Oracle Utilities Smart Grid Gateway

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Oracle Utilities Smart Grid Gateway Quick Install Guide

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Preface

Welcome to the Oracle Utilities Smart Grid Gateway Quick Install Guide.

The preface includes:

- Audience
- Related Documents
- Updates to this Documentation
- Conventions
- Acronyms
- Additional Resources

Audience

This guide is intended for database administrators who will be installing and maintaining the database for Oracle Utilities Smart Grid Gateway.

To complete installation you should have:

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

Related Documents

The following documentation is included with this release.

Installation Guides and Release Notes

- Oracle Utilities Smart Grid Gateway Release Notes
- Oracle Utilities Smart Grid Gateway Quick Install Guide
- Oracle Utilities Smart Grid Gateway Installation Guide
- Oracle Utilities Smart Grid Gateway Database Administrator's Guide
- Oracle Utilities Smart Grid Gateway Licensing Information User Manual

Configuration and User Guides

- Oracle Utilities Meter Solution Business User Guide
- Oracle Utilities Meter Solution Administrative User Guide

Supplemental Documents

- Server Administration Guide
- Security Guide

Updates to this Documentation

The complete Oracle Utilities Smart Grid Gateway documentation set is available from Oracle Help Center at https://docs.oracle.com/en/industries/utilities/index.html.

Visit My Oracle Support for additional and updated information about the product.

Conventions

The following text conventions are used in this document:

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

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

Acronyms

The following acronyms and terms are used in this document:

Acronym	Definition
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
OSB	Oracle Service Bus
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

Acronym	Definition
WAR	Web application Archive
WLS	WebLogic
XAIApp	XML Application Integration

Additional Resources

For more information and support, visit the Oracle Support website.

Installation Overview

This chapter provides an overview of the Oracle Utilities Smart Grid Gateway product and installation process. It includes the following sections:

- Installation Overview
- Installation Components
- Installation Types
- Media Pack Components

Installation Overview

This section provides a high-level overview of the installation steps for Oracle Utilities Smart Grid Gateway (SGG) V2.5.0.0.0 and selected additional software. For more information, see *Oracle Utilities Smart Grid Gateway Installation Guide*.

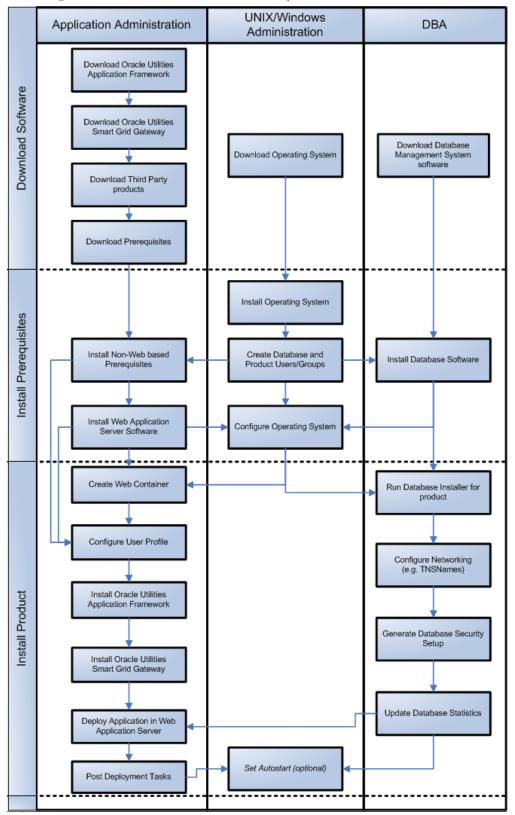
To install Oracle Utilities Smart Grid Gateway:

- 1. Install all required third-party software.
- 2. Install database. Refer to Oracle Utilities Smart Grid Gateway Database Administrator's Guide for complete details.

Note: When implementing Oracle Utilities Smart Grid Gateway with Oracle Utilities Meter Data Management, both the Smart Grid Gateway and Meter Data Management database components should be installed in the same database.

- 3. Install Oracle Utilities Application Framework.
- 4. Install Oracle Utilities Meter Data Management V2.5.0.0.0. All adapters are delivered with the Oracle Utilities Meter Data Management installation package.
 - MV90 Adapter for Itron
 - Adapter Development Kit
 - Adapter for Networked Energy Services
 - Adapter for Itron OpenWay
 - Adapter for Landis+Gyr
 - Adapter for Sensus RNI
 - Adapter for Silver Spring Networks

The following diagram provides an overview of the steps that need to be taken to install and configure Oracle Utilities Smart Grid Gateway:



Refer to My Oracle Support for up-to-date additional information on Oracle Utilities Smart Grid Gateway installation.

Installation Components

The Oracle Utilities Smart Grid Gateway product installation consists of the following components:

- Database Components
 - Oracle Utilities Application Framework database
 - Oracle Utilities Meter Data Management database
- Application Components
 - Oracle Utilities Application Framework application
 - Oracle Utilities Meter Data Management application

For a successful installation, you must install ALL of the above components.

Installation Types

The first step in the installation procedure is to determine the installation type that meets your business requirements. The following are the possible installation types:

- Initial Installation: A base installation, typically used for a production environment.
- Demo Installation: A base installation with pre-populated demo data, typically used for demonstration or training purposes.
- Upgrade Installation: An upgrade installation from v2.2.0.2.0, v2.2.0.3.0, v2.3.0.2.0 and v2.4.0.0.0 to v2.5.0.0.0.

Initial Installation

This installation type is applicable when installing Oracle Utilities Smart Grid Gateway for the first time or from scratch. For an initial install, you must install all of the following components:

Database components

Refer to the **Initial Install** section in the *Oracle Utilities Smart Grid Gateway Database Administrator's Guide* for more information.

- Application components
 - Oracle Utilities Application Framework application
 - Oracle Utilities Meter Data Management application

See Installing Oracle Utilities Smart Grid Gateway - Initial Installation for instructions to install these components.

Demo Installation

This installation type is applicable when installing a demo application of Oracle Utilities Smart Grid Gateway for demonstration or training purposes. For a demo install, you must install all of the following components:

Demo Database components

Refer to the **Demo Install** section in the *Oracle Utilities Smart Grid Gateway Database Administrator's Guide* for more information.

- Application components
 - Oracle Utilities Application Framework application
 - Oracle Utilities Meter Data Management application

See Installing Oracle Utilities Smart Grid Gateway - Demo Installation for instructions to install these components.

Upgrade Installation

This installation type is applicable when upgrading Oracle Utilities Smart Grid Gateway from V2.2.0.2.0, V2.2.0.3.0, V2.3.0.2.0 and V2.4.0.0.0 to V2.5.0.0.0.

Note: If you have a version prior to 2.2.0.2.0, you must install 2.2.0.2.0 before upgrading to 2.5.0.0.0.

If you have V2.3.0.0.0 installed, you must install V2.3.0.2.0 before upgrading to V2.5.0.0.0.

For an upgrade, you must upgrade all of the following components:

• Database components

Refer to the "Upgrade Install" section of the Oracle Utilities Smart Grid Gateway Database Administrator's Guide for more information.

- Application components
 - Oracle Utilities Application Framework application
 - Oracle Utilities Meter Data Management application

See Upgrading Oracle Utilities Smart Grid Gateway for instructions to install these components.

Media Pack Components

The Oracle Utilities Smart Grid Gateway Base Media Pack consists of the following packages:

Documentation Packages

- Oracle Utilities Smart Grid Gateway V2.5.0.0.0 Release Notes
- Oracle Utilities Smart Grid Gateway V2.5.0.0.0 Quick Install Guide
- Oracle Utilities Smart Grid Gateway V2.5.0.0.0 Install Documentation
- Oracle Utilities Smart Grid Gateway V2.5.0.0.0 User Documentation

• Oracle Utilities Smart Grid Gateway V2.5.0.0.0 Supplemental Documentation

Installation Packages

- Oracle Utilities Application Framework V4.5.0.0.0 Multiplatform
- Oracle Utilities Meter Data Management V2.5.0.0.0 Multiplatform
- Oracle Fusion Middleware 12c (12.2.1.4) Web Logic Server and Coherence
- Oracle Utilities Smart Grid Gateway Documentation V2.5.0.0.0
 As part of this installation package, the following additional packages are also included:
 - Oracle Utilities Smart Grid Gateway MV-90 Adapter for Itron V2.5.0.0.0 User Documentation
 - Oracle Utilities Smart Grid Gateway Adapter Development Kit V2.5.0.0.0
 User Documentation
 - Oracle Utilities Smart Grid Gateway Adapter for Networked Energy Services V2.5.0.0.0 User Documentation
 - Oracle Utilities Smart Grid Gateway Adapter for Itron OpenWay V2.5.0.0.0
 User Documentation
 - Oracle Utilities Smart Grid Gateway Adapter for Landis+Gyr V2.5.0.0.0 User Documentation
 - Oracle Utilities Smart Grid Gateway Adapter for Sensus RNI V2.5.0.0.0
 User Documentation
 - Oracle Utilities Smart Grid Gateway Adapter for Silver Spring Networks V2.5.0.0.0 User Documentation
 - Oracle Utilities Smart Grid Gateway Service Order Management V2.5.0.0.0
 User Documentation

Supported Platforms and Hardware Requirements

This chapter provides information on the supported platforms and requirements, including:

- Operating Systems and Application Servers
- Hardware and Web Browser Requirements
- Application Server Memory Requirements
- Support for Software Patches and Upgrades

Operating Systems and Application Servers

This section details the operating system and application server combinations on which this version of Oracle Utilities Smart Grid Gateway is supported.

Application Server Operating Systems

- Oracle Linux 8.x for x86_64
- Oracle Solaris 11.4+ for SPARC (64-bit)
- IBM AIX 7.2. TL5+ for POWER (64-bit)

Prerequisite Application Server Software

- Oracle Database Client 19c
- Oracle Java SE Development Kit 1.8.0_291+ (Windows, Solaris and Linux platforms only)
- IBM 64-bit SDK for AIX 8.0.x.x (IBM platforms only)
- Select jars from Hibernate ORM 4.1.0
- Oracle WebLogic Server 12c (Release 12.2.1.4) 64-bit

Notes:

Oracle Linux is 100% user space-compatible with Red Hat Enterprise Linux, therefore, Oracle Utilities Application Framework is also supported on Red Hat Enterprise Linux.

Refer to the *Oracle Utilities Application Framework Database Administrator's Guide* for the Oracle database server requirements.

Refer to the *Certification Matrix for Oracle Utilities Products (Document ID 1454143.1)* document on My Oracle Support to determine if support for newer versions of the listed products have been added.

Please note the following:

• Version numbers marked with a "+" are the MINIMUM version supported. That version and all future 4th digit updates will be supported.

Example: Oracle 12.1.0.2+ means that 12.1.0.2 and any higher 12.1.0.x versions of Oracle are supported.

• An "x" indicates that any version of the digit designed by the "x" is supported.

Example: Linux 8.x indicates that any version of Linux 8 (8.0, 8.1, 8.2 etc) will be supported.

Windows Server

 Windows Server is not supported for Production environments. Wherever Windows Server is referenced within this guide, it is supported for Test or Development environments only.

WebLogic Server

• Oracle WebLogic Server (Fusion Middleware Infrastructure) Release 12.2.1.4

- 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.
- **OSB and SOA Adapters are only supported on WebLogic V12.2.1.4. The browser version supports V12.2.1.x.
- Oracle Utilities Service Order Management is only supported on WebLogic V12.2.1.x.
- Customers must download Oracle WebLogic Server from the Oracle Software Delivery Cloud.

Oracle Database Server

Prerequisite database server software (on any vendor supported platform where x is vendor supported version):

- Oracle Database Server Enterprise Edition 19c
- Oracle Database Server Standard Edition 2 19c

Note: Oracle Database Enterprise Edition and the Partitioning and Advanced Compression options are strongly recommended in all situations.

Oracle VM Support

This version of Oracle Utilities Smart Grid Gateway is supported on Oracle VM Server for x86 for supported releases of Oracle Linux and Microsoft Windows operating systems.

Refer to My Oracle Support knowledge base article 249212.1 for Oracle's support policy on VMWare.

Hardware and Web Browser Requirements

The following section outlines client side hardware requirements for Oracle Utilities Smart Grid Gateway.

Client Side Hardware Requirements

Configuration	Processor	Memory (RAM)	Monitor (Display)
Minimum	1 GHz or faster 64-bit (x64) processor	2 GB	1280x1024
Recommended*	3 GHz or faster 64-bit (x64) processor	4 GB	1280X1024

^{*} The Recommended configuration supports better performance of the client.

Web Browser Requirements

The web browsers listed below are supported when used on each of the operating systems indicated:

Browser	Windows Operating System
Microsoft Edge for Business 81+ (Edge Chromium)	Microsoft Windows 10 Version x 64-bit
Mozilla Firefox ESR 91.x	Microsoft Windows 10 Version x 64-bit
Google Chrome Enterprise 81+	Microsoft Windows 10 Version x 64-bit
Apple Mobile Safari	Apple iPad iOS 15.x

Application Server Memory Requirements

For each application server environment a minimum of 4 GB of real memory is required, plus 6 GB of swap space. The approximate disk space requirements in a standard installation are as follows (the size represents the MINIMUM required):

Location	Size	Usage
Install Dir ("\$SPLEBASE") Location	10 GB recommended 5 GB minimum	This is the location 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. Note: This does not include the size of the edge product.
Log Dir ("\$SPLOUTPUT") Location	10 GB recommended 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	5 GB recommended 2 GB minimum	This location is used by 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.

Location	Size	Usage
Installation Temporary Area	10 GB minimum	The application gets installed from this location. You need enough space to uncompress the files and install the application.
Oracle Data Area	10 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.

Support for Software Patches and Upgrades

Due to the ongoing nature of software improvement, vendors will periodically issue patches and service packs for the operating systems, application servers and database servers on top of specific versions that Oracle products have already been tested against.

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 production environment itself. The exception to this is Hibernate software 4.1.0 which should not be upgraded.

Always contact Oracle Support prior to applying vendor updates that do not guarantee backward compatibility.

Planning the Installation

This chapter provides information for planning an Oracle Utilities Smart Grid Gateway installation. It includes the following sections:

- Before You Install
- Prerequisite Software List
- Installing Prerequisite Software
- Readiness Checklist

Before You Install

Visit My Oracle Support for up-to-date additional information about installing Oracle Utilities Smart Grid Gateway.

WebLogic Native Installation

With Oracle Utilities Application Framework 4.5.0.0.0, a WebLogic native installation is required. Refer to the *Oracle WebLogic 12.2.1.x Configuration Guide for Oracle Utilities* Framework (Doc ID 2413918.1) document on My Oracle Support for more information.

Application Server Clustering

If you are considering application server clustering, refer to the *Oracle WebLogic 12.2.1.x* Configuration Guide for Oracle Utilities Framework (Doc ID 2413918.1) document on My Oracle Support.

Additional information about WebLogic clustering, refer to the Fusion Middleware Using Clusters for Oracle WebLogic Server documentation.

Directory Names

Directory cannot contain whitespace characters.

Prerequisite Software List

Before you install Oracle Utilities Smart Grid Gateway, you must install prerequisite software.

Refer to the respective installation documentation of the software for instructions on downloading and installing.

Prerequisite Software for Database Server

The prerequisite software for the database component of Oracle Utilities Smart Grid Gateway is as follows:

- Oracle Database Server 19c This is required for installing the database component of the Oracle Utilities Smart Grid Gateway product. The following version of the database server is supported:
 - Oracle Database Enterprise Edition

Important: Oracle Database Enterprise Edition and the Partitioning and Advanced Compression options are strongly recommended in all situations.

Prerequisite Software for Application Server

The prerequisite software for the application component of Oracle Utilities Smart Grid Gateway is as follows:

- Oracle Database 19c Client
- JDK 1.8.0_291+ (64-bit)
- Oracle WebLogic 12c (12.2.1.4)

Note: Only WebLogic Fusion Middleware Infrastructure Installer should be used.

- Hibernate 4.1.0 Final
- Oracle Service Bus 12.2.1.4

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

Note: Oracle Service Bus 12.2.1.4 requires Oracle WebLogic Server 12.2.1.4.

Oracle SOA Suite 12.2.1.4

Oracle SOA Suite (specifically, BPEL Process Manager) is required for middleware implementations that plan to use a productized adapter or the Adapter Development Kit to implement two-way communications for processing meter commands.

Note: SOA Suite is NOT required with native implementations of Smart Grid Gateway adapters. See **Smart Grid Gateway Implementations** in the *Oracle Utilities Meter Solution Administrative User Guide* for more information.

Oracle Security Fix Updates

It is recommended that you keep the Oracle prerequisite software up to date with the latest security fixes provided by Oracle.

Web Browser Requirements

The web browsers listed below are supported when used on each of the operating systems indicated:

Browser	Windows Operating System
Microsoft Edge for Business 81+ (Edge Chromium)	Microsoft Windows 10 Version x 64-bit
Mozilla Firefox ESR 91.x	Microsoft Windows 10 Version x 64-bit
Google Chrome Enterprise 81+	Microsoft Windows 10 Version x 64-bit
Apple Mobile Safari	Apple iPad iOS 15.x

Installing Prerequisite Software

Refer to the **Installing Prerequisite Software** section in the *Oracle Utilities Smart Grid Gateway Installation Guide* for detailed instructions to install the prerequisite software.

Readiness Checklist

The following checklist will guide you through the installation process of Oracle Utilities Smart Grid Gateway. The details for each step are presented in the *Oracle Utilities Smart Grid Gateway Installation Guide*.

- 1. Confirm recommended hardware is ready. Refer to **Supported Platforms and Hardware Requirements** for more details.
- 2. Install prerequisite software, refer to Prerequisite Software List for more details.
- 3. Ensure that you have downloaded Oracle Utilities Smart Grid Gateway v2.5.0.0.0 components.
- 4. Go through the installation and configuration worksheets to understand the configuration menu.
- 5. Determine type of the installation initial, demo or upgrade. For specific instructions refer to the *Oracle Utilities Smart Grid Gateway Installation Guide*.
- 6. Perform post-installation tasks.

Installing Oracle Utilities Smart Grid Gateway - Initial Installation

This chapter provides an overview of installing Oracle Utilities Smart Grid Gateway from scratch. It includes the following sections:

- Before You Install
- Initial Installation Procedure

Before You Install

Refer to My Oracle Support for up-to-date additional information on Oracle Utilities Smart Grid Gateway.

Initial Installation Procedure

The initial installation procedure consists of:

- Installing the Database Component
- Installing the Application Components

Installing the Database Component

Installation of the database component of Oracle Utilities Smart Grid Gateway must be complete before you can proceed with the following sections. Refer to the **Initial Install** section in the *Oracle Utilities Smart Grid Gateway Database Administrator's Guide* for instructions to install the database component.

Note: When implementing Oracle Utilities Smart Grid Gateway with Oracle Utilities Meter Data Management, both the Smart Grid Gateway and Meter Data Management database components should be installed in the same database.

Installing the Application Components

Refer to the **Installing Oracle Utilities Smart Grid Gateway - Initial Installation** chapter in the *Oracle Utilities Smart Grid Gateway Installation Guide* for instructions to install the application components.

Installing Oracle Utilities Smart Grid Gateway - Demo Installation

This chapter provides an overview of the instructions for setting up a demo application of Oracle Utilities Smart Grid Gateway useful for demonstration or training purposes. It includes the following sections:

- Before You Install
- Demo Installation Procedure

Before You Install

Refer to My Oracle Support for up-to-date additional information on Oracle Utilities Smart Grid Gateway.

Demo Installation Procedure

The demo installation procedure consists of:

- Installing the Database Component
- Installing the Application Components

Installing the Database Component

Installation of the database component of Oracle Utilities Smart Grid Gateway must be complete before you can proceed with the following sections. Refer to the **Demo Install** section in the *Oracle Utilities Smart Grid Gateway Database Administrator's Guide* for instructions to install the database component with pre-populated demo data.

Note: When implementing Oracle Utilities Smart Grid Gateway with Oracle Utilities Meter Data Management, both the Smart Grid Gateway and Meter Data Management database components should be installed in the same database.

Installing the Application Components

Refer to the Installing Oracle Utilities Smart Grid Gateway - Demo Installation section in the *Oracle Utilities Smart Grid Gateway Installation Guide* for instructions to install the application components.

Upgrading Oracle Utilities Smart Grid Gateway

The upgrade installation type is applicable when upgrading Oracle Utilities Smart Grid Gateway from V2.2.0.2.0, V2.2.0.3.0, V2.3.0.2.0 and V2.4.0.0.0 to V2.3.0.2.0. THis chapter focuses on the following:

- Before You Upgrade
- Upgrade Procedure

Before You Upgrade

Review the list of operating system, application server and database server combinations that Oracle Utilities Smart Grid Gateway is certified to operate on, in the chapter Supported Platforms and Hardware Requirements.

For further assistance, contact My Oracle Support before you upgrade.

Upgrade Procedure

The initial installation procedure consists of:

- Upgrading the Database Component
- Upgrading the Application Components

Upgrading the Database Component

Upgrade of the database component of Oracle Utilities Smart Grid Gateway must be complete before you can proceed with the following sections. Refer to the **Upgrade Install** chapter in the *Oracle Utilities Smart Grid Gateway Database Administrator's Guide* for instructions to upgrade the database component.

Note: When implementing Oracle Utilities Smart Grid Gateway with Oracle Utilities Meter Data Management, both the Smart Grid Gateway and Meter Data Management database components should be installed in the same database.

Upgrading the Application Components

Refer to the **Upgrading** Oracle Utilities Smart Grid Gateway section in the *Oracle Utilities* Smart Grid Gateway Installation Guide for instructions to install the application components.