

Oracle Utilities Portfolio Management

Installation and Configuration Guide

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Chapter 1

Overview

This chapter provides an overview of the installation and configuration of Oracle Utilities Portfolio Management, including:

- **Installation and Configuration Overview**
- **What is this book?**

Installation and Configuration Overview

Installing and configuring Oracle Utilities Portfolio Management involves the following steps:

- Setup the Oracle Utilities Portfolio Management network environment as described in **Chapter 2: Oracle Utilities Portfolio Management Network Environment and Database Installation**.
- Install the Oracle Utilities Portfolio Management Database as described in **Chapter 2: Oracle Utilities Portfolio Management Network Environment and Database Installation** and **Chapter 3: Oracle Utilities Data Repository Schema Creation** of the *Oracle Utilities Energy Information Platform Configuration Guide*.
- Install workstation and application server applications used by Oracle Utilities Portfolio Management on client machines as described in **Chapter 3: Installing the Oracle Utilities Portfolio Management Software**.
- Install Oracle Utilities Portfolio Management Web components on web server as described in **Chapter 3: Installing the Oracle Utilities Portfolio Management Software**.
- Set up and configure database records as described in **Chapter 4: Setting Up Oracle Utilities Portfolio Management Database Tables**.
- Set up and configure security for use with Oracle Utilities Portfolio Management as described in **Chapter 5: Configuring Oracle Utilities Portfolio Management Security**.

What is this book?

The *Oracle Utilities Portfolio Management Installation and Configuration Guide* describes how to install and configure Oracle Utilities Portfolio Management, including the following:

- **Chapter 1: Overview** (this chapter) provides an overview of the Oracle Utilities Portfolio Management installation and configuration process
- **Chapter 2: Oracle Utilities Portfolio Management Network Environment and Database Installation** describes how to install the Oracle Utilities Portfolio Management Database.
- **Chapter 3: Installing the Oracle Utilities Portfolio Management Application Software** describes how to install Oracle Utilities Portfolio Management application software on an application server, on a web server, and on client machines.
- **Chapter 4: Setting Up Oracle Utilities Portfolio Management Database Tables** describes how to set up database tables used by Oracle Utilities Portfolio Management.
- **Chapter 5: Configuring Oracle Utilities Portfolio Management Security** describes how to configure security for use with Oracle Utilities Portfolio Management.
- **Appendix A: Oracle Utilities Data Repository Portfolio Management Database Schema** provides a database schema diagram of the database tables used with Oracle Utilities Portfolio Management.

Chapter 2

Oracle Utilities Portfolio Management Network Environment and Database Installation

This chapter describes the Oracle Utilities Portfolio Management network environment and how to install the Oracle Utilities Data Repository used by Oracle Utilities Portfolio Management, including:

- **The Oracle Utilities Portfolio Management Installation Package**
- **Oracle Utilities Portfolio Management Network Environment**
- **Oracle Utilities Portfolio Management Database Installation**

The Oracle Utilities Portfolio Management Installation Package

There is a separate installation package for the Oracle Utilities Energy Information Platform and for each related product. The table below provides the installation package file names for the Oracle Utilities Energy Information Platform and Oracle Utilities Portfolio Management.

Product	Installation File Name
Oracle Utilities Energy Information Platform	1.6.1.xx.0.EIP.zip
Oracle Utilities Portfolio Management	1.6.1.xx.0.PM.zip

The Oracle Utilities Portfolio Management installation package contains the following folders:

- **Install:** Contains the installation program for Oracle Utilities Portfolio Management, including:
 - Oracle Utilities PM 1.6.1.xx.0.msi
- **DBScripts:** Contains the following database scripts for Oracle Utilities Portfolio Management:
 - Install: scripts used to create a new Portfolio Management schema
 - Upgrade: scripts used to update the Portfolio Management schema

See **Oracle Utilities Portfolio Management Database Installation** on page 2-9 for more information about installing and upgrading the Oracle Utilities Portfolio Management database schema.

- **Documentation:** Contains documentation for Oracle Utilities Portfolio Management, including:
 - Oracle Utilities Portfolio Management Installation and Configuration Guide
 - Oracle Utilities Portfolio Management User's Guide

Note: Oracle Utilities Portfolio Management documentation can also be downloaded separately.

Oracle Utilities Portfolio Management Network Environment

This section contains options for hardware and software specifications for implementation of the Oracle Utilities Energy Information Platform and related products, including:

- Oracle Utilities Billing Component
- Oracle Utilities Load Analysis
- Oracle Utilities Load Profiling and Settlement
- Oracle Utilities Meter Data Management
- Oracle Utilities Quotations Management
- Oracle Utilities Rate Management
- Oracle Utilities Transaction Management

The Energy Information Platform application architecture comprises all of the components typically found in any n-tier enterprise architecture, including client machines, servers, and the supporting network infrastructure.

The Oracle Utilities Energy Information Platform uses five primary types of systems components. Suggested hardware specifications and required software for each component are listed below.

Before installing Oracle Utilities software you should consult with Oracle Utilities Consulting. They will make suggestions for your hardware and network architecture based on your business requirements. You should also consult with Oracle Utilities Consulting if your business requirements change, if your database grows significantly, or if you plan on migrating to a different version of Oracle Utilities software.

Note: Supported software versions are subject to change. Please refer to the Release Notes shipped with the software for the latest supported versions.

Client Workstation - C/S

These are workstations used when running the client/server (C/S) versions of Oracle Utilities applications, such as Data Manager.

Hardware	Minimum Requirements
CPU	Intel® Pentium® series (2 core per CPU, 1.6 GHz minimum)
Memory	2GB or higher
Disk Drive	80GB SATA 7200RPM
Network	100 MB/s or higher

Software for Client Workstation - C/S:

- Supported Operating Systems
 - Microsoft Windows 7 SP1
 - Windows 8.1
 - Windows 10
- Supported Web Browsers
 - Microsoft Internet Explorer 11 with latest security updates
- Relational Database Management System (RDBMS) client with applicable ODBC driver and Data Provider for .NET

Note: When using 64-bit operating systems, the 32-bit version of the database client is required.

- Oracle Utilities Energy Information Platform software
- Microsoft .NET Framework 4.5
- Microsoft Visual C++ Redistributable Packages for Visual Studio 2013 (32-bit)
- Microsoft Data Access Component (MDAC) 2.8 or higher
- Microsoft XML Core Services (MSXML) 6.0 or higher

Client Workstation - Web

These are workstations used when running the web-enabled versions of Oracle Utilities applications only.

Hardware	Minimum Requirements
CPU	Intel® Celeron® series (2 core per CPU, 1.6 GHz minimum)
Memory	1GB or higher
Disk Drive	80GB SATA 7200RPM
Network	100 MB/s

Software for Client Workstation - Web:

- Supported Operating Systems
 - Microsoft Windows 7 SP1
 - Windows 8.1
 - Windows 10
- Supported Web Browsers
 - Microsoft Internet Explorer 11 with latest security updates

Note: For users that require access to both client/server and web browser-based applications, please refer to the requirements listed for "Client Workstations - Thick Client."

Database Server

The database server houses the Oracle Utilities Data Repository. The hardware platform for the database server may be Windows/Intel or UNIX/RISC.

Hardware	Minimum Requirements
CPU	2 x Intel® Xeon® 5000 series or RISC based (2 core per CPU, 2.0 GHz minimum)
Memory	16GB or higher
Disk Drive	2 x 72GB 15k rpm SCSI or better (system disk)
Data Storage	External Network Storage
Disk Controller	RAID
Network	2 x Gigabit Ethernet or higher

Software for Database Server:

- Supported Operating Systems
 - Microsoft Windows Server 2008, Microsoft Windows Server 2012, LINUX (UNIX/Intel), Sun Microsystems Solaris, HP-UX, or IBM AIX (UNIX/RISC) software

Note: Refer to the *Oracle Utilities Energy Information Platform Quick Install Guide* for additional details about supported operating systems.
- RDBMS Server: Oracle

Database Platforms:

- Oracle 11g, Release 2 (11.2.0.4)
- Oracle 12c, Release 1 (12.1.0.2 or 12.2.0.1)

Note: Supported database versions and drivers are subject to change. Please refer to the Oracle Release Notes shipped with the software for the latest compatibility matrix.

Application/Batch Processing Server

Application servers are used when running Windows Services, such as those employed by the Reporting Framework and Adapter components. The application server(s) can also perform batch processes such as meter data upload and validation as well as batch billing and settlements.

Hardware	Minimum Requirements
CPU	2 x Intel® Xeon® 3000 series (2 core per CPU, 2.0 GHz minimum)
Memory	8GB or higher
Disk Drive	2 x 72 GB 10k rpm SCSI or better
Disk Controller	RAID
Network	2x Gigabit Ethernet or higher

Software for the Application/Batch Server:

- Supported Operating Systems
 - Windows 2008 Enterprise Server with Service Pack 2 (SP2) (64-bit)
 - Windows 2008 Enterprise Server R2 SP1 (64-bit)
 - Windows 2012 Server R2
- Supported Web Browsers
 - Microsoft Internet Explorer 11 with latest security updates
- RDBMS client with applicable ODBC driver and Data Provider for .NET

Note: When using 64-bit operating systems, the 32-bit version of the database client is required.
- Oracle Utilities Energy Information Platform software
- Microsoft .NET Framework 4.5
- Microsoft Visual C++ Redistributable Packages for Visual Studio 2013 (32-bit)
- Microsoft Data Access Component (MDAC) 2.8 or higher
- Microsoft XML Core Services (MSXML) 6.0 or higher
- Java Development Kit (JDK) 1.8 or later (for application servers that will be running the Adapter)

Web Server(s)

Web servers run Microsoft Internet Information Service (IIS). These servers may be combined with the application server(s) for combination Web and Application servers.

Hardware	Minimum Requirements
CPU	2 x Intel® Xeon® 3000 series (2 core per CPU, 2.0 GHz minimum)
Memory	8GB or higher
Disk Drive	2 x 72 GB 10k rpm SCSI or better
Disk Controller	RAID
Network	2x Gigabit Ethernet or higher

Software for Web Server(s):

- Supported Operating Systems
 - Windows 2008 Enterprise Server with Service Pack 2 (SP2) (64-bit) with Microsoft Internet Information Service (IIS) 7.5
 - Windows 2008 Enterprise Server R2 SP1 (64-bit) with Microsoft Internet Information Service (IIS) 7.5

Note: The IIS6 Management Capability option (including IIS6 Metabase Compatibility, IIS6 WMI Compatibility, IIS6 Scripting Tools, and IIS6 Management Console) must be installed when using IIS on Windows 2008.

 - Windows 2012 R2 Enterprise Server with Microsoft Internet Information Service (IIS) 8.5
- Supported Web Browsers
 - Microsoft Internet Explorer 11 with latest security updates
- RDBMS client with applicable ODBC driver and Data Provider for .NET

Note: When using 64-bit operating systems, the 32-bit version of the database client is required.
- Oracle Utilities Energy Information Platform software
- Microsoft .NET Framework 4.5
- Microsoft Visual C++ Redistributable Packages for Visual Studio 2013 (32-bit)
- Microsoft Data Access Component (MDAC) 2.8 or higher
- Microsoft XML Core Services (MSXML) 6.0 or higher

Oracle Utilities Portfolio Management Database Installation

This section describes how to install and verify the Oracle Utilities Portfolio Management database tables and data in the Oracle Utilities Data Repository, including:

- **Installation Requirements**
- **Installing the Database**
- **Upgrading the Portfolio Management Database Schema**
- **Updating the Reporting Framework for Oracle Business Intelligence Publisher**
- **Verifying the Database**

Note: This section assumes that you have created the Oracle Utilities Data Repository schema as described in **Chapter 3: Oracle Utilities Data Repository Schema Creation** in the *Oracle Utilities Energy Information Platform Installation Guide*.

Installation Requirements

The following are required in order to install the Oracle Utilities Portfolio Management tables and data into the Oracle Utilities Data Repository:

- The Oracle Utilities Data Repository (v1.6.0.0.0) schema must have been installed on the database instance on which you plan to run Oracle Utilities Portfolio Management.
- The **addPM.cmd** file. This database script adds the Oracle Utilities Portfolio Management database tables and data to the Oracle Utilities Data Repository.
- The **updatePM.cmd** file. This database script updates the tables and data used by Oracle Utilities Portfolio Management in the Oracle Utilities Data Repository. See **Upgrading the Portfolio Management Database Schema** on page 2-10 for more information.
- The **BIPPM.cmd** file. This database script changes the pre-defined Portfolio Management reports from Crystal Reports to Oracle Business Intelligence Publisher. See **Updating the Reporting Framework for Oracle Business Intelligence Publisher** on page 2-10 for more information.

Installing the Database

Installing the Oracle Utilities Portfolio Management database involves installing the Oracle Utilities Portfolio Management database schema into the Oracle Utilities Date Repository.

Oracle Utilities Portfolio Management Schema

Open a command prompt and run the addPM.CMD script. This script uses the following syntax:

```
addPM [-d <database>] [-own <owner name>] -opw <owner password>
```

Parameter	Description
<database>	The name given to the instance as specified in the TNSNAMES.ORA file. This parameter is optional and if not specified, the script will connect to the default Oracle database.
<owner name>	The name of the user which will own LODESTAR database objects. This parameter is optional. If not specified, the default LODESTAR user PWRLINE will own database objects.

Parameter	Description
<owner password>	The chosen password for the PWRLINE schema owner.

Like the base schema database tables and indexes, the Oracle Utilities Portfolio Management objects are created in the default tablespace of the PWRLINE user with default sizing parameters. If these defaults are required to be changed then the scripts may be edited.

Upgrading the Portfolio Management Database Schema

If you are upgrading Oracle Utilities Portfolio Management from a previous version, you must upgrade Portfolio Management database schema. The following database upgrade scripts are included in the Portfolio Management installation package.

- The **updatePM.cmd** file. This database script updates the tables and data used by Oracle Utilities Portfolio Management in the Oracle Utilities Data Repository. This script can only be used when upgrading the following schema version.

v1.6 Schema Version	v1.6.1 Schema Version
v1.6.0.0.0	v1.6.1.0.0

If you are upgrading from a different schema version, contact Oracle Global Customer Support.

Upgrading Oracle Utilities Portfolio Management Schema

Open a command prompt and run the updatePM.CMD script. This script uses the following syntax:

```
updatePM [-d <database>] [-own <owner name>] -opw <owner password>
```

Parameter	Description
<database>	The name given to the instance as specified in the TNSNAMES.ORA file. This parameter is optional and if not specified, the script will connect to the default Oracle database.
<owner name>	The name of the user which will own Oracle Utilities database objects. This parameter is optional. If not specified, the default Oracle Utilities user PWRLINE will own database objects.
<owner password>	The chosen password for the PWRLINE schema owner.

Updating the Reporting Framework for Oracle Business Intelligence Publisher

If you are using Oracle Business Intelligence Publisher for reporting, you must update the pre-defined reports in Reporting Framework database tables. The following database scripts are included in the Portfolio Management installation package for this purpose.

- The **BIPPM.cmd** file. This script changes the pre-defined Portfolio Management reports from Crystal Reports to Oracle Business Intelligence Publisher.

Oracle Utilities Portfolio Management Reports

Open a command prompt and run the BIPPM.CMD script. This script uses the following syntax:

```
BIPPM [-d <database>] [-own <owner name>] -opw <owner password>
```

Parameter	Description
<database>	The name given to the instance as specified in the TNSNAMES.ORA file. This parameter is optional and if not specified, the script will connect to the default Oracle database.
<owner name>	The name of the user which will own Oracle Utilities database objects. This parameter is optional. If not specified, the default Oracle Utilities user PWRLINE will own database objects.
<owner password>	The chosen password for the PWRLINE schema owner.

Verifying the Database

Verifying the Oracle Utilities Portfolio Management database involves verifying the Oracle Utilities Portfolio Management database schema in the Oracle Utilities Date Repository.

Verification - Portfolio Management Tables

To verify that the Oracle Utilities Portfolio Management schema tables are in place use the following procedure:

1. Log into the database using the PWRLINE user (Password =password).
2. Verify that the following tables exist in the database:
 - CHANNEL
 - DISTINCTTOUPERIOD
 - LSCDCALCS
 - LSCDCOMBINEDLOAD
 - LSCDCOMBINEDLOADV
 - LSCDLOAD
 - LSCDPROCUREMENT
 - LSCDSPOTPRICE
 - LSCDSPOTPRICEV
 - LSCDWEATHER
 - LSCDWEATHERV
 - LSCHCALCS
 - LSCHCOMBINEDLOAD
 - LSCHCOMBINEDLOADV
 - LSCHLOAD
 - LSCHPROCUREMENT
 - LSCHSPOTPRICE
 - LSCHSPOTPRICEV

- LSCHWEATHER
- LSCHWEATHERV
- LSCVMSGCALCS
- LSCVMSGCOMBINEDLOAD
- LSCVMSGCOMBINEDLOADV
- LSCVMSGLOAD
- LSCVMSGPROCUREMENT
- LSCVMSGSPOTPRICE
- LSCVMSGSPOTPRICEV
- LSCVMSGWEATHER
- LSCVMSGWEATHERV
- LSEDELIVERYPOINT
- LSMARKET
- LSPMCALCS
- LSPMCALCBUCKETS
- LSPMCALCSOPTION
- LSPMCOMBINEDLOAD
- LSPMCONFIDENCELEVELS
- LSPMCONTROL
- LSPMCORRELATIONMATRIX
- LSPMCORRELATIONMATRIXVALUE
- LSPMGROUP
- LSPMFORECASTBUCKETS
- LSPMFORECASTDAY
- LSPMIMBALANCE
- LSPMIMBALANCEVALUE
- LSPMLOAD
- LSPMLOADSCENARIO
- LSPMMARKETTOU
- LSPMPRICESCENARIO
- LSPMPROCUREMENT
- LSPMQUICKPICKMENU
- LSPMRUNHISTORY
- LSPMSPOTPRICE
- LSPMTIMESPAN
- LSPMVOLATILITYTRANSPOSE
- LSPMWEATHER
- LSPMWEATHERSCENARIO

- LSSERVICEPOINT
- LSZONE
- TOUPERIOD
- TOUSCHEDULE

Appendix A: Oracle Utilities Data Repository Portfolio Management Database Schema includes a diagram of the Oracle Utilities Portfolio Management database schema (v1.6.0.0.0) that provides details regarding the table and columns in the Oracle Utilities Portfolio Management schema, as well as the relationships between these tables in the Oracle Utilities Data Repository.

Verification - Portfolio Management Reports

To verify that the Portfolio Management reports have been updated, use the following procedure:

1. Log into the database using the PWRLINE user (Password =password).
2. Verify that the following records exist in the Report Instance table:

Report Name	Description	Report Type
PMRiskMetrics	Portfolio Risk Metrics Report	BIPublisher
PMRetailProfitLoss	Portfolio Retail Profit and Loss - Annual and Quarter View	BIPublisher
PMRetailPnLMonthView	Portfolio Retail Profit and Loss - Month View	BIPublisher
PMNetPosition	Portfolio Net Position Report	BIPublisher
PMForecastAccuracy	Portfolio Forecast Accuracy Report	BIPublisher

Chapter 3

Installing the Oracle Utilities Portfolio Management Application Software

This chapter describes how you install the Oracle Utilities Portfolio Management application software, including:

- **Installing the Oracle Utilities Portfolio Management Software**
- **Setting Up Configuration Files on the Web Server**
- **Setting Up Configuration Files on Application Server and Workstations**
- **Installing Oracle Utilities Portfolio Management Database Records and Rate Forms**

Installing the Oracle Utilities Portfolio Management Software

This section describes how to install the Oracle Utilities Portfolio Management software including:

- **Installing in Conjunction with the Energy Information Platform**
- **Installing After Installation of the Energy Information Platform**

Installing in Conjunction with the Energy Information Platform

To install the Oracle Utilities Portfolio Management software in conjunction with the Oracle Utilities Energy Information Platform, use the following procedure:

1. Navigate to the Install folder created by the Energy Information Platform installation package (1.6.1.xx.0.EIP.zip). This folder contains the following files:
 - Oracle Utilities EIP 1.6.1.xx.0.msi
 - setup.exe
2. Navigate to the Install folder created by the Oracle Utilities Portfolio Management installation package (1.6.1.xx.0.PM.zip). This file contains the following files:
 - Oracle Utilities PM 1.6.1.xx.0.msi
3. Move the “Oracle Utilities PM 1.6.1.xx.0.msi” file into the same directory as the Energy Information Platform files.

The directory should now contain following:

- Oracle Utilities EIP 1.6.1.xx.0.msi
 - setup.exe
 - Oracle Utilities PM 1.6.1.xx.0.msi
4. Double-click the setup.exe file.

A dialog opens asking you to confirm the products you wish to install. Click **Yes** to continue with the installation. Click **No** to cancel the installation.

5. Proceed with the installation (starting at Step 3) as outlined in **Chapter 4: Installing the Oracle Utilities Application Software** in the *Oracle Utilities Energy Information Platform Installation Guide*.

Installing After Installation of the Energy Information Platform

To install the Oracle Utilities Portfolio Management software after the Oracle Utilities Energy Information Platform software has been installed, use the following procedure:

1. Navigate to the Install folder created by the Oracle Utilities Portfolio Management installation package (1.6.1.xx.0.PM.zip). This file contains the following files:
 - Oracle Utilities PM 1.6.1.xx.0.msi

2. Double-click the Oracle Utilities PM 1.6.1.xx.0.msi file.

A dialog opens asking you to confirm the products you wish to install. Click **Yes** to continue with the installation. Click **No** to cancel the installation.

3. Proceed with the installation (starting at Step 3) as outlined in **Chapter 4: Installing the Oracle Utilities Application Software** in the *Oracle Utilities Energy Information Platform Installation Guide*.

Setting Up Configuration Files on the Web Server

Oracle Utilities web applications use the following configuration files.

LODESTAR.CFG

The LODESTAR.CFG file is a text file used to customize the working environment of the Oracle Utilities application software. See **LODESTAR.CFG** on page 2-2 in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about setting up this file. A sample of this file can be found in the **C:\LODESTAR\CFG\Examples\CFG** directory on the web server.

Note: This file **MUST** be named LODESTAR.CFG on the web server.

LSSECURE.CFG.XML

The LSSECURE.CFG.XML file specifies the data source used by the Security functionality and is required in order to run Oracle Utilities web-enabled applications. The LSSECURE.CFG.XML must be installed in the **C:\LODESTAR\CFG** directory. See **LSSECURE.CFG.XML** on page 2-42 in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about setting up this file. A sample of this file can be found in the **C:\LODESTAR\CFG\Examples\CFG** directory on the web server.

Note: If an application server and web server are installed on different machines, the LSSECURE.CFG.XML file is installed in the **C:\LODESTAR\CFG** directory with the web server components.

LSREPORTMONITOR.CFG.XML (optional)

The LSREPORTMONITOR.CFG.XML file specifies where report data is stored and how reports are processed through the web-enabled Oracle Utilities Energy Information Platform. The LSREPORTMONITOR.CFG.XML must be installed in the **C:\LODESTAR\CFG** directory. See **LSREPORTMONITOR.CFG.XML** on page 2-36 in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about setting up this file. A sample of this file can be found in the **C:\LODESTAR\CFG\Examples\CFG** directory on the web server.

Note: If an application server and web server are installed on different machines, the LSREPORTMONITOR.CFG.XML file is installed in the **C:\LODESTAR\CFG** directory on both server.

LSLOGGER.CFG.XML (optional)

The LSLOGGER.CFG.XML file defines how log files are generated by Oracle Utilities applications. Each Oracle Utilities component can be configured to write messages to a specified log file or an Event Log. The LSLOGGER.CFG.XML must be installed in the **C:\LODESTAR\CFG** directory. See **LSLOGGER.CFG.XML** on page 2-27 in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about setting up this file. A sample of this file can be found in the **C:\LODESTAR\CFG\Examples\CFG** directory on the web server.

Note: If an application server and web server are installed on different machines, the LSLOGGER.CFG.XML file is installed in the **C:\LODESTAR\CFG** directory on both machines.

LSSCHDLR.CFG.XML (optional)

The LSSCHDLR.CFG.XML file defines the data source(s) monitored by the Oracle Utilities Schedule Service (LSSCHDLR.exe). This service monitors the Scheduled Message (SCHEDULEDMESSAGE) table in each data source specified in this file. This file is required if the Oracle Utilities Schedule Service (LSSCHDLR.exe) is used. The LSSCHDLR.CFG.XML must

be installed in the **C:\LODESTAR\CFG** directory. See **LSSCHDLR.CFG.XML** on page 2-41 in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about setting up this file. A sample of this file can be found in the **C:\LODESTAR\CFG\Examples\CFG** directory on the web server.

Note: If an application server and web server are installed on different machines, the LSSCHDLR.CFG.XML file is installed in the **C:\LODESTAR\CFG** directory on both machines.

LSRELAY.CFG.XML (optional)

The LSRELAY.CFG.XML file identifies the machine running an SMTP service used to send email messages from the Oracle Utilities Energy Information Platform. This file is required only if the email functions are used. The LSRELAY.CFG.XML file must be installed in the **C:\LODESTAR\CFG** directory. See **LSRELAY.CFG.XML** on page 2-34 in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about setting up this file. A sample of this file can be found in the **C:\LODESTAR\CFG\Examples\CFG** directory on the web server.

LOCALES.CFG.XML

The LOCALES.CFG.XML file specifies the regional locales available to Oracle Utilities web-enabled applications. The LOCALES.CFG.XML file must be installed in the **C:\LODESTAR\Web\CCS** directory. A sample of this file can be found in the **C:\LODESTAR\CFG\Examples\CFG** directory on the web server. See **LOCALES.CFG.XML** on page 2-22 in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about this file.

Note: If an application server and web server are installed on different machines, the LOCALES.CFG.XML file is installed in the **C:\LODESTAR\Web\ccs** directory with the web server components.

Setting Up Configuration Files on Application Server and Workstations

You also need to set up the configuration files needed by application server and workstation applications such as Data Manager and batch executables.

LODESTAR.CFG

The **LODESTAR.CFG** file is a text file used to customize the working environment of the Oracle Utilities application software. See **LODESTAR.CFG** on page 2-2 of the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about setting up this file.

LSRELAY.CFG.XML (optional)

The **LSRELAY.CFG.XML** file identifies the machine running an SMTP service used to send email messages from the Oracle Utilities Energy Information Platform. This file is required only if the email functions are used. The **LSRELAY.CFG.XML** file must be installed in the **C:\LODESTAR\CFG** directory on any application server or workstation used to process Rules Language configuration that uses the **EMAILCLIENT** function. See **LSRELAY.CFG.XML** on page 2-34 in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about setting up this file. A sample of this file can be found in the **C:\LODESTAR\CFG\Examples\CFG** directory on the web server.

Installing Oracle Utilities Portfolio Management Database Records and Rate Forms

The web-enabled Oracle Utilities Portfolio Management application requires a specific set of database records and Rules Language rate forms be in place in the Oracle Utilities Data Repository. These records are installed in the **C:\LODESTAR\Web\portfolio\rateschedules** directory on the web server where the Oracle Utilities Portfolio Management web application was installed, and include the following:

Rate Schedules

- LSPM_CALC_THEN_REPORT.rpg
- LSPM_LOAD_DATA_SCHEDULE.prg
- LSPM_RPT_FORECAST_ANALYSIS.prg
- LSPM_RPT_NET_POSITION.prg
- LSPM_RPT_RETAIL_PROFIT_LOSS.prg
- LSPM_RPT_RISK_METRICS.prg

Riders

- LSPM_CALC_BUCKETS.prg
- LSPM_OPTIONS_RDR.prg
- LSPM_PORTFOLIO_CALCULATIONS_RDR.prg
- LSPM_PROCUREMENTS_RDR.prg
- LSPM_RETAIL_RDR.prg
- LSPM_RPT_FORECAST_PERIODS.prg
- LSPM_RPT_FORECAST_POPULATE_PERIOD_ARRAY.prg
- LSPM_RPT_FORECAST_RANGE.prg
- LSPM_RPT_PERIODS.prg
- LSPM_RPT_SAVE.prg
- LSPM_SAVE_INTERVAL_RDR.prg
- LSPM_SPOT_PRICE_RDR.prg
- LSPM_WRITE_WQ_RDR.prg
- USER_TOLERANCE_RDR.prg

Lists

- LSPM_CHECK_LSPMCALCS_LIST.qry
- LSPM_CHECK_LSPMCOMBINEDLOAD_LIST.qry
- LSPM_CHECK_LSPMLOAD_LIST.qry
- LSPM_CHECK_LSPMPROCUREMENT_LIST.qry
- LSPM_COMBINED_LOAD_MAX.qry
- LSPM_COMBINED_LOAD_MIN.qry
- LSPM_CONFIDENCE_LEVEL_VALUE.qry
- LSPM_CONTROL.qry
- LSPM_CONTROL_RECORD_LIST.qry

- LSPM_DELIVERYPOINTID_LIST.qry
- LSPM_ENTITY_CORRMV_LIST.qry
- LSPM_ENTITY_IMBALANCEVALUES_LIST.qry
- LSPM_ENTITY_LOADRECORD_LIST.qry
- LSPM_ENTITY_OPTION_LIST.qry
- LSPM_ENTITY_PROCUREMENT_LIST.qry
- LSPM_ENTITY_SPOTPRICE_LIST.qry
- LSPM_ENTITY_VOLATILITY_LIST.qry
- LSPM_GET_OPEN_WQ.qry
- LSPM_GROUPS.qry
- LSPM_LOADRECORD_LIST.qry
- LSPM_LOAD_MAX.qry
- LSPM_LOAD_SCENARIOS.qry
- LSPM_MARKETID_LIST.qry
- LSPM_MARKET_CORRMATRIXVALUES.qry
- LSPM_MARKET_SERVICE_TYPE_LIST.qry
- LSPM_MARKET_TOU_SCHEDULE_LIST.qry
- LSPM_OPTION_MAX.qry
- LSPM_PRICE_SCENARIOS.qry
- LSPM_PROCUREMENT_LIST.qry
- LSPM_PROCUREMENT_MAX.qry
- LSPM_RECENT_IMB_BAND_DATE.qry
- LSPM_RPT_GET_LATEST_RUNHISTORY.qry
- LSPM_RPT_LOADSCENARIO.qry
- LSPM_RPT_GETGENREPORTDATA.qry
- LSPM_RPT_MARKET.qry
- LSPM_RPT_MARKET_CALC_BUCKET.qry
- LSPM_RPT_MARKET_FORECAST_CBLOAD_PARTICIPANT.qry
- LSPM_RPT_MARKET_FORECASTANALYSIS_SPOTPRICE_RECORDER.qry
- LSPM_RPT_MARKET_FORECASTANALYSIS_WEATHER_RECORDER.qry
- LSPM_RPT_MARKET_TOU.qry
- LSPM_RPT_MARKET_ZONE_CALC_BUCKET.qry
- LSPM_RPT_PRICESCENARIO.qry
- LSPM_RPT_MARKET_ZONE_FORECASTANALYSIS_CBLOAD_RECORDER.qry
- LSPM_RPT_MARKET_ZONE_NETVOL_LOADSCENARIO_RECORDER.qry
- LSPM_RPT_MARKET_ZONE_RETAILPNL_NET_RECORDER.qry
- LSPM_RPT_MARKET_ZONES.qry
- LSPM_RPT_WEATHERSCENARIO.qry

- LSPM_SPOTPRICE_LIST.qry
- LSPM_SPOT_PRICE_MAX.qry
- LSPM_TOU_PERIOD_LIST.qry
- LSPM_VOLATILITY_DELIVERYPOINTID.qry
- LSPM_VOLATILITY_MARKETID.qry
- LSPM_VOLATILITY_ZONEID.qry
- LSPM_WEATHER_MAX.qry
- LSPM_ZONEID_LIST.qry
- LSPM_RPT_MARKET_FORECAST_SPOTPRICE_PARTICIPANT.qry
- LSPM_RPT_MARKET_FORECAST_WEATHER.qry
- LSPM_RPT_MARKET_ZONE_FORECASTANALYSIS_SPOTPRICE_RECORDER.qry
- LSPM_RPT_MARKET_ZONE_RETAILPNL_CBLOAD_RECORDER.qry
- LSPM_RPT_MARKET_FORECAST_WEATHER_PARTICIPANT.qry
- LSPM_RPT_MARKET_FORECASTANALYSIS_CBLOAD_RECORDER.qry
- LSPM_RPT_MARKET_NETVOL_LOADSCENARIO_RECORDER.qry
- LSPM_RPT_CONFIDENCELEVELS.qry
- LSPM_RPT_MARKET_FORECAST_CBLOAD.qry
- LSPM_RPT_MARKET_FORECAST_SPOTPRICE.qry

These records are installed with the Oracle Utilities Portfolio Management database schema. These can also be installed manually using either Data Manager or the PLIMPORT, INTDIMP, RFIMPEXP, and LSTIMEXP command line programs. See the *Data Manager User's Guide* and the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about using these tools.

Chapter 4

Setting Up Oracle Utilities Portfolio Management Database Tables

This chapter describes how to set up records in a number of tables in the Oracle Utilities Data Repository used by Oracle Utilities Portfolio Management, including:

- **Setting Up Lookup Tables and Data**
- **Setting Up Batch Menu Administration Data**
- **Setting Up Oracle Utilities Portfolio Management Data**
- **Setting Up Interval Data for use with Oracle Utilities Portfolio Management**

You set up these records in the Oracle Utilities Data Repository using either the Data Manager or Data Navigator application.

Setting Up Lookup Tables and Data

Lookup tables and data are records used by other tables in the Oracle Utilities Data Repository required by Oracle Utilities Portfolio Management. Setting up lookup tables and data involves creating records in the following tables in the Oracle Utilities Data Repository:

- **Time-of-Use Schedules**
- **Market Service Type Table**
- **Imbalance Charges Table**

Time-of-Use Schedules

Time-of-use (TOU) schedules are used to classify each hour in each day of the week (including holidays) in some way, such as “on peak,” “off peak,” or “shoulder,” or any other appropriate classification. TOU schedules allow different prices or charges to be applied to energy usage based on a specific day and time.

Time-of-use (TOU) periods are specific periods of time within a TOU schedule that define each hour in each day of the week (including holidays) by some classification such as “on peak,” “off peak,” or “shoulder,” or any appropriate classifications.

For example, time-of-use periods might define the hours of 9:00 PM (21:00:00) through 7:00 AM (07:00:00) on weekdays as “off peak” hours, and the hours of 7:00 AM through 9:00 PM on weekdays as “on peak.” In this case, energy used during the “on peak” hours could be charged a different (probably higher) rate than energy used during “off peak” hours.

Time-of-use schedules and periods are created using the Data Manager application. See **Time-of-Use Schedules** on page 7-8 in the *Data Manager User's Guide* for more information about creating Time-of-use schedules.

Market Service Type Table

Records in the Market Service Type table represent specific types of service offered within a market. Records in this table are used by the LS Market table (see **LS Market Table** on page 4-7). Records in this table include the following information:

- **Service Type:** The name of the service type.
- **Description:** A description of the service type.

Imbalance Charges Table

Records in the Imbalance Charges table define the date range and trade point for which the imbalance charge values apply. Records in this table are used by the Imbalance Charge Value table (see **Imbalance Charge Values Table** on page 4-10). Records in this table include the following information:

- **UID:** The unique identifier for the imbalance charge record.
- **Start Date:** The start date of the imbalance charge record.
- **Stop Date:** The stop date of the imbalance charge record.
- **Create Date:** The date on the imbalance charge record was created.
- **Market:** The market to which the imbalance charge applies. A single record can apply to a single trade point (market, zone, or delivery point).
- **Zone:** The zone to which the imbalance charge applies. A single record can apply to a single trade point (market, zone, or delivery point).
- **Delivery Point:** The delivery point to which the imbalance charge applies. A single record can apply to a single trade point (market, zone, or delivery point).

Setting Up Batch Menu Administration Data

Oracle Utilities Portfolio Management relies on batch processing data to control the batch processes that perform the calculations used by Oracle Utilities Portfolio Management, and on specific tables that define values used across Oracle Utilities Portfolio Management user interface. Setting up batch menu administration data involves creating records in the following tables in the Oracle Utilities Data Repository:

- **PM Control Table**
- **Confidence Levels Table**
- **Market TOU Table**
- **PM Quick Pick Menu Table**
- **Time Span Table**

Refer to **Chapter 7: Batch Menu Administration** in the *Oracle Utilities Portfolio Management User's Guide* for more information about creating these records using the Oracle Utilities Portfolio Management user interface.

PM Control Table

Records in the PM Control table define parameters used by the Oracle Utilities Portfolio Management calculations. Records in this table include the following information:

- **UID:** The unique ID for the record.
- **LS Market:** The market to which the parameters defined in the record apply.
- **Control ID:** An ID for the control record.
- **Contract Trade Point Level:** The trade point level (market, zone, or delivery point) at which load data is stored.
- **Spot Price Trade Point Level:** The trade point level (market, zone, or delivery point) at which spot price data is stored.
- **Batch Window Size:** The length, in number days of the batch window in which calculations are performed.
- **Batch Window Start Offset:** The number of days from the current date to begin the batch window.
- **VaR Holding Period Size:** The number of days for the value-at-risk holding period.
- **VaR Holding Period Start Offset:** The number of days from the current date to begin the start of value-at-risk calculations.
- **PaR Holding Period Size:** The number of days for the profit-at-risk holding period.
- **PaR Holding Period Start Offset:** The number of days from the current date to begin the start of profit-at-risk calculations.
- **Weather Tolerance:** The acceptable tolerance for weather fluctuations.
- **Spot Price Tolerance:** The acceptable tolerance for spot price fluctuations.
- **Load Volume Tolerance:** The acceptable tolerance for load volume fluctuations.
- **Default Matching Graph:** The default graph to display on the Graphs tab of the Matching screen (for future use).
- **Option Calculation:** A user-defined value that can be used to assist in calculating how options are struck.

- **Gap Check:** A flag that indicates (Yes or No) if gap checks are to be performed on load, procurement, and price data during calculations.
- **Zero or Null Check:** A flag that indicates (Yes or No) if zero or null checks are to be performed on load, procurement, and price data during calculations.
- **Negative Check:** A flag that indicates (Yes or No) if negative checks are to be performed on load, procurement, and price data during calculations.
- **Tolerance Check:** A flag that indicates (Yes or No) if tolerance checks are to be performed on load, procurement, and price data during calculations.
- **As of Date:** The date as of which the record is in effect.

Confidence Levels Table

Records in the Confidence Levels table represent assumed levels of accuracy, or confidence, which should be placed on the calculations. Records in this table include the following information:

- **Confidence Level:** The confidence level. Confidence levels are presented as percentages.
- **Alpha:** The value applied to calculations for the confidence level.

Market TOU Table

Records in the Market TOU (Time-of-Use) table represent relationships between markets and time-of-use schedules defined in the Oracle Utilities Data Repository. Records in this table include the following information:

- **Market:** The market for the relationship defined by the record (from the LS Markets table).
- **TOU:** The time-of-use schedule for the relationship defined by the record.
- **Start Time:** The start time of the relationship between the market and the TOU period.
- **Stop Time:** The stop time of the relationship between the market and the TOU period.

PM Quick Pick Menu Table

Records in the PM Quick Pick Menu table represent pre-defined time periods that allow users to quickly switch between date ranges on the Oracle Utilities Portfolio Management screens. Records in this table include the following information:

- **Quick Pick:** The name of the quick pick that will appear on the header portion of the Oracle Utilities Portfolio Management screens.
- **Menu Type:** The screen type to which the quick pick applies (Matching, Forecast Analysis, or Options)
- **Display Sequence:** The position in which the quick pick will appear on the screen. The first quick pick to appear on a screen has a display sequence of 1, the second 2, etc.
- **Detail Granularity:** The granularity associated with the quick pick (Hourly, Daily, or Weekly).
- **Relative Start UOM:** The unit of measure (Daily, Weekly, Monthly, Quarterly, Yearly) associated with the relative start time of the quick pick. For example, a quick pick that allows users to view 1 week of data 3 weeks ahead would have a Relative Start UOM of “Weekly.”
- **Relative Start Amount:** The number of units before or after the current date used by the quick pick. For example, a quick pick that allows users to view 1 week of data 3 weeks ahead would have a Relative Start Amount of 3 weeks.
- **Time Span UOM:** The unit of measure (Daily, Weekly, Monthly, Quarterly, Yearly) associated with the quick pick. For example, a quick pick that allows users to view 1 week of data 3 weeks ahead would have a Time Span UOM of “Weekly.”

- **Time Span Amount:** The time span of the quick pick, expressed in terms of the Time Span UOM. For example, a quick pick that allows users to view 1 week of data 3 weeks ahead would have a Time Span Amount of 1 week.
- **Active Flag:** A flag that indicates (Yes or No) if the quick pick is active.

Time Span Table

Records in the Time Span table define thresholds for different units of time (hours, days, weeks, months, and years) used in Oracle Utilities Portfolio Management calculations. Records in this table include the following information:

- **Time Span:** The name of the time span.
- **Day Tolerance:** The day tolerance for the time span, expressed as a number of days. Day Tolerance values can be negative.
- **Week Tolerance:** The week tolerance for the time span, expressed as a number of days. Week Tolerance values can be negative.
- **Month Tolerance:** The month tolerance for the time span, expressed as a number of days. Month Tolerance values can be negative.
- **Hour Tolerance:** The hour tolerance for the time span, expressed as a number of hours. Hour Tolerance values can be negative.
- **Year Tolerance:** The year tolerance for the time span, expressed as a number of years. Year Tolerance values can be negative.

Setting Up Oracle Utilities Portfolio Management Data

Oracle Utilities Portfolio Management data include records that define the trade points (Markets, Zones, and Delivery Points), scenarios (Load, Price, and Temperature), options, imbalance charges, and other data used by Oracle Utilities Portfolio Management. Setting up this data involves creating records in the following tables in the Oracle Utilities Data Repository:

- **LS Market Table**
- **Zone Table**
- **Delivery Point Table**
- **Group Table**
- **Load Scenario Table**
- **Price Scenario Table**
- **Weather Scenario Table**
- **Option Table**
- **Imbalance Charge Values Table**
- **Correlation Matrix Table**
- **Volatility Transpose Table**

Refer to **Chapter 8: Managing Oracle Utilities Portfolio Management Data** in the *Oracle Utilities Portfolio Management User's Guide* for more information about creating these records using the Oracle Utilities Portfolio Management user interface.

LS Market Table

Records in the LS Market table represent markets in which Oracle Utilities Portfolio Management is used. Records in this table include the following information:

- **UID:** The unique identifier for the LS Market record.
- **Market ID:** The market ID.
- **Service Type:** The type of service (electric, gas, water, etc.) associated with the market (from the Market Service Type table).
- **Market code:** A code that designates the market.

Zone Table

Records in the Zone table represent specific regions (or zones) within markets in which Oracle Utilities Portfolio Management is used. Records in this table include the following information:

- **UID:** The unique identifier for the Zone record.
- **Zone ID:** The zone ID.
- **LS Market:** The market (from the LS Market table) in which the zone resides.
- **Zone code:** A code that designates the zone.

Delivery Point Table

Records in the Delivery Point table represent specific delivery points (such as transformers or substations) within zones in which Oracle Utilities Portfolio Management is used. Records in this table include the following information:

- **UID:** The unique identifier for the Delivery Point record.
- **Delivery Point ID:** The delivery point ID.
- **Zone:** The zone (from the Zone table) in which the delivery point resides.
- **Delivery Point code:** A code that designates the delivery point.

Group Table

Records in the Group table represent logical groupings of markets, zones, and/or delivery points used with Oracle Utilities Portfolio Management. Records in this table include the following information:

- **UID:** The unique identifier for the Group record.
- **Group Code:** A code that designates the group.
- **Description:** A description of the group.
- **Display Sequence:** A number that indicates the sequence in which group records are displayed in drop-down lists on the Oracle Utilities Portfolio Management screens.

Load Scenario Table

Records in the Load Scenario table represent broad load volume estimates (high, low, or average) used by Oracle Utilities Portfolio Management. Records in this table include the following information:

- **UID:** The unique identifier for the Load Scenario record.
- **Load Scenario:** The name of the load scenario.
- **Description:** A description of the load scenario.
- **Display Sequence:** A number that indicates the sequence in which load scenario records are displayed in drop-down lists on the Oracle Utilities Portfolio Management screens.

Price Scenario Table

Records in the Price Scenario table represent broad estimates (high, low, or average) of spot prices used by Oracle Utilities Portfolio Management. Records in this table include the following information:

- **UID:** The unique identifier for the Price Scenario record.
- **Price Scenario:** The name of the price scenario.
- **Description:** A description of the price scenario.
- **Display Sequence:** A number that indicates the sequence in which price scenario records are displayed in drop-down lists on the Oracle Utilities Portfolio Management screens.

Weather Scenario Table

Records in the Weather Scenario table represent broad estimates (high, low, or average) of temperature used by Oracle Utilities Portfolio Management. Records in this table include the following information:

- **UID:** The unique identifier for the Weather Scenario record.
- **Weather Scenario:** The name of the weather scenario.
- **Description:** A description of the weather scenario.
- **Display Sequence:** A number that indicates the sequence in which weather scenario records are displayed in drop-down lists on the Oracle Utilities Portfolio Management screens.

Option Table

Records in the Option table represent potential options available to users of Oracle Utilities Portfolio Management application. Options are most often entered via an interface from an external system, but can be viewed, edited, and added manually. Records in this table include the following information:

- **UID:** The unique identifier for the option record.
- **Option ID:** The option ID.
- **Start Time:** The start time of the option.
- **Stop Time:** The stop time of the option.
- **Create Date:** The date on which the option was created.
- **Market:** The market for which the option is available.
- **Zone:** The zone for which the option is available.
- **Delivery Point:** The delivery point for which the option is available.
- **Deal Type:** The type of deal the option represents (Default = Option).
- **Price:** The current price of the option (also known as the premium).
- **Nominal Volume:** The volume the option represents.
- **Buy/Sell:** Whether the option is to Buy or Sell.
- **Physical/Financial:** Whether the option is physical or financial.
- **Call/Put:** Whether the option is a Call option or a Put option.
- **Strike Price:** The strike price of the option.
- **Prestruck:** Whether or not the option was pre-struck (Y or N).
- **Delta:** The delta associated with the option.
- **Treatment:** The treatment of the option (Default = Intrinsic).
- **TOU Period:** The Time-of-Use associated with the option.
- **Struck:** Whether or not the option has been struck (Y or N).
- **Group ID:** The group for which the option is available.

Imbalance Charge Values Table

Records in the Imbalance Charge Value table represent values used in the calculation of imbalance changes related to buying or selling energy in the spot market. Imbalance charge values are most often entered via an interface from an external system, but can be viewed, edited, and added manually. Records in this table include the following information:

- **UID:** The unique identifier for the imbalance charge value record.
- **Imbalance Charges:** The date range and trade point for which the imbalance charge value applies (from the Imbalance Charges table).
- **Amount:** The threshold amount when the adder and percentage values will be applied to spot market purchases and/or sales.
- **Adder:** A fixed amount associated with the imbalance charge value that is applied when the threshold specified in the Amount field is exceeded.
- **Percentage:** A percentage associated with the imbalance charge value that is applied when the threshold specified in the Amount field is exceeded.

Correlation Matrix Table

Records in the Correlation Matrix table represent the correlation between a specific market/zone/delivery point and a specific load scenario and price scenario combination over a specified date range. Each correlation matrix record has one or more Correlation Matrix Value records associated with it that define the correlation value for a specific combination of time-of-use schedules. Records in this table include the following information:

- **UID:** The unique identifier for the correlation matrix record.
- **Market:** The market associated with the correlation matrix.
- **Zone:** The zone associated with the correlation matrix.
- **Delivery Point:** The delivery point associated with the correlation matrix.
- **Load Scenario:** The load scenario associated with the correlation matrix.
- **Price Scenario:** The price scenario associated with the correlation matrix.
- **Start Time:** The start time of the date range during which the correlation matrix is applicable.
- **Stop Time:** The stop time of the date range during which the correlation matrix is applicable.

Correlation Matrix Value Table

Each record in the Correlation Matrix table has one or more records in the Correlation Matrix Value table associated with it that define the correlation value for a specific combination of time-of-use periods. Records in this table include the following information:

- **UID:** The unique identifier for the correlation matrix value record.
- **Correlation Matrix:** The parent correlation matrix associated to the correlation matrix value record (from the Correlation Matrix table).
- **TOU Period X:** The first of two TOU periods in the correlation (from the TOU Period table).
- **TOU Period Y:** The second of two TOU periods in the correlation (from the TOU Period table).
- **Correlation:** The correlation value for the combination of the TOU Period X and TOU Period Y.

Volatility Transpose Table

Records in the Volatility Transpose table represent the volatility in spot prices associated with a specific time-of-use (TOU) period for a specific market/zone/delivery point for a specific load scenario and price scenario combination over a specified date range. Records in this table include the following information:

- **UID:** The unique identifier for the volatility record.
- **Market:** The market associated with the volatility.
- **Zone:** The zone associated with the volatility.
- **Delivery Point:** The delivery point associated with the volatility.
- **TOU Period:** The time-of-use (TOU) period associated with the volatility.
- **Load Scenario:** The load scenario associated with the volatility.
- **Price Scenario:** The price scenario associated with the volatility.
- **Volatility:** The amount of the volatility.
- **Start Time:** The start time of the date range during which the volatility is applicable.
- **Stop Time:** The stop time of the date range during which the volatility is applicable.

Setting Up Interval Data for use with Oracle Utilities Portfolio Management

Oracle Utilities Portfolio Management uses interval data of different types (load, prices, temperature, etc.) at different trade point levels (Market, Zone, or Delivery Point) in its calculations. But before you can use the application, you must first set up records in the Oracle Utilities Data Repository that represent the specific types of interval data that will be used by the Oracle Utilities Portfolio Management application. Setting up interval data for use with Oracle Utilities Portfolio Management includes the following steps:

- **Set Up Recorder and Channel Records**
- **Set Up Oracle Utilities Portfolio Management Interval Data Tables**

Set Up Recorder and Channel Records

In Oracle Utilities Portfolio Management, each “type” of interval data represents a unique combination of Market, Zone, Delivery Point, Data Type, Load Scenario, Price Scenario, and Group. For each “type” of interval data used in your Oracle Utilities Portfolio Management implementation (load volumes, load prices, spot prices, etc. at different trade points), you need to create corresponding records in the Recorder and Channel tables.

Recorder Table

For each “type” of interval data, create a record in the Recorder table with the following information:

- **ID:** The recorder ID that represents the interval data “type”

Channel Table

For each “type” of interval data, create a record in the Channel table with the following information:

- **Recorder:** The Recorder ID that represents the interval data “type” (from the Recorder table)
- **Number:** The channel number that represents the interval data “type”

Recorder ID Naming Conventions

Because of the large number of possible “types” of interval data, Oracle Utilities strongly recommends using a naming convention of some sort for Recorder IDs. The Oracle Utilities Portfolio Management application uses the following recorder naming convention for interval data created during calculation processing:

```
<MARKET>_<ZONE>_<DPOINT>_<TYPE>_<LOADSCEN>_<PRICESCEN>_GROUP_<TRADEPOINTLEVEL>
```

where:

- **<MARKET>:** The Market Code (from the LS Market table) associated with the data defined by the Recorder ID.
- **<ZONE>:** The Zone Code (from the Zone table) associated with the data defined by the Recorder ID.
- **<DPOINT>:** The Delivery Point Code (from the Delivery Point table) associated with the data defined by the Recorder ID.
- **<TYPE>:** The type code for the data defined by the Recorder ID. Type codes are based on the type of data, and can include the following:
 - **Load Data:** Load data type codes include:
 - **FIXLDVOL** (Fixed Load Volume)

- FIXLDPRI (Fixed Load Price)
- VARLDVOL (Variable Load Volume)
- VARLDPRI (Variable Load Price)
- **Procurement:** Procurement type codes include:
 - PROCVOL (Procurement Volume)
 - PROCPRI (Procurement Price)
- **Spot Price:** Spot price type codes include:
 - SPOTPRI (Spot Price)
 - ACTSPPRI (Actual)
- **Weather:** Weather type codes include:
 - TEMP (Temperature)
 - ACTTEMP (Actual)
- **Combined Load:** Combined load data type codes include:
 - TOTLDVOL (Total Load Volume)
 - TOTLDPRI (Total Load Price)
 - TOTLDREV (Total Load Revenue)
 - ACTLDCB (Actual)
- **<LOADSCEN>:** The Load Scenario (from the Load Scenario table) associated with the data defined by the Recorder ID.
- **<PRICESCEN>:** The Price Scenario (from the Price Scenario table) associated with the data defined by the Recorder ID.
- **<GROUP>:** The Group Code (from the Group table) associated with the data defined by the Recorder ID. Note: A missing Group element on incoming data indicates no group. A missing Group element for calculated data represents an aggregation of all groups.
- **<TRADEPOINTLEVEL>:** The trade point level (Market (M), Zone (Z), or Delivery Point (D)) of the data associated with the data defined by the Recorder ID.

The following rules apply to this naming convention:

- All elements are separated with an underscore (_) character.
- A missing (or absent) element is represented by a string of zero length in the appropriate position. For example, to omit the Delivery Point, the recorder ID would be as follows:
`<MARKET>_<ZONE>__<TYPE>_<LOADSCEN>_<PRICESCEN>_GROUP_<TRADEPOINTLEVEL>`
- For trade point levels (Market, Zone, and Delivery Point), the presence of a lower elements requires the presence of all upper elements. For example, if you specify a Delivery Point, you must also specify its parent Zone and Market.

Examples

Following are examples of this naming convention based on the following trade points and scenarios:

- **Market:** MARKET01
- **Zone:** (within MARKET01): ZONE01, ZONE02
- **Delivery Point:** (within ZONE01): DP01, DP02, DP03
- **Load Scenario:** BASE, HIGH, LOW

- **Price Scenario:** BASE, HIGH, LOW
- **Group:** GROUP01, GROUP02

Fixed Load Volume for delivery point DP01 for the base load scenario and base price scenario for GROUP01:

```
MARKET01_ZONE01_DP01_FIXLDVOL_BASE_BASE_GROUP01_D
```

Fixed Load Volume for ZONE02 for the base load scenario and base price scenario for GROUP02:

```
MARKET01_ZONE02__FIXLDVOL_BASE_BASE_GROUP02_Z
```

Fixed Load Volume for MARKET01 for the base load scenario and base price scenario:

```
MARKET01__FIXLDVOL_BASE_BASE__M
```

Sample Combinations

As noted above, each “type” of interval data in Oracle Utilities Portfolio Management represents a unique combination of Market, Zone, Delivery Point, Data Type, Load Scenario, Price Scenario, and Group. Following are sample combinations using the above naming convention that represent different “types” of load data:

Base Load, Base Price, Fixed Load Volume for DP01:

```
MARKET01_ZONE01_DP01_FIXLDVOL_BASE_BASE_GROUP01_D  
MARKET01_ZONE01_DP01_FIXLDVOL_BASE_BASE_GROUP02_D  
MARKET01_ZONE01_DP01_FIXLDVOL_BASE_BASE__D
```

Base Load, Low Price, Fixed Load Volume for DP01:

```
MARKET01_ZONE01_DP01_FIXLDVOL_BASE_LOW_GROUP01_D  
MARKET01_ZONE01_DP01_FIXLDVOL_BASE_LOW_GROUP02_D  
MARKET01_ZONE01_DP01_FIXLDVOL_BASE_LOW__D
```

Base Load, High Price, Fixed Load Volume for DP01:

```
MARKET01_ZONE01_DP01_FIXLDVOL_BASE_HIGH_GROUP01_D  
MARKET01_ZONE01_DP01_FIXLDVOL_BASE_HIGH_GROUP02_D  
MARKET01_ZONE01_DP01_FIXLDVOL_BASE_HIGH__D
```

Low Load, Base Price, Fixed Load Volume for DP01:

```
MARKET01_ZONE01_DP01_FIXLDVOL_LOW_BASE_GROUP01_D  
MARKET01_ZONE01_DP01_FIXLDVOL_LOW_BASE_GROUP02_D  
MARKET01_ZONE01_DP01_FIXLDVOL_LOW_BASE__D
```

Low Load, Low Price, Fixed Load Volume for DP01:

```
MARKET01_ZONE01_DP01_FIXLDVOL_LOW_LOW_GROUP01_D  
MARKET01_ZONE01_DP01_FIXLDVOL_LOW_LOW_GROUP02_D  
MARKET01_ZONE01_DP01_FIXLDVOL_LOW_LOW__D
```

Low Load, High Price, Fixed Load Volume for DP01:

```
MARKET01_ZONE01_DP01_FIXLDVOL_LOW_HIGH_GROUP01_D  
MARKET01_ZONE01_DP01_FIXLDVOL_LOW_HIGH_GROUP02_D  
MARKET01_ZONE01_DP01_FIXLDVOL_LOW_HIGH__D
```

High Load, Base Price, Fixed Load Volume for DP01:

```
MARKET01_ZONE01_DP01_FIXLDVOL_HIGH_BASE_GROUP01_D  
MARKET01_ZONE01_DP01_FIXLDVOL_HIGH_BASE_GROUP02_D  
MARKET01_ZONE01_DP01_FIXLDVOL_HIGH_BASE__D
```

High Load, Low Price, Fixed Load Volume for DP01:

```
MARKET01_ZONE01_DP01_FIXLDVOL_HIGH_LOW_GROUP01_D  
MARKET01_ZONE01_DP01_FIXLDVOL_HIGH_LOW_GROUP02_D  
MARKET01_ZONE01_DP01_FIXLDVOL_HIGH_LOW__D
```


High Load, High Price, Fixed Load Volume for DP01:

```
MARKET01_ZONE01_DP01_FIXLDVOL_HIGH_HIGH_GROUP01_D
MARKET01_ZONE01_DP01_FIXLDVOL_HIGH_HIGH_GROUP02_D
MARKET01_ZONE01_DP01_FIXLDVOL_HIGH_HIGH__D
```

Base Load, Base Price, Variable Load Volume for DP01:

```
MARKET01_ZONE01_DP01_VARLDVOL_BASE_BASE_GROUP01_D
MARKET01_ZONE01_DP01_VARLDVOL_BASE_BASE_GROUP02_D
MARKET01_ZONE01_DP01_VARLDVOL_BASE_BASE__D
```

Base Load, Low Price, Variable Load Volume for DP01:

```
MARKET01_ZONE01_DP01_VARLDVOL_BASE_LOW_GROUP01_D
MARKET01_ZONE01_DP01_VARLDVOL_BASE_LOW_GROUP02_D
MARKET01_ZONE01_DP01_VARLDVOL_BASE_LOW__D
```

...

Base Load, Base Price, Fixed Load Price for DP01:

```
MARKET01_ZONE01_DP01_FIXLDPRI_BASE_BASE_GROUP01_D
MARKET01_ZONE01_DP01_FIXLDPRI_BASE_BASE_GROUP02_D
MARKET01_ZONE01_DP01_FIXLDPRI_BASE_BASE__D
```

...

Base Load, Base Price, Variable Load Price for DP01:

```
MARKET01_ZONE01_DP01_VARLDPRI_BASE_BASE_GROUP01_D
MARKET01_ZONE01_DP01_VARLDPRI_BASE_BASE_GROUP02_D
MARKET01_ZONE01_DP01_VARLDPRI_BASE_BASE__D
```

...

Base Load, Base Price, Fixed Load Price for DP02:

```
MARKET01_ZONE01_DP02_FIXLDVOL_BASE_BASE_GROUP01_D
MARKET01_ZONE01_DP02_FIXLDVOL_BASE_BASE_GROUP02_D
MARKET01_ZONE01_DP02_FIXLDVOL_BASE_BASE__D
```

...

Base Load, Base Price, Fixed Load Price for DP03:

```
MARKET01_ZONE01_DP03_FIXLDVOL_BASE_BASE_GROUP01_D
MARKET01_ZONE01_DP03_FIXLDVOL_BASE_BASE_GROUP02_D
MARKET01_ZONE01_DP03_FIXLDVOL_BASE_BASE__D
```

...

Base Load, Base Price, Fixed Load Price for all Delivery Points within ZONE01:

```
MARKET01_ZONE01__FIXLDVOL_BASE_BASE_GROUP01_Z
MARKET01_ZONE01__FIXLDVOL_BASE_BASE_GROUP02_Z
MARKET01_ZONE01__FIXLDVOL_BASE_BASE__Z
```

...

Base Load, Base Price, Fixed Load Price for all Zones within MARKET01:

```
MARKET01__FIXLDVOL_BASE_BASE_GROUP01_M
MARKET01__FIXLDVOL_BASE_BASE_GROUP02_M
MARKET01__FIXLDVOL_BASE_BASE__M
```

...

Set Up Oracle Utilities Portfolio Management Interval Data Tables

Once Recorder and Channel records have been created for the interval data “types” to be used in your Oracle Utilities Portfolio Management implementation, the next step is to create records in the Oracle Utilities Portfolio Management Interval Data tables that correspond to each, including the following:

- **Load Data Table**
- **Procurement Table**
- **Spot Price Table**
- **Weather Table**
- **Combined Load Data Table**

Each record in these tables includes a lookup to the Channel table that associates the record to the corresponding interval data Recorder ID and Channel (defined in the previous step). For example, if using the Recorder ID naming convention described above, a record in the Load Data table for DP01, Fixed Volume (FIXVOL), for the base load and base price scenario, and GROUP01 would be associated to the following Recorder ID:

```
MARKET01_ZONE01_DP01_FIXLDVOL_BASE_BASE_GROUP01_D
```

Load Data Table

Records in the Load Data table represent different “types” of load data, each representing a unique combination of trade point (Market, Zone, or Delivery Point), Data Type, Load Scenario, and Group. Note that only a single trade point can be specified for each record. Records in this table include the following information:

- **UID:** The unique identifier for the load data record.
- **Market:** The market associated with the load data record (from the LS Markets table).
- **Zone:** The zone associated with the load data record (from the Zone table).
- **Delivery Point:** The delivery point associated with the load data record (from the Delivery Point table).
- **Service Point:** The service point associated with the load data record (from the Service Point table).
- **Load Type:** The load type associated with the load data record. Can be one of the following:
 - Fixed Load Volume (FIXLDVOL)
 - Fixed Load Price (FIXLDPRI)
 - Variable Load Volume (VARLDVOL)
 - Variable Load Price (VARLDPRI)
- **Channel:** The Recorder ID and Channel associated with the load data record (from the Channel table).
- **Load Scenario:** The load scenario associated with the load data record (from the Load Scenario table).
- **Group:** The group associated with the load data record (from the Group table).

Interval data cuts related to each record in the Load Data table are stored in the following tables:

- Load Channel Cut Header
- Load Channel Cut Data
- Load Channel Cut Validation Message

Procurement Table

Records in the Procurement table represent different “types” of procurement data, each representing a unique combination of trade point (Market, Zone, or Delivery Point), Data Type, and Group. Note that only a single trade point can be specified for each record. Records in this table include the following information:

- **UID:** The unique identifier for the procurement record.
- **Market:** The market associated with the procurement record (from the LS Markets table).
- **Zone:** The zone associated with the procurement record (from the Zone table).
- **Delivery Point:** The delivery point associated with the procurement record (from the Delivery Point table).
- **Procurement Type:** The procurement type associated with the procurement record. Can be one of the following:
 - Procurement Volume (PROCVOL)
 - Procurement Price (PROCPRI)
- **Group:** The group associated with the procurement record (from the Group table).
- **Channel:** The channel associated with the procurement record (from the Channel table).

Interval data cuts related to each record in the Procurement table are stored in the following tables:

- Procurement Cut Header
- Procurement Cut Data
- Procurement Cut Validation Message

Spot Price Table

Records in the Spot Price table represent different “types” of price data, each representing a unique combination of trade point (Market, Zone, or Delivery Point), Price Scenario, and Data Type. Note that only a single trade point can be specified for each record. Records in this table include the following information:

- **UID:** The unique identifier for the spot price record.
- **Market:** The market associated with the spot price record (from the LS Markets table).
- **Zone:** The zone associated with the spot price record (from the Zone table).
- **Delivery Point:** The delivery point associated with the spot price record (from the Delivery Point table).
- **Price Scenario:** The price scenario associated with the spot price record (from the Price Scenario table).
- **Channel:** The channel associated with the spot price record (from the Channel table).
- **Spot Price Type:** The spot price type associated with the spot price record. Can be one of the following:
 - Spot Price (SPOTPRI)
 - Actual (ACTSPPRI)

Interval data cuts related to each record in the Spot Price table are stored in the following tables:

- Spot Price Cut Header
- Spot Price Cut Data
- Spot Price Cut Validation Message

Weather Table

Records in the Weather table represent different “types” of weather data, each representing a unique combination of trade point (Market, Zone, or Delivery Point), Data Type, Group, and Weather Scenario. Note that only a single trade point can be specified for each record. Records in this table include the following information:

- **UID:** The unique identifier for the weather record.
- **Weather Station ID:** ID of weather station associated with the weather data record.
- **Market:** The market associated with the weather record (from the LS Markets table).
- **Zone:** The zone associated with the weather record (from the Zone table).
- **Delivery Point:** The delivery point associated with the weather record (from the Delivery Point table).
- **Service Point:** The service point associated with the weather record (from the Service Point table).
- **Weather Type:** The weather type associated with the weather record. Can be one of the following:
 - Temperature (TEMP)
 - Actual (ACTTEMP)
- **Channel:** The channel associated with the weather record (from the Channel table).
- **Group:** The group associated with the weather record (from the Group table).
- **Weather Scenario:** The weather scenario associated with the weather record (from the Weather Scenario table).

Interval data cuts related to each record in the Weather table are stored in the following tables:

- Weather Channel Cut Header
- Weather Channel Cut Data
- Weather Channel Cut Validation Message

Combined Load Data Table

Records in the Combined Load Data table represent different “types” of combined load data (combinations of load volume and load price), each representing a unique combination of trade point (Market, Zone, or Delivery Point), Data Type, Load Scenario, and Group. Note that only a single trade point can be specified for each record. Records in this table include the following information:

- **UID:** The unique identifier for the combined load data record.
- **Market:** The market associated with the combined load data record (from the LS Markets table).
- **Zone:** The zone associated with the combined load data record (from the Zone table).
- **Delivery Point:** The delivery point associated with the combined load data record (from the Delivery Point table).
- **Service Point:** The service point associated with the combined load data record (from the Service Point table).
- **Combined Load Type:** The combined load type associated with the combined load data record. Can be one of the following:
 - Total Load Volume (TOTLDVOL)
 - Total Load Price (TOTLDPRI)

- Total Load Revenue (TOTLDREV)
- Actual (ACTLDCB)
- **Load Scenario:** The load scenario associated with the combined load data record (from the Load Scenario table).
- **Group:** The group associated with the combined load data record (from the Group table).
- **Channel:** The channel associated with the combined load data record (from the Channel table).

Interval data cuts related to each record in the Combined Load Data table are stored in the following tables:

- Combined Load Cut Header
- Combined Load Cut Data
- Combined Load Cut Validation Message

Note: Interval data cuts for combined load data is produced by the Oracle Utilities Portfolio Management application calculations and should NEVER be imported directly into these tables.

Chapter 5

Configuring Oracle Utilities Portfolio Management Security

This chapter describes how to configure security to work with Oracle Utilities Portfolio Management, including:

- **Oracle Utilities Portfolio Management Security**

Oracle Utilities Portfolio Management Security

This section describes the securable features of the Oracle Utilities Portfolio Management application, including:

- **Oracle Utilities Portfolio Management Features**
- **Important Notes about Assigning Oracle Utilities Portfolio Management Permissions**

Oracle Utilities Portfolio Management Features

Oracle Utilities Portfolio Management features include:

- **Matching:** Enables the Matching menu item.
- **Forecast Analysis:** Enables the Forecast Analysis menu item.
- **Options:** Enables the Options menu item.
- **Batch Menu Admin:** Enables the Batch Menu Admin menu, and expands to reveal Batch Menu Admin permissions including:
 - **Control:** Enables the Work Queues menu item.
 - **Run History:** Enables the Run History menu item.
 - **Confidence Levels:** Enables the Confidence Levels menu item.
 - **Market TOU:** Enables the Market TOU menu item.
 - **Quick Pick Menu:** Enables the Quick Pick Menu menu item.
 - **Time Span:** Enables the Time Span menu item.
- **Manage PM Data:** Enables the Batch Menu Admin menu, and expands to reveal Manage PM Data permissions including:
 - **Market:** Enables the Market menu item.
 - **Zone:** Enables the Zone menu item.
 - **Delivery Point:** Enables the Delivery Point menu item.
 - **Group:** Enables the Group menu item.
 - **Load Scenario:** Enables the Load Scenario menu item.
 - **Price Scenario:** Enables the Price Scenario menu item.
 - **Temperature Scenario:** Enables the Temperature Scenario menu item.
 - **Options:** Enables the Options menu item.
 - **Imbalance:** Enables the Imbalance menu item.
 - **Correlation Matrix:** Enables the Correlation Matrix menu item.
 - **Volatility:** Enables the Volatility menu item.
 - **Work Queue Types:** Enables the Work Queue Types menu item.
- **Run Reports:** Enables the Run Reports option on the Portfolio Management menu.
- **View Reports:** Enables the View Reports option on the Portfolio Management menu.

Important Notes about Assigning Oracle Utilities Portfolio Management Permissions

By default, the Oracle Utilities Portfolio Management features restrict access to all Portfolio Management functions and screens. To allow users access to Oracle Utilities Portfolio Management functionality, create users and groups and enable appropriate permissions for each.

Appendix A

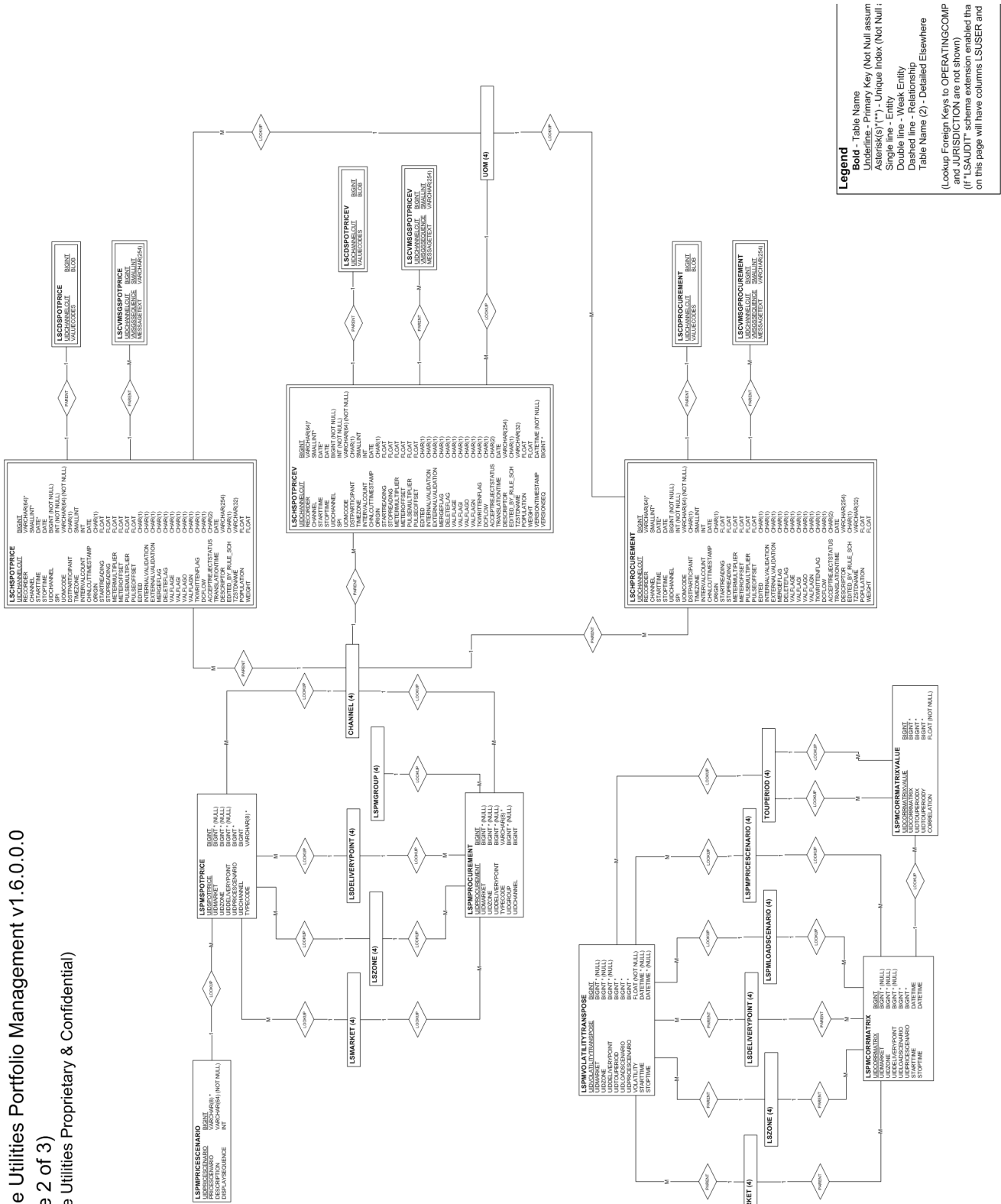
Oracle Utilities Data Repository Portfolio Management Database Schema

This appendix includes a diagram of the Oracle Utilities Data Repository Portfolio Management database schema (v1.6.0.0.0) that provides details regarding the table and columns in the Oracle Utilities Portfolio Management schema, as well as the relationships between these tables in the Oracle Utilities Data Repository. This information is very useful when writing Rules Language statements or constructing database queries. This includes:

- **Oracle Utilities Portfolio Management Database Schema, page 1**
- **Oracle Utilities Portfolio Management Database Schema, page 2**
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