

# **Oracle Utilities Smart Grid Gateway**

Installation Guide

Release 2.0.0.2

**E20525-03**

October 2011

Copyright © 2011, 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

<b>Preface .....</b>	<b>i-i</b>
Audience .....	i-i
Related Documents .....	i-i
Conventions .....	i-i
<b>Chapter 1</b>	
<b>Overview.....</b>	<b>1-1</b>
Installation Overview .....	1-2
<b>Chapter 2</b>	
<b>Application Architecture Overview.....</b>	<b>2-1</b>
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
<b>Chapter 3</b>	
<b>Supported Platforms and Hardware Requirements .....</b>	<b>3-1</b>
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 .....	3-8
Oracle WebLogic Server Information .....	3-8
Support for Software Patches and Upgrades .....	3-8
<b>Chapter 4</b>	
<b>Planning the Installation.....</b>	<b>4-1</b>
Installation and Configuration Overview .....	4-2
Before You Install .....	4-3
Installation Checklist.....	4-3
Application Framework Installation and Configuration Worksheets .....	4-4
Installation Menu Functionality Overview .....	4-4
Installation Menu Functionality Details .....	4-4
Third Party Software Configuration .....	4-5
Environment Installation Options .....	4-8
Environment Description.....	4-11
WebLogic Business Application Server Configuration.....	4-12
WebSphere Basic Business Application Server Configuration .....	4-13
WebLogic Web Application Server Configuration .....	4-14
WebSphere Basic Web Application Server Configuration .....	4-18
Database Configuration .....	4-21

General Configuration Options.....	4-24
Advanced Menu Options.....	4-25
Meter Data Framework Installation and Configuration Worksheets.....	4-35
WebLogic OSB Configuration.....	4-36
WebSphere OSB Configuration .....	4-38
WebLogic SOA Configuration .....	4-39
WebSphere SOA Configuration.....	4-41
Smart Grid Gateway Installation and Configuration Worksheets.....	4-42
SOA Head-end System Configuration .....	4-42
<b>Chapter 5</b>	
<b>Installing the Database .....</b>	<b>5-1</b>
<b>Chapter 6</b>	
<b>Installing Application Server Prerequisite Software .....</b>	<b>6-1</b>
AIX 6.1 Application Server.....	6-2
Supported Application Servers .....	6-2
Web/Application Server Tier.....	6-2
HP-UX 11.31 Itanium Application Server .....	6-5
Supported Application Servers .....	6-5
Web/Application Server Tier.....	6-5
Oracle Linux 5.5 or Red Hat Linux 5.5 Application Server .....	6-8
Supported Application Servers .....	6-8
Web/Application Server Tier.....	6-8
Solaris 10 Application Server.....	6-11
Supported Application Servers .....	6-11
Web/Application Server Tier.....	6-11
Windows 2008 Application Server .....	6-14
Supported Application Servers .....	6-14
Web/Application Server Tier.....	6-14
<b>Chapter 7</b>	
<b>Installing the Application Server Component of Oracle Utilities Application Framework.....</b>	<b>7-1</b>
Installation Overview.....	7-2
Preinstallation Tasks .....	7-3
Hardware and Software Version Prerequisites.....	7-3
Database Installation .....	7-3
Installation Prerequisites .....	7-3
System Architecture Overview .....	7-3
Copying and Decompressing Install Media .....	7-3
Set Permissions for the cistab File in UNIX .....	7-4
Installing Oracle Utilities Application Framework.....	7-5
Brief Description of the Installation Process .....	7-5
Detailed Description of the Installation Process .....	7-5
<b>Chapter 8</b>	
<b>Installing the Application Server Component of Oracle Utilities Meter Data Framework .....</b>	<b>8-1</b>
Preinstallation Tasks .....	8-2
Installing Prerequisite Patches .....	8-2
Copying and Decompressing Install Media .....	8-2
Installing Oracle Utilities Meter Data Framework .....	8-3
Preparing for the Installation .....	8-3
Installing the Application.....	8-3
<b>Chapter 9</b>	
<b>Installing the Application Server Component of Oracle Utilities Smart Grid Gateway.....</b>	<b>9-1</b>
Installing the Adapter for Echelon .....	9-2

Preinstallation Tasks for the Adapter for Echelon.....	9-2
Installing the Adapter for Echelon.....	9-3
Postinstallation Tasks for the Adapter for Echelon.....	9-4
Installing the Adapter for Landis+Gyr.....	9-14
Preinstallation Tasks for the Adapter for Landis+Gyr.....	9-14
Installing the Adapter for Landis+Gyr.....	9-15
Postinstallation Tasks for the Adapter for Landis+Gyr.....	9-16
Installing the MV90 Adapter for Itron.....	9-24
Preinstallation Tasks for the MV90 Adapter.....	9-24
Installing the MV90 Adapter.....	9-25
Postinstallation Tasks for the MV90 Adapter.....	9-25
Installing User Documentation.....	9-28
Installing Standalone Online Help.....	9-28
Operating the Application.....	9-29
<b>Chapter 10</b>	
<b>Additional Tasks.....</b>	<b>10-1</b>
Generating the Application Viewer.....	10-1
Building Javadoc Indexes.....	10-2
Configuring the Environment for Batch Processing.....	10-2
Customizing the Logo.....	10-2
WebLogic Production Server Considerations.....	10-3
Configure Identity and Trust.....	10-3
<b>Appendix A</b>	
<b>Glossary of Acronyms.....</b>	<b>A-1</b>
<b>Appendix B</b>	
<b>Required Application Framework Patches.....</b>	<b>B-1</b>
<b>Appendix C</b>	
<b>License and Copyright Notices.....</b>	<b>C-1</b>
Third Party Products.....	C-1
Notice concerning usage of ANTLR and Classycle.....	C-1
Notice concerning usage of Apache Software.....	C-1
Notice concerning usage of ASM.....	C-4
Notice concerning usage of Concurrent.....	C-5
Notice concerning usage of dom4j.....	C-5
Notice concerning usage of International Components for Unicode (ICU4J).....	C-6
Notice concerning usage of Jaxen.....	C-6
Notice concerning usage of JCIP Annotations.....	C-7
Notice concerning usage of XStream.....	C-10
Notice concerning usage of slf4j.....	C-11
Notice concerning usage of Perl.....	C-11
Notice concerning usage of Mime-Base64 Perl Module.....	C-13
Notice concerning usage of Mime-Lite Perl Module.....	C-13
Notice concerning usage of DBD::DB2 Perl Module.....	C-13
Notice concerning usage of DBI Perl Module.....	C-14



---

---

# Preface

This guide describes how to install Oracle Utilities Smart Grid Gateway.

This preface contains these topics:

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

## Audience

Oracle Utilities Smart Grid Gateway Installation Guide is intended for system administrators installing Oracle Utilities Smart Grid Gateway.

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

## Related Documents

For more information, see these Oracle documents:

- *Oracle Utilities Smart Grid Gateway Quick Install Guide*
- *Oracle Utilities Smart Grid Gateway Database Administrator's Guide*

## Conventions

The following text conventions are used in this document:

Convention	Meaning
<b>boldface</b>	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.

---

Convention	Meaning
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 Smart Grid Gateway.

# Installation Overview

Installing Oracle Utilities Smart Grid Gateway 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 Smart Grid Gateway *Database Administrator's Guide*.

3. Plan your installation as described in **Chapter 4: Planning the Installation**.
4. Install the database as described in the document Oracle Utilities Smart Grid Gateway *Database Administrator's Guide*.
5. Install all required third-party software as described in **Chapter 6: 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 7: Installing the Application Server Component of Oracle Utilities Application Framework**.
7. Install the meter data framework for the application as described in **Chapter 8: Installing the Application Server Component of Oracle Utilities Meter Data Framework**.
8. Install Oracle Utilities Smart Grid Gateway as described in **Chapter 9: Installing the Application Server Component of Oracle Utilities Smart Grid Gateway**.
9. Follow the installation guidelines described in **Chapter 10: Additional Tasks**.

# Chapter 2

---

## Application Architecture Overview

This section provides an overview of the Oracle Utilities Smart Grid Gateway application architecture.

## Application Architecture

The Oracle Utilities Smart Grid Gateway application is deployed on multiple tiers.

Please see the *Oracle Utilities Smart Grid Gateway 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 Smart Grid Gateway application. Note also that a desktop machine running Microsoft Windows and the Oracle client is required to perform some of the Oracle Utilities Smart Grid Gateway 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 Smart Grid Gateway 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 Smart Grid Gateway 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 Smart Grid Gateway be deployed?
- On which Web server product will Oracle Utilities Smart Grid Gateway deploy?
- On which database product will Oracle Utilities Smart Grid Gateway deploy?
- Do you plan to deploy multiple Oracle Utilities Smart Grid Gateway instances on the same physical server?
- How do you plan to deploy Oracle Utilities Smart Grid Gateway?
  - 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 Smart Grid Gateway, 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 Smart Grid Gateway 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 6: Installing Application Server Prerequisite Software** for more information.

## Operating Systems and Application Servers

This section includes the system and application server combinations on which Oracle Utilities Smart Grid Gateway version 2.0.0 has been tested and certified.

### Adapter for Echelon

The following table details the operating system and application server combinations on which Oracle Utilities Smart Grid Gateway Adapter for Echelon version 2.0.0 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 10.3.4	Oracle 11.2.0.1
	Oracle Linux 5.5 (64-bit)	x86_64	WebLogic 10.3.4	Oracle 11.2.0.1
	Red Hat Enterprise Linux 5.5 (64-bit)			
Windows 7 (IE 8.x)	Sun Solaris 10 Update 8 (64-bit)	SPARC	WebLogic 10.3.4	Oracle 11.2.0.1
	Windows Server 2008 R2 (64-bit)	x86_64	WebLogic 10.3.4	Oracle 11.2.0.1

**Adapter for Landis+Gyr and MV90 Adapter for Itron**

The following table details the operating system and application server combinations on which Oracle Utilities Smart Grid Gateway Adapter for Landis+Gyr 2.0.0 and Oracle Utilities Smart Grid Gateway MV90 Adapter for Itron 2.0.0 have 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 10.3.3 WebLogic 10.3.4	Oracle 11.2.0.1
	HP-UX 11.31 Base Quality Pack September 2009 (64-bit)	Itanium	WebLogic 10.3.3 WebLogic 10.3.4	Oracle 11.2.0.1
Windows 7 (IE 8.x)	Oracle Linux 5.5 (64-bit)	x86_64	WebLogic 10.3.3 WebLogic 10.3.4	Oracle 11.2.0.1
	Red Hat Enterprise Linux 5.5 (64-bit)			
	Sun Solaris 10 Update 8 (64-bit)	SPARC	WebLogic 10.3.3 WebLogic 10.3.4	Oracle 11.2.0.1
	Windows Server 2008 R2 (64-bit)	x86_64	WebLogic 10.3.3 WebLogic 10.3.4	Oracle 11.2.0.1

**Adapters for Echelon Adapter**

The following table details the operating system and application server combinations on which the adapters for Oracle Utilities Smart Grid Gateway Adapter for Echelon 2.0.0 have been tested and certified.

Adapter	Operating System (Server)	Chipset	Application Server	Database
OSB Adapter for Echelon	AIX 6.1 TL4 (64-bit)	POWER 64-bit	WebLogic 10.3.4	Oracle 11.2.0.1
	Oracle Linux 5.5 (64-bit)	x86_64	WebLogic 10.3.4	Oracle 11.2.0.1
	Red Hat Enterprise Linux 5.5 (64-bit)			
SOA Adapter for Echelon	Sun Solaris 10 Update 8 (64-bit)	SPARC	WebLogic 10.3.4	Oracle 11.2.0.1
	Windows Server 2008 R2 (64-bit)	x86_64	WebLogic 10.3.4	Oracle 11.2.0.1

### Adapters for the Adapter for Landis+Gyr and MV90 Adapter for Itron

The following table details the operating system and application server combinations on which the adapters for Oracle Utilities Smart Grid Gateway Adapter for Landis+Gyr 2.0.0 and Oracle Utilities Smart Grid Gateway MV90 Adapter for Itron 2.0.0 have been tested and certified.

Adapter	Operating System (Server)	Chipset	Application Server	Database
OSB Adapter for Landis+Gyr	AIX 6.1 TL4 (64-bit)	POWER 64-bit	WebLogic 10.3.3 WebLogic 10.3.4	Oracle 11.2.0.1
	HP-UX 11.31 Base Quality Pack September 2009 (64-bit)	Itanium	WebLogic 10.3.3 WebLogic 10.3.4	Oracle 11.2.0.1
OSB Adapter for MV90	Oracle Linux 5.5 (64-bit)	x86_64	WebLogic 10.3.3 WebLogic 10.3.4	Oracle 11.2.0.1
SOA Adapter for Landis+Gyr	Red Hat Enterprise Linux 5.5 (64-bit)			
	Sun Solaris 10 Update 8 (64-bit)	SPARC	WebLogic 10.3.3 WebLogic 10.3.4	Oracle 11.2.0.1
	Windows Server 2008 R2 (64-bit)	x86_64	WebLogic 10.3.3 WebLogic 10.3.4	Oracle 11.2.0.1

## Oracle Database Servers

Oracle Utilities Smart Grid Gateway version 2.0.0 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 this version 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

## 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 Smart Grid Gateway 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 Smart Grid Gateway production environment.

The exceptions from this rule are Hibernate software version 3.3.2 ga and the Oracle Client version 11.2.0.1. These versions should not be upgraded.

Always contact Oracle Utilities Smart Grid Gateway support prior to applying vendor updates that do not guarantee backward compatibility.

# Chapter 4

---

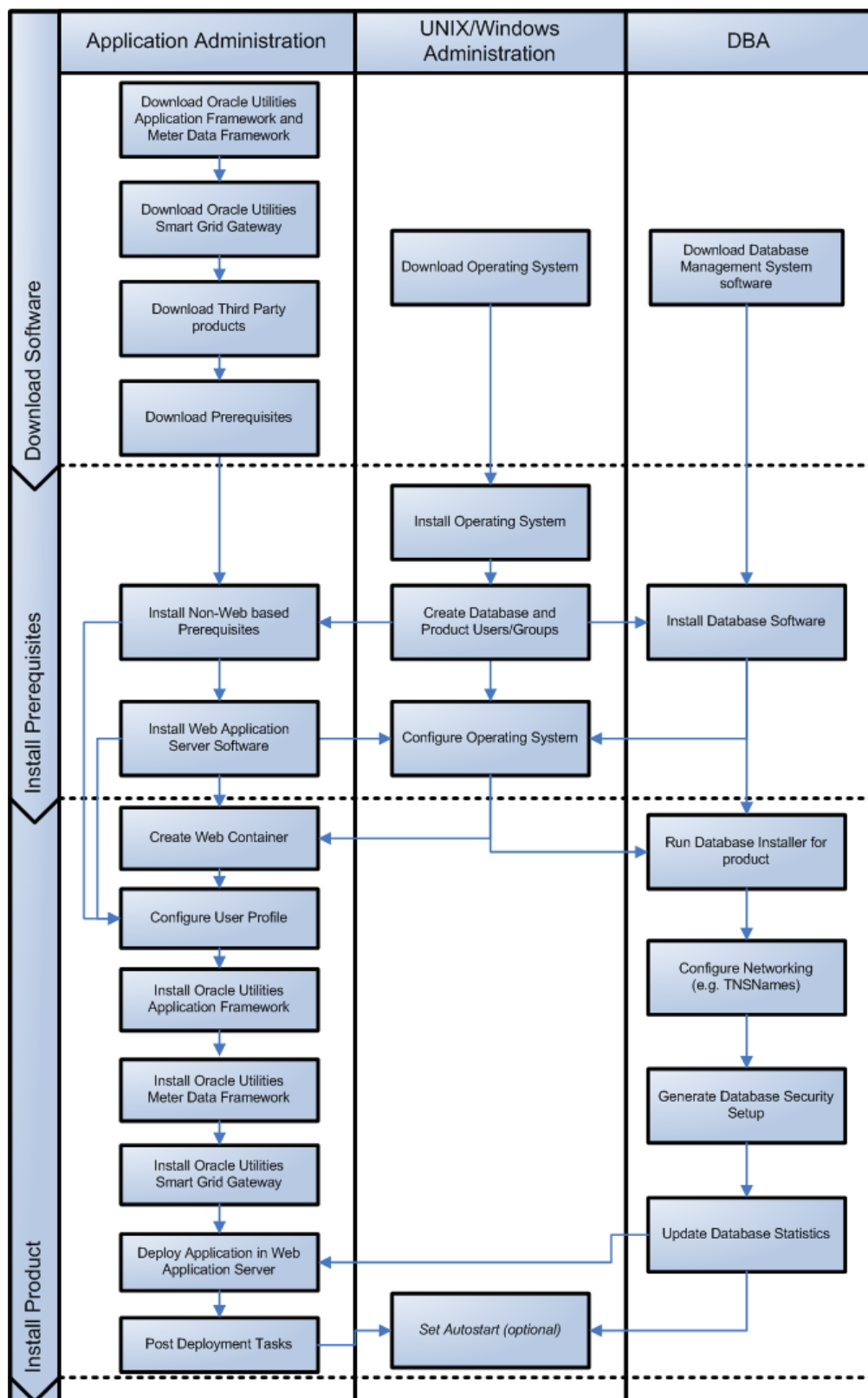
## Planning the Installation

This chapter provides information for planning an Oracle Utilities Smart Grid Gateway installation, including:

- **Installation and Configuration Overview**
- **Before You Install**
- **Installation Checklist**
- **Application Framework Installation and Configuration Worksheets**
- **Meter Data Framework Installation and Configuration Worksheets**
- **Smart Grid Gateway 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 Smart Grid Gateway:



## Before You Install

Refer to My Oracle Support for up-to-date additional information on Oracle Utilities Smart Grid Gateway 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 (for complete details about installing and configuring the prerequisite third-party software for your specific platform, see **Chapter 6: Installing Application Server Prerequisite Software**):

- Oracle client 11.2.0.1 (for connecting to Oracle database)
- Java 6
- Hibernate 3.3.2
- Oracle Service Bus 11.1.1.3.0 or 11.1.1.4.0

Oracle Service Bus is required for an implementation that plans to use a productized adapter or the generic adapter to process meter reading or device event data.

**Note:** Oracle Service Bus 11.1.1.3.0 requires Oracle WebLogic Server 10.3.3.  
Oracle Service Bus 11.1.1.4.0 requires Oracle WebLogic Server 10.3.4.

- Oracle SOA Suite 11.1.1.3.0 or 11.1.1.4.0

Oracle SOA Suite, specifically BPEL Process Manager, is required for an implementation that plans to use a productized adapter or the generic adapter to implement two-way communications for processing meter commands.

**Note:** Oracle SOA Suite 11.1.1.3.0 requires Oracle WebLogic Server 10.3.3.  
Oracle SOA Suite 11.1.1.4.0 requires Oracle WebLogic Server 10.3.4.

3. Install Oracle WebLogic Web Server 11gR1 (10.3.3 or 10.3.4).

**Note:** The Adapter for Echelon requires Oracle WebLogic 10.3.4.

4. Verify that all software installed.
5. Set up environment variables.
6. Install Oracle Utilities Application Framework.
7. Install Oracle Utilities Application Framework prerequisite single fixes.
8. Install Oracle Utilities Meter Data Framework.
9. Install Oracle Utilities Smart Grid Gateway.
10. Deploy Oracle Utilities Smart Grid Gateway application.
11. Complete post installation tasks.

# 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 7: 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 6: 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 Smart Grid Gateway *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/SPLcobAS51WP4	
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>In order 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_2</p>	Press <b>Enter</b> to skip this value.
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 SGG administrator user ID MUST be able to write to this directory. (This is the user ID that is created specifically to administer the (SGG) environments; the default is cissys). The installation sets permissions on all subdirectories installed under this directory.</p> <p>See &lt;SPLENVIRON&gt; 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 SGG administrator user ID MUST be able to write to this directory. (This is the user ID that is created specifically to administer the (SGG) environments; the default is cissys).</p> <p>For each environment initialized, the application logs will be written to the directory &lt;SPLDIROUT&gt;/&lt;SPLENVIRON&gt;</p> <p>Note: Later in the installation the splenvron.sh ( splenvron.cmd ) script will set the \$SPLOUTPUT (%SPLOUTPUT%) environment variable to point to:&lt;SPLDIROUT&gt;/&lt;SPLENVIRON&gt;</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 &lt;SPLDIR&gt; and an environment descriptor. This value typically identifies the purpose of the environment. For example, DEV01 or CONV.</p> <p>On installation a directory &lt;SPLDIR&gt;/&lt;SPLENVIRON&gt; is created, under which the Oracle Utilities Application Framework and Oracle Utilities Smart Grid Gateway 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 Smart Grid Gateway.</p> <p>Note: Later in the installation process, the splenviron.sh (splenviron.cmd) script will set \$SPLEBASE ( %SPLEBASE%) environment variable to point to &lt;SPLDIR&gt;/&lt;SPLENVIRON&gt;</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"><li>true: Application Viewer module will be installed.</li><li>false: Application Viewer module will not be installed.</li></ul> <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 this 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 this 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 this 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 this 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: If there is no previously created WebLogic user, specify the value as "system".  This is a security value.	

Menu Option	Name used in this 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: If WebLogic JNDI User ID was set to system, specify the value of ouafadmin for password. 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 to enter "Y" to encrypt. Enter Y/y When there is a not a WebLogic user previously created, and specify a value of "system".</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 to enter "Y" to encrypt. Enter Y/y when there is a not a WebLogic user previously created, and specify value of 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: If there is not a previously created WebLogic server, take default value of "myserver".</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 this 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 install 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 install 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 this 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 this 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: &lt;machine_name&gt;</p>	
Web Server Port Number	WEB_WLPORT	<p>The WC_defaulthost number for your WebSpher 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 SGG application.</p> <p>Each SGG 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 this 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 this 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 this 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 this 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 this Documentation	Usage	Customer Install Value
Oracle Client Character Set NLS_LANG	NLS_LANG	The Oracle Database Character Set.  Select the Language and Territory that are in use in your country.  Default value: AMERICAN_AMERICA.AL32UTF8	

## General Configuration Options

**Note:** See the Oracle Utilities Smart Grid Gateway *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 this 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  Default value: CLUSTERED Note: CLUSTERED is currently the only supported mode for production environments.	
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 this 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 this 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 BATCHEENABLED 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 BATCHEENABLED 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 this 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 this 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, HP-UX)  Note: For WebLogic installation only.	



Menu Option	Name used in this 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 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.	
Release Cobol Thread Memory Options	REL_CBL_THREAD_MEM	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.  Valid values: true, false  Default value: false	

## 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 this 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.</p> <p>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 this 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.</p> <p>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 OUA 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 this 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 pre-loaded 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 this 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 8: Installing the Application Server Component of Oracle Utilities Meter Data 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 **Chapter 6: Installing Application Server Prerequisite Software**.

## 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. Note: This also specifies the port number on which the example OSB WebLogic server will listen.	
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	JNDI name for accessing the OSB database  Note: Retain the default value.  Default Value: wlsbjmsrpDataSource.	
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	
OSB WebLogic User Name	OSB_USER	WebLogic JMS user ID for the WebLogic instance where the OSB cartridge will be deployed.  Note: For the example OSB WebLogic instance this should be specified as <b>weblogic</b> .	
OSB WebLogic User Password	OSB_PASS_WLS	WebLogic JMS user password for the WebLogic instance where the OSB cartridge will be deployed.  Note: For the example OSB WebLogic instance this should be specified as <b>weblogic123</b> .	



## 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: <b>Unix:</b> /middleware/Oracle_OSB1 <b>Windows:</b> 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

This configuration is required for installing the following adapters:

- Oracle Utilities Smart Grid Gateway Adapter for Echelon.
- Oracle Utilities Smart Grid Gateway Adapter for Landis+Gyr.

### 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 Documentation	Usage	Customer Install Value
SOA Home	SOA_HOME	Location of the directory where SOA is installed.  For Example: <b>Unix:</b> /middleware/Oracle_SOA1 <b>Windows:</b> C:\middleware\Oracle_SOA1	
SOA Host Server	SOA_HOST	Host server where the SOA WebLogic server instance will run.  Default Value: <current server name>	
SOA Port Number:	SOA_PORT_NUMBER	Port number of the SOA WebLogic server instance. If SOA is deployed on a managed server, specify the managed server port number.  Note: This also specifies the port number on which the example SOA WebLogic server will listen.	
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 SOA WebLogic server instance.	
Database User Name (SOAINFRA)	DBUSER_SOAINFRA	User ID for the SOAINFRA schema.  This value is required for the example SOA WebLogic server instance.	

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

## WebSphere SOA Configuration

This configuration is required for installing the following adapters:

- Oracle Utilities Smart Grid Gateway Adapter for Echelon.
- Oracle Utilities Smart Grid Gateway Adapter for Landis+Gyr.

### 9. SOA Configuration

SOA Home:

SOA Host Server:

SOA Port Number:

<machine name>

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><b>Unix:</b> /middleware/Oracle_SOA1</p> <p><b>Windows:</b> C:\middleware\Oracle_SOA1</p>	
SOA Host Server	SOA_HOST	<p>Host server where SOA WebLogic server instance will run.</p> <p>Default Value: &lt;current server name&gt;</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>	

# Smart Grid Gateway 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 8: Installing the Application Server Component of Oracle Utilities Meter Data 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 **Chapter 6: Installing Application Server Prerequisite Software**.

## SOA Head-end System Configuration

### For the Adapter for Echelon

10. SOA Configuration Plan (Echelon)

NES endpoint URI:

Menu Option	Name Used in this Documentation	Usage	Customer Install Value
NES endpoint URI	HEADEND_NES	<p>The root URL for the NES head-end system Web services.</p> <p>For Example: http://echelon.headend.company.com/CoreServices</p> <p>Note: To point to the test harness this value should be specified as http://&lt;SOA_HOST&gt;:&lt;SOA_PORT_NUMBER&gt;/soa-infra/services/Echelon_Test/Echelon</p>	

### For the Adapter for Landis+Gyr

10. SOA Configuration Plan

MR\_CB endpoint URI:

CD\_CB endpoint URI:

Menu Option	Name Used in this Documentation	Usage	Customer Install Value
MR_CB endpoint URI	HEADEND_MR_CB	<p>URL for the headend system running the MR_CB service.</p> <p>For Example: http://127.0.0.1:8088/mockMR_CBSoap</p>	
CD_CB endpoint URI	HEADEND_CD_CB	<p>URL for the headend system running CD_CB service</p> <p>For Example: http://127.0.0.1:8088/mockCD_CBSoap</p>	



# Chapter 5

---

## 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 Smart Grid Gateway Database Administrator's Guide*.





# Chapter 6

---

## 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**
- **HP-UX 11.31 Itanium Application Server**
- **Oracle Linux 5.5 or Red Hat Linux 5.5 Application Server**
- **Solaris 10 Application Server**
- **Windows 2008 Application Server**

**Note:** The Adapter for Echelon is not supported on the HP-UX 11.31 Itanium 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 <b>Note:</b> The Adapter for Echelon requires version 10.3.4.

### 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 Smart Grid Gateway Administrator User ID	cissys	
Oracle Utilities Smart Grid Gateway User Group	cisusr	

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

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 Smart Grid Gateway.

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**

**Note:** The Adapter for Echelon requires Oracle WebLogic version 10.3.4.

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 Service Bus 11.1.1.3.0 or 11.1.1.4.0**

Oracle Service Bus is required for an implementation that plans to use a productized adapter or the generic adapter to process meter reading or device event data.

**Note:** Oracle Service Bus 11.1.1.3.0 requires Oracle WebLogic Server 10.3.3.

Oracle Service Bus 11.1.1.4.0 requires Oracle WebLogic Server 10.3.4.

Oracle Service Bus must be installed prior to the installation of Oracle Utilities Smart Grid Gateway. Oracle Service Bus can be downloaded from the Oracle Fusion Middleware download web site:

<http://www.oracle.com/technetwork/middleware/fusion-middleware/downloads/index.html>

### **Oracle SOA Suite 11.1.1.3.0 or 11.1.1.4.0**

Oracle SOA Suite, specifically BPEL Process Manager, is required for an implementation that plans to use a productized adapter or the generic adapter to implement two-way communications for processing meter commands.

**Note:** Oracle SOA Suite 11.1.1.3.0 requires Oracle WebLogic Server 10.3.3.

Oracle SOA Suite 11.1.1.4.0 requires Oracle WebLogic Server 10.3.4.

Oracle SOA Suite must be installed prior to the installation of Oracle Utilities Smart Grid Gateway. Oracle SOA Suite can be downloaded from the Oracle Fusion Middleware download web site:

<http://www.oracle.com/technetwork/middleware/fusion-middleware/downloads/index.html>

# HP-UX 11.31 Itanium Application Server

**Note:** The Adapter for Echelon is not supported on HP-UX 11.3.1.

This section describes the software requirements for operating the application using the HP-UX 11.31 Itanium application server.

## Supported Application Servers

Operating System	Chipsets	Application Server
HP-UX 11.31 Base Quality Pack September 2009 (64-bit)	Itanium	Oracle WebLogic 11gR1 (10.3.3 or 10.3.4) 64-bit version

## Web/Application Server Tier

### HP-UX 11.31 Itanium Operating System Running on Itanium2 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 Smart Grid Gateway Administrator User ID	cissys	
Oracle Utilities Smart Grid Gateway 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.

### HP Java Development Kit version 1.6.0.06

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 userid cissys, ensure that the environment variable JAVA\_HOME is setup, and that "java" can be found in cissys' PATH variable.

### Hibernate 3.3.2

You must install Hibernate before installing Oracle Utilities Smart Grid Gateway.

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**

**Note:** The Adapter for Echelon requires Oracle WebLogic version 10.3.4.

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 Service Bus 11.1.1.3.0 or 11.1.1.4.0**

Oracle Service Bus is required for an implementation that plans to use a productized adapter or the generic adapter to process meter reading or device event data.

**Note:** Oracle Service Bus 11.1.1.3.0 requires Oracle WebLogic Server 10.3.3.

Oracle Service Bus 11.1.1.4.0 requires Oracle WebLogic Server 10.3.4.

Oracle Service Bus must be installed prior to the installation of Oracle Utilities Smart Grid Gateway. Oracle Service Bus can be downloaded from the Oracle Fusion Middleware download web site:

<http://www.oracle.com/technetwork/middleware/fusion-middleware/downloads/index.html>

## **Oracle SOA Suite 11.1.1.3.0 or 11.1.1.4.0**

Oracle SOA Suite, specifically BPEL Process Manager, is required for an implementation that plans to use a productized adapter or the generic adapter to implement two-way communications for processing meter commands.

**Note:** Oracle SOA Suite 11.1.1.3.0 requires Oracle WebLogic Server 10.3.3.

Oracle SOA Suite 11.1.1.4.0 requires Oracle WebLogic Server 10.3.4.

Oracle SOA Suite must be installed prior to the installation of Oracle Utilities Smart Grid Gateway. Oracle SOA Suite can be downloaded from the Oracle Fusion Middleware download web site:

<http://www.oracle.com/technetwork/middleware/fusion-middleware/downloads/index.html>

# 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 5.5 (64-bit)	x86_64	Oracle WebLogic 11gR1 (10.3.3 or 10.3.4) 64-bit version
Red Hat Enterprise Linux 5.5 (64-bit)		<b>Note:</b> The Adapter for Echelon requires version 10.3.4.

## Web/Application Server Tier

### Oracle Linux 5.5 or Red Hat Enterprise Linux 5.5 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 Smart Grid Gateway Administrator User ID	cissys	
Oracle Utilities Smart Grid Gateway 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 Smart Grid Gateway.

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**

**Note:** The Adapter for Echelon requires Oracle WebLogic version 10.3.4.

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 Service Bus 11.1.1.3.0 or 11.1.1.4.0**

Oracle Service Bus is required for an implementation that plans to use a productized adapter or the generic adapter to process meter reading or device event data.

**Note:** Oracle Service Bus 11.1.1.3.0 requires Oracle WebLogic Server 10.3.3.

Oracle Service Bus 11.1.1.4.0 requires Oracle WebLogic Server 10.3.4.

Oracle Service Bus must be installed prior to the installation of Oracle Utilities Smart Grid Gateway. Oracle Service Bus can be downloaded from the Oracle Fusion Middleware download web site:

<http://www.oracle.com/technetwork/middleware/fusion-middleware/downloads/index.html>

### **Oracle SOA Suite 11.1.1.3.0 or 11.1.1.4.0**

Oracle SOA Suite, specifically BPEL Process Manager, is required for an implementation that plans to use a productized adapter or the generic adapter to implement two-way communications for processing meter commands.

**Note:** Oracle SOA Suite 11.1.1.3.0 requires Oracle WebLogic Server 10.3.3.

Oracle SOA Suite 11.1.1.4.0 requires Oracle WebLogic Server 10.3.4.

Oracle SOA Suite must be installed prior to the installation of Oracle Utilities Smart Grid Gateway. Oracle SOA Suite can be downloaded from the Oracle Fusion Middleware download web site:

<http://www.oracle.com/technetwork/middleware/fusion-middleware/downloads/index.html>

# 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 <b>Note:</b> The Adapter for Echelon requires version 10.3.4.

## 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 Smart Grid Gateway Administrator User ID	cissys	
Oracle Utilities Smart Grid Gateway 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

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 Smart Grid Gateway.

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

**Note:** The Adapter for Echelon requires Oracle WebLogic version 10.3.4.

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 Service Bus 11.1.1.3.0 or 11.1.1.4.0

Oracle Service Bus is required for an implementation that plans to use a productized adapter or the generic adapter to process meter reading or device event data.

**Note:** Oracle Service Bus 11.1.1.3.0 requires Oracle WebLogic Server 10.3.3.

Oracle Service Bus 11.1.1.4.0 requires Oracle WebLogic Server 10.3.4.

Oracle Service Bus must be installed prior to the installation of Oracle Utilities Smart Grid Gateway. Oracle Service Bus can be downloaded from the Oracle Fusion Middleware download web site:

<http://www.oracle.com/technetwork/middleware/fusion-middleware/downloads/index.html>

## Oracle SOA Suite 11.1.1.3.0 or 11.1.1.4.0

Oracle SOA Suite, specifically BPEL Process Manager, is required for an implementation that plans to use a productized adapter or the generic adapter to implement two-way communications for processing meter commands.

**Note:** Oracle SOA Suite 11.1.1.3.0 requires Oracle WebLogic Server 10.3.3.

Oracle SOA Suite 11.1.1.4.0 requires Oracle WebLogic Server 10.3.4.

Oracle SOA Suite must be installed prior to the installation of Oracle Utilities Smart Grid Gateway. Oracle SOA Suite can be downloaded from the Oracle Fusion Middleware download web site:

<http://www.oracle.com/technetwork/middleware/fusion-middleware/downloads/index.html>

# 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 <b>Note:</b> The Adapter for Echelon requires version 10.3.4.

## 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 Smart Grid Gateway.

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](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

**Note:** The Adapter for Echelon requires Oracle WebLogic version 10.3.4.

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 Service Bus 11.1.1.3.0 or 11.1.1.4.0**

Oracle Service Bus is required for an implementation that plans to use a productized adapter or the generic adapter to process meter reading or device event data.

**Note:** Oracle Service Bus 11.1.1.3.0 requires Oracle WebLogic Server 10.3.3.

Oracle Service Bus 11.1.1.4.0 requires Oracle WebLogic Server 10.3.4.

Oracle Service Bus must be installed prior to the installation of Oracle Utilities Smart Grid Gateway. Oracle Service Bus can be downloaded from the Oracle Fusion Middleware download web site:

<http://www.oracle.com/technetwork/middleware/fusion-middleware/downloads/index.html>

### **Oracle SOA Suite 11.1.1.3.0 or 11.1.1.4.0**

Oracle SOA Suite, specifically BPEL Process Manager, is required for an implementation that plans to use a productized adapter or the generic adapter to implement two-way communications for processing meter commands.

**Note:** Oracle SOA Suite 11.1.1.3.0 requires Oracle WebLogic Server 10.3.3.

Oracle SOA Suite 11.1.1.4.0 requires Oracle WebLogic Server 10.3.4.

Oracle SOA Suite must be installed prior to the installation of Oracle Utilities Smart Grid Gateway. Oracle SOA Suite can be downloaded from the Oracle Fusion Middleware download web site:

<http://www.oracle.com/technetwork/middleware/fusion-middleware/downloads/index.html>





# Chapter 7

---

## 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 Smart Grid Gateway. 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 Smart Grid Gateway *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 Smart Grid Gateway consists of the following:

1. Oracle Utilities Application Framework installation
2. Oracle Utilities Meter Data Framework application installation
3. Oracle Utilities Smart Grid Gateway application installation

As a first step of the application server installation, the framework application server installation package must be downloaded and installed. The application server environment is created and configured by the framework installation process.

Once the Oracle Utilities Application Framework installation is successfully completed and the framework application environment is created, the 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 Smart Grid Gateway *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 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. Start the application installation utility by executing the appropriate script:  
**UNIX:** ksh ./install.sh  
**Windows:** install.cmd
5. 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.
6. 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 <SPLEDIR>/<SPLENVIRON> directory
- \$SPLEOUTPUT (%SPLEOUTPUT%) - stands for <SPLEDIROUT>/<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 8

---

## Installing the Application Server Component of Oracle Utilities Meter Data Framework

Installing Oracle Utilities Meter Data Framework is a prerequisite for installing Oracle Utilities Smart Grid Gateway. 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**

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 8-3.

## 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 2.0.1.5. 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-V2.0.1.5-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-V2.0.1.5-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. When you are done with the parameter setup, choose option P to proceed with the installation.
6. Change to the <TEMPDIR>/MDFV2.0.1 directory

7. 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.

# Chapter 9

---

## Installing the Application Server Component of Oracle Utilities Smart Grid Gateway

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

- **Installing the Adapter for Echelon**
- **Installing the Adapter for Landis+Gyr**
- **Installing the MV90 Adapter for Itron**
- **Installing User Documentation**
- **Operating the Application**

To proceed with the Oracle Utilities Smart Grid Gateway 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. Instructions for initializing the environment are included in this section.

## Installing the Adapter for Echelon

This section describes the installation of the Adapter for Echelon, including:

- **Preinstallation Tasks for the Adapter for Echelon**
- **Installing the Adapter for Echelon**
- **Postinstallation Tasks for the Adapter for Echelon**

### Preinstallation Tasks for the Adapter for Echelon

This section describes the steps that should be taken before installing Oracle Utilities Smart Grid Gateway, including:

- **Installation Prerequisite**
- **Copying and Decompressing the Installation Media**
- **Initializing the Meter Data Framework**

#### Installation Prerequisite

The Oracle Utilities Meter Data Framework 2.0.1.5 application must be installed prior to installing Oracle Utilities Smart Grid Gateway 2.0.0.

#### Copying and Decompressing the Installation Media

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

Oracle Utilities Smart Grid Gateway 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 6: 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 Smart Grid Gateway application environment. This can be the same <TEMPDIR> used during the installation of the Oracle Utilities Meter Data Framework.
3. Copy the file SGG-D4-V2.0.0-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 SGG-D4-V2.0.0-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 subdirectory named D4.V2.0.0 is created. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application product.

## Initializing the Meter Data Framework

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

### UNIX:

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

### Windows:

```
%SPLEBASE%\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 Adapter for Echelon

To install the Oracle Utilities Smart Grid Gateway Adapter for Echelon:

1. Change to the <TEMPDIR>/D4.V2.0.0 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.

The configuration menu for Oracle Utilities Smart Grid Gateway appears.

3. Select menu item 10 to configure the URI for the NES head-end system Web services.  
Use the completed SOA configuration worksheet to assist you in this step. See **Smart Grid Gateway Installation and Configuration Worksheets** on page 4-41.
4. When you are done setting up the parameters, choose option P to proceed with the installation.
5. Change to the <TEMPDIR>/D4.V2.0.0 directory
6. 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

Once the install has finished successfully, execute post installation steps described below.

## Postinstallation Tasks for the Adapter for Echelon

This section describes the tasks that should be taken after installing Oracle Utilities Smart Grid Gateway, including:

- **Deploying the OSB Adapter for the Adapter for Echelon**
- **Deploying the SOA Adapter for the Adapter for Echelon**
- **Deploying the Test Harness**
- **Configuring the Echelon Head-End System to Report Events**
- **Configuring Security for the SOA System**
- **Starting the Application**

**Note:** Oracle Enterprise Manager may be required for some of the security setups and for monitoring SOA. If Oracle Enterprise Manager is required, you need to extend the example SOA WebLogic domain and enable Enterprise Manager using WebLogic's configuration utility.

### Deploying the OSB Adapter for the Adapter for Echelon

This section describes how to deploy the OSB Adapter.

#### To Deploy on the Example WebLogic Instance

1. Create the following directories under <OSB\_LOG\_DIR>:

```
d4-event
d4-event-arch
d4-event-error
d4-usage
d4-usage-arch
d4-usage-error
```

2. Start the example OSB WebLogic instance.

#### UNIX:

```
cd $SPLEBASE/osbapp
./startWebLogic.sh
```

#### Windows:

```
cd %SPLEBASE%\osbapp
startWebLogic.cmd
```

3. Deploy the OSB adapter on the example WebLogic instance.

#### UNIX:

```
cd $SPLEBASE/osbapp
$SPLEBASE/product/apache-ant/bin/ant -buildfile deploy-osb_D4.xml
-Dadmin.user=weblogic -Dadmin.password=weblogic123
-Douaf.user=weblogic -Douaf.password=weblogic123
```

#### Windows:

```
cd %SPLEBASE%\osbapp
%SPLEBASE%\product\apache-ant\bin\ant -buildfile deploy-osb_D4.xml
-Dadmin.user=weblogic -Dadmin.password=weblogic123 -
-Douaf.user=weblogic -Douaf.password=weblogic123
```



## To Deploy on a Standalone WebLogic Instance

1. Create the following directories under <OSB\_LOG\_DIR>:

```
d4-event
d4-event-arch
d4-event-error
d4-usage
d4-usage-arch
d4-usage-error
```

2. Copy the following jars to the lib folder under the WebLogic's domain directory:

```
spl-d1-osb-2.0.1.jar
spl-d4-osb-2.0.0.jar
```

These jars are present under the following location:

**UNIX:** \$SPLEBASE/etc/lib

**Windows:** %SPLEBASE%\etc\lib

3. Start the standalone WebLogic instance.
4. Create JMS queues and target them to the OSB admin server:
  - Create a JMS server “OSB-JMSServer” and target it to the admin server
  - Create a JMS module “D4-SystemModule”
  - Under “D4-SystemModule” create a sub-deployment “D4-JMSFAServer” and target it to “OSB-JMSServer”
  - Create the following JMS queues:

**Queue Name:** DestinationQueue-D4

**JNDI Name:** DestinationQueue-D4

**Sub-deployment:** D4-JMSFAServer

**Targets:** OSB-JMSServer

**Queue Name:** NotificationQueue-D4

**JNDI Name:** DestinationQueue-D4

**Sub-deployment:** D4-JMSFAServer

**Targets:** OSB-JMSServer

5. Deploy the OSB adapter on the standalone WebLogic instance.

**UNIX:**

```
cd $SPLEBASE/osbapp
$SPLEBASE/product/apache-ant/bin/ant -buildfile deploy-osb_D4.xml
-Dadmin.user=<ADMIN_USER> -Dadmin.password=<ADMIN_PASSWORD>
-Douaf.user=<JMS_USER> -Douaf.password=<JMS_PASSWORD>
```

**Windows:**

```
cd %SPLEBASE%\osbapp
%SPLEBASE%\product\apache-ant\bin\ant -buildfile deploy-osb_D4.xml
```

```
-Dadmin.user=<ADMIN_USER> -Dadmin.password=<ADMIN_PASSWORD>  
-Douaf.user=<JMS_USER> -Douaf.password=<JMS_PASSWORD>
```

## Deploying the SOA Adapter for the Adapter for Echelon

The SOA adapter can be deployed on the bundled WebLogic example server instance or on a standalone WebLogic server instance.

**Note:** Oracle Enterprise Manager may be required for some of the security setups and for monitoring SOA. If Oracle Enterprise Manager is required, you need to extend the example SOA WebLogic domain and enable Enterprise Manager using WebLogic's configuration utility.

To deploy the SOA adapter, use the following procedures:

### To Deploy on the Example WebLogic Instance

1. Start the example SOA WebLogic instance:

#### UNIX:

```
cd $SPLEBASE/soaapp  
./startWebLogic.sh
```

#### Windows:

```
cd %SPLEBASE%\soaapp startWebLogic.cmd
```

2. Deploy the SOA adapter on the example WebLogic instance

#### UNIX:

```
cd $SPLEBASE/soaapp  
$SPLEBASE/product/apache-ant/bin/ant -buildfile  
deploy-soa_D4.xml -Dserver.user=weblogic  
-Dserver.password=weblogic123
```

#### Windows:

```
cd %SPLEBASE%\soaapp  
%SPLEBASE%\product\apache-ant\bin\ant -buildfile  
deploy-soa_D4.xml -Dserver.user=weblogic  
-Dserver.password=weblogic123
```

### To Deploy on a Standalone WebLogic Instance

1. Copy the following jar file to the lib folder under the WebLogic domain directory:

```
spl-dl-soa-security.jar
```

This jar is present under the following location:

**UNIX:** \$SPLEBASE/etc/lib

**Windows:** %SPLEBASE%\etc\lib

2. Start the standalone WebLogic instance.
3. Deploy the SOA adapter on the standalone WebLogic instance:

#### UNIX:

```
cd $SPLEBASE/soaapp  
$SPLEBASE/product/apache-ant/bin/ant -buildfile deploy-soa_D4.xml  
- Dserver.user=<ADMIN_USER> -Dserver.password=<ADMIN_PASSWORD>
```

**Windows:**

```
cd %SPLEBASE%\soaapp
%SPLEBASE%\product\apache-ant\bin\ant -buildfile deploy-soa_D4.xml
-Dserver.user=<ADMIN_USER> -Dserver.password=<ADMIN_PASSWORD>
```

**Deploying the Test Harness**

The test harness is a set of mock Web services that can be used to test the SOA configuration setup and functionality in the absence of an actual physical head-end system. This is an optional task.

**Note:** The test harness is not a supported feature of the application.

Use the following procedures to deploy the test harness SOA adapter:

**To Deploy on the Example WebLogic Instance**

1. Deploy the test harness on the example WebLogic instance

**UNIX:**

```
cd $SPLEBASE/soaapp
$SPLEBASE/product/apache-ant/bin/ant -buildfile
deploy-soa_D4.xml deployTestHarness -Dserver.user=weblogic
-Dserver.password=weblogic123
```

**Windows:**

```
cd %SPLEBASE%\soaapp
%SPLEBASE%\product\apache-ant\bin\ant -buildfile
deploy-soa_D4.xml deployTestHarness -Dserver.user=weblogic
-Dserver.password=weblogic123
```

**To Deploy on a Standalone WebLogic Instance**

1. Deploy the SOA adapter on the standalone WebLogic instance

**UNIX:**

```
cd $SPLEBASE/soaapp
$SPLEBASE/product/apache-ant/bin/ant -buildfile deploy-soa_D4.xml
deployTestHarness -Dserver.user=<ADMIN_USER>
-Dserver.password=<ADMIN_PASSWORD>
```

**Windows:**

```
cd %SPLEBASE%\soaapp
%SPLEBASE%\product\apache-ant\bin\ant -buildfile deploy-soa_D4.xml
deployTestHarness -Dserver.user=<ADMIN_USER>
-Dserver.password=<ADMIN_PASSWORD>
```

**Configuring the Echelon Head-End System to Report Events**

This section describes how to configure the Echelon head-end system to report events to the Echelon Adapter. Configuring the head-end system requires using the NES Diagnostic Tool to specify the following system properties:

- Event Delivery Type
- Event Receiver URL
- Event Receiver Namespace
- API Key Timeout Period

### Configuring the Event Delivery Type

To configure the event delivery type:

1. In the NES Diagnostic Tool navigation tree, navigate to **NES System Data, Event Configuration**.
2. In the tree, select the **Add Device Failure** event to view its properties.
3. Set the DELIVERYTYPEID property to **EventDeliveryType.SOAP**.

Repeat this task for each of the following events:

- Add Device Failure
- Add Device Success
- Connect Device Load Command Complete
- Disconnect Device Load Command Complete
- Move Device Success
- Move Device Failure
- Read Device Load Profile On-Demand Command Complete
- Read Device Full Load Profile Command Complete
- Read Device Load Status Command Complete
- Read Device Billing Data On-Demand Command Complete
- Set Device ATM Configuration Command Complete

### Configuring the Event Receiver URL

To Configure the Event Receiver URL:

1. In the NES Diagnostic Tool navigation tree, navigate to **NES System Data, Settings, Solution Settings**.
2. Select **Event Receiver URL** to view its properties.
3. Set the VALUE property to the URL that is specified for the Web service ReceivePanoramixEvents. For example:  
  
`http://<NES_HOST>:<PORT_NUMBER>/soa-infra/services/Echelon_NES/HandleReceiveEvents/ReceivePanoramixEvents`
4. Restart the application server that hosts the Echelon head-end system. (The World Wide Web and Echelon Local Task Manager services).

### Configuring the Event Receiver Namespace

To Configure the Event Receiver Namespace:

1. In the NES Diagnostic Tool navigation tree, navigate to **NES System Data, Settings, Solution Settings**.
2. Select **Event Receiver Namespace**.
3. Set the VALUE property to **http://tempuri.org**. This is the namespace for the Echelon Adapter Web service that will receive the events.

### Configuring the API Key Timeout Period

**Note:** This task is optional. By default the API Key Timeout Period is set to 60 minutes.

To configure the API Key Timeout Period:

1. In the NES Diagnostic Tool navigation tree, navigate to NES System Data, Settings, Solution Settings.
  2. In the tree, select the API Key Timeout Period to view its properties.
  3. Change the VALUE property to set the timeout period for the API key.
- Restart the application server that hosts the Echelon head-end system.

## Configuring Security for the SOA System

This section describes how to configure security credentials for the SOA system, including:

- **Configuring Security for the SOA System to Communicate with the Application Framework**
- **Configuring Security for the SOA System to Communicate with the Head-End System**

### Configuring Security for the SOA System to Communicate with the Application Framework

Configuring security for the SOA system involves using Oracle Enterprise Manager to create the following security credentials:

- A Credential Map
- A Credential Key for the Weblogic Server.
- A Credential Key for the Oracle Utilities Application Framework

Use the following procedure to create the security credentials:

1. In Oracle Enterprise Manager, expand the WebLogic domain, right-click on the domain, and choose **Security, Credentials**.
2. On the **Credentials** page, click **Create Map**.
3. In the Create Map dialog, name the map **oracle.wsm.security**, then click **OK**.
4. Click **Create Key** and enter the following values:
  - **Select Map:** oracle.wsm.security
  - **Key:** sgg.d4.credentials
  - **Type:** Password
  - **Username:** A valid WebLogic user name
  - **Password:** A valid WebLogic password
5. Click **OK**.
6. Click **Create Key** again and enter the following values:
  - **Select Map:** oracle.wsm.security
  - **Key:** sgg.d4.ouaf.credentials
  - **Type:** Password
  - **Username:** A valid OUAF user name
  - **Password:** A valid OUAF password
7. Click **OK**.

## Configuring Security for the SOA System to Communicate with the Head-End System

Configuring security for the SOA system involves creating the security credentials in Oracle Enterprise Manager, and then creating a Web service policy that uses the credentials to communicate with the head-end system. These configuration tasks are described in the following sections:

- **Creating the Security Credentials**
- **Importing the Policy Assertion Templates**
- **Creating the Web Service Policy for the Security Credentials**

### Creating the Security Credentials

To create the security credential in the Credential File Store (CFS):

1. In Oracle Enterprise Manager, navigate to **WebLogic Domain** and select the required SOA domain.
2. Right click on the domain and navigate to **Security, Credentials**.
3. Click **Create Map** to set up a new credentials store.
4. In the Create Map dialog box, enter a unique value in the Map Name field. For example, nes.credentials.
5. Click **OK**.
6. Select the new map in the Credentials list and click **Create Key**. For example, nes-key.
7. In the Create Key dialog box, enter the appropriate values in the fields. In the Type field, select **Password**.
8. Click **OK**.

### Importing the Policy Assertion Templates

The application includes several policy assertion templates that you can use to create security credentials. To import the policy assertion templates:

1. In Oracle Enterprise Manager, navigate to **WebLogic Domain** and select the required SOA domain.
2. Right click on the domain and navigate to **Web Services, Policies**
3. Click on **Web Services Assertion Templates** at the top of the page
4. Click on **Import From File** and import the following templates:
  - sgg\_d1\_csf\_access\_client\_custom\_template.xml
  - sgg\_d1\_csf\_access\_client\_xpath\_template.xml

These files are located in the following directory:

**UNIX:** \$SPLEBASE/soaapp

**Windows:** %SPLEBASE%\soaapp

### Creating the Web Service Policy for the Security Credentials

To create a Web service policy for the security credentials:

1. In Oracle Enterprise Manager, navigate to **WebLogic Domain** and select the required SOA domain.

2. Right click on the domain and navigate to **Web Services, Policies**. In the **Applies To** field, select either **All** or **Service Clients**.
3. Select the policy oracle/wss\_http\_token\_client\_policy.
4. Click **Create Like**.
  - Give the policy a unique name and an appropriate description.
  - Under Assertions, remove the Log Message and the HTTP Security policies.
  - Click **Add**.
  - Enter a name for the new assertion.
  - In the Assertion Template field, select sgg/d1\_csf\_access\_client\_xpath\_template and click **Save**.
  - Click **OK**.
5. In the Assertion Content field, edit property values in the XML according to the example below. The following table lists the property values that should be edited:

Field	Default Value	Description
csf-map		Required. The credential store map to use. This value is specified in the task <b>Creating the Security Credentials</b> on page 9-20.
csf-key		Required. The key in the credential store map that will resolve to a username-password pair. This value is specified in the task <b>Creating the Security Credentials</b> on page 9-20.
namespaceDefinitions		Prefix-namespace definitions used in the xpath fields below. Each should be in the form prefix=namespace. Multiple definitions should be separated by spaces. Default namespaces cannot be set.
soapElement	Body	The context node for xpath searches, either the SOAP header or the SOAP body. Legal values are "header" and "body."
userid.xpath		The xpath to the location to inject the username in the SOAP element. The statement must resolve to an attribute or element that already exists.
password.xpath		The xpath to the location to inject the password in the SOAP element. The statement must resolve to an attribute or element that already exists.

Field	Default Value	Description
isDebuggingActive	false	Reserved for internal use.

```

<orasp:SGGCredentialStoreInsertionXPath xmlns:orawsp="http://
schemas.oracle.com/ws/2006/01/policy" orawsp:Silent="true"
orawsp:name="CSF_Echelon" orawsp:description="Properties to add CSF
credentials to a SOAP message" orawsp:Enforced="true"
orawsp:category="security/authentication" xmlns:orasp="http://
schemas.oracle.com/ws/2006/01/securitypolicy">
  <orawsp:bindings>

<orawsp:Implementation>com.splwg.dl.sgg.soa.common.security.policy.Cre
dentialStorageFacilityAccessAssertionExecutor</
orawsp:Implementation>
  <orawsp:Config orawsp:name="CSFKeyInsertionConfig"
orawsp:configType="declarative">
    <orawsp:PropertySet orawsp:name="CSFKeyProperties">
      <orawsp:Property orawsp:type="string"
orawsp:contentType="required" orawsp:name="csf-map">
        <orawsp:Description>Which CSF map to use</
orawsp:Description>
        <orawsp:Value>CSF_map_name</orawsp:Value>
        <orawsp:DefaultValue/>
      </orawsp:Property>
      <orawsp:Property orawsp:type="string"
orawsp:contentType="required" orawsp:name="csf-key">
        <orawsp:Description>Which key in the map to use</
orawsp:Description>
        <orawsp:Value>CSF_Key</orawsp:Value>
        <orawsp:DefaultValue/>
      </orawsp:Property>
    </orawsp:PropertySet>
    <orawsp:PropertySet orawsp:name="XPathProperties">
      <orawsp:Property orawsp:type="string"
orawsp:contentType="required" orawsp:name="soapElement">
        <orawsp:Description>The segment of the soap message
to which to write. Legal Values are "header" & "body"</
orawsp:Description>
        <orawsp:Value>body</orawsp:Value>
        <orawsp:DefaultValue/>
      </orawsp:Property>
      <orawsp:Property orawsp:type="string"
orawsp:contentType="optional" orawsp:name="namespaceDefinitions">
        <orawsp:Description>A space-separated list of
prefix-namespace pairs. For example: ns1=http://myurl.com/ns1
ns2=http://oracle.com xsd=http://www.w3.org/2001/XMLSchema</
orawsp:Description>
        <orawsp:Value/>      <!-- NOTE: nothing entered in
this space -->
        <orawsp:DefaultValue/>
      </orawsp:Property>
      <orawsp:Property orawsp:type="string"
orawsp:contentType="required" orawsp:name="userid.xpath">
        <orawsp:Description>The xpath relative to the
soapElement property at which to insert the user id.</
orawsp:Description>
        <orawsp:Value>./sUserLogin</orawsp:Value>
        <orawsp:DefaultValue/>
      </orawsp:Property>

```



```

        <orawsp:Property orawsp:type="string"
orawsp:contentType="required" orawsp:name="password.xpath">
        <orawsp:Description>The xpath relative to the
soapElement property at which to insert the password.</
orawsp:Description>
        <orawsp:Value>./sPassword</orawsp:Value>
        <orawsp:DefaultValue/>
    </orawsp:Property>
</orawsp:PropertySet>
<orawsp:PropertySet orawsp:name="DebugProperties">
    <orawsp:Property orawsp:type="boolean"
orawsp:contentType="optional" orawsp:name="isDebuggingActive">
    <orawsp:Description>controls debugging output</
orawsp:Description>
    <orawsp:Value>>false</orawsp:Value>
    <orawsp:DefaultValue>>false</orawsp:DefaultValue>
    </orawsp:Property>
</orawsp:PropertySet>
</orawsp:Config>
</orawsp:bindings>
</orawsp:SGGCredentialStoreInsertionXPath>

```

6. Save the policy.
7. Attach the policy to the User Manger reference.
  - In Oracle Enterprise Manager, Navigate to the **AuthenticationMgr** composite. The full path is **SOA/soa-infra/Echelon/AuthenticationMgr**.
  - On the Policies tab, from the **Attach To/Detach From** menu, select **UserManager**.
  - In the Available Policies window, select the policy that you just created.
  - Click **Attach** to attach the policy to the UserManager reference.

## Starting the Application

The OSB WebLogic server instance should be up and running before starting the main application.

The first time you start Oracle Utilities Smart Grid Gateway, 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`

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.

Use the following utility to stop the environment:

**UNIX:** `spl.sh stop`

**Windows:** `spl.cmd stop`

## Installing the Adapter for Landis+Gyr

This section describes the installation of the Adapter for Landis+Gyr, including:

- **Preinstallation Tasks for the Adapter for Landis+Gyr**
- **Installing the Adapter for Landis+Gyr**
- **Postinstallation Tasks for the Adapter for Landis+Gyr**

### Preinstallation Tasks for the Adapter for Landis+Gyr

This section describes the steps that should be taken before installing Oracle Utilities Smart Grid Gateway, including:

- **Installation Prerequisite**
- **Copying and Decompressing the Installation Media**
- **Initializing the Meter Data Framework**

#### Installation Prerequisite

The Oracle Utilities Meter Data Framework 2.0.1 application must be installed prior to installing Oracle Utilities Smart Grid Gateway 2.0.0.

#### Copying and Decompressing the Installation Media

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

Oracle Utilities Smart Grid Gateway 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 6: 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 Smart Grid Gateway application environment. This can be the same <TEMPDIR> used during the installation of the Oracle Utilities Meter Data Framework.
3. Copy the file SGG-LG-V2.0.0-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 SGG-LG-V2.0.0-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 subdirectory named LG.V2.0.0 is created. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application product.

## Initializing the Meter Data Framework

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

### UNIX:

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

### Windows:

```
%SPLEBASE%\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 Adapter for Landis+Gyr

To install the Oracle Utilities Smart Grid Gateway Adapter for Landis+Gyr:

1. Change to the <TEMPDIR>/LG.V2.0.0 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.

The configuration menu for Oracle Utilities Smart Grid Gateway appears.

3. Select menu item 10 to configure the URI of the head-end system.  
Use the completed SOA configuration worksheet to assist you in this step. See **Smart Grid Gateway Installation and Configuration Worksheets** on page 4-41.
4. When you are done setting up the parameters, choose option P to proceed with the installation.
5. Change to the <TEMPDIR>/LG.V2.0.0 directory
6. 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

Once the install has finished successfully, execute post installation steps described below.

## Postinstallation Tasks for the Adapter for Landis+Gyr

This section describes the tasks that should be taken after installing Oracle Utilities Smart Grid Gateway, including:

- **Deploying the OSB Adapter for the Adapter for Landis+Gyr**
- **Deploying the SOA Adapter for the Adapter for Landis+Gyr**
- **Configuring Security for the SOA System**
- **Starting the Application**

**Note:** Oracle Enterprise Manager may be required for some of the security setups and for monitoring SOA. If Oracle Enterprise Manager is required, you need to extend the example SOA WebLogic domain and enable Enterprise Manager using WebLogic's configuration utility.

### Deploying the OSB Adapter for the Adapter for Landis+Gyr

The OSB adapter can be deployed on the bundled WebLogic example server instance or on a standalone WebLogic server instance. To deploy the OSB adapter, use the following procedures:

#### To Deploy on the Example WebLogic Instance

1. Create the following directories under <OSB\_LOG\_DIR>:

```
lg-usage
lg-usage-arch
lg-usage-error
lg-event
lg-event-arch
lg-event-error
```

2. Start the example OSB WebLogic instance.

##### UNIX:

```
cd $SPLEBASE/osbapp
./startWebLogic.sh
```

##### Windows:

```
cd %SPLEBASE%\osbapp
startWebLogic.cmd
```

3. Deploy the OSB adapter on the example WebLogic instance.

##### UNIX:

```
cd $SPLEBASE/osbapp
$SPLEBASE/product/apache-ant/bin/ant -buildfile deploy-osb_LG.xml
-Dadmin.user=weblogic -Dadmin.password=weblogic123
-Douaf.user=weblogic -Douaf.password=weblogic123
```

##### Windows:

```
cd %SPLEBASE%\osbapp
%SPLEBASE%\product\apache-ant\bin\ant -buildfile deploy-osb_LG.xml
-Dadmin.user=weblogic -Dadmin.password=weblogic123
-Douaf.user=weblogic -Douaf.password=weblogic123
```

#### To Deploy on a Standalone WebLogic Instance

1. Create the following directories under <OSB\_LOG\_DIR>:

```
lg-usage
lg-usage-arch
lg-usage-error
lg-event
lg-event-arch
lg-event-error
```

2. Copy the following jars to the lib folder under the WebLogic's domain directory:

```
spl-d1-osb-2.0.1.jar
spl-d3-osb-2.0.0.jar
```

These jars are present under the following location:

**UNIX:** \$SPLEBASE/etc/lib

**Windows:** %SPLEBASE%\etc\lib

3. Start the standalone WebLogic instance.
4. Create JMS queues and target them to the OSB admin server:
  - Create a JMS server “OSB-JMSServer” and target it to admin server.
  - Create a JMS module “D3-SystemModule”.
  - Under “D3-SystemModule” create a sub-deployment “D3-JMSFAServer” and target it to “OSB-JMSServer”.
  - Create the following JMS queues:

**Queue Name:** DestinationQueue-D3

**JNDI Name:** DestinationQueue-D3

**Sub-deployment:** D3-JMSFAServer

**Targets:** OSB-JMSServer

**Queue Name:** NotificationQueue-D3

**JNDI Name:** DestinationQueue-D3

**Sub-deployment:** D3-JMSFAServer

**Targets:** OSB-JMSServer

5. Deploy the OSB adapter on the standalone WebLogic instance.

**UNIX:**

```
cd $SPLEBASE/osbapp
$SPLEBASE/product/apache-ant/bin/ant -buildfile deploy-osb_LG.xml
-Dadmin.user=<ADMIN_USER> -Dadmin.password=<ADMIN_PASSWORD>
-Douaf.user=<JMS_USER> -Douaf.password=<JMS_PASSWORD>
```

**Windows:**

```
cd %SPLEBASE%\osbapp
%SPLEBASE%\product\apache-ant\bin\ant -buildfile deploy-osb_LG.xml
-Dadmin.user=<ADMIN_USER> -Dadmin.password=<ADMIN_PASSWORD>
-Douaf.user=<JMS_USER> -Douaf.password=<JMS_PASSWORD>
```

## Deploying the SOA Adapter for the Adapter for Landis+Gyr

The SOA adapter cartridge can be deployed on the bundled WebLogic example server instance or on a standalone WebLogic server instance.

**Note:** Oracle Enterprise Manager may be required for some of the security setups and for monitoring SOA. If Oracle Enterprise Manager is required, you need to extend the example SOA WebLogic domain and enable Enterprise Manager using WebLogic's configuration utility.

To deploy the SOA cartridge, use the following procedures:

### To Deploy on the Example WebLogic Instance

1. Start the example SOA WebLogic instance:

#### UNIX:

```
cd $SPLEBASE/soaapp
./startWebLogic.sh
```

#### Windows:

```
cd %SPLEBASE%\soaapp
startWebLogic.cmd
```

2. Deploy the SOA cartridge on the example WebLogic instance

#### UNIX:

```
cd $SPLEBASE/soaapp
$SPLEBASE/product/apache-ant/bin/ant -buildfile deploy-soa_LG.xml
-Dserver.user=weblogic -Dserver.password=weblogic123
```

#### Windows:

```
cd %SPLEBASE%\soaapp
%SPLEBASE%\product\apache-ant\bin\ant -buildfile deploy-soa_LG.xml
-Dserver.user=weblogic -Dserver.password=weblogic123
```

### To Deploy on a Standalone WebLogic Instance

1. Start the standalone WebLogic instance.
2. Deploy the SOA cartridge on the standalone WebLogic instance

#### UNIX:

```
cd $SPLEBASE/soaapp
$SPLEBASE/product/apache-ant/bin/ant -buildfile deploy-soa_LG.xml
-Dserver.user=<ADMIN_USER> -Dserver.password=<ADMIN_PASSWORD>
```

#### Windows:

```
cd %SPLEBASE%\soaapp
%SPLEBASE%\product\apache-ant\bin\ant -buildfile deploy-soa_LG.xml
-Dserver.user=<ADMIN_USER> -Dserver.password=<ADMIN_PASSWORD>
```

## Configuring Security for the SOA System

This section describes how to configure security credentials for the SOA system, including:

- **Configuring Security for the SOA System to Communicate with the Application Framework**
- **Configuring Security for the SOA System to Communicate with the Head-End System**

### Configuring Security for the SOA System to Communicate with the Application Framework

Configuring security for the SOA system involves using Oracle Enterprise Manager to create the following security credentials:

- A Credential Map
- A Credential Key for the WebLogic Server.
- A Credential Key for the Oracle Utilities Application Framework

Use the following procedure to create the security credentials:

1. In Oracle Enterprise Manager, expand the WebLogic domain, right-click on the domain, and choose **Security, Credentials**.
2. On the **Credentials** page, click **Create Map**.
3. In the Create Map dialog, name the map **oracle.wsm.security**, then click **OK**.
4. Click **Create Key** and enter the following values:
  - **Select Map:** oracle.wsm.security
  - **Key:** sgg.d3.credentials
  - **Type:** Password
  - **Username:** A valid WebLogic user name
  - **Password:** A valid WebLogic password
5. Click **OK**.
6. Click **Create Key** again and enter the following values:
  - **Select Map:** oracle.wsm.security
  - **Key:** sgg.d3.ouaf.credentials
  - **Type:** Password
  - **Username:** A valid OUAF user name
  - **Password:** A valid OUAF password
7. Click **OK**.

### Configuring Security for the SOA System to Communicate with the Head-End System

Configuring security for the SOA system involves creating the security credentials in Oracle Enterprise Manager, and then creating a Web service policy that uses the credentials to communicate with the head-end system. These configuration tasks are described in the following sections:

- **Creating the Security Credentials**
- **Importing the Policy Assertion Templates**

- **Creating the Web Service Policy for the Security Credentials**

### **Creating the Security Credentials**

To create the security credential in the Credential File Store (CFS):

1. In Oracle Enterprise Manager, navigate to **WebLogic Domain** and select the required SOA domain.
2. In the WebLogic Domain menu, navigate to **Security, Credentials**.
3. Click **Create Map** to set up a new credentials store.
4. In the Create Map dialog box, enter a unique value in the Map Name field.
5. Click **OK**.
6. Select the new map in the Credentials list and click **Create Key**.
7. In the Create Key dialog box, enter the appropriate values in the fields. In the Type field, select **Password**.
8. Click **OK**.

### **Importing the Policy Assertion Templates**

The application includes several policy assertion templates that you can use to create security credentials. To import the policy assertion templates:

1. In Oracle Enterprise Manager, navigate to **WebLogic Domain** and select the required SOA domain.
2. Right click on the domain and navigate to **Web Services, Policies**
3. Click on **Web Services Assertion Templates** at the top of the page
4. Click on **Import From File** and import the following templates:
  - sgg\_d1\_csf\_access\_client\_custom\_template.xml
  - sgg\_d1\_csf\_access\_client\_xpath\_template.xml

These files are located in the following directory:

**UNIX:** \$SPLEBASE/soaapp

**Windows:** %SPLEBASE%\soaapp

### **Creating the Web Service Policy for the Security Credentials**

To create a Web service policy for the security credentials:

1. In Oracle Enterprise Manager, navigate to **WebLogic Domain** and select the required SOA domain.
2. In the WebLogic Domain menu, navigate to **Web Services, Policies**.
3. Select the policy oracle/wss\_http\_token\_client\_policy.
4. Click **Create Like**.
  - Give the policy a unique name and an appropriate description.
  - Under Assertions, remove the Log Message and the HTTP Security policies.
  - Click **Add**.
  - Enter a name for the new assertion.



- In the Assertion Template field, select sgg/d1\_csf\_access\_client\_xpath\_template.
  - Click **OK**.
5. In the Assertion Content field, edit property values in the XML according to the example below. The following table lists the property values that should be edited:

Field	Default Value	Description
csf-map		Required. The credential store map to use. This value is specified in the task <b>Creating the Security Credentials</b> on page 9-20.
csf-key		Required. The key in the credential store map that will resolve to a username-password pair. This value is specified in the task <b>Creating the Security Credentials</b> on page 9-20.
namespaceDefinitions		Prefix-namespace definitions used in the xpath fields below. Each should be in the form prefix=namespace. Multiple definitions should be separated by spaces. Default namespaces cannot be set.
soapElement	Header	The context node for xpath searches, either the SOAP header or the SOAP body. Legal values are "header" and "body."
userid.xpath		The xpath to the location to inject the username in the SOAP element. The statement must resolve to an attribute or element that already exists.
password.xpath		The xpath to the location to inject the password in the SOAP element. The statement must resolve to an attribute or element that already exists.
isDebuggingActive	false	Reserved for internal use.

```
<orasp:SGGCredentialStoreInsertionXPath xmlns:orawsp="http://
schemas.oracle.com/ws/2006/01/policy" orawsp:Silent="true"
orawsp:name="CSF_L+G" orawsp:description="Properties to add CSF
credentials to a SOAP message" orawsp:Enforced="true"
orawsp:category="security/authentication" xmlns:orasp="http://
schemas.oracle.com/ws/2006/01/securitypolicy">
  <orawsp:bindings>
```

```
<orawsp:Implementation>com.splwg.dl.sgg.soa.common.security.policy.Cre
```

```

dentialStorageFacilityAccessAssertionExecutor</
orawsp:Implementation>
  <orawsp:Config orawsp:name="CSFKeyInsertionConfig"
orawsp:configType="declarative">
    <orawsp:PropertySet orawsp:name="CSFKeyProperties">
      <orawsp:Property orawsp:type="string"
orawsp:contentType="required" orawsp:name="csf-map">
        <orawsp:Description>Which CSF map to use</
orawsp:Description>
          <orawsp:Value>CSF_map_name</orawsp:Value>
          <orawsp:DefaultValue/>
        </orawsp:Property>
      <orawsp:Property orawsp:type="string"
orawsp:contentType="required" orawsp:name="csf-key">
        <orawsp:Description>Which key in the map to use</
orawsp:Description>
          <orawsp:Value>CSF_Key</orawsp:Value>
          <orawsp:DefaultValue/>
        </orawsp:Property>
      </orawsp:PropertySet>
    <orawsp:PropertySet orawsp:name="XPathProperties">
      <orawsp:Property orawsp:type="string"
orawsp:contentType="required" orawsp:name="soapElement">
        <orawsp:Description>The segment of the soap message
to which to write. Legal Values are "header" & "body"</
orawsp:Description>
          <orawsp:Value>header</orawsp:Value>
          <orawsp:DefaultValue/>
        </orawsp:Property>
      <orawsp:Property orawsp:type="string"
orawsp:contentType="optional" orawsp:name="namespaceDefinitions">
        <orawsp:Description>A space-separated list of
prefix-namespace pairs. For example: ns1=http://myurl.com/ns1
ns2=http://oracle.com xsd=http://www.w3.org/2001/XMLSchema</
orawsp:Description>
          <orawsp:Value>ns1=http://www.multispeak.org/
Version_3.0</orawsp:Value>
          <orawsp:DefaultValue/>
        </orawsp:Property>
      <orawsp:Property orawsp:type="string"
orawsp:contentType="required" orawsp:name="userid.xpath">
        <orawsp:Description>The xpath relative to the
soapElement property at which to insert the user id.</
orawsp:Description>
          <orawsp:Value>./ns1:MultiSpeakMsgHeader/@UserID</
orawsp:Value>
          <orawsp:DefaultValue/>
        </orawsp:Property>
      <orawsp:Property orawsp:type="string"
orawsp:contentType="required" orawsp:name="password.xpath">
        <orawsp:Description>The xpath relative to the
soapElement property at which to insert the password.</
orawsp:Description>
          <orawsp:Value>./ns1:MultiSpeakMsgHeader/@Pwd</
orawsp:Value>
          <orawsp:DefaultValue/>
        </orawsp:Property>
      </orawsp:PropertySet>
    <orawsp:PropertySet orawsp:name="DebugProperties">
      <orawsp:Property orawsp:type="boolean"
orawsp:contentType="optional" orawsp:name="isDebuggingActive">

```

```

        <orawsp:Description>controls debugging output</orawsp:Description>
        <orawsp:Value>>false</orawsp:Value>
        <orawsp:DefaultValue>>false</orawsp:DefaultValue>
    </orawsp:Property>
</orawsp:PropertySet>
</orawsp:Config>
</orawsp:bindings>
</orawsp:SGGCredentialStoreInsertionXPath>

```

6. Save the policy.
7. Attach the policy to the User Manger reference.
  - In Oracle Enterprise Manager, Navigate to the “AuthenticationMgr” composite.
  - From the **Attach To/Detach From** menu, select UserManager.
  - In the Available Policies window, select the policy that you just created.
  - Click **Attach** to attach the policy to the UserManager reference.

## Starting the Application

The OSB WebLogic server instance should be up and running before starting the main application.

The first time you start Oracle Utilities Smart Grid Gateway, 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`

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.

Use the following utility to stop the environment:

**UNIX:** `spl.sh stop`

**Windows:** `spl.cmd stop`

## Installing the MV90 Adapter for Itron

This section describes the installation of the MV90 Adapter for Itron, including:

- **Preinstallation Tasks for the MV90 Adapter**
- **Installing the MV90 Adapter**
- **Postinstallation Tasks for the MV90 Adapter**

### Preinstallation Tasks for the MV90 Adapter

This section describes the steps that should be taken before installing Oracle Utilities Smart Grid Gateway MV90 Adapter, including:

- **Installation Prerequisite**
- **Copying and Decompressing the Installation Media**
- **Initializing the Meter Data Framework**

#### Installation Prerequisite

The Oracle Utilities Meter Data Framework 2.0.1 application must be installed prior to installing Oracle Utilities Smart Grid Gateway 2.0.0.

#### Copying and Decompressing the Installation Media

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

Oracle Utilities Smart Grid Gateway 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 6: 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 Smart Grid Gateway application environment. This can be the same <TEMPDIR> used during the installation of the Oracle Utilities Meter Data Framework.
3. Copy the file SGG-MV90-V2.0.0-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 SGG-MV90-V2.0.0-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 subdirectory named MV90.V2.0.0 is created. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application product.

## Initializing the Meter Data Framework

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

### UNIX:

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

### Windows:

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

3. Stop the environment if running.

### UNIX:

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

### Windows:

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

## Installing the MV90 Adapter

To install the Oracle Utilities Smart Grid Gateway MV90 Adapter:

1. Change to the <TEMPDIR>/MV90.V2.0.0 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>/MV90.V2.0.0 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

Once the install has finished successfully, execute the postinstallation steps described below.

## Postinstallation Tasks for the MV90 Adapter

This section describes the tasks that should be taken after installing Oracle Utilities Smart Grid Gateway, including:

- **Deploying the OSB Cartridge for the MV90 Adapter**

- **Starting the Application**

## Deploying the OSB Cartridge for the MV90 Adapter

The OSB adapter cartridge can be deployed on the bundled WebLogic example server instance or on a standalone WebLogic server instance. To deploy the OSB cartridge, use the following procedures:

### To Deploy on the Example WebLogic Instance

1. Create the following directories under <OSB\_LOG\_DIR>:

```
mv90-usage
mv90-usage-arch
mv90-usage-error
```

2. Start the example OSB WebLogic instance.

#### UNIX:

```
cd $SPLEBASE/osbapp
./startWebLogic.sh
```

#### Windows:

```
cd %SPLEBASE%\osbapp
startWebLogic.cmd
```

3. Deploy the OSB cartridge on the example WebLogic instance.

#### UNIX:

```
cd $SPLEBASE/osbapp
$SPLEBASE/product/apache-ant/bin/ant -buildfile
deploy-osb_MV90.xml -Dadmin.user=weblogic
-Dadmin.password=weblogic123 -Douaf.user=weblogic
-Douaf.password=weblogic123
```

#### Windows:

```
cd %SPLEBASE%\osbapp
%SPLEBASE%\product\apache-ant\bin\ant -buildfile
deploy-osb_MV90.xml -Dadmin.user=weblogic
-Dadmin.password=weblogic123 -Douaf.user=weblogic
-Douaf.password=weblogic123
```

### To Deploy on a Standalone WebLogic Instance

1. Create the following directories under <OSB\_LOG\_DIR>:

```
mv90-usage
mv90-usage-arch
mv90-usage-error
```

2. Copy the following jars to the lib folder under the WebLogic domain directory:

```
spl-d1-osb-2.0.1.jar
spl-d5-osb-2.0.0.jar
```

These jars are present under the following location:

**UNIX:** \$SPLEBASE/etc/lib

**Windows:** %SPLEBASE%\etc\lib

3. Start the standalone WebLogic instance.
4. Create JMS queues and target them to the OSB admin server:

- Create a JMS server “OSB-JMServer” and target it to admin server.
- Create a JMS module “D5-SystemModule”.
- Under “D5-SystemModule” create a sub-deployment “D5-JMSFAServer” and target it to “OSB-JMServer”.
- Create the following JMS queues:

**Queue Name:** DestinationQueue-D5

**JNDI Name:** DestinationQueue-D5

**Sub-deployment:** D5-JMSFAServer

**Targets:** OSB-JMServer

**Queue Name:** NotificationQueue-D5

**JNDI Name:** DestinationQueue-D5

**Sub-deployment:** D5-JMSFAServer

**Targets:** OSB-JMServer

5. Deploy the OSB cartridge on the standalone WebLogic instance.

**UNIX:**

```
cd $SPLEBASE/osbapp
$SPLEBASE/product/apache-ant/bin/ant -buildfile
deploy-osb_MV90.xml -Dadmin.user=<ADMIN_USER>
-Dadmin.password=<ADMIN_PASSWORD> -Douaf.user=<JMS_USER>
-Douaf.password=<JMS_PASSWORD>
```

**Windows:**

```
cd %SPLEBASE%\osbapp
%SPLEBASE%\product\apache-ant\bin\ant -buildfile
deploy-osb_MV90.xml -Dadmin.user=<ADMIN_USER>
-Dadmin.password=<ADMIN_PASSWORD> -Douaf.user=<JMS_USER>
-Douaf.password=<JMS_PASSWORD>
```

## Starting the Application

The OSB WebLogic server instance should be up and running before starting the main application.

The first time you start Oracle Utilities Smart Grid Gateway, 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>

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.

Use the following utility to stop the environment:

**UNIX:** spl.sh stop

**Windows:** spl.cmd stop



## Installing User Documentation

This section provides instructions for installing the Oracle Utilities Smart Grid Gateway user documentation that is supplied with the system. The Oracle Utilities Smart Grid Gateway user documentation is provided in PDF format for printing.

The documentation is also provided in HTML format located inside the Oracle Utilities Smart Grid Gateway 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
- D3: Oracle Utilities Smart Grid Gateway for Landis+Gyr User Guide
- D4: Oracle Utilities Smart Grid Gateway for Echelon Guide
- D5: Oracle Utilities Smart Grid Gateway for MV90 User Guide
- F1: Oracle Utilities Application Framework Administration and Business Process Guides

## Installing Standalone Online Help

You can also use the Oracle Utilities Smart Grid Gateway online help in standalone mode (that is, you do not have to launch it from the Oracle Utilities Smart Grid Gateway application or access it on the application server).

To install the Oracle Utilities Smart Grid Gateway help for standalone operation, copy the help.war from the Oracle Utilities Smart Grid Gateway server (environment) or from the Oracle Utilities Smart Grid Gateway 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 Smart Grid Gateway environment, you can locate the file in the \$SPLEBASE/splapp/applications directory on the server.

Unzip the help.war file to any directory on your machine. To launch the Oracle Utilities Smart Grid Gateway help in standalone 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 Standalone 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 Standalone Help Under Web Server

You can also install Oracle Utilities Smart Grid Gateway online help as a standalone 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:** Standalone 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 standalone online help files.

## Operating the Application

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

Be sure to read the *Oracle Utilities Smart Grid Gateway Server Administration Guide* for more information on further configuring and operating the Oracle Utilities Smart Grid Gateway system.

# Chapter 10

---

## Additional Tasks

This section describes tasks that should be completed after installing Oracle Utilities Smart Grid Gateway, including:

- **Generating the Application Viewer**
- **Building Javadoc Indexes**
- **Configuring the Environment for Batch Processing**
- **Customizing the Logo**
- **WebLogic Production Server Considerations**

### 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 splenviron 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\splenviron.cmd -e %SPLENVIRON%
```

For example:

```
D:\ouaf\TEST_ENVIRON1\bin\splenviron.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

\$SPLBASE 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:

```
$SPLBASE/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 $SPLBASE/bin/genappvieweritems.sh
```

**Windows:**

```
%SPLBASE%\bin\genappvieweritems.cmd
```

4. Restart your application

## Building Javadoc 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:**

```
%SPLBASE%\bin\buildJavadocsIndex.cmd
```

**UNIX:**

```
ksh $SPLBASE/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 \$SPLBASE/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>/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 Microsystems'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.



# 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

---

## 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](mailto: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>

