

Oracle® Database

Configuring JMS on Weblogic Server 12c



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Oracle Database Configuring JMS on Weblogic Server 12c, Release 14.7.5.0.0

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Primary Authors: (primary author), (primary author)

Contributing Authors: (contributing author), (contributing author)

Contributors: (contributor), (contributor)

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Preface

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1.1 Purpose

This guide is designed to help the user to quickly get acquainted with the Customer Standard Instructions maintenance process.

1.2 Audience

This guide is intended for the central administrator of the Bank who controls the system and application parameters and ensures smooth functionality and flexibility of the banking application.

1.3 Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <https://www.oracle.com/corporate/accessibility/>.

Access to Oracle Support

Oracle customer access to and use of Oracle support services will be pursuant to the terms and conditions specified in their Oracle order for the applicable services.

1.4 Conventions

The following text conventions are used in this document:

Table 1-1 Conventions

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.

Table 1-1 (Cont.) Conventions

Convention	Meaning
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

1.5 Critical Patches

Oracle advises customers to get all their security vulnerability information from the Oracle Critical Patch Update Advisory, which is available at [Critical Patches](#), [Security Alerts and Bulletins](#). All critical patches should be applied in a timely manner to ensure effective security, as strongly recommended by [Oracle Software Security Assurance](#).

1.6 Diversity and Inclusion

Oracle is fully committed to diversity and inclusion. Oracle respects and values having a diverse workforce that increases thought leadership and innovation. As part of our initiative to build a more inclusive culture that positively impacts our employees, customers, and partners, we are working to remove insensitive terms from our products and documentation. We are also mindful of the necessity to maintain compatibility with our customers' existing technologies and the need to ensure continuity of service as Oracle's offerings and industry standards evolve. Because of these technical constraints, our effort to remove insensitive terms is ongoing and will take time and external cooperation.

1.7 Basic Actions

Table 1-2 Basic Actions

Action	Description
Approve	Used to approve the initiated report. This button is displayed, once the user click Authorize .
Audit	Used to view the maker details, checker details, and report status.
Authorize	Used to authorize the report created. A maker of the screen is not allowed to authorize the report. Only a checker can authorize a report, created by a maker.
Close	Used to close a record. This action is available only when a record is created.
Confirm	Used to confirm the performed action.
Cancel	Used to cancel the performed action.
Compare	Used to view the comparison through the field values of old record and the current record. This button is displayed in the widget, once the user click Authorize .
Collapse All	Used to hide the details in the sections. This button is displayed, once the user click Compare .
Expand All	Used to expand and view all the details in the sections. This button is displayed, once the user click Compare .

Table 1-2 (Cont.) Basic Actions

Action	Description
New	Used to add a new record. When the user click New , the system displays a new record enabling to specify the required data.
OK	Used to confirm the details in the screen.
Save	Used to save the details entered or selected in the screen.
View	Used to view the report details in a particular modification stage. This button is displayed in the widget, once the user click Authorize .
View Difference only	Used to view a comparison through the field element values of old record and the current record, which has undergone changes. This button is displayed, once the user click Compare .
Unlock	Used to update the details of an existing record. System displays an existing record in editable mode.

1.8 Screenshot Disclaimer

Personal information used in the interface or documents is dummy and does not exist in the real world. It is only for reference purposes.

2

Introduction

This document describes the major components of Weblogic JMS Server architecture.

- [Purpose](#)
- [Weblogic 12c New Features](#)
- [Components Diagram and Data Flow](#)

2.1 Purpose

The purpose of this topic is to explain the steps required for JMS configuration in cluster mode for -

1. Oracle FLEXCUBE Universal Banking 12.1
2. WebLogic Server 12.1.3.0.0

JMS Server

The JMS server acts as a management container for the JMS queue and topic resources defined within JMS modules that are targeted to specific JMS servers. A JMS server's main responsibility is to maintain persistent storage for these resources, maintain the state of the durable subscriber, etc. JMS servers can host a defined set of modules and any associated persistent storage that reside on a WebLogic Server instance.

JMS Module

JMS modules are application-related definitions that are independent of the domain environment. JMS modules group JMS configuration resources (such as queues, topics, and connections factories). These are outside domain configurations. JMS modules are globally available for targeting servers, and clusters configured in the domain, and therefore are available to all the applications deployed on the same target. JMS modules contain configuration resources, such as standalone queue and topic destinations, distributed destinations, and connection factories.

Subdeployment

Subdeployment is also known as Advanced Targeting. Subdeployment resource is a bridge between the group of JMS resources and JMS Servers. While creating a JMS resource, the user needs to choose one Subdeployment.

JMS Resources

Table 2-1 JMS Resources- Description

JMS Resources	Description
Queue	This defines a point-to-point destination type, which is used for asynchronous peer communications. A message delivered to the queue is distributed to only one customer.

Table 2-1 (Cont.) JMS Resources- Description

JMS Resources	Description
Topic	This defines a publish/subscribe destination type, which is used for asynchronous peer communication. A message delivered to the topic is distributed to all topic consumers.
Distributed queue	This defines a set of queues that are distributed on multiple JMS servers, but are accessible as a single, logical queue to JMS clients.
Distributed topic	This defines a set of topics that are distributed on multiple JMS servers, but which are as accessible as a single, logical topic to JMS clients.
Uniform Distributed Queue	This queue members are created uniformly from a common configuration.

Persistence store

A persistent store provides a built-in, high-performance storage solution for WebLogic Server subsystems and services that required persistence. There are two types of mechanisms to store the message -

1. File-based persistence store - Message is stored in a file
2. DB-based persistence store - Message is stored in Database.

2.2 Weblogic 12c New Features

Before Weblogic 12c JMS Servers and stores are targeted to individual WLS Servers. Scaling up requires configuring the JMS server, storing and targetting it to the new WLS Server.

In 12c JMS Servers and stores are targeted to the WLS cluster. Scaling up requires adding a WLS server to the cluster.

Figure 2-1 Architecture Previous to 12c

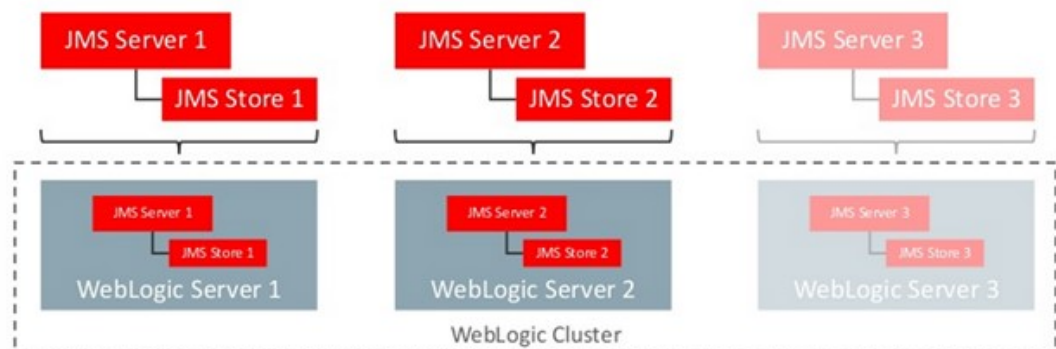
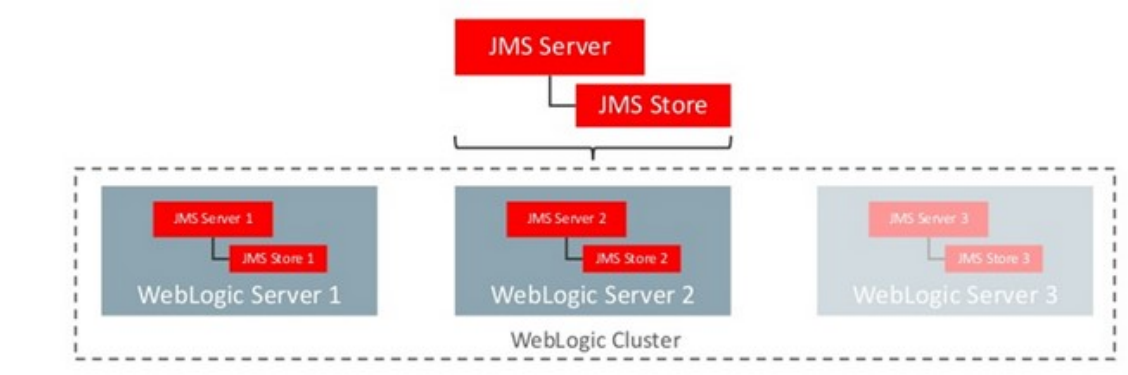


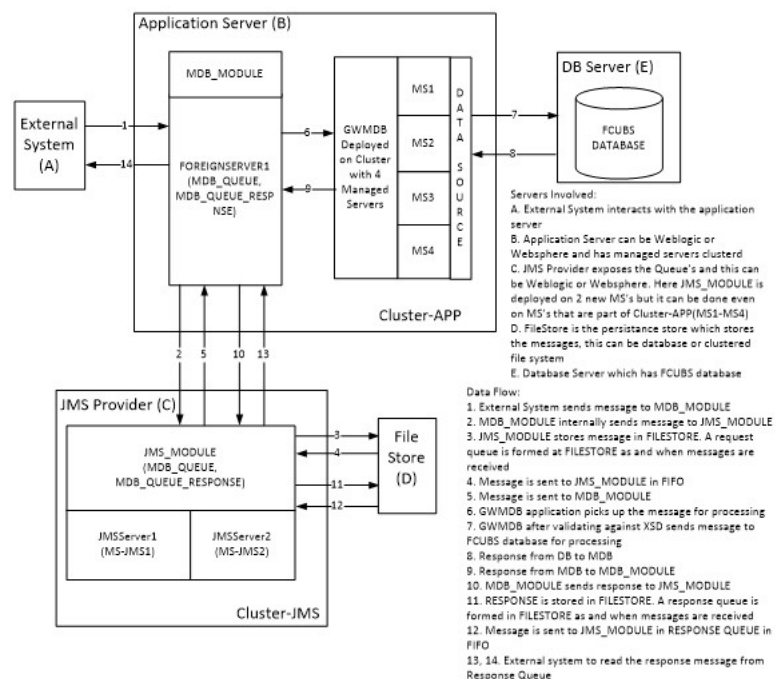
Figure 2-2 Architecture in 12c



2.3 Components Diagram and Data Flow

Below is the flow diagram which indicates various components that are used and the document explains the steps to create.

Figure 2-3 Components Diagram and Data Flow



Servers Involved -

1. External System interacts with the application server.
2. The application server can be Weblogic or Websphere and has managed servers clustered.

3. JMS provider exposes the Queue and this can be Weblogic or Websphere. Here JMS_MODULE is deployed on 2 new MSs but it can be done even on MSs that are part of Cluster-APP(MS1-MS4).
4. FileStore is the persistence store that stores the messages, this can be a database or clustered file system.
5. Database Server which has FCUBS database.

Data Flow -

1. External System sends a message to MDB_MODULE.
2. MDB_MODULE internally sends a message to JMS_MODULE.
3. JMS_MODULE stores messages in FILESTORE. A request queue is formed at FILESTORE as and when messages are received.
4. The message is sent to JMS_MODULE in FIFO.
5. The message is sent to MDB_MODULE.
6. GWMDB application picks up the message for processing.
7. GWMDB after validating against XSD sends a message to the FCUBS database for processing.
8. Response from DB to MDB
9. Response from MDB to MDB_MODULE
10. MDB_MODULE sends a response to JMS_MODULE.
11. RESPONSE is stored in FILESTORE. A response queue is formed in FILESTORE as and when messages are received.
12. The message is sent to JMS_MODULE in RESPONSE QUEUE in FIFO.
13. The message is sent to JMS_MODULE in RESPONSE QUEUE in FIFO.

3

Prerequisites

The document assumes that the below are created before proceeding with the JMS creation -

- **Machines**
Make sure that **MAC-1** and **MAC-2** machines are created.

Figure 3-1 Summary of Machines

ORACLE WebLogic Server Administration Console 12c

Home Log Out Preferences Record Help

Welcome, infra Connected to: FC146ZDT

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

Summary of Machines

A machine is the logical representation of the computer that hosts one or more WebLogic Server instances (servers). WebLogic Server uses configured machine names to determine the optimum server in a cluster to which certain tasks, such as HTTP session replication, are delegated. The Administration Server uses the machine definition in conjunction with Node Manager to start remote servers.

This page displays key information about each machine that has been configured in the current WebLogic Server domain.

Customize this table

Machines (Filtered - More Entries Exist)

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

New Clone Delete Showing 1 to 2 of 2 Previous | Next

Name	Type
MAC-1	Machine
MAC-2	Machine

New Clone Delete Showing 1 to 2 of 2 Previous | Next

- **Dynamic Clusters and Managed Servers**
Make sure that the dynamic cluster for FCUBS (4 Managed Servers) and Dynamic cluster for JMS Deployment (2 Managed Servers) are created.

Figure 3-2 Summary of Clusters

ORACLE WebLogic Server Administration Console 12c

Home Log Out Preferences Record Help

Welcome, weblogic Connected to: FCUBSDomain

Home > Summary of Servers > Summary of Clusters > Summary of Server Templates > Summary of Clusters > Summary of Servers > Summary of Clusters > Summary of Server Templates > Summary of Clusters

Summary of Clusters

This page summarizes the clusters that have been configured in the current WebLogic Server domain.

A cluster defines groups of WebLogic Server servers that work together to increase scalability and reliability.

Customize this table

Clusters (Filtered - More Columns Exist)

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

New Clone Delete Showing 1 to 2 of 2 Previous | Next

Name	Cluster Address	Cluster Messaging Mode	Migration Basis	Default Load Algorithm	Replication Type	Cluster Broadcast Channel	Servers
Cluster-App		Unicast	Database	Round Robin	(None)		DC_FCUBS_1, DC_FCUBS_2, DC_FCUBS_3, DC_FCUBS_4
Cluster-JMS		Unicast	Database	Round Robin	(None)		DC_JMS_1, DC_JMS_2

New Clone Delete Showing 1 to 2 of 2 Previous | Next

Figure 3-3 Summary of Servers

Summary of Servers

A server is an instance of WebLogic Server that runs in its own Java Virtual Machine (JVM) and has its own configuration. This page summarizes each server that has been configured in the current WebLogic Server domain.

Customize this table

Servers (Filtered - More Columns Exist)

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

Name	Type	Cluster	Machine	State	Health	Listen Port
AdminServer (admin)	Configured			RUNNING	OK	7001
DC_FCUBS_1	Dynamic	Cluster-App	MAC-1	SHUTDOWN	Not reachable	7101
DC_FCUBS_2	Dynamic	Cluster-App	MAC-2	SHUTDOWN	Not reachable	7102
DC_FCUBS_3	Dynamic	Cluster-App	MAC-1	SHUTDOWN	Not reachable	7103
DC_FCUBS_4	Dynamic	Cluster-App	MAC-2	SHUTDOWN	Not reachable	7104
DC_JMS_1	Dynamic	Cluster-JMS	MAC-1	SHUTDOWN	Not reachable	7106
DC_JMS_2	Dynamic	Cluster-JMS	MAC-2	SHUTDOWN	Not reachable	7107

- **Data Source**
Make sure that Data Source required for the MDB EAR is created with target as **Cluster-App**.

Figure 3-4 Summary of JDBC Data Sources

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	Type	JNDI Name	Targets
FLEXTTEST.WORLD	Generic	FLEXTTEST.WORLD	Cluster-App

- **Shared Folder**
A shared folder for File Store Creation is required, and this folder should be accessible across both servers (For example, NFS mount).

4

JMS Configuration

This chapter describes the JMS module and its configuration.

- [Create Persistence Store](#)
This topic explains systematic instructions to create the Persistence Store.
- [Create JMS Server](#)
This topic explains systematic instructions to create the JMS Server.
- [Configure Cluster for Service Migration](#)
This topic explains systematic instructions to configure cluster for service migration.

4.1 Create Persistence Store

This topic explains systematic instructions to create the Persistence Store.

1. Under the **Domain Structure** left panel, navigate to the **Services**, and click **Messaging**, and then **Persistent Stores**.

The **Summary of Persistent Stores** screen displays.

Figure 4-1 Summary of Persistent Stores

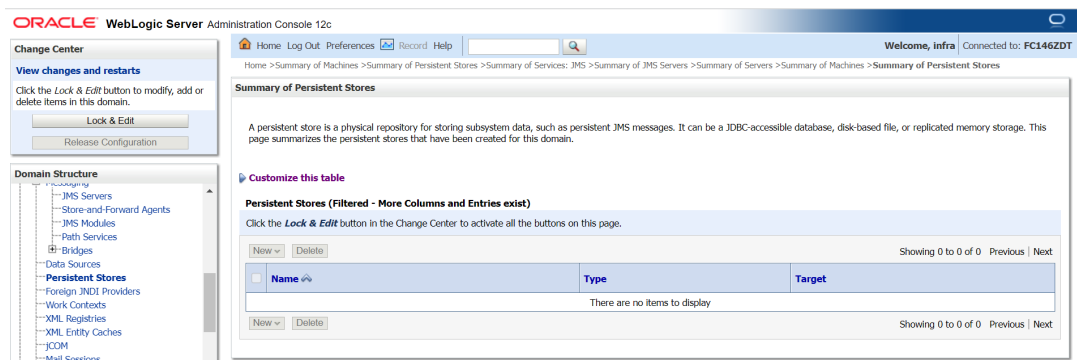
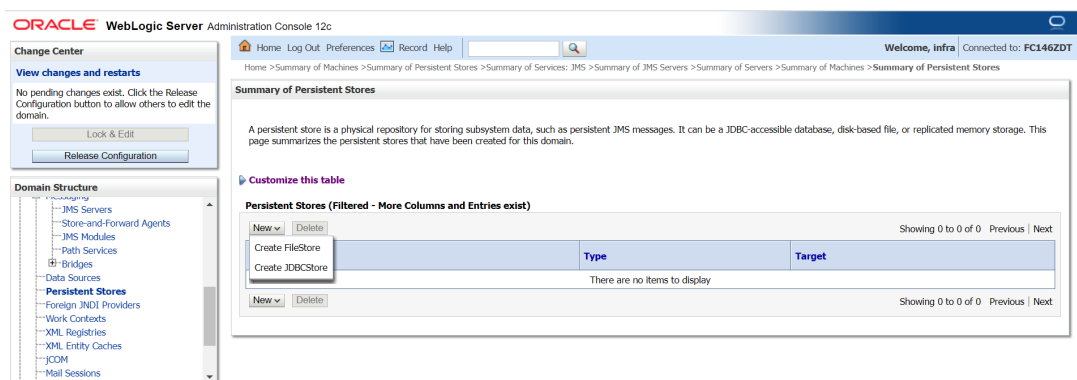


Figure 4-2 Summary of Persistent Stores - Select New



2. Navigate to **New** in the Persistent Stores table, and then select **Create FileStore** by navigating through the drop-down option.

The **Create a New File Store** screen displays.

Figure 4-3 Create a New File Store

ORACLE WebLogic Server Administration Console 12c

Home Log Out Preferences Record Help

Welcome, weblogic Connected to: FCUBSDomain

Home > Summary of Clusters > Summary of Servers > Summary of Clusters > Summary of Servers > Summary of Clusters > Cluster-JMS > Summary of Servers > Summary of Clusters > Summary of Servers > Summary of Persistent Stores

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: FileStore-1

Select a server instance for this file store.

Target: Cluster-JMS

The pathname to the directory on the file system where the file store is kept. This directory must exist on your system, so be sure to create it before completing this tab.

Directory: /scratch/work_area/JMS_FILESTORE

OK Cancel

3. Select **Cluster-JMS** under **Target** drop-down, and then click **OK**.

The **FileStore-1** is created.

Figure 4-4 Summary of Persistent Stores Message

ORACLE WebLogic Server Administration Console 12c

Home Log Out Preferences Record Help

Welcome, weblogic Connected to: FCUBSDomain

Home > Summary of Clusters > Summary of Servers > Summary of Clusters > Summary of Servers > Summary of Clusters > Cluster-JMS > Summary of Servers > Summary of Clusters > Summary of Servers > Summary of Persistent Stores

Messages

✓ All changes have been activated. No restarts are necessary.

Summary of Persistent Stores

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

Customize this table

Persistent Stores

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

New Delete Showing 1 to 1 of 1 Previous Next

Name	Type	Target
FileStore-1	FileStore	Cluster-JMS

New Delete Showing 1 to 1 of 1 Previous Next

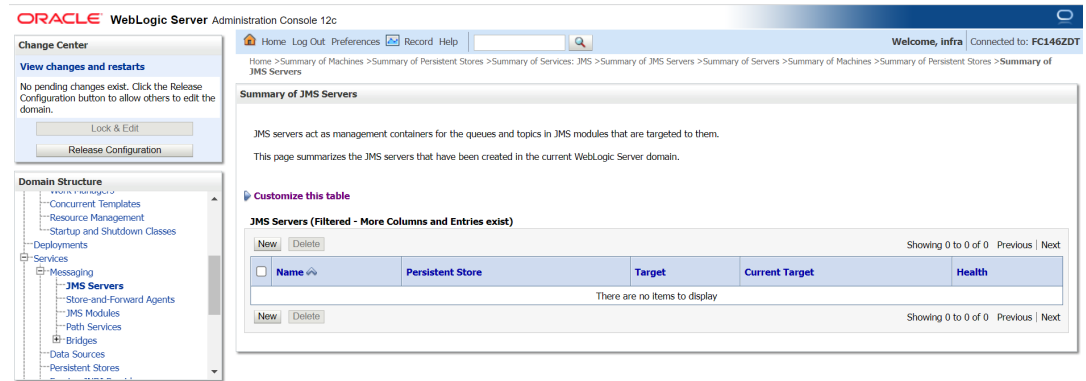
4.2 Create JMS Server

This topic explains systematic instructions to create the JMS Server.

1. Under the **Domain Structure** left panel, navigate to the **Services**, and click **Messaging**, and then **JMS Servers**.

The **Summary of JMS Servers** screen displays.

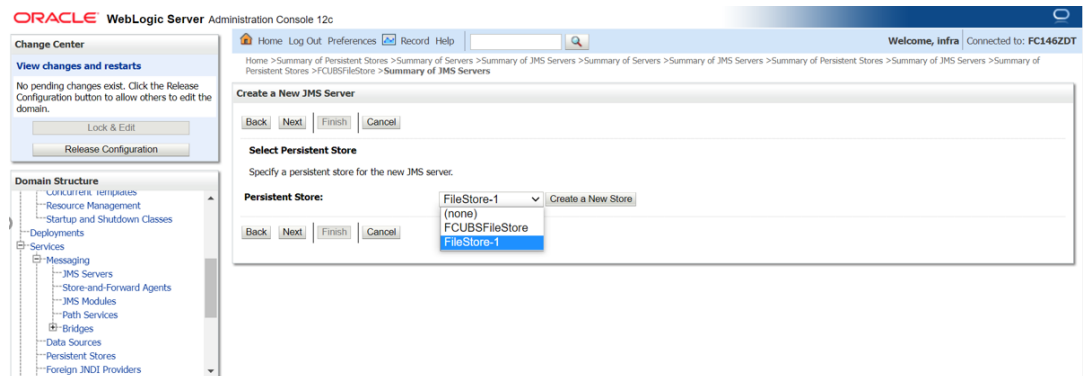
Figure 4-5 Summary of JMS Servers



2. Under JMS server table, click **New**.

The **Create a New JMS Server** screen displays.

Figure 4-6 Create a New JMS Server



3. Select **FileStore-1** in the field of **Persistent Store**, and then click **Next**.

The **Create a New JMS Server- Target** screen displays.

Figure 4-7 Create a New JMS Server- Target

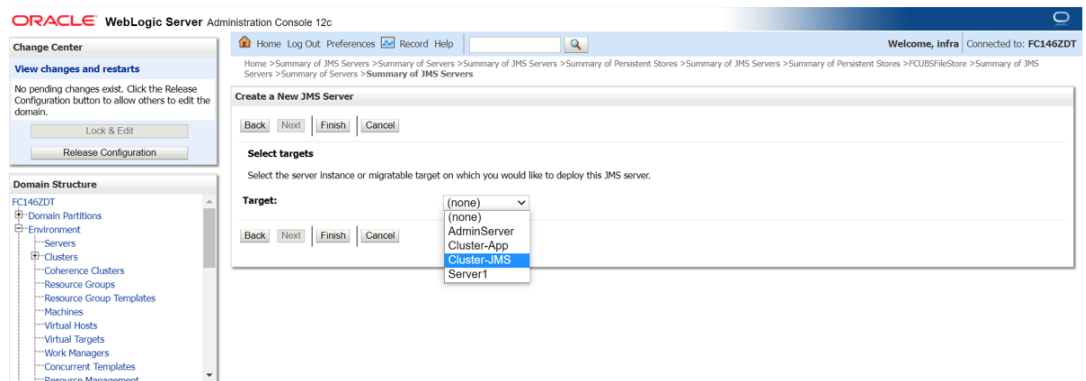
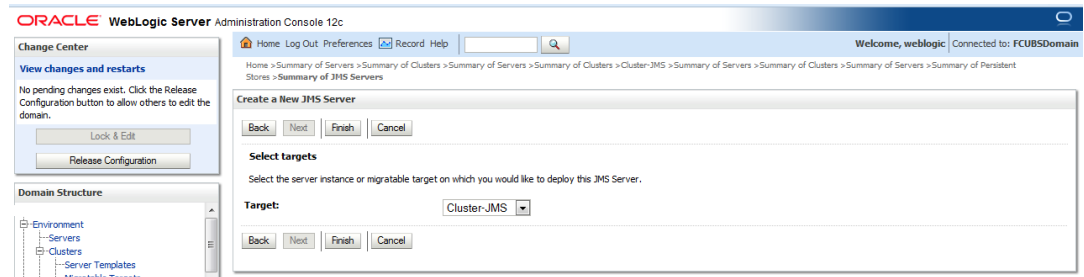
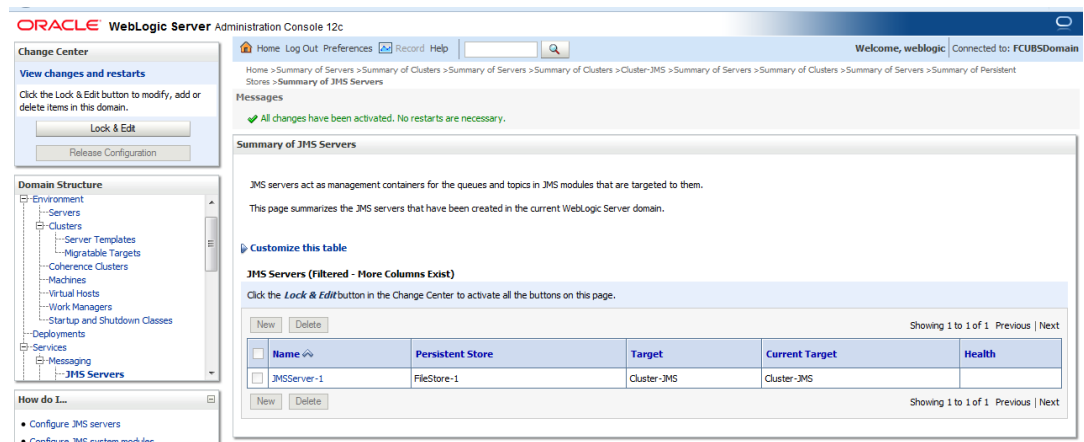


Figure 4-8 Target Cluster JMS



4. Select **Target** as **Cluster-JMS**, and then click **Finish**.
The **JMS-Server-1** is created.

Figure 4-9 Summary of JMS Servers



In NFS below filestores can be seen.

Figure 4-10 JMS Filestore

```
[root@          JMS_FILESTORE]# ll
total 2056
-rw-r----- 1 wl12c oinstall 1049088 Jun 16 14:10 FILESTORE-1@DC_JMS_1000000.DAT
-rw-r----- 1 wl12c oinstall 1049088 Jun 16 14:10 FILESTORE-1@DC_JMS_2000000.DAT
[root@          JMS_FILESTORE]# pwd
/scratch/work_area/JMS_FILESTORE
[root@          JMS_FILESTORE]#
```

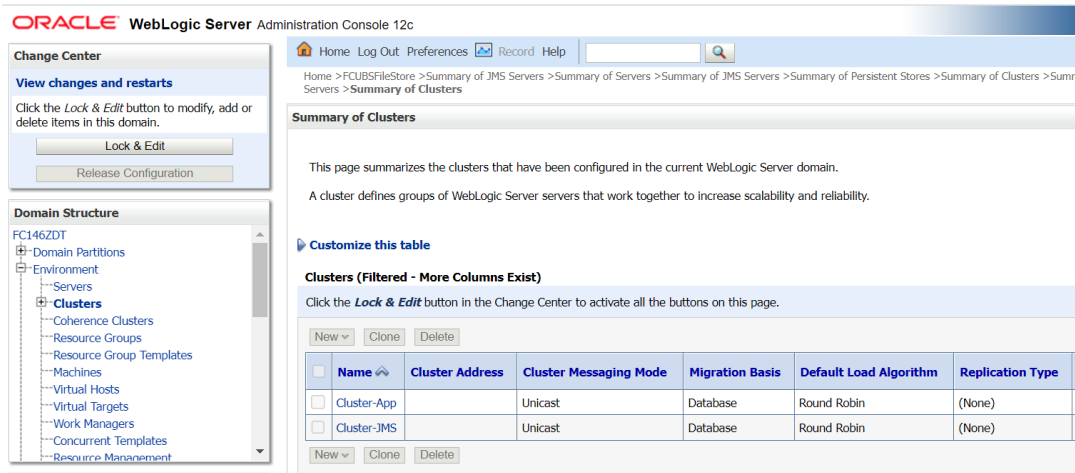
4.3 Configure Cluster for Service Migration

This topic explains systematic instructions to configure cluster for service migration.

1. Under the **Domain Structure** left panel, click the **Environment** drop-down option, and then click **Clusters**.

The **Summary of Clusters** screen displays.

Figure 4-11 Summary of Clusters



2. Select **Cluster-JMS** from clusters table.
The **Settings for Cluster-JMS** screen displays.

Figure 4-12 Settings for Cluster-JMS



3. Click the **Migration** Tab.
4. Change Migration Basis to Consensus, and then click **Save**.

5

Introduction

This chapter explains the creation of JMS module, sub deployment, queue and connection factory.

- [Create JMS Module](#)
This topic explains systematic instructions to create the JMS Module.
- [Create Sub Deployment](#)
This topic explains systematic instructions to create the Subdeployment.
- [Create Queue](#)
This topic explains systematic instructions to create the Queue.
- [Create Connection Factory](#)
This topic explains systematic instructions to create the Connection Factory.

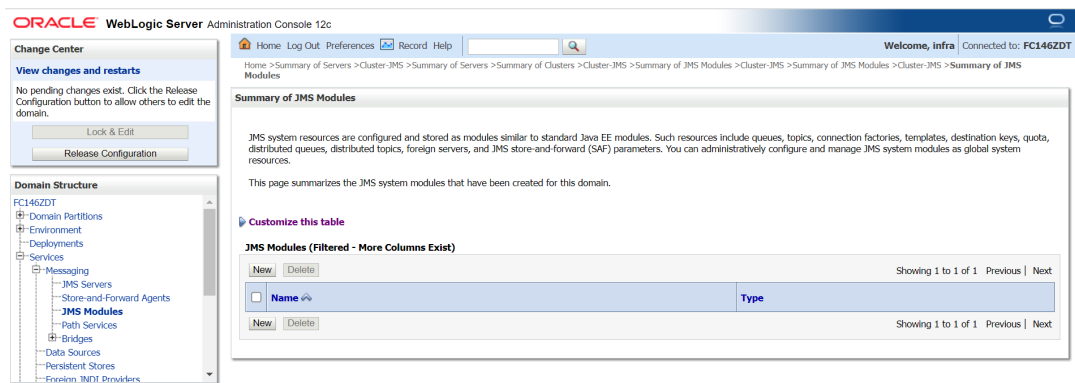
5.1 Create JMS Module

This topic explains systematic instructions to create the JMS Module.

1. Under the **Domain Structure** left panel, navigate to the **Services** drop-down option, and click **Messaging**, and then **JMS Modules**.

The **Summary of JMS Module** screen displays.

Figure 5-1 Summary of JMS Module



2. Click **New** under the **JMS Module** tab.

The **Create JMS System Module** screen displays.

Figure 5-2 Create JMS System Module

The screenshot shows the Oracle WebLogic Server Administration Console. The left sidebar contains the 'Domain Structure' tree with 'JMS Modules' selected. The main panel is titled 'Create JMS System Module' and includes a breadcrumb trail: Home > Summary of Servers > Cluster-JMS > Summary of Servers > Summary of Clusters > Cluster-JMS > Summary of JMS Modules > Cluster-JMS > Summary of JMS Modules. The page contains several sections: 'The following properties will be used to identify your new module.' with a description of JMS system resources; 'What would you like to name your System Module?' with a text field containing 'JMS_Module'; 'Would you like this new JMS System Module to be restricted to a specific resource group template or resource group?' with a 'Scope' dropdown set to 'Global'; 'What would you like to name the descriptor file name? If you do not provide a name, a default will be assigned.' with a text field; 'Descriptor File Name:' with a text field; 'Where would you like to place the descriptor for this System Module, relative to the jms configuration sub-directory of your domain?' with a text field; and 'Location In Domain:' with a text field.

3. Enter the **Name** as **JMS_MODULE**, and click **Next**.

The **Targets** tab displays under the **Create JMS System Module** screen.

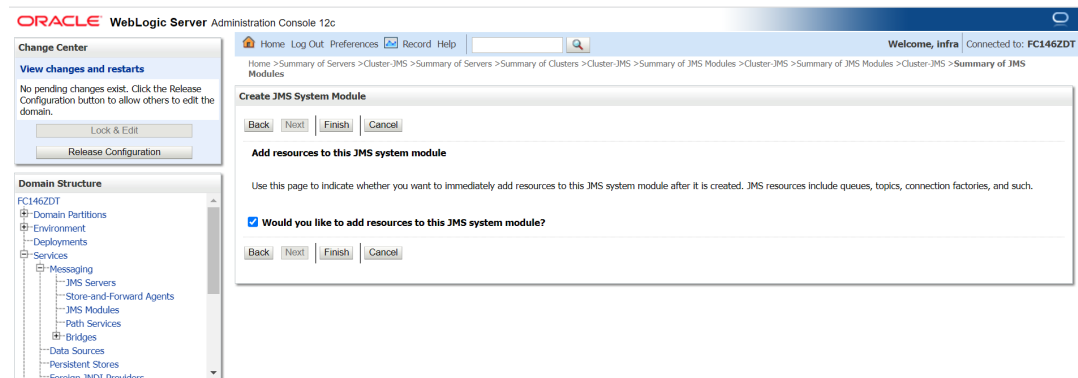
Figure 5-3 Targets

The screenshot shows the 'Targets' tab in the 'Create JMS System Module' screen. The breadcrumb trail is: Home > Summary of Server Templates > DC_JMS_Template-0 > Summary of Servers > Summary of Migratable Targets > Summary of JMS Servers > JMSServer-1 > Summary of JMS Servers > JMSServer-1 > Summary of Migratable Targets > Summary of JMS Modules. The page contains: 'The following properties will be used to target your new JMS system module.' with a description; 'Use this page to select the server or cluster on which you would like to deploy this JMS system module. You can reconfigure targets later if you wish.'; and a 'Targets:' section with two tables. The 'Servers' table has one row 'AdminServer' with an unchecked checkbox. The 'Clusters' table has two rows: 'Cluster-App' with a radio button selected for 'All servers in the cluster', and 'Cluster-JMS' with a checked checkbox and a radio button selected for 'All servers in the cluster'.

4. Select the target as **Cluster-JMS**, and then click **Next**.

Add resources to this JMS system module tab displays under the **Create JMS System Module** screen.

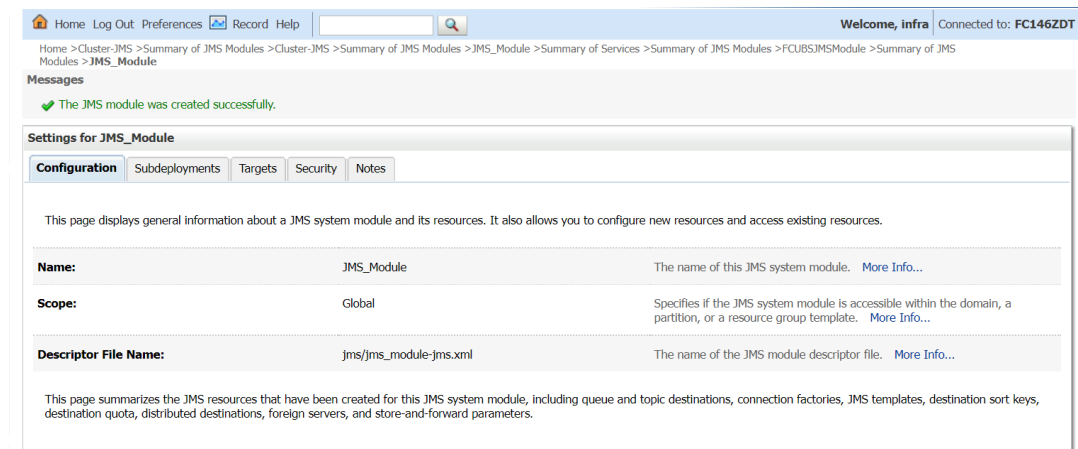
Figure 5-4 Add resources to this JMS system module



5. Select the check box, and click **Finish**.

The **JMS_MODULE** is created.

Figure 5-5 Settings For JMS_MODULE - Messages



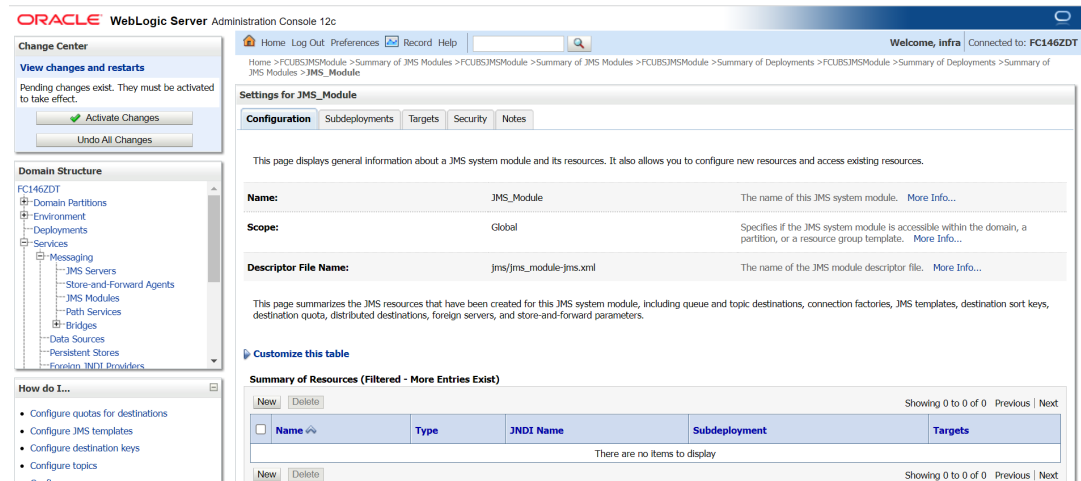
5.2 Create Sub Deployment

This topic explains systematic instructions to create the Subdeployment.

1. Under the **Domain Structure** left panel, navigate to the **Services** drop-down option.
2. Click **Messaging**, and then click **JMS Modules**.

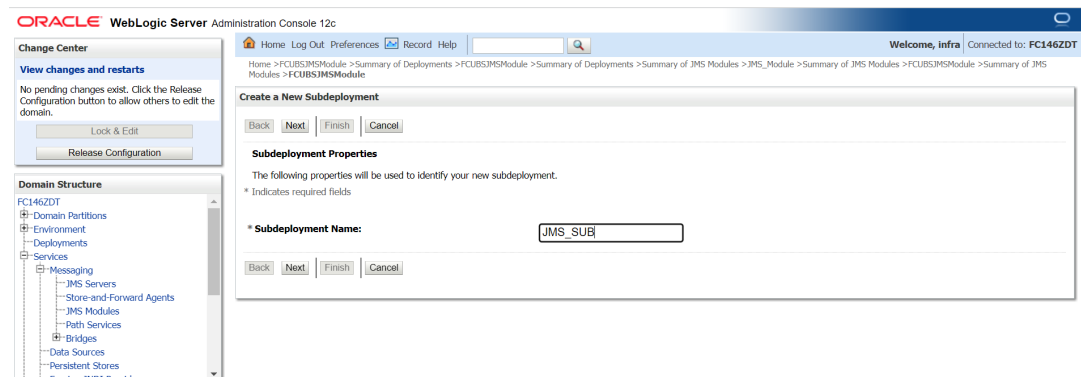
The **Settings for JMS_Module** screen displays.

Figure 5-6 Settings for JMS_Module



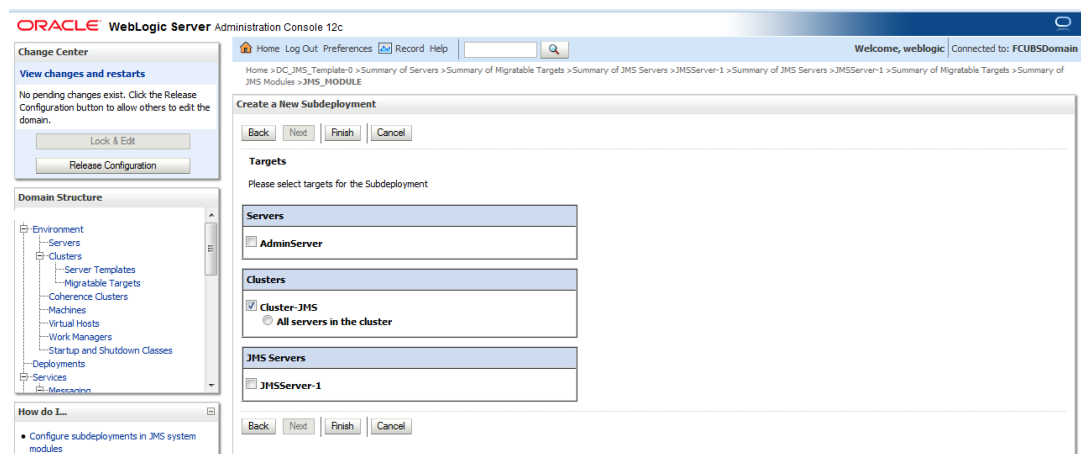
3. Click the **Subdeployments** tab, and then click **New**.
The **Create a New Subdeployment** screen displays.

Figure 5-7 Create a New Subdeployment



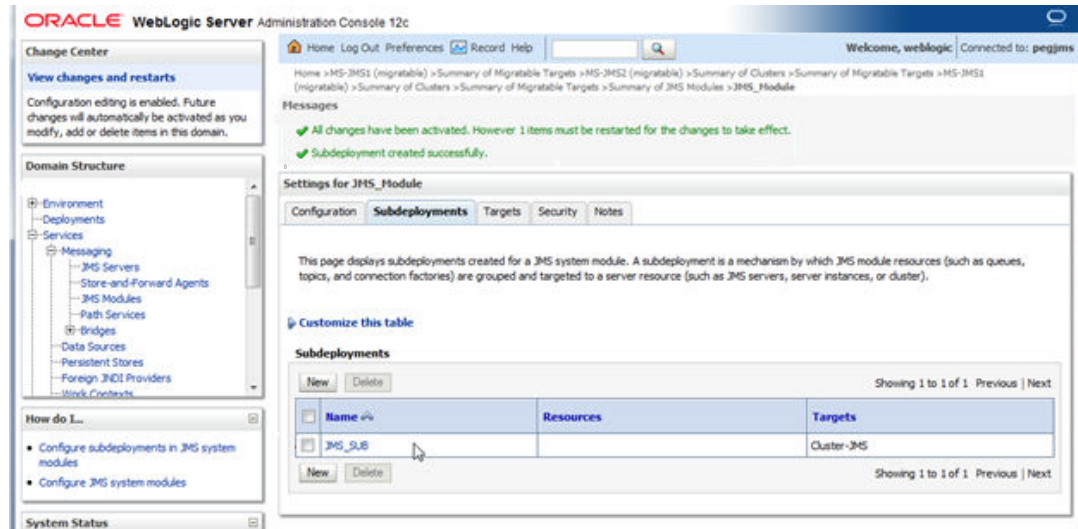
4. Enter the **Subdeployment Name** as **JMS_SUB**, and then click **Next**.
Under the **Create a New Subdeployment** screen, **Targets** tab displays.

Figure 5-8 Targets



5. Select the target as **Cluster-JMS**, and then click **Finish**.
The **JMS_SUB** subdeployment is created.

Figure 5-9 Settings for JMS_Module- Messages



5.3 Resource Creation

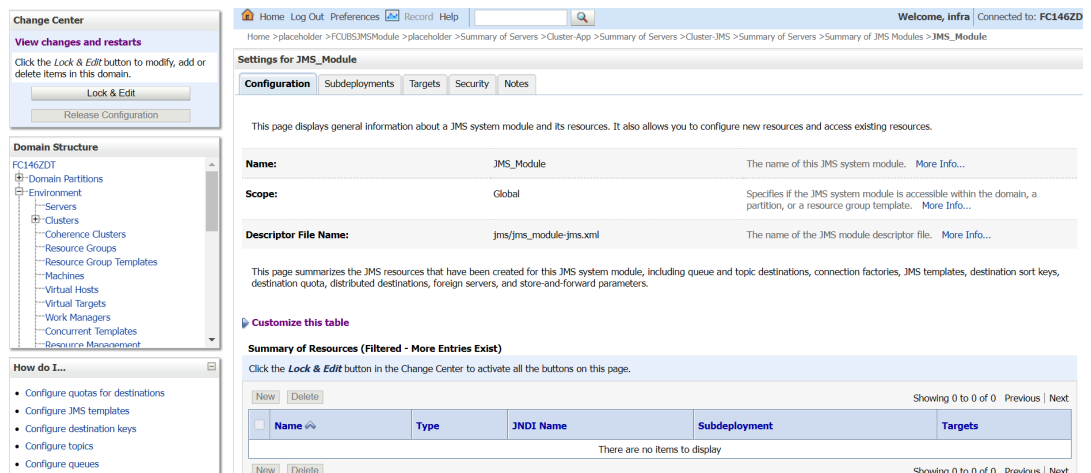
5.4 Create Queue

This topic explains systematic instructions to create the Queue.

1. Under the **Domain Structure** left panel, navigate to the **Services** drop-down option.
2. Click **Messaging**, and then click **JMS Modules**.

The **Settings for JMS_Module** screen displays.

Figure 5-10 Settings for JMS_Module



3. Click the **Configuration** tab, and then click **New**.

The **Create a New JMS System Module Resources** screen displays to choose the type of resources.

4. Select the **Distributed Queue**, and then click **Next**.

The **Create a New JMS System Module Resources** screen displays to enter the name of the resources.

Figure 5-11 Create a New JMS System Module Resources

WebLogic Server Administration Console 12c

Home | Log Out | Preferences | Record |

Welcome, **infra** | Connected to: **FC1462DT**

Change Center
View changes and restarts
 No pending changes exist. Click the Release Configuration button to allow others to edit the domain.

Lock & Edit

Release Configuration

Domain Structure
 FC1462DT

- Domain Partitions
- Environment
 - Deployments
 - Services
 - Messaging
 - JMS Servers
 - Store-and-Forward Agents
 - JMS Modules
 - Path Services
 - Bridges
 - Data Sources
 - Persistent Stores
 - Foreign INDI Providers

How do I...

- Configure quotas for destinations
- Configure JMS templates
- Configure destination keys
- Configure topics
- Configure queues

Home > Summary of JMS Modules > JMS_Module > Summary of JMS Modules > JMS_Module > Summary of JMS Modules > FCUBSJMSModule > Summary of JMS Modules > FCUBSJMSModule > Summary of JMS Modules > FCUBSJMSModule > Summary of JMS Modules > FCUBSJMSModule

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 is 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 is 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...](#)

☐ **Distributed Topic**

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

☐ **Foreign Server**

Define foreign messaging resources or connect WebLogic Server instances

5. Enter the **Name** as MDB QUEUE, and Click **Next**.

The **Create a New JMS System Module Resources** screen displays to enter the name of the resources.

Figure 5-12 Create a New JMS System Module Resources

ORACLE WebLogic Server Administration Console 12c

Change Center

View changes and restarts

No pending changes exist. Click the Release Configuration button to allow others to edit the domain.

Home Log Out Preferences Record Help

Welcome, infra Connected to: FC14GZDT

Home > Summary of JMS Modules > JMS Module > Summary of JMS Modules > FCUBSJMSModule > Summary of JMS Modules > FCUBSJMSModule > Summary of JMS Modules > FCUBSJMSModule > Summary of JMS Modules > FCUBSJMSModule

Create a New JMS System Module Resource

JMS Distributed Destination Properties

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

* Indicates required fields

What would you like to name your new destination?

* Name:

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

JNDI Name:

Queue members may be either created uniformly from a common configuration, or created and weighted individually to fine tune performance. How would you like to create queue members?

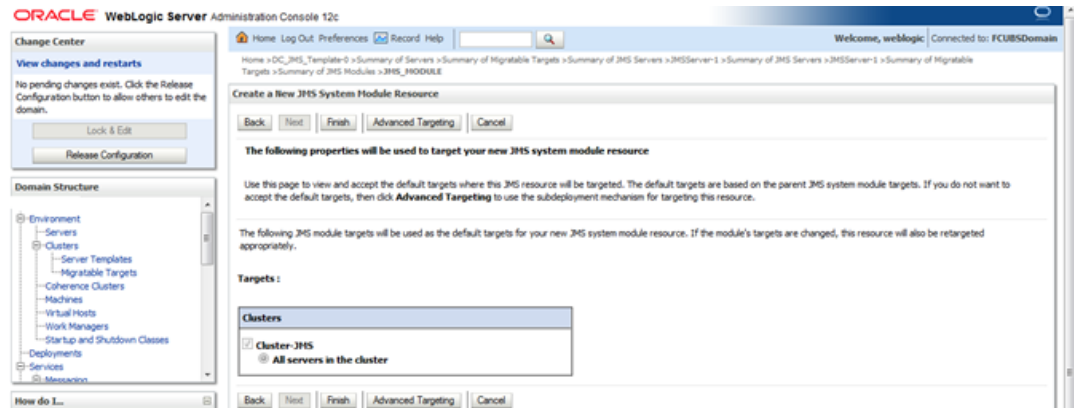
Domain Structure

- FC14GZDT
 - Domain Partitions
 - Environment
 - Deployments
 - Services
 - Messaging
 - JMS Servers
 - Store-and-Forward Agents
 - JMS Modules
 - Path Services
 - Bridges
 - Data Sources
 - Persistent Stores

- Click the **Advance Targeting** tab.

The **Targets** tab opens in **Create a New JMS System Module Resources** screen.

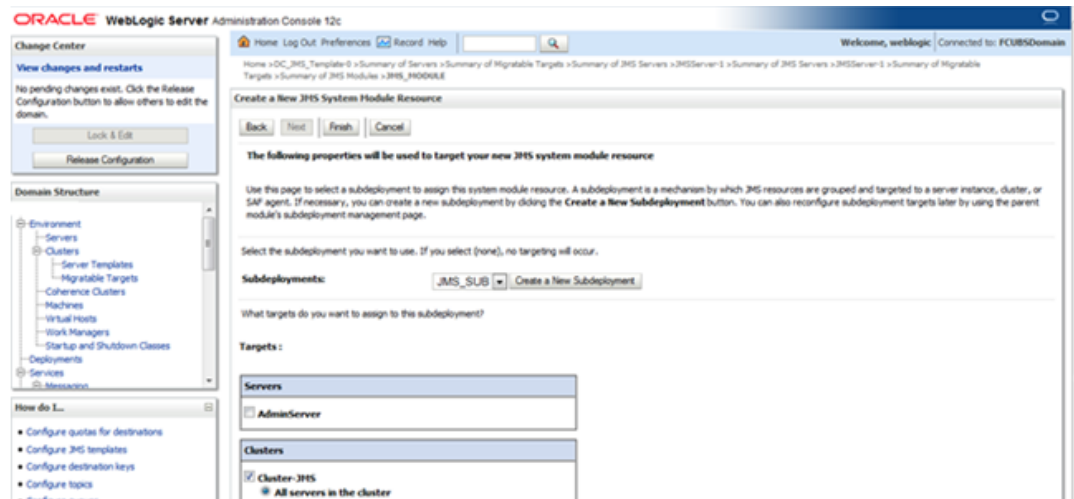
Figure 5-13 Create a New JMS System Module Resources



7. Select **Subdeployment** as **JMS_SUB**, and then click **Finish**.

Create a New JMS System Module Resources screen displays with subdeployment and target details.

Figure 5-14 Create a New JMS System Module Resources



8. **MDB-QUEUE** is created.

The **MDB-QUEUE** is reflected under Summary of Resources.

Figure 5-15 Summary of Resources

Settings for JMS_Module

This page displays general information about a JMS system module and its resources. It also allows you to configure new resources and access existing resources.

Name: JMS_Module
The name of this JMS system module. [More Info...](#)

Scope: Global
Specifies if the JMS system module is accessible within the domain, a partition, or a resource group template. [More Info...](#)

Descriptor File Name: jms/jms_module-jms.xml
The name of the JMS module descriptor file. [More Info...](#)

This page summarizes the JMS resources that have been created for this JMS system module, including queue and topic destinations, connection factories, JMS templates, destination sort keys, destination quota, distributed destinations, foreign servers, and store-and-forward parameters.

[Customize this table](#)

Summary of Resources (Filtered - More Entries Exist)

Name	Type	JNDI Name	Subdeployment	Targets
MDB_QUEUE	Uniform Distributed Queue	MDB_QUEUE	JMS_SUB	Cluster-JMS

- Similarly create the **MDB_QUEUE_RESPONSE** and **MDB_QUEUE_DLQ**.

The **MDB_QUEUE_RESPONSE** and **MDB_QUEUE_DLQ** displays under the tab **Summary of Resources**.

Figure 5-16 Settings for JMS_Module - Message

Settings for JMS_MODULE

This page displays general information about a JMS system module and its resources. It also allows you to configure new resources and access existing resources.

Name: JMS_MODULE
The name of this JMS system module. [More Info...](#)

Descriptor File Name: jms/jms_module-jms.xml
The name of the JMS module descriptor file. [More Info...](#)

This page summarizes the JMS resources that have been created for this JMS system module, including queue and topic destinations, connection factories, JMS templates, destination sort keys, destination quota, distributed destinations, foreign servers, and store-and-forward parameters.

[Customize this table](#)

Summary of Resources

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

Name	Type	JNDI Name	Subdeployment	Targets
MDB_QUEUE	Uniform Distributed Queue	MDB_QUEUE	JMS_SUB	Cluster-JMS
MDB_QUEUE_DLQ	Uniform Distributed Queue	MDB_QUEUE_DLQ	JMS_SUB	Cluster-JMS
MDB_QUEUE_RESPONSE	Uniform Distributed Queue	MDB_QUEUE_RESPONSE	JMS_SUB	Cluster-JMS

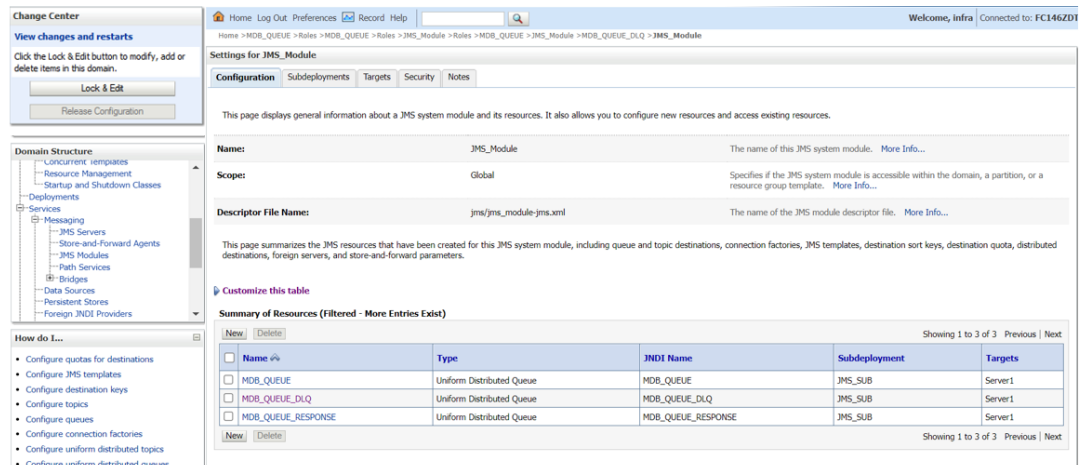
5.5 Create Connection Factory

This topic explains systematic instructions to create the Connection Factory.

- From the **Domain Structure** left panel, navigate to the **Services** drop-down option, and click **Messaging** and then click **JMS Modules**.

The **Settings for JMS_Module** screen displays.

Figure 5-17 Settings for JMS_Module



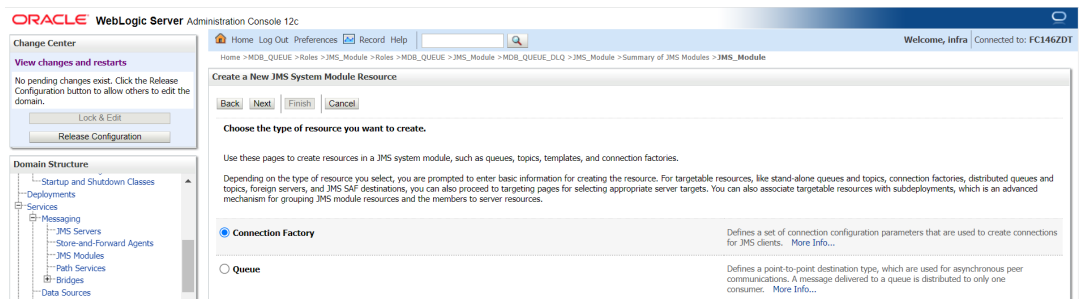
2. Click the **Configuration** tab, and then click **New**.

The **Create a New JMS System Module Resource** screen displays to choose the type of resource.

3. Select the resource **Connection Factory**, and click **Next**.

The **Create a New JMS System Module Resource** screen displays to specify the resource.

Figure 5-18 Create a New JMS System Module Resource



4. Specify the **Name** for connection factory, and then click **Next**.

The **Create a New JMS System Module Resource** screen displays to target new JMS module resource.

Figure 5-19 Create a New JMS System Module Resource

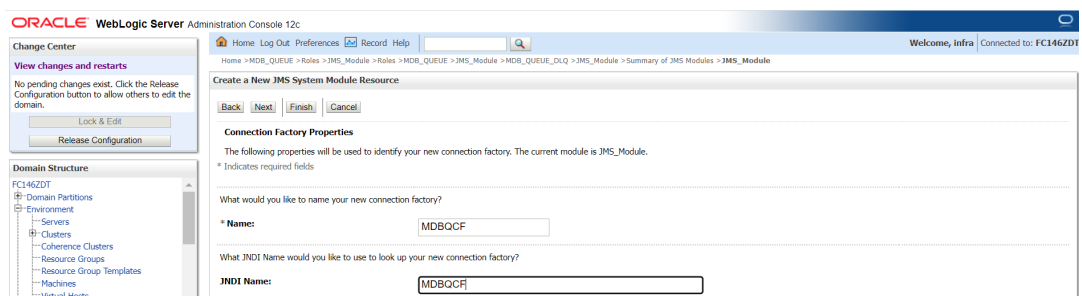
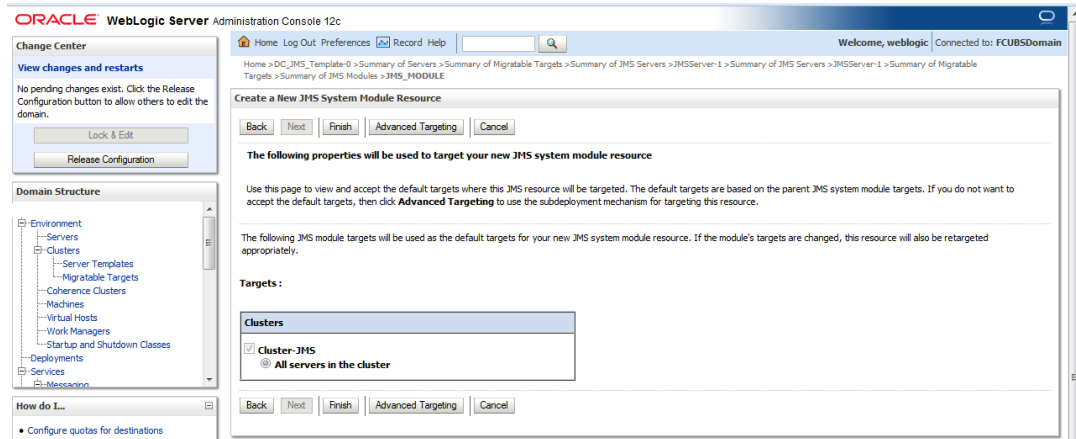


Figure 5-20 Create a New JMS System Module Resource

5. Click **Advanced Targeting**.

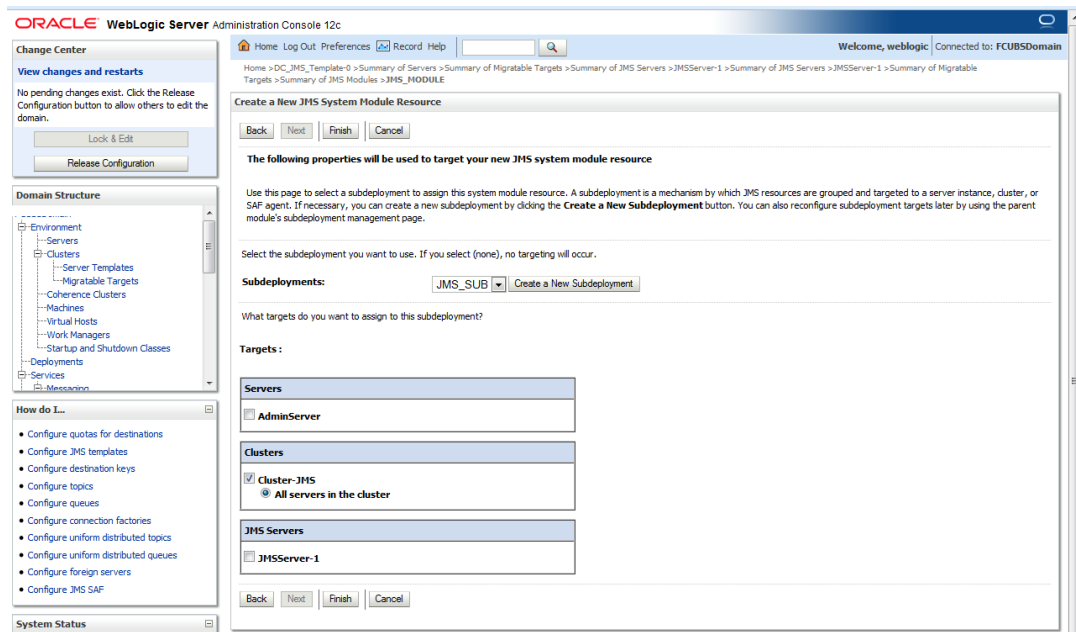
Figure 5-21 Create a New JMS System Module Resource



6. Select **JMS_SUB** as **Subdeployments**, and then click **Finish**.

The **Connection Factory** is created, and displays under the **Summary of Resources** tab.

Figure 5-22 Settings for JMS_Module- Summary of Resources



7. New connection Factory is Created.

Figure 5-23 Settings for JMS_Module

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

Environment

Deployments

Services

Messaging

JMS Servers

Store-and-Forward Agents

JMS Modules

Path Services

Bridges

Data Sources

Persistent Stores

Foreign JNDI Providers

Work Contexts

How do I...

No task help found.

System Status

Health of Running Servers

Failed (0)

Critical (0)

Overloaded (0)

Warning (0)

OK (1)

Home Log Out Preferences Record Help

Welcome, infra | Connected to: FC146ZDT

Home > Summary of JMS Modules > JMS_Module > placeholder > JMS_Module > MDBQCF > JMS_Module > placeholder > JMS_Module

Settings for JMS_Module

Configuration Subdeployments Targets Security Notes

This page displays general information about a JMS system module and its resources. It also allows you to configure new resources and access existing resources.

Name:

JMS_Module

The name of this JMS system module. [More Info...](#)

Scope:

Global

Specifies if the JMS system module is accessible within the domain, a partition, or a resource group template. [More Info...](#)

Descriptor File Name:

jms/jms_module-jms.xml

The name of the JMS module descriptor file. [More Info...](#)

This page summarizes the JMS resources that have been created for this JMS system module, including queue and topic destinations, connection factories, JMS templates, destination sort keys, destination quota, distributed destinations, foreign servers, and store-and-forward parameters.

[Customize this table](#)

Summary of Resources (Filtered - More Entries Exist)

New Delete

Showing 1 to 1 of 1 Previous | Next

<input type="checkbox"/>	Name ↕	Type	JNDI Name	Subdeployment	Targets
<input type="checkbox"/>	MDBQCF	Connection Factory	MDBQCF	JMS_SUB	Cluster-JMS

New Delete

Showing 1 to 1 of 1 Previous | Next

ORACLE®

5-11

6

Restart Server

This topic explains systematic instructions to restart the JMS servers.

1. Increase the heap size of both **DC_JMS_1** and **DC_JMS_2** clusters.

Figure 6-1 Summary of Servers

Summary of Servers

A server is an instance of WebLogic Server that runs in its own Java Virtual Machine (JVM) and has its own configuration. This page summarizes each server that has been configured in the current WebLogic Server domain.

Customize this table

Servers (Filtered - More Columns Exist)

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

Name	Type	Cluster	Machine	State	Health	Listen Port
AdminServer (admin)	Configured			RUNNING	OK	7001
DC_FOUBS_1	Dynamic	Cluster-App	MAC-1	SHUTDOWN	Not reachable	7101
DC_FOUBS_2	Dynamic	Cluster-App	MAC-2	SHUTDOWN	Not reachable	7102
DC_FOUBS_3	Dynamic	Cluster-App	MAC-1	SHUTDOWN	Not reachable	7103
DC_FOUBS_4	Dynamic	Cluster-App	MAC-2	SHUTDOWN	Not reachable	7104
DC_JMS_1	Dynamic	Cluster-JMS	MAC-1	SHUTDOWN	Not reachable	7106
DC_JMS_2	Dynamic	Cluster-JMS	MAC-2	SHUTDOWN	Not reachable	7107

2. Select the cluster **DC_JMS_Template-0**, and click the **Server Start** tab. The **Settings for DC_JMS_Template-0** screen displays.

Figure 6-2 Summary of Server Templates

Summary of Server Templates

This page summarizes each server template that has been configured in the current WebLogic Server domain. A server template contains common, non-default attributes that you can apply to a set of server instances, which then inherit the template configuration. Server templates enable you to easily manage configuration for a group of server instances in one centralized location.

Customize this table

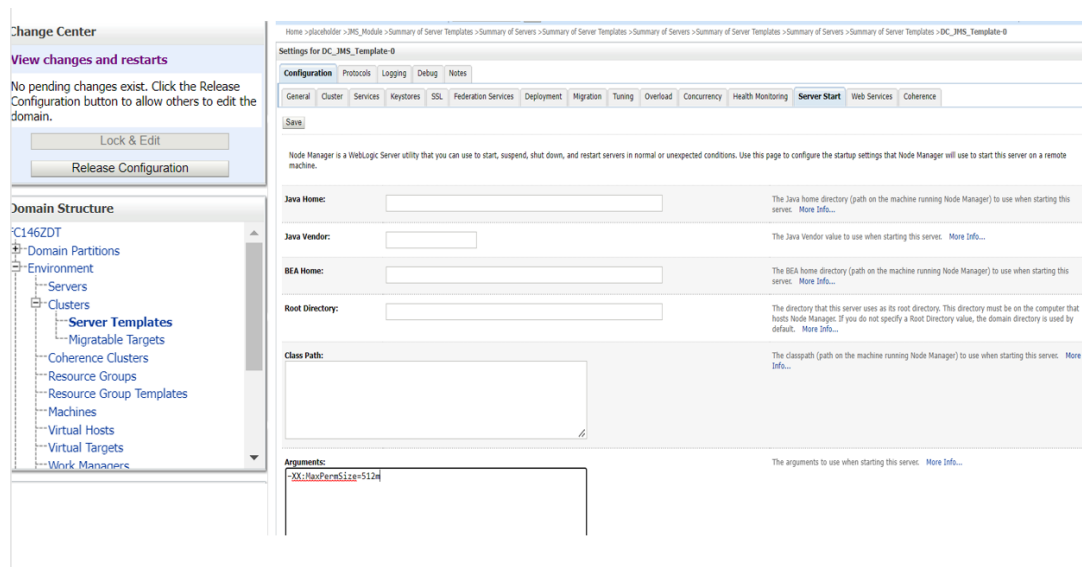
Server Templates

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

Name	Cluster	Machine	Listen Port	Listen Address
DC_FOUBS_Template	Cluster-App		7100	
DC_JMS_Template-0	Cluster-JMS		7105	

- Enter `-XX:MaxPermSize=512m` in an **Arguments** section.
Settings for DC_JMS_Template-0 is displayed.

Figure 6-3 Settings for DC_JMS_Template-0



- Restart the AdminServer and **DC_JMS_1** and **DC_JMS_2** managed servers.

7

Foreign Server Creation

- [Create Foreign Server Module](#)
This topic explains systematic instructions to create the MDB Module.
- [Create Foreign Server](#)
This topic provides systematic instructions to create the Foreign server.
- [Configure Foreign Server](#)
This topic explains systematic instructions to configure the foreign server.

7.1 Create Foreign Server Module

This topic explains systematic instructions to create the MDB Module.

1. Under the **Domain Structure** left panel, navigate to the **Services** drop-down option, and click **Messaging**, and then **JMS Modules**.

The **Summary of JMS Module** screen displays.

Figure 7-1 Summary of JMS Module

2. Click **New** under the **Customize the table** tab.

The **Create JMS System Module** screen displays.

3. Enter the **Name** as **MDB_MODULE**, and then click **Next**.

The **Targets** tab displays under the **Create JMS System Module** screen.

Figure 7-2 Create JMS System Module

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

- Environment
 - Deployments
 - Services
 - Messaging
 - JMS Servers
 - Store-and-Forward Agents
 - JMS Modules
 - Path Services
 - Bridges
 - Data Sources
 - Persistent Stores
 - Foreign JNDI Providers
 - Work Contexts

How do I...

- Configure JMS system modules
- Configure JMS servers

System Status

Health of Running Servers

Failed (0)

Home Log Out Preferences Record Help

Welcome, infra Connected to: FC

Home > Summary of Server Templates > Summary of Servers > Summary of Server Templates > Summary of Servers > Summary of Server Templates > Summary of Servers > Summary of JMS Modules

Create JMS System Module

Back Next Finish Cancel

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

JMS system resources are configured and stored as modules similar to standard Java EE modules. Such resources include queues, topics, connection factories, templates, destination keys, qu distributed queues, distributed topics, foreign servers, and JMS store-and-forward (SAF) parameters. You can administratively configure and manage JMS system modules as global system resources.

* Indicates required fields

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?

4. Select the target as **Cluster-App**, and then click **Next**.

The **Add resources to this JMS system module** tab displays under the **Create JMS System Module** screen.

Figure 7-3 Add resources to this JMS system module

5. Select the check box, and click **Finish**.

The **MDB_MODULE** is created.

Figure 7-4 Summary of JMS Modules

The screenshot shows the Oracle WebLogic Server Administration Console. The left sidebar contains a 'Domain Structure' tree with 'JMS Modules' selected. The main content area is titled 'Summary of JMS Modules' and includes a table of existing JMS modules.

Summary of JMS Modules

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

This page summarizes the JMS system modules that have been created for this domain.

[Customize this table](#)

JMS Modules (Filtered - More Columns Exist)

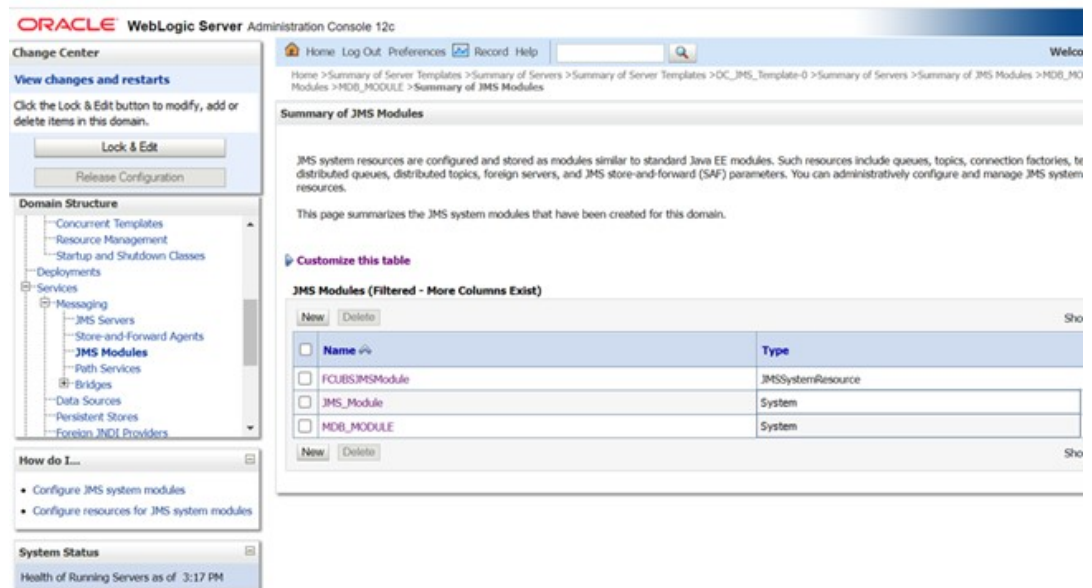
<input type="checkbox"/>	Name	Type
<input type="checkbox"/>	FCUBSJMSModule	JMSSystemResource
<input type="checkbox"/>	JMS_Module	System
<input type="checkbox"/>	MDB_MODULE	System

7.2 Create Foreign Server

This topic provides systematic instructions to create the Foreign server.

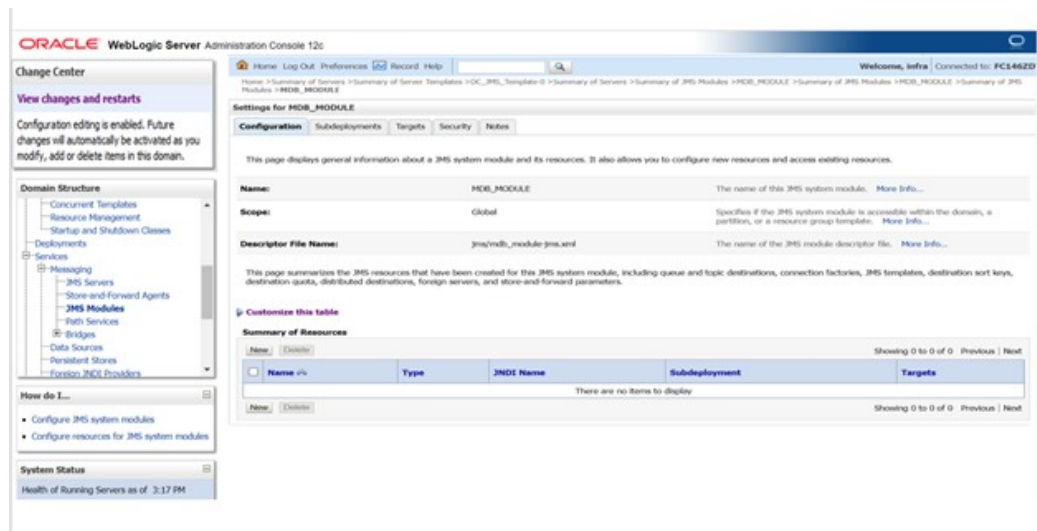
1. In **MDB_MODULE**, click the **Configuration** tab, and then click **New**.

Figure 7-5 Settings for MDB_MODULE



Create a New JMS System Module Resource screen displays to choose the type of resources.

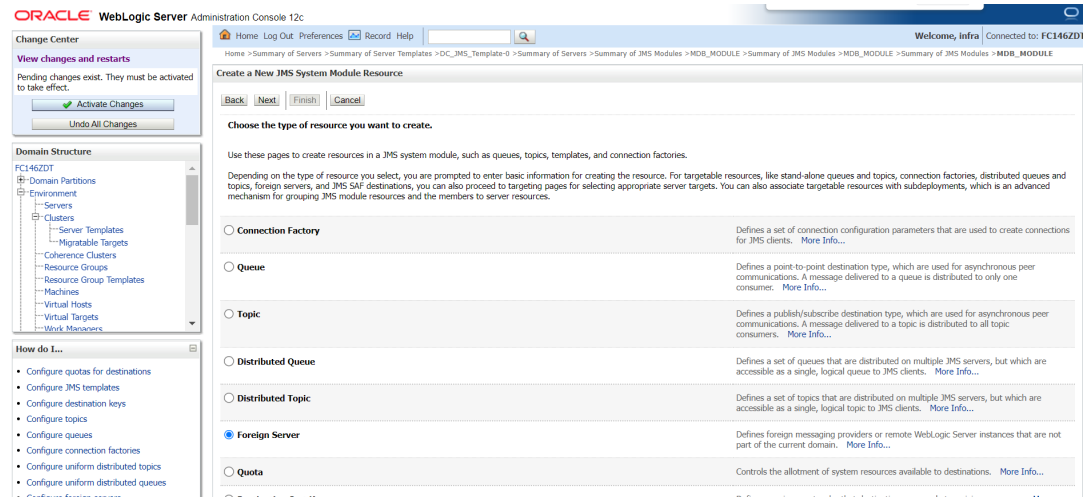
Figure 7-6 Create a New JMS System Module Resource



2. Select the **Foreign Server** resource, and click **Next**.

Create a New JMS System Module Resource screen displays to define foreign server properties.

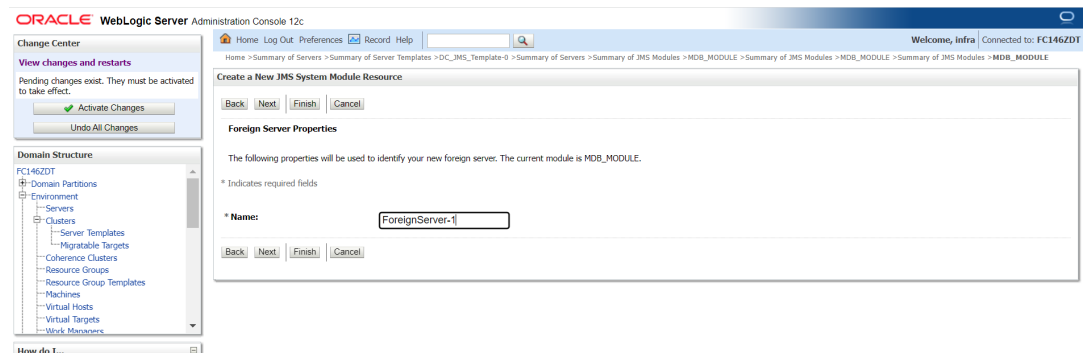
Figure 7-7 Create a New JMS System Module Resource



3. Enter **Name** of the foreign server, and then click **Next**.

The **Create a New JMS System Module Resource** screen displays to target foreign server module.

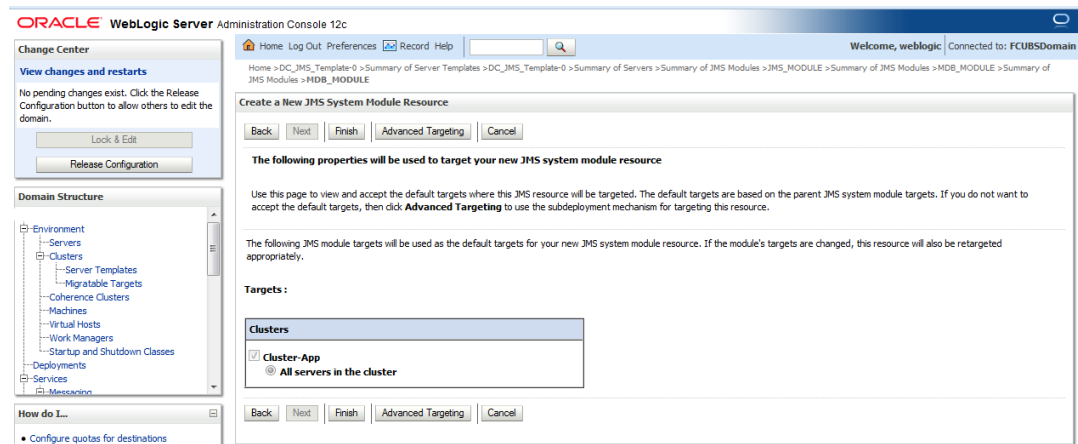
Figure 7-8 Create a New JMS System Module Resource



4. Click the **Advanced Targeting** tab.

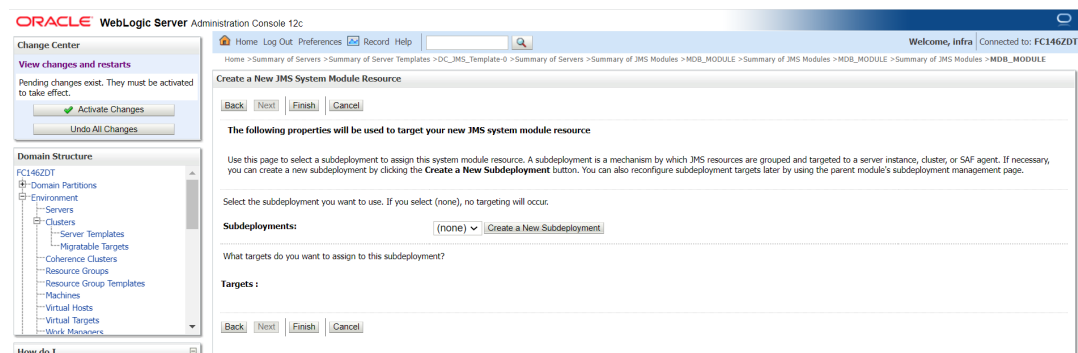
The **Create a New JMS System Module Resource** screen displays to select sub deployment target.

Figure 7-9 Create a New JMS System Module Resource



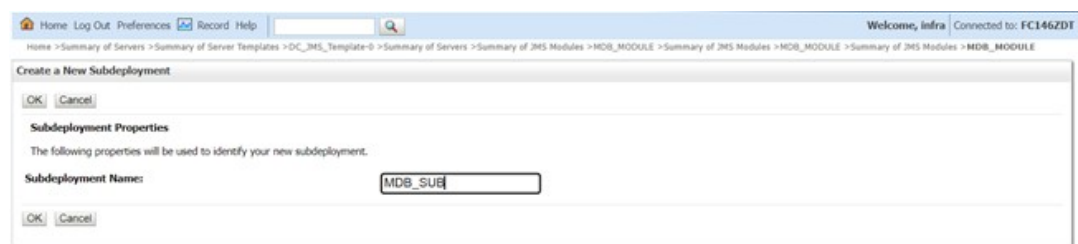
- Click the **Create a New Subdeployment** tab.
The **Create a New Subdeployment** screen displays.

Figure 7-10 Create a New Subdeployment



- Enter **Subdeployment Name** as **MDB_SUB**, and click **OK**.
The **Create a New JMS System Module Resource** screen displays to target **MDB_SUB** module.

Figure 7-11 Create a New JMS System Module Resource



7. Select **Targets** as a **Cluster-App**, and then click **Finish**.

The foreign server is created.

Figure 7-12 Settings for MDB_Module - Message

Settings for MDB_MODULE

Configuration Subdeployments Targets Security Notes

This page displays general information about a JMS system module and its resources. It also allows you to configure new resources and access existing resources.

Name: MDB_MODULE The name of this JMS system module. [More Info...](#)

Scope: Global Specifies if the JMS system module is accessible within the domain, a partition resource group template. [More Info...](#)

Descriptor File Name: jms/mdb_module-jms.xml The name of the JMS module descriptor file. [More Info...](#)

This page summarizes the JMS resources that have been created for this JMS system module, including queue and topic destinations, connection factories, JMS templates, destination sort keys, destination quota, destinations, foreign servers, and store-and-forward parameters.

[Customize this table](#)

Summary of Resources

Name	Type	JNDI Name	Subdeployment	Targets
ForeignServer-1	Foreign Server	N/A	MDB_SUB	Cluster-App

7.3 Configure Foreign Server

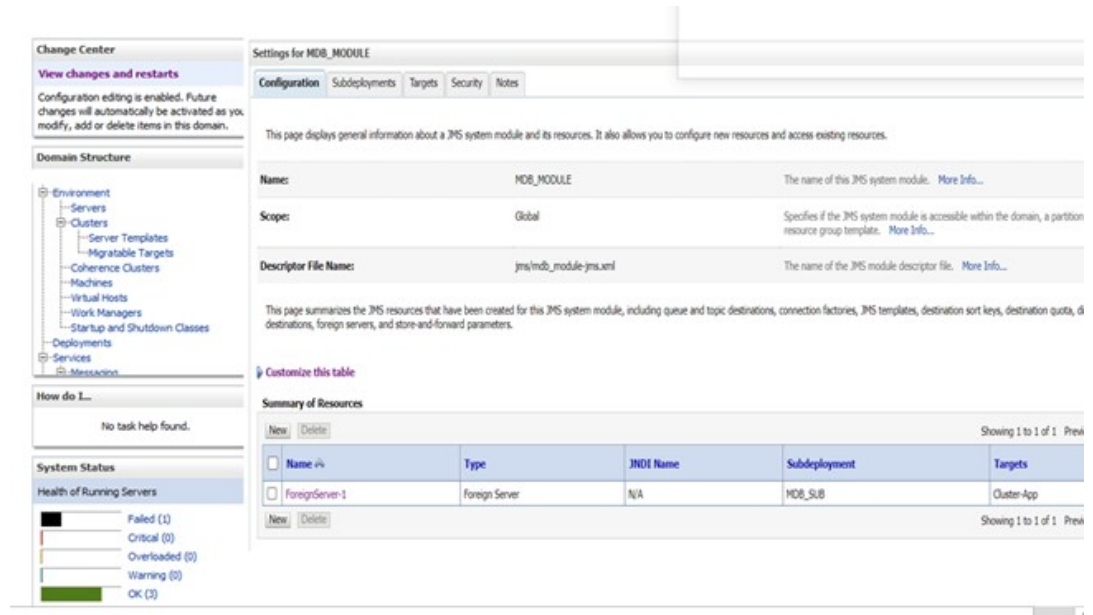
This topic explains systematic instructions to configure the foreign server.

1. In the **Settings for MDB_MODULE** screen, click **ForeignServer-1** in the **Summary of Resources** table.

Figure 7-13 Settings for MDB_MODULE

The **Settings for ForeignServer-1** screen displays.

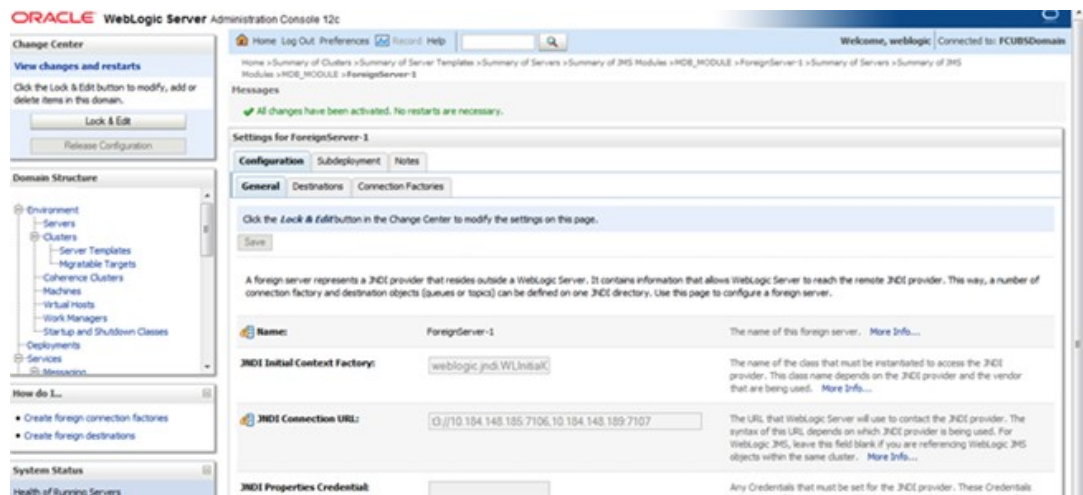
Figure 7-14 Settings for ForeignServer-1



- Under the **Configuration- General** tab, enter the **JNDI Connection URL** as Cluster URL (JMS Managed Servers), and then click **Save**.

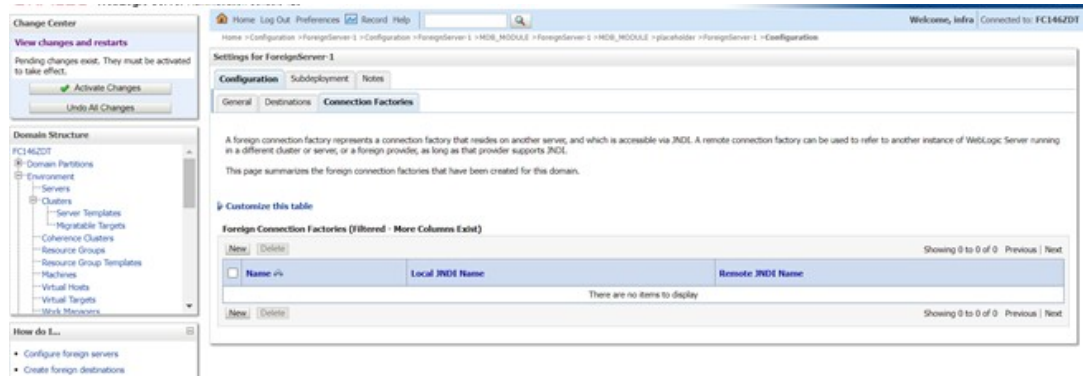
The Cluster URL get saved.

Figure 7-15 Configuration- General



- Click the **Configuration- Connection Factories** tab, and then click **New**.
Create a New Foreign JMS Connection Factory screen displays.

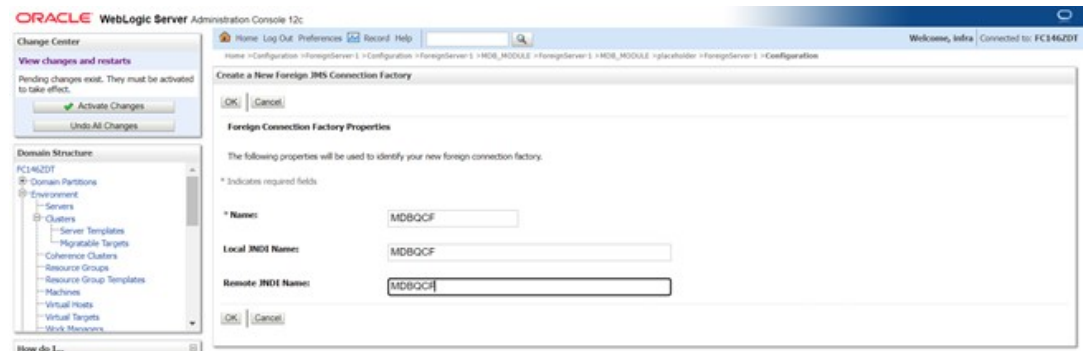
Figure 7-16 Create a New Foreign JMS Connection Factory



4. Enter the fields **Name**, **Local JNDI Name** and **Remote JNDI Name** as a **MDBQCF**, and click **OK** to create the foreign connection factory.

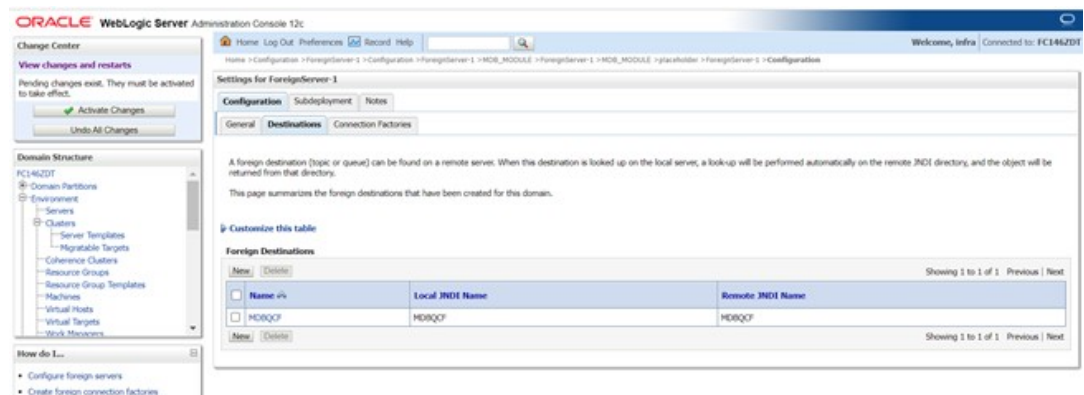
MDBQCF foreign connection factory is created, and displays in **Foreign Connection Factories** table.

Figure 7-17 Foreign Connection Factories



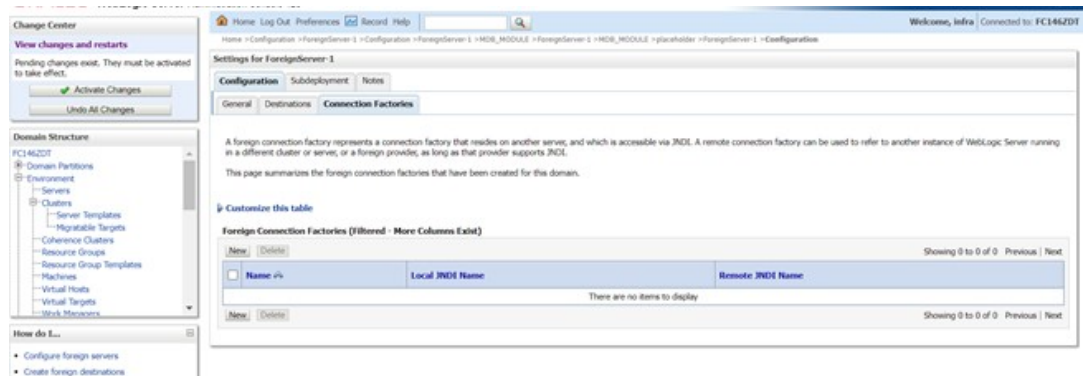
5. Click the **Configuration- Destination** tab.
- The **Foreign Destinations** tab opens under the **Settings for ForeignServer-1** screen.

Figure 7-18 Foreign Destinations



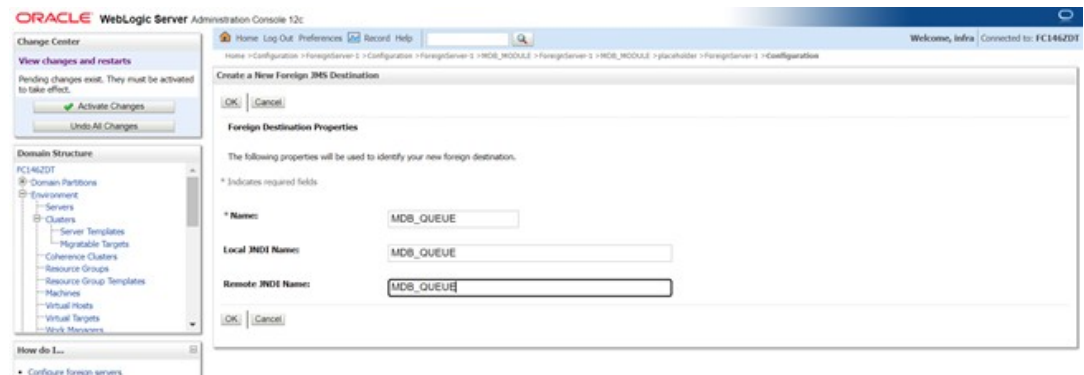
6. Click **New** to create the Queue.
- The **Create a New Foreign JMS Destination** screen displays.

Figure 7-19 Create a New Foreign JMS Destination



7. Enter the Queue name fields as **MDB_QUEUE**, and then click **OK**.
MDB_QUEUE is created, and displays under the **Foreign Destinations** table.

Figure 7-20 Settings for ForeignServer-1



8. Similarly Create **MDB_QUEUE_RESPONSE**, **MDB_QUEUE_DLQ**.
9. After creating all the resources, Restart the Admin and Managed Servers.

8

Application Deployment

This topic explains systematic instructions to deploy an application.

1. Deploy the EAR with **Target** as **Cluster-App**.

Figure 8-1 Settings for GWMDB

2. If JMS is configured properly, the **Health** column should show **OK** in the **Deployments** table, otherwise, the warning will be displayed.

Figure 8-2 Summary of Deployments

9

Frequently Asked Questions

9.1 Application and JMS Cluster Deployed on Same Cluster

This topic describes the process of deploying Application and JMS clusters on the same cluster.

Application and JMS Module can be deployed on the same cluster. In this topic both are on different clusters, however, it is possible to deploy on one cluster. When it is deployed on the same cluster then -

1. Foreign Server Creation is not required.
2. Targets should be given accordingly during the SubDeployment Creation.

9.2 Restart of Managed Servers

This topic explains systematic instructions to start managed servers.

1. Stop all managed servers.
2. Start only the JMS Cluster-managed servers.
3. After starting the MS Cluster-managed servers, start the App Cluster managed servers.

Even after proper JMS setup when the managed servers are restarted, the health of the application is **Warning**.

Figure 9-1 Summary of Deployments Warning

4. Force stop the application.
5. Again start the application.

The system resolves the **Warning**, and the health of the deployment is changed to **OK**.

9.3 Secure File Store Data

To properly secure file store data, set appropriate directory permissions on all file store directories. If data encryption is required, use appropriate third-party encryption software.

9.4 t3s Protocol

To secure the communication with the JMS Server use the t3s protocol instead of t3. This is applicable when connecting to the connection factory to send or receive messages, and also in the JNDI Connection URL provided in foreign server creation.

**Note:**

When using the t3s protocol **SSL Listen Port Enabled** should be checked in the server template, and the port number used in the URL should be a secure port.

9.5 Test the Deployment

This topic explains systematic instructions to test the deployment.

1. Under the **Domain Structure** left panel, navigate to the **Services** drop-down option, and click **Messaging**, and then **JMS Modules**.

The **Summary of JMS Module** screen displays.

Figure 9-2 Summary of JMS Module

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

- Environment
 - Servers
 - Clusters
 - Virtual Hosts
 - Migratable Targets
 - Coherence Servers
 - Coherence Clusters
 - Machines
 - Work Managers
 - Startup and Shutdown Classes
- Deployments
- Services
 - Messaging

How do I...
 • Manage distributed queue messages
 • Configure uniform distributed queues

Settings for MDB_QUEUE

Configuration Security **Monitoring** Subdeployment Notes

Use this page to view statistics about all of the members of a uniform distributed queue. Click on the individual member destination name in the table below to manage the messages on that destination.

To access the uniform distributed queue's message management page, select the check box next to its name, and then click the **Show Messages** button.

Customize this table

Destinations (Filtered - More Columns Exist)

Show Messages Showing 1 to 2 of 2 Previous Next

Name	Consumers Current	Consumers High	Consumers Total
JMS_MODULE:JMSServer-1@MDB_QUEUE	64	64	64
JMS_MODULE:JMSServer-2@MDB_QUEUE	64	64	64

Show Messages Showing 1 to 2 of 2 Previous Next

2. Navigate into **JMS_MODULE**, and then **MDB_QUEUE**.

The **Settings for MDB_QUEUE** screen displays.

Figure 9-3 Settings for MDB_QUEUE

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

Domain Structure

- Environment
 - Servers
 - Clusters
 - Virtual Hosts
 - Migratable Targets
 - Coherence Servers
 - Coherence Clusters
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 - Work Managers
 - Startup and Shutdown Classes
- Deployments
- Services
 - Messaging

How do I...
 • Manage queue messages
 • Manage distributed queue messages
 • Manage topic durable subscribers

System Status

Summary of JMS Messages

This page summarizes the available messages for a stand-alone queue, a distributed queue, or a topic durable subscriber. Use this page to view message details, create new messages, delete selected messages, move messages to another destination, export message contents in XML format to another file, import XML formatted message contents from another file, or drain all the messages from a destination.

Click on a message to view its contents.

Message Selector: **Apply**

Customize this table

JMS Messages (Filtered - More Columns Exist)

New Delete Move Import Export Showing 1 to 0 of 0 Previous Next

ID	Corrid	Time Stamp	State String	JMS Delivery Mode	Message Size
There are no items to display					

New Delete Move Import Export Showing 1 to 0 of 0 Previous Next

3. Click the **MONITORING** tab.

The **Settings for MDB_QUEUE** screen displays with **Destinations** table.

Figure 9-4 Settings for MDB_QUEUE

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

- Environment
 - Servers
 - Clusters
 - Virtual Hosts
 - Migratable Targets
 - Coherence Servers
 - Coherence Clusters
 - Machines
 - Work Managers
 - Startup and Shutdown Classes
 - Deployments
 - Services
 - Messaging

How do I...?

- Manage queue messages
- Manage distributed queue messages
- Manage topic durable subscribers

System Status

Health of Running Servers

- Failed (0)
- Critical (0)
- Overloaded (0)

Home > Configuration > MDB_QUEUE > JMS Modules > JMS_MODULE > MDB_QUEUE > Summary of JMS Messages > JMS Modules > JMS_MODULE > MDB_QUEUE > Summary of JMS Messages

Produce JMS Message

OK Cancel

JMS Message

The following properties will be used to produce a JMS message.

Type:

Correlation ID:

Expiration:

Priority:

Delivery Mode:

Delivery Time:

Redelivery Limit:

Body:

4. Select any one server, and click **Show Messages**.
The **Summary of JMS Messages** screen displays.

Figure 9-5 Summary of JMS Messages

Home > Configuration > MDB_QUEUE > JMS Modules > JMS_MODULE > MDB_QUEUE > Summary of JMS Messages > JMS Modules > JMS_MODULE > MDB_QUEUE > Summary of JMS Messages

Messages

✓ JMS message sent successfully.

Summary of JMS Messages

This page summarizes the available messages for a stand-alone queue, a distributed queue, or a topic durable subscriber. Use this page to view message details, create new messages, delete selected messages, move messages to another destination, export message contents in XML format to another file, import XML formatted message contents from another file, or drain all the messages from a destination.

Click on a message to view its contents.

Message Selector: Apply

Customize this table

JMS Messages (Filtered - More Columns Exist)

New Delete Move Import Export

Showing 1 to 1 of 1 Previous Next

ID	CorrId	Time Stamp	State String	JMS Delivery Mode	Message Size
ID=257876.141124889162.0		Fri Sep 19 17:11:29 IST 2014	receive transaction	Persistent	472

New Delete Move Import Export

Showing 1 to 1 of 1 Previous Next

5. Click **New**.
The **Produce JMS Message** screen displays.

Figure 9-6 Produce JMS Message

6. Enter the message in the field of **Body**, and click **OK**.
The message is sent, and displays under the **JMS Messages** table.

Figure 9-7 Summary of JMS Messages

ID	CorrelId	Time Stamp	State String	JMS Delivery Mode	Message Size
ID=257876.141124889162.0		Fri Sep 19 17:11:29 IST 2014	receive transaction	Persistent	472

7. Verify at the backend or in the MDB log if the message is processed successfully.

9.6 Increase maximum number of message-driven bean threads

The default number of consumers for an MDB is 16. To increase or restrict this number create Custom Work Manager with a Max Threads Constraint in conjunction with MDBs.

The solution is to create a work manager with a max threads constraint and assign the proxy services dispatch policy to this work manager. Steps to create a custom work manager -

1. Modify the MDB deployment descriptor, and redeploy the EAR
 2. Create a Custom Work manager, and add constraints to limit the number of the max MDB threads
- [Modify weblogic-ejb-jar.xml](#)
This topic explains systematic instructions to modify the **weblogic-ejb-jar.xml**.

- [Create Work Manager](#)
This topic explains systematic instructions to create the work manager.

9.6.1 Modify weblogic-ejb-jar.xml

This topic explains systematic instructions to modify the **weblogic-ejb-jar.xml**.

1. Add **<dispatch-policy>GWMDBWM</dispatch-policy>** line to the **weblogic-ejb-jar.xml** of the MDB EAR.

Figure 9-8 weblogic-ejb-jar.xml

2. Remove if any of the below tags are present in **weblogic-ejb-jar.xml**.
 - **max-beans-in-free-pool**
 - **initial-beans-in-free-pool**
3. Save the EAR file, and redeploy the EAR file.

9.6.2 Create Work Manager

This topic explains systematic instructions to create the work manager.

Create a new work manager with the name GWMDBWM (as mentioned in the property file) by below steps -

1. Log in to the WebLogic console, and navigate to the **Domain Structure**, and then **Environment**, and then **Work Managers**.

The **Create a New Work Manager Component** screen displays.

Figure 9-9 Create a New Work Manager Component

2. Select **Work Manager**, and then click **Next**.

The **Work Manager Properties** screen displays.

Figure 9-10 Work Manager Properties

3. Enter the field **Name** as **GWMDBWM** that is mentioned in the property file, and then click **Next**.

The **Select deployment targets** screen displays.

Figure 9-11 Select deployment targets

4. Select **Cluster-App** in available targets, and click **Finish**.

The **Summary of Work Managers** screen displays.

Figure 9-12 Summary of Work Managers

5. Click **New** in the **Global Work Managers, Request Classes and Constraints** table.

The **Create a New Work Manager Component** screen displays.

Figure 9-13 Create a New Work Manager Component

6. Select **Maximum Threads Constraints**, and then click **Next**.
The **Maximum Threads Constraints Properties** screen displays.

Figure 9-14 Maximum Threads Constraints Properties

7. Enter the desired thread count in the **Count** field, and then click **Next**.
The **Select deployment targets** screen displays.

Figure 9-15 Select deployment targets

8. Select **Cluster-App** target, and then click **Finish**.
The **Summary of Work Managers** screen displays.

Figure 9-16 Summary of Work Managers

9. Navigate to newly created Work Manager **GWMDBWM**.
The **Settings for GWMDBWM** screen displays.

Figure 9-17 Settings for GWMDBWM

10. Assign the **Maximum Threads Constraint** field to newly created **MaxThreadsConstraint-0**, and click **Save**.
The **Settings for GWMDBWM** screen displays.

Figure 9-18 Settings for GWMDBWM - Maximum Threads Constraint

11. Restart managed servers, and notice the change in the number of consumers for the queues.

9.7 High Availability of Servers

This topic describes the high availability of servers.

1. **Application Server** - MDB_MODULE and the GWEJB EAR are deployed in a cluster. The cluster has 4 managed servers, if any server goes down then the messages are processed by other managed servers.
2. **JMS Provider** - JMS is deployed on 2 managed servers, JMSServer1 and JMSServer2, if anyone goes down others will handle the messages.
3. **FileStore** - Filestore is a cluster file system or database where if one node goes down then the other will handle the requests.
4. **DB Server** - The database is installed in RAC mode where it has more than 1 node, if a node goes down then other nodes will handle messages.

9.8 Setup for Scheduler/Notifications

The above topics can be used for setting up JMS for scheduler/notifications but additional queues and connection factory needs to be created.

9.9 Other Modules uses JMS Queue's

JMS is used by following modules, relevant queues and factories need to be created additionally.

1. EMS for swift messages
2. GI for upload
3. ELCM
4. BIP

9.10 References

Refer to the Resource To Be Created document for more details.

Glossary

Index