

**Oracle® Retail Analytic Parameter Calculator for
Markdown Optimization**

Installation Guide

Release 13.2

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Oracle Retail Analytic Parameter Calculator for Markdown Optimization Installation Guide, Release 13.2

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Preface

This guide explains the procedure for installing the Oracle Retail Analytic Parameter Calculator for Markdown Optimization (APC-MDO) application.

Audience

This document is intended for system administrators and assumes that you are familiar with the following:

- Installing and configuring application server software
- Installing and configuring relational database management systems
- Installing and configuring distributed client/server applications

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Related Documents

For more information, see the following documents in the Oracle Retail Analytic Parameter Calculator for Markdown Optimization Release documentation set:

- *Oracle Retail Analytic Parameter Calculator for Markdown Optimization Configuration Guide*
- *Oracle Retail Analytic Parameter Calculator for Markdown Optimization Release Notes*
- *Oracle Retail Analytic Parameter Calculator for Markdown Optimization User Guide*

Customer Support

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<https://support.oracle.com>

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- 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, 13.1) or a later patch release (for example, 13.1.2). If you are installing the base release, additional patch, and bundled hot fix releases, read the documentation for all releases that have occurred since the base release before you begin installation. Documentation for patch and bundled hot fix releases can contain critical information related to the base release, as well as information about code changes since the base release.

Oracle Retail Documentation on the Oracle Technology Network

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

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

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

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

Conventions

The following text conventions are used in this document:

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

Overview

This chapter provides an overview of Oracle Retail Analytic Parameter Calculator for Markdown Optimization (APC-MDO) and a roadmap for implementing the application. It contains the following:

- [Introduction](#)
- [Overview of Oracle Configuration Manager](#)
- [APC-MDO Implementation Roadmap](#)

Introduction

APC-MDO is a single-user application that calculates the demand parameters required to perform forecasting. It uses the historical data to calculate and derive the demand parameters.

APC-MDO generates a set of text files that contain the calculated demand parameters. These parameters are loaded into the MDO schema during implementation.

The instructions in this guide assume knowledge of application servers, databases, and application installation or administration, and are intended for system administrators and experienced IT personnel. Before carrying out any of these activities, ensure that you understand UNIX commands (including shell configuration and scripting), directory operations, and symlinks.

Overview of Oracle Configuration Manager

Oracle Premier Support offers an automated support capability through the Software Configuration Manager and Oracle Configuration Manager (OCM). OCM is a configuration data collector that provides continuous tracking of key Oracle and system configuration settings for machines on which it is installed. This tool collects configuration details for customer environments and uploads it to a repository that is viewable through the My Oracle Support Web site.

The OCM Installer packaged with this release installs the latest version of OCM. The following document is available through My Oracle Support (formerly MetaLink). Access My Oracle Support at the following URL:

<https://support.oracle.com>

Oracle Configuration Manager Installer Guide (Doc ID: 835024.1)

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.

OCM Documentation Link

<http://www.oracle.com/technology/documentation/ocm.html>

Important: In case you choose to install the OCM collector, ensure that you have the My Oracle Support user account name, customer support identification number, and the country code (where the support agreement was issued) for the OCM installation.

APC-MDO Implementation Roadmap

This guide explains how you can install and set up the APC-MDO application and the required and optional software of that application.

The instructions in this guide assume knowledge of application servers, databases, and application installation or administration, and are intended for system administrators and experienced IT personnel. Before carrying out any of these activities, ensure that you understand UNIX commands (including shell configuration and scripting), directory operations, and symlinks.

In order to implement APC-MDO for production, you must perform the following tasks in sequence:

1. Plan the installation.
2. Set up the APC-MDO database.
3. Install the WebLogic application server.
4. Obtain the APC-MDO installation software.
5. Install the APC-MDO application.
6. Complete the post-installation tasks.

Planning Your Installation

Before installing APC-MDO, you must first determine the performance and availability goals for your business and then plan the hardware, network, and storage requirements accordingly. This chapter contains some basic considerations for the implementation of the APC-MDO application.

This chapter contains the following topics:

- [Overview of the Planning Process](#)
- [Supported Configurations](#)

Overview of the Planning Process

Planning your implementation prior to an installation gives you a better understanding of the environment and enables you to adapt faster to any future changes in the environment setup.

Planning Your Environment

Use the following steps to plan and prepare the product environment:

1. Plan and design the infrastructure, based on your business needs, for the installation. This includes:
 - Meeting the hardware and associated software requirements.
 - Acquiring the required software (and licensing).
 - Gathering capacity data.
 - Planning the data security policies.
 - Designing the backup and recovery strategies.
2. Determine the size of the implementation.
3. Identify source systems. Identify the systems that will exchange data with APC-MDO.

Sizing Considerations

The APC-MDO schema is installed under the User tablespace. Sizing considerations for this tablespace should use the following variables and formulas as a guideline.

Table 2–1 Sizing Variables

A = number of activities (also known as item-weeks).

Table 2–1 (Cont.) Sizing Variables

M = number of nodes in the merchandise hierarchy that are in the Raw-AP calculation.

L = number of nodes in the location hierarchy that are in the Raw-AP calculation.

SC = number of year-independent season codes. For example, if your implementation uses monthly season codes, this value is 12.

Sizing Formula

Number of gigabytes = $(A * 4.16 / 10 \text{ million}) + (M * L * SC * 1.4 / 1 \text{ million})$

Supported Configurations

This section describes the hardware and network requirements for the APC-MDO application and includes the following topics:

- [Network Requirements](#)
- [Database Requirements](#)
- [Application Server Requirements](#)
- [Client System Requirements](#)

Network Requirements

This section describes basic requirements for your network infrastructure:

- For connections between servers use the following:
 - Minimum: 100 MBps switched ethernet
 - Recommended: 1000 MBps
- For connections to the desktop, 100 MBps is sufficient.

Database Requirements

APC-MDO requires the use of the Oracle database as described in the following table:

Table 2–2 Database Requirements for APC-MDO

Software	Requirement
Database (64-bit)	Oracle 11g Release 2 (11.2.0.1.0) (64-bit)
Operating System (64-bit)	<ul style="list-style-type: none"> ■ Oracle Enterprise Linux 5.3 (64-bit) ■ HP-UX (11.31) Itanium (64-bit) ■ IBM AIX 6.1 TL4, APAR IY75211 ■ Sun Solaris 10 (SPARC platform), with timezone patch 122032-01 or later and libc patch 119689-07 or later.
Utilities	file transfer protocol utility (ftp or ssh/scp/rsync) sudo utility

Application Server Requirements

APC-MDO requires the use of the WebLogic application server. The following table lists the supported operating systems and the associated application server versions:

Table 2–3 Application Server Requirements for APC-MDO

Application Server	Operating System(64-bit)	JVM (32-bit)
WebLogic 10.0 mp1 (ADF 10.1.3 is a prerequisite for installing APC-MDO)	HP-UX (11.31)Itanium	HP-UX JDK for the Java 2 Standard Edition platform version 5.0.08 with Java HotSpot™ Server VM and all later JDK 5.0.* service packs for development and production deployment on HP-UX
	Oracle EnterpriseLinux 5.3	JRockit 5.0 R27.3.1 JDK and all later 5.0 releases of Jrockit
	IBM AIX 6.1, TL4,APAR IY75211	IBM Java 5 JDK (Service Refresh 9)-Java version 1.5.0, Java™ 2 Runtime Environment, Standard Edition (build pap32devfix-20081129 (SR9))
	Sun Solaris 10(SPARC)	Sun Java 2 JDK 5.0 Update 11 with the Java HotSpot™ Client and Server VMs and all later service packs of 5.0

For Solaris, the following timezone and libc patches are required:

- On SPARC platform, with timezone patch 122032-01 or later and libc patch 119689-07 or later.

Client System Requirements

The following table lists the supported client system options:

Table 2–4 Client System Environment

Software	Requirements
Windows XP Pro SP3 (with Office 2003)	■ Microsoft Internet Explorer 7.0
Windows XP Pro SP3 (with Office XP)	■ Microsoft Internet Explorer 7.0
Windows XP Pro SP3 (with Office 2000)	■ Microsoft Internet Explorer 7.0

Setting Up the Database

This chapter describes how to set up the database and the various database components. It contains the following:

- [Creating the APC-MDO Database](#)

Creating the APC-MDO Database

The APC-MDO database can be created as another instance on an existing Oracle Database Server.

Note: When APC-MDO is running, it will consume application server resources such as memory and CPU. These are important considerations if your application server has additional instances.

The asds schema must have Select privileges on the v\$parameter table. The DBA should grant these privileges when she creates the asds schema.

The asds schema, as installed by the installer, uses only a single tablespace. The DBA should decide whether or not to move the objects in the asds schema to different tablespaces.

Installing the asds Schema

The schema for APC-MDO is referred to as the “asds Schema”. The APC-MDO installer will automatically create and install the asds database schema. The database will be created under the application tablespace.

The asds schema must be installed on the same Oracle Database Server instance as the Oracle Retail Markdown Optimization (MDO) product. APC-MDO will use this schema to obtain historical data from MDO.

loadSchema.sh

The loadSchema.sh -u script does not drop any tables except the tables that belong to APC-MDO.

Here is a description of the loadSchema.sh functionality. To use the script, you must have an Oracle instance, an MDO schema, and an asds schema. Both schemas must be in the same Oracle instance. You must set up the tablespace and the indexspace.

This script is specifically used to load data from a MDO schema into an asds schema. It has several restrictions:

- The asds and MDO schemas must be located in the same Oracle instance for this script to work, because this script creates synonyms that point to the MDO schema without using db links.
- This script cannot be used to update an existing asds schema. This script can only be used to drop an existing asds schema, re-create the asds schema, and then load MDO data into the asds schema.
- This script does not automatically drop an existing asds schema. You need to use the -u option to first drop an existing asds schema. Then re-run the script once more to re-create the asds schema and load data from MDO. Note that the -u option will drop only asds tables; if there are other tables in the schema, those tables will not be dropped. You need to drop those manually if you want them dropped. In addition, the -u option does not drop the temporary tables that APC-MDO creates while it runs. There should be no need to drop these, since APC-MDO overwrites these tables once the script runs.

Setting Up the WebLogic Application Server

Before installing APC-MDO, you must set up a domain on the application server. This chapter provides instructions on setting up the WebLogic application server. It contains the following sections:

- [Setting Up the WebLogic Server](#)
- [Restarting the Application Server](#)

Note: This chapter includes specific instructions required for APC-MDO. Since the installation instructions for an application server may vary based on the operating system, Oracle recommends that you refer to the relevant installation documentation included with the application server.

Setting Up the WebLogic Server

APC-MDO supports the use of WebLogic Server 10.0 mp1. This section describes how you can set up a domain on the WebLogic server.

Installing the WebLogic Server

Install the Weblogic Server referring to the WebLogic Server Documentation for guidance.

In this guide, the WebLogic installation directory is referred to as the <WL_HOME> directory.

Setting Up a WebLogic Domain

Use the WebLogic Configuration Wizard to create and set up a domain on the WebLogic Server. This section describes how you can create and set up a domain.

To set up a WebLogic domain:

1. Navigate to the <WL_HOME>/weblogic10/common/bin directory, and run the following command to start the WebLogic Configuration Wizard in the graphical mode:

```
sh config.sh
```
2. On the WebLogic Configuration Wizard, follow the steps listed in the table below:

Table 4–1 Steps to Set Up a WebLogic Domain

Step	Screen	Task
1.	<i>Welcome Screen</i>	Click the Create a new WebLogic domain option, and then click Next .
2.	<i>Select Domain Source Screen</i>	Click the Generate a domain configured automatically to support the following products option, and then click Next . Note that the WebLogic Server (Required) check box is automatically selected and greyed out.
3.	<i>Configure Administrator User Name and Password Screen</i>	Set up an administrative user name and password. Important: Please keep a note of the user name and password. You must specify this user name and password in the install.properties file. The Oracle Installer uses this user account to connect to the WebLogic Server during the APC-MDO installation.
4.	<i>Configure Server Start Mode and JDK Screen</i>	Under WebLogic Domain Startup Mode , click Production Mode . Under JDK Selection , select the relevant JDK. Click Next .
5.	<i>Customize Environment and Services Settings Screen</i>	Select Yes if you want to customize the WebLogic settings further. Go to Step 6. OR Select No to proceed directly to creating your domain. Skip the following steps and go to Step 12.
6.	<i>Configure the Administration Server Screen</i>	Enter relevant information in the following fields: <ul style="list-style-type: none"> ■ Name – Valid server name. (String of characters that can include spaces.) ■ Listen address – Listen address for a server instance. ■ Listen port – Valid value for the listen port. ■ SSL listen port – Valid value to be used for secure requests. ■ SSL enabled – Select this check box to enable SSL. You can enter values in the SSL listen port field once you select this check box. Click Next .
7.	<i>Review WebLogic Domain Screen</i>	Review and confirm the configuration summary, and then click Next .
8.	<i>Create WebLogic Domain Screen</i>	Enter a domain name in the Domain Name field. In the Domain location field, specify the location where you want to install the domain.
9.	<i>Creating Domain Screen</i>	

Table 4–1 (Cont.) Steps to Set Up a WebLogic Domain

Step	Screen	Task
		Displays the domain configuration progress.
		Once the configuration is complete, click Done .

Setting Up the WebLogic Startup Script

To set up the WebLogic Startup script:

- Navigate to the `<WL_HOME>/user_projects/domains/<your domain name>/bin` directory, and ensure that the following parameters are set within the `startWebLogic.sh` script:
 - **WL_HOME** – The location where the WebLogic Server is installed.
 - **WLS_USER** – The WebLogic administrator user name.
 - **WLS_PW** – The password associated with the WebLogic administrator user account.
 - **JAVA_VENDOR** – The Java Development Kit (JDK) installed for the WebLogic Server. You can specify WebLogic, IBM, HP, or Sun.
 - **JAVA_HOME** – The location where the JDK is installed.
 - **CONFIGROOT** – The APC_MDO configuration root directory.
 - **JAVA_OPTIONS** – Append the following to the parameter value:
" -Dcom.profitlogic.configroot=\$CONFIGROOT"
 - **CLASSPATH** – Append the location of the Engine sub-folder located within the application configuration root directory.

For Example

```
#!/bin/sh
WL_HOME="<location where WebLogic Server is installed>"
WLS_USER=<weblogic admin user name>
WLS_PW=<weblogic admin password>
PRODUCTION_MODE="true"
JAVA_VENDOR="<name of the JDK>"
JAVA_HOME="<location where JDK is installed>"
. ${WL_HOME}/common/bin/commEnv.sh
SERVER_NAME="admin"
CONFIGROOT=<MDO INSTALLATION DIRECTORY>/config
JAVA_OPTIONS=$JAVA_OPTIONS " -Dcom.profitlogic.configroot=$CONFIGROOT"
CLASSPATH="${WEBLOGIC_CLASSPATH}:${POINTBASE_CLASSPATH}:${JAVA_HOME}/jre/lib/rt.jar:${WL_HOME}/server/lib/webservices.jar:${CLASSPATH}"
CLASSPATH=${CLASSPATH}:<MDO INSTALLATION DIRECTORY>/config/Engine
export CLASSPATH
${JAVA_HOME}/bin/java ${JAVA_VM} ${MEM_ARGS} ${JAVA_OPTIONS}
-Dweblogic.Name=${SERVER_NAME} -Dweblogic.ProductionModeEnabled=${PRODUCTION_MODE}
-Dweblogic.management.username=${WLS_USER} -Dweblogic.management.password=${WLS_PW}
-Djava.security.policy="${WL_HOME}/server/lib/weblogic.policy" weblogic.Server
2>> console.log >& 2 &
```

Restarting the Application Server

If the application server needs to be re-started, you must first shut down the server. To do this:

1. Navigate to <WL_Home>/user_projects/domains/<your domain name>/bin
2. Run the command `./stopWebLogic.sh`
3. Enter the Administrator user name and password if prompted to.
4. After the server is successfully shut down, use `startWebLogic.sh` to restart the server.

If the server does not shut down using this procedure, you may need to kill the back-end process. To do this:

1. Obtain the process ID (PID) for that process.
2. Run the command:
kill -9 <PID>
3. Re-start the back-end process.

Setting Up Password Stores

Before you start the application installation, you must set up a password store for the database user accounts using Oracle Wallet on the application database side. You must also set up another password store for the application installation using the Credential Storage Manager. This password store will store the user credentials of the relevant application server and the database user accounts.

This chapter describes the steps you must use to set up the relevant password stores. It includes the following sections:

- [About Password Stores](#)
- [Setting Up a Password Store for the Database User Accounts](#)
- [Setting Up a Password Store for the Application Installation](#)

About Password Stores

As part of the Oracle Software Security Assurance (OSSA) program, sensitive information such as user credentials must be encrypted and stored in a secure location called as the password stores. The password stores are secure software containers that store the encrypted user credentials.

You can retrieve the credentials using aliases that were set up when encrypting and storing the user credentials in the password store.

Once configured, the application installation and the other relevant scripts no longer need to use embedded user names and password. This reduces any security risks that may exist because user names and passwords are no longer exposed.

When the installation starts, all the necessary user credentials will be retrieved from the Oracle Wallet based on the alias name associated with the user credentials.

Setting Up a Password Store for the Database User Accounts

Once the database is installed and the default database user accounts set up, you must set up a password store using the Oracle Wallet. This involves assigning an alias for the user name and associated password for each database user account. The alias will later be used during the application installation. This password store must be created on the system where the application server and database client are installed.

This section highlights the steps you must take to set up a wallet and then the aliases for the database user accounts. For more information on configuring authentication and password stores, refer to the *Oracle Database Security Guide*.

Note: In this section, <wallet_location> is a placeholder text for illustration purposes. Before running the command, ensure that you specify the path to the location where you want to create and store the wallet.

To set up a password store for the database user accounts:

1. Create a wallet using the following command:

```
mkstore -wrl <wallet_location> -create
```

Once you run the command, a prompt appears to enter a password for the Oracle Wallet.

Note: The *mkstore* utility is included in the Oracle Database Client installation.

The wallet is created with the auto-login feature enabled. This feature enables the database client to access the wallet contents without using the password. For more information, refer to the *Oracle Database Advanced Security Administrator's Guide*.

2. Create the database connection credentials in the wallet using the following command:

```
mkstore -wrl <wallet_location> -createCredential <alias-name>
<database-user-name>
```

Once you run the command, a prompt appears to enter the password associated with the database user account.

3. Repeat step 2 for all the database user accounts.
4. Update the **sqlnet.ora** file to include the following statements:

```
WALLET_LOCATION = (SOURCE = (METHOD = FILE) (METHOD_DATA = (DIRECTORY =
<wallet_location>)))
SQLNET.WALLET_OVERRIDE = TRUE
SSL_CLIENT_AUTHENTICATION = FALSE
```

5. Update the **tnsnames.ora** file to include the following entry for each alias name to be set up.

```
<alias-name> =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP) (HOST = <host>) (PORT = <port>))
    )
    (CONNECT_DATA =
      (SERVICE_NAME = <service>)
    )
  )
```

In the statement above, <alias-name>, <host>, <port>, and <service> are placeholder text for illustration purposes. Ensure that you replace these with the relevant values.

Setting Up a Password Store for the Application Installation

Before starting the application installer, you must set up the user credentials for the application server and the database user accounts.

Note: In this section <MDO_CD_IMAGE> refers to the location where you extract the Markdown Optimization installation media. To proceed ahead, you must first access and extract the installation media. For more information, see [Accessing the Installation Software](#).

The application installation includes a Credential Storage Manager that you can use to set up a password store for the application installation.

To set up a password store for the application installation using the Credential Storage Manager:

1. Navigate to the following subfolder in the <MDO_CD_IMAGE> folder:

```
<MDO_CD_IMAGE>/CSM/lib/
```

For more information on the <MDO_CD_IMAGE> folder, see [Chapter 6, "Installing APC-MDO."](#)

2. Run the following command:

```
java -jar retail-public-security-api.jar <alias-name> <user-name>  
<locationofwalletDir>
```

Once you run this command, you will be prompted to enter the password associated with the user name.

Note: In the command above, <alias-name>, <user-name>, and <locationofwalletDir> are placeholder text for illustration purposes. For each set of user name and associated password, you must specify a unique alias name.

For the <locationofwalletDir> argument, you must specify the location where you want to store the wallet file that contains the encrypted user credentials. Keep a note of this location. You will need to set this location as the value for the CSM_HOME before starting the application installation. For more information, see [Setting Up Environment Variables](#).

3. Repeat step 2 to set up aliases for all the database and application server administrative user accounts.

Example

To set up an alias with a name **MDOAdminAlias** for the user **mdo-admin** and store the wallet file at **/u00/product/oracle/mdo/wallet/**, specify the following:

```
java -jar retail-public-security-api.jar MDOAdminAlias mdo-admin  
/u00/product/oracle/mdo/wallet/
```

Important Considerations

- For database user accounts, ensure that you set up the same alias names between the password stores (Oracle Wallet and Credential Store Manager).

- Keep a note of all the aliases you have set up. During the application installation, you will need to enter the alias names for the application installer to connect to the database and application server.

Installing APC-MDO

After you have set up the database and the application server, you can install APC-MDO using the guidelines provided in this chapter.

Note: You must install ADF 10.1.3 prior to installing APC-MDO.

This chapter contains the following:

- "Overview of the Installation Process"
- "Accessing the Installation Software"
- "Setting Up the Installation Properties File"
- "Setting Up Environment Variables"
- "Preparing The Unix Terminal Emulator and SSH Client"
- "Prerequisite for Installing APC-MDO on WebLogic"
- "Installing APC-MDO in Silent Mode"
- "Installing APC-MDO Using the Installer"
- "Post-Installation Tasks"

Overview of the Installation Process

In order to install APC-MDO, your first task is to obtain the installation media. You can then choose the installation mode you prefer. Whichever mode you use, you first need to set up the APC-MDO properties file. The installation modes are as follows:

- **Graphical mode** – In the graphical mode, the Oracle Installer displays a graphical user interface and prompts you to enter or modify the value of the properties specified in the properties file.
- **Silent mode** – In the silent mode, the installer processes the properties file without any manual intervention.

Accessing the Installation Software

The APC-MDO installation software is bundled with the Oracle Retail Markdown Optimization (MDO) product software. The software media is available from the Oracle E-Delivery site.

To download the software:

1. From the application server where you will be installing MDO, open a browser and navigate to the following URL:

<http://edelivery.oracle.com/>

The **Oracle E-Delivery** download page displays.

Note: Installation media files for an Enterprise release (13.0) are available on the *Oracle Electronic Delivery* Web site (<http://edelivery.oracle.com>) and Patch releases (13.0.x) and Hot Fixes (13.0.x.y) are available on the *My Oracle Support* Web site (<https://metalink.oracle.com>).

2. Select a language, and click **Continue**.

The **Export Validation** screen displays.

3. Respond to the following and click **Continue**.

- **Full Name** – enter your full name.
- **Company Name** – enter your company name.
- **E-mail Address** – enter your e-mail address.
- **Country** – select your country.
- **License Agreement** – select the License Agreement check box.
- **Export Restrictions** – select the Export Restrictions check box.

The **Media Pack Search** screen displays.

4. Respond to the following prompts, and then click **Go**.

- **License List** – review the list to determine which Product Packs you need to download.
- **Product Pack** – select **Oracle Retail Applications**.
- **Platform** – (optional). Select the desired operating system.

The **Oracle Retail Markdown Optimization Media Pack** screen displays.

5. In the **Select** column, click **Download**.

Oracle E-Delivery writes a Zip file to the default location you have selected for downloads.

6. Unpack the Zip file to a temporary directory.

Setting Up the Installation Properties File

In order to install APC-MDO, you first need to specify the properties to use during the installation process.

Defining File Directories

Use the **basedest.basedest.dir** property to specify the directory where the APC-MDO files will be copied

Defining the Application Server

Define the application server being used for the installation.

```
install.appserver = weblogic
```

Defining the Administrative User ID and Password

Define the WebLogic administrative user id and password using the following properties:

```
weblogic.admin.alias
```

Note that this is the admin alias name that you created as part of setting up password stores. This is described in [Chapter 5, "Setting Up Password Stores."](#)

WebLogic Properties

Set the following properties in the WebLogic Properties section of the install.properties file.

The value for the WebLogic server must be the name you assigned to the server. The default value is AdminServer.

The weblogic.home value must be \${bea.home}/wlserver_10.0/server. That is, wlserver_10.0 must be a subdirectory of bea.home, and wlserver_10.0 must contain the server directory of the WebLogic installation. The APC-MDO installer does not support arbitrary weblogic.home placement. So, if you have already installed WebLogic and the installation does not follow this directory structure, then you must re-install WebLogic.

Set the WebLogic domain name to the domain you created for APC-MDO when you set up WebLogic.

```
weblogic.server=<server name>
```

```
weblogic.domain
```

```
bea.home
```

```
weblogic.home
```

Defining Ports

Specify the following port property:

```
weblogic.admin.port=41001
```

Defining Database Properties

Specify the following database properties:

- database.apcdb.oracle.create=yes
- database.apcdb.oracle.upgrade=no
- database.apcdb.oracle.address
- database.apcdb.oracle.dbalias
- database.apcdb.oracle.dbname
- database.apcdb.oracle.dbport

Setting Up Environment Variables

Before you start the installation, make sure that the following environment variables are set in the system:

- JAVA_HOME
- PATH
- CSM_HOME
- TNS_ADMIN

Note the following:

- ORACLE_HOME must be set for all supported platforms.
- LD_LIBRARY_PATH must be set for OEL, HP, and Solaris.
- LIBPATH must be set for AIX.
- \$ORACLE_HOME/bin should be added to the user's PATH variable.

Although it is recommended that these variables be set up in relevant bash shell startup files (*.bash_profile*) of the system, you can also set up the variables using the **export** command at the UNIX prompt. For more information on setting up these variables in the startup files, refer to the operating system documentation.

To set up the environment variables for the current session, at the UNIX prompt type the following commands in sequence:

```
export JAVA_HOME=<path where JVM is installed>
```

For example, /usr/lib/java/jdk1.5

```
export ORACLE_HOME=<path where the Oracle database is installed>
```

For example, /u01/app/oracle/product/11.2.0/db_1

```
export PATH=$ORACLE_HOME/bin:$PATH
```

```
export CSM_HOME=<path where the Oracle Wallet is installed>
```

```
export TNS_ADMIN=<the location where sql.ora and tnsnames.ora are stored>
```

Preparing The Unix Terminal Emulator and SSH Client

In order to run the APC-MDO installer, you will need to use a Unix terminal emulator. In addition, the SSH Client must be configured to allow x-forwarding. Refer to the documentation for the SSH Client for instructions on how to enable x-forwarding.

Prerequisite for Installing APC-MDO on WebLogic

APC-MDO requires ADF, so before installing APC-MDO on WebLogic, you must install ADF.

To install ADF on the WebLogic server, complete the following steps:

1. Locate the ADF v10 archive, *adfinstaller.zip*. An example of the location of the Price CD image is:

Price-13.2/APC/lib/adfinstaller.zip
2. Unpack the archive in an appropriate directory (for example, /home/qace/ADF). The archive contains the README.html file. If you need to, you can refer to this file for additional information regarding the installation of ADF.

3. Edit the file `adfinstaller.properties` to make the following changes:
 - Set **DesHome** to the `bea.home` directory. (For more information about `bea.home`, see the `README.html` file.)
 - Set **type** to `WEBLOGIC`.
 - Set **UserHome** as the full path to the domain for APC-MDO that you created in WebLogic (For example, `/home/qace/wls/user_projects/domains/apc_domain`).
 - Set **OracleHome** to the location of the directory where you unzipped the `adfinstaller.zip` file.
4. Shut down the WebLogic server if it is running
5. Run the ADF installer.

```
java -jar runinstaller.jar adfinstaller.properties
```

6. Edit the file `setDomainEnv.sh`, located in the `bin` directory of the APC-MDO domain (for example, `/home/qace/wls/user_projects/domains/apc_domain/bin/setDomainEnv.sh`). You are going to edit the contents of this file directly below the `SET THE CLASSPATH` comment, as follows:
 - Immediately after the `SET THE CLASSPATH` comment, add the following command, which runs the `setupadf.sh` file. You should substitute the values appropriate to your system for `{bea.home}` and `{weblogic.domain}`.


```
.{bea.home}/user_projects/domains/{weblogic.domain}/setupadf.sh
```
 - Modify the `JAVA_OPTIONS` line by adding `-Djava.awt.headless=true` to the end of the line (but inside the double quotes). The entire line, after your modification, should appear as:


```
JAVA_OPTIONS="${JAVA_OPTIONS} ${JAVA_PROPERTIES}
-Dwls.iterativeDev=${iterativeDevFlag}
-Dwls.testConsole=${testConsoleFlag}
-Dwls.logErrorsToConsole=${logErrorsToConsoleFlag}
-Djava.awt.headless=true"
```
 - Modify the line that sets the class path. This involves appending `${CLASSPATHSEP}${CLASSPATH}` to the end of the line. After you edit the line, it should appear as follows:


```
CLASSPATH="${PRE_CLASSPATH}${CLASSPATHSEP}${WEBLOGIC_
CLASSPATH}${CLASSPATHSEP}${POST_CLASSPATH}${CLASSPATHSEP}${WLP_POST_
CLASSPATH}${CLASSPATHSEP}${CLASSPATH}"
```
7. Restart the WebLogic server. When the WebLogic server starts up, examine the console output. The class path should contain all the elements listed in `setupadf.sh`. If it does not, then the APC-MDO installer will not work properly, as the `apcfe.ear` file requires these elements.

Installing APC-MDO in Silent Mode

This section describes how to install APC-MDO in silent mode. Silent mode is non-interactive.

Note: You must install ADF 10.1.3 on the WebLogic server before you can install APC-MDO.

To install APC-MDO in silent mode, complete the following steps:

1. Make sure that you have completed ["Setting Up the Installation Properties File"](#) on page 6-2.
2. Make sure that the application server is running.
3. From the application server machine, enter the following command:

```
bash install.sh
```

install.sh

The `install.sh` command enables you to install APC.

Syntax

```
install.sh [-s] [-p <path-to-install.properties-file>] [-s]
```

Arguments

Use any arguments listed below as needed.

Argument	Description
-s	Optional. Silent mode. If you omit this option, the Oracle Installer user interface displays.
-p <path-to- <i>install.properties</i> >	Optional. Specifies an alternate path to the <code>install.properties</code> file. Defaults to <code>./install.properties</code> .
-x < <i>APC.xml</i> >	Specifies an alternate XML install script file within the <code>./InstallScripts</code> directory.
-h	Optional. Prints a help message.

Return Value

When run in silent mode (`install.sh -s`), the script displays a trace message to stdout (the console). When run in the Installer mode (the default), the script displays a graphical user interface.

Installing APC-MDO Using the Installer

Note: You must install ADF 10.1.3 on the WebLogic server before you can install APC-MDO.

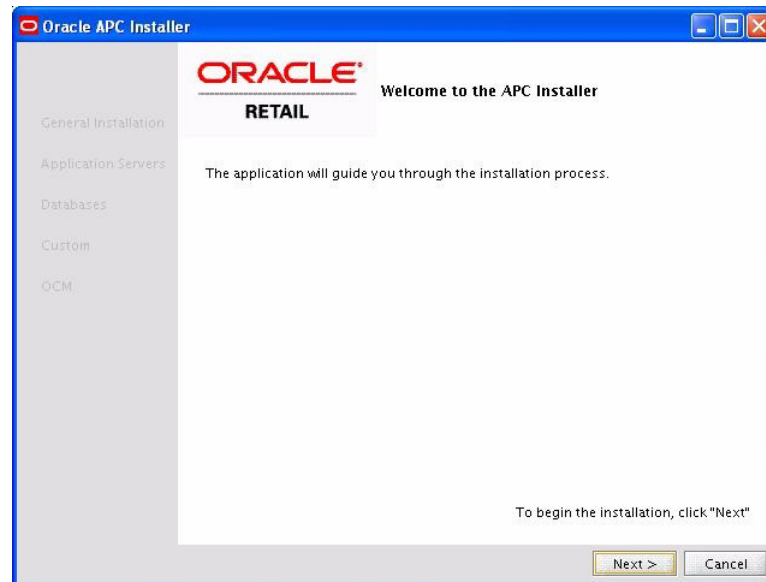
To install APC-MDO interactively using the Installer, complete the following steps:

1. Make sure that you have completed [Setting Up the Installation Properties File](#) on page 6-2.
2. From the Windows client, start the Unix terminal emulator.
3. Make sure that the application server software is running.
4. Navigate to the directory (for example, <MDO_CD_IMAGE>) that contains the installer shell script.
5. Start the installer by issuing the following command:

```
bash install.sh -p APC/apc.install.properties -x APC.xml
```

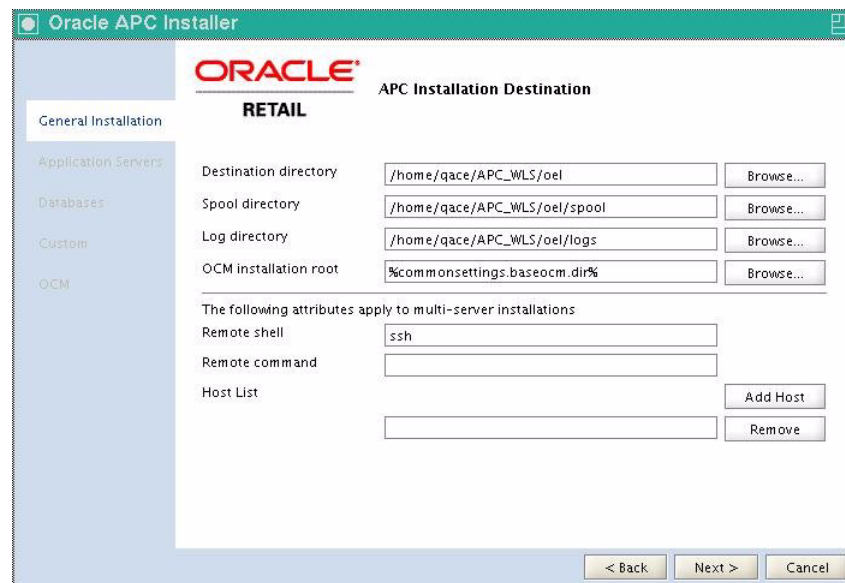
6. The installer opens and displays the **APC Installer Welcome Screen**. Click **Next**.

Figure 6–1 APC Installer Welcome Screen



7. The **APC Installation Destination** screen opens.

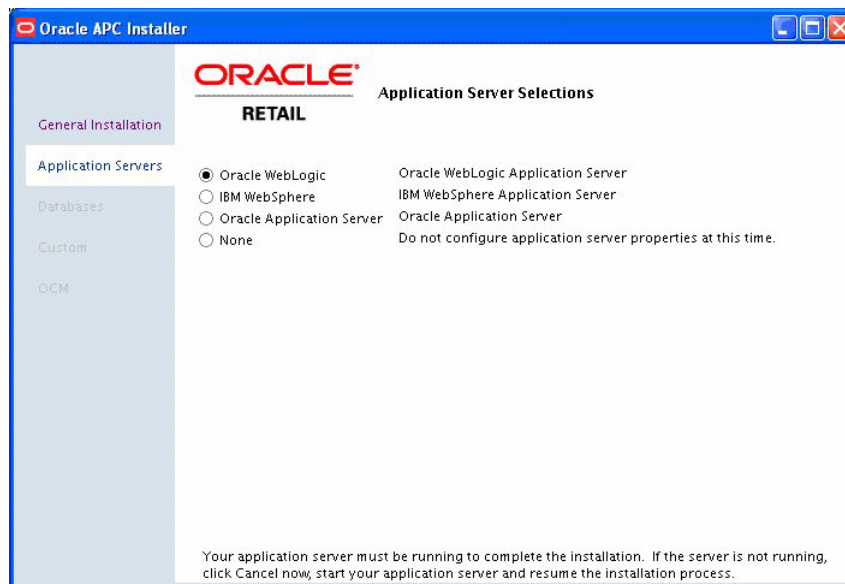
Figure 6–2 APC Installation Screen



- **Destination Directory** – enter the path to the APC-MDO installation target directory.
- **Spool Directory** – enter the path to the APC-MDO spool directory.
- **Log Directory** – enter the path to the APC-MDO log files.
- **OCM Installation root** – enter the path where the Oracle Configuration Manager (OCM) is installed.
- **Remote shell** – this field is populated by default.

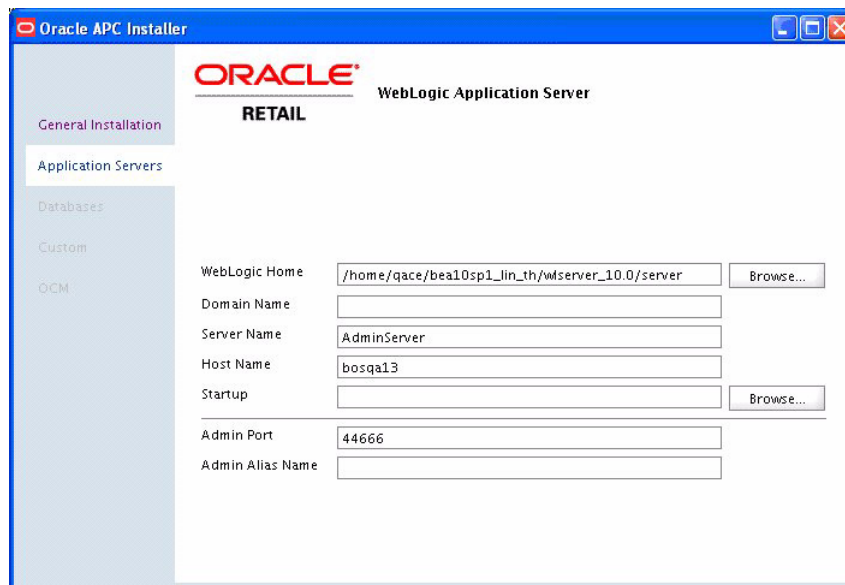
- **Remote command** – leave blank.
 - **Host List** – leave blank.
 - **Click Next.**
8. The **Application Server Selections** screen opens.

Figure 6–3 Application Server Selections



- **Select Oracle WebLogic.**
 - **Click Next.**
9. The **WebLogic Application Server** screen appears.

Figure 6–4 WebLogic Application Server Screen



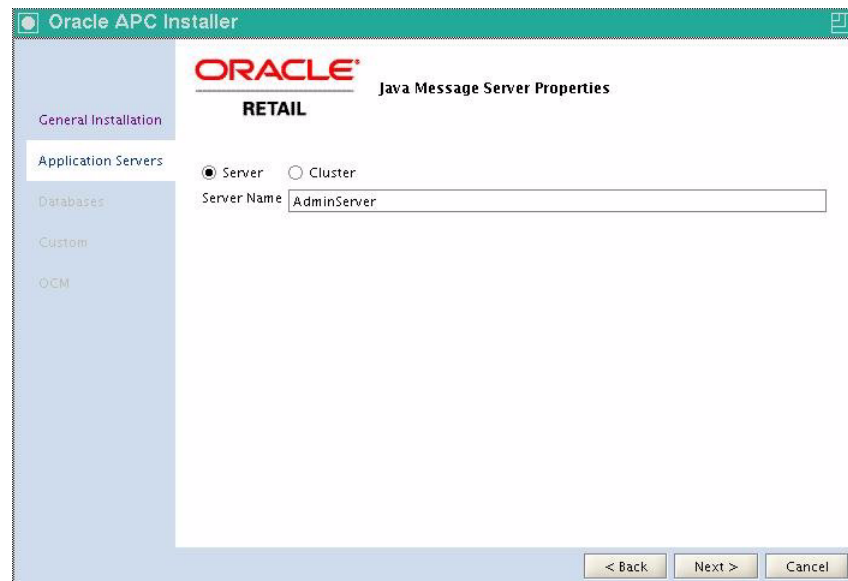
- **WebLogic Home** – enter the location of the WebLogic installation.

- **Domain Name** – enter the domain name for the WebLogic installation.
- **Server Name** – enter the server name for the WebLogic installation.
- **Host Name** – enter the host name for the WebLogic installation.
- **Startup** –left blank
- **Admin Port** – enter the administrative port for the WebLogic installation.
- **Admin Alias** – enter the WebLogic administrative user alias.
- Click **Next**.

Note: If the installation does not continue to the next screen, check the application server information and/or the status of the application server.

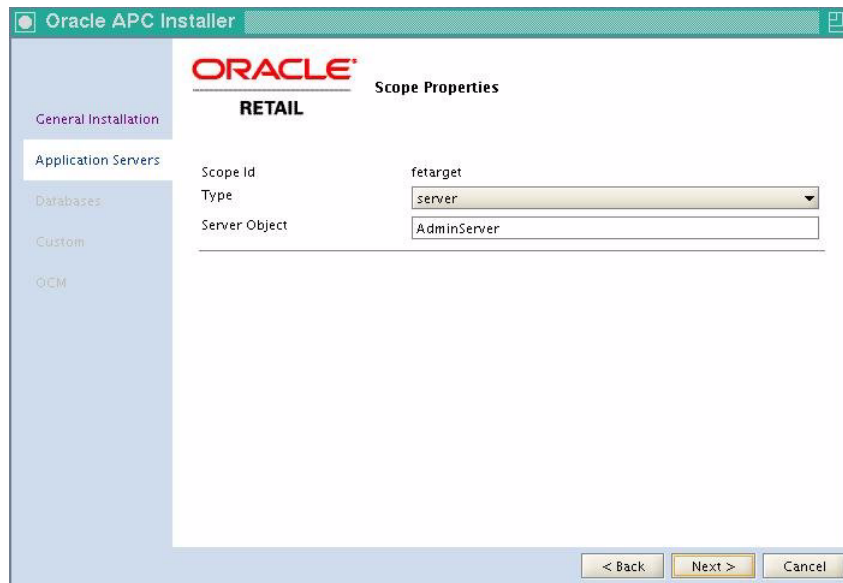
10. The **Java Message Server Properties** screen appears.

Figure 6–5 Java Message Server Properties Screen



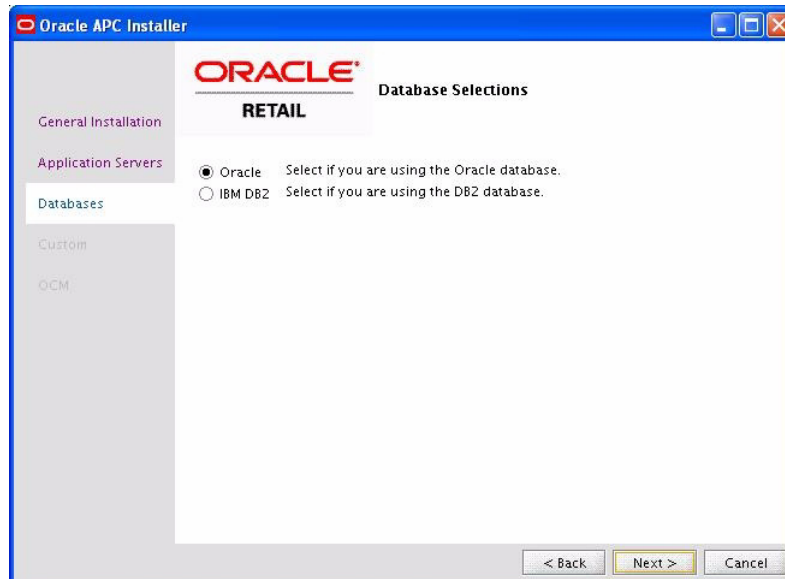
- Select **Server**.
- **Server Name Field** – enter the name of the server that you may have set up as a Java Message Server (JMS).
- Click **Next**.

11. The **Scope Properties** screen appears.

Figure 6–6 Scope Properties Screen

- Enter the server name.
- Click **Next**.

12. The **Database Selections** screen appears.

Figure 6–7 Database Selections Screen

- Select **Oracle**.

Note: APC-MDO does not support the use of DB2.

- Click **Next**.

13. The **Database Properties** screen appears.

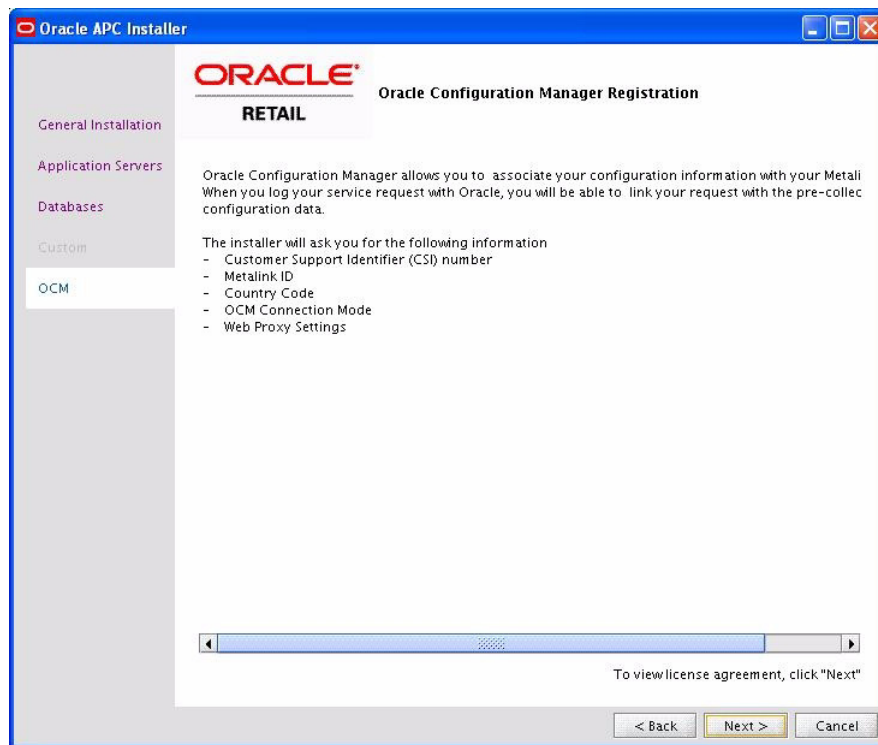
Figure 6–8 Database Properties Screen

- **RAC Database** – leave this field blank. There is no support for Oracle RAC in this release of APC-MDO.
- **Database server address** – enter the address of the database server.
- **Database server port** – enter the server port number associated with the database.
- **Database name** – enter the name used to identify the database.
- **Database alias** – enter the database alias.
- **RAC Host List** – leave this field blank.
- **Database URL** – (optional). Enter the database’s URL.
- **Tables** – select one of the following options:
 - **No Change** – select this option if you have an existing database schema that you do not want to modify. This enables you to configure data sources and EAR files without affecting the database.
 - **Create** – select this option if you are installing a new database schema for APC-MDO. The Oracle Installer drops all the schemas and creates new ones.
 - **Upgrade** – select this option if you have an existing database schema that you want to update. Any existing data remains intact. It is modified on a row-by-row, column-by-column basis, depending on the actions specified in the database patches.

- **Connection Pool** – this field is not editable.
- **Min Connections** – accept the default value.
- **Max Connections** – accept the default value.
- Click **Next**.

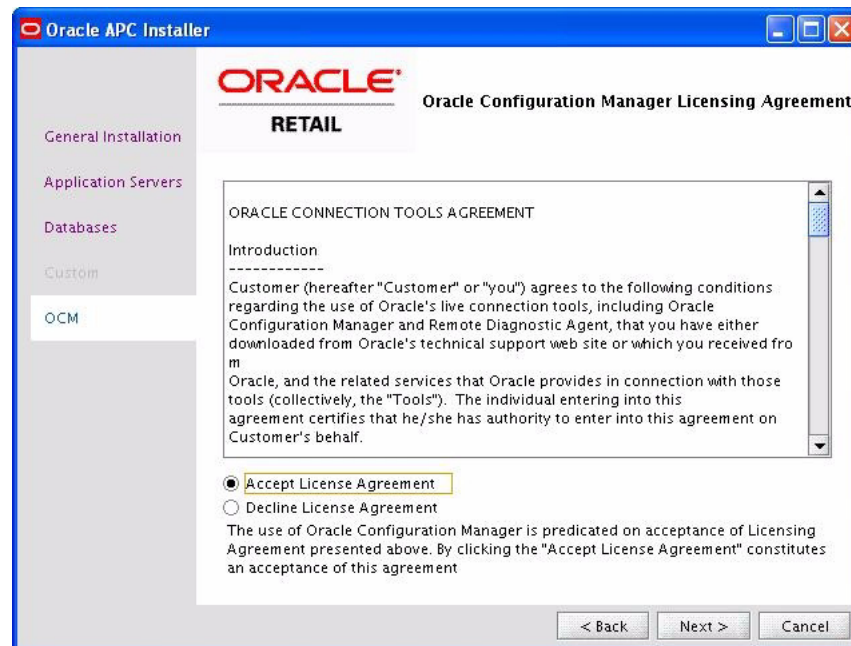
14. The **Oracle Configuration Manager Registration** screen opens.

Figure 6–9 Oracle Configuration Manager Registration



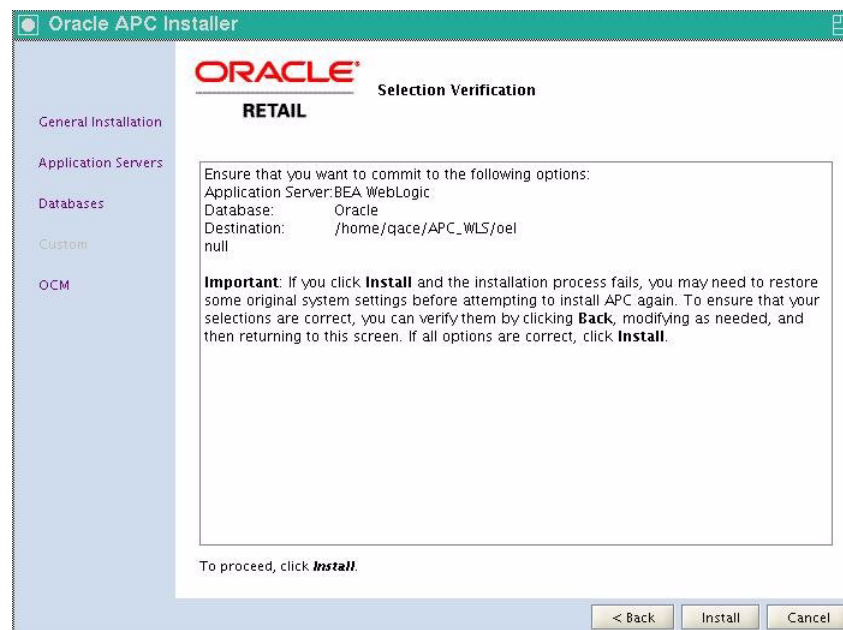
- Click **Next**.

15. The **Oracle Configuration Manager Licensing Agreement** screen opens.

Figure 6–10 Oracle Configuration Manager Licensing Agreement Screen

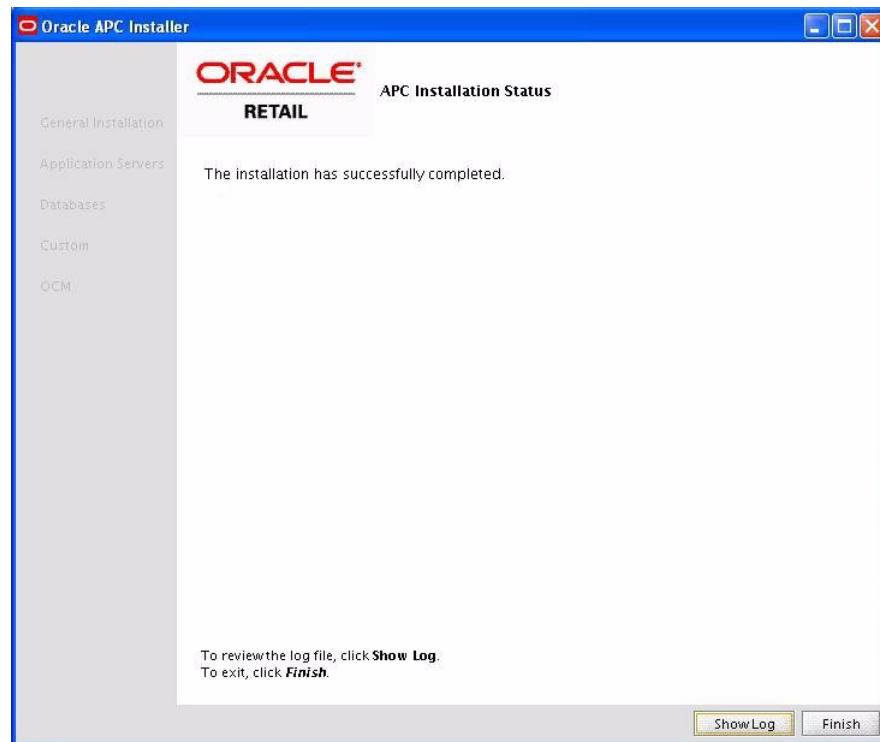
- To decline the License, select **Decline License Agreement**.
- Click **Next**.

16. The **Selection Verification Screen** opens.

Figure 6–11 Selection Verification Screen

- Review this screen, and then click **Install**.

17. The **APC Installation Status** screen opens.

Figure 6–12 APC Installation Status Screen

18. To complete installation:

- Click **Finish** to exit.
- Click **Show Log** to view the installation log file.

Post-Installation Tasks

After the installer has finished, complete the following steps:

1. Navigate to the directory where APC-MDO is installed. This is the directory you defined using the `basedest.basedest.dir` within the `apc.install.properties` file.
2. Edit `config/ecf.conf` within the following directory:
`./modules/APC/config/ecf.conf`
3. Within the `ecf.conf` file, update the admin user name and admin password with the WebLogic Admin user alias from the `install.properties` file.
4. Next, navigate to the `bin` directory, located in
`./modules/APC/bin`
5. Within this directory, issue the following command:
`nohup runAPC.sh -l t3://<host>:<Port> > APCBackEnd &`
 where `<host>` is the machine where WebLogic is running and `<Port>` is the WebLogic Admin port.
6. The only way to shut down the APC-MDO back-end process is to manually kill the process. When you start APC-MDO, using `runAPC.sh`, it spawns a child process. To stop APC-MDO you must kill the `runAPC.sh` process and the java process. To do this manually:

1. Log into the server where the APC-MDO back end is running.
2. Enter the command:
ps -ef | grep runAPC
3. Obtain the process ID (PID) for that process.
4. Enter the command:
ps -ef | grep java
5. Identify the correct java process associated with runAPC.sh and obtain the PID for that process.
6. Run the command:
kill -9 <PID1>

Logging In

Once APC-MDO is installed, you can access the application using the following URL:

http://server:port/apc/faces/Client/Client_Select.jspx

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