

**Oracle® Utilities Meter Data Management
Integration to SAP for Meter Data Unification and
Synchronization**

Release 11.1 Media Pack

Installation Guide

Oracle Utilities Meter Data Management v2.0.1.6

SAP for Meter Data Unification and Synchronization v 6.0
EHP5

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Overview

This guide describes the installation steps that must be completed before Oracle Utilities Meter Data Management can be integrated with SAP for Meter Data Unification and Synchronization.

The installation process for Oracle Utilities Meter Data Management Integration to SAP for Meter Data Unification and Synchronization involves the following:

- Installation of Oracle Utilities Meter Data Management Adapter for SAP Meter Data Unification and Synchronization
- Installation of Oracle Utilities Meter Data Management Integration to SAP for Meter Data Unification and Synchronization

Additional Resources

For more information read the following documents:

Resource	Location
Oracle Utilities Meter Data Management Integration to SAP for Meter Data Unification and Synchronization Release 11.1 Media Pack Implementation Guide	Same folder as this document, with the distribution for this product.
Oracle Utilities Meter Data Management Installation Guide for Release v2.0.1.6	Refer to Oracle Utilities Meter Data Management installation documentation located on Oracle Software Delivery Cloud.
SAP for Utilities v6.0 EHP5	Refer to http://help.sap.com for additional information.

Abbreviations

FMW	Fusion Middleware
OUMDM	Oracle Utilities Meter Data Management
CRB	SAP Customer Relations and Billing
AIA	Oracle Application Integration Architecture
JMS	Java Messaging Service
BD	Bill Determinants
EBF	Enterprise Business Flow
MDS	MetaData Store
MDUS	Meter Data Unification and Synchronization

Installing Oracle Utilities Meter Data Management Adapter for SAP Meter Data Unification and Synchronization

This chapter describes the procedure for installing Oracle Utilities Meter Data Management Adapter for SAP Meter Data Unification and Synchronization on top of the previously installed Oracle Utilities Meter Data Management environment.

This section includes:

- [Installation Overview](#)
- [Package Contents](#)
- [Installation Checklist](#)
- [Pre-Installation Tasks](#)
- [Installing the Database](#)
- [Installing the Application](#)
- [Post-Installation Tasks](#)

Installation Overview

The installation process of Oracle Utilities Meter Data Management Adapter for SAP Meter Data Unification and Synchronization includes installing the database and then installing the application.

As the first step of installation process, ensure that you have installed the prerequisites for both the database and the application server. For instructions, see [Pre-Installation Tasks](#).

Note: Ensure you install the database before installing the application server.

After you have successfully installed the prerequisites, proceed with installing Oracle Utilities Meter Data Management Adapter for SAP Meter Data Unification and Synchronization.

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

Package Contents

This section describes the contents included in “**Oracle Utilities Meter Data Management Adapter for SAP MDUS V2.0.0 Multiplatform.zip**”.

- **MDM-DX-V2.0.0-FW-PREREQ-Multiplatform** - Oracle Utilities Application Framework 4.1.0 prerequisite patches convenience rollup
- **MDM-DX-V2.0.0-MDF-PREREQ-Multiplatform** - Oracle Utilities Meter Data Framework Post SP6 prerequisite patches convenience rollup
- **MDM-DX-V2.0.0-MDM-PREREQ-Multiplatform** - Oracle Utilities Meter Data Management Post SP6 prerequisite patches convenience rollup
- **MDM-DX-V2.0.0-Multiplatform** - Oracle Utilities Meter Data Management Adapter for SAP MDUS application server and database installation package

Installation Checklist

To install Oracle Utilities Meter Data Management Adapter for SAP Meter Data Unification and Synchronization, follow the checklist:

1. Install the prerequisites. For instructions, see [Pre-Installation Tasks](#).
2. Install the database component of Oracle Utilities Meter Data Management Adapter for SAP Meter Data Unification and Synchronization. For instructions, see [Installing the Database](#).
3. Install the application component of Oracle Utilities Meter Data Management Adapter for SAP Meter Data Unification and Synchronization. For instructions, see [Installing the Application](#).

Pre-Installation Tasks

The following tasks should be completed before you install Oracle Utilities Meter Data Management Adapter for SAP Meter Data Unification and Synchronization.

Installation Prerequisites

The following prerequisites must be installed prior to installing Oracle Utilities Meter Data Management Adapter for SAP Meter Data Unification and Synchronization.

- Oracle Utilities Meter Data Management v2.0.1.6 application
- Oracle Utilities Framework patches
- Oracle Utilities Meter Data Framework patches
- Oracle Utilities Meter Data Management patches

The Oracle Utilities Meter Data Management v2.0.1.6 application is available for download from My Oracle Support [Patch Number - 13524046]. Refer to Oracle Utilities Meter Data Management v2.0.1.6 installation guide and DBA guide to install the application.

The above patches are also available as a convenience rollup along with this Media Pack. Refer to the instructions in the readme.txt in 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.

Installing the Database

This section provides the steps to install Oracle Utilities Meter Data Management Adapter for SAP Meter Data Unification and Synchronization database.

Ensure that the Oracle Utilities Meter Data Management v2.0.1.6 database is installed before installing the Oracle Utilities Meter Data Management Adapter for SAP Meter Data Unification and Synchronization database.

Note: You must have a supported version of the Java Development Kit and Oracle client installed on the Windows 32-bit desktop where you stage and run the database installation package.

Oracle Utilities Meter Data Management Adapter for SAP Meter Data Unification and Synchronization database will be installed on top of Oracle Utilities Meter Data Management v2.0.1.6 database.

To install the Oracle Utilities Meter Data Management Adapter for SAP Meter Data Unification and Synchronization, follow these steps:

1. Navigate to MDM-DX-V2.0.0-FW-PREREQ-Multiplatform/Database folder containing the prerequisite Framework DB single fixes. See the Readme.txt file to apply Framework single fixes.
2. Navigate to MDM-DX-V2.0.0-MDF-PREREQ-Multiplatform/Database folder containing the prerequisite Meter Data Framework DB single fixes. See the Readme.txt file to apply MDF single fixes.
3. Navigate to MDM-DX-V2.0.0-MDM-PREREQ-Multiplatform/Database folder containing the prerequisite Meter Data Management DB single fixes. See the Readme.txt file to apply Meter Data Management single fixes.
4. Navigate to MDM-DX-V2.0.0-Multiplatform/Database folder that contains the database components required to install Oracle Utilities Meter Data Management Adapter for SAP Meter Data Unification and Synchronization database. Run CDXDBI.exe from ./DX/Install-Upgrade.

The utility prompts you to enter values for:

- Name of the target database.
 - Password for the SYSTEM user account in the database (in silent mode).
 - Name of the owner of the database schema.<CISADM>
 - Location of Java Home.<Java Home e.g C:/Java/jdk1.6.0_18>
 - Location of TUGBU JAR files.<../DX/jarfiles>
 - Password for the user (in silent mode).
 - The Oracle user with read-write privileges to the database schema.<CISUSER>
 - The Oracle user with read-only privileges to the database schema.<CISREAD>
 - The Oracle database role with read-write privileges to the database schema.<CIS_USER>
 - The Oracle database role with read-only privileges to the database schema.<CIS_READ>
5. During an install process, new database objects may be added to the target database. Before starting to use the database, generate the complete statistics for these new objects using the DBMS_STATS package.

Installing the Application

Ensure that Oracle Utilities Meter Data Management V2.0.1.6 is installed before installing Oracle Utilities Meter Data Management Adapter for SAP Meter Data Unification and Synchronization.

To proceed with the Oracle Utilities Meter Data Management Adapter for SAP Meter Data Unification and Synchronization installation, ensure you are connected to the target Oracle Utilities Meter Data Management application environment.

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

Follow the steps below to install Oracle Utilities Meter Data Management Adapter for SAP Meter Data Unification and Synchronization.

1. Log in to the host server as the Oracle Utilities Meter Data Management administrator user ID (default cissys). This is the same user ID that was used to install the Oracle Utilities Meter Data Management.
2. Create a <TEMPDIR> directory on the host server, which is independent of any current or other working Oracle Utilities Meter Data Management Adapter for SAP MDUS application environment. This can be the same <TEMPDIR> used during the installation of the Oracle Utilities Meter Data Management.
3. Navigate to **MDM-DX-V2.0.0-FW-PREREQ-Multiplatform/Application-Server-MultiPlatform** folder containing the Oracle Utilities Framework prerequisites single fixes. Refer to readme.txt file to apply these single fixes.
4. Navigate to **MDM-DX-V2.0.0-MDF-PREREQ-Multiplatform/Application-Server-MultiPlatform** folder containing the Oracle Utilities Meter Data Framework prerequisites single fixes. Refer to readme.txt file to apply these single fixes.

5. Navigate to **MDM-DX-V2.0.0-MDM-PREREQ-Multiplatform/Application-Server-MultiPlatform** folder containing the Oracle Utilities Meter Data Management prerequisites single fixes. Refer to readme.txt file to apply these single fixes.
6. Navigate to **MDM-DX-V2.0.0-Multiplatform/Application-Server-MultiPlatform** folder containing Oracle Utilities Meter Data Management Adapter for SAP Meter Data Unification and Synchronization application installation jar file. Copy this MDM-DX-V2.0.0-MultiPlatform.jar file to a <TEMPDIR> on your host server.

If you use FTP to transfer this file, ensure you use the BINARY option for the FTP transfer.

7. Decompress the file:

```
cd <TEMPDIR>  
jar -xvf MDM-DX-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 sub-directory named DX.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.

8. Initialize the Oracle Utilities Meter Data Management Adapter for SAP Meter Data Unification and Synchronization environment that you want to install the product into.

UNIX:

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

Windows:

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

9. Stop the Oracle Utilities Meter Data Management Adapter for SAP Meter Data Unification and Synchronization server instance, if running.

UNIX:

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

Windows:

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

10. Change to the <TEMPDIR>/DX.V2.0.0 directory.

11. Execute the following install script:

UNIX:

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

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

Windows:

```
install.cmd
```

12. Choose option P to proceed with the installation.
13. Change to the <TEMPDIR>/DX.V2.0.0 directory.
14. Execute the following command:

UNIX:

configureEnv.sh

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

Windows:

configureEnv.cmd

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

15. Execute following command.

UNIX:

initialSetup.sh

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

Windows:

initialSetup.cmd

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

Post-Installation Tasks

Configuring JMS

For steps about configuring JMS, refer to "Setting Up Oracle Utilities Meter Data Management Adapter for SAP Meter Data Unification and Synchronization" section in Oracle Utilities Meter Data Management Integration to SAP Meter Data Unification and Synchronization Release 11.1 Media Pack Implementation Guide.

After configuring the JMS, follow the steps below:

1. Execute the following command:

UNIX:

initialSetup.sh

Windows:

initialSetup.cmd

2. Start the environment.

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.

Use the following utility to stop the environment:

UNIX

spl.sh stop

Windows

spl.cmd stop

Note: The first time you start Oracle Utilities Meter Data Management Adapter for SAP Meter Data Unification and Synchronization, login to the WebLogic console and give system access to cisusers role.

The WebLogic console application can be accessed through the following URL:

<http://<hostname>:<portnumber>/console>

Installing Oracle Utilities Meter Data Management Integration to SAP for Meter Data Unification and Synchronization

The following sections describe the settings and requirements for a successful installation of Oracle Utilities Meter Data Management Integration to SAP for Meter Data Unification and Synchronization. Complete these installation steps prior to configuring the applications for integrated functionality.

- [Software Requirements](#)
- [Pre-Installation Tasks](#)
- [Installation Steps](#)
- [Post-Installation Checklist](#)
- [Configuring Edge Applications](#)

For instructions to install Oracle Utilities Meter Data Management Adapter for SAP Meter Data Unification and Synchronization, see [Installing Oracle Utilities Meter Data Management Adapter for SAP Meter Data Unification and Synchronization](#).

Software Requirements

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

Note: For complete details, refer to the product specific installation instructions.

- Oracle Utilities Meter Data Management – Application version v2.0.1.6 installed on an Oracle database. Apply the following bug fix :
 - 13524046
- SAP for Meter Data Unification and Synchronization installed on following updates:
 - SAP ECC6.0 EHP 5
- SOA Suite 11.1.1.5.0 on WebLogic Server 11gR1 (10.3.5.0) and Oracle Database Version 11gR2.

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

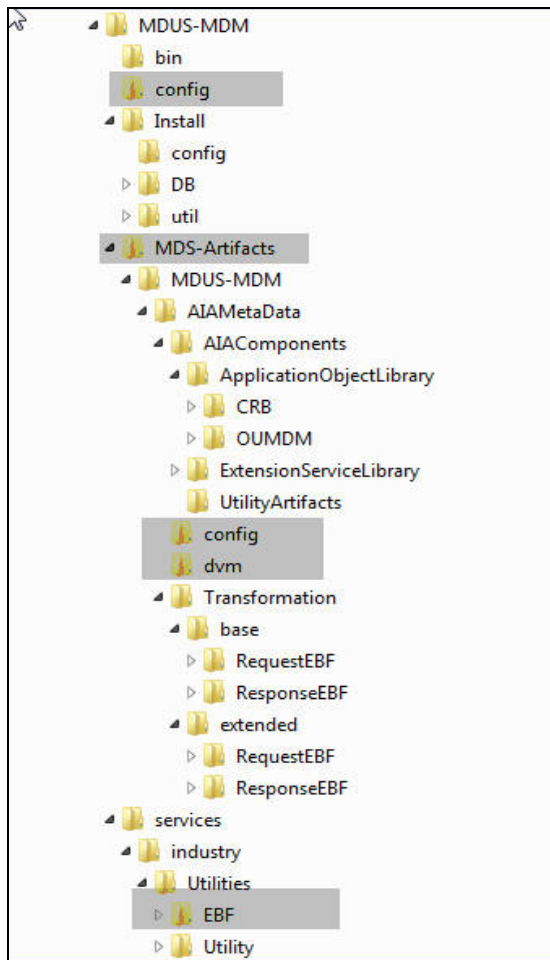
Pre-Installation Tasks

The following tasks should be completed before you install the Oracle Utilities Meter Data Management Integration to SAP for Meter Data Unification and Synchronization Release 11.1.

- Ensure that Oracle SOA Suite 11gR1 PS4 (11.1.1.5.0) is installed and running. For more information, refer to the documentation at <http://www.oracle.com/technetwork/middleware/soasuite/documentation/index.html#111150>.
- Login to the WebLogic console to confirm there are no changes in Pending Activation status.
- Start Node Manager.
- Restart the Enterprise Manager and the WebLogic Admin server.
- Make sure the WebLogic Admin server, SOA server, and Node Manager are up and running.
- If the SOA is hosted on Windows environment, apply the patch 14167129.
It is available through the ARU system with the patch 14167129 or bug 12321965.

Installation Steps

1. Download the installation zip file from Oracle Software Delivery Cloud (<http://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 folder includes subfolders, such as bin, config, Install, MDS-Artifacts, and services.



3. Set the following environment variables for UNIX and Windows OS:

Variable	Example
UNIX/Linux and Windows OS	
SOA_HOME	XXX/Middleware/Oracle_SOA1
ORACLE_HOME	XXX/Middleware/Oracle_SOA1
MW_HOME	XXX/Middleware
WL_HOME	XXX/Middleware
PRODUCT_HOME	Directory where MDUS-MDM.zip is extracted. Example: UNIX/Linux: PRODUCT_HOME=/slot/oracle/MDUS-MDM Windows: PRODUCT_HOME=D:\Oracle\MDUS-MDM

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 it should be referred to as %PRODUCT_HOME% in Windows. If you are using Windows, replace \$PRODUCT_HOME with %PRODUCT_HOME% throughout the document.

The following commands (setWLSEnv.sh on Linux and setWLSEnv.bat on Windows) set the environment variables used for executing the installation scripts.

- UNIX/ Linux:
source "\$WL_HOME/wlserver_10.3/server/bin/setWLSEnv.sh"
- Windows:
**cd %WL_HOME%\wlserver_10.3\server\bin\
setWLSEnv.cmd**

4. 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 WebLogic console to cross verify the values being entered for these properties, as the build might fail due to inappropriate values.

InstallProperties.xml is an XML file. Ensure you follow XML editing standards while editing InstallProperties.xml. All XML elements need to be closed properly. XML element in InstallProperties.xml file does not contain any attribute.

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

Note: Do not delete the PRODUCT_HOME 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 "/" to the path. For example: C:/MDUS-MDM

If install fails because of incorrect values defined in the installProperties.xml file, run uninstall, populate the correct values, and then run install again.

Property	Description	Example
<config> <MDUS-MDM>		
<modulename>	Name of the integration module.	Default: MDUS-MDM Do not change this value.
<WorkFlow.Notification> <from.emailid>	Email ID which should be set in the "From" property of Workflow Notification bean.	Please ensure that this is not left blank and is set with valid emailID.

Property	Description	Example
Server Information where MDM Queues are hosted If the MDM queues are hosted on the integration server, the server information for this section will be the same as the SOA information section. If the queues are hosted on a different managed server, provide the managed server information.		
<MDM> <AdminServer>		
<hostname>	Host name of the server where admin server is installed.	adminserver.example.oracle.com
<portnumber>	Port number the admin server is listening to.	7043
<servername>	Admin server name	AdminServer
<username>	User name used to log in as an Admin server administrator.	WebLogic
<password>	Password used to log in as an Admin server administrator.	
<MDM> <ManagedServer>		
<hostname>	Host name of server where managed server is installed.	managedserver.example.oracle.com
<portnumber>	Port number the managed server is listening to.	8043
<servername>	Managed server name	Managedserver1
<username>	User name used to log in as a managed server administrator.	WebLogic
<password>	Password used to log in as a managed server administrator.	
<MDM> <JMS>		
<serverName>	JMS server name Do not change this value if MDM queues are hosted and targeted on the same WebLogic domain hosting the SOA suite. If MDM queues are on a different WebLogic domain, then this value should be unique across domains. For more details, refer to WebLogic Administrator Guide .	Default: MDUSMDMJMServer

Property		Description	Example
	<ModuleName>	JMS module name	Default: MDUSMDMJMSModule Do not change this value.
	<SubDeploymentName>	Sub deployment name for JMS queues	Default MDUSMDMSubDeployment Do not change this value.
	<TargetServerName>	WebLogic managed server name. Usually, this value is same as the property given below. <config> <MDUS-MDM> <MDM> <ManagedServer> <servername>	
	<PersistentStoreName>	JMS persistent store name	Default: MDUSMDMFileStore
	<PersistentStoreType>	JMS persistent store type (FileStores or DBStore) Deployment script supports a file based persistent store.	Default: FileStores
	<PersistentStoreFilename>	Directory path name where the file based persistent store should be created.	
SOA Information			
<config> <SOA>			
	<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.	7043
	<servername>	Admin server name (hosting SOA suite)	AdminServer
	<username>	User name used to log in as an Admin server (hosting SOA suite) administrator.	WebLogic
	<password>	Password used to log in as an Admin server (hosting SOA suite) administrator.	

Property		Description	Example
	<domainname>	WebLogic domain name hosting SOA suite.	soa_domain
	<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.	8043
	<servername>	Managed server name (hosting SOA suite)	Managedserver1
	<username>	User name used to log in to managed server (hosting SOA suite) as an administrator.	WebLogic
	<password>	Password used to log in to managed server (hosting SOA suite) as an administrator.	
	<mdsconfig>		
	<mdsdbusername>	User name used to log in to MDS schema.	XXX_MDS
	<mdsdbuserpassword>	Password used to log in 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
Schema Information			
<config>			
<EH>			
	<dba.dbusername>	User name used to log in as a database administrator (DBA). This database hosts the schema required for MDUS-MDM integration.	System
	<dba.dbuserpassword>	Password used to log in as a database administrator (DBA). This database hosts the schema required for MDUS-MDM integration.	

Property	Description	Example
<dbusername>	User name used to log in to MDUS-MDM schema for MDUS-MDM integration. This user can be automatically created by the install (set dbuser.createflag to true) or manually outside the install process.	MDUS-MDM
<dbuserpassword>	Password used to log in to MDUS-MDM schema for MDUS-MDM integration.	
<dbuser.createflag>	Flag specifying whether to create a new schema or use the existing schema for MDUS-MDM 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 MDUS-MDM integration.	Db.sample.oracle.com
<dbportnumber>	Database port number used for MDUS-MDM integration.	1521
<dbsid>	Database SID used for MDUS-MDM integration.	SID

NOTE: If all the queues (Oracle Utilities Meter Data Management queues) are hosted in one managed server (for example: SOA server), then the Oracle Utilities Meter Data Management and SOA server information will be exactly the same. It is recommended to put all the queues in the integration managed server.

If the dbuser.createflag is set to false, the schema needed for Oracle Utilities Meter Data Management-SAP Meter Data Unification and Synchronization integration error handling will not be automatically created by the install. The schema has 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 Meter Data Management-SAP Meter Data Unification and Synchronization integration code.

- \$PRODUCT_HOME\bin\UnInstallBuild.xml is used to uninstall Oracle Utilities Meter Data Management-SAP Meter Data Unification and Synchronization integration code.
- \$PRODUCT_HOME\bin\DeployUndeployUtility.xml is used to deploy/ undeploy individual composite/ MDS folder and then restart the managed server.
- Installation/ uninstallation process can go on for long. Be patient till the installation is completed.

Installing the Integration

After setting the environment variables, open a Command prompt 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 -I
InstallBuild.log
- Windows:
cd %PRODUCT_HOME%\bin
ant -f InstallBuild.xml Install -
DInstallProperties=%PRODUCT_HOME%/config/InstallProperties.xml -I
InstallBuild.log

During the execution, the following tasks are performed and then the installation is complete.

- Creating database objects required for the Error Handling module.
- Creating JDBC DataSource for the ErrorHandler Module.
- Creating outbound connection pool instance for the database by updating the DBAdapter.rar file.
- Creating JMS server/ JMS module/ JMS connection pool/ JMS persistence store/ JMS queues and assigns error queues to the interface queues.
- Creating JMS outbound connections for both Oracle Utilities Meter Data Management and SAP for Meter Data Unification and Synchronization by updating the JMSAdapter.rar file.
- Updating MDS repository with all the artifacts.
- Creating the application partition where the composites are going to be deployed. For example: MDUS-MDM
- Compiling/ packaging, and then deploying all the composites to the Enterprise Manager.

Post-Installation Checklist

After running the installation scripts, you must complete the following tasks to finalize the installation.

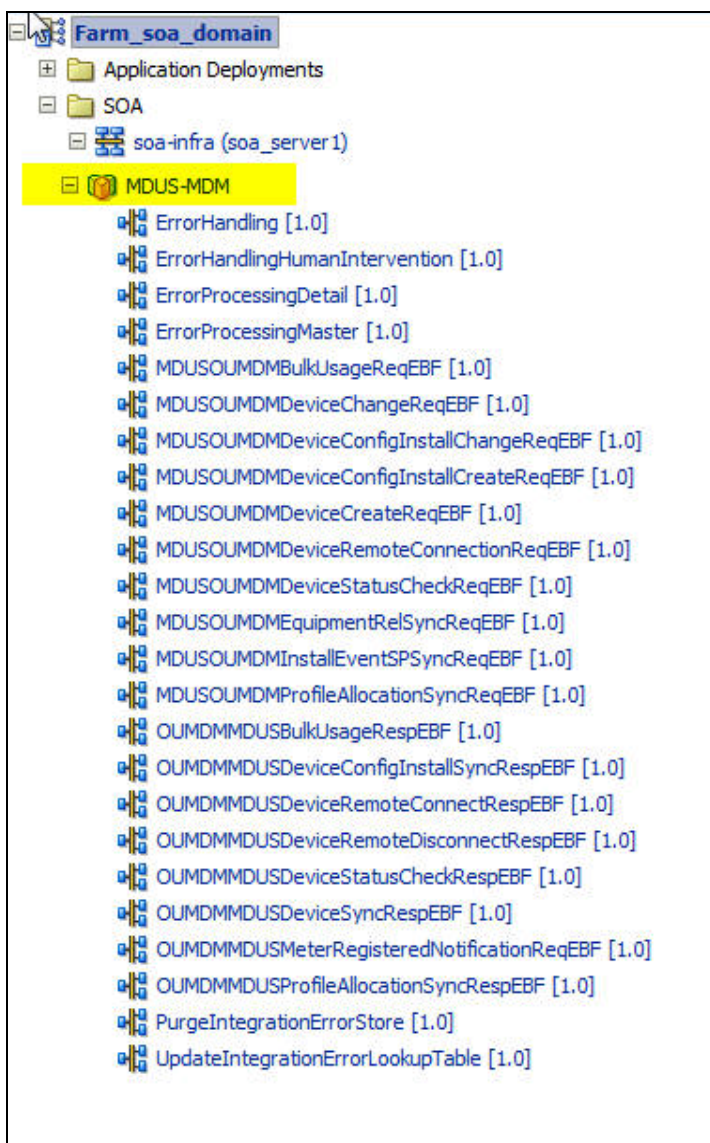
1. Restart the WebLogic Admin server and the SOA server.

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 that all JMS and JDBC resources are created.
4. Verify composites in the Enterprise Manager.

Verifying Composites in Enterprise Manager

Verify that the MDUS-MDM partition was created with all the composites deployed.

1. Login to Enterprise Manager.
2. Expand **Farm_soa_domain** → **soa** → **soa-infra** → **MDUS-MDM** partition.
3. Verify that all the composites are deployed and are in an active state.



Configuring Edge Applications

Configure Oracle Utilities Meter Data Management and SAP for Meter Data Unification and Synchronization installation according to the guidelines in the **Oracle Utilities Meter Data Management Integration to SAP for Meter Data Unification and Synchronization Release 11.1 Media Pack Implementation Guide**.

Deploying/ Undeploying Individual Composites

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

Undeploying Composites

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

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

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

```
cd %PRODUCT_HOME%\bin  
ant -f %PRODUCT_HOME%/Install/util/ant/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.
 - **SOA Server Hostname:** Host name of the server hosting SOA server. By default, it selects the managed server host name which is passed as InstallProperties property in ant command.
 - **SOA Server Portnumber:** Port number of the server hosting SOA server. By default, it selects the managed server port number which is passed as InstallProperties property in ant command.
 - **SOA Server Username:** User name used to connect to SOA server. By default, it selects the managed server user name which is passed as InstallProperties property in ant command.
 - **SOA Server Password:** Password used to connect to SOA server. By default, it selects the managed server password which is passed as InstallProperties property in ant command.
 - **Composite Name:** Name of the composite to be undeployed to SOA server. This parameter does not have a default value.
 - **Composite folder location:** 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:** The SOA partition name to which the composite should be undeployed.
3. Enter the composite name to be undeployed from the partition.

Deploying Individual Composites

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

```
cd $PRODUCT_HOME\bin  
  
ant -f $PRODUCT_HOME/Install/util/ant/DeployUndeployUtility.xml -  
DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml  
DeployComposite
```
 - Windows:

```
cd %PRODUCT_HOME%\bin  
  
ant -f %PRODUCT_HOME%/Install/util/ant/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.
 - **SOA Server Hostname:** Host name of the server hosting SOA server. By default, it selects the managed server host name which is passed as InstallProperties property in ant command.
 - **SOA Server Portnumber:** Port number of the server hosting SOA server. By default, it selects the managed server port number which is passed as InstallProperties property in ant command.
 - **SOA Server Username:** User name used to connect to SOA server. By default, it selects the managed server user name which is passed as InstallProperties property in ant command.
 - **SOA Server Password:** Password used to connect to SOA server. By default, it selects the managed server password which is passed as InstallProperties property in ant command.
 - **Composite Name:** Name of the composite to be deployed to SOA server. This parameter does not have a default value.
 - **Composite folder location:** The folder name should be an absolute path beginning with **%PRODUCT_HOME%/services/industry/Utilities/<EBF/utility>**.

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.

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

For example: MDUSOUMDMBulkUsageReqEBF

Note: Refer to [Verifying Composites in Enterprise Manager](#) section to see the composites for MDUS-MDM.

Deploying/ Undeploying MDS Folder

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

Undeploying MDS Folder

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

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 $PRODUCT_HOME/Install/util/ant/DeployUndeployUtility.xml -  
DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml UnDeployMDS
```
 - Windows:

```
cd %PRODUCT_HOME%\bin  
  
ant -f %PRODUCT_HOME%/Install/util/ant/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:** Host name of the server hosting SOA server. By default, it selects the managed server host name which is passed as InstallProperties property in ant command.
 - **SOA Server Portnumber:** Port number of the server hosting SOA server. By default, it selects the managed server port number which is passed as InstallProperties property in ant command.
 - **SOA Server Username:** User name used to connect to SOA server. By default, it selects the managed server user name which is passed as InstallProperties property in ant command.
 - **SOA Server Password:** Password used to connect to SOA server. By default, it selects the managed server password which is passed as InstallProperties property in ant command.
 - **MDS Folder Name:** Name of the folder to be undeployed from MDS repository.

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

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

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

Deploying MDS Folder

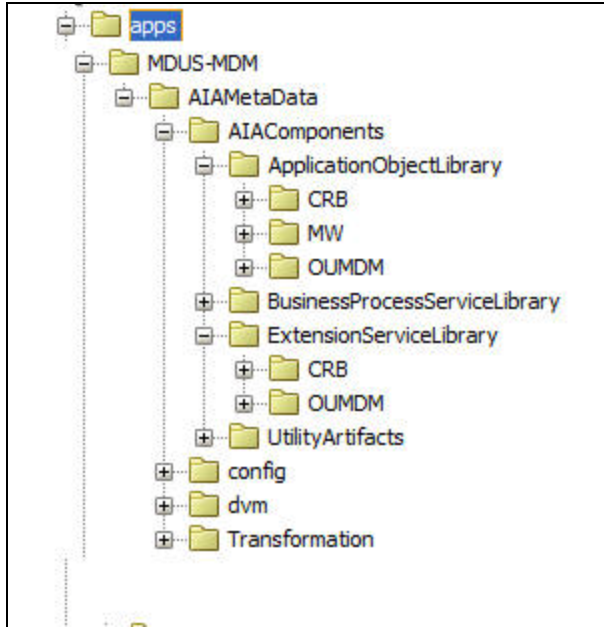
1. Open a Command prompt and execute the following commands in Linux and Windows respectively:
 - Linux:

```
cd $PRODUCT_HOME\bin  
ant -f $PRODUCT_HOME/Install/util/ant/DeployUndeployUtility.xml -  
DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml DeployMDS
```
 - Windows:

```
cd %PRODUCT_HOME%\bin  
ant -f %PRODUCT_HOME%/Install/util/ant/DeployUndeployUtility.xml -  
DInstallProperties=%PRODUCT_HOME%/config/InstallProperties.xml DeployMDS
```
2. Validate the following parameters when prompted with default values during deployment. Press ENTER to use the default prompted value.
 - **SOA Server Hostname:** Host name of the server hosting SOA server. By default, it selects the managed server host name which is passed as InstallProperties property in ant command.
 - **SOA Server Portnumber:** Port number of the server hosting SOA server. By default, it selects the managed server port number which is passed as InstallProperties property in ant command.
 - **SOA Server Username:** User name used to connect to SOA server. By default, it selects the managed server user name which is passed as InstallProperties property in ant command.
 - **SOA Server Password:** Password used to connect to 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 MDS repository.
The folder name should be a relative path inside **%PRODUCT_HOME%/MDS-Artifacts**, beginning MDUS-MDM.

Some examples of deploying to MDS:

Under the MDUS-MDM folder is the MDS-Artifacts subfolder which contains all the files that can be deployed to MDS.



- **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 **MDUS-MDM/AIAMetaData/dvm** as the MDS folder name and it will deploy the whole DVM folder to MDS.

- **Custom schema changes**

If custom elements are added to the MDM schema the ApplicationObjectLibrary folder must be updated in MDS. Pass **MDUS-MDM/AIAMetaData/ApplicationObjectLibrary** to deploy the whole MDUS and MDM schema folders or pass **MDUS-MDM/AIAMetaData/ApplicationObjectLibrary/OUMDM** to deploy only the MDMschema folder.

- **Concrete WSDL changes for extensions**

If extension service needs to be called by a process and the concrete WSDL is updated, the ExtensionServiceLibrary folder must be updated in MDS. Pass **MDUS-MDM/AIAMetaData/ExtensionServiceLibrary** to deploy the whole MDM and MDUS extension service library folders or pass **MDUS-MDM/AIAMetaData/ApplicationObjectLibrary/OUMDM** to deploy only the MDM extension library folder.

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

Restarting SOA Managed Server

This section describes how to restart the WebLogic managed server hosting SOA suite.

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

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

```
cd %PRODUCT_HOME%\bin  
  
ant -f %PRODUCT_HOME%/Install/util/ant/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:** Host name of the server hosting Admin server. By default, it selects the Admin Server host name which is passed as InstallProperties property in ant command.
 - **Admin Server Portnumber:** Port number of the server hosting 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 Admin server. By default, it selects the Admin Server user name which is passed as InstallProperties property in ant command.
 - **Admin Server Password:** Password used to connect to Admin server. By default, it selects the Admin Server password which is passed as InstallProperties property in ant command.
 - **Managed Server Name to be restarted:** The default value is selected from InstallProperties property.

Uninstalling Integration

If you need to uninstall the integration, complete the following:

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 which delete everything from the server related to MDUS-MDM.

- Undeploys all composites from the Enterprise Manager partition.
- Deletes the partition.
- Undeploys MDS artifacts.
- Deletes JMS resources (JMS module/ JMS persistent store/ JMS server).
- Undeploys JMS outbound connection pool.
- Undeploys database outbound connection pool.
- Deletes JDBC data source for Error Handling module.
- Drops database objects created for Error Handling module.

After a successful uninstall, all JMS and JDBC resources and MDUS-MDM partitions created during installation are deleted.