Oracle Utilities Smart Grid Gateway Integration for Outage Operations

Installation Guide

Oracle Utilities Network Management System
v1.11.0.4
Oracle Utilities Smart Grid Gateway v2.1.0.1

Release 2.1.0.1 Media Pack

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Oracle Utilities Smart Grid Gateway Integration for Outage Operations, Release 2.1.0.1 Media Pack

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Contents

Chapter 1

Overview

This guide describes the installation steps that must be completed before Oracle Utilities Network Management System can be integrated with Oracle Utilities Smart Grid Gateway.

Additional Resources

For more information refer to the following documents:

Task	Description
Oracle Utilities Smart Grid Gateway Integration for Outage Operations Media Pack Release 2.1.0.1 Implementation Guide	Same folder as this document with the distribution for this product.
Oracle Utilities Network Management System Installation Guide for Release v1.11.0.4 or later	Refer to Oracle Utilities Network Management System installation documentation located on the Oracle Software Delivery Cloud (https://edelivery.oracle.com) or on the Oracle Technology Network (http://www.oracle.com/technetwork/documentation/utilities-155272.html)
Oracle Utilities Smart Grid Gateway Installation Guide for Release v2.1.0.1 or later	Refer to Oracle Utilities Smart Grid Gateway installation documentation located on the Oracle Software Delivery Cloud (https://edelivery.oracle.com) or on the Oracle Technology Network (http://www.oracle.com/technetwork/documentation/utilities-155272.html)

Abbreviations

Abbreviations used in this guide are listed below:

- SGG - Oracle Utilities Smart Grid Gateway

- NMS - Oracle Utilities Network Management System

- DDL - Data Definition Language

- MDS - Metadata Store

- AIA - Oracle Application Integration Architecture
- EBF - Enterprise Business Flow
- SOA - Oracle Service-Oriented Architecture

Chapter 2

Installation

The following sections describe the settings and requirements for a successful installation of the Oracle Utilities Smart Grid Gateway Integration for Outage Operations. Complete these installation steps prior to configuring the applications for integrated functionality.

- Software Requirements

- Pre-Installation Tasks

- Installation Steps

- Installing the Integration

- Post-Installation Checklist

- Configuring Edge Applications

Software Requirements

The following software and platforms must be installed and configured before the installation of integration pack.

> **Note:** Refer to your product specific installation instructions for complete details.

- **Oracle Utilities Smart Grid Gateway**: Application version v2.1.0.1 or later installed on an Oracle database with the latest supported media pack.

- **Oracle Utilities Network Management System**: Application version v1.11.0.4 or later installed on an Oracle database with the latest supported media pack.

- SOA11g / Oracle Enterprise Manager 11.1.1.6.0 on WebLogic Server 10.3.6.

> **Note:** This integration does not require the AIA Foundation Pack to be installed.

Pre-Installation Tasks

The following tasks must be completed before installing the integration:

- Ensure that Oracle SOA Suite 11gR1 PS5 (11.1.1.6.0) or higher is installed and running.

  For details, refer to the documentation at:

  http://www.oracle.com/technetwork/middleware/soasuite/documentation/index.html#111160

- Login to the WebLogic console to confirm there are no changes in **Pending Activation** status.

- Start the Node Manager if not already running.

- Restart the Enterprise Manager and the WebLogic Admin server.

- Verify that the WebLogic Admin server, SOA server, and Node Manager are up and running.

Installation Steps

Perform and complete the following installation steps:

1. Download the installation zip file from Oracle Software Delivery Cloud (https://edelivery.oracle.com).

   Note: For specific instructions about installing this integration on non-Windows/ Linux platforms, see Oracle Support Knowledge article ID 1349320.1.

2. Extract the zip file to get the installation folder.

This directory includes sub folders, such as bin, config, Install, MDS-Artifacts, and services as shown in the figure below:
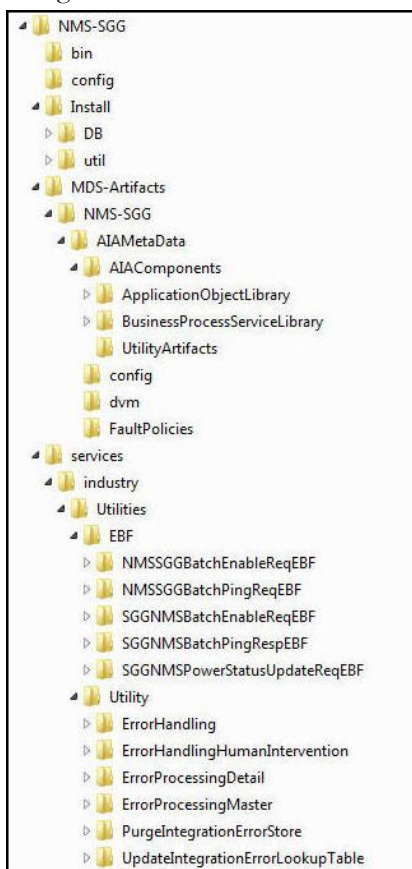
NMS-SGG Product Home Directory

3. Set the following environment variables for Unix and Windows operating systems:

Variable	Example
SOA_HOME	XXX/Middleware/Oracle_SOA1
ORACLE_HOME	XXX/Middleware/Oracle_SOA1
MW_HOME	XXX/Middleware
WL_HOME	XXX/Middleware
PRODUCT_HOME	Directory where NMS_SGG.zip is extracted. Example: **Unix/Linux**: PRODUCT_HOME=/slot/oracle/NMS-SGG **Windows**: PRODUCT_HOME=D:\Oracle\NMS-SGG

> **Note:** The syntax for PRODUCT_HOME changes depending on whether you are installing on Linux or Windows.

The following sections refer to this as $PRODUCT_HOME in Linux and as %PRODUCT_HOME% in Windows. If you are using Windows, replace $PRODUCT_HOME with %PRODUCT_HOME% while installing or deploying MDS, or deploying the composites individually.

4. Run the following commands (setWLSEnv.sh on Linux and setWLSEnv.cmd on Windows) to set the environment variables used for executing the installation scripts:

- **Unix / Linux:**

```
source "${WL_HOME}/wlserver_10.3/server/bin/setWLSEnv.sh"
```

- **Windows:**

  a. Change directory:

```
cd %WL_HOME%\wlsserver_10.3\server\bin\
```

  b. Execute the command:

```
setWLSEnv.cmd
```

Note: Setting up environment variables in a typical installation would be as below:

- **Unix/Linux:**

```
export SOA_HOME=/slot/ems66xx/oracle/Middleware/Oracle_SOA1
export ORACLE_HOME=/slot/ems66xx/oracle/Middleware/Oracle_SOA1
export MW_HOME=/slot/ems66xx/oracle/Middleware
export WL_HOME=/slot/ems66xx/oracle/Middleware
export PRODUCT_HOME=/slot/ems66xx/oracle/NMS-SGG
source "${WL_HOME}/wlserver_10.3/server/bin/setWLSEnv.sh"
cd $PRODUCT_HOME/bin
```

- **Windows:**

```
SET SOA_HOME=C:\Middleware\Oracle_SOA1
SET ORACLE_HOME=C:\Middleware\Oracle_SOA1
SET MW_HOME=C:\Middleware
SET WL_HOME=C:\Middleware
SET PRODUCT_HOME=C:\NMS-SGG
C:\Middleware\wlserver_10.3\server\bin\setWLSEnv.cmd
cd %PRODUCT_HOME%\bin
```

3. Modify the $PRODUCT_HOME/config/InstallProperties.xml file and ensure that the values entered are relevant to the server where the integration product has to be installed.

Use a text editor to update the InstallProperties.xml file.

Login to the integration WebLogic console to cross-verify the integration admin and SOA managed server values being entered for these properties, as the build might fail due to inappropriate values.

4. Modify the $PRODUCT_HOME/MDS-Artifacts\NMS-SGG/AIAMetaData/config/ConfigurationProperties.xml.

Locate the following properties and replace them with the appropriate end point URLs of Oracle Utilities Network Management System and Oracle Utilities Smart Grid Gateway.

```
<Property name="NMS.BulkRespService.EndPoint">https://NMS_HOST:NMS_PORT/nms-
ms/oa</Property>
<Property name="NMS.EnableReqService.EndPoint">https://NMS_HOST:NMS_PORT/nms-
ms/oa</Property>
<Property name="NMS.DevEventNotifService.EndPoint">https://NMS_HOST:NMS_PORT/
nms-ms/oa</Property>
<Property name="SGG.EnableReqService.EndPoint">http://SGG_HOST:SGG_PORT/ouaf/
XAIApp/xaiserver/D1-MaintainSuppression</Property>
```

```
<Property name="SGG.callbackURL">http://SOA_HOST:SOA_PORT/soa-
infra/services/PARTITION_NAME/SGGNMSBatchPingRespEBF/
SGGBatchPingCallBackRespBPEL_Client_ep</Property>
<Property name="SGG.BatchPingReqService.EndPoint">http://
SGG_SOA_HOST:SGG_SOA_PORT/soa-infra/services/SGG_PARTITION_NAME/
BulkRequest/BulkRequestService</Property>
```

> **Note:** In SGG.callbackURL property, replace SGG_SOA_HOST, SGG_SOA_PORT & SGG_PARTITION_NAME tokens with hostname, port number of SGG SOA server and partition where this BulkRequest SGG SOA composite is installed. In case the SGG SOA and integration SOA are running on the same managed server, SOA_HOST & SGG_SOA_HOST would be same. The same is applicable for SOA_PORT as well.

Example:

```
<Property name="NMS.BulkRespService.EndPoint">https://
xxx.xx.domain.com:7103/nms-ms/oa</Property>
<Property name="NMS.EnableReqService.EndPoint">https://
xxx.xx.domain.com:7103/nms-ms/oa</Property>
<Property name="NMS.DevEventNotifService.EndPoint">https://
xxx.xx.domain.com:7103/nms-ms/oa</Property>
<Property name="SGG.EnableReqService.EndPoint">http://
xxx.xx.domain.com:2101/ouaf/XAIApp/xaiserver/D1-
MaintainSuppression</Property>
<Property name="SGG.callbackURL">http://xxx.xx.domain.com:8001/
soainfra/services/NMS-SGG/SGGNMSBatchPingRespEBF/
SGGBatchPingCallBackRespBPEL_Client_ep</Property>
<Property name="SGG.BatchPingReqService.EndPoint">http://
xxx.xx.domain.com:8001/soa-infra/services/MDF/BulkRequest/
BulkRequestService</Property>
```

5. There are two XML files: InstallProperties.xml and ConfigurationProperties.xml. The XML element in InstallProperties.xml file does not contain any attribute.

> **Note**: When editing XML files, such as InstallProperties.xml and ConfigurationProperties.xml, make sure to follow XML editing standards while editing these files. All XML elements need to be closed properly.
>
> Do not delete the NMS-SGG directory. This directory will be used as the download location for patches.
>
> For a Windows installation, when updating any of the properties listed in the table below, add the "/" (forward slash) to the path. For example: C:/NMS-SGG
>
> If install fails because of incorrect values defined in the installProperties.xml file, run uninstall, populate the correct values, and then run install again.

The table below lists the properties available in the InstallProperties.xml file along with their usage. The default values are specified wherever applicable.

Property	Description	Example
SOA Information		
<config>		
<modulename>	Name of the integration module.	Default: NMS-SGG Do not change this value.
<config> <NMS-SGG>		
<WorkFlow.Notification>		
<from.emailid>	E-mail ID, which should be set in the "From" property of Workflow Notification bean.	
<mode>	EMAIL	
Oracle Utilities Network Management System Application Information		
<NMS>		
<ApplicationUsername>		
<ApplicationPassword>		
SGG Middleware Information		
<SGG-MW>		
<ApplicationUsername>		
<ApplicationPassword>		
Oracle Utilities Smart Grid Gateway Application Information		
<SGG>		
<ApplicationUsername>		
<ApplicationPassword>		
<config> <SOA>		
Admin Server Information		
<AdminServer>		
<hostname>	Host name of the server where admin server hosting SOA suite is installed.	adminserver.example.oracle.com
<portnumber>	Port number the admin server (hosting SOA suite) is listening to.	7045

Property	Description	Example
<servername>	Admin server name (hosting SOA suite)	AdminServer
<username>	User name used to login as an Admin server (hosting SOA suite) administrator.	webLogic
<password>	Password used to login as an Admin server (hosting SOA suite) administrator.	
<domainname>	WebLogic domain name hosting SOA suite.	soa_domain

Managed Server Information

<ManagedServer>		
<hostname>	Host name of the server where managed server (hosting SOA suite) is installed.	managedserver.example.oracle.com
<portnumber>	Port number the managed server (hosting SOA suite) is listening to.	8045
<servername>	Managed server name (hosting SOA suite)	Managedserver1
<username>	User name used to login to managed server (hosting SOA suite) as an administrator.	webLogic
<password>	Password used to login to managed server (hosting SOA suite) as an administrator.	

MDS DB Information

<mdsconfig>		
<mdsdbusername>	User name used to login to MDS schema.	XXX_MDS
<mdsdbuserpassword>	Password used to login to MDS schema.	
<mdsdbhostname>	Host name of the server hosting the database containing MDS schema.	db.hostname.oracle.com
<mdsdbportnumber>	Port number of the database containing MDS schema.	1521
<mdsdbsid>	SID of the database containing MDS schema.	SID

Error Handling Schema Information

<config> <EH>		

Property	Description	Example
<dba.dbusername>	User name used to log in as a Database Administrator (DBA). This database hosts the schema required for Oracle Utilities Network Management System and Oracle Utilities Smart Grid Gateway integration.	System
<dba.dbuserpassword>	Password used to log in as a Database Administrator (DBA). This database hosts the schema required for Oracle Utilities Network Management System and Oracle Utilities Smart Grid Gateway integration.	
<dbusername>	User name used to login to NMS-SGG Error Handling schema for Oracle Utilities Network Management System and Oracle Utilities Smart Grid Gateway integration. This user can be automatically created by the install (set dbuser.createflag to true) or manually outside the install process.	Example : NMS-SGG
<dbuserpassword>	Password used to log in to NMS-SGG Error Handling schema for Oracle Utilities Network Management System and Oracle Utilities Smart Grid Gateway integration.	
<dbuser.createflag>	Flag specifying whether to create a new schema or use the existing schema for Oracle Utilities Network Management System and Oracle Utilities Smart Grid Gateway integration. If the schema is created manually outside of the installation process, then set this value to "false". Else, set the value to "true", if the installation script should automatically create the schema. Valid values: true or false (this is case sensitive).	true
<dbhostname>	Database host name used for Oracle Utilities Network Management System and Oracle Utilities Smart Grid Gateway integration.	db.sample.oracle.com

Property	Description	Example
<dbportnumber>	Database port number used for Oracle Utilities Network Management System and Oracle Utilities Smart Grid Gateway integration.	1521
<dbsid>	Database SID used for Oracle Utilities Network Management System and Oracle Utilities Smart Grid Gateway integration.	SID

Table: Properties of the InstallProperties.xml file

Note: If the dbuser.createflag is set to false, the schema needed for Oracle Utilities Network Management System and Oracle Utilities Smart Grid Gateway integration error handling will not be automatically created by the install. The schema needs to be created manually before running the install. When creating the user manually, grant connect and resource to the user.

Also note the following:

- $PRODUCT_HOME/Install/util/ant folder contains all the ant build scripts.

- $PRODUCT_HOME/bin/InstallBuild.xml is used to install Oracle Utilities Network Management System and Oracle Utilities Smart Grid Gateway integration code.

- $PRODUCT_HOME/bin/UnInstallBuild.xml is used to uninstall Oracle Utilities Network Management System and Oracle Utilities Smart Grid Gateway integration code.

- $PRODUCT_HOME/bin/DeployUndeployUtility.xml is used to deploy/undeploy individual composite/ MDS folder and then restart the managed server.

Note: The installation and uninstallation process may take several minutes to complete. Please stand by until the install or uninstall process is finished.

Installing the Integration

After setting the environment variables, open the Command prompt window and execute the following installation scripts in Linux and Windows respectively.

- **Linux:**

```
cd $PRODUCT_HOME/bin
ant -f InstallBuild.xml Install
-DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml -l
Installation_date.log
```

- **Windows:**

```
cd %PRODUCT_HOME%\bin
ant -f InstallBuild.xml Install
-DInstallProperties=%PRODUCT_HOME%\config\InstallProperties.xml -l
Installation_date.log
```

During execution, the following tasks are performed to complete the installation process:

- Creates database objects required for the NMS-SGG module.

- Creates JDBC Data Source for the NMS-SGG Module.

- Deploys DbAdapter_NMSSGG.rar file that contains database outbound connections for middleware resources.

- Updates MDS repository with all the artifacts.

- Creates the application partition where the composites are going to be deployed. For example: NMS-SGG

- Compiles, and then deploys all the composites to the Enterprise Manager.

Post-Installation Checklist

After running the installation scripts, you must complete the following steps to finish the installation:

1. Restart the WebLogic Admin server and the SOA server.
   This task activates the processes that require a restart after installation and ensures that the installation of all artifacts is successful.

2. Review the logs under $WL_HOME/user_projects/domains/soa_domain/servers/ soa_server1/logs to check for deployment errors.

3. Verify DB Adapter configuration to check all the JDBC resources were created at the time of installation.

4. Verify that the composites in the Enterprise Manager.

5. Verify that the security policies are attached to the composite services and references.

6. Verify that the CSF-Keys are created.

7. Import Oracle Utilities Network Management System certificates into the key store if required.

Verifying DB Adapter Configuration

Verify the DB Adapter configuration by perform the following steps:

1. Open the **Weblogic Admin** console and click the **Deployment** link on the **Home** page.

2. Verify that **DBAdapter_NMSSGG.rar** is deployed, and the state is **Active**.
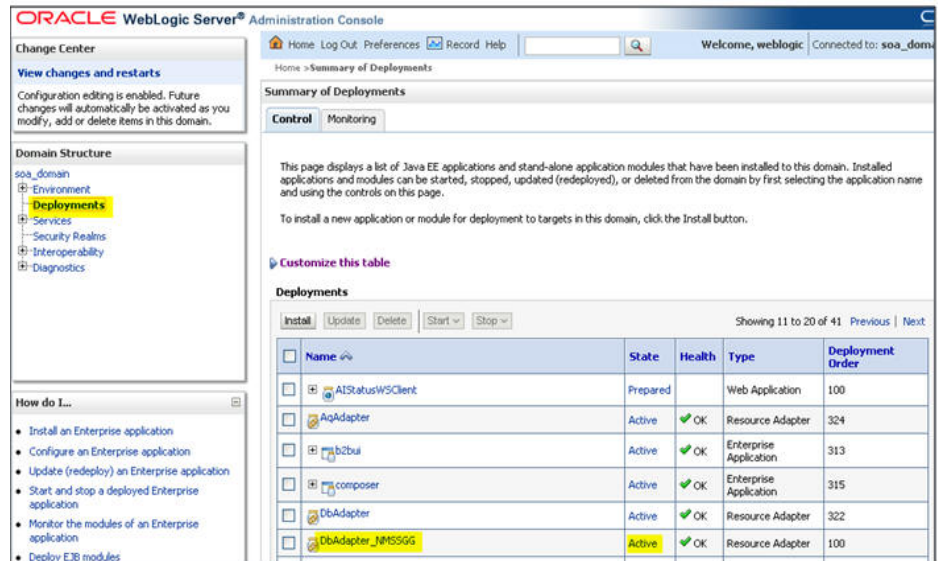
DB Adapter Deployment

3. Verify the eis/DB/NMS-SGGErrorHandling connection factory details to ensure the connection-factory location matches the one defined in the JCA files by following these steps:

   a. Click the **DBAdapter_NMSSGG** link on the Deployments table.

   b. Click the **Configuration** tab, and then click the **Outbound Connection Pools** subtab.

   c. Expand **javax.resource.cci.ConnectionFactory** to check eis/DB/NMS-SGGErrorHandling connection factory instance.
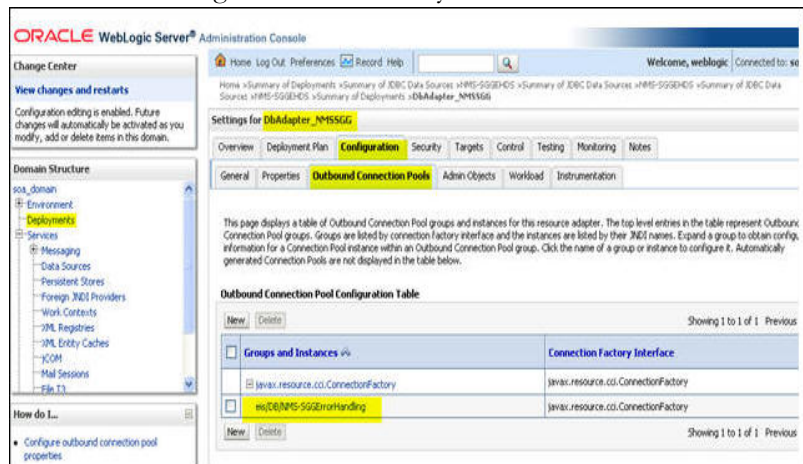
Connection Factory

4. Check to make sure the database details are correct by following these steps:

   a. On the left pane, click the **Services** > **Data Sources**.

   b. Click the **NMS-SGGEHDS** data source link to check the **JNDI Name**.
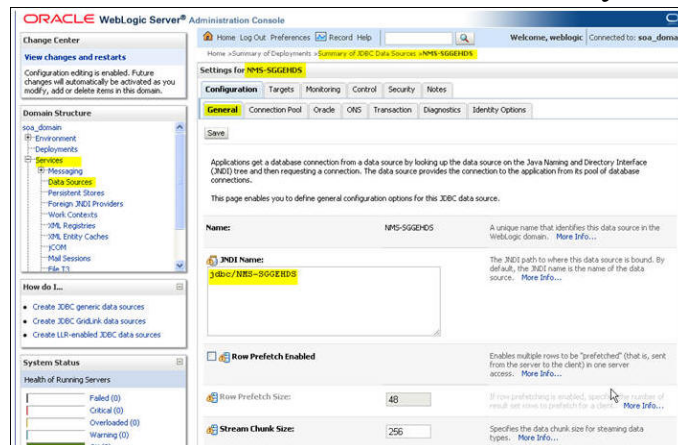
Data Source JNDI Name

   c. Click the **Connection Pool** subtab to check the **URL** and **Properties**.
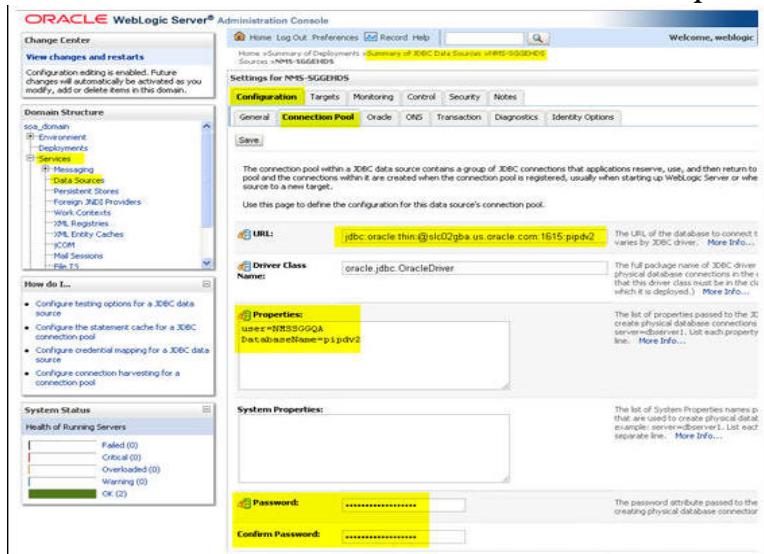
Database Details

4. Test the datasource for correct configurations by following these steps:

   a. Click the **Monitoring** tab, and then click the **Testing** tab.

b. Select the **SOA Managed** server, and click the **Test Data Source** button.
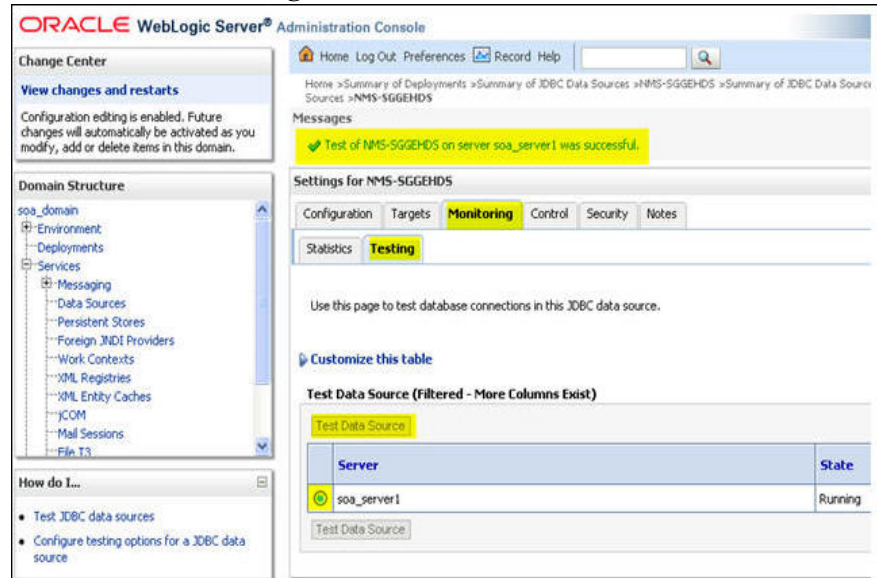
Database Configuration

Verifying Enterprise Manager

Verify that the NMS-SGG partition was created with all the composites deployed.

Perform the following steps:

1. Login to the **Enterprise Manager** console.

2. Expand **Farm_soa_domain** > **SOA** > **soa-infra** > **NMS-SGG** partition.

3. Verify that all composites are deployed and are in an active state.
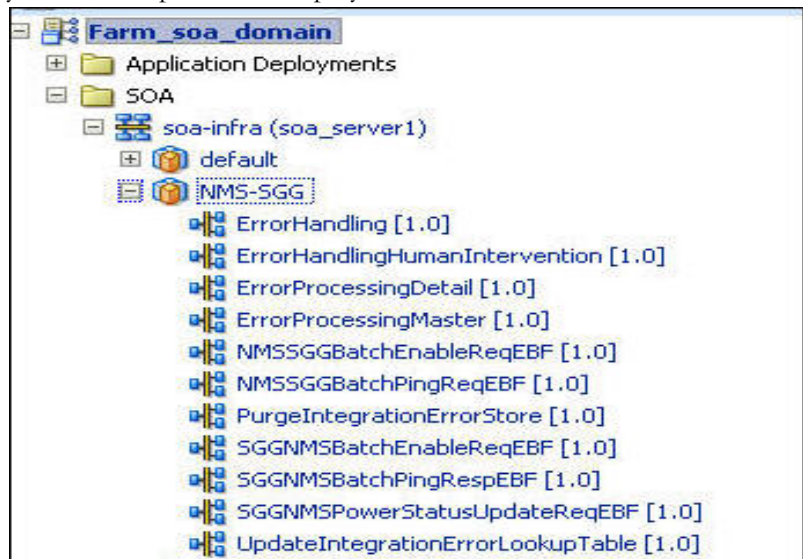
NMS-SGG Partition

Verifying Composite Services and References

Verify that security policies are attached to the composite services and references.

Perform the following steps:

1. Login to the **Enterprise Manager** console.

2. Expand **Farm_soa_domain** > **SOA** > **soa-infra** >**NMS-SGG** partition.

3. Select the respective composite (e.g., NMSSGGBatchEnableReqEBF).

4. Click the **Policies** tab in the right-side pane.

5. Check the security policies are attached to the respective service and references (e.g.: NMSSGGBatchEnableReqBPEL_Client_ep service should have oracle/ Utilities_wss_http_token_service_policy_OPT_ON policy attached).

Verifying CSF-Keys

Verify that all of the CSF-Keys are created successfully.

Perform the following steps:

1. Login to the **Enterprise Manager** console.

2. Expand **Farm_soa_domain**> **WebLogic_Domain** > **soa_domain**.

3. Right-click on **soa_domain,** and navigate to **Security** > **Credentials**.

4. Expand **oracle.wsm.security Map**.

5. Check the following keys are available.

   ```
   NMS-SGG_SGG_BPEL
   NMS-SGG_SGG_XAI
   NMS-SGG_NMS
   ```

Importing Oracle Utilities Network Management System Certificates into KeyStore

In case the Oracle Utilities Network Management System services are SSL enabled, you will need to import the Oracle Utilities Network Management System certificates into the Weblogic Managed server to enable secure communication between the integration layer and Oracle Utilities Network Management System.

> **Note**: Make sure that the server is restarted before using the system to ensure all the processes are activated as some of the artifacts used by the processes require restart of admin and managed servers after the complete installation.

> **Note** that the composite PurgeIntegrationErrorStore gets deployed only when purge.process.deploy=true in deploy.properties. If this is set to false, then you will not find this process deployed.

Updating the CSF-Key Values

In case if the edge application credentials are changed, the User Name and Password values in the respective CSF-Keys needs to be updated with the new credentials.

Perform the following steps:

1. Login to the Enterprise Manager console.

2. Expand **Farm_soa_domain** > **WebLogic_Domain** > **soa_domain**.

3. Right-click on **soa_domain** and navigate to **Security** > **Credentials**.

4. Expand **oracle.wsm.security** Map.

5. Edit the respective CSF-Key (eg: NMS-SGG_NMS).

6. Update the **User Name**, **Password** and **Confirm Password** fields.

7. Click **OK**.

Configuring Edge Applications

Configure Oracle Utilities Network Management System (NMS) and Oracle Utilities Smart Grid Gateway (SGG) installation to point to the integration according to the guidelines in the *Oracle Utilities Smart Grid Gateway Integration for Outage Operations Implementation Guide*.

Chapter 3

Deploying / Undeploying Individual Composites

This section describes how to deploy/ undeploy individual composites for incremental builds or patches.

- Undeploying Composites

- Deploying Individual Composites

Undeploying Composites

If the composite being deployed involves changes made to the MDS artifacts, you must first undeploy the composite.

Perform the following steps:

1. Open a **Command** prompt, and execute the following commands for Linux and Windows respectively:

   - **Linux:**

     ```
     cd $PRODUCT_HOME/bin
     ant -f $PRODUCT_HOME/bin/DeployUndeployUtility.xml
     -DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml
     UnDeployComposite
     ```

   - **Windows:**

     ```
     cd %PRODUCT_HOME%\bin
     ant -f %PRODUCT_HOME%\bin\DeployUndeployUtility.xml
     -DInstallProperties=%PRODUCT_HOME%\config\InstallProperties.xml
     UnDeployComposite
     ```

2. Validate the following parameters when prompted with default values during deployment. Press **ENTER** to use the default prompted value.

   - **Composite Name**: Indicates the name of the composite to be undeployed to SOA server. This parameter does not have a default value.

   - **Composite Folder Location**: Indicates the folder name should be an absolute path, beginning with <PRODUCT_HOME>/services/industry/Utilities/ <EBF/utility>.

     For example: If you are planning to undeploy the composite from **<PRODUCT_HOME>/services/industry/Utilities/EBF**, then pass **<PRODUCT_HOME>/services/industry/Utilities/EBF** to this property.

The default value for this property is **%PRODUCT_HOME%/services/
industry/Utilities/EBF**, as most of the business-specific composites reside in
this folder.

- **Partition Name**: Indicates the SOA partition name from where the composite
should be undeployed.

3. Enter the composite name to be undeployed from the partition.

Deploying Individual Composites

Deploy individual composites by performing the following steps:

1. Open a Command prompt, and execute the following commands for Linux and
Windows respectively:

- **Linux:**

```
cd $PRODUCT_HOME/bin
ant -f $PRODUCT_HOME/bin/DeployUndeployUtility.xml
-DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml
DeployComposite
```

- **Windows:**

```
cd %PRODUCT_HOME%\bin
ant -f %PRODUCT_HOME%\bin\DeployUndeployUtility.xml
-DInstallProperties=%PRODUCT_HOME%\config\InstallProperties.xml
DeployComposite
```

2. Validate the following parameters when prompted with default values during
deployment. Press **ENTER** to use the default prompted value.

- **Composite Name**: Indicates name of the composite to be deployed to SOA
server. This parameter does not have a default value.

- **Composite folder location**: Indicates the folder name should be an absolute
path beginning with %PRODUCT_HOME%/services/industry/Utilities/EBF.

For example: If you are planning to deploy the composite from
%PRODUCT_HOME%/services/industry/Utilities/EBF, then pass
%PRODUCT_HOME%/services/industry/Utilities/EBF to this property.

If you are planning to deploy the composite from Error Handling then
%PRODUCT_HOME%/services/industry/Utilities/Utility, then pass
%PRODUCT_HOME%/services/industry/Utilities/Utility to this property.

The default value for this property is %PRODUCT_HOME%/services/
industry/Utilities/EBF. Most of the business-specific composites reside in this
folder.

- **Partition Name**: The SOA partition name to which the composite should be
deployed. Enter the composite name to be deployed from the partition.

For example: NMSSGGBatchPingReqEBF

Note: Refer to Verifying Composite Services and References section for
details regarding composites for Oracle Utilities Network Management
System - Oracle Utilities Smart Grid Gateway.

Chapter 4

MDS Folders

This section describes how to deploy and undeploy individual MDS folders for incremental builds or patches.

The following topics are discussed here:

*   Undeploying the MDS Folder

*   Deploying the MDS Folder

Undeploying the MDS Folder

To undeploy a particular folder from MDS, execute the following commands and then pass the folder name to be undeployed.

Perform the following steps:

1. Open a Command prompt and execute the following commands for Linux and Windows respectively.

    These commands undeploy a folder under $PRODUCT_HOME/MDS-Artifacts from the MDS repository.

    *   **Linux:**

        ```
        cd $PRODUCT_HOME/bin
        ant -f $PRODUCT_HOME/bin/DeployUndeployUtility.xml
        -DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml UnDeployMDS
        ```

    *   **Windows:**

        ```
        cd %PRODUCT_HOME%\bin
        ant -f %PRODUCT_HOME%\bin\DeployUndeployUtility.xml
        -DInstallProperties=%PRODUCT_HOME%\config\InstallProperties.xml
        UnDeployMDS
        ```

2. Validate the following parameters when prompted with default values during undeployment. Press **ENTER** to use the default prompted value.

    *   **SOA Server Hostname**: Indicates the host name of the server hosting the SOA server. By default, it selects the managed server host name, which is passed as InstallProperties property in ant command.

    *   **SOA Server Portnumber**: Refers to the Port number of the server hosting the SOA server. By default, it selects the managed server port number, which is passed as InstallProperties property in ant command.

- **SOA Server Username**: Indicates the user name for connecting to the SOA server. By default, it selects the managed server user name, which is passed as InstallProperties property in ant command.

- **SOA Server Password**: Indicates the password used for connecting to the SOA server. By default, it selects the managed server password, which is passed as InstallProperties property in ant command.

- **MDS Folder Name**: Indicates the name of the folder to be undeployed from the MDS repository.

  The folder name should be a relative path inside %PRODUCT_HOME%/MDS-Artifacts, beginning with NMS-SGG.

  For example: To undeploy %PRODUCT_HOME%/MDS-Artifacts/NMS-SGG/AIAMetaData/dvm pass NMS-SGG/AIAMetaData/dvm as the MDS folder name.

  Note: This command does not support file-level undeployment. It is used only for folder-level undeployment.

Deploying the MDS Folder

To deploy the MDS folder, perform the following steps:

1. Open a Command prompt and execute the following commands in Linux and Windows respectively:

   - **Linux:**

   ```
   cd $PRODUCT_HOME/bin
   ant -f $PRODUCT_HOME/bin/DeployUndeployUtility.xml
   -DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml
   DeployMDS
   ```

   - **Windows:**

   ```
   cd %PRODUCT_HOME%\bin
   ant -f %PRODUCT_HOME%\bin\DeployUndeployUtility.xml
   -DInstallProperties=%PRODUCT_HOME%\config\InstallProperties.xml DeployMDS
   ```

2. Validate the following parameters when prompted with the default values during deployment. Press ENTER to use the default prompted value.

   - **SOA Server Hostname**: The host name of the server hosting the SOA server. By default, it selects the managed server host name, which is passed as InstallProperties property in the ant command.

   - **SOA Server Portnumber**: The port number of the server hosting the SOA server. By default, it selects the managed server port number, which is passed as InstallProperties property in the ant command.

   - **SOA Server Username**: User name used to connect to the SOA server. By default, it selects the managed server user name, which is passed as InstallProperties property in the ant command.

   - **SOA Server Password**: Password used to connect to the SOA server. By default, it selects the managed server password, which is passed as InstallProperties property in ant command.

- **MDS Folder Name**: Name of folder to be deployed from the MDS repository. The folder name should be a relative path inside %PRODUCT_HOME%/ MDS-Artifacts beginning NMS-SGG. Under the NMS-SGG folder is the MDS-Artifacts subfolder, which contains all the files that can be deployed to MDS.
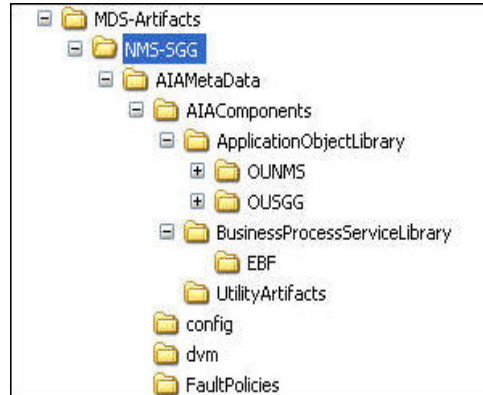
MDS Directory Structure

- **DVM changes**: When new DVM values are added to a DVM file(s), the DVM folder must be updated in MDS. This command will not only deploy the file(s) that were changed, but the whole DVM folder. Pass NMS-SGG/AIAMetaData/ dvm as the MDS folder name and it will deploy the whole DVM folder to MDS.

  Note: Use this command to perform only folder-level deployment. The command does not support file-level deployment.

Chapter 5

Restarting the SOA Managed Server

This chapter describes how to restart the WebLogic managed server hosting the Service-Oriented Architecture (SOA) suite. This is an **optional** step. You can perform all start and stop operations for managed WebLogic Servers either from the command prompt or from Oracle WebLogic Server Administration Console or Oracle Enterprise Manager Fusion Middleware Control. The following sections are for your reference only. For detailed information, refer to *Oracle WebLogic Server Administrator Guide*.

> **Note:** Node Manager must be running in order to use the Oracle WebLogic Server Administration Console or Oracle Enterprise Manager Fusion Middleware Control for controlling (start/stop) SOA WebLogic managed servers.

Perform the following steps to restart the SOA Managed Server:

1. Open a Command prompt and execute the following commands in Linux and Windows:

   - **Linux:**

     ```
     cd $PRODUCT_HOME/bin
     ant -f $PRODUCT_HOME/bin/DeployUndeployUtility.xml
     -DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml
     RestartManagedServer
     ```

   - **Windows:**

     ```
     cd %PRODUCT_HOME%\bin
     ant -f %PRODUCT_HOME%\bin\DeployUndeployUtility.xml
     -DInstallProperties=%PRODUCT_HOME%\config\InstallProperties.xml
     RestartManagedServer
     ```

2. Validate the following parameters when prompted with default values during deployment. Press ENTER to use the default prompted value.

   - **Admin Server Hostname**: The host name of the server hosting the Admin server. By default, it selects the Admin Server host name, which is passed as InstallProperties property in the ant command.

   - **Admin Server Portnumber**: Port number of the server hosting the Admin server. By default, it selects the Admin Server port number, which is passed as InstallProperties property in ant command.

   - **Admin Server Username**: User name used to connect to the Admin server. By default, it selects the Admin Server user name, which is passed as InstallProperties property in the ant command.

- **Admin Server Password**: Password used to connect to the Admin server. By default, it selects the Admin Server password, which is passed as InstallProperties property in the ANT command.

- **Managed Server Name to be restarted**: The default value is selected from InstallProperties property.

Chapter 6

Uninstalling the Integration

This section describes how to uninstall the integration.

> **Note**: It is recommended to take a back up of the NMS-SGG PRODUCT_HOME before uninstalling the product.

To uninstall the integration, perform the following steps:

1. Restart the WebLogic Admin server and the SOA server.

2. Set the environment variables as mentioned above in the Installation Steps.

3. Open a Command prompt, and execute the following commands in Linux and Windows respectively:

   - **Linux:**

   ```
   cd $PRODUCT_HOME/bin
   ant -f UnInstallBuild.xml UnInstall -DInstallProperties=$PRODUCT_HOME/
   config/InstallProperties.xml -l UnInstall.log
   ```

   - **Windows:**

   ```
   cd %PRODUCT_HOME%\bin
   ant -f UnInstallBuild.xml UnInstall
   -DInstallProperties=%PRODUCT_HOME%\config\InstallProperties.xml -l
   UnInstall.log
   ```

These commands perform the following tasks related to Oracle Utilities Smart Grid Gateway Integration for Outage Operations:

- Undeploys all composites from the Enterprise Manager partition

- Deletes the partition

- Deletes the CSF-Keys

- Undeploys MDS artifacts

- Undeploys database outbound connection pool

- Deletes JDBC data source for the **Error Handling** module

- Drops database objects created for the **Error Handling** module

> **Note:** After a successful uninstall, all JDBC resources and NMS-SGG partitions created during installation are deleted.