

Oracle Utilities Meter Data Management

Installation Guide

Release 2.0.1 Service Pack 9

E18180-07

May 2013

Copyright © 2000, 2013, Oracle and/or its affiliates. All rights reserved.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this software or related documentation is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. 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, the use, duplication, disclosure, modification, and adaptation shall be subject to the restrictions and license terms set forth in the applicable Government contract, and, to the extent applicable by the terms of the Government contract, the additional rights set forth in FAR 52.227-19, Commercial Computer Software License (December 2007). Oracle America, Inc., 500 Oracle Parkway, Redwood City, CA 94065.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications which may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information on content, products and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third party content, products and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third party content, products or services.

Contents

Preface	i-i
Audience	i-i
Related Documents	i-i
Conventions	i-i
Chapter 1	
Overview	1-1
Installation Overview	1-2
Chapter 2	
Application Architecture Overview	2-1
Application Architecture	2-2
Tier 1: Desktop/Client, or Presentation Tier	2-2
Tier 2: Web Application Server, Business Application Server, Batch Server Tier	2-2
Tier 3: Database, or Persistence Tier	2-2
Chapter 3	
Supported Platforms and Hardware Requirements	3-1
Software and Hardware Considerations	3-2
Minimum Requirements by Tier	3-3
Tier 1, Desktop: Software and Hardware Requirements	3-3
Tier 2, Web/Business Application Server, Batch Server: Software and Hardware Requirements	3-3
Tier 3, Database Server: Software and Hardware Requirements	3-4
Supported Platforms	3-5
Operating Systems and Application Servers	3-5
Oracle Database Servers	3-5
Oracle WebLogic Server Information	3-6
Application Dependencies for Oracle Business Intelligence for Utilities	3-6
Support for Software Patches and Upgrades	3-6
Chapter 4	
Installation Types	4-1
Initial Installation Compared with Upgrade Installation	4-2
Database Installation: Initial Installation Compared with Demo Installation	4-2
Chapter 5	
Planning the Installation	5-1
Installation and Configuration Overview	5-2
Before You Install	5-3
Installation Checklist	5-3
Prerequisite Third-Party Software Overview	5-3
Application Framework Installation and Configuration Worksheets	5-4
Installation Menu Functionality Overview	5-4
Installation Menu Functionality Details	5-4
Third Party Software Configuration	5-5

Environment Installation Options	5-8
Environment Description.....	5-11
WebLogic Business Application Server Configuration.....	5-12
WebSphere Basic Business Application Server Configuration	5-13
WebLogic Web Application Server Configuration	5-14
WebSphere Basic Web Application Server Configuration	5-18
Database Configuration	5-21
General Configuration Options.....	5-24
Advanced Menu Options.....	5-25
Meter Data Framework Installation and Configuration Worksheets.....	5-35
WebLogic OSB Configuration.....	5-36
WebSphere OSB Configuration	5-38
WebLogic SOA Configuration	5-39
WebSphere SOA Configuration	5-41
WebLogic MDF SOA Configuration Plan	5-42
Advanced Menu Options.....	5-43
Chapter 6	
Installing the Database	6-1
Chapter 7	
Installing Application Server Prerequisite Software	7-1
AIX 6.1 Application Server.....	7-2
Supported Application Servers	7-2
Web/Application Server Tier.....	7-2
Oracle Linux 5.5 or Red Hat Linux 5.5 Application Server	7-5
Supported Application Servers	7-5
Web/Application Server Tier.....	7-5
Solaris 10 Application Server.....	7-8
Supported Application Servers	7-8
Web/Application Server Tier.....	7-8
Windows 2008 Application Server	7-11
Supported Application Servers	7-11
Web/Application Server Tier.....	7-11
Chapter 8	
Configuring WebSphere Application Server.....	8-1
Configuring WebSphere Basic	8-2
Chapter 9	
Installing the Application Server Component of Oracle Utilities Application Framework.....	9-1
Installation Overview	9-2
Preinstallation Tasks	9-3
Hardware and Software Version Prerequisites.....	9-3
Database Installation	9-3
Installation Prerequisites	9-3
System Architecture Overview	9-3
Copying and Decompressing Install Media	9-3
Set Permissions for the cistab File in UNIX	9-4
Installing Oracle Utilities Application Framework.....	9-5
Brief Description of the Installation Process	9-5
Detailed Description of the Installation Process	9-5
Chapter 10	
Installing the Application Server Component of Oracle Utilities Meter Data Framework	10-1
Preinstallation Tasks	10-2
Installing Prerequisite Patches	10-2

Copying and Decompressing Install Media	10-2
Installing Oracle Utilities Meter Data Framework	10-3
Preparing for the Installation	10-3
Installing the Application.....	10-3
Installing Service Packs and Patches	10-4
Chapter 11	
Installing the Application Server Component of Oracle Utilities Meter Data Management	11-1
Preinstallation Tasks	11-2
Installation Prerequisite.....	11-2
Copying and Decompressing Install Media	11-2
Preparing for the Installation	11-2
Installing the Application	11-3
Post Installation steps:.....	11-3
Installing User Documentation	11-4
Installing Stand-Alone Online Help.....	11-4
Operating the Application.....	11-5
Installing Service Packs and Patches	11-5
Chapter 12	
Installing Service Packs	12-1
Prerequisites	12-1
Oracle Utilities Meter Data Framework 2.0.1.9.0 Prerequisites.....	12-1
Oracle Utilities Meter Data Management 2.0.1.9.0 Prerequisites	12-2
Package Contents	12-2
Installing the Database	12-3
Installing the Application	12-3
Chapter 13	
Additional Tasks	13-1
Customizing Configuration Files	13-2
Generating the Application Viewer.....	13-2
Building Javadoc Indexes	13-3
Configuring the Environment for Batch Processing.....	13-3
Customizing the Logo	13-3
WebLogic Production Server Considerations.....	13-4
Configure Identity and Trust.....	13-4
BI Publisher Report Configuration	13-4
Appendix A	
Glossary of Acronyms	A-1
Appendix B	
Required Application Framework Patches.....	B-1
Appendix C	
Meter Data Framework Fixes	C-1
Appendix D	
Meter Data Management Fixes	D-1
Appendix E	
License and Copyright Notices	E-1
Third Party Products.....	E-1
Notice concerning usage of ANTLR and Classycle	E-1
Notice concerning usage of Apache Software.....	E-1
Notice concerning usage of ASM.....	E-4
Notice concerning usage of Concurrent	E-5

Notice concerning usage of dom4j	E-5
Notice concerning usage of International Components for Unicode (ICU4J)	E-6
Notice concerning usage of Jaxen	E-6
Notice concerning usage of JCIP Annotations	E-7
Notice concerning usage of XStream	E-10
Notice concerning usage of slf4j	E-11
Notice concerning usage of Perl.....	E-11
Notice concerning usage of Mime-Base64 Perl Module.....	E-13
Notice concerning usage of Mime-Lite Perl Module	E-13
Notice concerning usage of DBD::DB2 Perl Module.....	E-13
Notice concerning usage of DBI Perl Module.....	E-14

Preface

This guide describes how to install Oracle Utilities Meter Data Management.

This preface contains these topics:

- **Audience**
- **Related Documents**
- **Conventions**

Audience

Oracle Utilities Meter Data Management Installation Guide is intended for system administrators installing Oracle Utilities Meter Data Management.

To use this document you should have:

- Experience installing and configuring application servers and other software
- Administrative privileges on the host where you are installing the software

If you are interested in the process of installing a service pack of Oracle Utilities Meter Data Management, for specific installation instructions please refer to the **Readme.txt** included with the service pack installation package.

Related Documents

For more information, see these Oracle documents:

- *Oracle Utilities Meter Data Management Quick Install Guide*
- *Oracle Utilities Meter Data Management Database Administrator's Guide*

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.

Convention	Meaning
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Chapter 1

Overview

This chapter provides an overview of the installation of Oracle Utilities Meter Data Management.

Installation Overview

Installing Oracle Utilities Meter Data Management involves the following steps:

1. Review the different tiers of the application architecture as described in **Chapter 2: Application Architecture Overview**.
2. Understand the hardware requirements for installing the application and the supported platforms for the application and database servers as described in **Chapter 3: Supported Platforms and Hardware Requirements**.

Note: The installation and administration of the database server tier is described in detail in the document *Oracle Utilities Meter Data Management Database Administrator's Guide*.
3. Plan your installation as described in **Chapter 5: Planning the Installation**.
4. Install the database as described in the document *Oracle Utilities Meter Data Management Database Administrator's Guide*.
5. Install all required third-party software as described in **Chapter 7: Installing Application Server Prerequisite Software**. The required software is listed for each supported combination of operating system and application server.
6. Install the framework for the application as described in **Chapter 9: Installing the Application Server Component of Oracle Utilities Application Framework**.
7. Install the meter data framework for the application as described in **Chapter 10: Installing the Application Server Component of Oracle Utilities Meter Data Framework**.
8. Install Oracle Utilities Meter Data Management as described in **Chapter 11: Installing the Application Server Component of Oracle Utilities Meter Data Management**.
9. Install the current service pack for Oracle Utilities Meter Data Management as described in **Chapter 12: Installing Service Packs**.
10. Follow the installation guidelines described in **Chapter 13: Additional Tasks**.

Chapter 2

Application Architecture Overview

This section provides an overview of the Oracle Utilities Meter Data Management application architecture.

Application Architecture

The Oracle Utilities Meter Data Management application is deployed on multiple tiers.

Please see the *Oracle Utilities Meter Data Management Server Administration Guide* for a more detailed description of the application architecture and individual tiers.

Tier 1: Desktop/Client, or Presentation Tier

This tier is implemented in a browser-based client. Users use a desktop client Web browser to log in to and use the Oracle Utilities Meter Data Management application. Note also that a desktop machine running Microsoft Windows and the Oracle client is required to perform some of the Oracle Utilities Meter Data Management product installation steps.

Tier 2: Web Application Server, Business Application Server, Batch Server Tier

This tier is implemented in a Web application server, business application server, or the batch server. The business application component can be installed as part of the Web application server, or as a separate component. Except where explicitly noted, most of the Oracle Utilities Meter Data Management installation documentation assumes that the Web application and business application servers reside together. The batch infrastructure will also run within this tier. You can have multiple batch server instances that serve the application.

Tier 3: Database, or Persistence Tier

This tier is implemented in a database server. The database server stores data maintained by the Oracle Utilities Meter Data Management application. More specifically, the database tier contains the data server files and database executables that physically store the tables, indexes, and other database objects for your system.

Chapter 3

Supported Platforms and Hardware Requirements

This section gives an overview of the tiers on which the product is implemented, and shows each of the operating system/server combinations that the product is certified for. It includes:

- **Software and Hardware Considerations**
- **Minimum Requirements by Tier**
- **Supported Platforms**
- **Support for Software Patches and Upgrades**

Software and Hardware Considerations

There are many factors that can influence software and hardware decisions. For example, your system may have to satisfy specific performance, availability, or scalability requirements, or to support running in a language other than English. These business requirements, together with the chosen system architecture, should be used in initial software and hardware planning.

Some of the questions that you should answer before beginning the installation include:

- On which hardware platform and operating system will Oracle Utilities Meter Data Management be deployed?
- On which Web server product will Oracle Utilities Meter Data Management deploy?
- On which database product will Oracle Utilities Meter Data Management deploy?
- Do you plan to deploy multiple Oracle Utilities Meter Data Management instances on the same physical server?
- How do you plan to deploy Oracle Utilities Meter Data Management?
 - Web/application/database on the same physical server
 - Web/application on one server and database on separate server
 - Each component on its own server

For detailed descriptions of various deployment architecture choices that may aid in planning, please see the document *Oracle Utilities Application Framework Architecture Guidelines*, available on My Oracle Support (Article ID 807068.1).

The final hardware and software decisions must comply with the specific requirements of Oracle Utilities Meter Data Management, as described in the rest of this chapter.

Minimum Requirements by Tier

- Tier 1, Desktop
- Tier 2, Web/Business Application Server/ Batch Server
- Tier 3, Database Server

Tier 1, Desktop: Software and Hardware Requirements

Configuration	Processor	Memory (RAM)	Monitor Display
Minimum	Pentium IV - 2.0 GHz	1024 MB	1024X768** 16-bit Color
Recommended*	Pentium IV - 3.0+ GHz, Or any Core 2 Duo Or any Athlon X2	2048 MB	1280X1024* 32-bit Color

* The Recommended configuration improves client performance.

** To reduce the amount of scrolling required for pages that are longer than 768 or 1024 pixels, consider placing a monitor into vertical position (with narrow side on the bottom).

Web Browser Requirements

The following Operating System / Web Browser software is supported:

- Windows XP SP3 or higher with Internet Explorer 7.x or 8.x
- Windows 7 (32-bit or 64-bit) with Internet Explorer 8.x

Tier 2, Web/Business Application Server, Batch Server: Software and Hardware Requirements

Please consult the **Supported Platforms** on page 3-5 to determine which Web application servers can be used with the operating system that will be hosting this tier.

The recommendations that follow are based on a standard installation with both the Web application and business application servers on the same machine and the system running with the default values. The default values may not support a production environment. You should adjust these values according to your production needs. Refer to the Oracle Utilities Meter Data Management *Server Administration Guide* on how to change the default values. The minimum resource requirements exclude third-party software installation requirements. Refer to the third-party vendors for specific requirements. The following sizing excludes the Oracle database server installation.

Memory Requirements

For each application server environment a minimum of 4 GB of real memory is required, plus 6 GB of swap space.

Disk Space Requirements

The approximate disk space requirements in a standard installation are as follows:

Location	Size	Usage
\$SPLEBASE	5 GB minimum	This location is where the application and Framework get installed. Startup, shutdown and other online log files are stored here. The size and space that is used should be monitored because various debugging options can significantly affect the size of log files.
\$SPLAPP	2 GB minimum	This location is used for storing batch log files and output from batch jobs. The size of this space should be influenced by which batches are run and how often, and the amount of debugging information that is collected.
Location of the application Web work files on the Web servers	1.5 GB minimum	This location is used by the various Web server vendors to expand the application. It should be considered when installing these products. Refer to the individual Web server documentation to determine the location of the temporary files.
Installation temporary area	4 GB	The application gets installed from this location. You need enough space to uncompress the files and install the application.
Oracle data area	4 GB minimum	This location is where the Oracle database data files are stored. The size of this space should be based on the requirements of the production environment. For an initial or demo database install 4 GB should be sufficient.

Tier 3, Database Server: Software and Hardware Requirements

See the section **Supported Platforms** on page 3-5 for supported database servers.

Supported Platforms

The installation has been tested and certified to operate on many operating system, application server, and database server combinations. For the software requirements for each of these combinations, see **Chapter 7: Installing Application Server Prerequisite Software** for more information.

Operating Systems and Application Servers

The following table details the operating system and application server combinations on which Oracle Utilities Meter Data Management version 2.0.1 has been tested and certified.

Operating System and Web Browser (Client)	Operating System (Server)	Chipset	Application Server	Database
Windows XP SP3 (IE 7.x, 8.x)	AIX 6.1 TL4 (64-bit)	POWER 64-bit	WebLogic 10.3.5 WebLogic 10.3.6 WebSphere 7.0.0.11	Oracle 11.2.0.1
	Oracle Linux 5.5, 5.8, 6.2 (64-bit)	x86_64	WebLogic 10.3.5 WebLogic 10.3.6	Oracle 11.2.0.1
	Red Hat Enterprise Linux 5.5, 5.8, 6.2 (64-bit)			
	Sun Solaris 10 Update 8 (64-bit)	SPARC	WebLogic 10.3.5 WebLogic 10.3.6	Oracle 11.2.0.1
	Windows Server 2008 R2 (64-bit)	x86_64	WebLogic 10.3.5 WebLogic 10.3.6	Oracle 11.2.0.1

Oracle Database Servers

Oracle Utilities Meter Data Management version 2.0.1 is supported with Oracle Database Server 11.2.0.1 on all of the operating systems listed above.

The following Oracle Database Server Editions are supported:

- Oracle Database Enterprise Edition
- Oracle Database Standard Edition

Note: Oracle Database Enterprise Edition and the Partitioning and Advanced Compression options are not mandatory but recommended. Standard Edition should only be considered suitable for very small, pilot projects or development environments where scalability, performance, and database size-on-disk are not important considerations. Oracle Database Enterprise Edition, including the Advanced Compression and Partitioning options, is strongly recommended in all other situations.

The Oracle 11.2.0.1 client is required for these versions of the database server.

Oracle WebLogic Server Information

The following Oracle WebLogic Server Editions are supported:

- Oracle WebLogic Server Standard Edition
- Oracle WebLogic Server Enterprise Edition

Application Dependencies for Oracle Business Intelligence for Utilities

When using Oracle Utilities Meter Data Management version 2.0.1.8 with Oracle Business Intelligence for Utilities, you must upgrade to Oracle Utilities Advanced Spatial and Operational Analytics version 2.4.0 Service Pack 4. This release is not compatible with previous releases of Oracle Utilities Advanced Spatial and Operational Analytics. For more information, see the release notes and installation documentation for Oracle Utilities Advanced Spatial and Operational Analytics, version 2.4.0 Service Pack 4.

Support for Software Patches and Upgrades

Due to the ongoing nature of software improvement, vendors will issue patches and service packs for the operating systems, application servers and database servers on top of specific versions that Oracle Utilities Meter Data Management has been tested with.

If it is necessary to apply an upgrade, please do so in a test environment that is running on the same platform as your production environment prior to updating the Oracle Utilities Meter Data Management production environment.

The exception from this rule is Hibernate software version 3.3.2 ga. This version should not be upgraded.

Always contact Oracle Utilities Meter Data Management support prior to applying vendor updates that do not guarantee backward compatibility.

Chapter 4

Installation Types

This section provides an overview of the two types of application installation. It includes the following section:

- **Initial Installation Compared with Upgrade Installation**
- **Database Installation: Initial Installation Compared with Demo Installation**

Initial Installation Compared with Upgrade Installation

Customers installing this version of Oracle Utilities Meter Data Management application may or may not have used previous versions of the application.

- If you have not installed and used previous versions of Oracle Utilities Meter Data Management, the installation process will create files as well as a database on your system. Depending on what data you choose to install in the database, the database install process is referred to as either initial install or demo install.
- If you have installed and used a previous version of Oracle Utilities Meter Data Management, the installation process will still create and / or overwrite files on your system. For the database however, the process will upgrade the existing database to the current version of Oracle Utilities Meter Data Management. This process is referred to as an upgrade install. Note that there are restrictions on which previous Oracle Utilities Meter Data Management versions can be upgraded to the current version.

Database Installation: Initial Installation Compared with Demo Installation

Initial install and demo install both start with an empty database.

In the case of initial install, demo data is not populated into the database by the installation process. This installation type is typically used for production environments.

In contrast, the demo install process populates the database with demo data. This installation type is typically used for demo and testing environments.

Chapter 5

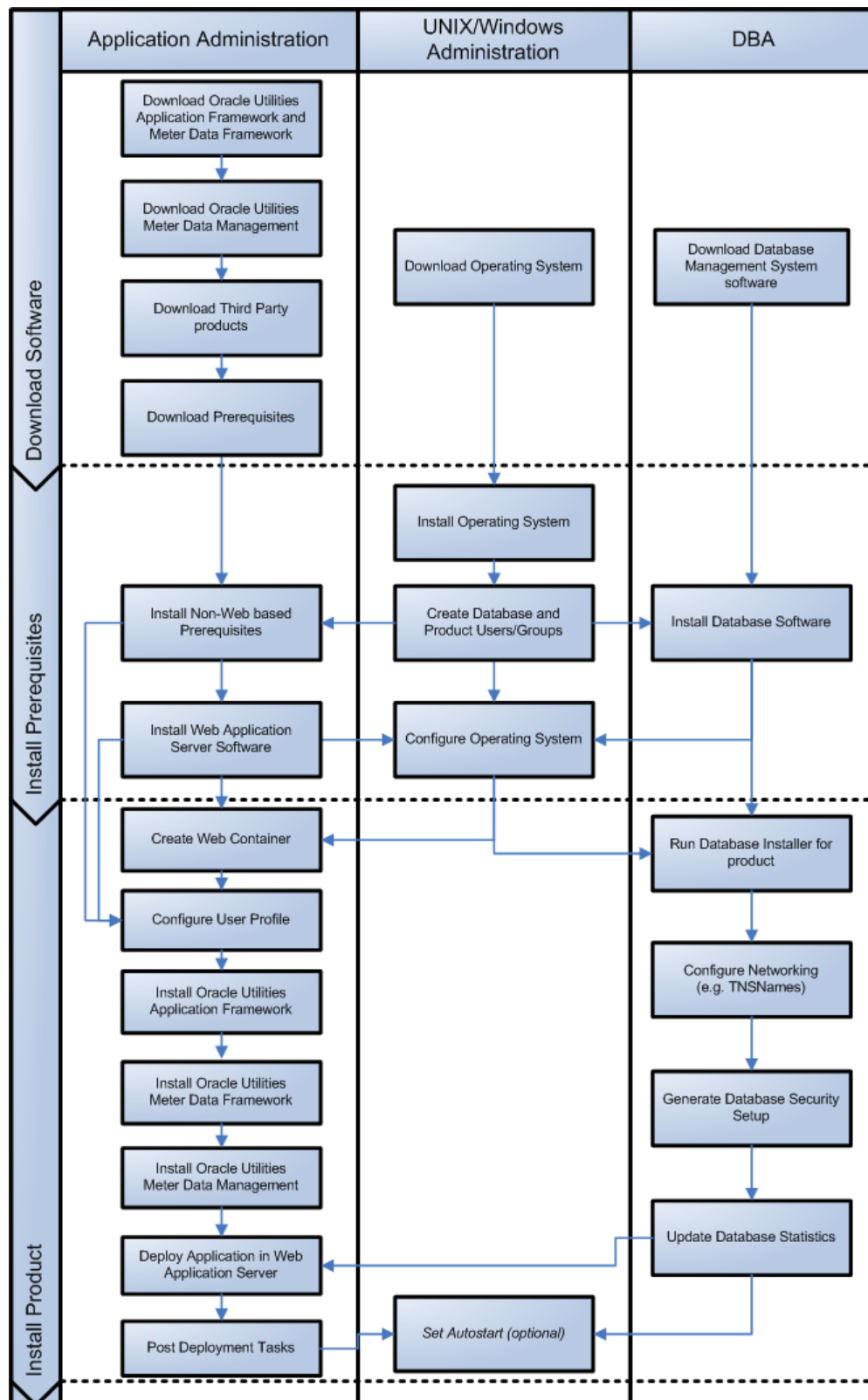
Planning the Installation

This chapter provides information for planning an Oracle Utilities Meter Data Management installation, including:

- **Installation and Configuration Overview**
- **Before You Install**
- **Installation Checklist**
- **Prerequisite Third-Party Software Overview**
- **Application Framework Installation and Configuration Worksheets**
- **Meter Data Framework Installation and Configuration Worksheets**

Installation and Configuration Overview

The following diagram provides an overview of the steps that need to be taken to install and configure Oracle Utilities Meter Data Management:



Before You Install

Refer to My Oracle Support for up-to-date additional information on Oracle Utilities Meter Data Management installation.

Installation Checklist

The following checklist will help guide you through the installation process of the application tier. The details for each step are presented in subsequent chapters.

1. Create Group/User ID.
2. Install prerequisite software (see **Prerequisite Third-Party Software Overview** on page 5-3 for more information).
 - Oracle client 11.2.0.1 (for connecting to Oracle database)
 - Java 6
 - Hibernate 3.3.2
3. Install one of the following Web servers.
 - Oracle WebLogic 10.3.3
 - Oracle WebLogic 10.3.4
 - IBM WebSphere 7.0.0.11
4. Install optional software.
 - Oracle BI Publisher 10g (10.1.3.4.0)
5. Verify that all software installed.
6. Set up environment variables.
7. Install Oracle Utilities Application Framework.
8. Install Oracle Utilities Application Framework prerequisite single fixes.
9. Install Oracle Utilities Meter Data Framework.
10. Install Oracle Utilities Meter Data Management.
11. Deploy Oracle Utilities Meter Data Management application.
12. Post installation tasks.

Prerequisite Third-Party Software Overview

For complete details about installing and configuring the prerequisite third-party software for your specific platform, see **Chapter 7: Installing Application Server Prerequisite Software**.

Application Framework Installation and Configuration Worksheets

During the installation and configuration of the application you will need to provide a variety of system values. These worksheets will assist you in providing that information. They should be completed before installing the application framework, as described in the **Chapter 9: Installing the Application Server Component of Oracle Utilities Application Framework**. No Customer Install Value fields should be left blank.

Note: Some web application server information will not be available until the software installation steps have been completed as described in the **Chapter 7: Installing Application Server Prerequisite Software**.

Installation Menu Functionality Overview

The main configuration menu is structured so that related variables and/or options are grouped together and are associated by a menu item number. To access a particular group of variables and options, enter the menu item number associated with that group. Each option within that group is displayed in turn on the screen, along with a prompt so that you can type the desired value for the option, if it is not the same as the default or current value.

When performing the initial installation you need to go through all menu options. The menu options may have a default value, a list of valid values and a validation check.

On each option prompt you can keep the current value by simply leaving the input line empty. In order to erase a variable value you need to enter one dot (“.”). The leading spaces will be trimmed out on each values entered.

Note: When working with the menu you will see the following:

- **Valid Values: [ALFANUM].** This indicates you will need to enter an alphanumeric value in the prompt.
- **Valid Values: [NUM].** This indicates you will need to enter an numeric value in the prompt.

When all options are set, type <P> at the main menu prompt option. This will save the option values selected throughout the configuration.

During this processing the global variables are validated and the configuration file <SPLEBASE>/etc/ENVIRON.INI is created or updated. This file contains all the variables inputted and calculated. These are needed by the next part of the installation process.

To exit the configuration utility without saving any of the values entered, type <X> and 'Enter'

Installation Menu Functionality Details

The Environment Installation Utility requires that Oracle Client Home is set in the path for the user performing the installation.

Prior to running the installation utility you will need to review the supported platforms document to ensure you have all of the Third Party software installed.

In this menu if the variables are set prior to execution, that value will be defaulted by the installation utility when performing the installation.

When the installation has been completed successfully, the values will be written to an ENVIRON.INI file. When splenviron.sh / cmd is executed, it will read from the ENVIRON.INI file to set the environment variables.

In the worksheets there are three different types of values given:

- **Default Values** are the values that will be defaulted when running the installation utility.

- Security Values denote values that should be changed when in production.
- Example Values are values that can be used for a default installation.

Note: The production environment should not be run with default values. See the Oracle Utilities Meter Data Management *Server Administration Guide* for additional information about configuring these values.

When you enter passwords you will not see the password characters on the screen because they are entered in silent mode. Passwords are encrypted when the values are entered.

Install the Oracle Client software specified in the section **Supported Platforms** prior to running any of the installation utilities.

The following prompt will appear when executing the installation utility:

```
Enter Oracle Client Home Directory (<ENTER> quit):
```

Note: If the environmental variable ORACLE_CLIENT_HOME is set, the install script will validate the variable. If it passes the validation you will not be prompted for it. This is needed in order to run Perl installation utilities.

Encryption Methods

When the application server choice is WebLogic, the Oracle Utilities Application Framework installation uses the Oracle WebLogic API to encrypt the User ID and password that perform admin functions for the WebLogic application servers. Please refer to the Oracle WebLogic documentation for further information about the encryption.

The Oracle Utilities Application Framework installation also uses industry standard cryptography to encrypt passwords that are prompted within the installation.

When the application server choice is WebSphere Basic or WebSphere Network Deployment, the Oracle Utilities Application Framework installation will use industry standard cryptography to encrypt passwords that are prompted within the installation.

In each case these password are entered in the command line but the inputted values are not reflected on the screen when performing the installation.

Third Party Software Configuration

```
*****
* Environment Installation Options *
*****
1. Third Party Software Configuration
   Oracle Client Home Directory:
   Web Java Home Directory:
   Child JVM Home Directory:
   COBOL Home Directory:
   Hibernate JAR Directory:
   ONS JAR Directory:
   Database Home Directory:
   Web Application Server Home Directory:
   ADF Home Directory:
   OIM OAM Enabled Environment:
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Oracle Client Home Directory	ORACLE_CLIENT_HOME	The home directory of the Oracle Client. The application will use the Perl included under this Oracle Client. Example Location: /oracle/client/product/11.2.0.1	
Web Java Home Directory	JAVA_HOME	Java home that will be used by the web application server. Example Location: /ouaf/java/jdk1.6.0_20	
* Child JVM Home Directory	CHILD_JVM_JAVA_HOME	Java home that will be used by the child java process that handles COBOL related requests. Example Location: /ouaf/java/jdk1.6.0_20	
* COBOL Home Directory	COBDIR	COBOL installation location directory. Example Location: /opt/SPLcobAS51WP6	
Hibernate JAR Directory	HIBERNATE_JAR_DIR	Location on the disk where the hibernate3.jar is installed.	
*ONS JAR Directory	ONS_JAR_DIR	Location on the disk where the ons-11.2.0.2.jar file is installed. **Required for Oracle RAC installation. See the Server Administration Guide for more information.	
Database Home Directory	DATABASE_HOME	Location on the disk where database client is installed for your particular installation. Example Location for Oracle Database: /oracle/client/product/11.2.0.1 Note: This value will be the same as the previously entered for Oracle.	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Web Application Server Home Directory	WEB_SERVER_HOME	<p>Location on the disk where the application server is installed.</p> <p>Example Location: WebLogic: /ouaf/middleware/wlserver_10.3</p> <p>To validate the home directory, check if the following jar files exist in the appropriate path: \$WEB_SERVER_HOME/server/lib/weblogic.jar %WEB_SERVER_HOME%\server\lib\weblogic.jar</p> <p>WebSphere: /ouaf/IBM/WebSphere7/AppServer</p> <p>WebSphere ND: /ouaf/IBM/WebSphere70ND/</p>	
* ADF Home Directory	ADF_HOME	<p>Location on the disk where ADF is installed.</p> <p>Example Location: /ouaf/jdev11_1_1_4 or /adf_location</p>	
OIM OAM Enabled Environment	OPEN_SPML_ENABLED_ENV	<p>Denotes if an environment will be integrating with Oracle Identity Manager for user propagation.</p> <p>Valid values: true false</p> <p>Defaulted value: false</p>	

* Denotes optional Menu Options that may be required for the product installation and variables.

** In order to activate the RAC FCF, the application needs the external ons.jar file, version 11.2.0.2. This ons.jar is located under the Oracle Database Software 11.2.0.2, at the following path:

\$ORACLE_HOME/opmn/lib/ons.jar

The ons.jar should be copied to the Application Server. During the OUAF installation the relevant option should be populated with the folder location of the ons.jar.

Environment Installation Options

50. Environment Installation Options

Environment Mount Point:

Log Files Mount Point:

Environment Name:

Database Type:

Web Application Server Type:

Install Application Viewer Module:

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Environment Mount Point	<SPLDIR>	<p>The mount point into which the application is installed. For example: /ouaf for UNIX and C:\ouaf for Windows.</p> <p>This mount point MUST exist and the MDM administrator user ID MUST be able to write to this directory. (This is the user ID that is created specifically to administer the (MDM) environments; the default is cissys). The installation sets permissions on all subdirectories installed under this directory.</p> <p>See <SPLENVIRON> below for more information on how this mount point is used.</p>	
Log File Mount Point	<SPLDIROUT>	<p>A mount point that will contain any application output or application logs. Example value is /ouaf/sploutput for UNIX installation or C:\ouaf\sploutput for Windows.</p> <p>This mount point MUST exist and the MDM administrator user ID MUST be able to write to this directory. (This is the user ID that is created specifically to administer the (MDM) environments; the default is cissys).</p> <p>For each environment initialized, the application logs will be written to the directory <SPLDIROUT>/<SPLENVIRON></p> <p>Note: Later in the installation the splenvron.sh (splenvron.cmd) script will set the \$SPLOUTPUT (%SPLOUTPUT%) environment variable to point to:<SPLDIROUT>/<SPLENVIRON></p>	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Environment Name	<SPLENVIRON>	<p>A descriptive name to be used as both a directory name under the mount point <SPLDIR> and an environment descriptor. This value typically identifies the purpose of the environment. For example, DEV01 or CONV.</p> <p>On installation a directory <SPLDIR>/<SPLENVIRON> is created, under which the Oracle Utilities Application Framework and Oracle Utilities Meter Data Management software resides.</p> <p>When multiple environments are set up on the machine you will typically have directories such as: /ouaf/DEV01/.... /ouaf/CONV/....</p> <p>Each of these contains a complete version of the Oracle Utilities Application Framework and Oracle Utilities Meter Data Management.</p> <p>Note: Later in the installation process, the splenvirion.sh (splenvirion.cmd) script will set \$SPLEBASE (%SPLEBASE%) environment variable to point to <SPLDIR>/<SPLENVIRON></p>	
Database Type	<CMPDB>	<p>Type of a database to connect an environment to.</p> <p>Valid values: oracle: Oracle</p> <p>Defaulted value: oracle</p> <p>Note: Not all database types are supported on all platforms; refer to the Supported Platforms section for details.</p>	oracle
Web Application Server Type	<SPLWAS>	<p>A web application server for the environment to be used. The following value must be selected:</p> <p>Valid values: WLS: WebLogic WAS: WebSphere WASND: WebSphere ND</p> <p>Note: Not all web application servers are supported on all platforms; refer to Supported Platforms section for details.</p>	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Installation Application Viewer Module	<WEB_ISAPVIEWER>	<p>Denotes if the Application Viewer Web Module will be installed in the environment. When this value is set to false the application viewer will not be accessible in the environment.</p> <p>Valid values:</p> <ul style="list-style-type: none">true: Application Viewer module will be installed.false: Application Viewer module will not be installed. <p>Defaulted value: true</p> <p>Note: When the value of false is selected, the Application Viewer will only be installed at a later date by a complete reinstall of the application.</p>	

Environment Description

1. Environment Description
Environment Description:

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Environment Description	DESC	This is a free form text field to describe the purpose of the environment.	

WebLogic Business Application Server Configuration

The WebLogic parameters below and in the worksheet are for a WebLogic installation.

2. Business Application Server Configuration

Business Server Host:	<machine_name>
WebLogic Server Name:	myserver
Business Server Application Name:	SPLService
MPL Admin Port Number:	
MPL Automatic startup:	false

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Business Server Host	BSN_WLHOST	The host name on which business application server resides. Default value: <current server name>	
WebLogic Server Name	BSN_WLS_SVRNAME	The name of the WebLogic server where the business application resides. Default value: myserver Note: If there is not a previously created WebLogic server, take the default value of “myserver”.	
Business Server Application Name	BSN_APP	The name of the business application server. Default value: SPLService	
MPL Admin Port number	MPLADMINPORT	The port number for the Multi Purpose Listener (MPL) Admin Server. Example value: 6502	
MPL Automatic Startup	MPLSTART	Automatically starts the MPL Listener whenever environment starts. Default value: false	

WebSphere Basic Business Application Server Configuration

The WebSphere parameters below and in the worksheet are for a WebSphere installation.

2. Business Application Server Configuration

```
Business Server Host:                <machine_name>
Bootstrap Port:
WebSphere Server Name:
WebSphere Node Name:
Business Server Application Name:    SPLService
MPL Admin Port Number:
MPL Automatic startup:
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Business Server Host	BSN_WLHOST	The host name on which business application server resides. Default value: <current server name>	
Bootstrap Port	BSN_WASBOOTSTRAPPORT	The boot strap port number allows the web module to communicate with the EJB module.	
WebSphere Server Name	BSN_SVRNAME	The WebSphere Application Server to host the OUAF application. Each OUAF must be installed in a unique WebSphere Application Server. Default value: server2	
WebSphere Node Name	BSN_NODENAME	The name of the WebSphere Node Name where the WebSphere Application Server is running.	
Business Server Application Name	BSN_APP	The name of the business application server. Default value: SPLService	
MPL Admin Port number	MPLADMINPORT	The port number for the Multi Purpose Listener (MPL) Admin Server. Example value: 6502	
MPL Automatic Startup	MPLSTART	Automatically starts the MPL Listener whenever environment starts. Default value: false	

WebLogic Web Application Server Configuration

The WebLogic parameters below and in the worksheet are for a WebLogic installation.

3. Web Application Server Configuration

```

Web Server Host:                               <machine_name>
Web Server Port Number:
Web Context Root:
WebLogic JNDI User ID:
WebLogic JNDI Password:
WebLogic Admin System User ID:
WebLogic Admin System Password:
WebLogic Server Name:                         myserver
Web Server Application Name:                  SPLWeb
Application Admin User ID:
Application Admin Password:
Expanded Directories:                         true
Application Viewer Module:                    true
  
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Web Server Host	WEB_WLHOST	The host name on which the web application server resides. Default value: <current server name>	
Web Server Port Number	WEB_WLPORT	A unique port number within the system that will be assigned to the HTTP port. This is the port number that is used as a part of the client URL request to connect to the host. Example value: 6500	
Web Context Root	WEB_CONTEXT_ROOT	A context root name that allows customers to run multiple instances of web application on the same server. Default value: ouaf	
WebLogic JNDI User ID	WEB_WLSYSUSER	The user ID the application uses to connect to the EJB component through JNDI. This is the EJB container user ID. Note: The required value for an initial installation is "system". This is a security value.	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
WebLogic JNDI Password	WEB_WLSYSPASS	<p>The password the application uses to connect to the EJB component through JNDI</p> <p>Note: The required value for an initial installation is “ouafadmin”. This value will be saved in encrypted format.</p> <p>This is a security value.</p>	
WebLogic Admin System User ID	WLS_WEB_WLSYSUSER	<p>The user ID to log in to the Oracle WebLogic console and to administer Oracle WebLogic. The Oracle WebLogic startup and stop script also utilizes this user ID</p> <p>Note: The installation utility will prompt you to enter “Y” to encrypt. For an initial installation, enter Y/y and specify the required value “system”.</p> <p>This is a security value.</p>	
WebLogic Admin System Password	WLS_WEB_WLSYSPASS	<p>The password to login to Oracle WebLogic console and to administer Oracle WebLogic. The Oracle WebLogic startup and stop script also utilize this password.</p> <p>Note: The installation utility will prompt you to enter “Y” to encrypt. For an initial installation, enter Y/y, and specify the required value “ouafadmin”.</p> <p>This is a security value.</p>	
WebLogic Server Name	WEB_WLS_SVRNAME	<p>The name of the WebLogic server where the web application resides.</p> <p>Default value: myserver</p> <p>Note: For an initial installation, use the default value of “myserver”.</p> <p>.</p>	
Web Server Application Name	WEB_APP	<p>The name of the web application server.</p> <p>Default value: SPLWeb</p> <p>Note: For an initial installation, use the default value of “SPLWeb”.</p>	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Application Admin User ID	WEB_SPLUSER	<p>This is the default user ID to login to the application through the browser.</p> <p>Example value: SYSUSER</p> <p>Note: The required value for an initial installation is “SYSUSER”. This value is also used in communication within the XAI application.</p> <p>This is a security value.</p>	
Application Admin Userid Password	WEB_SPLPASS	<p>This is the password of the application admin user.</p> <p>Example value: sysuser00</p> <p>Note: The required value for an initial installation is “sysuser00”. This value will be saved in encrypted format</p> <p>This is a Security Value.</p>	
Expanded Directories	WEB_ISEXPANDED	<p>When the value is “true” the web application will be deployed in exploded directory format (no WAR files).</p> <p>When the value is “false”, the web application will be deployed in ear file format.</p> <p>Valid values: true: Environment expanded (no WAR files) false: Environment with WAR/EAR files</p> <p>Default value: false</p>	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Application Viewer Module	WEB_ISAPPVIEWER	<p>When the value is “true” the application viewer will be deployed to the web server. When the value is “false”, the application viewer will not be deployed to the web Server.</p> <p>Note: With either value the application viewer module will still be managed by the upgrade process.</p> <p>Note: When this value is set to false from the initial install menu you will not be able to change this value to true to re-enable the application viewer.</p> <p>Valid values: true: The application viewer module will be deployed to the web server false: The application viewer module will not be deployed to the web server</p> <p>Default value: true</p>	

WebSphere Basic Web Application Server Configuration

The WebSphere parameters below and in the worksheet are for a WebSphere installation.

3. Web Application Server Configuration

Web Server Host: <machine_name>
 Web Server Port Number:
 Web Context Root:
 WebSphere Server Name:
 WebSphere Node Name:
 Web Server Application Name:
 WebSphere JNDI System User ID:
 WebSphere JNDI System Password:
 Application Admin User ID:
 Application Admin Password:
 Expanded Directories:
 Application Viewer Module:

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Web Server Host	WEB_WLHOST	<p>The host name on which the web application server resides.</p> <p>Default value: <machine_name></p>	
Web Server Port Number	WEB_WLPORT	<p>The WC_defaulthost number for your WebSphere Basic server. This is the port number that is used as a part of the client URL request to connect to the host.</p> <p>Example value: 9081</p>	
Web Context Root	WEB_CONTEXT_ROOT	<p>A context root name that allows customers to run multiple instances of web application on the same installation of WebSphere server.</p> <p>Default value: ouaf</p>	
WebSphere Server Name	WEB_SVRNAME	<p>The WebSphere Basic Application Server to host the MDM application.</p> <p>Each MDM must be installed in a unique WebSphere Basic application server.</p> <p>Default value: server2</p>	
WebSphere Node Name	WEB_NODENAME	<p>The name of the WebSphere Basic Node Name where the WebSphere Basic application server is running.</p>	
Web Server Application Name	WEB_APP	<p>The name of the web application server.</p> <p>Default value: SPLWeb</p>	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
WebSphere JNDI User ID:	WEB_WASUSER	<p>User ID the application utilizes to connect to the EJB component through JNDI. This is the EJB container user ID.</p> <p>Note: This value must be a valid User in the WebSphere console.</p> <p>This is a security value.</p>	
WebSphere JNDI System Password:	WEB_WASPASS	<p>The password the application utilizes to connect to the EJB component through JNDI.</p> <p>Note: This value will be saved in encrypted format.</p> <p>This is a security value.</p>	
Application Admin User ID	WEB_SPLUSER	<p>This is the default user ID to login to the application through the browser.</p> <p>Example value: SYSUSER</p> <p>Note: This value is also used in communication within the XAI application.</p> <p>Note: This value must be a valid User in the WebSphere console.</p> <p>This is a security value.</p>	
Application Admin Userid Password	WEB_SPLPASS	<p>This is the password of the application admin user.</p> <p>Example value: sysuser00</p> <p>Note: This value will be saved in encrypted format</p> <p>This is a security value.</p>	
Expanded Directories	WEB_ISEXPANDED	<p>When the value is “true” the web application will be deployed in exploded directory format (no WAR files).</p> <p>When the value is “false”, the web application will be deployed in ear file format.</p> <p>Valid values: true: Environment expanded (no WAR files) false: Environment with WAR/EAR files</p> <p>Default value: false</p>	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Application Viewer Module	WEB_ISAPPVIEWER	<p>When the value is “true” the application viewer will be deployed to the web server. When the value is “false”, the application viewer will not be deployed to the web server.</p> <p>Note: With either value the application viewer module will still be managed by the upgrade process.</p> <p>Note: When this value is set to false from the initial install menu you will not be able to change this value to true to re-enable the application viewer.</p> <p>Valid values: true: The application viewer module will be deployed to the web server) false: The application viewer module will not be deployed to the web server)</p> <p>Default value: true</p>	

Database Configuration

4. Database Configuration

Web Application Database User ID:
 Web Application Database Password:
 MPL Database User ID:
 MPL Database Password:
 XAI Database User ID:
 XAI Database Password:
 Batch Database User ID:
 Batch Database Password:
 Database Name
 Database Server:
 Database Port:
 ONS Server Configuration:
 Database Override Connection String:
 Oracle Client Character Set NLS_LANG: AMERICAN_AMERICA.AL32UTF8

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Web Application Database User ID	DBUSER	<p>The database user ID that has been configured on the database for the web application server connection.</p> <p>This is a security value.</p>	
Web Application Database Password	DBPASS	<p>The database password that has been configured on the database for the web application connection.</p> <p>Note: This value will be saved in encrypted format.</p> <p>This is a security value.</p>	
MPL Database User ID	MPL_DBUSER	<p>The database user ID that has been configured on the database for the MPL server connection.</p> <p>This is a security value.</p>	
MPL Database Password	MPL_DBPASS	<p>The database password that has been configured on the database for the MPL server connection.</p> <p>Note: This value will be saved in encrypted format.</p> <p>This is a security value.</p>	
XAI Database User ID	XAI_DBUSER	<p>The database user ID that has been configured on the database for the XAI server connection.</p> <p>This is a security value.</p>	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
XAI Database Password	XAI_DBPASS	<p>The database password that has been configured on the database for the XAI server connection.</p> <p>Note: This value will be saved in encrypted format.</p> <p>This is a security value.</p>	
Batch Database User ID	BATCH_DBUSER	<p>The database user ID that has been configured on the database for the batch connection.</p> <p>This is a security value.</p>	
Batch Database Password	BATCH_DBPASS	<p>The database password that has been configured on the database for the batch connection.</p> <p>Note: This value will be saved in encrypted format.</p> <p>This is a security value.</p>	
Database Name	DBNAME	The name of the database instance that the application will be connecting to.	
Database Server	DBSERVER	Host name of the server where database resides.	
Database Port	DBPORT	Database port number on the database server used for connecting to the database	
ONS Server Configuration	ONSCONFIG	<p>ONS Server Configuration is required for Oracle RAC FCF.</p> <p>See the Server Administration Guide for more information.</p> <p>This is an optional value.</p>	
Database Override Connection String	DB_OVERRIDE_CONNECTION	<p>This connection string can be used to override the database information entered above for RAC installation.</p> <p>Set this string to override the standard database connection string, as entered above.</p> <p>See the Server Administration Guide for more information.</p> <p>This is an optional value.</p>	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Oracle Client Character Set NLS_LANG	NLS_LANG	<p>The Oracle Database Character Set.</p> <p>Select the Language and Territory that are in use in your country.</p> <p>Default value: AMERICAN_AMERICA.AL32UTF8</p>	

General Configuration Options

Note: See the Oracle Utilities Meter Data Management *Batch Server Administration Guide* for additional details on this configuration.

5. General Configuration Options

Batch RMI Port:
 Batch Mode: CLUSTERED
 Coherence Cluster Name:
 Coherence Cluster Address:
 Coherence Cluster Port:
 Coherence Cluster Mode: dev

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Batch RMI Port	BATCH_RMI_PORT	Unique port used by the Batch RMI.	
Batch Mode	BATCH_MODE	Valid values: CLUSTERED or DISTRIBUTED DISTRIBUTED - allows numerous threads from numerous jobs to be execute by one or more JVMs.	
Coherence Cluster Name	COHERENCE_CLUSTER_NAME	Unique name for the batch CLUSTER Note: Value is required when batch mode is CLUSTERED.	
Coherence Cluster Address	COHERENCE_CLUSTER_ADDRESS	Unique multicast address. Note: Value is required when batch mode is CLUSTERED.	
Coherence Cluster Port	COHERENCE_CLUSTER_PORT	Unique port for the batch CLUSTER Note: Value is required when batch mode is CLUSTERED.	
Coherence Cluster Mode	COHERENCE_CLUSTER_MODE	Valid values: dev (Development) prod (Production) Default value: dev	

Advanced Menu Options

The advanced menu options are not available during installation. These options can be accessed after installation using the following commands:

Unix:

```
$SPLEBASE/bin/configureEnv.sh -a
```

Windows

```
%SPLEBASE%\bin\configureEnv.cmd -a
```

Advanced Environment Miscellaneous Configuration

50. Advanced Environment Miscellaneous Configuration

```
Online JVM Batch Server Enabled:           false
Online JVM Batch Number of Threads:        5
Online JVM Batch Scheduler Daemon Enabled:  false
JMX Enablement System User ID:
JMX Enablement System Password:
RMI Port number for JMX Business:
RMI Port number for JMX Web:
GIS Service Running on the same Web Server: true
GIS Service URL:
GIS WebLogic System User ID:
GIS WebLogic System Password:
Online Display Software Home:
```

Menu Option	Name Used in Documentation	Usage	Customer Value Install
WebSphere Deployment Manager Host Name	WASND_DMGR_HOST	WebSphere Deployment Manager Host name, this value is used for WebSphere ND, when connecting to the WebSphere Deployment Manager. Note: This value will only appear for WebSphere ND.	
Online JVM Batch Server Enabled	BATCHENABLED	When starting a web application server JVM, this property can be set to “true” to allow the on-line application server to also act as a batch worker in the grid. Default value: false Note: This functionality should only be used in low volume environments.	

Menu Option	Name Used in Documentation	Usage	Customer Value Install
Online JVM Batch Number of Threads	BATCHTHREADS	<p>The maximum number of batch processing threads to be executed within a worker JVM when no explicit Distributed Thread Pool is specified. The “DEFAULT” distributed thread pool is used by the batch-scheduling daemon when it initiates processing on batch jobs (typically added via the online system) where no thread pool is specified).</p> <p>Default value: 5</p> <p>Note: This will be only used and activated when BATCHENABLED is set to true.</p>	
Online JVM Batch Scheduler Daemon Enabled	BATCHDAEMON	<p>In a distributed batch environment, this property can be set to “true” to allow a worker JVM to host the batch scheduling daemon. The daemon accepts online batch submissions requests and automatically submits the work for them.</p> <p>Valid values: true, false</p> <p>Default value: false</p> <p>Note: This will be only used and activated when BATCHENABLED is set to true.</p>	
JMX Enablement System User ID	BSN_JMX_SYSUSER	<p>Example value: user</p> <p>This value is optional.</p>	
JMX Enablement System Password	BSN_JMX_SYSPASS	<p>Example value: admin</p> <p>Note: This value will be saved in encrypted format.</p> <p>This value is optional.</p>	
RMI Port number for JMX Business	BSN_JMX_RMI_POR T_PERFORMACE	<p>JMX Port for business application server monitoring.</p> <p>This needs to be set to an available port number on the machine.</p> <p>This value is optional.</p>	

Menu Option	Name Used in Documentation	Usage	Customer Value Install
RMI Port number for JMX Web	WEB_JMX_RMI_PORT_PERFORMANCE	<p>JMX Port for web application server monitoring</p> <p>This needs to be an available port number for the environment running on the machine.</p> <p>This value is optional.</p>	
GIS Service Running on the same Web Server	GIS	<p>Geographical information (GEOCODING) - GIS Service running on the same web application server</p> <p>Valid values: true, false</p> <p>This value is optional.</p>	
GIS Service URL	GIS_URL	<p>This is the URL of the external web server.</p> <p>Note: This value will be only be used when GIS is set to true.</p> <p>This value is optional.</p>	
GIS WebLogic System User ID	GIS_WLSYSUSER	<p>GIS WebLogic System User ID</p> <p>Note: This value will be only be used when GIS is set to true.</p> <p>This value is optional.</p>	
GIS WebLogic System Password	GIS_WLSYSPASS	<p>GIS WebLogic System Password.</p> <p>Note: This value will be only be used when GIS is set to true.</p> <p>This value is optional.</p>	
Online Display Software Home	ONLINE_DISPLAY_HOME	<p>The location of the Online Display Software installation directory.</p> <p>This value is optional.</p>	

Advanced Environment Memory Configuration

```

51. Advanced Environment Memory Configuration
    JVM Child Memory Allocation:                    512
    JVM Child Additional Options:
    Web Application Java Initial Heap Size:          1024
    Web Application Java Max Heap Size:              1024
    Web Application Java Max Perm Size:              500
    Web Application Additional Options:
    Ant Min Heap Size:                              200
    Ant Max Heap Size:                              800
    Ant Additional Options:
    Thread Pool Worker Java Min Heap Size:          512
    Thread Pool Worker Java Max Heap Size:          1024
    Thread Pool Worker Java Max Perm Size:          768
    Thread Pool Worker Additional Options:
    Additional Runtime Classpath:
    Release Cobol Thread Memory Options:
-Dspl.runtime.cobol.remote.releaseThreadMemoryAfterEachCall=...

```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
JVM Child Memory Allocation	JVMMEMORYARG	Heap size for the JVM Child. Default value: 512	
JVM Child Additional Options	JVM_ADDITIONAL_OPT	Additional JVM options that are passed to the Child JVM. Note: For WebLogic installation only.	
Web Application Java Initial Heap Size	WEB_MEMORY_OPT_MIN	Initial heap size for the application server. Default value: 1024 Note: For WebLogic installation only.	
Web Application Java Max Heap Size	WEB_MEMORY_OPT_MAX	Maximum heap size for the application server. Default value: 1024 Note: For WebLogic installation only.	
Web Application Java Max Perm Size	WEB_MEMORY_OPT_MAXPERMSIZE	Maximum Perm Size for the application server. Default value: 500MB (Linux, Solaris) 300MB (Windows) Note: For WebLogic installation only.	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Web Application Additional Options	WEB_ADDITIONAL_OPT	Additional options that will be passed in to the web application server JVM. Optional Entry. Note: For WebLogic installation only.	
Ant Min Heap Size	ANT_OPT_MIN	Minimum Heap Size passed to ANT JVM. Default value: 200	
Ant Max Heap Size	ANT_OPT_MAX	Maximum Heap Size passed to ANT JVM. Default value: 800	
Ant Additional Options	ANT_ADDITIONAL_OPT	Additional options that are passed into the ANT JVM.	
Thread Pool Worker Java Min Heap Size	BATCH_MEMORY_OPT_MIN	Minimum heap size passed to the Thread Pool Worker. Default value: 512	
Thread Pool Worker Java Max Heap Size	BATCH_MEMORY_OPT_MAX	Maximum heap size passed to the Thread Pool Worker. Default value: 1024	
Thread Pool Worker Java Max Perm Size	BATCH_MEMORY_OPT_MAXPERMSIZE	Maximum perm size passed to the Thread Pool Worker Default value: 768	
Thread Pool Worker Additional Options	BATCH_MEMORY_ADDITIONAL_OPT	Additional Memory Options passed into the Thread Pool Worker. This is an optional free form field.	
Additional Runtime Classpath	ADDITIONAL_RUNTIME_CLASSPATH	Additional Classpath Options passed in when starting the WebLogic JVM Note: For WebLogic installation only. This is an optional value.	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Release Cobol Thread Memory Options	REL_CBL_THREAD_MEM	<p>Allow for child JVMs to be optionally configured to release thread-bound memory when each thread is returned to its thread pool. This will increase the number of memory allocations and memory free calls performed by the Microfocus runtime. It will also lower the amount of C-heap memory consumed by child JVMs.</p> <p>Valid values: true, false</p> <p>Default value: false</p>	

Advanced Web Application Configuration

52. Advanced Web Application Configuration

```

WebLogic SSL Port Number:
WebLogic Console Port Number:
WebLogic Additional Stop Arguments:
Strip HTML Comments: false
Authentication Login Page Type: FORM
Web Form Login Page: /loginPage.jsp
Web Form Login Error Page: /formLoginError.jsp
Web Security Role: cisusers
Web Principal Name: cisusers
This is a development environment: false
Preload All Pages on Startup: false
Maximum Age of a Cache Entry for Text: 28800
Maximum Age of a Cache Entry for Images: 28800
JSP Recompile Interval (s): 43200

```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
WebLogic SSL Port Number:	WEB_WLSSPORT	<p>The port number assigned to WebLogic Secure Sockets connection. This is the port number that is used for Secure Sockets connecting to the WebLogic server.</p> <p>The Secure Sockets implementation is disabled in the default configuration.</p> <p>For Production additional actions are required. Do NOT run Production with Demo certificates Refer to the WLS installation guide - Configuring Identity and Trust When this value is populated http will be disabled.</p> <p>Example value: 6501</p> <p>Note: For WebLogic installation only. This value is optional.</p>	
WebLogic Console Port Number	WLS_ADMIN_PORT	<p>The port number assigned to WebLogic Console connection. This is the port number that is used for Secure Sockets connecting to the WebLogic Console server.</p> <p>Note: For WebLogic installation only.</p> <p>This value is optional.</p>	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
WebLogic Additional Stop Arguments	ADDITIONAL_STOP_WEBLOGIC	<p>WebLogic Additional Stop Arguments</p> <p>This value is required when running the WebLogic Console Port Number and the Application using SSL.</p> <p>Example values: -Dweblogic.security.TrustKeyStore=DemoTrust -Dweblogic.security.TrustKeystoreType=CustomTrust</p> <p>Note: For Production additional actions are required. Do NOT run Production with Demo certificates</p> <p>Refer to the WLS installation guide - Configuring Identity and Trust</p> <p>Note: For WebLogic installation only. This is an optional value.</p>	
StripHTMLComments: false	STRIP_HTML_COMMENTS	<p>Stripping HTML (and JavaScript) comments will increase the security of the system.</p> <p>Default value: false</p> <p>Valid values: true, false</p>	
Authentication Login Page Type	WEB_WLAUTHMETHOD	<p>Specifies which authentication mode should be used. To switch off OUAF Login Page enter: BASIC</p> <p>Valid values: FORM, BASIC</p> <p>Default value: FORM</p>	
Web Form Login Page	WEB_FORM_LOGIN_PAGE	<p>Specify the jsp file used to login into the application.</p> <p>Default value: /loginPage.jsp</p>	
Web Form Login Error Page	WEB_FORM_LOGIN_ERROR_PAGE	<p>Specify the jsp file used when there is an error when logging into the application.</p> <p>Default value: /formLoginError.jsp</p>	
Web Security Role	WEB_PRINCIPAL_NAME	<p>Specify the name of the security role.</p> <p>Default value: cisusers</p>	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Web Principal Name	WEB_PRINCIPAL_NAME	Specify the name of a principal that is defined in the security realm. Default value: cisusers	
This is a development environment	WEB_ISDEVELOPMENT	If the value is “true”, the web application may be used for application development, which will trigger certain generation processes. If the value is “false” the environment will be used as a runtime environment. When you choose “true” (development environment) the startup preload pages will be disabled, and the application security will be less strict. This value also controls the amount of logging information written to the application log files. Valid values: true, false Default value: false	
Preload All Pages on Startup	WEB_PRELOADALL	This controls if the pages should be preloaded during the startup of the application or not. Valid values: true, false Default value: false	
Maximum Age of a Cache Entry for Text	WEB_MAXAGE	Default value: 28800	
Maximum Age of a Cache Entry for Images	WEB_MAXAGEI	Default value: 28800	
JSP Recompile Interval (s)	WEB_wlpageCheckSeconds	Default value: 43200	

Advanced Web Application Configuration

53. OIM Configuration Settings

SPML SOAP Trace Setting: false
 SPML IDM Schema Name: F1-IDMUser
 SPML OIM Name Space: http://xmlns.oracle.com/OIM/provisioning
 SPML OIM Enclosing Element: sOAPElement

Menu Option	Name Used in Documentation	Usage	Customer Install Value
SPML SOAP Trace Setting	OIM_SPML_SOAP_DEBUG_SETTING	Name of Oracle Identity Manager library for debug Default value: false Valid values: true, false	
SPML IDM Schema Name	OIM_SPML_UBER_SCHEMA_NAME	Name of Oracle Identity Manager library for schema Default value: F1-IDMUser	
SPML OIM Name Space	OIM_SPML_NAME_SPACE	Default Namespace for Oracle Identity Manager integration Default value: http://xmlns.oracle.com/OIM/provisioning	
SPML OIM Enclosing Element	OIM_SPML_SOAP_ELEMENT	Default top level SOAP Element name for Oracle Identity Manager integration Default value: sOAPElement	

Meter Data Framework Installation and Configuration Worksheets

During the installation and configuration of the application you will need to provide a variety of system values. These worksheets will assist you in providing that information. They should be completed before installing the application framework, as described in **Chapter 10: Installing the Application Server Component of Oracle Utilities Meter Data Framework**. No Customer Install Value fields should be left blank.

Note: The OSB configuration and SOA configuration menus are optional for Oracle Utilities Meter Data Management and can be skipped. These configurations are required in case another product such as Oracle Utilities Smart Grid Gateway will also be installed on top of Oracle Utilities Meter Data Framework.

WebLogic OSB Configuration

8. OSB Configuration

```

OSB Home:
OSB Host Server: <machine name>
OSB Port Number:
JDBC URL for database:
Database User Name:
Database Password:
JNDI name for datasource: wlsbjmsrpDataSource
Mount point for OSB files: /spl/sploutput/osb
OSB Weblogic User Name:
OSB Weblogic User Password:

```

Menu Option	Name Used In Documentation	Usage	Customer Install Value
OSB Home	OSB_HOME	Location of the directory where OSB is installed. For Example: Unix: /middleware/Oracle_OSB1 Windows: C:\middleware\Oracle_OSB1	
OSB Host Server	OSB_HOST	Host name of the server where the OSB WebLogic server instance will run. Default Value: <current server name>	
OSB Port Number:	OSB_PORT_NUMBER	Admin port number of the OSB WebLogic server instance. This is the port number that is used as a part of the OSB URL request to connect to the host.	
JDBC URL for database	DBURL_OSB	The JDBC URL of the database where the OSB schemas are located. For Example: jdbc:oracle:thin:@localhost:1521:OSBDB This value is required for the example WebLogic server instance.	
Database User Name	DBUSER_OSB	OSB database user ID. This value is required for the example WebLogic server instance.	
Database Password	DBPASS_OSB_WLS	OSB database password. This value is required for the example WebLogic server instance.	

Menu Option	Name Used In Documentation	Usage	Customer Install Value
JNDI name for datasource	JNDI_OSB	<p>JNDI name for accessing the OSB database</p> <p>Note: Retain the default value.</p> <p>Default Value: wlsbjmsrpDataSource.</p>	
Mount point for OSB files	OSB_LOG_DIR	<p>Location of the network share or mount point where the OSB files will be dropped. This path should be accessible from the machine where OSB WebLogic instance is running.</p> <p>For example: /ouaf/osb/<ENVIRONMENT NAME>/</p> <p>Default Value: /spl/sploutput/osb</p>	
OSB WebLogic User Name	OSB_USER	<p>WebLogic JMS user ID for the WebLogic instance where the OSB adapter will be deployed.</p> <p>Note: For the example OSB WebLogic instance this should be specified as weblogic.</p>	
OSB WebLogic User Password	OSB_PASS_WLS	<p>WebLogic JMS user password for the WebLogic instance where the OSB adapter will be deployed.</p> <p>Note: For the example OSB WebLogic instance this should be specified as weblogic123.</p>	

WebSphere OSB Configuration

8. OSB Configuration

OSB Home:

OSB Host Server:

<machine name>

OSB Port Number:

Mount point for OSB files:

/spl/sploutput/osb

Menu Option	Name Used in this Documentation	Usage	Customer Install Value
OSB Home	OSB_HOME	Location of the directory where OSB is installed. For Example: Unix: /middleware/Oracle_OSB1 Windows: C:\middleware\Oracle_OSB1	
OSB Host Server	OSB_HOST	Host name of the server where the OSB WebLogic server instance will run. Default Value: <current server name>	
OSB Port Number:	OSB_PORT_NUMBER	Admin port number of the OSB WebLogic server instance. Note: This also specifies the port number on which the example WebLogic server will listen.	
Mount point for OSB files	OSB_LOG_DIR	Location of the network share or mount point where the OSB files will be dropped. This path should be accessible from the machine where OSB WebLogic instance is running. For example: /ouaf/osb/<ENVIRONMENT NAME>/ Default Value: /spl/sploutput/osb	

WebLogic SOA Configuration

9. SOA Configuration

SOA Home:

SOA Host Server:

<machine name>

SOA Port Number:

JDBC URL for database:

Database User Name (SOAINFRA):

Database Password (SOAINFRA):

Database User Name (MDS):

Database Password (MDS):

Database User Name (ORASDPM):

Database Password (ORASDPM):

Menu Option	Name Used in this Documentation	Usage	Customer Install Value
SOA Home	SOA_HOME	Location of the directory where SOA is installed. For Example: Unix: /middleware/Oracle_SOA1 Windows: C:\middleware\Oracle_SOA1	
SOA Host Server	SOA_HOST	Host name of the server where the SOA WebLogic server instance will run. Default Value: <current server name>	
SOA Port Number:	SOA_PORT_NUMBER	Admin port number of the SOA WebLogic server instance. This is the port number that is used as a part of the SOA URL request to connect to the host.	
JDBC URL for database	DBURL_SOA	The JDBC URL of the database where the SOA schemas are located. For Example: jdbc:oracle:thin:@localhost:1521:SOADB This value is required for the example WebLogic server instance.	
Database User Name (SOAINFRA)	DBUSER_SOAINFRA	SOAINFRA database user ID. This value is required for the example WebLogic server instance.	

Menu Option	Name Used in this Documentation	Usage	Customer Install Value
Database Password (SOAINFRA)	DBPASS_SOAINFRA	SOAINFRA database password. This value is required for the example WebLogic server instance.	
Database User Name (MDS)	DBUSER_MDS	MDS database user ID. This value is required for the example WebLogic server instance.	
Database Password (MDS)	DBPASS_MDS	MDS database password. This value is required for the example WebLogic server instance.	
Database User Name (ORASDPM)	DBUSER_ORASDPM	ORASDPM database user ID. This value is required for the example WebLogic server instance.	
Database Password (ORASDPM)	DBPASS_ORASDPM	ORASDPM database password. This value is required for the example WebLogic server instance.	

WebSphere SOA Configuration

9. SOA Configuration

SOA Home:

SOA Host Server:

<machine name>

SOA Port Number:

Menu Option	Name Used in this Documentation	Usage	Customer Install Value
SOA Home	SOA_HOME	<p>Location of the directory where SOA is installed.</p> <p>For Example:</p> <p>Unix: /middleware/Oracle_SOA1</p> <p>Windows: C:\middleware\Oracle_SOA1</p>	
SOA Host Server	SOA_HOST	<p>Host server where SOA WebLogic server instance will run.</p> <p>Default Value: <current server name></p>	
SOA Port Number:	SOA_PORT_NUMBER	<p>Port number of the SOA WebLogic server instance. If SOA is deployed on a managed server, specify the managed server port number.</p> <p>Note: This also specifies the port number on which the example SOA WebLogic server will listen.</p>	

WebLogic MDF SOA Configuration Plan

10. SOA Configuration Plan (MDF)

MDF Bulk Request Callback URL:
 MDF Headend http connection timeout: 50000
 MDF Headend http read timeout: 500000
 MDF SOA Request Queue JNDI Name: queue/BulkRequestQueue
 MDF SOA Notify Queue JNDI Name: queue/BulkNotifyQueue
 MDF SOA Commnad Queue JNDI Name: queue/BulkCommandQueue

Menu Option	Name Used In Documentation	Usage	Customer Install Value
MDF Bulk Request Callback URL	D1_BULK_REQUEST_CALLBACK_URL	This is the URL from the edge application that receives any fault responses in Bulk Command BPEL processing. Default value: empty	
MDF Headend http connection timeout	D1_HEADEND_HTTP_CONN_TIMEOUT	MDF Headend http connection timeout value. Default value: 50000	
MDF Headend http read timeout	D1_HEADEND_HTTP_READ_TIMEOUT	MDF Headend http read timeout value. Default value: 500000	
MDF SOA Request Queue JNDI Name	SOA_REQUEST_QUEUE_D1	MDF SOA Request Queue JNDI Name. Default Value: queue/BulkRequestQueue	
MDF SOA Notify Queue JNDI Name	SOA_NOTIFY_QUEUE_D1	MDF SOA Notify Queue JNDI Name. Default Value: queue/BulkNotifyQueue	
MDF SOA Commnad Queue JNDI Name	SOA_COMMAND_QUEUE_D1	MDF SOA Commnad Queue JNDI. Default Value: queue/BulkCommandQueue	

Advanced Menu Options

The advanced menu options are not available during installation. These options can be accessed after installation using the following commands:

Unix:

```
$SPLEBASE/bin/configureEnv.sh -a
```

Windows

```
%SPLEBASE%\bin\configureEnv.cmd -a
```

Advanced Environment Memory Configurations

```
61. Advanced Memory Configurations for SOA
    SOA Initial Heap Size:          1024
    SOA Maximum Heap Size:         2048
    SOA Minimum Perm Size:         512
    SOA Maximum Perm Size:         1024
    SOA Application Additional Options:
```

Menu Option	Name Used In Documentation	Usage	Customer Install Value
SOA Initial Heap Size	SOA_MEMORY_OPT_MIN	Initial heap size for the SOA server. Default value: 1024 Note: For WebLogic installation only.	
SOA Maximum Heap Size	SOA_MEMORY_OPT_MAX	Maximum heap size for the SOA server. Default value: 2048 Note: For WebLogic installation only.	
SOA Minimum Perm Size	SOA_MEMORY_OPT_MINPERMSIZE	Maximum Perm Size for the SOA server. Default value: 512 Note: For WebLogic installation only.	
SOA Maximum Perm Size	SOA_MEMORY_OPT_MAXPERMSIZE	Maximum Perm Size for the SOA server. Default value: 1024 Note: For WebLogic installation only.	
SOA Maximum Perm Size	SOA_JVM_ADDITIONAL_OPT	Additional options that will be passed in to the SOA server JVM. Optional Entry. Note: For WebLogic installation only.	

62. Advanced Memory Configurations for OSB

OSB Initial Heap Size: 512
 OSB Maximum Heap Size: 1024
 OSB Minimum Perm Size: 512
 OSB Maximum Perm Size: 1024
 OSB Application Additional Options:

Menu Option	Name Used In Documentation	Usage	Customer Install Value
OSB Initial Heap Size	OSB_MEMORY_OPT_MIN	Initial heap size for the OSB server. Default value: 512 Note: For WebLogic installation only	
OSB Maximum Heap Size	OSB_MEMORY_OPT_MAX	Maximum heap size for the OSB server. Default value: 1024 Note: For WebLogic installation only.	
OSB Minimum Perm Size	OSB_MEMORY_OPT_MINPERMSIZE	Maximum Perm Size for the OSB server. Default value: 512 Note: For WebLogic installation only.	
OSB Maximum Perm Size	OSB_MEMORY_OPT_MAXPERMSIZE	Maximum Perm Size for the OSB server. Default value: 1024 Note: For WebLogic installation only.	
OSB Application Additional Options	OSB_JVM_ADDITIONAL_OPT	Additional options that will be passed in to the OSB server JVM. Optional Entry. Note: For WebLogic installation only.	

Chapter 6

Installing the Database

Please review Chapter 1 of this guide and then follow the steps for installing the database as described in the *Oracle Utilities Meter Data Management Database Administrator's Guide*.

Chapter 7

Installing Application Server Prerequisite Software

This chapter describes the software that needs to be installed for each of the supported operating system and application server combinations. The sections for this chapter are:

- **AIX 6.1 Application Server**
- **Oracle Linux 5.5 or Red Hat Linux 5.5 Application Server**
- **Solaris 10 Application Server**
- **Windows 2008 Application Server**

AIX 6.1 Application Server

This section describes the software requirements for operating the application using the AIX application server.

Supported Application Servers

Operating System	Chipsets	Application Server
AIX 6.1 (64-bit) TL4	POWER 64-bit	Oracle WebLogic 11gR1 (10.3.3 or 10.3.4) 64-bit version WebSphere Basic (7.0.0.13) 64-bit version

Web/Application Server Tier

AIX 6.1 TL4 Operating System Running on Power5 and Power6 Architecture

UNIX Administrator User ID

The following user groups and accounts have to be created to install and administer the application:

Description	Default Value	Customer Defined Value
Oracle Utilities Meter Data Management Administrator User ID	cissys	
Oracle Utilities Meter Data Management User Group	cisusr	

Note: It is recommended that you change the default values for security reasons.

Throughout this document the administrator user id is often referred to as the "cissys" user id. You should substitute that with the customer defined user id when not using the default value. After the initial install, the software should always be managed using that user id.

By default, the cissys userid is the only one given access to the installed files.

1. Create a group called cisusr (user group).
2. Create a user called cissys. Primary group cisusr. Set the primary shell for the cissys user to Korn Shell.

The shell scripts use the ">" to overwrite shell functionality. Your operating system may be configured to not allow this functionality by default in the users shell.

To avoid file access permission problems when executing scripts, consider placing the following command into cissys profile script:

```
set +o noclobber
```

Security Configuration

Various options exists to secure a system. In this application all files will be created with the minimum permissions required to ensure that group-readable, group-writable and group-executable files will have the correct user groups and to restrict the permissions available to

legitimate users. In this way, a low privileged end user cannot directly edit configuration files and thereby bypass application security controls.

The following users and group categories must be defined to implement this security. For demonstration purposes the following users and groups will be used. These users must be created according to industry standards (including password policies). All users should be created with a default umask of 022 to ensure files created during normal operation have the correct permissions.

Please replace these users and groups for your installation defaults:

User	Group	Description
cissys	cisusr	This user will be used to install the application and to apply patches. This user will own all the application files. The same care should be taken with this user ID as if it is 'root'. This user will be able to add, delete and modify files within the application.
cisadm	cisusr	Administrative and Operation functions will be available to this user. This user will be able to stop and start the application and batch processes, but will not have access to modify any file other than generated log files
cisoper	-----	Low level operator. This user will only be able to read logs files and collect information for debugging and investigative purposes. Care should be taken in production to disable debugging as debugging information could contain potential sensitive data which this user should not have privy to.

Note: The Oracle Client and WebLogic should be installed as the user who will stop and start the application. For example, if you plan to run the application as the install user these components must belong to cissys.

Oracle Client 11.2.0.1 — Runtime Option

Install the Oracle Client as described in the Oracle Client installation documentation. Use the cissys account to install the Oracle Client. If another user installs the Oracle Client, make sure the cissys user ID has the proper execute permissions.

For the cissys user ID, ensure that the environment variable ORACLE_CLIENT_HOME is set up, and that ORACLE_CLIENT_HOME/perl/bin is the first Perl listed in the cissys account's PATH variable.

IBM Java Software Development Kit version 6.0 SR8 64-bit

Installation of Java is a prerequisite for using Oracle WebLogic as a web application server.

At the time of release, AIX Java packages could be obtained from:

<http://www.ibm.com/developerworks/java/jdk/aix/service.html>

The web server requires the 64-bit Java platform in order to function. The main prerequisite for the web server is the version of java mentioned above.

For the Administrator userid (cissys), ensure that the environment variable JAVA_HOME is set up, and that "java" can be found in cissys' PATH variable.

Hibernate 3.3.2

You must install Hibernate before installing Oracle Utilities Meter Data Management.

Download the file hibernate-3.3.2.ga.zip (the zip file associated with the 3.3.2 GA release.) from the following link:

<http://sourceforge.net/projects/hibernate/files/hibernate3/3.3.2.GA/>

It is very important that you download the exact version, as the product has only been certified with this exact release.

You will need to create a permanent directory to place one of the files from hibernate-3.3.2.ga.zip. (e.g., /opt/hibernate).

Extract the file hibernate3.jar into the newly created directory (e.g., /opt/hibernate) from the hibernate-3.3.2.ga.zip zip file.

IBM WebSphere Basic (7.0.0.13) 64-bit

WebSphere must be purchased and downloaded from IBM. It must be installed and configured prior to the MDM installation. This web application server will run as a 64-bit application.

A single WebSphere server represents a single Oracle Utilities Meter Data Management environment. You can install multiple environments on a single WebSphere Installation by creating additional WebSphere servers. Refer to the Chapter **Configuring WebSphere Application Server** for preinstallation steps.

Oracle WebLogic 11gR1 (10.3.3 or 10.3.4) 64-bit

Oracle WebLogic software can be downloaded from the Oracle web site. This application server will run as a 64-bit application.

- Download and install 64-bit Java (as documented above) before installing WebLogic.
- Download and install WebLogic Server 11gR1 (10.3.3 or 10.3.4).

Oracle Linux 5.5 or Red Hat Linux 5.5 Application Server

This section describes the software requirements for operating the application using the Oracle Linux or Red Hat Linux application server.

Supported Application Servers

Operating System	Chipsets	Application Server
Oracle Linux 5.6 (64-bit) Red Hat Enterprise Linux 5.6 (64-bit)	x86_64	Oracle WebLogic 11gR1 (10.3.3 or 10.3.4) 64-bit version

Web/Application Server Tier

Oracle Linux 5.6 or Red Hat Enterprise Linux 5.6 Operating System Running on x86_64 64-bit Architecture

UNIX Administrator User ID

The following user groups and accounts have to be created to install and administer the application:

Description	Default Value	Customer Defined Value
Oracle Utilities Meter Data Management Administrator User ID	cissys	
Oracle Utilities Meter Data Management User Group	cisusr	

Note: It is recommended that you change the default values for security reasons.

Throughout this document the administrator user id is often referred to as the "cissys" user id. You should substitute that with the customer defined user id when not using the default value. After the initial install, the software should always be managed using that user id.

By default, the cissys userid is the only one given access to the files installed.

1. Create a group called cisusr (user group)
2. Create a user called cissys. Primary group cisusr. Set the primary shell for the cissys user to Korn Shell.

The shell scripts use the ">" to overwrite shell functionality. Your operating system may be configured to not allow this functionality by default in the users shell.

To avoid file access permission problems when executing scripts, consider placing the following command into cissys profile script:

```
set +o noclobber
```

Security Configuration

Various options exist to secure a system. In this application all files will be created with the minimum permissions required to ensure that group-readable, group-writable and group-

executable files will have the correct user groups and to restrict the permissions available to legitimate users. In this way, a low privileged end user cannot directly edit configuration files and thereby bypass application security controls.

The following users and group categories must be defined to implement this security. For demonstration purposes the following users and groups will be used. These users must be created according to industry standards (including password policies). All users should be created with a default umask of 022 to ensure files created during normal operation have the correct permissions.

Please replace these users and groups for your installation defaults:

User	Group	Description
cissys	cisusr	This user will be used to install the application and to apply patches. This user will own all the application files. The same care should be taken with this user ID as if it is 'root'. This user will be able to add, delete and modify files within the application.
cisadm	cisusr	Administrative and Operation functions will be available to this user. This user will be able to stop and start the application and batch processes, but will not have access to modify any file other than generated log files
cisoper	-----	Low level operator. This user will only be able to read logs files and collect information for debugging and investigative purposes. Care should be taken in production to disable debugging as debugging information could contain potential sensitive data which this user should not have privy to.

Note: The Oracle Client and WebLogic should be installed as the user who will stop and start the application. For example, if you plan to run the application as the install user these components must belong to cissys.

Oracle Client 11.2.0.1 — Runtime Option

Install the Oracle Client as described in the Oracle Client installation documentation. Use the cissys account to install the Oracle Client. If another user installs the Oracle Client, make sure the cissys user ID has the proper execute permissions.

For the cissys user ID, ensure that the environment variable ORACLE_CLIENT_HOME is set up, and that ORACLE_CLIENT_HOME/perl/bin is the first Perl listed in the cissys account's PATH variable.

Oracle Java Development Kit Version 6.0 Update 20 or Later, 64-bit

At time of release, Oracle Java packages could be obtained from:

<http://www.oracle.com/technetwork/java/archive-139210.html>

The Oracle WebLogic Server requires the 64-bit version. The main prerequisite for the web server is the version of java mentioned above.

For the userid cissys, ensure that the environment variable JAVA_HOME is setup, and that java_home/bin and java_home/lib can be found in cissys' PATH variable.

Hibernate 3.3.2

You must install Hibernate before installing Oracle Utilities Meter Data Management.

Download the file hibernate-3.3.2.ga.zip (the zip file associated with the 3.3.2 GA release.) from the following link:

<http://sourceforge.net/projects/hibernate/files/hibernate3/3.3.2.GA/>

It is very important that you download the exact version, as the product has only been certified with this exact release.

You will need to create a permanent directory to place one of the files from hibernate-3.3.2.ga.zip. (e.g., /opt/hibernate).

Extract the file hibernate3.jar into the newly created directory (e.g., /opt/hibernate) from the hibernate-3.3.2.ga.zip zip file.

Oracle WebLogic 11gR1 (10.3.3 or 10.3.4) 64-bit

Oracle WebLogic software can be downloaded from the Oracle web site. This application server will run as a 64-bit application.

- Download and install 64-bit Java (as documented above) before installing WebLogic.
- Download and install WebLogic Server 11gR1 (10.3.3 or 10.3.4).

Solaris 10 Application Server

This section describes the software requirements for operating the application using the Sun Solaris 10 application server.

Supported Application Servers

Operating System	Chipsets	Application Server
Solaris 10 Update 8 (64-bit)	SPARC	Oracle WebLogic 11gR1 (10.3.3 or 10.3.4) 64-bit version

Web/Application Server Tier

Solaris 10 Operating System Running on SPARC-based 64-bit Architecture

UNIX Administrator User ID

The following user groups and accounts have to be created to install and administer the application:

Description	Default Value	Customer Defined Value
Oracle Utilities Meter Data Management Administrator User ID	cissys	
Oracle Utilities Meter Data Management User Group	cisusr	

Note: It is recommended that you change the default values for security reasons.

Throughout this document the administrator user id is often referred to as the "cissys" user id. You should substitute that with the customer defined user id when not using the default value. After the initial install, the software should always be managed using that user id.

By default, the cissys userid is the only one given access to the files installed.

1. Create a group called cisusr (user group)
2. Create a user called cissys. Primary group cisusr. Set the primary shell for the cissys user to Korn Shell.

The shell scripts use the ">" to overwrite shell functionality. Your operating system may be configured to not allow this functionality by default in the users shell.

To avoid file access permission problems when executing scripts, consider placing the following command into cissys profile script:

```
set +o noclobber
```

Security Configuration

Various options exists to secure a system. In this application all files will be created with the minimum permissions required to ensure that group-readable, group-writable and group-executable files will have the correct user groups and to restrict the permissions available to

legitimate users. In this way, a low privileged end user cannot directly edit configuration files and thereby bypass application security controls.

The following users and group categories must be defined to implement this security. For demonstration purposes the following users and groups will be used. These users must be created according to industry standards (including password policies). All users should be created with a default umask of 022 to ensure files created during normal operation have the correct permissions.

Please replace these users and groups for your installation defaults:

User	Group	Description
cissys	cisusr	This user will be used to install the application and to apply patches. This user will own all the application files. The same care should be taken with this user ID as if it is 'root'. This user will be able to add, delete and modify files within the application.
cisadm	cisusr	Administrative and Operation functions will be available to this user. This user will be able to stop and start the application and batch processes, but will not have access to modify any file other than generated log files
cisoper	-----	Low level operator. This user will only be able to read logs files and collect information for debugging and investigative purposes. Care should be taken in production to disable debugging as debugging information could contain potential sensitive data which this user should not have privy to.

Note: The Oracle Client and WebLogic should be installed as the user who will stop and start the application. For example, if you plan to run the application as the install user these components must belong to cissys.

Oracle Client 11.2.0.1 — Runtime Option

Install the Oracle Client as described in the Oracle Client installation documentation. Use the cissys account to install the Oracle Client. If another user installs the Oracle Client, make sure the cissys user ID has the proper execute permissions.

For the cissys user ID, ensure that the environment variable ORACLE_CLIENT_HOME is set up, and that ORACLE_CLIENT_HOME/perl/bin is the first Perl listed in the cissys account's PATH variable.

Oracle Java Development Kit Version 6.0 Update 20 or Later, 64-bit

This software is only required for Oracle WebLogic installations.

At the time of release, the Oracle Java packages used in the test cycle were downloaded from:

<http://www.oracle.com/technetwork/java/archive-139210.html>

The Oracle WebLogic Server requires the 64-bit version. The main prerequisite for the web server is the version of java mentioned above.

For the userid cissys, ensure that the environment variable JAVA_HOME is setup, and that java_home/bin and java_home/lib can be found in cissys' PATH variable.

Hibernate 3.3.2

You must install Hibernate before installing Oracle Utilities Meter Data Management.

Download the file hibernate-3.3.2.ga.zip (the zip file associated with the 3.3.2 GA release.) from the following link:

<http://sourceforge.net/projects/hibernate/files/hibernate3/3.3.2.GA/>

It is very important that you download the exact version, as the product has only been certified with this exact release.

You will need to create a permanent directory to place one of the files from hibernate-3.3.2.ga.zip. (e.g., /opt/hibernate).

Extract the file hibernate3.jar into the newly created directory (e.g., /opt/hibernate) from the hibernate-3.3.2.ga.zip zip file.

Oracle WebLogic 11gR1 (10.3.3 or 10.3.4) 64-bit

Oracle WebLogic software can be downloaded from the Oracle web site. This application server will run as a 64-bit application.

- Download and install 64-bit Java (as documented above) before installing WebLogic.
- Download and install WebLogic Server 11gR1 (10.3.3 or 10.3.4).

Windows 2008 Application Server

This section describes the software requirements for operating the application using the Windows application server.

Supported Application Servers

Operating System	Chipsets	Application Server
Windows Server 2008 R2 (64-bit)	x86_64	Oracle WebLogic 11gR1 (10.3.3 or 10.3.4) 64-bit version

Web/Application Server Tier

Oracle Client 11.2.0.1 — Runtime Option

Install the Oracle Client as described in the Oracle Client installation documentation. Use the cissys account to install the Oracle Client. If another user installs the Oracle Client, make sure the cissys user ID has the proper execute permissions.

For the cissys user ID, ensure that the environment variable ORACLE_CLIENT_HOME is set up, and that ORACLE_CLIENT_HOME/perl/bin is the first Perl listed in the cissys account's PATH variable.

Oracle Java Development Kit version 6.0 Update 20 or Later, 64-bit

This software is required for the Oracle WebLogic Installation.

At time of release, Oracle Java packages could be obtained from:

<http://www.oracle.com/technetwork/java/archive-139210.html>

The Oracle WebLogic Server requires the 64-bit version. The main prerequisite for the web server is the version of java mentioned above.

For the userid cissys, ensure that the environment variable JAVA_HOME is setup, and that java_home/bin and java_home/lib can be found in cissys' PATH variable.

Hibernate 3.3.2

Hibernate must be installed prior to the installation of Oracle Utilities Meter Data Management.

Please download the file hibernate-3.3.2.ga.zip from the following link:

<http://prdownloads.sourceforge.net/hibernate/>

or from the following link:

http://sourceforge.net/project/showfiles.php?group_id=40712&package_id=127784

It is very important that you download the exact version, as the product has only been certified with this exact release.

You will need to create a permanent directory to place one of the files from hibernate-3.3.2.ga.zip. (e.g. c:\opt\hibernate3.3.2).

Extract the file hibernate3.jar from hibernate-3.3.2.ga.zip.

Oracle WebLogic 11gR1 (10.3.3 or 10.3.4) 64-bit

Oracle WebLogic software can be downloaded from the Oracle web site. This application server will run as a 64-bit application.

- Download and install 64-bit Java (as documented above) before installing WebLogic.
- Download and install WebLogic Server 11gR1 (10.3.3 or 10.3.4).

Chapter 8

Configuring WebSphere Application Server

Note: This section applies only to installations using WebSphere as an application server.

This section describes tasks that you should complete before you install the Oracle Utilities Application Framework. It also describes configuration tasks you should complete after installing Oracle Utilities Meter Data Management. It includes the following:

- **Configuring WebSphere Basic**

Configuring WebSphere Basic

Preinstallation Tasks

This section describes tasks that you should complete to configure a WebSphere Basic application server before you install the Oracle Utilities Application Framework.

When working within the WebSphere console make sure to apply and save your changes to the Master Configuration when appropriate.

Setting of WebSphere Security

There are several security configuration options within WebSphere. In a production environment you must use the security implementation appropriate for your security requirements. During the QA cycle we used the User account repository of the Federated repository. The following procedures describe how to apply these security settings.

Note: Refer to the IBM WebSphere Application Server documentation for more details.

1. Start the WebSphere Administrative Console and log in.
2. Go to **Security, Global security**.
 - Check **Enable administrative security**.
 - Check **Enable application security**.
 - Select **Federated repositories** from the Available realm definitions
3. Click **Apply**.

Setting WebSphere Application Groups

1. Start the WebSphere Administrative Console and log in.
2. Go to **Users and Groups - Manage Groups**.

Create the group name of cisusers (default group).
3. Click **Create**.

Setting WebSphere Application Users

1. Start the WebSphere Administrative Console and log in.
2. Go to **Users and Groups - Manage Users**.
 - Create the user Id of SYSUSER (example user)
 - Add the Group Membership of cisusers (created in the previous step) to the user.
3. Click **Create**.

Setting WebSphere JNDI Users

1. Start the WebSphere Administrative Console and log in.
2. Go to **Users and Groups, Manage Users**.
 - Create the user id of JNDI (example user).
3. Click **Create**.

Setting WebSphere JNDI Users - CORBA Naming Service Users

1. Start the WebSphere Administrative Console and log in.
2. Go to **Environment, Naming, CORBA Naming Service Users**.
 - Add the user id of JNDI (example user).

-
- Highlight all of the Roles (Cos Naming Read, Cos Naming Write, Cos Naming Create, Cos Naming Delete)
3. Click **Apply**.

Note: Prior to this step you will need to restart the server¹ since when adding CORBA Naming Service Users, the User is not recognized.
 4. Note the values for JNDI User and Password. The Oracle Utilities Application Framework will prompt you for this information during the installation.

Creation of Additional Servers in WebSphere - Sample Script

You must also provide the name of servers during OUAF installation. You can use the following sample script to create additional servers using the wsadmin.sh tool.

Note: There are several other ways to accomplish this task.

1. Initialize a wsadmin.sh session:

```
<$WAS_HOME>/bin/wsadmin.sh -host localhost -port  
<SoapConnectorPort> -conntype SOAP -username  
<webSphereUserName> -password <webSphereUserPassword>
```

Note: Substitute \$WAS_HOME, webSphereUserName, SoapConnectorPort, webSphereUserPassword, with values that are appropriate for your installation:

For example:

```
/ouaf/IBM/WebSphere70/AppServer/bin/wsadmin.sh -host  
localhost -port  
8889 -conntype SOAP
```

2. Create the server instance:

```
<wsadmin> $AdminTask createApplicationServer  
<nodeName> {-name <serverName>}
```

Setting General Server Properties

1. Connect to the WebSphere administrative console.
2. Select **Servers, Server Types, WebSphere application servers**, and then select **Application Servers**.
3. Select your server name.
4. Under the section General Properties.
 - Deselect **Parallel start**.
 - Deselect **Run in development mode**.
5. Click **OK**.
6. Click **Save** to commit the setting.

Enabling SOAP Communication with WebSphere

The OUAF configuration scripts communicate with WebSphere as a SOAP client by using Jython commands to perform environment maintenance (for example, stop, start, deploy, undeploy).

To enable SOAP communication with WebSphere:

1. In a text editor, open the following file:

```
$WAS_HOME/profiles/<PROFILE_NAME>/properties/soap.client.props
```

Edit the property lines as follows:

- com.ibm.SOAP.requestTimeout=0

- `com.ibm.SOAP.loginUserId=< WebSphere_User_Id >`
- `com.ibm.SOAP.loginPassword=< WebSphere_Password >`

Note: Refer to IBM WebSphere Application Server documentation for more details.

1. If you want to encode the password in the `soap.client.props` file, then run the `PropFilePasswordEncoder` command from the `$WAS_HOME/profiles/<PROFILE_NAME>/bin` directory.

This command is specific to IBM WebSphere Application Server. It encodes passwords located in plain-text property files.

2. Save and close the file.

Creation of Additional Servers in WebSphere - Sample Script

You must also provide the name of servers during the installation. You can use the following sample script to create additional servers using the `wsadmin.sh` tool.

Note: There are several other ways to accomplish this task.

1. Initialize a `wsadmin.sh` session:

```
<$WAS_HOME>/bin/wsadmin.sh -host localhost -port <SoapConnectorPort> -conntype SOAP -username <webSphereUserName> -password <webSphereUserPassword>
```

Note: Substitute `$WAS_HOME`, `webSphereUserName`, `SoapConnectorPort`, `webSphereUserPassword`, with values that are appropriate for your installation:

For example: `/ouaf/IBM/WebSphere70/AppServer/bin/wsadmin.sh -host localhost -port 8889 -conntype SOAP`

2. Create the server instance:

```
wsadmin> $AdminTask createApplicationServer <nodeName> {-name <serverName>}
```

Obtaining the Bootstrap Port and WC_defaulthost

You must also provide these port numbers during OUAF installation. Obtain the bootstrap port number and the `WC_defaulthost` by using the WebSphere administrative console.

Note: The WebSphere application server1 must be running to obtain the bootstrap port number and the `WC_defaulthost` port number.

To view the bootstrap port number and the `WC_defaulthost`:

1. Log on to the WebSphere administrative console.
2. Select **Servers, Server Types, WebSphere application servers, <server_name>** and then select **Ports** under **Communications**.

The bootstrap port is displayed as `BOOTSTRAP_ADDRESS`.

The `WC_defaulthost` is displayed as `WC_defaulthost`.

3. Note the values for `WC_defaulthost` and `BOOTSTRAP_ADDRESS`. The Oracle Utilities Application Framework will prompt you for this information during the installation.

Set Up a Virtual Host for the Server

1. Select **Environment, Virtual Host, default_host**, and then select **Host Alias**.
2. Click **New**.

Enter the following:

- **Host Name:** *
- **Port:** `WC_defaulthost` Port Number

Obtaining the WebSphere Node Name

You must also provide the node name during the installation. Obtain the node name by using the WebSphere administrative console.

Note: The WebSphere application server must be running to obtain the bootstrap port number.

To obtain the node name:

1. Connect to the WebSphere administrative console.
2. Select **Servers, Server Types, WebSphere application servers, <server_name>**.

Note: Take note of the value for the Node Name.

Installing Oracle Utilities Application Framework as a Non-Root User with IBM WebSphere Installed as Root

Installing Oracle Utilities Application Framework as a non-root user on a WebSphere application server running on AIX requires certain permissions. Prior to the installation, verify that the operating system user account installing the framework has write and execute permissions on the directories in which WebSphere will be installed.

Postinstallation Tasks

This section describes tasks that you should complete after you have installed Oracle Utilities Meter Data Management on a WebSphere application server.

Setting Environment Entries

1. Connect to the WebSphere administrative console.
2. Select **Servers, Server Types, WebSphere application servers**.
3. Select the server name.
4. Go to **Server Infrastructure**, and then click **Java and Process Management**.
5. Select **Process Definition**.
6. Go to Environment Entries.
7. Click **New** and add the following Environment Entries:

Name: SPLENVIRON

Value: <\$SPLENVIRON>

Note: Substitute \$SPLENVIRON with appropriate values for your installation.

Name: SPLEBASE

Value: < \$SPLEBASE >

Note: Substitute \$SPLEBASE with appropriate values for your installation.

Name: LIBPATH

Value: <\$SPLEBASE >/runtime

Note: Substitute \$SPLEBASE with appropriate values for your installation.

Note: You will need to restart the server_name before you attempt to start the application on the server.

8. Click **OK**.
9. Click **Save** to commit the setting.

Setting JVM Memory and Arguments

For Oracle Utilities Application Framework, JVM memory settings must be changed for production environments and/or when processing large volume in a nonproduction environment.

Perform the following steps to set the JVM memory size. The WebSphere application server must be running to set the memory size.

To set the JVM memory size:

1. Connect to the WebSphere administrative console.
2. Select **Servers, Server Types, WebSphere application servers**.
3. Select the server name.
4. Go to **Server Infrastructure**, and then click **Java and Process Management**.
5. Select **Process Definition**.
6. Go to **Additional Properties**, and then click **Java Virtual Machine**.
7. Enter 1024 for **Minimum Heap Size**.
8. Enter 1024 for **Maximum Heap Size**.
9. Enter `-Djava.security.auth.login.config=<$SPLEBASE>/splapp/config/java.login.config` for Generic JVM arguments.

Note: Substitute \$SPLEBASE with appropriate values for your installation.

You will need to restart the server_Name before you attempt to start the application on the server.

10. Click **OK**.
11. Click **Save** to commit the setting.

Setting Server Custom Properties

The following custom properties have been need in the past to enable WebSphere Classloader to load the correct xalan.jar file.

To set the Custom Properties:

1. Connect to the WebSphere administrative console.
2. Select **Servers, Server Types, WebSphere application servers**.
3. Select the server name.
4. Go to **Server Infrastructure**, and then click **Java and Process Management**.
5. Select **Process Definition**.
6. Go to **Additional Properties**, and then click **Java Virtual Machine**.
7. Go to **Additional Properties**, and then click **Custom Properties**.
8. Click **New**.

Enter the following information:

- **Name:** javax.xml.transform.TransformerFactory
- **Value:** org.apache.xalan.processor.TransformerFactoryImpl

9. Click **OK**.
10. Click **Save** to commit the setting.

Setting the Web Container Custom Properties

To set the Web Container Custom Properties:

-
1. Connect to the WebSphere administrative console.
 2. Select **Servers, Server Types, WebSphere application servers**.
 3. Select the server name.
 4. Go to **Container Settings**, and then click **Web Container Settings**.
 5. Select **Web container**.
 6. Go to **Additional Properties**, and then click **Custom properties**.
 7. Click **New**.

Enter the following information:

- **Name:** com.ibm.ws.webcontainer.invokefilterscompatibility
- **Value:** true

8. Click **OK**.
9. Click **Save** to commit the setting.

Starting and Stopping WebSphere Servers

To start WebSphere on AIX use the `$WAS_HOME/profiles/<profile_name>/bin/startServer.sh` script. For example, run:

```
$WAS_HOME/profiles/<profile_name>/bin/startServer.sh <server_name>
```

To stop WebSphere on AIX, use the `$WAS_HOME/profiles/<profile_name>/bin/stopServer.sh` script. For example, run:

```
$WAS_HOME/profiles/<profile_name>/bin/stopServer.sh <server_name>
```

Note: The Oracle Utilities Application Framework script **spl.sh** does not stop or start the IBM WebSphere servers. It only stops and starts the Oracle Utilities Application Framework-based applications.

Deployment Using Supplied Script

The application deployment script is `initialSetup.sh.-d`, located in `$SPLEBASE/bin` (this script deploys both the `SPLService.ear` and `SPLWeb.ear`)

Note: Before running the script ensure you have initialized the environment by running `splenvron.sh`

Deployment via the Admin Console

Follow these steps to deploy the application using the Admin Console:

Deployment Overview

The application needs to be deployed in the following order:

1. `SPLService.ear`
2. `SPLWeb.ear`

Note: The `SPLService.ear` must be successfully deployed before deploying `SPLWeb.ear`

Deploy SPLService.ear

1. Select the ear file to deploy.
 - Select **Applications, Install New Application**.
 - Select **Remote file system**.
 - Browse to the `SPLService.ear` or enter the full path to the file.

-
- The ear files can be found under \$SPLEBASE/splapp/applications.
 - Click **Next**.
2. Select **Option Fast Path - Prompt only when additional information is required**. Click **Next**.
 3. On the Select installation options page ensure that **Deploy enterprise beans** is checked. Click **Next**.
 4. Assign the module to the WebSphere server instance.
When deploying an application from the console make sure you select the correct server and click **Apply**.
 5. Review the summary page. Review the installation options.
 6. Click **Finish**. The application will then deploy. The deployment process takes about 5 minutes.
 7. Click **Save**. The save process can take more than 20 minutes.

Deploying SPLWeb.ear

1. Select the ear file to deploy.
 - Select **Applications, Install New Application**.
 - Select **Remote file system**.
 - Browse to the SPLWeb.ear or enter the full path to the file.
 - The ear files can be found under \$SPLEBASE/splapp/applications.
 - Click **Next**.
2. Select **Option Fast Path - Prompt only when additional information is required**. Click **Next**.
3. Assign the module to the WebSphere server instance.
When deploying an application from the console make sure you select the correct server and click **Apply**.
4. Review the summary page. Review the installation options.
5. Click **Finish**. The application will then deploy. The deployment process takes about 5 minutes.
6. Click **Save**. The save process can take about more than 20 minutes.

Configure the Applications

You need to apply these steps to both the SPLWeb and SPLService applications unless specified.

1. Set the startup order of the applications (this applies only to SPLWeb):
 - Select the SPLWeb application from **Applications, Enterprise Applications**.
 - Select **Startup behavior**.
 - Change the startup order to 2.
 - Click **OK**.
 - Click **OK** and Save directly to master configuration.
2. Set the class loading order (for both SPLService.ear and SPLWeb.ear): Select Class loading and update detection.
 - Set Polling interval to 0.

-
- Under Class loader order select Classes loaded with application class loader first. Click **OK** and Save to master configuration.
 3. Set the module starting weight:
 - **SPLService only:** Set the Starting weight to 1.
 - **SPLWeb only:** For each module (.war) set the Starting weight to 10000 and change the Class loader order to Classes loaded with application class loader first
 4. Set EJB JNDI names (this applies only to SPLService). Select Enterprise Java Bean Properties and enter the following values:
 - **EJB module:** SPLServiceBean
 - JNDI name for all interfaces
 - **Target Resource JNDI Name:** [Web Context Root]/servicebean
 - **EJB module:** TUGBULiteServiceBean
 - JNDI name for all interfaces
 - **Target Resource JNDI Name:** [Web Context Root]/liteservicebean
 5. Click **Ok**.

Configure Application Security

After using the supplied script to deploy the application to WebSphere you will need to configure each application's security before starting the application.

Using the WebSphere administration console select **Applications, Application Types, WebSphere enterprise applications, <Business Server Application Name>, <server name>** (for example, SPLService-server2), **Security role to user/group mapping**.

For role cisusers:

- Check **Select** and the click **Map Users:**
- Search for SYSUSER and add to the Selected users list.
- Click **OK**.

Note: Repeat the process for <Web Server Application Name>-<server name> (for example, SPLWeb-server2).

Restart the WebSphere Server

It is recommended to stop and then restart the WebSphere server.

If the application is deployed in server1 you can use the admin console to stop and start the server. If the application is deployed in another server you will need to use the scripts that are supplied with WebSphere (stopServer.sh, startServer.sh).

Note: WebSphere admin console runs under server1.

Application URL

The Web link to the WebSphere application will be:

`http://<hostname>:<WC_default_port>/<context_root>/loginPage.jsp`

For example, `http://oracle.test:9081/ouaf/loginPage.jsp`

-

Chapter 9

Installing the Application Server Component of Oracle Utilities Application Framework

Installing the Oracle Utilities Application Framework is the prerequisite and foundation for installing a framework-based application such as Oracle Utilities Meter Data Management. This section describes the process for installing the Oracle Utilities Application Framework, including:

- **Installation Overview**
- **Preinstallation Tasks**
- **Installing Oracle Utilities Application Framework**

Installation Overview

This process replaces any previously delivered and installed version of the Oracle Utilities Application Framework Server. Before you proceed:

1. Make sure that you have installed all the required third-party software as described in **Chapter 6: Installing Application Server Prerequisite Software**.
2. Complete the database installation (refer to the Oracle Utilities Meter Data Management *Database Administrator's Guide*).
3. If you plan to upgrade a previously installed application server make a backup before you start a new installation.

The application server installation process of Oracle Utilities Meter Data Management consists of the following:

1. Installing Oracle Utilities Application Framework
2. Installing Oracle Utilities Meter Data Framework
3. Installing Oracle Utilities Meter Data Management

As a first step of the application server installation, download and install the framework application server. The installation process creates and configures the application server environment.

Once the Oracle Utilities Application Framework installation is successfully completed and the framework application environment is created, Oracle Utilities Meter Data Managementthe Oracle Utilities Meter Data Framework can be installed on top of the framework environment.

You can download the installation packages from the Oracle Software Delivery Cloud.

This section describes how to install a working Oracle Utilities Application Framework Server, which can then be further configured manually to allow for production performance levels.

Application server installation packages delivered for this version are multi-platform and are ready to install on any supported platform (as described in the section **Supported Platforms**). You must complete the database installation before installing the application server.

Preinstallation Tasks

Hardware and Software Version Prerequisites

The section **Supported Platforms** contains all of the available platforms that are required with this release of the product.

Database Installation

Verify that the database has been installed and is operational. See Oracle Utilities Meter Data Management *Database Administrator's Guide* for more information.

Installation Prerequisites

Chapter 6: Installing Application Server Prerequisite Software describes all preparations that need to be done on the server prior to installing the application server. Please read carefully the server setup requirements and make sure that all prerequisite software is installed and that all required environment variables are set. Correct server setup and proper environment variable settings are an essential prerequisite for successful environment installation.

System Architecture Overview

Oracle Utilities Application Framework V4.1.0 is a decoupled system architecture involving a business service application tier and a web application tier. Typically both will run on the same server, but the design does allow each tier to be installed on separate servers.

The design implements a stateless session bean (EJB technology, under Java EE 6), to provide remote access to service invocations. The root web app, Mobility web app, and XAI web apps can be configured to access service processing locally (as in previous versions), or to make a remote EJB call to perform the service request. In the latter case, the served containers, effectively, run as very thin servlet wrappers around the remote call.

For all supported application servers except for WebLogic expanded configuration (SDK environment), the deployment is in the form of two Enterprise Archive (ear) Files: SPLService.ear and SPLWeb.ear. Web Archive (war) files are created during the installation process but are not deployed.

Copying and Decompressing Install Media

The Oracle Utilities Application Framework installation file is delivered in jar format for both UNIX and Windows platforms.

If you are planning to install multiple Oracle Utilities Framework environments operated by different Oracle Utilities Administrator user ids, you must complete each of the following installation steps for each Administrator userid.

1. Log in to the application server host as the Oracle Utilities Framework administrator user ID (default cissys).
2. Create a temporary directory such as c:\ouaf\temp or /ouaf/temp. (Referred to below as <TEMPDIR>.)

This directory must be located outside any current or other working Oracle Utilities application environment. All files that are placed in this directory as a part of the installation can be deleted after completing a successful installation.

3. Copy the file FW-V4.1.0-MultiPlatform.jar from the delivered package to the <TEMPDIR>. If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.

4. Decompress the file:

```
cd <TEMPDIR>

jar -xvf FW-V4.1.0-MultiPlatform.jar
```

Note: You will need to have Java JDK installed on the machine used to (un)jar the application server installation package. Please install the JDK that is supported for the install on your platform to be able to use the jar command. This is the location of Java packages:

<http://www.oracle.com/technetwork/java/archive-139210.html>

A sub-directory named “FW.V4.1.0” is created. It contains the installation software for the Oracle Utilities framework application server.

Set Permissions for the cistab File in UNIX

Every Oracle Utilities Application Framework environment installed on a server must be registered in the /etc/cistab file located on that server. On UNIX servers, generally only the root user ID has write permissions to the /etc directory. Since the installation process is run by the Oracle administrator user ID (cissys), this user ID may not be able to write to /etc/cistab table.

The install utility checks permissions and if it identifies a lack of the necessary permissions, it generates a script in the <TEMPDIR>/FW.V4.1.0 directory named cistab_<SPLENVIRON>.sh. Run the generated script using the root account before continuing with the installation process. The script initializes the cistab file in /etc directory (if it is the first Oracle Utilities Framework application environment on the server) and registers a new environment.

The generated script also changes the owner of /etc/cistab file to the Oracle Utilities Framework administrator user ID, so that the next time a new environment is created by the same Oracle Utilities Framework administrator user ID, you do not need to run the generated script with the root user ID. Instead the install utility itself proceeds with the registration.

If you are reinstalling an existing environment, only the validation of /etc/cistab entry is done by the install utility, no new registration occurs. The install utility interactively instructs you about every step that needs to occur in each specific case.

If you are planning to upgrade an existing environment it is your responsibility to take a backup prior to the installation process. The installation utility does not create a backup of existing environment.

Installing Oracle Utilities Application Framework

This section outlines the steps for installing the Application Framework.

Brief Description of the Installation Process

1. Log on as the Oracle Utilities Framework administrator (the default is cissys on UNIX) or as a user with Administrator privileges (on Windows).
2. Configure your application server and any third-party software required for your platform, as outlined in **Chapter 6: Installing Application Server Prerequisite Software**.
3. Change directory to the <TEMPDIR>/FW.V4.1.0 directory.
4. Set the Oracle PERL bin directory in path variable.
5. Start the application installation utility by executing the appropriate script:
UNIX: ksh ./install.sh
Windows: install.cmd
6. Follow the messages and instructions that are produced by the application installation utility. Use the completed worksheets in the section **Application Framework Installation and Configuration Worksheets** to assist you.
7. Installation of Oracle Utilities Framework Application Server is complete if no errors occurred during installation.

Detailed Description of the Installation Process

1. Log on to the host server as Oracle Utilities Application Framework administrator.
Logon as cissys (on UNIX) or as a user with Administrator privileges (on Windows)
2. Configure application server and third-party software.
Complete all steps outlined in **Chapter 6: Installing Application Server Prerequisite Software**. You will need to obtain specific information for the install.
3. Change directory to the <TEMPDIR>/FW.V4.1.0 directory and start the application installation utility by executing the appropriate script:
UNIX: ksh ./install.sh
Windows: install.cmd
4. On the Environment Installation Options menu, select item 1: Third Party Software Configuration.
Use the completed Third Party Software Configuration worksheet to complete this step. See **Application Framework Installation and Configuration Worksheets**.
5. Select menu item 50: Environment Installation Options.
Use the completed Environment Installation Options Worksheet to complete this step. See **Application Framework Installation and Configuration Worksheets**.
Note: You must create the directory for output (the Log Mount Point). The installation process fails if this directory does not exist.
 - Specify the environment name and the environment directory names for a new installation on a menu screen.
 - Specify the type of the database your environment will be connected to (the default will be Oracle).

- Specify the web application server your environment will run with (the default will be WebLogic).
 - Enter **P** to accept the selected options.
 - During this step, the specification of a new environment is checked for validity against /etc/cistab and the permissions on mount points and directories.
6. Configure environment parameters.
- During this step you will configure environment parameters such as web server hosts and ports, database name, and userid.
 - The application installation utility shows default values for some configuration options.
 - Use the completed Environment Configuration Worksheet to assist you.
- Note:** Every option requires a value for a successful install. It is important to provide all values.
- When you are done with the parameters setup, proceed with the option **P. Write Configuration File.**
- All of the options will be written in the following File: \$ SPLEBASE/etc/ ENVIRON.INI.
- You will be warned if you did not edit a section. You may proceed if you want to keep the default settings.
 - The application installation utility copies the installation media to a new environment.
 - The installation utility copies the new version software from the temporary installation media directory to the new environment.
 - If any manual or electronic interruption occurs during this step, you can rerun the install utility from the beginning and follow the interactive instructions. The application installation utility is able to recover from such a failure.
 - The application installation utility generates environment configuration parameters:
 - The application installation utility automatically executes the script initialSetup.sh (on UNIX) or initialSetup.cmd (on Windows), located in \$SPLEBASE/bin (%SPLEBASE%\bin on Windows) directory. This script populates different application template configuration files with the new environment variables values and completes the rest of the installation steps.
7. Set up environment variables.

Once the ENVIRON.INI file is created and contains the correct environment parameters, the application installation utility starts a sub shell to the current process by executing the splenviron.sh (on UNIX) or splenviron.cmd (on Windows) script, located in \$SPLEBASE/bin (or %SPLEBASE%\etc for Windows) directory. This script sets up all the necessary environment variables and shell settings for the application server to function correctly.

From this point, a number of environment variables have been set up. Some key ones are:

- \$PATH - an adjustment to \$PATH is made so that all of the environment scripts and objects will be in the path.
- \$SPLEBASE (%SPLEBASE%) - stands for <SPLDIR>/<SPLENVIRON> directory
- \$SPLOUTPUT (%SPLOUTPUT%) - stands for <SPLDIROUT>/<SPLENVIRON> directory

Note: Make sure that this directory exists. Otherwise the installation script will fail.

- \$SPLENVIRON (%SPLENVIRON%) - environment name

For future operations or any post installation steps, you need to first execute the following command to connect your session to the new environment:

UNIX: \$SPLEBASE/bin/splenvron.sh -e \$SPLENVIRON

Windows: %SPLEBASE%\bin\splenvron.cmd -e %SPLENVIRON%

You need to execute this script each time you want to be connected to the specific environment before performing manual operations such as shutdown, startup or performing an additional application product installation.

When you have finished the install process, your current online session will be connected to the new environment.

See the chapter **Planning the Installation** for settings and configuration.

Chapter 10

Installing the Application Server Component of Oracle Utilities Meter Data Framework

Installing Oracle Utilities Meter Data Framework is a prerequisite for installing Oracle Utilities Meter Data Management. This section describes the process for installing Oracle Utilities Meter Data Framework on top of the previously created Oracle Utilities Application Framework environment. This section includes:

- **Preinstallation Tasks**
- **Installing Oracle Utilities Meter Data Framework**
- **Installing Service Packs and Patches**

To proceed with the Oracle Utilities Meter Data Framework installation you need to be connected to the target framework application environment. See the detailed installation instructions in the following section.

You must initialize the Framework environment along with the required set of patches prior to proceeding with the Oracle Utilities Meter Data Framework application installation. For detailed instructions see **Preparing for the Installation** on page 10-3.

Preinstallation Tasks

This section describes the steps that should be taken before installing Oracle Utilities Meter Data Framework.

Installing Prerequisite Patches

Oracle Utilities Application Framework patches must be installed prior to installing Oracle Utilities Meter Data Framework 2.0.1. These patches are available as a convenience rollup along with this Media Pack. Please refer to the instructions contained inside the rollup directory for steps to install the patches in a single group. These patches are also available for download separately from My Oracle Support.

See Appendix B for a list of the patches contained in the rollup.

Copying and Decompressing Install Media

The installation file is delivered in jar format for both UNIX and Windows platforms.

Oracle Utilities Meter Data Framework is delivered as a separate installation package. Please refer to the **Supported Platforms** section for installation details regarding the database and operating system versions supported for the Meter Data Framework. Also see the chapter **Installing Application Server Prerequisite Software** for prerequisite third-party software installation instructions.

Download the installation package and proceed as follows:

1. Log in to the host server as the Oracle Utilities Application Framework administrator user ID (default cissys). This is the same user ID that was used to install the Oracle Utilities Application Framework.
2. Create a <TEMPDIR> directory on the host server, which is independent of any current or other working Oracle Utilities Meter Data Framework application environment. This can be the same <TEMPDIR> used during the installation of the Oracle Utilities Application Framework.
3. Copy the file MDF-V2.0.1-MultiPlatform.jar in the delivered package to a <TEMPDIR> on your host server. If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.
4. Decompress the file:

```
cd <TEMPDIR>
jar -xvf MDF-V2.0.1-MultiPlatform.jar
```

For Windows installations, include the location of the JDK in your path before you execute the jar command.

For both Unix and Windows platforms, a sub-directory named MDFV2.0.1 is created. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application.

Installing Oracle Utilities Meter Data Framework

This section outlines the steps for installing the Meter Data Framework.

Preparing for the Installation

1. Log on as Oracle Utilities Meter Data Framework Administrator (default cissys).
2. Initialize the Framework environment that you want to install the product into.

UNIX:

```
$SPLEBASE/bin/splenviron.sh -e $SPLENVIRON
```

Windows:

```
%SPLEBASE%\bin\splenviron.cmd -e %SPLENVIRON%
```

3. Stop the environment if running.

UNIX:

```
$SPLEBASE/bin/spl.sh stop
```

Windows:

```
%SPLEBASE%\bin\spl.cmd stop
```

Installing the Application

1. Change to the <TEMPDIR>/MDFV2.0.1 directory.
2. Execute the script:

UNIX:

```
ksh ./install.sh
```

Windows:

```
install.cmd
```

Note: On UNIX, ensure that you have the proper execute permission on install.sh

The configuration menu for the Oracle Utilities Meter Data Framework Application appears

3. Select menu item 8 to configure OSB.

Use the completed OSB configuration worksheet to assist you in this step. See the **Meter Data Framework Installation and Configuration Worksheets** in the chapter **Planning the Installation**.

4. Select menu item 9 to configure SOA.

Use the completed SOA configuration worksheet to assist you in this step. See the **Meter Data Framework Installation and Configuration Worksheets** in the chapter **Planning the Installation**.

5. Select menu item 10 to configure the MDF SOA Configuration Plan.

Use the completed SOA Configuration Plan (MDF) worksheet to assist you in this step. See the **Meter Data Framework Installation and Configuration Worksheets** in the chapter **Planning the Installation**.

6. When you are done with the parameter setup, choose option P to proceed with the installation.

7. Change to the <TEMPDIR>/MDF.V2.0.1 directory.
8. Execute the following command:

UNIX:

```
ksh ./postinstall.sh
```

Windows:

```
postinstall.cmd
```

Note: On UNIX, ensure that you have the proper execute permission on postinstall.sh

Installation of Oracle Utilities Meter Data Framework Application Server is complete if no errors occurred during installation.

Installing Service Packs and Patches

Periodically, Oracle Utilities releases a service pack of single fixes for its products. A service pack is an update to an existing release that includes solutions to known problems and other product enhancements. A service pack is not a replacement for an installation, but a pack consisting of a collection of changes and additions for it. The service pack may include changes to be applied to the application server, the database, or both. The service pack includes all files necessary for installing the collection of changes, including installation instructions.

Between services packs, Oracle Utilities releases patches to fix individual bugs. For information on installing patches, see knowledge base article ID 974985.1 on My Oracle Support.

Service packs and patches can be downloaded from My Oracle Support (<https://support.oracle.com/>).

Chapter 11

Installing the Application Server Component of Oracle Utilities Meter Data Management

This section describes the procedure for installing Oracle Utilities Meter Data Management on top of the previously installed Oracle Utilities Meter Data Framework environment. This section includes:

- **Preinstallation Tasks**
- **Installing the Application**
- **Installing User Documentation**
- **Operating the Application**
- **Installing Service Packs and Patches**

To proceed with the Oracle Utilities Meter Data Management installation you need to be connected to the target Oracle Utilities Meter Data Framework application environment. See the detailed installation instructions in the following section.

You *must* initialize the Meter Data Framework environment. For detailed instructions see **Preparing for the Installation** on page 11-2.

Preinstallation Tasks

This section describes the steps that should be taken before installing Oracle Utilities Meter Data Management.

Installation Prerequisite

The Oracle Utilities Meter Data Framework 2.0.1 application must be installed prior to installing Oracle Utilities Meter Data Management 2.0.1.

Copying and Decompressing Install Media

The installation file is delivered in jar format for both UNIX and Windows platforms.

Oracle Utilities Meter Data Management is delivered as a separate installation package. Please refer to the **Supported Platforms** on page 3-5 for versions and installation details regarding the database and operating system. Also see **Chapter 7: Installing Application Server Prerequisite Software** for prerequisite third-party software installation instructions.

Download the installation package and proceed as follows:

1. Log in to the host server as the Oracle Utilities Meter Data Framework administrator user ID (default cissys). This is the same user ID that was used to install the Oracle Utilities Meter Data Framework.
2. Create a <TEMPDIR> directory on the host server, which is independent of any current or other working Oracle Utilities Meter Data Management application environment. This can be the same <TEMPDIR> used during the installation of the Oracle Utilities Meter Data Framework.
3. Copy the file MDM-V2.0.1-MultiPlatform.jar in the delivered package to a <TEMPDIR> on your host server. If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.

4. Decompress the file:

```
cd <TEMPDIR>

jar -xvf MDM-V2.0.1-MultiPlatform.jar
```

For Windows installations, include the location of the JDK in your path before you execute the jar command.

For both Unix and Windows platforms, a sub-directory named MDM.V2.0.1 is created. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application product.

Preparing for the Installation

1. Log on as Oracle Utilities Meter Data Management Administrator (default cissys).
2. Initialize the Framework environment that you want to install the product into.

UNIX:

```
$SPLBASE/bin/splenvron.sh -e $SPLENVIRON
```

Windows:

```
%SPLBASE%\bin\splenvron.cmd -e %SPLENVIRON%
```

3. Stop the environment if running.

UNIX:

```
$SPLEBASE/bin/spl.sh stop
```

Windows:

```
%SPLEBASE%\bin\spl.cmd stop
```

Installing the Application

1. Change to the <TEMPDIR>/MDM.V2.0.1 directory.
2. Execute the install script:

UNIX:

```
ksh ./install.sh
```

Windows:

```
install.cmd
```

Note: On UNIX, ensure that you have the proper execute permission on install.sh.

3. Choose option P to proceed with the installation.
4. Change to the <TEMPDIR>/MDM.V2.0.1 directory
5. Execute the following command:

UNIX:

```
ksh ./postinstall.sh
```

Windows:

```
postinstall.cmd
```

Note: On UNIX, ensure that you have the proper execute permission on postinstall.sh

6. Once the install has finished successfully, you will need to execute Post Installation steps:

Post Installation steps:

1. Start up the environment. Run the following command:

UNIX: spl.sh start

Windows: spl.cmd start

Follow the messages on the screen along with the logs in \$SPLSYSTEMLOGS directory to ensure that the environment was started successfully.

If the startup failed, identify the problem by reviewing the logs. Resolve any issues before attempting to restart the environment.

You should postpone the startup process until you are done with post installation steps.

(See the note below:)

Use the following utility to stop the environment:

UNIX: spl.sh stop

Windows: spl.cmd stop

Note: The first time you start Oracle Utilities Meter Data Management, you need to log in to the WebLogic console and give system access to cisusers role. The WebLogic console application can be accessed through the following URL:
`http://<hostname>:<portname>/console`

Installing User Documentation

This section provides instructions for installing the Oracle Utilities Meter Data Management user documentation that is supplied with the system. The Oracle Utilities Meter Data Management user documentation is provided in PDF format for printing.

The documentation is also provided in HTML format located inside the Oracle Utilities Meter Data Management application server installation package. It is automatically installed and can be launched from the user interface. The files are under the applications directory packaged in the file named help.war. User documentation is provided in English (ENG). The documentation material is divided into the following subdirectories underneath the language directory:

- D1: Oracle Utilities Meter Data Framework User Guide
- D2: Oracle Utilities Meter Data Management User Guide
- F1: Oracle Utilities Application Framework Administration and Business Process Guides

Installing Stand-Alone Online Help

You can also use the Oracle Utilities Meter Data Management online help in stand-alone mode (that is, you do not have to launch it from the Oracle Utilities Meter Data Management application or access it on the application server).

To install the Oracle Utilities Meter Data Management help for stand-alone operation, copy the help.war from the Oracle Utilities Meter Data Management server (environment) or from the Oracle Utilities Meter Data Management installation package to the server or machine on which you want to access the help. If you want to copy the file from any installed Oracle Utilities Meter Data Management environment, you can locate the file in the \$SPLBASE/splapp/applications directory on the server.

Unzip the help.war file to any directory on your machine. To launch the Oracle Utilities Meter Data Management help in stand-alone mode, open the SPLHelp.html file (located inside the language directory that you wish to use).

Note: Do not change the subdirectory names. The documents use relative path names to link to other documents. Changing the subdirectory names will result in broken links.

Customizing Help for Stand-Alone Operation

You can customize the SPLHelp.html file to open to the file and topic that you most frequently use. To do so, edit the SPLHelp.html file and change the DEFAULT_BOOKMARK to the desired location. The default DEFAULT_BOOKMARK is 'helpHome.html'.

Installing Stand-Alone Help Under Web Server

You can also install Oracle Utilities Meter Data Management online help as a stand-alone web application. You can use any Web Application server like WebLogic. Configure the configuration file for your web application server to use web application help.

For example,

- For WebLogic, configure config.xml file for deployed application Name="help" with URI="help.war" and set WebServer DefaultWebApp="help"

- For WebSphere, configure application.xml with module id="WebModule_help" and <web-uri>help.war</web-uri>
- For Tomcat, configure server.xml with Context path="/help" and docBase= full path of help.war file

Access the documentation from the browser by the following URL:

`http://<host name>:<port name>/<WebContext>/<Lang>/SPLHelp.html`, where <hostname>:<portname> is the URL of the web server, <Web Context> is the root web context name specified during Web application server configuration, <Lang> is the name of the language directory, for example, ENG.

Note: Stand-alone online help files are not automatically updated when changes are made to the help files on the application server. You will have to re-install the stand-alone online help files.

Operating the Application

At this point your installation and custom integration process is complete.

Be sure to read the *Oracle Utilities Meter Data Management Server Administration Guide* for more information on further configuring and operating the Oracle Utilities Meter Data Management system.

Installing Service Packs and Patches

Periodically, Oracle Utilities releases a service pack of single fixes for its products. A service pack is an update to an existing release that includes solutions to known problems and other product enhancements. A service pack is not a replacement for an installation, but a pack consisting of a collection of changes and additions for it. The service pack may include changes to be applied to the application server, the database, or both. The service pack includes all files necessary for installing the collection of changes, including installation instructions. For more information about installing the current service pack, see **Chapter 12: Installing Service Packs**.

Between services packs, Oracle Utilities releases patches to fix individual bugs. For information on installing patches, see knowledge base article ID 974985.1 on My Oracle Support.

Service packs and patches can be downloaded from My Oracle Support (<https://support.oracle.com/>).

Chapter 12

Installing Service Packs

This chapter provides instructions for installing Oracle Utilities Meter Data Management Service Pack v2.0.1.9.0 on top of an existing Oracle Utilities Meter Data Management 2.0.1.x installation.

This chapter includes the following topics:

- **Prerequisites**
- **Package Contents**
- **Installing the Database**
- **Installing the Application**

For fixes included in this service pack, see **Appendix C** and **Appendix D**.

For Known Issues in this service pack, see the Release Notes included with this service pack.

Prerequisites

Oracle Utilities Meter Data Framework 2.0.1.9.0 is a prerequisite for installing Oracle Utilities Meter Data Management 2.0.1.9.0.

Oracle Utilities Meter Data Framework 2.0.1.9.0 Prerequisites

Before installing Meter Data Framework 2.0.1.9.0 the following prerequisites must be installed:

- Oracle Utilities Application Framework 4.1.0
- Oracle Utilities Meter Data Framework 2.0.1.x
- Oracle Utilities Application Framework 4.1.0 Service Pack 2 (4.1.0.2.0)
- The following Oracle Utilities Application Framework 4.1.0 Service Pack 2 Prerequisite Single Fixes:
 - 16489896
 - 16620519
 - 16182632
 - 16192379
 - 16619506

A convenience rollup containing the above fixes is provided along with this package. Please refer the readme.txt file provided along with the rollup for the installation instructions.

The above fixes are also available for download separately from My Oracle Support.

Oracle Utilities Meter Data Management 2.0.1.9.0 Prerequisites

Before installing Meter Data Management 2.0.1.9.0 the following prerequisites must be installed:

- Oracle Utilities Meter Data Framework 2.0.1.9.0

Package Contents

Oracle Utilities Meter Data Management 2.0.1.9.0 includes the following components:

- MDM_Release_Notes_2_0_1_9.pdf - Release notes for this service pack
- MDF-V2.0.1.9.0-PFDs - Product Fix Documents for MDF single fixes included in this service pack
- MDM-V2.0.1.9.0-PFDs - Product Fix Documents for MDM single fixes included in this service pack
- MDM-V2.0.1.9.0-Database.zip - Database installation package.
- MDF-V2.0.1.9.0-MultiPlatform.zip - Meter Data Framework application server installation package
- MDM-V2.0.1.9.0-MultiPlatform.zip - Meter Data Management application server installation package.
- FW-V4.1.0.2.0-MultiPlatform.zip - Oracle Utilities Application Framework 4.1.0 Service Pack 2 (4.1.0.2.0)
- MDM-V2.0.1.9.0-FW-SP2-PREREQ-MultiPlatform.zip - Oracle Utilities Application Framework 4.1.0 Service Pack 2 single fix convenience rollup
- Oracle Utilities Meter Data Management V2.0.1.9 Install Documentation.zip - Detailed Meter Data Management Installation documentation

Installing the Database

Please refer to the *Oracle Utilities Meter Data Management Database Administrator's Guide* file for instructions on installing the database component for Oracle Utilities Application Framework 4.1.0 Service Pack2, Oracle Utilities Meter Data Framework 2.0.1.9.0 and Oracle Utilities Meter Data Management 2.0.1.9.0.

Installing the Application

This section describes how to install Oracle Utilities Meter Data Management 2.0.1.9.0.

Install Oracle Utilities Application Framework 4.1.0 Service Pack 2 (4.1.0.2.0)

1. Create a <TEMPDIR> directory on the host server that is independent of any current or other working Oracle Utilities Application Framework 4.1.0 application environment.
2. Copy the file FW-V4.1.0.2.0-MultiPlatform.jar in the delivered package to <TEMPDIR>.

Note: If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.

3. Decompress the file using following command:

```
cd <TEMPDIR>
jar -xvf FW-V4.1.0.2.0-MultiPlatform.jar
```

Notes:

For Windows installations include the location of the JDK in your path before executing the jar command.

To be able to decompress the application server package using the “jar” command, please ensure that the JDK version supported for your platform is installed. Java packages can be downloaded from the following web site:

<http://java.sun.com/products/archive/index.html>

For both Unix and Windows platforms, a sub-directory named FW-V4.1.0.2.0-SP2 is created

4. Initialize the Oracle Utilities Meter Data Management environment that you want to install the product into

UNIX:

```
<SPLEBASE>/bin/splenviron.sh -e <SPLENVIRON>
```

Windows:

```
<SPLEBASE>\bin\splenviron.cmd -e <SPLENVIRON>
```

5. Stop the Oracle Utilities Meter Data Management application server instance if running
6. Change to the <TEMPDIR>/FW-V4.1.0.2.0-SP2 Directory.
7. Execute the following command:

UNIX:

```
ksh ./installSP.sh
```

Note: On UNIX, ensure that you have the proper execute permission on installSP.sh

Windows:

```
installSP.cmd
```

Install Oracle Utilities Meter Data Framework 2.0.1.9.0

1. Create a <TEMPDIR> directory on the host server that is independent of any current or other working Oracle Utilities Meter Data Framework application environment.
2. Copy the file MDF-V2.0.1.9.0-MultiPlatform.jar in the delivered package to <TEMPDIR>.

Note: If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.

3. Decompress the file using following command:

```
cd <TEMPDIR>
jar -xvf MDF-V2.0.1.9.0-MultiPlatform.jar
```

Note: For Windows installations include the location of the JDK in your path before executing the jar command. For both UNIX and Windows platforms, a sub-directory named MDF.V2.0.1.9.0 is created

4. Initialize the Oracle Utilities Meter Data Management environment that you want to install the product into:

UNIX:

```
<SPLEBASE>/bin/splenviron.sh -e <SPLENVIRON>
```

Windows:

```
<SPLEBASE>\bin\splenviron.cmd -e <SPLENVIRON>
```

5. Stop the Oracle Utilities Meter Data Management application server instance if running
6. Change to the <TEMPDIR>/MDF.V2.0.1.9.0 Directory.
7. Execute the following command:

UNIX:

```
ksh ./install.sh
```

Note: On UNIX, ensure that you have the proper execute permission on install.sh

Windows:

```
install.cmd
```

8. Choose option P to proceed with the installation
9. Change to the <TEMPDIR>/MDF.V2.0.1.9.0 Directory.
10. Execute the following command:

UNIX:

```
ksh ./postinstall.sh
```

Note: On UNIX, ensure that you have the proper execute permission on postinstall.sh

Windows:

```
postinstall.cmd
```

Installing Oracle Utilities Meter Data Management 2.0.1.9.0

1. Create a <TEMPDIR> directory on the host server that is independent of any current or other working Oracle Utilities Meter Data Management application environment.
2. Copy the file MDM-V2.0.1.9.0-MultiPlatform.jar in the delivered package to <TEMPDIR>.

Note: If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.

3. Decompress the file using following command:

```
cd <TEMPDIR>
jar -xvf MDF-V2.0.1.9.0-MultiPlatform.jar
```

Note: For Windows installations include the location of the JDK in your path before executing the jar command. For both UNIX and Windows platforms, a sub-directory named MDM.V2.0.1.9.0 is created

4. Initialize the Oracle Utilities Meter Data Management environment that you want to install the product into

UNIX:

```
<SPLEBASE>/bin/splenvron.sh -e <SPLENVIRON>
```

Windows:

```
<SPLEBASE>\bin\splenvron.cmd -e <SPLENVIRON>
```

5. Stop the Oracle Utilities Meter Data Management application server instance if running
6. Change to the <TEMPDIR>/MDM.V2.0.1.9.0 Directory.
7. Execute the following command:

UNIX:

```
ksh ./install.sh
```

Note: On UNIX, ensure that you have the proper execute permission on install.sh

Windows:

```
install.cmd
```

8. Choose option P to proceed with the installation
9. Change to the <TEMPDIR>/MDM.V2.0.1.9.0 Directory.
10. Execute the following command:

UNIX:

```
ksh ./postinstall.sh
```

Note: On UNIX, ensure that you have the proper execute permission on postinstall.sh

Windows:

```
postinstall.cmd
```

11. Execute following command.

UNIX:

`configureEnv.sh`

Note: On UNIX, ensure that you have the proper execute permission on `configureEnv.sh`

Windows:

`configureEnv.cmd`

12. Enter “P” for the choice “Choose option (1,2,3,4,5,8,9, <P> Process, <X> Exit):”.
13. Execute following command.

UNIX:

`initialSetup.sh`

Note: On UNIX, ensure that you have the proper execute permission on `initialSetup.sh`

Windows:

`initialSetup.cmd`

14. 13.Start up the application server instance.

UNIX:

`spl.sh start`

Windows:

`spl.cmd start`

Chapter 13

Additional Tasks

This section describes tasks that should be completed after installing Oracle Utilities Meter Data Management, including:

- **Customizing Configuration Files**
- **Generating the Application Viewer**
- **Building Javadocs Indexes**
- **Configuring the Environment for Batch Processing**
- **Customizing the Logo**
- **WebLogic Production Server Considerations**
- **BI Publisher Report Configuration**

Customizing Configuration Files

You may wish to make customer modifications to various configuration files. To do so, you should locate the configuration file you want to customize and edit it manually.

Configuration files are generated from delivered templates in the Oracle Utilities installation and are populated by values entered by the installation utility during the configuration process. In future upgrades of Oracle Utilities application software versions, some templates may be changed to reflect new software version requirements. In this case, the upgrade process will back up your customized configuration file and will regenerate a configuration file based on a new template. You will need to review the new configuration file and apply your customized changes back if still applicable for the new version.

For configuration files that are located in a Web application (for example, web.xml, hibernate.properties), of the Web application during installation process, you will not be able to edit the configuration files directly.

You will need to follow the procedure:

- Locate the configuration file you want to customize in the directory \$SPLEBASE/etc/conf.
- Apply your changes.
- Update application war file with the latest changes by executing the command:

UNIX: \$SPLEBASE/bin/initialSetup.sh

Windows: %SPLEBASE%\bin\initialSetup.cmd

Generating the Application Viewer

You may extend Application Viewer capabilities within an environment by generating additional items. The additional items that can be generated include algorithm type and related algorithm information, maintenance object information and data dictionary information.

This section details the steps necessary to generate the additional items.

1. Shut down the environment.
2. Initialize a command shell:

The scripts that are provided with the system need to be run from a shell prompt on the machine that you installed the application on. Before such scripts can be run the shell must be “initialized” by running the splenvron script provided with the system.

For Windows:

The command window should be opened on the Windows server that you installed the application on.

In the below example you should replace the variables:

%SPLEBASE% with the Full directory name that you installed the application into
and

%SPLENVIRON% with the name you gave to the environment at installation time.

To initialize the environment type the following in your command prompt:

%SPLEBASE%\bin\splenvron.cmd -e %SPLENVIRON%

For example:

D:\ouaf\TEST_ENVIRON1\bin\splenvron.cmd -e TEST_ENVIRON1

For Unix:

You will need to logon to your UNIX box as the Oracle Utilities Administrator (default cissys) and open a shell prompt.

In the below example you should replace the variables

\$SPLEBASE with the Full directory name that you installed the application into
and

\$SPLENVIRON with the name you gave to the environment at installation time.

To initialize the environment type:

```
$SPLEBASE/bin/splenviron.sh -e $SPLENVIRON
```

For example:

```
/ouaf/TEST_ENVIRON1/bin/splenviron.sh -e TEST_ENVIRON1
```

3. Execute the script to generate all information

Execute the following command for your operating system

UNIX:

```
ksh $SPLEBASE/bin/genappvieweritems.sh
```

Windows:

```
%SPLEBASE%\bin\genappvieweritems.cmd
```

4. Restart your application

Building Javadocs Indexes

The following script allows rebuilding the Javadocs indexes in the appViewer java module. This is necessary after Customer Modifications have been applied to an environment. (This needs to be run only if the Customer Modification includes Java Code.)

Windows:

```
%SPLEBASE%\bin\buildJavadocsIndex.cmd
```

UNIX:

```
ksh $SPLEBASE/bin/buildJavadocsIndex.sh
```

Configuring the Environment for Batch Processing

See the *Batch Server Administration Guide* for information on configuring the environment for batch processing.

Customizing the Logo

The customer may want to replace the Oracle Utilities logo image on the Main menu with another logo image. To do this, put the logo <customer_logo_file>.gif file into the directory \$SPLEBASE/etc/conf/root/cm and create a new “External” Navigation Key called CM_logoImage. To do that, run the Oracle Utilities application from the browser with the parameters: `http://<hostname>:<port>/<Web Context>/cis.jsp?utilities=true&tools=true`. From the Admin menu, select Navigation Key. Add the above Navigation Key with its corresponding URL Override path. The syntax for the URL path is:

For Windows: `http://<host name>:<port>/<Web Context>/cm/<customer_logo_file>.gif`

For UNIX: `http://<host name>:<port>/<Web Context>/cm/<customer_logo_file>.gif`

The root directory may be deployed in war file format for runtime environment (SPLApp.war). Use provided utilities to incorporate your cm directory into SPLApp.war file.

WebLogic Production Server Considerations

By default, WebLogic Server is configured with two keystores, to be used for development only. These keystores should not be used in a production environment.

Configure Identity and Trust

Private keys, digital certificates, and trusted certificate authority certificates establish and verify identity and trust in the WebLogic Server environment. WebLogic Server is configured with a default identity keystore DemoIdentity.jks and a default trust keystore DemoTrust.jks. In addition, WebLogic Server trusts the certificate authorities in the cacerts file in the JDK. This default keystore configuration is appropriate for testing and development purposes. However, these keystores should not be used in a production environment.

To configure identity and trust for a server:

1. Obtain digital certificates, private keys, and trusted CA certificates from the CertGen utility, Sun Microsystem's keytool utility, or a reputable vendor such as Entrust or Verisign. You can also use the digital certificates, private keys, and trusted CA certificates provided by the WebLogic Server kit. The demonstration digital certificates, private keys, and trusted CA certificates should be used in a development environment only.
2. Store the private keys, digital certificates, and trusted CA certificates. Private keys and trusted CA certificates are stored in a keystore.
3. Configure the identity and trust keystores for a WebLogic Server instance on the Configuration: Keystores page.

By default, WebLogic Server is configured with two keystores, to be used for development only.

- DemoIdentity.jks: Contains a demonstration private key for WebLogic Server. This keystore establishes an identity for WebLogic Server.
- DemoTrust.jks: Contains a list of certificate authorities trusted by WebLogic Server. This keystore establishes trust for WebLogic Server.

These keystores are located in the WL_HOME\server\lib directory and the JAVA_HOME\jre\lib\security directory. For testing and development purposes, the keystore configuration is complete. Use the steps in this section to configure identity and trust keystores for production use.

Refer to the WebLogic documentation to configure identity and trust keystores for production use (Secure servers and resources > Configure identity and trust/Set up SSL)

Note: Depending on your choice of implementation you may need to change some configuration files. These files are managed by templates and will be overwritten if the procedures documented in “Customizing Configuration Files” are not followed.

BI Publisher Report Configuration

This release of Oracle Utilities Meter Data Management comes bundled with a sample BI Publisher report. To configure BI Publisher to access this report, follow these steps:

1. Install BI Publisher 10g (10.1.3.4.0).
2. Login as admin and create a Data Source to connect to the database where MDM is installed.
3. Create a shared folder for uploading the report.

4. Upload the sample report file D2_VEEEME.xdo to the shared folder created above. This file is located under:
`<INSTALL_DIR>/reports/BIPublisher`
5. Edit the report to point to the MDM Data Source.
6. Upload the template file VEEEME.rtf for the uploaded report. This file is located under:
`<INSTALL_DIR>/reports/BIPublisher`
7. Update the reporting options in the MDM application to point to the correct BI Publisher server URL and shared folder location.

Appendix A

Glossary of Acronyms

ADF: Oracle Application Development Framework

EAR: Enterprise Archive

EJB: Enterprise JavaBeans

HTML: HyperText Markup Language

JAR: Java Archive

JDBC: Java database connectivity

JMX: Java Management Extensions

JNDI: Java Naming and Directory Interface

JSP: JavaServer Pages

JVM: Java Virtual Machine.

MPL: Multi Purpose Listener

OUAF: Oracle Utilities Application Framework

OAM: Oracle Access Manager

OIM: Oracle Identity Management

ONS: Oracle Notification Service

Oracle RAC FCF: Oracle Real Application Clusters Fast Connection Failover

RMI: Remote Method Invocation

SOAP: Simple Object Access Protocol

SOA: Service-oriented architecture

SPLEBASE: The location where the application will be installed.

SPLOUTPUT: This location is used for storing batch log files and output from batch jobs

WAR: Web application Archive

WAS: WebSphere

WASND: WebSphere Network Deployment

WLS: WebLogic

XAIApp: XML Application Integration

Appendix B

Required Application Framework Patches

The following table lists the Oracle Utilities Application Framework patches that must be installed prior to installing Oracle Utilities Meter Data Framework. These patches are available as a convenience rollup included in the Media Pack.

8503140	10624363	11735716	12337775
8901782	10625739	11738085	12338323
9042555	10631948	11739404	12340553
9382171	10632029	11742563	12344492
9387114	10636556	11742578	12344520
9455478	10638783	11744412	12354548
9527752	10639236	11785204	12355193
9540205	10639817	11790352	12355336
9564113	10640366	11791685	12355345
9569173	10647519	11793264	12355355
9618908	10649131	11800924	12355359
9682934	11055998	11800964	12355545
9712702	11056031	11802408	12355578
9822605	11061063	11802524	12355589
9943141	11065275	11805029	12357553
10014729	11065841	11810803	12358078
10133277	11066173	11812272	12369181
10179538	11068621	11825658	12369294
10189618	11068834	11825757	12375706
10215092	11070215	11825763	12377282
10235438	11071551	11826984	12380588
10235446	11074152	11827061	12388252
10235453	11077044	11828290	12388695
10235472	11078114	11829323	12390834

8503140	10624363	11735716	12337775
10281572	11659316	11831954	12394303
10283802	11659469	11831962	12396557
10289114	11671144	11836696	12397361
10316317	11673372	11837168	12398660
10316391	11675596	11838963	12401741
10316953	11676685	11838977	12404368
10324881	11677625	11840470	12412886
10334495	11684041	11844142	12415869
10335027	11684640	11844499	12417483
10357429	11686129	11846353	12417960
10357830	11686789	11848622	12428239
10360341	11687677	11849058	12432357
10360688	11688966	11865125	12432996
10371591	11689021	11870260	12536674
10374359	11689086	11870708	12537292
10375560	11689155	11875008	12539014
10375682	11689215	11875029	12546120
10376226	11690177	11880325	12546220
10376879	11691074	11881465	12548444
10380556	11691830	11882316	12548945
10382474	11691896	11882984	12556076
10383911	11694867	11886308	12558316
10387212	11698997	11886487	12560045
10390304	11699913	11888040	12561191
10391114	11700127	11888244	12564985
10399826	11700177	11890627	12564994
10400934	11703071	11893511	12565011
10401066	11706217	11894700	12567535
10403427	11708221	11896216	12574075
10411296	11709380	11897375	12578692
10411845	11711736	11900153	12584797
10413650	11712334	11900457	12593383
10413698	11713020	11903828	12632749
10416888	11714753	11904426	12680209
10419736	11714946	11930834	12703227

8503140	10624363	11735716	12337775
10419846	11718025	11935491	12774795
10422028	11718917	11935602	12844738
10424407	11724144	11937218	12874623
10428600	11725991	11937452	12875351
10428634	11729096	12327094	12932177
10435878	11731141	12327124	12938862
10623053	11735128	12329849	12958675

Appendix C

Meter Data Framework Fixes

The following table lists the Meter Data Framework fixes included in this release.

Bug	Description
12711770	Remove Usage Rule Constraint From Usage Period SQ Table Metadata
13688606	Cannot Hide Device Event Type Portal From Certain Users.,
13956379	Update D1-MSRMT Parameters: Substitute Measuring Component Type For Business Object
14158715	Modify Sequence For Defaulting Timezone In SP Ongoing Sync
14241115	Update IE Sync Logic For Smart Device Determination
14351313	75032/75046 Axis Conversion - Changes To Preserve Peak And Measurement Condition
14498405	IE Sync Failure When Install And Removal On Same Day
14726817	Enhancement Req To Have Broadcast Ability For Usage Rule Eligibility Criteria
14762786	If Device Retired On Same Day Removed, Device Sync Fails
14765094	MDM ODM - Update Asset System ID Description To Asset Location ID
14766182	Manual Meter Install Event - Removal Section - Collapse/Expand Icon Issue
14783489	CCB-MDM Scalar MR Sync Measurement Loses System Estimate Condition
14822201	Copy Payload Statistic - Accumulate Statistic Error Out With Error Imd Seeder
14840576	Install Event Is Shown In The Middle Of The List .
15838297	Period Estimation Algorithm D1-CRIMTODO Not Working As Expected
15845218	Copy Of 14495216 - Sync Request Issue When Deleting Register From Meter Config I
15845228	Copy Of 14498049 - D1-CMSYN Does Not Raise An Error When It Cannot Determine The

Bug	Description
15850528	Device ID Not Getting Passed To The Activity Screen When Invoked From Context Me
15853479	Copy Of 15853411 - Copy Of 15839199 - Measurement Is Not Updated To Do Not Use .
15863970	Copy Bug - Outage Activity Start Time Is Not In Sync With Device Event Time.
15864063	Replace Critical Error With Error On D1-DeviceEventSeeder And D1-IMDSeeder.
15869057	IMD History Zone Shows Install Measurement At The Top
15870472	Copy Of 14741869 - MDM Enhancement To Support Multiple Data Source Indicator
15879677	In SP8 Multiple Install Events Are Shown.
15895160	Copy Of 15895105 - VEE Estimation IMD Is Not Creating For Missing Data When Batc
15899052	Allow ODM Identifiers To Be Updated In MDM For Contact And Service Point
15919746	Copy Of 15903932 - Bundle Import Fails For Activity Type "Aggregator Creator - P
15920179	Copy Of 15875211 - Imd Seeder Should Error With Fallback Head End When Device He
15920777	Copy Of 15897952 - Unable To Go To Install Event From Device Current Context Men
15933304	Copy Of 15922964 - Error Selecting Device From Context Menu - Unable To Declare
15945141	Copy Of 15918715 - Not Able To Create Service Point After Sp8 Installation
15956713	Copy Of 15865246 - Loading IMD Is Too Slow After Installation SP8.
15962213	Copy Of 14759858 - IE Sync Failure When Passing Installation Status Of Zero From
15976926	Copy Of 15936342 - Measurement Does Not Get Updated With Replacement Read
15980532	Copy Of 15972166 - Bundle Import, Error "VEE Group Is Missing." When Applying B
15982690	Copy Of 15904906 - IMD Seeder Rerprocessing Algorithm Does Not Include Character
16040005	Copy Of 16025848 - Scalar Estimation Histroic Data Start/End Dates.
16040866	Copy Of 14552829 - Query Timeout Error While Deleting Manual Imd.
16064159	Copy Of 16050802 - After Upgrade To MDM SP8 IMD Message Processing Makes MDM Ino

Bug	Description
16065911	Copy Of 16046408 - Scalar Estimate Value For MC With Multiple Reads Per Day.
16073907	Copy Bug - MV90 Upload Stats Error Out When Perform Accumulate Statistics
16074647	Copy Of 16064237 - Performance Problem With Master Data Sync Install Event Initi
16082609	Copy Of 16078070 - Dynamic Determination Of Usage Calc Group (BI-Related) To Sup
16089697	Copy Of 16081239 - VEE Exception Handler Override To Do Type Does Not Work
16165061	Usage Subscription Value Not Seeing As Per Current Context
16192846	"Time Zone Is Missing" Error When Importing Bundle For Aggregator MC Type
16205899	Copy Of 16192146 - Npe While Processing Device Events.
16207616	Copy Of 16207068 - Update Description And Detail Description Of BS D1-Retrievesp
16233085	Copy Of 14227773 - Ongoing Sync Issues With Fields That Are Removed
16235585	Activity List Not Shown When 'Go To Activity' Invoked From Device Context Menu
16240484	Copy Of 16217516 - Reprocessing Of Device Event Seeder Record Results In Batch E
16245564	Copy Of Device Event Pairing Is Incorrect.
16248483	Copy Of 16238840 - Duke - Error On Uploading Scalar Imd
16295958	Copy Of 16270099 - IMD In Exception Causes Final Reads After That Read To Be Mar
16308364	Copy Of 16299089 - New Register Read Of Equal Data Quality Condition(Priority)
16315424	Copy Of 16304484 - New Manual Imd Bo Is Not Recognized As Override Bo Option Dur
16321458	Copy Of 16311217 - Behavior Of New Register Read Of Equal Data Quality Condition
16343795	Copy Of 16339218 - Zone To Edit Data In Error Is Not Presented In Some Rollover
16357061	SP Info String Should Show Next Scheduled Read Date
16417386	Interval Undercount Not Functioning As Expected
16432027	Max Digits Failure Stops All Processing For Meter
16432258	IMD Create Measurement Log On Update Is Always Turned On
16444111	Discrepancy Between Start Date Times In IMD Log And IMD Record Itself

Bug	Description
16456707	Scalar Measuring Components Not Displaying "Hours Before Estimation"
16481763	Copy Of 15983759 - Shiftlegaldateimetostandard_Impl Errorout If End Dttm Is Wit
16493655	D1-Spsfx - Snapshot Type Does Not Get Populated With Default Value M (Month)
16499672	Copy Of 16494534 - Meter Does Not Transition From Retired To Active (Sync Failur
16572308	Remove Rowref From Device Config BO
16575361	D1-VALARMSTS Is Missing From The Conn-Comm State On D1-SmartMeterInstallEvent BO
16668910	Copy Of 16616195 - Periodic Estimation Creates IMD Ending After Install Event Re
16714853	Copy Of 16687987 - Lastest Read Date/Time Not Updated When New Finalized IMD Ove
16720618	Copy Of 16312379 - IE Sync With Error Still Creates Pending IE With No Date & Ne
16730557	Copy Of 16718261 - MC Could Not Be Resolve Because Of Time Shift Issue In Dst Pe

Appendix D

Meter Data Management Fixes

The following table lists the Meter Data Management fixes included in this release.

Bug	Subject
11668745	Controlling IMD Overlay Contents
13036693	Rederive Function In 360 Portal Is Erring Out.
13404561	CR054 - Fr - SP VEE Exception Snapshot
13574323	11668745Partially Selected Interval Not Color Coded In Tou Overlay Zone
13615335	Syncbi-Data - Batch D2-Svefx Has Incorrect Prepop Value In Snapshottype = Y
13953694	Bottom Scrollbar Shown For Short Sp Info String In Us Maint. Ui Map
14064806	BI 2.4 - Hardcoded Snapshot Type Is Used Instead Of Using Snapshot_Type_Flg
14139659	Duplicate Entries Are Getting Created In Flat File For D2sufax Batch
14698581	360 Search By Address Screen Does Not Return Service Point If No Contact Defined
14739784	Math Rule Doesn't Generate The Correct Error 'Interval Data Does Not Exist'
14749917	Math Rule - Vector Profile Factor Generates - Java.Lang.Nullpointerexceptionon
14765294	Description Is Incorrect For D2-Spprimaryuslite Business Object
14795871	Issue With Interval Data Snapshot When UtTSpans Dst Change For D2wo Option
15852635	Add Rate History Section In D2-USMAINT
15853395	Copy Of 15853391 - Copy Of 15832624 - Initial Bill In Case Of Meter Exchange And
15861513	Summation Of Quantities Is Displaying Incorrect Value For Math Rule
15864827	Copy Of 15834095 - D1-Perestm On D1-Smartmeter Erroneously Deactivated In D2

Bug	Subject
15886195	Copy Of 15885514 - Copy Of 15845390 - Timeline Zone On The Service Point 360 Vie
15902729	Copy Of 15873412 - Issue With Patch 14806976 - Measurement Cycle Schedule For Su
15909997	Copy Of 15907214 - MDM Enhancement To Support Multiple Data Source Indicator
15926160	Copy Of 15926154 - Copy Of 15880322 - Mdm Not Estimating A 0 Value
15926793	Copy Of 15926787 - Copy Of 15858066 - Estimation For A Meter Attached To 2 Diffe
15931956	Copy Of 15931952 - Copy Of 15893787 - Interval Date Times Fails Ut With "No Usag
15945148	Copy Of 15942063 - Cyrillic BO Status Representation Error In Us Portal Zone.
15948973	Dimension Scanner Activity Type Should Have Category Of Dimension Scanner
15956918	Copy Of 15956914 - Copy Of 15955649 - Usage Transaction - Npe When Using "Derive
15963346	Copy Of 14822077 - Gap In Usage Period Lists Over Meter Exchange Creates Error O
15967234	Copy Bug 15899389 - Discrepancy With Starting And Ending Interval Measurement Ti
15982613	In Us Type The Dynamic Determination Algorithm Search Results All Algorithms
15988548	Copy Of 15983267 - BI - Quantity/Consumption Fields Should Be Of Format N (26,7)
15992504	Missing Extensibility On Snapshot Algorithms For BI
16012279	Copy Bug - Imd "Save As" Function Incorrectly Shifts Data Forward An Hour By Def
16013994	Copy Of 15974789 - Dimension Scanner Issues With Market Relationship Type
16014199	Copy Of 14791860 - When SA Stopped Within Summary Acct Bill Cycle Window, Bill S
16026970	Copy Of 16017772 - Zone D2-STPCQ1 Has Invalid Application Service
16045369	75046 Get Interval Data Usage Rule - Axis Conversion Enhancement
16053366	Copy Of 14250422 - Dynamic Determination Of Usage Calc Group (BI-Related)
16074515	Copy Of 14397210 - If Automtd Retry Is 'No-Automatic Discard',Sub Ut Fails To Di
16088183	Copy Of 16080963 - D2-Svefx Extracts Incorrect Information.

Bug	Subject
16101574	Copy Of 16091815 - Scalar End Read Is Wrong When Using "Save As" Button
16175853	Copy Of 16025692 - Dynamic Determination Of Usage Calc Group - BI Extracts
16190004	Copy Of 16013329 - Start Date/Time Differences In Usage Transaction Portal
16211341	Mathmaint Page Does Not Keep Value For Profile Dropdown Menu.
16220318	Copy Of 16218790 - D2-DetermineEstimatedAndHighLowScalarreadings Getting "Divide
16220651	Copy Of 16210733 - Restricting To "Inquire" Access Mode Does Not Prevent User Fr
16268509	Copy Of 16236835 - Green Button Functionality Does Not Always Generate Usage Dat
16281030	Copy Of 16203578 - Is Estimate On Ut Should Be Set When Estimate Read Is Conside
16302496	Copy Of 16193210 - Dynamic Determination Of Usage Calc Group - BI Aggregation
16303840	Usage Transaction Error Message Display Incorrect Dates
16320376	Copy Of 16317243 - Raise Missing Quantity Exception Not Creating Exceptions For

Appendix E

License and Copyright Notices

License and Copyright notices for associated products:

Third Party Products

Notice concerning usage of ANTLR and Classycle

[The BSD License]

Copyright (c) 2010 Terence Parr

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

Neither the name of the author nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

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 COPYRIGHT OWNER 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.

Notice concerning usage of Apache Software

The following are covered under the Apache 2.0 license.

1. bsf-2.4.0.jar

-
2. castor-1.3.1-core.jar
 3. castor-1.3.1-xml.jar
 4. castor-1.3.1-xml-schema.jar
 5. cglib-2.2.jar
 6. classycle.1.1.jar
 7. commons-beanutils-core-1.8.1.jar
 8. commons-cli-1.1.jar
 9. commons-codec-1.4.jar
 10. commons-collections-3.1.jar
 11. commons-fileupload-1.2.1.jar
 12. commons-httpclient-3.0.1.jar
 13. commons-io-1.3.2.jar
 14. commons-lang-2.2.jar
 15. ehcache-1.2.3.jar
 16. log4j-1.2.15.jar
 17. qdox.1.6.1.jar
 18. serializer-2.7.1.jar
 19. stax2.jar
 20. velocity.1.4.jar
 21. wstx-asl-3.2.1.jar
 22. xalan-mod-2.7.1.jar
 23. xmlparserv2.jar

Apache License

Version 2.0, January 2004

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

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:

You must give any other recipients of the Work or Derivative Works a copy of this License; and
You must cause any modified files to carry prominent notices stating that You changed the files; and

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

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

Notice concerning usage of ASM

Copyright (c) 2000-2005 INRIA, France Telecom

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

3. Neither the name of the copyright holders nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

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 COPYRIGHT OWNER 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.

Notice concerning usage of Concurrent

All classes are released to the public domain and may be used for any purpose whatsoever without permission or acknowledgment. <http://g.oswego.edu/dl/classes/EDU/oswego/cs/dl/util/concurrent/intro.html>

Notice concerning usage of dom4j

Copyright 2001-2010 (C) MetaStuff, Ltd. All Rights Reserved.

Redistribution and use of this software and associated documentation ("Software"), with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain copyright statements and notices. Redistributions must also contain a copy of this document.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. The name "DOM4J" must not be used to endorse or promote products derived from this Software without prior written permission of MetaStuff, Ltd. For written permission, please contact dom4j-info@metastuff.com.
4. Products derived from this Software may not be called "DOM4J" nor may "DOM4J" appear in their names without prior written permission of MetaStuff, Ltd. DOM4J is a registered trademark of MetaStuff, Ltd.
5. Due credit should be given to the DOM4J Project - <http://dom4j.sourceforge.net>

THIS SOFTWARE IS PROVIDED BY METASTUFF, LTD. 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 METASTUFF, LTD. 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.

Notice concerning usage of International Components for Unicode (ICU4J)

COPYRIGHT AND PERMISSION NOTICE

Copyright (c) 1995-2010 International Business Machines Corporation and others

All rights reserved.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, provided that the above copyright notice(s) and this permission notice appear in all copies of the Software and that both the above copyright notice(s) and this permission notice appear in supporting documentation.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Except as contained in this notice, the name of a copyright holder shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization of the copyright holder.

Notice concerning usage of Jaxen

/*

Copyright 2003-2006 The Werken Company. All Rights Reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- * Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

- * Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

- * Neither the name of the Jaxen Project nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

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 COPYRIGHT OWNER 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.

*/

Notice concerning usage of JCIP Annotations

Attribution 2.5

CREATIVE COMMONS CORPORATION IS NOT A LAW FIRM AND DOES NOT PROVIDE LEGAL SERVICES. DISTRIBUTION OF THIS LICENSE DOES NOT CREATE AN ATTORNEY-CLIENT RELATIONSHIP. CREATIVE COMMONS PROVIDES THIS INFORMATION ON AN "AS-IS" BASIS. CREATIVE COMMONS MAKES NO WARRANTIES REGARDING THE INFORMATION PROVIDED, AND DISCLAIMS LIABILITY FOR DAMAGES RESULTING FROM ITS USE.

License

THE WORK (AS DEFINED BELOW) IS PROVIDED UNDER THE TERMS OF THIS CREATIVE COMMONS PUBLIC LICENSE ("CCPL" OR "LICENSE"). THE WORK IS PROTECTED BY COPYRIGHT AND/OR OTHER APPLICABLE LAW. ANY USE OF THE WORK OTHER THAN AS AUTHORIZED UNDER THIS LICENSE OR COPYRIGHT LAW IS PROHIBITED.

BY EXERCISING ANY RIGHTS TO THE WORK PROVIDED HERE, YOU ACCEPT AND AGREE TO BE BOUND BY THE TERMS OF THIS LICENSE. THE LICENSOR GRANTS YOU THE RIGHTS CONTAINED HERE IN CONSIDERATION OF YOUR ACCEPTANCE OF SUCH TERMS AND CONDITIONS.

1. Definitions

1. "Collective Work" means a work, such as a periodical issue, anthology or encyclopedia, in which the Work in its entirety in unmodified form, along with a number of other contributions, constituting separate and independent works in themselves, are assembled into a collective whole. A work that constitutes a Collective Work will not be considered a Derivative Work (as defined below) for the purposes of this License.
2. "Derivative Work" means a work based upon the Work or upon the Work and other pre-existing works, such as a translation, musical arrangement, dramatization, fictionalization, motion picture version, sound recording, art reproduction, abridgment, condensation, or any other form in which the Work may be recast, transformed, or adapted, except that a work that constitutes a Collective Work will not be considered a Derivative Work for the purpose of this License. For the avoidance of doubt, where the Work is a musical composition or sound recording, the synchronization of the Work in timed-relation with a moving image ("synching") will be considered a Derivative Work for the purpose of this License.
3. "Licensor" means the individual or entity that offers the Work under the terms of this License.
4. "Original Author" means the individual or entity who created the Work.
5. "Work" means the copyrightable work of authorship offered under the terms of this License.
6. "You" means an individual or entity exercising rights under this License who has not previously violated the terms of this License with respect to the Work, or who has received express permission from the Licensor to exercise rights under this License despite a previous violation.

2. Fair Use Rights. Nothing in this license is intended to reduce, limit, or restrict any rights arising from fair use, first sale or other limitations on the exclusive rights of the copyright owner under copyright law or other applicable laws.

3. License Grant. Subject to the terms and conditions of this License, Licensor hereby grants You a worldwide, royalty-free, non-exclusive, perpetual (for the duration of the applicable copyright) license to exercise the rights in the Work as stated below:

1. to reproduce the Work, to incorporate the Work into one or more Collective Works, and to reproduce the Work as incorporated in the Collective Works;
2. to create and reproduce Derivative Works;
3. to distribute copies or phonorecords of, display publicly, perform publicly, and perform publicly by means of a digital audio transmission the Work including as incorporated in Collective Works;
4. to distribute copies or phonorecords of, display publicly, perform publicly, and perform publicly by means of a digital audio transmission Derivative Works.
- 5.

For the avoidance of doubt, where the work is a musical composition:

1. Performance Royalties Under Blanket Licenses. Licensor waives the exclusive right to collect, whether individually or via a performance rights society (e.g. ASCAP, BMI, SESAC), royalties for the public performance or public digital performance (e.g. webcast) of the Work.

2. Mechanical Rights and Statutory Royalties. Licensor waives the exclusive right to collect, whether individually or via a music rights agency or designated agent (e.g. Harry Fox Agency), royalties for any phonorecord You create from the Work ("cover version") and distribute, subject to the compulsory license created by 17 USC Section 115 of the US Copyright Act (or the equivalent in other jurisdictions).

6. Webcasting Rights and Statutory Royalties. For the avoidance of doubt, where the Work is a sound recording, Licensor waives the exclusive right to collect, whether individually or via a performance-rights society (e.g. SoundExchange), royalties for the public digital performance (e.g. webcast) of the Work, subject to the compulsory license created by 17 USC Section 114 of the US Copyright Act (or the equivalent in other jurisdictions).

The above rights may be exercised in all media and formats whether now known or hereafter devised. The above rights include the right to make such modifications as are technically necessary to exercise the rights in other media and formats. All rights not expressly granted by Licensor are hereby reserved.

4. Restrictions. The license granted in Section 3 above is expressly made subject to and limited by the following restrictions:

1. You may distribute, publicly display, publicly perform, or publicly digitally perform the Work only under the terms of this License, and You must include a copy of, or the Uniform Resource Identifier for, this License with every copy or phonorecord of the Work You distribute, publicly display, publicly perform, or publicly digitally perform. You may not offer or impose any terms on the Work that alter or restrict the terms of this License or the recipients' exercise of the rights granted hereunder. You may not sublicense the Work. You must keep intact all notices that refer to this License and to the disclaimer of warranties. You may not distribute, publicly display, publicly perform, or publicly digitally perform the Work with any technological measures that control access or use of the Work in a manner inconsistent with the terms of this License Agreement. The above applies to the Work as incorporated in a Collective Work, but this does not require the Collective Work apart from the Work itself to be made subject to the terms of this License. If You create a Collective Work, upon notice from any Licensor You must, to the extent practicable, remove from the Collective Work any credit as required by clause 4(b), as requested. If You create a Derivative

Work, upon notice from any Licensor You must, to the extent practicable, remove from the Derivative Work any credit as required by clause 4(b), as requested.

2. If you distribute, publicly display, publicly perform, or publicly digitally perform the Work or any Derivative Works or Collective Works, You must keep intact all copyright notices for the Work and provide, reasonable to the medium or means You are utilizing: (i) the name of the Original Author (or pseudonym, if applicable) if supplied, and/or (ii) if the Original Author and/or Licensor designate another party or parties (e.g. a sponsor institute, publishing entity, journal) for attribution in Licensor's copyright notice, terms of service or by other reasonable means, the name of such party or parties; the title of the Work if supplied; to the extent reasonably practicable, the Uniform Resource Identifier, if any, that Licensor specifies to be associated with the Work, unless such URI does not refer to the copyright notice or licensing information for the Work; and in the case of a Derivative Work, a credit identifying the use of the Work in the Derivative Work (e.g., "French translation of the Work by Original Author," or "Screenplay based on original Work by Original Author"). Such credit may be implemented in any reasonable manner; provided, however, that in the case of a Derivative Work or Collective Work, at a minimum such credit will appear where any other comparable authorship credit appears and in a manner at least as prominent as such other comparable authorship credit.

5. Representations, Warranties and Disclaimer

UNLESS OTHERWISE MUTUALLY AGREED TO BY THE PARTIES IN WRITING, LICENSOR OFFERS THE WORK AS-IS AND MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND CONCERNING THE WORK, EXPRESS, IMPLIED, STATUTORY OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF TITLE, MERCHANTIBILITY, FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT, OR THE ABSENCE OF LATENT OR OTHER DEFECTS, ACCURACY, OR THE PRESENCE OF ABSENCE OF ERRORS, WHETHER OR NOT DISCOVERABLE. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES, SO SUCH EXCLUSION MAY NOT APPLY TO YOU.

6. Limitation on Liability. EXCEPT TO THE EXTENT REQUIRED BY APPLICABLE LAW, IN NO EVENT WILL LICENSOR BE LIABLE TO YOU ON ANY LEGAL THEORY FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR EXEMPLARY DAMAGES ARISING OUT OF THIS LICENSE OR THE USE OF THE WORK, EVEN IF LICENSOR HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

7. Termination

1. This License and the rights granted hereunder will terminate automatically upon any breach by You of the terms of this License. Individuals or entities who have received Derivative Works or Collective Works from You under this License, however, will not have their licenses terminated provided such individuals or entities remain in full compliance with those licenses. Sections 1, 2, 5, 6, 7, and 8 will survive any termination of this License.

2. Subject to the above terms and conditions, the license granted here is perpetual (for the duration of the applicable copyright in the Work). Notwithstanding the above, Licensor reserves the right to release the Work under different license terms or to stop distributing the Work at any time; provided, however that any such election will not serve to withdraw this License (or any other license that has been, or is required to be, granted under the terms of this License), and this License will continue in full force and effect unless terminated as stated above.

8. Miscellaneous

1. Each time You distribute or publicly digitally perform the Work or a Collective Work, the Licensor offers to the recipient a license to the Work on the same terms and conditions as the license granted to You under this License.

2. Each time You distribute or publicly digitally perform a Derivative Work, Licensors offers to the recipient a license to the original Work on the same terms and conditions as the license granted to You under this License.

3. If any provision of this License is invalid or unenforceable under applicable law, it shall not affect the validity or enforceability of the remainder of the terms of this License, and without further action by the parties to this agreement, such provision shall be reformed to the minimum extent necessary to make such provision valid and enforceable.

4. No term or provision of this License shall be deemed waived and no breach consented to unless such waiver or consent shall be in writing and signed by the party to be charged with such waiver or consent.

5. This License constitutes the entire agreement between the parties with respect to the Work licensed here. There are no understandings, agreements or representations with respect to the Work not specified here. Licensors shall not be bound by any additional provisions that may appear in any communication from You. This License may not be modified without the mutual written agreement of the Licensors and You.

Creative Commons is not a party to this License, and makes no warranty whatsoever in connection with the Work. Creative Commons will not be liable to You or any party on any legal theory for any damages whatsoever, including without limitation any general, special, incidental or consequential damages arising in connection to this license. Notwithstanding the foregoing two (2) sentences, if Creative Commons has expressly identified itself as the Licensors hereunder, it shall have all rights and obligations of Licensors.

Except for the limited purpose of indicating to the public that the Work is licensed under the CCPL, neither party will use the trademark "Creative Commons" or any related trademark or logo of Creative Commons without the prior written consent of Creative Commons. Any permitted use will be in compliance with Creative Commons' then-current trademark usage guidelines, as may be published on its website or otherwise made available upon request from time to time.

Creative Commons may be contacted at <http://creativecommons.org/>.

Notice concerning usage of XStream

Copyright (c) 2003-2006, Joe Walnes

Copyright (c) 2006-2007, XStream Committers

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

Neither the name of XStream nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

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 COPYRIGHT OWNER 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.

Notice concerning usage of slf4j

SLF4J source code and binaries are distributed under the MIT license.

Copyright (c) 2004-2008 QOS.ch

All rights reserved.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Notice concerning usage of Perl

Perl Kit, Version 5

Copyright (C) 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, by Larry Wall and others

All rights reserved.

This program is free software; it is being redistributed under the terms of the "Artistic License".

The Artistic License

Preamble

The intent of this document is to state the conditions under which a Package may be copied, such that the Copyright Holder maintains some semblance of artistic control over the development of the package, while giving the users of the package the right to use and distribute the Package in a more-or-less customary fashion, plus the right to make reasonable modifications.

Definitions:

"Package" refers to the collection of files distributed by the Copyright Holder, and derivatives of that collection of files created through textual modification.

"Standard Version" refers to such a Package if it has not been modified, or has been modified in accordance with the wishes of the Copyright Holder.

"Copyright Holder" is whoever is named in the copyright or copyrights for the package.

"You" is you, if you're thinking about copying or distributing this Package.

"Reasonable copying fee" is whatever you can justify on the basis of media cost, duplication charges, time of people involved, and so on. (You will not be required to justify it to the Copyright Holder, but only to the computing community at large as a market that must bear the fee.)

"Freely Available" means that no fee is charged for the item itself, though there may be fees involved in handling the item. It also means that recipients of the item may redistribute it under the same conditions they received it.

1.You may make and give away verbatim copies of the source form of the Standard Version of this Package without restriction, provided that you duplicate all of the original copyright notices and associated disclaimers.

2.You may apply bug fixes, portability fixes and other modifications derived from the Public Domain or from the Copyright Holder. A Package modified in such a way shall still be considered the Standard Version.

3.You may otherwise modify your copy of this Package in any way, provided that you insert a prominent notice in each changed file stating how and when you changed that file, and provided that you do at least ONE of the following:

1.place your modifications in the Public Domain or otherwise make them Freely Available, such as by posting said modifications to Usenet or an equivalent medium, or placing the modifications on a major archive site such as ftp.uu.net, or by allowing the Copyright Holder to include your modifications in the Standard Version of the Package.

2.use the modified Package only within your corporation or organization.

3.rename any non-standard executables so the names do not conflict with standard executables, which must also be provided, and provide a separate manual page for each non-standard executable that clearly documents how it differs from the Standard Version.

4.make other distribution arrangements with the Copyright Holder.

4.You may distribute the programs of this Package in object code or executable form, provided that you do at least ONE of the following:

a)distribute a Standard Version of the executables and library files, together with instructions (in the manual page or equivalent) on where to get the Standard Version.

b)accompany the distribution with the machine-readable source of the Package with your modifications.

c)accompany any non-standard executables with their corresponding Standard Version executables, giving the non-standard executables non-standard names, and clearly documenting the differences in manual pages (or equivalent), together with instructions on where to get the Standard Version.

d)make other distribution arrangements with the Copyright Holder.

5.You may charge a reasonable copying fee for any distribution of this Package. You may charge any fee you choose for support of this Package. You may not charge a fee for this Package itself. However, you may distribute this Package in aggregate with other (possibly commercial) programs as part of a larger (possibly commercial) software distribution provided that you do not advertise this Package as a product of your own.

6.The scripts and library files supplied as input to or produced as output from the programs of this Package do not automatically fall under the copyright of this Package, but belong to whomever generated them, and may be sold commercially, and may be aggregated with this Package.

7.C or perl subroutines supplied by you and linked into this Package shall not be considered part of this Package.

8.The name of the Copyright Holder may not be used to endorse or promote products derived from this software without specific prior written permission.

9.THIS PACKAGE IS PROVIDED "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

The End

Notice concerning usage of Mime-Base64 Perl Module

Copyright 1995-1999,2001-2004 Gisle Aas <gisle@ActiveState.com>

This library is free software; you can redistribute it and/or modify it under the same terms as Perl itself.

The standard version of the package that is used can be obtained from <http://www.cpan.org>.

Specifically, the software can be obtained from the following link :

<http://search.cpan.org/search%3fmodule=MIME::Base64>

Notice concerning usage of Mime-Lite Perl Module

This is MIME::Lite 3.01 Maintenance release

TERMS AND CONDITIONS

Copyright (c) 1997 by Eryq.

Copyright (c) 1998 by ZeeGee Software Inc.

Copyright (c) 2003 Yves Orton. demerphq (at) hotmail.com.

All rights reserved. This program is free software; you can redistribute it and/or modify it under the same terms as Perl itself.

This software comes with NO WARRANTY of any kind. See the COPYING file in the distribution for details.

The standard version of the package that is used can be obtained from <http://www.cpan.org>.

Specifically, the software can be obtained from the following link :

<http://search.cpan.org/search%3fmodule=MIME::Lite>

Notice concerning usage of DBD::DB2 Perl Module

License Agreement for DBD::DB2

PLEASE READ THIS AGREEMENT CAREFULLY BEFORE INSTALLING OR USING THIS PROGRAM. IF YOU INSTALL OR USE THIS PROGRAM, YOU AGREE TO THESE TERMS.

1. This DBD::DB2 code "Program" is owned by International Business Machines Corporation or its subsidiaries (IBM) or IBM's suppliers, and is copyrighted and licensed, not sold. IBM retains title to the Program, and grants the user of the Program "You" an:

irrevocable, worldwide, nonexclusive, perpetual, royalty-free and fully paid-up license

- (i) to use, execute, display, perform, and reproduce the Program,
- (ii) to prepare derivative works based on the Program,
- (iii) to distribute copies of the Program and derivative works thereof, and
- (iv) to authorize others to do all of the above.

2. You must reproduce the copyright notice and any other legend of ownership on each copy or partial copy of the Program.

3. IBM would appreciate receiving a copy of derivative works of the Program that You create. You may provide to IBM such derivative works pursuant to the terms of this Agreement and the directions in the README file contained within the Program directory. You represent and warrant to IBM that You are the sole author of, and/or have full exclusive right, title and interest to any and all derivative works You provide to IBM. You further represent that You are under no obligation to assign your rights in such derivative works to any third-party, including without limitation, any current or former employer.

4. You agree that IBM may utilize all information, ideas, concepts, know-how or techniques furnished by You to IBM in connection with any derivative works You make or have made to the IBM Program, and that You provide to IBM and IBM may, but shall not be obligated to, include such derivative works in the IBM Program or in any IBM product without accounting to You.

5. With respect to any derivative works of the Program You provide to IBM, You grant to IBM an:

irrevocable, worldwide, non-exclusive, perpetual, royalty--free and fully paid-up license

(i) to use, execute, display, perform, and reproduce your derivative works,

(ii) to prepare derivative works based upon your derivative works,

(iii) to distribute copies of your derivative works, and

(iv) to authorize others to do all of the above.

6. YOU UNDERSTAND THAT THE PROGRAM IS BEING PROVIDED TO YOU "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY, QUALITY, PERFORMANCE, INTELLECTUAL PROPERTY INFRINGEMENT OR FITNESS FOR ANY PARTICULAR PURPOSE. IBM has no obligation to provide service, defect correction, or any maintenance for the Program. IBM has no obligation to supply any Program updates or enhancements to You even if such are or later become available.

7. IBM accepts no liability for damages You may suffer as a result of your use of the Program. Under no circumstances is IBM liable for any of the following:

1. third-party claims against You for losses or damages;

3. loss of, or damage to, your records or data; or

4. direct damages, lost profits, lost savings, incidental, special, or indirect damages or consequential damages, even if IBM or its authorized supplier, has been advised of the possibility of such damages.

8. Some jurisdictions do not allow these limitations or exclusions, so they may not apply to You.

9. You are responsible for the payment of any taxes resulting from this license.

10. You agree not to bring a legal action more than two years after the cause of action arose.

11. This license will be governed by and interpreted in accordance with the laws of the State of New York.

12. This license is the only understanding and agreement IBM has for your use of the Program.

The standard version of the package that is used can be obtained from <http://www.cpan.org>.

Specifically, the software can be obtained from the following link :

<http://search.cpan.org/search%3fmodule=DBD::DB2>

Notice concerning usage of DBI Perl Module

DBI by Tim Bunce. This pod text by Tim Bunce, J. Douglas Dunlop,

Jonathan Leffler and others. Perl by Larry Wall and the perl5-porters.

COPYRIGHT

The DBI module is Copyright (c) 1994-2004 Tim Bunce. Ireland.

All rights reserved.

This is distributed under the terms of the Artistic License.

The standard version of the package that is used can be obtained from <http://www.cpan.org>.

Specifically, the software can be obtained from the following link :

<http://search.cpan.org/search%3fmodule=DBD::DB2>

