

**Oracle® Utilities Customer Care
and Billing Integration to Oracle
Utilities Meter Data Management
Release 3.1.1 Media Pack**

White Paper for Cluster Install

Oracle Utilities Meter Data Management v2.0.1.1
Oracle Utilities Customer Care and Billing v2.3.1.1

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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 Oracle Utilities Customer Care and Billing in a clustered WebLogic 11g environment.

Additional Resources

For more information please refer to the following:

Resource	Location
Oracle Utilities Customer Care and Billing Integration to Oracle Utilities Meter Data Management Release 3.1.1 Media Pack Installation Guide	Part of initial product package

Abbreviations

CCB - Oracle Utilities Customer Care and Billing

MDM - Oracle Utilities Meter Data Management

DDL – Data Definition Language

MDS – Metadata Services

UDQ – Uniform Distributed Queue

Installation

This section describes the settings and requirements for a successful installation. Complete these installation steps prior to configuring the applications for integrated functionality.

Software Requirements

Please refer to Oracle® Utilities Customer Care and Billing Integration to Oracle Utilities Meter Data Management Release 3.1.1 Media Pack Installation Guide for product specific versions and patch level.

Pre-Installation Tasks

The following should be completed before installing the Oracle Utilities Customer Care and Billing-Oracle Utilities Meter Data Management integration.

- Ensure that Oracle SOA Suite 11gR1 PS3 (11.1.1.4.0) is installed and running. See the documentation at <http://www.oracle.com/technetwork/middleware/soasuite/documentation/index.html#111140>.

- Log in to the WebLogic console to confirm there are no changes in Pending Activation status.
- Restart the Enterprise Manager and the WebLogic server.
- Configure the cluster setup as per the Oracle Fusion Middleware High Availability Guide at http://download.oracle.com/docs/cd/E14571_01/core.1111/e10106/ha_soa.htm.

Assumptions

- This document assumes that the integration product is being done in a cluster with two different SOA managed servers.
- This document does not cover the setup for RAC database.
- Both the SOA managed servers should use the same SOA database and schemas.
- SOA_HOME (pointing to SOA suite code) and PRODUCT_HOME (pointing to CCB2-MDM2 code) are hosted on the same machine or accessible across machines.

Note: The solution can be enhanced for additional SOA managed servers on the cluster.

Installation Steps

The installation is not a single step install as the current deployment scripts do not cater to a clustered environment. The install partly uses the install scripts and partly manual steps.

Setup for running the scripts

The integration artifacts will be installed only on one of the managed servers and will be available to all the other managed servers in the cluster as they share the same MDS. MDS maintains information about all the deployed composites. Keep only one managed server running on which the integration install will be performed.

To run the install scripts, do the following:

1. Create the PRODUCT_HOME directory and setup parameters in the PRODUCT_HOME/config/InstallProperties.xml file (as defined in the Install Guide) with the following exceptions:
 - Set the config/CCB-MDM2/SOA/AdminServer/hostname to the Load balancer hostname.
 - Set the config/CCB-MDM2/SOA/AdminServer/ portnumber to the Load balancer port number.
 - Set the config/CCB-MDM2/SOA/ManagedServer/hostname to the Load balancer hostname
 - Set the config/CCB-MDM2/SOA/ManagedServer/ portnumber to the Load balancer port number.
2. Ensure that the parameters in the InstallProperties.xml file point to the SOA managed server where the product has to be installed.

3. Open a command prompt and navigate to \$PRODUCT_HOME\bin.
4. Set up all the environment variables (SOA_HOME, ORACLE_HOME, MW_HOME, WL_HOME, and PRODUCT_HOME) as defined in the Install Guide.
5. Execute the individual installation script steps from this command prompt.

Note: Do not execute the ant command deployCCBMDM. This is not a one step installation, but rather the tasks have to be individually executed as listed in the sections below.

Callback URL

The server URL and server callback URL need to be modified in the Enterprise Manager to point to the load balancer URL.

To change the server URL and the callback server URL:

1. Login to the Enterprise Manager console at http://<host_name>:<port>/em.
2. On the Home page, navigate to SOA → soa-infra.
3. Right-click soa-infra, then navigate to SOA Administration → Common Properties.
4. On the Common Properties page, enter the URLs for Callback server and Server, respectively.
5. Restart the Admin server and all SOA managed servers.

soa-infra
SOA Infrastructure

SOA Infrastructure Home > Common Properties

SOA Infrastructure Common Properties

The properties set at this level will impact all deployed composites, except those composites for which you have

Audit Level: Production

Capture Composite Instance State: ☐

Payload Validation: ☐

UDDI Registry Properties

Inquiry URL:

User:

Password:

Server URLs

Callback Server URL:

Server URL:

Database Artifacts

1. Open a Command prompt and execute the following commands.

Command	Description	Restart Required?
ant -f InstallBuildCluster.xml - DInstallProperties=\$PRODUCT_HOME/config/InstallProperties.xml deployDB	Create all database objects required by CCB- MDM2 Error Handling module.	No
ant -f InstallBuildCluster.xml - DInstallProperties=\$PRODUCT_HOME/config/InstallProperties.xml createJDBCResources	Create JDBC Datasource required for CCB- MDM2 Error Handling module.	No
ant -f InstallBuildCluster.xml - DInstallProperties=\$PRODUCT_HOME/config/InstallProperties.xml deployDbOutbound	Deploy DB outbound connection pool. DBAdapter.rar file is updated. A server restart is required for changes to take effect.	Yes

The deployDbOutbound command updates the DbAdapter.rar under
\$SOA_HOME/soa/connectors.

2. If both the SOA managed servers are not sharing the SOA libraries, then copy the DbAdapter.rar to the \$SOA_HOME/soa/connectors folder in the second SOA managed server.
3. Restart the SOA managed server 1 and then start the SOA managed server 2.
4. After both SOA managed servers are up and running, log in to the WebLogic Server Administration console at http://<host_name>:<admin_port>/console.
5. On the Home page, click the link Domain Configuration → JDBC → Data Sources. On the Summary of JDBC Data Sources page, you will see the CCB MDM2 Error Handling data source created with the name CCB2-MDM2EHDS. The data source will be targeted to the SOA managed server 1.
6. Click the link and on the data source page, select the Targets tab.
7. Select the cluster as a target for the data source and click Save.

JMS Resources

JMS resources need to be created manually using the WebLogic Administration console.

Persistent Stores

To create a file based persistent store on each SOA managed server:

1. Ensure both the SOA managed serves are up and running.
2. From the Home page of the WebLogic Administration console, navigate to Domain Configurations → Services → Persistent Stores.
3. On the Persistent Stores page, click New and then select Create FileStore.

4. On the Create a New File Store page, enter the Name and then select the SOA managed server 1 as the target.
5. Enter the directory path which is accessible from the managed server 1 and click OK.

Create a New File Store

OK Cancel

File Store Properties

The following properties will be used to identify your new file store.

* Indicates required fields

What would you like to name your new file store?

* **Name:**

Select a server instance for this file store.

Target: ▼

The pathname to the directory on the file system where the file store is kept. This directory must exist on the file system.

Directory:

OK Cancel

Follow steps 1 to 5 to create the second file store for SOA managed server 2. The target must be managed server 2 and directory must be accessible from managed server 2.

Create a New File Store

OK Cancel

File Store Properties

The following properties will be used to identify your new file store.
* Indicates required fields

What would you like to name your new file store?

* **Name:** SOAFileStore2

Select a server instance for this file store.

Target: soa_server2

The pathname to the directory on the file system where the file store is kept. This directory must exist.

Directory: G:/FileStore

OK Cancel

JMS Servers

To create a new JMS server page each SOA managed server:

1. Ensure both SOA managed serves are up and running.
2. Create two JMS servers, one targeted to each SOA managed server.
3. From the WebLogic Administration console Home page, navigate to Domain Configurations → Services → Messaging → JMS Servers.
4. On the JMS Servers page, click New.
5. On the Create a New JMS Server page, enter the JMS server name, and select one of the two persistent stores. Click Next.

Create a New JMS Server

Back Next Finish Cancel

JMS Server Properties

The following properties will be used to identify your new JMS Server.

* Indicates required fields

What would you like to name your new JMS Server?

* **Name:** SOAJMSServer1

Specify persistent store for the new JMS Server.

Persistent Store: SOAFileStore1

Back Next Finish Cancel

6. Select managed server 1 as the target and click Finish.

Create a New JMS Server

Back Next Finish Cancel

Select targets

Select the server instance or migratable target on which you would like to deploy this JMS Server.

Target: soa_server1

Back Next Finish Cancel

Follow the steps 1 to 6 to create a JMS server for managed server 2 and persistent store 2.

Create a New JMS Server

Back Next Finish Cancel

JMS Server Properties

The following properties will be used to identify your new JMS Server.

* Indicates required fields

What would you like to name your new JMS Server?

* **Name:** SOAJMSServer2

Specify persistent store for the new JMS Server.

Persistent Store: SOAFileStore2

Back Next Finish Cancel

Create a New JMS Server

Back Next Finish Cancel

Select targets

Select the server instance or migratable target on which you would like to deploy this JMS Server.

Target: soa_server2

Back Next Finish Cancel

JMS Module

To create a JMS module which is a logical placeholder for all the JMS resources:

1. Ensure both the SOA managed serves are up and running.
2. In the WebLogic Administration console Home page, navigate to Domain Configurations → Services → Messaging → JMS Modules.
3. On the JMS Modules page, click New.
4. On the Create JMS System Module page, enter the Name and click Next.

Create JMS System Module

The following properties will be used to identify your new module.

JMS system resources are configured and stored as modules similar to standard J2EE modules. Such resources include queues, topics, foreign servers, and JMS store-and-forward (SAF) parameters. You can administratively configure and manage JMS system modules.

* Indicates required fields

What would you like to name your System Module?

*** Name:**

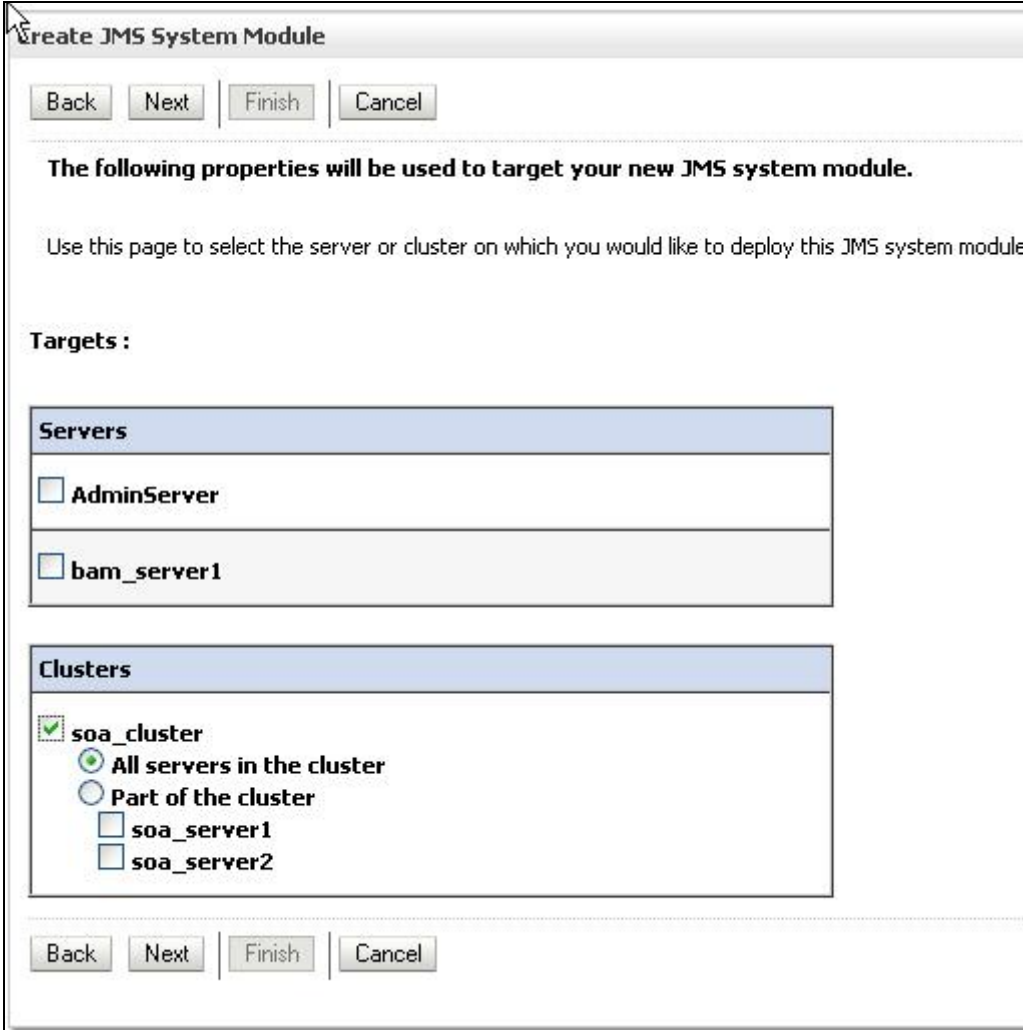
What would you like to name the descriptor file name? If you do not provide a name, a default will be assigned.

Descriptor File Name:

Where would like to place the descriptor for this System Module, relative to the jms configuration sub-directory of your domain?

Location In Domain:

5. Select the cluster as target and click Next.



Create JMS System Module

Back Next Finish Cancel

The following properties will be used to target your new JMS system module.

Use this page to select the server or cluster on which you would like to deploy this JMS system module

Targets :

Servers

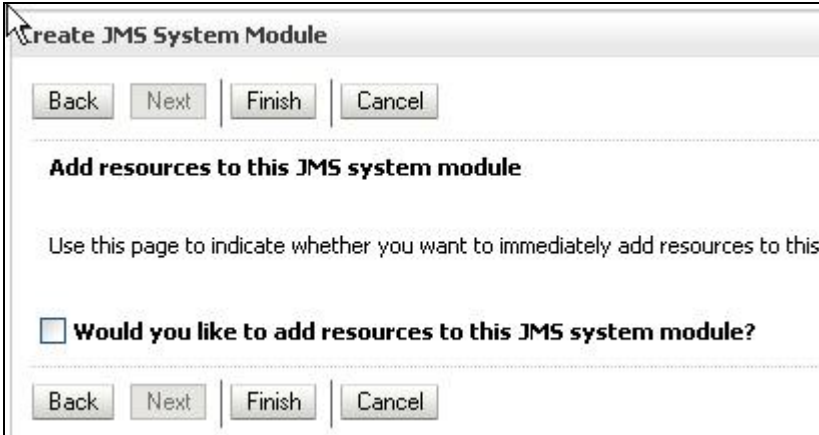
- ☐ AdminServer
- ☐ bam_server1

Clusters

- ☒ soa_cluster
 - ☒ All servers in the cluster
 - ☐ Part of the cluster
 - ☐ soa_server1
 - ☐ soa_server2

Back Next Finish Cancel

6. Deselect the checkbox and click Finish. The JMS module is created.



Create JMS System Module

Back Next Finish Cancel

Add resources to this JMS system module

Use this page to indicate whether you want to immediately add resources to this

☐ **Would you like to add resources to this JMS system module?**

Back Next Finish Cancel

Subdeployments

You will need to create two subdeployments, one for both JMS servers and one for the cluster.

To create a subdeployment:

1. Ensure both the SOA managed serves are up and running.
2. From the WebLogic Administration console Home page, navigate to Domain Configurations → Services → Messaging → JMS Modules.
3. Select the JMS Module, and on the Subdeployments tab click New.

Settings for ClusterJMSModule

Configuration **Subdeployments** Targets Security Notes

This page displays subdeployments created for a JMS system module. A subdeployment is a mechanism by which JMS module resource (such as JMS servers, server instances, or cluster).

[Customize this table](#)

Subdeployments

New Delete

<input type="checkbox"/>	Name	Resources
--------------------------	------	-----------

There are no items to display

New Delete

4. On the Create a New Subdeployment page, enter the Cluster sub deployment and click Next.

Create a New Subdeployment

Back Next Finish Cancel

Subdeployment Properties

The following properties will be used to identify your new subdeployment.

* Indicates required fields

* **Subdeployment Name:** ClusterSubdeployment

Back Next Finish Cancel

5. Select the cluster as the target and click **Finish**. A subdeployment for the selected cluster is created.

Create a New Subdeployment

Back Next Finish Cancel

Targets

Please select targets for the Subdeployment

Servers

- ☐ AdminServer
- ☐ bam_server1

Clusters

- ☒ soa_cluster
 - ☒ All servers in the cluster
 - ☐ Part of the cluster
 - ☐ soa_server1
 - ☐ soa_server2

JMS Servers

- ☐ BPMJMSServer_auto_1
- ☐ BPMJMSServer_auto_2
- ☐ JMSServer-1
- ☐ JMSServer-2
- ☐ SOAJMSServer1
- ☐ SOAJMSServer2
- ☐ SOAJMSServer_auto_1
- ☐ SOAJMSServer_auto_2
- ☐ UMSJMSServer_auto_1
- ☐ UMSJMSServer_auto_2

Back Next Finish Cancel

6. Create another subdeployment for both the JMS servers. For this, select both the JMS servers created as targets.

Create a New Subdeployment

Back Next Finish Cancel

Targets

Please select targets for the Subdeployment

Servers

☐ AdminServer

☐ bam_server1

Clusters

☐ soa_cluster

☐ All servers in the cluster

☐ Part of the cluster

☐ soa_server1

☐ soa_server2

JMS Servers

☐ BPMJMSSEServer_auto_1

☐ BPMJMSSEServer_auto_2

☐ JMSEServer-1

☐ JMSEServer-2

☒ SOAJMSSEServer1

☒ SOAJMSSEServer2

☐ SOAJMSSEServer_auto_1

☐ SOAJMSSEServer_auto_2

☐ UMSJMSSEServer_auto_1

☐ UMSJMSSEServer_auto_2

Back Next Finish Cancel

JMS Connection Factory

To create a JMS connection factory:

1. Ensure both the servers are up and running.
2. Navigate to the existing JMS module and on the Configuration tab, click New.

Settings for ClusterJMSModule

Configuration Subdeployments Targets Security Notes

This page displays general information about a JMS system module and its resources. It also allows you to create and manage resources.

Name: ClusterJMSModule

Descriptor File Name: jms/clusterjmsmodule-jms.xml

This page summarizes the JMS resources that have been created for this JMS system module, including destinations, foreign servers, and store-and-forward parameters.

[Customize this table](#)

Summary of Resources

New Delete

<input type="checkbox"/>	Name ^	Type	JNDI Name

New Delete

- On the Create a New JMS System Module Resource page, select the Connection Factory radio button and then click Next.

Create a New JMS System Module Resource

Back Next Finish Cancel

Choose the type of resource you want to create.

Use these pages to create resources in a JMS system module, such as queues, topics, templates, and destinations. Depending on the type of resource you select, you are prompted to enter basic information for creating the resource. For example, for topics, foreign servers, and JMS SAF destinations, you can also proceed to targeting pages for selecting a mechanism for grouping JMS module resources and the members to server resources.

☒ **Connection Factory**

- Enter the connection factory name as OUCCB2OUMDM2ConnectionFactory and JNDI name as jms/OUCCB2OUMDM2ConnectionFactory. These names are used by the integration and must not be changed. Click Next.
- Click **Advanced Targeting**.

The screenshot shows a dialog box titled "Create a New JMS System Module Resource". At the top, there are navigation buttons: "Back", "Next", "Finish", "Advanced Targeting" (which is highlighted), and "Cancel". Below the buttons, the text reads: "The following properties will be used to target your new JMS system module resource". This is followed by a paragraph: "Use this page to view and accept the default targets where this JMS resource will be targeted. The default targets are **Advanced Targeting** to use the subdeployment mechanism for targeting this resource." Another paragraph states: "The following JMS module targets will be used as the default targets for your new JMS system module resource. If the". Below this, the label "Targets :" is followed by a table with the heading "Clusters". The table contains one row with a checked checkbox next to "soa_cluster". Under "soa_cluster", there are two radio button options: "All servers in the cluster" (which is selected) and "Part of the cluster". Under "Part of the cluster", there are two unchecked checkbox options: "soa_server1" and "soa_server2". At the bottom of the dialog, there are navigation buttons: "Back", "Next", "Finish", "Advanced Targeting" (highlighted), and "Cancel".

6. Select the subdeployment created for cluster and click Finish. This creates the connection factory targeted to the cluster.

Create a New JMS System Module Resource

Back Next Finish Cancel

The following properties will be used to target your new JMS system module resource

Use this page to select a subdeployment to assign this system module resource. A subdeployment is a mechanism by which you can create a new subdeployment by clicking the **Create a New Subdeployment** button. You can also reconfigure subdeployments.

Select the subdeployment you want to use. If you select (none), no targeting will occur.

Subdeployments: ClusterSubdeployment ▼ Create a New Subdeployment

What targets do you want to assign to this subdeployment?

Targets :

Servers

☐ AdminServer

☐ bam_server1

Clusters

☒ soa_cluster

☒ All servers in the cluster

☐ Part of the cluster

☐ soa_server1

☐ soa_server2

Uniform Distributed Queues

The following uniform distributed queues will be created which are used by the integration. Each queue has to be associated to an error queue. The naming convention followed for error queues is <Queue_Name>Error.

Queue Name	JNDI Name
OUCCB2SPSyncRequest	jms/OUCCB2SPSyncRequest
OUCCB2SPSyncRequestError	jms/OUCCB2SPSyncRequestError
OUCCB2SPSyncResponse	jms/OUCCB2SPSyncResponse
OUCCB2SPSyncResponseError	jms/OUCCB2SPSyncResponseError
OUCCB2SASyncRequest	jms/OUCCB2SASyncRequest
OUCCB2SASyncRequestError	jms/OUCCB2SASyncRequestError
OUCCB2SASyncResponse	jms/OUCCB2SASyncResponse

Queue Name	JNDI Name
OUCCB2SASyncResponseError	jms/OUCCB2SASyncResponseError
OUCCB2BatchBDRequest	jms/OUCCB2BatchBDRequest
OUCCB2BatchBDRequestError	jms/OUCCB2BatchBDRequestError
OUCCB2BatchBDResponse	jms/OUCCB2BatchBDResponse
OUCCB2BatchBDResponseError	jms/OUCCB2BatchBDResponseError
OUCCB2OnlineBDRequest	jms/OUCCB2OnlineBDRequest
OUCCB2OnlineBDRequestError	jms/OUCCB2OnlineBDRequestError
OUCCB2OnlineBDResponse	jms/OUCCB2OnlineBDResponse
OUCCB2OnlineBDResponseError	jms/OUCCB2OnlineBDResponseError
OUCCB2ReplReadRequest	jms/OUCCB2ReplReadRequest
OUCCB2ReplReadRequestError	jms/OUCCB2ReplReadRequestError
OUCCB2PersonSyncRequest	jms/OUCCB2PersonSyncRequest
OUCCB2PersonSyncRequestError	jms/OUCCB2PersonSyncRequestError
OUCCB2PersonSyncResponse	jms/OUCCB2PersonSyncResponse
OUCCB2PersonSyncResponseError	jms/OUCCB2PersonSyncResponseError
OUCCB2MeterSyncRequest	jms/OUCCB2MeterSyncRequest
OUCCB2MeterSyncRequestError	jms/OUCCB2MeterSyncRequestError
OUCCB2MeterSyncResponse	jms/OUCCB2MeterSyncResponse
OUCCB2MeterSyncResponseError	jms/OUCCB2MeterSyncResponseError
OUCCB2MeterConfigSyncRequest	jms/OUCCB2MeterConfigSyncRequest
OUCCB2MeterConfigSyncRequestError	jms/OUCCB2MeterConfigSyncRequestError
OUCCB2MeterConfigSyncResponse	jms/OUCCB2MeterConfigSyncResponse
OUCCB2MeterConfigSyncResponseError	jms/OUCCB2MeterConfigSyncResponseError
OUCCB2SPMeterHistSyncRequest	jms/OUCCB2SPMeterHistSyncRequest
OUCCB2SPMeterHistSyncRequestError	jms/OUCCB2SPMeterHistSyncRequestError
OUCCB2SPMeterHistSyncResponse	jms/OUCCB2SPMeterHistSyncResponse
OUCCB2SPMeterHistSyncResponseError	jms/OUCCB2SPMeterHistSyncResponseError
OUMDM2SPSyncRequest	jms/OUMDM2SPSyncRequest
OUMDM2SPSyncRequestError	jms/OUMDM2SPSyncRequestError
OUMDM2SPSyncResponse	jms/OUMDM2SPSyncResponse
OUMDM2SPSyncResponseError	jms/OUMDM2SPSyncResponseError
OUMDM2SASyncRequest	jms/OUMDM2SASyncRequest

Queue Name	JNDI Name
OUMDM2SASyncRequestError	jms/OUMDM2SASyncRequestError
OUMDM2SASyncResponse	jms/OUMDM2SASyncResponse
OUMDM2SASyncResponseError	jms/OUMDM2SASyncResponseError
OUMDM2BatchBDRequest	jms/OUMDM2BatchBDRequest
OUMDM2BatchBDRequestError	jms/OUMDM2BatchBDRequestError
OUMDM2BatchBDResponse	jms/OUMDM2BatchBDResponse
OUMDM2BatchBDResponseError	jms/OUMDM2BatchBDResponseError
OUMDM2OnlineBDRequest	jms/OUMDM2OnlineBDRequest
OUMDM2OnlineBDRequestError	jms/OUMDM2OnlineBDRequestError
OUMDM2OnlineBDResponse	jms/OUMDM2OnlineBDResponse
OUMDM2OnlineBDResponseError	jms/OUMDM2OnlineBDResponseError
OUMDM2ReplReadRequest	jms/OUMDM2ReplReadRequest
OUMDM2ReplReadRequestError	jms/OUMDM2ReplReadRequestError
OUMDM2PersonSyncRequest	jms/OUMDM2PersonSyncRequest
OUMDM2PersonSyncRequestError	jms/OUMDM2PersonSyncRequestError
OUMDM2PersonSyncResponse	jms/OUMDM2PersonSyncResponse
OUMDM2PersonSyncResponseError	jms/OUMDM2PersonSyncResponseError
OUMDM2MeterSyncRequest	jms/OUMDM2MeterSyncRequest
OUMDM2MeterSyncRequestError	jms/OUMDM2MeterSyncRequestError
OUMDM2MeterSyncResponse	jms/OUMDM2MeterSyncResponse
OUMDM2MeterSyncResponseError	jms/OUMDM2MeterSyncResponseError
OUMDM2MeterConfigSyncRequest	jms/OUMDM2MeterConfigSyncRequest
OUMDM2MeterConfigSyncRequestError	jms/OUMDM2MeterConfigSyncRequestError
OUMDM2MeterConfigSyncResponse	jms/OUMDM2MeterConfigSyncResponse
OUMDM2MeterConfigSyncResponseError	jms/OUMDM2MeterConfigSyncResponseError
OUMDM2SPMeterHistSyncRequest	jms/OUMDM2SPMeterHistSyncRequest
OUMDM2SPMeterHistSyncRequestError	jms/OUMDM2SPMeterHistSyncRequestError
OUMDM2SPMeterHistSyncResponse	jms/OUMDM2SPMeterHistSyncResponse
OUMDM2SPMeterHistSyncResponseError	jms/OUMDM2SPMeterHistSyncResponseError

Create all the uniform distributed queues (UDQ) and error queues (Error UDQ) as in the table above.
The following steps describe the procedure to create JMS artifacts for MDM SP Sync Response.

1. Ensure both the servers are up and running.
2. Navigate to the JMS module created. On the Configuration tab, click New to display the Summary of Resources table.
3. On the Create a New JMS System Module Resource page, select the Distributed Queue radio button, and then click Next.

Create a New JMS System Module Resource

Back Next Finish Cancel

Choose the type of resource you want to create.

Use these pages to create resources in a JMS system module, such as queues, topics, templates, and connection factories. Depending on the type of resource you select, you are prompted to enter basic information for creating the resource. For topics, foreign servers, and JMS SAF destinations, you can also proceed to targeting pages for selecting appropriate server mechanism for grouping JMS module resources and the members to server resources.

☐ Connection Factory

☐ Queue

☐ Topic

☒ Distributed Queue

4. Enter the Name and JNDI Name for the queue (as per the queue names in the table above).
5. Keep the Allocate Members Uniformly checkbox selected.
6. Select a load balancing policy and click Next.
7. Click Advanced Targeting and then select the subdeployment created for JMS servers.
8. Click Finish.

JMS artifacts for MDM SP Sync Response are created.

Create a New JMS System Module Resource

Back

Next

Finish

Cancel

The following properties will be used to target your new JMS system module resource

Use this page to select a subdeployment to assign this system module resource. A subdeployment is a mechanism by which you can create a new subdeployment by clicking the **Create a New Subdeployment** button. You can also reconfigure an existing subdeployment.

Select the subdeployment you want to use. If you select (none), no targeting will occur.

Subdeployments:

JMSServersSubdeployment

Create a New Subdeployment

What targets do you want to assign to this subdeployment?

Targets :

Servers

☐ AdminServer

☐ bam_server1

Clusters

☐ soa_cluster

☐ All servers in the cluster

☐ Part of the cluster

☐ soa_server1

☐ soa_server2

JMS Servers

☐ BAMJMServer

☐ BPMJMServer_auto_1

☐ BPMJMServer_auto_2

☐ JMServer-1

☐ JMServer-2

☒ SOAJMServer1

☒ SOAJMServer2

This creates a logical UDQ and two physical queues one for each JMS server. The members for the UDQ can be seen by navigating to the UDQ → Configuration → Members tab.

You can monitor the UDQ on the Monitoring tab. You can see individual queues for each JMS server. Repeat the steps to create a UDQ which will act as the Error Queue. For example: OUMDM2SPSyncResponse error

To associate the error UDQ to the main UDQ, navigate to the main UDQ → Configuration → Delivery Failure tab. On this page, set the Redelivery limit to 0, Expiration Policy to Redirect, and select the appropriate error queue from the Error Destination dropdown list. Click Save to get the error UDQ get associated to the main UDQ.

Note: Scripts to create Uniform Distributed Queues are available for download from My Oracle Support in Patch number 13641634 - CCB-MDM V2 INTEGRATION - UNIFORM DISTRIBUTED QUEUES SCRIPTS FOR CLUSTER.

JMS Adapter

1. Shut down both SOA managed servers.
2. Open a Command prompt and execute the following commands. This will update the JMSAdapter.rar file on the SOA managed server 1.

Command	Description	Restart Required?
ant -f InstallBuildCluster.xml - DInstallProperties=\$PRODUCT_HOME/config/InstallProperties.xml deployJmsOutbound	Create outbound connection pool for the integration. JMSAdapter.rar is updated. A server restart is required for changes to take effect.	Yes

3. If both the SOA managed servers are not sharing SOA libraries, then copy the JMSAdapter.rar file to the \$SOA_HOME/soa/connectors folder in the second SOA managed server.
4. Restart the SOA managed server 1.

Creating Partition and Updating MDS

To create a partition and update MDS, ensure that the SOA managed server 1 is up and running. Then, execute the following commands:

Command	Description	Restart Required?
ant -f InstallBuildCluster.xml - DInstallProperties=\$PRODUCT_HOME/config/InstallProperties.xml createPartition	Creates partition CCB-MDM in em console.	No
ant -f InstallBuildCluster.xml - DInstallProperties=\$PRODUCT_HOME/config/InstallProperties.xml updateMDS	Updates MDS schema with all the MDS artifacts available at \$PRODUCT_HOME/MDS-Artifacts/ folder.	Yes

Finally, restart the SOA managed server 1.

Composite Deploy

To deploy all composites in the SOA managed server 1, ensure that the SOA managed server 1 is up and running. Then, execute the following commands.

Command	Description	Restart Required?
ant -f InstallBuildCluster.xml - DInstallProperties=\$PRODUCT_HOME/config/InstallProperties.xml deployAllComposite	Deploys all the composites to the partition created with version number mentioned in InstallProperties.xml file.	No

Finally, restart the SOA managed server 1.

Verifying the Install

To verify whether the installation is complete:

- Restart both the SOA managed servers and log in to the Enterprise Manager console.
- All the composites will be available for each of the managed server. Even if the SOA managed server 1 is shut down, the composite will be available in SOA managed server 2 and vice versa as the MDS is shared by both the servers.

Note: To connect to the UDQ external applications, use the load balancer URL and port to create the initial context.

For example: InitialContext ctx = new InitialContext("t3://weblogiccluster.soa.com:8005");