ORACLE

Oracle® Promotion Intelligence and Promotion Planning and Optimization

Installation Guide

Release 13.2

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Oracle® Retail Promotion Intelligence and Promotion Planning and Optimization Installation Guide, Release 13.2

Value-Added Reseller (VAR) Language

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Oracle® Retail Promotion Intelligence and Promotion Planning and Optimization Installation Guide, Release 13.2

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

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

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

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

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

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

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

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

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

Preface

This guide enables you to install the Oracle Retail Promotion Intelligence and Promotion Planning and 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, configuring, and managing the application server software and security.

- Installing, configuring, and managing the relational database management systems. You must be familiar with the Database Administrator (DBA) level commands and tasks.

- Installing, configuring, and managing the distributed client/server applications on a UNIX-based local area network.

Related Documents

For more information, see the following documents in the Oracle Retail Promotion Intelligence and Promotion Planning and Optimization documentation set:

- *Oracle Retail Promotion Intelligence and Promotion Planning and Optimization Release Notes*

- *Oracle Retail Promotion Intelligence User Guide*

- *Oracle Retail Promotion Planning and Optimization User Guide*

- *Oracle Retail Promotion Intelligence and Promotion Planning and Optimization Operations Guide*

- *Oracle Retail Promotion Intelligence and Promotion Planning and Optimization Configuration Guide*

- *Oracle Retail Promotion Intelligence and Promotion Planning and Optimization Implementation Guide*

- *Oracle Retail Promotion Intelligence and Promotion Planning and Optimization Data Model*

- *Oracle Retail Promotion Intelligence and Promotion Planning and Optimization Licensing Information*

Customer Support

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

- https://support.oracle.com

When contacting Customer Support, please provide:

- 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

If you are installing the application for the first time, you install either a base release (for example, 13.0) or a later patch release (for example, 13.0.2). If you are installing a software version other than the base release, be sure to read the documentation for each patch release (since the base release) before you begin installation. Patch documentation can contain critical information related to the base release 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 (with the exception of the Data Model which, if available, is only included with the release packaged code):

http://www.oracle.com/technology/documentation/oracle_
retail.html

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

Conventions

The following text conventions are used in this document:

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

1

Overview

This chapter provides an overview of Oracle Retail Promotion Intelligence and Promotion Planning and Optimization. It contains the following sections:

- Overview of Promotion Intelligence and Promotion Planning and Optimization
- Overview of Oracle Configuration Manager
- Roadmap for Implementing Promotion Intelligence and Promotion Planning and Optimization

Overview of Promotion Intelligence and Promotion Planning and Optimization

Oracle® Retail Promotion Intelligence and Promotion Planning and Optimization products enable retailers to determine the most profitable way to execute day to day Ad content and promotion pricing decisions. These pricing decisions support the marketing strategy and fulfill the needs at each store to drive higher traffic and more profitable sales.

This product suite includes:

- Promotion Intelligence – Analytic engine
- Promotion Planning and Optimization – User interface that help manage the promotion calendar and other features.

About Promotion Intelligence Application

The Promotion Intelligence application allows the analysis of the historic ad information. It utilizes the Promote Calculation Engine, a Java-based application, run through command-line tools. It can be integrated with customer's tools and utilities for running historical analysis.

- Analyzing the results from past promotions and advertising across merchandise, region, time, and vehicle
- Evaluating the ROI of advertising vehicles.
- Analyzing the affinity effects of products on one another.

This product includes MicroStrategy reports.

About Promotion Planning and Optimization Application

The Promotion Planning and Optimization application provides a user interface that helps you manage the promotion calendar and perform What-If analysis. This application depends on the installation of the Promote Intelligence application, and uses the Promote Calc Engine API.

- Promotion Calendar
- Event Planning
- Whitespace Allocation
- Vehicle Design
- Forecasting
- What-If
- Workflow

The following figure outlines both the products and the relation between them. The Promotion Intelligence product includes the green area (analytics DB + PCE + Ad Analysis Desktop), and the Promotion Planning and Optimization product includes the yellow area (Promotion Manager).

> **Important:** It is recommended that the Promote Calc Engine (PCE) be installed on the system where the application server for the Promotion Planning and Optimization is running.

Figure 1–1 Promotion Intelligence and Promotion Planning and Optimization Architecture
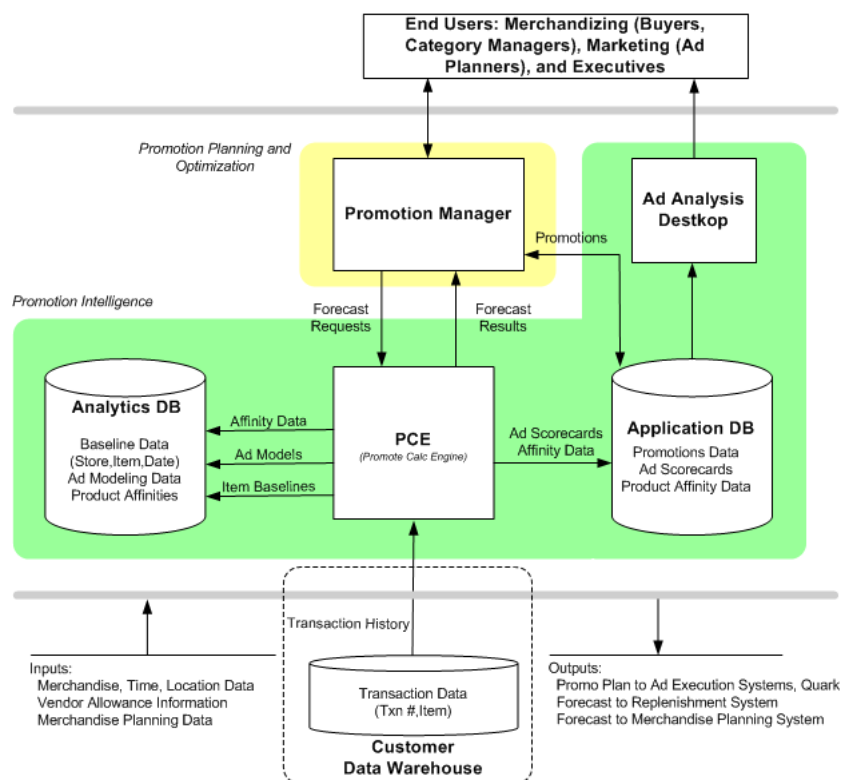
Supported Languages

Promotion Intelligence and Promotion Planning and Optimization is available in the following languages:

- Chinese (Simplified)

- Chinese (Traditional)

- English

- French

- German

- Italian

- Japanese

- Korean

- Portuguese (Brazilian)

- Spanish

The Promotion Intelligence and Promotion Planning and Optimization applications depend on both the browser settings and the regional settings to determine which language is being supported for a specific implementation.

They support a single language within a single installation. They do not support multiple currencies within a single installation.

Translation

Translation is the process of interpreting and adapting text from one language into another. Although the code itself is not translated, components of the application that are translated include:

- Graphical user interface (GUI)

- Error messages

The following components are not translated:

- Documentation (Online Help, Release Notes, Installation Guide, User Guide, Operations Guide)

- Batch programs and messages

- Log files

- Configuration Tools

- Demo data

- Training materials

Overview of Oracle Configuration Manager

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

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

https://support.oracle.com

Oracle Configuration Manager Installer Guide (Doc ID: 835024.1)

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

OCM Documentation Link

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

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

Roadmap for Implementing Promotion Intelligence and Promotion Planning and Optimization

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

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

In order to implement Promotion Intelligence and Promotion Planning and Optimization for production, you must perform the following tasks in a sequence:

Table 1–1   Roadmap for Implementing Promotion Intelligence and Promotion Planning and Optimization

Task	Description
Pre-installation Tasks	
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".
3.	Set up your application server. For more information, see Chapter 4, "Setting Up Your Application Server".
4.	Set up a password store. For more information, see Chapter 5, "Setting Up Password Stores".
Installation Task	
5.	Access the Promotion Intelligence and Promotion Planning and Optimization installation software, set up the install.properties file, and run the Oracle installer. For more information, see Chapter 6, "Installing Promotion Intelligence and Promotion Planning and Optimization".

Table 1–1 (Cont.) Roadmap for Implementing Promotion Intelligence and Promotion Planning and Optimization

Task	Description
Post-installation Tasks	
6.	Configure your business rules and user accounts. For more information, see the *Promotion Intelligence and Promotion Planning and Optimization Configuration Guide*.
7.	Modify the Promotion Intelligence and Promotion Planning and Optimization user interface to accommodate your business needs, as described in the *Promotion Intelligence and Promotion Planning and Optimization Configuration Guide*. Concurrent with this activity, complete the remaining steps in this roadmap. You can continue refining the user interface iteratively, as needed (optional).
8.	Set up user accounts and introduce the end users to the application.
9.	Perform and schedule the necessary data loads, as described in the *Promotion Intelligence and Promotion Planning and Optimization Operations Guide*.

2

Planning Your Installation

Before installing Promotion Intelligence and Promotion Planning and Optimization, 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
- Setting Up Shell Limits on Linux-based Systems

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 Promotion Intelligence and Promotion Planning and 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 Promotion Intelligence and Promotion Planning and Optimization.

Planning for Optimal Promotion Intelligence and Promotion Planning and Optimization Performance

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

1. Determine the Promotion Intelligence and Promotion Planning and 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 *Promotion Intelligence and Promotion Planning and 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.

> **Important:** To ensure optimal performance, you must synchronize the clocks on the systems hosting the application server and database.

Supported Configurations

This section describes the hardware and network requirements for the Promotion Intelligence and Promotion Planning and Optimization, and includes the following topics:

- Network Requirements
- Database Requirements
- Application Server Requirements
- Client System Requirements
- Supported Reporting Tool

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.
- Network load balancers to provide scalability to the servers.

Database Requirements

Promotion Intelligence and Promotion Planning and Optimization requires the use of the Oracle database as described in the following table:

Table 2–1   Database Requirements for Promotion Intelligence and Promotion Planning and Optimization

Software	Requirement			
Database (64-bit)	■ Oracle Database 11*g* Release 1, Enterprise Edition (11.1.0.7) RAC or Single Instance ■ Oracle Database 10*g* Release 2, Enterprise Edition (10.2.0.3) RAC or Single Instance			
Database Features	Oracle Partitioning **Important:** Although this database feature is available in the Oracle Database Enterprise Edition, you may need a separate license to use this feature. For more information, refer to the *Oracle Database Licensing Information 10g Release 2*.			
Operating System (64-bit)	Oracle Enterprise Linux 5.0 Update 3	HP-UX 11i v3 Update 1 (11.31), Itanium-based	IBM AIX 6.1 Technology Level (TL) 1 Service Pack 2 (SP2)	Oracle Enterprise Linux 4.0	Sun Solaris 10
Utilities	file transfer protocol utility (ftp or ssh/scp/rsync) sudo utility			

User Requirements

Your implementation may require you to set up multiple user accounts and user groups. Ensure that the user accounts, UIDs, user groups, GIDs, home directory, and shell are set up consistently across all the clusters and servers.

Application Server Requirements

Promotion Intelligence and Promotion Planning and Optimization requires the use of Oracle Application Server 10*g* Release 3 (10.1.3.3). The following table lists the supported operating systems and the associated application server versions:

Table 2–2   Application Server Requirements for Promotion Intelligence and Promotion Planning and Optimization

Software	Requirement				
Application Servers	Oracle Application Server 10*g* Release 3 Patch Set 10.1.3.3 (32-bit)				Oracle Application Server 10*g* Release 3 Patch Set 10.1.3.3 (64-bit)
Database Client	Oracle Database 10*g* Client Release 2 (10.2.0.4.0)				
Operating Systems (64-bit)	Oracle Enterprise Linux 4.0	Oracle Enterprise Linux Release 5.0 Update 3	IBM AIX 6.1 Technology Level (TL) 1 Service Pack 2 (SP2)	Sun Solaris 10	HP-UX 11i v3 Update 1 (11.31), Itanium-based
JVM	For OAS, Sun JDK 1.5.0_6 (32-bit) For PCE, Sun JDK 1.5.0_16 (64-bit)	For OAS, Sun JDK 1.5.0_6 (32-bit) For PCE, Sun JDK 1.5.0_ 16-b02 (64-bit)	IBM JDK 1.5 (Service Refresh 9) build pap32devfix-20081129 (32-bit)	For OAS, Sun JDK 1.5.0_6 (32-bit) For PCE, Sun JDK 1.5.0_ 16-b02 (64-bit)	HP-UX JDK for the Java 2 Standard Edition 5.0.0.8 with Java HotSpot and later. (32-bit)

Requirement for Installations based on Clusters

When you choose to install the application over application server clusters, ensure that the clustering nodes are configured in the same manner. The clustering nodes must be configured with the same database in the datasources, initial/maximum connections, HTTP and transactional time outs, and so on.

User Requirements

Your implementation may require you to set up multiple user accounts and user groups. Ensure that the user accounts, UIDs, user groups, GIDs, home directory, and shell are set up consistently across all the clusters and servers.

Client System Requirements

The following table lists the supported client system options:

Table 2–3   Client System Environment

Software	Requirements
Windows XP Pro SP2	■ Microsoft® Internet Explorer® 6.0 ■ Adobe Flash Player 9
Windows XP Pro SP3	■ Microsoft® Internet Explorer® 7.0 ■ Adobe Flash Player 9

Supported Reporting Tool

Promotion Intelligence and Promotion Planning and Optimization supports the use of Microstrategy 8 for reports. The following table lists the supported configuration:

Table 2–4   Reporting Tool Requirements for Promotion Intelligence and Promotion Planning and Optimization

Software	Requirement
Reporting Tool	Microstrategy 8
Operating System (32-bit)	■ Microsoft Windows Server 2003

Setting Up Shell Limits on Linux-based Systems

You can improve the performance of the software on Linux systems by increasing the following shell limits for the default ORACLE user account set up in the system:

■ Maximum number of open file descriptors (*nofile* parameter in **limits.conf**)

■ Maximum number of processes available to a single user (*nproc* parameter in **limits.conf**)

To set up these shell limits:

1. Log on to the system as *root* user, and navigate to the following location:

   ```
   /etc/security/
   ```

2. Edit the **limits.conf** file to include the following lines:

   ```
   oracle soft nproc 2047
   oracle hard nproc 16384
   oracle soft nofile 1024
   oracle hard nofile 65536
   ```

3. Navigate to the following location:

   ```
   /etc/pam.d/
   ```

4. Edit the **login** file to include the following line (if it does not already exist):

   ```
   session required /lib/security/pam_limits.so
   ```

5. Based on the user's default shell, make the following updates in the shell start-up file:

   ■ For the Bourne, Bash, or Korn shell, add the following lines to the **profile** file (in **/etc** directory):

   ```
   if [ $USER = "oracle" ]; then
    if [ $SHELL = "/bin/ksh" ]; then
     ulimit -p 16384
     ulimit -n 65536
     else
     ulimit -u 16384 -n 65536
    fi
   fi
   ```

   ■ For the C or tcsh shell, add the following lines to the **csh.login** file (in **/etc** directory):

   ```
   if ( $USER == "oracle" ) then
     limit maxproc 16384
   ```

```
   limit descriptors 65536
endif
```

3

Setting Up the Database

Before you run the Oracle installer to install the application, you must set up the database to include certain necessary tablespaces, and a database user account. This chapter describes how you can set up your database, and the various database components. It contains the following sections:

- Installing the Database
- Creating the Default Tablespaces
- Creating the Default Data User Accounts

> **Note:** If your database requires multi-byte support, specify the following properties in your init.ora file:
>
> ```
> CHARACTER_SET=AL32UTF8
> NLS_LENGTH_SEMANTICS=CHAR
> ```

This chapter includes specific instructions required for Promotion Intelligence and Promotion Planning and Optimization. Since the installation instructions for the database may vary based on the operating system, Oracle recommends that you refer to the relevant installation documentation included with the database.

Installing the Database

The application requires the use of the Oracle® Database 11*g* Release 1 (11.1.0.7) or Oracle® Database 10*g* Release 2 (10.2.0.4) and the Natively Compiled Java Libraries (in the Oracle Database Companion CD).

> **Note:** Before starting the installation, ensure that you have sufficient privileges to perform any database administrator (DBA) level tasks.

Install the database for the application, along with the software, referring to the relevant *Oracle Database Documentation* included with the software.

Ensure that the Oracle Database software is installed along with the Natively Compiled Java Libraries. For more information, see the *Oracle Database Installation Guide* and *Oracle Database Companion CD Installation Guide*.

> **Note:** Information from the Promote Calc Engine gets stored in the analytics database in a binary file format. Ensure that a proper capacity planning is done, based on your business needs, to determine the disk storage requirements to support the analytics database.

Installing the Database with Real Application Clusters (RAC)

In case you choose to install the database with Real Application Clusters (RAC), ensure that the database connection URL does not contain any space characters.

Creating the Default Tablespaces

When you run the Oracle installer, schemas and tables for the application get installed on the database you create. For the schemas and tables to install successfully, the database must include certain default tablespaces.

Use the Oracle Database Configuration Assistant to create a default database with the tablespaces mentioned in Table 3–1, Business Database Tablespaces. For more information on using the Oracle 10*g* Database Configuration Assistant, see the Oracle 10g Release 2 Installation documentation.

Table 3–1   Business Database Tablespaces

Tablespace	Description
DATA_01	Required. Application tablespace for Promote. Recommended size: 5 GB.
INDEX_01	Required. Application tablespace for the indexes of Promote, STG, and ASH. Recommended size: 5 GB.

> **Note:** The sizes of tablespaces depend on the amount of data being stored. For any sizing recommendations, see Table 3–1, Business Database Tablespaces.

Creating the Default Data User Accounts

You must also create two default database user accounts (*Promote* and *RDM*) that will be used during the installation to access the application database and Retail Data Mart (RDM).

To create the user accounts:

1. At the SQL prompt, type the following statement to create the users, and set the DATA_01 as the default tablespace:

```
CREATE USER Promote IDENTIFIED BY <PASSWORD>
DEFAULT TABELESPACE DATA_01;
CREATE USER RDM IDENTIFIED  BY <PASSWORD>
DEFAULT TABELESPACE DATA_01;
```

2. Once the users are created, use the Oracle 10g Database Configuration Assistant and grant the relevant access privileges to both the users. The following table lists the access privileges you must assign to the users:

Table 3–2   Access Privileges for the Users

User	Privileges
Promote	Connect
	Resource
	Create/drop table
	Create/drop/rebuild index
	Select any table
	Query rewrite
	Create materialized view
	Create/recompile/drop trigger
	Create/recompile/drop package
	Create view
	Execute any procedure
	getClassLoader Java Runtime permission*
RDM	Connect
	Resource
	Create/drop table
	Create/drop/rebuild index
	Select any table
	Select any table at Promote User schema
	Query rewrite
	Create materialized view
	Drop any table
	Create/recompile/drop trigger
	Create/recompile/drop package
	Create view
	Execute any procedure
	Execute any procedure at Promote User schema

Note: To assign the getClassLoader Java Runtime privilege, at the SQL prompt, run the following command:

```
exec dbms_java.grant_permission(
'<USERNAME>','SYS:java.lang.RuntimePermission', 'getClassLoader', '' )
```

4

Setting Up Your Application Server

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

This chapter describes how you can set up the application server. It contains the following sections:

- Installing the Oracle Application Server
- Configuring the Oracle Application Server

If you plan to use clusters for the 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 the Oracle Application Server

The Promotion Intelligence and Promotion Planning and Optimization applications require the use of the Oracle Application Server 10g Release 3 (10.1.3.3). 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 Promotion Intelligence and Promotion Planning and 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>.

> **Note:** Once the Oracle Application Server is installed, you must keep a note of the HTTP Server and RMI port values. You will need to enter these values during the application installation.

Configuring the Oracle Application Server

Before you start the application server instance, you must set up the configuration properties XML files to include JVM properties and enable global JNDI look ups.

To configure the Oracle Application Server:

1. Navigate to the following location in the Oracle Application Server installation folder:

   ```
   <OAS_HOME>/opmn/conf/config/
   ```

2. Edit the **opmn.xml**, and modify the value property of the **category id** tag (in the **ias-component id** section) to include the JVM arguments that specify the configuration root and the JVM switches that increase JVM-accessible memory.

   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= <path-to-config-root>
           -Djava.awt.headless=true -Xmx512m -Xms256m -XX:MaxPermSize=256m
           -Dhttp.webdir.enable=false
           -Xrunjdwp:transport=dt_socket,server=y,suspend=n,address=5005"/>
   </category>
   ```

   In the example above, *<path-to-config-root>* is the path to the **config** directory located within the directory where you want to install the application (*<installdir>* parameter in the install.properties file). The **config** directory will be created along with other application files when you install the application. Ensure that the installation directory you specify here matches the directory you specify during the application installation. For more information on the install.properties file, see .

   > **Note:** It is important for the time zones settings between the operating system, application server, and databases to be in sync for reporting and debugging purposes. In case the JVM does not recognize the time zone setting of the operating system, you must also add the adding the following JVM argument to set up the time zone for the application server to be in sync with the operating system:
   >
   > ```
   > -Duser.timezone=<country>/<city>
   > ```

3. Navigate to the following location in the Oracle Application Server installation folder:

   ```
   <OAS_HOME>/j2ee/home/config/
   ```

4. Edit the **server.xml** file, and in the **application-server** section, add a new attribute **global-jndi-lookup-enabled** attribute, and set it to **true**.

   For example:

   ```
   <application-server  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xsi:noNamespaceSchemaLocation="http://xmlns.oracle.com/oracleas/schema/applicat
   ion-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" >
   ```

5. Edit the **java2.policy** file, and add the following statements:

```
grant codeBase "file:${oracle.home}/j2ee/home/applications/-"
{
 permission java.security.AllPermission;
 permission oracle.security.jps.service.credstore.CredentialAccessPermission
"credstoressp.credstore", "read,write,update,delete";
 permission oracle.security.jps.service.credstore.CredentialAccessPermission
"credstoressp.credstore.*", "read,write,update,delete";
};
```

5

Setting Up Password Stores

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

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

- About Password Stores
- Setting Up a Password Store for the Database User Accounts
- Setting Up a Password Store for the Application Installation

About Password Stores

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

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

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

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

Setting Up a Password Store for the Database User Accounts

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

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

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

1. Create a wallet using the following command:

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

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

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

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

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

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

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

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

3. Repeat step 2 for all the database user accounts.

4. Update the **sqlnet.ora** file to include the following statements:

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

   In the statements above, `<wallet_location>` is a placeholder text that indicates the location where the Wallet file is located. Ensure that you enter a relevant location in place of the placeholder text.

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

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

```
        )
        (CONNECT_DATA =
            (SERVICE_NAME = <service>)
        )
    )
```

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

Setting Up a Password Store for the Application Installation

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

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

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

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

   `<PROMOTE_CD_IMAGE>/CSM/lib/`

   For more information on the `<PROMOTE_CD_IMAGE>` folder, see Accessing the Installation Software.

2. Run the following command:

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

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

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

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

Important Considerations

- For the database user accounts, ensure that the alias name for the database user accounts match the name you specified when setting up the password store for the database user accounts using Oracle Wallet.

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

- As part of the Oracle Wallet configuration, you must also set up the promote.mail.alias parameter in the promote.properties configuraton file. For more information, refer to the Oracle Retail Promotion Intelligence and Promotion Planning and Optimization Configuration Guide.

6

Installing Promotion Intelligence and Promotion Planning and Optimization

After you have set up your database and application server, you can install the applications using the guidelines provided in this chapter. This chapter contains the following sections:

- Overview of the Installation Process

- Accessing the Installation Software

- Setting Up Install.properties File

- Setting Up Environment Variables

- Installing Promotion Intelligence

- Installing Promotion Planning and Optimization

- About install.sh

- Post-Installation Tasks

Overview of the Installation Process

> **Note:** Although the options for IBM DB2 and IBM WebSphere display on the Oracle Installer, they are not supported in this release.

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

- **Graphical mode** – In the graphical mode, the Oracle Installer displays a graphical user interface and prompts you to enter or modify the value of the properties specified in the properties file.

- **Silent mode** – In the silent mode, the installer processes the properties file without any manual intervention.

Accessing the Installation Software

In order to install Promotion Intelligence and Promotion Planning and 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 Promotion Intelligence and Promotion Planning and Optimization software ZIP file from the Oracle E-Delivery site.

To download the Promotion Intelligence and Promotion Planning and Optimization software:

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

   http://edelivery.oracle.com/

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

   Note: Installation media files for an Enterprise release (13.1) are available on the *Oracle Electronic Delivery* Web site (http://edelivery.oracle.com) and Patch releases (13.1.x) and Hot Fixes (13.1.x.y) are available on the *My Oracle Support* Web site (https://metalink.oracle.com).

   ---

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

   The **Export Validation** screen displays.

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

   - **Full Name** - Enter your full name.

   - **Company Name** - Enter your company name.

   - **E-mail Address** - Enter your e-mail address.

   - **Country** - Select your country.

   - **License Agreement** - 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.

   The **Oracle Retail Promotion Intelligence and Promotion Planning and Optimization Media Pack** screen displays.

5. In the **Select** column, click **Download**, and download all the media packs displayed on screen.

6. Unpack the ZIP file to a temporary directory. In this guide, the directory that contains the installation media is referred to as the <PROMOTE_CD_IMAGE> directory.

   Now you can set up your Promotion Intelligence and Promotion Planning and Optimization installation properties file.

Setting Up Install.properties File

In order to install the Promotion Intelligence and Promotion Planning and Optimization applications, you first need to specify the properties to use during the installation process. The install.properties file, available for each installation, helps you specify the necessary properties for the installation.

To set up your install.properties file:

1. From the installation media, copy the **sample.install.properties** file to your system, and rename the file to **install.properties**.

2. Edit the install.properties file, specifying values as described within the file, and save it. For more information on the properties included in the install.properties file, see Install.properties Parameters Reference.

Install.properties Parameters Reference

The following table describes the parameters in the install.properties file that you must set up before you install the Promotion Intelligence and Promotion Planning and Optimization applications:

Table 6–1   Install.properties Parameters Reference

Parameter	Description
installdir	Use this parameter to specify the path to the default base installation folder (includes modules, configuration root, and logs).
Promote Analytic Engine Parameters	
KDE_NUM_CPUS	Use this parameter to specify the number of CPUs that host the analytics engine.
KDE_RMI_SERVER_PORT	Use this parameter to specify the port to access the administration utility for the PCE Predictor.
KDE_RMI_FACTORY_SERVER _PORT	Use this parameter to specify the port to access the Promote Calc Engine (PCE) Predictor Factory.
KDE_RMI_PREDICTOR_SERVER _PORT	Use this parameter to specify the port to access the PCE Predictor.
KDE_RMI_SERVER_ADDRESS	Use this parameter to specify the URL where the RMI server is installed.
KDE_HOME	Use this parameter to specify the default base folder for the analytics engine.
KDE_TMP_DIR_PATH	Use this parameter to specify the default temporary folder for the analytics engine.
Application Server Details	
app.server	The application server used for the application. The current release supports Oracle Application Server 10g Release 3 (10.1.3.1).
install.appserver	The 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 RMI port to connect to the Oracle application server.
oracle.admin.userid	Use this parameter to specify the administrative user name for the application server.

Table 6–1 (Cont.) Install.properties Parameters Reference

Parameter	Description
oracle.admin.password	Use this parameter to specify the password associated with the administrative user.
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.
oracle.multicast.default	Use this parameter to specify the multicast port number, when the application is installed over a clustered environment.
oracle.group.name	Use this parameter to specify the group name, that is 'default_group' in a standard OAS installation.
host list	Use this parameter to specify the list of nodes in the cluster.
Wallet Information	
oracle.admin.alias	Use this parameter to specify the alias name set up for the Oracle Application Server administrative user account. For more information, see Setting Up a Password Store for the Application Installation.
install.csm.home	Use this parameter to specify the path where the Wallet is installed. This location was referred to as *<wallet_location>* in the chapter Setting Up Password Stores. For more information, see Setting Up Password Stores.
Information for Suite.Properties File	
suite.host	Use this parameter to specify the application server host name where the application is installed. This value is used for the suite.properties file.
suite.port	Use this parameter to specify the HTTP port to connect to the application server. This value is used for the suite.properties file.
http.protocol	Use this parameter to specify the HTTP protocol that must be used to connect to the server.
Parameters for the Log and Spool Files	
basedest.basedest.dir	Use this parameter to specify the path to the default base installation folder.
basedest.baselog.dir	Use this parameter to specify the path to the folder where the installation log files get stored.
basedest.basespool.dir	Use this parameter to specify the path to the folder where the installation spool files get stored.
install.command.shell	Use this parameter to specify the command shell to be used for the installation.
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.

Table 6–1 (Cont.) Install.properties Parameters Reference

Parameter	Description
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 *no* 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: ■ Connected – to proceed installing OCM. You must also procure the Customer Support Identifier, My Oracle Support user account name, and the country code to install the OCM. Specify "no" to set the Connected mode. ■ Disconnected – to skip the OCM configuration. Specify "yes" to set the Disconnected mode.
ocm.csi_id	Use this parameter to specify the Customer Support identification number.
ocm.metalink_id	Use this parameter to specify the My Oracle Support 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 *yes* or *no*.
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.
Oracle Database Configuration	
install.database	Use this parameter to specify the database you want to use for the application.
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.
database.commondb.oracle.address	Use this parameter to specify the URL 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.

Table 6–1 (Cont.) Install.properties Parameters Reference

Parameter	Description
database.commondb.oracle.dbport	Use this parameter to specify the port to connect to the database.
database.commondb.oracle.dburl	Optional. Use this parameter to specify the database URL for JDBC connectivity. When you leave this field blank, the installer will automatically build the database URL based on the values entered in the other database parameters. In case you specify the database URL, the installer will use the values specified here during the installation. **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=<hostname1>)(PORT=<dbport1>))(ADDRESS=(PROTOCOL=TCP)(HOST=<hostname2>)(PORT=<dbport2>))(ADDRESS=(PROTOCOL=TCP)(HOST=<hostname3>)(PORT=<dbport3>))(ADDRESS=(PROTOCOL=TCP)(HOST=<hostname4>)(PORT=<dbport4>)))(CONNECT_DATA=(SERVICE_NAME=<dbname>)(failover_mode=(type=select)(method=basic)(retries=60)(delay=5))))
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.dbport	Use this parameter to specify the port to connect to the Audit database.
database.auditdb.oracle.create	Use this parameter to indicate that a new Audit database must be created.
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 database schema name for the application front end schema.
common.dblink	Use this parameter to specify the database link to access the common schema through the audit schema. If the schema exists in the same instance, specify *none*.
database.rdmdb.oracle.create	Use this parameter to indicate that a new Retail Data Mart (RDM) database must be created.
database.rdmdb.oracle.upgrade	Use this parameter to specify that the existing database be upgraded to include the RDM schema.
database.rdmdb.oracle.dbname	Use this parameter to specify the name of the RDM database.
database.rdmdb.oracle.dbalias	Use this parameter to specify the RDM database alias name.
database.rdmdb.oracle.address	Use this parameter to specify the URL where the RDM database is installed.

Table 6–1   (Cont.) Install.properties Parameters Reference

Parameter	Description
database.rdmdb.oracle.dbport	Use this parameter to specify the port to connect to the RDM database.
rdm.feschema	Use this parameter to specify the RDM database schema name associated with the application front end schema.
database.elmdb.oracle.create	Use this parameter to indicate that a new ELM database be created. Valid values are Yes or No.
database.elmdb.oracle.dbname	Use this parameter to specify the ELM database name.
database.elmdb.oracle.dbalias	Use this parameter to specify the ELM database alias name.
database.elmdb.oracle.address	Use this parameter to specify the URL where the ELM database is installed.
database.elmdb.oracle.dbport	Use this parameter to specify the port to connect to the ELM database.
database.elmdb.oracle.auth. elmoracleauth.user	Use this parameter to specify the user name to connect to the ELM database.
database.elmdb.oracle. elm_main_dblink	Use this parameter to specify the database link name for the ELM schema to access the main database. If they exist in the same instance, specify *none*.
database.CommonDB.oracle. main_elm_dblink	Use this parameter to specify the database link to access the ELM schema through the common schema. If the schema exists in the same instance, specify *none*.
database.auditdb.oracle.dburl database.rdmdb.oracle.dburl database.elmdb.oracle.dburl	Optional. Use these parameters to specify the relevant database schema URL for JDBC connectivity. When you leave this field blank, the installer will automatically build the database URL based on the values entered in the other database parameters. In case you specify the database URL, the installer will use the values specified here during the installation. **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=<hostname1>)(PORT=<dbport1>))(ADDRESS=(PROTOCOL=TCP)(HOST=<hostname2>)(PORT=<dbport2>))(ADDRESS=(PROTOCOL=TCP)(HOST=<hostname3>)(PORT=<dbport3>))(ADDRESS=(PROTOCOL=TCP)(HOST=<hostname4>)(PORT=<dbport4>))))(CONNECT_DATA=(SERVICE_NAME=<dbname>)(failover_mode=(type=select)(method=basic)(retries=60)(delay=5))))
database.commondb.oracle.dbdriver database.auditdb.oracle.dbdriver database.rdmdb.oracle.dbdriver database.elmdb.oracle.dbdriver	Specify the database drivers to be used for each database schema. The values default to *oracle.jdbc.OracleDriver* and indicate the use of Oracle database drivers.

Table 6–1   (Cont.) Install.properties Parameters Reference

Parameter	Description
Internationalization Properties	
dataset.load.characterset	Use this parameter to specify the character set to be used in the data control (.ctl) files.
	For more information on the correct character set syntax, refer to the appendix *Locale Data* in the *Oracle Database Globalization Support Guide* included in the *Oracle Database 10g Release 2 Documentation*.
	In case you choose not to set the value for this parameter, the default character set (UTF8) will be used for the application.

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)
- NLS_LANG
- CSM_HOME

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 or set up these variables in the relevant application server startup script. For more information on setting up these variables in the startup files, refer to the operating system or application server 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

export NLS_LANG=[Language]_[Territory].[character set]
For example, AMERICAN_AMERICA.UTF8

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

Installing Promotion Intelligence

You can install the Promote Intelligence application in one of the following ways:

- Silent Mode – See Installing Promotion Intelligence in the Silent Mode.

- Graphical Mode – See Installing Promotion Intelligence Using the Graphical Oracle Installer.

> **Important:** It is recommended that the Promote Calc Engine (PCE) be installed on the system where the application server for the Promotion Planning and Optimization is running.

Installing Promotion Intelligence in the Silent Mode

To install the Promotion Intelligence application:

1. Ensure that you have set up the install.properties file for the installation. For more information, see Setting Up Install.properties File.

> **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. From the <PROMOTE_CD_IMAGE> folder, run the installer in the silent mode using the following command:

```
bash install.sh -p <path-to-install.properties> -s
```

> **Note:** For more information about this command, see About install.sh.

3. Once the installation completes, restart the application server.

Installing Promotion Intelligence Using the Graphical Oracle Installer

If you prefer to use a guided user interface, you can use the graphical Oracle Installer.

To install Promotion Intelligence using the Oracle Installer:

1. Ensure that you have set up the install.properties file for the installation. For more information, see Setting Up Install.properties File.

> **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 the <PROMOTE_CD_IMAGE> folder, run the installer using the following command:

```
bash install.sh
```

> **Note:** For more information about this command, see About install.sh.

The Oracle Installer appears.

5. Follow the instructions in the Oracle Installer to specify or confirm all the relevant parameters for the installation and start the installation.

6. Once the installation is complete, verify that the application is accessible over the network. For more information, see Verify the Promote URL.

Before you log on to the application, you must complete the post-installation tasks. For more information, Post-Installation Tasks.

Installing Promotion Planning and Optimization

You can install the Promote Planning and Optimization application in one of the following ways:

- Silent Mode – See Installing the Promotion Planning and Optimization in the Silent Mode.

- Graphical Mode – See Installing Promotion Planning and Optimization Using the Graphical Oracle Installer.

Installing the Promotion Planning and Optimization in the Silent Mode

To install the Promotion Planning and Optimization application:

1. Ensure that you have set up the install.properties file for the installation. For more information, see Setting Up Install.properties File.

> **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. From the <PROMOTE_CD_IMAGE> folder, run the installer in the Silent mode using the following command:

```
bash install.sh -p <path-to-install.properties> -s
```

For more information on the install.sh script, see About install.sh.

3. Once the installation completes, restart the application server.

Installing Promotion Planning and Optimization Using the Graphical Oracle Installer

If you prefer to use a guided user interface, you can use the graphical Oracle Installer.

To install Promotion Intelligence using the Oracle Installer:

1. Ensure that you have set up the install.properties file for the installation. For more information, see Setting Up Install.properties File.

   > **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 the <PROMOTE_CD_IMAGE> folder, run the installer using the following command:

   ```
   bash install.sh
   ```

   > **Note:** For more information about this command, see About install.sh.

   The Oracle Installer appears.

5. Follow the instructions in the Oracle Installer to specify or confirm all the relevant parameters for the installation and start the installation.

6. Once the installation is complete, verify that the application is accessible over the network. For more information, see Verify the Promote URL.

Before you log on to the application, you must complete the post-installation tasks. For more information, Post-Installation Tasks.

About install.sh

The install.sh script enables you to launch the Oracle installer, and install the application.

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

Arguments
The following table describes the arguments you can use along with the install.sh:

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.

Argument	Description
-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.

Post-Installation Tasks

This section includes the following tasks you can perform after the installation:

- Installing the Adobe Flex License
- Restart the Application Server
- Installing the Sample Dataset
- Start the PCE Server
- Verify the Promote URL
- Avoiding the Oracle for J2EE (OC4J) Out of Memory Exception for Oracle Application Server

> **Note:** In the following section, the application installation directory is referred to as `<installdir>` and indicates the application installation path specified in the install.properties file. For more information, see Setting Up Install.properties File.

Installing the Adobe Flex License

Adobe® Flex™ is an Independent Development Environment (IDE), based on Adobe® Flash framework, that enables you to create scalable and rich Internet applications (RIAs) within your enterprise or the Web.

To install the Adobe Flex license:

1. Navigate to the following location in the application installation folder:

   ```
   <installdir>/modules/tools/
   ```

2. Run the following script, with the appropriate syntax:

   ```
   bash license-flex.sh <OAS_HOME>/j2ee/home <Flex License Number>
   ```

> **Note:** You can also install the Adobe Flex license, as part of the application installation.

Restart the Application Server

Once you install the Adobe Flex license, you must restart the application server.

To restart the application server:

1. Navigate to the following location in the Oracle Application Server installation directory:

    ```
    <OAS_HOME>/opmn/bin/
    ```

2. At the command prompt, run the following command:

    ```
    opmnctl stopall
    ```

    followed by,

    ```
    opmnctl startall
    ```

Installing the Sample Dataset

The Promotion Intelligence and Promotion Planning and Optimization installation comes along with a sample dataset that can be used during implementation and demonstrations. This dataset contains generic data and is designed to work along with the default product configuration. The data files, along with the necessary data load scripts, are included as part of the installation media.

When you run the Oracle Installer, the sample dataset does not get installed by default. You must manually access and run the data load script to load the sample data.

You can find the sample dataset and the data load scripts at the following location in your Promotion Intelligence and Promotion Planning and Optimization installation directory:

```
<installdir>/modules/pce/sample/
```

To load the sample data:

1. Navigate to the following location in the Promotion Intelligence and Promotion Planning and Optimization installation directory:

    ```
    <installdir>/modules/pce/sample/
    ```

2. Run the following script, with a relevant syntax:

    ```
    bash deploy.sh
    ```

    You can use one of the following syntax:

    - bash deploy.sh *all* – For the Promotion Planning and Optimization application. Use this syntax to load the data, templates, users, computed statistics, and so on.

    - bash deploy.sh *pce_all* – For the Promotion Intelligence application. Use this syntax to load the data, computed statistics, and so on (does not include users, templates, and images).

About Deploy.sh Script

The deploy.sh script enables you to load sample data, and has the following features:

- It works without any dependencies on the environment variables and the PATH

- It can load promotion templates, users, roles, Adobe Flex serial number, and so on.

Start the PCE Server

Once you load the sample data, you can start the PCE server.

To start the PCE server:

1. Navigate to the following path in the installation folder:

    ```
    <installdir>/modules/pce/bin
    ```

2. Run the following script:

    ```
    bash pceserver.sh -start
    ```

> **Note:** You can incorporate this script into your system startup procedure. The script assumes that the Java interpreter is set in the PATH variable.

Verify the Promote URL

In a Web browser, type the following link to verify the Promote application installation:

```
http://<hostname>:<portnumber>/promote
```

where, <hostname> and <portnumber> are the relevant host name and port number for your company.

Avoiding the Oracle for J2EE (OC4J) Out of Memory Exception for Oracle Application Server

> **Note:** This section applies to upgrade procedures only.

An issue has been identified for Oracle Application Server 10g (MetaLink Note 368342.1). When the upgrade is initiated, the installation replaces any existing applications deployed over the OC4J instance with new ones. During this operation, the OC4J instance may run out of physical memory space and generate an Out of Memory (PermGen space) exception. Once this exception occurs, the instance will no longer be available for use and a server restart will be necessary to continue operations.

To avoid an Out of Memory exception during the upgrade, you must first complete the following steps:

1. Navigate to the following location in the Oracle Application Server Home directory:

    ```
    <OAS_HOME>/opmn/conf/
    ```

2. Edit the **opmn.xml** and ensure that it includes the following values within the **category id** tag (in the **ias-component id** section for the **oc4j** module):

    ```
    -Djava.awt.headless=true -Xmx512m -Xms256m -XX:MaxPermSize=256m
    ```

> **Note:** The **-Xmx512m**, **-Xms256m**, and **-XX:MaxPermSize=256m** memory arguments are recommendations for a typical configuration. You can choose to set up a different memory argument that best fits your hardware configuration.

3. Log on to the Enterprise Manager for the application server by typing the following address in a Web browser:

```
http://mycompany.domain.com:<admin-port>/em
```

Once logged on, the **Cluster Topology** page appears.

4. On the **Cluster Topology** page, under the **Members** section, select the check box next to the following application components:

– **c4p**

– **ImageServer**

– **ppohelp**

– **promote**

– **StoreSet**s

– **StoreSetsHelp**

– **SuitePropertiesManager**

– **SystemInformationTool**

– **UMHelp**

– **UserManagement**

5. Click **Stop**. The **Confirmation** page appears.

6. On the **Confirmation** page, review the components selected, and click **Yes**.

7. Restart the application server.

7

Setting Up Microstrategy

If you are using the MicroStrategy for the reports, you must set up the Promote and RDM data sources and configure a MicroStrategy project that maps to these data sources. This chapter highlights these configuration procedures and includes the following sections:

- Installing the MicroStrategy Components
- Setting Up the Promote Metadata and Data Source
- Setting Up the RDM Data Source
- Setting Up a MicroStrategy Project
- Duplicating the Project to the MicroStrategy Server
- Configuring RDM to the Project
- Deploying Standard Reports
- Configuring Reports
- Restarting the RMI Service

> **Important:** This chapter highlights the configuration instructions you may require to set up the MicroStrategy project that will help you view and use the reports included with Promotion Intelligence and Promotion Planning and Optimization.
>
> For more information on the installation and configuration of MicroStrategy components for your implementation, you must refer to the MicroStrategy documentation.

Installing the MicroStrategy Components

The Promotion Intelligence and Promotion Planning and Optimization application supports the MicroStrategy 8 platform.

Using the MicroStrategy documentation for assistance, install the following components:

- MicroStrategy Intelligence Server
- MicroStrategy OLAP Services
- MicroStrategy Desktop

> **Note:** You can choose to install the MicroStrategy Desktop on the same system where the MicroStrategy Intelligence Server is installed.

Before starting the installation, you must consider the following important points:

- Ensure that users *have not* been added to the RDM user management tables—it will save you time later.

- MicroStrategy Product Platform installation does not support installing a different version of the platform over an existing platform. You must install MicroStrategy 8 on a different system or uninstall MicroStrategy platform from the system, and then install MicroStrategy 8.

Setting Up the Promote Metadata and Data Source

Before you start setting up the Microstrategy components for Promote, you must set up the metadata and a data source for the MicroStrategy project source.

The metadata database file (PromoteReportsMetaData.zip) is included in the Promotion Intelligence installation media pack and available at the following location:

```
<PROMOTE_CD_IMAGE>/modules/pce/reporting/
```

To set up the metadata and data source:

1. Navigate to the following location in the <PROMOTE_CD_IMAGE>:

    ```
    <PROMOTE_CD_IMAGE>/modules/pce/reporting/
    ```

2. On the system where the MicroStrategy Server is installed, create a new folder, and copy the **PromoteReportsMetaData.zip** file to this folder.

3. Extract the **PromoteReportsMetadata.mdb**, included in this ZIP file, on your system.

    > **Important:** If you want to set up or view reports in a language other than English, you must set up the metadata for that specific language. For more information, see Setting Up the Metadata for a Different Language.

4. In the **Microsoft Control Panel**, double-click **Administrative Tools**.

5. In **Administrative Tools**, double-click **Data Sources (ODBC)**. The **ODBC Data Source Administrator** window appears.

6. On the **System DSN** tab, click **Add**. The **Create New Data Source** window appears.

7. Select **Microsoft Access Driver (*.mdb)**, and click **Finish**. The **ODBC Microsoft Access Setup** window appears.

8. On the **ODBC Microsoft Access Setup** window, type a data source name and description you want.

9. In the **Database** section, click **Select**. The **Select Database** window appears.

10. On the **Select Database** window, navigate to the location where you have stored the **PromoteReportsMetadata.mdb** file, select the file, and then click **OK**.

11. On the **ODBC Microsoft Access Setup** window, click **OK**.

12. On the **ODBC Data Source Administrator** window, click **OK**.

Setting Up the Metadata for a Different Language

By default, the reports are provided in English. In case you want to set up or view reports in a language other than English, you must change the metadata for the reports to use the strings or values in the relevant language.

> **Note:** For the users to view the reports in a language other than English, the language settings on the user systems must also reflect the specific language. For more information on changing the language settings on the user systems, refer to the *Microsoft Windows documentation*.
>
> Changing the language settings on a user system may require access to the Windows installation media and a mandatory restart of the system for the changes to take effect.

To set up the metadata for a language other than English:

1. Navigate to the following location in the <PROMOTE_CD_IMAGE>:

```
<PROMOTE_CD_IMAGE>/modules/pce/reporting/
```

2. Copy the **LoadLangText.class** and the **promotereports_xy.properties.native** files to the folder where you have stored the **PromoteReportsMetadata.mdb**.

> **Note:** *xy* indicates the abbreviation for the relevant language.
>
> For example, to set up the metadata for the *French* language, use promotereports_*fr*.properties file.

3. In the command prompt, run the following command to insert the strings for the relevant language in the metadata file:

```
java LoadLangText promotereports_xy.properties.native
PromoteReportsMetadata.mdb <char_code>
```

where <char_code> is the relevant character encoding code for the specific language. Before running the script above, you must replace <char_code> with the specific code from the following table:

Table 7–1   Character Code for the Supported Languages

Language	Abbreviation (*xy*)	Character Encoding Code(*<char_code>*)
Chinese (Simplified)	*zh_CN*	gb2312
Chinese (Traditional)	*zh_TW*	BIG5
French	*fr*	CP1252
German	*de*	CP1250
Italian	*it*	CP1252
Japanese	*ja*	MS932
Korean	*ko*	MS949

Table 7–1 (Cont.) Character Code for the Supported Languages

Language	Abbreviation (*xy*)	Character Encoding Code(*<char_code>*)
Portuguese (Brazilian)	*pt*	CP1252
Spanish	*es*	CP1252

> **Note:**   For each language, you must start with a fresh metadata file obtained from the <PROMOTE_CD_IMAGE>.

4. Once the strings are inserted in the metadata, the file can copied over to the MicroStrategy server for deployment.

Setting Up the RDM Data Source

You must set up a data source for the RDM using the MicroStrategy ODBC Driver for Oracle Wire Protocol.

To set up the RDM data source:

1. In the **Microsoft Control Panel**, double-click **Administrative Tools**.

2. In **Administrative Tools**, double-click **Data Sources (ODBC)**. The **ODBC Data Source Administrator** window appears.

3. On the **System DSN** tab, click **Add**. The **Create New Data Source** window appears.

4. Select **MicroStrategy ODBC Driver for Oracle Wire Protocol**, and click **Finish**. The **ODBC Oracle Wire Protocol Driver Setup** window appears.

5. On the **ODBC Oracle Wire Protocol Driver Setup** window, type a data source name and description you want.

6. In the **Standard Connection** section, enter the database host name, port number, and service name in the relevant fields, and click **OK**.

7. On the **ODBC Data Source Administrator** window, click **OK**.

Setting Up a MicroStrategy Project

A MicroStrategy project includes all the schema and application object definitions that together form the reporting environment. You must set up a MicroStrategy project for the Promote reports.

To set up a MicroStrategy project:

1. Log on to the **MicroStrategy Desktop**.

2. From the **Schema** menu, select **Create New Project**. The **Project Creation Assistant** window appears.

3. In the **Project Creation Assistant** window, click the button next to **Create project**. The **New Project** window appears.

4. In the **New Project** window, enter relevant information in the fields, and in the **Select the Project Source you would like to use** area, click **New**. The **Project Source Manager** window appears.

For more information on the fields, refer to the *MicroStrategy documentation*.

5. In the **Project Source Manager** window, enter a project source name in the **Project** source field.

6. In the **Connection** mode drop-down list, select **Direct**, and then select the data source set up for the Promote metadata.

7. Click **OK** to save the changes and return to the **Project Creation Assistant** window.

Duplicating the Project to the MicroStrategy Server

Once you have the project configured on the MicroStrategy Desktop, you must duplicate it to the MicroStrategy server.

To duplicate the project to the MicroStrategy server:

1. In the **MicroStrategy Desktop**, right click on the project you created, and select **Duplicate Project**. The **Project Duplication** window appears.

2. Click **Next**. The **Source Project Location** window appears.

3. On the **Source Project Location** window, in the **Available Project Sources** drop-down list, select the project source you created.

4. Enter the relevant authentication details, and click **Next**.

5. In the **Available projects** section, select the relevant project, and click **Next**. The **Duplicate Project Location** window appears.

6. On the **Duplicate Project Location** window, in the **Available Project Sources** drop-down list, select the host name of the system where the MicroStrategy server is installed.

7. Click **Next**.

8. Enter a relevant destination project name and description, and click **Next**. The **Select objects to duplicate** window appears.

9. On the **Select objects to duplicate** window, select the objects you want to copy, and click **Finish** to start the duplication process.

10. Once the process is complete, click **Exit**.

Configuring RDM to the Project

Once the MicroStrategy project is set up, you must configure the RDM data source to this project.

To configure the RDM to the project:

1. In the **MicroStrategy Desktop**, right-click on the project you just created, and select **Project Configuration**. The **Project Configuration** window appears.

2. In the **Project Configuration** window, expand **Database instance**, and click **General**. The database instances that are available appear on the right.

3. Click **New**. The **Database Instances** window appears.

4. In the **Database Instances** window, on the **General** tab, enter a relevant database instance name in the **Database** instance name field.

5. From the **Database connection type** drop-down list, select **Oracle 10g**.

6. In the **Description** field, enter a relevant description, and click **New**. The **Database Connection** window appears.

7. In the **Database Connection** window, on the **General** tab, enter a relevant database connection name in the **Database connection** name field.

8. In the **Local system ODBC data sources** section, select the RDM data source you created.

9. In the **Default database login name** section, click **New**. The **Database Logins** window appears.

10. On the **Database Logins** window, enter a relevant database login name, log on user name, and password for the database.

11. Click **OK**. The **Database Instances** window appears.

12. On the **Database Instances** window, select the database connection you just created, and then click **OK**. The **Project Configuration** window appears.

13. On the **Project Configuration** window, select the database instance you just set up, and then click **OK**.

Deploying Standard Reports

The Promote installation media packs also includes the standard reports for the application (WebMstr8_OraclePromote.war) at the following location in the Promote installation directory:

```
<Promote_Installation>/modules/pce/reporting/WebMstr8_OraclePromote.war
```

In case you choose to install these standard reports, you must deploy them manually as a Web application on the Oracle Application Server.

To deploy the standard reports:

1. Log on to the Oracle Enterprise Manager for the Oracle Application Server.

2. On the **Cluster Topology** page, under the **Members** section, select **home**. The **OC4J: home** page appears.

3. On the **OC4J: home** page, click the **Applications** tab.

4. On the **Applications** tab, click **Deploy**.

5. On the **Deploy: Select Archive** page, enter the location of the **WebMstr8_OraclePromote.war** file.

6. In the **Deployment Plan** section, select the **Automatically create a new deployment plan.** option, and click **Next**.

7. On the **Deploy: Application Attributes** page, enter a relevant application name and context root.

8. Click **Next**. The **Deploy: Deployment Settings** page appears.

9. On the **Deploy: Deployment Settings** page, click **Deploy**.

Configuring Reports

Once the deployment is complete, you must configure the reports to display properly.

To configure the reports:

1. Edit the **promote-config.xml** (located in the **<promote-installation>/configure/ promote/** directory) to include the report server parameters. For example,

    ```
    <connect protocol="http" server="<server's hostname>" port="<server's port
    number>" webapp_path="<report application name>/servlet/mstrWeb">
    <param name="project"><MS project name></param>
    ```

2. Edit the orion-application.xml file (located in the <OAS_HOME>/ application-deployments/<report application name>/ directory) for the reports application to include the following:

    ```
    <security-role-mapping name="admin">
            <group name="oc4j-administrators"/>
    </security-role-mapping>
    ```

3. Restart the application server.

4. In a Web browser, go to the Administration URL (for example, `http://<hostname>:<portnumber>/<report application name>/servlet/mstrWebAdmin`).

5. Log on to the Administration console using the administrator user name and password.

6. Once logged in, enter the host name, and click Connect.

Restarting the RMI Service

In case you find it necessary to restart the RMI service on a regular basis, Oracle recommends that you use the *RestartRMIServer.cmd* file (installed along with the MicroStrategy User Integration Server), and schedule it as a task that runs at a regular interval.

The *RestartRMIServer.cmd* file stops and starts the RMI service running on your MicroStrategy server. To schedule this file as a task:

1. On the Windows server running the MicroStrategy server, click **Start**, click **Control Panel**, and then double-click **Scheduled Tasks**.

2. Double-click **Add Scheduled Task**. The **Scheduled Task Wizard** appears.

3. Follow the **Scheduled Task Wizard**, and set up the *RestartRMIServer.cmd* file to run at a regular interval.

8

Setting Up Single Sign-On

This chapter describes how you can set up the Single Sign-On plugin and integrate Promotion Intelligence and Promotion Planning and 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 for Promotion Intelligence and Promotion Planning and Optimization. Once you install the Single Sign-On cookie plugin, you can achieve a one-way interoperability 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 Promotion Intelligence and Promotion Planning and Optimization URL directly. If you access Promotion Intelligence and Promotion Planning and Optimization 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 *$ORACLE_HOME/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 (Promotion Intelligence and Promotion Planning and Optimization and OSSO) and is more specific than a top-level domain name (such as *.com*).
>
> For example, if the Promotion Intelligence and Promotion Planning and Optimization system is hosted on **ppo.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 Promotion Intelligence and Promotion Planning and Optimization URL available through Workspace:

1. In the *retail-workspace-page-config.xml* file, create a **secure-work-item id** entry with the value **Promote**, and set the **rendered** parameter value to **true**.

2. Specify the application URL within the **<url>** tags as illustrated in the example below.

For Promotion Intelligence and Promotion Planning and Optimization, there are no other application configuration parameters.

Example

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

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

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

```
<secure-work-item id="Promote"
  display-string="Launch Promotion Intelligence and Promotion Planning and
Optimization"
  rendered="true"
  launchable="true"
  show-in-content-area="false">
<url>http://mycomputer.mycompany.com:7777/promote</url>
<parameters>
</parameters>
```

A
Appendix: Installation Order

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

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

Enterprise Installation Order

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

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 Returns Management (ORRM)

11. Oracle Retail Back Office (ORBO) or Back Office with Labels and Tags (ORLAT)

12. Oracle Retail Store Inventory Management (SIM)

> **Note:** During installation of SIM, you are asked for the 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.

13. Oracle Retail Predictive Application Server (RPAS)

14. Oracle Retail Demand Forecasting (RDF)

15. Oracle Retail Category Management (CM)

16. Oracle Retail Replenishment Optimization (RO)

17. Oracle Retail Analytic Parameter Calculator Replenishment Optimization (APC RO)

18. Oracle Retail Regular Price Optimzation (RPO)

19. Oracle Retail Merchandise Financial Planning (MFP)

20. Oracle Retail Size Profile Optimization (SPO)

21. Oracle Retail Assortment Planning (AP)

22. Oracle Retail Item Planning (IP)

23. Oracle Retail Item Planning configured for COE (IPCOE)

24. Oracle Retail Advanced Inventory Planning (AIP)

25. Oracle Retail Integration Bus (RIB)

26. Oracle Retail Point-of-Service (ORPOS)

27. Orace Retail Mobile Point-of-Service (ORMPOS)

28. Oracle Retail Analytics Applications

   - Oracle Retail Markdown Optimization (MDO)

   - Oracle Retail Promotion Intelligence and Promotion Planning and Optimization

   - Oracle Retail Analytic Parameter Calculator for Markdown Optimization (APC MDO)

   - Oracle Retail Clearance Optimization Engine (COE)

29. Oracle Retail Data Warehouse (RDW)

30. Oracle Retail Workspace (ORW)

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