

Oracle® Retail Markdown Optimization

Installation Guide

Release 13.0

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Primary Author: Anirudha Accanoor

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Preface

This guide enables you to install the Oracle Retail Markdown Optimization application, along with the server-side components required for the application.

Audience

This guide 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 on a UNIX-based local area network

Related Documents

For more information about using the Markdown Optimization application, the following documents are available in the Oracle Retail Markdown Optimization Release 13.0 documentation set:

- *Oracle Retail Markdown Optimization Administration Guide*
- *Oracle Retail Markdown Optimization Configuration Guide*
- *Oracle Retail Markdown Optimization Operations Guide*
- *Oracle Retail Markdown Optimization User Guide*

Customer Support

- <https://metalink.oracle.com>

When contacting Customer Support, please provide:

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

Review Patch Documentation

For a base release (".0" release, such as 13.0), Oracle Retail strongly recommends that you read all patch documentation before you begin installation procedures. Patch documentation can contain critical information related to the base release, based on new information and code changes that have been made since the base release.

Oracle Retail Documentation on the Oracle Technology Network

In addition to being packaged with each product release (on the base or patch level), all Oracle Retail documentation is available on the following Web site:

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

Documentation should be available on this Web site within a month after a product release. Note that documentation is always available with the packaged code on the release date.

Conventions

The following text conventions are used in this document:

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

This chapter provides an overview of Oracle Retail Markdown Optimization and a roadmap for implementing the application. It contains the following sections:

- [Overview of Markdown Optimization](#)
- [Overview of Oracle Configuration Manager](#)
- [Roadmap for Implementing Markdown Optimization](#)

Overview of Markdown Optimization

Markdown Optimization is a web-based application that enables retailers to attain maximum gross profit margins and clear inventory at specified outdates.

What Are the Markdown Optimization Components?

Markdown Optimization contains the following components:

- **Markdown Optimization** - includes application logic and a web interface to user management, the business rules manager, and to the Markdown Optimization console. Markdown Optimization requires only one instance, which resides on the application server machine.
- **Calculation Engine** - runs in the background, controlling the flow of a run process, responding to optimization requests, and generating forecasts and pricing recommendations that are displayed later on the user interface.

The Calculation Engine may reside on any networked machine--whether it is the application server machine or its own computational machine used specifically for heavy data processing.

Markdown Optimization requires only one instance of the Calculation Engine. However, you can install multiple Engines to boost performance. The Engine is scalable across your network: you can install all Engines on a single machine or distribute them across machines as needed.

How Does Markdown Optimization Turn My Data Into Business Information?

Once a week (or any other defined time interval), a system administrator uploads a set of your business data, which include your relevant business data (for example, your business policies, specified effective dates, ticket prices, full prices, and so forth) and relevant historical data (for example, new sales, inventory, price levels, planned promotions, and other relevant data). This data load process is called the standard load. The only data that is gathered is what you have specified in your business rules.

The Calculation Engine analyzes this data and generates forecasts that calculate all possible price trajectories for applicable items. Markdown Optimization saves the best

forecast trajectory as a recommendation, which you can view from the Markdown Optimization user interface. You can either accept these recommendations or modify them if you prefer an alternative markdown strategy.

At the end of the week, or any other more granular time interval, (such as daily) you generate a sendback file, which contains any changes that have been made using the Markdown Optimization user interface. This keeps your data up to date.

For detailed information about configuring and implementing your specific business rules, data configuration, and Markdown Optimization user interface, see the *Markdown Optimization Configuration Guide*.

How Does Markdown Optimization Help Me Reach My Business Goals?

During the week, retailers use the Markdown Optimization web interface to conduct day-to-day markdown planning to achieve two goals:

- Attain maximum gross margins - by applying the pricing recommendations calculated for in-season merchandise
- Clear inventory - to specified levels at specified outdates

For example, the Markdown Optimization What If feature enables you to create and test possible scenarios in order to forecast demand and select alternative prices. For information on using What If and other aspects of the Markdown Optimization user interface, refer to the *Markdown Optimization User Guide*. You can also access online help by clicking Help from the Markdown Optimization user interface.

Markdown Optimization enables you to customize the way the user interface displays information, sorts and filters data, and generates reports. For information on customizing the Markdown Optimization user interface, see the *Markdown Optimization Configuration Guide*.

Supported Languages

Markdown Optimization is available in the following languages:

- Chinese (Traditional and Simplified)
- English
- French
- German
- Italian
- Japanese
- Korean
- Portuguese (Brazilian)
- Russian
- Spanish
- Taiwanese

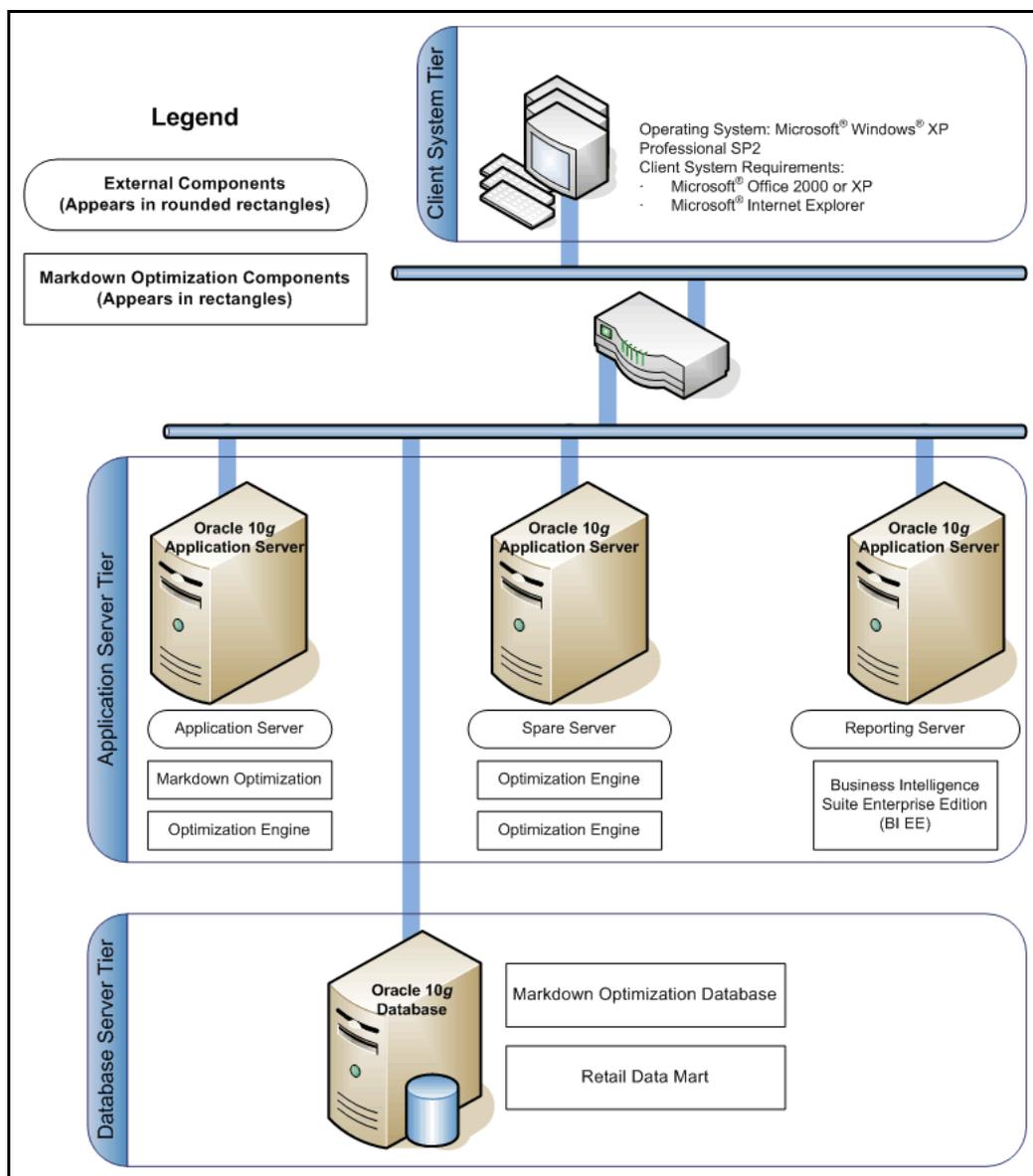
Markdown Optimization Enterprise Components

The Markdown Optimization application is a distributed application, using an application server as the platform for the services, a database, and several other software components. It contains the following components:

- [Client System Tier](#)
- [Application Server Tier](#)
- [Database Server Tier](#)
- [Optional Components](#)

The following diagram depicts a typical setup for a large retailer at chain level or a specialty retailer at region level:

Figure 1-1 *Markdown Optimization Network Diagram*



Client System Tier

The Client System tier contains the systems that connect to the Markdown Optimization application using a Web browser. It includes systems with the following components:

- Microsoft Windows
- Microsoft Office
- Microsoft Internet Explorer 6.0, with ActiveX control

Application Server Tier

The Application Server tier contains the application server domains, clusters, and managed servers set up as a platform used by the application and calculation engine. This tier includes the following components hosted on the application server (Oracle Application Server):

- Application – The Markdown Optimization application resides on a domain configured on this application server. You can install and run multiple instances of the application server or multiple application server machines, based on your business needs.
- Calculation Engine – It also installs on a specific domain configured on the application server. To improve performance, you can install and run multiple engines, and move them to any other production server within your environment as needed.

Note: Oracle recommends that you set up separate hosts for the application and the Calculation Engine.

Database Server Tier

The Database Server tier contains the systems configured with the database management systems (Oracle 10g Database) along with the necessary database software.

- Relational database management system.
- Markdown Optimization Database – contains historical sales and other business information that originates from systems external to Markdown Optimization.
- The database also contains the Retail Data Mart (RDM), a set of data generated and used internally by Markdown Optimization.

Optional Components

- Additional computational servers for implementing the Calculation Engine in a large-scale environment.
- Additional application server machines for implementing Markdown Optimization for a large number of users.

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 Software Configuration Manager Metalink Web site.

The first OCM collector distribution that will be aware of the Oracle Retail applications is in development. This version of OCM is scheduled to be posted for download but is not yet available. Oracle Retail recommends that retailers download OCM 10.3.0 from ARU and use the "emCCR update_components" command to upgrade installed OCM collectors. See the OCM Installation and Administration Guide for further instructions. The Retail OCM Installer released with Oracle Retail 13.0 applications will install OCM 10.2.7. If the collector remains at version 10.2.7 and is installed in connected mode, an automatic update to version 10.3.0 is expected to occur later this year, the time at which 10.3.0 becomes a mandatory upgrade.

For more information, see the following:

Metalink Note: 559539.1

The Oracle Configuration Manager Installer 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.

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

Roadmap for Implementing Markdown Optimization

This guide explains how you can install and set up the Markdown Optimization application, along with the required and optional software.

The instructions in this guide assume knowledge of application servers, databases, and application installation, 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 Markdown Optimization for production, you must perform the following tasks in a sequence:

Table 1–1 Roadmap for Implementing Markdown Optimization

Task	Description
<i>Pre-installation Tasks</i>	
1.	Plan your environment, based on your business needs. For more information on the planning process and the supported configurations, see Chapter 2, "Planning Your Installation" .
2.	Set up your application database. For more information, see Chapter 3, "Setting Up the Database" .

Table 1–1 Roadmap for Implementing Markdown Optimization

Task	Description
3.	Set up your application server. For more information, see Chapter 4, "Setting Up Your Application Server" .
<i>Installation Task</i>	
4.	Access the Markdown Optimization installation software, set up the install.properties file, and run the Oracle installer. For more information, see Chapter 5, "Installing Markdown Optimization" .
<i>Post-installation Tasks</i>	
5.	Configure your business rules and user accounts. For more information, see the <i>Markdown Optimization Configuration Guide</i> .
6.	Load data and evaluate the results. For more information, see the <i>Markdown Optimization Configuration Guide</i> .
7.	Set up your reporting tool, Oracle Business Intelligence Suite Enterprise Edition (BI EE). For more information, see Chapter 6, "Setting Up BI Infrastructure" .
8.	If you want to integrate the Markdown Optimization application as part of the Oracle Application Server Single Sign-On implemented with Oracle Retail Workspace, see Chapter 7, "Setting up Single Sign-On" .
9.	Modify the Markdown Optimization user interface to accommodate your business needs, as described in the <i>Markdown Optimization Configuration Guide</i> . Concurrent with this activity, complete the remaining steps in this roadmap. You can continue refining the user interface iteratively, as needed (optional).
10.	Set up user accounts and introduce the end users to the application.
11.	Maintain the application as described in the <i>Markdown Optimization Configuration Guide</i> .

Planning Your Installation

Before installing the Markdown Optimization application, you must first determine the performance and availability goals for your business, and then plan the hardware, network, and storage requirements accordingly. This chapter provides some basic considerations for the implementation. It also includes the list of hardware and software requirements.

This chapter includes the following sections:

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

Overview of the Planning Process

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

This section contains the following topics:

- [Planning Your Environment](#)
- [Planning for Optimal Markdown Optimization Performance](#)

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 prerequisite software (and licensing).
 - Setting up the load balancers and clusters.
 - Gathering the 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 Markdown Optimization.

Planning for Optimal Markdown Optimization Performance

Consider the following steps to plan and prepare the product environment.

1. Determine the Markdown Optimization metrics relevant to your business needs.
2. Determine your relevant business policies. The business policy is a statement of what rules govern the application processes. You need to develop a business policy based on your business rules. For more information about business rules, see the *Markdown Optimization Configuration Guide*.
3. Plan the periodic batch loading of business and historical databases. This also includes the data feeds needed from the external systems for nightly, weekly, and periodic batch updates and recycling.

Supported Configurations

This section describes the hardware and network requirements for the Markdown Optimization application, and includes the following topics:

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

Note: Before installing the Markdown Optimization application, you must install one of the following appropriate versions of the *rsync* utility:

- For AIX-based operating system, use rsync version 2.6.2
- For HP-UX-based operating system, use rsync version 2.6.9
- For Linux-based operating system, use rsync version 2.5.7
- For Solaris-based operating system, use rsync version 2.5.6

rsync is an open source utility that provides fast incremental file transfer and is freely available under the GNU General Public License version 2. For more information on rsync and resources on installation, visit the rsync web page at <http://samba.anu.edu.au/rsync>

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

Markdown Optimization requires the use of the Oracle database as described in the following table:

Table 2–1 Database Requirements for Markdown Optimization

Software	Requirement
Database (64-bit)	Oracle 10g Release 2 (10.2.0.3) Single Instance Oracle 10g Release 2 (10.2.0.3) RAC
Operating System (64-bit)	<ul style="list-style-type: none"> ■ Oracle Enterprise Linux 4.0 ■ HP-UX 11iv2 (11.23) Itanium ■ IBM AIX 5.3.0, TL5, 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

Important: Although the Markdown Optimization Release 13.0 supports JDK 1.5, ensure that the system that hosts the database is set to use JDK 1.4.

Oracle 10g Release 2 requires the use of JDK 1.4.

Application Server Requirements

Markdown Optimization requires the use of the Oracle 10g Application Server. The following table lists the supported operating systems and the associated application server versions:

Table 2–2 Application Server Requirements for Markdown Optimization

Software	Requirement
Application Server	OAS 10.1.3.3 (64-bit) OAS 10.1.3.3 (32-bit)
Operating System (64-bit)	HP-UX 11iv2 (11.23) Itanium Oracle Enterprise Linux 4.0 IBM AIX 5.3.0, TL5, APAR IY75211 Sun Solaris 10 (SPARC)
JVM (32-bit)	HP JDK 1.5.0.03 build 1.5.0.03-13_feb_2006_16_39 Sun JDK 1.5.0_6 IBM JDK 1.5 - build pap32dev-20051104 Sun JDK 1.5.0_6

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.

Reporting Tool Requirements

Markdown Optimization requires the use of Oracle 10g Business Intelligence (BI) Suite Enterprise Edition for reports. The following table lists the supported configurations:

Table 2-3 Reporting Tool Requirements for Markdown Optimization

Software	Requirement
Reporting Tool	Oracle Business Intelligence Suite Enterprise Edition Version 10.1.3.3.1
Operating System (64-bit)	<ul style="list-style-type: none"> ■ Oracle Enterprise Linux 4.0 ■ HP-UX 11iv2 (11.23) Itanium ■ IBM AIX 5.3.0, TL5, APAR IY75211 ■ Sun Solaris 10 (SPARC platform), with timezone patch 122032-01 or later and libc patch 119689-07 or later.
Operating System (32-bit)	<ul style="list-style-type: none"> ■ Microsoft Windows XP Pro SP2
JVM	Sun JDK 1.5.06 or above

Client System Requirements

The following table lists the supported client system options:

Table 2-4 Client System Environment

Software	Requirements
Windows XP Pro SP2 (with Office 2003)	<ul style="list-style-type: none"> ■ Microsoft Office 2003 ■ Microsoft Internet Explorer 7.0
Windows XP Pro SP2 (with Office XP)	<ul style="list-style-type: none"> ■ Microsoft Office XP ■ Microsoft Internet Explorer 7.0
Windows XP Pro SP2 (with Office 2000)	<ul style="list-style-type: none"> ■ Microsoft Office 2000 ■ Microsoft Internet Explorer 7.0

Setting Up the Database

This chapter describes how you can set up your database, and the various database components. It contains the following sections:

- [Before You Begin](#)
- [Creating the Markdown Optimization Database](#)
- [Creating the Database Links](#)

Note: If your database requires multi-byte support, specify the following properties in your `init.ora` file:

```
CHARACTER_SET=AL32UTF8
NLS_LENGTH_SEMANTICS=CHAR
```

Before You Begin

Read this section before setting up your Markdown Optimization database.

Overview of the Markdown Optimization Database Installation

Markdown Optimization requires the following database instances:

- Business database
- History database
- RDM database
- Optimized data database

Note: Ensure that the RDM database objects are created on a separate schema.

Installing the Prerequisite Software

Install your database before you install your application server and Markdown Optimization. For database prerequisites and other requirements, see [Chapter 2, "Planning Your Installation"](#).

Install the following software, using the documentation specific to your database for guidance:

- Oracle application software
- Oracle J Accelerator
- Install the JVM into Oracle

Creating the Markdown Optimization Database

Note: The size of tablespaces depends on the amount of data being stored. For any sizing recommendations, see [Table 3–1, Markdown Optimization Tablespaces](#).

Creating the Markdown Optimization database involves the following steps:

1. [Creating the Initialization Parameter File](#)
2. [Creating the Markdown Optimization Tablespaces](#)
3. [Creating the System Data Dictionary](#)
4. [Specifying Users and Permissions](#)
5. [Creating the Schema](#)

Creating the Initialization Parameter File

Create an init.ora file in the <ORACLE_HOME>/dbs directory, specifying the following parameters:

```
db_block_size = 8192
shared_pool_size = 500M
db_cache_size = 1500M
large_pool_size = 20M
log_buffer = 524288
pga_aggregate_target = 500M
workarea_size_policy = AUTO
undo_management = AUTO
global_names = FALSE
optimizer_mode = CHOOSE
cursor_sharing = SIMILAR
query_rewrite_enabled = TRUE
query_rewrite_integrity = TRUSTED
compatible = 9.2.0
optimizer_features_enable = 9.2.0
parallel_automatic_tuning = TRUE
db_file_multiblock_read_count = 64
log_checkpoints_to_alert = TRUE
session_cached_cursors = 100
timed_statistics = TRUE
log_checkpoint_interval = 100000000
log_checkpoint_timeout = 0
```

Creating the Markdown Optimization Tablespaces

The Markdown Optimization database requires the following system tablespaces.

Table 3–1 *Markdown Optimization Tablespaces*

Tablespace	Description
DATA_01	Required. Default tablespace for Markdown Optimization table. Recommended: 5 GB.
INDEX_01	Required. Tablespace for indexes of Markdown Optimization, STG, and ASH. Recommended: 5 GB.
ITEM_DATA_PIN	Required. Tablespace for ITEM_DATA table of the Markdown Optimization schema. Recommended: 5 GB.
SYSTEM	System tablespace used for metadata.
SUS AUX	System tablespace used for system monitoring.
TEMP	Typical but not required. System tablespace used for temporary system swap space for Markdown Optimization, STG, and ASH. Recommended size: 10 GB.
RBS	Typical but not required. System tablespace for resolving data write clashes. Recommended size: 5 GB.

Creating the System Data Dictionary

To create the system data dictionary, log in as the sys user and run the following scripts:

```
<ORACLE_HOME>/rdbms/admin/catalog.sql
<ORACLE_HOME>/rdbms/admin/catproc.sql
<ORACLE_HOME>/sqlplus/admin/pupbld.sql
```

Specifying Users and Permissions

Specify the following default privileges to the Oracle schemas:

- Resource
- Select any table
- Query rewrite
- Create materialized view
- Drop any table
- Create view
- Execute any procedure
- Java permissions as follows:

```
dbms_java.grant_permission
('PRICE', 'SYS:java.lang.RuntimePermission', 'getClassLoader', '' );
```

Creating the Schema

After the default privileges to schemas are assigned, carry out the following steps to create the schema. (This assumes a script named `price.sql` and a schema named `price`.)

```
sqlplus <user>/password@databasename@price.sql
```

To create the bufferpool:

Run the `CREATE BUFFERPOOL` command for each bufferpool, using the following recommended values:

```
CREATE BUFFERPOOL "BP_8K_DATA_01"  SIZE 40000 PAGESIZE 8192 NOT EXTENDED STORAGE;
CREATE BUFFERPOOL "BP_8K_INDEX_01"  SIZE 40000 PAGESIZE 8192 NOT EXTENDED STORAGE;
CREATE BUFFERPOOL "BP_8K_TEMP_01"   SIZE 40000 PAGESIZE 8192 NOT EXTENDED STORAGE;
CREATE BUFFERPOOL "BP_8K_DATA_02"   SIZE 40000 PAGESIZE 8192 NOT EXTENDED STORAGE;
CREATE BUFFERPOOL "BP_16K_ITEM_DATA" SIZE 1000  PAGESIZE 16384 NOT EXTENDED
STORAGE;
CREATE BUFFERPOOL "BP_16K_TEMP_02"  SIZE 1000  PAGESIZE 16384 NOT EXTENDED STORAGE;
```

Creating the Database Links

Before proceeding with the application installation, you must create a database link between the RDM and application database (for example, *rdmoakdblink*) instances.

To create the database link:

- At the SQL prompt, connect to the RDM schema, and then run the following command to create the database link for the RDM database to access the application database:

```
create database link rdmoakdblink connect to <MDO_Schema> identified by
<Database_User> using <Database_Password>;
```

Where,

- `<MDO_Schema>` – indicates the name of the application database schema.
- `<Database_User>` – indicates the user name associated with the application schema.
- `<Database_Password>` – indicates the password associated with the user name.

Important: Keep a note of the database link name. When you set up the `install.properties` file or run the Installer in graphical mode, you must specify this database link name for the `rdm.oak.dblink` property.

Setting Up Your Application Server

Before installing the Markdown Optimization application, you must set up an instance on the application server. Based on your business need, you must set up the instance to include one or more server instances, and logically related resources and services.

This chapter describes how you can set up the Oracle Application Server . It contains the following section:

- [Installing and Configuring Oracle Application Server](#)

If you plan to use clusters for the Markdown Optimization installation, Oracle recommends that you create the clusters before setting up the instance. Otherwise, the managed servers must be added manually. For information about managing clusters, see the documentation for your application server.

Installing and Configuring Oracle Application Server

The Markdown Optimization application requires the use of Oracle Application Server 10g Release 3 (10.1.3.3). To install and configure Oracle Application Server, use these sections in the following sequence:

1. [Installing Oracle Application Server](#)
2. [Configuring Oracle Application Server](#)

Installing Oracle Application Server

Install the Oracle Application Server, referring to the Oracle Application Server documentation for guidance.

During the installation, accept the default values for the multicast IP address and port settings; these settings will be automatically updated, as needed, when you run the Markdown Optimization Installer. If you want your OAS instance to be part of a cluster, specify the information relevant to your cluster topology.

In this guide, the Oracle Application Server installation directory is referred to as the <OAS_HOME> directory.

Next, you need to specify properties in the Oracle Application Server configuration files.

Configuring Oracle Application Server

To specify Oracle Application Server configuration properties:

1. Navigate to the **<OAS_Home>/j2ee/home/config** directory, edit the **server.xml** file to include the *global-jndi-lookup-enabled* property. For example,

```
<application-server xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:noNamespaceSchemaLocation="http://xmlns.oracle.com/oracleas/schema/application-server-10_1.xsd" localhostIsAdmin="true"
  application-directory="../applications"
  check-for-updates="adminClientOnly"
  deployment-directory="../application-deployments"
  connector-directory="../connectors"
  global-jndi-lookup-enabled="true"
  schema-major-version="10" schema-minor-version="0" >
```

2. Navigate to the **<OAS_Home>/opmn/conf** directory, edit the **opmn.xml** to include the JVM start up parameters. For example,

```
<category id="start-parameters">
  <data id="java-options" value="-Xrs -server
    -Djava.security.policy=$ORACLE_HOME/j2ee/home/config/java2.policy
    -Dcom.profitlogic.configroot=/pricecluster/config
    -Djava.awt.headless=true -Xmx512m -Xms512m -XX:MaxPermSize=256m
    -Dhttp.webdir.enable=false"/>
</category>
```

Note: Setting the headless abstract window toolkit class to "true" enables the What If graphics to display on your application server.

3. For the changes to take effect, restart the application server.

Installing Markdown Optimization

After you have set up your database management system and application server, you can install Markdown Optimization as described in this chapter. This chapter contains the following sections:

- [Overview of the Installation Process](#)
- [Installing Markdown Optimization](#)
- [Post-Installation Tasks](#)
- [Upgrading to the Latest Release of Markdown Optimization](#)
- [Troubleshooting Installation Issues](#)

Overview of the Installation Process

Note: Although options for IBM AIX, DB2, WebSphere, and BEA WebLogic Server appear in the Oracle Installer, they are not supported in this release.

In order to install Markdown Optimization, your first task is to obtain the installation media.

Then you should choose which installation mode you prefer. Whichever mode you use, you first need to set up the Markdown Optimization properties file. The two modes are as follows:

- **Graphical mode** - In graphical mode, the Oracle Installer displays a graphical user interface and prompts you to enter or modify the value of properties specified in the properties file.
- **Silent mode** - In silent mode, the installer processes the properties file with no manual intervention required.

To begin the installation process, see [Installing Markdown Optimization](#).

Installing Markdown Optimization

Installing Markdown Optimization consists of the following tasks:

- [Accessing the Installation Software](#)
- [Setting Up Your Installation Properties File](#)
- [Installing Markdown Optimization in Silent Mode](#)
- [Installing Markdown Optimization Using the Graphical Oracle Installer](#)

Accessing the Installation Software

In order to install Markdown Optimization, you first need to obtain the software media, which is available on DVD or from a ZIP file. This section explains how to download the Markdown Optimization software ZIP file from the Oracle E-Delivery site.

To download the Markdown Optimization software:

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

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

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

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** - Click the check box.
- **Export Restrictions** - Click the check box.

The **Media Pack Search** screen displays.

4. Respond to the following and click **Go**.

- **License List** - Review the list to determine which Product Packs you need to download.
- **Product Pack** - Select **Oracle Retail Applications**.
- **Platform** - Select the desired operating system. Optional.

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. In this guide, the directory that contains the installation media is referred to as the <MARKDOWN OPTIMIZATION_CD_IMAGE> directory.

Now you can set up your Markdown Optimization installation properties file.

Setting Up Your Installation Properties File

In order to install Markdown Optimization, you first need to specify the properties to use during the installation process. These properties are specified in the `install.properties` file.

To set up your `install.properties` file:

1. Ensure that your `<MARKDOWN OPTIMIZATION_CD_IMAGE>` directory exists and is populated as described in [Accessing the Installation Software](#), on page 5-2.
2. Navigate to the `<MARKDOWN OPTIMIZATION_CD_IMAGE>` directory and copy the `reference.price.install.properties` file to the same directory, naming it `install.properties`.
3. Edit the `install.properties` file, specifying values as described within the file, and save it. For more information on the parameters, see [Install.properties Parameter Reference](#).

Now you can install Markdown Optimization, using either of the following modes:

- [Installing Markdown Optimization in Silent Mode](#)
- [Installing Markdown Optimization Using the Graphical Oracle Installer](#)

Install.properties Parameter Reference

The following table describes the parameters in the `install.properties` file that you must set up before you install the Markdown Optimization application:

Table 5–1 *Install.properties Parameters Reference*

Parameter	Description
Architecture Properties	
<code>basedest.basedest.dir</code>	Use this parameter to specify the path to the base installation folder.
<code>basedest.baselog.dir</code>	Use this parameter to specify the path to the folder that contains the log files.
<code>basedest.basespool.dir</code>	Use this parameter to specify the path to the folder that contains the spool files.
<code>architecture</code>	Use this parameter to specify the operating system for the application. Valid values are <code>aix_powerpc</code> , <code>linux_i686</code> , <code>sunos_sun4u</code> , or <code>hpux_ia64</code> .
<code>http.protocol</code>	The type of HTTP protocol used to host the Markdown Optimization application.
<code>install.command.shell</code>	The shell command to use when you want to execute the shell scripts.
<code>suite.host</code>	The host name or IP address where the User Management module is installed.
<code>suite.port</code>	The port to connect to the User Management module.
<code>delphi.rmi.host</code>	The host name or IP address where the Delphi RMI server is installed.
<code>delphi.rmi.port</code>	The port to connect to the Delphi RMI server.
Database Properties	
<code>install.database</code>	Use this parameter to specify the installed database.
<code>install.database.default</code>	Use this parameter to specify the default database.

Table 5–1 Install.properties Parameters Reference

Parameter	Description
Oracle Properties	
dbms.oracle.host	The host name or IP address where the Oracle database is installed.
dbms.oracle.port	The port to connect to the Oracle database.
dbms.oracle.db	Use this parameter to specify the Oracle database name.
dbms.oracle.alias	Use this parameter to specify the Oracle database alias name.
dbms.oracle.user	Use this parameter to specify the user name to connect to the Oracle database.
dbms.oracle.pass	Use this parameter to specify the password to connect to the Oracle database.
database.commondb.oracle.address	Use this parameter to specify the URL (host name or IP address) where the Oracle database is installed.
database.commondb.oracle.dbalias	Use this parameter to specify the database alias name.
database.commondb.oracle.dbname	Use this parameter to specify the database name.
database.commondb.oracle.dbport	Use this parameter to specify the port to connect to the database.
database.commondb.oracle.auth.commonOracleAuth.user	Use this parameter to specify the user name to connect to the database.
database.commondb.oracle.auth.commonOracleAuth.password	Use this parameter to specify the password to connect to the database.
database.commondb.oracle.user	Use this parameter to specify the user name to connect to the database.
database.commondb.oracle.password	Use this parameter to specify the password to connect to the database.
<i>Properties for databases with Real Application Clusters (RAC)</i>	
database.commondb.oracle.racenabled	Use this parameter to indicate that the database is set up with Real Application Clusters (RAC).
database.commondb.oracle.dbhostlist	Use this parameter to specify the host names (with port numbers) of the servers hosting the database.
database.commondb.oracle.dburl	Use this parameter to specify the database URL for JDBC connectivity. Syntax: For non RAC database, jdbc:oracle:thin:@<host name>:<dbport>:<dbname> For RAC database, jdbc:oracle:thin:@(DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL = TCP)(HOST = <host name1>)(PORT = <dbport1>)) (ADDRESS = (PROTOCOL = TCP)(HOST = <host name2>)(PORT = <dbport2>)) (ADDRESS = (PROTOCOL = TCP)(HOST = <host name3>)(PORT = <dbport3>)) (ADDRESS = (PROTOCOL = TCP)(HOST = <host name4>)(PORT = <dbport4>))) (CONNECT_DATA = (SERVICE_NAME = <dbname> (failover_mode = (type=select) (method=basic) (retries=60)(delay=5))))
database.commondb.oracle.create	Use this parameter to specify that a new database schema must be created. Valid values are Yes or No.
database.commondb.oracle.upgrade	Use this parameter to specify that the existing database schema be upgraded. Valid values are Yes or No.

Table 5–1 Install.properties Parameters Reference

Parameter	Description
RDM database connection information for Oracle database	
Note: Ensure that the RDM database objects are created on a separate schema.	
<i>RDM Database Information</i>	
database.rdmdb.oracle.dbname	Use this parameter to specify the RDM database name.
database.rdmdb.oracle.dbalias	Use this parameter to specify the RDM database alias name.
database.rdmdb.oracle.address	Use this parameter to specify the host name or IP address where the RDM database is installed.
database.rdmdb.oracle.dbport	Use this parameter to specify the port to connect to the RDM database.
database.rdmdb.oracle.user	Use this parameter to specify the user name to connect to the RDM database.
database.rdmdb.oracle.password	Use this parameter to specify the password to connect to the RDM database.
<i>New RDM Database Definitions</i>	
database.RdmDB.oracle.auth.rdmOracleAuth.user	Use this parameter to specify the user name to connect to the RDM database.
database.RdmDB.oracle.auth.rdmOracleAuth.password	Use this parameter to specify the password to connect to the RDM database.
<i>Database Schema Name for OAK and FE schemas</i>	
rdm.oakschema	Use this parameter to specify the database name for the OAK schema.
rdm.feschema	Use this parameter to specify the database name for the front end schema.
<i>Properties for databases with Real Application Clusters (RAC)</i>	
database.rdmdb.oracle.racenabled	Use this parameter to indicate that the database is set up with Real Application Clusters (RAC).
database.rdmdb.oracle.dbhostlist	Use this parameter to specify the host names (with port numbers) of the servers hosting the database.
database.rdmdb.oracle.dburl	Use this parameter to specify the database URL for JDBC connectivity. Syntax: For non RAC database, jdbc:oracle:thin:@<host name>:<dbport>:<dbname> For RAC database, jdbc:oracle:thin:@(DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL = TCP)(HOST = <host name1>)(PORT = <dbport1>)) (ADDRESS = (PROTOCOL = TCP)(HOST = <host name2>)(PORT = <dbport2>)) (ADDRESS = (PROTOCOL = TCP)(HOST = <host name3>)(PORT = <dbport3>)) (ADDRESS = (PROTOCOL = TCP)(HOST = <host name4>)(PORT = <dbport4>))) (CONNECT_DATA = (SERVICE_NAME = <dbname> (failover_mode = (type=select) (method=basic) (retries=60)(delay=5))))
<i>Properties to create or upgrade RDM database</i>	
database.rdmdb.oracle.create	Use this parameter to indicate that a new RDM database be created. Valid values are Yes or No.
database.rdmdb.oracle.upgrade	Use this parameter to indicate that the existing RDM database be upgraded. Valid values are Yes or No.

Table 5–1 Install.properties Parameters Reference

Parameter	Description
rdm.oak.dblink	Use this parameter to specify the database link used by the RDM and optimized history schemas to access the BASE schema. Although this link can be a public or private link in each schema, ensure that the link name is the same. If the schemas exist in the same instance, specify the database instance name.
DB2 Properties	
dbms.db2.host	Use this parameter to specify the host name or IP address where the DB2 database is installed.
dbms.db2.port	Use this parameter to specify the port to connect to the DB2 database.
dbms.db2.db	Use this parameter to specify the DB2 database name.
dbms.db2.alias	Use this parameter to specify the DB2 database alias name.
dbms.db2.user	Use this parameter to specify the user name to connect to the DB2 database.
dbms.db2.pass	Use this parameter to specify the password to connect to the DB2 database.
database.commondb.db2.address	Use this parameter to specify the URL (host name or IP address) where the DB2 database is installed.
database.commondb.db2.dbport	Use this parameter to specify the port to connect to the DB2 database.
database.commondb.db2.dbname	Use this parameter to specify the DB2 database name.
database.commondb.db2.dbalias	Use this parameter to specify the DB2 database alias name.
database.commondb.db2.classpath	Use this parameter to specify the class path set for the DB2 database.
database.commondb.db2.user	Use this parameter to specify the user name to connect to the DB2 database.
database.commondb.db2.password	Use this parameter to specify the password to connect to the DB2 database.
database.commondb.db2.auth.commonDb2auth.user	Use this parameter to specify the user name to connect to the DB2 database.
database.commondb.db2.auth.commonDb2auth.password	Use this parameter to specify the password to connect to the DB2 database.
database.rdmdb.db2.dbname	Use this parameter to specify the RDM database name.
database.rdmdb.db2.dbalias	Use this parameter to specify the RDM database alias name.
database.rdmdb.db2.address	Use this parameter to specify the host name or IP address where the RDM database is installed.
database.rdmdb.db2.dbport	Use this parameter to specify the port to connect to the RDM database.
database.rdmdb.db2.user	Use this parameter to specify the user name to connect to the RDM database.
database.rdmdb.db2.password	Use this parameter to specify the password to connect to the RDM database.
database.RdmDB.db2.auth.rdmOracleAuth.user	Use this parameter to specify the user name to connect to the RDM database.
database.RdmDB.db2.auth.rdmOracleAuth.password	Use this parameter to specify the password to connect to the RDM database.
rdm.oakschema	Use this parameter to specify the database name for the OAK schema.

Table 5–1 Install.properties Parameters Reference

Parameter	Description
rdm.feschema	Use this parameter to specify the database name for the front end schema.
database.rdmdb.db2.create	Use this parameter to indicate that a new RDM database be created. Valid values are Yes or No.
database.rdmdb.db2.upgrade	Use this parameter to indicate that the existing RDM database be upgraded. Valid values are Yes or No.
Oracle Application Server Properties	
install.appserver	The default application server for the application.
oracle.home	The default base folder for the Oracle application server.
oracle.server.address	The base URL for the Oracle application server instance.
oracle.admin.port	Use this parameter to specify the port to connect to the Oracle application server.
oracle.admin.userid	Use this parameter to specify the administrative user name for the application server.
oracle.admin.password	Use this parameter to specify the password associated with the administrative user.
oracle.group.name	Use this parameter to specify the group name associated with the application server instance.
oracle.instance.name	Use this parameter to specify the name of the application server instance.
oracle.opmn.enabled	Use this parameter to specify whether you want to use the OPMN server service. Set the value to 'Yes' for Oracle Application Server, and 'No' for OC4J instance.
database.commondb.oracle.dbdriver	Use this parameter to specify the database driver that provides connection to the database.
WebLogic Server Properties	
bea.home	Use this parameter to specify the path to the BEA base directory. For example, C:\BEA.
weblogic.server	Use this parameter to specify the name of the server instance.
weblogic.domain	Use this parameter to specify the name of the domain created on the WebLogic application server.
weblogic.admin.userid	Use this parameter to specify the WebLogic admin user name.
weblogic.admin.password	Use this parameter to specify the WebLogic admin password.
weblogic.admin.port	Use this parameter to specify the port to connect to the WebLogic application server.
weblogic.server.address	Use this parameter to specify the URL to connect to the WebLogic application server.
weblogic.home	Use this parameter to specify the path to the WebLogic server in the BEA base directory. For example, C:\BEA\weblogic81\server
weblogic.start	Use this parameter to specify the path to the WebLogic startup shell script (startWebLogic.sh).

Table 5–1 Install,properties Parameters Reference

Parameter	Description
WebLogic Cluster Properties	
scope.fetarget.serverobject	Use this parameter to specify the name of the server or cluster where the Price database is installed.
scope.fetarget.type	Use this parameter to specify the type of the server object. You can specify cluster or server.
WebLogic Cluster (Calc Engine) Properties	
scope.cetarget.serverobject	Use this parameter to specify the name of the server or cluster where the Calculation Engine is installed.
scope.cetarget.type	Use this parameter to specify the type of the server object. You can specify cluster or server.
jms.server	Use this parameter to specify the name of the JMS server (in the cluster) where the Markdown Optimization application is installed.
jms.deployment	Use this parameter to specify the type of deployment. The value defaults to Server . For cluster-based deployment, specify Cluster .
jms.ce.server	Use this parameter to specify the name of the JMS server (in the cluster) where the Calculation Engine is installed.
jms.ce.deployment	Use this parameter to specify the type of deployment. The value defaults to Server . For cluster-based deployment, specify Cluster .
host.list	This is the list of managed servers, where you want the installer to deploy an instance of Calculation Engine. <hostname1,hostname2...>, When installing in a clustered environment across multiple hosts, the install base needs to be replicated on all the hosts involved. (This is not needed if the install base is on network drive shared among the servers).
WebSphere Server Properties	
websphere.cell	Name of the WebSphere cell.
websphere.node	Name of the WebSphere node.
websphere.server	Name of the WebSphere server.
websphere.admin.userid	Use this parameter to specify the WebSphere admin user name.
websphere.admin.password	Use this parameter to specify the WebSphere admin password.
websphere.admin.port	Use this parameter to specify the server SOAP port to connect to the WebSphere server.
websphere.server.address	Use this parameter to specify the host name or IP address to connect to the WebSphere server.
websphere.home	Use this parameter to specify the path to the WebSphere base directory. For example, /opt/WebSphere/AppServer
websphere.instance.home	Use this parameter to specify the path to the WebSphere instance. For example, /home/user/wasinst1
websphere.wsadmin.options	Use this parameter to specify the maximum size of the memory allocation pool for Websphere.
websphere.jdbc.scope	Use this parameter to specify the WebSphere configuration scope. The configuration scope defaults to node.
websphere.provider. commonDB2JdbcProvider.classpath	Use this parameter to specify the class path set for the DB2 database.

Table 5–1 Install.properties Parameters Reference

Parameter	Description
Post-installation Properties Files	
install.properties.savefile	Use this parameter to specify the path to the folder where you want to store the properties file (last-session.properties) that contains the parameter values used in the last installation session.
missing.properties.savefile	Use this parameter to specify the path to the folder where you want to store the properties file (missing-entries.properties) that contains the parameter values the Oracle installer tried to use during installation.
RDM Roll-Up information	
rdm.MviewsYN	Use this parameter to indicate whether you want roll-ups created as part of the installation.
rdm.numOrigMviews	Use this parameter to indicate the number of roll-ups already created before installing the application. When you install the application for the first time, set the value to '0'. In case you want to add more roll-ups, include the existing number of roll-ups.
rdm.merchOptLvl	Use these parameters to indicate the merchandise and location hierarchy levels of an item, at which the optimization occurs.
rdm.locOptLvl	The level number are located in the LEVEL_SQC column of CLIENT_HIERARCHY_LEVELS_TBL for merchandise and location hierarchies.
rdm.mview1MerchLvl	Use these parameters to indicate the merchandise and location hierarchy levels at which the roll-ups must be created to enhance performance.
rdm.mview1LocLvl	You can specify a set of four roll-ups only.
rdm.mview2MerchLvl	The level number are located in the LEVEL_SQC column of CLIENT_HIERARCHY_LEVELS_TBL for merchandise and location hierarchies.
rdm.mview2LocLvl	
rdm.mview3MerchLvl	
rdm.mview3LocLvl	
rdm.mview4MerchLvl	
rdm.mview4LocLvl	
Audit Database Connection Information for Oracle	
database.auditdb.oracle.address	Use this parameter to specify the URL where the Audit database is installed.
database.auditdb.oracle.dbalias	Use this parameter to specify the Audit database alias name.
database.auditdb.oracle.dbname	Use this parameter to specify the name of the Audit database.
database.auditdb.oracle.port	Use this parameter to specify the port to connect to the Audit database.
database.auditdb.oracle.user	Use this parameter to specify the user name to connect to the Audit database.
database.auditdb.oracle.password	Use this parameter to specify the password to connect to the Audit database.
Database Authentication Credentials for AUDIT	
database.auditdb.oracle.auth.auditoracleauth.user	Use this parameter to specify the user name to connect to the Audit database.
database.auditdb.oracle.auth.auditoracleauth.password	Use this parameter to specify the password to connect to the Audit database.
<i>Properties for databases with Real Application Clusters (RAC)</i>	
database.rdmdb.oracle.racenabled	Use this parameter to indicate that the database is set up with Real Application Clusters (RAC).

Table 5–1 Install,properties Parameters Reference

Parameter	Description
database.rdmdb.oracle.dbhostlist	Use this parameter to specify the host names (with port numbers) of the servers hosting the database.
database.rdmdb.oracle.dburl	Use this parameter to specify the database URL for JDBC connectivity. Syntax: jdbc:oracle:thin:@<host name>:<dbport>:<dbname>
AUDIT property for Creating the Database	
database.auditdb.oracle.create	Use this parameter to indicate that a new Audit database must be created.
AUDIT property for Upgrading the Database	
database.auditdb.oracle.upgrade	Use this parameter to specify that the existing database be upgraded to include the Audit schema.
common.feschema	Use this parameter to specify the user name associated with the application schema.
common.dblink	Use this parameter to specify the database link to access the common components schema through the audit schema. If the schema exists in the same instance, specify <i>none</i> .
Oracle Configuration Manager (OCM) Properties	
basedest.baseocm.dir	Use this parameter to specify the path to the folder that contain the OCM files. Oracle recommends that this path be in the base installation folder.
product.ocm.install	Use this parameter to accept or decline the OCM license agreement. The value defaults to <i>no</i> and indicates that OCM will not be installed (rest of the OCM properties are ignored).
ocm.distribution	Use this parameter to specify the architecture of the operating system on which OCM is being installed.
ocm.disconnected	Use this parameter to specify one of the following OCM connection mode: <ul style="list-style-type: none"> ■ Connected – to proceed installing OCM. You must also procure the Customer Support Identifier, Metalink user account name, and the country code to install the OCM. ■ Disconnected – to skip the OCM configuration.
ocm.csi_id	Use this parameter to specify the Customer Support identification number.
ocm.metalink_id	Use this parameter to specify the Metalink user account name associated with the Customer Support identification number.
ocm.country_code	Use this parameter to specify the country code where the support agreement was initiated.
ocm.http.proxyenabled	Use this parameter to indicate that the system will connect to the Internet using proxy. Valid values are <i>yes</i> or <i>no</i> .
ocm.http.proxyhost	Use this parameter to specify the host name of the proxy server.
ocm.http.proxyport	Use this parameter to specify the port number of the proxy server.
ocm.http.proxyuser	Use this parameter to specify the user name to connect to the proxy server.
ocm.http.proxypassword	Use this parameter to specify the password associated with the user name to connect to the proxy server.

Setting Up Environment Variables

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

- JAVA_HOME
- ORACLE_HOME
- PATH
- LD_LIBRARY_PATH (applies to Linux, HP-UX, Solaris based systems)
- LIBPATH (applies to IBM AIX based systems)

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/jdk1.4

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

For example, /u01/app/oracle/product/10.2.0/db_1

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

```
export LD_LIBRARY_PATH=$ORACLE_HOME/lib:$LD_LIBRARY_PATH
```

In case of AIX, export LIBPATH=\$ORACLE_HOME/lib;\$LIBPATH

Installing Markdown Optimization in Silent Mode

This section describes how to install Markdown Optimization in silent mode. Silent mode is non-interactive.

To install Markdown Optimization in silent mode:

1. Ensure that you have completed "[Setting Up Your Installation Properties File](#)" on page 5-3.
2. Make sure that your application server is running.
3. From your application server machine, enter the following command:

```
bash install.sh
```

install.sh

The `install.sh` command enables you to install Markdown Optimization.

Syntax

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

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- install.properties>	Optional. Specifies an alternate path to the install.properties file. Defaults to ./install.properties.
-l, --log-config	Optional. Specifies an alternate log4j configuration file (to change the verbosity level or the log file output location). Defaults to ./Install/conf/log4j.properties. The log4j log file is used for troubleshooting.
-y -n	Optional. Specifies whether or not to overwrite existing files. Defaults to -y (overwrite).
-d <XML path>	Optional. Specifies an alternate path to the XML install scripts. Defaults to ./InstallScripts.
-x <filename.xml>	Optional. Specifies an alternate XML install script file within the ./InstallScripts directory.
-i, --websphere -b, --weblogic	Optional. For specifying your application server.
-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 Oracle Installer mode (the default), the script displays a graphical user interface.

Output

The Markdown Optimization installation creates the Markdown Optimization directory structure, populates it with appropriate files, and when the installation finishes, it generates a log file and two properties files.

If the installation resulted in issues, see [Troubleshooting Installation Issues](#).

Installing Markdown Optimization Using the Graphical Oracle Installer

If you prefer to use a guided user interface, you can use the graphical Oracle Installer. To install Markdown Optimization using the Oracle Installer:

1. Ensure that you have completed "[Setting Up Your Installation Properties File](#)" on page 5-3.

Note: Although you can run the installation without setting up the installation properties file, ensure that you set up the installation properties file, and then start the installation.

2. Ensure that your application server software is running.
3. If you are viewing the installer from a Windows client:
 - On the **Windows** client, start an **Xserver** program that enables you to emulate the X terminal.
 - On the application server, set the display for the Windows client where you want the Oracle Installer to display as follows:

```
export DISPLAY=<IP address>:0.0
```

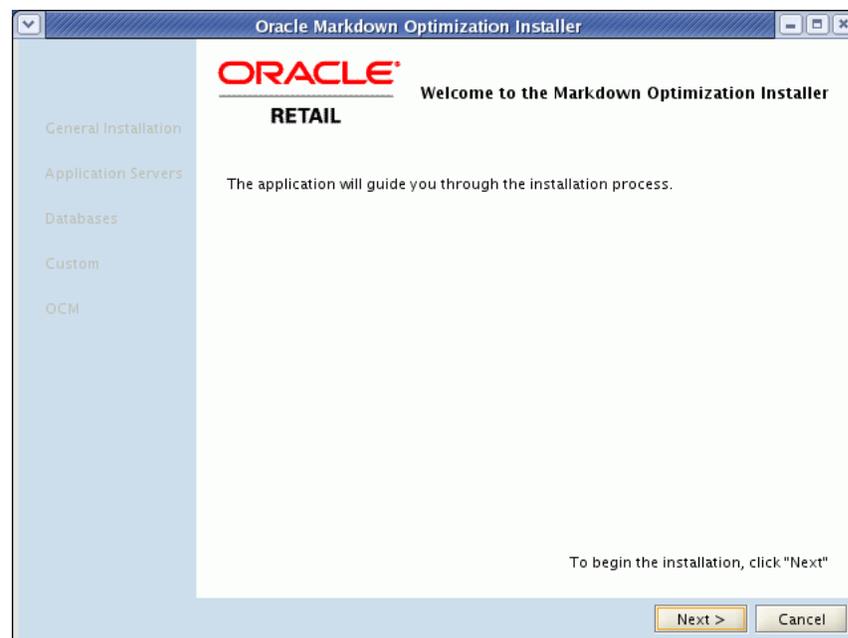
4. From your application server machine, enter the following command:

```
bash install.sh
```

Note: For more information about this command, see [Installing Markdown Optimization in Silent Mode](#).

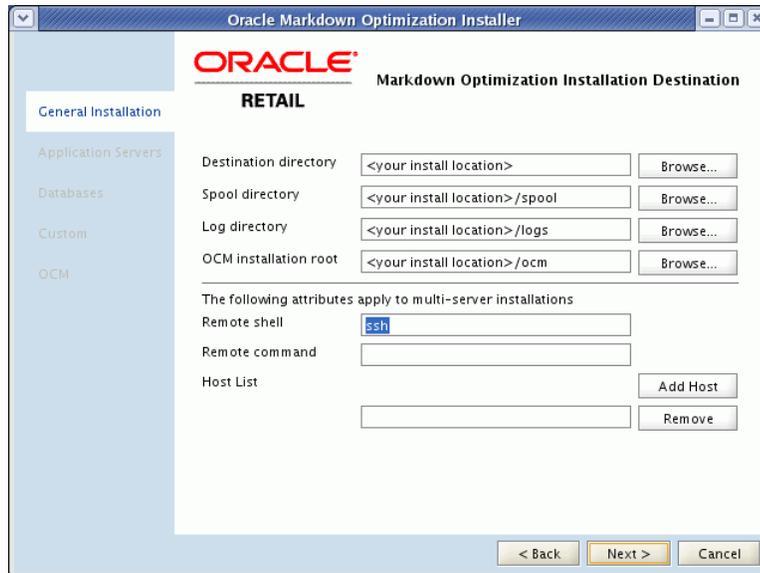
The **Welcome** screen appears.

Figure 5–1 Welcome Screen

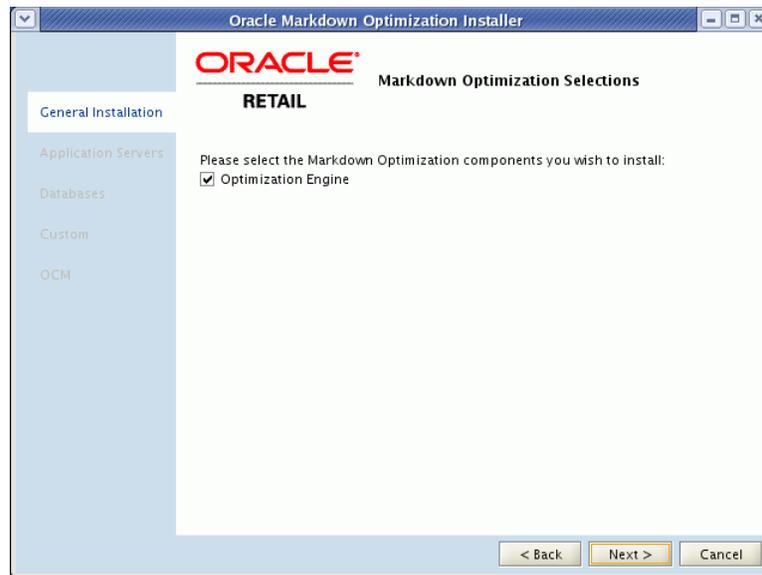


- Click **Next**. The **Markdown Optimization Installation Destination** screen appears.

Figure 5–2 *Markdown Optimization Installation Destination Screen*



- On the **Markdown Optimization Installation Destination** screen, specify the paths for the following:
 - **Destination Directory** - path to the Markdown Optimization installation target directory.
 - **Spool Directory** – path to the Markdown Optimization spool directory.
 - **Log Directory** – path to the Markdown Optimization installation log files.
 - **OCM installation root** – path to the location where the Oracle Configuration Manager (OCM) is installed.
- Click **Next**. The **Markdown Optimization Selections** screen appears.

Figure 5–3 Markdown Optimization Selections Screen

8. On the **Markdown Optimization Selections** screen, select the component you want to install, and click **Next**. The **Application Server Selections** screen appears.

Figure 5–4 Application Server Selections Screen

9. On the **Application Server Selections** screen, click **Oracle Application Server**, and then click **Next**. The **Oracle Application Server** screen appears.

Figure 5–5 Oracle Application Server Screen

10. On the **Oracle Application Server** screen, enter the relevant information (such as host, port, user name, password) to connect to the application server set up for the application.

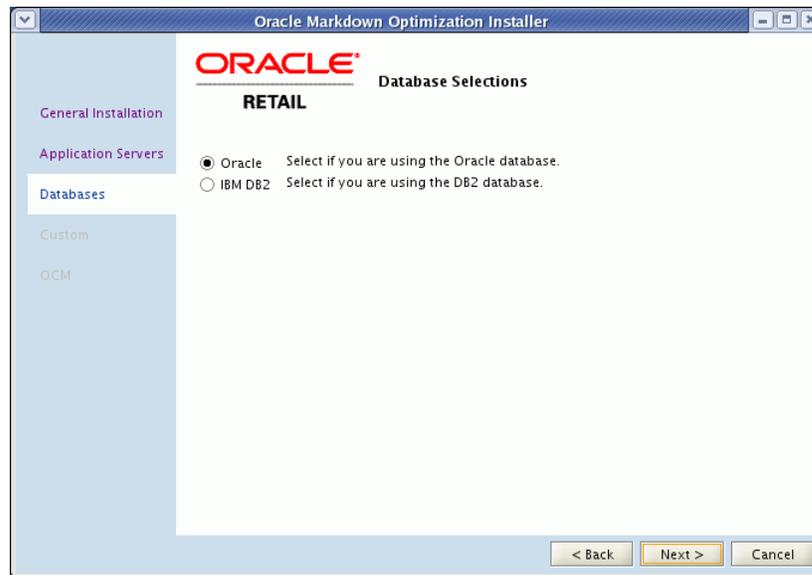
Note: In case the installation does not proceed ahead, check the application server information or the status of the application server.

11. Click **Next**. The **Java Message Server Properties** screen appears.

Figure 5–6 Java Message Server Properties Screen

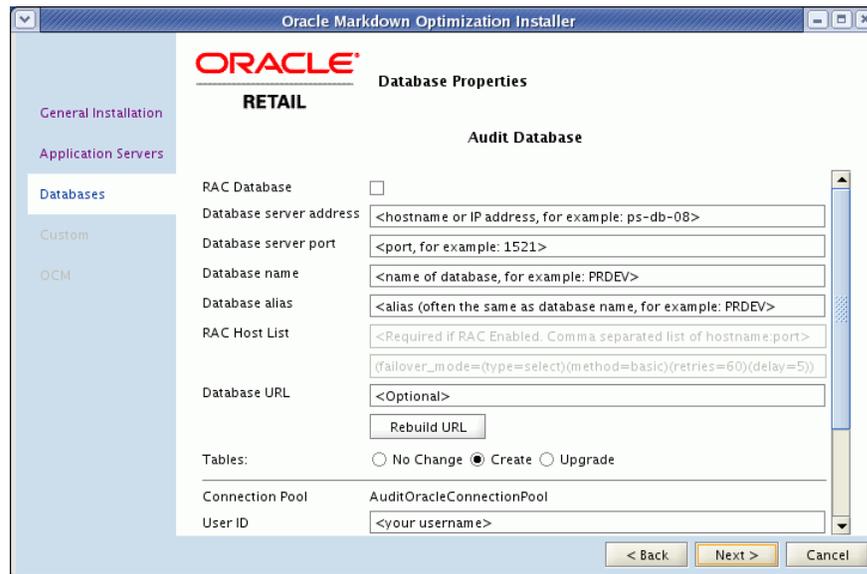
12. On the **Java Message Server Properties** screen, specify the name of the server or cluster that you may have set up as a Java Message Server (JMS), and click **Next**. The **Database Selections** screen appears.

Figure 5–7 Database Selections Screen



13. On the **Database Selections** screen, click **Oracle**, and then click **Next**. The **Database Properties** screen appears.

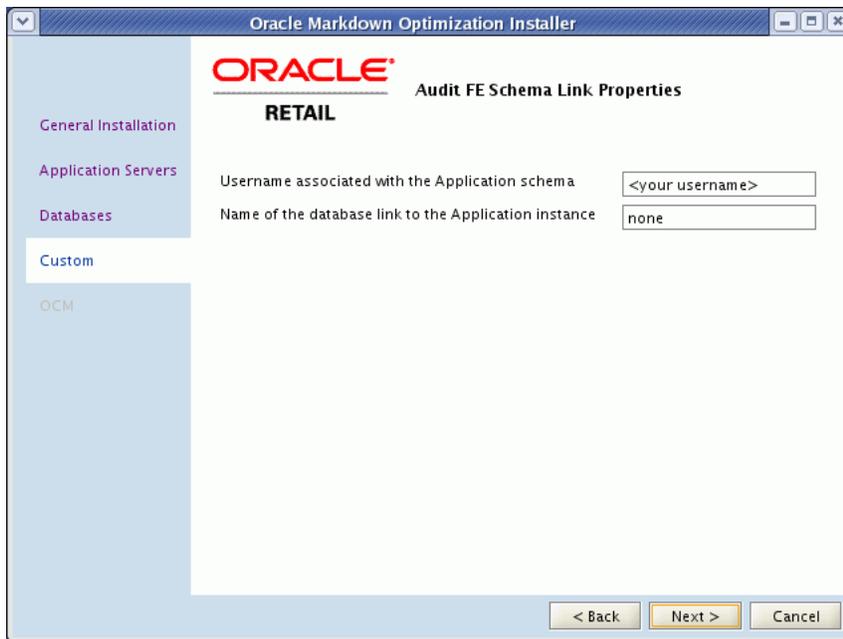
Figure 5–8 Database Properties Screen



14. On the **Database Properties** screen, enter the following database information for the **Audit**, **CommonDB**, and **Retail Data Mart** databases:
- **RAC Database** – Select this check box to indicate that the database is set up with Real Application Clusters (RAC). Once you select this check box, you must then specify the RAC host list and properties in the **RAC Host List** and **RAC Properties** fields.
 - **Database server address** – Enter the address of the database server.
 - **Database server port** – Enter the server port number associated with your database.

- **Database name** – Enter the name used to identify your database.
 - **Database alias** – Enter the database alias, which is typically the same name as the database.
 - **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, EAR files, and so forth, without affecting the database.
 - **Create** – Select this option if you are installing a new database schema for Place. 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 and modified on a row-by-row, column-by-column basis, depending on the actions specified in the database patches.
 - **User ID** – Enter the user name associated with the database.
 - **Password** – Enter the password associated with the database.
15. Click **Next**. The **Audit FE Schema Link Properties** screen appears.

Figure 5–9 Audit FE Schema Link Properties Screen



16. On the **Audit FE Schema Link Properties** screen, specify the user name and the database link associated with the application schema, and then click **Next**. The **Retail Data Mart Schema Link Properties** screen appears.
17. On the **Retail Data Mart Schema Link Properties** screen, specify the user name and the database link associated with the application schema, and then click **Next**. The **RDM Materialized Views** screen appears.

Figure 5–10 RDM Materialized Views Screen

Question	Field Name
Do you want to install Materialized Views now? (Y/N)	%rdm.mviewsYN%
Number of summary views (MVIEWs) already created	%rdm.numOrigMviews%
Markdown Optimization Merchandise Level	%rdm.merchOptLv%
Markdown Optimization Location Level	%rdm.locOptLv%
Summary view 1 Merchandise Level	%rdm.mview1MerchLv%
Summary view 1 Location Level	%rdm.mview1LocLv%
Summary view 2 Merchandise Level	%rdm.mview2MerchLv%
Summary view 2 Location Level	%rdm.mview2LocLv%
Summary view 3 Merchandise Level	%rdm.mview3MerchLv%
Summary view 3 Location Level	%rdm.mview3LocLv%
Summary view 4 Merchandise Level	%rdm.mview4MerchLv%
Summary view 4 Location Level	%rdm.mview4LocLv%

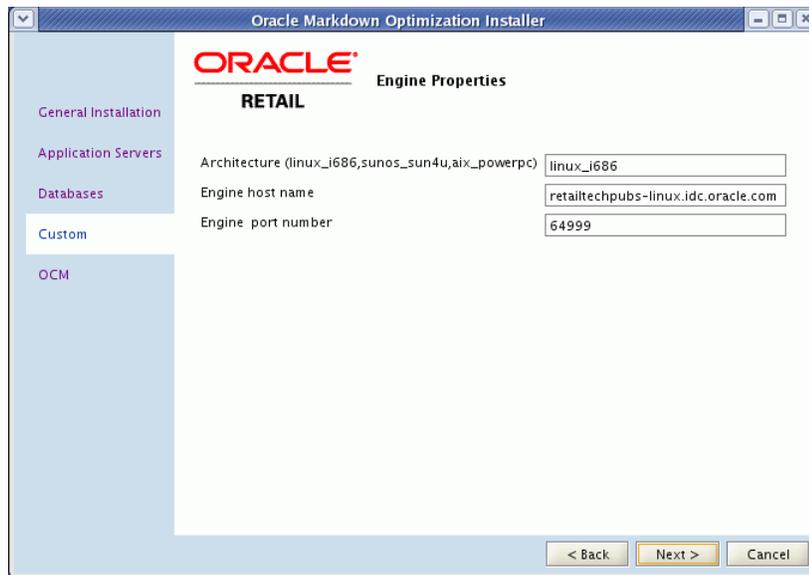
18. On the **RDM Materialized Views** screen, enter the following RDM materialized view information:
- **Do you want to install Materialized Views now?** – Specify one of the following:
 - If you do not need to optimize data and enhance database performance when creating reports, enter **N**, and click **Next**.
 - If you want to improve the database performance when creating reports, enter **Y**, and specify the other options on screen.
 - **Number of Summary views (MVIEWs) already created** - Specify how many summary views you have already created. You can create up to a total of four summary views, which includes any views you may have already created.
 - **Markdown Optimization Merchandise Optimization Level** - Specify the level in the merchandise hierarchy at which you want the optimization to take place.
 - **Markdown Optimization Location Optimization Level** - Specify the level in the location hierarchy at which you want the optimization to take place.

Note: The combination of the Merchandise and Location levels specifies the ITEM level.

- **Summary View Levels** - Specify the hierarchy level for each summary view level you want to add. The minimum number of summary levels is one, and the maximum number is four.

For example, if you only need two summary levels, you would specify the location and merchandise hierarchy values for the first four **Summary View Levels** fields, and leave the remaining four **Summary View Levels** fields blank.

19. Click **Next**. The **Engine Properties** screen appears.

Figure 5–11 Engine Properties Screen

20. On the **Engine Properties** screen, specify the following information on the system hosting the Optimization Engine:

- **Architecture** – operating system on which the Optimization Engine runs.
- **Engine host name** – host name associated with the server.
- **Engine port number** – port number associated with the server.

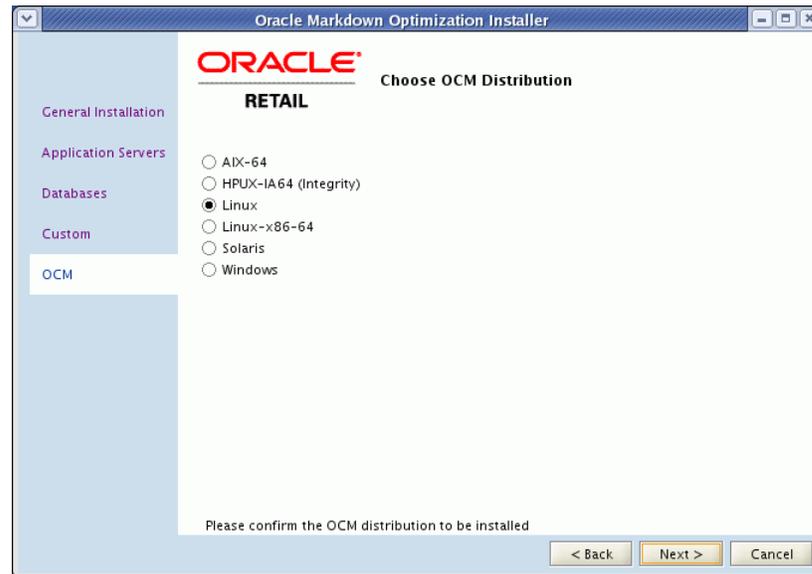
21. Click **Next**. The **Oracle Configuration Manager Registration** screen appears.

Figure 5–12 Oracle Configuration Manager Registration Screen

Note: For more information on Oracle Configuration Manager (OCM), see [Overview of Oracle Configuration Manager](#).

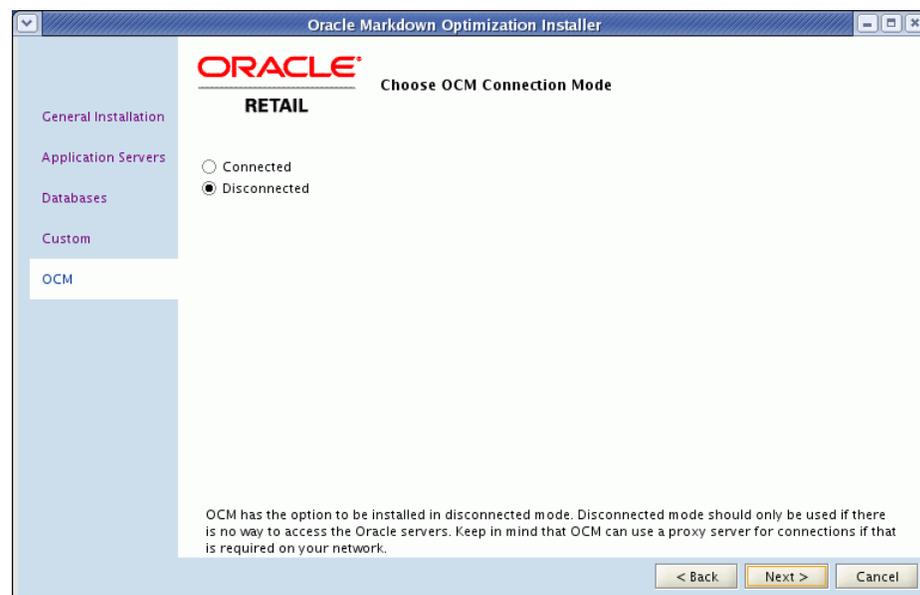
22. Click **Next**. The **Oracle Configuration Manager Licensing Agreement** screen appears. To skip installing the OCM, decline the license agreement, and click **Next**. The **Selection Verification** screen appears. Go to step 29.
23. Accept the license agreement, and click **Next**. The **Choose OCM Distribution** screen appears.

Figure 5–13 Choose OCM Distribution Screen



24. On the **Choose OCM Distribution** screen, select the operating system hosting the application, and click **Next**. The **Choose OCM Connection Mode** screen appears.

Figure 5–14 Choose OCM Connection Mode Screen



25. On the **Choose OCM Connection Mode** screen, select one of the following modes:
 - **Disconnected** – select this mode of OCM installation, when there is no way to access the Oracle servers or you want to keep the automatic collection of configuration data disabled. The **Selection Verification** screen appears. Go to Step 29.
 - **Connected** – select this mode to continue installing OCM, and click **Next**. The **Oracle Customer Information** screen appears.
26. On the **Oracle Customer Information** screen, specify your Customer Support Identifier (CSI) number, Metalink account user name, and the country code where the service agreement is initiated.
27. Click **Next**. The **Proxy Server Details** screen appears.

Figure 5–15 Proxy Server Details Screen

The screenshot shows the Oracle Markdown Optimization Installer window. The title bar reads "Oracle Markdown Optimization Installer". The main window has a blue sidebar on the left with navigation options: "General Installation", "Application Servers", "Databases", "Custom", and "OCM". The "OCM" option is selected. The main content area is titled "ORACLE RETAIL Proxy Server Details". It contains the following fields:

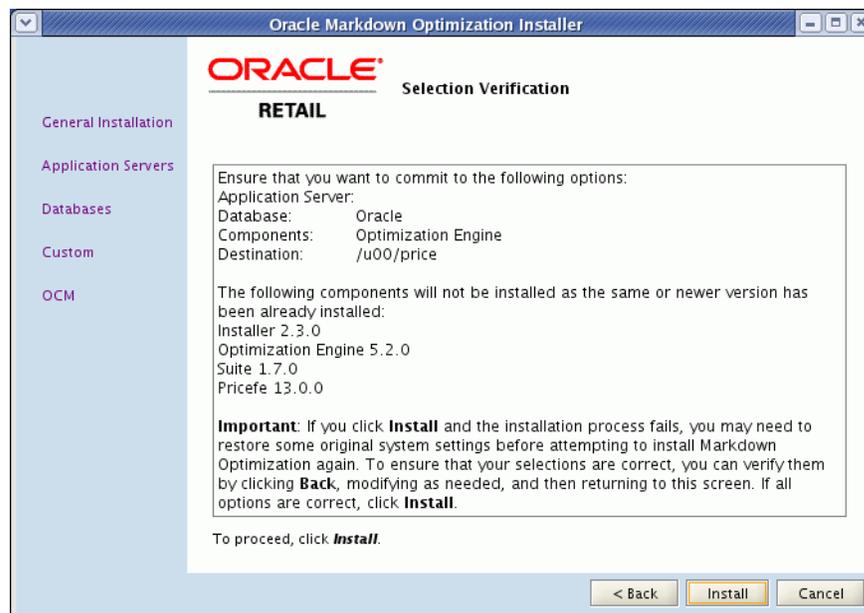
- "Enable Proxy" with an unchecked checkbox.
- "Server" with a text input field.
- "Port" with a text input field.
- "Username" with a text input field.
- "Password" with a text input field.

At the bottom of the main content area, there is a note: "If your network configuration requires it, the OCM collector can use a proxy server to connect to Oracle." Below the note are three buttons: "< Back", "Next >" (highlighted in yellow), and "Cancel".

28. On the **Proxy Server Details** screen, enter the relevant proxy server details, and click **Next**. The **Select Verification** screen appears.

Note: Skip this step if your connection to the Internet does not require a proxy server.

Figure 5–16 Selection Verification Screen



29. Review the **Selection Verification** screen, and click **Install**.

The **Installation Progress** screen appears.

If the installation resulted in issues, see [Troubleshooting Installation Issues](#) on page 5-26.

Post-Installation Tasks

Now that you have installed Markdown Optimization, restart your application server software and proceed with the following options:

- If you are ready to start working with your business data, perform the following tasks:
 - [Loading Business Rules](#)
 - [Loading User Roles](#)
 - [Loading Seed Data](#)
- If you want to integrate the Markdown Optimization application as part of the Oracle Application Server Single Sign-On implemented with Oracle Retail Workspace, see [Setting up Single Sign-On](#).
- If you want to maximize system performance, you can tune your Calculation Engine.

Loading Business Rules

Use the Business Rules Management Administration shell script (brmadmin.sh) to load the business rule definitions set up for the Markdown Optimization application. The script loads the business rule definitions specified in a rule definitions file.

The rule definitions are set up based on your business needs and includes the business rules information for the Markdown Optimization application. Ensure that this file is available during the implementation. You can find a sample rules definition file, *rule_definitions.xml*, at the following location:

```
<Markdown Optimization_Installation>\modules\tools\conf\SampleRules
```

For more information, see the section *Loading Business Rule Definitions* in the *Markdown Optimization Configuration Guide*.

Loading User Roles

Use the User Management Bulk Loader script to load the user roles set up for the Markdown Optimization application. The Bulk Loader script loads the user roles specified in a role set file.

The role set and role assignments are set up based on your business needs and include the user accounts and roles access information for the Markdown Optimization application. Ensure that this file is available during the implementation. You can find sample user roles set files at the following location:

```
<Markdown Optimization_Installation>\modules\tools\conf
```

For more information, see the chapter *User Management* in the *Markdown Optimization Configuration Guide*.

Loading Seed Data

Markdown Optimization provides a set of scripts that stage, transform, and load data into the target database tables in the Markdown Optimization database. It is also referred to as the standard load.

Before starting the data load process, configure and run scripts that load the seed data. For more information, see the *Markdown Optimization Configuration Guide*.

Upgrading to the Latest Release of Markdown Optimization

This section describes how you can upgrade from a previous release to the latest release of Markdown Optimization. Before you start the upgrade process, Oracle recommends that you study, procure, and set up the system configuration required for the upgrade. For more information, see [Planning Your Installation](#).

To upgrade to the latest release of Markdown Optimization Release 13.0:

1. Back up the database, configuration root, custom scripts, and so on.
2. Upgrade the operating system referring to the operating system documentation for guidance. Also, apply the necessary patches as described in the chapter [Planning Your Installation](#).

Note: Although you can upgrade an operating system from an existing version, Oracle recommends that you do a clean installation of the operating system.

3. Once you have installed the operating system, install the Oracle database referring to the database documentation for guidance. For more information on the database configuration required for Markdown Optimization, see [Setting Up the Database](#).
4. Install the supported application server (Oracle Application Server) referring to the application server documentation for guidance. For more information on the application server configuration required for Markdown Optimization, see [Setting Up Your Application Server](#).
5. Verify the JVM version for the application server. The JVM versions differ based on the operating system. For more information on the compatible JVMs, see [Application Server Requirements](#).
6. Once you have set up the application server and database, edit the *install.properties* file and set up the database parameters in the following manner:
 - For the Common DB, set up the following parameters to indicate an upgrade to the existing database or schema:
 - set the `database.commondb.oracle.upgrade` parameter to **yes**.
 - set the `database.commondb.oracle.create` parameter to **no**.
 - For the RDM DB, set up the following parameters to indicate that a new database schema be created:
 - set the `database.rdmdb.oracle.create` parameter to **yes**.
 - set the `database.rdmdb.oracle.upgrade` parameter to **no**.
 - For the Audit DB, set up the following parameters to indicate that a new database schema be created:
 - set the `database.auditdb.oracle.create` parameter to **yes**.
 - set the `database.auditdb.oracle.upgrade` parameter to **no**.

For more information, see [Setting Up Your Installation Properties File](#).

Note: Ensure that the RDM database objects are created on a separate schema.

7. Before you run the installer, set the environment variables required for the Markdown Optimization installation. For more information, see [Setting Up Environment Variables](#).
8. Run the Markdown Optimization installer and install the application. For more information, see [Installing Markdown Optimization in Silent Mode](#) or [Installing Markdown Optimization Using the Graphical Oracle Installer](#). In case you choose to install the application in the graphical mode, ensure that you select the **Upgrade** check box in the **Database Properties** screens.
9. Replace the configuration root with the copy that was backed up in step 1.
10. Replace all other customizations and scripts that were backed up in step 1.

Troubleshooting Installation Issues

The Oracle Installer simplifies the process of integrating and configuring multiple applications (for example, your database software, your application server software, and Markdown Optimization).

Because of this complexity and the state of your own environment, there may be some situations that you need to troubleshoot and resolve. This section enables you to understand and resolve Markdown Optimization installation issues.

Ensure that you thoroughly understand the messages being output by the Oracle Installer.

Understanding Trace Output Messages

Note that the Oracle Installer displays messages that originate from multiple sources. Some messages are Markdown Optimization-specific, such as the directories being created. Other messages are redirected stderr output from third-party applications; as a result, the message content depends on what the software vendor wants to display.

As a result, refer to the documentation associated with the relevant application when troubleshooting, which will help you determine if the error message is even valid and how to correct any existing problems.

For example, during database installation, if a error messages indicate class deployments issues, see the documentation associated with your database management software. The documentation will explain whether the message is spurious (and to be ignored) or valid. If the error is actually valid, the documentation will explain how to correct the problem.

Installation Does Not Complete

If the installation process fails before the application has been completely installed, an on-screen message prompts you to review the log files to determine the cause of the errors. However, since the installation had not completed, no log file was generated.

Instead, review the on-screen trace messages to determine the origin of the error.

Installation Completes with Errors

If the installation completes but has errors, an on-screen message prompts you to review the log. Also, you may want to review the generated properties files.

The file naming convention of the log file is as follows:

```
install-<YYYYMMDD>-<HHMMSS>.log
```

where HH is in 24-hour format.

Setting Up BI Infrastructure

Markdown Optimization requires the use of Oracle Business Intelligence (BI) Suite Enterprise Edition as the reporting tool used for the reports. Based on your business need, you must install and set up BI Server and configure the RDM repository.

This chapter describes how you can set up the Oracle BI server. It contains the following section:

- [Installing and Configuring BI Components](#)
- [Configuring RDM Repository](#)
- [Stopping and Starting BI Infrastructure](#)

Installing and Configuring BI Components

The Markdown Optimization application requires the use of Oracle Business Intelligence Suite Enterprise Edition Version 10.1.3.3.1. To install and configure the BI Server, use these sections in the following sequence:

1. [Installing Business Intelligence Components](#)
2. [Configuring the BI Infrastructure](#)

Installing Business Intelligence Components

Install the Oracle Business Intelligence (BI) Suite Enterprise Edition, referring to the Oracle BI documentation for guidance.

Before you run the BI installer, ensure that you have the following softwares installed on the system:

- Sun JDK 1.5.0 or higher.
- Oracle Database 10g Client Release 2.

During the installation, select a complete installation, and install all the BI components. Once installed, review the list of the installed components and ensure that the following BI components are installed:

- BI Server
- BI Presentation Services
- BI Presentation Services Plug-in
- BI Scheduler
- BI Administration Tool*

- BI Cluster Controller
- BI Client
- BI ODBC Driver*
- BI JDBC Driver
- BI Systems Management
- BI Catalog Manager*
- BI Job Manager*
- BI Publisher

In this list, components marked with an asterisk (*) are compatible on the Microsoft Windows based systems only.

Note: In this chapter, the BI installation directory is referred to as the `<BI_HOME>` directory.

Configuring the BI Infrastructure

Once you install the BI infrastructure, you must set up the `user.sh` file in the BI setup directory to include the right environment settings for the Oracle database client.

To set up the `user.sh`:

1. Navigate to the `<BI_HOME>/setup` directory, and run the following command to stop the OC4J process:

```
oc4j -shutdown -port <portnumber> -password <password>
```

Where,

- `<portnumber>` – indicates the ORMI port number. You can find this value as the port attribute specified for the `rmi-server` tag in the `rmi.xml` file (in the `<BI_HOME>/oc4j_bi/j2ee/home/config/` directory).
 - `<password>` – indicates the password associated with the OC4J administrative user (set during the BI installation).
2. Edit the `user.sh` file to include the following parameters:

Parameter	Description
<code>set +u</code>	You may need to uncomment this line.
<code>ORACLE_HOME</code>	Specify the location of the home directory of Oracle database.
<code>TNS_ADMIN</code>	Uncomment this line to accept the default path.
<code>PATH</code>	OR
<code>LD_LIBRARY_PATH</code>	Add this parameter and specify the path you want. Note: For the <code>LD_LIBRARY_PATH</code> parameter, follow the directions in the <code>user.sh</code> file.

3. Save and close the file.

Note: For this setting to work, the server hosting the BI EE infrastructure must also have the Oracle Database 10g client installed on it.

4. Start the OC4J instance using the following command:

```
oc4j -start&
```

Configuring RDM Repository

This section describes how you can configure the RDM repository on the BI server using the BI Administration tool. It includes the following tasks:

- [Configuring the Connection Pool](#)
- [Configuring the BI Server](#)
- [Setting Up Connection to the Database](#)
- [Configuring User Access to the Repository and BI Presentation Server](#)

Note: To proceed with configuring the RDM repository, ensure that Markdown Optimization is installed and running on the server.

Before You Begin

Before you begin the configuration, you must run certain scripts and also gain access to the Metadata source archive file. After the weekly batch script (weeklyBatch.sh) is run, follow these steps:

1. Navigate to the following location in the Markdown Optimization installation directory:

```
<MDOInstallation>\modules\Database\REDWOODSchema\install\oracle\REDWOODSchema\scripts
```

2. Run the following scripts to load the data in the RDM database schema:

```
bash pl_init_load_rdm.sh /path/to/configroot
bash pl_load_rdm.sh /path/to/configroot
```

3. Navigate to the following location in the installation directory:

```
<MDOInstallation>\modules\Database\POPLARSchema\install\oracle\POPLARSchema\scripts
```

4. Copy the **OBIEE_MDOMetadata.zip** file to a local directory, and extract the contents to a temporary location.

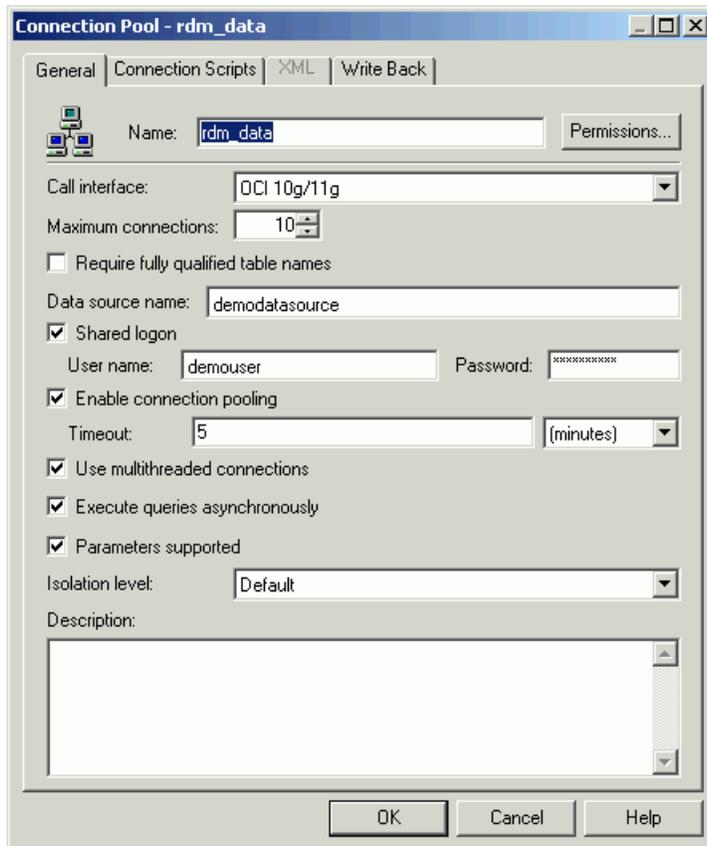
Configuring the Connection Pool

Use the BI Administration tool to configure the *rdm_data* and *rdm_connect* connection pools. This configures the repository to connect to the RDM database schema.

To configure the connection pool:

1. In the BI Administration Tool, open the **rdm.rpd** file using the Offline method of opening the repository.
2. Once the repository file is opened, right-click **rdm_data** in the **Physical** layer, and click **Properties**. The **Connection Pool** window appears.

Figure 6–1 Connection Pool Window



3. On the **Connection Pool** window, in the **General** tab, enter appropriate information in the following fields:
 - **Call interface** – set the value to **OCI 10g/11g**.
 - **Maximum connections** – set the value to **10**.
 - **Data source name** – name of the database where the RDM schema resides.
 - **Shared logon** – select this check box.
 - **User name** – user name or schema name to log on to the RDM schema.
 - **Password** – password associated with the user name to log on to the RDM schema.
 - **Enable connection pooling** – select this check box.
 - **Timeout** – set the value to **5 minutes**.
 - **Use multithreaded connections** – select this check box.
 - **Execute queries asynchronously** – select this check box.
 - **Parameters supported** – select this check box.
 - **Isolation level** – set to **Default**.
4. Repeat step 3 for **rdm_connect** connection pool.
5. Save the changes to the **rdm.rpd** file.

Configuring the BI Server

Once you set up the connection pools, you must copy the repository specific files to the server, and configure the BI server.

To configure the BI server:

1. Copy the **rdm.rpd** file to the `<BI_HOME>/server/Repository` directory.
2. Navigate to the `<BI_HOME>/server/config` directory, and edit the **NQSConfig.ini** file to include the following:

```
[ REPOSITORY ]
#Star=paint.rpd, DEFAULT;
Star=rdm.rpd, DEFAULT;
```

3. Copy the RDM metadata folder you extracted from the **OBIEE_MDOMetadata.zip** file to the following location:

```
<BI_DATA_HOME>/web/catalog
```

4. Navigate to the `<BI_DATA_HOME>/web/config` directory, and in the **instanceconfig.xml** file, comment out the existing "`<CatalogPath>`" entry and include the following entry:

```
<CatalogPath><BI_DATA_HOME>/web/catalog/rdm</CatalogPath>
```

Note: `<BI_DATA_HOME>` indicates the location where you chose to save the data for the BI Server during installation.

5. Stop and start the BI infrastructure. For more information, see [Stopping and Starting BI Infrastructure](#).

Setting Up Connection to the Database

Edit the `odbc.ini` to enable the BI Server to connect to the database using the OCI client.

To set up this connection:

1. Navigate to the `<BI_HOME>/setup` directory, and edit the **odbc.ini** file to include the following entries in the "[AnalyticsWeb]" section:

```
[AnalyticsWeb]
Driver=<BI_HOME>/server/Bin/libnqsodbc.so
Description=Oracle BI Server
ServerMachine=local
Repository=Star
Catalog=rdm
UID=
PWD=
Port=9703
```

2. Save and close the file.

Configuring User Access to the Repository and BI Presentation Server

The BI server installs with a default *administrator* user account (with the password *SADMIN*). This user account has the following privileges:

- Edit the repository files.
- Create new reports.
- Edit and save the pre-defined reports in the Shared and Private folders section of the Presentation server.

For the administrator user to run the pre-defined reports, a similar administrator user account must be created (with the same user name and password) in the Markdown Optimization schema with the *PRICE_VIEWER* role.

To access the BI Presentation Server as a non-administrative user, user accounts must be set up with the *PRICE_VIEWER* role. For more information on assigning roles to the user accounts, see the *Oracle Retail Markdown Optimization Administration Guide*.

Stopping and Starting BI Infrastructure

When you update any BI configuration files (such as *NQSConfig.ini*) or repository files, you must stop and start the following BI infrastructure components for the changes to take effect:

- OC4J Process
- BI Server
- BI Presentation Services

Stopping the BI Infrastructure Components

To stop the BI infrastructure components:

1. In the *<BI_HOME>/setup* directory, run the following commands to stop the BI Server (*run-sa.sh*) and Presentation Services (*run-saw.sh*):

```
./run-saw.sh stop
```

```
./run-sa.sh stop
```

2. Run the following command to stop the OC4J process:

```
oc4j -shutdown -port <portnumber> -password <password>
```

Where,

- *<portnumber>* – indicates the ORMI port number. You can find this value as the port attribute specified for the *rmi-server* tag in the *rmi.xml* file (in the *<BI_HOME>/oc4j_bi/j2ee/home/config/* directory).
- *<password>* – indicates the password associated with the OC4J administrative user (set during the BI installation).

Starting the BI Infrastructure Components

To start the BI Infrastructure components:

1. In the *<BI_HOME>/setup* directory, run the following command to start the OC4J process:

```
oc4j -start&
```

The ampersand (&) after the *start* command runs the process in the background, so it continues to run even when the terminal window is closed.

2. Run the following commands to start the BI Server (`run-sa.sh`) and Presentation Services (`run-saw.sh`):

```
./run-sa.sh start
```

```
./run-saw.sh start
```

Setting up Single Sign-On

This chapter describes how you can set up the Single Sign-On plugin and integrate Markdown Optimization as part of the Oracle Application Server Single Sign-On (OSSO) implemented with Oracle Retail Workspace.

It contains the following sections:

- [About the Single Sign-On Plugin](#)
- [Installing the Single Sign-On Plugin](#)
- [Integration with Oracle Retail Workspace](#)

About the Single Sign-On Plugin

The current User Management module provides single sign-on capabilities between the two applications—Markdown Optimization and Promotion Intelligence and Promotion Planning and Optimization. Once you install the Single Sign-On cookie plugin, you can achieve a one-way interoperability of these applications with other Oracle Retail applications (such as Workspace) implemented on Oracle Application Server Single Sign-On (OSSO).

When you log on to the OSSO server using a user account configured at both the systems, a User Management cookie gets registered in your browser session. This enables you to access the Markdown Optimization URL directly. If you access the Markdown Optimization application first and then later attempt to access the OSSO URL, you will need to log on to the OSSO system because the User Management module cannot create an SSO cookie.

For more information on Oracle Application Server Single Sign-On and Oracle Internet Directory, refer to the *Oracle Application Server Single Sign-On Administrator's Guide* and *Oracle Internet Directory Administrator's Guide*.

Installing the Single Sign-On Plugin

To install the Single Sign-On plugin on the Oracle Application Server implementing Single Sign-On:

1. Copy the SSO Plugin JAR or ZIP file to the following location on the OSSO infrastructure application server:

```
$ORACLE_HOME/sso/plugin
```

2. Use one of the following commands, and extract the SSO Plugin contents:

```
jar -xvf plsso_plugin.jar
```

OR

```
unzip plsso_plugin.zip -d $ORACLE_HOME/sso/plugin
```

3. Review the `/sso/plugin` directory and verify that following classes and property files exist in this location:
 - `plsso.properties`
 - `PLSSOCustomCookie.class` (in `com/profitlogic/common/security/ssoplugin`)
 - `PLSSOPlugin.class` (in `com/profitlogic/common/security/ssoplugin`)
 - `PLSSOHelper.class` (in `com/profitlogic/common/security/util`)
 - `HexEncoder.class` (in `com/profitlogic/common/util`)
4. In the `plsso.properties` file, enter relevant information for the following properties
 - **domain** – indicates the domain within which the cookie is created for the browser session.
 - **timeout** – indicates the number of minutes the Single Sign-On plugin is valid.
 - **plssoplugin.log.file** – [Optional] indicates the location of the Single Sign-On plugin log file.
5. In the `$ORACLE_HOME/sso/conf/` directory, edit the `policy.properties` to include the following entries:

```
CustomCookie_ProviderPlugin  
=com.profitlogic.common.security.ssoplugin.PLSSOCustomCookie  
CustomCookieAuthLevel=MediumSecurity
```

Important: Ensure that the domain value includes both the systems (Markdown Optimization and OSSO) and is more specific than a top-level domain name (such as `.com`).

For example, if the Markdown Optimization system is hosted on `mdo.mydepartment.mycompany.com` and the Oracle Single Sign-On system is hosted on `osso.mydepartment.mycompany.com`, the domain value must be specified as `mydepartment.mycompany.com`.

Integration with Oracle Retail Workspace

The Oracle Retail Workspace installer prompts you to enter the URL for your supported Oracle Retail applications. However, if you install an application after the Oracle Retail Workspace installation, you must update the *retail-workspace-page-config.xml* file to reflect the new application.

The file as supplied comes with all the appropriate products configured, but the configurations for the products not installed are switched off (**rendered** parameter set to **false**).

To make the Markdown Optimization URL available through Workspace:

1. In the *retail-workspace-page-config.xml* file, navigate to the **secure-work-item id** entry with the value **priceopt**, and set the **rendered** parameter value to **true**.
2. Specify the application URL within the **<url>** tags as illustrated in the example below.

For Markdown Optimization there are no other application configuration parameters.

Example

Suppose Markdown Optimization is installed on **mycomputer.mycompany.com**, port **7777**, using a standard install and the Markdown Optimization application is configured with the application name of **p4pgui**. If you were to access Markdown Optimization directly from your browser, you would type in:

```
http://mycomputer.mycompany.com:7777/p4pgui
```

The entry in the *retail-workspace-page-config.xml* file after installation would resemble the following:

```
<url>http://mycomputer.mycompany.com:7777/p4pgui</url>
<parameters>
</parameters>
```

Configuring the Logout Page

Once you set up the Markdown Optimization URL in the Workspace page configuration file (*retail-workspace-page-config.xml*), you must also enable the Markdown Optimization Logout page. This page enables you to log out of the system completely by ending the browser session.

To enable the Logout page, in the **suite.properties** file (in the *<Markdown Optimization_Installation>/config/suite* directory), set the **suite.logoutpage.show** parameter to **true**. For more information on this parameter, refer to the chapter User Management in the *Oracle Retail Markdown Optimization Configuration Guide*.

Installation Order

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

1. Oracle Retail Merchandising System (RMS), Oracle Retail Trade Management (RTM), Oracle Retail Sales Audit (ReSA)
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 Allocation
7. Oracle Retail Invoice Matching (ReIM)
8. 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 `jndi_provider.xml` file.

9. Oracle Retail Central Office (ORCO)
10. Oracle Retail Back Office (ORBO)
11. Oracle Retail Store Inventory Management (SIM)

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

12. Oracle Retail Integration Bus (RIB)
13. Oracle Retail Point-of-Service (ORPOS)
14. Oracle Retail Analytics Applications
15. Oracle Retail Advanced Inventory Planning (AIP)
16. Oracle Retail Predictive Application Server (RPAS)
17. Oracle Retail Data Warehouse (RDW)
18. Oracle Retail Workspace (ORW)



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