

Oracle Banking APIs
JMS Configuration Multi Entity Guide
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Table of Contents

1. Preface.....	6
1.1 Intended Audience	6
1.2 Documentation Accessibility	6
1.3 Access to Oracle Support	6
1.4 Structure.....	6
1.5 Related Information Sources.....	6
2. Objective and Scope	7
2.1 Background	7
2.2 Objective and Scope	7
3. JMS Step 1: Create foreign server in a weblogic server	8
3.1 Introduction and Definitions.....	8
3.1.1 Create a JMS Module	8
3.1.2 Create a foreign Server	8
3.1.3 To configure additional properties for the new foreign server.....	9
3.1.4 Create foreign connection factories	9
3.1.5 Create foreign destinations	10
4. JMS Step 2 - How to Create a Simple JMS Queue in Weblogic Server.....	12
4.1 Introduction and Definitions.....	12
4.1.1 Create a JMS Server-	15
4.1.2 Create a JMS Module	17
4.1.3 Create a SubDeployment.....	19
4.1.4 Create a Connection Factory	22
4.1.5 Create a JMS Queue	23

JMS Configuration for external System

	Name
Author	APIs Development team
Current Version	1
Date	

Revision History

Version	Updates	Author	Date
Draft	Initial version		

1. Preface

1.1 Intended Audience

This document is intended for the following audience:

- Customers
- Partners

1.2 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..>

1.3 Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

1.4 Structure

This manual is organized into the following categories:

Preface gives information on the intended audience. It also describes the overall structure of the User Manual.

The subsequent chapters describes following details

- Objective and Scope
- Steps for JMS Configuration

1.5 Related Information Sources

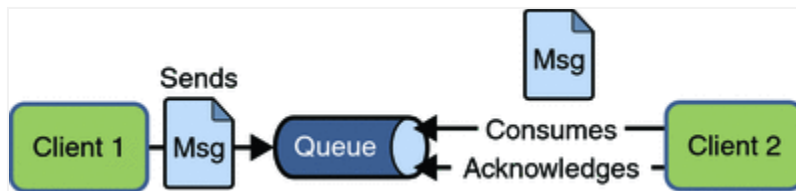
For more information on Oracle Banking APIs Release 18.3.0.0.0, refer to the following documents:

- Oracle Banking APIs Installation Manuals

2. Objective and Scope

2.1 Background

JMS (Java Message Service) is an API that provides the facility to create, send and read messages. It provides loosely coupled, reliable communication. Messaging enables distributed communication that is loosely coupled. A component sends a message to a destination, and the recipient can retrieve the message from the destination. However, the sender and the receiver do not have to be available at the same time in order to communicate. In fact, the sender does not need to know anything about the receiver; nor does the receiver need to know anything about the sender. The sender and the receiver need to know only which message format and which destination to use. JMS configuration is required to send message (request) to external system and receive processed message (response) from external system.



2.2 Objective and Scope

Define a common set of messaging concepts and facilities. The scope of this document is to provide steps to configure foreign server for connecting external system using JNDI provider and configure JMS queue to receive data from external system. Foreign server is used to send message to external system with help of JNDI Initial, JNDI connection url, JNDI connection factory and JNDI destination. To configure JMS receiver queue in web logic we have to create JMS server and JMS module. Where JMS module include creation of JMS connection factory, JMS queue and SubDeployment.

[Home](#)

3. JMS Step 1: Create foreign server in a weblogic server

3.1 Introduction and Definitions

A Foreign Server represents a JNDI provider that is outside WebLogic server. It contains information that allows a local WebLogic Server instance to reach a remote JNDI provider, thereby allowing for a number of foreign connection factory and destination objects to be defined on one JNDI directory.

3.1.1 Create a JMS Module

- Services > Messaging > JMS Modules
- Select New
- Name: HostSystemModule
- Leave the other options empty
- Targets: obapis_server
- Press Next
- Leave “Would you like to add resources to this JMS system module” unchecked and press Finish .

Name	Type	Scope	Domain Partitions
AsyncFailureLogJMS	JMSSystemResource	Global	
AuditJMS	JMSSystemResource	Global	
EndPointJMSModule	JMSSystemResource	Global	
extXfaceJMSModule	JMSSystemResource	Global	
FileUploadJMS	JMSSystemResource	Global	
HostSystemModule	JMSSystemResource	Global	
UBSSystemModule	JMSSystemResource	Global	

3.1.2 Create a foreign Server

- Services > Messaging > JMS Modules
- Select HostSystemModule and press New
- Select Foreign Server and Next
- Name: ForeignServer (Once you create a foreign server, you cannot rename it. Instead, you must delete it and create another one that uses the new name) and Click Next to proceed to the targeting page or click **Finish** to create the foreign server.

Name	Type	JNDI Name	Subdeployment	Targets
ForeignServer	Foreign Server	N/A	Default Targeting	obdx_server

3.1.3 To configure additional properties for the new foreign server

- Services > Messaging > JMS Modules
- Select HostSystemModule
- Click on ForeignServer
- On the Configuration> General tab
- Enter Following details.
 - JNDI Initial: enter the name of the class that must be instantiated to access the JNDI provider. For example (weblogic.jndi.WLInitialContextFactory)
 - JNDI Connection URL: enter the URL that WebLogic Server uses to contact the JNDI provider. (http://IP:port)
- Click **Save**.

The screenshot shows the 'Configuration' page for a 'ForeignServer' in the 'General' tab. The 'Save' button is at the top left. Below it is a descriptive paragraph: 'A foreign server represents a JNDI provider that resides outside a WebLogic Server. It contains information that allows WebLogic Server to reach the remote JNDI provider. This way, a number of connection factory and destination objects (queues or topics) can be defined on one JNDI directory. Use this page to configure a foreign server.' Below this are four configuration fields:

- Name:** ForeignServer. Description: The name of this foreign server. [More Info...](#)
- JNDI Initial Context Factory:** weblogic.jndi.WLInitialCont. Description: The name of the class that must be instantiated to access the JNDI provider. This class name depends on the JNDI provider and the vendor that are being used. [More Info...](#)
- JNDI Connection URL:** http://mum00aoz.in.oracle.com:6003. Description: The URL that WebLogic Server will use to contact the JNDI provider. The syntax of this URL depends on which JNDI provider is being used. For WebLogic JMS, leave this field blank if you are referencing WebLogic JMS objects within the same cluster. [More Info...](#)
- JNDI Properties Credential:** (empty field). Description: Any Credentials that must be set for the JNDI provider. These Credentials will be part of the properties will be passed directly to the constructor for the JNDI provider's InitialContext class. Note: For secure credential management, use the Credential field. Using the Properties field results in the credential being stored and displayed as originally entered. [More](#)

3.1.4 Create foreign connection factories

- Services > Messaging > JMS Modules
- Select HostSystemModule
- Click on ForeignServer
- On the Configuration> **Connection** Factories tab press **New**
- Enter Following details
 - Name: enter a name for the foreign connection factory.
 - Local JNDI Name: specify the name that the remote object will be bound to in the local server's JNDI tree and is used to look up the object on the local server.
 - Remote JNDI Name: specify the name of the remote object that will be looked up in the remote JNDI directory.
- Click **Ok**.

Settings for ForeignConnectionFactory

Configuration Notes

Save

A foreign connection factory is a connection factory that resides on another server instance and is accessible via JNDI. A remote connection factory can be used to refer to another instance of WebLogic Server running in a different cluster or server, or a foreign provider, as long as that provider supports JNDI.

Use this page to create a foreign connection factory.

Name: ForeignConnectionFactory The name of this foreign connection factory. [More Info...](#)

Local JNDI Name: HostQCF The name that the remote object will be bound to in the local server's JNDI tree. This is the name that should be used to look up the object on the local server. [More Info...](#)

Remote JNDI Name: HostQCF The name of the remote object that will be looked up in the remote JNDI directory. [More Info...](#)

Settings for ForeignServer

Configuration Subdeployment Notes

General Destinations **Connection Factories**

A foreign connection factory represents a connection factory that resides on another server, and which is accessible via JNDI. A remote connection factory can be used to refer to another instance of WebLogic Server running in a different cluster or server, or a foreign provider, as long as that provider supports JNDI.

This page summarizes the foreign connection factories that have been created for this domain.

[Customize this table](#)

Foreign Connection Factories (Filtered - More Columns Exist)

Name	Local JNDI Name	Remote JNDI Name
ForeignConnectionFactory	HostQCF	HostQCF

3.1.5 Create foreign destinations

- Services > Messaging > JMS Modules
- Select HostSystemModule
- Click on ForeignServer
- On the Configuration>Destination tab press New
- Enter Following details
 - Name: enter a name for the foreign destination.
 - Local JNDI Name: specify the name that the remote object will be bound to in the local server's JNDI tree and is used to look up the object on the local server.
 - Remote JNDI Name: specify the name of the remote object that will be looked up in the remote JNDI directory.
- Click Ok.

Settings for ForeignDestination

Configuration Notes

Save

A foreign destination (topic or queue) is a destination on a remote server. When this destination is looked up on the local server, a look-up will be performed automatically on the remote JNDI directory, and the object will be returned from that directory.

Use this page to configure a foreign destination.

Name: ForeignDestination The name of this foreign destination. [More Info...](#)

Local JNDI Name: The name that the remote object will be bound to in the local server's JNDI tree. This is the name that should be used to look up the object on the local server. [More Info...](#)

Remote JNDI Name: The name of the remote object that will be looked up in the remote JNDI directory. [More Info...](#)

Configuration Subdeployment Notes

General Destinations Connection Factories

A foreign destination (topic or queue) can be found on a remote server. When this destination is looked up on the local server, a look-up will be performed automatically on the remote JNDI directory, and the object will be returned from that directory.

This page summarizes the foreign destinations that have been created for this domain.

[Customize this table](#)

Foreign Destinations

Showing 1 to 1 of 1 Previous | Next

<input type="checkbox"/>	Name	Local JNDI Name	Remote JNDI Name
<input type="checkbox"/>	ForeignDestination	HostProcess	HostProcess

Showing 1 to 1 of 1 Previous | Next

[Home](#)

4. JMS Step 2 - How to Create a Simple JMS Queue in Weblogic Server

4.1 Introduction and Definitions

A JMS queue in Weblogic Server is associated with a number of additional resources:

JMS Server

A JMS server acts as a management container for resources within JMS modules. Some of its responsibilities include the maintenance of persistence and state of messages and subscribers. A JMS server is required in order to create a JMS module.

JMS Module

A JMS module is a definition which contains JMS resources such as queues and topics. A JMS module is required in order to create a JMS queue.

Subdeployment

JMS modules are targeted to one or more WLS instances or a cluster. Resources within a JMS module, such as queues and topics are also targeted to a JMS server or WLS server instances. A subdeployment is a grouping of targets. It is also known as advanced targeting.

Connection Factory

A connection factory is a resource that enables JMS clients to create connections to JMS destinations.

JMS Queue

A JMS queue (as opposed to a JMS topic) is a point-to-point destination type. A message is written to a specific queue or received from a specific queue.

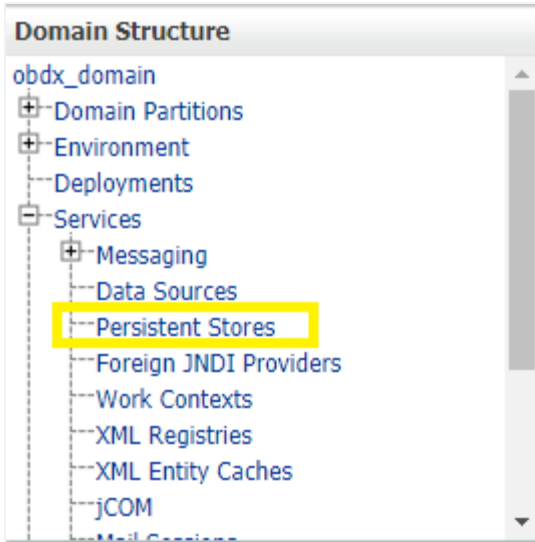
The objects used in this example are:

Object Name	Type	JNDI Name
ExtXfaceJMSServer	JMS Server	
extXfaceJMSModule	JMS Module	
extXfaceSubdeployment	Subdeployment	
ReceiverQCF	Connection Factory	
ReceiverQueue	JMS Queue	

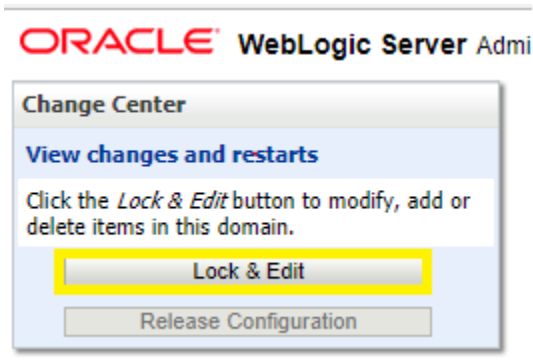
1. Configuration Steps-The following steps are done in the WebLogic Server Console, beginning with the left-hand navigation menu.

Create Persistent store-

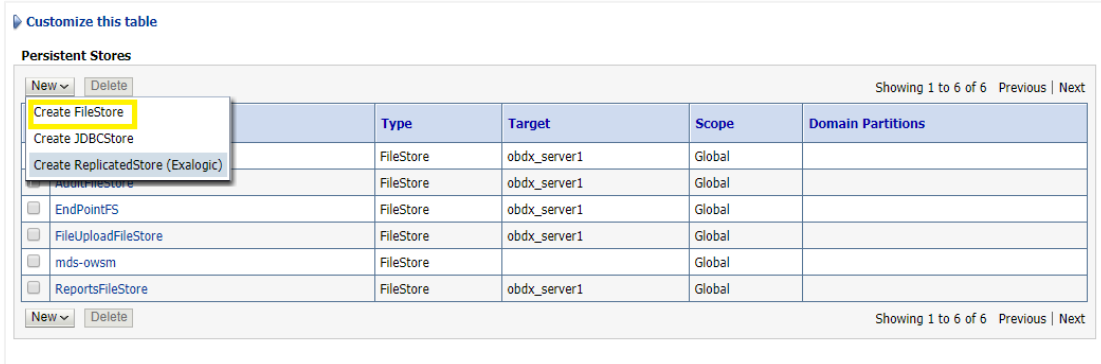
- Here you have to Create a new persistent store (Once the persistent store is created that can be used for both sender and receiver server. Hence there is no need to create a different persistent store for two different servers.) Hence Before creating a JMS server you need to create the Persistent store if its not already created. Follow the steps shown below for creating a persistent store.
- Select **Services > Persistent Stores**.



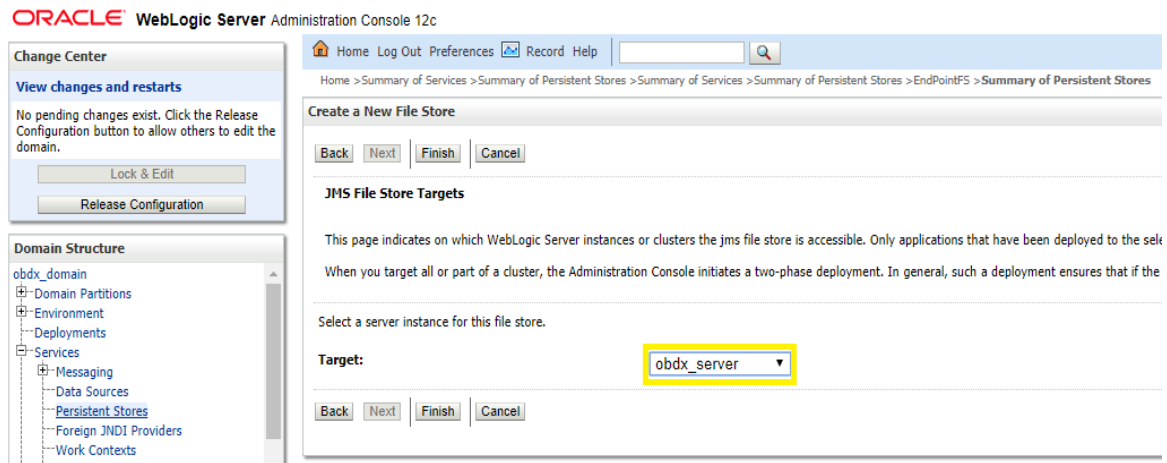
First Select Lock & Edit as shown-



- Select new and the select create FileStore from the list as shown below-



- Give the name of the filestore. Example- **EndPointFS** and the Directory location, example **/scratch/obapis/wls**. **Directory location field is optional and the path given above is just an example , it may vary according to the server.**
- Click **Next**.
- Select the target server as shown in following snapshot-



- Click **Finish**.

4.1.1 Create a JMS Server-

Services > Messaging > JMS Servers



- Select **New**.

JMS Servers (Filtered - More Columns Exist)

New Delete Showing 1 to 6 of 6 Previous | Next

<input type="checkbox"/>	Name	Persistent Store	Target	Current Target	Health	Scope	Domain Partitions
<input type="checkbox"/>	AsyncFailureLogJMServer	AsyncFailureLogFileStore	obdx_server1	obdx_server1		Global	
<input type="checkbox"/>	AuditJMServer	AuditFileStore	obdx_server1	obdx_server1		Global	
<input type="checkbox"/>	ExtfaceReceiverServer	EndPointFS	obdx_server1	obdx_server1		Global	
<input type="checkbox"/>	ExtfaceSenderServer	EndPointFS	obdx_server1	obdx_server1		Global	
<input type="checkbox"/>	FileUploadJMServer	FileUploadFileStore	obdx_server1	obdx_server1		Global	
<input type="checkbox"/>	ReportsJMServer	ReportsFileStore	obdx_server1	obdx_server1		Global	

New Delete Showing 1 to 6 of 6 Previous | Next

- Name: Give name as for example-**ExtfaceReceiverServer** .
- After naming the server **Click next** as shown in following example screenshot.

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:

Would you like this new JMS server to be restricted to a specific resource group template or resource group ?

Scope:

Back Next Finish Cancel

- **Persistent Store:** Select the name Persistent store from the dropdown list which was created in the previous step. Example-**EndPointFS**.
- Click **Next**.

Create a New JMS Server

Back Next Finish Cancel

Select Persistent Store

Specify a persistent store for the new JMS server.

Persistent Store: EndPointFS Create a New Store

Back Next Finish Cancel

- **Target:** Target should Point to the **Weblogic server cluster** as in this case target is set to **obapis_server1** cluster. (Or any other available cluster).
- 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: obdx_server1

Back Next Finish Cancel

The JMS server should now be visible in the list.

Customize this table

JMS Servers (Filtered - More Columns Exist)

Click the **Lock & Edit** button in the Change Center to activate all the buttons on this page.

New Delete Showing 1 to 6 of 6 Previous | Next

<input type="checkbox"/>	Name	Persistent Store	Target	Current Target	Health	Scope	Domain Partitions
<input type="checkbox"/>	AsyncFailureLogJMServer	AsyncFailureLogFileStore	obdx_server1	obdx_server1		Global	
<input type="checkbox"/>	AuditJMServer	AuditFileStore	obdx_server1	obdx_server1		Global	
<input type="checkbox"/>	ExtfaceReceiverServer	EndPointFS	obdx_server1	obdx_server1		Global	
<input type="checkbox"/>	ExtfaceSenderServer	EndPointFS	obdx_server1	obdx_server1		Global	
<input type="checkbox"/>	FileUploadJMServer	FileUploadFileStore	obdx_server1	obdx_server1		Global	
<input type="checkbox"/>	ReportsJMServer	ReportsFileStore	obdx_server1	obdx_server1		Global	

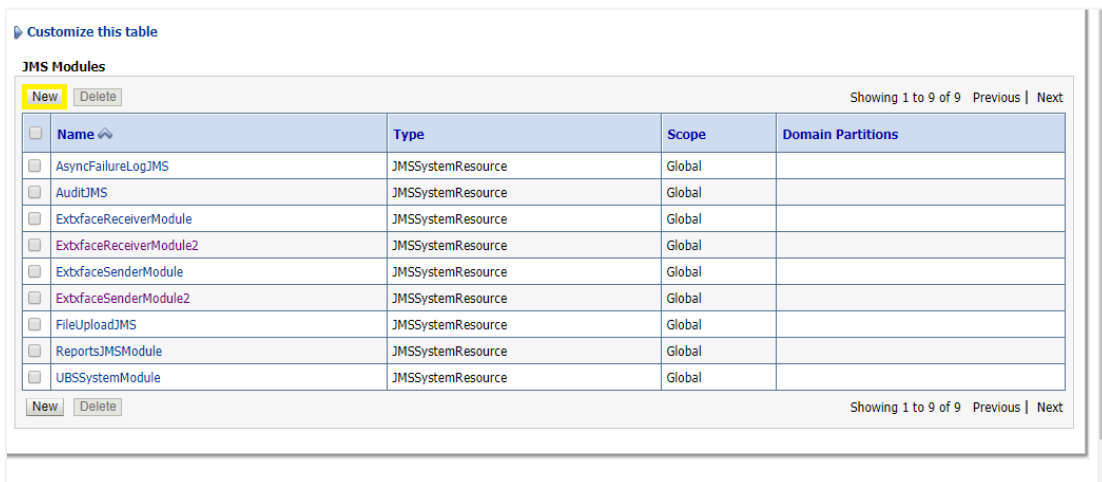
New Delete Showing 1 to 6 of 6 Previous | Next

4.1.2 Create a JMS Module

- Services > Messaging > JMS Modules.



- Select **New**.



- Name: Provide name for JMS Module.
- Leave the other options empty.
- Click **Next**.

What would you like to name your System Module?

* Name:

Would you like this new JMS System Module to be restricted to a specific resource group template or resource group ?

Scope:

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:

- Targets: **Obapis_Cluster** (or choose any other clusters available).
- Press **Next**.

Targets :

Servers

AdminServer

Clusters

obdx_cluster

All servers in the cluster

Part of the cluster

obdx_server1

Leave “**Would you like to add resources to this JMS system module**” unchecked and press **Finish** .

Create JMS System Module

Add resources to this JMS system module

Use this page to indicate whether you want to immediately add resources to this JMS system module after it is created. JMS resources include queues, topics, connection factories, and such.

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

Customize this table

JMS Modules

New Delete Showing 1 to 9 of 9 Previous | Next

<input type="checkbox"/>	Name ↕	Type	Scope	Domain Partitions
<input type="checkbox"/>	AsyncFailureLogJMS	JMSSystemResource	Global	
<input type="checkbox"/>	AuditJMS	JMSSystemResource	Global	
<input type="checkbox"/>	ExtxfaceReceiverModule	JMSSystemResource	Global	
<input type="checkbox"/>	ExtxfaceReceiverModule2	JMSSystemResource	Global	
<input type="checkbox"/>	ExtxfaceSenderModule	JMSSystemResource	Global	
<input type="checkbox"/>	ExtxfaceSenderModule2	JMSSystemResource	Global	
<input type="checkbox"/>	FileUploadJMS	JMSSystemResource	Global	
<input type="checkbox"/>	ReportsJMSModule	JMSSystemResource	Global	
<input type="checkbox"/>	UBSSystemModule	JMSSystemResource	Global	

New Delete Showing 1 to 9 of 9 Previous | Next

4.1.3 Create a SubDeployment

A subdeployment is not necessary for the JMS queue to work, but it allows you to easily target subcomponents of the JMS module to a single target or group of targets. We will use the subdeployment in this example to target the following connection factory and JMS queue to the JMS server we created earlier.

- Services > Messaging > JMS Modules.
- Select **ExtxfaceReceiverModule**.

Customize this table

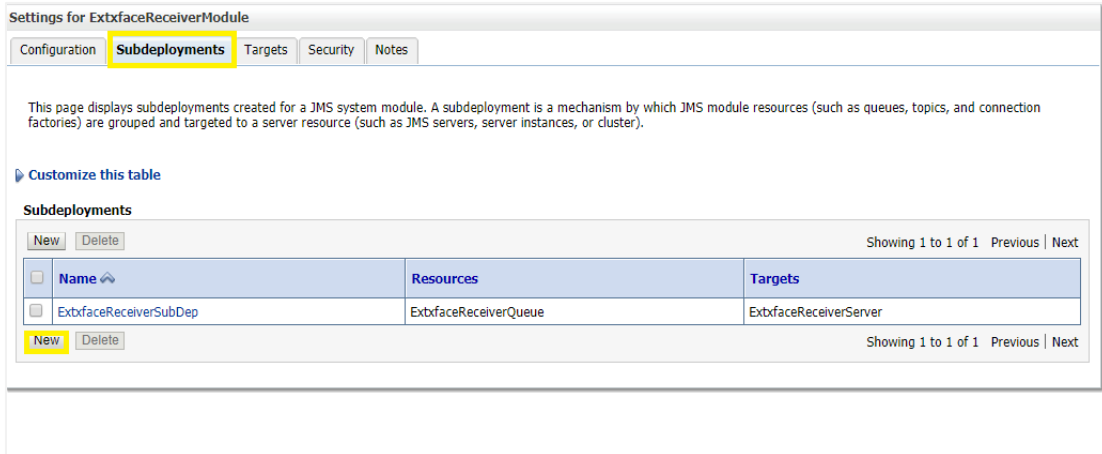
JMS Modules

New Delete Showing 1 to 9 of 9 Previous | Next

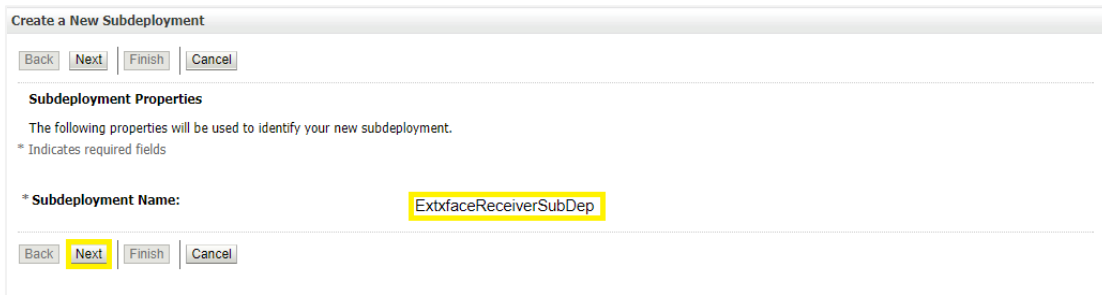
<input type="checkbox"/>	Name ↕	Type	Scope	Domain Partitions
<input type="checkbox"/>	AsyncFailureLogJMS	JMSSystemResource	Global	
<input type="checkbox"/>	AuditJMS	JMSSystemResource	Global	
<input type="checkbox"/>	ExtxfaceReceiverModule	JMSSystemResource	Global	
<input type="checkbox"/>	ExtxfaceReceiverModule2	JMSSystemResource	Global	
<input type="checkbox"/>	ExtxfaceSenderModule	JMSSystemResource	Global	
<input type="checkbox"/>	ExtxfaceSenderModule2	JMSSystemResource	Global	
<input type="checkbox"/>	FileUploadJMS	JMSSystemResource	Global	
<input type="checkbox"/>	ReportsJMSModule	JMSSystemResource	Global	
<input type="checkbox"/>	UBSSystemModule	JMSSystemResource	Global	

New Delete Showing 1 to 9 of 9 Previous | Next

- Select the **Subdeployments** tab and click **New**.



- Subdeployment Name: give subdeployment name. example- **ExtxfaceReceiverSubDep**
- Press **Next**.



- Here you can select the target(s) for the subdeployment. You can choose either Servers (i.e. WebLogic managed servers, such as the **obapis_server**) or JMS Servers such as the JMS Server created earlier. As the purpose of our subdeployment in this example is to target a specific JMS server, we will choose the JMS Server option. Select the **ExtxfaceReceiverServer** created earlier.
- Press **Finish**.

Targets

Please select targets for the Subdeployment

Clusters
<input type="checkbox"/> obdx_cluster <ul style="list-style-type: none"><input type="radio"/> All servers in the cluster<input type="radio"/> Part of the cluster<ul style="list-style-type: none"><input type="checkbox"/> obdx_server1

JMS Servers
<input type="checkbox"/> AsyncFailureLogJMSServer
<input type="checkbox"/> AuditJMSServer
<input checked="" type="checkbox"/> ExtxfaceReceiverServer
<input type="checkbox"/> ExtxfaceSenderServer
<input type="checkbox"/> FileUploadJMSServer
<input type="checkbox"/> ReportsJMSServer

4.1.4 Create a Connection Factory

- Services > Messaging > JMS Modules
- Select **ExtxfaceReceiverModule** and press **New**.

Customize this table

JMS Modules

New Delete Showing 1 to 9 of 9 Previous | Next

<input type="checkbox"/>	Name ↕	Type	Scope	Domain Partitions
<input type="checkbox"/>	AsyncFailureLogJMS	JMSSystemResource	Global	
<input type="checkbox"/>	AuditJMS	JMSSystemResource	Global	
<input type="checkbox"/>	ExtxfaceReceiverModule	JMSSystemResource	Global	
<input type="checkbox"/>	ExtxfaceReceiverModule2	JMSSystemResource	Global	
<input type="checkbox"/>	ExtxfaceSenderModule	JMSSystemResource	Global	
<input type="checkbox"/>	ExtxfaceSenderModule2	JMSSystemResource	Global	
<input type="checkbox"/>	FileUploadJMS	JMSSystemResource	Global	
<input type="checkbox"/>	ReportsJMSModule	JMSSystemResource	Global	
<input type="checkbox"/>	UBSSystemModule	JMSSystemResource	Global	

New Delete Showing 1 to 9 of 9 Previous | Next

Customize this table

Summary of Resources

New Delete Showing 1 to 2 of 2 Previous | Next

<input type="checkbox"/>	Name ↕	Type	JNDI Name	Subdeployment	Targets
<input type="checkbox"/>	ExtxfaceReceiverQCF	Connection Factory	ExtSystemReceiverQCF	Default Targeting	obdx_server1
<input type="checkbox"/>	ExtxfaceReceiverQueue	Queue	ExtSystemReceiverQueue	ExtxfaceReceiverSubDep	ExtxfaceReceiverServer

New Delete Showing 1 to 2 of 2 Previous | Next

- Select **Connection Factory** and 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 targetable resources, like stand-alone queues and topics, connection factories, distributed queues and topics, foreign servers, and JMS SAF destinations, you can also proceed to targeting pages for selecting appropriate server targets. You can also associate targetable resources with subdeployments, which is an advanced mechanism for grouping JMS module resources and the members to server resources.

- Connection Factory** Defines a set of connection configuration parameters that are used to create connections for JMS clients. [More Info...](#)
- Queue** Defines a point-to-point destination type, which are used for asynchronous peer communications. A message delivered to a queue is distributed to only one consumer. [More Info...](#)
- Topic** Defines a publish/subscribe destination type, which are used for asynchronous peer communications. A message delivered to a topic is distributed to all topic consumers. [More Info...](#)

- Name: Give name of the connection factory example- **ExtxfaceReceiverQCF**. JNDI Name: **ExtSystemReceiverQCF**.
- Click **Next**.

Create a New JMS System Module Resource

Back Next Finish Cancel

Connection Factory Properties

The following properties will be used to identify your new connection factory. The current module is ExtfaceReceiverModule.
* Indicates required fields

What would you like to name your new connection factory?

* Name:

What JNDI Name would you like to use to look up your new connection factory?

JNDI Name:

The Connection Factory Subscription Sharing Policy Subscribers can be used to control which subscribers can access new subscriptions. Should subscriptions created using this factory be sharable?

Subscription Sharing Policy:

The Client ID Policy indicates whether more than one JMS connection can use the same Client ID. Oracle recommends setting the Client ID policy to Unrestricted if sharing durable subscribers. Subscriptions created with different Client ID policies are always treated as independent subscriptions. What Client ID Policy would you like to use?

Client ID Policy:

A connection factory can limit the number of messages that can be queued for an asynchronous session. Should this connection factory impose a limit?

Maximum Messages per Session:

- Select Default Targeting Enabled and Press **Finish**
- The connection factory should be listed on the following page with **Default Targeting** as Subdeployment and WebLogic cluster as the target.

4.1.5 Create a JMS Queue

- Services > Messaging > JMS Modules
- Select **ExtfaceReceiverModule** and Click **New**.

Customize this table

JMS Modules

New Delete Showing 1 to 9 of 9 Previous | Next

Name	Type	Scope	Domain Partitions
AsynFailureLogJMS	JMSSystemResource	Global	
AuditJMS	JMSSystemResource	Global	
ExtfaceReceiverModule	JMSSystemResource	Global	
ExtfaceReceiverModule2	JMSSystemResource	Global	
ExtfaceSenderModule	JMSSystemResource	Global	
ExtfaceSenderModule2	JMSSystemResource	Global	
FileUploadJMS	JMSSystemResource	Global	
ReportsJMSModule	JMSSystemResource	Global	
UBSSystemModule	JMSSystemResource	Global	

New Delete Showing 1 to 9 of 9 Previous | Next

Customize this table

Summary of Resources

New Delete Showing 1 to 2 of 2 Previous | Next

<input type="checkbox"/>	Name ^	Type	JNDI Name	Subdeployment	Targets
<input type="checkbox"/>	ExtfaceReceiverQCF	Connection Factory	ExtSystemReceiverQCF	Default Targeting	obdx_server1
<input type="checkbox"/>	ExtfaceReceiverQueue	Queue	ExtSystemReceiverQueue	ExtfaceReceiverSubDep	ExtfaceReceiverServer

New Delete Showing 1 to 2 of 2 Previous | Next

- Select **Queue** and Click **Next**.

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 targetable resources, like stand-alone queues and topics, connection factories, distributed queues and topics, foreign servers, and JMS SAF destinations, you can also proceed to targeting pages for selecting appropriate server targets. You can also associate targetable resources with subdeployments, which is an advanced mechanism for grouping JMS module resources and the members to server resources.

Connection Factory Defines a set of connection configuration parameters that are used to create connections for JMS clients. [More Info...](#)

Queue Defines a point-to-point destination type, which are used for asynchronous peer communications. A message delivered to a queue is distributed to only one consumer. [More Info...](#)

Topic Defines a publish/subscribe destination type, which are used for asynchronous peer communications. A message delivered to a topic is distributed to all topic consumers. [More Info...](#)

Distributed Queue Defines a set of queues that are distributed on multiple JMS servers, but which are accessible as a single, logical queue to JMS clients. [More Info...](#)

- **Name:** Provide name of the message queue. example- **ExtfaceReceiverQueue**.
- **JNDI Name:** Provide JNDI name. example- **ExtSystemReceiverQueue**.
- **Template:** **None**.
- Press **Next**.

Create a New JMS System Module Resource

Back Next Finish Cancel

JMS Destination Properties

The following properties will be used to identify your new Queue. The current module is ExtfaceReceiverModule.

* Indicates required fields

* Name: ExtfaceReceiverQueue

JNDI Name: ExtSystemReceiverQueue

Template: None ▾

Back Next Finish Cancel

- **Subdeployments:** Give the name of the sub-deployment name in which Queue is supposed to be added. **Example-** ExtxfaceReceiverSubDep.
- Select the Target as **ExtxfaceReceiverServer**
Click **Finish**.

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 JMS resources are grouped and targeted to a server instance, cluster, or SAF agent. If necessary, you can create a new subdeployment by clicking the **Create a New Subdeployment** button. You can also reconfigure subdeployment targets later by using the parent module's subdeployment management page.

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

Subdeployments: **ExtxfaceReceiverSubDep** [Create a New Subdeployment](#)

What targets do you want to assign to this subdeployment?

Targets :

JMS Servers
<input type="radio"/> AsyncFailureLogJMSServer
<input type="radio"/> AuditJMSServer
<input checked="" type="radio"/> ExtxfaceReceiverServer
<input type="radio"/> ExtxfaceSenderServer
<input type="radio"/> FileUploadJMSServer
<input type="radio"/> ReportsJMSServer

The **ReceiverQueue** should be listed on the following page with Sub-deployment as **ExtxfaceReceiverSubDep** and target as **ExtxfaceReceiverServer**.

[Customize this table](#)

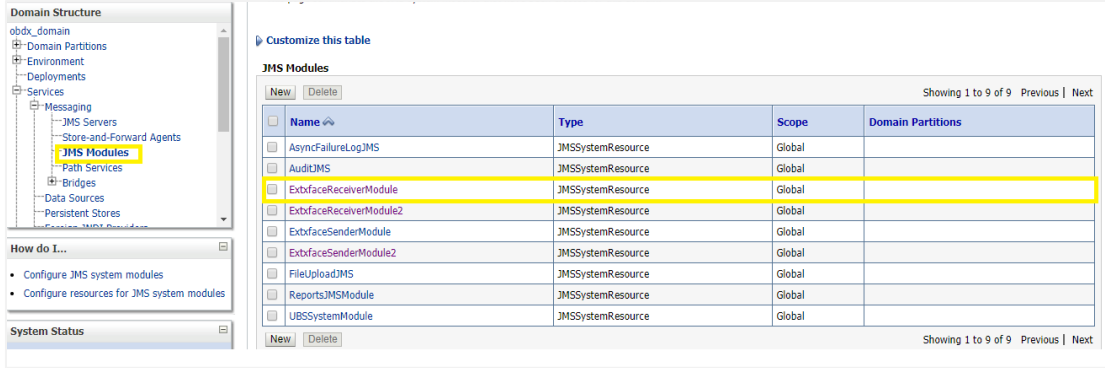
Summary of Resources

[New](#) [Delete](#) Showing 1 to 2 of 2 Previous | Next

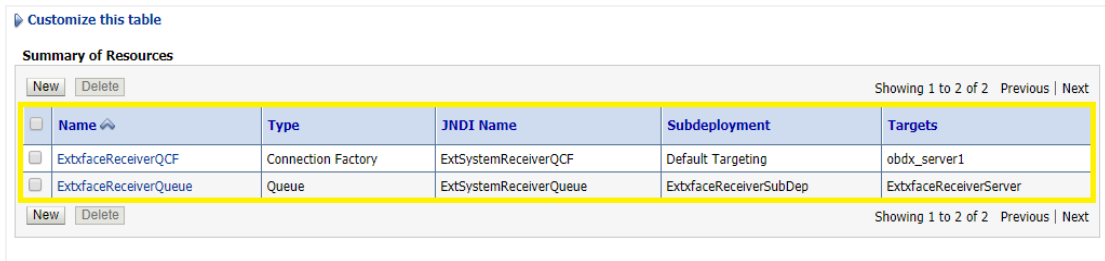
<input type="checkbox"/>	Name	Type	JNDI Name	Subdeployment	Targets
<input type="checkbox"/>	ExtxfaceReceiverQCF	Connection Factory	ExtSystemReceiverQCF	Default Targeting	obdx_server1
<input type="checkbox"/>	ExtxfaceReceiverQueue	Queue	ExtSystemReceiverQueue	ExtxfaceReceiverSubDep	ExtxfaceReceiverServer

[New](#) [Delete](#) Showing 1 to 2 of 2 Previous | Next

Confirm the resources for the **ExtxfaceReceiverModule**. Using the Domain Structure tree, navigate to Services > Messaging > JMS Modules then select **ExtxfaceReceiverModule**



You should see the following resources-



The JMS queue is now complete and can be accessed using the JNDI names

ExtSystemReceiverQCF And **ExtSystemReceiverQueue**..

Note: Repeat the above process from the step 4.1 i.e Create File-Store to create the JMS Configuration for Sender module. Separate JMS Server , Module and Queues would get created for Sender.

In case of a multi-entity setup where Third-party entity is not a base entity after Creating the JMS configuration for both the Receiver and sender you have to manually deploy the ExtxfaceSimulatorMDB.ear on weblogic server present in the installebes. After deploying the ExtxfaceSimulatorMDB and restarting the server, check the **state** of the application by going in **Deployments** wizard on the weblogic server console. If it is not in “Active” state, it needs to be started manually, to do so, follow the steps mentioned below by keeping server in ‘Running’ state-

- Go into the **Control** tab.

JMS Step 2 - How to Create a Simple JMS Queue in Weblogic Server

ORACLE WebLogic Server Administration Console 12c

Home > Summary of Services > Summary of Persistent Stores > Summary of Services > EndPointFS > Summary of Persistent Stores > Summary of Deployments

Summary of Deployments

Configuration | **Control** | Monitoring

This page displays the list of Java EE applications and standalone application modules installed to this domain.

You can update (redeploy) or delete installed applications and modules from the domain by selecting the checkbox next to the application name and then using the controls on this page.

To install a new application or module for deployment to targets in this domain, click **Install**.

Customize this table

Deployments

Name	State	Health	Type	Targets
adlf.oracle.businesseditor(1.0,12.2.1.0.0)	Active		Library	AdminServer, ExtXface_Server, obdx_server
adlf.oracle.domain(1.0,12.2.1.0.0)	Active		Library	AdminServer, ExtXface_Server, obdx_server
adlf.oracle.domain.webapp(1.0,12.2.1.0.0)	Active		Library	AdminServer, ExtXface_Server, obdx_server
BatchResourceAdapter	Active		Enterprise Application	obdx_server
coherence-transaction-rar	Active	OK	Resource Adapter	AdminServer, ExtXface_Server, obdx_server
com.ofss.digx.app.connector	Active	OK	Enterprise Application	obdx_server
DMS Application (12.2.1.0.0)	Active	OK	Web Application	AdminServer, ExtXface_Server, obdx_server
em	Active	OK	Enterprise Application	AdminServer
ExtXfaceSimulatorMDB	Prepared	OK	Enterprise Application	obdx_server
obdx.app.rest.idm	Active	OK	Enterprise Application	obdx_server
obdx.app.soap	Active	OK	Enterprise Application	obdx_server
opss-rest	Active	OK	Web Application	AdminServer
state-management-provider-memory-rar	Active	OK	Resource Adapter	AdminServer, ExtXface_Server, obdx_server

- From the List of applications select the checkbox before **ExtXfaceSimulatorMDB** ear.

Summary of Deployments

Configuration | **Control** | Monitoring

This page displays the list of Java EE applications and standalone application modules installed to this domain.

You can start and stop applications and modules from the domain by selecting the checkbox next to the application name and then using the controls on this page.

Customize this table

Deployments

Start | Stop

Name	State	Health	Type	Targets	Scope	Domain Partitions
BatchResourceAdapter	Active		Enterprise Application	obdx_server	Global	
coherence-transaction-rar	Active	OK	Resource Adapter	AdminServer, ExtXface_Server, obdx_server	Global	
com.ofss.digx.app.connector	Active	OK	Enterprise Application	obdx_server	Global	
DMS Application (12.2.1.0.0)	Active	OK	Web Application	AdminServer, ExtXface_Server, obdx_server	Global	
em	Active	OK	Enterprise Application	AdminServer	Global	
<input checked="" type="checkbox"/> ExtXfaceSimulatorMDB	Prepared	OK	Enterprise Application	obdx_server	Global	
obdx.app.rest.idm	Active	OK	Enterprise Application	obdx_server	Global	
obdx.app.soap	Active	OK	Enterprise Application	obdx_server	Global	
opss-rest	Active	OK	Web Application	AdminServer	Global	
state-management-provider-memory-rar	Active	OK	Resource Adapter	AdminServer, ExtXface_Server, obdx_server	Global	

Showing 1 to 10 of 13 Previous | Next

- Select the **'Start'** dropdown list and from that select option-**"Servicing all requests"**.

Start | Stop

Name	State	Health	Type	Targets	Scope
BatchResourceAdapter	Active		Enterprise Application	obdx_server	Global
coherence-transaction-rar	Active	OK	Resource Adapter	AdminServer, ExtXface_Server, obdx_server	Global
com.ofss.digx.app.connector	Active	OK	Enterprise Application	obdx_server	Global
DMS Application (12.2.1.0.0)	Active	OK	Web Application	AdminServer, ExtXface_Server, obdx_server	Global
em	Active	OK	Enterprise Application	AdminServer	Global
<input checked="" type="checkbox"/> ExtXfaceSimulatorMDB	Prepared	OK	Enterprise Application	obdx_server	Global
obdx.app.rest.idm	Active	OK	Enterprise Application	obdx_server	Global
obdx.app.soap	Active	OK	Enterprise Application	obdx_server	Global
opss-rest	Active	OK	Web Application	AdminServer	Global
state-management-provider-memory-rar	Active	OK	Resource Adapter	AdminServer, ExtXface_Server, obdx_server	Global

Showing 1 to 1

Start | Stop

Servicing all requests

Servicing only administration requests

Note: Whenever a new Entity is created within a setup(i.e multiple third party entities) the following mentioned steps should be followed in order to enable support for MultiEntity.

In order to enable the support for newly created Entity, Sender/Receiver Connection Factories and Queues are needed to be created within a new Sender/Receiver JMS Modules. These modules can be hosted on the same Sender/Receiver JMS server created as per the steps defined in section [4.1.1](#)(Create JMS Server) for the earlier Entity.

- Create a new JMS Module by repeating steps given in section [4.1.2](#)(Creating JMS Module) , on the same JMS server with new names as follows-

	JMS Module Name
Sender JMS Module	ExtxfacSenderModule2
Receiver JMS Module	ExtxfacReceiverModule2

- Create a new SubDeployment within both Sender/Receive module created with above step by repeating the procedure given in section [4.1.3](#) (Create JMS Subdeployment) with the new name as follows-

	JMS Module Name	SubDeployment Name
Sender JMS Module	ExtxfacSenderModule2	ExtxfacReceiverSubDep2
Receiver JMS Module	ExtxfacReceiverModule2	ExtxfacSenderSubDep2

- Create Sender/Receiver connection factories within newly created module by following the steps defined in the section [4.1.4](#)(Creating Connection Factories), with different names as follows-

	Connection Factory Name	Connection Factory JNDI Name
Sender Connection Factory	ExtxfacSenderQCF2	ExtSystemSenderQCF2
Receiver Connection Factory	ExtxfacReceiverQCF2	ExtSystemReceiverQCF2

- Create Sender/Receiver JMS queues within newly created JMS module by repeating the steps given in section [4.1.5](#) (Creating JMS Queues), with the new names to the sender/receiver queues as follows-

	JMS Queue Name	JMS Queue JNDI Name
Sender JMS Queue	ExtxfacSenderQueue2	ExtSystemSenderQueue2

	JMS Queue Name	JMS Queue JNDI Name
Receiver JMS Queue	ExtxfceReceiverQueue2	ExtSystemReceiverQueue2

After creating the new JMS sender/receiver modules, connection factories and queues by following the above defined steps. Further Redeploy the ExtxfceSimulatorMDB.ear with the following changes -

- Add new <message-driven> tag in **ejb-jar.xml** (Path- ExtxfceSimulatorMDB.ear\com.ofss.digx.extxfce.mdb.jar\META-INF\ **ejb-jar.xml**) as shown below –

```

<?xml version="1.0" encoding="UTF-8"?>
<!-- Copyright (c) 2012, Oracle and/or its affiliates. All rights reserved. -->
- <ejb-jar version="3.0" xsi:schemaLocation="http://java.sun.com/xml/ns/javaee http://java.sun.com/xml/ns/javaee/.ejb-jar_3_0.xsd"
  xmlns:ejb="http://java.sun.com/xml/ns/javaee/.ejb-jar_3_0.xsd" xmlns="http://java.sun.com/xml/ns/javaee"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <display-name>com.ofss.digx.extxface.mdb</display-name>
  - <enterprise-beans>
    - <message-driven>
      <display-name>ExtxfaceSimulatorMDB</display-name>
      <ejb-name>ExtxfaceSimulatorMDB</ejb-name>
      <ejb-class>com.ofss.digx.extxface.mdb.ExtxfaceSimulatorMDB</ejb-class>
      <transaction-type>Bean</transaction-type>
      <message-destination-type>javax.jms.Queue</message-destination-type>
    </message-driven>
    - <message-driven>
      <display-name>ExtxfaceSimulatorMDB2</display-name>
      <ejb-name>ExtxfaceSimulatorMDB2</ejb-name>
      <ejb-class>com.ofss.digx.extxface.mdb.ExtxfaceSimulatorMDB</ejb-class>
      <transaction-type>Bean</transaction-type>
      <message-destination-type>javax.jms.Queue</message-destination-type>
    </message-driven>
  </enterprise-beans>
</ejb-jar>

```

Fig.1 ExtxfaceSimulatorMDB.ear\com.ofss.digx.extxface.mdb.jar\META-INF\ejb-jar.xml

```

<message-driven>
<display-name>ExtxfaceSimulatorMDB2</display-name>
<ejb-name>ExtxfaceSimulatorMDB2</ejb-name>
<ejb-class>com.ofss.digx.extxface.mdb.ExtxfaceSimulatorMDB</ejb-class>
<transaction-type>Bean</transaction-type>
<message-destination-type>javax.jms.Queue</message-destination-type>
</message-driven>

```

Note: As Shown in above example the value of the <ejb-class> sub-tag in <message-driven> tag should be same for all the Entities.

- Add new <weblogic-enterprise-bean> configuration tag in **weblogic-*ejb-jar*** (Path- ExtxfaceSimulatorMDB.ear\com.ofss.digx.extxface.mdb.jar\META-INF\ **weblogic-*ejb-jar***) as shown below-

```

<?xml version="1.0" encoding="UTF-8"?>
<!-- Copyright (c) 2012, Oracle and/or its affiliates. All rights reserved. -->
<weblogic-ejb-jar xsi:schemaLocation="http://xmlns.oracle.com/weblogic/weblogic-ejb-jar/1.1/weblogic-ejb-jar.xsd" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://xmlns.oracle.com/weblogic/weblogic-ejb-jar">
  - <weblogic-enterprise-bean>
    <ejb-name>ExtxfaceSimulatorMDB</ejb-name>
    <dispatch-policy>ExtxfaceWorkManager</dispatch-policy>
    - <message-driven-descriptor>
      - <pool>
        <initial-beans-in-free-pool>10</initial-beans-in-free-pool>
        <max-beans-in-free-pool>100</max-beans-in-free-pool>
      </pool>
      <destination-jndi-name>ExtSystemSenderQueue</destination-jndi-name>
      <connection-factory-jndi-name>ExtSystemSenderQCF</connection-factory-jndi-name>
      <jms-polling-interval-seconds>1</jms-polling-interval-seconds>
    </message-driven-descriptor>
    <jndi-name>ExtSystemSenderQueue</jndi-name>
  - <transaction-descriptor>
    <trans-timeout-seconds>60</trans-timeout-seconds>
  </transaction-descriptor>
</weblogic-enterprise-bean>
  <weblogic-enterprise-bean>
    <ejb-name>ExtxfaceSimulatorMDB2</ejb-name>
    <dispatch-policy>ExtxfaceWorkManager</dispatch-policy>
    - <message-driven-descriptor>
      - <pool>
        <initial-beans-in-free-pool>10</initial-beans-in-free-pool>
        <max-beans-in-free-pool>100</max-beans-in-free-pool>
      </pool>
      <destination-jndi-name>ExtSystemSenderQueue2</destination-jndi-name>
      <connection-factory-jndi-name>ExtSystemSenderQCF2</connection-factory-jndi-name>
      <jms-polling-interval-seconds>1</jms-polling-interval-seconds>
    </message-driven-descriptor>
    <jndi-name>ExtSystemSenderQueue2</jndi-name>
  - <transaction-descriptor>
    <trans-timeout-seconds>60</trans-timeout-seconds>
  </transaction-descriptor>
</weblogic-enterprise-bean>
  - <run-as-role-assignment>
    <role-name>LookupRole</role-name>
    <run-as-principal-name>weblogic</run-as-principal-name>
  </run-as-role-assignment>
  - <work-manager>
    <name>ExtxfaceWorkManager</name>

```

Fig.2 ExtxfaceSimulatorMDB.ear\com.ofss.digx.extxface.mdb.jar\META-INF\weblogic-ejb-jar.xml

```

<weblogic-enterprise-bean>

  <ejb-name>ExtxfaceSimulatorMDB2</ejb-name>

  <dispatch-policy>ExtxfaceWorkManager</dispatch-policy>

```

```

<message-driven-descriptor>
    <pool>
        <initial-beans-in-free-pool>10</initial-beans-in-free-pool>
        <max-beans-in-free-pool>100</max-beans-in-free-pool>
    </pool>
    <destination-jndi-name>ExtSystemSenderQueue2</destination-jndi-name>
    <connection-factory-jndi-name>ExtSystemSenderQCF2</connection-factory-jndi-
name>
    <jms-polling-interval-seconds>1</jms-polling-interval-seconds>
</message-driven-descriptor>
<jndi-name>ExtSystemSenderQueue2</jndi-name>
<transaction-descriptor>
    <trans-timeout-seconds>60</trans-timeout-seconds>
</transaction-descriptor>
</weblogic-enterprise-bean>

```

Note: <destination-jndi-name> i.e. JNDI name of the JMS sender queue should be same as given while creating the queue. In above example it is- ExtSystemSenderQueue2.

<connection-factory-jndi-name> i.e. connection factory JNDI name should be same as given while creating the new connection factory. In the above example it is- ExtSystemSenderQCF2.

<dispatch-policy> value should be same for all the Entities. i.e., ExtxfaceWorkManager

After Redeploying the ExtxfaceSimulatorMDB and restarting the server, check the **state** of the application by going in **Deployments** wizard on the weblogic server console. If it is not in “Active” state, it needs to be started manually, to do so, follow the steps mentioned below by keeping server in ‘Running’ state-

- Go into the **Control** tab.
- From the List of applications select the checkbox before **ExtxfaceSimulatorMDB** ear.
- Select the ‘**Start**’ dropdown list and from that select option-“**Servicing all requests**”.

[Home](#)