Oracle® Retail Price Optimization

Installation Guide

Release 12.0.3

June 2007

ORACLE®

Oracle® Retail Price Optimization Installation Guide, Release 12.0.3

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Value-Added Reseller (VAR) Language

(i) the software component known as **ACUMATE** developed and licensed by Lucent Technologies Inc. of Murray Hill, New Jersey, to Oracle and imbedded in the Oracle Retail Predictive Application Server - Enterprise Engine, Oracle Retail Category Management, Oracle Retail Item Planning, Oracle Retail Merchandise Financial Planning, Oracle Retail Advanced Inventory Planning and Oracle Retail Demand Forecasting applications.

(ii) the **MicroStrategy** Components developed and licensed by MicroStrategy Services Corporation (MicroStrategy) of McLean, Virginia to Oracle and imbedded in the MicroStrategy for Oracle Retail Data Warehouse and MicroStrategy for Oracle Retail Planning & Optimization applications.

(iii) the **SeeBeyond** component developed and licensed by Sun MicroSystems, Inc. (Sun) of Santa Clara, California, to Oracle and imbedded in the Oracle Retail Integration Bus application.

(iv) the **Wavelink** component developed and licensed by Wavelink Corporation (Wavelink) of Kirkland, Washington, to Oracle and imbedded in Oracle Retail Store Inventory Management.

(v) the software component known as **Crystal Enterprise Professional and/or Crystal Reports Professional** licensed by Business Objects Software Limited ("Business Objects") and imbedded in Oracle Retail Store Inventory Management.

(vi) the software component known as **Access Via™** licensed by Access Via of Seattle, Washington, and imbedded in Oracle Retail Signs and Oracle Retail Labels and Tags.

(vii) the software component known as **Adobe Flex™** licensed by Adobe Systems Incorporated of San Jose, California, and imbedded in Oracle Retail Promotion Planning & Optimization application.

(viii) the software component known as **Style Report™** developed and licensed by InetSoft Technology Corp. of Piscataway, New Jersey, to Oracle and imbedded in the Oracle Retail Value Chain Collaboration application.

(ix) the software component known as **i-net Crystal-Clear™** developed and licensed by I-NET Software Inc. of Berlin, Germany, to Oracle and imbedded in the Oracle Retail Central Office and Oracle Retail Back Office applications.

(x) the software component known as **WebLogic™** developed and licensed by BEA Systems, Inc. of San Jose, California, to Oracle and imbedded in the Oracle Retail Value Chain Collaboration application.

(xi) the software component known as **DataBeacon™** developed and licensed by Cognos Incorporated of Ottawa, Ontario, Canada, to Oracle and imbedded in the Oracle Retail Value Chain Collaboration application.

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Preface

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

Audience

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

- Installing and configuring application server software
- Installing and configuring relational database management systems
- Installing and configuring distributed client/server applications on a UNIX-based local area network

Related Documents

For more information about using the Price Optimization application, the following documents are available in the Oracle Retail Price Release 12.0.3 documentation set:

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

Customer Support

- https://metalink.oracle.com

When contacting Customer Support, please provide:

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

Review Patch Documentation

For a base release (".0" release, such as 12.0), Oracle Retail strongly recommends that you read all patch documentation before you begin installation procedures. Patch documentation can contain critical information related to the base release, based on new information and code changes that have been made since the base release.

Oracle Retail Documentation on the Oracle Technology Network

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

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

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

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
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 Price Optimization and a roadmap for implementing the application. It contains the following sections:

Overview of Price Optimization

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

What Are the Price Optimization Components?

Price Optimization contains the following components:

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

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

  Price Optimization requires only one instance of the Calculation Engine. However, you can install multiple Engines to boost performance. The Engine is scalable across your network: you can install all Engines on a single machine or distribute them across machines as needed.
- Merchant Desktop (Optional) - produces a customized view of your business data by means of its Retail Data Mart database. By default, Merchant Desktop uses the MicroStrategy business intelligence tool, which is also optional.

How Does Price Optimization Turn My Data Into Business Information?

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

The Calculation Engine analyzes this data and generates forecasts that calculate all possible price trajectories for applicable items. Price Optimization saves the best forecast trajectory as a recommendation, which you can view from the Price Optimization user interface. You can either accept these recommendations or modify them if you prefer an alternative markdown strategy.

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

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

How Does Price Optimization Help Me Reach My Business Goals?

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

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

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

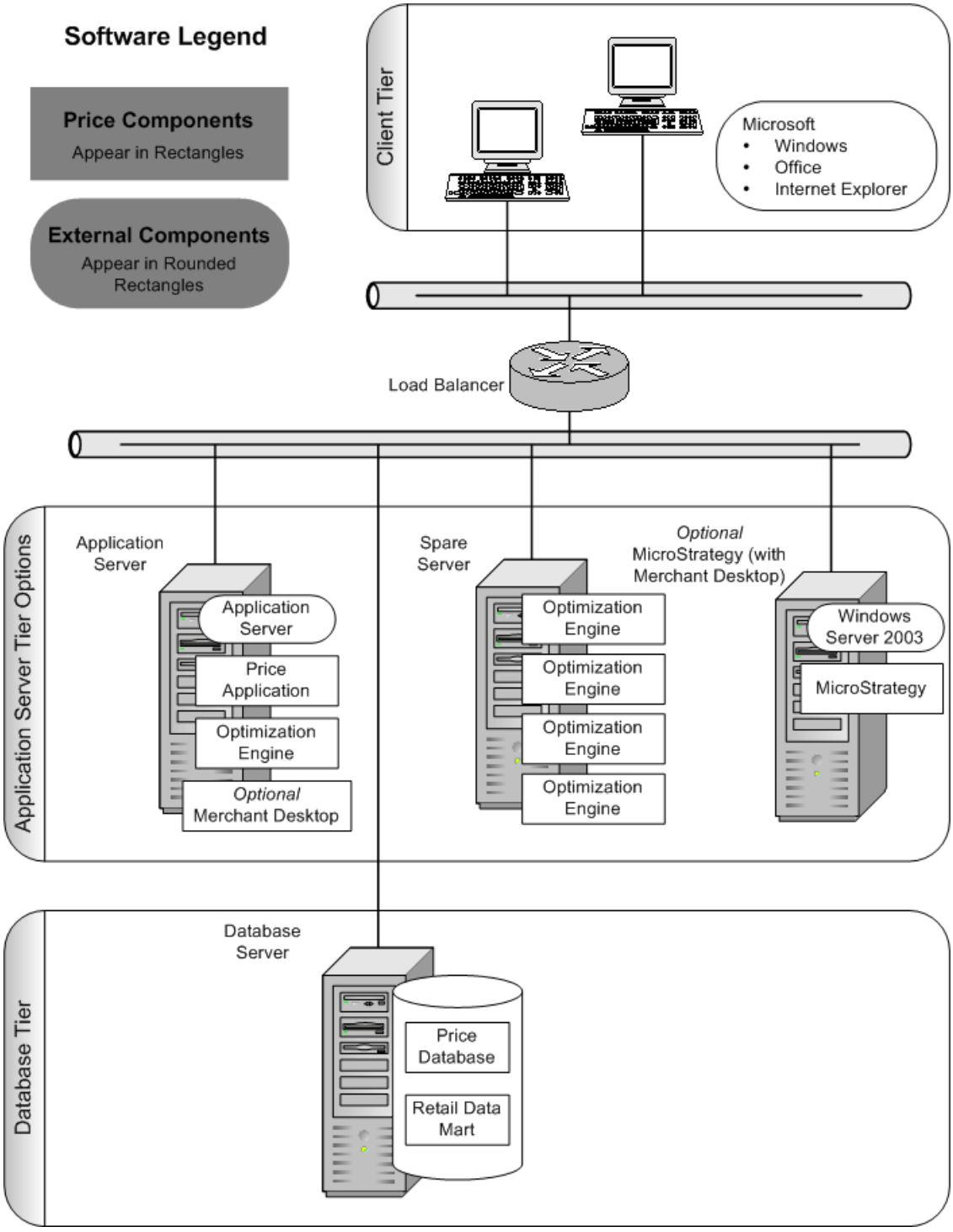
Price Optimization enables you to customize the way the user interface displays information, sorts and filters data, and generates reports. For information on customizing the Price Optimization user interface, see the *Price Optimization Configuration Guide*.

Price Optimization Architecture

Price Optimization Enterprise Components describes the optional and required software. For information about specific versions required, see Chapter 2, Planning Your Installation.

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

Figure 1–1 Price Optimization Network Diagram



Price Optimization Enterprise Components

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

- Client System Tier
- Application Server Tier
- Database Server Tier
- Optional Components

Client System Tier

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

- Microsoft Windows
- Microsoft Office
- Microsoft Internet Explorer 6.0, with ActiveX control
- JRE for Merchant Desktop (optional)

Application Server Tier

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

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

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

Database Server Tier

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

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

Optional Components

- Merchant Desktop (an optional component) requires a Windows server for MicroStrategy.
- Additional computational servers for implementing the Calculation Engine in a large-scale environment.
- Additional application server machines for implementing Price Optimization for a large number of users.

Roadmap for Implementing Price Optimization

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

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

In order to implement Price Optimization for production, you must perform the following tasks in a sequence:

Table 1–1 Roadmap for Implementing Price

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".
	Installation Task
4.	Access the Price installation software, set up the install.properties file, and run the Oracle installer. For more information, see Chapter 5, "Installing Price Optimization".
	Post-installation Tasks
5.	Configure your business rules and user accounts. For more information, see the *Price Optimization Configuration Guide*.
6.	Load data and evaluate the results. For more information, see the*Price Optimization Configuration Guide*.
7.	Modify the Price Optimization user interface to accommodate your business needs, as described in the *Price 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.	If you are using Merchant Desktop and MicroStrategy, see Chapter 6, "Integrating with MicroStrategy."
9.	Set up user accounts and introduce the end users to the application.
10.	Maintain the application as described in the *Price Optimization Configuration Guide*.

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Planning Your Installation

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

This chapter includes the following sections:

Overview of the Planning Process

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

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 Price Optimization.

Planning for Optimal Price Optimization Performance

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

1. Determine the Price 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 *Price Optimization Configuration Guide*.
3. Plan the periodic batch loading of business and historical databases. This also includes the data feeds needed from the external systems for nightly, weekly, and periodic batch updates and recycling.

Supported Configurations

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

- Network Requirements
- Database Requirements
- Application Server Requirements
- Merchant Desktop Requirements
- Client System Requirements

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

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

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

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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.

Managed Server Configuration

You can host the Price Optimization application and the Calculation Engine over multiple server instances (managed servers), and set up clusters to improve the system performance. The following list illustrates a typical cluster configuration:

- Application Cluster - two or more managed server nodes that host instances of Price Optimization and its related applications.
- Calculation Engine Cluster - two managed server nodes that host instances of the Calculation Engine.

> **Note:** Although the Price Optimization application can work along with managed servers, Failover clusters are not supported at the database or the application server tier. In an event of a failure of an instance, instead of the user's session migrating to another (spare) instance, the user will get redirected to the Price Optimization Login page.

For clustered and multi-server implementations, a hardware load balancer may be required. Cisco CSS series is supported.

Database Requirements

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

Table 2–1 Oracle Database Requirements

Software	Requirement
Operating System	Solaris 8, 9, or 10
Database	Oracle 10g Release 2 (10.2.0.3)
Utilities	file transfer protocol utility (ftp or ssh/scp/rsync) sudo utility

> **Note:** For Oracle 10*g* Database installations on the Solaris Operating System (x86-64), ensure that you apply the Oracle 10*g* Release 2 (10.2.0.3) Patch Set. For more information on this patch set, review the release document *316900.1* (ALERT: Oracle 10g Release 2 (10.2) Support Status and Alerts) available on the Oracle MetaLink Web site.
>
> To locate this document on the Oracle MetaLink Web site,
>
> - In the **Quick Find** section, for **Document ID**, enter **316900.1**, and click **Go**.

Application Server Requirements

Price Optimization supports the use of the following application servers:

- Oracle Application Server
- WebLogic Application Server

Oracle Application Server

If you are running Oracle Application Server, see the following table.

Table 2–2 Oracle Applicatoin Server Requirements

Software	Requirement
Operating System	Solaris™ 8, 9, or 10
Application Server	Oracle Application Server 10g 10.1.3 with patches 4645524 and 4968168.
JVM	Sun JDK 1.4.2_08 (32 bit) or above

WebLogic Application Server

Price Optimization supports the use of the BEA WebLogic Server on the following platforms:

- Solaris
- Linux

Weblogic Configuration on Solaris If you are running WebLogic on Solaris, see the following table.

Table 2–3 Solaris Requirements for WebLogic

Software	Requirement
Operating System	Solaris™ 8, 9, or 10
Application Server	WebLogic 8.1 Service Pack 6
JVM	Sun JDK 1.4.2_08 (32 bit) or above

Weblogic Configuration on Linux The following table lists the Linux requirements for the WebLogic Server:

Table 2–4 Linux Requirements for WebLogic

Software	Requirement
Operating System	Red Hat Enterprise Linux release 3.0 (Taroon), Update 5
Application Server	BEA WebLogic Server 8.1 Service Pack 6
JVM	BEA WebLogic Jrockit 1.4.2_10

Important: You must run the Time Zone Updater tool to update the BEA Jrockit SDK with the latest time zone information that accommodates the U.S. 2007 daylight saving time changes (US2007DST). For more information, visit the BEA Jrockit online documentation at http://edocs.bea.com/jrockit/geninfo/diagnos/tzupdate.html

Merchant Desktop Requirements

Merchant Desktop is optional. If you are using Merchant Desktop, see the following table for the supported configuration.

If you are using Merchant Desktop with MicroStrategy, Merchant Desktop must be installed on the application server node and MicroStrategy must be installed on a system that hosts a Microsoft Windows 2003 server.

Table 2–5 Merchant Desktop Server Requirements

Software	Requirement
Operating System	Windows Server 2003
Business Intelligence Tool	MicroStrategy 7.5.3
Java	Sun JDK 1.4.1_05 (32 bit)

Client System Requirements

The following table lists the supported client system options:

Table 2–6 Client System Environment

Software	Requirements
Windows XP Pro SP2 (with Office 2003)	■ Microsoft® Office 2003 ■ Microsoft® Internet Explorer® 6.0 ■ Sun JRE 1.4.1_05 (32-bit) for Merchant Desktop
Windows XP Pro SP2 (with Office XP)	■ Microsoft Office XP ■ Microsoft Internet Explorer 6.0 ■ Sun JRE 1.4.1_05 (32-bit) for Merchant Desktop
Windows XP Pro SP2 (with Office 2000)	■ Microsoft Office 2000 ■ Microsoft Internet Explorer 6.0 ■ Sun JRE 1.4.1_05 (32-bit) for Merchant Desktop
Windows NT 4.0 SP6	■ MS Office 97 SR-2 ■ Internet Explorer 5.5 SP2 ■ Sun JRE 1.4.1_05 (32-bit) for Merchant Desktop

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Setting Up the Database

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

- Before You Begin
- Creating the Price Optimization Database
- Merchant Desktop and RDM Performance

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

Before You Begin

Read this section before setting up your Price Optimization database.

Overview of the Price Optimization Database Installation

Price Optimization requires the following database instances:

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

Installing the Prerequisite Software

Install your database before you install your application server and Price Optimization. For database prerequisites and other requirements, see Chapter 2, "Planning Your Installation".

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

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

Creating the Price Optimization Database

Note: The size of tablespaces depends on the amount of data being stored. For any sizing recommendations, see Table 3–1, Price Optimization Tablespaces.

Creating the Price Optimization database involves the following steps:

1. Creating the Initialization Parameter File
2. Creating the Price Optimization Database
3. Creating the System Data Dictionary
4. Specifying Users and Permissions
5. Creating the Schema

Creating the Initialization Parameter File

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

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

Creating the Price Optimization Database

The Price Optimization database requires the following system tablespaces.

Table 3–1 Price Optimization Tablespaces

Tablespace	Description
DATA_01	Required. Default tablespace for Price Optimization table. Recommended: 5 GB.
INDEX_01	Required. Tablespace for indexes of Price Optimization, STG, and ASH. Recommended: 5 GB.

Table 3–1 Price Optimization Tablespaces

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

Creating the System Data Dictionary

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

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

Specifying Users and Permissions

Specify the default privileges to Oracle schemas as follows:

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

```
call dbms_java.grant_permission('RDM_USER',
'oracle.aurora.security.JServerPermission', 'Verifier', '');
```

Creating the Schema

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

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

To create the bufferpool:

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

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

```
STORAGE;
CREATE BUFFERPOOL "BP_16K_TEMP_02" SIZE 1000 PAGESIZE 16384 NOT EXTENDED STORAGE;
```

Merchant Desktop and RDM Performance

To improve the performance of the report generation process you can add indexes relevant to the user interface you are using as follows.

Planning for Optimal Merchant Desktop Performance

The RDM database abstracts forecasting and historic data from Price Optimization for use with either the Merchant Desktop or the MicroStrategy user interface.

Planning for RDM Storage Requirements

Typically, the following tables can be very large objects in the RDM:

- RDM_ACTIVITES (extracted from Price Optimization)
- RDM_FORECAST_ACTIVITIES

  The RDM_FORECAST_ACTIVITIES and the summary tables can be very large. When RDM is installed, allocate extra storage in the amount of the sum of Activities and Forecast Activities. For example, if the size of the Price Optimization dataset is 10 GB, the size of Activities is 3 GB, and Forecast Activities is 1 GB, RDM requires an addition 4 GB of space.
- RDM_MERCHANDISE_TBL (extracted from Price Optimization)
- Summary tables and indexes

Increasing the Speed of the Report Generation Process

To improve the performance of the report generation process you can add indexes relevant to the user interface you are using as described in this section.

Merchant Desktop Reports

The speed of data drilling during report generation depends on the number of product hierarchies you company has implemented.

To increase the speed of the Merchant Desktop report generation process, you can index specific hierarchy columns within the MERCHANDISE_TBL and RDM_MV_ACT_BASE2_1 tables as needed. For example, if the maximum optimization level is 8, you can improve performance by creating an index on the HIERARCHY8_PID column in the MERCHANDISE_TBL and RDM_MV_ACT_BASE2_1 tables.

MicroStrategy Reports

If you are using MicroStrategy, you can increase the speed of the report generation process by adding indexes to the RDM tables for the summary levels that are described in Chapter 6, "Integrating with MicroStrategy."

4

Setting Up Your Application Server

This chapter contains the following sections:

Before You Begin

This chapter describes how to install your application server.

For information about the supported version and other requirements, see Chapter 2, "Planning Your Installation."

If you are clustering instances of your application server, create them before installing Price Optimization—otherwise any managed servers must be added manually. For information about managing clusters, see the documentation for your application server.

Installing and Configuring Oracle Application Server

To install and configure Oracle Application Server, use these sections in the following sequence:

1. Installing Oracle Application Server
2. Configuring Oracle Application Server

Installing Oracle Application Server

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

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

In the *Price Optimization Installation Guide*, the Oracle Application Server installation directory is referred to as the <OAS_HOME> directory.

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

Configuring Oracle Application Server

To specify Oracle Application Server configuration properties:

1. Edit the **j2ee/home/config/server.xml** file, and specify the following:

```
<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" >
```

2. Edit the **opmn/conf/opmn.xml** file, and specify the configroot and memory as follows:

```
<category id="start-parameters">
    <data id="java-options" value="-Xrs -server
        -Djava.security.policy=$ORACLE_HOME/j2ee/home/config/java2.policy
        -Dcom.profitlogic.configroot=/pricecluster/config
        -Djava.awt.headless=true -Xmx512m -Xms512m -XX:MaxPermSize=256m
        -Dhttp.webdir.enable=false
        -Xrunjdwp:transport=dt_socket,server=y,suspend=n,address=5005"/>
</category>
```

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

Installing and Configuring WebLogic

To install and configure WebLogic, use these sections in the following sequence:

1. Installing WebLogic
2. Creating a WebLogic Domain
3. Editing the WebLogic Startup Script
4. Installing ADF Libraries

Installing WebLogic

Install the WebLogic application server using the WebLogic documentation for guidance. In this guide, the WebLogic installation directory is referred to as the <WL_HOME> directory.

Next, you can create and configure a domain, using the WebLogic Configuration Wizard.

Creating a WebLogic Domain

Price Optimization uses a WebLogic domain consisting of one administration server, a cluster of one or more managed servers, and other logically related resources and services. The WebLogic Configuration Wizard prompts you to specify all of the settings required by the application domain.

To create a WebLogic domain:

From <WL_HOME>/common/bin/config.sh, start the WebLogic Configuration Wizard and create a new domain and server, using the values specified in Table 4–1, Settings for the WebLogic Configuration Wizard.

Table 4–1 Settings for the WebLogic Configuration Wizard

Setting	Description
Define Logical Grouping	
Domain Type	Select **WLS Domain.**
Server Type	Select **Admin Server with Clustered Managed Server(s).**
Domain Name	Enter the domain name to use for Price Optimization. Recommended value: Prepend the domain name with a three-character acronym that represents your company name. For example, ABC Company would enter `abcProdPrice`.
Define the Administration Server	
Administration Server Name	Name of the server that controls the cluster. Recommended value: `admin0`
Administration Server Listener Port	**Important:** Select a unique port number that is not in use by other applications. Recommended value: `8000` **Tip:** You can ensure that 8000 is an unused port number by entering the following UNIX command: `netstat -ae | grep 8000`

Table 4–1 Settings for the WebLogic Configuration Wizard

Setting	Description
Administration Server SSL Listener Port	Number of the server listener port, incremented by 1. Recommended value: `8001`
Configure Managed Servers	
First Server Name	Recommended value: `price0`
First Server Listen Address	Recommended value: `0.0`
First Server Listen Port	Recommended value: `8040`
First Server SSL Port	Number of the managed server port, incremented by 1. Recommended value: `8041`
Second Server Name	Name of the first managed server, incremented by 1. Recommended value: `price1`
Second Server Listen Address	Recommended value: `0.0`
Second Server Port	Recommended value: `8044`
Second SSL Port	Port number of the first managed server, incremented by 1. Recommended value: `8046`
Join the Nodes in the Cluster Together	
Cluster Name	Recommended value: `price-cluster`
Cluster Multicast Port	Recommended value: `7777`
Cluster Listen Address	Same as host number.

Editing the WebLogic Startup Script

Edit the startWebLogic.sh script, and add the following:

```
CONFIG_ROOT="<PRICE_HOME>/config"
JAVA_OPTION=""-Dcom.profitlogic.configroot=${CONFIG_ROOT}
-Djava.awt.headless=true
-Dweblogic.management.username=${WLS_USER}
-Dweblogic.management.password=${WLS_PW}""
MEM_ARGS="-Xmx256m -Xms256m"
WLS_USER= Set so the script can run in the background without prompting the user.
WLS_PW= Set so the script can run in the background without prompting the user.
```

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

Installing ADF Libraries

For the Online Help to work, you must install the Application Development Framework (ADF) libraries in the Weblogic Server Home directory.

> **Note:** Oracle Application Server 10g Release 3 (10.1.3.x) is shipped with the ADF libraries, and the installation includes the necessary ADF libraries.

To install the ADF libraries:

1. Download the ADF Installer (10.1.3.2) from the following URL on the Oracle Technology Network:

   http://www.oracle.com/technology/software/products/jdev/htdocs/adfinstaller.html

2. Extract the **adfinstaller.zip** file to an appropriate folder.
3. In the **adfinstaller.properties** file, set the following variables:
   - **DesHome** – the home directory of the application server. For example, the *DesHome* variable can have the "c:\\bea\weblogic81" value for the WebLogic server.
   - **type** – the platform for the application server where the ADF libraries need to be installed.
   - **UserHome** – the WebLogic domain folder for which the ADF installation is considered. For example, the *UserHome* variable can have the "c:\\bea\weblogic81\user_projects\\domains\\adfdomain" value for the WebLogic server.
   - **OracleHome** – the absolute path to the directory containing the ADF jars to be installed. This is the location where you extracted the adfinsatller.zip file.
4. Shut down all instances of the application server running on the target platform.
5. At the command prompt, run the following command:

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

The Oracle ADF Installer detects the server instance and copies the runtime libraries into the appropriate folders. For additional information on the Application Development Framework (ADF), visit the following URL:

http://www.oracle.com/technology/products/adf/learnadf.html

After installing the ADF libraries, you must source the *setupadf.sh* file in the WebLogic startup script. Add the following line in the WebLogic startup script:

```
source c:\\bea\weblogic81\user_projects\\domains\\adfdomain\\setupadf.sh
```

5

Installing Price Optimization

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

Overview of the Installation Process

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

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

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

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

  Note: The graphical mode **does not** support application server clusters. If you are clustering instances of your application server, you **must** install Price Optimization in silent mode.

- Silent mode - In silent mode, the installer processes the properties file with no manual intervention required.

To begin the installation process, see Installing Price Optimization.

Installing Price Optimization

Installing Price Optimization consists of the following tasks:

- Installing Price Optimization in Silent Mode
- Installing Price Optimization Using the Graphical Oracle Installer

Accessing the Installation Software

In order to install Price 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 Price Optimization software ZIP file from the Oracle E-Delivery site.

To download the Price Optimization software:

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

   `http://edelivery.oracle.com/`

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

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

   The **Export Validation** screen displays.

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

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

   The **Media Pack Search** screen displays.

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

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

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

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

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

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

   Now you can set up your Price Optimization properties file.

Setting Up Your Installation Properties File

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

To set up your install.properties file:

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

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

- Installing Price Optimization in Silent Mode
- Installing Price Optimization Using the Graphical Oracle Installer

Install.properties Parameter Reference

The following table describes the parameters in the install.properties file that you must set up before you install the Price optimization application:

Table 5–1 Install.properties Parameters Reference

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

Table 5–1 Install.properties Parameters Reference

Parameter	Description
install.database.default	Use this parameter to specify the default database.
Oracle Properties	
dbms.oracle.host	The host name or IP address where the Oracle database is installed.
dbms.oracle.port	The port to connect to the Oracle database.
dbms.oracle.db	Use this parameter to specify the Oracle database name.
dbms.oracle.alias	Use this parameter to specify the Oracle database alias name.
dbms.oracle.user	Use this parameter to specify the user name to connect to the Oracle database.
dbms.oracle.pass	Use this parameter to specify the password to connect to the Oracle database.
database.commondb.oracle.address	Use this parameter to specify the URL (host name or IP address) where the Oracle database is installed.
database.commondb.oracle.dbalias	Use this parameter to specify the database alias name.
database.commondb.oracle.dbname	Use this parameter to specify the database name.
database.commondb.oracle.dbport	Use this parameter to specify the port to connect to the database.
database.commondb.oracle.auth.commonOracleAuth.user	Use this parameter to specify the user name to connect to the database.
database.commondb.oracle.auth.commonOracleAuth.password	Use this parameter to specify the password to connect to the database.
database.commondb.oracle.user	Use this parameter to specify the user name to connect to the database.
database.commondb.oracle.password	Use this parameter to specify the password to connect to the database.
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.rdmdb.oracle.dbname	Use this parameter to specify the RDM database name.
database.rdmdb.oracle.dbalias	Use this parameter to specify the RDM database alias name.
database.rdmdb.oracle.address	Use this parameter to specify the host name or IP address where the RDM database is installed.
database.rdmdb.oracle.dbport	Use this parameter to specify the port to connect to the RDM database.
database.rdmdb.oracle.user	Use this parameter to specify the user name to connect to the RDM database.
database.rdmdb.oracle.password	Use this parameter to specify the password to connect to the RDM database.
database.RdmDB.oracle.auth.rdmOracleAuth.user	Use this parameter to specify the user name to connect to the RDM database.
database.RdmDB.oracle.auth.rdmOracleAuth.password	Use this parameter to specify the password to connect to the RDM database.

Table 5–1 Install.properties Parameters Reference

Parameter	Description
rdm.oakschema	Use this parameter to specify the database name for the OAK schema.
rdm.feschema	Use this parameter to specify the database name for the front end schema.
database.rdmdb.oracle.create	Use this parameter to indicate that a new RDM database be created. Valid values are Yes or No.
database.rdmdb.oracle.upgrade	Use this parameter to indicate that the existing RDM database be upgraded. Valid values are Yes or No.
DB2 Properties	
dbms.db2.host	Use this parameter to specify the host name or IP address where the DB2 database is installed.
dbms.db2.port	Use this parameter to specify the port to connect to the DB2 database.
dbms.db2.db	Use this parameter to specify the DB2 database name.
dbms.db2.alias	Use this parameter to specify the DB2 database alias name.
dbms.db2.user	Use this parameter to specify the user name to connect to the DB2 database.
dbms.db2.pass	Use this parameter to specify the password to connect to the DB2 database.
database.commondb.db2.address	Use this parameter to specify the URL (host name or IP address) where the DB2 database is installed.
database.commondb.db2.dbport	Use this parameter to specify the port to connect to the DB2 database.
database.commondb.db2.dbname	Use this parameter to specify the DB2 database name.
database.commondb.db2.dbalias	Use this parameter to specify the DB2 database alias name.
database.commondb.db2.classpath	Use this parameter to specify the class path set for the DB2 database.
database.commondb.db2.user	Use this parameter to specify the user name to connect to the DB2 database.
database.commondb.db2.password	Use this parameter to specify the password to connect to the DB2 database.
database.commondb.db2.auth. commonDb2auth.user	Use this parameter to specify the user name to connect to the DB2 database.
database.commondb.db2.auth. commonDb2auth.password	Use this parameter to specify the password to connect to the DB2 database.
database.rdmdb.db2.dbname	Use this parameter to specify the RDM database name.
database.rdmdb.db2.dbalias	Use this parameter to specify the RDM database alias name.
database.rdmdb.db2.address	Use this parameter to specify the host name or IP address where the RDM database is installed.
database.rdmdb.db2.dbport	Use this parameter to specify the port to connect to the RDM database.
database.rdmdb.db2.user	Use this parameter to specify the user name to connect to the RDM database.

Table 5–1 Install.properties Parameters Reference

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

Table 5–1 Install.properties Parameters Reference

Parameter	Description
weblogic.home	Use this parameter to specify the path to the WebLogic server in the BEA base directory. For example, C:\BEA\weblogic81\server
weblogic.start	Use this parameter to specify the path to the WebLogic startup shell script (startWebLogic.sh).
WebLogic Cluster Properties	The following properties are strictly optional and only need to be used if the installation is directed at a cluster.
WebLogic Cluster (Price Application) Properties	
scope.fetarget.serverobject	Use this parameter to specify the name of the server or cluster where the Price database is installed.
scope.fetarget.type	Use this parameter to specify the type of the server object. You can specify cluster or server.
WebLogic Cluster (Calc Engine) Properties	
scope.cetarget.serverobject	Use this parameter to specify the name of the server or cluster where the Calculation Engine is installed.
scope.cetarget.type	Use this parameter to specify the type of the server object. You can specify cluster or server.
jms.server	Use this parameter to specify the name of the JMS server (in the cluster) where the Price Optimization application is installed.
jms.deployment	Use this parameter to specify the type of deployment. The value defaults to **Server**. For cluster-based deployment, specify **Cluster**.
jms.ce.server	Use this parameter to specify the name of the JMS server (in the cluster) where the Calculation Engine is installed.
jms.ce.deployment	Use this parameter to specify the type of deployment. The value defaults to **Server**. For cluster-based deployment, specify **Cluster**.
host.list	This is the list of managed servers, where you want the installer to deploy an instance of Calculation Engine. <hostname1,hostname2...>, When installing in a clustered environment across multiple hosts, the install base needs to be replicated on all the hosts involved. (This is not needed if the install base is on network drive shared among the servers).
WebSphere Server Properties	
websphere.cell	Name of the WebSphere cell.
websphere.node	Name of the WebSphere node.
websphere.server	Name of the WebSphere server.
websphere.admin.userid	Use this parameter to specify the WebSphere admin user name.
websphere.admin.password	Use this parameter to specify the WebSphere admin password.
websphere.admin.port	Use this parameter to specify the server SOAP port to connect to the WebSphere server.
websphere.server.address	Use this parameter to specify the host name or IP address to connect to the WebSphere server.

Table 5–1 Install.properties Parameters Reference

Parameter	Description
websphere.home	Use this parameter to specify the path to the WebSphere base directory. For example, /opt/WebSphere/AppServer
websphere.instance.home	Use this parameter to specify the path to the WebSphere instance. For example, /home/user/wasinst1
websphere.wsadmin.options	Use this parameter to specify the maximum size of the memory allocation pool for Websphere.
websphere.jdbc.scope	Use this parameter to specify the WebSphere configuration scope. The configuration scope defaults to node.
websphere.provider. commonDB2JdbcProvider.classpath	Use this parameter to specify the class path set for the DB2 database.
Post-installation Properties Files	
install.properties.savefile	Use this parameter to specify the path to the folder where you want to store the properties file (last-session.properties) that contains the parameter values used in the last installation session.
missing.properties.savefile	Use this parameter to specify the path to the folder where you want to store the properties file (missing-entries.properties) that contains the parameter values the Oracle installer tried to use during installation.
RDM Roll-Up information	
rdm.MviewsYN	Use this parameter to indicate whether you want roll-ups created as part of the installation.
rdm.numOrigMviews	Use this parameter to indicate the number of roll-ups already created before installing the application. When you install the application for the first time, set the value to '0'. In case you want to add more roll-ups, include the existing number of roll-ups.
rdm.merchOptLvl rdm.locOptLvl	Use these parameters to indicate the merchandise and location hierarchy levels of an item, at which the optimization occurs. The level number are located in the LEVEL_SQC column of CLIENT_HIERARCHY_LEVELS_TBL for merchandise and location hierarchies.
rdm.mview1MerchLvl rdm.mview1LocLvl rdm.mview2MerchLvl rdm.mview2LocLvl rdm.mview3MerchLvl rdm.mview3LocLvl rdm.mview4MerchLvl rdm.mview4LocLvl	Use these parameters to indicate the merchandise and location hierarchy levels at which the roll-ups must be created to enhance performance. You can specify a set of four roll-ups only. The level number are located in the LEVEL_SQC column of CLIENT_HIERARCHY_LEVELS_TBL for merchandise and location hierarchies.

Installing Price Optimization in Silent Mode

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

To install Price Optimization in silent mode:

1. Ensure that you have completed "Setting Up Your Installation Properties File" on page 5-3.
2. Make sure that your application server is running.
3. From your application server machine, enter the following command. **Note:** For more information about this command, see the install.sh command on page 5-9.

```
bash install.sh
```

install.sh

The install.sh command enables you to install Price Optimization.

Syntax

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

Arguments

Use any arguments listed below as needed.

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

Return Value

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

Output

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

When the installation successfully completes, see What's Next? on page 5-21.

If the installation resulted in issues, see Troubleshooting Installation Issues.

Installing Price Optimization Using the Graphical Oracle Installer

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

Note: The graphical user interface **does not support clusters.** If you are clustering instances of your application server, install Price Optimization in the **silent mode.**

To install Price Optimization using the Oracle Installer:

1. Ensure that you have completed "Setting Up Your Installation Properties File" on page 5-3.
2. Make sure that your application server software is running.
3. If you are viewing the installer from a Windows client:
   - On the Windows client, start an Xserver program that enables you to emulate the X terminal.
   - On the application server, set the display for the Windows client where you want the Oracle Installer to display as follows:

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

4. From your application server machine, enter the following command. Note: for more information about this command, see Installing Price Optimization in Silent Mode.

   ```
   bash install.sh
   ```

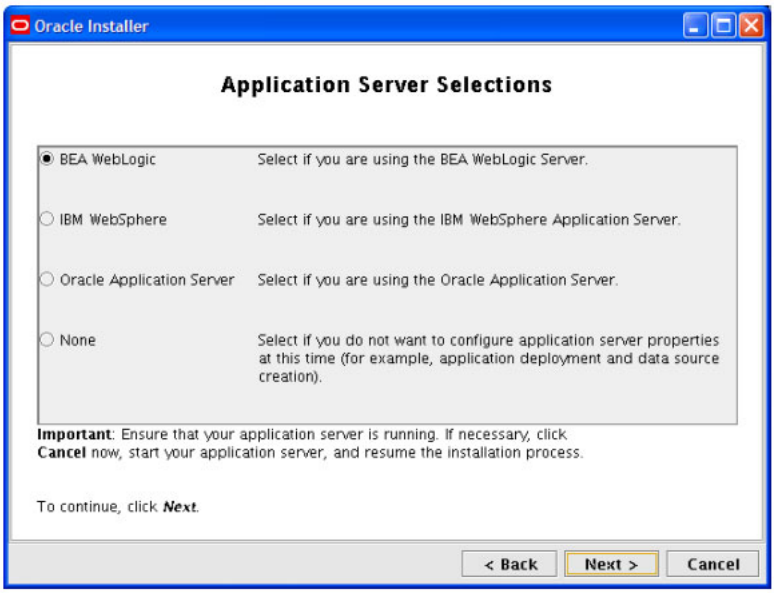
   The **Welcome** screen displays.

Figure 5–1 Welcome Screen

5. Click **Next.**

   The **Application Server Selections** screen displays.

Figure 5–2 Application Server Selections Screen

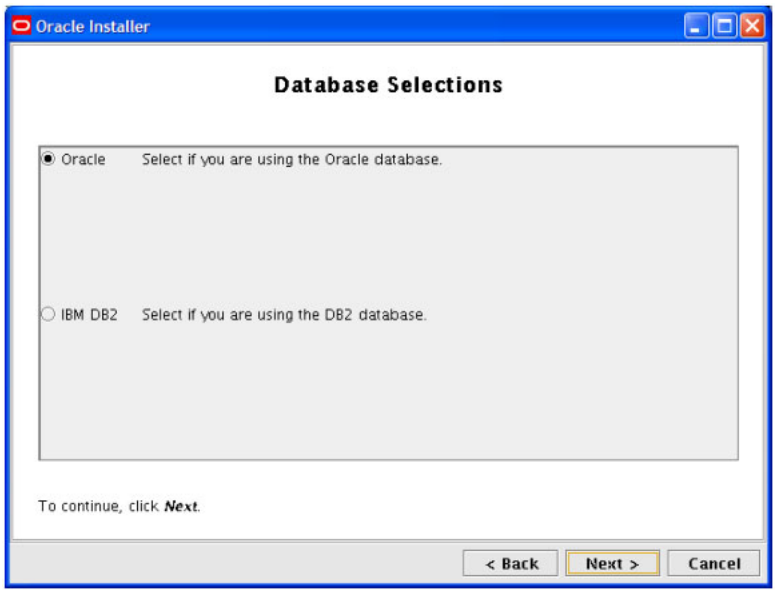


6. Specify application server options as follows:

   - **BEA WebLogic** - Select this to configure WebLogic properties.
   - **IBM WebSphere** - Select this to configure WebSphere properties.
   - **Oracle Application Server** - Select this to configure Oracle Application Server properties.
   - **None** - Select this if you are not configuring an application server (for example, if you are only configuring your database).

   Click **Next** and the **Database Selections** screen displays.

Figure 5–3 Database Selections Screen

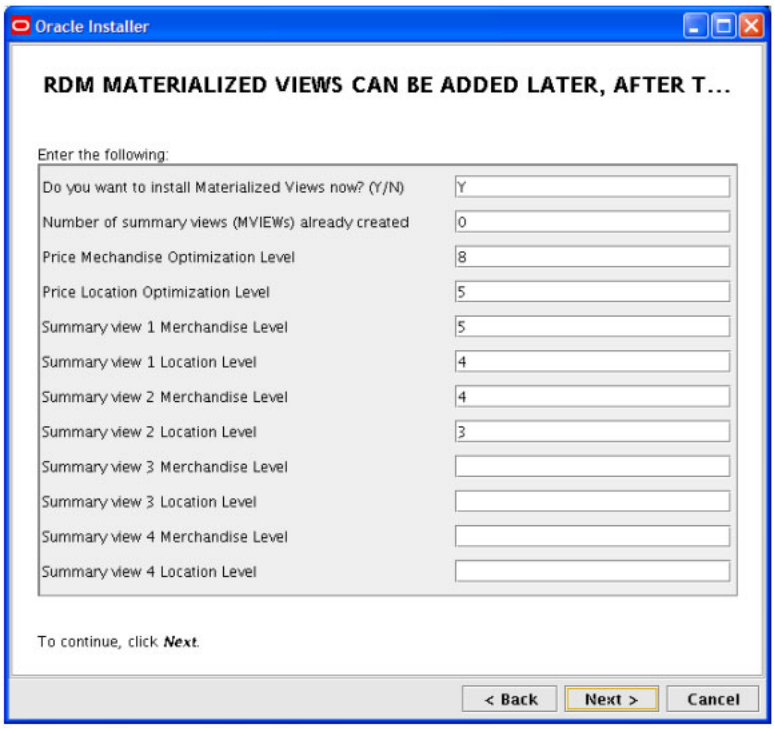


7. Specify database options as follows:
   - **Oracle** - Select this to configure Oracle.
   - **IBM DB2** - Select this to configure DB2.

   Click **Next** and the **Price Selections** screen displays.
8. On the **Plan Selections** screen, specify options as follows:
   - **Destination Directory** - Specify the location the Price target directory.
   - **Spool Directory** - Specify the path to the Price spool directory.
   - **Log Directory** - Specify the path to the Price installation log files.

   Click **Next** and the **RDM Materialized Views** screen displays.

Figure 5–4 RDM Materialized Views Screen



9. Specify options as follows:

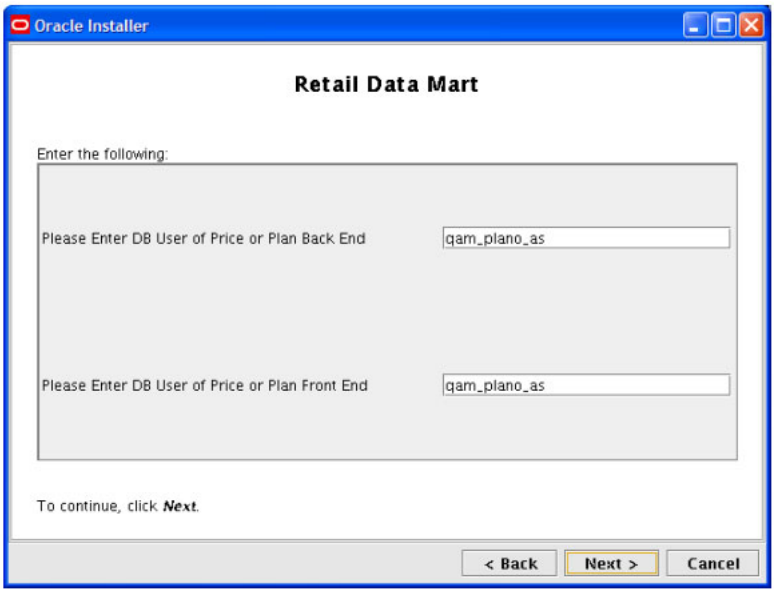
   - **Do you want to install Materialized Views now?** - This screen is optional.
     - If you do not need to optimize data to enhance database performance when creating reports in Merchant Desktop enter **N,** and click **Next.**
     - If you want to improve the database performance when creating reports in Desktop Merchant enter **Y,** and specify the following options.
   - **Number of Summary views (MVIEWS) already created** - Specify how many summary views you have already created. You can create up to a total of four summary views, which includes any views you may have already created.
   - **Price Merchandise Optimization Level** - Specify the level in the merchandise hierarchy at which you want optimization to take place.
   - **Price Location Optimization Level** - Specify the level in the location hierarchy at which you want optimization to take place.

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

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

     For example, if you only need two summary levels, you would specify the location and merchandise hierarchy values for the first four **Summary View Level**s fields, and leave the remaining four **Summary View Levels** fields blank.
   - Click **Next** and the **Retail Data Mart** screen displays.

Figure 5–5 Retail Data Mart Screen

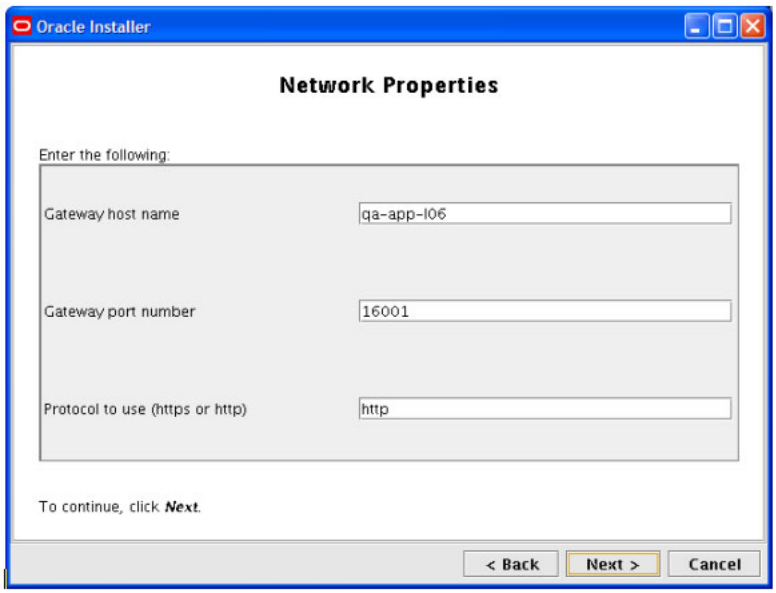


10. Specify Retail Data Mart options as follows:

    - **Please Enter DB User of Price or Plan Back End** - Enter the name of the database link.
    - **Please Enter DB User of Price or Plan Front End** - Enter the user name associated with the Application database schema.

    Click **Next** and the **Network Properties** screen displays.

Figure 5–6 Network Properties Screen



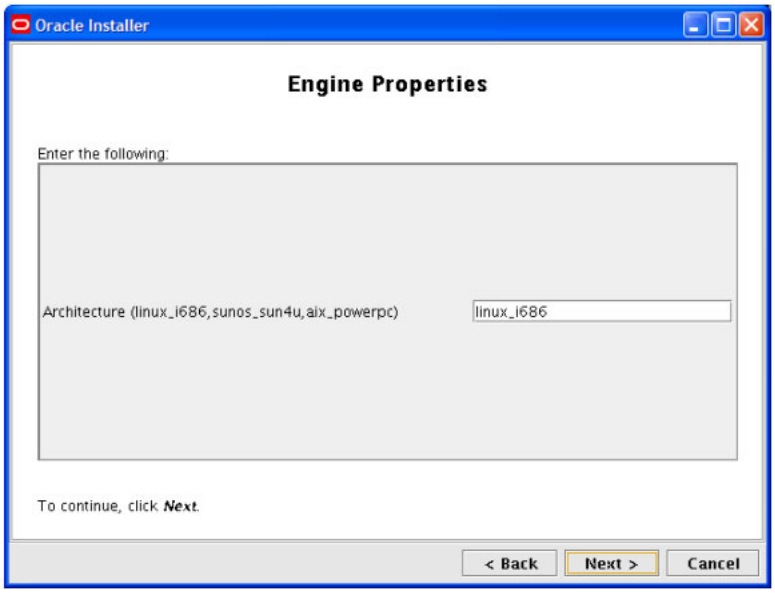
11. Specify network options as follows:

    - **Gateway host name** - Enter the host name or IP address of the server or load balancer hosting the user management, business rules, and Price components.

- **Gateway port number** - Enter the port number of the gateway host.
- **Protocol to use (https or http)** - Specify using lower-case characters.

Click **Next** and the **Engine Properties** screen displays.

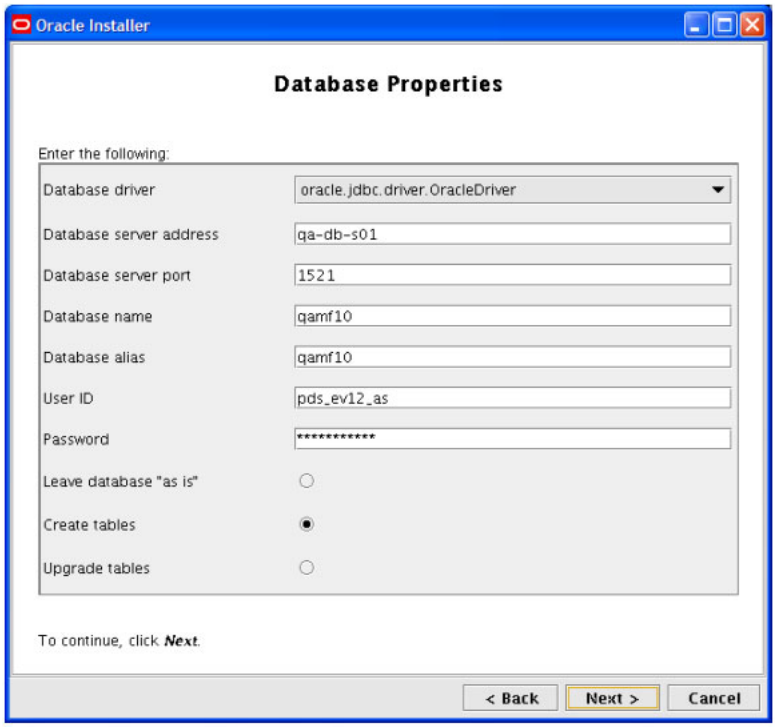
Figure 5–7 Engine Properties



12. Specify Engine Properties options as follows:
    - **Architecture** - Specify the your operating system on which your Optimization Engine runs as follows:
      - Linux - specify linux_i686
      - Sun - specify sunos_sun4u
      - AIX - specify aix_powerpc

    Click **Next** and the **Database Properties** screen displays.

Figure 5–8 Database Properties

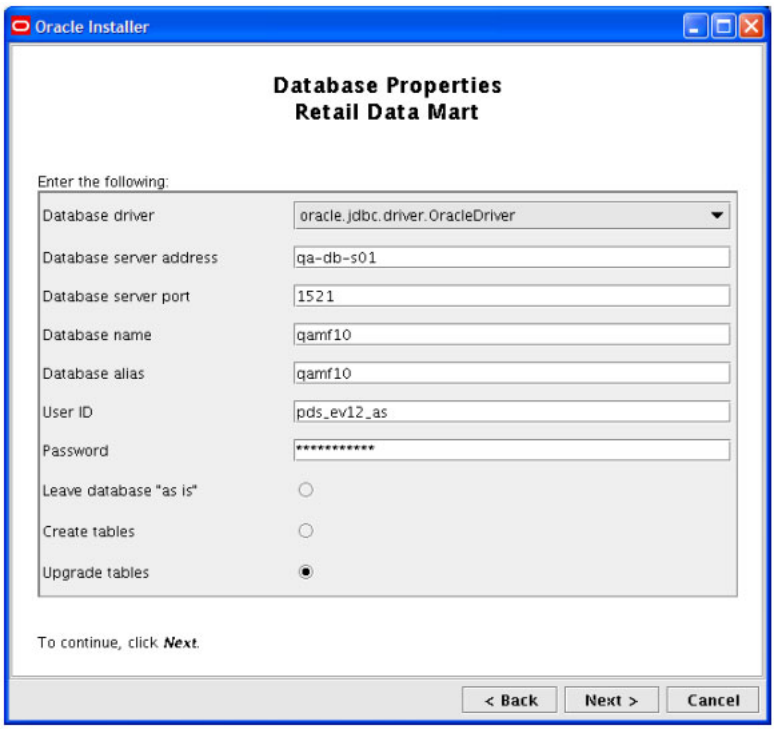


Specify Price database options as follows:

- **Database driver** - Select the appropriate driver from the drop-down list.
- **Database server address** - Enter the name or IP address of the destination server for the database.
- **Database server port** - Enter the server port number associated with your database.
- **Database name** - Enter the name used to identify your database.
- **Database alias** - Enter the database alias, which is typically the same name as the database.
- **User ID** - Enter the user name associated with the database.
- **Password** - Enter the password associated with the database.
- **Leave database "as is"** - Select this if you have an existing database schema that you do not want to modify. This enables you to configure data sources, EAR files, and so forth, without affecting the database.
- **Create tables** - Select this if you are installing a new database schema for Price Optimization. The Oracle Installer drops all schemas and creates new ones.
- **Upgrade tables** - Select this if you have an existing database schema that you want to update. Any existing data remains intact and modified on a row-by-row, column-by-column basis, depending on the actions specified in the database patches.

Click **Next** and the **Database Properties Retail Data Mart** screen displays.

Figure 5–9 Database Properties Retail Data Mart Screen



13. Specify Database Properties Retail Data Mart options as follows:

- **Database driver** - Select the appropriate driver from the drop-down list.
- **Database server address** - Enter the name or IP address of the destination server for the database.
- **Database server port** - Enter the server port number associated with your database.
- **Database name** - Enter the name used to identify your database.
- **Database alias** - Enter the database alias, which is typically the same name as the database.
- **User ID** - Enter the user name associated with the database.
- **Password** - Enter the password associated with the database.
- **Leave database "as is"** - Select this if you have an existing database schema that you do not want to modify. This enables you to configure data sources, EAR files, and so forth, without affecting the database.
- **Create tables** - Select this if you are installing a new database schema for Price Optimization. The Oracle Installer drops all schemas and creates new ones.
- **Upgrade tables** - Select this if you have an existing database schema that you want to update. Any existing data remains intact and modified on a row-by-row, column-by-column basis, depending on the actions specified in the database patches.

Click **Next** and the **Selection Verification** screen displays.

Figure 5–10 Selection Verification Screen

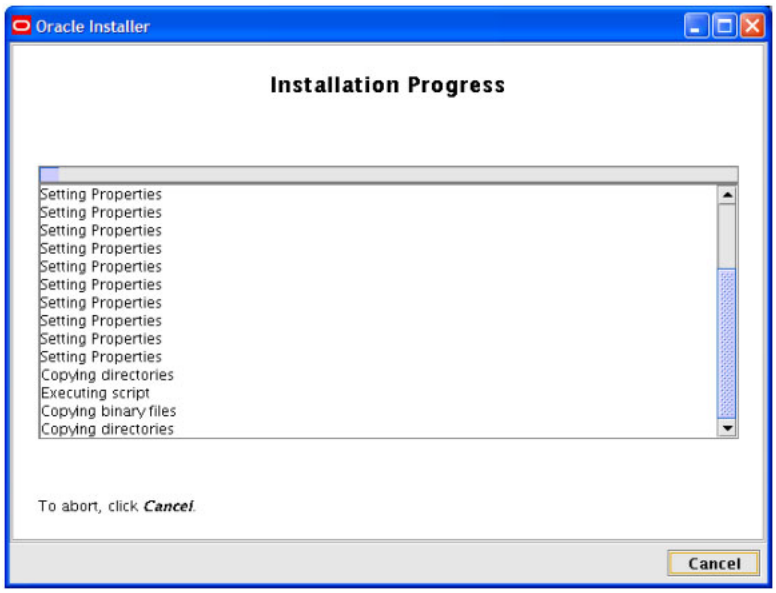
14. The **Selection Verification** screen is the last screen before the Oracle Installer commits these selections to disk.

    Verify your selections and click any of the following as needed:

    - **Back** - to modify any of the selections you have made.
    - **Cancel** - to terminate the installation process. The **Installation Status** screen appears, displaying a message that the installation was cancelled by the user. Choosing **Cancel** stops the installation process before anything has been written to disk.
    - **Install** - if all selections are correct and you are ready to start the installation process.

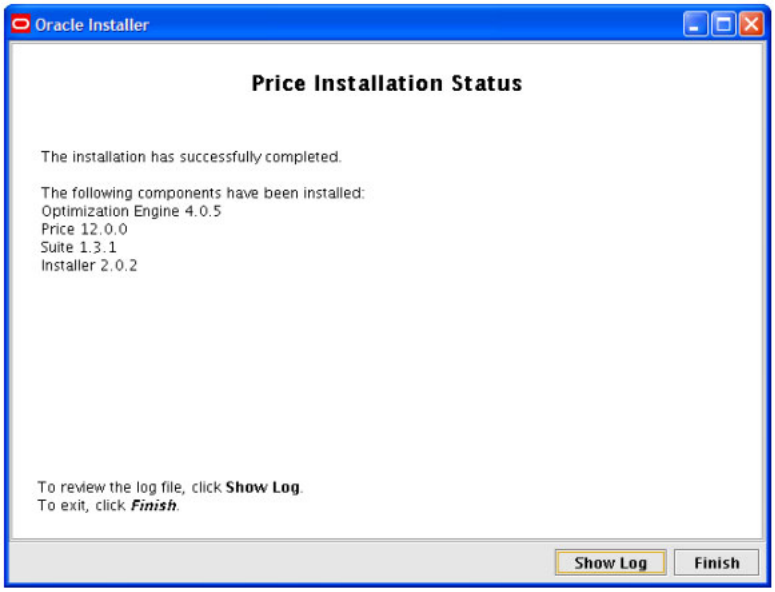
    The **Installation Progress** screen displays.

Figure 5–11 Installation Progress Screen



15. If you need to abort the installation, click **Cancel.** Otherwise, the installation proceeds. At the completion, the **Price Installation Status** screen displays as follows:

Figure 5–12 Price Installation Status Screen



16. Select options as follows:

- **Show Log** - Select this if you want to review the actions taken.
- **Finish** - Select this to exit the Oracle Installer.

  When you click **Finish,** the Oracle Installer creates the Price Optimization directory structure and populates it with appropriate files, and generates a log file and two properties files. For more information, see "install.sh" on page 5-9.

If the installation resulted in issues, see Troubleshooting Installation Issues on page 5-20.

If the installation successfully completes, see the What's Next? section.

Troubleshooting Installation Issues

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

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

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

Understanding Trace Output Messages

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

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

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

Installation Does Not Complete

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

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

Installation Completes with Errors

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

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

install-<YYYYMMDD>-<HHMMSS>.log

where HH is in 24-hour format.

Configuring Merchant Desktop

If you are using Merchant Desktop, you may need to configure it as described in the following sections:

- Configuring a Proxy Server
- Registering Merchant Desktop Alerts

Configuring a Proxy Server

If you are using a proxy server to connect with the Internet, you need to configure Merchant Desktop to recognize that server as follows:

1. Edit the modules/MerchantDesktop/MerchantDesktop.ear/dashboard.ear/dashboard.war/WEB-INF/conf/JetspeedResources.properties file and specify your proxy server values for the following properties:

   ```
   services.URLManager.proxy.http.host=
   services.URLManager.proxy.http.port=
   ```

2. Restart your application server for the changes to take effect.

Registering Merchant Desktop Alerts

If you are using Merchant Desktop alerts, you need to register them.

> **Note:** If you have previously registered alerts, run the following script using `unregister` instead of `register`.

To register alerts:

Run the following script:

```
cd ../ProfitLogic/modules/tools/admin
bash ./registerAlerts.sh <wls|was> <app_server>:<7001> register|unregister
```

What's Next?

Now that you have installed Price Optimization, restart your application server software and proceed with any option as follows:

- If you are using MicroStrategy with Merchant Desktop, configure it as described in Chapter 6, "Integrating with MicroStrategy."
- If you are ready to start working with your business data, load your data as described in the *Price Optimization Configuration Guide*.
- If you want to maximize system performance, you can tune your Calculation Engine.

6

Integrating with MicroStrategy

If you are using MicroStrategy, you must configure it to map to the RDM database and the Merchant Desktop user interface. This chapter explains how to configure mapping between the two applications. This chapter contains the following sections:

Getting Started

Tip: Before you begin, ensure that users *have not* been added to the RDM user management tables—it will save you time later.

This section explains what you need to install in order to get started integrating Price Optimization with MicroStrategy.

Installing Your MicroStrategy Applications

Install the following components, using MicroStrategy documentation for assistance as needed:

- MicroStrategy Intelligence Server
- MicroStrategy OLAP Services
- MicroStrategy Desktop

Next, create the Merchant Desktop Data Source.

Creating Your Merchant Desktop Data Source

Before you start setting up the MicroStrategy components, you must set up the data source for the *Access Metadata* project source.

To set up the data source:

1. Copy the **MDPriceMetadata.zip** file from the Price Optimization CD. Save it to the computer where MicroStrategy Desktop is installed.
2. Extract the **MDMetadata.mdb**, included in this ZIP file, on your system.
3. On the **Start** menu, navigate to **Settings**, and then click **Control Panel**.
4. On the **Control Panel**, double-click **Administrative Tools**, and then double-click **Data Sources (ODBC)**.

   The **ODBC Data Source Administrator** utility appears.
5. On the **System DSN** tab, click **Add**.
6. Select **Microsoft Access Driver (*.mdb)** and click **Finish**.

   The **ODBC Microsoft Access Setup** window appears.
7. In the **Database** section, click **Select**, and navigate to your ODBC datasource (for example, C:\temp\MDMetadata.mdb), and then click **OK**.

   The data source is now available.

Now you can use the MicroStrategy Configuration Wizard to begin setting up MicroStrategy.

Using the MicroStrategy Configuration Wizard

Use the MicroStrategy Configuration Wizard as described in the following sections:

- Creating the Metadata Repository and Statistics Tables
- Configuring MicroStrategy Intelligence Server
- Configuring Project Sources

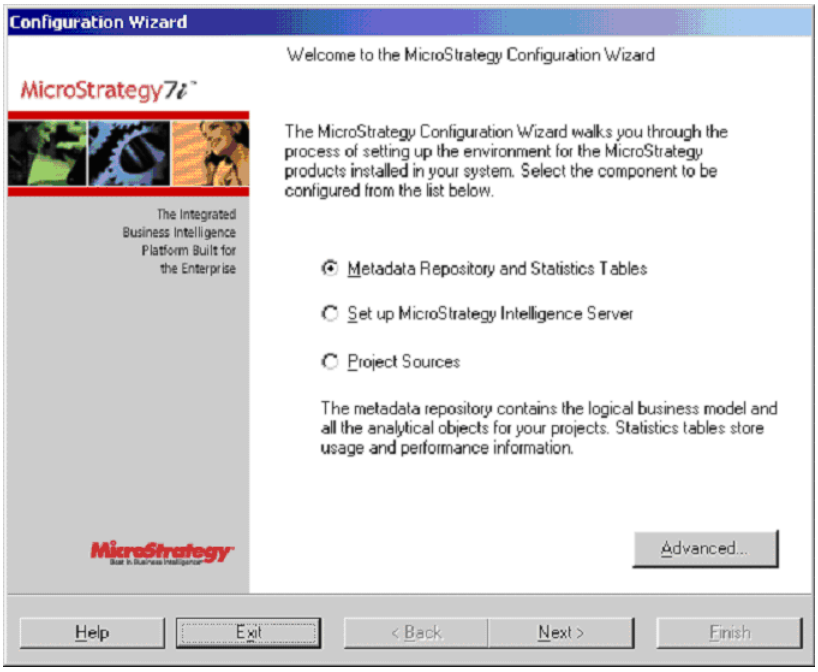
Creating the Metadata Repository and Statistics Tables

To create the metadata repository and statistics tables:

1. Launch the MicroStrategy Configuration Wizard.

   The **Welcome** screen displays.

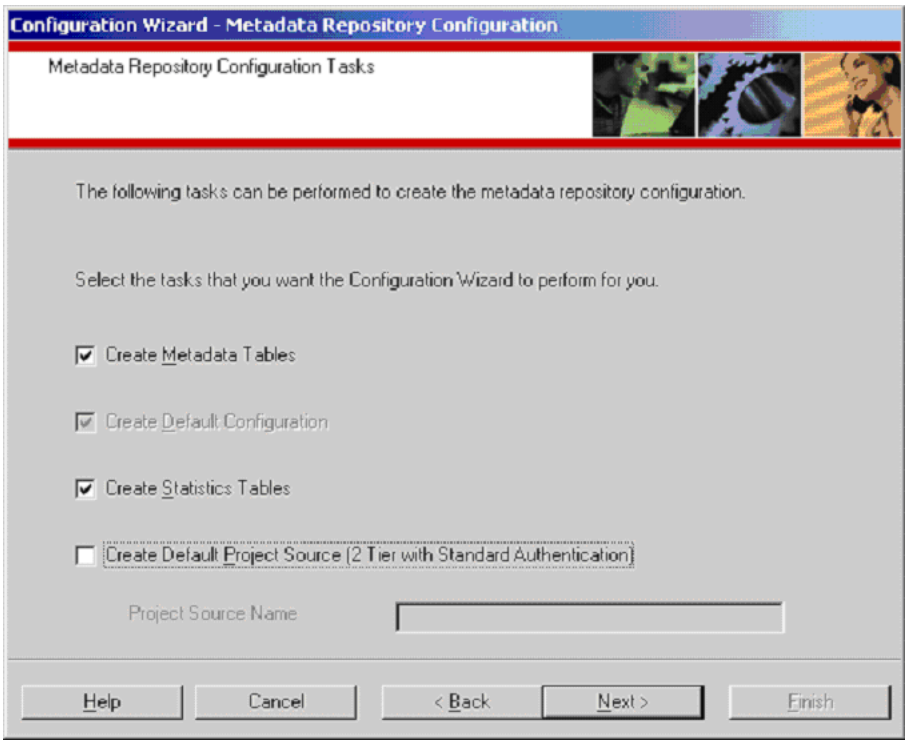
Figure 6–1 Welcome Screen



2. Select **Metadata Repository and Statistics Tables** and click **Next.**

   The **Configuration Tasks** screen displays.

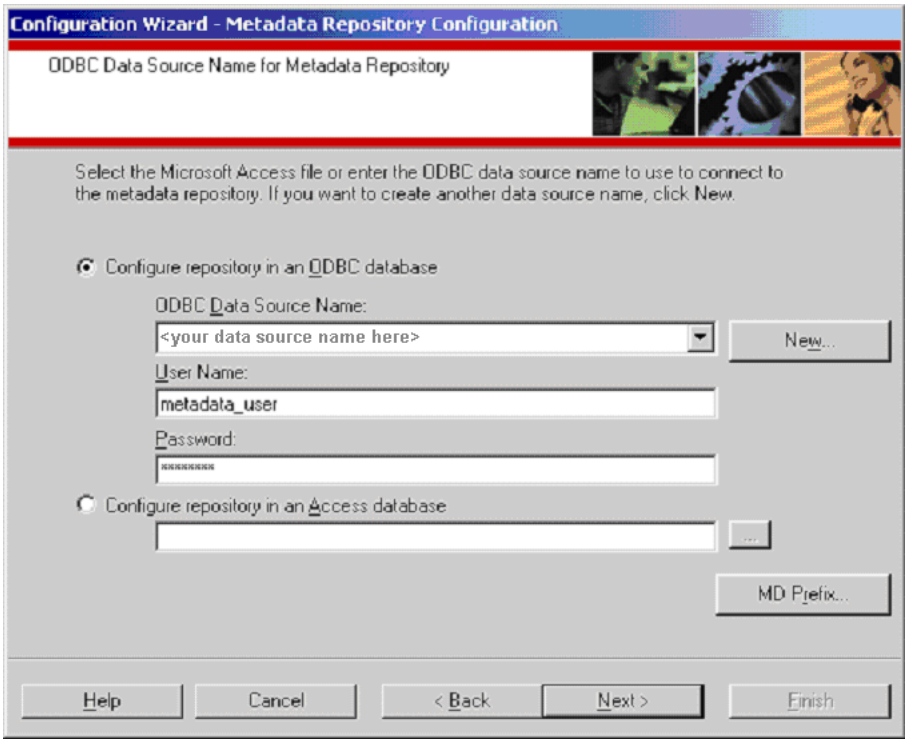
Figure 6–2 Configuration Tasks Screen



3. Select **Create Metadata Tables** and **Create Statistics Tables,** and click **Next.**

   The **ODBC Data Source Name** screen displays.

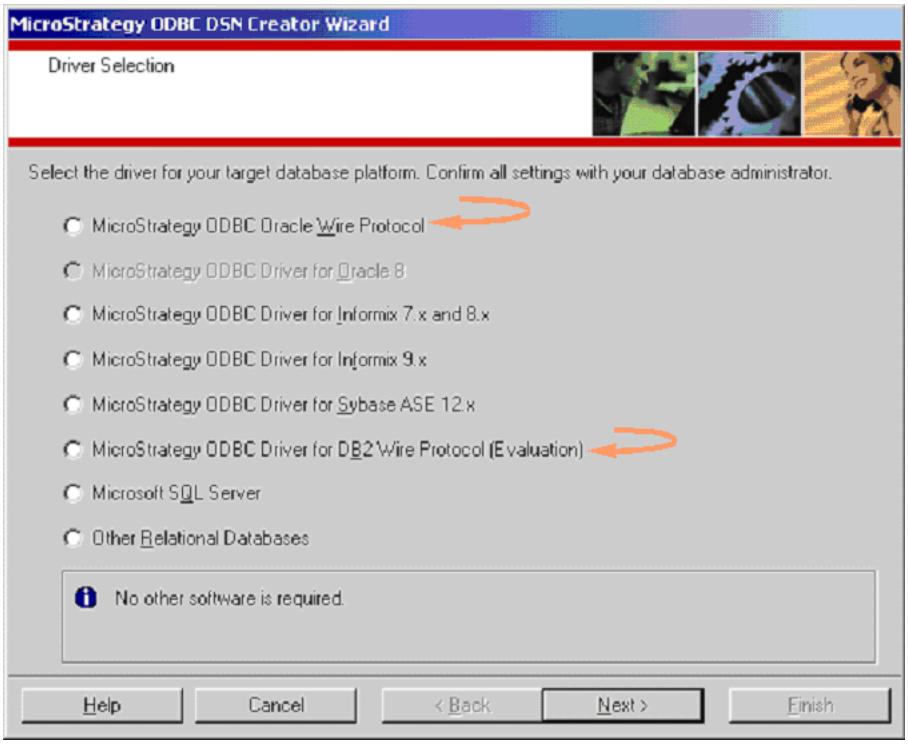
Figure 6–3 ODBC Data Source Name Screen



4. Select **Configure repository in an ODBC database.** Enter the **ODBC Data Source Name,** the **User Name** as `metadata_user`, the **Password,** and click **Next.**

   The **Driver Selection** screen displays.

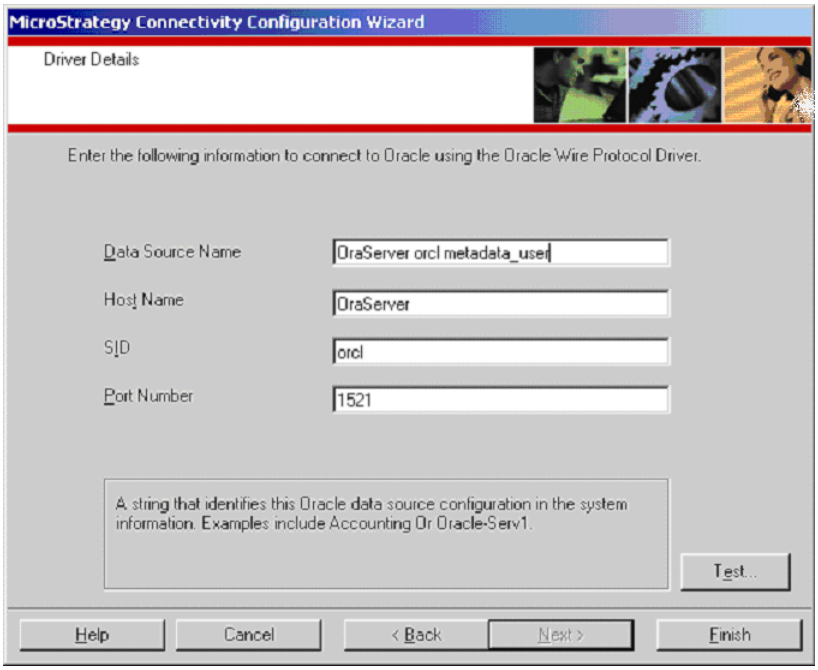
Figure 6–4 Driver Selection Screen



5. Select the **MicroStrategy ODBC Oracle Wire Protocol** driver and click **Next.**

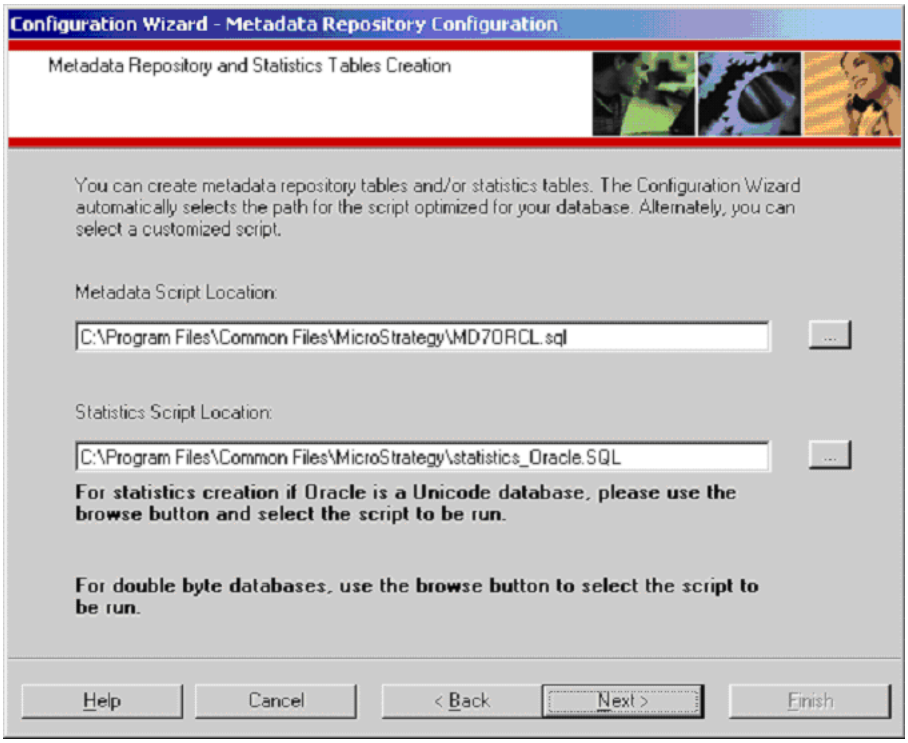
   The **Driver Details** screen displays.

Figure 6–5 Oracle Driver Details Screen



6. Enter your **Data Source Name** as `OraServer orcl metadata_user`, **Host Name** as `OraServer`, **SID** as `orcl`, **Port Number** as `1521`, and click **Next.**
7. The **Metadata Repository and Statistics Tables Creation** screen displays.

Figure 6–6 Metadata Repository and Statistics Tables Creation Screen

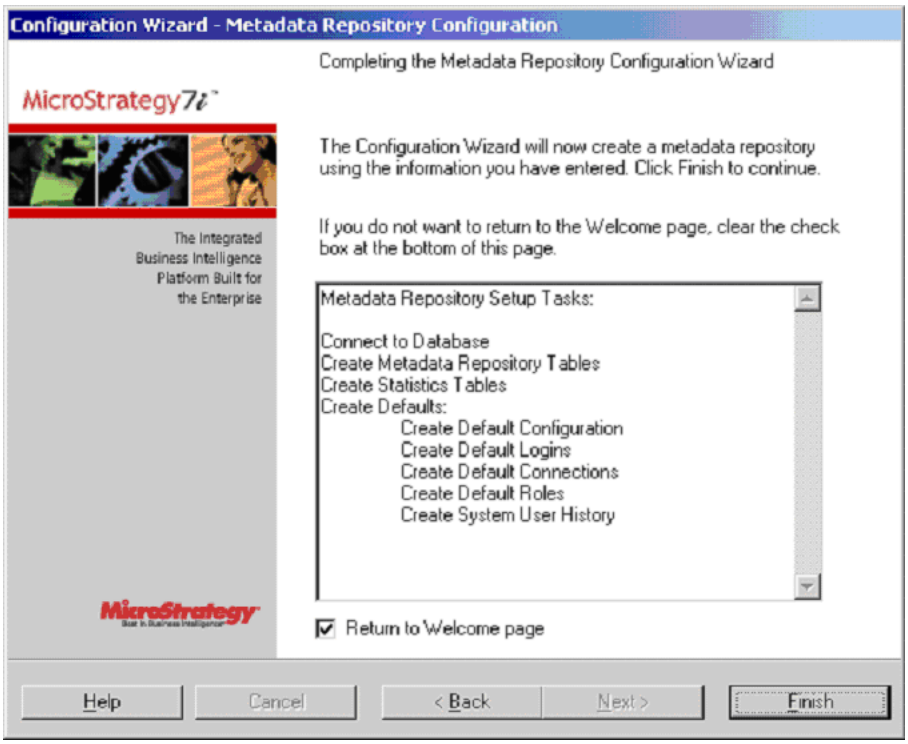


8. Browse to your **Metadata Script Location** and select it, browse to your **Statistics Script Location** and select it, and click **Next**.

> **Note:** For UTF-8 encoded data, select the **Metadata Script Location /MicroStrategy/md7orcutf8.sql.**

The **Completing the Metadata Repository Configuration Wizard** screen displays.

Figure 6–7 Completing the Metadata Repository Configuration Wizard Screen



9. Verify that the setup tasks are correct, select **Return to Welcome page,** and click **Finish**.

   The **Welcome** screen displays.

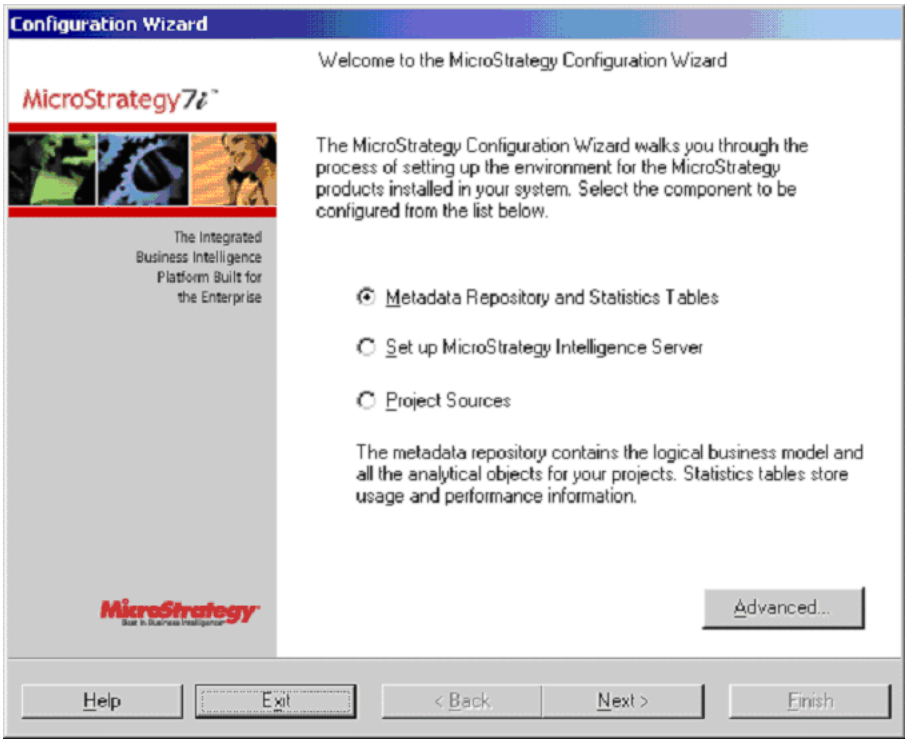
Now you can configure the MicroStrategy Intelligence Server.

Configuring MicroStrategy Intelligence Server

This section describes how to configure your MicroStrategy Intelligence Server.

1. Start from the MicroStrategy Configuration Wizard **Welcome** screen.

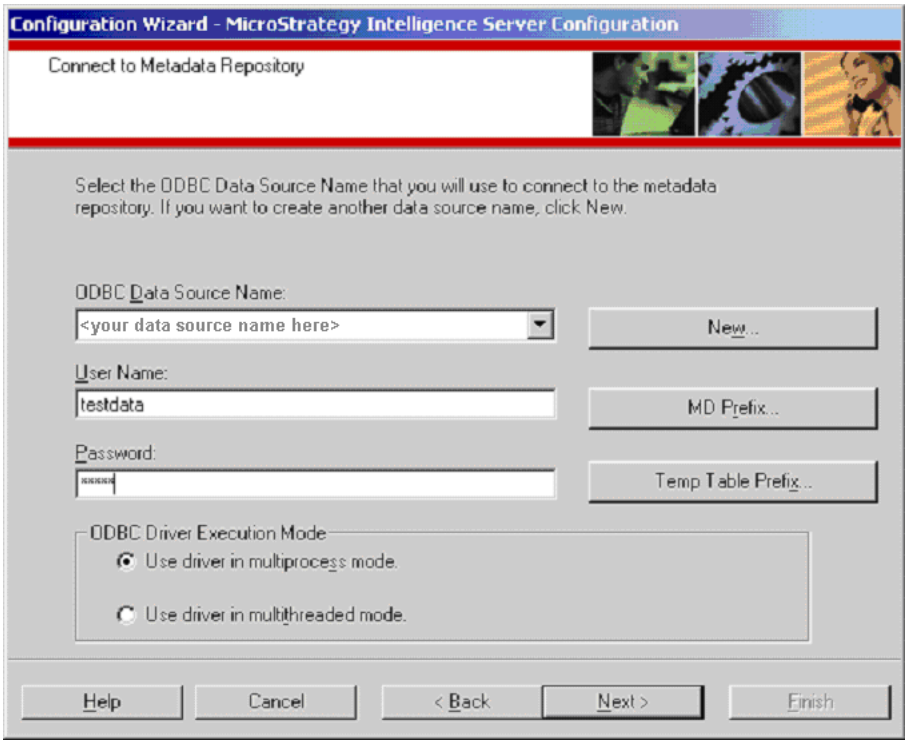
Figure 6–8 Welcome Screen



2. Select **Set up MicroStrategy Intelligence Server** and click **Next.**

   The **Connect to Metadata Repository** screen displays.

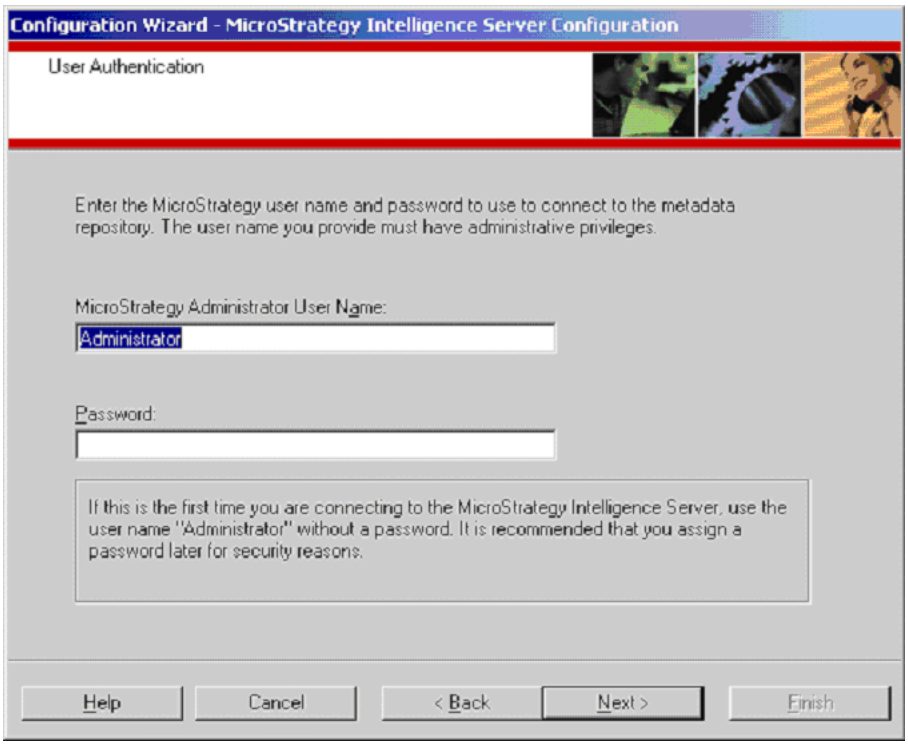
Figure 6–9 Connect to Metadata Repository Screen



3. Enter the **ODBC Data Source Name, User Name,** and **Password;** select **Use driver in multiprocess mode;** and click **Next.**

   The **User Authentication** screen displays.

Figure 6–10 User Authentication Screen

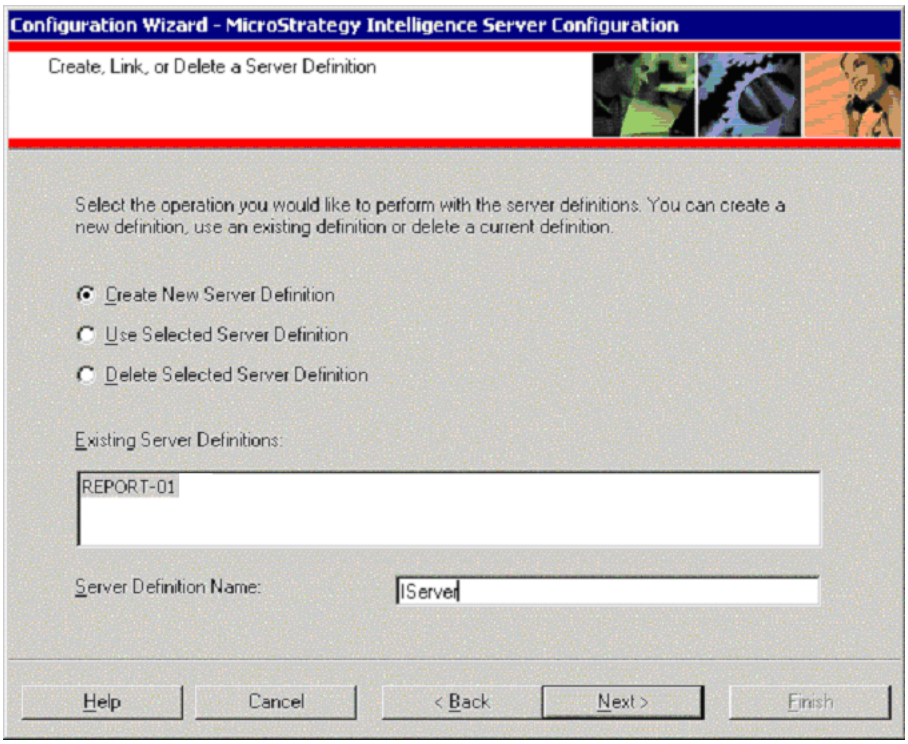


4. Enter the **MicroStrategy Administrator User Name** and **Password** to use to connect to the metadata repository, and click **Next.**

   The **Create, Link, or Delete a Server Definition** screen displays.

   Note: The Administrator user name and password combination will also be required later, in the usermanagement.properties file, as described in Configuring the User Link on page 6-31.

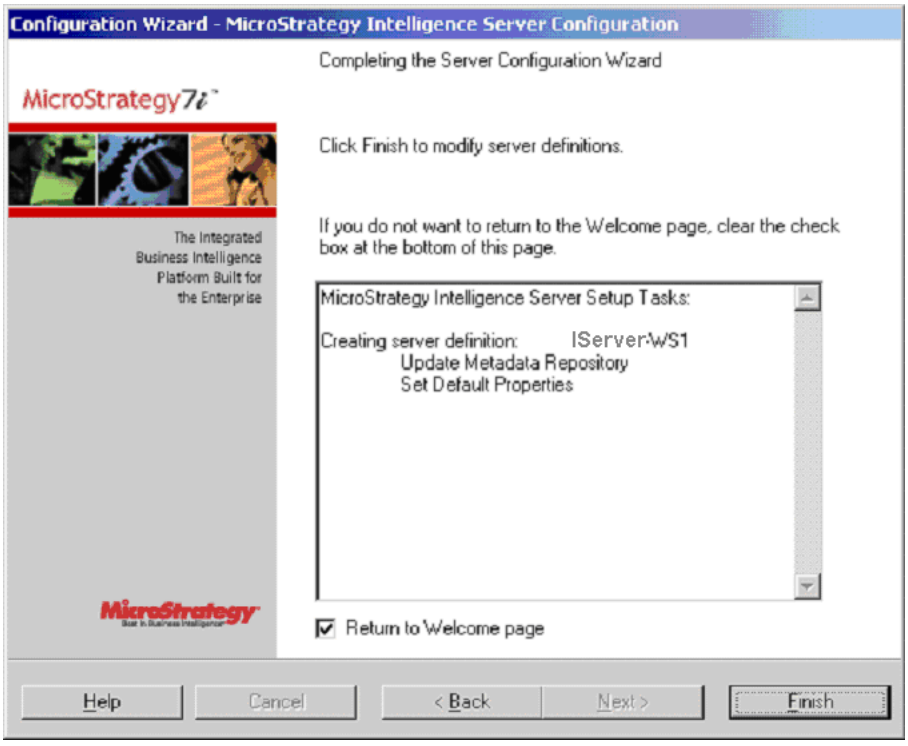
Figure 6–11 Create, Link, or Delete a Server Definition Screen



5. Select **Create New Server Definition,** select your **Existing Server Definitions,** enter **Server Definition Name** as `IServer`, and click **Next.**

   The **Completing the Server Configuration Wizard** screen displays.

Figure 6–12 Completing the Server Configuration Wizard Screen



6. Verify that the setup tasks are correct, select **Return to Welcome page**, and click **Finish.**

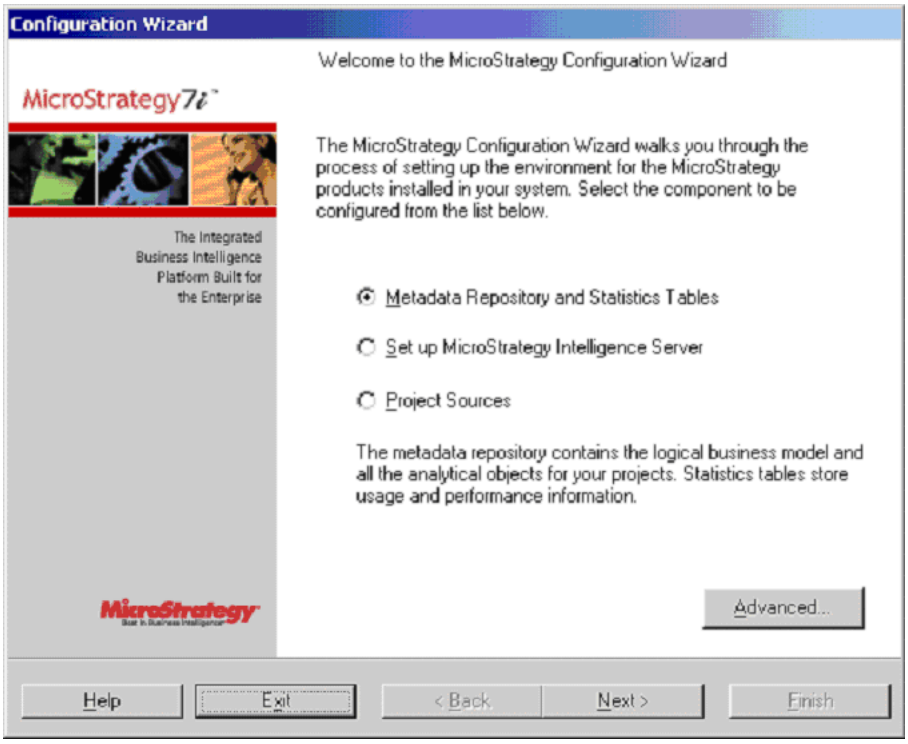
   The **Welcome** screen displays.

Now you can configure the Project Sources.

Configuring Project Sources

Start from the MicroStrategy Configuration Wizard **Welcome** screen.

Figure 6–13 Welcome Screen



Select **Project Sources,** click **Next,** and complete the **Project Sources** wizard.

After you finish, migrate your metadata.

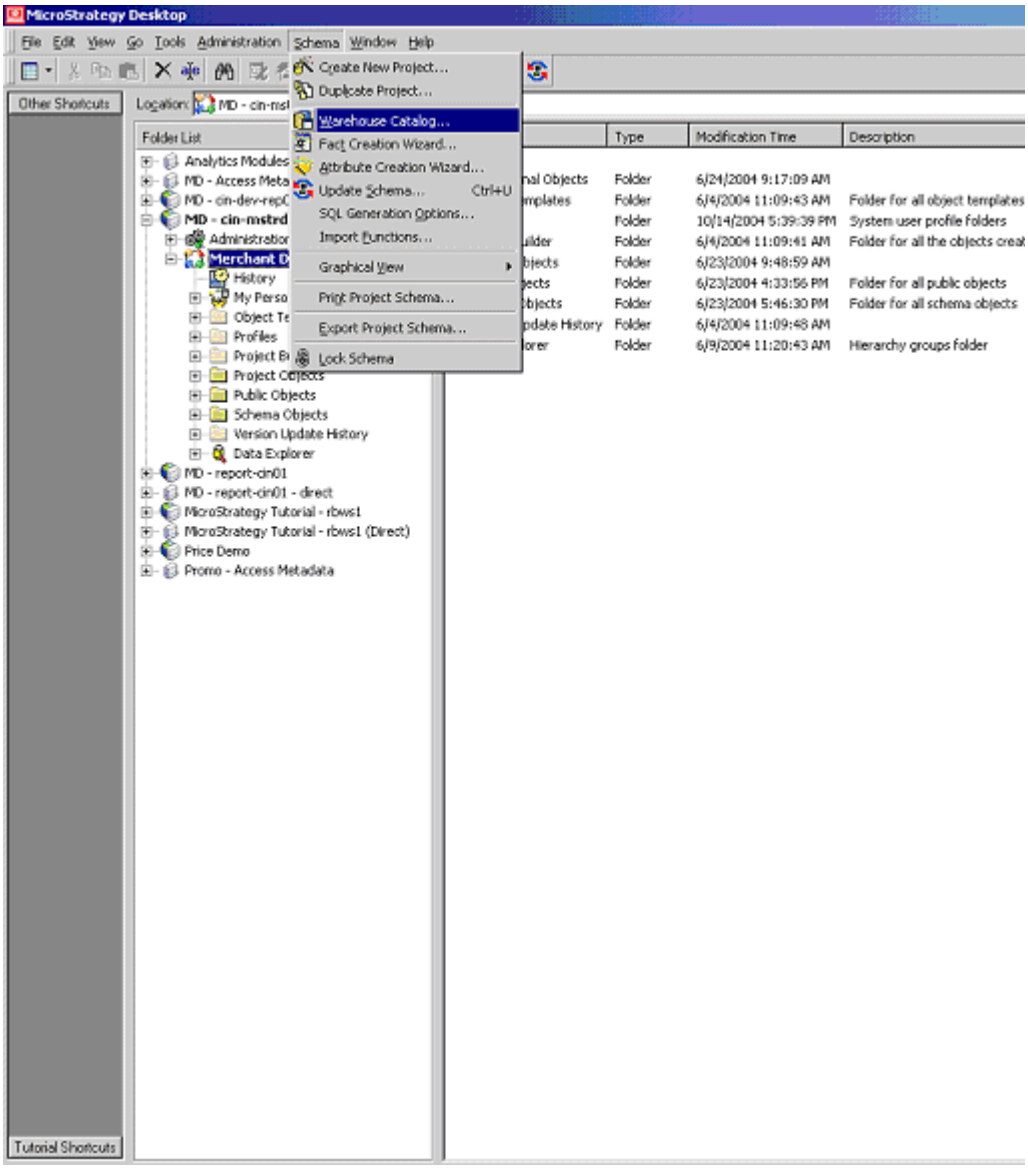
Migrating the Metadata

Use MicroStrategy Desktop to create a project source that points to the correct Intelligence Server as follows:

To create a project source:

1. Start from the MicroStrategy Desktop user interface and update warehouse catalog schema as follows.

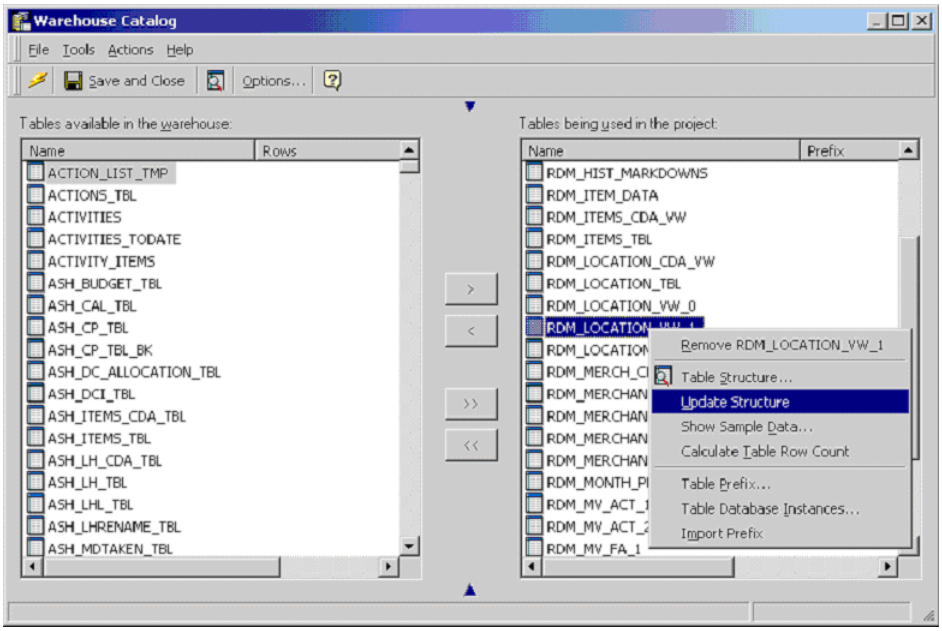
Figure 6–14 Updating Warehouse Catalog Schema



From the **MicroStrategy Desktop** menu, select **Schema** > **Warehouse Catalog.**

The **Warehouse Catalog** screen displays.

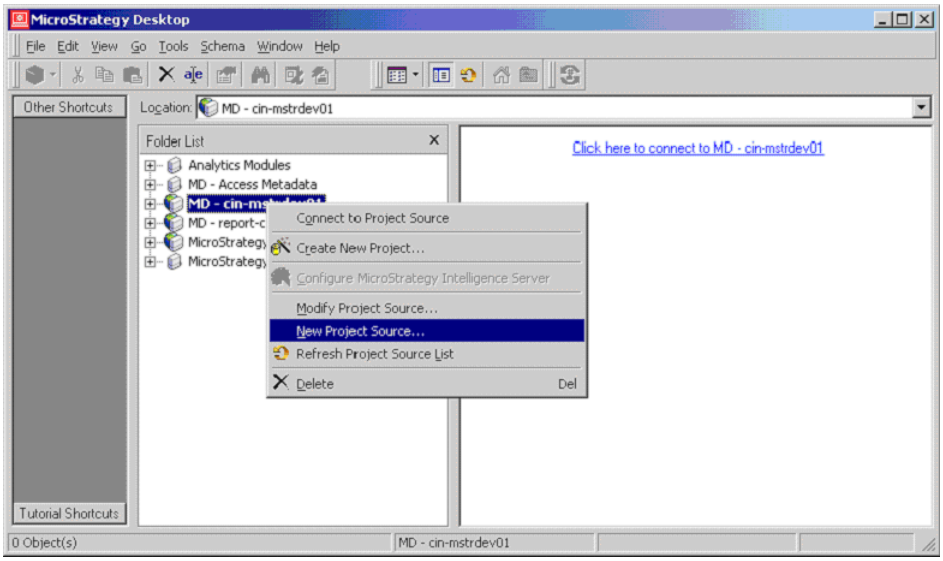
Figure 6–15 Warehouse Catalog Screen



In the **Tables being used in the project** box, right-click each table, and select **Update Structure.**

2. Use the MicroStrategy Desktop to create a project source.

Figure 6–16 Creating a Project Source for the Intelligence Server



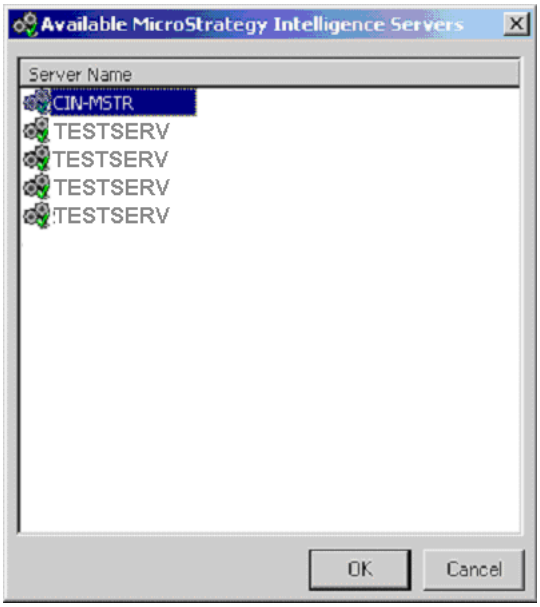
From the **Folder List** pane, right-click **MD - cin** and select **New Project Source.**

The **Project Source Manager** screen displays.

Enter a name for the **Project Source** and click **Active Servers.**

The **Available MicroStrategy Intelligence Servers** screen displays.

Figure 6–17 Available MicroStrategy Intelligence Servers



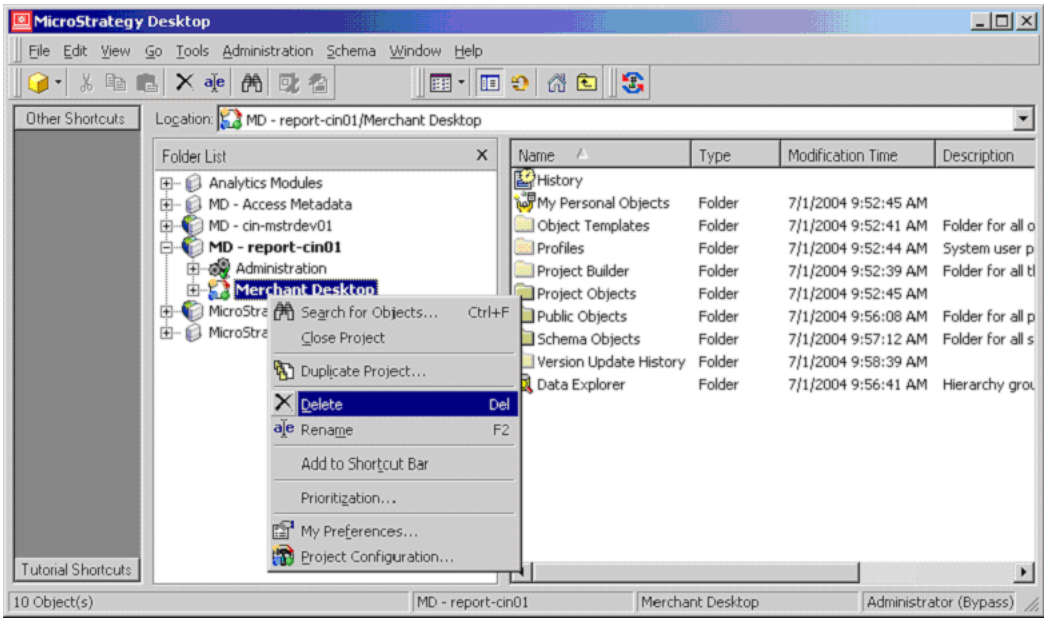
Select your Intelligence Server and click **OK.**

In the **Create Project Source** box, click **OK.**

The **MicroStrategy Desktop** screen displays.

3. If any old Merchant Desktop projects exist, delete them as follows:

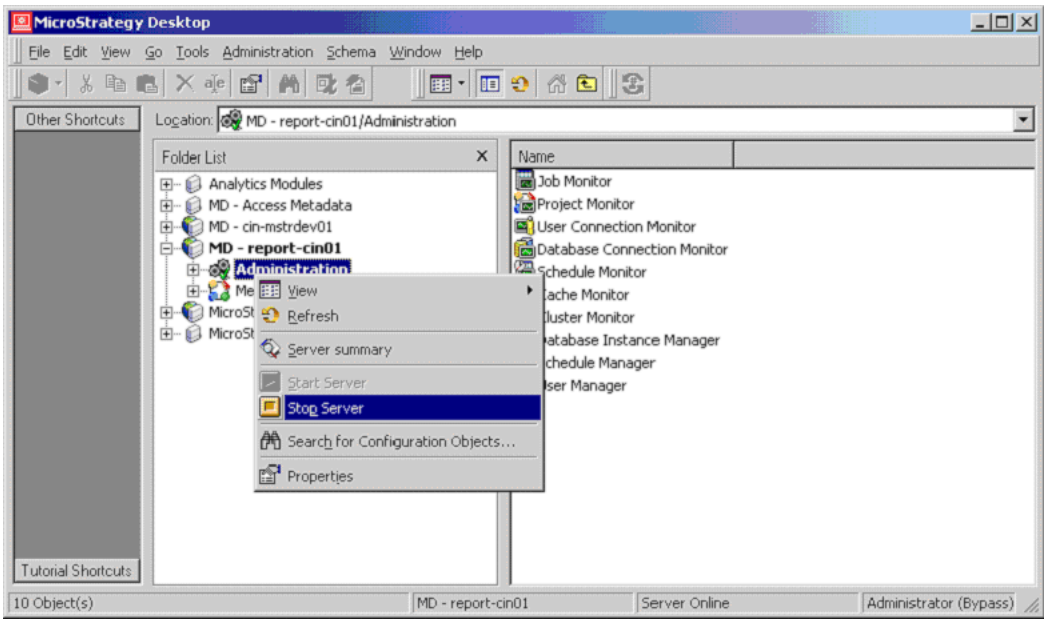
Figure 6–18 Deleting Old Merchant Desktop Projects



From the **Folder List,** right-click **Merchant Desktop** and click **Delete.**

4. Stop and restart the Intelligence Server as follows:

Figure 6–19 Stopping and Restarting the Intelligence Server

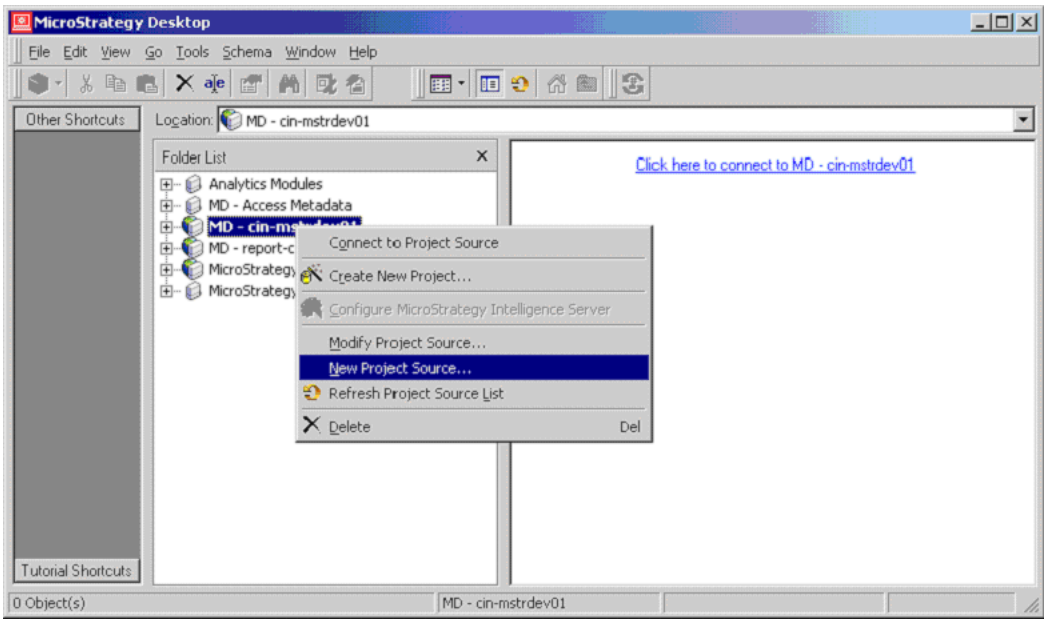


From the **Folder List** pane, right-click **Administration** and select **Stop Server.**

Next, right click **Administration** and select **Start Sever.**

5. Create a new project source as follows:

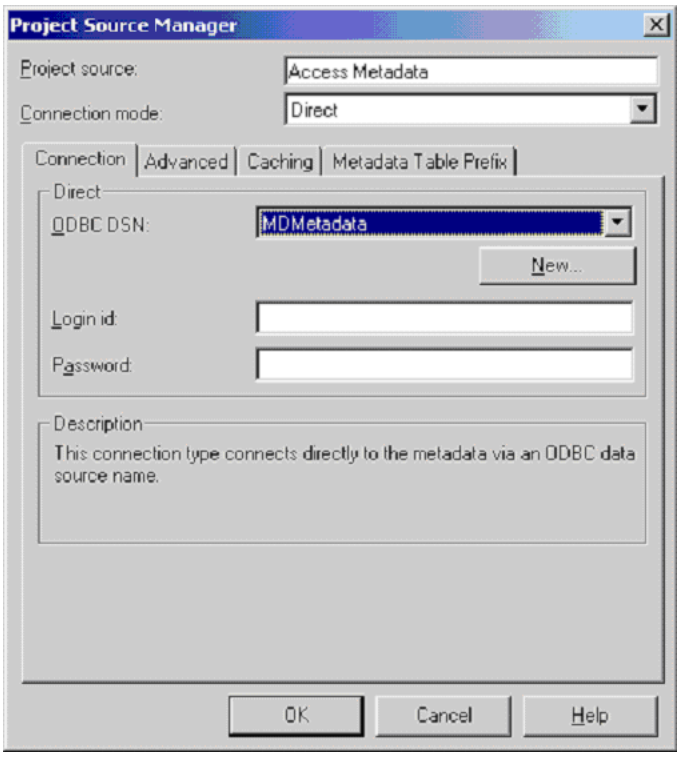
Figure 6–20 Creating a New Project Source



From the **Folder List** pane, right-click on a project source and select **New Project Source.**

The **Project Source Manager** screen displays.

Figure 6–21 Project Source Manager Screen

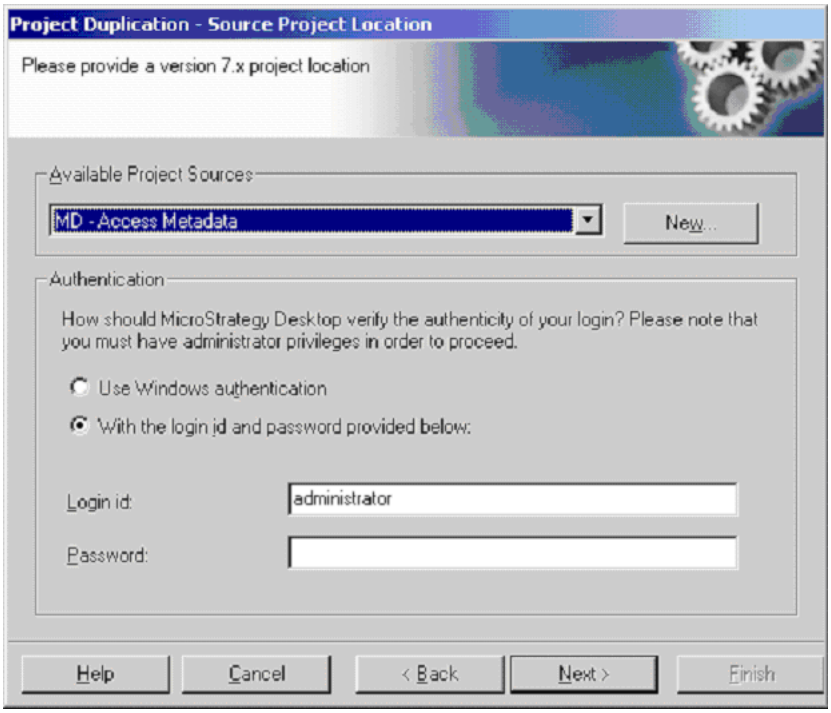


a. In the **Project source** field, enter `Access Metadata`; in the **Connection Mode** dropdown, select **Direct;** on the **Connection** tab, use the **ODBC DSN** drop-down to select the **MDMetadata** database; enter your **Login ID** and **Password;** and click **OK.**

b. From the MicroStrategy Desktop menu, select **Schema** > **Duplicate Project.**

The **Project Duplication - Source Project Location** screen displays.

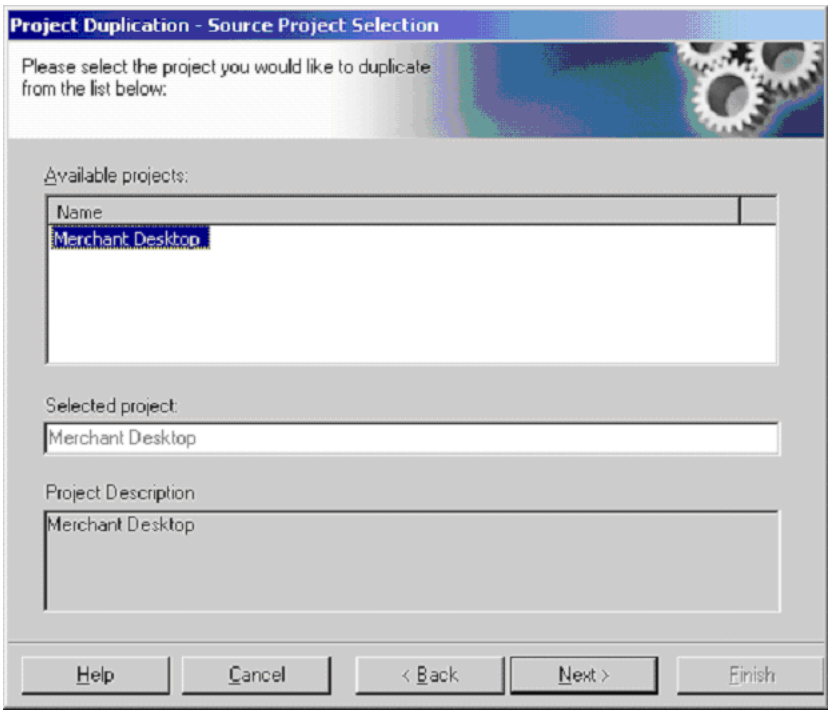
Figure 6–22 Project Duplication - Source Project Location Screen



c. From the **Available Project Sources** drop-down menu, select **MD - Access Metadata** and click **Next.**

The **Project Duplication - Source Project Selection** screen displays.

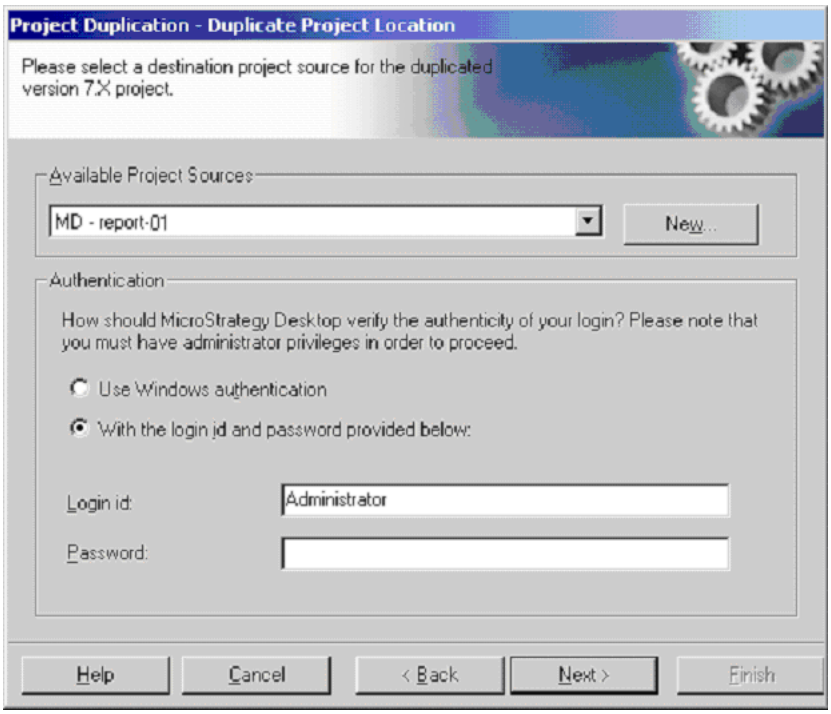
Figure 6–23 Project Duplication - Source Project Selection Screen



d. In the **Available Projects** field, select **Merchant Desktop** and click **Next.**

The **Project Duplication - Duplicate Project Location** screen displays.

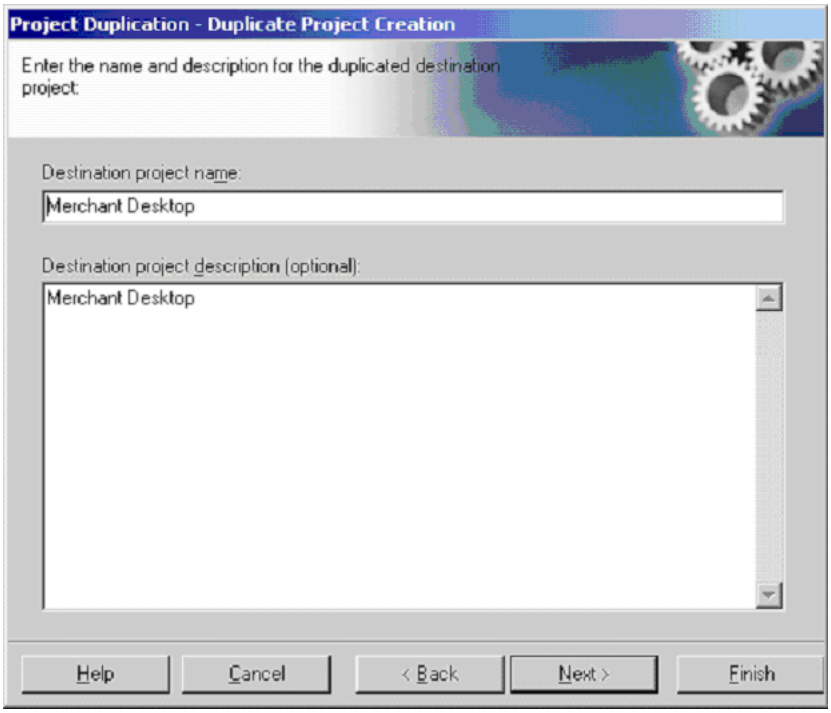
Figure 6–24 Project Duplication - Duplicate Project Location Screen



e. In the **Available Project Sources** drop-down menu, select **MD - report-01,** and click **Next.**

The **Project Duplication - Duplicate Project Creation** screen displays.

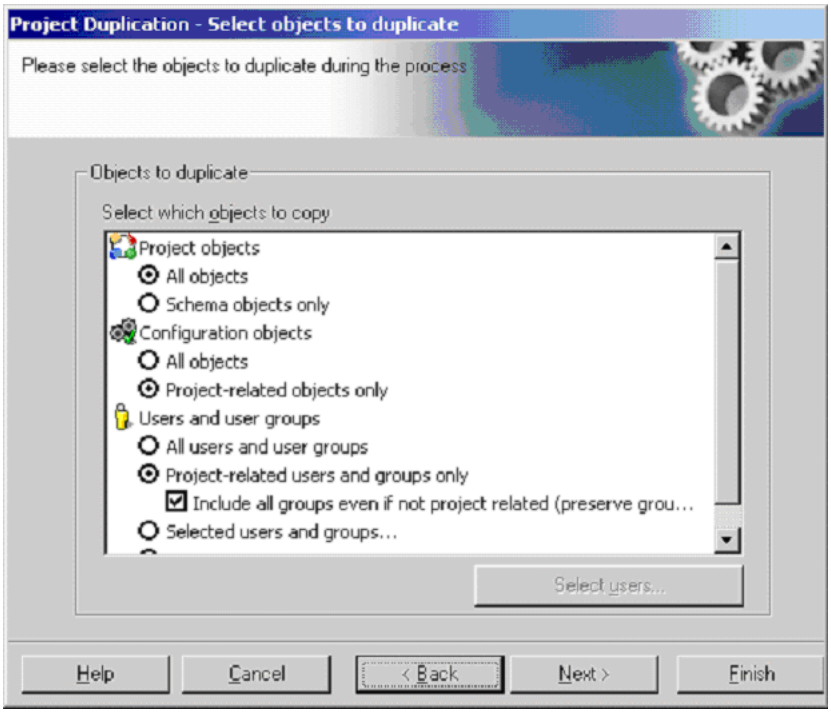
Figure 6–25 Project Duplication - Duplicate Project Creation Screen



f. Enter the **Destination project name** as `Merchant Desktop` and click **Next.**

The **Project Duplication - Select Objects to Duplicate** screen displays.

Figure 6–26 Project Duplication - Select Objects to Duplicate Screen

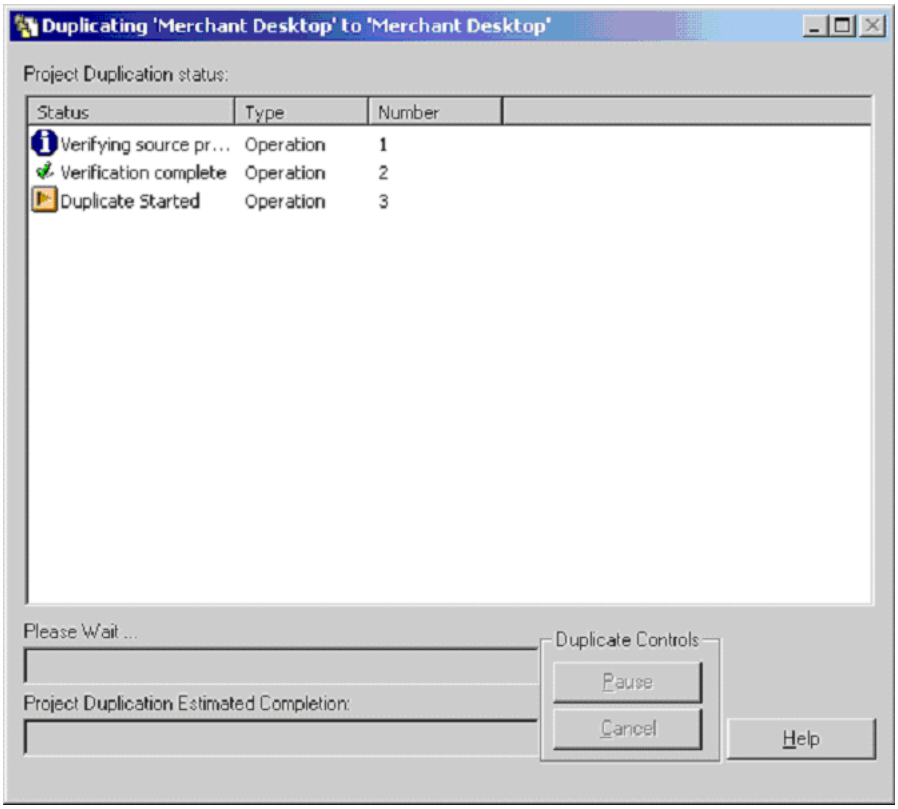


Select the Project objects you want to duplicate and click **Finish.**

When prompted to overwrite the event log, click **Yes to All.**

The **Project Duplication Status** screen displays.

Figure 6–27 Project Duplication Status Screen (In Process)

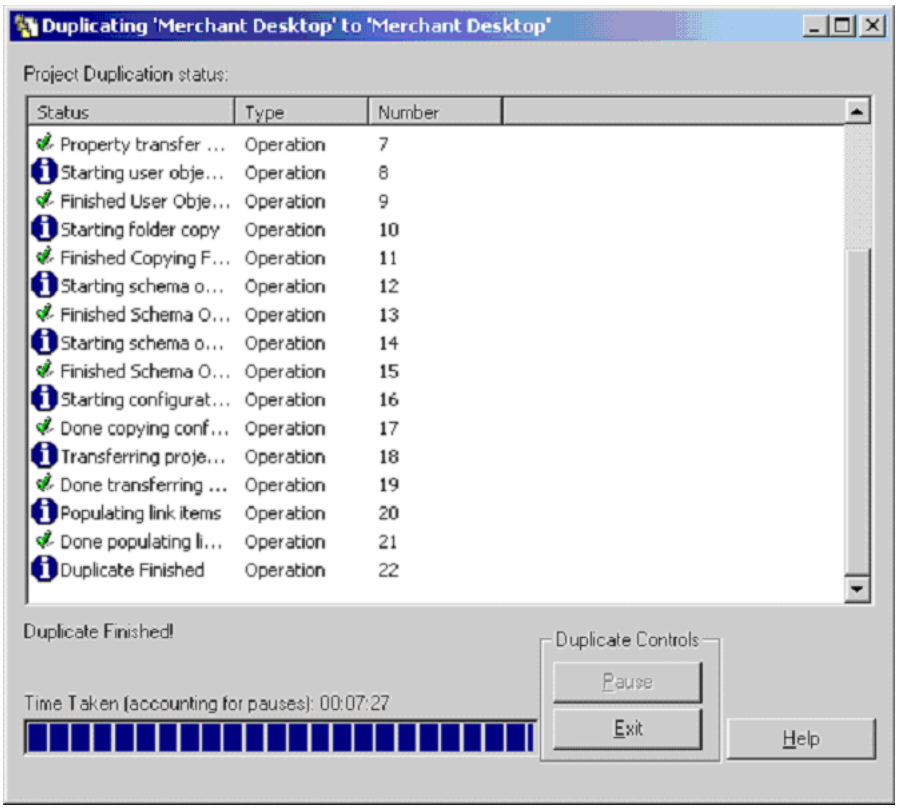


The duplication process takes approximately 15 minutes.

g. When the **Duplicating Finished** notification displays, click **OK.**

The **Project Duplication Status** screen now displays an **Exit** button.

Figure 6–28 Project Duplication Status Screen (Completed)



h. When the process finishes, click **Exit.**

Now the Merchant Desktop metadata has been migrated to the new server.

Now you can configure MicroStrategy to access the RDM database.

Configuring MicroStrategy to Access the RDM Database

This section describes how to configure MicroStrategy to point to the correct RDM database. This section contains the following topics:

- Creating the Database Connection
- Mapping MicroStrategy Desktop to the RDM

Creating the Database Connection

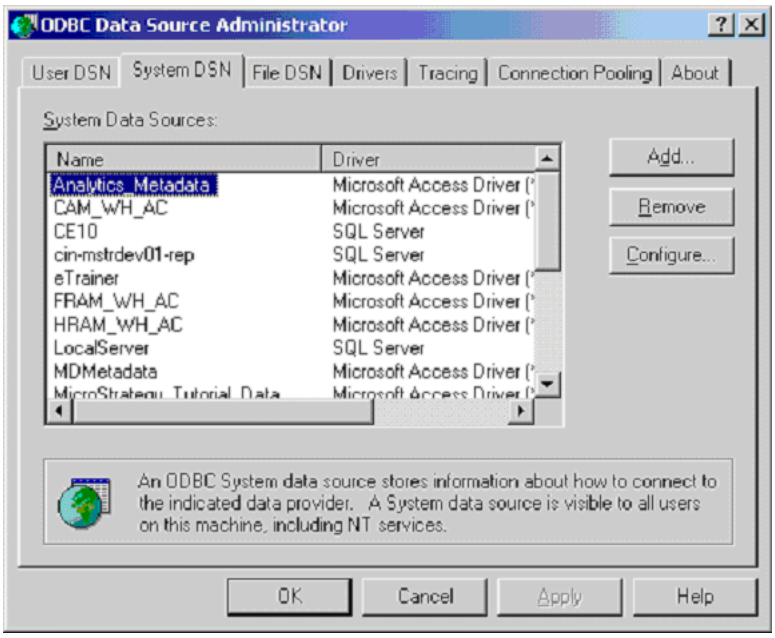
This section explains how to create an ODBC System DSN connection to the RDM database.

To connect the ODBC to the RDM database:

1. From Microsoft Windows, navigate to **Start** > **Settings** > **Control Panel** > **Administrative Tools** > **Data Sources (ODBC).**

The **ODBC Data Source Administrator Screen** displays.

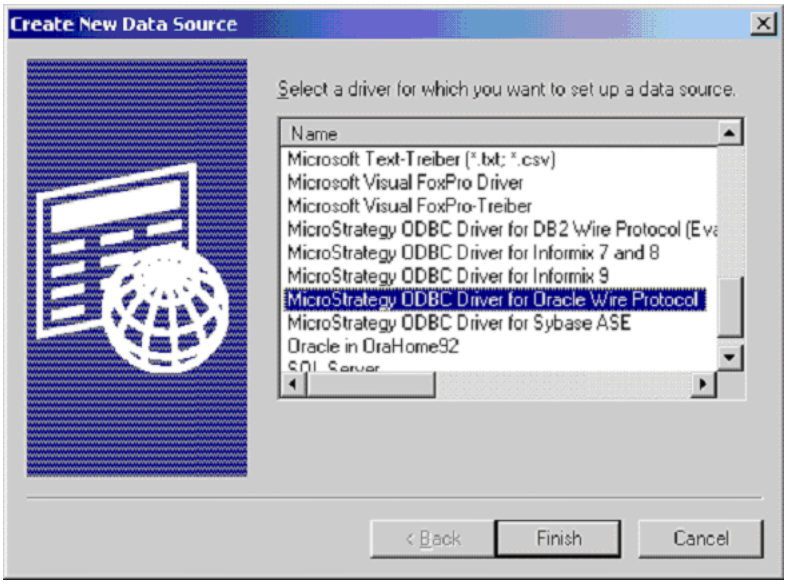
Figure 6–29 ODBC Data Source Administrator Screen



2. Click the **System DSN** tab, and click **Add.**

   The **Create New Data Source** screen displays.

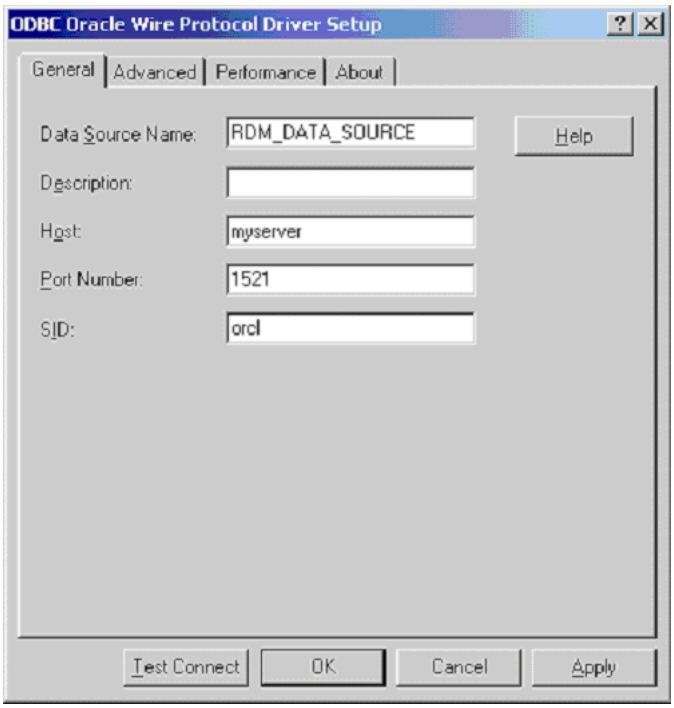
Figure 6–30 Create New Data Source Screen



   Select **MicroStrategy ODBC Driver for Oracle Wire Protocol** and click **Finish.**

   The **ODBC Oracle Wire Protocol Driver Setup** screen displays.

Figure 6–31 ODBC Oracle Wire Protocol Driver Setup Screen



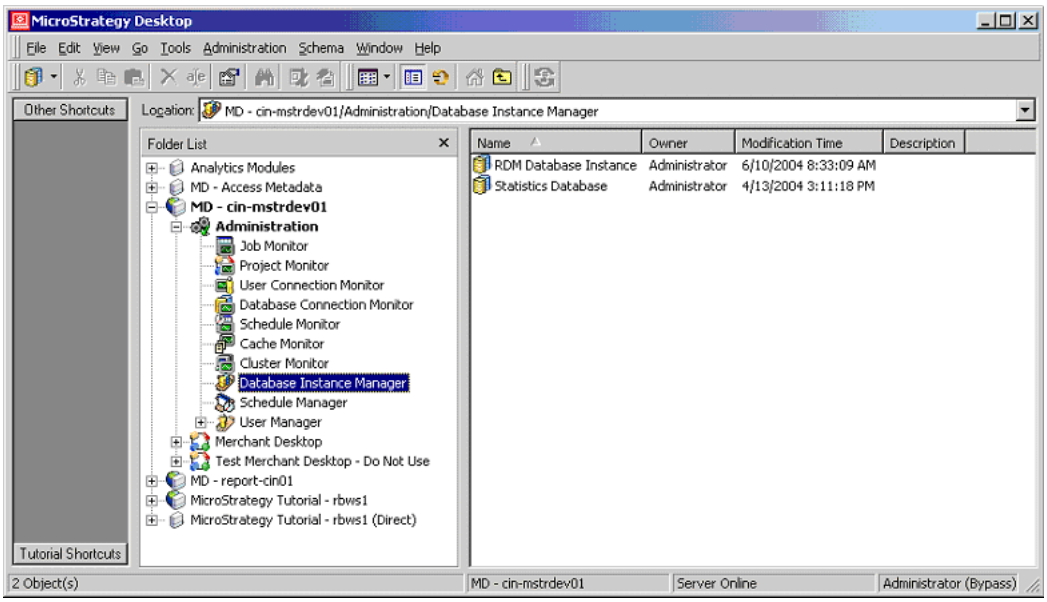
For **Data Source Name** enter `RDM_DATA_SOURCE`, for **Port Number** enter `1521`, for **SID** enter `orcl`, and click **OK.**

Mapping MicroStrategy Desktop to the RDM

To map MicroStrategy Desktop to the RDM database:

1. Using MicroStrategy Desktop, map the MicroStrategy configuration to the RDM database instance as follows:

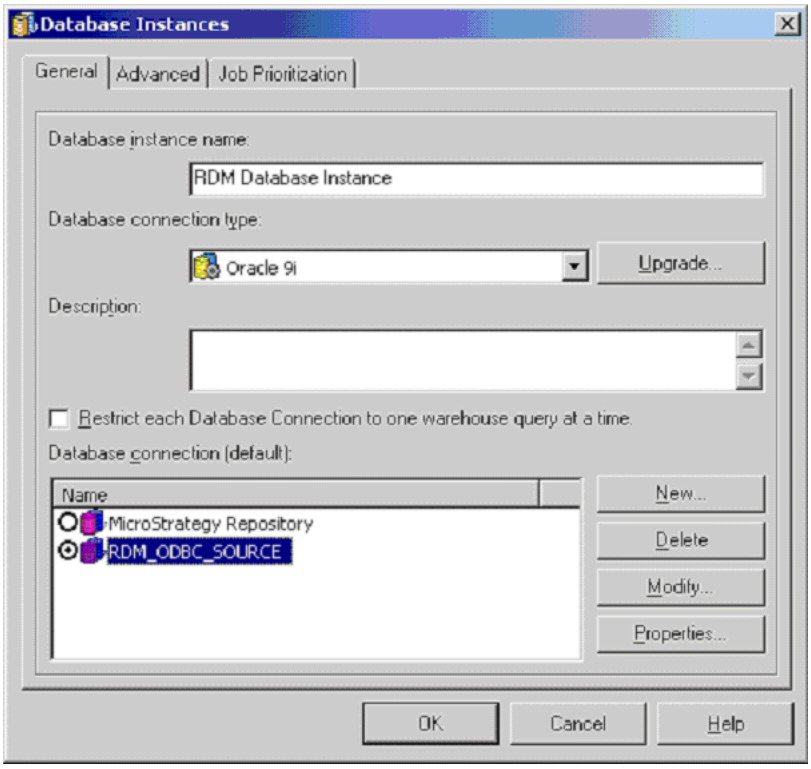
Figure 6–32 Mapping MicroStrategy to RDM Database Instance



2. From the **Folder List** panel, select **Project Source** > **Database Instance Manager.**

   The **Database Instances** screen displays.

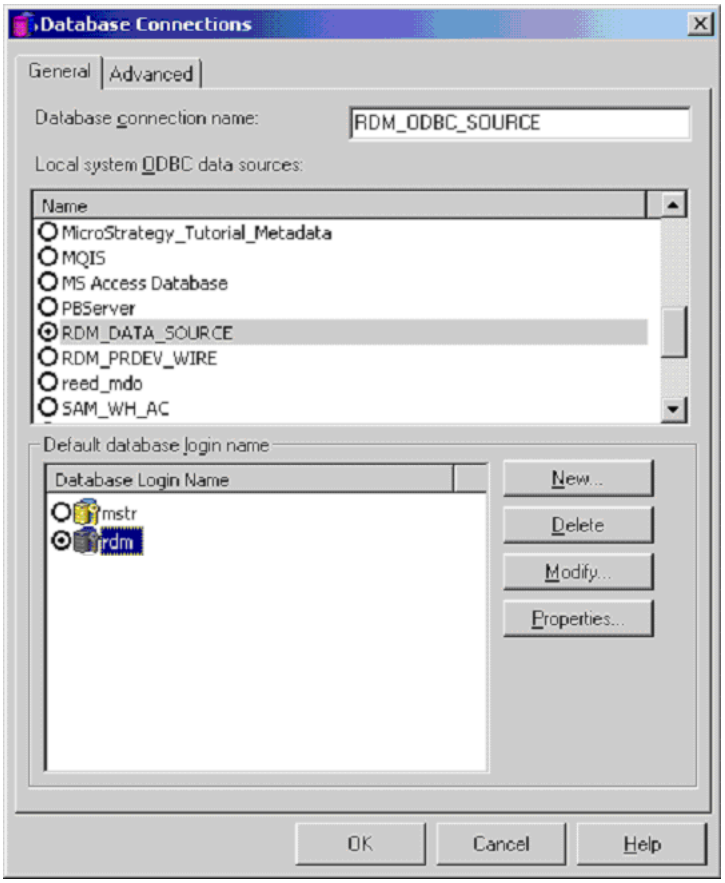
Figure 6–33 Database Instances Screen



3. Enter **Database instance name** as `RDM Database Instance`, select **RDM_ODBC_SOURCE,** and click **OK.**

   The **Database Connections** screen displays.

Figure 6–34 Database Connections Screen



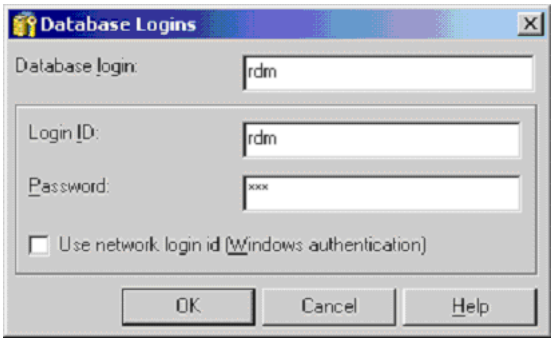
From the **Database connection name** drop-down menu, select **RDM_DATA_SOURCE;** in the **Local system ODBC data sources** field, select **RDM_DATA_SOURCE;** and in the **Database Login Name,** select **rdm.**

If your login does not already exist, click **New** and create your login ID.

Click **OK.**

4. The **Database Login** screen displays.

Figure 6–35 Database Login Screen



Enter the **Database Login, Login ID,** and **Password** for the database where the RDM is installed, and click **OK.**

Your data sources are now mapped to each other.

Mapping RDM and MicroStrategy Summarization Levels

This section contains the following topics:

Understanding the Summarization Mapping

For information about summarization level mapping, see the following table.

Table 6–1 Mapping the Summarization Levels

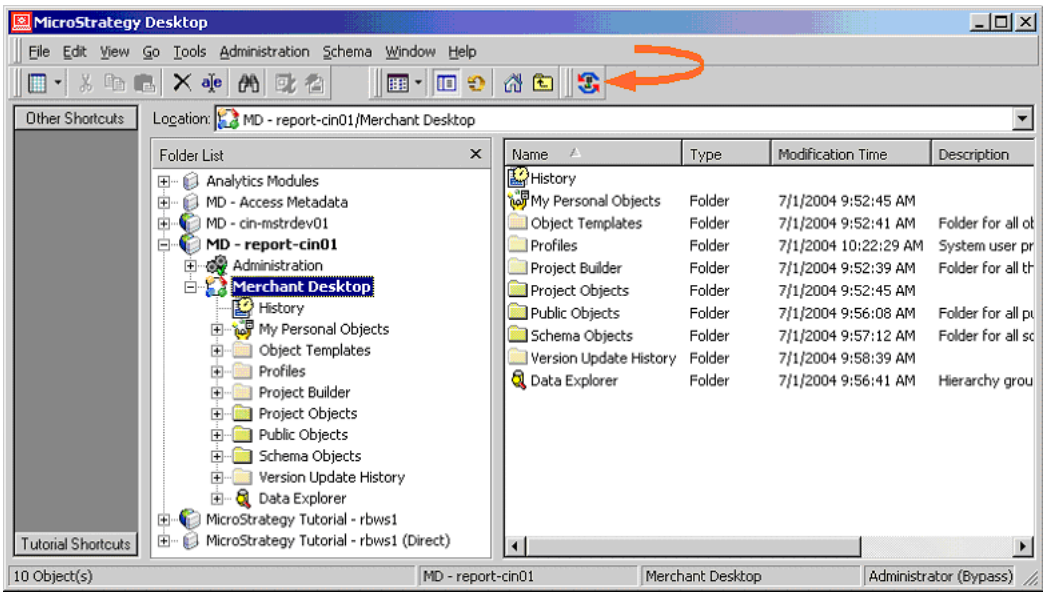
Hierarchy	Summarization Level
Location Hierarchies	
Location Hierarchy 1	*At summary levels*: 0, 1 and 2 *Between summary levels:* B *Optimization levels:* test
Location Hierarchy 2	*At summary levels*: 0, 1 and 2 *Between summary levels:* B *Optimization levels:* test
Location Hierarchy 3	*At summary levels*: 0, 1 and 2 *Between summary levels:* B *Optimization levels:* test
Location Hierarchy 4	*At summary levels*: 0 and 1 *Between summary levels:* B *Optimization levels:* test
Merchandise Hierarchies	
Product Hierarchy 1	*At summary levels*: 0, 1, and 2 *Between summary levels:* B *Optimization levels:* test
Product Hierarchy 2	*At summary levels*: 0, 1 and 2 *Between summary levels:* B *Optimization levels:* test
Product Hierarchy 3	*At summary levels*: 0, 1 and 2 *Between summary levels:* B *Optimization levels:* test
Product Hierarchy 4	*At summary levels*: 0, 1 and 2 *Between summary levels:* B *Optimization levels:* test
Product Hierarchy 5	*At summary levels*: 0 and 1 *Between summary levels:* B *Optimization levels:* test
Product Hierarchy 6	*At summary levels*: 0 *Between summary levels:* B *Optimization levels:* test
Product Hierarchy 7	*At summary levels*: 0 *Between summary levels:* B *Optimization levels:* test
Product Hierarchy 8	*At summary levels*: 0 *Between summary levels:* B *Optimization levels:* test

Using MicroStrategy Desktop to Map Merchant Desktop Attributes

If the new summary levels for either hierarchy are below the appropriate levels, use MicroStrategy Desktop to update the schema as follows. Refer to Configuring RDM and MicroStrategy Summarization Levels for information.

1. Launch MicroStrategy Desktop and update the Merchant Desktop schema as follows:

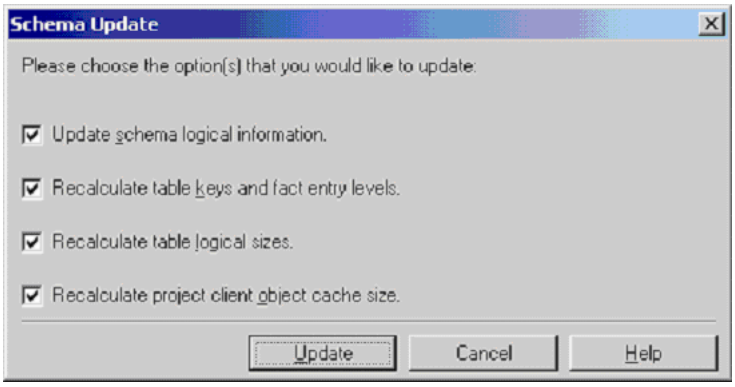
Figure 6–36 Updating the Merchant Desktop Schema



From the MicroStrategy Desktop menu, select **Schema** > **Update Schema** (or click the Schema Update button).

The **Schema Update** screen displays.

Figure 6–37 Schema Update Screen



2. Ensure that all options are selected and click **Update.**

   This updates the schema. The MicroStrategy Desktop displays.

3. Specify attribute mapping as follows:

   Modify each **Attribute** screen as shown in the following tables.

- Table 6–2, " Location Hierarchy Attributes"
- Table 6–3, " Product Hierarchy Attributes"

Note: Price Optimization has views but no materialized views.

Location Hierarchy Attributes. For each ***location*** hierarchy level, the attribute is configured to be available for the hierarchyN_lid for hierarchy, where N is the level of the hierarchy.

Table 6–2 Location Hierarchy Attributes

Attribute	Form Expression	Source Table
Location Hierarchy 1	HIERARCHY1_LID	RDM_LOCATION_2 ~12
	LOCATION_ID	RDM_LOCATION_1 RDM_LOCATION_CDA_1 RDM_PLAN_COMPANY_BUDGETS
Location Hierarchy 2	HIERARCHY2_LID	RDM_LOCATION_3 ~12
	LOCATION_ID	RDM_LOCATION_2 RDM_LOCATION_CDA_2 RDM_ACTUAL_HISTORY_2 RDM_ACTUAL_HISTORY_3 RDM_OPT_HISTORY_2 RDM_OPT_HISTORY_3
Location Hierarchy 3	HIERARCHY3_LID	RDM_LOCATION_4 ~12
	LOCATION_ID	RDM_LOCATION_3 RDM_LOCATION_CDA_3
Location Hierarchy 4	HIERARCHY4_LID	RDM_LOCATION_5 ~12
	LOCATION_ID	RDM_LOCATION_4 RDM_LOCATION_CDA_4
Location Hierarchy 5	HIERARCHY5_LID	RDM_LOCATION_6 ~12
	LOCATION_ID	RDM_LOCATION_5 RDM_LOCATION_CDA_5 RDM_ACTUAL_HISTORY_0 RDM_ACTUAL_HISTORY_1 RDM_OPT_HISTORY_0 RDM_OPT_HISTORY_1 RDM_PLANNED_PACK_OPT RDM_PLAN_COMPANY_BUDGETS RDM_PLAN_SEGMENT_1_DATA_0 RDM_PLAN_SEGMENT_1_DATA_1 RDM_PLAN_SEGMENT_2_DATA_0 RDM_PLAN_SEGMENT_2_DATA_1 RDM_PLAN_STORE_BUDGETS RDM_PLAN_VOLUME_GROUPS

Product Hierarchy Attributes. For each ***product*** hierarchy level, each attribute is configured to be available for the following form expressions:

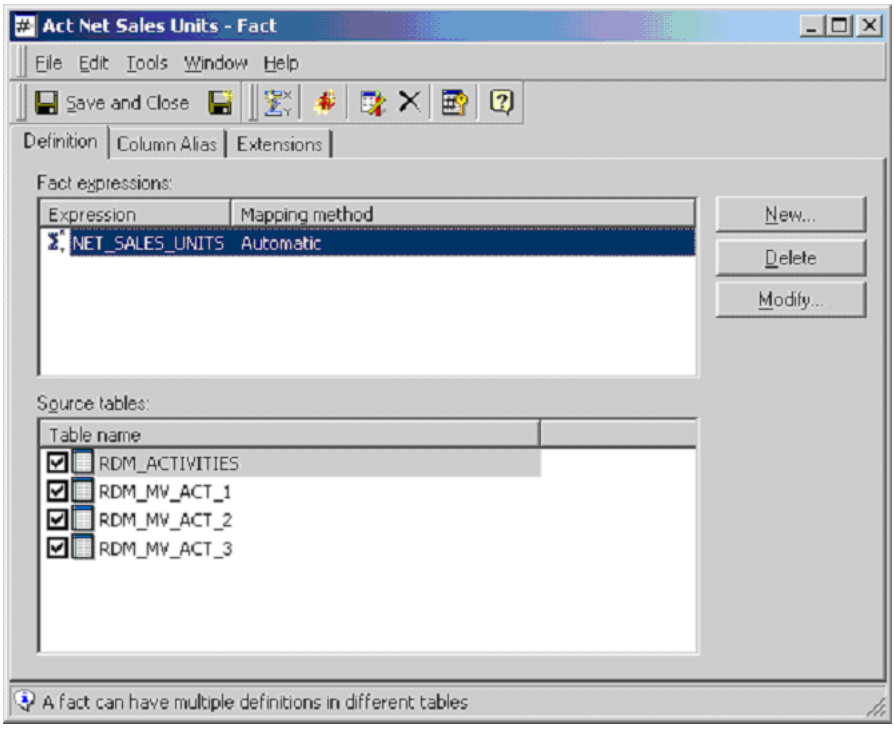
- primary key join
- hierarchyN_pi_id, where N is the level of the hierarchy.

Table 6–3 Product Hierarchy Attributes

Attribute	Form Expression	Source Table
Product Hierarchy 1	HIERARCHY1_PI_ID	RDM_MERCHANDISE_2-15
	PI_ID	RDM_MERCHANDISE_1 RDM_MERCH_CDA_1
Product Hierarchy 2	HIERARCHY2_PI_ID	RDM_LOCATION_3-15
	PI_ID	RDM_MERCHANDISE_2 RDM_MERCHANDISE_CDA_2
Product Hierarchy 3	HIERARCHY3_PI_ID	RDM_MERCHANDISE_4-15
	PI_ID	RDM_MERCHANDISE_3 RDM_MERCHANDISE_CDA_3
Product Hierarchy 4	HIERARCHY4_PI_ID	RDM_MERCHANDISE_5-15
	PI_ID	RDM_MERCHANDISE_4 RDM_MERCHANDISE_CDA_4 RDM_PLAN_COMPANY_BUDGETS
Product Hierarchy 5	HIERARCHY5_PI_ID	RDM_MERCHANDISE_6-15
	PI_ID	RDM_MERCHANDISE_5 RDM_MERCH_CDA_5 RDM_ACTUAL_HISTORY_3 RDM_OPT_HISTORY_3
Product Hierarchy 6	HIERARCHY6_PI_ID	RDM_MERCHANDISE_7-15
	PI_ID	RDM_MERCHANDISE_6 RDM_MERCH_CDA_6
Product Hierarchy 7	HIERARCHY7_PI_ID	RDM_MERCHANDISE_8-15
	PI_ID	RDM_MERCHANDISE_7 RDM_MERCH_CDA_7
Product Hierarchy 8	HIERARCHY8_PI_ID	RDM_MERCHANDISE_9-15
	PI_ID	RDM_MERCHANDISE_8 RDM_MERCH_CDA_8 RDM_PLANNED_ITEMS_1 RDM_PLAN_SEGMENT_1_DATA_1 RDM_PLAN_SEGMENT_2_DATA_1
Product Hierarchy 9	HIERARCHY9_PI_ID	RDM_MERCHANDISE_10-15
	PI_ID	RDM_MERCHANDISE_9 RDM_MERCH_9 RDM_ACTUAL_HISTORY_1 RDM_ACTUAL_HISTORY_2 RDM_OPT_HISTORY_1 RDM_OPT_HISTORY_2 RDM_PLANNED_ITEMS_0 RDM_PLAN_COMPANY_BUDGETS RDM_PLAN_SEGMENT_1_DATA_0 RDM_PLAN_SEGMENT_2_DATA_0
Product Hierarchy 10	HIERARCHY10_PI_ID	RDM_MERCHANDISE_11-15
	PI_ID	RDM_MERCHANDISE_10 RDM_MERCH_CDA_10 RDM_OPT_HISTORY_0 RDM_ACTUAL_HISTORY_0 RDM_PLANNED_PACK_OPT

4. After you have created, added, or changed any summary levels, use MicroStrategy Desktop to modify the following folders to include the new summary levels:
   - ../schema object/facts/actuals
   - ../schema object/facts/forecasts

Figure 6–38 Act Net Sales Units - Fact Screen



5. Change the lookup on all of the forms, not just the ID form.

   Now you can map the display of hierarchies to display correctly.

Mapping the Display of Hierarchy Levels

Now you need to enable the correct display of hierarchy level descriptions for the user interface.

To enable the correct display of hierarchy level descriptions:

1. Start MicroStrategy Desktop.
2. From the **Folder List** pane, select **Merchant Desktop** > **Schema Objects** > **Attributes.**
3. In the **Attributes** folder, right-click each mapped attribute, select **Rename,** and enter the description for each level based on your location and merchandise hierarchy levels. The following table lists the mapping of the hierarchy levels

Table 6–4 Mapping the Display of Hierarchy Levels

MicroStrategy Attributes	Merchant Desktop Descriptions
Location Attributes	
Location Attribute 1	Location Chain

Table 6–4 Mapping the Display of Hierarchy Levels

MicroStrategy Attributes	Merchant Desktop Descriptions
Location Attribute 2	Company
Location Attribute 3	Zone
Location Attribute 4	Price Zone
Merchandise Attributes	
Product Attribute 1	Merchandise Chain
Product Attribute 2	Company Chain
Product Attribute 3	Division
Product Attribute 4	Department
Product Attribute 5	Class
Product Attribute 6	Style
Product Attribute 7	Color
Product Attribute 8	Product Key

Configuring the User Link

Configuring the user link is the last step in integrating with MicroStrategy. This step automatically migrates user configuration data into MicroStrategy, eliminating the need to enter the same user management information into both Merchant Desktop and MicroStrategy.

After you have completed these steps, all MicroStrategy reporting will use the same security settings as specified for Price Optimization/Merchant Desktop users.

1. From the Windows server where MicroStrategy is installed, run the following command:

   ```
   <CD>/MicrostrategyServerSetup/CDImage/install.cmd
   ```

   The Oracle Installer **Welcome** screen displays.

2. Respond to prompts on the Oracle Installer screens as follows:

   a. **Welcome** screen - Click **Next.**

   b. **Application Server** screen - Select **None** and click **Next.**

   c. **Database** screen - Select a database.

      Note: Although this setting is not used by the MicroStrategy User Integration Server and will have no effect on its installation, a current limitation of the Oracle Installer does not allow the **None** selection.

   d. **Select Components** screen - Select **RMI/Jacob Server,** and make sure the destination directories point to the appropriate directory. Click **Next.**

   e. **Summary** screen - Click **Install.**

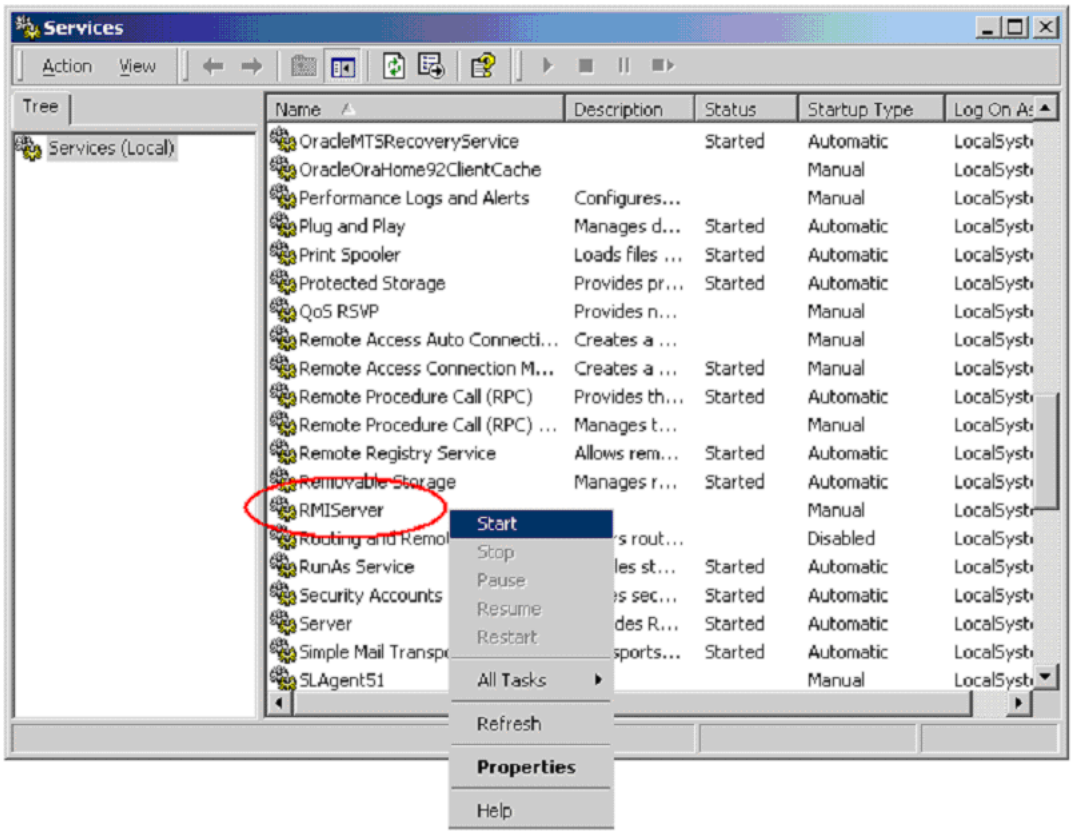
   Now, the MicroStrategy User Integration Server is installed.

   Next, start this service manually, as follows.

3. From MicroSoft Windows, navigate to **Start** > **Settings** > **Control Panel** > **Administrative Tools** > **Services.**

   The **Services** dialog box displays.

Figure 6–39 Services Dialog Box



4. Right click **RMIServer** and select **Start.**

   A progress bar displays, and the status changes to **Started.**

   Note: You can set the RMIServer service to run automatically by selecting **Properties** and on the **RMIServer Properties** dialog box, select **Automatic** for **Startup Type.**

5. Edit the <PRICE_HOME>/config/usermanagement.properties file as follows:

   Note: You can skip to step 6, if the install.properties settings were configured correctly when installing the application.

```
# Replace the value with your RMI host.
rmiHost=report-01.<host name>.com

# Specify your rmiHost and reportServer. In most cases they are the same.
rmiPort=44499
reportServer=<host name or ip address>

# Specify the administrator username and password for MicroStrategy.
administratorName=administrator
administratorPassword=<password specified when you set up the Project Source>

## Specify the number of MicroStrategy licenses you have purchased.
microstrategy.users.max=<number of microstrategy licenses purchased>
```

   Now you can test the user mapping.

6. Shut down your application server and restart it.
7. Enter the URL for Price Optimization, login as root, and create some Merchant Desktop/Price Optimization users.
8. When you have successfully created a user account with a Merchant Desktop and Price Optimization role, enter the URL for Merchant Desktop and log on as an administrator.

Troubleshooting

This section lists the errors (related to user management), that you may encounter when configuring the user links. The following table describes these errors:

Table 6–5 Troubleshooting User Link Configuration Errors

Message	Resolution
Error: Unable to update the MicroStrategy Users table: Licenses exceeded.	Edit the usermanagement.properties file as described in Step 5 and specify the correct number of MicroStrategy licenses. Then shut down and restart your application server.
Error: MicroStrategy Integration: General failure connecting to the remote registry.	Start the RMI service as described in Step 4.
Error when trying to add a role.	The role you are trying to create already exists in the MicroStrategy users database. Remove the user instance from the MicroStrategy users database, and then try to add the Merchant Desktop role again.

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