



# **ProfitLogic Price 4.5 Installation Guide**



Copyright © 1996, 2003 Oracle Corporation. All rights reserved.

The Programs (which include both the software and documentation) contain proprietary information; they are provided under a license agreement containing restrictions on use and disclosure and are also protected by copyright, patent, and other intellectual and industrial property laws. Reverse engineering, disassembly, or decompilation of the Programs, except to the extent required to obtain interoperability with other independently created software or as specified by law, is prohibited.

The information contained in this document is subject to change without notice. If you find any problems in the documentation, please report them to us in writing. This document is not warranted to be error-free. Except as may be expressly permitted in your license agreement for these Programs, no part of these Programs may be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose.

If the Programs are delivered to the United States Government or anyone licensing or using the Programs on behalf of the United States Government, the following notice is applicable:

#### U.S. GOVERNMENT RIGHTS

Programs, software, databases, and related documentation and technical data delivered to U.S. Government customers are "commercial computer software" or "commercial technical data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the Programs, including documentation and technical data, shall be subject to the licensing restrictions set forth in the applicable Oracle license agreement, and, to the extent applicable, the additional rights set forth in FAR 52.227-19, Commercial Computer Software--Restricted Rights (June 1987). Oracle USA, Inc., 500 Oracle Parkway, Redwood City, CA 94065.

The Programs are not intended for use in any nuclear, aviation, mass transit, medical, or other inherently dangerous applications. It shall be the licensee's responsibility to take all appropriate fail-safe, backup, redundancy and other measures to ensure the safe use of such applications if the Programs are used for such purposes, and we disclaim liability for any damages caused by such use of the Programs.

The Programs may provide links to Web sites and access to content, products, and services from third parties. Oracle is not responsible for the availability of, or any content provided on, third-party Web sites. You bear all risks associated with the use of such content. If you choose to purchase any products or services from a third party, the relationship is directly between you and the third party. Oracle is not responsible for: (a) the quality of third-party products or services; or (b) fulfilling any of the terms of the agreement with the third party, including delivery of products or services and warranty obligations related to purchased products or services. Oracle is not responsible for any loss or damage of any sort that you may incur from dealing with any third party.

Oracle, JD Edwards, and PeopleSoft are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

---

# Contents

## Preface

### 1. Overview of Price

What Is Price? .....	2
Overview of the Price Architecture.....	4
Roadmap for Implementing Price .....	6
What's Next? .....	7

### 2. Planning Your Environment

Overview of the Planning Process .....	10
Supported Configurations .....	11
Network Requirements.....	11
Sun Solaris Platform.....	12
Linux Platform .....	13
Merchant Desktop Requirements .....	14
Client System Options.....	15
Supported Business Intelligence Solution Integrations.....	16
What's Next? .....	17

### 3. Installing Your Database

Overview of Installing and Configuring Your Database .....	20
Installing and Configuring Oracle.....	21
Installing Oracle.....	21
Creating the Database .....	21
Creating and Configuring the init.ora File.....	22
Setting the Environment Variables .....	22
Creating and Running the Database Creation Script .....	24
Creating the System Data Dictionary .....	25
Creating the Tablespaces .....	25
Installing the JVM into Oracle .....	26
Specifying Users and Permissions.....	27

## Contents

Creating the Schema .....	27
What's Next? .....	28
<b>4. Installing Your Application Server</b>	
Overview of the Application Server Installation Process .....	30
Installing and Configuring WebLogic .....	31
Installing the WebLogic Server .....	31
Creating a WebLogic Domain .....	32
Setting Up the WebLogic Environment.....	34
What's Next? .....	35
<b>5. Installing Price</b>	
Overview of the Price Installation Process .....	38
Determining the Installation Mode .....	39
Setting Up Your Price Properties File .....	40
Installing Price from the Command Line.....	41
Installing Price from the Graphical Installer .....	43
Troubleshooting Price Installation Issues.....	51
What's Next? .....	52
<b>6. Installing Merchant Desktop</b>	
Installing the Merchant Desktop Software.....	54
Retail Data Mart Considerations .....	54
Improving the Performance of Report Generation.....	54
Storage Requirements for RDM.....	54
Running the Merchant Desktop Installer.....	55
What's Next.....	61
<b>7. Installing MicroStrategy</b>	
Overview .....	64
Installing MicroStrategy Components.....	65
Configuring MicroStrategy .....	66
Creating the Metadata Repository .....	67

Configuring MicroStrategy Intelligence Server .....	74
Configuring MicroStrategy Desktop .....	79
Installing Merchant Desktop Metadata .....	80
Prerequisites.....	80
Migrating the Metadata.....	80
Configuring MicroStrategy to Access the RDM Database .....	95
Fixing Attributes.....	95
Creating the Database Connection.....	96

## 8. Integrating Merchant Desktop with MicroStrategy

Overview of the Integration Configuration .....	104
Configuring RDM and MicroStrategy Summarization Levels .....	105
“Between” Summary Levels Product Attribute Configuration .....	109
“At” Summary Levels Product Attribute Configuration .....	111
Optimization Level Product Attribute Configuration.....	113
“Between” Summary Levels Location Attribute Configuration .....	115
“At” Summary Levels Location Attribute Configuration .....	116
Optimization Level Location Attribute Configuration .....	117
After Creating, Adding, or Changing Summary Levels .....	119
Configuring the Display of Hierarchy Levels .....	121
Configuring the User Link .....	122
What’s Next.....	127

## 9. Third-Party Licenses

Overview of Third-Party Licensing .....	130
Third-Party Open Source Licenses .....	131
Apache Jakarta Commons .....	131
Apache Jakarta Taglibs 1.0 .....	135
Apache Xalan 2.4.1.....	139
Apache Xerces 1.4.1 .....	140
Castor 0.9.5.....	141
DB ObJectRelationalBridge (DB-OBJ) 1.0.1 .....	142
Jakarta Regexp 1.2.....	146

**Contents**

Jakarta Struts 1.2..... 150

Jakarta Velocity 1.2..... 154

Jetspeed Portal 1.4 ..... 158

Looks 1.2.1 ..... 162

Log4J 1.2.8 ..... 163

ORO 2.0.8 ..... 167

POI 1.9.0..... 171

XDoclet 1.2.1 ..... 175

## Preface

Price enables retailers to attain maximum gross margins by applying the pricing recommendations calculated for in-season merchandise and to clear inventory to specified levels at specified outdates. This book enables you to install the components required for using the Price Application.

## Audience

This book assumes that you understand:

- J2EE distributed applications
- Database administration
- Unix administration

## Price Documentation Set

For additional information about using Price, see the following:

- *ProfitLogic Price Installation Guide* for instructions on setting up the application server and database environment for Price as well as installing Price.
- *ProfitLogic Price Configuration Guide* for instructions on configuring the Price front end (user interface), loading data, and configuring and performing runs.
- *ProfitLogic Price User Guide* for information on how to use Price and on all its functionality and screens.
- *ProfitLogic Price Operations Guide* for instructions on weekly processes and maintaining Price.
- Price Online Help for instructions on accessing worksheets, key items, forecasts, reports, etc., and for using features such as What If and Optimize to Budget.
- If your installation of Price includes Merchant Desktop, see the Merchant Desktop Help for instructions on accessing Price, Price merchandise alerts, and enhanced reporting; using worksheets, What If, and Optimize to Budget features; and personalizing your desktop.

## Technical Support

If you experience problems and need technical assistance, see your ProfitLogic Professional Services representative.

## Conventions

Throughout this guide, the term *administrator* refers to the person(s) who configures and maintains the application and related features such as Merchant Desktop. In some cases the administrator will be someone at your company, and in other cases, the administrator will be someone from ProfitLogic Professional Services.

Convention	Description
>	Shows navigation through the user interface. For example, Click <b>Tools</b> menu > <b>Internet Options</b> means to click the Tools menu and then the Internet Options menu item.
Monospace	Represents text that you must type
<i>Monospace italic</i>	Indicates a variable for which you supply a value
<b>Note:</b>	Indicates exceptions and information that, if omitted, can cause you to perform one or more actions again
<b>Caution:</b>	Indicates danger to the integrity of the data or system



This chapter contains the following sections:

- “What Is Price?” on page 2
- “Overview of the Price Architecture” on page 4
- “Roadmap for Implementing Price” on page 6
- “What’s Next?” on page 7

---

## What Is Price?

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

### What Are the Price Components?

Price contains the following components:

- *Price Application* - includes application logic and a web interface to user management, the business rules manager, and to the Price console. Price requires only one instance of the Price Application, which resides on the application server machine.
- *Optimization 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 Optimization 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 requires only one instance of the Optimization 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 default, Merchant Desktop uses the MicroStrategy business intelligence tool, which is also optional.

### How Does Price Turn My Retail Data into Pricing 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 Optimization Engine analyzes this data and generates forecasts that calculate all possible price trajectories for applicable items. Price saves the best forecast trajectory as a *recommendation*, which you can view from the Price 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 user interface. This keeps your data up to date.

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

### **How Does Price Help Me Reach My Business Goals?**

During the week, retailers use the Price 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 *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 user interface, refer to the *Price User Guide*. You can also access online help by clicking Help from the Price user interface.

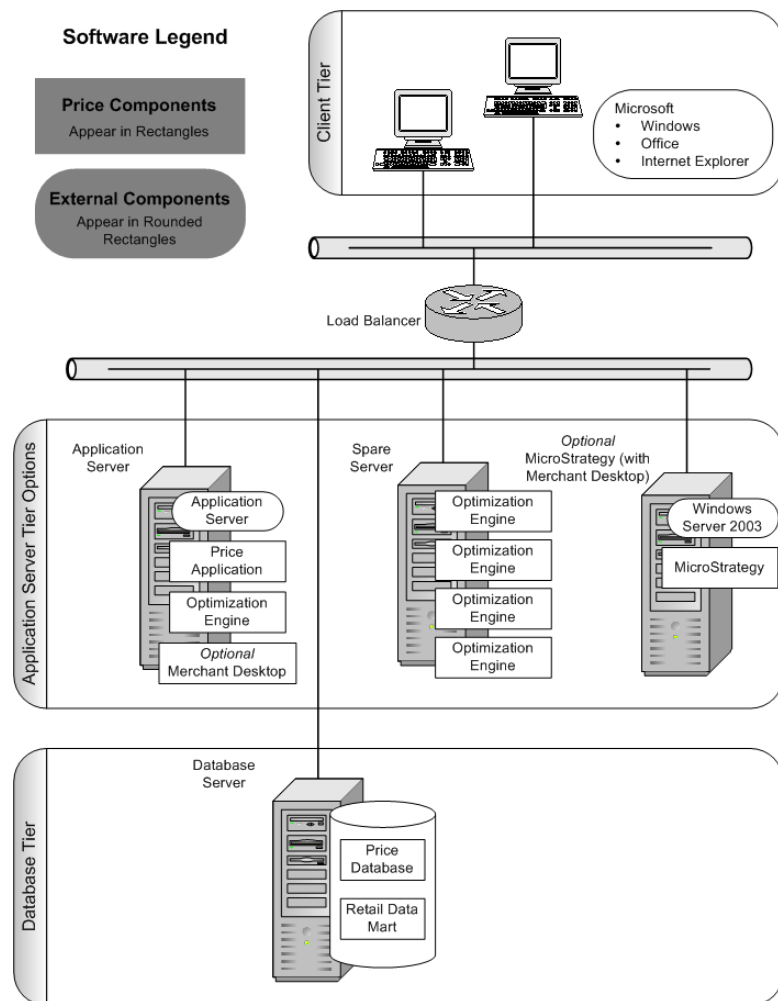
Price enables you to customize the way the user interface displays information, sorts and filters data, and generates reports. For information on customizing the Price user interface, see the *Configuration Guide*.

## Overview of the Price Architecture

Price is a distributed application, using an application server as the platform for the services, a database, and several software components. The following diagram depicts a typical setup for a large retailer at chain level or a specialty retailer at region level.

Figure 1-1

Price Architecture



## Price Enterprise Components

Figure 1-1, Price Architecture, shows the optional and required software as described below. For information about specific versions required, see Chapter 2, “Planning Your Environment.”

### Client System Tier

- Microsoft Windows, Office, and Internet Explorer.
- ActiveX control (installs automatically when Price is run). JRE for Merchant Desktop (*optional*).

### Application Server Tier

- Application server software from vendor.
- Price Application - installs and resides on your application server machine. You can install and run multiple Price Application instances on multiple application server machines.
- Optimization Engine - which installs on the application server machine by default. To boost performance, you can run install and run multiple Engines, and move them to any other production server within your environment as needed.
- *Optional*. Merchant Desktop Application.

### Database Server Tier

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

### Optional Components

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

---

## Roadmap for Implementing Price

This Guide explains how to install and set up the required and optional software and the Price applications.

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

To get Price ready for production, you perform these tasks in the following sequence:

1. Planning Your Environment as described in Chapter 2.
2. Installing Your Database as described in Chapter 3.
3. Installing Your Application Server as described in Chapter 4.
4. Installing Price as described in Chapter 5.
5. Configuring Your Application Server for Price as described in Chapter 6.
6. Configure your business rules as described in the *Configuration Guide*.
7. *Optional*. Modifying the Price user interface to accommodate your business needs, as described in the *Configuration Guide*. Concurrent with this activity, complete the remaining steps in this roadmap. You can continue refining the user interface iteratively, as needed.
8. *Optional*. If you are using Merchant Desktop and MicroStrategy, follow Chapter 6, Chapter 7, and Chapter 8 of this Guide.
9. Verifying the application is correctly installed.
10. Loading data, performing a model run, and evaluating the results, as described in the *Configuration Guide*.
11. *Optional*. Testing and Tuning Price, as described in Chapter 9.
12. Setting up Price user login accounts and introducing end users to Price.
13. Maintaining Price data as described in the *Configuration Guide*.

---

## What's Next?

Plan your hardware and software environment as described in Chapter 2, “Planning Your Environment.”





This chapter contains the following sections:

- “Overview of the Planning Process” on page 10
- “Supported Configurations” on page 11
- “Network Requirements” on page 11
- “Merchant Desktop Requirements” on page 14
- “Client System Options” on page 15

---

## Overview of the Planning Process

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

1. Determine the size of the implementation.
2. Determine your relevant business policies. The business policy is a statement of what rules govern the markdown process. You need to develop a business policy based on your business rules. For more information about business rules, see the *Configuration Guide*.

3. Determine relevant metrics.

4. Identify source systems.

Identify the systems that will trade data with Price.

5. Plan the infrastructure. Design the hardware and software infrastructure, including system requirements, consider the following:
  - Hardware and associated software requirements
  - Prerequisite software (and licensing)
  - Load balancing and clusters
  - Capacity data gathered in Step 1.
  - Data security
  - Backup and recovery strategies
6. Plan periodic batch loading of business and historical databases. Plan business and historical databases, including the data feeds needed from the external systems for nightly, weekly, and periodic batch updates and recycling.

## Supported Configurations

This section describes the Price architecture and outlines the supported options. Mixed platforms are not supported.

Choose one of the following server platforms:

- “Sun Solaris Platform” on page 12
- “Linux Platform” on page 13

Optionally, if you are using Merchant Desktop with MicroStrategy, see “Merchant Desktop Requirements” on page 14.

Then choose any number of the client machine solutions as described in “Client System Options” on page 15.

## Network Requirements

- For connections between servers use the following:
  - Minimum: 100 Mbps switched ethernet
  - Recommended: 1000 Mbps
- For connections to the desktop, 100 MB is sufficient.
- For clustered and multi-server implementations, a hardware load balancer may be required. Cisco CSS series is supported.

## Sun Solaris Platform

The following table shows the required Solaris platform configuration. For supported client machine configurations, see “Client System Options” on page 15.

If you are using Merchant Desktop, see “Merchant Desktop Requirements” on page 14.

**Table 2-1                      Solaris Platform Requirements**

Software	Requirements
<b>Database Tier</b>	
Operating System	Solaris 8
Database	Oracle 9i 9.2.0.6
<b>Application Server Tier</b>	
Operating System	Solaris 8
Application Server	WebLogic 8.1 SP4
JVM	Sun JDK 1.4.2_05 (32-bit)

## Linux Platform

The following table shows the required Linux platform configuration. For supported client machine configurations, see “Client System Options” on page 15.

If you are using Merchant Desktop, see “Merchant Desktop Requirements” on page 14.

**Table 2-2 Linux Platform Requirements**

Software	Requirements
<b>Database Tier</b>	
Operating System	Solaris 8
Database	Oracle 9i 9.2.0.6
<b>Application Server Tier</b>	
Operating System	Red Hat Enterprise Linux 2.1 Kernel 2.4.9 with glibc-2.2.4-31.7
Application Server	WebLogic 8.1 SP4
JVM	Jrockit 8.1 SP4

---

## Merchant Desktop Requirements

The following table shows the required Merchant Desktop configuration.

Optionally, if you are using Merchant Desktop with MicroStrategy, Merchant Desktop requires MicroStrategy to be installed on your application server node.

**Table 2-3**                      **Merchant Desktop System Requirements**

Software	Requirements
Operating System	Windows Server 2003
Business Intelligence Tool	MicroStrategy 7.5.3
Java	Sun JDK 1.4.2_05 (32 bit)

## Client System Options

The following table shows the required client system configuration options.

**Table 2-4**                      **Client System Options**

Operating System	Requirements
Windows XP Pro SP2 (with Office 2003)	<ul style="list-style-type: none"> <li>• MS Office 2003</li> <li>• Internet Explorer 5.5 SP2</li> <li>• Sun JRE 1.4.1_05 (32-bit) for Merchant Desktop</li> </ul>
Windows XP Pro SP2 (with Office 2002)	<ul style="list-style-type: none"> <li>• MS Office XP (Office 2002)</li> <li>• Internet Explorer 6.0</li> <li>• Sun JRE 1.4.1_05 (32-bit) for Merchant Desktop</li> </ul>
Windows XP Pro SP2 (with Office 2000)	<ul style="list-style-type: none"> <li>• MS Office 2000</li> <li>• Internet Explorer 6.0</li> <li>• Sun JRE 1.4.1_05 (32-bit) for Merchant Desktop</li> </ul>
Windows NT 4.0 SP6	<ul style="list-style-type: none"> <li>• MS Office 97 SR-2</li> <li>• Internet Explorer 5.5 SP2</li> <li>• Sun JRE 1.4.1_05 (32-bit) for Merchant Desktop</li> </ul>

---

## Supported Business Intelligence Solution Integrations

By default, the Merchant Desktop uses the MicroStrategy business intelligence solution that provides reporting functionality in a format that meets your business needs.

Alternatively, you can integrate Price with other business intelligence applications, as shown in the following table.

**Table 2-5**                      **Supported Business Intelligence Solution Integrations**

Configuration Option	Price	RDM	Merchant Desktop	MicroStrategy
Default Configuration	Y	Y	Y	Y
Retail Data Mart Only	Y	Y	--	--
MicroStrategy	Y	Y	--	Y



---

## What's Next?

Now you can install your database software as described in Chapter 3.



---

# 3

## Installing Your Database

This chapter contains the following sections:

- “Overview of Installing and Configuring Your Database” on page 20
- “Installing and Configuring Oracle” on page 21

---

## Overview of Installing and Configuring Your Database

Install your database before you install your application server and Price. For database prerequisites and other requirements, see Chapter 2, “Planning Your Environment.”

This chapter describes how to install and configure Oracle.

---

## Installing and Configuring Oracle

Setting up Oracle involves the following steps:

1. “Installing Oracle” on page 21
2. “Creating the Database” on page 21
3. “Setting the Environment Variables” on page 22
4. “Creating and Running the Database Creation Script” on page 24
5. “Creating the System Data Dictionary” on page 25
6. “Creating the Tablespaces” on page 25
7. “Installing the JVM into Oracle” on page 26
8. “Specifying Users and Permissions” on page 27
9. “Creating the Schema” on page 27

### Installing Oracle

Install Oracle into the following locations, using the Oracle documentation for guidance:

- Oracle application software - into the `opt/app/oracle` directory (referred to as the `ORACLE_BASE` directory in this guide)
- Oracle version software - into the `/opt/app/oracle/Product/9.2.0` directory (referred to as the `ORACLE_HOME` directory in this guide)

### Creating the Database

Creating the database involves the following high-level steps:

1. Creating the `init.ora` file and specifying the parameters in it.
2. Setting the environment variables.
3. Running the create database command.
4. Creating the system data dictionary.
5. Creating the tablespace and specifying appropriate sizes.
6. Specifying users and permissions.

## Creating and Configuring the init.ora File

Create an init.ora file in the /opt/app/oracle/Product/9.2.0/dbs directory, specifying the following settings:

```
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
```

## Setting the Environment Variables

To set the correct environment variables, set the following:

1. `-export ORACLE_SID=[database name]`
2. Set your `JAVA_HOME` and `PATH` environment variables to point to the version of Java that was installed by your database server.
3. Set your `LD_LIBRARY_PATH` environment variables to point to the correct set of 64-bit libraries for the operating system where you will be running the load processes as follows:

For Solaris—

```
LD_LIBRARY_PATH=$LD_LIBRARY_PATH:$ORACLE_HOME/lib:$ORACLE_HOME/lib32
```

For Linux—

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

---

## Creating and Running the Database Creation Script

To create and run the database creation script:

1. Create a file named PRICEORA.SQL, populate it with follows, and save it.

```
CREATE DATABASE [database name]

        LOGFILE GROUP 1 ('/db/dbname/d000/redolog11.log',
        '/db/dbname/d001/redolog12.log') size 100m,
GROUP 2 ('/db/dbname/d000/redolog21.log',
        '/db/dbname/d001/redolog22.log') size 100m

DATAFILE '/db/dbname/d000/system01.dbf' size 500m EXTENT
MANAGEMENT LOCAL

DEFAULT TEMPORARY TABLESPACE TEMP TEMPFILE
'/db/dbname/d001/temp01.dbf' size 5120m UNIFORM size 2m

UNDO TABLESPACE "RBS" datafile '/db/dbname/d000/rbs01.dbf' size 5120m;
```

2. Run the following command:

```
CREATE DATABASE PRICED.SQL
```

This creates two users:

- sys - the root user
- system - the user one level down

And three tablespaces:

- SYSTEM
- TEMP
- RBS - rollback tablespace



## Creating the System Data Dictionary

You create the system data dictionary by running Oracle scripts.

To create the Oracle 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
```

where the recommended path for ORACLE\_HOME is /opt/app/oracle/product/script.

```
ORACLE_HOME/sqlplus/admin/pupbld.sql
```

## Creating the Tablespaces

You create the tablespaces by creating a script and then running it.

To create tablespaces:

1. Create a script file named PRICEORATS.SQL, populate it as follows, and save it.

Note that the create tablespace statement is repeated for each new tablespace being created and saved as **tablespace.sql**.

```
EXPORT ORACLE_SID = [database name]
SQLPLUS /nolog
connect /as sysba
SQL>@tablespace.sql
```

2. From the directory where your tablespaces script resides, run the following script:

```
PRICEORATS.SQL
```

The script creates the tablespaces. The following table shows typical tablespaces and sizes for an Oracle database running with Price.

**Table 3-1**                      **Oracle Tablespaces and Sizes for Price**

Tablespace	Description
DATA_01	Required. Default tablespace for Price table. 5 GB.
INDEX_01	Required. Tablespace for indexes of Price, STG, and ASH. 5 GB.
ITEM_DATA_PIN	Required. Tablespace for ITEM_DATA table of the Price schema. 5 GB.
RBS	Typical but not required. Rollback tablespace. 5 GB.
TEMP	Typical but not required. Default temporary tablespace for Price, STG, and ASH. 10 GB.

## Installing the JVM into Oracle

After you create the database and tablespaces, install the JVM into Oracle.

To install JVM into Oracle, run the following commands.

**Note:** The SQL prompt displays after you enter the first two commands.

```
export ORACLE_SID=[database name]
sqlplus /nolog
connect / as sysdba
startup mount;
alter system set "_system_trig_enabled" = false scope=memory
alter database open;
@/opt/app/oracle/product/9.2.0/javavm/install/initjvm.sql
```

To enable installation of Price into an Oracle schema, you must have permission to turn off the Oracle Java class bytecode verifier.

To grant the permission to turn off the Oracle Java class bytecode verifier:

1. Login as the system user.
2. Run the following command in sqlplus:

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

where *price* is the name of the schema to be granted permission

## Specifying Users and Permissions

Specify the default privileges to Oracle schemas as follows:

**Table 3-2**

**Default Privileges to Oracle Schemas**

User	Privileges
Price	<ul style="list-style-type: none"><li>• Connect</li><li>• Resource</li><li>• Select any table</li><li>• Query rewrite</li><li>• Create materialized view</li><li>• Drop any table</li><li>• Create view</li><li>• Execute any procedure</li></ul>

## 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
```

---

## What's Next?

The next step is to install your application server software.

---

# 4

## Installing Your Application Server

This chapter contains the following sections:

- “Overview of the Application Server Installation Process” on page 30
- “Installing and Configuring WebLogic” on page 31

---

## Overview of the Application Server Installation Process

This chapter describes how to install the supported application servers.

For information about the version number and other requirements, see Chapter 2, “Planning Your Environment.”

---

## Installing and Configuring WebLogic

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

1. “Installing the WebLogic Server” on page 31
2. “Creating a WebLogic Domain” on page 32
3. “Setting Up the WebLogic Environment” on page 34

### Installing the WebLogic Server

Install WebLogic as described in the BEA documentation, referring to the following table for Price-related settings.

**Table 4-1** Settings for the WebLogic Installer

Setting	Description
BEA Home Directory	Create a BEA home directory. Recommended directory path:  /profit/modules/bea/[WL_version] sp4/ weblogic/sunos-sun4u/user_projects  /profit/modules/bea/[WL_version] sp4/ weblogic/linux-i68u/user_projects
Install Type	Enables you to install and create custom application domains. Select <b>Custom Installation</b> .  <b>Note:</b> From <WL_HOME>/common/bin/config.sh, create a new domain and server.
Components	Select which WebLogic components that you do <b>not</b> want to use.
Product Installation Directory	After you select the product directory, the installation files are copied into this directory. Use same path as for the home directory.

Now that you have installed WebLogic, the next step is to create and configure a domain, using the WebLogic Configuration Wizard.

## Creating a WebLogic Domain

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

To create a WebLogic domain:

Start the WebLogic Configuration Wizard and enter the values specified in Table 4-2, “Settings for WebLogic Configuration Wizard.”

When you finish, WebLogic writes these settings to the config.xml file.

**Table 4-2 Settings for WebLogic Configuration Wizard**

Setting	Description
<b>Define Logical Grouping</b>	
Domain Type	Select <b>WLS Domain</b>
Server Type	Select <b>Admin Server with Clustered Managed Server(s)</b> .
Domain Name	Recommended domain name:  <tle>ProdPrice  where tle is a three-character acronym for your company. For example, ABC Company would enter abcProdPrice.
<b>Define the Cluster Administration Server</b>	
Administration Server Name	Name of the name of the server that controls the cluster. Recommended value: admin0
Administration Server Listener Port	<b>Important:</b> Select a unique port number that is not in use by other applications. Recommended value: 8000.  You can ensure that 8000 is an unused port number by entering the following command:  netstat -ae   grep 8000
Administration Server SSL Listener Port	This is the number of the server listener port incremented by 1. Recommended value: 8001



**Table 4-2 Settings for WebLogic Configuration Wizard (Continued) (Continued)**

Setting	Description
Path to Create for Domain	Use either of these recommended paths as applicable:  /profit/configs/[datetimestamp]/bea/[WLversion] sp4/weblogic/[linux-i686]  /profit/configs/[datetimestamp]/bea/[WLversion] sp4/weblogic/sunos-sun4u/user_projects
<b>Define the Nodes in the Cluster</b>	
First Managed Server Name	Recommended value: p4pgui0
First Managed Server Port Number	Recommended value: 8040
First Managed Server SSL Port	Number of managed server port, incremented by 1. Recommended value: 8041
First Managed Server Listener Address	Recommended value: 0.0
Second Managed Server Name	Name of the first managed server, incremented by 1. Recommended value: p4pgui1
Second Managed Server Port Number	Recommended value: 8044
Second Managed Server SSL Port	Port number of the first managed server, incremented by 1. Recommended value: 8046
Second Managed Server Listener Address	Recommended value: 0.0
<b>Join the Nodes in the Cluster Together</b>	
Cluster Name	Recommended value: p4pgui-cluster
Cluster Multicast Port	Recommended value: 7777
Cluster Port	
Cluster Listener Address	Same as host number.



## Setting Up the WebLogic Environment

Set up the WebLogic environment as described in this section.

Edit the WebLogic startup script, and add the following for JAVA\_OPTION:

```
-Dcom.profitlogic.configroot=<configRoot>
```

```
-Djava.awt.headless=true
```

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

---

## What's Next?

Now you are ready to install Price as described in Chapter 5, "Installing Price."



---

# 5 Installing Price

This chapter contains the following sections:

- “Overview of the Price Installation Process” on page 38
- “Determining the Installation Mode” on page 39
- “Setting Up Your Price Properties File” on page 40
- “Installing Price from the Command Line” on page 41
- “Installing Price from the Graphical Installer” on page 43
- “What’s Next?” on page 52

---

## Overview of the Price Installation Process

**Note:** IBM AIX, DB2, and WebSphere are not supported in Price 4.5.

Installing the Price applications consists of the following tasks:

1. Determining the Installation Mode.
2. Setting Up Your Price Properties File.
3. Installing Price, either from the command line or from the graphical user interface.
4. Restarting your application server.

## Determining the Installation Mode

Every setting that you can make in graphical mode has a corresponding line of code in the `install.properties` file. Conversely, every setting that you make in the `install.properties` file (after the initial set of configurations) has a corresponding selection box in the user interface. Therefore, after making the initial set of configurations, you can toggle back and forth between the two methods.

The following table shows a comparison of the graphical and silent installation modes.

**Table 5-1 Comparison of Graphical and Silent Mode Price Installation**

Mode	Features	Advantages
Graphical	<ul style="list-style-type: none"> <li>• Uses graphical user interface (GUI) in an interactive mode.</li> <li>• Enables modification of settings during installation process.</li> </ul>	<ul style="list-style-type: none"> <li>• Graphical display of install options enables easy identification and modification of configuration properties.</li> </ul>
Silent	<ul style="list-style-type: none"> <li>• Can be run by a single command as part of shell script or command file with no further user intervention.</li> <li>• Non interactive; minimal console output during installation.</li> <li>• Installer reads the (reusable) configuration settings from the configured <code>install.properties</code> file.</li> </ul>	<ul style="list-style-type: none"> <li>• Accessible if no GUI available.</li> <li>• Same <code>install.properties</code> file can be used to install Price on multiple machines.</li> <li>• Call to <code>install.properties</code> file can be part of automated installation process requiring no user intervention.</li> <li>• Configuration of <code>install.properties</code> file before installation allows phased implementation.</li> </ul>

---

## Setting Up Your Price Properties File

In order to install Price, 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 Price `install.properties` file:

1. Insert the Price Installation CD and navigate to the `reference.price.install.properties` file.
2. Copy the `reference.price.install.properties` file to your local system, and rename it as `install.properties`.
3. Edit the file, specifying values as described within the file, and save it to the application server where you will be installing Price.

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

- “Installing Price from the Graphical Installer” on page 43
- “Installing Price from the Command Line” on page 41



## Installing Price from the Command Line

This section describes how to install Price in “silent mode” (from the command line).

**Note:** Make sure that your application server is running before continuing.

To install Price from the command line:

1. Ensure that you have completed “Setting Up Your Price Properties File” on page 40.
2. From your application server machine, enter the following:

### Syntax

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

### Arguments

Use any arguments listed below as needed.

-s	<i>Optional.</i> Silent mode. If you omit this option, the Installer graphical user interface displays.
-p <path-to-install.properties>	<i>Optional.</i> Specifies an alternate path to the install.properties file. Defaults to ./install.properties.
-l, --log-config	<i>Optional.</i> 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	<i>Optional.</i> Specifies whether or not to overwrite existing files. Defaults to -y (overwrite).
-d <XML path>	<i>Optional.</i> Specifies an alternate path to the XML install scripts. Defaults to ./InstallScripts.
-x <filename.xml>	<i>Optional.</i> Specifies an alternate XML install script file within the ./InstallScripts directory.
-i, --websphere   -b, --weblogic	<i>Optional.</i> For specifying your application server.
-h	<i>Optional.</i> 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 graphical mode (the default), the script displays a graphical user interface.

## Output

The Price 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 52.

If the installation resulted in issues, see “Troubleshooting Price Installation Issues” on page 51.

---

## Installing Price from the Graphical Installer

This section describes how to use the graphical Installer.

**Note:** Make sure that your application server is running before continuing.

To install the Price using the graphical installer:

1. Ensure that you have completed “Setting Up Your Price Properties File” on page 40.
2. Set the display for the system where you want the Installer GUI to display:  

```
export DISPLAY=<IP address>:0.0
```
3. From your application server machine, enter the following command. **Note:** for more information about this command, see “Installing Price from the Command Line” on page 41.

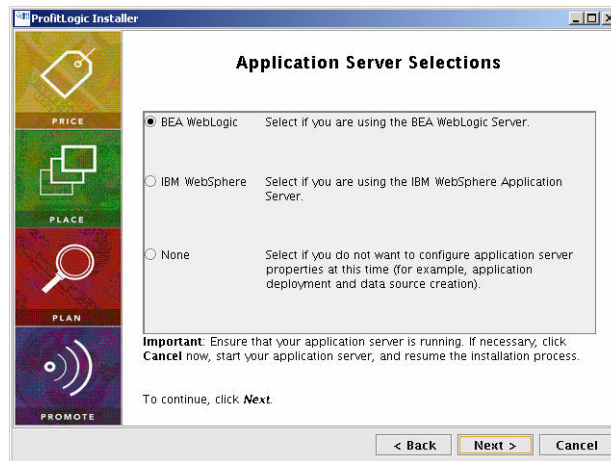
```
bash install.sh -p <path to install.properties file>
```

The **Welcome to the Price Installer** screen displays.



4. Click **Next**.

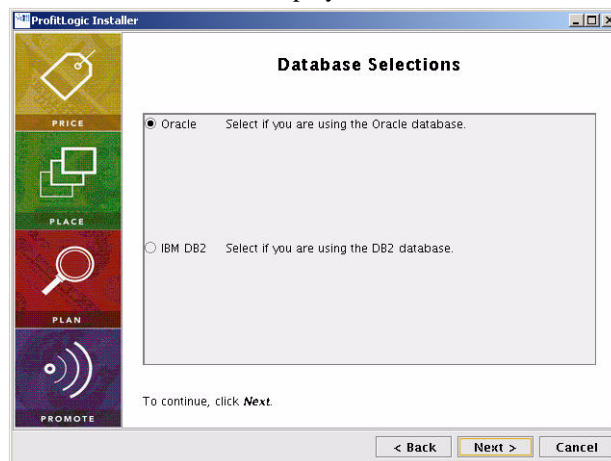
The **Application Server Selections** screen displays.



5. Specify application server options and click **Next**:

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

The **Database Selections** screen displays.

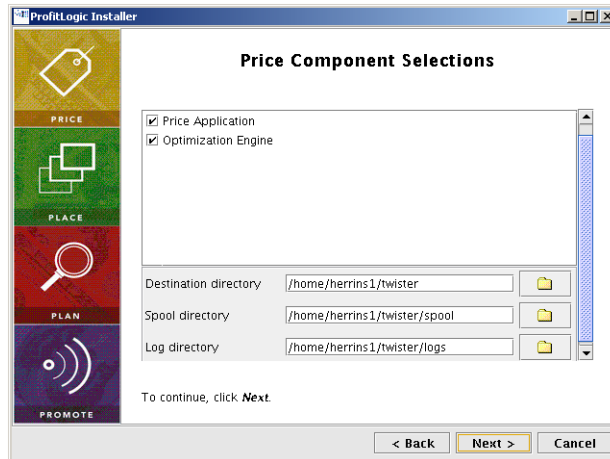


6. Specify database software options and click **Next**:

- **Oracle** - Select this to configure Oracle.

- **IBM DB2** - Select this to configure DB2.

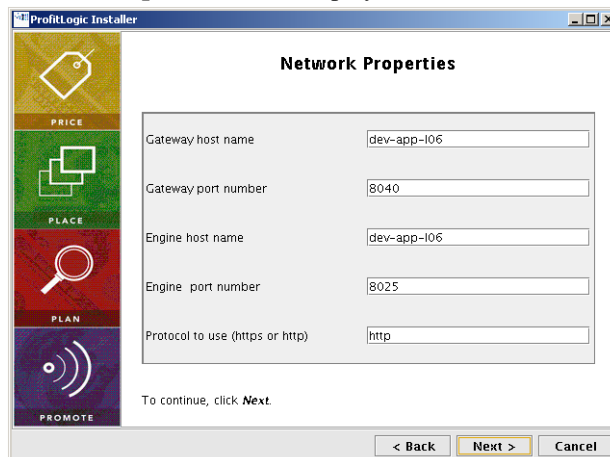
The **Price Component Selections** screen displays.



7. Specify Price options and click **Next**.

- **Price Application** - Select this to install the Price business application.
- **Optimization Engine** - Select this to install the Price calculation engine.
- **Destination Directory** - Specify the location the Price target directory.
- **Spool Directory** - Specify the path to the Price spool.
- **Log Directory** - Specify the path to the Price installation log files.

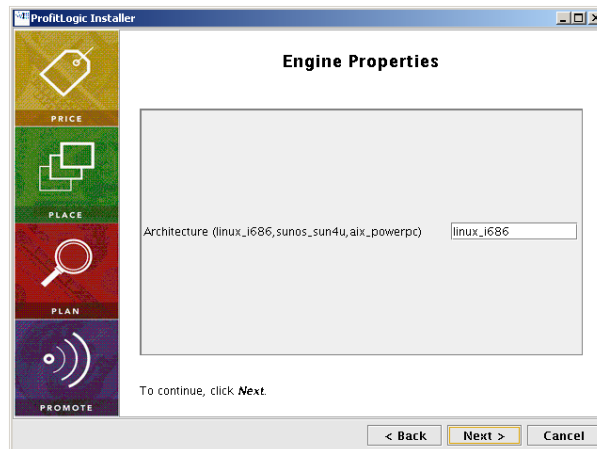
The **Network Properties** screen displays.



8. Specify network property options and click **Next**.

- **Gateway host name** - Enter the hostname or IP address of the server or load balancer hosting the user management, business rules, and Price Application.
- **Gateway port number** - Enter the port number of the gateway host.
- **Engine host name** - Enter the hostname or IP address of the server hosting the Optimization Engine.
- **Engine port number** - Enter the port number of the Engine host.
- **Protocol to use (https or http)** - Specify using lower case characters.

The **Engine Properties** screen displays.



9. Specify your operating system and click **Next**.

The **Database Properties Application Database** screen displays.

10. Specify database properties and click **Next**.

- **Database driver** - Specify the database driver.
- **Database server address** - Enter the hostname or IP address of the server where your database is installed.
- **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 datasources, EAR files, and so forth, without affecting the database.
- **Create database tables** - Select this if you are installing a new database schema for Price.
- **Upgrade database tables** - Select this if you have an existing database schema that you want to update. The installer drops all schemas and creates new ones.

The **Selection Verification** screen displays.



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

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

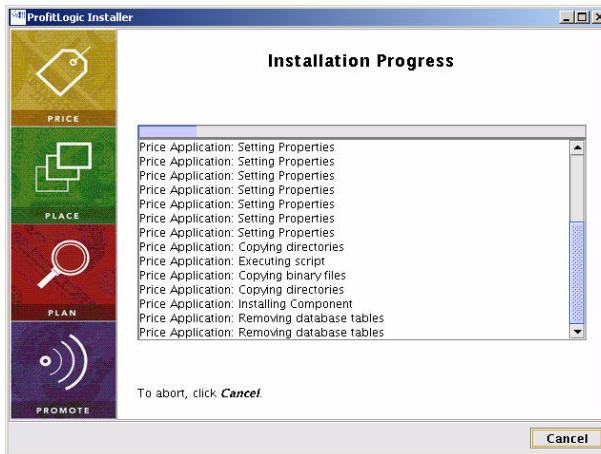
- **Back** - to modify any of the selections you have made.
- **Cancel** - to terminate the installation process. The **Installation Status** screen appears, displaying a message that the installation was cancelled by the user.

**Note:** Choosing **Cancel** on this screen 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.



12. The **Installation Progress** screen displays a high-level summary of the activities being performed. For detailed information about activities being performed, see the trace messages output to the application server console window.

If you need to stop the installation process, click **Cancel**. The **Installation Status** screen appears, displaying a message that the installation was cancelled by the user.

**Note:** Choosing **Cancel** on this screen merely stops the installation process; it does not uninstall the application.

The **Price Installation Status** screen displays.



13. Now that the installation has completed, choose either option as applicable:



- Click **View Log** to review the actions taken.
- Click **Finish** to exit the installer. When you click **Finish**, the Installer has created the Price directory structure, populated it with appropriate files, and when the installation finished, it generated a log file and two properties files.

If the installation resulted in issues, see “Troubleshooting Price Installation Issues” on page 51.

If the installation successfully completes, see “What’s Next?” on page 52.

---

## Troubleshooting Price Installation Issues

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

### Understanding Trace Output Messages

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

**Cause:** The Price 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.

**Resolution:** When troubleshooting, always refer to the relevant documentation, which will help you determine if the error message is even valid. For example, during database installation, if a error messages indicate class deployments issues, see your database software documentation. The third-party documentation will explain whether the message is spurious (and to be ignored) or valid and will explain how to correct the problem.

### Installation Does Not Complete

**Cause:** If the installation fails before the installation completes, an onscreen 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.

**Resolution:** Instead, review the onscreen trace messages to determine the origin of the error.

install-20050628-154213.log

install-2005 06 28- 15 42 13.log

install-2005 06 28- 1 54 213.log

install-<YYYYMMDD>-154213.log

### Installation Completes with Errors

**Cause:** If the installation completes but with errors, an onscreen message prompts you to review the log.

**Resolution:** Also, you may want to review the generated properties files.

---

## What's Next?

Now that you have installed the Price, restart your application server software and complete either option as follows:

- Install and configure the optional Merchant Desktop as described in Chapter 6, “Installing Merchant Desktop.”
- Load data as described in the *Configuration Guide*.
- If you want to maximize system performance, you can tune your Optimization Engine utilization.

---

# 6

## Installing Merchant Desktop

This chapter contains the following:

- “Installing the Merchant Desktop Software” on page 54
- “What’s Next” on page 61

---

## Installing the Merchant Desktop Software

In this chapter, you will install ProfitLogic's Merchant Desktop software and MicroStrategy Web Universal, which is installed automatically as part of the Merchant Desktop installation. Retail Data Mart (RDM) is also installed as part of the Merchant Desktop installation.

Before you begin, you must have installed Price, as outlined in Chapter 5, "Installing Price," on page 37.

### Retail Data Mart Considerations

RDM abstracts forecasting and historic data from Price for use with Business Intelligence (BI) tools. To do so, it abstracts a large number of its tables through synonyms from Price database tables. Note that there are installation restrictions on the use of synonyms across database links, and most of the data resides in Price. As result, you should install RDM into the same database schema as the Price schema.

RDM Stored Procedures include common classes built as part of Price. RDM Stored Procedures need to resolve these dependencies before they can successfully run. You can avoid these restrictions by installing RDM in the same schema/user as Price.

### Improving the Performance of Report Generation

The speed of data drilling during report generation depends on the number of product hierarchies used by your implementation.

To speed up data drilling performance, you can index specific hierarchy columns within the MERCHANDISE\_TBL and RDM\_MV\_ACT\_BASE2\_1 tables as required by your implementation. 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.

### Storage Requirements for RDM

Large objects in RDM could be:

- RDM\_ACTIVITES (extracted from Price)
- RDM\_FORECAST\_ACTIVITIES

The RDM\_FORECAST\_ACTIVITIES and the summary tables could 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 Dataset is 10 G, the size of Activities is 3 G, and Forecast Activities is 1 G, RDM will require an addition 4 G of space.

- RDM\_MERCHANDISE\_TBL (extracted from Price)
- The Summary tables and indexes

## Running the Merchant Desktop Installer

1. Set the JAVA\_HOME variable, using either the **export** or **install.sh** command. This example is for WebSphere:

```
JAVA_HOME=/usr/WebSphere51/AppServer/java
```

2. Load the Merchant Desktop CD into the server where you want to install Merchant Desktop.
3. Copy the reference.price.install.properties file from the CD to the Windows server, renaming the file as install.properties.
4. Edit the file, setting values applicable to your environment. Note that the example below lists the minimum required properties. You can set other values now, or you can set them later, using the Merchant Desktop installer user interface.

### WebLogic

```
basedest.basedest.unix=/ProfitLogic
```

**Note:** This value must be the same in the Price install.properties file

```
install.unix.command.shell=bash
```

```
weblogic.domain=mydomain
```

```
weblogic.server=myserver
```

```
weblogic.admin.userid=weblogic
```

```
weblogic.admin.password=password
```

```
weblogic.admin.port=7001
```

```
weblogic.home.unix=/bea/weblogic81/server
```

```
weblogic.start.unix=/usr/local/bea/projects/domains/mydomain/startWebLogic.sh
```

5. Ensure that your application server is running. Otherwise, skip to step 5.

```
export DISPLAY=xxx.xxx.x.xx:0.0 (this is the address of the computer on which you want to view the installation utility GUI)
```

**Note:** This command is in the [IP]:0.0 format

## WebLogic

```
export WL_HOME=bea/weblogic81/server
cd bea/user_projects/domains/mydomain
nohup ./startWebLogic.sh 2>&1 &
```

6. Change to the directory that contains the install.sh file, and start the Merchant Desktop installer, as follows:

```
chmod 777 install.sh
bash ./install.sh
```

7. Complete each of the installer screens as follows:

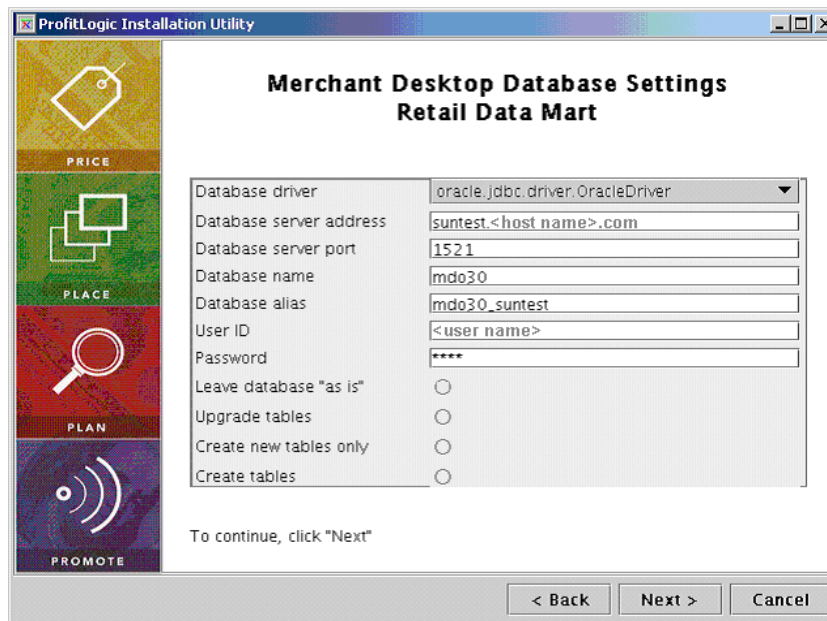
**Welcome** screen.

**Select an application server** screen - Select either WebLogic or WebSphere.

**Select a database application** screen - Select either Oracle or DB2.

**Select from the following components** screen - Select Merchant Desktop and use the same destination directory as you did for Price.

**Retail Data Mart settings** screen - This step installs the RDMSchema. If you are installing Merchant Desktop for the first time, select **Create Tables**.



The screenshot shows the 'ProfitLogic Installation Utility' window. The title bar reads 'ProfitLogic Installation Utility'. The main window has a sidebar on the left with four icons: 'PRICE' (a tag), 'PLACE' (stacked squares), 'PLAN' (a magnifying glass), and 'PROMOTE' (a signal icon). The main area is titled 'Merchant Desktop Database Settings' and 'Retail Data Mart'. It contains a table of settings:

Database driver	oracle.jdbc.driver.OracleDriver
Database server address	suntest.<host name>.com
Database server port	1521
Database name	mdo30
Database alias	mdo30_suntest
User ID	<user name>
Password	****
Leave database "as is"	<input type="radio"/>
Upgrade tables	<input type="radio"/>
Create new tables only	<input type="radio"/>
Create tables	<input type="radio"/>

Below the table, it says 'To continue, click "Next"'. At the bottom right, there are three buttons: '< Back', 'Next >', and 'Cancel'.

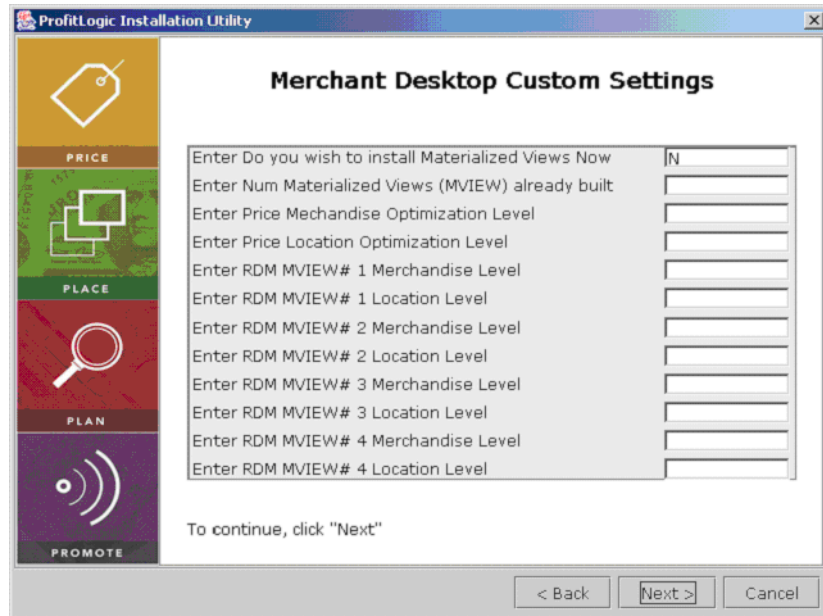


**Note:** What you select in this screen depends on your situation. Use the following table to determine which option to select:

Option	Description
Leave database “as is”	<p>Select this option when:</p> <p>You want to create (or upgrade) datasources and connections pools, but you do not want the database to be affected.</p> <p>You want to upgrade the .ears but not the database. Datasources and connections pools will still be created.</p>
Upgrade tables	<p>Select this option when you have previously installed the application and its database tables (schema) and now you want the tables to be upgraded with everything required for the current release (for example, new tables, tables updated with new columns or rows, new views, and so forth).</p> <p>Selecting this option should not affect existing data.</p> <p>After the initial installation, this is probably the option that will be used the most.</p>
Create new tables only	<p>Select this option when you want to add only new tables. Essentially, this option will ignore all existing tables and simply add any new tables.</p>
Create tables	<p>Select this option for a first-time install only. If there are any existing tables, it drops them (which deletes any data) and then recreates them.</p>

**Merchant Desktop Custom Settings** screen - Make sure **N** (for No) is entered in the first field and click **Next**. You can create the summary levels later. Otherwise, if you have already set up the summary levels, enter **Y** (for Yes) and

the hierarchy levels. For more information on hierarchy summarization levels see See “Configuring RDM and MicroStrategy Summarization Levels” on page 105.

The screenshot shows a Windows-style window titled "ProfitLogic Installation Utility". On the left is a vertical sidebar with four colored buttons: "PRICE" (orange), "PLACE" (green), "PLAN" (red), and "PROMOTE" (purple). The main area is titled "Merchant Desktop Custom Settings" and contains a list of configuration options, each with a text input field. The first option, "Do you wish to install Materialized Views Now", has the letter "N" entered. At the bottom of the window are three buttons: "< Back", "Next >", and "Cancel".

Setting	Value
Enter Do you wish to install Materialized Views Now	N
Enter Num Materialized Views (MVIEW) already built	
Enter Price Merchandise Optimization Level	
Enter Price Location Optimization Level	
Enter RDM MVIEW# 1 Merchandise Level	
Enter RDM MVIEW# 1 Location Level	
Enter RDM MVIEW# 2 Merchandise Level	
Enter RDM MVIEW# 2 Location Level	
Enter RDM MVIEW# 3 Merchandise Level	
Enter RDM MVIEW# 3 Location Level	
Enter RDM MVIEW# 4 Merchandise Level	
Enter RDM MVIEW# 4 Location Level	

**Common DB Database Settings** screen - This step installs the MDSchema. If you are installing Merchant Desktop for the first time, select **Create Tables**.

**ProfitLogic Installation Utility**

**Merchant Desktop Database Settings  
Common DB**

Database driver: oracle.jdbc.driver.OracleDriver

Database server address: suntest.<host name>.com

Database server port: 1521

Database name: mdo30

Database alias: mdo30\_suntest

User ID: <user name>

Password: \*\*\*\*

Leave database "as is": ☐

Upgrade tables: ☐

Create new tables only: ☒

Create tables: ☐

To continue, click "Next"

< Back   Next >   Cancel

**Note:** What you select in this screen depends on your situation. Use the following table to determine which option to select:

Option	Description
Leave database "as is"	<p>Select this option when:</p> <p>You want to create (or upgrade) datasources and connections pools, but you do not want the database to be affected.</p> <p>You want to upgrade the .ears but not the database. Datasources and connections pools will still be created.</p>

Option	Description
Upgrade tables	<p>Select this option when you have previously installed the application and its database tables (schema) and now you want the tables to be upgraded with everything required for the current release (for example, new tables, tables updated with new columns or rows, new views, and so forth).</p> <p>Selecting this option should not affect existing data.</p> <p>After the initial installation, this is probably the option that will be used the most.</p>
Create new tables only	<p>Select this option when you want to add only new tables. Essentially, this option will ignore all existing tables and simply add any new tables.</p>
Create tables	<p>Select this option for a first-time install only. If there are any existing tables, it drops them (which deletes any data) and then recreates them.</p>

**Summary** screen

**Finished** screen - When the Installer finishes, click **Finish**.

- Run the following script to register alerts:

## WebLogic

```
cd ../ProfitLogic/modules/tools/admin
bash ./registerAlerts.sh wls <applicationserver>:<7001>
register
```

**Note:** If you previously registered alerts, run the registerAlerts.sh script with “unregister” instead of “register.”

---

## What's Next

At this point you have installed and set up the Merchant Desktop software. Now use the following chapters to set up MicroStrategy and establish communications between MicroStrategy and Merchant Desktop.



This chapter contains the following sections:

- “Overview” on page 64
- “Installing MicroStrategy Components” on page 65
- “Installing Merchant Desktop Metadata” on page 80
- “Configuring MicroStrategy to Access the RDM Database” on page 95

---

## Overview

Read this chapter if you are using MicroStrategy, an optional business intelligence component. This chapter explains how to complete the following tasks:

- Create a MicroStrategy Metadata Repository
- Configure MicroStrategy Intelligence Server to use the new Metadata Repository
- Configure MicroStrategy Desktop so it can access the new Metadata Repository
- Install Merchant Desktop Metadata into the MicroStrategy Metadata Repository
- Configure MicroStrategy Software to point to the correct Retail Data Mart (RDM) database



---

## Installing MicroStrategy Components

Install the following products, referring to MicroStrategy documentation for guidance as needed:

- MicroStrategy Intelligence Server
- MicroStrategy OLAP Services
- MicroStrategy Desktop

---

## Configuring MicroStrategy

This section explains how to configure MicroStrategy, using the settings as described in the following table.

**Table 7-1 Database Specifications for MicroStrategy**

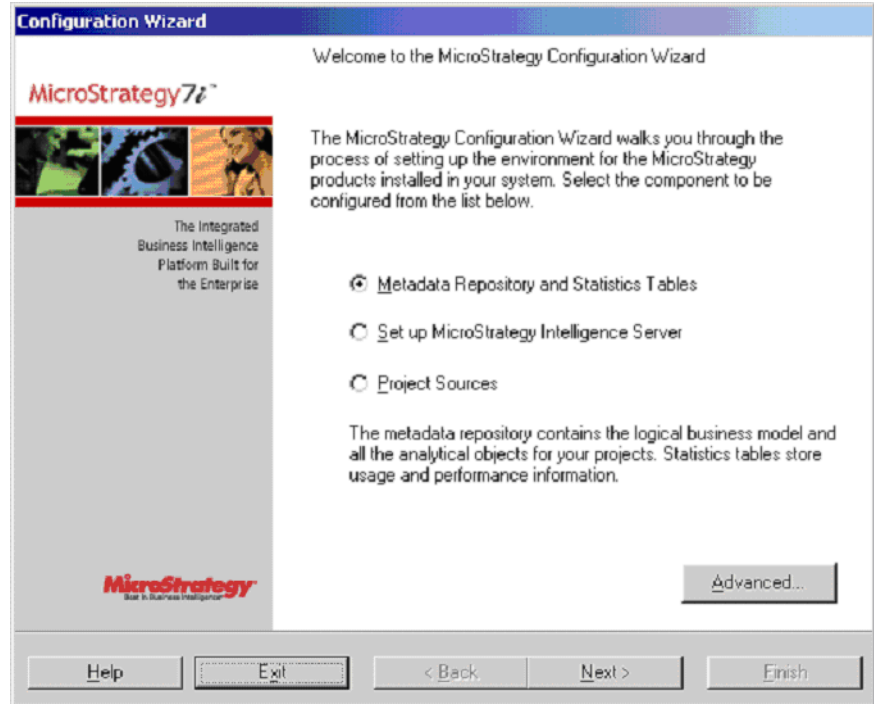
Components	Oracle	DB2
Database server	OraServer	DB2 Server
Database SID	orcl	NA
Database metadata user	metadata_user	metadata_user
Database RDM user	rdm_user	rdm_user
MicroStrategy Intelligence Server	IServer	IServer

Then use the following sections to complete the following:

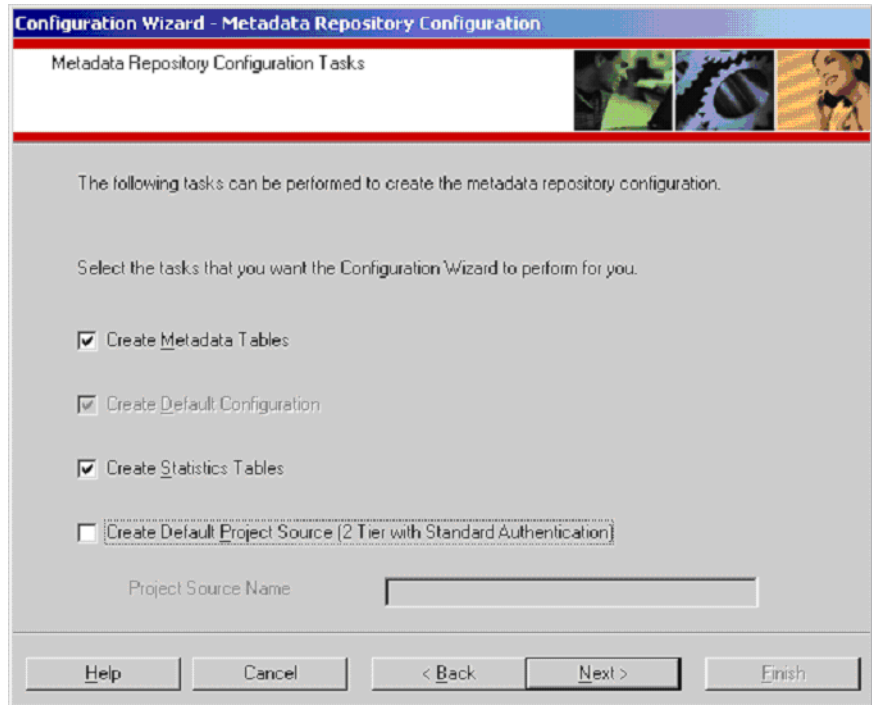
- Create a MicroStrategy Metadata Repository
- Configure MicroStrategy Intelligence Server to use the new Metadata Repository
- Configure MicroStrategy Desktop to access the new Metadata Repository

## Creating the Metadata Repository

Welcome screen - Select **Metadata Repository and Statistics Tables**:



**Configuration Tasks screen - Select Create Metadata Tables and Create Statistics Tables**



**Configuration Wizard - Metadata Repository Configuration**

Metadata Repository Configuration Tasks

The following tasks can be performed to create the metadata repository configuration.

Select the tasks that you want the Configuration Wizard to perform for you.

- ☒ Create Metadata Tables
- ☒ Create Default Configuration
- ☒ Create Statistics Tables
- ☐ Create Default Project Source (2 Tier with Standard Authentication)

Project Source Name

**ODBC Data Source Name** screen - Select **Configure repository in an ODBC database** and enter the datasource name, user name, and password. Also select **Use the same information for Statistics**

**Configuration Wizard - Metadata Repository Configuration**

ODBC Data Source Name for Metadata Repository

Select the Microsoft Access file or enter the ODBC data source name to use to connect to the metadata repository. If you want to create another data source name, click New.

☒ Configure repository in an ODBC database

ODBC Data Source Name:  
<your data source name here> New...

User Name:  
metadata\_user

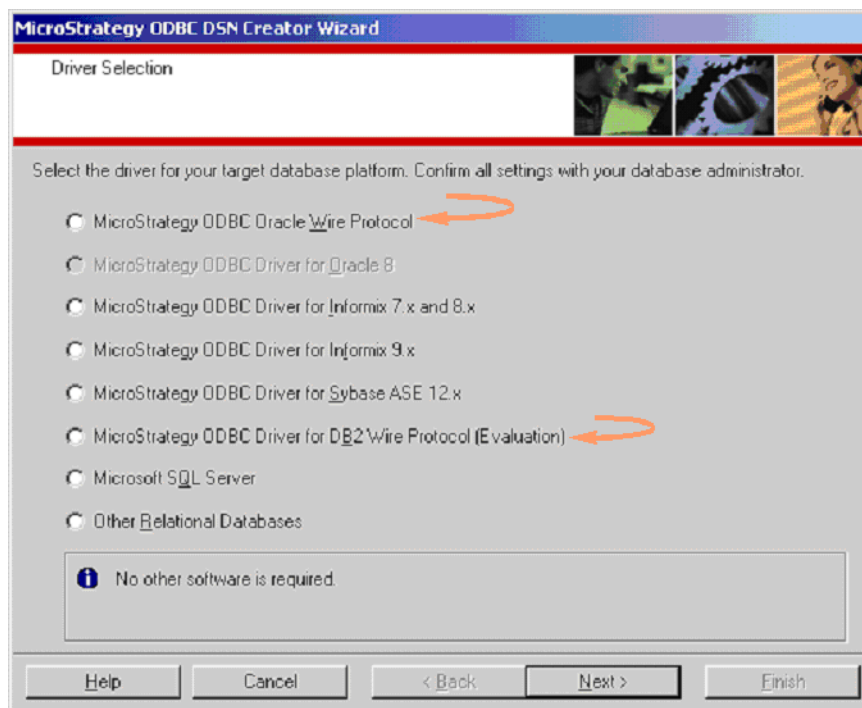
Password:  
XXXXXXXXXX

☐ Configure repository in an Access database

MD Prefix...

Help Cancel < Back Next > Finish

**Driver Selection** screen - Select one of the following drivers depending on which database you are using:



**Driver Details** screen - For Oracle, enter your specific information, as in the following example:

MicroStrategy Connectivity Configuration Wizard

Driver Details

Enter the following information to connect to Oracle using the Oracle Wire Protocol Driver.

Data Source Name: OraServer orcl metadata\_user

Host Name: OraServer

SID: orcl

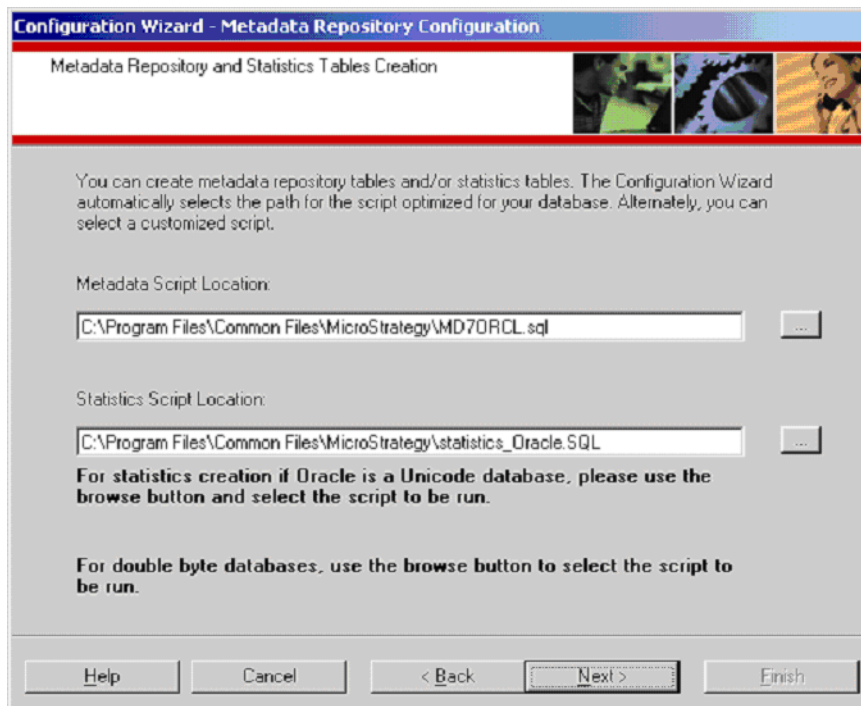
Port Number: 1521

A string that identifies this Oracle data source configuration in the system information. Examples include Accounting Or Oracle-Serv1.

Test...

Help Cancel < Back Next > Finish

**Repository and Statistics Tables Creation** screen - Browse to the location of your database. The following example shows Oracle:



**Configuration Wizard - Metadata Repository Configuration**

Metadata Repository and Statistics Tables Creation

You can create metadata repository tables and/or statistics tables. The Configuration Wizard automatically selects the path for the script optimized for your database. Alternately, you can select a customized script.

Metadata Script Location:

C:\Program Files\Common Files\MicroStrategy\MD70RCL.sql

Statistics Script Location:

C:\Program Files\Common Files\MicroStrategy\statistics\_Oracle.SQL

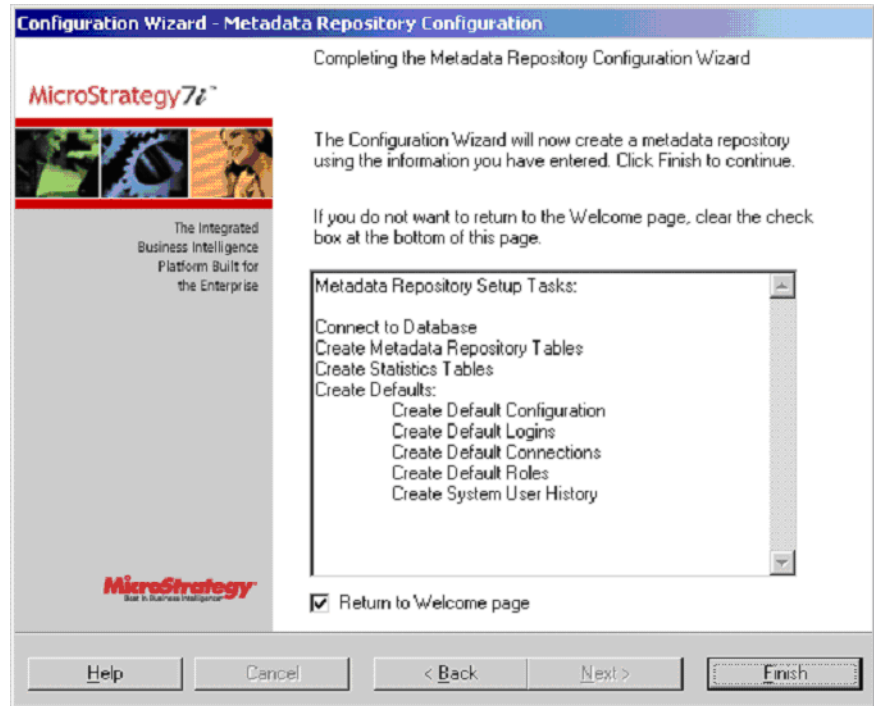
**For statistics creation if Oracle is a Unicode database, please use the browse button and select the script to be run.**

**For double byte databases, use the browse button to select the script to be run.**

Help Cancel < Back Next > Finish

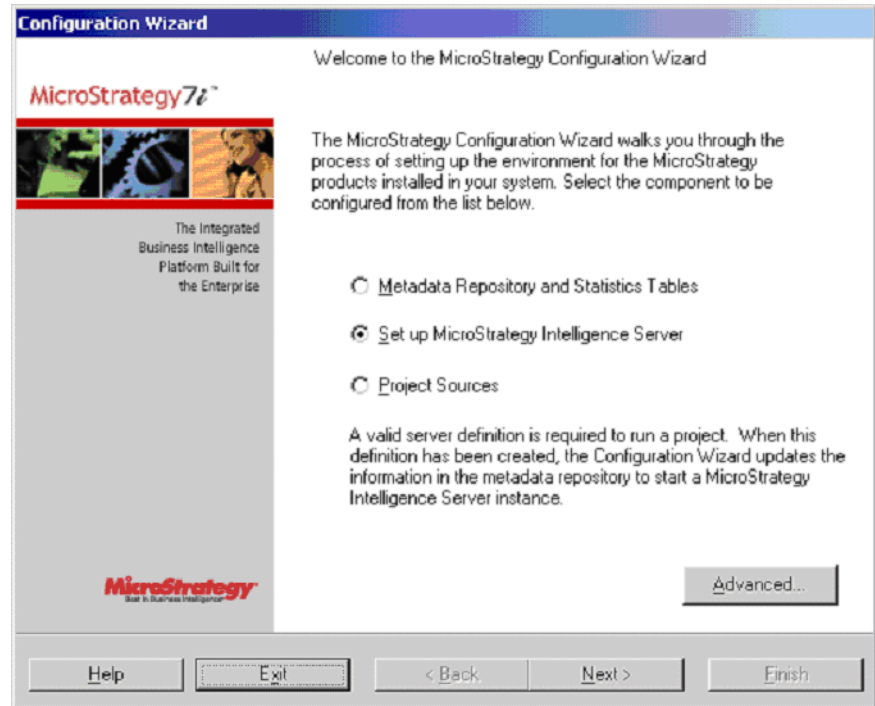


**Completing the Metadata Repository Configuration** screen - Verify that the setup tasks appear as below, and select **Return to Welcome page** so you can set up the MicroStrategy Intelligence Server.



## Configuring MicroStrategy Intelligence Server

Welcome screen - This time, select **Set up MicroStrategy Intelligence Server**



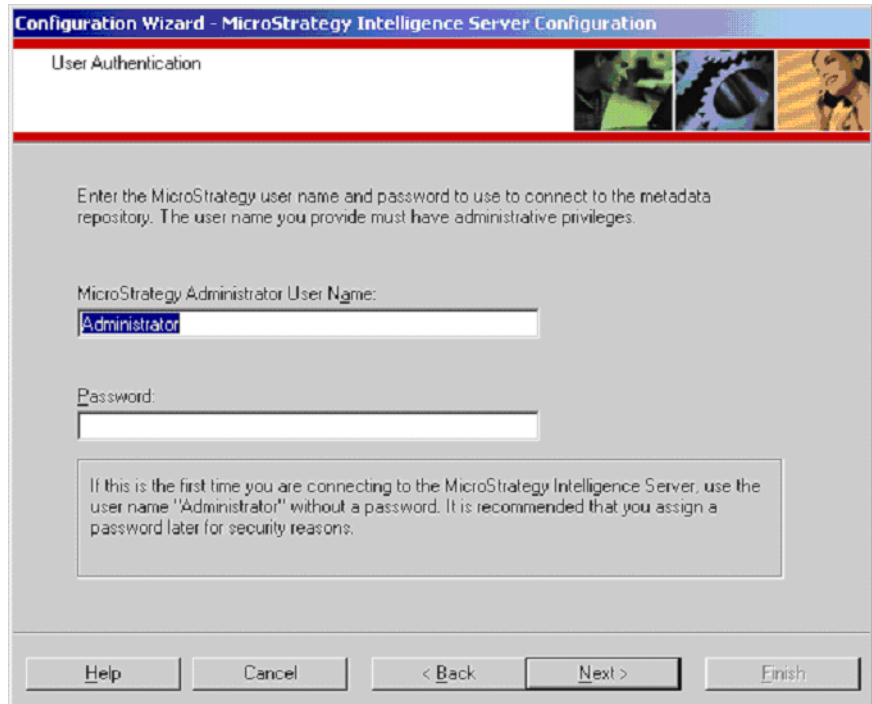
**Connect to Metadata Repository** screen - Enter the ODBC Data Source Name, User Name, and Password, and select **Use driver in multiprocess mode**

The screenshot shows a window titled "Configuration Wizard - MicroStrategy Intelligence Server Configuration". The main heading is "Connect to Metadata Repository". Below this, there is a text box with the instruction: "Select the ODBC Data Source Name that you will use to connect to the metadata repository. If you want to create another data source name, click New." The form contains several input fields and buttons:

- ODBC Data Source Name:** A dropdown menu showing "<your data source name here>" with a "New..." button to its right.
- User Name:** A text field containing "testdata" with an "MD Prefix..." button to its right.
- Password:** A text field with masked characters (dots) and a "Temp Table Prefix..." button to its right.
- ODBC Driver Execution Mode:** A group box containing two radio buttons:
  - ☒ Use driver in multiprocess mode.
  - ☐ Use driver in multithreaded mode.

At the bottom of the window are five buttons: "Help", "Cancel", "< Back", "Next >", and "Finish".

**User Authentication** screen - Make sure the user name you enter has Windows admin account privileges. You will use the same user name and password when you update the usermanagement.properties file later.



The screenshot shows a Windows-style dialog box titled "Configuration Wizard - MicroStrategy Intelligence Server Configuration". The subtitle is "User Authentication". Below the title bar, there are three small icons: a green square, a blue gear, and a yellow square with a person. The main area of the dialog has a light gray background. It contains the following text: "Enter the MicroStrategy user name and password to use to connect to the metadata repository. The user name you provide must have administrative privileges." Below this text are two input fields. The first is labeled "MicroStrategy Administrator User Name:" and contains the text "Administrator". The second is labeled "Password:" and is empty. Below the input fields is a text box with the following text: "If this is the first time you are connecting to the MicroStrategy Intelligence Server, use the user name 'Administrator' without a password. It is recommended that you assign a password later for security reasons." At the bottom of the dialog, there are five buttons: "Help", "Cancel", "< Back", "Next >", and "Finish".

Configuration Wizard - MicroStrategy Intelligence Server Configuration

User Authentication

Enter the MicroStrategy user name and password to use to connect to the metadata repository. The user name you provide must have administrative privileges.

MicroStrategy Administrator User Name:

Password:

If this is the first time you are connecting to the MicroStrategy Intelligence Server, use the user name "Administrator" without a password. It is recommended that you assign a password later for security reasons.

Help Cancel < Back Next > Finish

**Create, link, or delete a Server Definition** screen - Select **Create New Server Definition** and enter your Server Definition Name. You will use the same name later when you update the usermanagement.properties file.

Configuration Wizard - MicroStrategy Intelligence Server Configuration

Create, Link, or Delete a Server Definition

Select the operation you would like to perform with the server definitions. You can create a new definition, use an existing definition or delete a current definition.

☒ Create New Server Definition  
☐ Use Selected Server Definition  
☐ Delete Selected Server Definition

Existing Server Definitions:

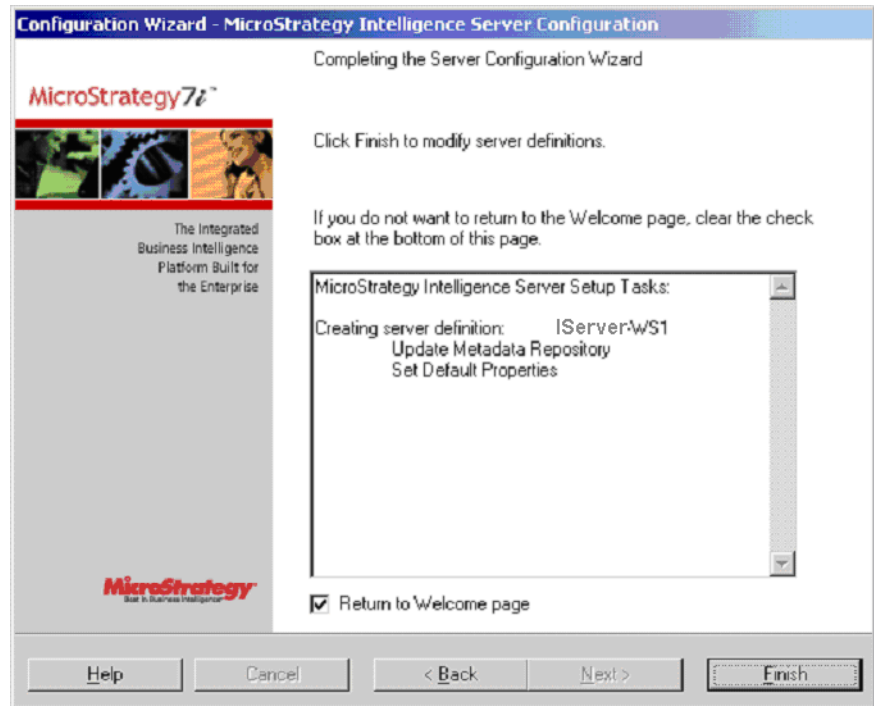
REPORT-01

Server Definition Name: IServer

Help Cancel < Back Next > Finish

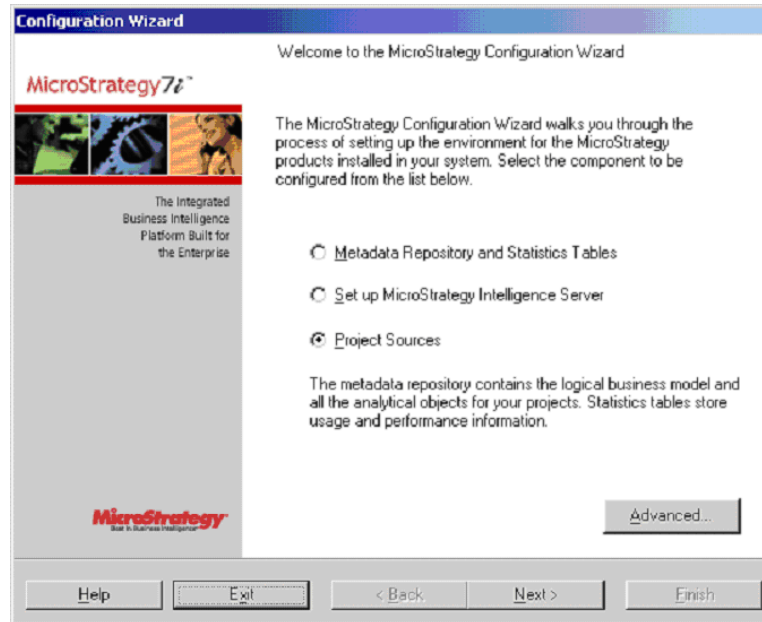
You will be prompted to choose whether to use the new server definition by default. Click **Yes**.

**Completing the Server Configuration Wizard** screen - Verify the server setup tasks are correct and click **Finish**



## Configuring MicroStrategy Desktop

Complete the Project Sources wizard.



---

## Installing Merchant Desktop Metadata

Since the metadata describes everything that allows MicroStrategy to work with ProfitLogic's Retail Data Mart (RDM), migrating the metadata must be done before you can create reports.

This procedure should be done before users are added to the user management tables.

## Prerequisites

Before you begin, make sure you have already done the following:

- MicroStrategy Intelligence Server must be installed
- A MicroStrategy Metadata Database must be created and the MicroStrategy Intelligence Server configured to use the new Metadata Database
- MicroStrategy Desktop must be installed either on the same computer as the MicroStrategy Intelligence Server or a different computer

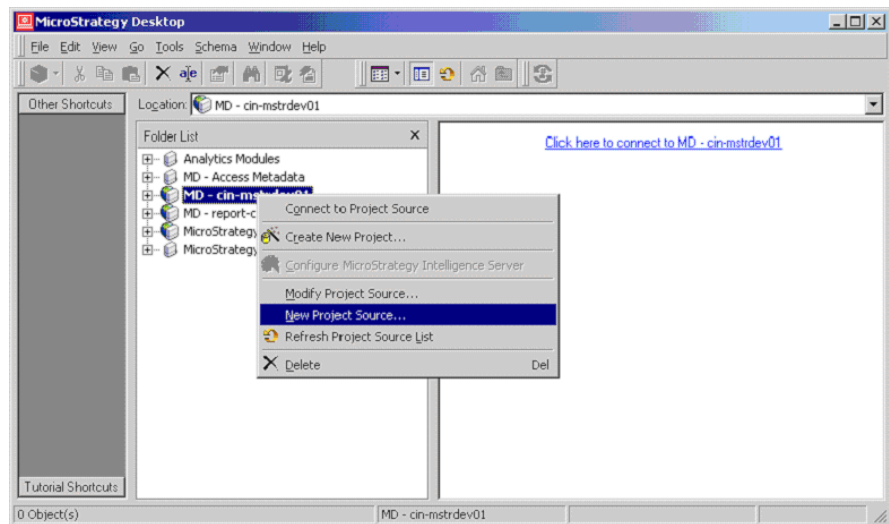
## Migrating the Metadata

On a machine with MicroStrategy Desktop installed:

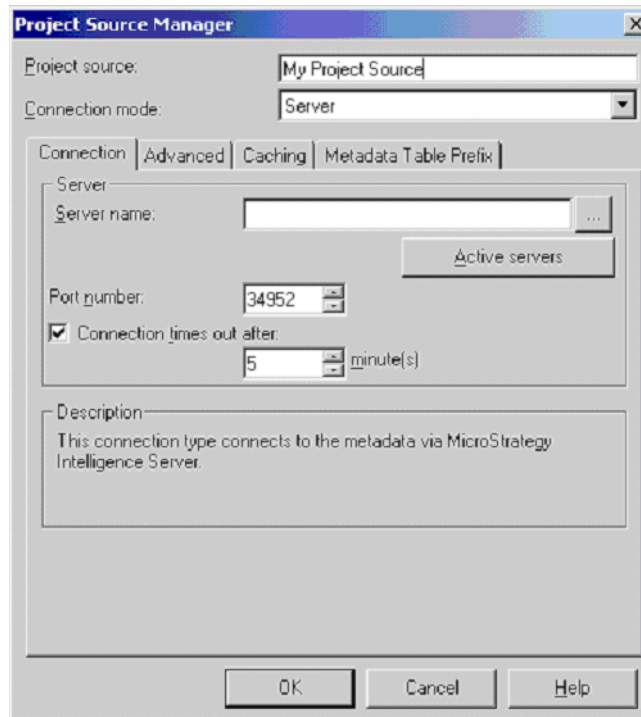
1. Create a project source that points to the correct Intelligence Server (one time only)



## 2. Select New Project Source

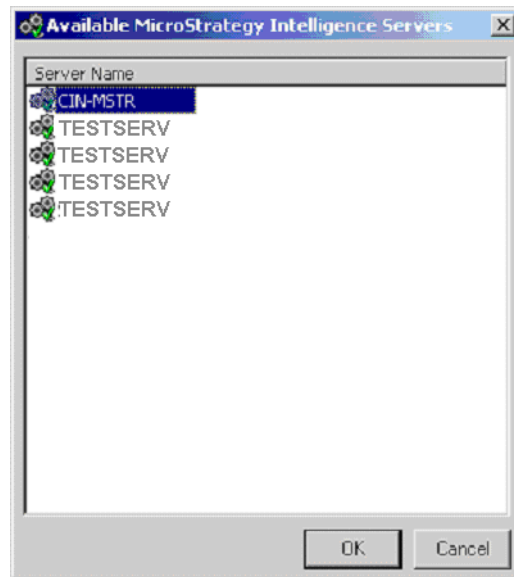


3. Select a name for the Project source and click **Active Servers**



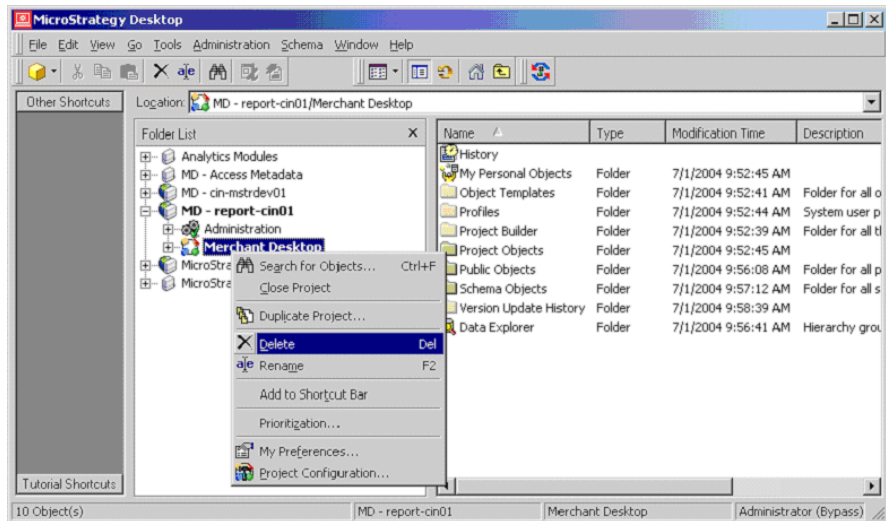
The image shows the "Project Source Manager" dialog box. At the top, there is a title bar with the text "Project Source Manager" and a close button. Below the title bar, there are two input fields: "Project source:" with the text "My Project Source" and "Connection mode:" with a dropdown menu showing "Server". Below these fields are four tabs: "Connection", "Advanced", "Caching", and "Metadata Table Prefix". The "Connection" tab is selected. Inside the "Connection" tab, there is a section labeled "Server" with a "Server name:" input field and a button with three dots. To the right of this section is a button labeled "Active servers". Below the "Server name" field is a "Port number:" input field with the value "34952". Below the port number is a checkbox labeled "Connection times out after:" which is checked, followed by a spin box with the value "5" and the text "minute(s)". At the bottom of the dialog box are three buttons: "OK", "Cancel", and "Help".

4. Select your Intelligence Server and click **OK** to return to the Project Source Manager screen.



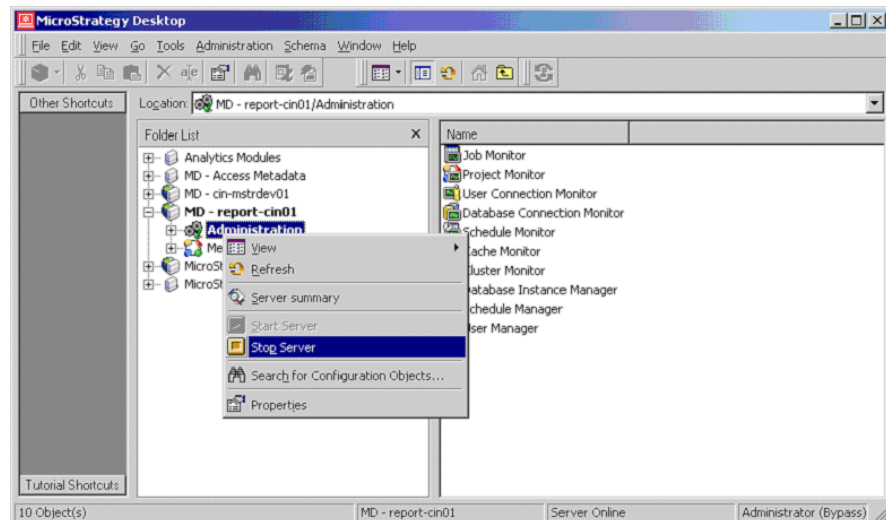
5. Click **OK** to Create Project Source.
6. Delete any old projects, if they exist:
  - Open and connect to the Merchant Desktop project source
  - Double click the project source, then double click the Merchant Desktop project

- Right click the Merchant Desktop project and select **Delete**

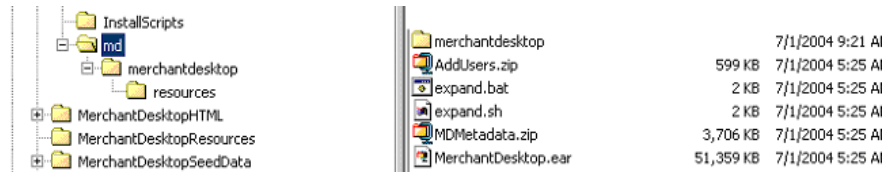


#### 7. Stop the Intelligence Server

- Right click project **Source > Administration > Stop Server** or **Administration > Server > Stop Server**



8. Start the Intelligence Server by using the same process shown above.
9. Copy the MDMetadata.zip file from the CD:



Unzip and copy Access Metadata Database (MDMetadata.mdb) to a directory on the machine that has MicroStrategy Desktop.

10. Setup the Project source for Access Metadata.

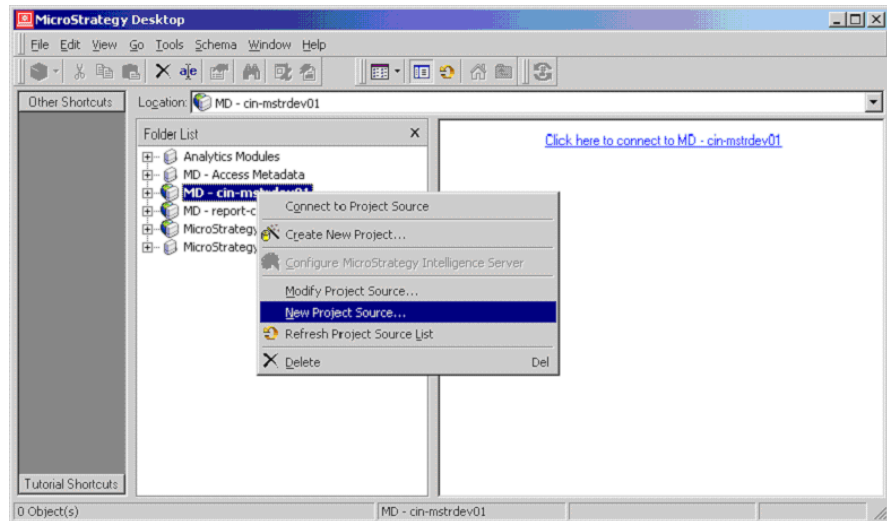
**Note:** This needs to be done only the first time you are installing.

Have the Merchant Desktop Access Metadata Database on the location machine, i.e., C:\temp\MDMetadata.mdb.

Create an Access ODBC data source pointing at the access data base in C:\temp\MDMetadata.mdb. The ODBC Datasource is MDMetadata in this example.

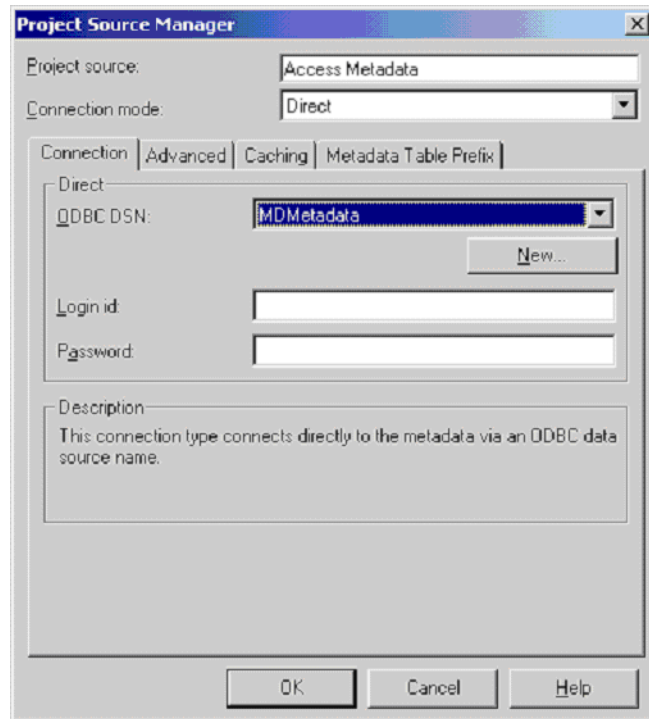
- Launch ODBC Manager
- Click **System DSN**
- Click **New**
- Select **Microsoft Access Driver (\*.mdb)**
- Click **Finish**
- Click **Select** in the database section
- Select C:\temp\MDMetadata.mdb
- Click **OK**
- Click **OK**
- Launch MicroStrategy Desktop

- Right click on a project source and select **New Project Source**



- Change the connection mode to **direct**

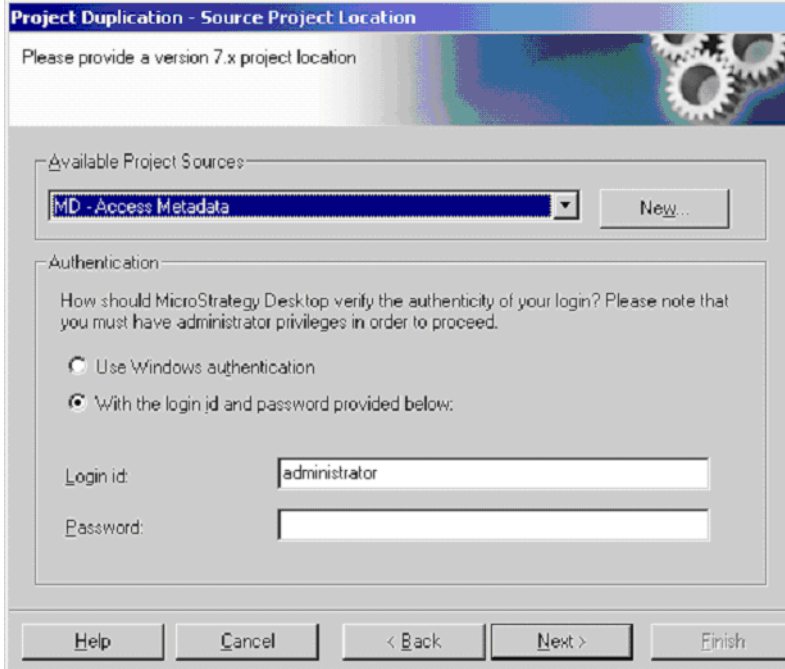
- Select the ODBC Data Source pointing at the Access Metadata database (MDMetadata)



- Click **OK**
- Click **OK** when you are prompted about login

11. Duplicate access Metadata database into the Intelligence Server:

- Schema > Duplicate Project



**Project Duplication - Source Project Location**

Please provide a version 7.x project location

Available Project Sources:

MD - Access Metadata [v]  
New...

Authentication:

How should MicroStrategy Desktop verify the authenticity of your login? Please note that you must have administrator privileges in order to proceed.

☐ Use Windows authentication

☒ With the login id and password provided below:

Login id: administrator

Password:

Help Cancel < Back Next > Finish



- Select the project your created earlier:

**Project Duplication - Source Project Selection**

Please select the project you would like to duplicate from the list below:

Available projects:

Name
Merchant Desktop

Selected project:

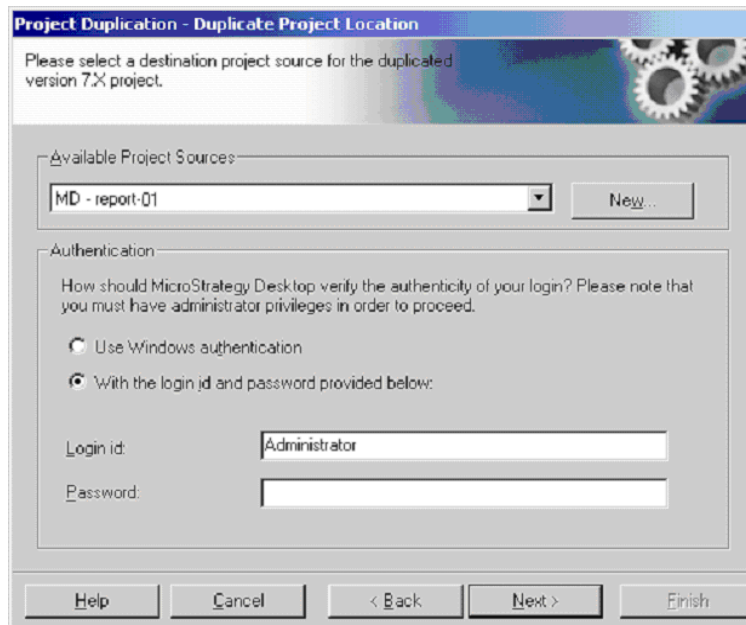
Merchant Desktop

Project Description:

Merchant Desktop

Help Cancel < Back Next > Finish

- Select the location for your duplicated project source



**Project Duplication - Duplicate Project Location**

Please select a destination project source for the duplicated version 7.X project.

Available Project Sources:

MD - report-01 New...

Authentication

How should MicroStrategy Desktop verify the authenticity of your login? Please note that you must have administrator privileges in order to proceed.

☐ Use Windows authentication

☒ With the login id and password provided below:

Login id: Administrator

Password:

Help Cancel < Back Next > Finish

- Change destination project name from Duplicated Merchant Desktop to Merchant Desktop:

**Project Duplication - Duplicate Project Creation**

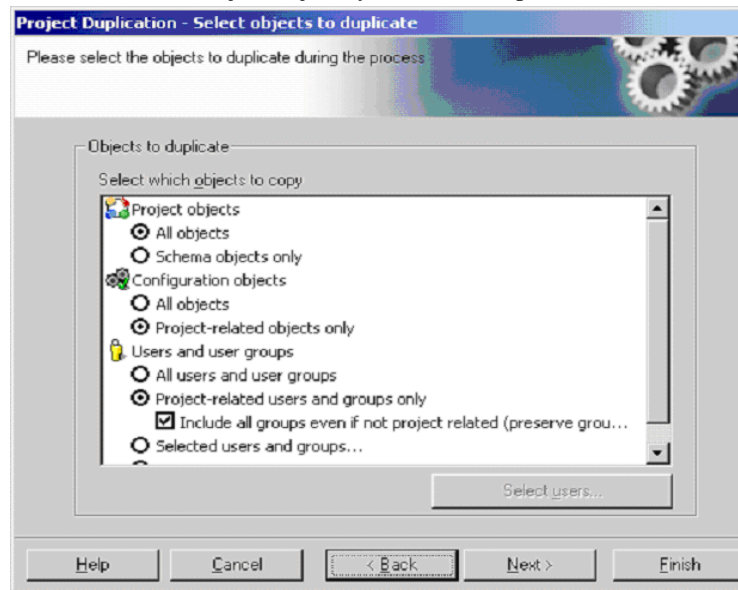
Enter the name and description for the duplicated destination project:

Destination project name:  
Merchant Desktop

Destination project description (optional):  
Merchant Desktop

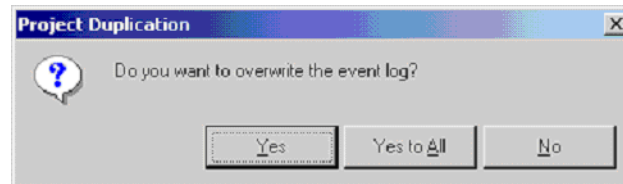
Help Cancel < Back Next > Finish

- Select the Project objects you want to duplicate

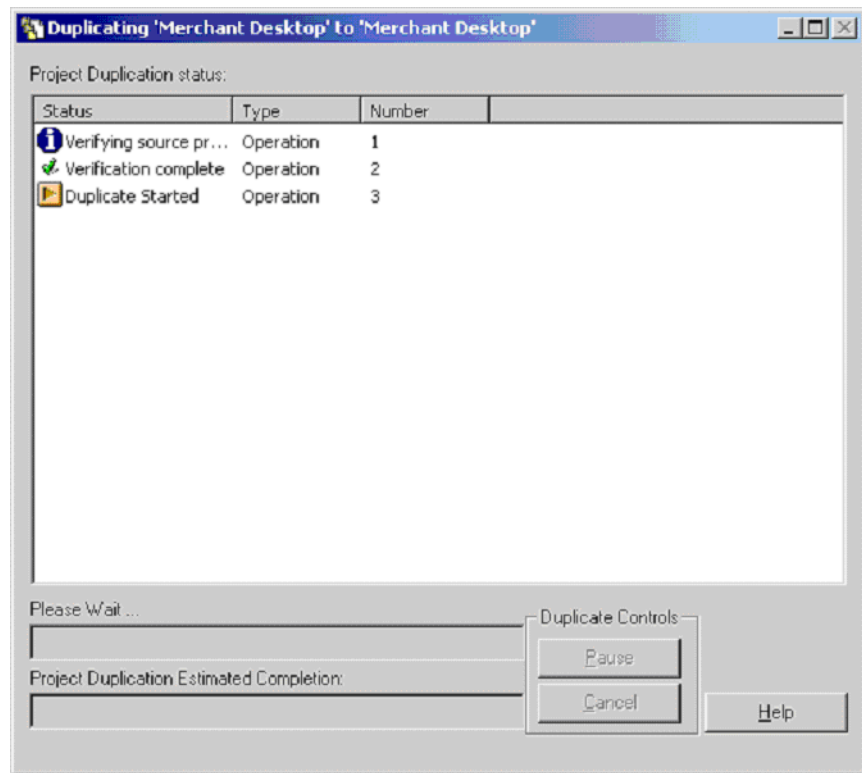


12. Select **Finish**.

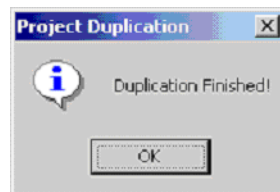
13. Click **Yes to All**.



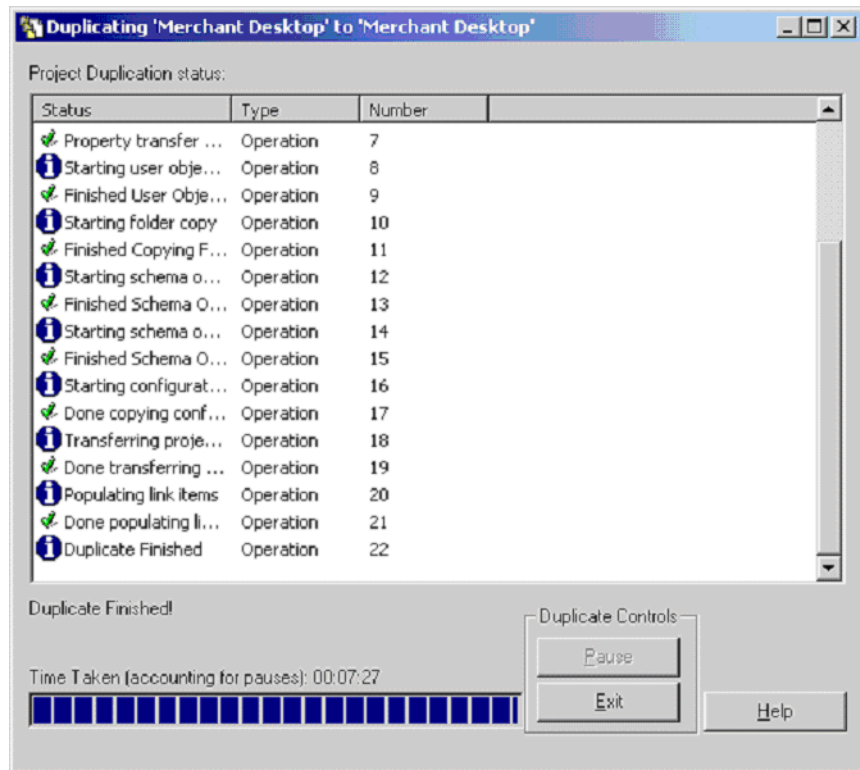
14. The following window will open:



This can take up to 20 minutes to run, but should typically take about eight minutes. When the duplication is complete, you will see the following:



15. Click **OK**. Click **Exit** on the following screen:



The Merchant Desktop Metadata has been migrated to the new server.

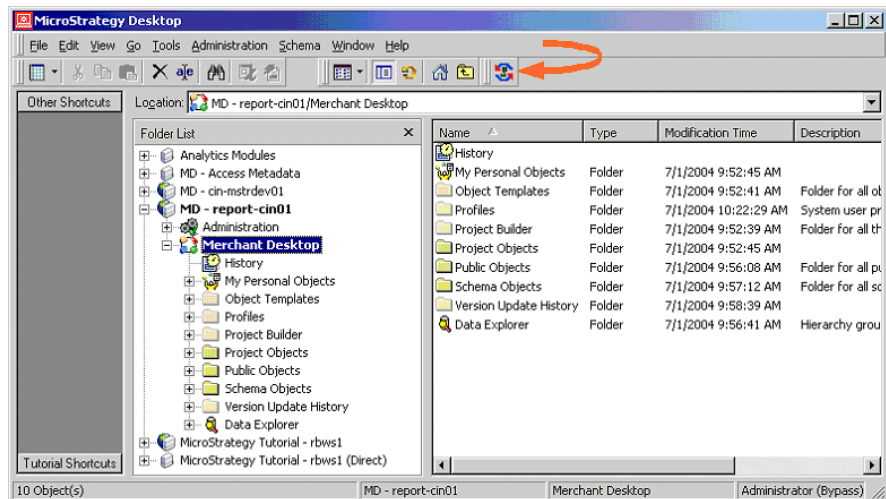
## Configuring MicroStrategy to Access the RDM Database

In this section you will configure MicroStrategy to point to the correct RDM database.

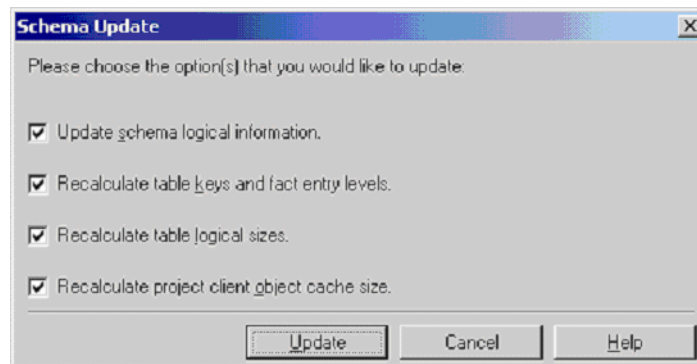
### Fixing Attributes

Refer to “Configuring RDM and MicroStrategy Summarization Levels” on page 105 for information.

1. Execute a Schema Refresh by going to **Schema > Update Schema** or by clicking the Schema Update icon as show below:



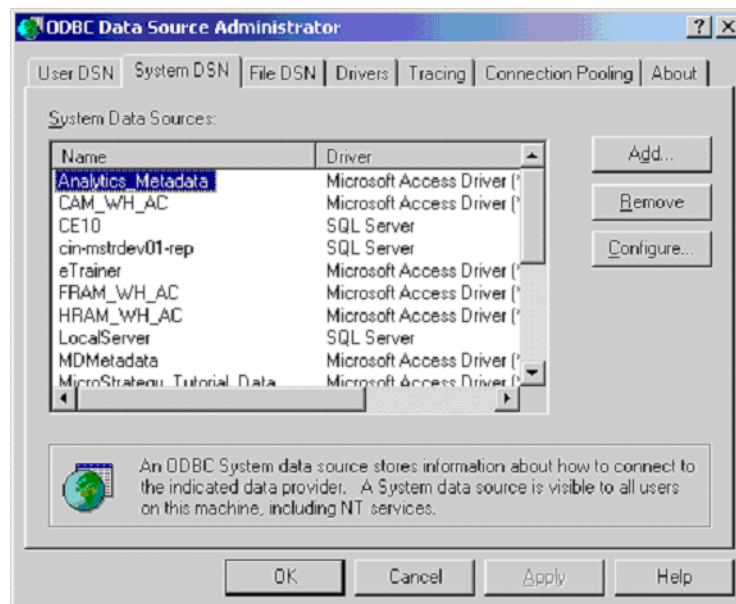
2. Click **Update**.



## Creating the Database Connection

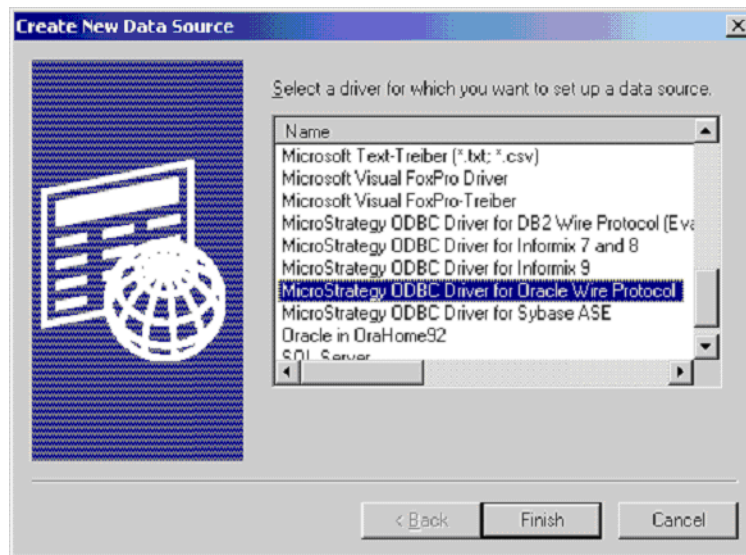
In this section you will create an ODBC System DSN connection to the RDM database.

1. Navigate to **Start > Settings > Control Panel > Administrative Tools > Data Sources (ODBC)**. Click the **System DSN** tab, select the data source, and click **Add**:

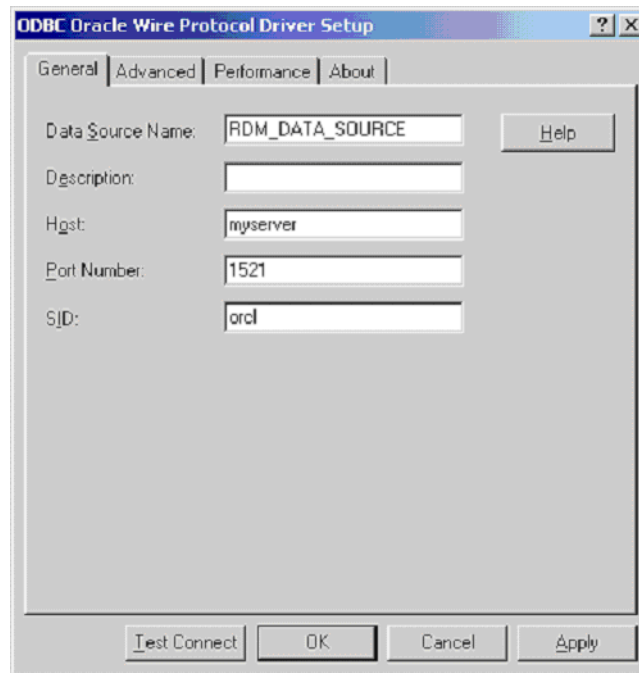




2. Select the MicroStrategy ODBC Driver for the appropriate database.

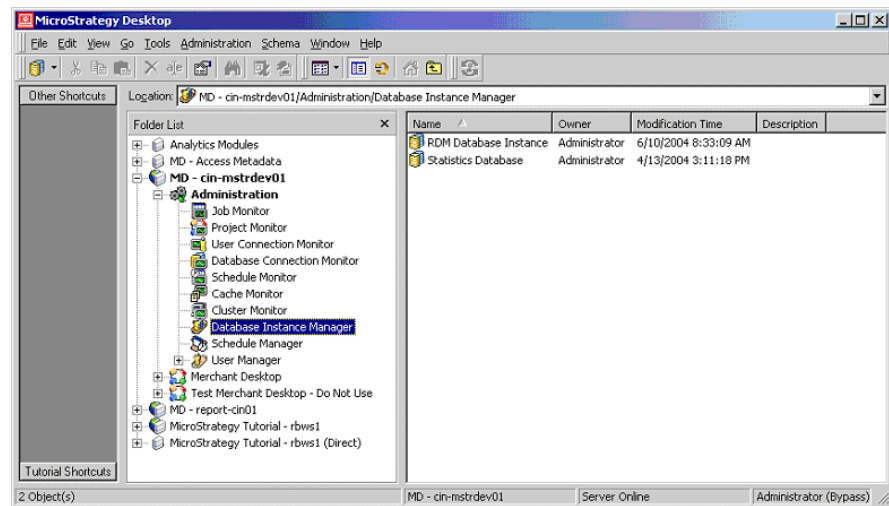


3. Modify the MicroStrategy Configuration to point the RDM database instance.

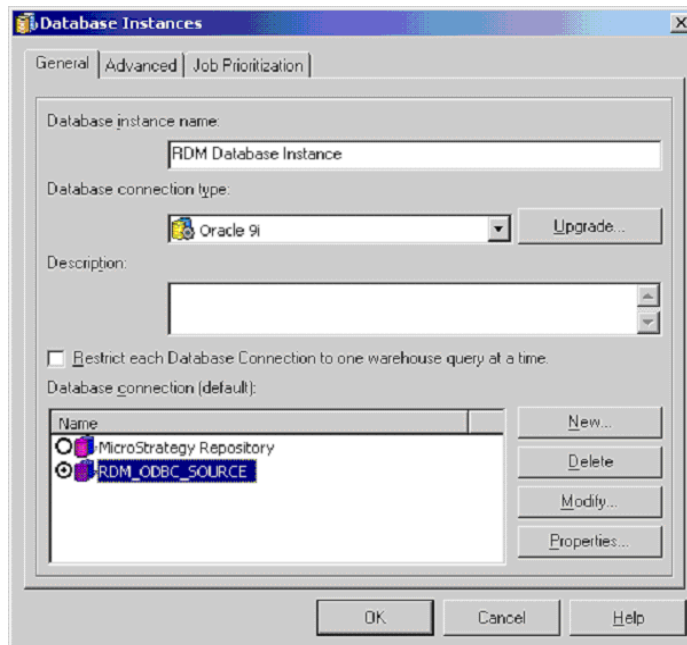


4. Open MicroStrategy Desktop
5. Navigate to **Project Source > Database Instance Manager**

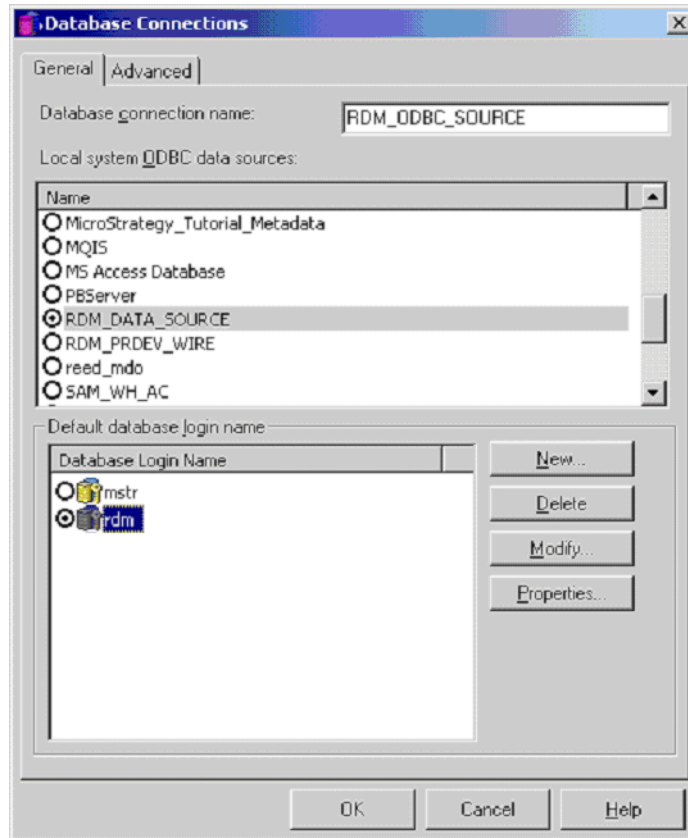
6. Select the RDM Database Instance



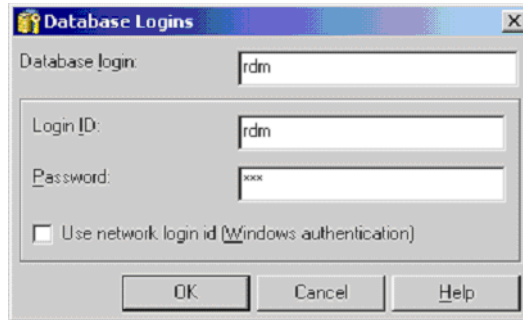
7. Select the RDM\_ODBC\_SOURCE and click **Modify**



8. Select the ODBC\_DATA\_SOURCE for the database (created above), RDM\_DATASOURCE. Click **New** in the Default Database Login Name if your login does not already exist.



9. Enter an alias and user name/password for the database where the RDM is installed.



The image shows a Windows-style dialog box titled "Database Logins". It contains three text input fields: "Database login:" with the text "rdm", "Login ID:" with the text "rdm", and "Password:" with masked characters "xxxx". Below these fields is a checkbox labeled "Use network login id (Windows authentication)" which is currently unchecked. At the bottom of the dialog are three buttons: "OK", "Cancel", and "Help".



# **Integrating Merchant Desktop with MicroStrategy**

This chapter contains the following sections:

- “Overview of the Integration Configuration” on page 104
- “Configuring RDM and MicroStrategy Summarization Levels” on page 105
- “Configuring the Display of Hierarchy Levels” on page 121
- “Configuring the User Link” on page 122
- “What’s Next” on page 127

---

## Overview of the Integration Configuration

By now you have installed Merchant Desktop as described in x-ref and you have installed and configured MicroStrategy as described in x-ref.

This chapter explains the following final tasks that enable Merchant Desktop and Price to share data:

- Configure RDM/MicroStrategy Summarization Levels (if you want to enable reports)
- Perform basic configuration of Price, hierarchies, and so forth
- Update MicroStrategy schema configuration after data is loaded
- Install and configure the user link between ProfitLogic Common Components and MicroStrategy



## Configuring RDM and MicroStrategy Summarization Levels

The setup of MicroStrategy metadata attributes must match the optimization and summarization levels created in the RDM database. If the MicroStrategy metadata and the Retail Data Mart (RDM) summarization levels do not match, it is likely the pre-configured reports will execute with errors or return empty result sets.

There is a distinction in metadata attribute definitions at optimization level, summary level, and between summary levels. All metadata hierarchy attribute definitions are based on two summary levels, but the same concepts apply regardless of the number of summary levels. The location attributes have only two summary levels, but one summary level is the same as the optimization level. If a level of the hierarchy exists at both a summary level and the optimization level, all the 'tables' from both levels must be present in the attribute definition. An example of this is the 'Location Hierarchy4' (Price Zone) attribute documented on "Optimization Level Location Attribute Configuration" on page 117.

The following sections use the "product hierarchyN" notation for attribute names. If the metadata has been configured for a specific data set, you need to specify the correct attribute. For example, in the Example Data provided below, the "product hierarchy3" attribute becomes the "division" attribute.

**Note:** To improve performance when you drill through reports, add indexes to the RDM tables for the summary levels.

**Note:** The following sample, Example Data, uses the default settings provided with the application is for a mid-size data set.

### Summary Level Attribute Definitions

- Between summary levels, the attribute definition must include the following tables:
  - Hierarchy tables for summary/optimization levels at or below the attribute level only
- At a summary level, the attribute definition must include the following tables:
  - Hierarchy tables for summary/optimization levels at or below the attribute level.
  - Materialized views for activities and forecast activities summary views at the attribute level.

- At optimization level (or summary level 0), the attribute definition must include the following tables:
  - Hierarchy tables for summary level 0
  - Materialized views for activities and forecast activities at or below the attribute level
  - Detail level tables (rdm\_activities, rdm\_forecast\_activities, rdm\_budgets, rdm\_hist\_markdowns, rdm\_item\_data, rdm\_items\_tbl)

### Product Hierarchy Summary Views for Attributes

- Product Hierarchy Summary views for attributes are:
  - Rdm\_merchandise\_vw\_{N} Where {N} is <= the highest summary level defined at or below the attribute level.

In the Example Data set:

Product Hierarchy1, 2, 3, 4 include summary levels 0, 1, 2

Product Hierarchy5 includes summary levels 0, 1

Product Hierarchy6, 7, 8 include only summary level 0

### Location Hierarchy Summary Views for Attributes

- Location Hierarchy Summary views for attributes are:
  - Rdm\_location\_vw\_{N} - Where {N} is <= the highest summary level defined at or below the attribute level.

In the Example Data set:

Location Hierarchy1, 2, 3 include summary levels 0, 1, 2

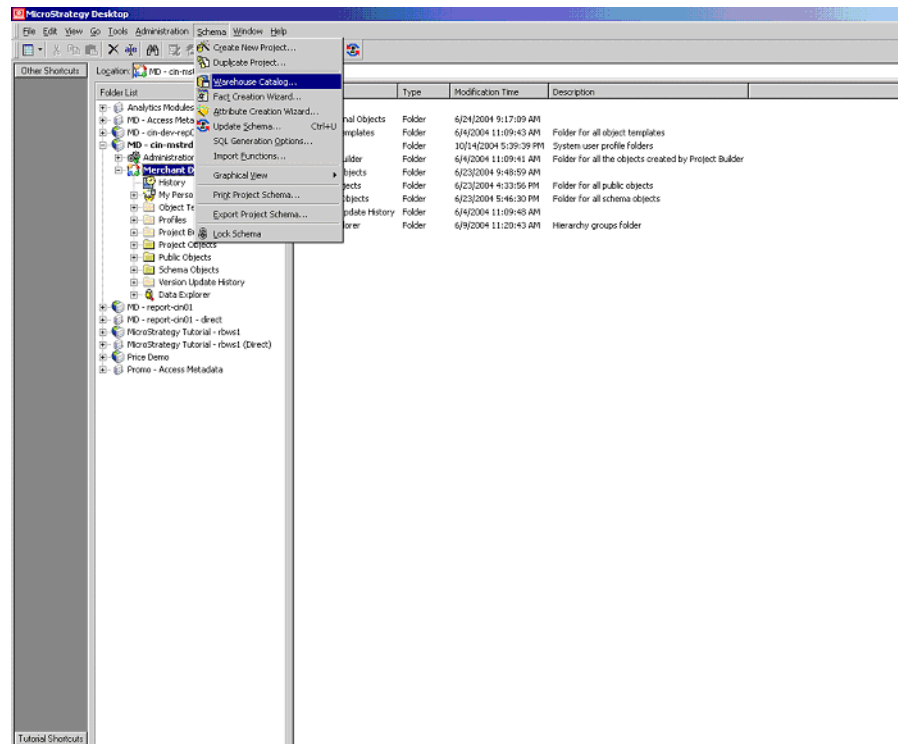
Location Hierarchy4 includes summary levels 0, 1

For Example Data, these levels are:

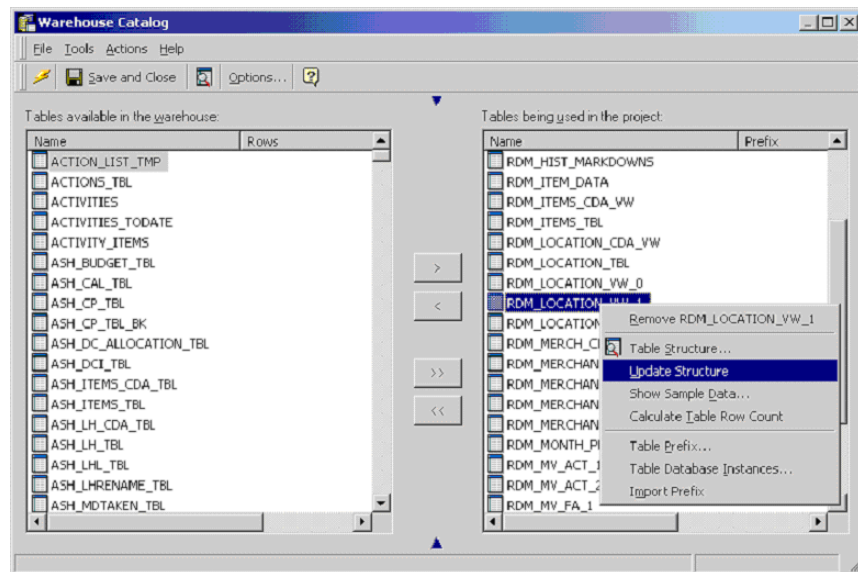
	Product Hierarchy (in Price)	Location Hierarchy (in Price)
Optimization Level (Summary Level 0)	8	4
Summary Level 1	5	4
Summary Level 2	4	3

If the new summary levels for either hierarchy are below the levels listed above, do the following:

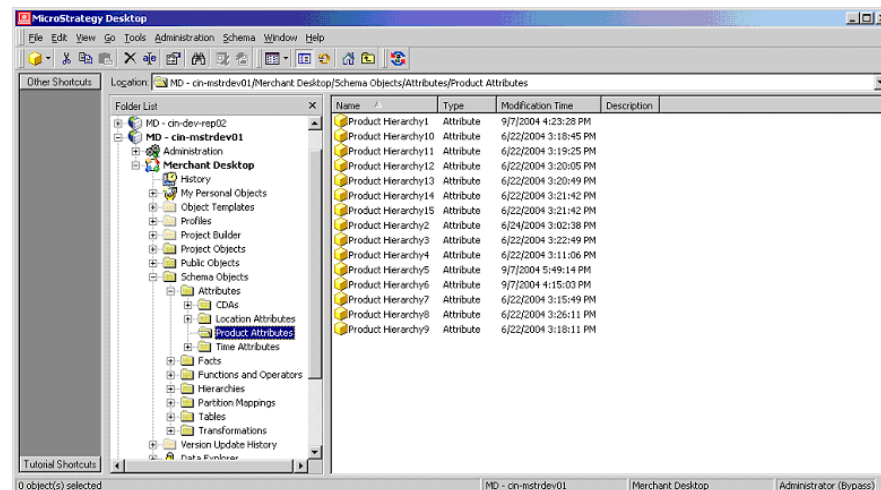
1. From the MicroStrategy Desktop, select **Schema > Warehouse Catalog**



2. Select the summary tables and update the schema:



3. Access the Edit Attribute screen by going to **Project > Schema Objects > Attributes**. This will allow the correct values below to be available for lower (higher number) levels of the hierarchies:



## “Between” Summary Levels Product Attribute Configuration

Any Product attribute “between” summary levels (or above the highest summary level) should resemble the following:

**Note:** It should include all merchandise hierarchy views at or below the level of the attribute.

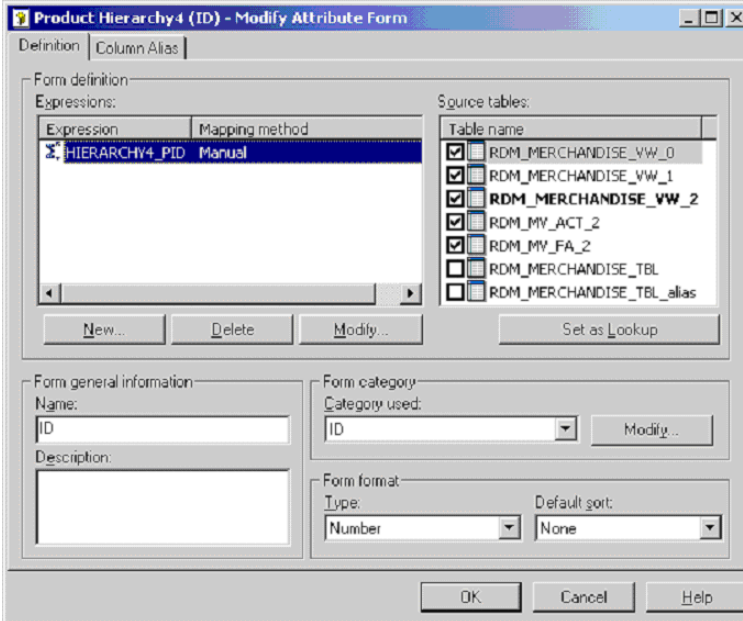
In the Example Data Set, the product hierarchy “between” levels are:

- 1, 2, 3, (Between summary level 2 and the root of the hierarchy tree)
- 6, 7 (Between optimization level (summary level 0) and summary level 1)

Product Hierarchy1 (above Summary Level 2)

**Note:** In all the charts, the highlighted hierarchy summary view is 'lookup' for the attribute. The correct 'lookup' is the highest hierarchy view that includes the attribute.

To make a modification, click **Modify** on the above screen, then click the boxes next to the appropriate summary level tables:



**Product Hierarchy4 (ID) - Modify Attribute Form**

Definition | Column Alias

Form definition:

Expression	Mapping method
HIERARCHY4_PID	Manual

Source tables:

Table name
<input checked="" type="checkbox"/> RDM_MERCHANDISE_VW_0
<input checked="" type="checkbox"/> RDM_MERCHANDISE_VW_1
<input checked="" type="checkbox"/> RDM_MERCHANDISE_VW_2
<input checked="" type="checkbox"/> RDM_MY_ACT_2
<input checked="" type="checkbox"/> RDM_MY_FA_2
<input type="checkbox"/> RDM_MERCHANDISE_TBL
<input type="checkbox"/> RDM_MERCHANDISE_TBL_alias

New... Delete Modify... Set as Lookup

Form general information:

Name: ID

Description:

Form category:

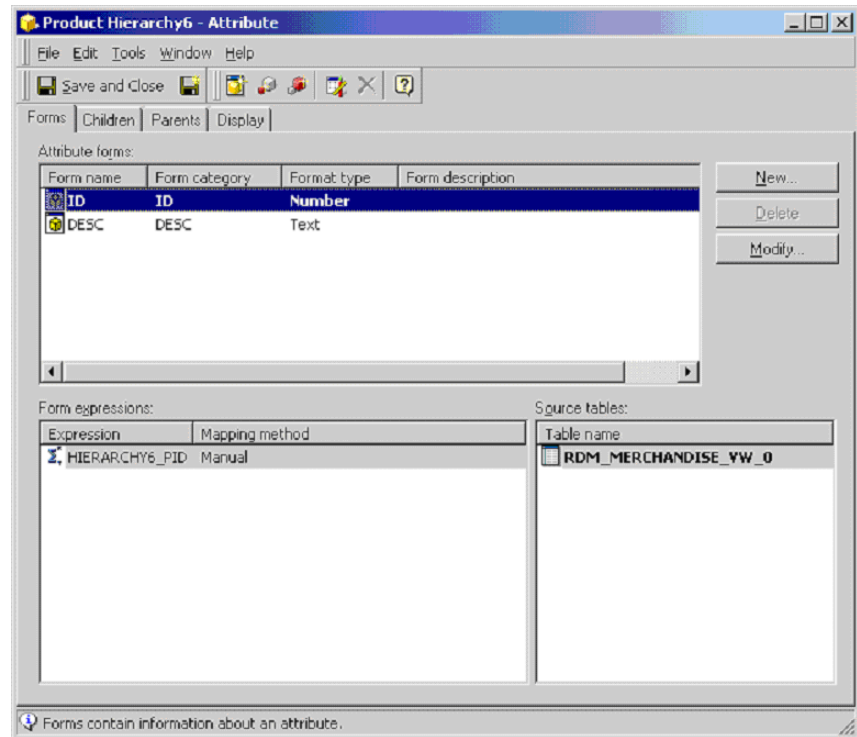
Category used: ID Modify...

Form format:

Type: Number Default sort: None

OK Cancel Help

Product Hierarchy 6 - Between optimization level (Summary level 0) and summary level 1



## “At” Summary Levels Product Attribute Configuration

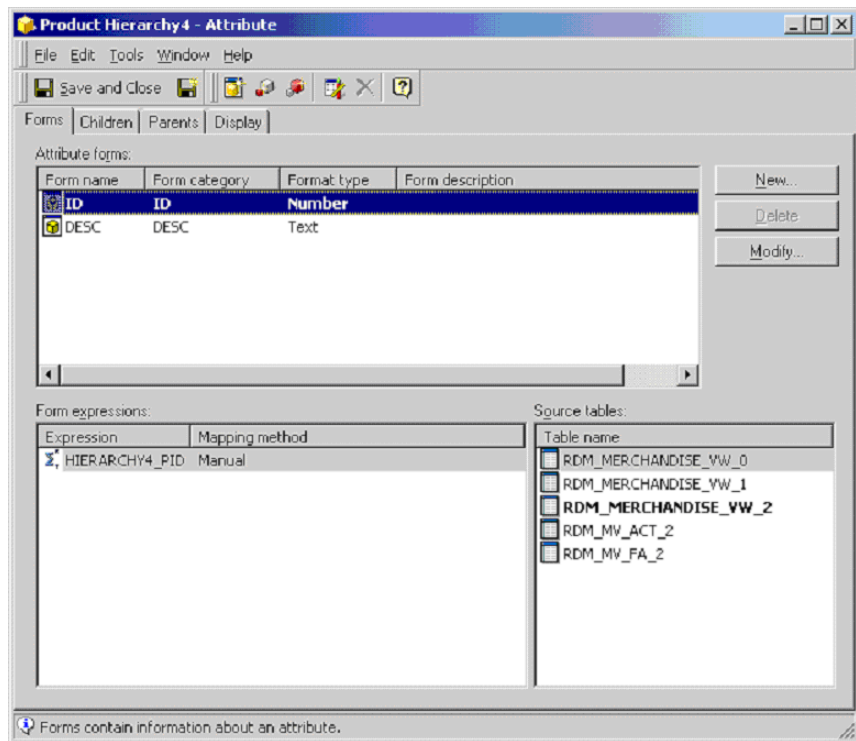
Any Product Attribute 'at' a summary level should resemble the following:

**Note:** It should include all merchandise hierarchy views at or below the level of the attribute plus the `rdm_mv_act_{N}` and `rdm_mv_fa_{N}` where {N} = the summary level defined for this attribute level.

In the Example Data set, the 'at' product hierarchy levels are:

- 8 - summary level 0
- 5 - summary level 1
- 4 - summary level 2

Product Hierarchy Level 4 (At summary level 2)



Product Hierarchy4 - Attribute

File Edit Tools Window Help

Save and Close

Forms Children Parents Display

Attribute forms:

Form name	Form category	Format type	Form description
ID	ID	Number	
DESC	DESC	Text	

New...  
Delete  
Modify...

Form expressions:

Expression	Mapping method
HIERARCHY4_PID	Manual

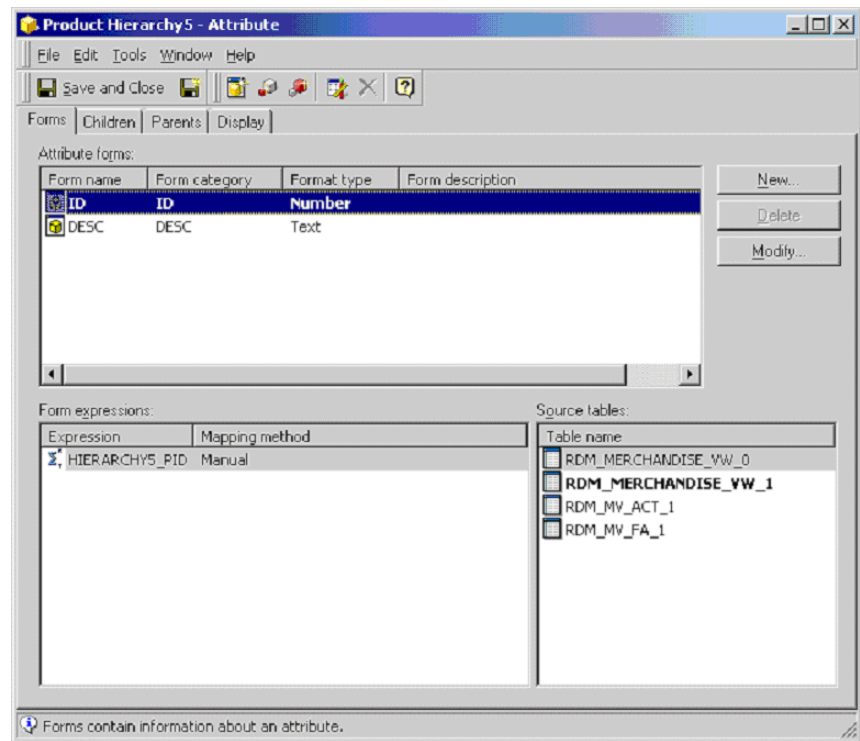
Source tables:

Table name
<input type="checkbox"/> RDM_MERCHANDISE_VW_0
<input type="checkbox"/> RDM_MERCHANDISE_VW_1
<input type="checkbox"/> RDM_MERCHANDISE_VW_2
<input type="checkbox"/> RDM_MV_ACT_2
<input type="checkbox"/> RDM_MV_FA_2

Forms contain information about an attribute.



## Product Hierarchy Level 5 (At summary level 1)

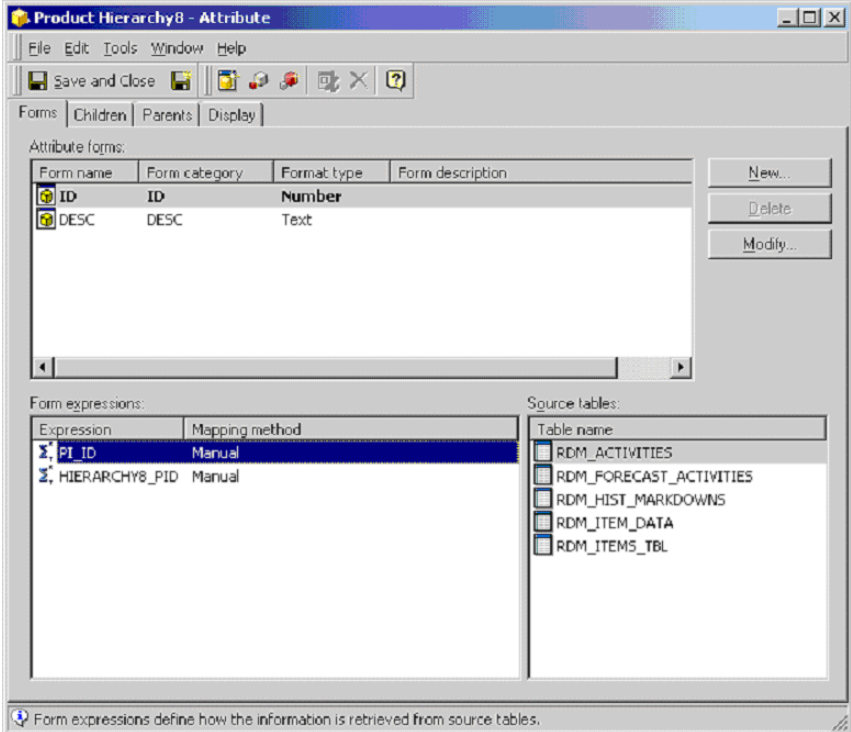


## Optimization Level Product Attribute Configuration

The Product Attribute at the optimization level (Summary level 0) should resemble the following:

**Note:** There are two form expressions (PI\_ID and HIERARCHY{N}\_PID where {N} = the optimization level for the hierarchy.

### Product Hierarchy 8 -PI\_ID form expression



The screenshot shows the 'Product Hierarchy8 - Attribute' window. It has a menu bar (File, Edit, Tools, Window, Help) and a toolbar with icons for Save and Close, Undo, Redo, and others. Below the toolbar are tabs for Forms, Children, Parents, and Display. The 'Forms' tab is active, showing a table of 'Attribute forms'.

Form name	Form category	Format type	Form description
ID	ID	Number	
DESC	DESC	Text	

Buttons for 'New...', 'Delete', and 'Modify...' are on the right. Below the table is a 'Form expressions' section with a table:

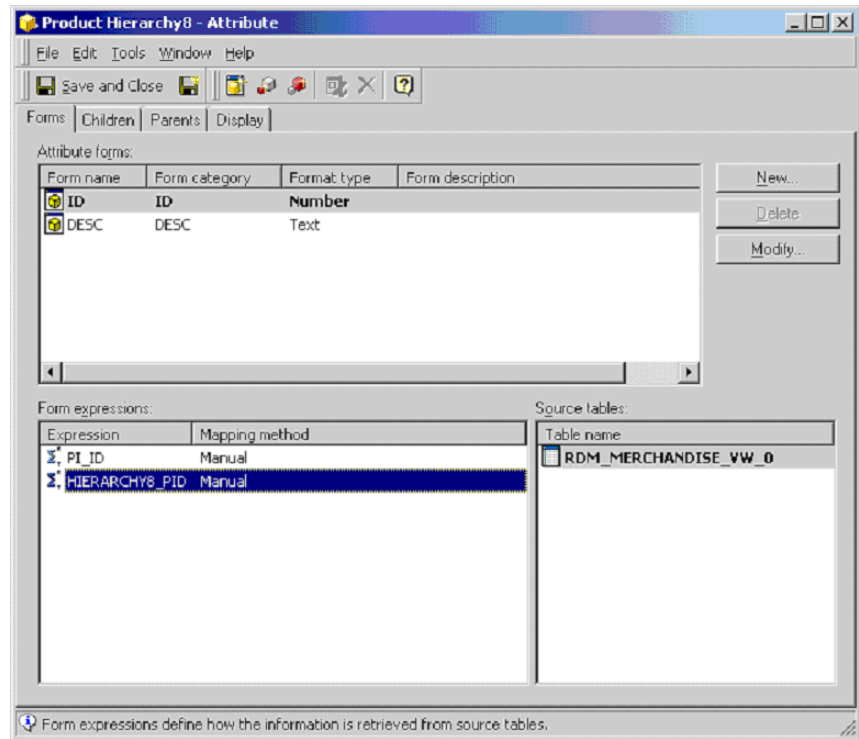
Expression	Mapping method
PI_ID	Manual
HIERARCHY8_PID	Manual

To the right of the 'Form expressions' table is a 'Source tables' section with a list of table names:

- ☐ RDM\_ACTIVITIES
- ☐ RDM\_FORECAST\_ACTIVITIES
- ☐ RDM\_HIST\_MARKDOWNS
- ☐ RDM\_ITEM\_DATA
- ☐ RDM\_ITEMS\_TBL

A status bar at the bottom reads: 'Form expressions define how the information is retrieved from source tables.'

## Product Hierarchy 8 - Hierarchy{N}\_PID form expression



## “Between” Summary Levels Location Attribute Configuration

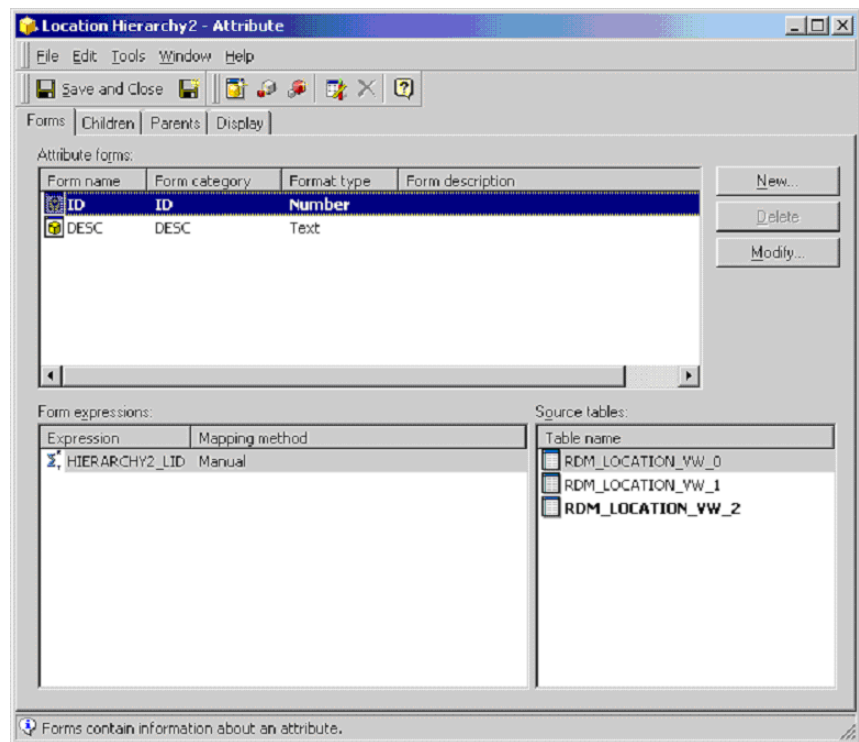
Any Location attribute 'between' summary levels (or above the highest summary level) should resemble the following:

**Note:** It should include all location hierarchy views at or below the level of the attribute.

In the Example Data set, the location hierarchy 'between' levels are:

- 1, 2 (Between summary level 2 and the root of the hierarchy tree)

## Location Hierarchy 2 (Above Summary Level 2)



## “At” Summary Levels Location Attribute Configuration

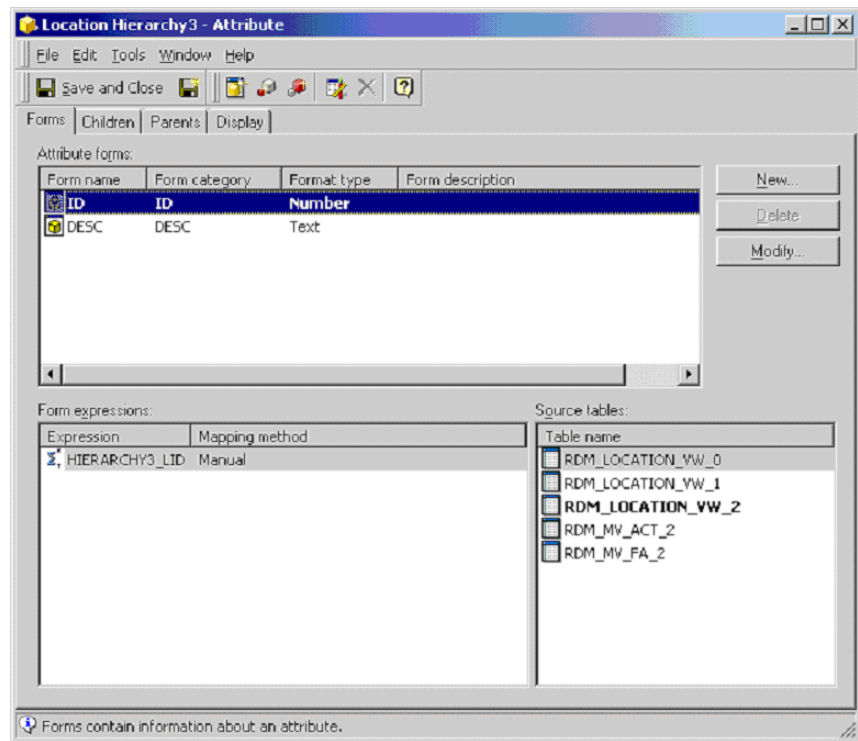
Any Location Attribute 'at' a summary level should resemble the following:

**Note:** It should include all location hierarchy views at or below the level of the attribute plus the `rdm_mv_act_{N}` and `rdm_mv_fa_{N}` where {N} = the summary level defined for this attribute level.

In the AE Data set, the 'at' location hierarchy levels are:

- 4 - summary level 0 and 1
- 3 - summary level 2

### Location Hierarchy 3 (At summary Level 2)



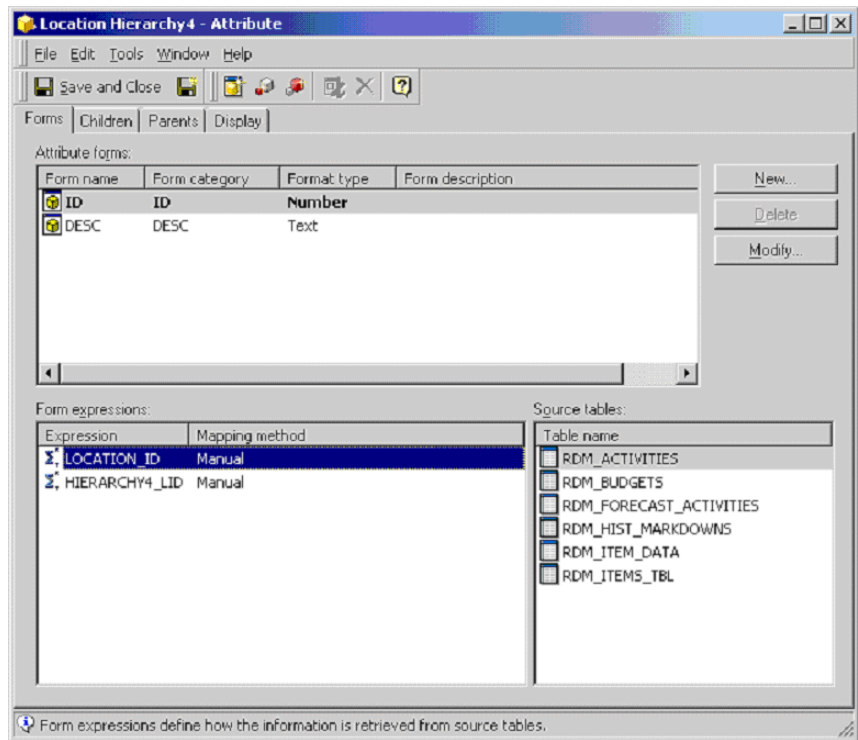
## Optimization Level Location Attribute Configuration

The Location Attribute at the optimization level (Summary level 0) should resemble the following:

**Note:** There are 2 form expressions (LOCATION\_ID and HIERARCHY{N}\_LID where {N} = the optimization level for the hierarchy.

Location Hierarchy4 is unique because it is both summary level 0 and 1.

### Location Hierarchy4 - Location\_id form expression



The screenshot shows the 'Location Hierarchy4 - Attribute' window. It has a menu bar (File, Edit, Tools, Window, Help) and a toolbar. Below the toolbar are tabs for 'Forms', 'Children', 'Parents', and 'Display'. The 'Forms' tab is active, showing a table of attribute forms. To the right of the table are buttons for 'New...', 'Delete', and 'Modify...'. Below the table is a 'Form expressions:' section with a table showing expressions and their mapping methods. To the right of this is a 'Source tables:' section with a list of table names.

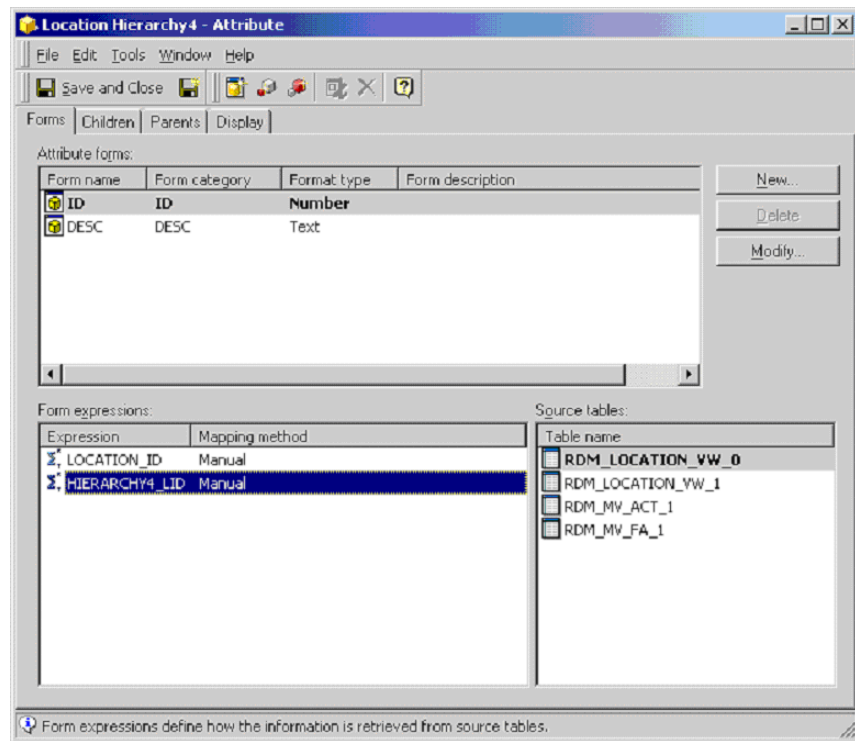
Form name	Form category	Format type	Form description
ID	ID	Number	
DESC	DESC	Text	

Expression	Mapping method
LOCATION_ID	Manual
HIERARCHY4_LID	Manual

Table name
RDM_ACTIVITIES
RDM_BUDGETS
RDM_FORECAST_ACTIVITIES
RDM_HIST_MARKDOWNS
RDM_ITEM_DATA
RDM_ITEMS_TBL

Form expressions define how the information is retrieved from source tables.

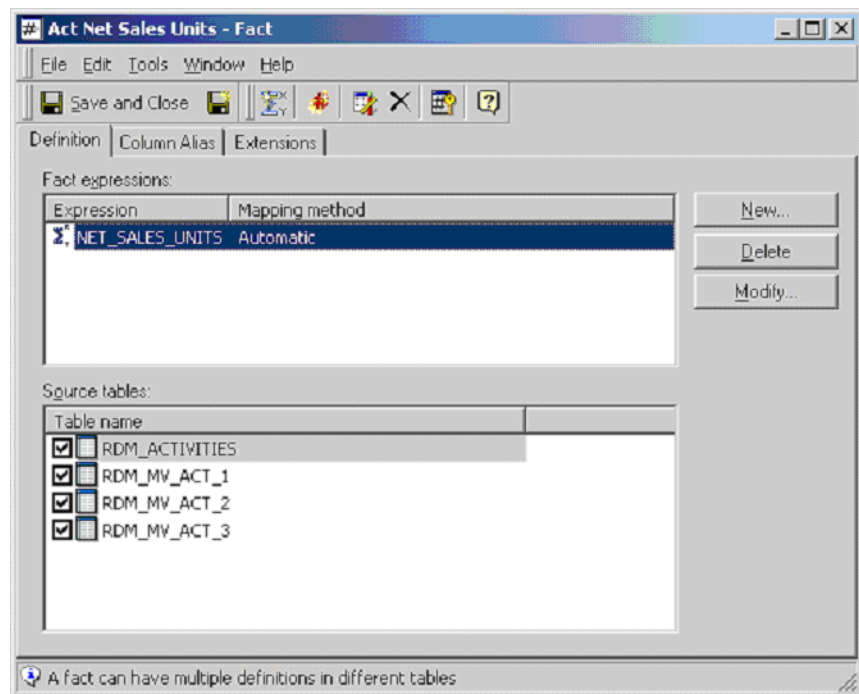
Location Hierarchy4 - hierarchy{N}\_lid form expression.



## After Creating, Adding, or Changing Summary Levels

After you create, add, or change a summary level, you must do the following:

1. Modify these folders to include the new summary levels:
  - ../schema object/facts/actuals
  - ../schema object/facts/forecasts



2. Change the lookup on *all* the forms, not just the ID form.



## Configuring the Display of Hierarchy Levels

To enable the correct display of hierarchy level descriptions in the user interfaces of Merchant Desktop and MicroStrategy:

1. Start MicroStrategy Desktop.
2. From the Folder List (tree), select **Merchant Desktop > Schema Objects > Attributes**.
3. In the **Attributes** folder, right-click each hierarchy icon described below, select **Rename**, and enter the correct description for your data set as follows.

Table 8-1

**Merchant Desktop Schema Attributes**

MicroStrategy Name	Description
<b>Location Attributes</b>	
Location Attribute 1	Location Chain
Location Attribute 2	Company
Location Attribute 3	Zone
Location Attribute 4	Price Zone
<b>Merchandise / Product Attributes</b>	
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

This last step automates the migration of user configuration data to MicroStrategy. This means you do not have to enter user information in two places: ProfitLogic software user management and MicroStrategy user management.

Once you have completed these steps, all reporting will use the same security settings as the settings you entered through Price/Merchant Desktop's user management component.

1. From the Windows server on which MicroStrategy is installed, run the install utility:

```
..\MerchantDesktop.tar\MicrostrategyServerSetup\install.cmd
```

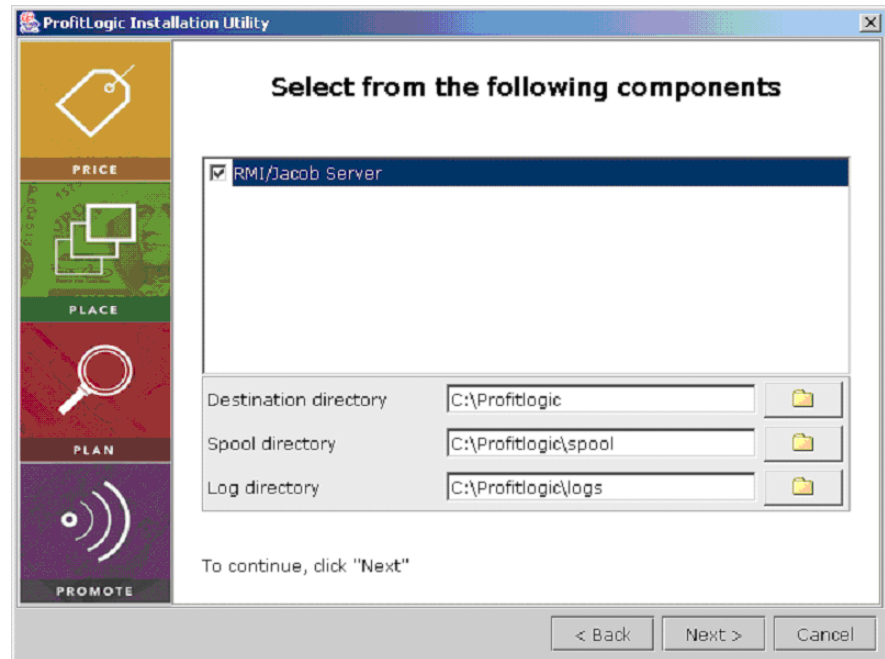
2. Respond to the following screens:

**Welcome** screen.

**Application Server** screen - Select **None**.

**Database** screen - Select a database. 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 installer does not allow the **None** selection.

**Select Components** screen - Make sure RMI/Jacob Server is selected, and make sure the destination directory is Profitlogic, as shown below. Accept the default of C:\Profitlogic. (The install.properties file is set up with this directory: basedest.basedest.windows=C:\\Profitlogic.)



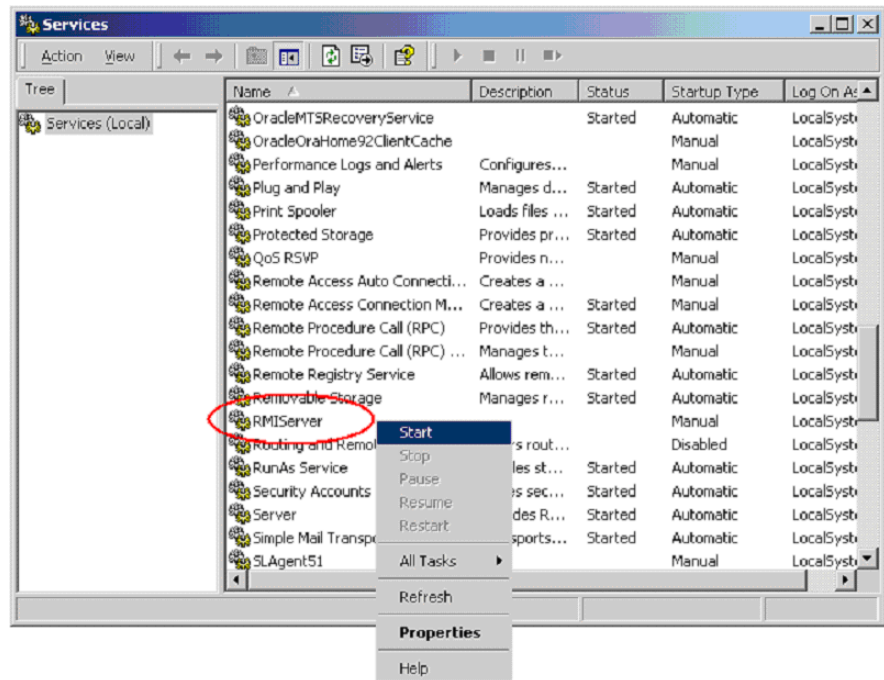
**Summary** screen - Click **Install**.

At this point, the MicroStrategy User Integration Server is installed, but you start the service manually, as explained in the next step.

3. Navigate to **Start > Settings > Control Panel > Administrative Tools > Services**.

The Services dialog box appears.

4. On the Services dialog box, right click **RMIServer** and select **Start**.



A progress bar appears and the status changes to Started.

An option is to set the RMIServer to run automatically by selecting **Properties** and on the RMIServer Properties dialog box, select **Automatic** for Startup Type.

5. Before you attempt to create Merchant Desktop/MicroStrategy users through User Management, update the following entries in the usermanagement.properties file:

```
../ProfitLogic/config/usermanagement
###MerchantDesktop Report Server
rmiHost=report-01.<host name>.com replace with
your RMI host
rmiPort=44499
# In most cases, rmiHost and reportServer should
be the same
reportServer=report-01.<host name>.com replace
with your report server name
administratorName=administrator
```

```
administratorPassword=password Change as necessary.  
## Microstrategy user limit  
microstrategy.users.max=0 Note: You must update this to the number of MicroStrategy licenses you have purchased.
```

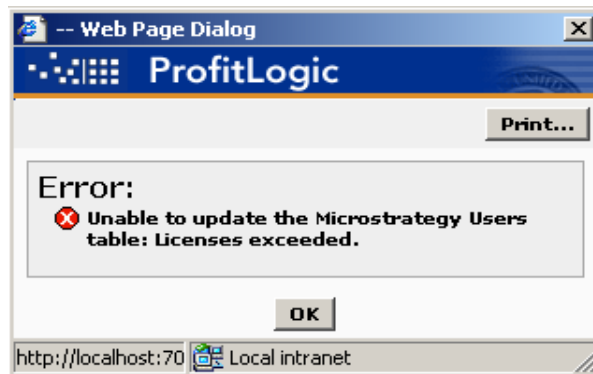
6. Shut down your application server and restart it.
7. Enter the URL for Price, log on as root / root, and create some Merchant Desktop/Price users.

If this error appears, you may be trying to create a Merchant Desktop (and MicroStrategy reporting) role for a username that already exists in the MicroStrategy users database. To remedy this situation, remove the user from the MicroStrategy users database and then attempt to add the Merchant Desktop role again.

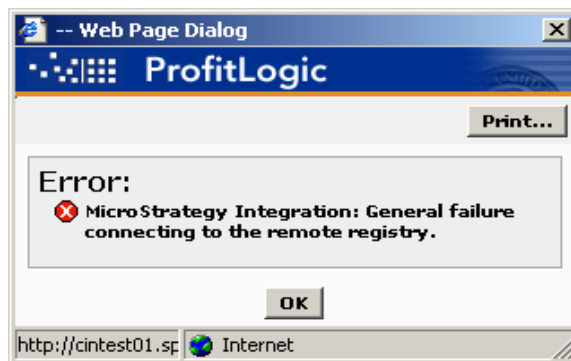
8. When you have successfully created a user account with a Merchant Desktop and Price role, enter the URL for Merchant Desktop and log on as an admin.

## Troubleshooting

If this error appears, you may have forgotten to update the usermanagement.properties file for number of licenses (see Step 5), or you have not have shut down and restarted your application server after you changed the file.



If this error appears, you have not started the RMI service as explained in Step 4.



---

## What's Next

Now that the Price, Merchant Desktop, and MicroStrategy set ups are complete, you are ready to load data into the Retail Data Mart and configure the Merchant Desktop for your users.

For information on how to load the data, see the *Price Configuration Guide*. For information on setting up users and how to use Merchant Desktop, see the *Price User Guide* and Online Help.





This chapter contains the following sections:

- “Overview of Third-Party Licensing” on page 130
- “Third-Party Open Source Licenses” on page 131

---

## Overview of Third-Party Licensing

The distribution of Price includes third-party code. This appendix provides licensing information for all third-party open source applications included with *Price*.

---

## Third-Party Open Source Licenses

This section contains licensing information for the following third-party applications:

- “Apache Jakarta Commons” on page 131
- “Apache Jakarta Taglibs 1.0” on page 135
- “Apache Xalan 2.4.1” on page 139
- “Apache Xerces 1.4.1” on page 140
- “Castor 0.9.5” on page 141
- “DB ObjectRelationalBridge (DB-OBJ) 1.0.1” on page 142
- “Jakarta Regexp 1.2” on page 146
- “Jakarta Struts 1.2” on page 150
- “Jakarta Velocity 1.2” on page 154
- “Jetspeed Portal 1.4” on page 158
- “Looks 1.2.1” on page 162
- “Log4J 1.2.8” on page 163
- “ORO 2.0.8” on page 167
- “POI 1.9.0” on page 171
- “XDoclet 1.2.1” on page 175

### Apache Jakarta Commons

Apache Commons commons-cli 1.0

Apache Commons commons-logging 2.0

Apache Commons commons-httpclient 2.0

This program contains third-party Jakarta Commons code from The Apache Software Foundation. Under the terms of The Apache Software Foundation license, Oracle is required to license The Apache Software Foundation software to you under the following terms. Note that the terms contained in the Oracle program license that accompanied this product do not apply to The Apache Software Foundation software, and your rights to use the software are solely as set forth

below. Oracle is not responsible for the performance of The Apache Software Foundation software, does not provide technical support for the software, and shall not be liable for any damages arising out of any use of the software.

All source and documentation of the Commons project is copyrighted by The Apache Software Foundation, and made available under the following license.

### **Apache License Version 2.0**

<http://www.apache.org/licenses/>

Copyright © 2000-2005, The Apache Software Foundation. January 2004

All rights Reserved.

#### **TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION**

1. **Definitions.** “License” shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

“Licensor” shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

“Legal Entity” shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, “control” means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

“You” (or “Your”) shall mean an individual or Legal Entity exercising permissions granted by this License.

“Source” form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

“Object” form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

“Work” shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

“Derivative Works” shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

“Contribution” shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, “submitted” means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as “Not a Contribution.”

“Contributor” shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. **Grant of Copyright License.** Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.
3. **Grant of Patent License.** Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. **Redistribution.** You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:
  - a. You must give any other recipients of the Work or Derivative Works a copy of this License; and
  - b. You must cause any modified files to carry prominent notices stating that You changed the files; and
  - c. You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and
  - d. If the Work includes a “NOTICE” text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. **Submission of Contributions.** Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions.

Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. **Trademarks.** This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.
7. **Disclaimer of Warranty.** Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an “AS IS” BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.
8. **Limitation of Liability.** In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.
9. **Accepting Warranty or Additional Liability.** While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

## Apache Jakarta Taglibs 1.0

This program contains third-party Jakarta Taglibs code from The Apache Software Foundation. Under the terms of The Apache Software Foundation license, Oracle is required to license The Apache Software Foundation software to you under the following terms. Note that the terms contained in the Oracle program license that accompanied this product do not apply to The Apache Software Foundation

software, and your rights to use the software are solely as set forth below. Oracle is not responsible for the performance of The Apache Software Foundation software, does not provide technical support for the software, and shall not be liable for any damages arising out of any use of the software.

## Apache License Version 2.0

<http://www.apache.org/licenses/>

Copyright © 2000-2005, The Apache Software Foundation. January 2004

All rights Reserved.

### TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. **Definitions.** “License” shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

“Licensor” shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

“Legal Entity” shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, “control” means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

“You” (or “Your”) shall mean an individual or Legal Entity exercising permissions granted by this License.

“Source” form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

“Object” form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

“Work” shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).



“Derivative Works” shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

“Contribution” shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, “submitted” means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as “Not a Contribution.”

“Contributor” shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. **Grant of Copyright License.** Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.
3. **Grant of Patent License.** Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. **Redistribution.** You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:
  - a. You must give any other recipients of the Work or Derivative Works a copy of this License; and
  - b. You must cause any modified files to carry prominent notices stating that You changed the files; and
  - c. You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and
  - d. If the Work includes a “NOTICE” text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. **Submission of Contributions.** Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions.

Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. **Trademarks.** This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.
7. **Disclaimer of Warranty.** Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an “AS IS” BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.
8. **Limitation of Liability.** In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.
9. **Accepting Warranty or Additional Liability.** While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

## Apache Xalan 2.4.1

The Xalan software consists of voluntary contributions made by many individuals on behalf of the Apache Software Foundation and was originally based on software copyright (c) 1999, Lotus Development Corporation., <http://www.lotus.com>. For more information on the Apache Software Foundation, see <http://www.apache.org/>.

This program contains third-party Xalan code from The Apache Software Foundation. Under the terms of The Apache Software Foundation license, Oracle is required to license The Apache Software Foundation software to you under the following terms. Note that the terms contained in the Oracle program license that accompanied this product do not apply to The Apache Software Foundation software, and your rights to use the software are solely as set forth below. Oracle is not responsible for the performance of The Apache Software Foundation software, does not provide technical support for the software, and shall not be liable for any damages arising out of any use of the software.

The Apache Software License, Version 1.1, applies to all versions up to and including Xalan-Java 2.5.2.

For the licences that apply to the JARs other than xalan.jar, see the licenses and associated readme files in the root directory of this distribution.

### **Apache License Version 1.1**

<http://www.apache.org>

Copyright (c) 1999-2003 The Apache Software Foundation. All rights reserved.

THIS SOFTWARE IS PROVIDED “AS IS” AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE APACHE SOFTWARE FOUNDATION OR ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

END OF TERMS AND CONDITIONS

### **Apache Xerces 1.4.1**

The Xerces software consists of voluntary contributions made by many individuals on behalf of the Apache Software Foundation and was originally based on software copyright (c) 1999, International Business Machines, Inc., <http://www.ibm.com>. For more information on the Apache Software Foundation, please see [<http://www.apache.org/>](http://www.apache.org).

This program contains third-party Xerces code from The Apache Software Foundation. Under the terms of The Apache Software Foundation license, Oracle is required to license The Apache Software Foundation software to you under the following terms. Note that the terms contained in the Oracle program license that accompanied this product do not apply to The Apache Software Foundation software, and your rights to use the software are solely as set forth below. Oracle is not responsible for the performance of The Apache Software Foundation software, does not provide technical support for the software, and shall not be liable for any damages arising out of any use of the software.

Xerces-J 1.4.4 uses the Apache Software License, Version 1.1

### **Apache License Version 1.1**

<http://www.apache.org>

Copyright (c) 1999-2003 The Apache Software Foundation. All rights reserved.

THIS SOFTWARE IS PROVIDED “AS IS” AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE APACHE SOFTWARE FOUNDATION OR ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

END OF TERMS AND CONDITIONS

## **Castor 0.9.5**

This program contains third-party Castor code from Intalio. Under the terms of the Intalio license, Oracle is required to license the Intalio software to you under the following terms. Note that the terms contained in the Oracle program license that accompanied this product do not apply to the Intalio software, and your rights to use the software are solely as set forth below. Oracle is not responsible for the performance of the Intalio software, does not provide technical support for the software, and shall not be liable for any damages arising out of any use of the software.

### **Castor License**

<http://www.castor.org/license.html>

Copyright 1999-2004 (C) Intalio Inc., and others. All Rights Reserved. ExoLab Project (<http://www.exolab.org/>).

THIS SOFTWARE IS PROVIDED BY INTALIO AND CONTRIBUTORS ``AS IS" AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL INTALIO OR ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

## **DB ObjectRelationalBridge (DB-OBJ) 1.0.1**

This program contains third-party DB-OBJ code from The Apache Software Foundation. Under the terms of The Apache Software Foundation license, Oracle is required to license The Apache Software Foundation software to you under the following terms. Note that the terms contained in the Oracle program license that accompanied this product do not apply to The Apache Software Foundation software, and your rights to use the software are solely as set forth below. Oracle is not responsible for the performance of The Apache Software Foundation software, does not provide technical support for the software, and shall not be liable for any damages arising out of any use of the software.

### **Apache License Version 2.0**

<http://www.apache.org/licenses/>

Copyright © 2000-2005, The Apache Software Foundation. January 2004

All rights Reserved.

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND  
DISTRIBUTION

1. **Definitions.** “License” shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

“Licensor” shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

“Legal Entity” shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, “control” means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

“You” (or “Your”) shall mean an individual or Legal Entity exercising permissions granted by this License.

“Source” form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

“Object” form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

“Work” shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

“Derivative Works” shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

“Contribution” shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, “submitted” means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the

Licensors for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as “Not a Contribution.”

“Contributor” shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. **Grant of Copyright License.** Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.
3. **Grant of Patent License.** Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.
4. **Redistribution.** You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:
  - a. You must give any other recipients of the Work or Derivative Works a copy of this License; and
  - b. You must cause any modified files to carry prominent notices stating that You changed the files; and
  - c. You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and
  - d. If the Work includes a “NOTICE” text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those



notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. **Submission of Contributions.** Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions.

Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. **Trademarks.** This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.
7. **Disclaimer of Warranty.** Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an “AS IS” BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.
8. **Limitation of Liability.** In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special,

incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. **Accepting Warranty or Additional Liability.** While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

## Jakarta Regexp 1.2

This program contains third-party Jakarta Regexp code from The Apache Software Foundation. Under the terms of The Apache Software Foundation license, Oracle is required to license The Apache Software Foundation software to you under the following terms. Note that the terms contained in the Oracle program license that accompanied this product do not apply to The Apache Software Foundation software, and your rights to use the software are solely as set forth below. Oracle is not responsible for the performance of The Apache Software Foundation software, does not provide technical support for the software, and shall not be liable for any damages arising out of any use of the software.

### Apache License Version 2.0

<http://www.apache.org/licenses/>

Copyright © 2000-2005, The Apache Software Foundation. January 2004

All rights Reserved.

### TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. **Definitions.** “License” shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

“Licensor” shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

“Legal Entity” shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, “control” means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

“You” (or “Your”) shall mean an individual or Legal Entity exercising permissions granted by this License.

“Source” form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

“Object” form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

“Work” shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

“Derivative Works” shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

“Contribution” shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, “submitted” means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as “Not a Contribution.”

“Contributor” shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. **Grant of Copyright License.** Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.
3. **Grant of Patent License.** Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.
4. **Redistribution.** You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:
  - a. You must give any other recipients of the Work or Derivative Works a copy of this License; and
  - b. You must cause any modified files to carry prominent notices stating that You changed the files; and
  - c. You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and
  - d. If the Work includes a “NOTICE” text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the

Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. **Submission of Contributions.** Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions.

Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. **Trademarks.** This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.
7. **Disclaimer of Warranty.** Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an “AS IS” BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.
8. **Limitation of Liability.** In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited

to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. **Accepting Warranty or Additional Liability.** While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

## Jakarta Struts 1.2

This program contains third-party Jakarta Struts code from The Apache Software Foundation. Under the terms of The Apache Software Foundation license, Oracle is required to license The Apache Software Foundation software to you under the following terms. Note that the terms contained in the Oracle program license that accompanied this product do not apply to The Apache Software Foundation software, and your rights to use the software are solely as set forth below. Oracle is not responsible for the performance of The Apache Software Foundation software, does not provide technical support for the software, and shall not be liable for any damages arising out of any use of the software.

### Apache License Version 2.0

<http://www.apache.org/licenses/>

Copyright © 2000-2005, The Apache Software Foundation. January 2004

All rights Reserved.

### TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. **Definitions.** “License” shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

“Licensor” shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

“Legal Entity” shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, “control” means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

“You” (or “Your”) shall mean an individual or Legal Entity exercising permissions granted by this License.

“Source” form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

“Object” form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

“Work” shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

“Derivative Works” shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

“Contribution” shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, “submitted” means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as “Not a Contribution.”

“Contributor” shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. **Grant of Copyright License.** Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.
3. **Grant of Patent License.** Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.
4. **Redistribution.** You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:
  - a. You must give any other recipients of the Work or Derivative Works a copy of this License; and
  - b. You must cause any modified files to carry prominent notices stating that You changed the files; and
  - c. You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and
  - d. If the Work includes a “NOTICE” text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within



Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. **Submission of Contributions.** Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions.

Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. **Trademarks.** This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.
7. **Disclaimer of Warranty.** Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an “AS IS” BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.
8. **Limitation of Liability.** In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. **Accepting Warranty or Additional Liability.** While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

## Jakarta Velocity 1.2

This program contains third-party Jakarta Velocity code from The Apache Software Foundation. Under the terms of The Apache Software Foundation license, Oracle is required to license The Apache Software Foundation software to you under the following terms. Note that the terms contained in the Oracle program license that accompanied this product do not apply to The Apache Software Foundation software, and your rights to use the software are solely as set forth below. Oracle is not responsible for the performance of The Apache Software Foundation software, does not provide technical support for the software, and shall not be liable for any damages arising out of any use of the software.

### Apache License Version 2.0

<http://www.apache.org/licenses/>

Copyright © 2000-2005, The Apache Software Foundation. January 2004

All rights Reserved.

### TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. **Definitions.** “License” shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

“Licensor” shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

“Legal Entity” shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, “control” means (i) the power, direct or indirect, to

cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

“You” (or “Your”) shall mean an individual or Legal Entity exercising permissions granted by this License.

“Source” form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

“Object” form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

“Work” shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

“Derivative Works” shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

“Contribution” shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, “submitted” means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as “Not a Contribution.”

“Contributor” shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. **Grant of Copyright License.** Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.
3. **Grant of Patent License.** Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.
4. **Redistribution.** You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:
  - a. You must give any other recipients of the Work or Derivative Works a copy of this License; and
  - b. You must cause any modified files to carry prominent notices stating that You changed the files; and
  - c. You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and
  - d. If the Work includes a “NOTICE” text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within

Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. **Submission of Contributions.** Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions.

Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. **Trademarks.** This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.
7. **Disclaimer of Warranty.** Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an “AS IS” BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.
8. **Limitation of Liability.** In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. **Accepting Warranty or Additional Liability.** While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

## Jetspeed Portal 1.4

This program contains third-party Jetspeed Portalcode from The Apache Software Foundation. Under the terms of The Apache Software Foundation license, Oracle is required to license The Apache Software Foundation software to you under the following terms. Note that the terms contained in the Oracle program license that accompanied this product do not apply to The Apache Software Foundation software, and your rights to use the software are solely as set forth below. Oracle is not responsible for the performance of The Apache Software Foundation software, does not provide technical support for the software, and shall not be liable for any damages arising out of any use of the software.

### Apache License Version 2.0

<http://www.apache.org/licenses/>

Copyright © 2000-2005, The Apache Software Foundation. January 2004

All rights Reserved.

### TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. **Definitions.** “License” shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

“Licensor” shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

“Legal Entity” shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, “control” means (i) the power, direct or indirect, to

cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

“You” (or “Your”) shall mean an individual or Legal Entity exercising permissions granted by this License.

“Source” form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

“Object” form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

“Work” shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

“Derivative Works” shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

“Contribution” shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, “submitted” means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as “Not a Contribution.”

“Contributor” shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. **Grant of Copyright License.** Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.
3. **Grant of Patent License.** Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.
4. **Redistribution.** You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:
  - a. You must give any other recipients of the Work or Derivative Works a copy of this License; and
  - b. You must cause any modified files to carry prominent notices stating that You changed the files; and
  - c. You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and
  - d. If the Work includes a “NOTICE” text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within



Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. **Submission of Contributions.** Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions.

Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. **Trademarks.** This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.
7. **Disclaimer of Warranty.** Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an “AS IS” BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.
8. **Limitation of Liability.** In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. **Accepting Warranty or Additional Liability.** While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

## Looks 1.2.1

This program contains third-party Looks code from Jgoodies. Under the terms of the Jgoodies license, Oracle is required to license the Jgoodies software to you under the following terms. Note that the terms contained in the Oracle program license that accompanied this product do not apply to the Jgoodies software, and your rights to use the software are solely as set forth below. Oracle is not responsible for the performance of the Jgoodies software, does not provide technical support for the software, and shall not be liable for any damages arising out of any use of the software.

### Open Source BSD License

[www.jgoodies.com](http://www.jgoodies.com)

Copyright (c) 1998, Regents of the University of California

All rights reserved.

THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS AND CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

## Log4J 1.2.8

This program contains third-party Log4J code from The Apache Software Foundation. Under the terms of The Apache Software Foundation license, Oracle is required to license The Apache Software Foundation software to you under the following terms. Note that the terms contained in the Oracle program license that accompanied this product do not apply to The Apache Software Foundation software, and your rights to use the software are solely as set forth below. Oracle is not responsible for the performance of The Apache Software Foundation software, does not provide technical support for the software, and shall not be liable for any damages arising out of any use of the software.

### Apache License Version 2.0

<http://www.apache.org/licenses/>

Copyright © 2000-2005, The Apache Software Foundation. January 2004

All rights Reserved.

### TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. **Definitions.** “License” shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

“Licensor” shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

“Legal Entity” shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, “control” means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

“You” (or “Your”) shall mean an individual or Legal Entity exercising permissions granted by this License.

“Source” form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

“Object” form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

“Work” shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

“Derivative Works” shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

“Contribution” shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, “submitted” means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as “Not a Contribution.”

“Contributor” shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. **Grant of Copyright License.** Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.
3. **Grant of Patent License.** Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the

Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. **Redistribution.** You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:
  - a. You must give any other recipients of the Work or Derivative Works a copy of this License; and
  - b. You must cause any modified files to carry prominent notices stating that You changed the files; and
  - c. You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and
  - d. If the Work includes a “NOTICE” text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. **Submission of Contributions.** Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions.

Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. **Trademarks.** This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.
7. **Disclaimer of Warranty.** Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an “AS IS” BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.
8. **Limitation of Liability.** In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.
9. **Accepting Warranty or Additional Liability.** While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

## ORO 2.0.8

This program contains third-party ORO code from The Apache Software Foundation. Under the terms of The Apache Software Foundation license, Oracle is required to license The Apache Software Foundation software to you under the following terms. Note that the terms contained in the Oracle program license that accompanied this product do not apply to The Apache Software Foundation software, and your rights to use the software are solely as set forth below. Oracle is not responsible for the performance of The Apache Software Foundation software, does not provide technical support for the software, and shall not be liable for any damages arising out of any use of the software.

### Apache License Version 2.0

<http://www.apache.org/licenses/>

Copyright © 2000-2005, The Apache Software Foundation. January 2004

All rights Reserved.

### TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. **Definitions.** “License” shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

“Licensor” shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

“Legal Entity” shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, “control” means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

“You” (or “Your”) shall mean an individual or Legal Entity exercising permissions granted by this License.

“Source” form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

“Object” form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

“Work” shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

“Derivative Works” shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

“Contribution” shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, “submitted” means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as “Not a Contribution.”

“Contributor” shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. **Grant of Copyright License.** Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.
3. **Grant of Patent License.** Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the



Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. **Redistribution.** You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:
  - a. You must give any other recipients of the Work or Derivative Works a copy of this License; and
  - b. You must cause any modified files to carry prominent notices stating that You changed the files; and
  - c. You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and
  - d. If the Work includes a “NOTICE” text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. **Submission of Contributions.** Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions.

Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. **Trademarks.** This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.
7. **Disclaimer of Warranty.** Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an “AS IS” BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.
8. **Limitation of Liability.** In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.
9. **Accepting Warranty or Additional Liability.** While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

## POI 1.9.0

The POI software consists of voluntary contributions made by many individuals on behalf of the Apache Software Foundation. For more information on the Apache Software Foundation, please see <<http://www.apache.org/>>. Portions of this software are based upon public domain software originally written at the National Center for Supercomputing Applications, University of Illinois, Urbana-Champaign.

This program contains third-party POI code from The Apache Software Foundation. Under the terms of The Apache Software Foundation license, Oracle is required to license The Apache Software Foundation software to you under the following terms. Note that the terms contained in the Oracle program license that accompanied this product do not apply to The Apache Software Foundation software, and your rights to use the software are solely as set forth below. Oracle is not responsible for the performance of The Apache Software Foundation software, does not provide technical support for the software, and shall not be liable for any damages arising out of any use of the software.

### Apache License Version 2.0

<http://www.apache.org/licenses/>

Copyright © 2000-2005, The Apache Software Foundation. January 2004

All rights Reserved.

#### TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. **Definitions.** “License” shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

“Licensor” shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

“Legal Entity” shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, “control” means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

“You” (or “Your”) shall mean an individual or Legal Entity exercising permissions granted by this License.

“Source” form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

“Object” form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

“Work” shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

“Derivative Works” shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

“Contribution” shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, “submitted” means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as “Not a Contribution.”

“Contributor” shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. **Grant of Copyright License.** Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. **Grant of Patent License.** Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.
4. **Redistribution.** You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:
  - a. You must give any other recipients of the Work or Derivative Works a copy of this License; and
  - b. You must cause any modified files to carry prominent notices stating that You changed the files; and
  - c. You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and
  - d. If the Work includes a “NOTICE” text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. **Submission of Contributions.** Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions.

Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. **Trademarks.** This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.
7. **Disclaimer of Warranty.** Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an “AS IS” BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.
8. **Limitation of Liability.** In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.
9. **Accepting Warranty or Additional Liability.** While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf

of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

## END OF TERMS AND CONDITIONS

### **XDoclet 1.2.1**

This program contains third-party XDoclet code from the XDoclet Team. Under the terms of the XDoclet Team license, Oracle is required to license the XDoclet Team software to you under the following terms. Note that the terms contained in the Oracle program license that accompanied this product do not apply to the XDoclet Team software, and your rights to use the software are solely as set forth below. Oracle is not responsible for the performance of the XDoclet Team software, does not provide technical support for the software, and shall not be liable for any damages arising out of any use of the software.

#### **XDoclet License**

Copyright (c) 2000-2004, XDoclet Team.

All rights reserved.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS ``AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

