

**Oracle Utilities Customer Care and Billing
Integration to Oracle Utilities Meter Data
Management**

Installation Guide

Release 12.1

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Oracle Utilities Customer Care and Billing Integration to Oracle Utilities Meter Data Management, Release 12.1 Installation Guide

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Preface

This document is intended for anyone implementing the Oracle Utilities Customer Care and Billing Integration to Oracle Utilities Meter Data Management.

Documentation and Resources

For more information regarding this integration, foundation technology and the edge applications, refer to the following documents:

Product Documentation

Topic	Description
Integration documentation:	
Oracle Utilities Customer Care and Billing Integration to Oracle Utilities Meter Data Management Release Notes	
Oracle Utilities Customer Care and Billing Integration to Oracle Utilities Meter Data Management Implementation Guide	Refer to the Oracle Utilities applications documentation page: http://docs.oracle.com/cd/E72219_01/documentation.html
Oracle Utilities Customer Care and Billing Integration to Oracle Utilities Meter Data Management Installation Guide	
Edge application documentation:	
Oracle Utilities Customer Care and Billing	
Oracle Utilities Meter Data Management	

Additional Documentation

Resource	Location
SOA Suite 12c documentation	Refer to the SOA documentation at: http://www.oracle.com/technetwork/middleware/soasuite/documentation/index.html
Oracle Support	Visit My Oracle Support at https://support.oracle.com regularly to stay informed about updates and patches. Access the support site for the Edge Application Certification Matrix for Oracle Utilities Products (Doc ID 1454143.1) or refer to the Oracle Utilities Integrations page at http://my.oracle.com/site/tugbu/productsindustry/productinfo/utilities/integration/index.htm
Oracle Technology Network (OTN) Latest versions of documents	http://www.oracle.com/technetwork/index.html
Oracle University for training opportunities	http://education.oracle.com/
Web Services Security	For more information about Web services security using Oracle Fusion Middleware 12c refer to https://docs.oracle.com/middleware/12211/cross/webservicetasks.htm .
Oracle Fusion Middleware 12c documentation	Refer to the Oracle applications documentation page: http://docs.oracle.com/en/middleware/
Oracle Fusion Middleware “What's New In Oracle WebLogic Server” Section: Standards Support, Supported Configurations and WebLogic Server Compatibility, Database Interoperability	http://docs.oracle.com/middleware/1221/wls/NOTES/toc.htm
For additional information on the type of database to use.	
Instructions on installing this integration on non-Windows/ Linux platforms	Refer to Oracle Support Knowledge Article ID 1349320.1.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

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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.
<i>italic</i>	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.

Abbreviations

The following abbreviations are used in these guides:

AIA	Application Integration Architecture
BPEL	Business Process Execution Language
DVM	Domain Value Map
EBF	Enterprise Business Flow
EM	Enterprise Manager
JMS	Java Message Service
MDS	Metadata Store
OUCCB or CCB	Oracle Utilities Customer Care and Billing
OUMDM or MDM	Oracle Utilities Meter Data Management
SA	Service Agreement
SOA	Service Oriented Architecture
SP	Service Point

Chapter 1

Overview

This section provides information on prerequisites for installation of the Oracle Utilities Customer Care and Billing Integration to Oracle Utilities Meter Data Management.

Integration Pack Software Requirements

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

Participating Applications

- Oracle Utilities Customer Care and Billing v2.5.0.2+ installed on an Oracle database with the latest patch set.
- Oracle Utilities Meter Data Management v2.1.0.3+ installed on an Oracle database with the latest patch set.

This integration will work with previous versions of Oracle Utilities Customer Care and Billing and Oracle Utilities Meter Data Management but not all functionalities will be available.

Oracle SOA / Weblogic Server

Oracle SOA suite 12c with Oracle Enterprise Manager 12.2.x on WebLogic Server 12.2.x.

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

Note: Refer to the Oracle Utilities product Certification Matrix (referenced in the [Additional Documentation](#) section) for the most up to date supported edge application versions.

Chapter 2

Installation

This section describes the settings and requirements for a successful installation of the Oracle Utilities Customer Care and Billing Integration to Oracle Utilities Meter Data Management including:

- [Pre-Installation Tasks](#)
- [Installation Steps](#)
- [Verify Generated Artifacts](#)
- [Configure Edge Applications](#)
- [Security Policies](#)

Pre-Installation Tasks

The following tasks should be completed before you install the integration package:

1. Verify that Oracle SOA Suite 12c is installed and running.
For more information, refer to the documentation at <http://www.oracle.com/technetwork/middleware/soasuite/documentation/index.html>.
2. Login to the **WebLogic Server Administration** console to confirm there are no changes in **Pending Activation** status.

Complete this step to verify that the WebLogic Server is in a healthy state. If any items are in **Pending Activation** status, then there is likely an issue on the server. All issues must be resolved before you can proceed with the installation.
3. Start **Node Manager**, if not already running.
4. Restart the **WebLogic Managed** server and the **WebLogic Admin** server.
5. Verify that the **Weblogic Admin Server**, **Managed Server**, and **Node Manager** are up and running.

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. In general, note that the forward slash (/) is used as the path separator on Linux and the back slash (\) is used on Windows.

Excusing any inadvertent syntax errors in this guide, these conventions should be followed for all commands depending on your operating system.

Also, as installation commands and arguments are lengthy, please copy the installation commands in a text file and verify that the command is formatted correctly without any syntax or formatting errors.

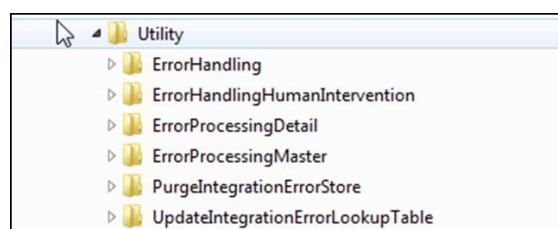
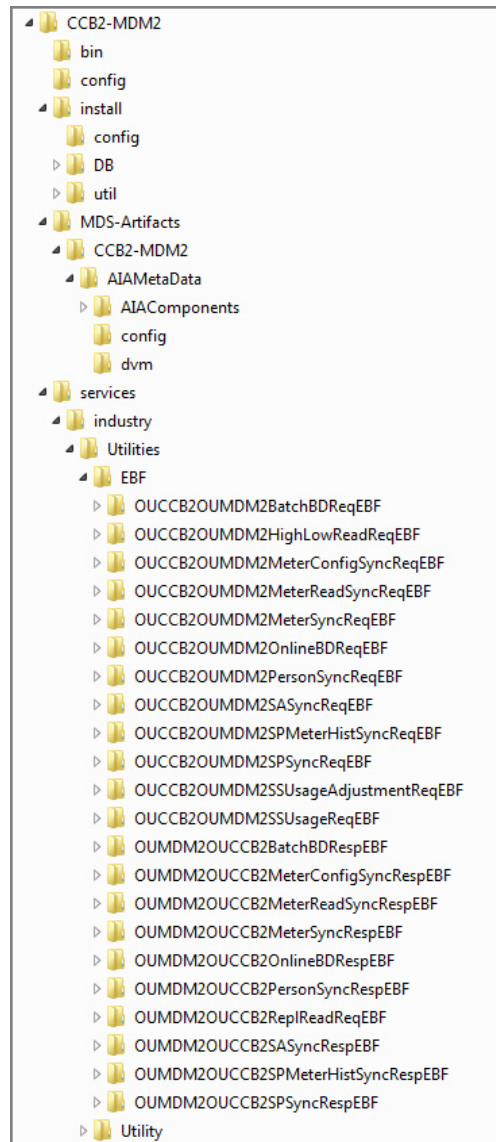
Installation Steps

Complete the following to install:

1. Download the installation CCB2-MDM2.zip file from Oracle Software Delivery Cloud (<http://edelivery.oracle.com/>).

Note: For specific instructions about installing this integration on non-Windows/ Linux platforms refer to 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.



CCB2 MDM2 Product Home Directory

3. Download and apply patch 23295348.
 - a. Refer to the **Readme.txt** file and **PatchInstallInstructions.txt** files included with the patch for more information and installation instructions. The following sub-steps provide more information related to the steps included in the Readme file.

Note: As indicated in the Readme.txt file, you must define or populate the values in the Install Properties xml file prior to installing the integration. Refer to Step 1 in the **PatchInstallInstructions.txt** file included in the patch download.

Refer to the [Installation Properties](#) chapter for information about individual properties.

- b. Set the following environment variables for Linux and Windows operating system:

Variable	Example
Linux and Windows OS	
PATCH_HOME	XXX/23295348
MW_HOME	XXX/Middleware
SOA_HOME	XXX/Middleware/soa
PRODUCT_HOME	The product installation folder. Example: PRODUCT_HOME=/scratch/PRODUCT_HOMES/ CCB2-MDM2

- c. The commands indicated in the readme file (setWLSEnv.sh on Linux and setWLSEnv.bat on Windows) set the environment variables used for executing the installation scripts.

Below is an example to set up environment variables in a typical installation:

Linux

```
export MW_HOME=/Oracle/Middleware/soa
export SOA_HOME=$MW_HOME/soa
export PRODUCT_HOME=/Product_Homes/CCB2-MDM2
source $MW_HOME/wlserver/server/bin/setWLSEnv.sh
```

Windows

```
SET MW_HOME=C:\Oracle\Middleware\soa
SET SOA_HOME=%MW_HOME%\soa
SET PRODUCT_HOME=C:\Product_Homes\CCB2-MDM2
cd %MW_HOME%\wlserver\server\bin\
setWLSEnv.cmd
```

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 CCB2-MDM2 integration code.
- PRODUCT_HOME/bin/UnInstallBuild.xml is used to uninstall CCB2-MDM2 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 process may take several minutes to complete.

Installing the Integration

After setting the environment variables, open a command prompt and execute the installation scripts (steps 3 & 4) mentioned in the "Installing the patch" section in the PatchInstallInstructions.txt file included in the patch download. This section provides additional detail to supplement those steps.

The `installDB` commands perform the following tasks:

- Create the Error Handling user for the integration.
- Create the Error Handling tables and Error Lookup tables.
- Insert the seed data that is used for Error Handling scenarios that occur during the BPEL flow instances.

The `installWL` commands perform the following tasks:

- Create the JDBC DataSource for the ErrorHandler Module.
- Create an outbound connection pool instance for the database by updating the DBAdapter_CCB2-MDM2.rar file.
- Create JMS server/JMS module/JMS connection pool/JMS persistence store/JMS queues and assigns the error queues to the interface queues.
- Create JMS outbound connections to both Oracle Utilities Customer Care and Billing and Oracle Utilities Meter Data Management by updating the JMSAdapter_CCB2-MDM2.rar file.
- Create the csf key for the integration.
Oracle Utilities Meter Data Management and Oracle Utilities Customer Care and Billing.
 - CCB2-MDM2_MDM2
 - CCB2-MDM2_CCB2

The `installSOA` commands perform the following tasks:

- Update the MDS repository with all artifacts.
- Create the application partition where the composites are deployed.
For example: CCB2-MDM2.
- Compile and deploy all composites.

Verify Generated Artifacts

After running the installation scripts, follow these steps to complete the installation.

1. Verify that all the JMS and JDBC resources were created.
Refer to the [Verify Domain Structures](#) section for guidelines.
2. Verify that the csf-keys are generated.
Refer to the [Verify the csf-key Generation](#) section for guidelines.
3. Review the logs under `$MW_HOME/user_projects/domains/soa_domain/servers/<managed-server-name>/logs` to check for deployment errors.

4. Verify that all the composites in Enterprise Manager are deployed.
Refer to the [Verify Composites in Enterprise Manager](#) section for guidelines.
5. Verify that the user messaging service is active.
Refer to the [Verify the User Messaging Service List](#) section for guidelines.
6. [Import Security Certificates into the KeyStore](#)

Verify Domain Structures

JMS Server

Verify CCB2-MDM2JMS server - CCB2MDM2JS

In the **Administration** console, under the **Domain Structure**, expand the **Services** (by clicking the + sign next to it), expand the **Messaging** (by clicking the + sign next to it), and then click **JMS Servers**.

The screenshot shows the Oracle WebLogic Server Administration Console. The left-hand navigation pane shows the 'Domain Structure' tree with 'Services' expanded to 'Messaging' and 'JMS Servers'. The main content area displays the 'Summary of JMS Servers' page, which includes a table of JMS Servers. The table has the following data:

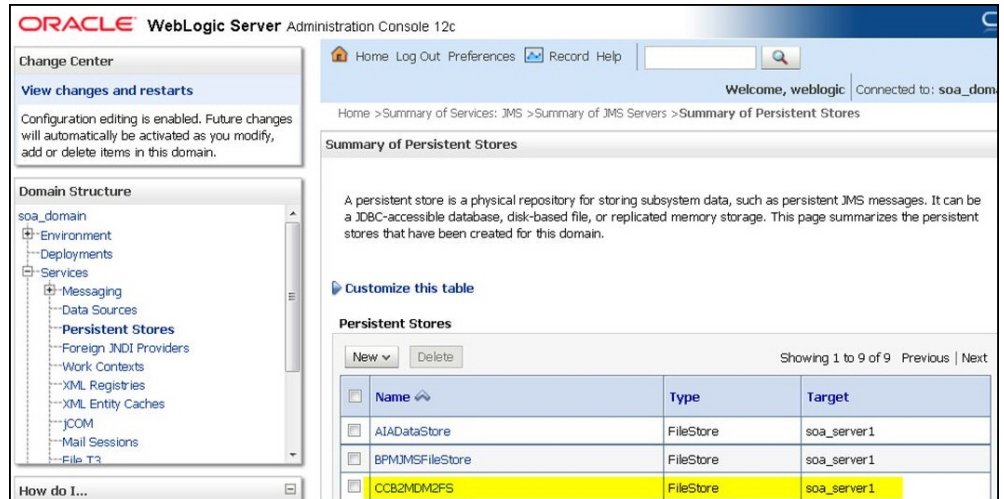
Name	Persistent Store	Target	Current Target	Health
AIAJMServer	AIADataStore	soa_server1	soa_server1	OK
BPMJMServer	BPMJMSFileStore	soa_server1	soa_server1	OK
CCB2MDM2JS	CCB2MDM2FS	soa_server1	soa_server1	OK

File Store

Verify CCB2-MDM2FileStore - CCB2MDM2FS

In the **Administration** console, under the **Domain Structure**, expand the **Services** (by clicking the + sign next to it), and then click **Persistent Store**.

Verify that the `JMSFileStorePath` is correct and the directory has 'write' permissions.



ORACLE WebLogic Server Administration Console 12c

Home > Summary of Services: JMS > Summary of JMS Servers > Summary of Persistent Stores

Welcome, weblogic | Connected to: soa_dom

Summary of Persistent Stores

A persistent store is a physical repository for storing subsystem data, such as persistent JMS messages. It can be a JDBC-accessible database, disk-based file, or replicated memory storage. This page summarizes the persistent stores that have been created for this domain.

Persistent Stores

Name	Type	Target
AIADataStore	FileStore	soa_server1
BPMJMSFileStore	FileStore	soa_server1
CCB2MDM2FS	FileStore	soa_server1

JMS Module

Verify CCB2-MDM2 JMS Module - CCB2MDM2JM

In the **Administration** console, under the **Domain Structure**, expand the **Services** (by clicking the + sign next to it), expand the **Messaging** (by clicking the + sign next to it), and then click **JMS Modules**.

The screenshot shows the Oracle WebLogic Server Administration Console. The left-hand navigation pane is expanded to show the **Domain Structure** for **soa_domain**, with **Services** > **Messaging** > **JMS Modules** selected. The main content area displays the **Summary of JMS Modules** page. It includes a description of JMS system resources and a table listing the configured modules. The table has columns for **Name** and **Type**. The row for **CCB2MDM2JM** is highlighted in yellow.

Name	Type
AIAJMSModule	System
BPMJMSModule	System
CCB2MDM2JM	System

Sub Deployment

Verify CCB2-MDM2 SubDeployment - CCB2MDM2SD

In the **Administration** console, under the **Domain Structure**, expand the **Services** (by clicking the + sign next to it), expand the **Messaging** (by clicking the + sign next to it), and then click **JMS Modules**. Select the **CCB2MDM2JM** JMS module and click on the **Subdeployments** tab.

The screenshot shows the **Subdeployments** tab for the **CCB2MDM2JM** JMS module. The page displays a list of subdeployments, with one subdeployment named **CCB2MDM2SD** selected. The subdeployment details are shown in a table with columns for **Name**, **Resources**, and **Targets**. The **Resources** column contains a long list of JMS-related resource names, and the **Targets** column shows **CCB2MDM2JS**.

Name	Resources	Targets
CCB2MDM2SD	OUCCB2SPSyncRequest, OUCCB2SPSyncRequestError, OUCCB2SPSyncResponse, OUCCB2SPSyncResponseError, OUCCB2SASyncRequest, OUCCB2SASyncRequestError, OUCCB2SASyncResponse, OUCCB2SASyncResponseError, OUCCB2BatchBDRRequest, OUCCB2BatchBDRRequestError, OUCCB2BatchBDRResponse, OUCCB2BatchBDRResponseError, OUCCB2OnlineBDRRequest, OUCCB2OnlineBDRRequestError, OUCCB2OnlineBDRResponse, OUCCB2OnlineBDRResponseError, OUCCB2RepReadRequest, OUCCB2RepReadRequestError, OUCCB2PersonSyncRequest, OUCCB2PersonSyncRequestError, OUCCB2PersonSyncResponse, OUCCB2PersonSyncResponseError, OUCCB2MeterSyncRequest, OUCCB2MeterSyncRequestError, OUCCB2MeterSyncResponse, OUCCB2MeterSyncResponseError, OUCCB2MeterConfigSyncRequest, OUCCB2MeterConfigSyncRequestError, OUCCB2MeterConfigSyncResponse, OUCCB2MeterConfigSyncResponseError, OUCCB2SPMeterHistSyncRequest, OUCCB2SPMeterHistSyncRequestError, OUCCB2SPMeterHistSyncResponse, OUCCB2SPMeterHistSyncResponseError, OUMDM2SPSyncRequest, OUMDM2SPSyncRequestError, OUMDM2SPSyncResponse, OUMDM2SPSyncResponseError, OUMDM2SASyncRequest, OUMDM2SASyncRequestError, OUMDM2SASyncResponse, OUMDM2SASyncResponseError, OUMDM2BatchBDRRequest, OUMDM2BatchBDRRequestError, OUMDM2BatchBDRResponse, OUMDM2BatchBDRResponseError, OUMDM2OnlineBDRRequest, OUMDM2OnlineBDRRequestError, OUMDM2OnlineBDRResponse, OUMDM2OnlineBDRResponseError, OUMDM2RepReadRequest, OUMDM2RepReadRequestError, OUMDM2PersonSyncRequest, OUMDM2PersonSyncRequestError, OUMDM2PersonSyncResponse, OUMDM2PersonSyncResponseError, OUMDM2MeterSyncRequest, OUMDM2MeterSyncRequestError, OUMDM2MeterSyncResponse, OUMDM2MeterSyncResponseError, OUMDM2MeterConfigSyncRequest, OUMDM2MeterConfigSyncRequestError, OUMDM2MeterConfigSyncResponse, OUMDM2MeterConfigSyncResponseError, OUMDM2SPMeterHistSyncRequest, OUMDM2SPMeterHistSyncRequestError, OUMDM2SPMeterHistSyncResponse, OUMDM2SPMeterHistSyncResponseError, OUCCB2MeterReadSyncRequest, OUCCB2MeterReadSyncRequestError, OUCCB2MeterReadSyncResponse, OUCCB2MeterReadSyncResponseError, OUMDM2MeterReadSyncRequest, OUMDM2MeterReadSyncRequestError, OUMDM2MeterReadSyncResponse, OUMDM2MeterReadSyncResponseError, OUCCB2DynamicOptEvtSyncRequest, OUCCB2DynamicOptEvtSyncRequestError, OUCCB2DynamicOptEvtSyncResponse, OUCCB2DynamicOptEvtSyncResponseError, OUCCB2DynamicOptSyncRequest, OUCCB2DynamicOptSyncRequestError, OUCCB2DynamicOptSyncResponse, OUCCB2DynamicOptSyncResponseError, OUCCB2OUMDM2ConnectionFactory	CCB2MDM2JS

JMS Adapter Outbound Connection Pool

Verify eis/wls/[edge application]Queues

In the **Administration** console, under the **Domain Structure**, expand the **Deployments** (by clicking the + sign next to it) and find the .rar file name with **JmsAdapter_CCB2-MDM2**. Click on it and click on the **Configuration** tab and in that, click on the **Outbound Connection Pools** tab.

Expand “oracle.tip.adapter.jms.IJmsConnectionFactory”. There should be 2 connection pool instances deployed:

- “eis/wls/OUCCB2Queue”
- “eis/wls/OUMDM2Queue”

The screenshot shows the Oracle WebLogic Server Administration Console. The left sidebar displays the Domain Structure with 'soa_domain' expanded to 'Deployments'. The main content area shows the 'Settings for JmsAdapter_CCB2-MDM2' configuration page, specifically the 'Outbound Connection Pools' tab. A table titled 'Outbound Connection Pool Configuration Table' lists the groups and instances.

Groups and Instances	Connection Factory Interface
oracle.tip.adapter.jms.IJmsConnectionFactory	oracle.tip.adapter.jms.IJmsConnectionFactory
eis/wls/OUCCB2Queue	oracle.tip.adapter.jms.IJmsConnectionFactory
eis/wls/OUMDM2Queue	oracle.tip.adapter.jms.IJmsConnectionFactory

JMS Connection Factory and JMS Queues

Verify OUCCB2MDM2ConnectionFactory and JMS Queues List

In the **Administration** console, under the **Domain Structure**, expand the **Services** (by clicking the + sign next to it), and then expand the **Messaging** (by clicking the + sign next to it), and then click **JMS Modules**. Select the **CCB2MDM2JM** JMS module

Request/Response Queues

Verify that all the listed queues along with the ConnectionFactory are created as part of the installation:

- **Connection Factory:** OUCCB2MDM2ConnectionFactory
- **Queues:**

Module	Request/Response Queues	Corresponding Error Queues
CCB Service Point Sync	OUCCB2SPSyncRequest OUCCB2SPSyncResponse	OUCCB2SPSyncRequestError OUCCB2SPSyncResponseError
CCB Service Agreement Sync	OUCCB2SASyncRequest OUCCB2SASyncResponse	OUCCB2SASyncRequestError OUCCB2SASyncResponseError
CCB Batch Billing Determinants	OUCCB2BatchBDRequest OUCCB2BatchBDResponse	OUCCB2BatchBDRequestError OUCCB2BatchBDResponseError
CCB Online Billing Determinants	OUCCB2OnlineBDRequest OUCCB2OnlineBDResponse	OUCCB2OnlineBDRequestError OUCCB2OnlineBDResponseError
CCB Replacement Reads Notification	OUCCB2ReplReadRequest	OUCCB2ReplReadRequestError
CCB Person Information Sync	OUCCB2PersonSyncRequest OUCCB2PersonSyncResponse	OUCCB2PersonSyncRequestError OUCCB2PersonSyncResponseError
CCB Meter Information Sync	OUCCB2MeterSyncRequest OUCCB2MeterSyncResponse	OUCCB2MeterSyncRequestError OUCCB2MeterSyncResponseError
CCB Meter Configuration Information Sync	OUCCB2MeterConfigSyncRequest OUCCB2MeterConfigSyncResponse	OUCCB2MeterConfigSyncRequestError OUCCB2MeterConfigSyncResponseError
CCB Service Point – Meter History Information Sync	OUCCB2SPMeterHistSyncRequest OUCCB2SPMeterHistSyncResponse	OUCCB2SPMeterHistSyncRequestError OUCCB2SPMeterHistSyncResponseError
MDM Service Point Sync	OUMDM2SPSyncRequest OUMDM2SPSyncResponse	OUMDM2SPSyncRequestError OUMDM2SPSyncResponseError
MDM Service Agreement Sync	OUMDM2SASyncRequest OUMDM2SASyncResponse	OUMDM2SASyncRequestError OUMDM2SASyncResponseError
MDM Batch Billing Determinants	OUMDM2BatchBDRequest OUMDM2BatchBDResponse	OUMDM2BatchBDRequestError OUMDM2BatchBDResponseError
MDM Online Billing Determinants	OUMDM2OnlineBDRequest OUMDM2OnlineBDResponse	OUMDM2OnlineBDRequestError OUMDM2OnlineBDResponseError
MDM Replacement Reads Notification	OUMDM2ReplReadRequest	OUMDM2ReplReadRequestError
MDM Person Information Sync	OUMDM2PersonSyncRequest OUMDM2PersonSyncResponse	OUMDM2PersonSyncRequestError OUMDM2PersonSyncResponseError

Module	Request/Response Queues	Corresponding Error Queues
MDM Meter Information Sync	OUMDM2MeterSyncRequest OUMDM2MeterSyncResponse	OUMDM2MeterSyncRequestError OUMDM2MeterSyncResponseError
MDM Meter Configuration Information Sync	OUMDM2MeterConfigSyncRequest OUMDM2MeterConfigSyncResponse	OUMDM2MeterConfigSyncRequestError OUMDM2MeterConfigSyncResponseError
MDM Service Point – Meter History Information Sync	OUMDM2SPMeterHistSyncRequest OUMDM2SPMeterHistSyncResponse	OUMDM2SPMeterHistSyncRequestError OUMDM2SPMeterHistSyncResponseError
CCB Meter Read Sync	OUCCB2MeterReadSyncRequest OUCCB2MeterReadSyncResponse	OUCCB2MeterReadSyncRequestError OUCCB2MeterReadSyncResponseError
MDM Meter Read Sync	OUMDM2MeterReadSyncRequest OUMDM2MeterReadSyncResponse	OUMDM2MeterReadSyncRequestError OUMDM2MeterReadSyncResponseError
CCB Dynamic Option Event	OUCCB2DynamicOptEvtSyncRequest OUCCB2DynamicOptEvtSyncResponse	OUCCB2DynamicOptEvtSyncRequestError OUCCB2DynamicOptEvtSyncResponseError
CCB Dynamic Option Sync	OUCCB2DynamicOptSyncRequest OUCCB2DynamicOptSyncResponse	OUCCB2DynamicOptSyncRequestError OUCCB2DynamicOptSyncResponseError
MDM Dynamic Option Event	OUMDM2DynamicOptEvtSyncRequest OUMDM2DynamicOptEvtSyncResponse	OUMDM2DynamicOptEvtSyncRequestError OUMDM2DynamicOptEvtSyncResponseError
MDM Dynamic Option Sync	OUMDM2DynamicOptSyncRequest OUMDM2DynamicOptSyncResponse	OUMDM2DynamicOptSyncRequestError OUMDM2DynamicOptSyncResponseError
CCB Bill Cycle Sync for MDM V2.1.0.3	OUCCB2BillCycleSyncRequest OUCCB2BillCycleSyncResponse	OUCCB2BillCycleSyncRequestError OUCCB2BillCycleSyncResponseError
MDM Bill Cycle Sync for MDM V2.1.0.3	OUMDM2BillCycleSyncRequest OUMDM2BillCycleSyncResponse	OUMDM2BillCycleSyncRequestError OUMDM2BillCycleSyncResponseError
CCB Bill Cycle Sync for MDM V2.2.x	OUCCB2BillCycleSyncRequestV2 OUCCB2BillCycleSyncResponseV2	OUCCB2BillCycleSyncRequestErrorV2 OUCCB2BillCycleSyncResponseErrorV2
MDM Bill Cycle Sync for MDM V2.2.x	OUMDM2BillCycleSyncRequestV2 OUMDM2BillCycleSyncRequestErrorV2	OUMDM2BillCycleSyncResponseV2 OUMDM2BillCycleSyncResponseErrorV2

Note: If JMSMODULENAME!JMSQUEUENAME doesn't exist in the rows of the Destinations table, it means there are problems with the installation.

If some of the composites or artifacts mentioned in the document are not available in the integration environment, ensure that all the relevant functional patches are applied in the integration environment.

JDBC Configurations

To verify the JDBC configuration, follow these steps:

1. Navigate to **Home > Deployments**.
2. Verify that DbAdapter_CCB2-MDM2.rar is deployed, and is in **Active** state.

3. Verify the eis/DB/CCB2-MDM2ErrorHandling connection factory details to ensure the connection-factory location matches with that defined in the JCA files. Follow these steps:
 - a. Click DbAdapter_CCB2-MDM2 on the **Deployments** table.
 - b. On the **Configuration** tab, click **Outbound Connection Pools**.
 - c. Expand javax.resource.cci.ConnectionFactory to check the eis/DB/CCB2-MDM2ErrorHandling connection factory instance.
4. Ensure the database details are as required:
 - a. On the left pane, navigate to **Services > Data Sources**.
 - b. Click the CCB2-MDM2EHDS data source to check the JNDI Name: jdbc/CCB2-MDM2EHDS.
5. Click **Connection Pool** to check the URL and properties.
6. Click **Monitoring**, click **Testing**, select the target server, and then click **Test Data Source**.
Verify that the data source has been configured successfully.

Verify Composites in Enterprise Manager

Verify that the CCB2-MDM2 partition was created with all the composites deployed. Perform the following steps to verify composites in Enterprise Manager:

1. Login to Enterprise Manager.
2. Expand SOA → soa-infra → CCB2-MDM2 partition.
3. Verify that all the composites are deployed and are in an 'active' state.

Composites List:

- ErrorHandler
- ErrorHandlerHumanIntervention
- ErrorProcessingDetail
- ErrorProcessingMaster
- OUCCB2OUMDM2BatchBDReqEBF
- OUCCB2OUMDM2DynamicOptEvtSyncReqEBF
- OUCCB2OUMDM2DynamicOptSyncReqEBF
- OUCCB2OUMDM2HighLowReadReqEBF
- OUCCB2OUMDM2MeterConfigSyncReqEBF
- OUCCB2OUMDM2MeterReadSyncReqEBF
- OUCCB2OUMDM2MeterSyncReqEBF
- OUCCB2OUMDM2OnlineBDReqEBF
- OUCCB2OUMDM2PersonSyncReqEBF
- OUCCB2OUMDM2SASyncReqEBF
- OUCCB2OUMDM2SPMeterHistSyncReqEBF

- OUCCB2OUMDM2SPSyncReqEBF
- OUCCB2OUMDM2UsageAdjustmentReqEBF
- OUCCB2OUMDM2SSUsageReqEBF
- OUMDM2OUCCB2BatchBDRespEBF
- OUMDM2OUCCB2DynamicOptEvtSyncRespEBF
- OUMDM2OUCCB2DynamicOptSyncRespEBF
- OUMDM2OUCCB2MeterConfigSyncRespEBF
- OUMDM2OUCCB2MeterReadSyncRespEBF
- OUMDM2OUCCB2MeterSyncRespEBF
- OUMDM2OUCCB2OnlineBDRespEBF
- OUMDM2OUCCB2PersonSyncRespEBF
- OUMDM2OUCCB2ReplReadReqEBF
- OUMDM2OUCCB2SASyncRespEBF
- OUMDM2OUCCB2SPMeterHistSyncRespEBF
- OUMDM2OUCCB2SPSyncRespEBF
- OUCCB2OUMDM2BillCycleSyncReqEBF
- OUCCB2OUMDM2BillCycleSyncReqEBFV2
- OUCCB2OUMDM2SAActivationBillCycleRequestEBF
- OUMDM2OUCCB2BillCycleSyncRespEBF
- OUMDM2OUCCB2BillCycleSyncRespEBFV2
- OUMDM2OUCCB2BillCycleChangeNotifEBF
- PurgeIntegrationErrorStore
- UpdateIntegrationErrorLookupTable

Verify the csf-key Generation

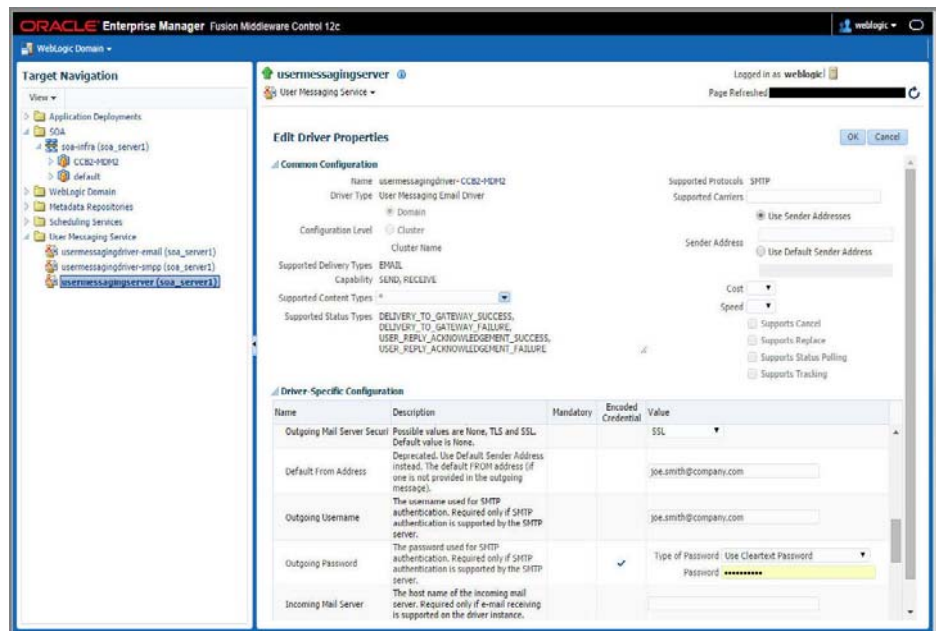
To verify that the csf-key is created successfully, complete the following:

1. Login to the Enterprise Manager console.
2. Navigate to WebLogic_Domain > soa_domain.
3. Right-click soa_domain, and then select **Security** > **Credentials**.
4. Expand the oracle.wsm.security map.
5. Verify whether or not the following keys are available:
 - CCB2-MDM2_MDM2
 - CCB2-MDM2_CCB2

Verify the User Messaging Service List

To verify the user messaging service list, follow these steps:

1. In the WebLogic Administration console, navigate to **Deployments**.
2. Verify that the usermessagingdriver-email email driver is **Active**.
3. If not, click usermessagingdriver-email > Targets > <managed server>. For example: soa_server1.
4. Select **Yes** and click **Activate Changes**.
5. In the WebLogic Enterprise Manager console, navigate to soa-infra [managed server].
6. Right-click the soa-infra [managed server] node, select SOA Administration, and then select **Workflow Properties**.
7. Verify that the Notification Mode under Workflow Properties is set to Email.
8. Navigate to the User Messaging Service node, and select the usermessagingserver [managed server] entry. For example: usermessagingserver (soa_server1)
Notice that the email driver is already enabled.
9. Click **Configure Driver** to check the e-mail driver properties and view the specific configuration details as shown in the figure below.



Import Security Certificates into the KeyStore

To import and configure the security certificate (for example: Oracle Utilities Meter Data Management certificate), follow these steps:

Important: Make sure that you copy/paste the commands in Notepad to remove extra spaces, if any.

1. Export the certificate and save it on the integration server to add it to the key store. For example: /tmp/mdmdemocert.cer
2. Create a new keystore (for example: UtilitiesIntegration.jks for importing the certificates).

Linux:

```
keytool -genkey -keystore /Oracle/Middleware/Oracle_Home/
wlserver/ server/lib/UtilitiesIntegration.jks -storepass
<keystore password>
```

Windows:

```
keytool -genkey -keystore
C:\Oracle\Middleware\Oracle_Home\wlserver\UtilitiesIntegrati
on.jks
-storepass <keystore password>
```

3. Import the certificates into the trust store created in Step 2.

Linux:

```
keytool -import -file /tmp/mdmdemocert.cer -alias RootCA -
keystore
/Oracle/Middleware/Oracle_Home/wlserver/server/lib/
UtilitiesIntegration.jks -storepass <keystore password>
```

Windows:

```
keytool -import -file C:\mdmdemocert.cer -alias RootCA -
keystore
C:\Oracle\Middleware\Oracle_Home\wlserver\UtilitiesIntegrati
on.jks
-storepass <keystore password>
```

4. Verify that the certificate is added to the store using the following command.

Linux:

```
keytool -list -v -keystore /Oracle/Middleware/Oracle_Home/
wlserver/ server/lib/UtilitiesIntegration.jks
```

Windows:

```
keytool -list -v -keystore
C:\Oracle\Middleware\Oracle_Home\wlserver\UtilitiesIntegrati
on.jks
```

Note: Enter the password when prompted.

5. Edit the setDomainEnv.sh file for Linux or setDomainEnv.cmd for Windows and replace the existing javax.net.ssl.trustStore property. It is located at


```

      ${MW_HOME}/ user_projects/domains/<domain_name>/bin.
```
6. Search for -Djavax.net.ssl.trustStore in the file and replace it with


```

      Djavax.net.ssl.trustStore=${MW_HOME}/wlserver/server/lib/
      UtilitiesIntegration.jks -Djavax.net.ssl.trustStorePassword=<keystore password>.
```
7. In the WebLogic console, navigate to **Home > Servers > <managed server> > Keystores** and configure the details there.
8. Click **Lock & Edit** to change the keystore details.
9. Click **Change** and then select **Custom Identity and Java Standard Trust** from the drop-down list.
10. Enter the following values in the respective fields:
 - **Custom Identity Keystore:** /Oracle/Middleware/Oracle_Home/wlserver/ server/lib/UtilitiesIntegration.jks

- Custom Identity Keystore Type: jks
 - **Custom Identity Keystore Passphrase:** <keystore password> For example: welcome1
 - **Confirm Custom Identity Keystore Passphrase:** <keystore password> For example: welcome1
11. Click **Activate Changes** to release the configuration and bounce the managed server to bring the changes into effect.

Note: In a clustered environment, managed servers should have their own keystore configured.

If the services in Oracle Utilities Meter Data Management are SSL enabled, import the Oracle Utilities Meter Data Management certificates into the Weblogic Managed server to enable secure communication between the integration layer and Oracle Utilities Meter Data Management.

Restart the server 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.

Configure Edge Applications

Configure Oracle Utilities Customer Care and Billing and Oracle Utilities Meter Data Management according to the guidelines in the Implementation Guide for this release.

Security Policies

When a composite needs to invoke an edge application web service, an appropriate security policy should be attached to the reference web service of the composite.

- Invoking edge application XAI Service

When calling an edge application XAI service, the security policy to attach to the reference web service of the composite is oracle/wss_http_token_client_policy.

- Invoking edge application Inbound Web Service (IWS)

When calling an edge application Inbound Web Service (IWS), the security policy to attach to the reference web service of the composite is dependent on the annotation specified in the IWS wsdl.

- If a security policy annotation is specified in the edge application's Inbound Web Service, use the policy specified.

Example 1: The policy defined in the IWS wsdl is UsernameToken, meaning that oracle/wss_username_token_client_policy should be attached to the

composite's reference web service.

```
<wsp:UsingPolicy wssutil:Required="true"/>
- <ns0:Policy wssutil:Id="UsernameToken">
- <ns1:SupportingTokens>
- <ns0:Policy>
- <ns1:UsernameToken ns1:IncludeToken="http://docs.oasis-open.org/ws-sx/ws-securitypolicy/200512/IncludeToken/AlwaysToRecipient">
- <ns0:Policy>
- <ns1:WssUsernameToken10/>
- </ns0:Policy>
- </ns1:UsernameToken>
- </ns0:Policy>
- </ns1:SupportingTokens>
</ns0:Policy>
```

Example 2: The policy defined in the IWS wsdl is `Https-BasicAuth.xml` meaning that HTTP Basic Authentication over SSL Including Timestamp is required. The `oracle/wss_http_token_over_ssl_client_policy` should be attached to the composite's reference web service.

```
<wsp:UsingPolicy wssutil:Required="true"/>
- <ns0:Policy wssutil:Id="Wssp1.2-2007-Https-BasicAuth.xml">
- <ns1:TransportBinding>
- <ns0:Policy>
- <ns1:TransportToken>
```

- If no security policy annotation is specified in the edge application's Inbound Web Service and the edge application is using Framework 4.3.0.2.0, a default security policy `oracle/wss_http_token_over_ssl_client_policy` will be used by the edge application's Inbound Web Service. The default policy can be changed in the edge application's Feature Configuration Menu.

Refer to the specific edge application implementation guide for more information.

- If the edge application is using Framework 4.2.0, a security policy annotation has to be specified in the edge application's Inbound Web Service. In this version of framework, there is no default security policy specified. `oracle/wss_http_token_client_policy` has to be specified in the edge application's Inbound Web Service security policy annotation.

Chapter 3

Individual Composites

This section describes how to deploy/ undeploy individual composites for incremental builds or patches, including:

- [Undeploying Individual Composites](#)
- [Deploying Individual Composites](#)
- **Note:** Refer to [Verify Composites in Enterprise Manager](#) to see the composites for this integration.

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

Windows

```
cd %PRODUCT_HOME%\bin
ant -f 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 value.
 - **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.
 - **SOA Partition Name:** The SOA partition name from where the composite should be undeployed.
3. Press Enter to use the default value.

Deploying Individual Composites

Perform the following steps to deploy individual composites:

1. Execute the following commands in the command prompt for Linux and Windows respectively:

Linux

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

Windows

```
cd %PRODUCT_HOME%\bin
ant -f 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 value.
 - **Composite Name:** Name of the composite to be deployed to SOA server. This parameter does not have a default value. For example: OUCCB2OUMDM2OnlineBDRequestEBF
 - **Composite folder location:** The folder name should be an absolute path beginning with **<PRODUCT_HOME>/services/industry/Utilities/<EBF/utility>**.
For example: 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.
3. Press Enter to use the default value.

Note: Refer to [Verify Composites in Enterprise Manager](#) to see the composites for this integration.

Chapter 4

Metadata Store (MDS) Artifacts

Individual Metadata Store (MDS) folders may need to be undeployed, deployed or updated for incremental builds or patches. This section describes the following:

- [Undeploying the MDS Folder](#)
- [Deploying the MDS Folder](#)
- [Update MDS](#)

Please note the following:

- You can only use the indicated commands to perform folder-level undeployment, deployment or update. The commands do not support file-level actions.
- Validate the **MDS Folder Name** parameter when prompted with default values during undeployment or deployment. Press ENTER to use the default value.
- The **MDS Folder Name** represents the name of the folder to be deployed or undeployed from MDS repository. The folder name should be a relative path inside **<PRODUCT_HOME>/MDS-Artifacts** beginning with CCB2-MDM2.
Refer to the [Home Directory](#) image in the [Installation](#) chapter for a reference.
- The folder includes an MDS-Artifacts subfolder which contains all the files that can be deployed to MDS.

For example: To undeploy **<PRODUCT_HOME>/MDS-Artifacts/CCB2-MDM2/AIAMetaData/dvm** pass **CCB2-MDM2/AIAMetaData/dvm** as the **MDS Folder Name**.

Undeploying the MDS Folder

To undeploy a particular folder from MDS:

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

Windows

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

2. Pass the folder name to be undeployed.
Validate the **MDS Folder Name** parameter when prompted with default values.
Press ENTER to use the default value.

Deploying the MDS Folder

Perform the following steps to deploy the MDS folder:

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

Linux

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

Windows

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

2. Validate the **MDS Folder Name** parameter when prompted with default values during deployment. Press ENTER to use the default value.

DVM Changes

When new DVM values are added to a DVM file, the DVM folder must be updated in MDS. This command will not only deploy the files that were changed but the whole DVM folder.

- Pass **/AIAMetaData/dvm** as the **MDS Folder Name** and the entire DVM folder will deploy to MDS.
- **When the DVMs are updated from the SOA composer, verify that the values are updated in the /MDS-Artifacts/CCB2-MDM2/AIAMetaData/dvm folder. If not, the changes made from the composer will be overridden by the PRODUCT_HOME values.**

Custom Schema Changes

If custom elements are added to either or both of the edge application schemas, the `ApplicationObjectLibrary` folder must be updated in MDS.

Do one of the following:

- Pass `CCB2-MDM2/AIAMetaData/AIAComponents/ApplicationObjectLibrary` to deploy the schema folders, or
- Pass `CCB2-MDM2/AIAMetaData/AIAComponents/ApplicationObjectLibrary/OUCCB2` to deploy only the CCB schema folder, or
- Replace `with` to deploy only the `schema` folder.

Concrete WSDL Changes for Extensions

If an extension service needs to be called by a process and the concrete WSDL is updated, the `ExtensionServiceLibrary` folder must be updated in MDS.

Do one of the following:

- Pass `CCB2-MDM2/AIAMetaData/ApplicationObjectLibrary/ExtensionServiceLibrary` to deploy the extension service library folders, or
- Pass `/AIAMetaData/ApplicationObjectLibrary/` to deploy only the extension library folder, or
- Replace `with` to deploy only the `extension service library`.

Update MDS

If there is any change in the endpoints of the participating applications, references of those endpoints in the integration have to be updated to point to the correct URIs. In order to make the changes, update the `$PRODUCT_HOME/config/InstallProperties.xml` file with the correct edge application details and `updateMDS`.

1. Open a command prompt and execute the following commands to update MDS.

Linux

```
ant -f InstallBuild.xml updateMDS -
DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml |
tee $PRODUCT_HOME/bin/updatemds.log
```

Windows

```
ant -f InstallBuild.xml updateMDS -
DInstallProperties=%PRODUCT_HOME%/config/InstallProperties.xml -l
%PRODUCT_HOME%/bin/updatemds.log
```

This command performs the following tasks:

- Updates the edge application endpoint URIs in `ConfigurationProperties.xml` file

- Updates the edge application endpoint URIs in Application Object Library directory `$PRODUCT_HOME/MDS-Artifacts/OUCCB2/AIAMetaData/AIAComponents/ApplicationObjectLibrary/<ApplicationFolder>`
Example: `CCB-SOM/MDS-Artifacts/CCB-SOM/AIAMetaData/AIAComponents/ApplicationObjectLibrary/OUCCB2/V1/wsdl`
2. Restart the managed server to see the changes take effect.

Chapter 5

Installation Properties

This section includes a listing of applicable installation properties.

Make sure that you follow XML editing standards while editing the InstallProperties.xml file. All XML elements need to be closed properly. The XML element in the InstallProperties.xml file does not contain any attribute.

Login to the WebLogic console to cross verify the values being entered for these properties. Also ensure that the values are relevant to the server where the integration product is to be installed. The build may fail due to inappropriate values.

Note: If the `dbuser.createflag` is set to `false`, the schema needed for integration error handling will not be automatically created by the install and will need to be created manually prior to running the installation. When creating the user manually, grant connect and resource to the user.

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

Installation Properties

Property (XPath Representation)	Description	Example
<config>		
<modulename>	Name of the integration module.	Default: CCB2-MDM2 Do not change this value.
CCB Application Information		
<CCB-MDM2><CCB><Protocol>	The protocol on which the application is accessible.	http or https
<CCB-MDM2><CCB><Host>	The host name of Oracle Utilities Customer Care and Billing server application.	CCB_HOST.yourdomain.com
<CCB-MDM2><CCB><Port>	The port number of Oracle Utilities Customer Care and Billing application.	CCB_PORT_NO (Example: 1961)

Property (XPath Representation)	Description	Example
<CCB-MDM2><CCB><ContextRoot>	The context root of the application.	CCB_CONTEXT_ROOT_NAME <ul style="list-style-type: none"> ouaf/XAIApp/xaiserver (for XAI services) ouaf/webservices (for IWS services)
<CCB-MDM2><CCB><ApplicationUsername>	The login user name of the application.	CCBUSER
<CCB-MDM2><CCB><ApplicationPassword>	The login password of the application.	CCBPWD
<CCB-MDM2><CCB><policy>	The security policy that CCB accepts when invoking it's webservice.	Use oracle/wss_http_token_client_policy for XAI services or refer to the Security Policies section for more information when invoking IWS services.
MDM Application Information		
<CCB-MDM2><MDM><Protocol>	The protocol on which the application is accessible.	http or https
<CCB-MDM2><MDM><Host>	The host name of Oracle Utilities Meter Data Management application.	MDM_HOST.yourdomain.com
<CCB-MDM2><MDM><Port>	The port number of Oracle Utilities Meter Data Management application.	MDM_PORT_NO (Example: 1961)
<CCB-MDM2><MDM><ContextRoot>	The context root of the application.	CCB_CONTEXT_ROOT_NAME <ul style="list-style-type: none"> ouaf/XAIApp/xaiserver (for XAI services) ouaf/webservices (for IWS services)
<CCB-MDM2><MDM><ApplicationUsername>	The login user name of the application.	MDMUSER
<CCB-MDM2><MDM><ApplicationPassword>	The login password of the application.	MDMPWD
<CCB-MDM2><MDM><policy>	The security policy that MDM accepts when invoking it's webservice.	Use oracle/wss_http_token_client_policy for XAI services or refer to the Security Policies section for more information when invoking IWS services.

Property (XPath Representation)	Description	Example
Workflow Notification Properties		
<CCB-MDM2><WorkFlow.Notification> <from.emailid>	Email ID which should be set in the “From” property of Workflow Notification bean.	Admin.user@yourdomain.com
<CCB-MDM2><WorkFlow.Notification> <mode>	Type of notification mode	EMAIL
SOA Admin Server		
<SOA><AdminServer><hostname>	Host name of the server where admin server hosting SOA suite is installed.	adminserver.example. oracle.com
<SOA><AdminServer><portnumber>	Port number the admin server (hosting SOA suite) is listening to.	7001
<SOA><AdminServer><servername>	Admin server name (hosting SOA suite)	Admin Server
<SOA><AdminServer><username>	User name used to log in as an Admin server (hosting SOA suite) administrator.	weblogic
<SOA><AdminServer><password>	Password used to log in as an Admin server (hosting SOA suite) administrator.	xxxxxx
<SOA><AdminServer><domainname>	WebLogic domain name hosting SOA suite.	soa_domain
SOA Managed Server		
<SOA><ManagedServer><hostname>	Host name of the server where managed server (hosting SOA suite) is installed.	managedserver.example. oracle.com
<SOA><ManagedServer><portnumber>	Port number the managed server (hosting SOA suite) is listening to.	8001
<SOA><ManagedServer><servername>	Managed server name (hosting SOA suite)	Managedserver1
<SOA><ManagedServer><username>	User name used to log in to managed server (hosting SOA suite) as an administrator.	weblogic
<SOA><ManagedServer><password>	Password used to log in to managed server (hosting SOA suite) as an administrator.	xxxx

Property (XPath Representation)	Description	Example
Oracle HTTP Server Information		
<SOA><OHS><hostname>	The host name of the Oracle HTTP Server.	In a non-cluster environment these properties would be same as the <ManagedServer> values. Oracle http server where cluster is managed
<SOA><OHS><portnumber>	The port number of the Oracle HTTP Server.	Example: 7777
<SOA><OHS><servernames>	The list of server names that are defined as Managed Servers/Clusters.	In multiple managed servers, provide comma separated values. Example: soa_server1, soa_server2
<SOA><OHS>< Protocol>	The protocol on which Oracle HTTP Server can be accessed.	http or https
MDS DB Information		
<SOA><mdsconfig><mdsdbusername>	User name used to log in to MDS.	XXX_MDS
<SOA><mdsconfig><mdsdbuserpassword>	Password used to log in to MDS.	****
<SOA><mdsconfig><mdsdbhostname>	Host name of the server hosting the database containing the MDS schema.	Db.hostname.oracle.com
<SOA><mdsconfig><mdsdbportnumber>	Port number of the database containing the MDS schema.	1521
<SOA><mdsconfig><mdsdbsid>	SID of the database containing MDS.	SID
JMS Information		
<SOA><JMS><serverName>	The JMS server name.	Default:: CCB2MDM2JS Do not change.
<SOA><JMS><ModuleName>	The JMS module name.	Default:: CCB2MDM2JM
<SOA><JMS><SubDeploymentName>	The Subdeployment name.	Default: CCB2MDM2SD Do not change.
<SOA><JMS><JMSServerTarget>	The SOA Managed Server Target for JMS server.	For cluster environment, give only one managed server name under the cluster
<SOA><JMS><JMSModuleTargets>	The JMS Module targeted SOA managed servers/Clusters.	For cluster environment give comma separated managed server names under the cluster or multiple cluster names
<SOA><JMS><PersistantStoreName>	The file store persistence details.	Default: CCB2MDM2FS

Property (XPath Representation)	Description	Example
<SOA><JMS><PersistentStoreType>	JMS persistent store type (FileStores or DBStore). Deployment script supports a file	Default: FileStores
<SOA><JMS><PersistentStoreFilename>	Directory path name where the file based persistent store should be created.	PRODUCT_HOME/CCB2-MDM2/bin
<SOA><JMS><JMSCFName>	The file name of the ConnectionFactory.	OUCCB2OUMDM2ConnectionFactory
<SOA><JMS><JMSCFJNDI>	The JNDI file name of the ConnectionFactory.	jms/ OUCCB2OUMDM2ConnectionFactory
Email Information		
<SOA><EMAIL><MailAccessProtocol>	The protocol of the Mail Access.	IMAP
<SOA><EMAIL><OutgoingDefaultFromAddr>	The email address from which the outgoing mails are sent.	mail.id@yourdomain.com
<SOA><EMAIL><OutgoingMailServer>	The mail server name from where the mails are sent.	host.yourdomain.com
<SOA><EMAIL><OutgoingMailServerPort>	The port number of the outgoing mail server.	465
<SOA><EMAIL><OutgoingMailServerSecurity>	The security for the outgoing mail server.	SSL
<SOA><EMAIL><OutgoingUsername>	The user name of the outgoing email.	mail.id@ yourdomain.com
<SOA><EMAIL><Outgoingpassword>	The password of the outgoing email.	Your password
<SOA><EMAIL><incomingMailServer>	The mail server name where mail is received.	host.yourdomain.com
<SOA><EMAIL><IncomingUserIDs>	Incoming user IDs.	mail.id@ yourdomain.com
<SOA><EMAIL><IncomingUserPasswords>	Incoming passwords.	Your password
<SOA><EMAIL><applicationName>	The application for which the UMS configuration is considered.	usermessaging driver-email
<SOA><EMAIL><capability>	Sets the driver's capability to send or receive messages.	For 12c, the values are SEND, RECEIVE, and BOTH.
Error Handling Database Information		
<EH><dba.dbusername>	User name used to log in as a database administrator (DBA). This database hosts the schema required for the integration.	system

Property (XPath Representation)	Description	Example
<EH><dba.dbuserpassword>	Password used to log in as a database administrator (DBA). This database hosts the schema required for the integration.	xxxxxx
<EH><dbusername>	User name to log in to the error handling schema for the integration. This User can be automatically created by the install (set dbuser.createflag to true) or manually outside the install process.	CCBMDMUSER
<EH>dbuserpassword>	Password to log in to the error handling schema for the integration.	xxxxxx
<EH><dbuser.createflag>	If set to true, the db user can be automatically created by the install. If this value is set to false, the schema needed for integration error handling will not be automatically created by the install and will need to be created manually prior to running the installation. When creating the user manually, grant connect and resource to the user.	true
<EH><dbhostname>	The DB Hostname of the error handling schema for the integration.	host.yourdomain.com
<EH><dbportnumber>	The DB Port of the error handling schema for the integration.	1521
<EH><dbsid>	The DB SID of the error handling schema for the integration.	SID

Chapter 6

Troubleshooting

This section provides information regarding issues that may arise during installation.

Password Expiry for Database

If a password expires or is changed, credential issues may arise with the Meta Data Store (MDS) or with an integration specific database. To fix this issue, perform the following steps:

1. Reset or unlock the password for the corresponding database (MDS or integration specific database).
2. Change the password for the data source for which the password is changed/or locked from the Weblogic Administration Console.
3. Change the password in the **InstallationProperties.xml** for the database instance (this helps only while reinstalling).
4. Perform the following steps to find the **adf-config.xml** file that is generated during installation.

The file is generally located at `$PRODUCT_HOME/install/util/template/`.

- a. Identify the correct “metadata-store-usage” from the “meta-data-namespaces” element by the path mentioned above.
- b. In the “metadata-store-usage” element, find the element property with the attribute value as “jdbc-password” for the “name” attribute.
- c. Change the password for the value attribute in the property element.

Chapter 7

Uninstalling the Integration

This section provides steps for:

- [Uninstalling the Integration](#)
- [Uninstalling the UsageMessagingDriver-Email](#)

Uninstalling the Integration

To uninstall the integration, complete 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. The uninstallation process is divided into three steps. Execute the commands in each of those steps:
 - a. Execute the following commands at the command prompt:

Linux

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

Windows

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

These commands perform the following tasks:

- Undeploys all the composites from the Enterprise Manager partition.
- Deletes the partition.
- Undeploys MDS artifacts.

- b. Execute the following commands at the command prompt:

Linux

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

Windows

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

These commands perform the following tasks:

- Delete the JMS resources (JMS module/ JMS persistent store/ JMS server).
- Undeploy the JMS outbound connection pool.
- Undeploy the database outbound connection pool.
- Delete the JDBC data source for the Error Handling module.
- Remove the work flow notification that is created.
- Delete the csf-keys generated.

After executing the commands mentioned above, bounce the managed server and admin server manually.

- c. Execute the following commands at the command prompt:

Linux

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

Windows

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

These commands drop the database objects created for the Error Handling module created for the integration.

After a successful uninstall, all JMS, JDBC resources, and the CCB2-MDM2 partition created during installation are deleted.

Uninstalling the UsageMessagingDriver-Email

To uninstall the UsageMessagingDriver:

1. Open the **Enterprise Manager** console.
2. Expand the **Usage Message Service**.
3. Right-click on the **usermessagingdriver-email**.
4. Select the **Email Driver Properties** menu item.
5. In the **Email Driver Properties** table, find the row with the instance set as “usermessagingdriver-[integration]” or “usermessagingdriver-UGBUEMAIL”.
6. Click **Delete**.
7. Click **Yes** in the confirmation dialog box.