml
build-common-backoffice.xml
build-common-easpi.xml
build-common-oas.xml
build-common-retailinv.xml
build-common-was.xml
build-common-webapps.xml
build-common-wl.xml
build-test.cmd
checkdeps.cmd
checkdeps.sh
install.cmd
install.sh
prepare.xml
retail-OCM-stores.zip
wallet.xml
```

For the remainder of this chapter, <*staging_directory*>/ORBO-13.4 is referred to as <*INSTALL_DIR*>.

Obtain Third-Party Library Files Required by Back Office

The Back Office application uses DB2 drivers from IBM. Before running the Back Office application installer, you must obtain the DB2 files from your database server.

1. Obtain the db2jcc.jar and db2jcc_license_cu.jar files from your database server at <*IBM_DB2_INSTALL_DIR*>.

   Note: The db2jcc_license_cu.jar file is needed to permit JDBC/SQLJ connectivity to the IBM DB2 database. The file is the standard license included with all editions of the IBM DB2 database.

2. Copy the jar files into <*INSTALL_DIR*>/external-lib/.

Set Up for Integration with Central Office and Returns Management

On the Integrate Applications screen, you select the applications that Oracle Retail Back Office is integrated with. See Figure A–8. If Central Office or Returns Management is selected on the screen, that application must be running in order for the Back Office files to be installed correctly. Before running the Back Office installer, verify that the application is running.

Enable Data Import

Data Import (DIMP) is used by external systems to send data bundles to Back Office for routine data loading of certain types of data. To use DIMP, you need to create a directory for the incoming bundles and a directory where the bundles are archived after being processed.

On the Enable DIMP installer screen, you select whether DIMP will be used. See Figure A–13. If **Yes** is selected on the screen, you then provide the paths to the directories on the DIMP Configuration installer screen. See Figure A–14.

For detailed information on DIMP, see the *Oracle Retail POS Suite/Merchandising Products Implementation Guide*.

Oracle Configuration Manager

The Oracle Retail OCM Installer packaged with this release installs the latest version of OCM.

The following document is available through My Oracle Support. Access My Oracle Support at the following URL:

`https://support.oracle.com`

***Oracle Retail Oracle Configuration Manager (OCM) Installer Guide* (Doc ID: 1071030.1)**

This guide describes the procedures and interface of the Oracle Retail Oracle Configuration Manager Installer that a retailer runs near the completion of its installation process.

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:

- "Database Install Options"
- "Manual Deployment of the Back Office Application"
- "Install Parameters"

For information on loading the templates for Labels and Tags, see "Load Templates for Labels and Tags".

Database Install Options

The database schema must be created and populated before configuring the application server. On the Install Database Option screen, you select whether the installer creates and populates the database schema or if you want to do this manually. See Figure A–15.

- If you choose **Create schema with sample dataset**, the installer creates and populates the database schema with sample data, such as item data. This is the default selection on the screen. The sample dataset includes the minimum dataset and report data. If you want data available to use for demonstrating Back Office functionality after installation, you can select this option.

  To use this option, you must provide the location of the zip file containing the sample dataset on the Sample Dataset installer screen. See Figure A–16. You can obtain the `sample-dataset-13.4.zip` file from the Oracle Software Delivery Cloud.

- If you choose **Create schema with minimum dataset**, the installer creates and populates the database schema with the minimum amount of data needed to launch and run Back Office. The minimum dataset includes report data. If you want to load your own data after installation, you can select this option.

- If you choose **Skip schema creation and data loading**, the installer does not create and populate the database schema. You choose this option if you want to create and populate the database schema manually. For information on manually creating and populating the database schema, see "Manually Create the Database Schema".

Note: If Back Office is being installed for the first time and a clean schema is being used, do not select the **Skip schema creation and data loading** option. The installer will fail at some point if there is no data available in the database. You must populate the database schema before running the installer by selecting one of the other options.

If the schema is already populated and you want to manually restore or update the data, select the **Skip schema creation and data loading** option.

Manually Create the Database Schema

To manually create and populate the database schema:

1. Change to the *<INSTALL_DIR>*/backoffice/configured-output/db directory.
2. Set the JAVA_HOME and ANT_HOME environment variables. You can use the JDK and Ant that are installed with the IBM WebSphere Application Server.

   ```
   JAVA_HOME=<WAS_INSTALL_DIR>/Java; ANT_HOME=<INSTALL_DIR>/ant; export JAVA_HOME
   ANT_HOME
   ```

3. 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
   ```

4. Modify db.properties.
   a. Uncomment the DB2 properties and comment out the properties for the other vendors.
   b. Set the following properties with your database settings. The values to be set are shown in bold in the examples.

      Set the hash algorithm, for example, to SHA-256.

      ```
      # Hash Algorithm
      inst.hash.algorithm=HASH_ALGORITHM
      ```

      Enter the values for the users in the following example:

      ```
      inst.app.admin.user=my-bo-admin-user
      inst.app.admin.password-encrypted=my-encrypted-bo-admin-password

      db.user=DB_USER_ID
      db.password-encrypted=DB_PASSWORD_ENCRYPTED

      db.owner.user=DB_OWNER_USER_ID
      db.owner.password-encrypted=DB_OWNER_PASSWORD_ENCRYPTED
      ```

The ant target will prompt for the passwords. Run the following ant target to encrypt the passwords:

```
ant -f db.xml encrypt-webapp-passwords
```

Enter the values for the URL used by the Back Office application to access the database schema. See Appendix D for the expected syntax:

```
db.jdbc-url=jdbc:db2://DB_HOST_NAME:DB_PORT_NUMBER/DB_NAME
```

Enter the value for the store ID shown in the following example:

```
configured.store.id=04241
```

Enter the value for the supported locales shown in the following example:

```
gen.locales=fr,zh
```

c. Set the host name and port number for the `parameters.apphost` property to point to your Back Office installation.

```
parameters.apphost=corbaloc:iiop:<hostname>:<iiop listenport>
```

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

e. If loading sample data, replace FILE_DATASET_SAMPLE with the full path and file name for the sample dataset zip file.

```
dataset.sample.zip=FILE_DATASET_SAMPLE
```

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

- load_sample: creates the database schema containing the sample dataset. The sample dataset includes the minimum dataset and report data.

  To use this option, you must provide the location of the zip file containing the sample dataset. You can obtain the `sample-dataset-13.4.zip` file from the Oracle Software Delivery Cloud.

- load_minimum: creates the database schema containing the minimum dataset. The minimum dataset includes report data.
- load_reports: loads report data.

For example: `ant load_sample`

To specifically load the report data, use the following command:
`ant -f db.xml load_reports`

Secure the JDBC for the IBM DB2 Database

On the Enable Secure JDBC screen, you select whether secure JDBC will be used for communication with the database. See Figure A–11. If **No** is selected and you want to manually set up the secure JDBC after the installer completes, see the Oracle Retail POS Suite Security Guide.

Set up the JMS SSL Key Store

Selecting US Strength or Export Strength on the Select JMS SSL Level screen requires that a CA certificate and Key Store are used for IBM WebSphere Application Server and WebSphere MQ. You can manually deploy the CA certificate and Key Store for IBM WebSphere Application Server and WebSphere MQ or you can have the installer perform the deployment.

The default alias is `myalias`.

To have the installer do the deployment, enter the details on the JMS SSL Keystore Details screen. See Figure A–32.

Note: The JMS SSL level must be the same for Back Office and Central Office.

If **Yes** is selected on the Filter Based on Distinguished Name screen, you enter the filter name on the Distinguished Name Filter screen. See Figure A–26 and Figure A–27. It is recommended that SSL certificates contain a distinguished name which follows the retailer's naming convention.

Install the Java Cryptography Extension (JCE)

If you are using US Strength for the JMS SSL level, you must update the security for your JRE. You need to obtain version 1.4.2+ of the Java Cryptography Extension (JCE) Unlimited Strength Jurisdiction Policy Files. The 1.4.2+ version for the JCE Unlimited Strength Encryption is compatible with the IBM Java6 JRE.

1. Make a backup copy of `local_policy.jar` and `US_export_policy.jar`.

   ```
   cd <WAS_INSTALL_DIR>/java/jre/lib/security
   mv local_policy.jar local_policy.jar.bak
   mv US_export_policy.jar US_export_policy.jar.bak
   ```

2. Download version 1.4.2+ of JCE.
   a. Go to the following Web site:

      `http://www.ibm.com/developerworks/java/jdk/security/50/`

   b. Click **IBM SDK Policy Files**. You are prompted to log in. You need an IBM ID, which you can request from the Sign in screen, in order to log in to this Web site.

   c. After you log in, follow the instructions to download the JCE.
3. Copy the `local_policy.jar` and `US_export_policy.jar` files into the JRE security directory. The files are bundled as `unrestricted.zip`.

Configure AccessVia for Labels and Tags

If you are installing Back Office with Labels and Tags, you must install and configure the AccessVia software before running the Back Office installer. See Chapter 4.

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 A.

1. Change to the *<INSTALL_DIR>* directory.
2. Set the JAVA_HOME environment variable to point to the Java in the IBM WebSphere application server, that is, *<WAS_INSTALL_DIR>*`/java`.

   Note: The installer is not compatible with versions of Java earlier than 1.6.

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 Linux server as a user who is authorized to install software.
   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: `orbo-install-app.<timestamp>.log`

   The installer leaves behind the `ant.install.properties` and `cwallet.sso` files for repeat installations.

Resolve Errors Encountered During Application Installation

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

For a list of common installation errors, see Appendix E.

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

Configure IBM WebSphere MQ

IBM WebSphere MQ must be configured with a queue manager and the JMS 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 IBM WebSphere MQ or if you manually configure it.

> **Note:** If IBM WebSphere MQ is installed on a different machine than IBM WebSphere Application Server, you must manually configure it.

Typically, when IBM WebSphere MQ is installed, a special user ID (usually `mqm`), and a user group (also `mqm`) are created in the operating system. The MQ installation files and directories have their owner and group set to the IBM WebSphere MQ user ID and group ID.

The user ID used for the Back Office installation, must be made a member of IBM WebSphere MQ's user group, before attempting to create the Back Office queue manager, queues, and topics. For example, if Back Office is installed as user `root`, then `root` must be made a member of the `mqm` group.

Use the runmqsc command to configure IBM WebSphere MQ. Set up the following variables in the <*INSTALL_DIR*>`/backoffice/appserver/was/createq.dat` file before running the command:

- `@mq.port@`
- `@configured_store_id@`

If Back Office is integrating with Central Office, set up the following variables:

- `@mq.co.queue.manager@`
- `@mq.co.host@`
- `@mq.co.port@`

If Back Office is integrating with Returns Management, set up the following variables:

- `@mq.rm.queue.manager@`
- `@mq.rm.host@`
- `@mq.rm.port@`

In the following command, `MQ_Install_Dir` is the directory where IBM WebSphere MQ was installed. The value for `<input.jms.server.queue>` comes from the `ant.install.properties` file.

```
<MQ_Install_Dir>/bin/runmqsc     <input.jms.server.queue> <
    <INSTALL_DIR>/backoffice/appserver/was/createq.dat
```

Manual Deployment of the Back Office Application

Skip this section if you chose the default option of allowing the installer to complete installation to the application server on the Manual Deployment Option screen. See Figure A–33.

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 deploy the Back Office ear file by following these steps:

- To deploy using the ant target:

  1. Update the following property in the `ant.install.properties` file.

     ```
     input.install.to.appserver = true
     ```

  2. Run the following ant target:

     ```
     install.sh ant init app-ear-deploy  -propertyfile ant.install.properties
     ```

- To deploy from the application server console, manually deploy the ear file from the following location:

  `<INSTALL_DIR>/backoffice/backoffice.ear`

  Note: When deploying the ear file, 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.

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".

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 POS Suite 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 after the installation is complete. 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*.

Import 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.

   `https://<your host name>:<port number/<context root>`

2. Log in to the application with a 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/configured-output/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/configured-output/db` folder.

Import 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. Set the host name and port number for the `parameters.apphost` property to point to your Back Office installation.

   `parameters.apphost=corbaloc:iiop:<hostname>:<iiop listenport>`

3. Set the JAVA_HOME and ANT_HOME environment variables.

   ```
   JAVA_HOME=<WAS_INSTALL_DIR>/java/jre
   ANT_HOME=<INSTALL_DIR>/ant
   ```

4. Execute the following command:

   ```
   $ANT_HOME/bin/ant load_parameters
   ```

Load Templates for Labels and Tags

To load the templates for Oracle Retail Labels and Tags, you must provide the location of the zip file containing the sample templates. You can obtain the `sample-template-13.4.zip` file from the Oracle Software Delivery Cloud.

Run the following command:

```
ant init_labels
```

Load Optional Purge Procedures

For information on how to invoke the procedures provided for purging aged data, see the *Oracle Retail POS Suite Operations Guide*.

To load the purge procedures:

1. Run the available Ant target to load the procedures.

   ```
   ant load_purge_procedures
   ```

2. Log in as the database schema owner, <*schema_username*>.
3. Create a user for running the purge procedures. This user should only have the privileges required to run the 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 `https://<servername>:<portnumber>/<context root>`

For example, https://myhost:9443/backoffice

4

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

This document also pertains to Oracle customers who have licensed Oracle Retail Signs in conjunction with Oracle Retail Labels and Tags. The Oracle Retail Labels and Tags product restricts printing not to exceed six square inches. To print a size greater than six square inches, the customer must license Oracle Retail Signs.

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.

The following libraries are required for using Labels and Tags. For the tested versions, see Chapter 1:

- AccessVia Print Engine
- IBM DB2 Client
- unixODBC
- Xerces libraries
- POCO Foundation libraries
- DB2 client libraries

Configuring the AccessVia Print Engine includes the following tasks:

- "AccessVia Print Engine .ini File"
- "Configuring the Database for the AccessVia Print Engine"
- "Configuring for IBM WebSphere"
- "Updating the AccessVia License File"
- "Testing the AccessVia Print Engine"
- "Adding Multiple Printers"

To troubleshoot printing problems, see "Troubleshooting Labels and Tags Problems on the IBM Stack".

For configuration changes needed when importing templates larger than 4 MB from Central Office to Back Office, see "Importing Templates Larger than 4 MB" in Appendix G.

Creating the AccessVia Print Engine .ini File

The AccessVia Print Engine requires an .ini file for configuration. An initial version of this file is found in `<staging_directory>/backoffice/lib/thirdparty/accessvia-8.5/accessvia_SLEPOS/dsign/program/dsign.ini`.

Updates to the .ini file are done as part of the configuration for the application server. For a description and example of this file, see "AccessVia Print Engine .ini File".

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 for IBM WebSphere

For the following steps, `<staging_directory>/backoffice/lib/thirdparty/accessvia-8.5/accessvia_SLEPOS` is referred to as `<ACCESSVIA_HOME>`.

To configure for IBM WebSphere:

1. Install unixODBC. Download the installer files.
    a. Download the `unixODBC-2.3.0.tar.gz` file from the following Web site:

       `http://www.unixodbc.org/`

    b. Copy the `unixODBC*.tar.gz` file to a location where you have permission to create files and directories.
    c. gunzip unixODBC*.tar.gz
    d. tar xvf unixODBC*.tar
    e. CFLAGS=-m32 LDFLAGS=-m32 ./configure -prefix=/usr/local/unixODBC
    f. make
    g. make install
2. Install the DB2 client and catalog the database for CLI. To catalog the database:
    a. db2 catalog tcpip node node1 remote *<database_host_name>* server *<database port_number>*

b. db2 catalog database *<database_name>* as *<database_alias_name>* at node node1

   The *<database_alias_name>* is used for DBALIAS in the dsign.ini file. See ".ini File Example".

c. Verify the steps:

   db2> list database directory

   db2> list node directory

3. Verify that unixODBC and the unixODBC driver are installed at /usr/lib/unixODBC.
4. Copy the *<ACCESSVIA_HOME>*/dsign folder to /usr/ on the SLEPOS server.
5. Copy the odbcinst.ini file from *<ACCESSVIA_HOME>*/usr/local/lib to /usr/local/lib on the SLEPOS server. Verify that the driver path is correct.
6. Copy the odbc.ini file from *<ACCESSVIA_HOME>*/root to /root on the SLEPOS server. Update the database related information.
7. Give executable permissions to all the .so files under /usr/dsign/program and /usr/dsign/program/lib.
8. Give executable permission to the dsign and *.sh files under /usr/dsign/program.
9. Create the following links. Open a command shell and run the following commands:

   Navigate to /usr/dsign/program/lib.

   a. ln -s libgd.so.2.0.0 libgd.so.2
   b. ln -s libgd.so.2 libgd.so
   c. ln -s libxerces-c.so.28.0 libxerces-c.so.28
   d. ln -s libxerces-c.so.28 libxerces-c.so
   e. ln -s libxerces-depdom.so.28.0 libxerces-depdom.so.28
   f. ln -s libxerces-depdom.so.28 libxerces-depdom.so
   g. ln -s libPocoFoundation.so.9 libPocoFoundation.so
   h. Give executable permission to all these files.

10. Edit .bashrc and verify that the paths are correctly set. There is a sample file at *<ACCESSVIA_HOME>*/root.
11. Encrypt the database password in the /usr/dsign/program/dsign.ini file:

    a. Update the DSN, DB alias, user ID, and password information for the database schema owner.

       Enter the password in clear text for the PWD property. The DSN is the ODBC data source name specified in the /root/.odbc.ini file copied over in Step 6. The DB alias is the *<database_alias_name>* entered in Step 2b.

       For information on the schema owner, see "Create the Database Schema Owner and Data Source Users" in Chapter 3.

These fields are highlighted in the following example.

```
CONNECTION=DSN=dvsus04;DBALIAS=dvsus04;UID=fbo1;PWD=dbpassword
USERID=fbo1
PWD=dbpassword
```

b. Verify the paths in the `../env.sh` script.

c. Run the `../env.sh` script.

d. To encrypt the password, run the following command:

```
./dsign -zdsign.ini -x"ENCRYPT_DSN()"
```

e. Verify that both occurrences of the password are encrypted. If only one of them is encrypted, copy it over to overwrite the clear text one.

12. Modify `PrinterName` and `PortSetting1` in the `dsign.ini` file to point to your network printer.

PrinterName=<Printer hostname>

PortSetting1=<Printer IP>

Adding Multiple Printers

To use multiple printers for printing labels and tags, add the printers to the *<INSTALL_DIR>*`/backoffice/templates/printers.properties` file. The instructions for adding printers are included in the file. This file is deployed to the application server by the installer.

Updating the AccessVia License File

Oracle Retail Labels and Tags is shipped with a demonstration license file for AccessVia. The demonstration license file needs to be replaced by a full-use production license file.

1. When a retailer purchases Oracle Retail Labels and Tags, Oracle requests the full-use production license file from AccessVia Support through e-mail. AccessVia returns the license file to Oracle within one business day.

The full-use production license file includes the user name and a license end date or an end date of perpetual.

2. Oracle provides the full-use production license file to the retailer or system integrator.

3. The retailer or system integrator updates the license file in the AccessVia installation. The file should be in the same folder as the dsign executable file, for example:

```
/usr/dsign/program/dsign.lic
```

Note: According to AccessVia, if the license file is transferred to a non-Windows platform, an ASCII transfer is required to maintain the correct file format.

Back Office Installation

After completing the above steps, run the installer. The following information is needed during the install:

- The paths to the `dJava.jar` and `dsign.ini` files are entered on the AccessVia Configuration installer screen. See Figure A–21. These files are found in the following locations:
  - `usr/dsign/program/djava.jar`
  - `usr/dsign/program/dsign.ini`
- On the Load Templates Options installer screen, you select whether to load the templates into the database. See Figure A–36. If you select Yes, you must provide the location of the zip file containing the sample templates on the Sample Template Data installer screen. You can obtain the `sample-templates-13.4.zip` file from the Oracle Software Delivery Cloud.

Updating or Creating Templates

Software is available, for example from AccessVia, that can be used to create and update templates. For more information, contact your integrator or implementation staff.

To create templates using designer:

1. Open the designer and create the template.
2. Look at the sample sqt (SALTEMPL.sqt) in the `sample-templates-13.4.zip` file. The sqt takes four input parameters (batchID, templateID, departmentID, locale). Make sure you define these inputs when creating new templates with customized queries to see the expected behavior.
3. To print the labels in an order from the application, add the following, for example, to the query: "ORDER BY CAST(ID_DPT_POS AS INT), ID_ITM".
4. Export the templates to csv files using the Export utility:
   a. In the Export Utility, select File | Export All Templates to Files.
   b. Select Delimited using as "~".
   c. Select First row contains column names.
   d. Select Surround values with and use "|".
   e. Select the location where these files will be created.
   f. Click **Ok**. Go to the location and verify the files.
5. Update this zip file with the new csv files, images, sqts, and fonts that are used during creating the templates.
6. Import the new templates into the application by either running the ant target (ant init_labels) or using the Back Office **Import Labels and Tags Template** import task. For information on the import task, see the *Oracle Retail Back Office User Guide*.

Configuring Multiple Printers

To use multiple printers for printing labels and tags:

1. To enable users to select from a list of printers on the Add Batch and Batch Detail screens, set up the Allow Multiple Printers parameter. For information on the parameter, see the *Oracle Retail POS Suite Configuration Guide*.
2. If you did not set up the list of printers before running the Back Office installer, add the printers in the `<WAS_PROFILE_DIR>/properties/printers.properties` file. The instructions for adding printers are included in the file.

Testing the AccessVia Print Engine

After the steps in "Configuring for IBM WebSphere" are completed and Back Office is installed, test the AccessVia Print Engine.

Note: The test program is intended to only be used with test data.

To test AccessVia for IBM WebSphere:

1. Stop the IBM WebSphere server.
2. Change to the `/usr/dsign/program` directory.
3. Run the `test_j.sh` test program. This file may need to be updated to meet your configuration.
   a. ../env.sh
   b. ./test_java.sh

   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.
4. Start the IBM WebSphere server.

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". For an example of an .ini file, see ".ini File Example".

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

.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. See the `System Setup` section for the paths.

  `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=<printer driver>`. Set to the printer driver, for example, POSTSCRIPT. The AccessVia Print Engine prefers PostScript printers to PCL printers.
  - `PrinterName=<printer name>`. Set to your printer name or use the default printer name.
  - `PortSetting1=<IP address>`. Set to the IP address of your printer.
  - `PortSetting2=<port number>`. Set to the port number of your printer.
- 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 Example

The following is an example of an .ini file.

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

```
ConnectRetry=2

;-------  DATABASE Connection Properties  -----------------------------
;[DATABASE]
;Enabled=True
;CONNECTION=DSN=ORLAT;DBALIAS=ORLAT;UID=owner;PWD=x($+&%o ,o*m(k&i$g"e
;userid=owner
;password=x($+&%o ,o*m(k&i$g"e
;SCHEMA_SYS=OWNER

;-------  DATABASE Connection Properties  -----------------------------
[DATABASE]
Enabled=True
DataDriver=ODBC
CONNECTION=DSN=dvsus04;DBALIAS=dvsus04;UID=fbo1;PWD=E%tw0@.>,<*:(8&6$4"2
USERID=fbo1
PASSWORD=E%tw0@.>,<*:(8&6$4"2
ConnectionPool=False
SCHEMA_SYS=fbo1

[STARTUP]
InitApp=No
RowsetStatus=Yes
RowsetRequired=No
InlineHTML=NO

;*** Folders Path Settings  ***
ExePath=/usr/dsign/program/
UserPath=/usr/dsign/program/
DataPath=/usr/dsign/data/
GraphicPath=/usr/dsign/images/
SystemPath=/usr/dsign/system/
FontPath=/usr/dsign/fonts/
WorkPath=/usr/dsign/program/

;*** Log Settings ***
; DebugMode Severity levels:
 FATAL/CRITICAL/ERROR/WARNING/NOTICE/INFORMATION/DEBUG/TRACE
DebugMode=ERROR
; Message Values: SILENT/VERBOSE/EXTENSIVE
MessageMode=SILENT
LoggerName=/usr/dsign/program/avdsign
LogChannel=TSVTextLog

;---------------- Printer Setup
;[AVPrintDefaults]
;*** Rendering Settings ***
PrintSpooler=
PrinterDriver=PS
PrinterName=AUSMFD5
SignOffset=1
BumpPageX=0.00
BumpPageY=0.00
; Optimization Values:
 NONE/FORMS/FORMAT/DATA/NOMACRO/NODOWNLOAD/HTMLBODY/HTMLHEAD/ENGINE
Optimization=NONE

;*** Output Settings ***
; OutputMode Values: DEFAULT/APPEND/NO OVERWRITE
OutputMode=DEFAULT
```

```
;PrintCopies=1
PaperTray=
; PrintDuplex Values: 0(User printer settings)/1(1-sided)/2(2-sided long
 edge)/3(2-sided short edge
PrintDuplex=0
; PrinterCopiesMode Values: YES(Job Copies)/NO(Sign Copies)/PAGE(Page Copies)
PrinterCopiesMode=NO
ReversePage=NO
PrintToFile=N
PrintFile=output.ps
CustomPaperSize=No

;*** Communication Settings ***
PrinterPort=WS:
PrinterIPAddress=10.143.200.65
PrinterIPPort=9100
PrinterCOMPortSettings=9600,n,8,1

;PortSetting1=10.143.200.65
;PortSetting2=9100
;PortSetting3=9600,n,8,1

;*** Other Settings ***
PageTotal=No

;*** Thermal and PS Settings ***
PrinterSettings1=
PrinterSettings2=
PrinterSettings3=

;----------------- Section for  LogChannel=TSVTextLog

--------------------------------------------------------------------------------
----------------
[TSVTextLog]
LogHeader =Date Application     Build   Host    Process Thread  Function
      File    Line    Priority        ID      Message
LogFormat =%Y-%m-%d %H:%M:%S.%c dSign Ver %v    %N      %P      %I      %V
  %F      %L      %p      %C      %t
LogFile   =avdsign.log

;*** Escape Settings ***
;---------------- Messaging and Errors
ErrorLog=avdsign.err
Debug=Yes

;----------------- Section for  LogChannel=TSVTextLog
--------------------------------------------------------------------------------
----------------
[TSVTextLog]
LogHeader =Date Application     Build   Host    Process Thread  Function
      File    Line    Priority        ID      Message
LogFormat =%Y-%m-%d %H:%M:%S.%c dSign Ver %v    %N      %P      %I      %V
     %F      %L      %p      %C      %t
LogFile   =avdsign.log

;*** Escape Settings ***
;---------------- Messaging and Errors
ErrorLog=avdsign.err
Debug=Yes
```

```
;----------------- Section for  LogChannel=TSVTextLog
--------------------------------------------------------------------------------
----------------
[TSVTextLog]
LogHeader =Date Application     Build   Host    Process Thread  Function
      File    Line    Priority        ID      Message
LogFormat =%Y-%m-%d %H:%M:%S.%c dSign Ver %v    %N      %P      %I      %V
 %F      %L      %p      %C      %t
LogFile   =avdsign.log

;*** Escape Settings ***
LogReplaceTab=<HT>
LogReplaceCR =<CR>
LogReplaceNL =


[FORMATS]
Enabled=False

[SYSTEM]
Enabled=False
```

Setting up a USB Printer in a Network

To set up the printer for printing labels:

1. Install the driver that was included with the printer on the device where the printer is connected.
2. Add an anonymous user.
   a. Open the Printer Properties for the printer.
   b. Select the **Security** tab.
   c. Click **Add**.
   d. Add the user—**ANONYMOUS LOGON**.
   e. Click **OK**.
3. Enable network access to the anonymous user.
   a. From the Control Panel, open **Administrative Tools**. Select **Local Security Policy**.
   b. Expand Local Policies. Select **Security Options**.
   c. Select **Network access: Let Everyone permissions apply to anonymous users**. In the window, select **Enabled** and then click **OK**.
4. Add the following printer settings to the `dsign.ini` file.

```
---------------- Printer Setup -------------------------
PrinterDriver=GDI
PrinterName=\\<printer_IP_address>\DYMO,WinPrint,USB002
PrinterPort=<port_number>
PrinterOptimizationType=NONE
PrintFile=output.ps
PrintToFile=No
PrintCopies=1
PrintMode=No
SignOffset=-d
```

```
PrinterPortMode=NEW
PageTotal=No
PortSetting1=
PortSetting2=
PortSetting3=9600,N,8,1
PrintItem=Yes
CustomPaperSize=No
```

Troubleshooting Labels and Tags Problems on the IBM Stack

This section contains information that may be useful if you encounter problems using Labels and Tags.

- If any problem occur running the test program, make sure the correct version of unixODBC is installed.
- If `test_j.sh` fails, check the `dsign.ini` file. The Userid field must be all uppercase, for example:

  ```
  Userid=ORBOLAT1
  ```

- If you see an error related to print format, modify the printer settings. The possible values for the PrinterDriver field are GDI and PS. The possible values for PrinterPort are PM: and WS:.
- In the `dsign.ini` file, modify the PortSetting field to the IP address for your network printer.

  ```
  PortSetting1=10.143.200.26
  ```

- To improve performance, turn off debug mode in the dsign.ini file.

  ```
  Debug=ERROR
  ```

- If there is any problem related to the configuration, turn on debug mode in the `dsign.ini` file. Look for the errors in the `dsDebug.txt` and `dsign.err` files.

  ```
  Debug=DEBUG
  ```

- If the testing runs fine but printing from the application server fails, set PrintToFile=Y in the `dsign.ini` file. This settings causes the output to be printed to the `output.ps` file. Open the file with Notepad and see if the item information is present.
- If you see an unsatisfiedLinkError, verify the paths used to load the AccessVia libraries.
- If you have a problem connecting to the database using Designer 8.5, make sure that during the creation of a connection, the schema name is uppercase under the advanced settings.
- If there is any problem with the database connections not getting closed after printing a template, the may be a memory leak issued. Contact AccessVia for more information.
- Postscript does not support frames, rules, and layers. When creating templates with AccessVia, do not use these options.
- Make sure the ini file path in the SGCONFIG table is correctly pointing to the ini file. If it is not, run the update sql. For example:

  ```
  update SGCONFIG set FCONFIGPARAMVALUE='/usr/dsign/program/dsign.ini'
  where FCONFIGPARAMNAME='AccessViaIniFilePath'
  ```

- Make sure the printer drivers are installed where AccessVia is configured.
- In the Printer Setup section, verify that the printer IP address is correct.

A

Appendix: Installer Screens for the IBM Stack

You need specific 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.

> **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

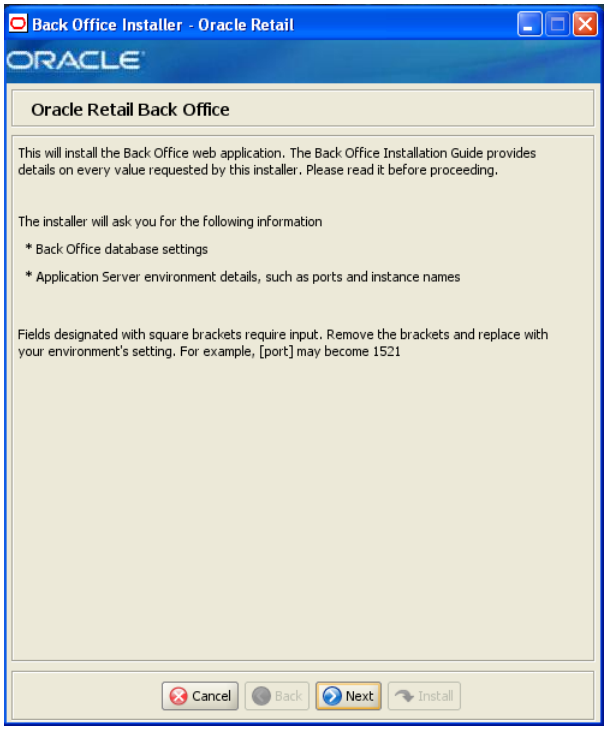
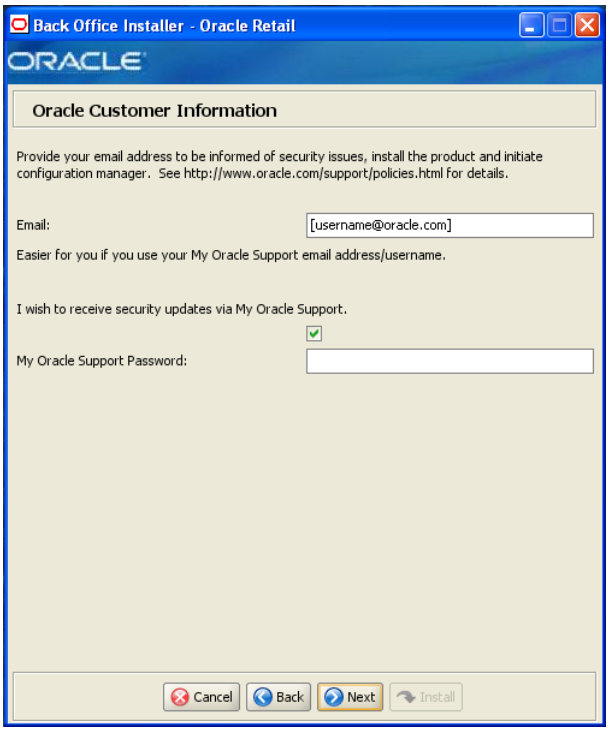


Figure A–2 Oracle Customer Information



This screen sets up the information needed for Oracle Configuration Manager (OCM). The OCM collector must be registered with your My Oracle Support account so that the uploaded configuration information can be stored properly and be readily available during the resolution of a service request.

After the Central Office installer completes, the OCM installer runs if OCM is not already installed. For information on OCM, see "Oracle Configuration Manager" in Chapter 3.

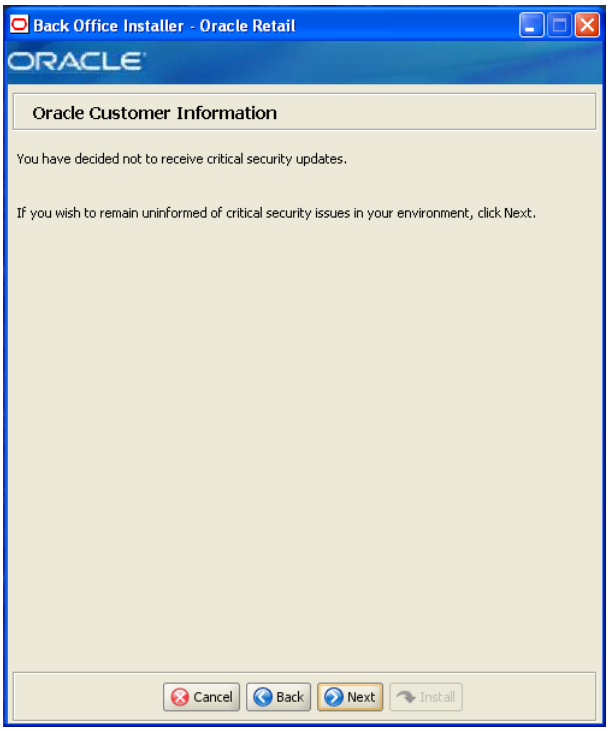
The fields on this screen are described in the following tables.

Field Title	Email
Field Description	Email address to use for OCM installation.

Field Title	I wish to receive security updates via My Oracle Support.
Field Description	To receive security updates, check the box.

Field Title	My Oracle Support Password
Field Description	Password for the My Oracle Support user to receive security updates.

Figure A–3 Oracle Customer Information



This screen is only displayed if **No** is selected on the previous Oracle Customer Information screen.

Figure A–4 Requirements

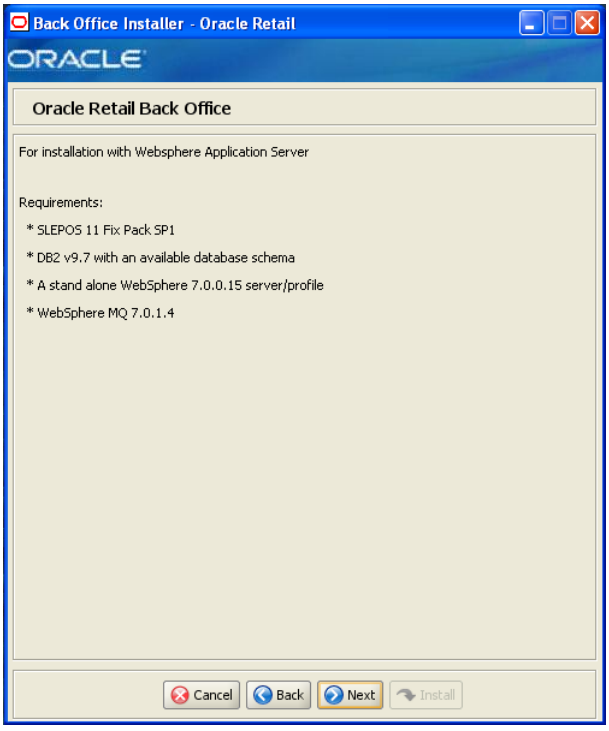
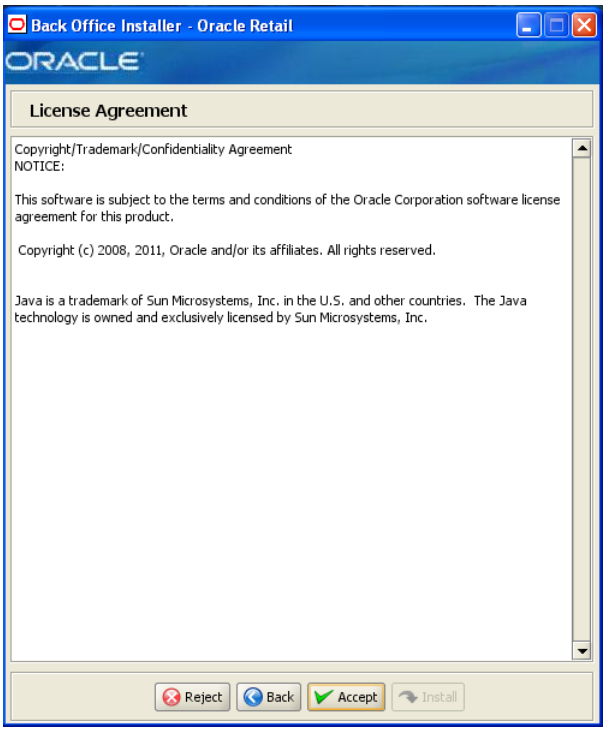
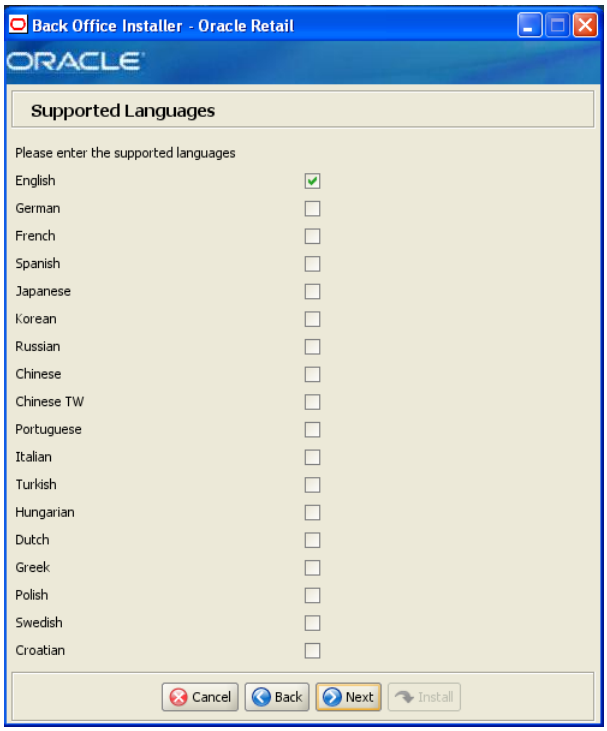


Figure A–5 License Agreement



Note: You must choose to accept the terms of the license agreement in order for the installation to continue.

Figure A–6 Supported Languages



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

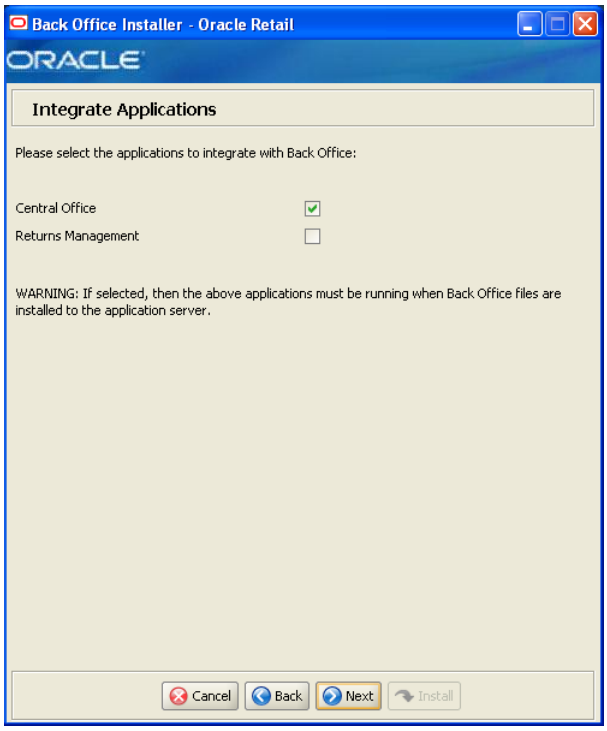
Field Title	Please enter the supported languages
Field Description	Select the languages that will be available for the Back Office application. The languages selected on this screen determine the available choices on the Enter Default Locale screen.
Example	English

Figure A–7 Enter Default Locale

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

Field Title	Enter Default Locale
Field Description	Locale support in Back Office enables the date, time, currency, calendar, address, and phone number to be displayed in the format for the selected default locale. The choices for default locale are dependent on the selections made on the Supported Languages screen. For each selected language, the default locale for that language is displayed on the Enter Default Locale screen. For example, if English and French are selected on the Supported Languages screen, en_US and fr_FR are the available choices for the default locale.
Example	en_US

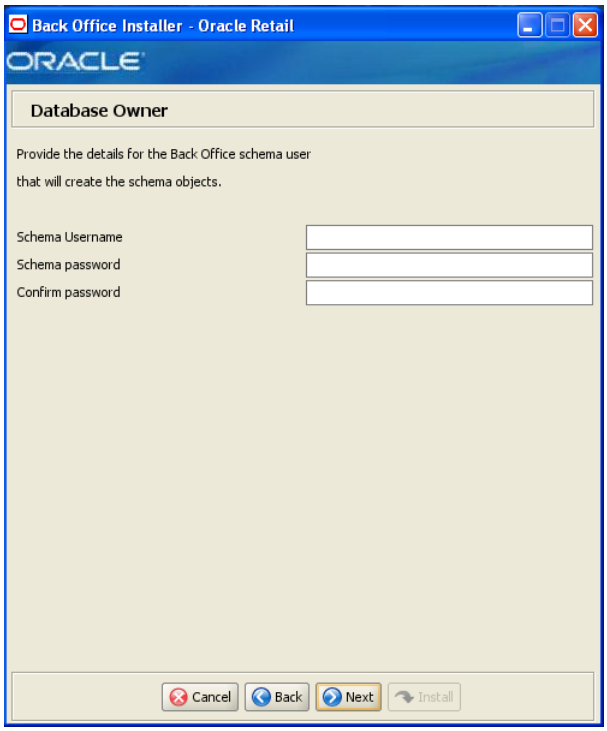
Figure A–8 Integrate Applications



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

Field Title	Applications
Field Description	Select the applications that Back Office is integrated with. ■ Central Office ■ Returns Management **Note:** The selected applications must be running when Back Office is installed to the application server.

Figure A–9 Database Owner



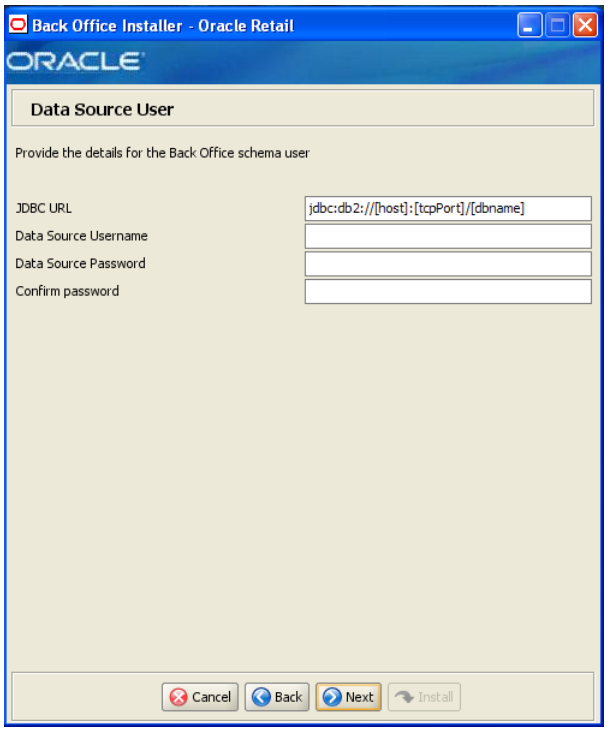
The fields on this screen are described in the following tables.

Field Title	Schema Username
Field Description	Schema user name that manages the objects in the schema. This user has Create, Drop, and Alter privileges in the schema, that is, Data Definition Language (DDL) execution privileges. For information on creating this user, see "Create the Database Schema Owner and Data Source Users" in Chapter 3. **Note:** This user creates the database objects used by Back Office.

Field Title	Schema Password
Field Description	Password for the database owner.

Field Title	Confirm Password
Field Description	Reentered Schema Password used to confirm the password. **Note:** The passwords in the Schema Password and Confirm Password fields must match.

Figure A–10 Data Source User



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

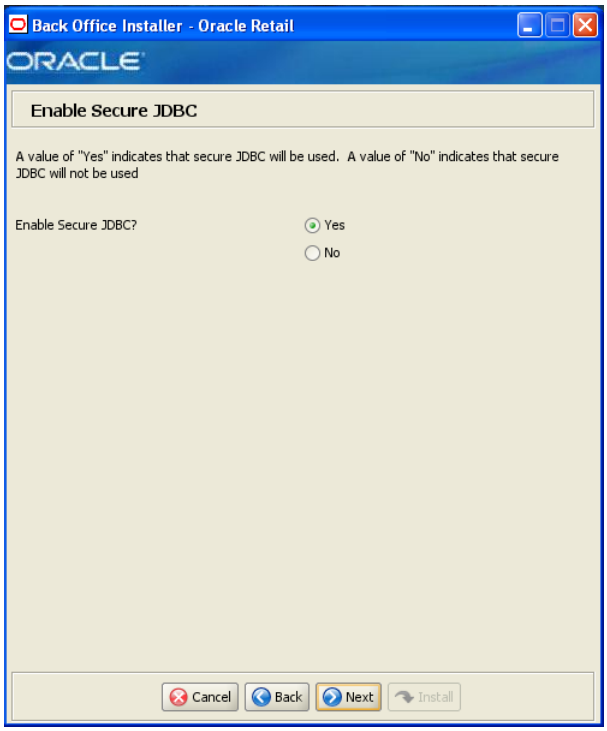
Field Title	JDBC URL
Field Description	URL used by the Back Office application to access the database schema. See Appendix D for the expected syntax.
Example	`jdbc:db2://myhost:50001/mydb`

Field Title	Data Source Username
Field Description	Database user name that can access and manipulate the data in the schema. This user can have Select, Insert, Update, Delete, and Execute privileges on objects in the schema, that is, Data Manipulation Language (DML) execution privileges. For information on creating this user, see "Create the Database Schema Owner and Data Source Users" in Chapter 3. **Note:** This schema user is used by Back Office to access the database.

Field Title	Data Source Password
Field Description	Password for the data source user.

Field Title	Confirm Password
Field Description	Reentered Data Source Password used to confirm the password. **Note:** The passwords in the Data Source Password and Confirm Password fields must match.

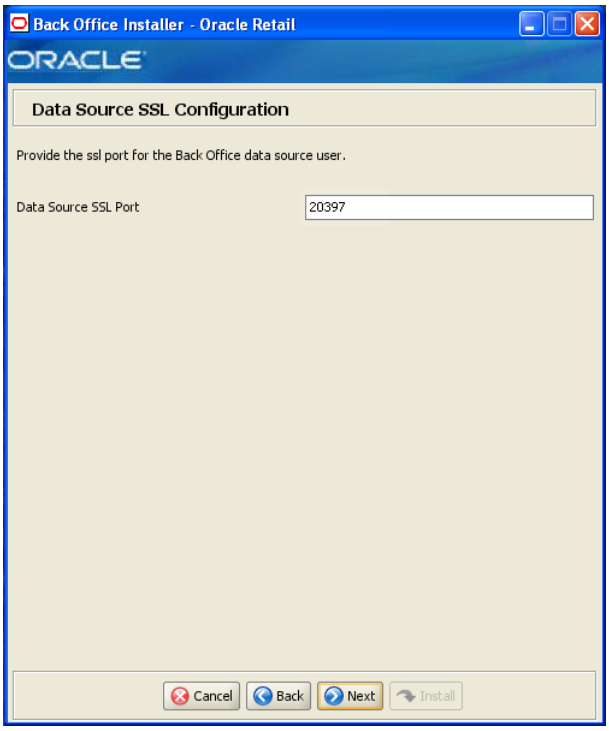
Figure A–11 Enable Secure JDBC



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

Field Title	Enable Secure JDBC?
Field Description	Select whether secure JDBC is to be used for communication with the database.
Example	Yes

Figure A–12 Data Source SSL Configuration

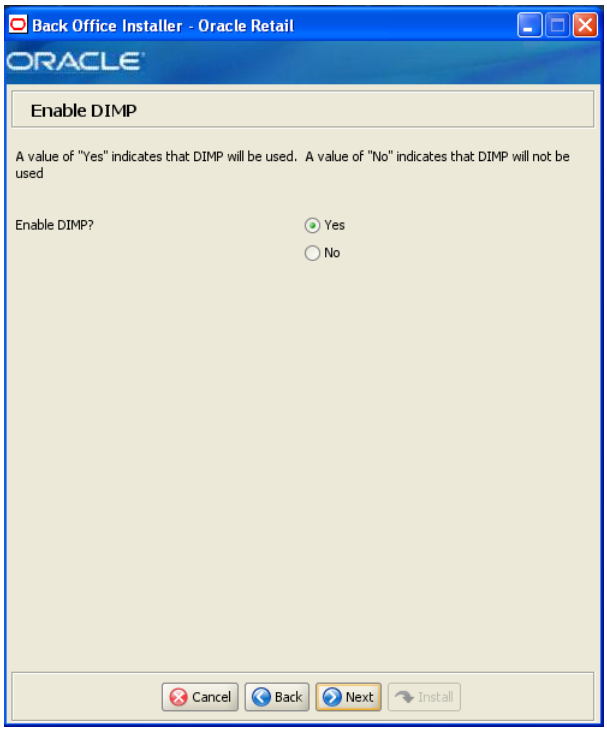


This screen is only displayed if **Yes** is selected on the Enable Secure JDBC screen.

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

Field Title	Data Source SSL Port
Field Description	SSL port used to access the database.
Example	20397

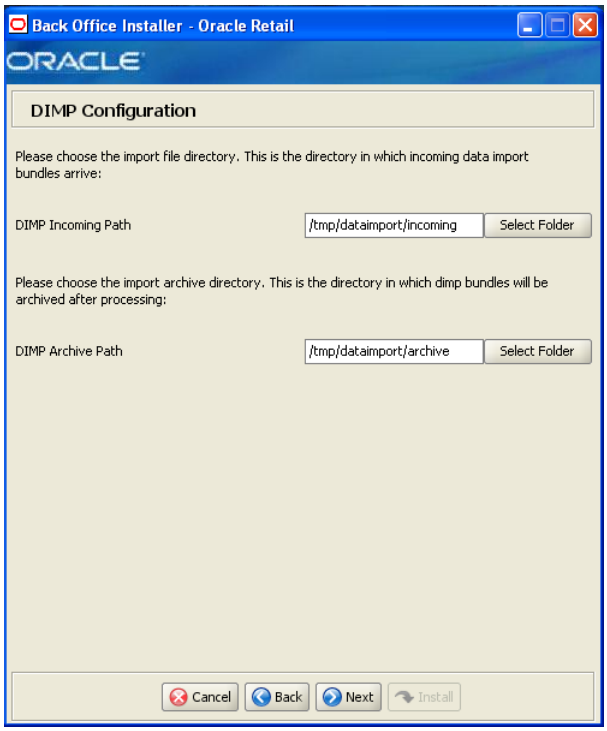
Figure A–13 Enable DIMP



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

Field Title	Enable DIMP?
Field Description	Select whether DIMP will be used. For information on DIMP, see "Enable Data Import" in Chapter 3.
Example	Yes

Figure A–14 DIMP Configuration



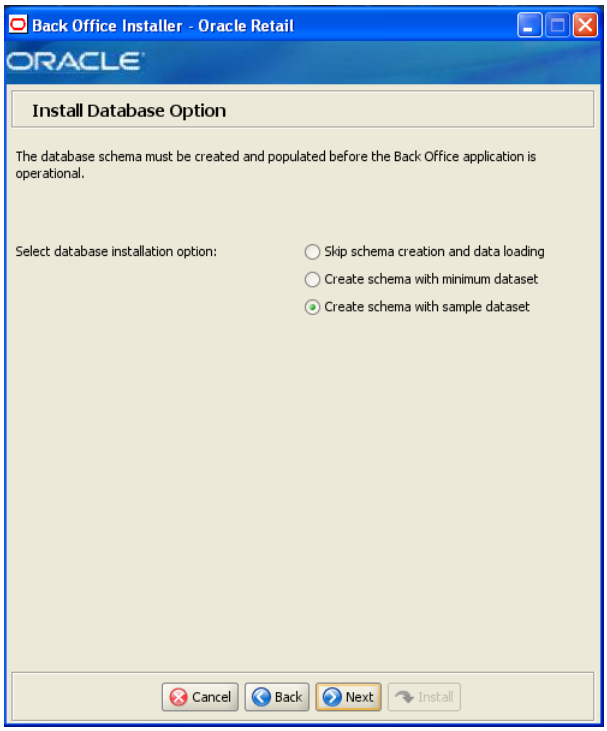
This screen is only displayed if **Yes** is selected on the Enable DIMP screen.

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

Field Title	DIMP Incoming Path
Field Description	Directory where the incoming data import bundles arrive.
Example	`/tmp/dataimport/incoming`

Field Title	DIMP Archive Path
Field Description	Directory where the incoming data import bundles are archived after processing.
Example	`/tmp/dataimport/archive`

Figure A–15 Database Install Options



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

Field Title	Create the database schema?
Field Description	The database schema must be created and populated before starting Back Office. This screen gives you the option to have the installer create and populate the database schema or leave the database schema unmodified. ▪ To have the installer leave the database schema unchanged, select **Skip schema creation and data loading**. ▪ To have the installer create and populate the database schema with the minimum dataset, select **Create schema with minimum dataset**. ▪ To have the installer create and populate the database schema with the sample dataset, select **Create schema with sample dataset**. For more information, see "Database Install Options" in Chapter 3.
Example	Create schema with sample dataset

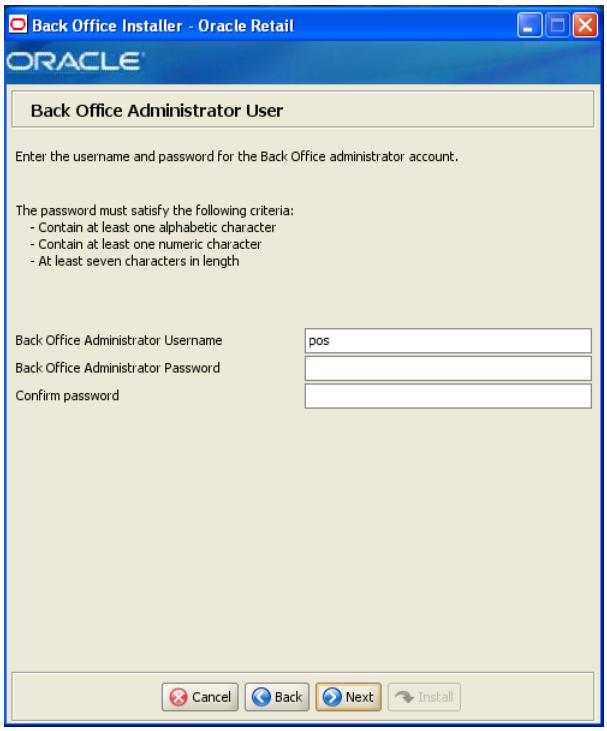
Figure A–16 Sample Dataset

This screen is only displayed when **Create schema with sample dataset** is selected on the Install Database Option screen.

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

Field Title	Sample dataset file
Field Description	Enter the path to the sample dataset to be loaded into the database schema. For more information, see "Database Install Options" in Chapter 3.
Example	/oracle/retail/samples/sample-db.zip

Figure A–17 Back Office Administrator User



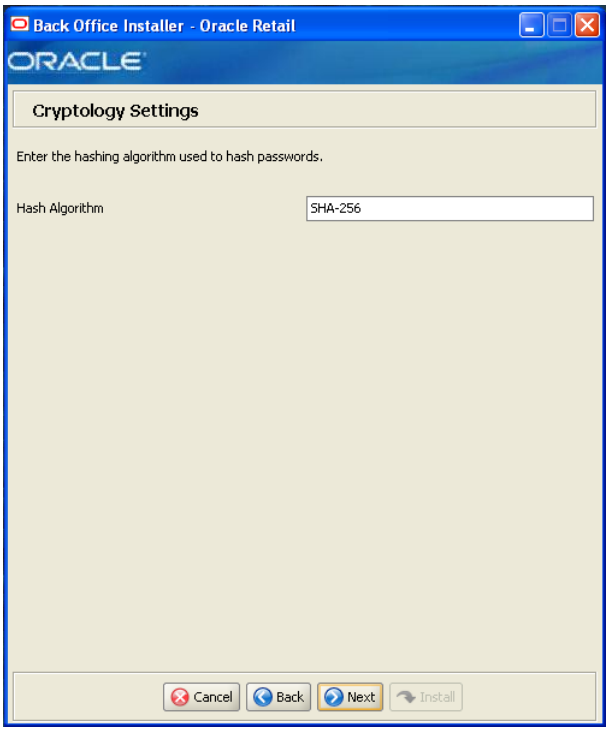
The fields on this screen are described in the following tables.

Field Title	Back Office Administrator Username
Field Description	Administrator user for the Back Office application.
Example	pos

Field Title	Back Office Administrator Password
Field Description	Password for the administrator user.

Field Title	Confirm Password
Field Description	Reentered Back Office Administrator Password used to confirm the password. **Note:** The passwords in the Back Office Administrator Password and Confirm Password fields must match.

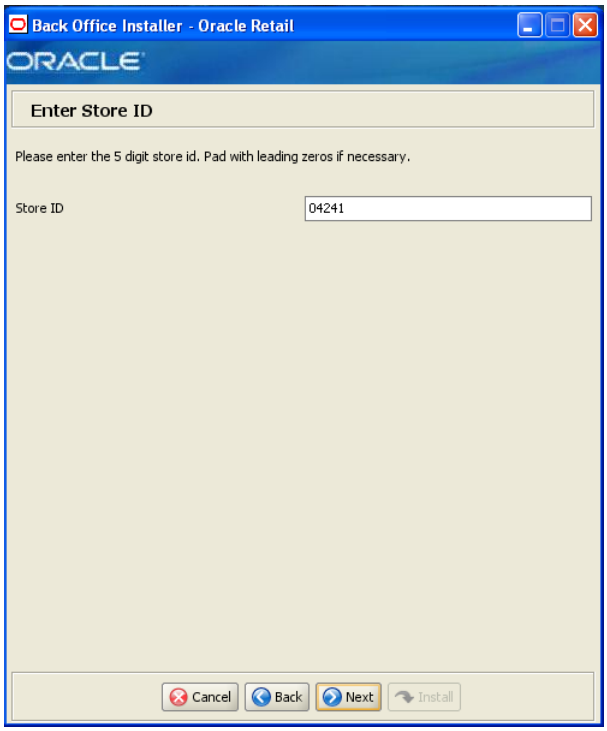
Figure A–18 Cryptology Settings



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

Field Title	Hash Algorithm
Field Description	Enter the name of the algorithm used to hash passwords.
Example	SHA-256

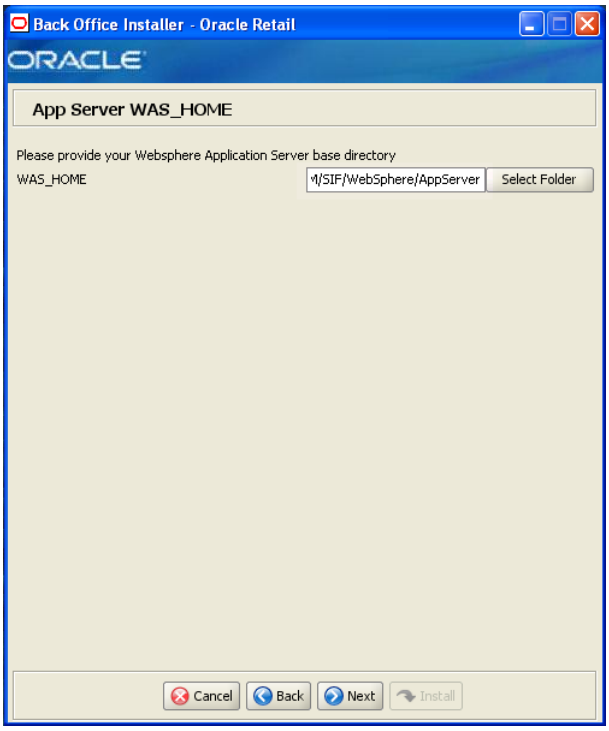
Figure A–19 Enter Store ID



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

Field Title	Store ID
Field Description	ID for this store. **Note:** The store ID must be five digits. It can be padded with leading zeroes if necessary. The store ID can only contain the numeric characters 0 through 9.
Example	04241

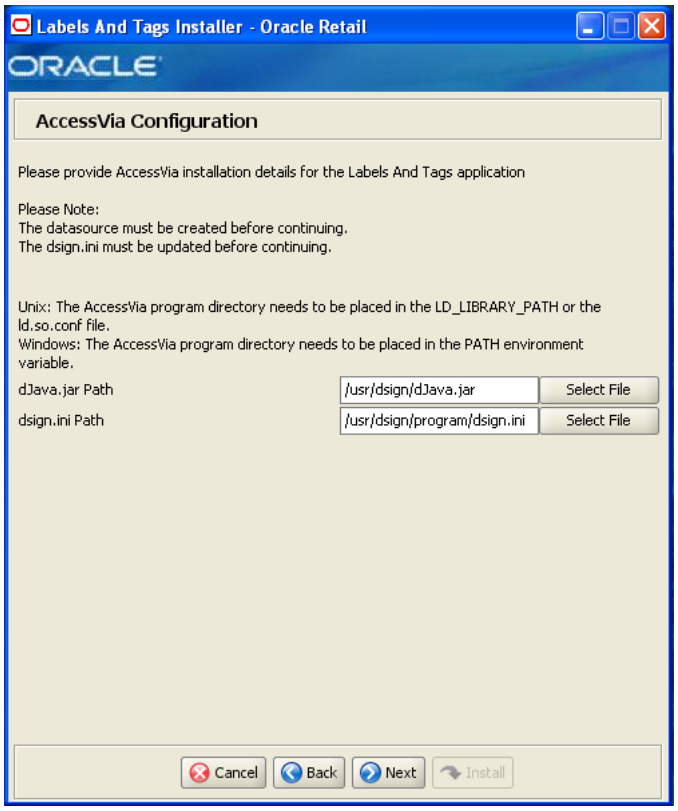
Figure A–20 App Server WAS_HOME



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

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

Figure A–21 AccessVia Configuration



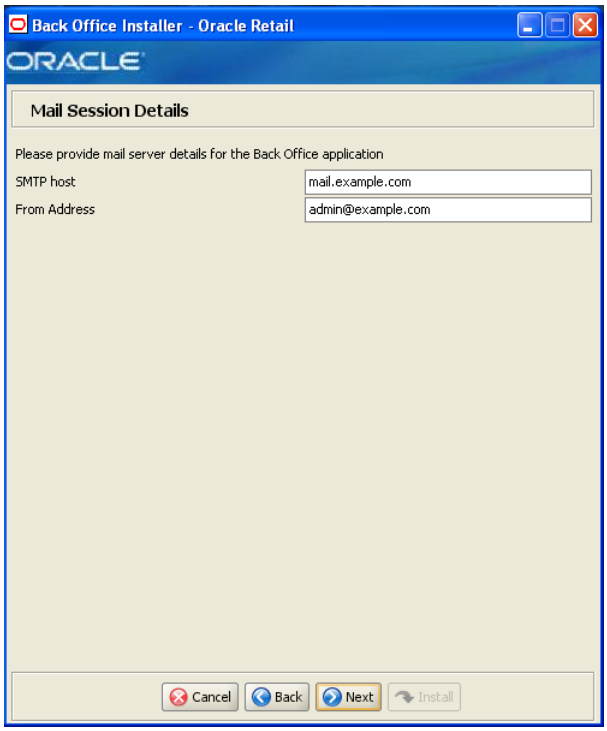
This screen is only displayed when installing Oracle Retail Back Office with the Labels and Tags module.

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	`/usr/dsign/dJava.jar`

Field Title	dsign.ini Path
Field Description	Path to the AccessVia Print Engine configuration file.
Example	`/usr/dsign/program/dsign.ini`

Figure A–22 Mail Session Details

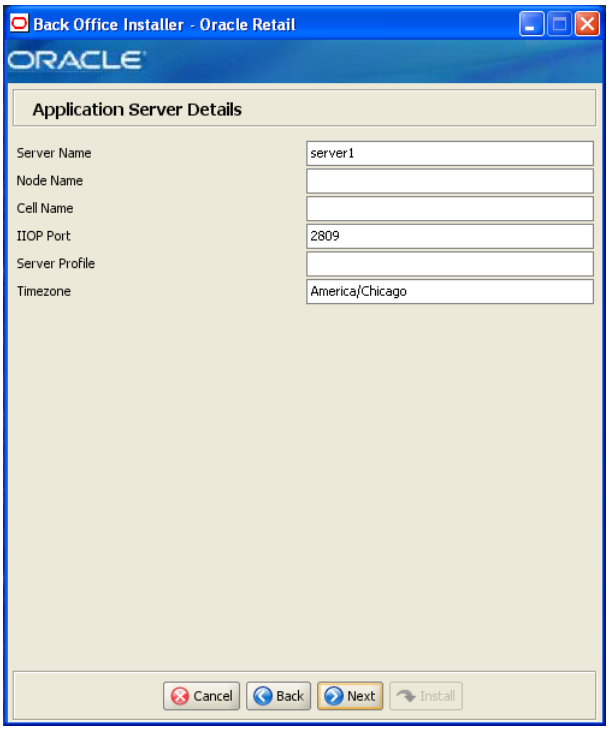


The fields on this screen are described in the following tables.

Field Title	SMTP host
Field Description	Host where the SMTP server is running.
Example	`mail.example.com`

Field Title	From Address
Field Description	From address in e-mails generated by Back Office.
Example	`admin@example.com`

Figure A–23 Application Server Details



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

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

Field Title	Node Name
Field Description	Name of the IBM WebSphere node.

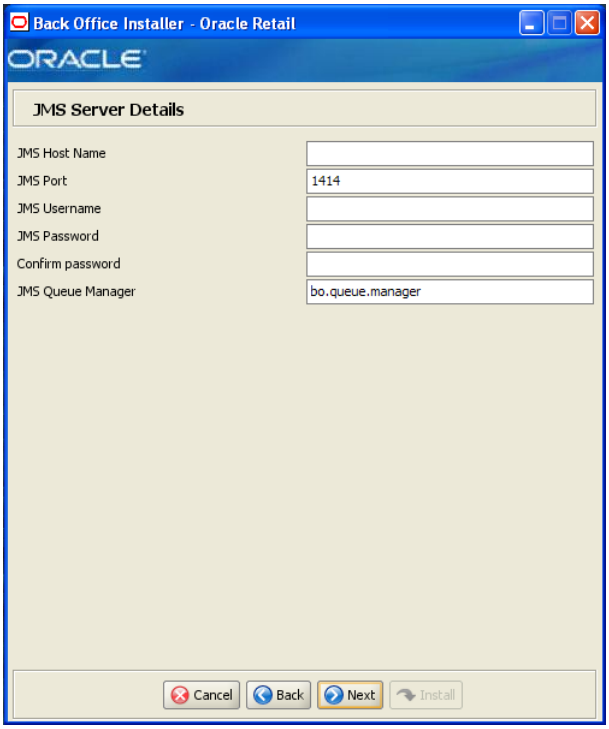
Field Title	Cell Name
Field Description	Name of the IBM WebSphere cell.

Field Title	IIOP port
Field Description	IIOP/BOOTSTRAP_ADDRESS port of the IBM WebSphere server. This port can be found in the following file: `<WAS_PROFILE_DIR>/logs/AboutThisProfile.txt`
Example	2809

Field Title	Server Profile
Field Description	Name of the IBM WebSphere profile.

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

Figure A–24 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 host name and not the IP address or "localhost". There may be problems integrating with Point-of-Service if the actual host name is not used.

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

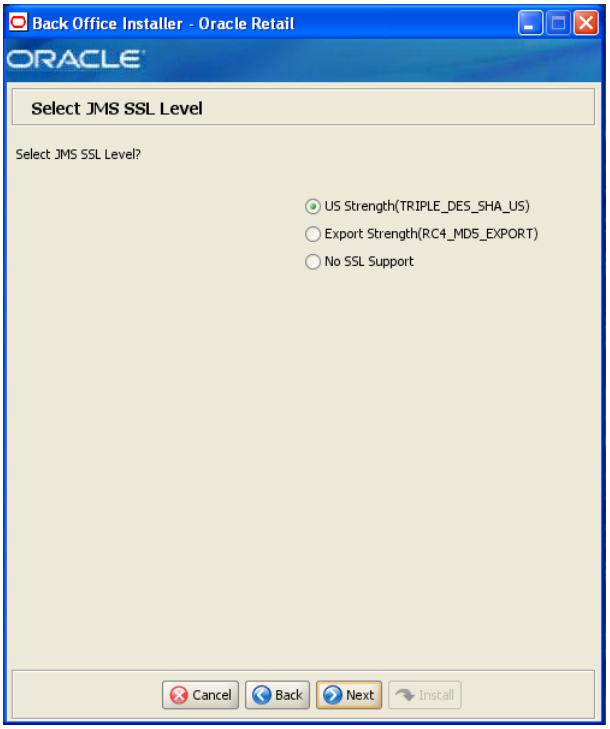
Field Title	JMS Username
Field Description	User name for the JMS server. This user must exist in the Back Office schema.

Field Title	JMS Password
Field Description	Password for the JMS server.

Field Title	Confirm Password
Field Description	Reentered JMS Password used to confirm the password. **Note:** The passwords in the JMS Password and Confirm Password fields must match.

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

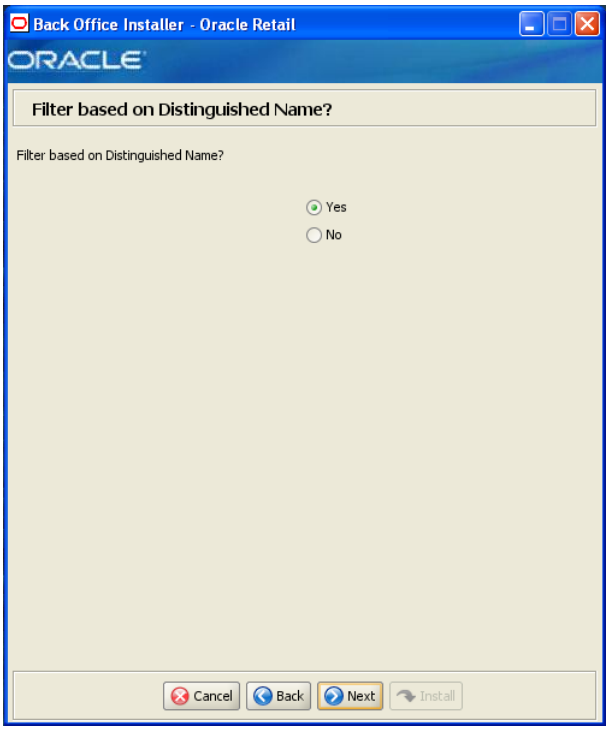
Figure A–25 Select JMS SSL Level



The field on this screen is described in the following table. For more information, see "Set up the JMS SSL Key Store" in Chapter 3.

Field Title	Select JMS SSL Level
Field Description	JMS SSL level to be used. ▪ To use US strength, select **US Strength(TRIPLE_DES_SHA_US)**. The next screen displayed is Figure A–26. ▪ To use export strength, select **Export Strength(RC4_MDS_EXPORT)**. The next screen displayed is Figure A–26. ▪ To not use ssl support, select **No SSL Support**. The next screen displayed is Figure A–28.
Example	US Strength(TRIPLE_DES_SHA_US)

Figure A–26 Filter Based on Distinguished Name

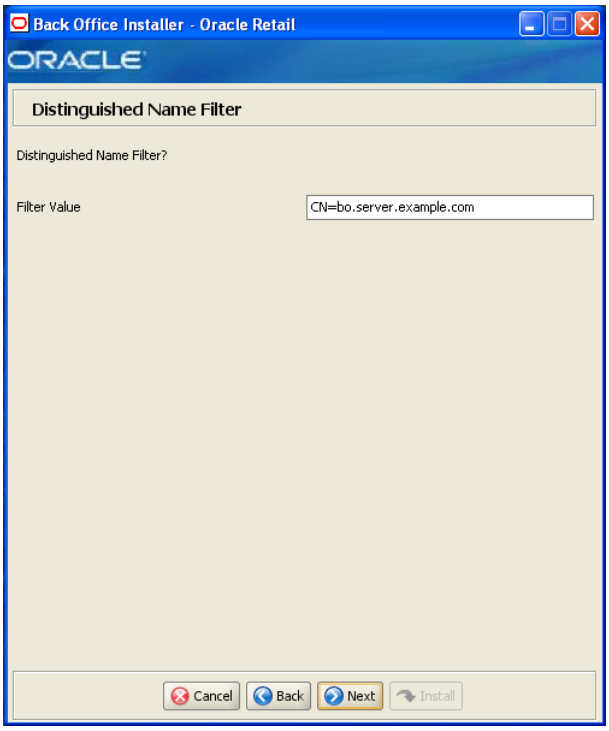


This screen is only displayed if **US Strength(TRIPLE_DES_SHA_US)** or **Export Strength(RC4_MDS_EXPORT)** is selected on the Select JMS SSL Level screen.

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

Field Title	Filter based on Distinguished Name?
Field Description	This screen gives you the option to filter based on the distinguished name.
Example	Yes

Figure A–27 Distinguished Name Filter

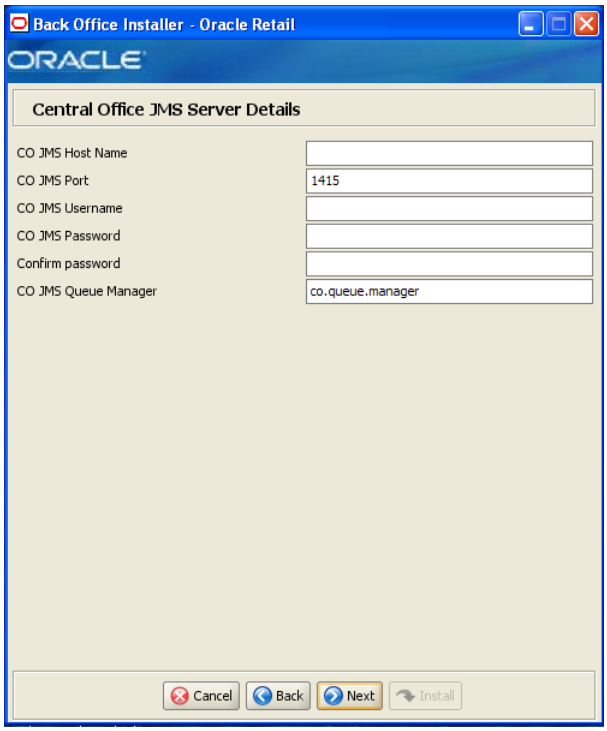


This screen is only displayed if **Yes** is selected on the Filter based on Distinguished Name screen.

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

Field Title	Filter Value
Field Description	Distinguished name for the JMS SSL filter.
Example	CN=bo.server.example.com

Figure A–28 Central Office JMS Server Details



This screen is only displayed if **Central Office** is selected on the Integrate Applications 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 host name and not the IP address or "localhost". There may be problems integrating with Point-of-Service if the actual host name is not used.

Field Title	CO JMS Server Port
Field Description	Port number used by the Central Office JMS server.
Example	1415

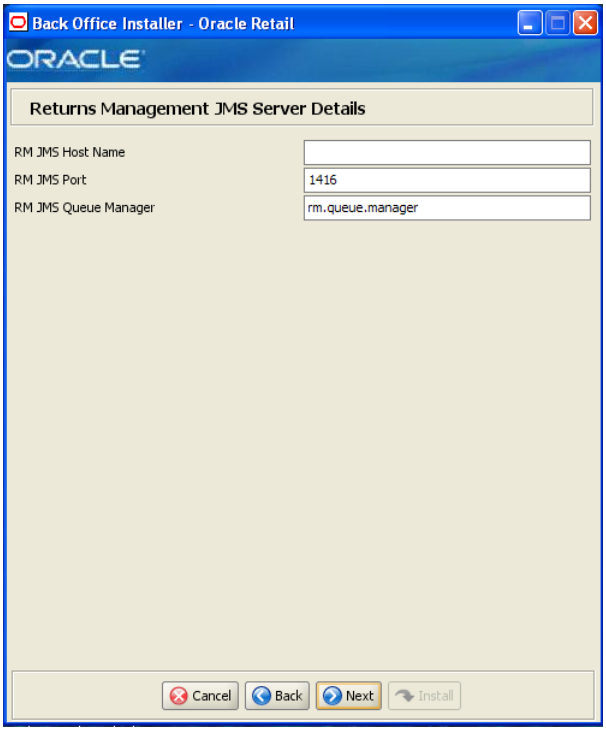
Field Title	CO JMS Username
Field Description	User name for the Central Office JMS server. This user must exist in the operating system where Central Office is running and the user must be in the `mqm` group.

Field Title	CO JMS Password
Field Description	Password for the user name entered in the CO JMS Username field.

Field Title	Confirm Password
Field Description	Reentered CO JMS Password used to confirm the password. **Note:** The passwords in the CO JMS Password and Confirm Password fields must match.

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

Figure A–29 Returns Management JMS Server Details



This screen is only displayed if **Returns Management** is selected on the Integrate Applications screen.

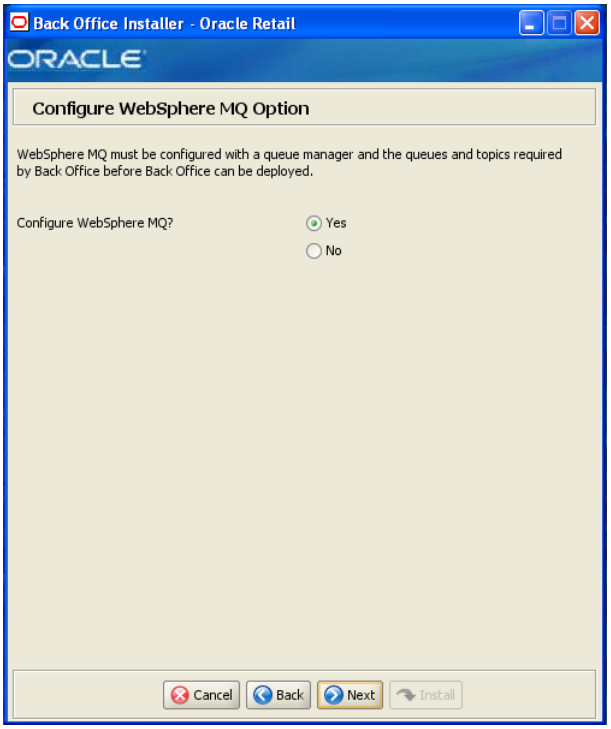
The fields on this screen are described in the following tables.

Field Title	RM JMS Host Name
Field Description	Name of the Returns Management JMS server. **Note:** Always use the actual host name and not the IP address or "localhost". There may be problems integrating with Point-of-Service if the actual host name is not used.

Field Title	RM JMS Port
Field Description	Port number used by the Returns Management JMS server.
Example	1416

Field Title	RM JMS Queue Manager
Field Description	Name of the Returns Management JMS queue manager.
Example	rm.queue.manager

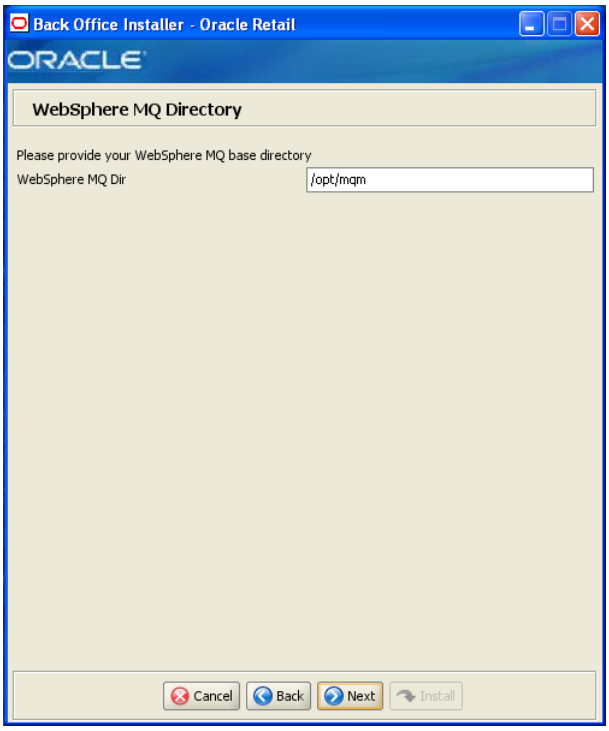
Figure A–30 Configure WebSphere MQ Option



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

Field Title	Configure WebSphere MQ?
Field Description	IBM WebSphere MQ 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 IBM WebSphere MQ manually. If you choose No, see "Configure IBM WebSphere MQ" in Chapter 3 for the manual steps you need to perform after the installer completes.
Example	Yes

Figure A–31 WebSphere MQ Directory

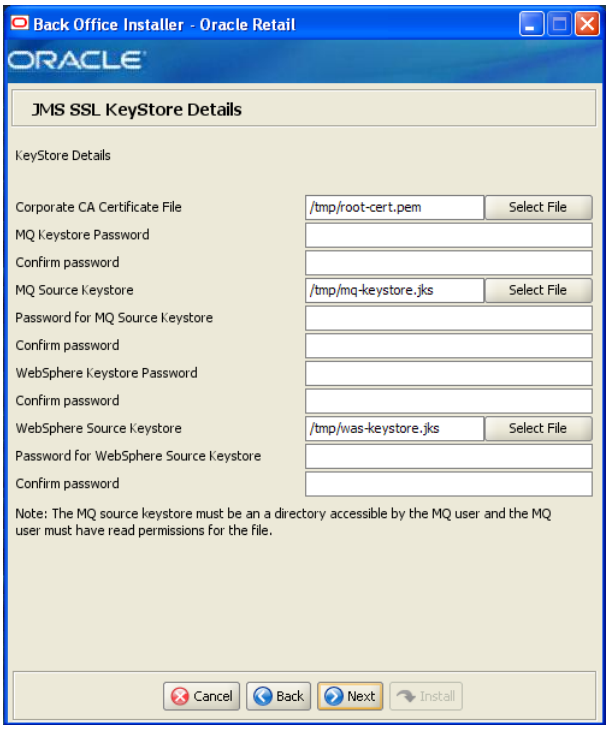


This screen is only displayed if **Yes** is selected on the Configure WebSphere MQ Option screen.

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

Field Title	WebSphere MQ Dir
Field Description	Base directory for IBM WebSphere MQ.
Example	/opt/mqm

Figure A–32 JMS SSL Keystore Passwords



This screen is only displayed if **US Strength(TRIPLE_DES_SHA_US)** or **Export Strength(RC4_MDS_EXPORT)** is selected on the Select JMS SSL Level screen.

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

Field Title	Corporate CA Certificate File
Field Description	Location of the corporate certificate file.
Example	/tmp/root-cert.pem

Field Title	MQ Keystore Password
Field Description	Key Store password for WebSphere MQ.

Field Title	Confirm Password
Field Description	Reentered MQ Keystore Password used to confirm the password. **Note:** The passwords in the MQ Keystore Password and Confirm Password fields must match.

Field Title	MQ Source Keystore
Field Description	Location of the source Key Store for WebSphere MQ.
Example	/tmp/mq-keystore.jks

Field Title	Password for MQ Source Keystore
Field Description	Key Store password for MQ source.

Field Title	Confirm Password
Field Description	Reentered MQ Source Keystore Password used to confirm the password. **Note:** The passwords in the MQ Source Keystore Password and Confirm Password fields must match.

Field Title	WebSphere Keystore Password
Field Description	Key Store password for the WebSphere Application Server.

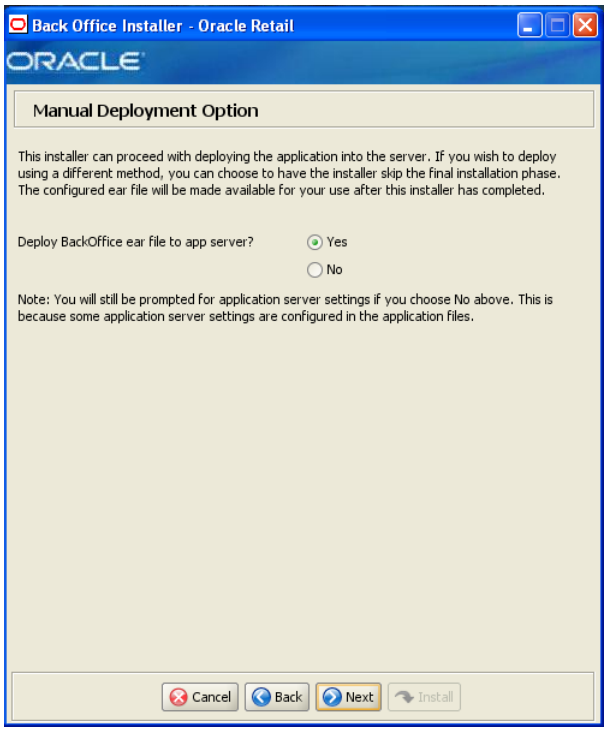
Field Title	Confirm Password
Field Description	Reentered WebSphere Keystore Password used to confirm the password. **Note:** The passwords in the WebSphere Keystore Password and Confirm Password fields must match.

Field Title	WebSphere Source Keystore
Field Description	Location of the source Key Store for WebSphere.
Example	/tmp/was-keystore.jks

Field Title	Password for WebSphere Source Keystore
Field Description	Key Store password for WebSphere.

Field Title	Confirm Password
Field Description	Reentered WebSphere Source Keystore Password used to confirm the password. **Note:** The passwords in the WebSphere Source Keystore Password and Confirm Password fields must match.

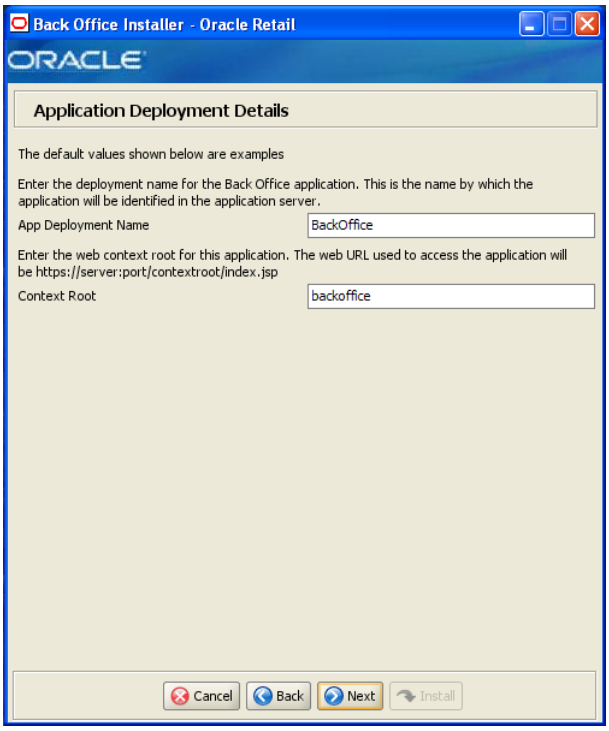
Figure A–33 Manual Deployment Option



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.
Example	Yes

Figure A–34 Application Deployment Details

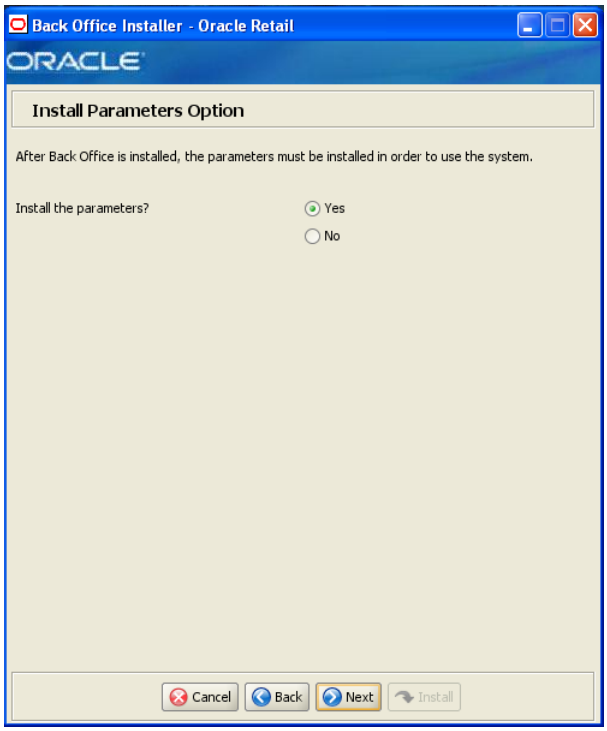


The fields on this screen are described in the following tables.

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

Field Title	Context Root
Field Description	Path under the HTTPS 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 `https://host:port/backoffice/index.jsp`.
Example	backoffice

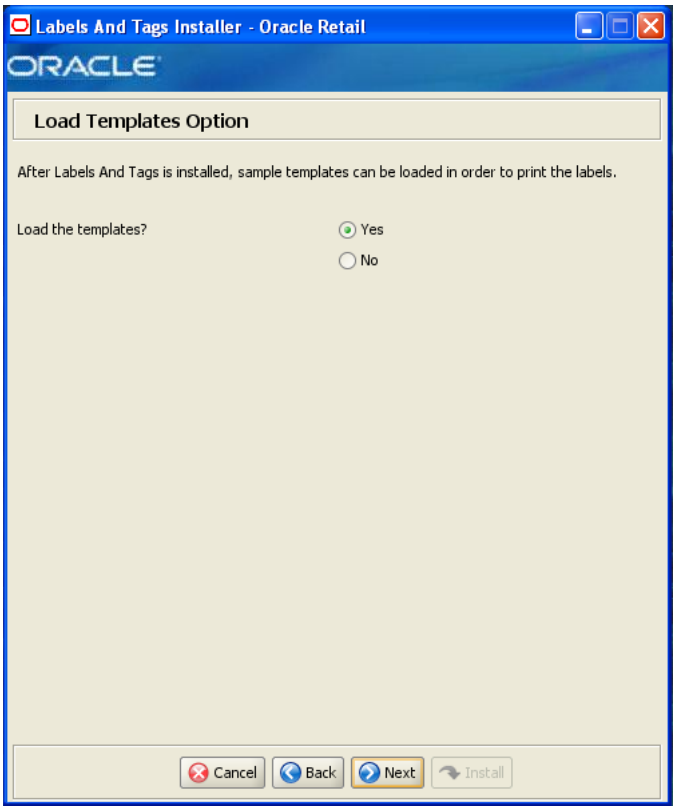
Figure A–35 Install Parameters Option



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 "Import Initial Parameters" in Chapter 3 for the manual steps you need to perform after the installer completes.
Example	Yes

Figure A–36 Load Templates Option

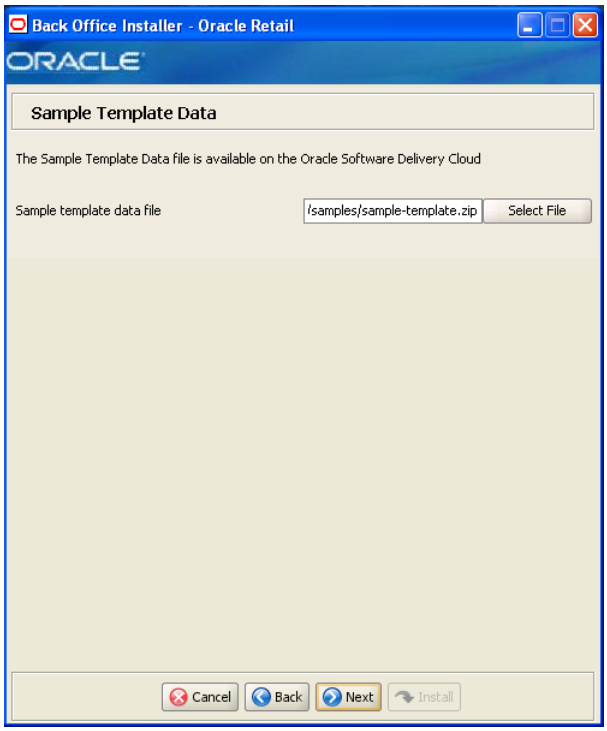


This screen is only displayed when installing Oracle Retail Back Office with the Labels and Tags module.

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

Field Title	Load the templates?
Field Description	Sets whether sample templates for printing labels are loaded into the database after Back Office is installed. For more information, see "Back Office Installation" in Chapter 4. ▪ To load the templates, choose Yes. ▪ To not load the templates, choose No.
Example	Yes

Figure A–37 Sample Template Data

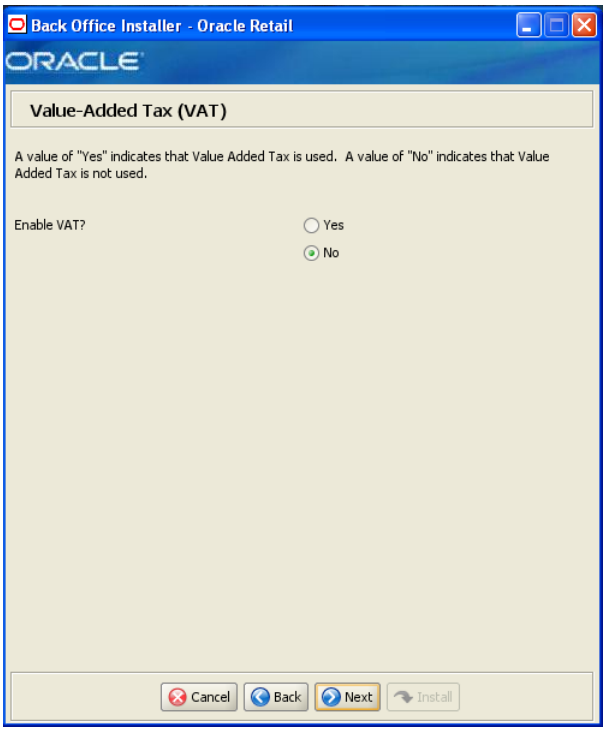


This screen is only displayed if **Yes** is selected on the Load Templates Option screen.

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

Field Title	Sample template file
Field Description	Enter the path to the sample dataset to be loaded into the database schema. For more information, see "Back Office Installation" in Chapter 4.
Example	/oracle/retail/samples/sample-template.zip

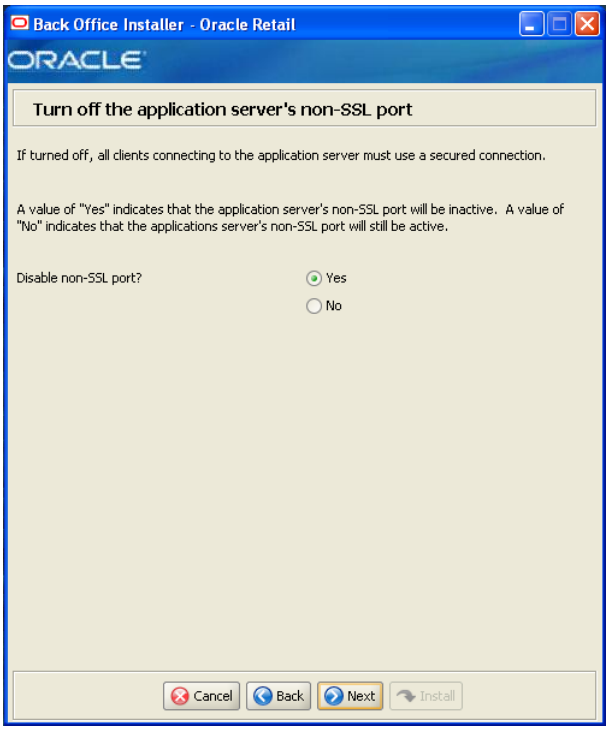
Figure A–38 Value-Added Tax (VAT)



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. ▪ To enable Back Office to use VAT, choose Yes. ▪ To not use VAT, choose No.
Example	No

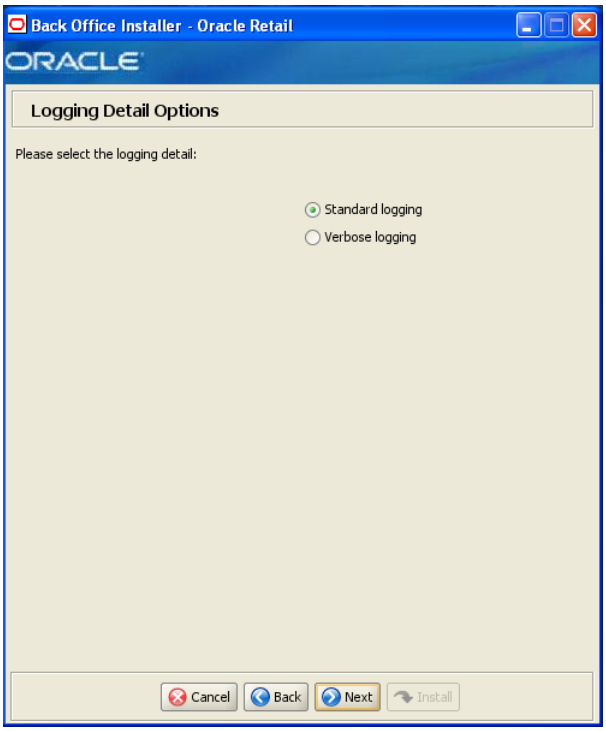
Figure A–39 Turn Off the Application Server's Non-SSL Port



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

Field Title	Disable non-SSL port?
Field Description	Sets whether connecting to the application server requires a secured connection. **Note:** It is recommended that you disable the non-SSL port in order to increase the security of your environment. ■ To disable the use of a non-SSL port, choose **Yes**. ■ To enable using a non-SSL port, choose **No**.
Example	Yes

Figure A–40 Logging Detail Options



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

Field Title	Logging Detail Options
Field Description	Choose the level of logging. ▪ To only log some of the messages, choose **Standard Logging**. ▪ To log all of the messages, choose **Verbose Logging**.
Example	Standard logging

Figure A–41 Installation Progress

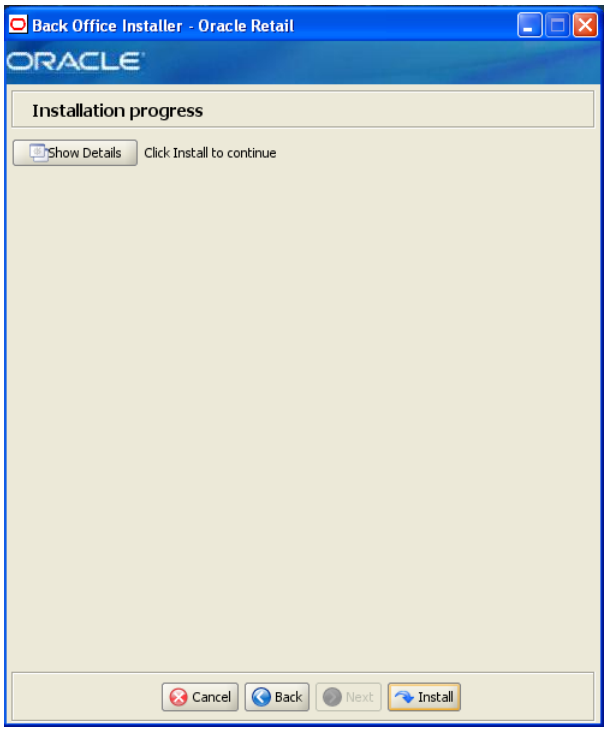
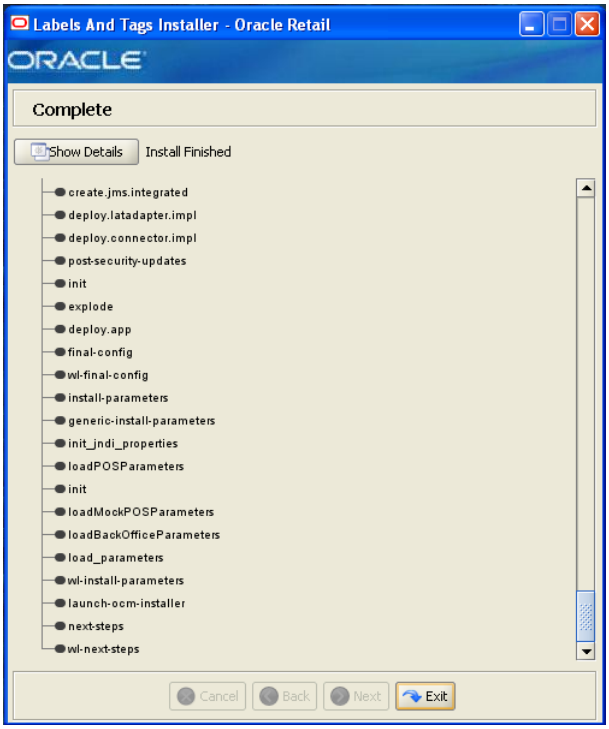


Figure A–42 Installation Complete



After the installer completes, the Oracle Configuration Manager (OCM) installer runs if OCM is not already installed. For information on OCM, see "Oracle Configuration Manager" in Chapter 3.

B

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 during 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 and the `cwallet.sso` file is created. 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` and `cwallet.sso` files 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. If the previous install was successful, the `cwallet.sso` file is found in the installation directory for that install. Copy the `cwallet.sso` file to *<INSTALL_DIR>* for this silent install.
3. Run the installer again with the silent argument.

   ```
   install.sh silent websphere
   ```

C

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 IBM Stack

To reinstall:

1. Stop the WebSphere application server in the profile that contains Back Office.
2. Delete the profile.
3. Stop the WebSphere MQ queue manager and listener. For example, stop `bo.queue.manager`.
4. Delete the queue manager.
5. Recreate the profile.
6. Start the WebSphere application server in the profile.
7. Run the Back Office installer. For more information, see "Run the Back Office Application Installer" in Chapter 3.

D

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 IBM Stack

The following sections describe the URLs 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>*: host name 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>*: host name 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`

E

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 needs to be set to a version 1.6 JDK. Set JAVA_HOME to a Java development kit of version 1.6 or later and run the installer again.

F

Appendix: Troubleshooting

This appendix has information that can be used to troubleshoot problems after the installation of Back Office.

Deployment Failure

If the deployment of the application fails, see the following Web site for information about setting the ulimit option:

https://www-304.ibm.com/support/docview.wss?uid=swg21380114

G

Appendix: Labels and Tags

This appendix has additional information for Labels and Tags.

Importing Templates Larger than 4 MB

If templates larger than 4 MB will be imported from Central Office to Back Office, make the following WebSphere MQ configuration changes:

1. Stop the Central Office and Back Office applications.
2. Run the following commands on the WebSphere MQ server on Central Office and Back Office:
   a. ALTER QMGR MAXMSGL(9194304)
   b. ALTER CHANNEL(SYSTEM.DEF.SVRCONN) CHLTYPE(SVRCONN) MAXMSGL(9194304)
   c. ALTER CHANNEL(SYSTEM.DEF.CLNTCONN) CHLTYPE(CLNTCONN) MAXMSGL(9194304)
   d. ALTER qlocal(<*store_04241*>) MAXMSGL(8194304)

      Change <*store_04241*> to your defined store.
3. Shut down and start the queue managers.
4. Start the Central Office application.
5. Start the Back Office application.
6. Test exporting a template from Central Office to Back Office.

H

Appendix: Installation Order

This section provides a guideline for the order in which the Oracle Retail applications should be installed. If a retailer has chosen to use only some of the applications, the order is still valid, less the applications not being installed.

Note: The installation order is not meant to imply integration between products.

Enterprise Installation Order

1. Oracle Retail Merchandising System (RMS), Oracle Retail Trade Management (RTM), Oracle Retail Sales Audit (ReSA), Optional: Oracle Retail Fiscal Management (ORFM)

   Note: ORFM is an optional application for RMS if you are implementing Brazil localization.

2. Oracle Retail Service Layer (RSL)
3. Oracle Retail Extract, Transform, Load (RETL)
4. Oracle Retail Active Retail Intelligence (ARI)
5. Oracle Retail Warehouse Management System (RWMS)
6. Oracle Retail Invoice Matching (ReIM)
7. Oracle Retail Price Management (RPM)

   Note: During installation of RPM, you are asked for the RIBforRPM provider URL. Since RIB is installed after RPM, make a note of the URL you enter. If you need to change the RIBforRPM provider URL after you install RIB, you can do so by editing the remote_service_locator_info_ribserver.xml file.

8. Oracle Retail Allocation
9. Oracle Retail Central Office (ORCO)
10. Oracle Retail Returns Management (ORRM)
11. Oracle Retail Back Office (ORBO) or Back Office with Labels and Tags (ORLAT)

12. Oracle Retail Store Inventory Management (SIM)

    Note: During installation of SIM, you are asked for the RIB provider URL. Since RIB is installed after SIM, make a note of the URL you enter. If you need to change the RIB provider URL after you install RIB, you can do so by editing the remote_service_locator_info_ribserver.xml file.

13. Oracle Retail Predictive Application Server (RPAS)
14. Oracle Retail Demand Forecasting (RDF)
15. Oracle Retail Category Management (CM)
16. Oracle Retail Replenishment Optimization (RO)
17. Oracle Retail Analytic Parameter Calculator Replenishment Optimization (APC RO)
18. Oracle Retail Regular Price Optimzation (RPO)
19. Oracle Retail Merchandise Financial Planning (MFP)
20. Oracle Retail Size Profile Optimization (SPO)
21. Oracle Retail Assortment Planning (AP)
22. Oracle Retail Item Planning (IP)
23. Oracle Retail Item Planning Configured for COE (IP COE)
24. Oracle Retail Advanced Inventory Planning (AIP)
25. Oracle Retail Integration Bus (RIB)
26. Oracle Retail Point-of-Service (ORPOS)
27. Oracle Retail Markdown Optimization (MDO)
28. Oracle Retail Clearance Optimization Engine (COE)
29. Oracle Retail Analytic Parameter Calculator for Markdown Optimization (APC-MDO)
30. Oracle Retail Analytic Parameter Calculator for Regular Price Optimization (APC-RPO)
31. Oracle Retail Promotion Intelligence and Promotion Planning and Optimization (PI-PPO)
32. Oracle Retail Analytics
33. Oracle Retail Workspace (ORW)