

Oracle® Utilities Customer Care and Billing Integration to Oracle Utilities Network Management System

Installation Guide

Oracle Utilities Network Management System

v1.10.0.0.1

Oracle Utilities Customer Care and Billing v2.3.1

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Overview

This guide describes the installation steps that must be completed before Oracle Utilities Network Management System can be integrated with Oracle Utilities Customer Care and Billing.

This installation is placed on top of an Oracle SOA Suite 11gR1 PS2. Oracle Utilities Network Management System and Oracle Utilities Customer Care and Billing system interacts with the middleware to initiate the services that are housed.

Additional Resources

For more information read the following documents:

Resource	Location
Oracle Utilities Customer Care and Billing Integration to Oracle Utilities Network Management System Implementation Guide	Same folder as this document with the distribution for this product.
Oracle Utilities Network Management System Installation Guide for Release v1.10.0.0.1	Refer to NMS installation documentation located on e-delivery.
Oracle Utilities Customer Care and Billing Installation Guide for Release v2.3.1	Refer to CCB installation documentation located on e-delivery.

Abbreviations

CCB - Oracle Utilities Customer Care and Billing application.

NMS - Oracle Utilities Network Management System application.

DDL – Data definition language

MDS – Metadata Services

Installation

The following sections describe the settings and requirements for a successful installation. Complete these installation steps prior to configuring the applications for integrated functionality.

Software Requirements

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

Please refer to your product specific installation instructions for complete details.

- Oracle Utilities Customer Care and Billing –Application version v2.3.1 installed on an Oracle database.
- Oracle Utilities Network Management System – Application version v1.10.0.0.1 installed on an Oracle database.
- SOA11g / Oracle Enterprise Manager 11.1.1.3.0
- Weblogic Server 10.3.3.0

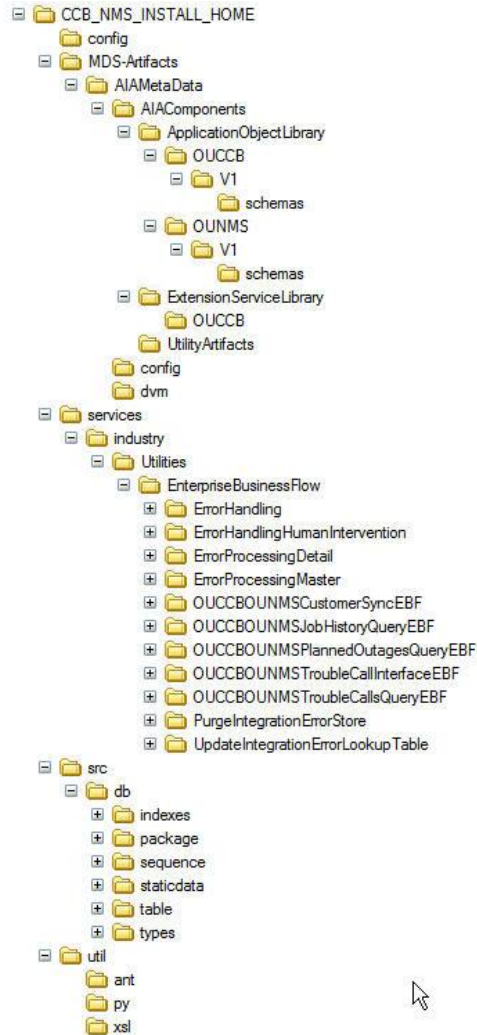
Pre-Installation Tasks

The following should be completed before installation.

- Ensure that Oracle SOA Suite 11gR1 PS2 (11.1.1.3.0) is installed and running. Refer to documentation at <http://www.oracle.com/technetwork/middleware/soasuite/documentation/index.html#111130>
- Login to the Weblogic console to confirm there are no changes in Pending Activation status.
- Restart the SOA Managed Server and the Weblogic Admin Server.

Installation Steps

1. Download CCB_NMS_INSTALL_HOME.zip file from e-delivery.
2. Extract CCB_NMS_INSTALL_HOME to get directory similar to what is visible in the image below.



3. Set the following environment variables

UNIX and Windows OS:

SOA_HOME = example: XXX/Middleware/Oracle_SOA1

ORACLE_HOME = example: XXX/Middleware/Oracle_SOA1

MW_HOME = example: XXX/Middleware

WL_HOME = example: XXX/Middleware

PRODUCT_HOME = directory where CCB-NMS.zip is extracted

Examples:

Linux: PRODUCT_HOME=/slot/oracle/CCB_NMS_INSTALL_HOME

Windows: PRODUCT_HOME=D:\Oracle\CCB_NMS_INSTALL_HOME

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 the Linux syntax. However, if you are installing on Windows, it should be referred to as: %PRODUCT_HOME%. Wherever \$PRODUCT_HOME is mentioned in this document please replace with %PRODUCT_HOME% for Windows.

- The setWLSEnv.sh on Linux and setWLSEnv.bat on Windows is used to 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\  
execute setWLSEnv.bat
```

- Modify the \$\$PRODUCT_HOME\config\deploy.properties file and ensure that the values are relevant to the server where the CCB-NMS installation is to be installed. Login to the weblogic console to cross verify the values being entered for these properties as the build will fail due to inappropriate values.

The following table provides an overview of the properties available in deploy.properties and their usage. The default values are specified wherever applicable.

The CCB_NMS_INSTALL_HOME directory should not be deleted. This directory will be used for any patches as well.

For windows installation, when updating any of the properties below, please add the "/" to the path Example: C:/ccb-nms

Property	Description	Example
Server Installation Information		
weblogic_admin_server_host	Host name of the server where admin server is installed.	adcxxx.abc.oracle.com
weblogic_admin_server_port	Port Number admin server is listening to.	7043
weblogic_soa_mgdserver_name	SOA Managed Server Name	soa_server1
weblogic_soa_adminserver_name	Admin Server name	AdminServer
domain_name	SOA Domain name	soa_domain
weblogic_soa_server_hostname	Host name of the server where soa server is installed.	adcxxx.abc.oracle.com
weblogic_soa_server_portnumber	Port Number soa server is listening to.	8043
weblogic_username	User name used to log in to the weblogic console	
weblogic_password	Password used to log in to the weblogic console	
middleware_home	Path on the server where middleware is installed	/slot/emsXXX/Middleware
middleware_wls_home	Path on the server where weblogic is installed.	/slot/emsXXX/Middleware/wlserver_10.3
middleware_soa_home	Path on the server where SOA is installed.	/slot/emsXXX/oracle/Middleware/Oracle_SOA1
JMS Queue Information		

Property	Description	Example
ccb_nms_qlist_file	This file contains all Queues required by both edge applications both CCB and NMS. **See notes below for more details	Default: CCB-NMS-QList.file
jmsServerName	JMS Server Name used by CCB-NMS integration.	Default: CCBNMSFJS
jmsModuleName	JMS Module name used by CCB-NMS integration.	Default: CCBNMSFJM
jmsSubDeploymentName	Sub deployment name.	Default: CCBNMSFileSubDeployment
jmsConnectionFactoryName	JMS Connection Factory name for CCB-NMS integration.	Default: OUCCBOUNMSConnectionFactory
jmsFactoryJNDI	JNDI name for the JMS Connection Factory.	Default: jms/OUCCBOUNMSConnectionFactory
jmsFileStoreName	JMS FileStore name.	Default: CCBNMSFileStore
jmsFileStorePath	Path to the location where JMS Filestore should create the file. Depending on this value the installation script creates a folder at the specified location. It is recommended to keep this folder outside \$PRODUCT_HOME.	Linux: /slot/XXXX/CCB_NMS_INSTALL_HOME/ccb-NMS-jms-filestore Windows: d:/CCB_NMS_INSTALL_HOME/ccb-nms-jms-filestore
composite.completionPersistPolicy	This property can only be used when composite.inMemoryOptimization is set to be True.	Default to faulted faulted: only the faulted instances are saved. Off: No instances of the process are saved. Deferred: The completed instances are saved but in different thread and another transaction. On: The completed instance is saved normally.
composite.inMemoryOptimization	This property indicates to Oracle BPEL Server that this process is a transient process and dehydration of the instance is not required. When set to True, the completionPersistPolicy is used to determine persistence behavior. This property can only be set to True for transient processes or processes that do not contain any dehydration points such as receive, wait, onMessage and onAlarm activities. The inMemoryOptimization property is set at the BPEL component level.	Default to True true: The completionPersist policy is used to determine persistence behavior. Please refer to the property above. false (default): Instances are persisted completely and recorded in the dehydration store database.

Property	Description	Example
composite.auditLevel	<p>The auditLevel property sets the audit trail logging level. This configuration property is applicable to both durable and transient processes. This property controls the amount of audit events that are logged by a process. Audit events result in more database inserts into the audit_trail table which may impact performance. Audit information is used only for viewing the state of the process from Oracle Enterprise Manager Console.</p> <p>Use the Off value if you do not want to store any audit information. Always choose the audit level according to your business requirements and use cases</p>	<p>Default to Inherit</p> <p>Inherit: Inherits the audit level from infrastructure level.</p> <p>Off: No audit events (activity execution information) are persisted and no logging is performed; this can result in a slight performance boost for processing instances.</p> <p>Minimal: All events are logged; however, no audit details (variable content) are logged.</p> <p>Production: All events are logged. The audit details for assign activities are not logged; the details for all other activities are logged.</p> <p>Development : All events are logged; all audit details for all activities are logged.</p>
overwrite	Any existing composite with same revision number will be overridden.	Default: true
forceDefault	Force new composite as default composite	Default: true
revision	Composite revision number.	Default: 1.0
purge.process.deploy	This flag denotes if the composite PurgeIntegrationErrorStore will be deployed or not at the client side. This process is part of the ErrorHandling framework.	<p>Default to true</p> <p>True: PurgeIntegrationErrorStore will be deployed.</p> <p>False: PurgeIntegrationErrorStore will not be deployed.</p>
automate.LifeCycle	This flag indicates that installation script will take care of shutting down and starting of Admin and Managed server. When this is set to false then it has to be done manually.	true
soa_partition	All composites related to CCB-NMS integration will be deployed to this partition	Default: CCB-NMS
JDBC Properties Section For Error Handling		
db_vendor	DB Vendor	Default: Oracle
jdbc_ds_name	JDBC Error Handling Datasource name.	CCBNMSErrorHandlingDS

Property	Description	Example
jdbc_driver_class	JDBC Driver class.	oracle.jdbc.OracleDriver
soa.db.hostname	Database hostname	adcXXXX.abc.oracle.com
soa.db.port	Database port number	1521
soa.db.sid	Databse SID	xxxdev2
soa.db.adminuser	Database admin user name.	System
soa.db.adminpwd	Database admin password.	Manager
soa.dbuser	ErrorHandling schema user name.	Errorhandlinguser
soa.dbpwd	ErrorHandling schema password	Errorhandlingpwd
db.create.user.flag	This flag controls whether or not an error handling user is created. If the user is already created then this will be set to false for the next installation.	True
mds.user	MDS repository user name	DEV_MDS
mds.pwd	MDS repository password	XXX_MDS
JDBC Properties Section For NMS Application		
db_vendor_app	DB Vendor	Oracle
jdbc_ds_name_app	JDBC NMS Datasource name.	NMSJDBCDataSource
jdbc_driver_class_app	JDBC Driver class.	oracle.jdbc.OracleDriver
app.db.hostname	Database hostname	adcXXXX.abc.oracle.com
app.db.port	Database port number	1521
app.db.sid	Databse SID	ccbdev2
app.db.adminuser	Database admin user name.	System
app.db.adminpwd	Database admin password.	Manager
app.dbuser	NMS user	nms_ces
app.dbpwd	NMS user password	nms_ces
Outbound Connection Pool Properties		
jms.adapter.namespace		http://www.bea.com/ns/weblogic/weblogic-connector
db.adapter.namespace		http://www.bea.com/ns/weblogic/90

****Note:** Queue names mentioned in any of the *.file under \$PRODUCT_HOME/config folder cannot have any leading or trailing spaces and the file cannot have any blank lines. Any line starting with # will be ignored. Queue names should also not be modified. The queue name should appear in the deploy.properties as the value for the CCB-NMS-QList.file.

Also take note of the following:

- \$PRODUCT_HOME\util\ant folder contains all the ant build scripts.
- build.xml is the wrapper for all other scripts which means any task which is part of build.xml internally invokes one of the other ant build scripts from the folder for execution.
- CommonTasks.xml file contains tasks which are repeatedly used by one of the build scripts or used by more than one build scripts.

Installing the Integration

After setting the environment variables:

1. Open a command prompt and execute the command: `cd CCB_NMS_INSTALL_HOME\util\ant`
2. Execute: `ant -f build.xml deployCCBNMS` to invoke the build script.

This completes the end to end CCB-NMS integration installation by performing the following tasks:

- Create database objects required for Error Handling module.
- Create JDBC DataSource for the ErrorHandler Module
- Create outbound connection pool instance for Database used by Errorhandling Module by updating DBAdapter.rar file.
- Create JDBC DataSource for the NMS Database the integration should connect to.
- Create outbound connection pool instance for NMS Database by updating DBAdapter.rar file.
- Install the following BPEL-related packages in the NMS Database. (Refer to [the next section](#) for more details)
 - `'BPEL_OUNMSCUSTOMERSYNSTOREDPR'`
 - `'BPEL_OUNMSSUBMITCALLSTOREDPROC'`
- Create JMS Server / JMS Module / JMS Connection Pool / JMS Persistence Store / JMS Queues / Assign Error Queues to the interface queues/
- Create JMS Outbound Connections for CCB by updating JMSAdapter.rar file.
- If automate.LifeCycle=true in deploy.properties file under \$PRODUCT_HOME\config folder then shutdown and start Admin Server and Managed Server will be done thru the script to ensure that the all changes are activated.
- Update MDS repository with all the artifacts.
- Create the application partition where the composites are going to be deployed for eg:CCB-NMS
- Compile / Package and then deploy all the composites to the enterprise manager.

Install BPEL Related Packages

Installing the BPEL-related packages in the NMS Database is done through the following steps.

- BPEL related packages get deployed on the NMS database when the deployDB task is ran on the full install.
- Inside deployDB task is the NMSDBTasks ant call which creates all the BPEL-related types, package head and package body required to convert the records to object type and vice versa.
- Validate the packages health check by running the following query on the NMS datastore.

```
select object_name,object_type,status from user_objects where object_name in  
( 'BPEL_OUNMSCUSTOMERSYNSTOREDPR','BPEL_OUNMSSUBMITCALLSTORED  
PROC')
```

- This query retrieves 4 records and shows a status valid for a successful install.

Post Installation Checklist

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

- Restart the weblogic admin and soa server.
- Review the logs under
\$WL_HOME/user_projects/domains/soa_domain/servers/soa_server1/logs to see if there were any exceptions thrown during deployment.
- Log in to the weblogic console to verify all JMS and JDBC resources were created.

Java Messaging Service (JMS) Configurations Check List

JMS Server

Verify **CCBNMSFJS** JMS Server is created.

On the Left Pane, select the **Services** → **Messaging** → **JMS Servers** and check for the presence of CCBNMSFJS server.

Oracle WebLogic Server Administration Console

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

Welcome, weblogic | Connected to: soa_domain

Summary of JMS Servers

JMS servers act as management containers for the queues and topics in JMS modules that are targeted to them.
This page summarizes the JMS servers that have been created in the current WebLogic Server domain.

Customize this table

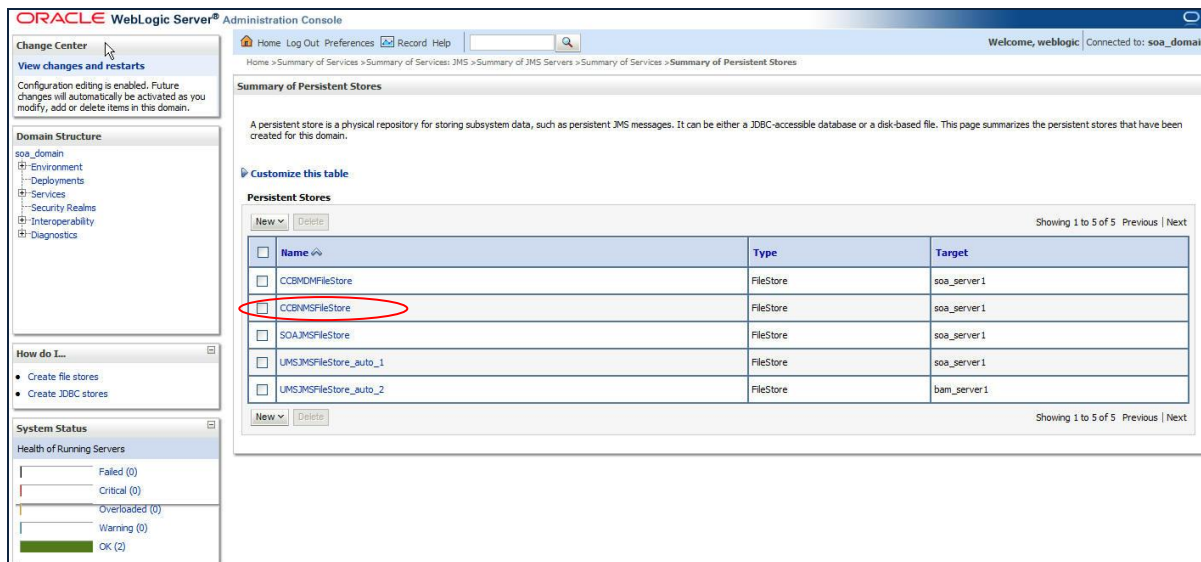
JMS Servers (Filtered - More Columns Exist)

<input type="checkbox"/>	Name	Persistent Store	Target	Current Server	Health
<input type="checkbox"/>	BAMJMServer		bam_server1	bam_server1	
<input type="checkbox"/>	CCBMDMFileStore	CCBMDMFileStore	soa_server1	soa_server1	OK
<input checked="" type="checkbox"/>	CCBNMSFJS	CCBNMSFileStore	soa_server1	soa_server1	OK
<input type="checkbox"/>	SOAJMServer	SOAJMSFileStore	soa_server1	soa_server1	OK
<input type="checkbox"/>	UMSJMServer_auto_1	UMSJMSFileStore_auto_1	soa_server1	soa_server1	OK
<input type="checkbox"/>	UMSJMServer_auto_2	UMSJMSFileStore_auto_2	bam_server1	bam_server1	

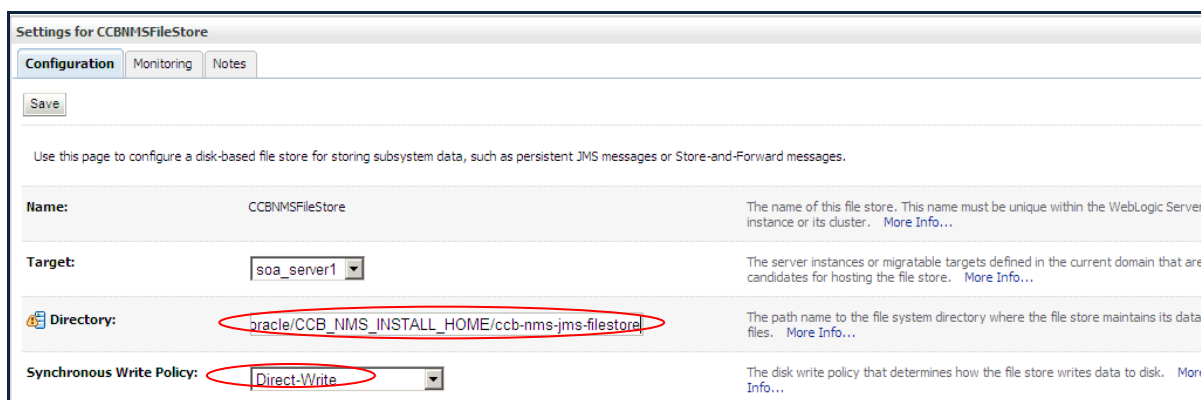
Showing 1 to 6 of 6 Previous | Next

JMS Persistent Store

1. Verify whether the **CCBNMSFileStore** Persistent Store is created.
On the Left Pane, select the **Services** → **Persistent Store** and check for the presence of CCBNMSFileStore.



2. Verify that the JMSFileStorePath is correct and the directory exists with this name with write permission by clicking on CCBNMSFileStore.
Example screen:



JMS Module

Verify whether the **CCBNMSFJM** JMS module is created.

On the Left Pane, select **Services** → **Messaging** → **JMS Modules**.

The screenshot shows the Oracle WebLogic Server Administration Console. The left pane has a 'Domain Structure' section with a tree view showing 'soa_domain' > 'Environment' > 'Deployments' > 'Services' > 'Security Realms' > 'Interoperability' > 'Diagnostics'. The 'How do I...' section lists 'Configure JMS system modules' and 'Configure resources for JMS system modules'. The 'System Status' section shows 'Health of Running Servers' with a bar chart indicating 'Failed (0)', 'Critical (0)', 'Overloaded (0)', 'Warning (0)', and 'OK (2)'. The main pane is titled 'JMS Modules' and contains a table with the following data:

Name	Type
BAMJmsSystemResource	System
CCBNMDFJM	System
CCBNMSFJM	System
SOAJMSModule	System
UMSJMSSystemResource	System

JMS Destinations

1. Click on the CCBNMSFJM JMS Module to ensure that all the 4 Queues are created and they are associated to the correct Subdeployment and Correct Target i.e., CCBNMSFJS JMS server.
2. Ensure all the Queues are populated with server option assigned to it and target server mapped.

The screenshot shows the Oracle WebLogic Server Administration Console. The left pane has a 'Domain Structure' section with a tree view showing 'soa_domain' > 'Environment' > 'Deployments' > 'Services' > 'Security Realms' > 'Interoperability' > 'Diagnostics'. The 'How do I...' section lists 'Configure JMS system modules' and 'Configure resources for JMS system modules'. The 'System Status' section shows 'Health of Running Servers' with a bar chart indicating 'Failed (0)', 'Critical (0)', 'Overloaded (0)', 'Warning (0)', and 'OK (2)'. The main pane is titled 'Settings for CCBNMSFJM' and contains a table with the following data:

Name	Type	JNDI Name	Subdeployment	Targets
OUCCBCustomerDataSyncRequest	Queue	jms/OUCCBCustomerDataSyncRequest	CCBNMSFJSSubDeployment	CCBNMSFJS
OUCCBCustomerDataSyncRequestError	Queue	jms/OUCCBCustomerDataSyncRequestError	CCBNMSFJSSubDeployment	CCBNMSFJS
OUCCBCustomerDataSyncResponse	Queue	jms/OUCCBCustomerDataSyncResponse	CCBNMSFJSSubDeployment	CCBNMSFJS
OUCCBCustomerDataSyncResponseError	Queue	jms/OUCCBCustomerDataSyncResponseError	CCBNMSFJSSubDeployment	CCBNMSFJS
OUCCBCUINMSConnectionFactory	Connection Factory	jms/OUCCBCUINMSConnectionFactory	CCBNMSFJSSubDeployment	CCBNMSFJS

JMS Queues

Navigation: On the Left pane, select **Services** → **Messaging** → **JMS Modules** → **CCBNMSFJM** > **OUCCBCustomerDataSyncRequest** or any other queue

- Select the Monitoring tab.
- Verify that the screen appears exactly as below.
- If the JMSMODULENAME!JMSQUEUENAME row is not present in the Destinations table, there were problems with the installation.

Home > JMS Modules > CCBNMSFJM > OUCCBCustomerDataSyncRequest

Settings for OUCCBCustomerDataSyncRequest

Configuration **Monitoring** Control Security Subdeployment Notes

A JMS destination identifies a queue (Point-To-Point) or a topic (Pub/Sub) that is targeted to a JMS server.

This page summarizes the active JMS destinations that have been created for this JMS module.

[Customize this table](#)

Destinations (Filtered - More Columns Exist)

Show Messages Showing 1 to 1 of 1 Previous | Next

<input type="checkbox"/>	Name	Messages Current	Messages Pending	Messages Total	Consumers Current	Consumers High	Consumers Total	Messages High
<input type="checkbox"/>	CCBNMSFJM! OUCCBCustomerDataSyncRequest	0	0	13	10	10	50	1

Show Messages Showing 1 to 1 of 1 Previous | Next

JMS Error Queue Assignment

There are two Destination Queues and another two corresponding Error Queues associated for the destination queues. Here CCBNMSCustomerDataSyncRequest is the regular destination Queue and CCBNMSCustomerDataSyncRequestError is the corresponding Error Queue.

- Check for the RedeliveryLimit set to 0, ExpirationPolicy to Redirect and Error Destination to corresponding Error Queue.
Navigation: On the Left pane select **Services** → **Messaging** → **JMS Modules** → **CCBNMSFJM** - **> OUCCBCustomerDataSyncRequest**.
- Select the Delivery failure option with the redirect and ErrorQueue assigned in it.

ORACLE WebLogic Server® Administration Console

Home Log Out Preferences Record Help Welcome, weblogic Connected to: soa_domain

Change Center
View changes and restarts
Configuration editing is enabled. Future changes will automatically be activated as you modify, add or delete items in this domain.

Domain Structure
soa_domain
Environment
Deployments
Services
Messaging
JDBC
Persistent Stores
Foreign JNDI Providers
Coherence Clusters
Work Contexts
XML Registries
XML Entity Caches
JCOM
Mail Sessions

How do I...
Configure queue message delivery failure options
Configure JMS templates

System Status
Health of Running Servers
Failed (0)
Critical (0)
Overloaded (0)
Warning (0)
OK (2)

Settings for OUCCBCustomerDataSyncRequest

Configuration **Monitoring** Control Security Subdeployment Notes

General Thresholds and Quotas Overrides Logging **Delivery Failure**

Save

Use this page to define message delivery failure parameters, like specifying redelivery limits, selecting a message expiration policy, and specifying an error destination for undeliverable or expired messages.

Redelivery Delay Override: -1
The delay, in milliseconds, before rolled back or recovered messages are redelivered, regardless of the RedeliveryDelay specified by the consumer and/or connection factory. Redelivered queue messages are put back into their originating destination; redelivered topic messages are put back into their originating subscription. The default value (-1) specifies that the destination will not override the RedeliveryDelay setting specified by the consumer and/or connection factory. [More Info...](#)

Redelivery Limit: 0
The number of redelivery tries a message can have before it is moved to the error destination. This setting overrides any redelivery limit set by the message sender. If the redelivery limit is configured, but no error destination is configured, then persistent and non-persistent messages are simply dropped (deleted) when they reach their redelivery limit. [More Info...](#)

Expiration Policy: Redirect
The message Expiration Policy to use when an expired message is encountered on a destination. The valid expiration policies are: [More Info...](#)

Expiration Logging Format:
The policy that defines what information about the message is logged when the Expiration Policy is set to Log. The valid logging policy values are: [More Info...](#)

Error Destination: OUCCBCustomerDataSyncRequestError
The name of the target error destination for messages that have expired or reached their redelivery limit. If no error destination is configured, then such messages are simply dropped. If a message has expired or reached its redelivery limit, and the Expiration Policy is set to Redirect, then the message is moved to the specified Error Destination. [More Info...](#)

Save

JDBC Configurations Check list

Datasource

1. Ensure that following two datasources are created on the server:

- CCBNMSErrorHandlingDS - ErrorHandling datasource
- NMSJDBCDataSource – NMS datasource

Navigation: On left pane, select the **Services → JDBC → DataSources** check the two datasources marked are installed.

Configuration editing is enabled. Future changes will automatically be activated as you modify, add or delete items in this domain.

Domain Structure

- soa_domain
 - Environment
 - Deployments
 - Services
 - Messaging
 - JMS Servers
 - Store-and-Forward Agents
 - JMS Modules
 - Path Services
 - Bridges
 - JDBC
 - Data Sources
 - Multi Data Sources
 - Data Source Factories

How do I...?

- Create JDBC data sources
- Delete JDBC data sources

System Status

Health of Running Servers

- Failed (0)
- Critical (0)
- Overloaded (0)
- Warning (0)
- OK (2)

Summary of JDBC Data Sources

A JDBC data source is an object bound to the JNDI tree that provides database connectivity through a pool of JDBC connections. Applications can look up a data source on the JNDI tree and then borrow a database connection from a data source.

This page summarizes the JDBC data source objects that have been created in this domain.

Customize this table

Data Sources (Filtered - More Columns Exist)

Name	JNDI Name	Targets
BAMDataSource	jdbc/oracle/bam/adc	bam_server1
CCBMDMErrorHandlingDS	jdbc/CCBMDMErrorHandlingDS	soa_server1
CCBNMSErrorHandlingDS	jdbc/CCBNMSErrorHandlingDS	soa_server1
EDNDataSource	jdbc/EDNDataSource	soa_server1
EDNLocalTxDataSource	jdbc/EDNLocalTxDataSource	soa_server1
mds-owsm	jdbc/mds/owsm	AdminServer, soa_server1, bam_server1
mds-soa	jdbc/mds/MDS_LocalTxDataSource	AdminServer, soa_server1
NMSJDBCDataSource	jdbc/NMSJDBCDataSource	soa_server1
OODLWDDDataSource	jdbc/OODLWDDDataSource	soa_server1
OODMetaDataSource	jdbc/OODMetaDataSource	soa_server1

Showing 1 to 10 of 13 Previous | Next

2. Check Datasource JNDI name is the same as the ones defined in the JCA files

Navigation: On the Left Pane, select **Services → JDBC → Datasources** and click on the Datasource (not checkbox) and in the Main page select Configuration tab and General sub tab to ensure the jndi name matches the one defined in the JCA files.

ORACLE WebLogic Server® Administration Console

Home Log Out Preferences Record Help

Welcome, weblogic Connected to: soa_domain

Home > JmsAdapter > Roles > JmsAdapter > Summary of Deployments > JmsAdapter > Summary of Deployments > JmsAdapter > Summary of Services: JDBC > Summary of JDBC Data Sources > NMSJDBCDataSource

Settings for NMSJDBCDataSource

Configuration Targets Monitoring Control Security Notes

General Connection Pool Transaction Diagnostics Identity Options

Save

Applications get a database connection from a data source by looking up the data source on the Java Naming and Directory Interface (JNDI) tree and then requesting a connection. The data source provides the connection to the application from its pool of database connections.

This page enables you to define general configuration options for this JDBC data source.

Name: NMSJDBCDataSource A unique name that identifies this data source in the WebLogic domain. More Info...

JNDI Name: jdbc/NMSJDBCDataSource The JNDI path to where this data source is bound. By default, the JNDI name is the name of the data source. More Info...

Row Prefetch Enabled Enables multiple rows to be "prefetched" (that is, sent from the server to the client) in one server access. More Info...

Row Prefetch Size: 48 If row prefetching is enabled, specifies the number of result set rows to prefetch for a client. More Info...

Stream Chunk Size: 256 Specifies the data chunk size for streaming data types. More Info...

Save

3. Check for the URL settings are correctly pointed to the Database
Navigation: On the Left Pane, select **Services** → **JDBC** → **Datasource** and in the main page select the Configuration tab and Connection pool sub tab check the URL and properties text area for the credentials

Configuration editing is enabled. Future changes will automatically be activated as you modify, add or delete items in this domain.

Domain Structure

- soa_domain
 - Environment
 - Deployments
 - Services
 - Messaging
 - JMS Servers
 - Store-and-Forward Agents
 - JMS Modules
 - Path Services
 - Bridges
 - JDBC
 - Data Sources
 - Multi Data Sources
 - Data Source Factories

How do I...

- Create JDBC data sources
- Configure testing options for a JDBC data source
- Configure the statement cache for a JDBC connection pool
- Configure credential mapping for a JDBC data source

System Status

Health of Running Servers

- Failed (0)
- Critical (0)
- Overloaded (0)
- Warning (0)
- OK (2)

Settings for NMSJDBCDataSource

Configuration Targets Monitoring Control Security Notes

Save

The connection pool within a JDBC data source contains a group of JDBC connections that applications reserve, use, and then return to the pool. The connection pool and the connections within it are created when the connection pool is registered, usually when starting up WebLogic Server or when deploying the data source to a new target. Use this page to define the configuration for this data source's connection pool.

URL: jdbc:oracle:thin:@intser8.idc.oracle.com:1522:NMSCLON

Driver Class Name: oracle.jdbc.OracleDriver

Properties: user=nms_ces DatabaseName=NMSCLON

Password: [Masked]

Confirm Password: [Masked]

Initial Capacity: 1

Maximum Capacity: 100

Capacity Increment: 1

4. Test the database for correct configurations.
Navigation: On the Left Pane, select the Services → JDBC → Data Sources and in the main page select the Monitoring and in that select the sub task Testing and test the connectivity for the NMS or Error Handling data source.

ORACLE WebLogic Server® Administration Console

Home Log Out Preferences Record Help

Welcome, weblogic Connected to: soa_domain

Home > JmsAdapter > Summary of Deployments > JmsAdapter > Summary of Services: JDBC > Summary of JDBC Data Sources > CCBNMSErrorHandlingDS > Summary of JDBC Data Sources > CCBNMSErrorHandlingDS

Messages

- Test of CCBNMSErrorHandlingDS on server soa_server1 was successful.

Settings for CCBNMSErrorHandlingDS

Configuration Targets Monitoring Control Security Notes

Statistics Testing

Use this page to test database connections in this JDBC data source.

Customize this table

Test Data Source (Filtered - More Columns Exist)

Test Data Source	Showing 1 to 1 of 1 Previous Next
Server	State
soa_server1	Running

Test Data Source

Showing 1 to 1 of 1 Previous | Next

5. Validate these settings for the ErrorHandler Datasource as well.

Database Outbound Connection pool

1. Ensure that following two connection instances are created on the server:

- eis/wls/CCBNMSErrorHandling - ErrorHandling connection instance
- eis/DB/NMS – NMS connection instance

Navigation: On the Left Pane, select the Deployments click on the **DBAdapter** and select the **Configuration** tab and select the **Outbound Connection Pools** tab under the Configuration tab

2. Expand javax.resource.cci.ConnectionFactory

This page displays a table of Outbound Connection Pool groups and instances for this resource adapter. The top level entries in the table represent Outbound Connection Pool groups. Groups are listed by connection factory interface and the instances are listed by their JNDI names. Expand a group to obtain configuration information for a Connection Pool instance within an Outbound Connection Pool group. Click the name of a group or instance to configure it. Automatically generated Connection Pools are not displayed in the table below.

Outbound Connection Pool Configuration Table

Groups and Instances	Connection Factory Interface
[-] javax.resource.cci.ConnectionFactory	javax.resource.cci.ConnectionFactory
[-] eis/DB/CCBMDMErrorHandling	javax.resource.cci.ConnectionFactory
[-] eis/DB/CCBNMSErrorHandling	javax.resource.cci.ConnectionFactory
[-] eis/DB/NMS	javax.resource.cci.ConnectionFactory
[-] eis/DB/SOADemo	javax.resource.cci.ConnectionFactory

Composites in Enterprise Manager

- Verify the CCB-NMS partition was created with all the composites are deployed

- Login to the Enterprise Manager

Navigation: On Left Pane expand **SOA** → **soa-infra** → **CCB-NMS** partition and check all the composites are deployed, active state.

ORACLE Enterprise Manager Fusion Middleware Control 11g

Setup Help Log Out

Logged in as weblogic@host:ad60119fms.us.oracle.com

Page Refreshed Aug 18, 2010 4:23:42 AM PDT

Composites Control Deployment

Partitions are logical groupings of composites to help you manage large deployments. The following SOA composite revisions are deployed in this partition.

Search: Search Composite (full or partial name)...

Composite Revisions Found 11

Composite	Status	Mode	Instances Total	Failed	Last Modified Date
ErrorHandling [1.0]	Active	Active	2	0	Aug 13, 2010 5:31:01 AM
OUCCBOUNMSJobHistoryQueryEBF [1.0]	Active	Active	5	0	Aug 17, 2010 11:41:10 PM
ErrorHandlingHumanIntervention [1.0]	Active	Active	0	0	Aug 13, 2010 5:30:43 AM
UpdateIntegrationErrorLookupTable [1.0]	Active	Active	0	0	Aug 13, 2010 5:31:57 AM
ErrorProcessingDetail [1.0]	Active	Active	0	0	Aug 13, 2010 5:30:24 AM
OUCCBOUNMSCustomerSyncEBF [1.0]	Active	Active	19	0	Aug 13, 2010 5:32:18 AM
OUCCBOUNMSTroubleCallInterfaceEBF [1.0]	Active	Active	4	0	Aug 13, 2010 5:33:17 AM
OUCCBOUNMSTroubleCallQueryEBF [1.0]	Active	Active	5	0	Aug 17, 2010 11:43:07 PM
PurgeIntegrationErrorStore [1.0]	Active	Active	0	0	Aug 13, 2010 5:31:36 AM
OUCCBOUNMSPlannedOutagesQueryEBF [1.0]	Active	Active	4	0	Aug 16, 2010 1:01:54 AM
ErrorProcessingMaster [1.0]	Active	Active	0	0	Aug 13, 2010 5:31:19 AM

This ensures the installation of all artifacts as successful. The installation script restarts the server and all the artifacts are activated.

Make sure the server is restarted before using the system to ensure all the processes are activated as a lot of the artifacts used by the processes require restart of admin and managed servers after the complete installation.

Please note that the composite `PurgeIntegrationErrorStore` gets deployed only when `purge.process.deploy=true` in `deploy.properties`. If this is false then you won't find this process deployed.

Configure the Edge Applications

Configure Oracle Utilities Customer Care and Billing and Oracle Utilities Network Management System installation to point to the Integration according to the guidelines in the Oracle Utilities Customer Care and Billing - Oracle Utilities Network Management System Integration Implementation Guide.

Deploying Individual Composite

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

Un-deploy the Composite

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 command: **cd \$PRODUCT_HOME\util\ant**
2. Execute: **ant -f build.xml undeployComposite**
You will be prompted to enter the name of the composite
3. Enter: composite name (example: `OUCCBOUNMSCustomerSyncEBF_`)
This will undeploy the composite name specified.

Alternatively, this command can also be executed

ant -f build.xml undeployComposite -DcompositeName=OUCCBOUNMSCustomerSyncEBF

This will not prompt for entering the composite name.

Update Metadata Store Artifacts

1. Modify `createCopyConfig.xml` that has the path of artifacts to be moved to SOA MDS. The base folder is `$PRODUCT_HOME/MDS-Artifacts/AIAMetaData`. The files are modified in the base folder and the path and file name to be moved to MDS are added to the `createCopyConfig.xml`

E.g. In sample below only the `OUCBCCustomerSyncReq.xsd` will be moved to MDS.

```
<?xml version="1.0" standalone="yes" ?>
```

```
<MDSArtifacts>
  <fileset dir="${env.PRODUCT_HOME}/MDS-Artifacts/AIAMetaData">
    <include name="AIAComponents/ApplicationObjectLibrary/OUCCB/V1/schemas/
      OUCCBCustomerSyncReq.xsd"/>
  </fileset>
</MDSArtifacts>
```

2. Ensure that the path is correct.
3. Save this file after edit.
4. Return to the Command prompt and type: **cd \$PRODUCT_HOME\util\ant**
5. Type: **ant -f build.xml updateMDS**
6. Press Enter
This command only puts artifacts mentioned in the createCopyConfig.xml file into the MDS schema.
Once MDS is updated you can execute the commands in the next section to deploy the individual composites.

Deploying Individual Composites

1. Open a Command prompt and execute the command: **cd \$PRODUCT_HOME\util\ant**
2. Execute: **ant -f build.xml deployComposite**
You will be prompted to enter the name of the composite
3. Enter: composite name (example: OUCCBOUNMSCustomerSyncEBF)
This deploys the composite name specified.

Alternatively execute following command

ant -f build.xml deployComposite -DcompositeName=OUCCBOUNMSCustomerSyncEBF
This will not prompt for entering the composite name .

Uninstalling the Integration

If you find that you need to uninstall the integration you must complete the following:

1. Restart the soa server and weblogic admin server.
2. Set environment variables as mentioned above in the Installation steps point 3.
3. Ensure that user soa.dbuser is disconnected from database.

Please run the following query on database as sysdba user and it should not return any rows.

Example:

```
select username, sid, serial# from v$session where username='CCBNMS';
```

4. `cd $PRODUCT_HOME\util\ant`
5. Run the script: **`ant -f build.xml undeployCCBNMS`**

This command deletes everything related to CCB-NMS from the server by completing the following tasks: Undeploy all composites from the Enterprise Manager partition.

- Delete the partition.
 - Undeploy MDS artifacts.
 - Delete JMS Resources (JMS Module / JMS Persistent Store / JMS Server).
 - Undeploy JMS Outbound Connection Pool.
 - Undeploy DB Outbound Connection Pool.
 - Deletes the NMS database objects and NMS datasource.
 - Delete JDBC Data Source for the Error Handling module.
 - Drop Database objects created for the Error Handling module.
6. Restart the weblogic and soa server again after the delete.

After successful deletion, all JMS and JDBC resources and CCB-NMS partitions created during install are deleted.

Installation Commands

The table below lists the possible commands for the install scripts.

Command	Description	Restart Required?
<code>ant -f build.xml deployCCBNMS</code>	Install CCB-NMS Integration from scratch.	Yes
<code>ant -f build.xml deployDB</code>	Create all database objects required by CCB-NMS Error Handling module and NMS database packages in order to convert objects to records and vice-versa.	No

Command	Description	Restart Required?
ant -f build.xml createJDBCResources	Create JDBC Datasource required for CCB-NMS Error Handling module.	No
ant -f build.xml deployDbOutbound	Deploy DB outbound connection pool. DBAdapter.rar file is updated. A server restart is required for changes to take effect.	Yes
ant -f build.xml createJMSResources	Create JMS resources to be used by the integration. This includes JMS Server / JMS Connection Pool / JMS Persistent store.	No
ant -f build.xml assignAll	Assign Error Queues to the Queues.	No
ant -f build.xml deployJmsOutbound	Create outbound connection pool for the integration. JMSAdapter.rar is updated. A server restart is required for changes to take effect.	Yes
ant -f build.xml createPartition	Creates partition CCB-NMS in em console.	No
ant -f build.xml updateMDS	Updates MDS schema with all the MDS artifacts available at PRODUCT_HOME/MDS-Artifacts/ folder.	Yes
ant -f build.xml deployAll	Deploy all the composites to the partition created with version number mentioned in deploy.properties file.	No
ant -f build.xml deployComposite	This command is used while deploying a single composite to the server. This will prompt for the name of the composite to be deployed. Name of the composite is nothing but name of the folder under PRODUCT_HOME/services/industry/Utilities/EnterpriseBusinessFlow for example : OUCCBOUNMSCustomerSyncEBF	No
ant -f build.xml undeployComposite	This command is used while undeploying a single composite from the server. This will prompt for the name of the composite to be undeployed. Name of the composite is nothing but name of the folder under PRODUCT_HOME/services/industry/Utilities/EnterpriseBusinessFlow for example : OUCCBOUNMSCustomerSyncEBF	No
ant -f build.xml undeployMDS	This will remove all the artifacts related to the CCB-NMS integration from the MDS schema.	Yes
ant -f build.xml undeployAll	For undeploying all the composites of CCB-NMS product	No
ant -f build.xml deletePartition	Deletes the partition created.	No
ant -f build.xml deleteJMSResources	Delete all JMS Resources including JMS Module / JMS Server and JMS Persistent store. Deleting JMS Module deletes JMS Connection Factory and JMS Queues as well.	No
ant -f build.xml undeployJmsOutbound	Remove the JMS Outbound connection pool references created for CCB-NMS integration. JMSAdapter.rar is updated. A server restart is required for changes to take effect.	Yes
ant -f build.xml undeployDbOutbound	Remove the DB Outbound connection pool references created for CCB-NMS integration. DBAdapter.rar is updated. A server restart is required for changes to take effect.	Yes

Command	Description	Restart Required?
ant -f build.xml deleteJDBCResources	Deletes datasource created for CCB-NMS Error Handling module.	No
ant -f build.xml bounceServers	Depends on automate.LifeCycle=true. Shuts down managed server and the admin server then starts the admin server and the managed server.	
ant -f build.xml undeployDB	Delete all database objects created for CCB-NMS Error Handling module as well as the DB packages that are created on the NMS data store which are installed.	No
ant -f build.xml undeployCCBNMS	Uninstall CCB-NMS Integration	Yes