Oracle Utilities Smart Grid Gateway

Installation Guide

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Oracle Utilities Smart Grid Gateway Installation Guide

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

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.

> **Note:** This service pack is intended to be installed on top of an existing Oracle Utilities Smart Grid Gateway installation. Please refer to **Chapter 10: Installing Service Packs** for more information about installing this service pack.

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. Install the current service pack, as described in **Chapter 10: Installing Service Packs**.
10. Follow the installation guidelines described in **Chapter 11: Additional Tasks**.

Chapter 2

Application Architecture Overview

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. This section includes the following topics:

- **Oracle Utilities Smart Grid Gateway Adapters**
- **Oracle Utilities Smart Grid Gateway OSB and SOA Adapters**
- **Oracle Database Servers**
- **Oracle Database Servers**
- **Oracle WebLogic Server Information**

Oracle Utilities Smart Grid Gateway Adapters

The following table details the operating system and application server combinations on which Oracle Utilities Smart Grid Gateway adapters 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) Windows 7 (IE 8.x)	AIX 6.1 TL4 (64-bit)	POWER 64-bit	WebLogic 10.3.5 WebLogic 10.3.6	Oracle 11.2.0.1+
	Oracle Linux 5.5, 5.8, 6.2 (64-bit) Red Hat Enterprise Linux 5.5, 5.8, 6.2 (64-bit)	x86_64	WebLogic 10.3.5 WebLogic 10.3.6	Oracle 11.2.0.1+
	Sun Solaris 10 Update 8 (64-bit)	SPARC	WebLogic 10.3.5 WebLogic 10.3.6	Oracle 11.2.0.1+
	Windows Server 2008 R2 (64-bit)	x86_64	WebLogic 10.3.5 WebLogic 10.3.6	Oracle 11.2.0.1+

Oracle Utilities Smart Grid Gateway OSB and SOA Adapters

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

Adapter	Operating System (Server)	Chipset	Application Server	Database
OSB Adapter SOA Adapter (Not applicable for MV90 Adapter for Itron)	AIX 6.1 TL4 (64-bit)	POWER 64-bit	WebLogic 10.3.5 WebLogic 10.3.6	Oracle 11.2.0.1+
	Oracle Linux 5.5, 5.8, 6.2 (64-bit) Red Hat Enterprise Linux 5.5, 5.8, 6.2 (64-bit)	x86_64	WebLogic 10.3.5 WebLogic 10.3.6	Oracle 11.2.0.1+
	Sun Solaris 10 Update 8 (64-bit)	SPARC	WebLogic 10.3.5 WebLogic 10.3.6	Oracle 11.2.0.1+
	Windows Server 2008 R2 (64-bit)	x86_64	WebLogic 10.3.5 WebLogic 10.3.6	Oracle 11.2.0.1+

Oracle Database Servers

Oracle Utilities 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

Although Oracle Utilities Smart Grid Gateway is supported only on the Oracle WebLogic application server, it can write to any JMS compliant queuing application by way of Oracle Service Bus. For more information about Oracle Service Bus, refer to the *Oracle Fusion Middleware Developers Guide for Oracle Service Bus.*

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 exception from this rule is Hibernate software version 3.3.2 ga. This version 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

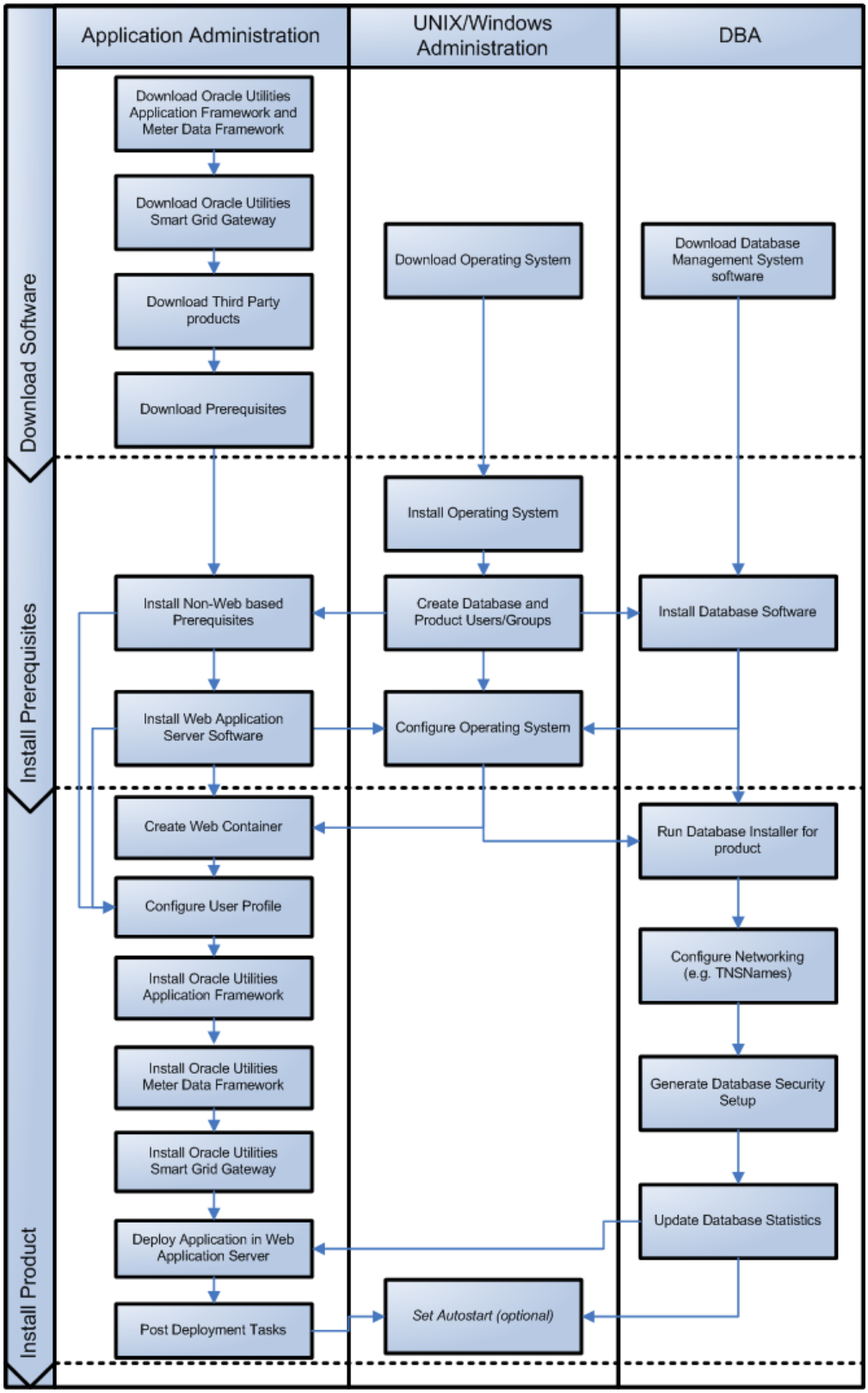
Planning the Installation

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 11.1.1.5.0 or 11.1.1.6.0

     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 11.1.1.5.0 requires Oracle WebLogic Server 10.3.5.
     Oracle Service Bus 11.1.1.6.0 requires Oracle WebLogic Server 10.3.6.
   - Oracle SOA Suite 11.1.1.5.0 or 11.1.1.6.0

     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 11.1.1.5.0 requires Oracle WebLogic Server 10.3.5.
     Oracle SOA Suite 11.1.1.6.0 requires Oracle WebLogic Server 10.3.6.
3. Install Oracle WebLogic Web Server 11gR1 (10.3.5 or 10.3.6).
4. Verify that all software installed.
5. Set up environment variables.
6. Install Oracle Utilities Application Framework.
7. Install Oracle Utilities Application Framework V4.1.0 Service Pack 1 Multiplatform.
8. Install Oracle Utilities Meter Data Framework..
9. Install Oracle Utilities Smart Grid Gateway.
10. Deploy Oracle Utilities Smart Grid Gateway application.
11. Complete postinstallation 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.

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

Third Party Software Configuration

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

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

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Web Application Server Home Directory	WEB_SERVER_ HOME	Location on the disk where the application server is installed. Example Location: WebLogic: /ouaf/middleware/ wlserver_10.3 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 WebSphere: /ouaf/IBM/WebSphere7/AppServer WebSphere ND: /ouaf/IBM/WebSphere70ND/	
* ADF Home Directory	ADF_HOME	Location on the disk where ADF is installed. Example Location: /ouaf/jdev11_1_1_4 or /adf_location	
OIM OAM Enabled Environment	OPEN_SPML_ENABL ED_ENV	Denotes if an environment will be integrating with Oracle Identity Manager for user propagation. Valid values: true false Defaulted value: false	

* 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>	The mount point into which the application is installed. For example: /ouaf for UNIX and C:\ouaf for Windows. 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. See <SPLENVIRON> below for more information on how this mount point is used.	
Log File Mount Point	<SPLDIROUT>	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. 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). For each environment initialized, the application logs will be written to the directory <SPLDIROUT>/<SPLENVIRON> Note: Later in the installation the splenviron.sh (splenviron.cmd) script will set the $SPLOUTPUT (%SPLOUTPUT%) environment variable to point to:<SPLDIROUT>/<SPLENVIRON>	

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

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Installation Application Viewer Module	<WEB_ISAPPVIEWER>	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. Valid values: true: Application Viewer module will be installed. false: Application Viewer module will not be installed. Defaulted value: true 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.	

Environment Description

```
1. Environment Description
       Environment Description:
```

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

WebLogic Business Application Server Configuration

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

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

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

WebSphere Basic Business Application Server Configuration

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

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

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

WebLogic Web Application Server Configuration

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

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

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

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

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

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Application Viewer Module	WEB_ISAPPVIEWER	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. Note: With either value the application viewer module will still be managed by the upgrade process. 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. 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 Default value: true	

WebSphere Basic Web Application Server Configuration

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

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

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

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

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Application Viewer Module	WEB_ISAPPVIEWER	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. Note: With either value the application viewer module will still be managed by the upgrade process. 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. 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) Default value: true	

Database Configuration

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

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

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

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

Advanced Menu Options

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

Unix:

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

Windows

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

Advanced Environment Miscellaneous Configuration

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

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

Menu Option	Name Used in Documentation	Usage	Customer Value Install
Online JVM Batch Number of Threads	BATCHTHREADS	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). Default value: 5 Note: This will be only used and activated when BATCHENABLED is set to true.	
Online JVM Batch Scheduler Daemon Enabled	BATCHDAEMON	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. Valid values: true, false Default value: false Note: This will be only used and activated when BATCHENABLED is set to true.	
JMX Enablement System User ID	BSN_JMX_SYSUSER	Example value: user This value is optional.	
JMX Enablement System Password	BSN_JMX_SYSPASS	Example value: admin Note: This value will be saved in encrypted format. This value is optional.	
RMI Port number for JMX Business	BSN_JMX_RMI_PORT_PERFORMACE	JMX Port for business application server monitoring. This needs to be set to an available port number on the machine. This value is optional.	

Menu Option	Name Used in Documentation	Usage	Customer Value Install
Online JVM Batch Number of Threads	BATCHTHREADS	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). Default value: 5 Note: This will be only used and activated when BATCHENABLED is set to true.	
Online JVM Batch Scheduler Daemon Enabled	BATCHDAEMON	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. Valid values: true, false Default value: false Note: This will be only used and activated when BATCHENABLED is set to true.	
JMX Enablement System User ID	BSN_JMX_SYSUSER	Example value: user This value is optional.	
JMX Enablement System Password	BSN_JMX_SYSPASS	Example value: admin Note: This value will be saved in encrypted format. This value is optional.	
RMI Port number for JMX Business	BSN_JMX_RMI_PORT_PERFORMACE	JMX Port for business application server monitoring. This needs to be set to an available port number on the machine. This value is optional.	

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

Advanced Environment Memory Configuration

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

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

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

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Release Cobol Thread Memory Options	REL_CBL_THREAD_MEM	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 Documentation	Usage	Customer Install Value
WebLogic SSL Port Number:	WEB_WLSSPORT	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. The Secure Sockets implementation is disabled in the default configuration. 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. Example value: 6501 Note: For WebLogic installation only. This value is optional.	
WebLogic Console Port Number	WLS_ADMIN_PORT	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. Note: For WebLogic installation only. This value is optional.	

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

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Web Principal Name	WEB_PRINCIPAL_NAME	Specify the name of a principal that is defined in the security realm. Default value: cisusers	
This is a development environment	WEB_ISDEVELOPMENT	If the value is "true", the web application may be used for application development, which will trigger certain generation processes. If the value is "false" the environment will be used as a runtime environment. When you choose "true" (development environment) the startup preload pages will be disabled, and the application security will be less strict. This value also controls the amount of logging information written to the application log files. Valid values: true, false Default value: false	
Preload All Pages on Startup	WEB_PRELOADALL	This controls if the pages should be 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 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 Defautlt 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 adapter will be deployed. Note: For the example OSB WebLogic instance this should be specified as **weblogic.**	
OSB WebLogic User Password	OSB_PASS_WLS	WebLogic JMS user password for the WebLogic instance where the OSB adapter will be deployed. Note: For the example OSB WebLogic instance this should be specified as **weblogic123.**	

WebSphere OSB Configuration

This configuration menu does not apply to Oracle Utilities Smart Grid Gateway.

```
8. OSB Configuration
      OSB Home:
      OSB Host Server:                                  <machine name>
      OSB Port Number:
     Mount point for OSB files:                      /spl/sploutput/osb
```

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

WebLogic SOA Configuration

```
9. SOA Configuration
     SOA Home:
     SOA Host Server:                                <machine name>
     SOA Port Number:
     JDBC URL for database:
     Database User Name (SOAINFRA):
     Database Password (SOAINFRA):
     Database User Name (MDS):
     Database Password (MDS):
     Database User Name (ORASDPM):
     Database Password (ORASDPM):
```

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

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

WebSphere SOA Configuration

This configuration menu does not apply to Oracle Utilities Smart Grid Gateway.

```
9. SOA Configuration
       SOA Home:
      SOA Host Server:                                    <machine name>
       SOA Port Number:
```

Menu Option	Name Used in this Documentation	Usage	Customer Install Value
SOA Home	SOA_HOME	Location of the directory where SOA is installed. For Example: **Unix:** /middleware/Oracle_SOA1 **Windows:** C:\middleware\Oracle_SOA1	
SOA Host Server	SOA_HOST	Host server where 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.	

WebLogic MDF SOA Configuration Plan

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
- Oracle Utilities Smart Grid Gateway Adapter for Sensus
- Oracle Utilities Smart Grid Gateway Adapter for Silver Spring Networks

```
10. SOA Configuration Plan (MDF)
      MDF Bulk Request Callback URL:
      MDF Headend http connection timeout:                    50000
      MDF Headend http read timeout:                         500000
      MDF SOA Request Queue JNDI Name:          queue/BulkRequestQueue
      MDF SOA Notify Queue JNDI Name:           queue/BulkNotifyQueue
      MDF SOA Commnad Queue JNDI Name:          queue/BulkCommandQueue
```

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

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**.

For the Adapter for Echelon

```
17. SOA Configuration Plan (Echelon)
    NES endpoint URI:
    SOA_PARTITION_D4:
    HEADEND_EVENTMANAGER_D4:
    HEADEND_GATEWAYMANAGER_D4:
    HEADEND_DEVICEMANAGER_D4:
    HEADEND_SETTINGMANAGER_D4:
    HEADEND_USERMANAGER_D4:
```

Menu Option	Name Used in this Documentation	Usage	Customer Install Value
NES endpoint URI	HEADEND_NES	The root URL for the NES head-end system web services. For Example: http://echelon.headend.company.com/CoreServices Note: To point to the test harness this value should be specified as http://<SOA_HOST>:<SOA_PORT_NUMBER>/soa-infra/services/Echelon_Test/Echelon	
SOA_PARTITION_D4	SOA_PARTITION_D4	The SOA partition to which the application is installed. Default Value: Echelon	
HEADEND_EVENTMANAGER_D4	HEADEND_EVENTMANAGER_D4	The path to the NES EventManager web service on the head end system. Default Value: CoreServices/EventManager.asmx	
HEADEND_GATEWAYMANAGER_D4	HEADEND_GATEWAYMANAGER_D4	The path to the NES GatewayManager web service. Default Value: CoreServices/GatewayManager.asmx	

Menu Option	Name Used in this Documentation	Usage	Customer Install Value
HEADEND_DEVICE MANAGER_D4	HEADEND_DEVICE MANAGER_D4	The path to the NES DeviceManager web service on the head end system. Default Value: CoreServices/DeviceManager.asmx	
HEADEND_SETTIN GMANAGER_D4	HEADEND_SETTIN GMANAGER_D4	The path to the NES SettingManager web service on the head end system. Default Value: CoreServices/SettingManager.asmx	
HEADEND_USERMA NAGER_D4	HEADEND_USERMA NAGER_D4	The path to the NES UserManager web service on the head end system. Default Value: CoreServices/UserManager.asmx	

For the Adapter for Landis+Gyr

```
16. 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	URL for the head-end system running the MR_CB service. For Example: http://127.0.0.1:8088/mockMR_CBSoap	
CD_CB endpoint URI	HEADEND_CD_CB	URL for the head-end system running CD_CB service For Example: http://127.0.0.1:8088/mockCD_CBSoap	

For the Adapter for Sensus

```
18. SOA Configuration Plan (Sensus)
       MR Server Endpoint URI:
       CD Server Endpoint URI:
       OD Server Endpoint URI
       Headend Http Read Timeout:                          500000
       Headend Http Connection Timeout:                    50000
```

Menu Option	Name Used in this Documentation	Usage	Customer Install Value
MR Server Endpoint URI	HEADEND_MR	URL for the headend system running the MR service. For Example: http://10.241.39.88:11080/multispeakv4-mr-ws	
CD Server Endpoint URI	HEADEND_CD	URL for the headend system running CD service For Example: http://10.241.39.88:11080/multispeakv4-cd-ws	
OD Server Endpoint URI	HEADEND_OD	URL for the headend system running OD service For Example: http://10.241.39.88:11080/multispeakv4-cd-ws	
Headend Http Read Timeout	Headend_http_read_timeout_D6	Headend http read timeout value Default Value: 500000	
Headend Http Connection Timeout	Headend_http_conn_timeout_D6	Headend Http Connection Timeout value Default Value: 50000	

For the Adapter for Silver Spring Networks

SOA Configuration Plan (SSN)

```
19. SOA Configuration Plan (SSN)
       SSN SOA Partition Name:                                    SSN
       SOA Weblogic User Name:
       SOA Weblogic User Password:
       SSN SOA Queue JNDI Name:                          queue/SSNODRQ
       SSN Headend DataAggregation Endpoint URI:
       SSN Headend DeviceManager Endpoint URI:
       SSN Headend DeviceResults Endpoint URI:
       SSN Headend JobManager Endpoint URI:
```

Menu Option	Name Used in this Documentation	Usage	Customer Install Value
SOA Partition Name	SOA_PARTITION_D7	SOA SSN partition name. Default Value: SSN	
SOA Queue JNDI Name	SOA_QUEUE_D7	SOA queue JNDI name. Default Value: queue/SSNODRQ	
Headend DataAggregation Endpoint URI	Headend_DataAggregation_Server_D7	URL for headend DataAggregation Endpoint. Example: http://localhost:7001/soa-infra/services/SSN_Test/SSNTestHarness / DataAggregationService	
Headend DeviceManager Endpoint URI	Headend_DeviceManager_Server_D7	URL for headend DeviceManager Endpoint. Example: http://localhost:7001/soa-infra/services/SSN_Test/SSNTestHarness/ DeviceManagerService	
Headend DeviceResults Endpoint URI	Headend_DeviceResults_Server_D7	URL for headend DeviceResults Endpoint. Example: http://localhost:7001/soa-infra/services/SSN_Test/SSNTestHarness/ DeviceResultsService	
Headend JobManager Endpoint URI	Headend_JobManager_Server_D7	URL for headend JobManager endpoint. Example: http://localhost:7001/soa-infra/services/SSN_Test/SSNTestHarness / JobManagerService	

SSN JMS Source Destination Bridge Configuration

```
20. SSN JMS Source Destination Bridge Configuration
   SSN Bridge Destination Name:        SSNTestHarnessBridgeDestination
   SSN Bridge Destination Additional Classpath:
   SSN Bridge Destination Connection URL:
   SSN Bridge Destination Initial Context Factory:
                                  weblogic.jndi.WLInitialContextFactory
   SSN Bridge Connection Factory JNDI Name:
                                    jms/SSNTestHarnessConnectionFactory
   SSN Bridge Destination Queue JNDI Name:       queue/SSNTestSSNODRQ
   SSN Destination Bridge Username:
   SSN Destination Bridge Password:
```

Parameter Description	Name Used in this Documentation	Usage	Customer Install Value
Source Bridge Destination Name	SRC_BRG_NAME_D7	Source bridge Destination name. Default Value: SSNTestHarnessBridgeDestination	
Classpath	SRC_BRG_CLASSPATH_D7	Source bridge destination classpath. Default Value: empty	
Connection URL	SRC_BRG_CONN_URL_D7	Source bridge destination connection URL. Example: t3://JMS_PROVIDER_HOST:JMS_PORT_NUMBER	
Initial Context Factory	SRC_BRG_INITIAL_CONTEXT_D7	Source bridge destination initial context factory. Default: weblogic.jndi.WLInitialContextFactory	
Connection Factory JNDI Name	SRC_BRG_CONN_FACTORY_D7	SSN bridge connection factory JNDI Name. Default: jms/SSNTestHarnessConnectionFactory	
Destination Queue JNDI Name	SRC_BRG_QUEUE_JNDI_D7	SSN bridge destination queue JNDI name. Default: queue/SSNTestSSNODRQ	
JMS Provider User Name	SRC_BRD_WLS_USER_D7	Source destination bridge username.	
JMS Provider User Password	SRC_BRD_WLS_PASS_D7	Source destination bridge password.	

Advance Menu Option for Test Harness Configuration

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
```

```
70. SSN SOA TestHarness Configurations
      SSN TestHarness SOA Host Server:
      SSN TestHarness SOA Port Number:
      SSN SOA TestHarness Partition Name:                    SSN_Test
      SSN SOA TestHarness Queue JNDI Name:          queue/SSNTestSSNODRQ
```

Parameter Description	Name used in this Document	Usage	Customer Install Value
TestHarness SOA Host Server	SOA_HOST_TEST_D7	TestHarness SOA Host Server	
TestHarness SOA Port Server	SOA_PORT_NUMBER_TEST_D7	TestHarness SOA Port Server	
SOA TestHarness Partition Name	SOA_PARTITION_TEST_D7	TestHarness SOA partition name. Default Value: SSN_Test	
SOA TestHarness Queue JNDI Name	SOA_QUEUE_TEST_D7	TestHarness SOA Queue JNDI Name. Default Value: queue/SSNTestSSNODRQ	

For the Adapter Development Kit

```
21. DG Reference Implementation SOA Configurations
      DG SOA Partition Name: DG
      MR Server Endpoint URI: CD Server Endpoint URI:
      OD Server Endpoint URI:
      Headend Http Read Timeout:          500000
      Headend Http Connection Timeout:    50000
```

Menu Option	Name Used in this Documentation	Usage	Customer Install Value
DG SOA Partition Name	SOA_PARTITION_DG	SOA DG partition name. Default Value: DG	
MR Server Endpoint URI	Headend_MR_Server_DG	URL for the headend system running the MR service. For Example: http://localhost:port/soa-infra/services/DG_Test/DGTestHarness/MR_Server	
CD Server Endpoint URI	Headend_CD_Server_DG	URL for the headend system running CD service For Example: http://localhost:port/soa-infra/services/DG_Test/DGTestHarness/CD_Server	
OD Server Endpoint URI	Headend_OD_Server_DG	URL for the headend system running OD service For Example: http://localhost:port/soa-infra/services/DG_Test/DGTestHarness/OD_Server	
Headend Http Read Timeout	Headend_http_read_timeout_DG	Headend http read timeout value Default Value: 500000	
Headend Http Connection Timeout	Headend_http_conn_timeout_DG	Headend Http Connection Timeout value Default Value: 50000	

For the Adapter for Itron OpenWay

```
22. SOA Configuration Plan (Itron OpenWay)
      Itron SOA Partition Name: Itron
      Headend Http Read Timeout: 500000
      Headend Http Connection Timeout: 50000
      DataSubscriberService Output Path:
       ExceptionSubscriberService Output Path:
      Itron Headend DataService Endpoint URI:
      Itron Headend DiagnosticService Endpoint URI:
      Itron Headend UtilService Endpoint URI:
      Itron Headend ControlService Endpoint URI:
      Itron Headend ProvisioningService Endpoint URI:
      Itron Headend ProvisioningService370 Endpoint URI:
      Itron Headend ControlService370 Endpoint URI:
```

Note: Replace localhost and port with respective host and port for the below mentioned Endpoint URLs.

Menu Option	Name Used in this Documentation	Usage	Customer Install Value
Itron SOA Partition Name	SOA_PARTITION_D8	Itron SOA Partition Name Default Value: Itron	
Headend Http Read Timeout	HEADEND_HTTP_READ_TIMEOUT_D8	Headend Http Read Timeout Default Value: 500000	
Headend Http Connection Timeout	HEADEND_HTTP_CONN_TIMEOUT_D8	Headend Http Connection Timeout Default Value: 50000	
DataSubscriberService Output Path	DATASUBSCRIBER_OUTPUT_PATH_D8	Directory path for DataSubscriberService Output	
ExceptionSubscriberService Output Path	EXCEPTIONSUBSCRIBER_OUTPUT_PATH_D8	Directory path for ExceptionSubscriberService For example: Output	
Itron Headend DataService Endpoint URI	Headend_DataService_D8	URL for Itron Headend DataService Endpoint For Example: http://localhost:port/soa-infra/services/Itron_Test/ItronTestHarness/DataService390	
Itron Headend DiagnosticService Endpoint URI	Headend_DiagnosticService_D8	URL for Itron Headend DiagnosticService Endpoint For Example: http://localhost:port/soa-infra/services/Itron_Test/ItronTestHarness/DiagnosticService390	

Menu Option	Name Used in this Documentation	Usage	Customer Install Value
Itron Headend UtilService Endpoint URI	Headend_UtilService_D8	URL for Itron Headend UtilService Endpoint For Example: http://localhost:port/soa-infra/services/Itron_Test/ItronTestHarness/UtilService	
Itron Headend ControlService Endpoint URI	Headend_ControlService_D8	URL for Itron Headend ControlService Endpoint For Example: http://localhost:port/soa-infra/services/Itron_Test/ItronTestHarness/ControlService39	
Itron Headend ProvisioningService Endpoint URI	Headend_ProvisioningService_D8	URL for Itron Headend ProvisioningService Endpoint For Example: http://localhost:port/soa-infra/services/Itron_Test/ItronTestHarness/ProvisioningService39	
Itron Headend ProvisioningService370 Endpoint URI	Headend_ProvisioningService370_D8	URL for Itron Headend ProvisioningService370 Endpoint For Example: http://localhost:port/soa-infra/services/Itron_Test/ItronTestHarness/ProvisioningService37	
Itron Headend ControlService370 Endpoint URI	Headend_ControlService370_D8	URL for Itron Headend ControlService370 Endpoint For Example: http://localhost:port/soa-infra/services/Itron_Test/ItronTestHarness/ControlService370	

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**
- **Oracle Linux 5.5, 5.8, or 6.2 or Red Hat Linux 5.5, 5.8, or 6.2 Application Server**
- **Solaris 10 Application Server**
- **Windows 2008 Application Server**

AIX 6.1 Application Server

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

Supported Application Servers

Operating System	Chipsets	Application Server
AIX 6.1 (64-bit) TL4	POWER 64-bit	Oracle WebLogic 11gR1 (10.3.5 or 10.3.6) 64-bit version

Web/Application Server Tier

AIX 6.1 TL4 Operating System Running on Power5 and Power6 Architecture

UNIX Administrator User ID

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

Description	Default Value	Customer Defined Value
Oracle Utilities 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 user ID 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 and 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 user ID (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 (10.3.5 or 10.3.6) 64-bit

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

- Download and install 64-bit Java (as documented above) before installing WebLogic.
- Download and install WebLogic Server 11gR1 (10.3.5 or 10.3.6).

Oracle Service Bus (11.1.1.5.0 or 11.1.1.6.0)

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 11.1.1.5.0 requires Oracle WebLogic Server 10.3.5.
> Oracle Service Bus 11.1.1.6.0 requires Oracle WebLogic Server 10.3.6.

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 (11.1.1.5.0 or 11.1.1.6.0)

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 Service Bus 11.1.1.5.0 requires Oracle WebLogic Server 10.3.5.
> Oracle Service Bus 11.1.1.6.0 requires Oracle WebLogic Server 10.3.6.

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, 5.8, or 6.2 or Red Hat Linux 5.5, 5.8, or 6.2 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, 5.8, or 6.2 (64-bit) Red Hat Enterprise Linux 5.5, 5.8, or 6.2 (64- bit)	x86_64	Oracle WebLogic 11gR1 (10.3.5 or 10.3.6) 64-bit version

Web/Application Server Tier

Oracle Linux 5.5, 5.8, or 6.2 or Red Hat Enterprise Linux 5.5, 5.8, or 6.2 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 user ID is the only one given access to the files installed.

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

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

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

```
set +o noclobber
```

Security Configuration

Various options exists to secure a system. In this application all files will be created with the minimum permissions required to ensure that group-readable, group-writable and group-executable files will have the correct user groups and to restrict the permissions available to legitimate users. In this way, a low privileged end user cannot directly edit configuration files and thereby bypass application security controls.

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

Please replace these users and groups for your installation defaults:

User	Group	Description
cissys	cisusr	This user will be used to install the application and to apply patches. This user will own all the application files. The same care should be taken with this user ID as if it is 'root'. This user will be able to add, delete and modify and 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 user ID 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 (10.3.5 or 10.3.6) 64-bit

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

- Download and install 64-bit Java (as documented above) before installing WebLogic.
- Download and install WebLogic Server 11gR1 (10.3.5 or 10.3.6).

Oracle Service Bus (11.1.1.5.0 or 11.1.1.6.0)

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 11.1.1.5.0 requires Oracle WebLogic Server 10.3.5.
Oracle Service Bus 11.1.1.6.0 requires Oracle WebLogic Server 10.3.6.

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 (11.1.1.5.0 or 11.1.1.6.0)

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 Service Bus 11.1.1.5.0 requires Oracle WebLogic Server 10.3.5.
Oracle Service Bus 11.1.1.6.0 requires Oracle WebLogic Server 10.3.6.

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 (10.3.5 or 10.3.6) 64-bit version

Web/Application Server Tier

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

UNIX Administrator User ID

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

Description	Default Value	Customer Defined Value
Oracle Utilities 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 user ID is the only one given access to the files installed.

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

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

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

```
set +o noclobber
```

Security Configuration

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

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

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

Please replace these users and groups for your installation defaults:

User	Group	Description
cissys	cisusr	This user will be used to install the application and to apply patches. This user will own all the application files. The same care should be taken with this user ID as if it is 'root'. This user will be able to add, delete and modify and 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 user ID 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 (10.3.5 or 10.3.6) 64-bit

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

- Download and install 64-bit Java (as documented above) before installing WebLogic.
- Download and install WebLogic Server 11gR1 (10.3.5 or 10.3.6).

Oracle Service Bus (11.1.1.5.0 or 11.1.1.6.0)

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 11.1.1.5.0 requires Oracle WebLogic Server 10.3.5.
> Oracle Service Bus 11.1.1.6.0 requires Oracle WebLogic Server 10.3.6.

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 (11.1.1.5.0 or 11.1.1.6.0)

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 Service Bus 11.1.1.5.0 requires Oracle WebLogic Server 10.3.5.
> Oracle Service Bus 11.1.1.6.0 requires Oracle WebLogic Server 10.3.6.

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 (10.3.5 or 10.3.6) 64-bit version

Web/Application Server Tier

Oracle Client 11.2.0.1 — Runtime Option

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

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

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

This software is required for the Oracle WebLogic Installation.

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

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

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

For the user ID 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

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 (10.3.5 or 10.3.6) 64-bit

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

- Download and install 64-bit Java (as documented above) before installing WebLogic.

- Download and install WebLogic Server 11gR1 (10.3.5 or 10.3.6).

Oracle Service Bus (11.1.1.5.0 or 11.1.1.6.0)

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 11.1.1.5.0 requires Oracle WebLogic Server 10.3.5.
Oracle Service Bus 11.1.1.6.0 requires Oracle WebLogic Server 10.3.6.

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 (11.1.1.5.0 or 11.1.1.6.0)

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 Service Bus 11.1.1.5.0 requires Oracle WebLogic Server 10.3.5.
Oracle Service Bus 11.1.1.6.0 requires Oracle WebLogic Server 10.3.6.

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**
- **Installing Oracle Utilities Application Framework Service Pack1**

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. Installing Oracle Utilities Application Framework
2. Installing Oracle Utilities Meter Data Framework
3. Installing Oracle Utilities Smart Grid Gateway

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

Once the Oracle Utilities Application Framework installation is successfully completed and the framework application environment is created, Oracle Utilities Smart Grid Gatewaythe 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, Mobility web app, and XAI web apps can be configured to access service processing locally (as in previous versions), or to make a remote EJB call to perform the service request. In the latter case, the served containers, effectively, run as very thin servlet wrappers around the remote call.

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

Copying and Decompressing Install Media

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

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

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

   This directory must be located outside any current or other working Oracle Utilities application environment. All files that are placed in this directory as a part of the installation can be deleted after completing a successful installation.
3. Copy the file FW-V4.1.0-MultiPlatform.jar 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 FW-V4.1.0-MultiPlatform.jar
```

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

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

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

Set Permissions for the cistab File in UNIX

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

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

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

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

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

Installing Oracle Utilities Application Framework

This section outlines the steps for installing the Application Framework.

Brief Description of the Installation Process

1. Log on as the Oracle Utilities Framework administrator (the default is cissys on UNIX) or as a user with Administrator privileges (on Windows).
2. Configure your application server and any third-party software required for your platform, as outlined in **Chapter 6: Installing Application Server Prerequisite Software**.
3. Change directory to the *<TEMPDIR>*/FW.V4.1.0 directory.
4. Set the ORACLE_CLIENT_HOME and path variables as Oracle client Perl is required to run the installer.

   UNIX:

   ```
   export ORACLE_CLIENT_HOME=<ORACLE CLIENT INSTALL LOCATION>
   export PERL_HOME=${ORACLE_CLIENT_HOME}/perl
   export PATH=${PERL_HOME}/bin:$PATH
   export PERL5LIB=${PERL_HOME}/lib:${PERL_HOME}/lib/site_perl:<OUAF
   Installer Decompressed location/bin/perlib>
   export PERLLIB=${PERL_HOME}/lib:${PERL_HOME}/lib/site_perl:<OUAF
   Installer Decompressed location/bin/perlib>
   export LD_LIBRARY_PATH=${ORACLE_CLIENT_HOME}/lib:$LD_LIBRARY_PATH
   ```

   Windows:

   ```
   set ORACLE_CLIENT_HOME=<ORACLE CLIENT INSTALL LOCATION>
   set PERL_HOME=%ORACLE_CLIENT_HOME%\perl
   set PATH=%PERL_HOME%\bin;%PATH%
   ```

5. Start the application installation utility by executing the appropriate script:

   UNIX: ksh ./install.sh

   Windows: install.cmd

6. Follow the messages and instructions that are produced by the application installation utility. Use the completed worksheets in the section **Application Framework Installation and Configuration Worksheets** to assist you.
7. Installation of Oracle Utilities Framework Application Server is complete if no errors occurred during installation.

Detailed Description of the Installation Process

1. Log on to the host server as Oracle Utilities Application Framework administrator.

   Logon as cissys (on UNIX) or as a user with Administrator privileges (on Windows).

2. Configure application server and third-party software.

   Complete all steps outlined in **Chapter 6: Installing Application Server Prerequisite Software**. You will need to obtain specific information for the install.

3. Change directory to the *<TEMPDIR>*/FW.V4.1.0 directory and start the application installation utility by executing the appropriate script:

   UNIX: ksh ./install.sh

   Windows: install.cmd

4. On the Environment Installation Options menu, select item 1: Third Party Software Configuration.

   Use the completed Third Party Software Configuration worksheet in **Application Framework Installation and Configuration Worksheets** to complete this step. Below are the mandatory lists of configurable items along with descriptions for a few items. Where you see <Mandatory>, enter values suitable to your environment. You can assign default values to the rest of the menu items.

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

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.
   - Below are the mandatory lists of configurable items along with descriptions for a few items.

```
50. Environment Installation Options
Environment Mount Point: <Mandatory> - Install Location
Log Files Mount Point:<Mandatory> - ThreadPoolWorker Logs
Location
Environment Name:<Mandatory>
Database Type: Oracle
Web Application Server Type: WLS
Install Application Viewer Module: true


    Each item in the above list should be configured for a
successful install.
    Choose option (1, 50, <P> Process, <X> Exit):
```

6. Once you enter 'P' after entering mandatory input values in the above menu, the system populates another configuration menu. See Application Framework Installation and Configuration Worksheets. During this step, the specification of a new environment is

checked for validity against /etc/cistab and the permissions on mount points and directories. Below are the mandatory lists of configurable items along with descriptions for a few items.

```
    ************************************************************
    * Environment Configuration *
    ************************************************************
        1. Environment Description
        Environment Description: <Mandatory>
        2. Business Application Server Configuration
        Business Server Host: <Mandatory> - Hostname on which
application being installed
        WebLogic Server Name: myserver
        Business Server Application Name: SPLService
        MPL Admin Port Number: <Mandatory> - Multipurpose Listener
        Port
        MPL Automatic startup: false

        3. Web Application Server Configuration
        Web Server Host: <Mandatory>
        Web Server Port Number: <Mandatory>
        Web Context Root: ouaf
        WebLogic JNDI User ID: <Mandatory>
        WebLogic JNDI Password: <Mandatory>
        WebLogic Admin System User ID: <Mandatory>
        WebLogic Admin System Password: <Mandatory>
        WebLogic Server Name: myserver
        Web Server Application Name: SPLWeb
        Application Admin User ID: <Mandatory>
        Application Admin Password: <Mandatory>
        Expanded Directories: false
        Application Viewer Module: true

        4. Database Configuration
        Application Server Database User ID: <Mandatory>
        Application Server Database Password: <Mandatory>
        MPL Database User ID: <Mandatory>
        MPL Database Password: <Mandatory>
        XAI Database User ID: <Mandatory>
        XAI Database Password: <Mandatory>
        Batch Database User ID: <Mandatory>
        Batch Database Password: <Mandatory>
        Database Name: <Mandatory>
        Database Server: <Mandatory>
        Database Port: <Mandatory>
        ONS Server Configuration:
        Database Override Connection String:
        Oracle Client Character Set NLS_LANG:
        5. General Configuration Options
        Batch RMI Port: <Mandatory> - RMI port for batch
        Batch Mode: <Mandatory> - CLUSTERED or DISTRIBUTED
        Coherence Cluster Name: <Mandatory> - Unique name for batch
        Coherence Cluster Address: <Mandatory> - Unique multicast
address
        Coherence Cluster Port: <Mandatory> - Unique port for batch
cluster
        Coherence Cluster Mode: <Mandatory> - prod
        Each item in the above list should be configured for a
successful install.
        Choose option (1,2,3,4,5, <P> Process, <X> Exit):
```

7. 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.**
- 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.

8. When you are done with the parameter setup, proceed with the option P. The utility writes the configured parameters and their values into the configuration file $ SPLEBASE/etc/ENVIRON.INI. 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.
9. Once the install has finished, the installation log location appears on the screen. If the log does not list any error messages, the installation of the application component of Oracle Utilities Application Framework is complete.
10. 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 %SPLEBSE%\etc for Windows) directory. This script sets up all the necessary environment variables and shell settings for the application server to function correctly.

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

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

  Note: Make sure that this directory exists. Otherwise the installation script will fail.
- $SPLENVIRON (%SPLENVIRON%) - environment name

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

UNIX: $SPLEBASE/bin/splenviron.sh -e $SPLENVIRON

Windows:%SPLEBASE%\bin\splenviron.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.

Installing Oracle Utilities Application Framework Service Pack1

This section outlines the steps for installing the Application Framework Service Pack1

Copying and Decompressing Install Media

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

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 Framework application environment. This can be the same <TEMPDIR> used during the installation of the Oracle Utilities Application Framework.

3. Copy the file FW-V4.1.0.1.0-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 FW-V4.1.0.1.0-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 sub-directory named FW.V4.1.0.1.0 is created. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application.

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 Framework Service Pack1

1. Change to the <TEMPDIR>/ FW.V4.1.0.1.0 directory.
2. Execute the script:

   UNIX:

   ```
   ksh ./installSP.sh
   ```
   Windows:

   ```
   installSP.cmd
   ```

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

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**
- **Installing Service Packs and Patches**

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

You must initialize the Framework environment along with the required set of patches prior to proceeding with the Oracle Utilities Meter Data Framework application installation. For detailed instructions see **Preparing for the Installation** on page 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 2.0.1.8.0. The patches are available as a convenience rollup, SGG-V2.0.0.8.0-FW-SP1-PREREQ-MultiPlatform.zip, 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.

> **Note:** Oracle Utilities Smart Grid Gateway Adapter for Itron OpenWay 2.0.0.8.0 requires additional Framework patch **14685786** on top of Framework SP1 Rollup. Please download the patch from https://support.oracle.com.

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-V2.0.1.8.0-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  MDF-V2.0.1.8.0-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 sub-directory named MDF.V2.0.1.8.0 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>/MDF.V2.0.1.8.0 directory.
2. Execute the script:

   UNIX:

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

   Windows:

   ```
   install.cmd
   ```

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

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

3. Select menu item 8 to configure OSB.

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

4. Select menu item 9 to configure SOA.

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

5. Select menu item 10 to configure the Bulk SOA.

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

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

7. Change to the <TEMPDIR>/MDF.V2.0.1.8.0 directory.
8. Execute the following command:

   UNIX:

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

   Windows:

   ```
   postinstall.cmd
   ```

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

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

Installing Service Packs and Patches

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

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

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

Chapter 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 Adapter for Sensus**
- **Installing the Adapter for Silver Spring Networks**
- **Installing the MV90 Adapter for Itron**
- **Installing the Adapter Development Kit**
- **Installing the Adapter for Itron OpenWay**
- **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/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 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 17 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 4-44.

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 postinstallation 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 Echelon**
- **Deploying the SOA 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 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
   ```

   Note: Use the following command if this is an upgrade from a previous version:

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

   This will not override any OSB custom changes

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
```

Note: Use the following command if this is an upgrade from a previous version:

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

This will not override any OSB custom changes

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>
```

   Note: Use the following command if this is an upgrade from a previous version:

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

   This will not override any OSB custom changes

   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
```

   Note: Use the following command if this is an upgrade from a previous version:

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

   This will not override any OSB custom changes

Deploying the SOA 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_MDF.xml
-Dserver.user=weblogic
-Dserver.password=weblogic123

    $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_MDF.xml -Dserver.user=weblogic
-Dserver.password=weblogic123

    %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-d1-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:

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

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

Windows:

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

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. 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

Security is managed through policies attached to the input and output points of each composite. More information on policies and their configuration can be found in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite*, Chapter 10: Configuring Policies.

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 **Creating the Security Credentials** on page 9-10.
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 **Creating the Security Credentials** on page 9-10.
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.
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.d1.sgg.soa.common.security.policy.Cre
dentialStorageFacilityAccessAssertationExecutor</
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: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: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" &amp;amp; "body"</
orawsp:Description>
                    <orawsp:Value>body</orawsp:Value>
                </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: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: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: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>
</orasp: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 postinstallation 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/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 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 16 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 4-44.
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 postinstallation 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 Landis+Gyr**
- **Deploying the SOA 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 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
```

   > **Note:** Use the following command if this is an upgrade from a previous version:

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

   This will not override any OSB custom changes

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
```

Note: Use the following command if this is an upgrade from a previous version:

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

This will not override any OSB custom changes

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>
   ```

   Note: Use the following command if this is an upgrade from a previous version:

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

   This will not override any OSB custom changes

   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>
   ```

   Note: Use the following command if this is an upgrade from a previous version:

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

   This will not override any OSB custom changes

Deploying the SOA Adapter for Landis+Gyr

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:

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

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

Windows:

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

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 adapter on the standalone WebLogic instance

UNIX:

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

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

Windows:

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

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

Security is managed through policies attached to the input and output points of each composite. More information on policies and their configuration can be found in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite*, Chapter 10: Configuring Policies.

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: s**gg.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 **Creating the Security Credentials** on page 9-22.
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 **Creating the Security Credentials** on page 9-22.
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.d1.sgg.soa.common.security.policy.Cre
dentialStorageFacilityAccessAssertationExecutor</
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: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: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" &amp;amp; "body"</
orawsp:Description>
                    <orawsp:Value>header</orawsp:Value>
                </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: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: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: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>
</orasp:SGGCredentialStoreInsertionXPath>
```

6. Save the policy.
7. Attach the policy to the MR_CB reference on the CommissionDecommission composite.
   - In Oracle Enterprise Manager, navigate to the **CommissionDecommission** composite.
   - From the **Attach To/Detach From** menu, select **MR_CB.**
   - In the Available Policies window, select the policy that you just created.
   - Click **Attach** to attach the policy to the MR_CB reference.
8. Attach the policy to the CD_CB reference on the ConnectDisconnect composite
   - Navigate to the **ConnectDisconnect** composite.
   - From the **Attach To/Detach From** menu, select **CD_CB.**
   - In the Available Policies window, select the policy that you just created.
   - Click **Attach** to attach the policy to the CD_CB reference.
9. Attach the policy to the MR_CB reference on the OnDemandRead composite.
   - Navigate to the **OnDemandRead** composite.
   - From the **Attach To/Detach From** menu, select **MR_CB.**
   - In the Available Policies window, select the policy that you just created.
   - Click **Attach** to attach the policy to the MR_CB 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 postinstallation steps.

Use the following utility to stop the environment:

UNIX: spl.sh stop

Windows: spl.cmd stop

Installing the Adapter for Sensus

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

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

Preinstallation Tasks for the Adapter for Sensus

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 2.0.1.6 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-D6-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-D6-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 D6.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/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 Adapter for Sensus

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

1. Change to the <TEMPDIR>/D6.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 18 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 4-44.

4. When you are done setting up the parameters, choose option P to proceed with the installation.
5. Change to the <TEMPDIR>/D6.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 postinstallation steps described below.

Postinstallation Tasks for the Adapter for Sensus

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

- **Deploying the OSB Adapter for Sensus**
- **Deploying the SOA Adapter for Sensus**
- **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 Sensus

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>:

```
d6-usage
d6-usage-arch
d6-usage-error
d6-event
d6-event-arch
d6-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_D6.xml
-Dadmin.user=weblogic -Dadmin.password=weblogic123
-Douaf.user=weblogic -Douaf.password=weblogic123
```

> **Note:** Use the following command if this is an upgrade from a previous version:

```
cd $SPLEBASE/osbapp
$SPLEBASE/product/apache-ant/bin/ant -buildfile deploy-osb_D6.xml
update_osb -Dadmin.user=weblogic -Dadmin.password=weblogic123
-Douaf.user=weblogic -Douaf.password=weblogic123
```

This will not override any OSB custom changes

Windows:

```
cd %SPLEBASE%\osbapp
%SPLEBASE%\product\apache-ant\bin\ant -buildfile deploy-osb_D6.xml
-Dadmin.user=weblogic -Dadmin.password=weblogic123
-Douaf.user=weblogic -Douaf.password=weblogic123
```

Note: Use the following command if this is an upgrade from a previous version:

```
cd %SPLEBASE%/osbapp
%SPLEBASE%/product/apache-ant/bin/ant -buildfile deploy-osb_D6.xml
update_osb -Dadmin.user=weblogic -Dadmin.password=weblogic123
-Douaf.user=weblogic -Douaf.password=weblogic123
```

This will not override any OSB custom changes

To Deploy on a Standalone WebLogic Instance

1. Create the following directories under <OSB_LOG_DIR>:

   ```
   d6-usage
   d6-usage-arch
   d6-usage-error
   d6-event
   d6-event-arch
   d6-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-d6-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 “D6-SystemModule”.
   - Under “D6-SystemModule” create a sub-deployment “D6-JMSFAServer” and target it to “OSB-JMSServer”.
   - Create the following JMS queues:

     Queue Name: DestinationQueue-D6

     JNDI Name: DestinationQueue-D6

     Sub-deployment: D6-JMSFAServer

     Targets: OSB-JMSServer

     Queue Name: NotificationQueue-D6

     JNDI Name: DestinationQueue-D6

     Sub-deployment: D6-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_D6.xml
   -Dadmin.user=<ADMIN_USER> -Dadmin.password=<ADMIN_PASSWORD>
   -Douaf.user=<JMS_USER> -Douaf.password=<JMS_PASSWORD>
   ```

   Note: Use the following command if this is an upgrade from a previous version:

   ```
   cd $SPLEBASE/osbapp
   $SPLEBASE/product/apache-ant/bin/ant -buildfile deploy-osb_D6.xml
   update_osb -Dadmin.user=weblogic -Dadmin.password=weblogic123
   -Douaf.user=weblogic -Douaf.password=weblogic123
   ```

   This will not override any OSB custom changes

   Windows:

   ```
   cd %SPLEBASE%\osbapp
   %SPLEBASE%\product\apache-ant\bin\ant -buildfile deploy-osb_D6.xml
   -Dadmin.user=<ADMIN_USER> -Dadmin.password=<ADMIN_PASSWORD>
   -Douaf.user=<JMS_USER> -Douaf.password=<JMS_PASSWORD>
   ```

   Note: Use the following command if this is an upgrade from a previous version:

   ```
   cd %SPLEBASE%/osbapp
   %SPLEBASE%/product/apache-ant/bin/ant -buildfile deploy-osb_D6.xml
   update_osb -Dadmin.user=weblogic -Dadmin.password=weblogic123
   -Douaf.user=weblogic -Douaf.password=weblogic123
   ```

   This will not override any OSB custom changes

Deploying the SOA Adapter for Sensus

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_MDF.xml
-Dserver.user=weblogic -Dserver.password=weblogic123

$SPLEBASE/product/apache-ant/bin/ant -buildfile deploy-soa_D6.xml
-Dserver.user=weblogic -Dserver.password=weblogic123
```

Windows:

```
cd %SPLEBASE%\soaapp

%SPLEBASE%\product\apache-ant\bin\ant -buildfile
deploy-soa_MDF.xml -Dserver.user=weblogic -
Dserver.password=weblogic123

%SPLEBASE%\product\apache-ant\bin\ant -buildfile deploy-soa_D6.xml
-Dserver.user=weblogic -Dserver.password=weblogic123
```

To Deploy on a Standalone WebLogic Instance

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

UNIX:

```
cd $SPLEBASE/soaapp

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

$SPLEBASE/product/apache-ant/bin/ant -buildfile deploy-soa_D6.xml
-Dserver.user=<ADMIN_USER> -Dserver.password=<ADMIN_PASSWORD>
```

Windows:

```
cd %SPLEBASE%\soaapp

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

%SPLEBASE%\product\apache-ant\bin\ant -buildfile deploy-soa_D6.xml
-Dserver.user=<ADMIN_USER> -Dserver.password=<ADMIN_PASSWORD>
```

Configuring Security for the SOA System

Security is managed through policies attached to the input and output points of each composite. More information on policies and their configuration can be found in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite*, Chapter 10: Configuring Policies.

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.d6.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: s**gg.d6.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 **Creating the Security Credentials** on page 9-34.
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 **Creating the Security Credentials** on page 9-34.
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_Sensus" 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.d1.sgg.soa.common.security.policy.Cre
dentialStorageFacilityAccessAssertationExecutor</
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: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: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" &amp;amp; "body"</
orawsp:Description>
                    <orawsp:Value>header</orawsp:Value>
                </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_4.1_Release</orawsp:Value/>
                </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: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: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>
</orasp:SGGCredentialStoreInsertionXPath>
```

6. Save the policy.
7. Attach the policy to the MR_Server reference on the Common composite.
    - In Oracle Enterprise Manager, navigate to the **Sensus/Common** composite.
    - Navigate to the Policies tab.
    - From the **Attach To/Detach From** menu, select **MR_Server.**
    - In the Attached Policies window, select the oracle/wss_http_token_client_policy.
    - Click **Detach** to remove the default security policy.
    - In the Available Policies window, select the policy that you just created.
    - Click **Attach** to attach the policy to the MR_Server reference.
8. Attach the policy to the CD_Server reference on the Common composite.
    - Navigate to the **Sensus/Common** composite.
    - Navigate to the Policies tab.
    - From the **Attach To/Detach From** menu, select **CD_Server.**
    - In the Attached Policies window, select the oracle/wss_http_token_client_policy.
    - Click **Detach** to remove the default security policy.
    - In the Available Policies window, select the policy that you just created.
    - Click **Attach** to attach the policy to the CD_Server reference.
9. Attach the policy to the OD_Server reference on the Common composite.
    - Navigate to the **Sensus/Common** composite.
    - Navigate to the Policies tab.
    - From the **Attach To/Detach From** menu, select **OD_Server.**
    - In the Attached Policies window, select the oracle/wss_http_token_client_policy.
    - Click **Detach** to remove the default security policy.
    - In the Available Policies window, select the policy that you just created.
    - Click **Attach** to attach the policy to the OD_Server 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 postinstallation steps.

   Use the following utility to stop the environment:

   UNIX: spl.sh stop

   Windows: spl.cmd stop

Installing the Adapter for Silver Spring Networks

This section describes the installation of the Adapter for Silver Spring Networks, including:

- **Preinstallation Tasks for the Adapter for Silver Spring Networks**
- **Installing the Adapter for Silver Spring Networks**
- **Postinstallation Tasks for the Adapter for Silver Spring Networks**

Preinstallation Tasks for the Adapter for Silver Spring Networks

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 2.0.1.7 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-D7-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-D7-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 D7.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/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 Adapter for Silver Spring Networks

To install the Oracle Utilities Smart Grid Gateway Adapter for Silver Spring Networks:

1. Change to the <TEMPDIR>/D7.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 19 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 4-44.
4. Select menu item 20 to configure the JMS source destination bridge.

   Use the completed SOA configuration worksheet to assist you in this step. See **Smart Grid Gateway Installation and Configuration Worksheets** on page 4-44.
5. Select menu item 70 to configure the test harness.

   Use the completed SOA configuration worksheet to assist you in this step. See **Smart Grid Gateway Installation and Configuration Worksheets** on page 4-44.
6. When you are done setting up the parameters, choose option P to proceed with the installation.
7. Change to the <TEMPDIR>/D7.V2.0.0 directory
8. Execute the following command:

UNIX:

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

Windows:

```
postinstall.cmd
```

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

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

Postinstallation Tasks for the Adapter for Silver Spring Networks

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

- **Deploying the OSB Adapter for Silver Spring Networks**
- **Deploying the SOA Adapter for Silver Spring Networks**
- **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 Silver Spring Networks

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>:

```
d7-csv
d7-csv-arch
d7-csv-error
d7-ssnxml
d7-ssnxml-arch
d7-ssnxml-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_D7.xml
   -Dadmin.user=weblogic -Dadmin.password=weblogic123
   -Douaf.user=weblogic -Douaf.password=weblogic123
   ```

   Note: Use the following command if this is an upgrade from a previous version:

   ```
   cd $SPLEBASE/osbapp
   $SPLEBASE/product/apache-ant/bin/ant -buildfile deploy-osb_D7.xml
   update_osb -Dadmin.user=weblogic -Dadmin.password=weblogic123
   -Douaf.user=weblogic -Douaf.password=weblogic123
   ```

   This will not override any OSB custom changes

   Windows:

   ```
   cd %SPLEBASE%\osbapp
   %SPLEBASE%\product\apache-ant\bin\ant -buildfile deploy-osb_D7.xml
   -Dadmin.user=weblogic -Dadmin.password=weblogic123
   -Douaf.user=weblogic -Douaf.password=weblogic123
   ```

   Note: Use the following command if this is an upgrade from a previous version:

   ```
   cd %SPLEBASE%/osbapp
   %SPLEBASE%/product/apache-ant/bin/ant -buildfile deploy-osb_D7.xml
   update_osb -Dadmin.user=weblogic -Dadmin.password=weblogic123
   -Douaf.user=weblogic -Douaf.password=weblogic123
   ```

   This will not override any OSB custom changes

To Deploy on a Standalone WebLogic Instance

1. Create the following directories under <OSB_LOG_DIR>:

   ```
   d7-csv
   d7-csv-arch
   d7-csv-error
   d7-ssnxml
   d7-ssnxml-arch
   d7-ssnxml-error
   ```

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

   ```
   spl-d1-osb-2.0.1.7.jar
   spl-d7-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-JMSServe” and target it to admin server.

- Create a JMS module D7-SystemModule.
- Under D7-SystemModule create a sub-deployment D7-JMSFAServer and target it to OSB-JMSServer.
- Create the following JMS queues:

  Queue Name: DestinationQueue-D7

  JNDI Name: DestinationQueue-D7

  Sub-deployment: D7-JMSFAServer

  Targets: OSB-JMSServer

  Queue Name: NotificationQueue-D7

  JNDI Name: DestinationQueue-D7

  Sub-deployment: D7-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_D7.xml
-Dadmin.user=<ADMIN_USER> -Dadmin.password=<ADMIN_PASSWORD>
-Douaf.user=<JMS_USER> -Douaf.password=<JMS_PASSWORD>
```

   Note: Use the following command if this is an upgrade from a previous version:

```
cd $SPLEBASE/osbapp
$SPLEBASE/product/apache-ant/bin/ant -buildfile deploy-osb_D7.xml
update_osb -Dadmin.user=weblogic -Dadmin.password=weblogic123
-Douaf.user=weblogic -Douaf.password=weblogic123
```

   This will not override any OSB custom changes

   Windows:

```
cd %SPLEBASE%\osbapp
%SPLEBASE%\product\apache-ant\bin\ant -buildfile deploy-osb_D7.xml
-Dadmin.user=<ADMIN_USER> -Dadmin.password=<ADMIN_PASSWORD>
-Douaf.user=<JMS_USER> -Douaf.password=<JMS_PASSWORD>
```

   Note: Use the following command if this is an upgrade from a previous version:

```
cd %SPLEBASE%/osbapp
%SPLEBASE%/product/apache-ant/bin/ant -buildfile deploy-osb_D7.xml
update_osb -Dadmin.user=weblogic -Dadmin.password=weblogic123
-Douaf.user=weblogic -Douaf.password=weblogic123
```

   This will not override any OSB custom changes

Deploying the SOA Adapter for Silver Spring Networks

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_MDF.xml
   -Dserver.user=weblogic -Dserver.password=weblogic123

   $SPLEBASE/product/apache-ant/bin/ant -buildfile deploy-soa_D7.xml
   -Dserver.user=weblogic -Dserver.password=weblogic123
   ```

   Windows:

   ```
   cd %SPLEBASE%\soaapp

   %SPLEBASE%\product\apache-ant\bin\ant -buildfile
   deploy-soa_MDF.xml -Dserver.user=weblogic
   -Dserver.password=weblogic123

   %SPLEBASE%\product\apache-ant\bin\ant -buildfile deploy-soa_D7.xml
   -Dserver.user=weblogic -Dserver.password=weblogic123
   ```

To Deploy on a Standalone WebLogic Instance

1. Create WebLogic SOA Domain and select Enterprise Manger option also.
2. Copy the following jar file to the lib folder under the WebLogic domain directory, spl-d1-soa-security.jar

   This jar is present under the following location:

   UNIX: $SPLEBASE/etc/lib

   Windows: %SPLEBASE%\etc\lib

3. Append following XML snippet to <MIDDLEWARE_HOME>\user_projects\domains\SGG_2007_SOADomain\config\fmwconfig\system-jazn-data.xml

```
<grant>
<grantee>
<codesource>
<url>file:${domain.home}/lib/spl-d1-soa-security.jar</url>
<codesource>
</grantee>
<permissions>
<permission>
    <class>oracle.security.jps.service.credstore.
    CredentialAccessPermission</class
<name>context=SYSTEM,mapName=*,keyName=*</name>
<actions>*</actions>
</permission>
</permissions>
<permission-set-refs>
</permission-set-refs>
</grant>
```

4. Start the standalone WebLogic instance.
5. Deploy jms-notran-adp.rar file as an application deployment from <WL_HOME>/wlserver_10.3/server/lib folder.
6. Create JMS queues and target them to the SOA managed server:
   a. Create a JMS Server:
      - Under Domain Structure, navigate to **Services, Messaging, JMS Servers**
      - On the JMS Servers Page, Click on **New**.
      - On the Create a New JMS Server page:
        - Provide a name for your JMS Server, for example, SSN-JMSServer.
        - Select a Persistent Store to SOAJMSFileStore, click **Next**
        - On the next screen, select the SOA_Server as Target Server instance where you would like to deploy this JMS Server.
        - Select the Target Server from the dropdown list and click **Finish** to complete the JMS server creation. Make sure you activate the changes.
      - You should now find your new JMS Server in the JMS Servers List.
   b. Create a JMS Module.
      - On the Create JMS System Module screen, enter name, for example, SSN-SystemModule (You can leave other fields empty if you want.)
      - Select the SOA Server you would like to target (ideally, this would be the same server that is hosting the JMS server you created above). For example, soa_server1
      - On the next screen click **Finish and Activate changes.**
   c. Create Queues:
      - Click on **New** in JMS Module to create the Queue.
      - Provide a name (for example, SSNTestSSNODRQ) and a JNDI name (for example, queue/SSNTestSSNODRQ).
      - Select a subdeployment (for example, SSN-JMSFAServer) if you already created or follow below steps to create a new subdeployment. (A subdeployment is a convenient way for grouping and targeting JMS module resources.)

- Provide a name for the subdeployment (E.g. SSN-JMSFAServer) and click **OK.**
- Select the target JMS Server we created (E.g. SSN-JMSServer) and Click **finish**.
- Click on **New** in JMS Module to create the Queue.
- Provide a name (e.g., SSNODRQ) and a JNDI name (e.g., queue/SSNODRQ)
- Select a subdeployment (for example, SSN-JMSFAServer) if you already created or follow below steps to create a New Subdeployment.(A subdeployment is a convenient way for grouping and targeting JMS module resources.)
- Provide a name for the subdeployment (for example, SSN-JMSFAServer) and click **OK**.
- Select the target JMS Server we created (for example, SSN-JMSServer) and Click **finish**.

d. Create JMS Connection Factory

- Click on **New** in JMS Module to create the Connection factory
- Give the Connection factory a name (for example, SSNTestHarnessConnectionFactory and JNDI name (for example, jms/SSNTestHarnessConnectionFactory). Click **Next**.
- Select **Advance Targeting** and on the next page select the subdeployment you created above (SSN-JMSFAServer). Wait for the page to refresh and click on **Finish**.
- Click on **New** in JMS Module to create the Connection factory.
- Give the Connection factory a name (for example, SSNConnectionFactory) and JNDI name (for example, jms/SSNConnectionFactory). Click **Next.**
- Select **Advance Targeting** and on the next page select the subdeployment you created above (SSN-JMSFAServer). Wait for the page to refresh and click **Finish**.

e. Create a Source JMS Bridge Destination:

- Under Domain Structure, navigate to **Services, Messaging, Bridge, JMS Bridge Destinations**
- On the JMS Bridge Destinations Page, Click on **New** button. On the Create a New JMS Bridge Destination page:
  - Provide a name for your JMS Bridge destination SSNTestHarnessBridgeDestination.
  - Select Adapter JNDI named eis.jms.WLSConnectionFactoryJNDINoTX.
  - Provide Initial Context Factory as weblogic.jndi.WLInitialContextFactory.
  - Provide Connection URL as t3://@SSN_UIQ_HOST@:@SSN_UIQ_PORT@. For example t3://tudevwp0169.us.oracle.com:8001
  - Provide Connection Factory JNDI name as jms/SSNTestHarnessConnectionFactory
  - Provide Destination JNDI name as queue/SSNTestSSNODRQ
  - Select Destination type as queue
  - Provide username.
  - Provide password.
  - Confirm the password

Note: Once you created JMS Bridge Destination, Click on Services > Messaging > Bridge > JMS Bridge Destinations > SSNSOABridgeDestination.

- On the SSNSOABridgeDestination page, Enter username and password values, Click **Save**.

f. Create a Target JMS Bridge Destination

- Under Domain Structure, navigate to **Services, Messaging, Bridge, JMS Bridge Destinations.**
- On the JMS Bridge Destinations Page, Click **New**. On the Create a New JMS Bridge Destination page:
  - Provide a name for your JMS Bridge destination SSNSOABridgeDestination.
  - Select Adapter JNDI name as eis.jms.WLSConnectionFactoryJNDINoTX.
  - Provide Initial Context Factory as weblogic.jndi.WLInitialContextFactory.
  - Provide Connection URL as t3://@SOA_HOST@:@SOA_PORT_NUMBER.
  - Provide Connection Factory JNDI name as jms/SSNConnectionFactory"
  - Provide Destination JNDI name as queue/SSNODRQ.
  - Select Destination type as queue.

Note: Once you created JMS Bridge Destination, navigate to **Services, Messaging, Bridge, JMS Bridge Destinations, SSNSOABridgeDestination**.

- On the SSNSOABridgeDestination page, Enter username and password values, Click Save.

g. Create a Bridge:

- Under Domain Structure, navigate to **Services, Messaging, Bridges On the Bridges Page.** Click on **New** button. On the Create a New Bridge page:
  - Provide a name for Bridge as SSNODRQBridge.
  - Select Quality of Service as At most-Once.
  - Check Started.
  - Click **Next.**
  - Select Source Bridge Destination as SSNTestHarnessBridgeDestination.
  - Select Messaging Provider as WebLogic Server 7.0 or Higher.

Note: In real time depending on SSN environment this should be changed

- Select Target Bridge Destination as SSNSOABridgeDestination.
- Select Messaging Provider as Weblogic Server 7.0 or Higher.
- Select server as soa_server1.

Note: Any web logic managed server

- Click **Finish**.

7. Deploy the SOA adapter on the standalone WebLogic instance

Note: Modify the SOA Host Server, SOA Port Number, SOA Weblogic User Name, SOA Weblogic User Password menu items according to Standalone domain using SOA Configuration Menu item 9.

UNIX:

```
cd $SPLEBASE/soaapp

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

$SPLEBASE/product/apache-ant/bin/ant -buildfile deploy-soa_D7.xml
-Dserver.user=<ADMIN_USER> -Dserver.password=<ADMIN_PASSWORD>
```

Windows:

```
cd %SPLEBASE%\soaapp

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

%SPLEBASE%\product\apache-ant\bin\ant -buildfile deploy-soa_D7.xml
-Dserver.user=<ADMIN_USER> -Dserver.password=<ADMIN_PASSWORD>
```

Configuring Security for the SOA System

Security is managed through policies attached to the input and output points of each composite. More information on policies and their configuration can be found in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite*, Chapter 10: Configuring Policies.

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.d7.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: s**gg.d7.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 establishing a secure socket layer communications channel to the head end system. These configuration tasks are described in the following sections:

- **Creating the Security Credentials**
- **Attaching Secure Socket Layer (SSL) Policies**

Creating the Security Credentials

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.d7.ssn.credentials
    - **Type:** Password
    - **Username:** A valid WebLogic user name
    - **Password:** A valid WebLogic password
5. Click OK.

Attaching Secure Socket Layer (SSL) Policies

Silver Springs Networks accepts SSL transmissions to secure web service calls to their head-end system. Oracle web service references communicating with the head-end system include OWSM policies that implement HTTPS over SSL. The following services are all contained in the Common composite:

- JobManager
- DeviceManager

- DataAggregation
- DeviceResults

Each of these is configured to use the credential created above that uses the "sgg.d7.ssn.credentials" key.

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 postinstallation 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/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 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 Adapter for the MV90**

- **Starting the Application**

Deploying the OSB Adapter for the MV90

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>:

```
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 adapter 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
```

Note: Use the following command if this is an upgrade from a previous version:

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

This will not override any OSB custom changes

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
```

Note: Use the following command if this is an upgrade from a previous version:

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

This will not override any OSB custom changes

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-JMSServer" 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-JMSServer".
   - Create the following JMS queues:

     Queue Name: DestinationQueue-D5

     JNDI Name: DestinationQueue-D5

     Sub-deployment: D5-JMSFAServer

     Targets: OSB-JMSServer

     Queue Name: NotificationQueue-D5

     JNDI Name: DestinationQueue-D5

     Sub-deployment: D5-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_MV90.xml -Dadmin.user=<ADMIN_USER>
   -Dadmin.password=<ADMIN_PASSWORD> -Douaf.user=<JMS_USER>
   -Douaf.password=<JMS_PASSWORD>
   ```

   Note: Use the following command if this is an upgrade from a previous version:

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

   This will not override any OSB custom changes

   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>
   ```

   Note: Use the following command if this is an upgrade from a previous version:

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

   This will not override any OSB custom changes

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 postinstallation steps.

Use the following utility to stop the environment:

UNIX: spl.sh stop

Windows: spl.cmd stop

Installing the Adapter Development Kit

This section describes the installation of the Adapter Development Kit, including:

- **Preinstallation Tasks for the Adapter Development Kit**
- **Installation Tasks for the Adapter Development Kit**
- **Postinstallation Tasks for the Adapter Development Kit**

Preinstallation Tasks for the Adapter Development Kit

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**

Installation Prerequisite

The Oracle Utilities Meter Data Framework 2.0.1.8.0 application must be installed prior to installing Oracle Utilities Adapter Development Kit 2.0.0.8.0

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-DG-V2.0.0.8.0-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-DG-V2.0.0.8.0-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 DG.V2.0.0.8.0 is created. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application product.

Installation Tasks for the Adapter Development Kit

This section describes the installation of the Adapter Development Kit, including:

- **Initializing the Meter Data Framework**
- **Installing the Adapter Development Kit**

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/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 Adapter Development Kit

To install the Oracle Utilities Smart Grid Gateway Adapter Development Kit:

1. Change to the <TEMPDIR>/DG.V2.0.0.8.0 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 21 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 4-46.

4. When you are done setting up the parameters, choose option P to proceed with the installation.
5. Change to the <TEMPDIR>/DG.V2.0.0.8.0 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 postinstallation steps described below.

Postinstallation Tasks for the Adapter Development Kit

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

- **Deploying the OSB Adapter for the Adapter Development Kit**
- **Deploying the SOA Adapter for the Adapter Development Kit**
- **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 Development Kit

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>:

```
dg-csv-error
dg-csv-arch
dg-csv
dg-xml
dg-xml-error
dg-xml-arch
```

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_DG.xml -
Dadmin.user=<OSB_Server_Username> -Dadmin.password=<
OSB_Server_Password> -Douaf.user=<JMS_USER> -
Douaf.password=<JMS_PASSWORD>
```

   > **Note:** Use the following command if this is an upgrade from a previous version:

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

   This will not override any OSB custom changes

Windows:

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

Note: Use the following command if this is an upgrade from a previous version:

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

This will not override any OSB custom changes

To Deploy on a Standalone WebLogic Instance

1. Create the following directories under <OSB_LOG_DIR>:

   ```
   dg-csv-error
   dg-csv-arch
   dg-csv
   dg-xml
   dg-xml-error
   dg-xml-arch
   ```

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

   ```
   spl-d1-osb-2.0.1.8.0.jar
   spl-dg-osb-2.0.0.8.0.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 osb managed server.

   Create a JMS module "DG-SystemModule"

   Under "DG-SystemModule" create a sub-deployment "DG-JMSFAServer" and target it to "OSB-JMSServer"

- Create the following JMS queues:

  Queue Name: DestinationQueue-DG

  JNDI Name: DestinationQueue-DG

  Sub-deployment: DG-JMSFAServer

  Targets: OSB-JMSServer

  Queue Name: NotificationQueue-DG

  JNDI Name: DestinationQueue-DG

  Sub-deployment: DG-JMSFAServer

  Targets: OSB-JMSServer

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

Note:- Modify the OSB Host Server,OSB Port Number according to Stnadalone domain using "OSB Configuration Menu item 8".

UNIX:

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

Note: Use the following command if this is an upgrade from a previous version:

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

This will not override any OSB custom changes

Windows:

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

Note: Use the following command if this is an upgrade from a previous version:

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

This will not override any OSB custom changes

Deploying the SOA Adapter for the Adapter Development Kit

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_MDF.xml
-Dserver.user=weblogic -Dserver.password=weblogic123

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

Windows:

```
cd %SPLEBASE%\soaapp

%SPLEBASE%\product\apache-ant\bin\ant -buildfile
deploy-soa_MDF.xml Dserver.user=weblogic
-Dserver.password=weblogic123

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

3. Deploy the TestHarness SOA composites on example WebLogic instance.

UNIX:

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

Windows:

Note: Open the command prompt as Administrative mode and then select the environment to deploy soa

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

4. Import the Policy Templates and Policies.

a. First, import the two policy template files using Enterprise Manager.

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

ii. Right click on the domain and navigate to **Web Services, Policies.**

iii. Click on **Web Services Assertion Templates** at the top of the page

iv. Click on **Import From File** and import the following templates:

- sgg_d1_csf_access_client_custom_template.xm
- sgg_d1_csf_access_client_xpath_template.xml

These files are located in the following directory:

UNIX: $SPLEBASE/soaapp

Windows: %SPLEBASE%\soaapp

b. Next import the "sgg_dg_cfs_multispeak_header_client_policy.xml" policy file ($SPLEBASE/soaapp) using Enterprise Manager.

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

ii. Right click on the domain and navigate to **Web Services, Policies.**

iii. Click on **Import From File** and import the following template:

- sgg_dg_cfs_multispeak_header_client_policy.xml

This file is located in the following directory:

UNIX: $SPLEBASE/soaapp

Windows: %SPLEBASE%\soaapp

To Deploy on a Standalone WebLogic Instance

1. Create WebLogic SOA Domain and select Enterprise Manger option also.

2. Copy the following jar file to the lib folder under the WebLogic domain directory, spl-d1-soa-security.jar

This jar is present under the following location:

UNIX: $SPLEBASE/etc/lib

Windows: %SPLEBASE%\etc\lib

3. Append following XML snippet to

```
<MIDDLEWARE_HOME>\user_projects\domains\<SOA
Domain>\config\fmwconfig\system-jazn-data.xml
<grant>
<grantee>
<codesource>
 <url>file:${domain.home}/lib/spl-d1-soa-security.jar</url>
<codesource>
</grantee>
<permissions>
<permission>

<class>oracle.security.jps.service.credstore.CredentialAccessPermissio
n</class
<name>context=SYSTEM,mapName=*,keyName=*</name>
<actions>*</actions>
</permission>
</permissions>
<permission-set-refs>
</permission-set-refs>
</grant>
```

4. Start the standalone WebLogic instance.

5. Deploy the SOA cartridge on the standalone WebLogic instance

Note:- Modify the SOA Host Server, SOA Port Number, SOA Weblogic User Name, SOA Weblogic User Password and Endpoint URLs menu items according to Standalone domain using "SOA Configuration Menu item 9".

UNIX:

```
cd $SPLEBASE/soaapp

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

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

Windows:

```
cd %SPLEBASE%\soaapp

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

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

6. Deploy the TestHarness SOA composites on the standalone WebLogic instance.

UNIX:

```
cd $SPLEBASE/soaapp

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

Windows:

```
    cd %SPLEBASE%\soaapp

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

7. Before SOA composites deployment, import the Policy Templates and Policies.

a. First, import the two policy template files using Enterprise Manager.

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

ii. Right click on the domain and navigate to **Web Services, Policies.**

iii. Click on **Web Services Assertion Templates** at the top of the page

iv. 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

b. Next, import the "sgg_dg_cfs_multispeak_header_client_policy.xml" policy file ($SPLEBASE/soaapp) using Enterprise Manager.

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

ii. Right click on the domain and navigate to **Web Services, Policies.**

iii. Click on **Import From File** and import the following templates

- sgg_dg_cfs_multispeak_header_client_policy.xml

The file is located in the following directory:

UNIX: $SPLEBASE/soaapp

Windows: %SPLEBASE%\soaapp

Configuring Security for the SOA System

Security is managed through policies attached to the input and output points of each composite. More information on policies and their configuration can be found in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite*, Chapter 10: Configuring Policies.

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.dg.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: s**gg.dg.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

The ADK Test Harness is a frequently-used substitute for a real head-end System. Some specific settings highlighted below will facilitate connecting to and using the Test Harness.

Creating Security Credentials

Configuring security for the SOA system involves creating the security credentials in Oracle Enterprise Manager.

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**.

By default, the sgg_dg_cfs_multispeak_header_client_policy policy imported previously uses a Credential Map named "dg.security" and a Credential Key called "dg.credentials." Use these values unless making changes to the template values.

> **Test Harness Note:** By default, the Test Harness expects a user name of "MultiSpeakUserID" and a password of "MultiSpeakPwd."

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 postinstallation steps.

   Use the following utility to stop the environment:

   UNIX: spl.sh stop

   Windows: spl.cmd stop

Installing the Adapter for Itron OpenWay

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

- **Preinstallation Tasks for the Adapter for Itron OpenWay**
- **Installing Tasks for the Adapter for Itron OpenWay**
- **Postinstallation Tasks for the Adapter for Itron OpenWay**

Preinstallation Tasks for the Adapter for Itron OpenWay

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**

Installation Prerequisite

The Oracle Utilities Meter Data Framework 2.0.1.8.0 application must be installed prior to installing Oracle Utilities Smart Grid Gateway Adapter for Itron OpenWay 2.0.0.8.0.

Oracle Utilities Smart Grid Gateway Adapter for Itron OpenWay 2.0.0.8.0 requires additional Oracle Utilities Meter Data Framework patches **14739746** and **14775734.** Please download the patches from https://support.oracle.com.

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-D8-V2.0.0.8.0-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-D8-V2.0.0.8.0-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 D8.V2.0.0.8.0 is created. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application product.

Installing Tasks for the Adapter for Itron OpenWay

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

- **Initializing the Meter Data Framework**
- **Installing the Adapter for Itron OpenWay**

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/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 Adapter for Itron OpenWay

To install the Oracle Utilities Smart Grid Gateway Adapter for Itron OpenWay:

1. Change to the <TEMPDIR>/D8.V2.0.0.8.0 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 22 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 4-46.

4. When you are done setting up the parameters, choose option P to proceed with the installation.

5. Change to the <TEMPDIR>/D8.V2.0.0.8.0 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 Itron OpenWay

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

- **Deploying the OSB Adapter for the Itron OpenWay**
- **Deploying the SOA Adapter for the Itron OpenWay**
- **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 Itron OpenWay

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>:

```
itronxml
itronxml-arch
itronxml-error
itronexcpetion
itronexception-arch
itronexception-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_D8.xml -
Dadmin.user=<OSB_Server_Username> -Dadmin.password=<
OSB_Server_Password> -Douaf.user=<JMS_USER> -
Douaf.password=<JMS_PASSWORD>
```

> **Note:** Use the following command if this is an upgrade from a previous version:

```
cd $SPLEBASE/osbapp
$SPLEBASE/product/apache-ant/bin/ant -buildfile deploy-osb_D8.xml
update_osb -Dadmin.user=weblogic -Dadmin.password=weblogic123
-Douaf.user=weblogic -Douaf.password=weblogic123
```

This will not override any OSB custom changes

Windows:

```
cd %SPLEBASE%\osbapp
%SPLEBASE%\product\apache-ant\bin\ant -buildfile deploy-osb_D8.xml
-Dadmin.user=<OSB_Server_Username> -Dadmin.password=<
OSB_Server_Password> -Douaf.user=<JMS_USER> -
Douaf.password=<JMS_PASSWORD>
```

Note: Use the following command if this is an upgrade from a previous version:

```
cd %SPLEBASE%/osbapp
%SPLEBASE%/product/apache-ant/bin/ant -buildfile deploy-osb_D8.xml
update_osb -Dadmin.user=weblogic -Dadmin.password=weblogic123
-Douaf.user=weblogic -Douaf.password=weblogic123
```

This will not override any OSB custom changes

To Deploy on a Standalone WebLogic Instance:

1. Create the following directories under <OSB_LOG_DIR>:

```
itronxml
itronxml-arch
itronxml-error
itronexcpetion
itronexception-arch
itronexception-error
```

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

```
spl-d1-osb-2.0.1.8.0.jar spl-d8-osb-2.0.0.8.0.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 osb managed server. Create a JMS module "D8-SystemModule"

Under "D8-SystemModule" create a sub-deployment "D8-JMSFAServer" and target it to "OSB-JMSServer"

Create the following JMS queues:

Queue Name: DestinationQueue-D8

JNDI Name: DestinationQueue-D8

Sub-deployment: D8-JMSFAServer

Targets: OSB-JMSServer

Queue Name: NotificationQueue-D8

JNDI Name: DestinationQueue-D8

Sub-deployment: D8-JMSFAServer

Targets: OSB-JMSServer

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

> **Note**: Modify the OSB Host Server,OSB Port Number according to Stnadalone domain using "OSB Configuration Menu item 8".

UNIX:

```
cd $SPLEBASE/osbapp
$SPLEBASE/product/apache-ant/bin/ant -buildfile deploy-osb_D8.xml -
Dadmin.user=<OSB_ADMIN_USER> - Dadmin.password=<OSB_ADMIN_PASSWORD>
-Douaf.user=<JMS_USER> -Douaf.password=<JMS_PASSWORD>
```

> **Note:** Use the following command if this is an upgrade from a previous version:

```
cd $SPLEBASE/osbapp
$SPLEBASE/product/apache-ant/bin/ant -buildfile deploy-osb_D8.xml
update_osb -Dadmin.user=weblogic -Dadmin.password=weblogic123
-Douaf.user=weblogic -Douaf.password=weblogic123
```

This will not override any OSB custom changes

Windows:

```
cd %SPLEBASE%\osbapp
%SPLEBASE%\product\apache-ant\bin\ant -buildfile deploy-osb_D8.xml
-Dadmin.user=<OSB_ADMIN_USER> - Dadmin.password=<OSB_ADMIN_PASSWORD> -
Douaf.user=<JMS_USER> - Douaf.password=<JMS_PASSWORD>
```

> **Note:** Use the following command if this is an upgrade from a previous version:

```
cd %SPLEBASE%/osbapp
%SPLEBASE%/product/apache-ant/bin/ant -buildfile deploy-osb_D8.xml
update_osb -Dadmin.user=weblogic -Dadmin.password=weblogic123
-Douaf.user=weblogic -Douaf.password=weblogic123
```

This will not override any OSB custom changes

Deploying the SOA Adapter for the Itron OpenWay

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 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_MDF.xml
 -Dserver.user=weblogic -Dserver.password=weblogic123

$SPLEBASE/product/apache-ant/bin/ant -buildfile deploy-soa_D8.xml
-Dserver.user=weblogic -Dserver.password=weblogic123
```

Windows:

```
cd %SPLEBASE%\soaapp

%SPLEBASE%\product\apache-ant\bin\ant -buildfile
deploy-soa_MDF.xml -Dserver.user=weblogic
-Dserver.password=weblogic123

%SPLEBASE%\product\apache-ant\bin\ant -buildfile deploy-soa_D8.xml
-Dserver.user=weblogic -Dserver.password=weblogic123
```

3. Deploy the TestHarness SOA composites on example WebLogic instance.

UNIX:

```
cd $SPLEBASE/soaapp
$SPLEBASE/product/apache-ant/bin/ant -buildfile deploy-soa_D8.xml
deployTestHarness -Dserver.user=weblogic -Dserver.password=weblogic123
```

Windows:

Note: Open the command prompt as Administrative mode and then select the environment to deploy SOA.

```
cd %SPLEBASE%/soaapp
  %SPLEBASE%\product\apache-ant\bin\ant -buildfile deploy-
soa_D8.xml deployTestHarness -Dserver.user=weblogic -
Dserver.password=weblogic123
```

To Deploy on a Standalone WebLogic Instance:

1. Create WebLogic SOA Domain and select Enterprise Manger option also.

2. Copy the following jar file to the lib folder under the WebLogic domain directory, spl-d1-soa-security.jar

This jar is present under the following location:

UNIX:

```
$SPLEBASE/etc/lib
```

Windows:

```
%SPLEBASE%\etc\lib
```

3.Append following XML snippet to

```
<MIDDLEWARE_HOME>\user_projects\domains\<SOA
Domain>\config\fmwconfig\system-jazn-data.xml
<grant>
<grantee>
<codesource>
```

```
    <url>file:${domain.home}/lib/spl-d1-soa-security.jar</url>
    <codesource>
    </grantee>
    <permissions>
    <permission>
    <class>oracle.security.jps.service.credstore.CredentialAccessPermi
ssio n</class
    <name>context=SYSTEM,mapName=*,keyName=*</name>
    <actions>*</actions>
    </permission>
    </permissions>
    <permission-set-refs>
    </permission-set-refs>
    </grant>
```

4. Start the standalone WebLogic instance.

5. Deploy the SOA cartridge on the standalone WebLogic instance

> **Note:** Modify the SOA Host Server, SOA Port Number, SOA Weblogic User Name, SOA Weblogic User Password and Endpoint URLs menu items according to Standalone domain using "SOA Configuration Menu item 9".

UNIX:

```
cd $SPLEBASE/soaapp

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

$SPLEBASE/product/apache-ant/bin/ant -buildfile deploy-soa_D8.xml
-Dserver.user=<ADMIN_USER> -Dserver.password=<ADMIN_PASSWORD>
```

Windows:

```
cd %SPLEBASE%\soaapp

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

%SPLEBASE%\product\apache-ant\bin\ant -buildfile deploy-soa_D8.xml
-Dserver.user=<ADMIN_USER> -Dserver.password=<ADMIN_PASSWORD>
```

6. Deploy the TestHarness SOA composites on the standalone WebLogic instance.

UNIX:

```
cd $SPLEBASE/soaapp

$SPLEBASE/product/apache-ant/bin/ant -buildfile deploy-soa_D8.xml
deployTestHarness -Dserver.user=<ADMIN_USER>
-Dserver.password=<ADMIN_PASSWORD>
```

Windows:

```
cd %SPLEBASE%\soaapp

%SPLEBASE%\product\apache-ant\bin\ant -buildfile deploy-soa_D8.xml
deployTestHarness -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 Frame- work**
- **Configuring Security for the SOA System to Communicate with the Head-End System**

Configuring Security for the SOA System to Communicate with the Application Frame-work

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.d8.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.d8.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

According to the Itron OpenWay Web Service Reference Guide, the head end system can accommodate many different types of security schemes including Basic HTTP, HTTPS, and X.509. Oracle SOA Server supports these, as well. By default, Basic HTTP is enabled, but as always users should evaluate the most appropriate type of security for their environment. Please refer to the Oracle SOA Server product documentation for detailed instructions on securing web services.

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
- D6: Oracle Utilities Smart Grid Gateway for Sensus User Guide
- D7: Oracle Utilities Smart Grid Gateway for Silver Spring Networks User Guide
- DG: Oracle Utilities Smart Grid Gateway Adapter Development Kit
- D8: Oracle Utilities Smart Grid Gateway Adapter for Itron OpenWay 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 such as 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

Installing Service Packs

This section provides instructions for installing Oracle Utilities Smart Grid Gateway Service Pack v2.0.0.9.0 on top of an existing Oracle Utilities Smart Grid Gateway 2.0.0.x installation. This section includes:

- **Prerequisites**
- **Installing Oracle Utilities Application Framework 4.1.0 Service Pack 2 (4.1.0.2.0)**
- **Installing Oracle Utilities Meter Data Framework 2.0.1.9.0**
- **Installing the Database**
- **Installing the Application Server Component of Oracle Utilities Smart Grid Gateway Service Pack**

For fixes included in this Service Packs, see Appendixes C and D

For known issues in this Service Packs, see the Release Notes included with this service pack.

Prerequisites

Oracle Utilities Meter Data Framework 2.0.1.9.0 is a prerequisite for installing Oracle Utilities Smart Grid Gateway Service Pack v2.0.0.9.0.

> **Note:** For installation instructions, see the section **Installing Oracle Utilities Meter Data Framework 2.0.1.9.0** on page 10-4.

Prerequisites for Installing Oracle Utilities Meter Data Framework 2.0.1.9.0

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

- Oracle Utilities Application Framework 4.1.0
- Oracle Utilities Meter Data Framework 2.0.1.x
- Oracle Utilities Application Framework 4.1.0 Service Pack 2 (4.1.0.2.0)

  > **Note:** For installation instructions, see **Installing Oracle Utilities Application Framework 4.1.0 Service Pack 2 (4.1.0.2.0)** on page 10-3.
- Oracle Utilities Application Framework 4.1.0 Service Pack 2 Prerequisite Single Fixes:
  - 16489896
  - 16620519
  - 16182632
  - 16192379
  - 16619506

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

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

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

1. Extract the FW-V4.1.0.2.0-MultiPlatform.zip file from the package contents of the specific adapter you want to install.

   Note: Refer to **Installing the Application Server Component of Oracle Utilities Smart Grid Gateway Service Pack** on page 10-5 for the package contents of each adapter.

2. Create a <TEMPDIR> directory on the host server that is independent of any current or other working Oracle Utilities Application Framework 4.1.0 application environment.

3. Copy the file FW-V4.1.0.2.0-MultiPlatform.jar in the delivered package to <TEMPDIR>.

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

4. Decompress the file using following command:

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

   Notes:

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

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

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

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

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

   UNIX:

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

   Windows:

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

6. Stop the Oracle Utilities Meter Data Management application server instance if running

7. Change to the <TEMPDIR>/FW-V4.1.0.2.0-SP2 directory.

8. Execute the following command:

   UNIX:

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

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

   Windows:

   ```
   installSP.cmd
   ```

Installing Oracle Utilities Meter Data Framework 2.0.1.9.0

1. Extract the MDF-V2.0.1.9.0-MultiPlatform.zip file from the package contents of the specific adapter you want to install.

   Note: Refer to **Installing the Application Server Component of Oracle Utilities Smart Grid Gateway Service Pack** on page 10-5 for the package contents of each adapter.

2. Create a <TEMPDIR> directory on the host server that is independent of any current or other working Oracle Utilities Meter Data Framework application environment.

3. Copy the file MDF-V2.0.1.9.0-MultiPlatform.jar in the delivered package to <TEMPDIR>.

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

4. Decompress the file using following command:

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

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

   For both Unix and Windows platforms, a sub-directory named MDF.V2.0.1.9.0 is created

5. Initialize the Oracle Utilities Smart Grid Gateway Echelon Adapter environment that you want to install the product into.

   UNIX:

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

   Windows:

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

6. Stop the Oracle Utilities Smart Grid Gateway application server instance if running

7. Change to the <TEMPDIR>/MDF.V2.0.1.9.0 directory.

8. Execute the following command:

   UNIX:

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

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

   Windows:

   ```
   install.cmd
   ```

9. Choose option P to proceed with the installation.

10. Change to the <TEMPDIR>/MDF.V2.0.1.9.0 Directory.

11. Execute the following command:

    UNIX:

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

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

    Windows:

    ```
    postinstall.cmd
    ```

Installing the Database

Please refer to the *Oracle Utilities Smart Grid Gateway Database Administrator's Guide* for instructions on installing the database component for Oracle Utilities Application Framework 4.1.0 Service Pack 2, Oracle Utilities Meter Data Framework 2.0.1.9.0 and Oracle Utilities Smart Grid Gateway for 2.0.0.9.0.

Installing the Application Server Component of Oracle Utilities Smart Grid Gateway Service Pack

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.

This section includes the following topics:

- **Installing the Adapter for Echelon v2.0.0.9.0**
- **Installing the Adapter for Sensus v2.0.0.9.0**
- **Installing the Adapter for Silver Spring Networks v2.0.0.9.0**
- **Installing the MV90 Adapter for Itron v2.0.0.9.0**
- **Installing the Adapter Development Kit v2.0.0.9.0**
- **Installing the Adapter for Itron OpenWay v2.0.0.9.0**

Installing the Adapter for Echelon v2.0.0.9.0

This section includes instructions specific to Echelon adapter. Before proceeding with the installation, extract the following package contents:

- SGG_Release_Notes_2_0_0_9.pdf - Release notes for this service pack
- MDF-V2.0.1.9.0-PFDs - Product Fix Documents for MDF single fixes included in this service pack
- SGG-Echelon-V2.0.0.9.0-PFDs - Product Fix Documents for Echelon single fixes included in this service pack
- SGG-V2.0.0.9.0-Database.zip - Database installation package.
- MDF-V2.0.1.9.0-MultiPlatform.zip - Meter Data Framework application server installation package
- SGG-Echelon-V2.0.0.9.0-Multiplatform.zip - Smart Grid Gateway application server installation package.
- FW-V4.1.0.2.0-MultiPlatform.zip - Oracle Utilities Application Framework 4.1.0 Service Pack2 (4.1.0.2.0)
- SGG-V2.0.0.9.0-FW-SP2-PREREQ-MultiPlatform.zip - Oracle Utilities Application Framework 4.1.0 Service Pack 2 prerequisite single fix convenience rollup
- Oracle Utilities Smart Grid Gateway V2.0.0.9.0 Install Documentation.zip - Detailed SGG(Echelon) Installation Documentation
- Oracle Utilities Smart Grid Gateway V2.0.0.9.0 Quick Install Guide.zip - Detailed SGG(Echelon) Quick Installation Guide
- Oracle Utilities Smart Grid Gateway V2.0.0.9.0 User Documentation.zip

- Oracle Utilities Smart Grid Gateway Adapter for Echelon V2.0.0.9.0 User Documentation.zip
- Oracle Utilities Smart Grid Gateway V2.0.0.9.0 Supplemental Documentation.zip

Installation instructions:

1. Create a <TEMPDIR> directory on the host server that is independent of any current or other working Oracle Utilities Smart Grid Gateway Echelon Adapter application environment.
2. Copy the file SGG-D4-V2.0.0.9.0-MultiPlatform.jar in the delivered package to <TEMPDIR>.

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

   ```
   cd <TEMPDIR>
   jar -xvf SGG-D4-V2.0.0.9.0-MultiPlatform.jar
   ```

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

   For both Unix and Windows platforms, a sub-directory named D4.V2.0.0.9.0 is created
4. Initialize the Oracle Utilities Smart Grid Gateway Echelon Adapter environment that you want to install the product into

   UNIX:

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

   Windows:

   ```
   <SPLEBASE>\bin\splenviron.cmd -e <SPLENVIRON>
   ```
5. Stop the Oracle Utilities Smart Grid Gateway Echelon Adapter application server instance if running
6. Change to the <TEMPDIR>/D4.V2.0.0.9.0 Directory.
7. Execute the following command:

   UNIX:

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

   Windows:

   ```
   install.cmd
   ```

   Note: On UNIX, ensure that you have the proper execute permission on install.sh
8. Choose option P to proceed with the installation.
9. Change to the <TEMPDIR>/D4.V2.0.0.9.0 Directory.
10. 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

11. Execute following command.

    UNIX:

    ```
    configureEnv.sh
    ```

    Windows:

    ```
    configureEnv.cmd
    ```

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

    Type "P" against "Choose option (1,2,3,4,5,8,9, <P> Process, <X> Exit):".

12. Execute following command:

    UNIX:

    ```
    initialSetup.sh
    ```

    Windows:

    ```
    initialSetup.cmd
    ```

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

13. Start up the application server instance.

    UNIX:

    ```
    spl.sh start
    ```

    Windows:

    ```
    spl.cmd start
    ```

Installing the Adapter for Landis+Gyr v2.0.0.9.0

This section includes instructions specific to Landis+Gyr adapter. Before proceeding with the installation, extract the following package contents:

- SGG_Release_Notes_2_0_0_9.pdf - Release notes for this service pack
- MDF-V2.0.1.9.0-PFDs - Product Fix Documents for MDF single fixes included in this service pack
- SGG-V2.0.0.9.0-Database.zip - Database installation package.
- MDF-V2.0.1.9.0-MultiPlatform.zip - Meter Data Framework application server installation package
- SGG-LG-V2.0.0.9.0-MultiPlatform.zip - Smart Grid Gateway application server installation package.
- FW-V4.1.0.2.0-MultiPlatform.zip - Oracle Utilities Application Framework 4.1.0 Service Pack2 (4.1.0.2.0)
- SGG-V2.0.0.9.0-FW-SP2 PREREQ-MultiPlatform.zip - Oracle Utilities Application Framework 4.1.0 Service Pack 2 prerequisite single fix convenience rollup
- Oracle Utilities Smart Grid Gateway V2.0.0.9.0 Install Documentation.zip - Detailed SGG(Echelon) Installation Documentation
- Oracle Utilities Smart Grid Gateway V2.0.0.9.0 Quick Install Guide.zip - Detailed SGG(Echelon) Quick Installation Guide
- Oracle Utilities Smart Grid Gateway V2.0.0.9.0 User Documentation.zip
- Oracle Utilities Smart Grid Gateway Adapter for Landis+Gyr V2.0.0.9.0 User Documentation.zip
- Oracle Utilities Smart Grid Gateway V2.0.0.9.0 Supplemental Documentation.zip

Installation instructions:

1. Create a <TEMPDIR> directory on the host server that is independent of any current or other working Oracle Utilities Smart Grid Gateway Landis+Gyr Adapter application environment.
2. Copy the file SGG-LG-V2.0.0.9.0-MultiPlatform.jar in the delivered package to <TEMPDIR>.

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

   ```
   cd <TEMPDIR>
   jar -xvf SGG-LG-V2.0.0.9.0-MultiPlatform.jar
   ```

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

   For both Unix and Windows platforms, a sub-directory named LG.V2.0.0.9.0 is created
4. Initialize the Oracle Utilities Smart Grid Gateway Landis+Gyr Adapter environment that you want to install the product into

   UNIX:

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

   Windows:

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

5. Stop the Oracle Utilities Smart Grid Gateway Landis+Gyr Adapter application server instance if running
6. Change to the <TEMPDIR>/LG.V2.0.0.9.0 Directory.
7. Execute the following command:

   UNIX:

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

   Windows:

   ```
   install.cmd
   ```

   Note: On UNIX, ensure that you have the proper execute permission on install.sh
8. Choose option P to proceed with the installation.
9. Change to the <TEMPDIR>/LG.V2.0.0.9.0 Directory.
10. 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
11. Execute following command.

    UNIX:

    ```
    configureEnv.sh
    ```

    Windows:

    ```
    configureEnv.cmd
    ```

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

    Type "P" against "Choose option (1,2,3,4,5,8,9, <P> Process, <X> Exit):".
12. Execute following command.

    UNIX:

    ```
    initialSetup.sh
    ```

    Windows:

    ```
    initialSetup.cmd
    ```

    Note: On UNIX, ensure that you have the proper execute permission on initialSetup.sh
13. Start up the application server instance.

    UNIX:

    ```
    spl.sh start
    ```

    Windows:

    ```
    spl.cmd start
    ```

Installing the Adapter for Sensus v2.0.0.9.0

This section includes instructions specific to Sensus adapter. Before proceeding with the installation, extract the following package contents:

- SGG_Release_Notes_2_0_0_9.pdf - Release notes for this service pack
- MDF-V2.0.1.9.0-PFDs - Product Fix Documents for MDF single fixes included in this service pack
- SGG-Sensus-V2.0.0.9.0-PFDs - Product Fix Documents for Echelon single fixes included in this service pack
- SGG-V2.0.0.9.0-Database.zip - Database installation package.
- MDF-V2.0.1.9.0-MultiPlatform.zip - Meter Data Framework application server installation package
- SGG-D6-V2.0.0.9.0-Multiplatform.zip - Smart Grid Gateway application server installation package.
- FW-V4.1.0.2.0-MultiPlatform.zip - Oracle Utilities Application Framework 4.1.0 Service Pack2 (4.1.0.2.0)
- SGG-V2.0.0.9.0-FW-SP2-PREREQ-MultiPlatform.zip - Oracle Utilities Application Framework 4.1.0 Service Pack 2 prerequisite single fix convenience rollup
- Oracle Utilities Smart Grid Gateway V2.0.0.9.0 Install Documentation.zip - Detailed SGG(Echelon) Installation Documentation
- Oracle Utilities Smart Grid Gateway V2.0.0.9.0 Quick Install Guide.zip - Detailed SGG(Echelon) Quick Installation Guide
- Oracle Utilities Smart Grid Gateway V2.0.0.9.0 User Documentation.zip
- Oracle Utilities Smart Grid Gateway Adapter for Sensus V2.0.0.9.0 User Documentation.zip
- Oracle Utilities Smart Grid Gateway V2.0.0.9.0 Supplemental Documentation.zip

Installation instructions:

1. Create a <TEMPDIR> directory on the host server that is independent of any current or other working Oracle Utilities Smart Grid Gateway Sensus Adapter application environment.
2. Copy the file SGG-D6-V2.0.0.9.0-MultiPlatform.jar in the delivered package to <TEMPDIR>.

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

   ```
   cd <TEMPDIR>
   jar -xvf SGG-D6-V2.0.0.9.0-MultiPlatform.jar
   ```

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

   For both Unix and Windows platforms, a sub-directory named D6.V2.0.0.9.0 is created
4. Initialize the Oracle Utilities Smart Grid Gateway Sensus Adapter environment that you want to install the product into

   UNIX:

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

   Windows:

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

5. Stop the Oracle Utilities Smart Grid Gateway Sensus Adapter application server instance if running
6. Change to the <TEMPDIR>/D6.V2.0.0.9.0 Directory.
7. Execute the following command:

   UNIX:

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

   Windows:

   ```
   install.cmd
   ```

   Note: On UNIX, ensure that you have the proper execute permission on install.sh
8. Choose option P to proceed with the installation.
9. Change to the <TEMPDIR>/D6.V2.0.0.9.0 Directory.
10. 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
11. Excecute following command.

    UNIX:

    ```
    configureEnv.sh
    ```

    Windows:

    ```
    configureEnv.cmd
    ```

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

    Type "P" against "Choose option (1,2,3,4,5,8,9, <P> Process, <X> Exit):".
12. Ececute following command.

    UNIX:

    ```
    initialSetup.sh
    ```

    Windows:

    ```
    initialSetup.cmd
    ```

    Note: On UNIX, ensure that you have the proper execute permission on initialSetup.sh
13. Start up the application server instance.

    UNIX:

    ```
    spl.sh start
    ```

    Windows:

    ```
    spl.cmd start
    ```

Installing the Adapter for Silver Spring Networks v2.0.0.9.0

This section includes instructions specific to Silver Spring Networks adapter. Before proceeding with the installation, extract the following package contents:

- SGG_Release_Notes_2_0_0_9.pdf - Release notes for this service pack
- MDF-V2.0.1.9.0-PFDs - Product Fix Documents for MDF single fixes included in this service pack
- SGG-D7-V2.0.0.9.0-PFDs - Product Fix Documents for Echelon single fixes included in this service pack
- SGG-V2.0.0.9.0-Database.zip - Database installation package.
- MDF-V2.0.1.9.0-MultiPlatform.zip - Meter Data Framework application server installation package
- SGG-D7-V2.0.0.9.0-Multiplatform.zip - Smart Grid Gateway application server installation package.
- FW-V4.1.0.2.0-MultiPlatform.zip - Oracle Utilities Application Framework 4.1.0 Service Pack2 (4.1.0.2.0)
- SGG-V2.0.0.9.0-FW-SP2-PREREQ-MultiPlatform.zip - Oracle Utilities Application Framework 4.1.0 Service Pack 2 prerequisite single fix convenience rollup
- Oracle Utilities Smart Grid Gateway V2.0.0.9.0 Install Documentation.zip - Detailed SGG(Echelon) Installation Documentation
- Oracle Utilities Smart Grid Gateway V2.0.0.9.0 Quick Install Guide.zip - Detailed SGG(Echelon) Quick Installation Guide
- Oracle Utilities Smart Grid Gateway V2.0.0.9.0 User Documentation.zip
- Oracle Utilities Smart Grid Gateway Adapter for Silver Spring Networks V2.0.0.9.0 User Documentation.zip
- Oracle Utilities Smart Grid Gateway V2.0.0.9.0 Supplemental Documentation.zip

Installation instructions:

1. Create a <TEMPDIR> directory on the host server that is independent of any current or other working Oracle Utilities Smart Grid Gateway Silver Spring Networks Adapter application environment.
2. Copy the file SGG-D7-V2.0.0.9.0-MultiPlatform.jar in the delivered package to <TEMPDIR>.

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

   ```
   cd <TEMPDIR>
   jar -xvf SGG-D7-V2.0.0.9.0-MultiPlatform.jar
   ```

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

   For both Unix and Windows platforms, a sub-directory named D7.V2.0.0.9.0 is created
4. Initialize the Oracle Utilities Smart Grid Gateway Silver Spring Networks Adapter environment that you want to install the product into

   UNIX:

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

Windows:

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

5. Stop the Oracle Utilities Smart Grid Gateway Silver Spring Networks Adapter application server instance if running
6. Change to the <TEMPDIR>/D7.V2.0.0.9.0 Directory.
7. Execute the following command:

   UNIX:

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

   Windows:

   ```
   install.cmd
   ```

   Note: On UNIX, ensure that you have the proper execute permission on install.sh
8. Choose option P to proceed with the installation.
9. Change to the <TEMPDIR>/D7.V2.0.0.9.0 Directory.
10. 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
11. Excecute following command.

    UNIX:

    ```
    configureEnv.sh
    ```

    Windows:

    ```
    configureEnv.cmd
    ```

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

    Type "P" against "Choose option (1,2,3,4,5,8,9, <P> Process, <X> Exit):".
12. Ececute following command.

    UNIX:

    ```
    initialSetup.sh
    ```

    Windows:

    ```
    initialSetup.cmd
    ```

    Note: On UNIX, ensure that you have the proper execute permission on initialSetup.sh
13. Start up the application server instance.

    UNIX:

    ```
    spl.sh start
    ```

Windows:

```
spl.cmd start
```

Installing the MV90 Adapter for Itron v2.0.0.9.0

This section includes instructions specific to MV90 Adapter for Itron. Before proceeding with the installation, extract the following package contents:

- SGG_Release_Notes_2_0_0_9.pdf - Release notes for this service pack
- MDF-V2.0.1.9.0-PFDs - Product Fix Documents for MDF single fixes included in this service pack
- SGG-MV90-V2.0.0.9.0-PFDs - Product Fix Documents for MV90 single fixes included in this service pack
- SGG-V2.0.0.9.0-Database.zip - Database installation package.
- MDF-V2.0.1.9.0-MultiPlatform.zip - Meter Data Framework application server installation package
- SGG- MV90-V2.0.0.9.0-Multiplatform.zip - Smart Grid Gateway application server installation package.
- FW-V4.1.0.2.0-MultiPlatform.zip - Oracle Utilities Application Framework 4.1.0 Service Pack2 (4.1.0.2.0)
- SGG-V2.0.0.9.0-FW-SP2-PREREQ-MultiPlatform.zip - Oracle Utilities Application Framework 4.1.0 Service Pack 2 prerequisite single fix convenience rollup
- Oracle Utilities Smart Grid Gateway V2.0.0.9.0 Install Documentation.zip - Detailed SGG(Echelon) Installation Documentation
- Oracle Utilities Smart Grid Gateway V2.0.0.9.0 Quick Install Guide.zip - Detailed SGG(Echelon) Quick Installation Guide
- Oracle Utilities Smart Grid Gateway V2.0.0.9.0 User Documentation.zip
- Oracle Utilities Smart Grid Gateway Adapter for MV90 Adapter for Itron V2.0.0.9.0 User Documentation.zip
- Oracle Utilities Smart Grid Gateway V2.0.0.9.0 Supplemental Documentation.zip

Installation instructions:

1. Create a <TEMPDIR> directory on the host server that is independent of any current or other working Oracle Utilities Smart Grid Gateway MV90 Adapter for Itron application environment.
2. Copy the file SGG-MV90-V2.0.0.9.0-MultiPlatform.jar in the delivered package to <TEMPDIR>.

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

   ```
   cd <TEMPDIR>
   jar -xvf SGG-MV90-V2.0.0.9.0-MultiPlatform.jar
   ```

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

   For both Unix and Windows platforms, a sub-directory named MV90.V2.0.0.9.0 is created
4. Initialize the Oracle Utilities Smart Grid Gateway MV90 Adapter for Itron environment that you want to install the product into

   UNIX:

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

Windows:

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

5. Stop the Oracle Utilities Smart Grid Gateway MV90 Adapter for Itron application server instance if running
6. Change to the <TEMPDIR>/MV90.V2.0.0.9.0 Directory.
7. Execute the following command:

   UNIX:

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

   Windows:

   ```
   install.cmd
   ```

   Note: On UNIX, ensure that you have the proper execute permission on install.sh
8. Choose option P to proceed with the installation.
9. Change to the <TEMPDIR>/MV90.V2.0.0.9.0 Directory.
10. 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
11. Execute following command.

    UNIX:

    ```
    configureEnv.sh
    ```

    Windows:

    ```
    configureEnv.cmd
    ```

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

    Type "P" against "Choose option (1,2,3,4,5,8,9, <P> Process, <X> Exit):".
12. Execute following command.

    UNIX:

    ```
    initialSetup.sh
    ```

    Windows:

    ```
    initialSetup.cmd
    ```

    Note: On UNIX, ensure that you have the proper execute permission on initialSetup.sh
13. Start up the application server instance.

    UNIX:

    ```
    spl.sh start
    ```

Windows:

```
spl.cmd start
```

Installing the Adapter Development Kit v2.0.0.9.0

This section includes instructions specific to Adapter Development Kit. Before proceeding with the installation, extract the following package contents:

- SGG_Release_Notes_2_0_0_9.pdf - Release notes for this service pack
- MDF-V2.0.1.9.0-PFDs - Product Fix Documents for MDF single fixes included in this service pack
- SGG-DG-V2.0.0.9.0-PFDs - Product Fix Documents for Echelon single fixes included in this service pack
- SGG-V2.0.0.9.0-Database.zip - Database installation package.
- MDF-V2.0.1.9.0-MultiPlatform.zip - Meter Data Framework application server installation package
- SGG-DG-V2.0.0.9.0-Multiplatform.zip - Smart Grid Gateway application server installation package.
- FW-V4.1.0.2.0-MultiPlatform.zip - Oracle Utilities Application Framework 4.1.0 Service Pack2 (4.1.0.2.0)
- SGG-V2.0.0.9.0-FW-SP2-PREREQ-MultiPlatform.zip - Oracle Utilities Application Framework 4.1.0 Service Pack 2 prerequisite single fix convenience rollup
- Oracle Utilities Smart Grid Gateway V2.0.0.9.0 Install Documentation.zip - Detailed SGG(Echelon) Installation Documentation
- Oracle Utilities Smart Grid Gateway V2.0.0.9.0 Quick Install Guide.zip - Detailed SGG(Echelon) Quick Installation Guide
- Oracle Utilities Smart Grid Gateway V2.0.0.9.0 User Documentation.zip
- Oracle Utilities Smart Grid Gateway Adapter Development Kit V2.0.0.9.0 User Documentation.zip
- Oracle Utilities Smart Grid Gateway V2.0.0.9.0 Supplemental Documentation.zip

Installation instructions:

1. Create a <TEMPDIR> directory on the host server that is independent of any current or other working Oracle Utilities Smart Grid Gateway Adapter Development Kit application environment.
2. Copy the file SGG-DG-V2.0.0.9.0-MultiPlatform.jar in the delivered package to <TEMPDIR>.

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

   ```
   cd <TEMPDIR>
   jar -xvf SGG-DG-V2.0.0.9.0-MultiPlatform.jar
   ```

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

   For both Unix and Windows platforms, a sub-directory named DG.V2.0.0.9.0 is created
4. Initialize the Oracle Utilities Smart Grid Gateway Adapter Development Kit environment that you want to install the product into

   UNIX:

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

Windows:

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

5. Stop the Oracle Utilities Smart Grid Gateway Adapter Development Kit application server instance if running
6. Change to the <TEMPDIR>/DG.V2.0.0.9.0 Directory.
7. Execute the following command:

   UNIX:

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

   Windows:

   ```
   install.cmd
   ```

   Note: On UNIX, ensure that you have the proper execute permission on install.sh
8. Choose option P to proceed with the installation.
9. Change to the <TEMPDIR>/DG.V2.0.0.9.0 Directory.
10. 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
11. Execute following command.

    UNIX:

    ```
    configureEnv.sh
    ```

    Windows:

    ```
    configureEnv.cmd
    ```

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

    Type "P" against "Choose option (1,2,3,4,5,8,9, <P> Process, <X> Exit):".
12. Execute following command.

    UNIX:

    ```
    initialSetup.sh
    ```

    Windows:

    ```
    initialSetup.cmd
    ```

    Note: On UNIX, ensure that you have the proper execute permission on initialSetup.sh
13. Start up the application server instance.

    UNIX:

    ```
    spl.sh start
    ```

Windows:

```
spl.cmd start
```

Installing the Adapter for Itron OpenWay v2.0.0.9.0

This section includes instructions specific to Itron OpenWay. Before proceeding with the installation, extract the following package contents:

- SGG_Release_Notes_2_0_0_9.pdf - Release notes for this service pack
- MDF-V2.0.1.9.0-PFDs - Product Fix Documents for MDF single fixes included in this service pack
- SGG-D8-V2.0.0.9.0-PFDs - Product Fix Documents for Itron OpenWay single fixes included in this service pack
- SGG-V2.0.0.9.0-Database.zip - Database installation package.
- MDF-V2.0.1.9.0-MultiPlatform.zip - Meter Data Framework application server installation package
- SGG-D8-V2.0.0.9.0-Multiplatform.zip - Smart Grid Gateway application server installation package.
- FW-V4.1.0.2.0-MultiPlatform.zip - Oracle Utilities Application Framework 4.1.0 Service Pack2 (4.1.0.2.0)
- SGG-V2.0.0.9.0-FW-SP2-PREREQ-Multiplatform.zip - Oracle Utilities Application Framework 4.1.0 Service pack 2 prerequisite single fix convenience rollup
- Oracle Utilities Smart Grid Gateway V2.0.0.9.0 Install Documentation.zip - Detailed SGG(Echelon) Installation Documentation
- Oracle Utilities Smart Grid Gateway V2.0.0.9.0 Quick Install Guide.zip - Detailed SGG(Echelon) Quick Installation Guide
- Oracle Utilities Smart Grid Gateway V2.0.0.9.0 User Documentation.zip
- Oracle Utilities Smart Grid Gateway Adapter Itron OpenWay V2.0.0.9.0 User Documentation.zip
- Oracle Utilities Smart Grid Gateway V2.0.0.9.0 Supplemental Documentation.zip

Installation instructions:

1. Create a <TEMPDIR> directory on the host server that is independent of any current or other working Oracle Utilities Smart Grid Gateway Adapter for Itron OpenWay application environment.
2. Copy the file SGG-D8-V2.0.0.9.0-MultiPlatform.jar in the delivered package to <TEMPDIR>.

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

   ```
   cd <TEMPDIR>
   jar -xvf SGG-D8-V2.0.0.9.0-MultiPlatform.jar
   ```

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

   For both Unix and Windows platforms, a sub-directory named D8.V2.0.0.9.0 is created
4. Initialize the Oracle Utilities Smart Grid Gateway Adapter for Itron OpenWay environment that you want to install the product into.

   UNIX:

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

Windows:

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

5. Stop the Oracle Utilities Smart Grid Gateway Adapter for Itron OpenWay application server instance if running
6. Change to the <TEMPDIR>/D8.V2.0.0.9.0 Directory.
7. Execute the following command:

   UNIX:

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

   Windows:

   ```
   install.cmd
   ```

   Note: On UNIX, ensure that you have the proper execute permission on install.sh
8. Choose option P to proceed with the installation.
9. Change to the <TEMPDIR>/D8.V2.0.0.9.0 Directory.
10. 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
11. Execute following command.

    UNIX:

    ```
    configureEnv.sh
    ```

    Windows:

    ```
    configureEnv.cmd
    ```

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

    Type "P" against "Choose option (1,2,3,4,5,8,9, <P> Process, <X> Exit):".
12. Execute following command.

    UNIX:

    ```
    initialSetup.sh
    ```

    Windows:

    ```
    initialSetup.cmd
    ```

    Note: On UNIX, ensure that you have the proper execute permission on initialSetup.sh
13. Start up the application server instance.

    UNIX:

    ```
    spl.sh start
    ```

Windows:

```
spl.cmd start
```

Chapter 11

Additional Tasks

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

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

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.

Configuring Identity and Trust

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

To configure identity and trust for a server:

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

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

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

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

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

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

Building Javadoc Indexes

The following script rebuilds the Javadocs indexes in the application viewer java module. This is necessary after customer modifications (CM) have been applied to an environment. You need to run this script only if the customer modification includes Java code.)

Windows:

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

UNIX:

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

Configuring the Environment for Batch Processing

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

Customizing the Logo

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

Windows:

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

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.

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.

To generate the additional items in the application viewer:

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.

   Unix:

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

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

   For example:

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

   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 following variables:

- **%SPLEBASE% :** The Full directory name that you installed the application into
- **%SPLENVIRON%:** 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
```

3. Execute the following script to generate all information.

   UNIX:

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

   Windows:

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

4. Restart your application

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.

- 14408620
- 14281091
- 14211260
- 14501848
- 14316987
- 14353374
- 14154392
- 14305425

The following table lists the Oracle Utilities Application Framework additional patches that must be installed prior to installing Oracle Utilities Meter Data Framework. These patches are not available in convenience rollup and please download the patches from https://support.oracle.com.

- 14685786

The following table lists the Oracle Utilities Meter Data Framework patches that must be installed prior to installing Oracle Utilities Smart Grid Gateway Adapter for Itron OpenWay. These patches are not available in convenience rollup and please download the patches from https://support.oracle.com.

- 14739746
- 14775734

Appendix C

Meter Data Framework Fixes

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

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

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

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

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

Appendix D

Smart Grid Gateway Fixes

The following tables lists the Smart Grid Gateway fixes included in this release.

MV90 Fixes included in this service pack release:

Bug	Subject
12418061	MV 90 OSB / OUAF upload should support register reads.
14822887	Populate new MCIS field for IMD seeder.
16103475	Request to add a switch to turn off scalar read creation.

Itron OpenWay (D8) Fixes included in this service pack release:

Bug	Subject
14822868	Populate new MCIS field for IMD seeder.
16197675	Update D8-OBCTD, D8-IBCTD TODO types: add message overrides for DLSV and RDSBM.

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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
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