

Configuring JMS on Weblogic Server 12c
Oracle FLEXCUBE Universal Banking
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1. Introduction

1.1 Purpose

The purpose of this document is to explain the steps required for JMS Configuration in cluster mode for

- 1) FCUBS 12.1
- 2) WebLogic Server 12.1.3.0.0

1.2 Introduction

Below is brief description on major components in Weblogic JMS Server architecture

JMS Server

JMS server acts as management container for JMS queue and topic resources defined within JMS modules that are targeted to specific that JMS server. A JMS server's main responsibility is to maintain persistent storage for these resources, maintain the state of durable subscriber and 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 configuration. JMS modules are globally available for targeting to servers and clusters configured in the domain and therefore are available to all the applications deployed on the same targeted. 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. When you create a JMS resource you need to choose one Subdeployment.

JMS Resources

- 1) **Queue** defines a point-to-point destination type, which are used for asynchronous peer communications. A message delivered to queue is distributed to only one customer.
- 2) **Topic** defines a publish/subscribe destination type, which are used for asynchronous peer communication. A message delivered to topic is distributed to all topic consumers
- 3) **Distributed queue** defines a set of queues that are distributed on multiple JMS servers, but are accessible as a single, logical queue to JMS clients
- 4) **Distributed topic** defines a set of topics that are distributed on multiple JMS servers, but which as accessible as a single, logical topic to JMS clients.
- 5) **Uniform Distributed Queue:** 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 type of mechanism to store the message

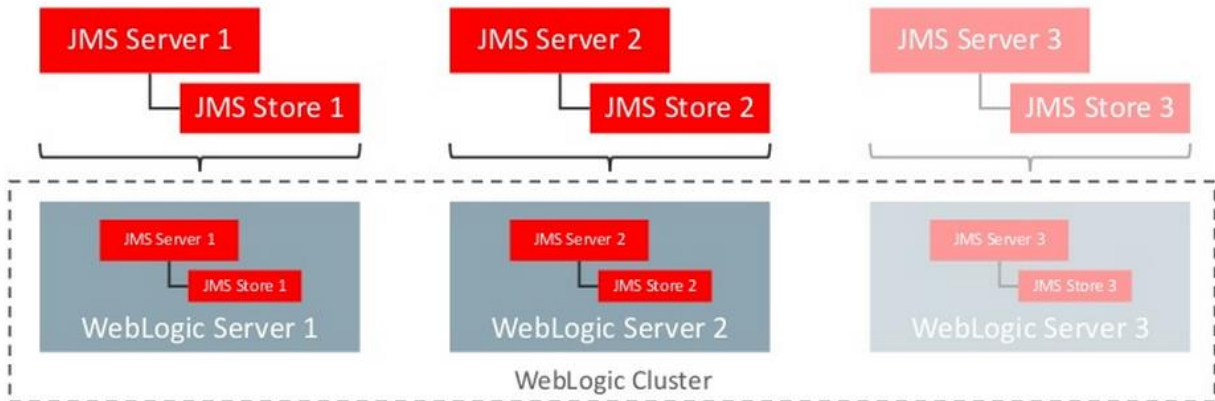
- 1) File based persistence store → Message is stored in a file
- 2) DB based persistence store → Message is stored in Database.

1.3 Weblogic 12c New Features

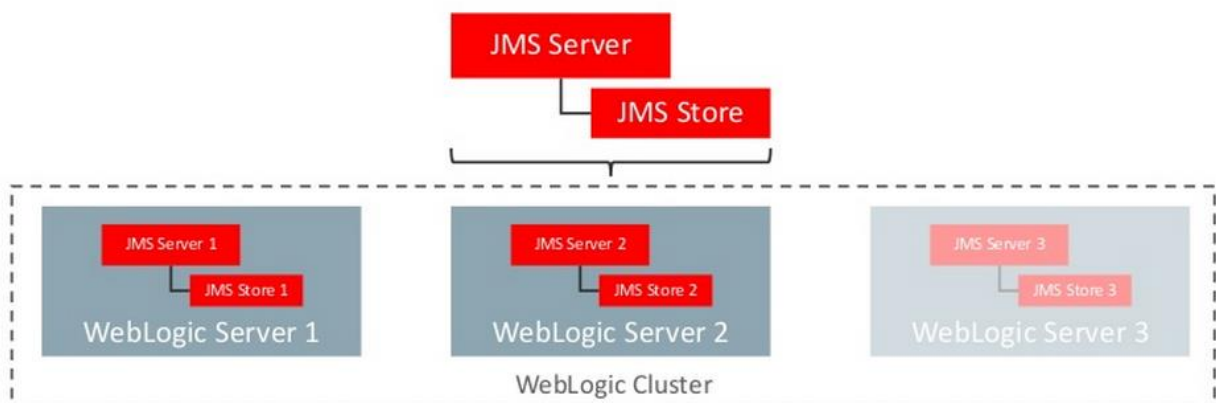
Before weblogic 12c JMS Servers and stores are targeted to individual WLS Servers. Scaling up requires configure the JMS server, the store and target it to new WLS Server

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

Architecture previous to 12c

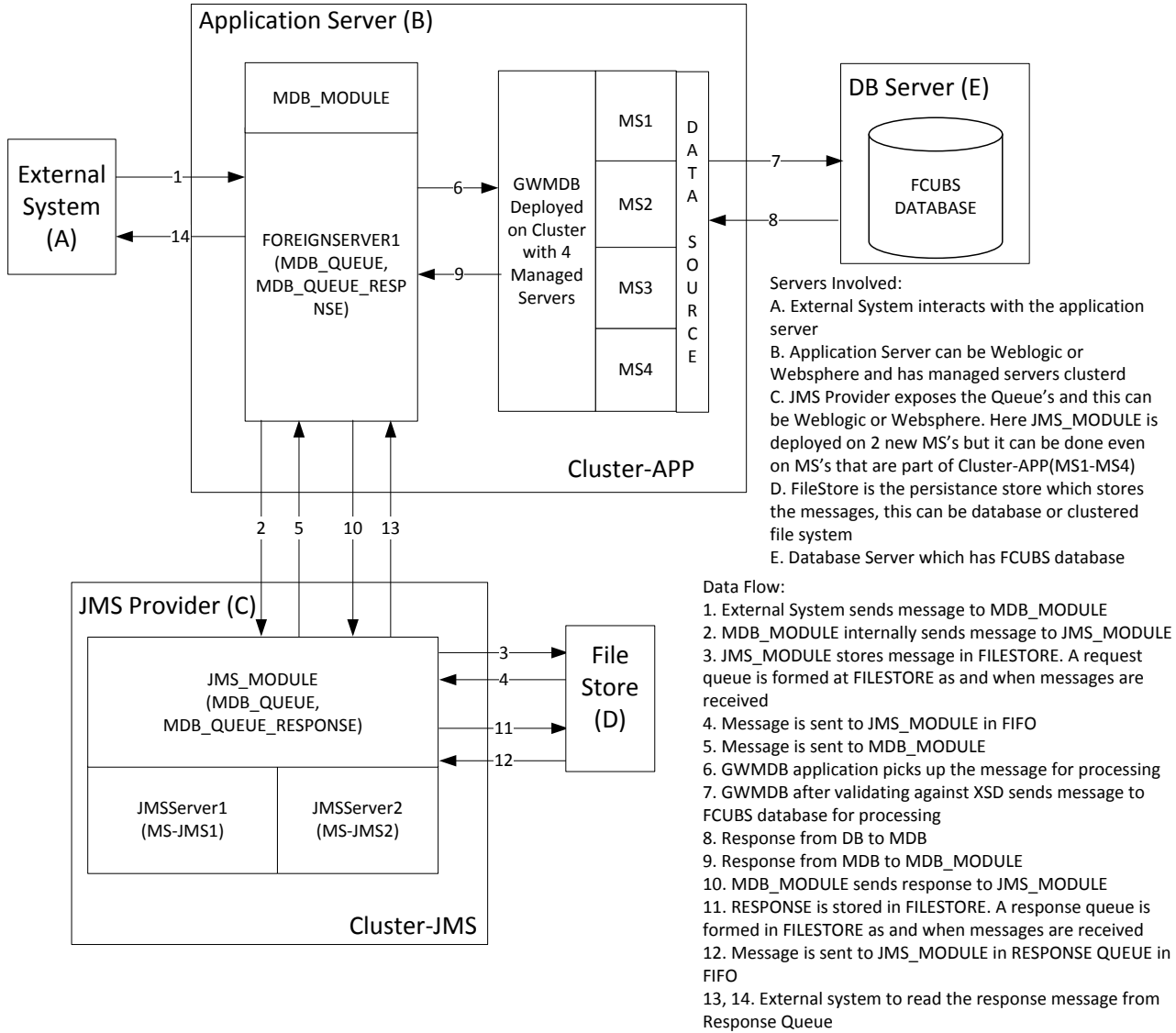


Architecture in 12c



1.4 Components Diagram & Data Flow

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



2. Pre-Requisites

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

2.1 Machines

MAC-1 & MAC-2

ORACLE WebLogic Server Administration Console 12c

Home > 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

| Name | Type |
|-------|---------|
| MAC-1 | Machine |
| MAC-2 | Machine |

2.2 Dynamic Clusters and Managed Servers

Ensure Dynamic cluster for FCUBS (4 Managed Servers) and Dynamic cluster for JMS Deployment (2 Managed Servers)

ORACLE WebLogic Server Administration Console 12c

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 Servers > 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.

| 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 |

ORACLE WebLogic Server Administration Console 12c

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

Home > Summary of Server Templates > 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 Servers

Configuration Control

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.

New Clone Delete Showing 1 to 7 of 7 Previous | Next

| 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 |

New Clone Delete Showing 1 to 7 of 7 Previous | Next

2.3 DataSource

Ensure that DataSource required for the MDB ear is created with Target as Cluster-App

ORACLE WebLogic Server Administration Console

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

Home > JMS Modules > JMS_MODULE > MDB_QUEUE > Summary of JMS Messages > JMS Modules > JMS_MODULE > MDB_QUEUE > Summary of JMS Messages > Summary of Deployments > Summary of JDBC Data Sources

Summary of JDBC Data Sources

Configuration Monitoring

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)

New Delete Showing 1 to 3 of 3 Previous | Next

| Name | Type | JNDI Name | Targets |
|---------------|---------|---------------|-------------|
| FLEXTST.WORLD | Generic | FLEXTST.WORLD | Cluster-App |

2.4 Shared Folder

A shared folder for File Store Creation is required and this folder should be accessible across both the servers (eg, NFS mount).

3. JMS Configuration

3.1 Persistence Store Creation

1) Navigate to Services → Persistent Stores → New → Create FileStore

The screenshot shows the Oracle WebLogic Server Administration Console. The left sidebar contains a 'Domain Structure' tree with 'Persistent Stores' highlighted. The main content area displays the 'Summary of Persistent Stores' page. A message at the top states 'Create operation cancelled - no file store created.' Below this, a table titled 'Persistent Stores' is shown with columns for Name, Type, and Target. The table is currently empty, displaying 'There are no items to display'.

This screenshot shows the same Oracle WebLogic Server Administration Console interface. The 'New' dropdown menu in the 'Persistent Stores' table is open, showing three options: 'Create FileStore', 'Create JDBCStore', and 'Create ReplicatedStore (Exalogic)'. A mouse cursor is pointing at the 'Create FileStore' option. The rest of the page, including the 'Messages' section and the empty table, remains the same as in the previous screenshot.

2) Select **Cluster-JMS** under target dropdown and Click on OK

The screenshot shows the Oracle WebLogic Server Administration Console interface. On the left, there is a 'Change Center' panel with 'View changes and restarts' and 'Release Configuration' buttons. Below it is the 'Domain Structure' tree, and at the bottom, 'How do I...' links for 'Create File Stores' and 'Monitor persistent stores'. The main area displays the breadcrumb path: 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. The 'Create a New File Store' dialog box is open, showing 'File Store Properties'. The 'Name' field is 'FileStore-1', the 'Target' dropdown is set to 'Cluster-JMS', and the 'Directory' field is '/scratch/work_area/JMS_FILESTORE'. 'OK' and 'Cancel' buttons are visible at the top and bottom of the dialog.

3) **FileStore-1** is created

The screenshot shows the Oracle WebLogic Server Administration Console after the file store creation. The 'Change Center' panel now shows 'Click the Lock & Edit button to modify, add or delete items in this domain.' with 'Lock & Edit' and 'Release Configuration' buttons. The 'Domain Structure' tree is expanded to show 'Persistent Stores'. The main area displays the breadcrumb path: 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. A green message states: 'All changes have been activated. No restarts are necessary.' Below this is the 'Summary of Persistent Stores' section, which includes a description of persistent stores and a table of the created stores. The table has columns for 'Name', 'Type', and 'Target'. The table shows one entry: 'FileStore-1' of type 'FileStore' with target 'Cluster-JMS'. 'New' and 'Delete' buttons are present above and below the table. The page also shows 'Showing 1 to 1 of 1 Previous | Next'.

| Name | Type | Target |
|-------------|-----------|-------------|
| FileStore-1 | FileStore | Cluster-JMS |

3.2 JMS Server Creation

1) Navigate to Services → Messaging → JMS Servers → Click on **New**

The screenshot shows the Oracle WebLogic Server Administration Console 12c interface. On the left, the 'Domain Structure' tree is expanded to 'Services' > 'Messaging' > 'JMS Servers', with 'JMS Servers' highlighted by a red box. The main content area displays a 'Summary of JMS Servers' page. At the top, a message states 'Create operation cancelled - no JMS Servers created.' Below this, there is a table titled 'JMS Servers (Filtered - More Columns Exist)'. The table has columns for 'Name', 'Persistent Store', 'Target', 'Current Target', and 'Health'. A 'New' button is highlighted with a red box in the table's toolbar. The table currently shows 'There are no items to display'.

2) .Select FileStore-1 , Click **Next**

The screenshot shows the 'Create a New JMS Server' wizard in the Oracle WebLogic Server Administration Console 12c. The wizard is at the 'JMS Server Properties' step. The 'Name' field is set to 'JMSServer-1'. The 'Persistent Store' dropdown menu is open, showing 'FileStore-1' selected, with 'FileStore-1' also highlighted by a red box. The 'Next' button is highlighted with a red box. The 'Back', 'Finish', and 'Cancel' buttons are also visible.

3) Select Target as Cluster-JMS and click on **Finish**

The screenshot shows the 'Create a New JMS Server' wizard in the Oracle WebLogic Server Administration Console 12c. The wizard is at the 'Select targets' step. The 'Target' dropdown menu is open, showing 'Cluster-JMS' selected, with 'Cluster-JMS' also highlighted by a red box. The 'Finish' button is highlighted with a red box. The 'Back', 'Next', and 'Cancel' buttons are also visible.

ORACLE WebLogic Server Administration Console 12c

Welcome, weblogic | Connected to: FCUBSDomain

Home > 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 > Summary of JMS Servers

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: Cluster-JMS

Back Next Finish Cancel

4) JMS-Server-1 is created

ORACLE WebLogic Server Administration Console 12c

Welcome, weblogic | Connected to: FCUBSDomain

Home > 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 > Summary of JMS Servers

Messages

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

Summary of JMS Servers

JMS servers act as management containers for the queues and topics in JMS modules that are targeted to them.

This page summarizes the JMS servers that have been created in the current WebLogic Server domain.

[Customize this table](#)

JMS Servers (Filtered - More Columns Exist)

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

| <input type="checkbox"/> | Name | Persistent Store | Target | Current Target | Health |
|--------------------------|-------------|------------------|-------------|----------------|--------|
| <input type="checkbox"/> | JMSServer-1 | FileStore-1 | Cluster-JMS | Cluster-JMS | |

New Delete Showing 1 to 1 of 1 Previous | Next

How do I...

- Configure JMS servers
- Configure JMS system modules

5) In NFS below filestores can be seen

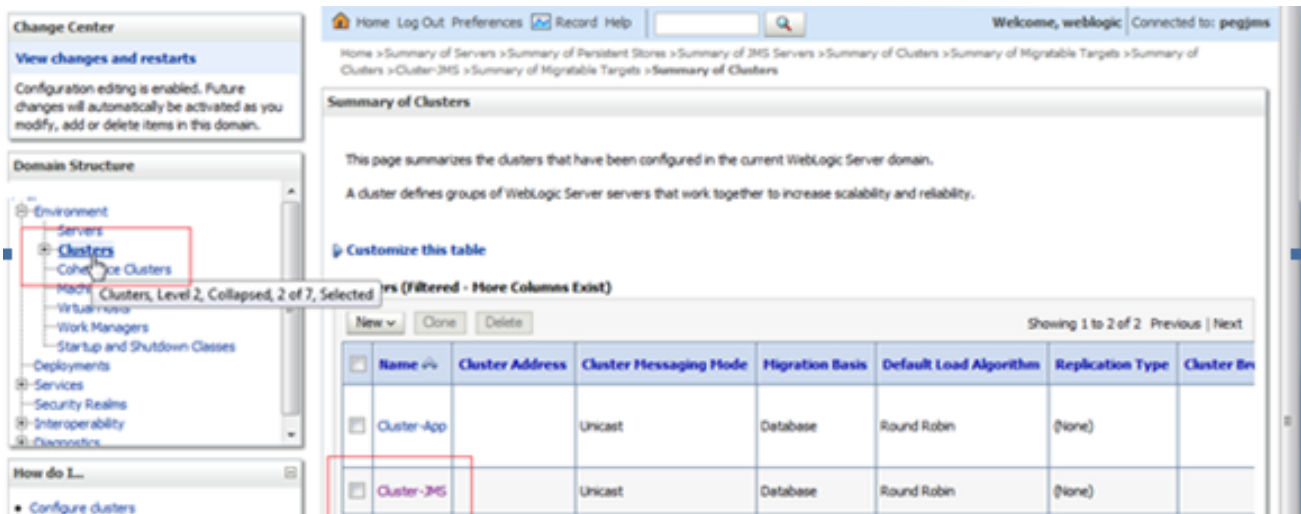
```

[root@          JMS_FILESTORE]# ll
total 2056
-rw-r----- 1 wll2c oinstall 1049088 Jun 16 14:10 FILESTORE-1@DC_JMS_1000000.DAT
-rw-r----- 1 wll2c oinstall 1049088 Jun 16 14:10 FILESTORE-1@DC_JMS_2000000.DAT
[root@          JMS_FILESTORE]# pwd
/scratch/work_area/JMS_FILESTORE
[root@          JMS_FILESTORE]# █

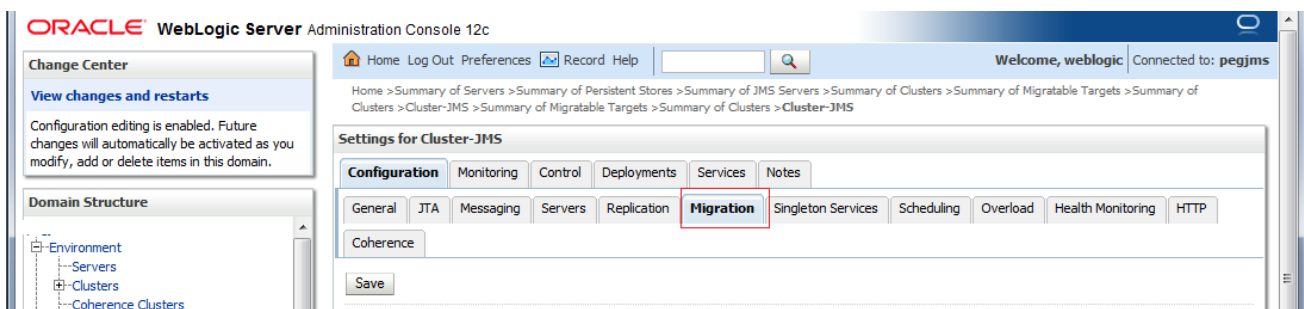
```

3.3 Cluster Configuration for Service Migration

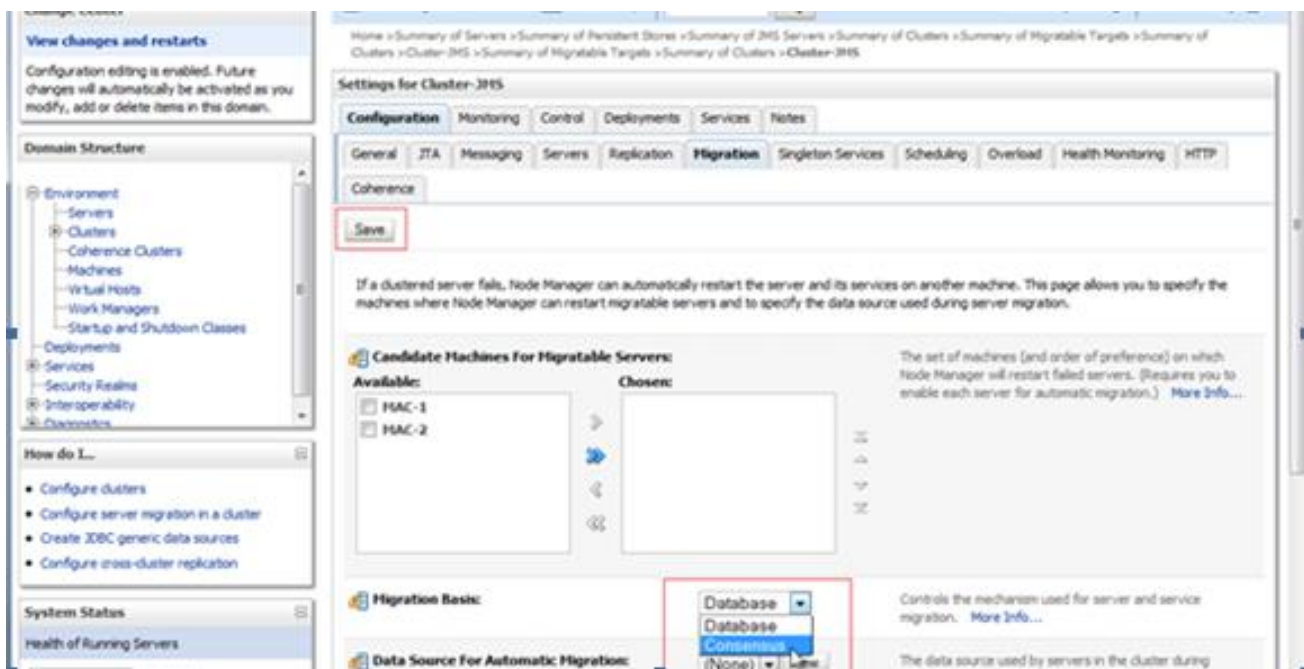
1) Click on Environment → Clusters → Cluster-JMS



2) Click on Migration Tab



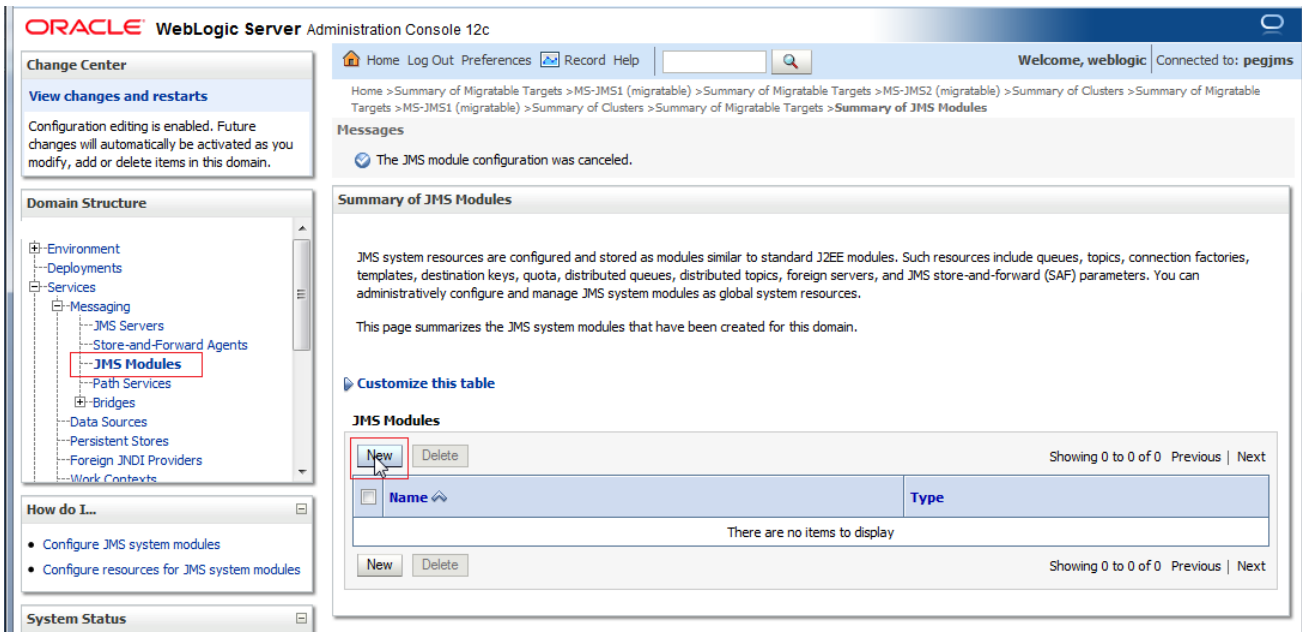
3) Change Migration Basis to Consensus and Click on Save



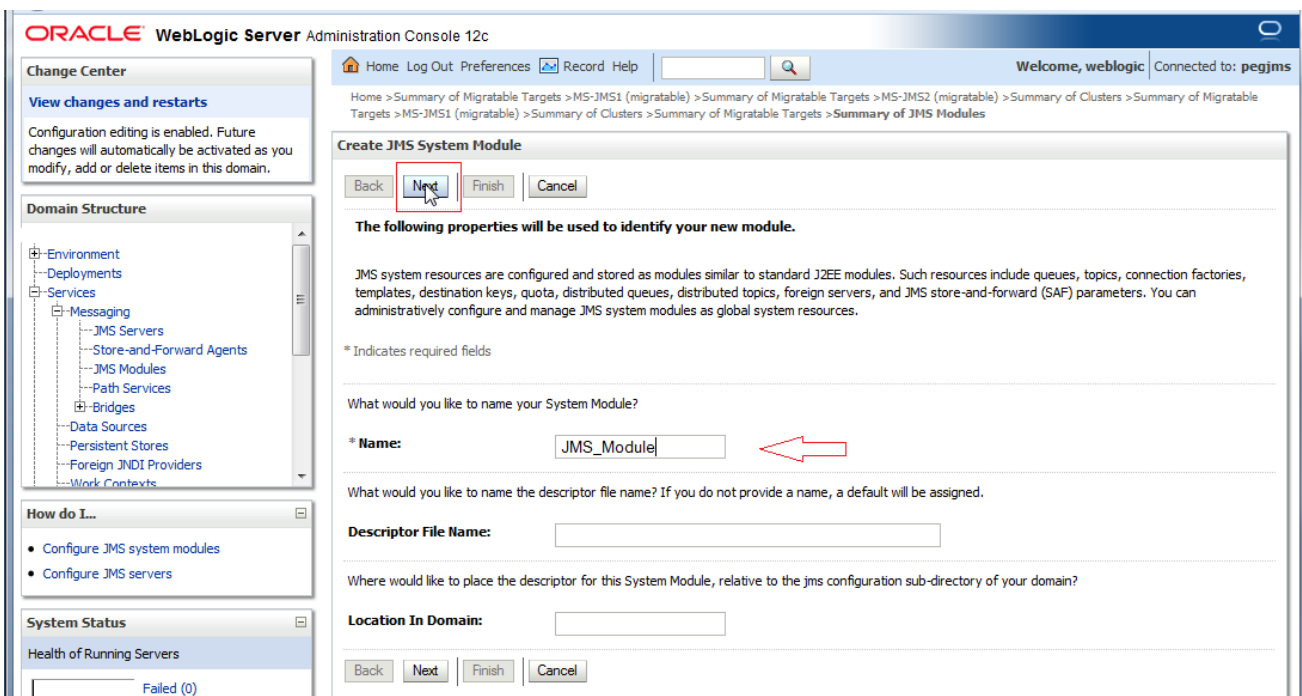
4. JMS Module Creation

4.1 Module Creation

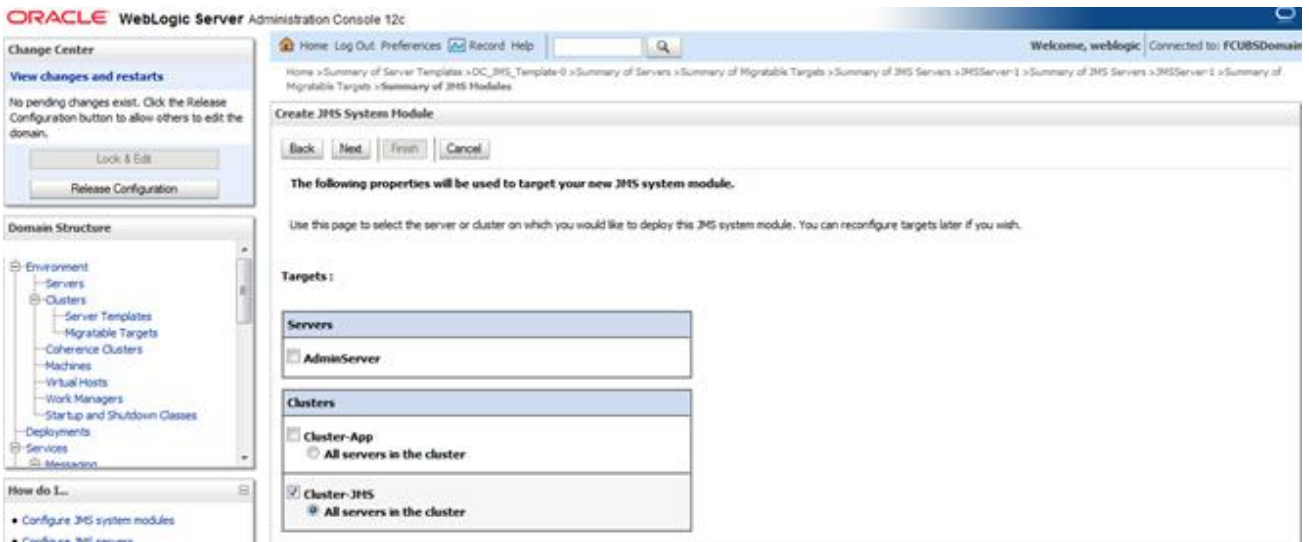
- 1) Navigate to Services → Messaging → JMS Modules and Click on **New**.



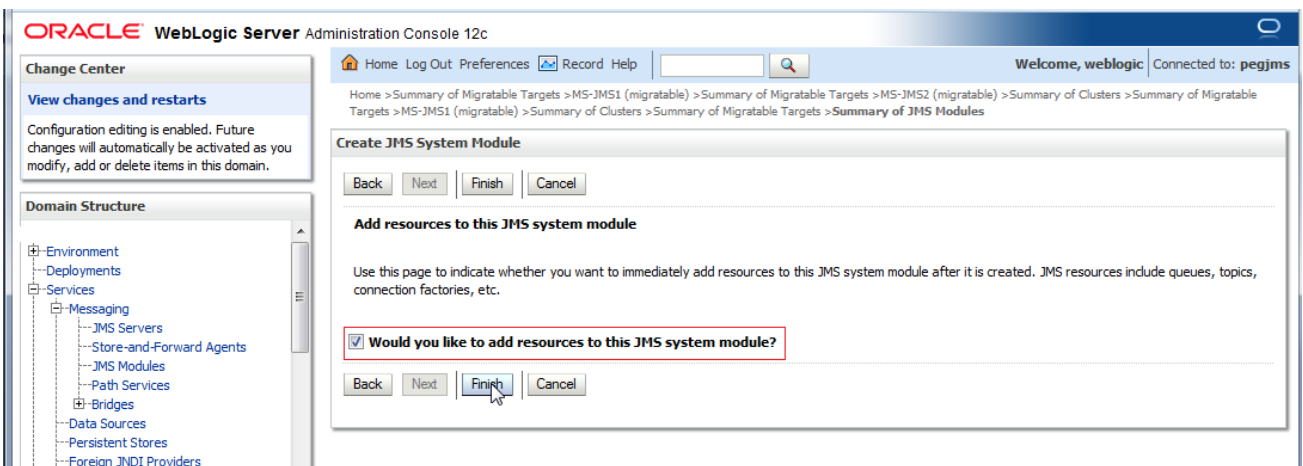
- 2) Enter name as JMS_MODULE and Click on **Next**



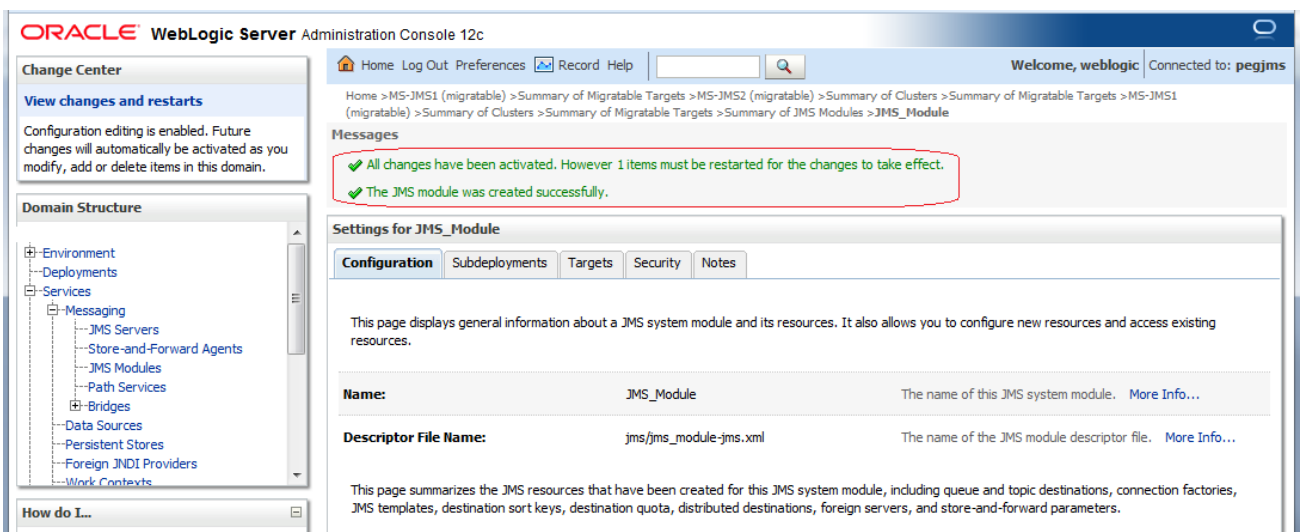
- 3) Select Target as Cluster-JMS and Click on **Next**



4) Select the checkbox and Click on **Finish**



5) JMS_MODULE is created



4.2 Sub Deployment Creation

- 1) In JMS_MODULE, Click on Sub Deployment tab , Click on **New**

ORACLE WebLogic Server Administration Console 12c

Home > MS-JMS1 (migratable) > Summary of Migratable Targets > MS-JMS2 (migratable) > Summary of Clusters > Summary of Migratable Targets > MS-JMS1 (migratable) > Summary of Clusters > Summary of Migratable Targets > Summary of JMS Modules > JMS_Module

Messages

- ✓ All changes have been activated. However 1 items must be restarted for the changes to take effect.
- ✓ The JMS module was created successfully.

Settings for JMS_Module

Configuration **Subdeployments** Targets Security Notes

Subdeployments- Tab

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

New Delete Showing 0 to 0 of 0 Previous | Next

| Name | Type | JNDI Name | Subdeployment | Targets |
|-------------------------------|------|-----------|---------------|---------|
| There are no items to display | | | | |

New Delete Showing 0 to 0 of 0 Previous | Next

WebLogic Server Version: 12.1.3.0.0
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Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

- 2) Enter name as JMS_SUB and click on **Next**

ORACLE WebLogic Server Administration Console 12c

Home > MS-JMS1 (migratable) > Summary of Migratable Targets > MS-JMS2 (migratable) > Summary of Clusters > Summary of Migratable Targets > MS-JMS1 (migratable) > Summary of Clusters > Summary of Migratable Targets > Summary of JMS Modules > JMS_Module

Welcome, weblogic | Connected to: pegjms

Create a New Subdeployment

Back **Next** Finish Cancel

Subdeployment Properties

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

* Indicates required fields

* Subdeployment Name: JMS_SUB

Back Next Finish Cancel

3) Select Target as Cluster-JMS and Click on **Finish**

The screenshot shows the Oracle WebLogic Server Administration Console interface. The main window is titled "Create a New Subdeployment". The breadcrumb path is: Home > DC_JMS_Template-0 > Summary of Servers > Summary of Migratable Targets > Summary of JMS Servers > JMSServer-1 > Summary of Migratable Targets > Summary of JMS Modules > JMS_MODULE. The "Targets" section is active, and the user is prompted to "Please select targets for the Subdeployment". Under the "Clusters" section, "Cluster-JMS" is selected with a checkmark, and "All servers in the cluster" is chosen as the target. The "Servers" and "JMS Servers" sections are also visible but not selected. The "How do I..." sidebar on the left provides instructions: "Configure subdeployments in JMS system modules".

4) Sub-Deployment is created

The screenshot shows the Oracle WebLogic Server Administration Console interface. The main window is titled "Settings for JMS_Module". The breadcrumb path is: Home > MS-JMS1 (migratable) > Summary of Migratable Targets > MS-JMS2 (migratable) > Summary of Clusters > Summary of Migratable Targets > MS-JMS1 (migratable) > Summary of Clusters > Summary of Migratable Targets > Summary of JMS Modules > JMS_Module. The "Messages" section shows two green checkmarks: "All changes have been activated. However 1 items must be restarted for the changes to take effect." and "Subdeployment created successfully.". The "Subdeployments" table is visible, showing one entry: "JMS_SUB" with "Cluster-JMS" as the target. The "How do I..." sidebar on the left provides instructions: "Configure subdeployments in JMS system modules" and "Configure JMS system modules". A red arrow points to the "JMS_SUB" entry in the table.

| Name | Resources | Targets |
|---------|-----------|-------------|
| JMS_SUB | | Cluster-JMS |

4.3 Resource Creation

4.3.1 Queue Creation

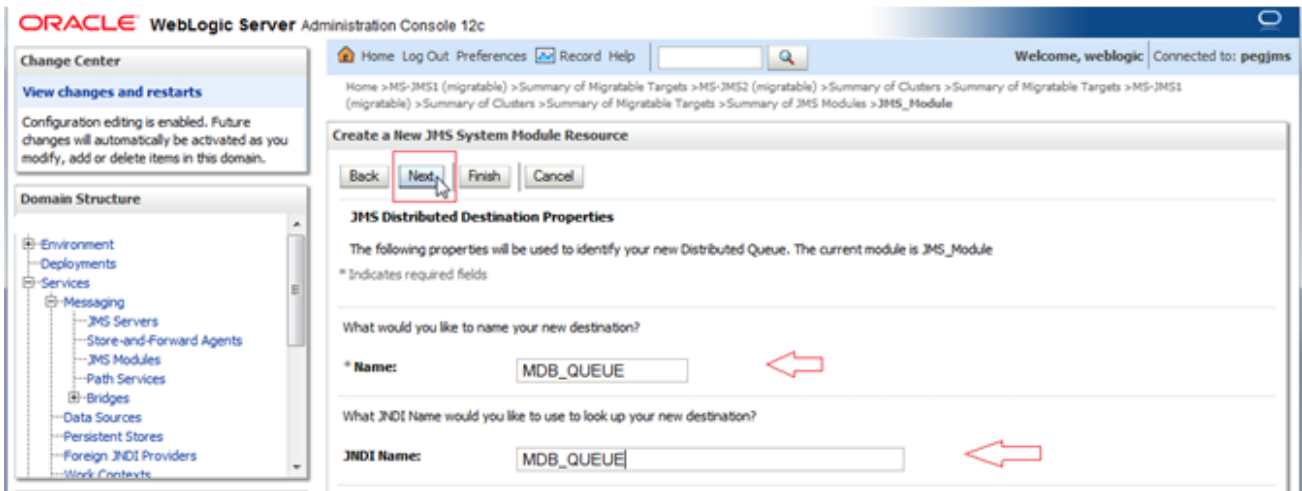
- 1) In JMS_MODULE Click on **New**

The screenshot shows the Oracle WebLogic Server Administration Console. The left sidebar contains the 'Domain Structure' tree with 'JMS Modules' highlighted. The main content area is titled 'Settings for JMS_Module' and has several tabs: 'Configuration', 'Subdeployments', 'Targets', 'Security', and 'Notes'. The 'Configuration' tab is active, displaying general information about the JMS system module, including its name ('JMS_Module') and descriptor file name ('jms/jms_module-jms.xml'). Below this is a 'Summary of Resources' table with columns for Name, Type, JNDI Name, Subdeployment, and Targets. The table is currently empty, and the 'New' button is highlighted with a red box.

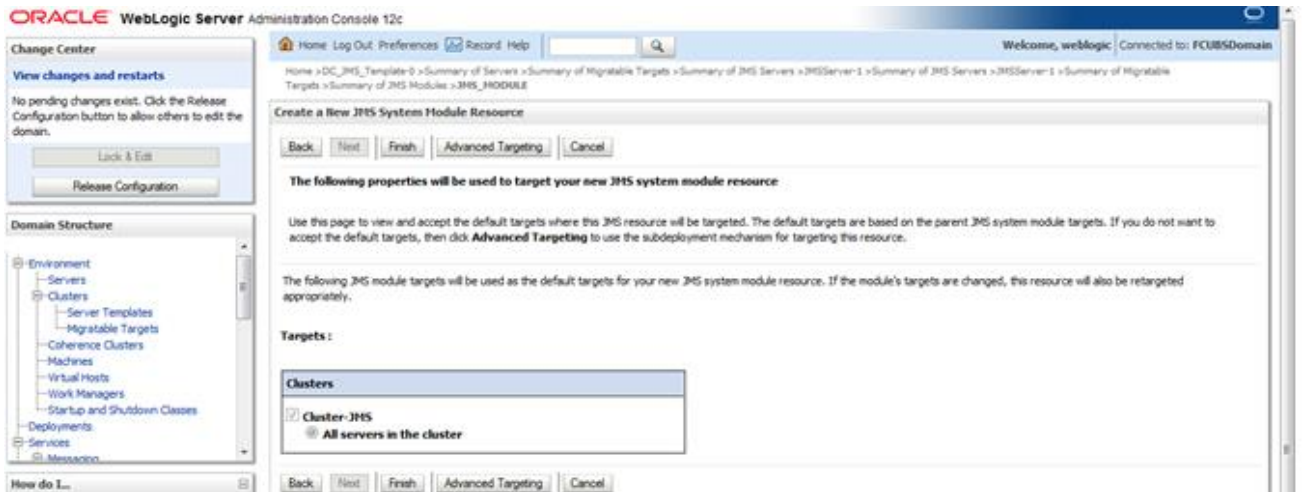
- 2) Select Distributed Queue and Click on **Next**

The screenshot shows the 'Create a New JMS System Module Resource' page in the Oracle WebLogic Server Administration Console. The 'Next' button is highlighted with a red box. Below the buttons, there is a section titled 'Choose the type of resource you want to create.' with three radio button options: 'Connection Factory', 'Queue', and 'Distributed Queue'. The 'Distributed Queue' option is selected, and a red arrow points to it. The 'Distributed Queue' option is described as defining a set of queues distributed on multiple JMS servers.

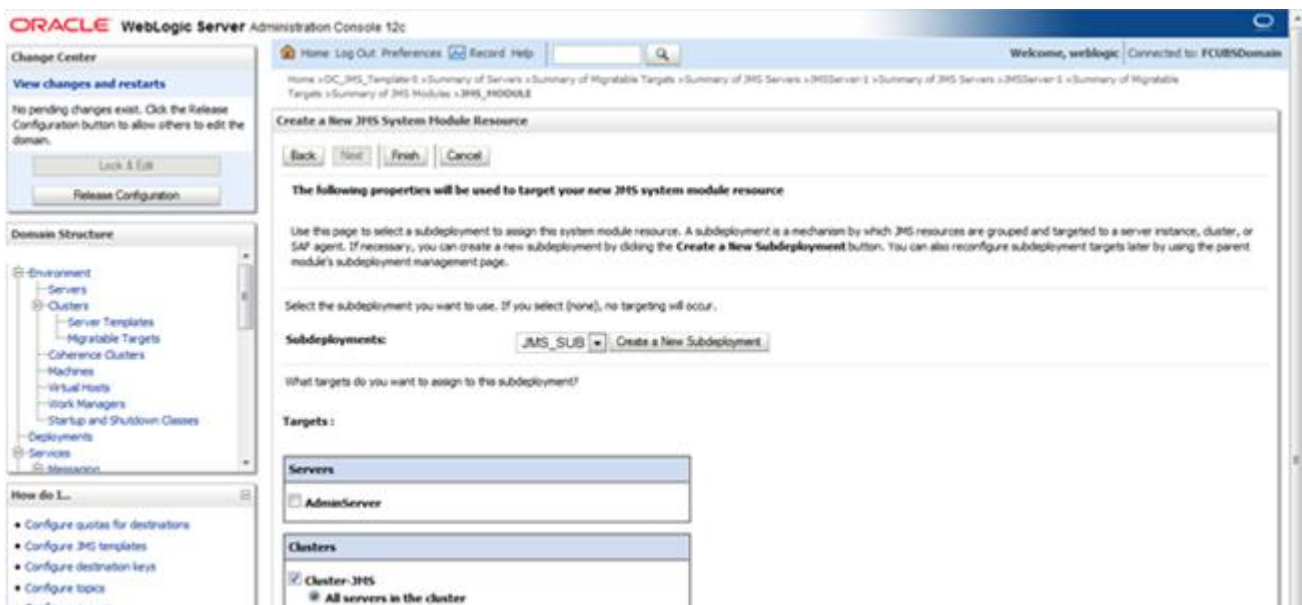
3) Enter the queue name and Click on **Next**



4) Click on **Advance Targeting**



5) Select Subdeployment as **JMS_SUB** and Click on **Finish**



6) **MDB_QUEUE** is created

ORACLE WebLogic Server Administration Console 12c

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

Home > MS-JMS1 (migratable) > Summary of Migratable Targets > MS-JMS2 (migratable) > Summary of Clusters > Summary of Migratable Targets > MS-JMS1 (migratable) > Summary of Clusters > Summary of Migratable Targets > Summary of JMS Modules > JMS_Module

Messages

- ✓ All changes have been activated. However 1 items must be restarted for the changes to take effect.
- ✓ The JMS distributed queue was created successfully.

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...](#)

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.

Summary of Resources

New Delete Showing 1 to 1 of 1 Previous Next

| Name | Type | JNDI Name | Subdeployment | Targets |
|------------------------------------|---------------------------|-----------|---------------|-------------|
| <input type="checkbox"/> MDB_QUEUE | Uniform Distributed Queue | MDB_QUEUE | JMS_SUB | Cluster-JMS |

New Delete Showing 1 to 1 of 1 Previous Next

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)

7) Similarly Create MDB_QUEUE_RESPONSE and MDB_QUEUE_DLQ

ORACLE WebLogic Server Administration Console 12c

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

Home > 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 > JMS_MODULE

Messages

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

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...](#)

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.

Summary of Resources

New Delete Showing 1 to 3 of 3 Previous Next

| Name | Type | JNDI Name | Subdeployment | Targets |
|---|---------------------------|--------------------|---------------|-------------|
| <input type="checkbox"/> MDB_QUEUE | Uniform Distributed Queue | MDB_QUEUE | JMS_SUB | Cluster-JMS |
| <input type="checkbox"/> MDB_QUEUE_DLQ | Uniform Distributed Queue | MDB_QUEUE_DLQ | JMS_SUB | Cluster-JMS |
| <input type="checkbox"/> MDB_QUEUE_RESPONSE | Uniform Distributed Queue | MDB_QUEUE_RESPONSE | JMS_SUB | Cluster-JMS |

New Delete Showing 1 to 3 of 3 Previous Next

Change Center

View changes and restarts

Click the Lock & Edit button to modify, add or delete items in this domain.

Lock & Edit

Release Configuration

Domain Structure

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

How do I...

No task help found.

System Status

Health of Running Servers

- Failed (0)
- Critical (0)
- Overloaded (0)
- Warning (0)
- OK (5)

4.3.2 Connection Factory Creation

1) In JMS_MODULE, Click on **New**

ORACLE WebLogic Server Administration Console 12c

Home > MS-JMS1 (migratable) > Summary of Migratable Targets > MS-JMS2 (migratable) > Summary of Clusters > Summary of Migratable Targets > MS-JMS1 (migratable) > Summary of Clusters > Summary of Migratable Targets > Summary of JMS Modules > JMS_Module

Messages

- ✓ All changes have been activated. However 1 items must be restarted for the changes to take effect.
- ✓ The JMS distributed queue was created successfully.

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...](#)

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

New Delete Showing 1 to 3 of 3 Previous | Next

| 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 |

New Delete Showing 1 to 3 of 3 Previous | Next

WebLogic Server Version: 12.1.3.0.0
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2) Select Connection Factory and click on **Next**

ORACLE WebLogic Server Administration Console 12c

Home > MS-JMS1 (migratable) > Summary of Migratable Targets > MS-JMS2 (migratable) > Summary of Clusters > Summary of Migratable Targets > MS-JMS1 (migratable) > Summary of Clusters > Summary of Migratable Targets > Summary of JMS Modules > JMS_Module

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

3) Enter the Name and Click on **Next**

ORACLE WebLogic Server Administration Console 12c

Home Log Out Preferences Record Help

Welcome, weblogic Connected to: pegjms

Home > MS-JMS1 (migratable) > Summary of Migratable Targets > MS-JMS2 (migratable) > Summary of Migratable Targets > MS-JMS1 (migratable) > Summary of Clusters > Summary of Migratable Targets > Summary of JMS Modules > JMS_Module

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 JMS_Module.

* 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: ←

4) Click on **Advance Targeting**

ORACLE WebLogic Server Administration Console 12c

Home Log Out Preferences Record Help

Welcome, weblogic Connected to: FCUBSDomain

Home > DC_JMS_Template-0 > Summary of Servers > Summary of Migratable Targets > Summary of JMS Servers > JMS-Server-1 > Summary of JMS Servers > JMS-Server-1 > Summary of Migratable Targets > Summary of JMS Modules > JMS_MODULE

Create a New JMS System Module Resource

Back Next Finish **Advanced Targeting** Cancel

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

Use this page to view and accept the default targets where this JMS resource will be targeted. The default targets are based on the parent JMS system module targets. If you do not want to accept the default targets, then click **Advanced Targeting** to use the subdeployment mechanism for targeting this resource.

The following JMS module targets will be used as the default targets for your new JMS system module resource. If the module's targets are changed, this resource will also be retargeted appropriately.

Targets:

| Clusters |
|---|
| <input checked="" type="checkbox"/> Cluster-JMS |
| <input checked="" type="radio"/> All servers in the cluster |

Back Next Finish **Advanced Targeting** Cancel

5) Select JMS_SUB and Click on Finish

ORACLE WebLogic Server Administration Console 12c

Home > 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 > JMS_MODULE

Create a New JMS System Module Resource

Back Next Finish Cancel

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

Use this page to select a subdeployment to assign this system module resource. A subdeployment is a mechanism by which 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: JMS_SUB Create a New Subdeployment

What targets do you want to assign to this subdeployment?

Targets:

Servers

AdminServer

Clusters

Cluster-JMS
 All servers in the cluster

JMS Servers

JMSServer-1

Back Next Finish Cancel

6) Connection Factory is Created

ORACLE WebLogic Server Administration Console 12c

Home > M5-JMS1 (migratable) > Summary of Migratable Targets > M5-JMS2 (migratable) > Summary of Clusters > Summary of Migratable Targets > M5-JMS1 (migratable) > Summary of Clusters > Summary of Migratable Targets > Summary of JMS Modules > JMS_Module

Messages

✓ All changes have been activated. However 1 items must be restarted for the changes to take effect.
 ✓ Connection factory created successfully.

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...](#)

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

New Delete Showing 1 to 4 of 4 Previous | Next

| Name | Type | JNDI Name | Subdeployment | Targets |
|---|---------------------------|--------------------|---------------|-------------|
| <input type="checkbox"/> MDBQCF | Connection Factory | MDBQCF | JMS_SUB | Cluster-JMS |
| <input type="checkbox"/> MDB_QUEUE | Uniform Distributed Queue | MDB_QUEUE | JMS_SUB | Cluster-JMS |
| <input type="checkbox"/> MDB_QUEUE_DLQ | Uniform Distributed Queue | MDB_QUEUE_DLQ | JMS_SUB | Cluster-JMS |
| <input type="checkbox"/> MDB_QUEUE_RESPONSE | Uniform Distributed Queue | MDB_QUEUE_RESPONSE | JMS_SUB | Cluster-JMS |

New Delete Showing 1 to 4 of 4 Previous | Next

5. Server Restart

1) Increase the heap size of both DC_JMS_1 and DC_JMS_2 cluster

ORACLE WebLogic Server Administration Console 12c

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

Home > Summary of JMS Servers > JMSServer-1 > Summary of JMS Servers > JMSServer-1 > Summary of Migratable Targets > Summary of JMS Modules > JMS_MODULE > ConnectionFactory-0 > placeholder > Summary of Servers

Summary of Servers

Configuration Control

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 |

2) Select the cluster 'DC_JMS_Template-0' and

ORACLE WebLogic Server Administration Console 12c

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

Home > JMSServer-1 > Summary of Migratable Targets > Summary of JMS Modules > JMS_MODULE > ConnectionFactory-0 > placeholder > Summary of Servers > Summary of Server Templates > DC_JMS_Template-0 > 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_FCUBS_Template | Cluster-App | | 7100 | |
| DC_JMS_Template-0 | Cluster-JMS | | 7105 | |

3) Click on Server Start Tab and in Arguments Section enter **-XX:MaxPermSize=512m**

The screenshot displays the Oracle WebLogic Server Administration Console interface. The main content area is titled "Settings for DC_JMS_Template-0" and features a navigation bar with tabs for "Configuration", "Protocols", "Logging", "Debug", and "Notes". The "Server Start" tab is selected and highlighted with a red box. Below the navigation bar, there is a "Save" button and a descriptive paragraph about the Node Manager utility. The configuration page includes several input fields with labels and descriptions:

- Java Home:** The Java home directory (path on the machine running Node Manager) to use when starting this server. [More Info...](#)
- Java Vendor:** The Java Vendor value to use when starting this server. [More Info...](#)
- BEA Home:** The BEA home directory (path on the machine running Node Manager) to use when starting this server. [More Info...](#)
- Root Directory:** The directory that this server uses as its root directory. This directory must be on the computer that hosts Node Manager. If you do not specify a Root Directory value, the domain directory is used by default. [More Info...](#)
- Class Path:** The classpath (path on the machine running Node Manager) to use when starting this server. [More Info...](#)
- Arguments:** The arguments to use when starting this server. [More Info...](#)

The "Arguments" field is highlighted with a red box and contains the text: `-XX:MaxPermSize=512m`

On the left side of the console, there are several panels:

- Change Center:** Shows "View changes and restarts" with a message: "No pending changes exist. Click the Release Configuration button to allow others to edit the domain." It includes "Lock & Edit" and "Release Configuration" buttons.
- Domain Structure:** A tree view showing the hierarchy of the domain, including Environment, Servers, Clusters, Server Templates, Migratable Targets, Coherence Clusters, Machines, Virtual Hosts, Work Managers, Startup and Shutdown Classes, Deployments, Services, and Messaging.
- How do I...:** A list of links for configuration tasks: "Configure startup arguments for Managed Servers", "Start Managed Servers from the Administration Console", and "Shut down a server instance".
- System Status:** A section titled "Health of Running Servers" showing status indicators for Failed (0), Critical (0), and Overloaded (0).

4) **Restart** the AdminServer and DC_JMS_1 and DC_JMS_2 managed servers.

6. Foreign Server Creation

6.1 Module Creation

1) JMS_Modules and Click on **New**

ORACLE WebLogic Server Administration Console 12c

Home Log Out Preferences Record Help

Welcome, weblogic Connected to: pegjms

Home > Summary of Servers > MS-JMS2 > Summary of Virtual Hosts > Summary of Servers > Summary of Clusters > Summary of Migratable Targets > Summary of Servers > Summary of Deployments > Summary of JMS Modules

Summary of JMS Modules

JMS system resources are configured and stored as modules similar to standard J2EE modules. Such resources include queues, topics, connection factories, templates, destination keys, quota, 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.

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

Customize this table

JMS Modules

| Name | Type |
|------------|--------|
| JMS_Module | System |

New Delete

Showing 1 to 1 of 1 Previous | Next

New Delete

Showing 1 to 1 of 1 Previous | Next

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

- Work Managers
- Startup and Shutdown Classes
- 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 resources for JMS system modules

2) Enter name as **MDB_MODULE** and click on **Next**

ORACLE WebLogic Server Administration Console 12c

Home Log Out Preferences Record Help

Welcome, weblogic Connected to: pegjms

Home > Summary of Migratable Targets > MS-JMS1 (migratable) > Summary of Migratable Targets > MS-JMS1 (migratable) > Summary of Clusters > Summary of Migratable Targets > MS-JMS1 (migratable) > S

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 J2EE modules. Such resources include queues, topics, connection factories, templates, destination keys, quota, 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: ←

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:

Back Next Finish Cancel

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...

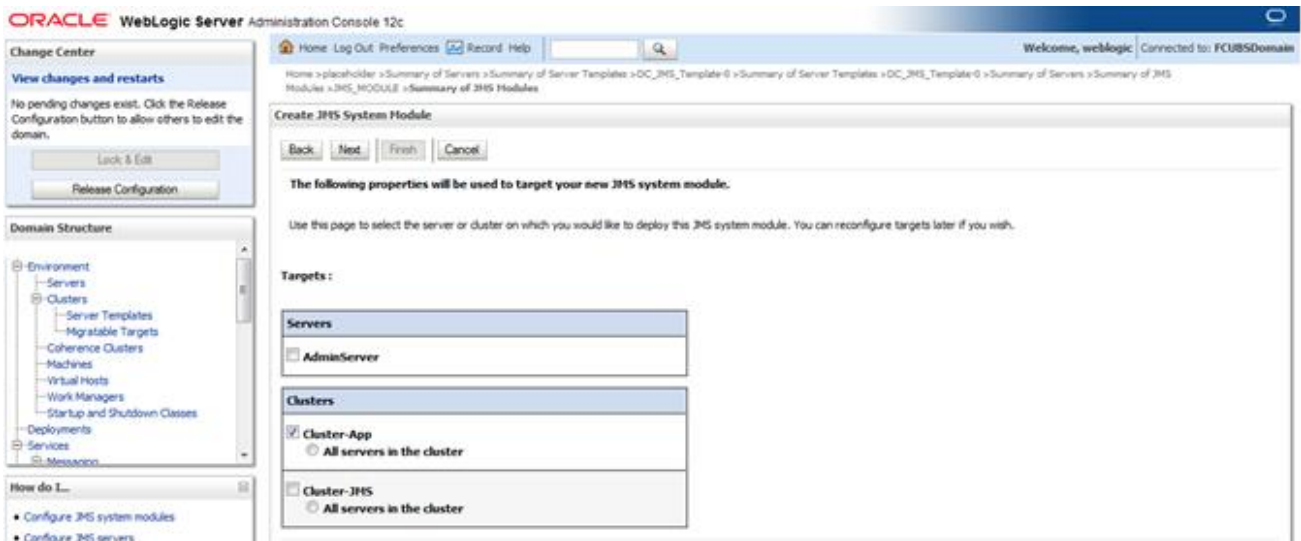
- Configure JMS system modules
- Configure JMS servers

System Status

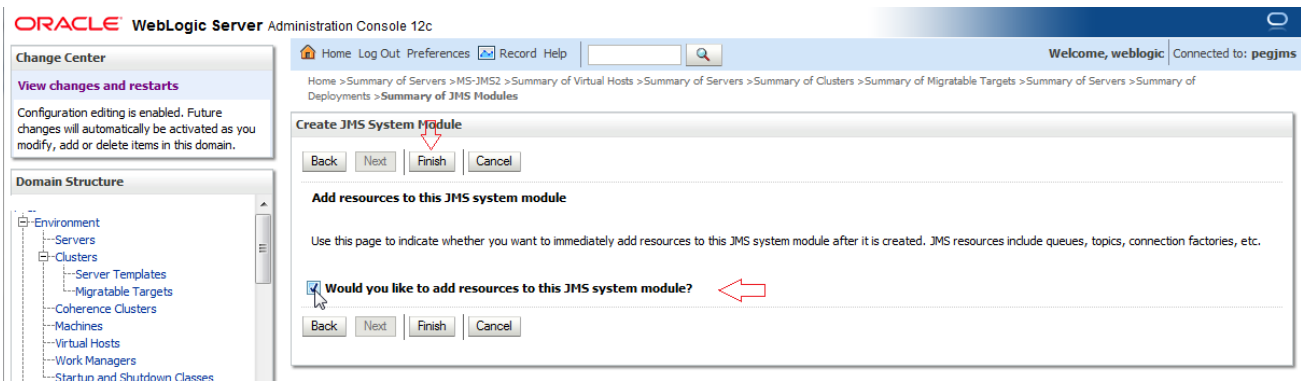
Health of Running Servers

Failed (0)

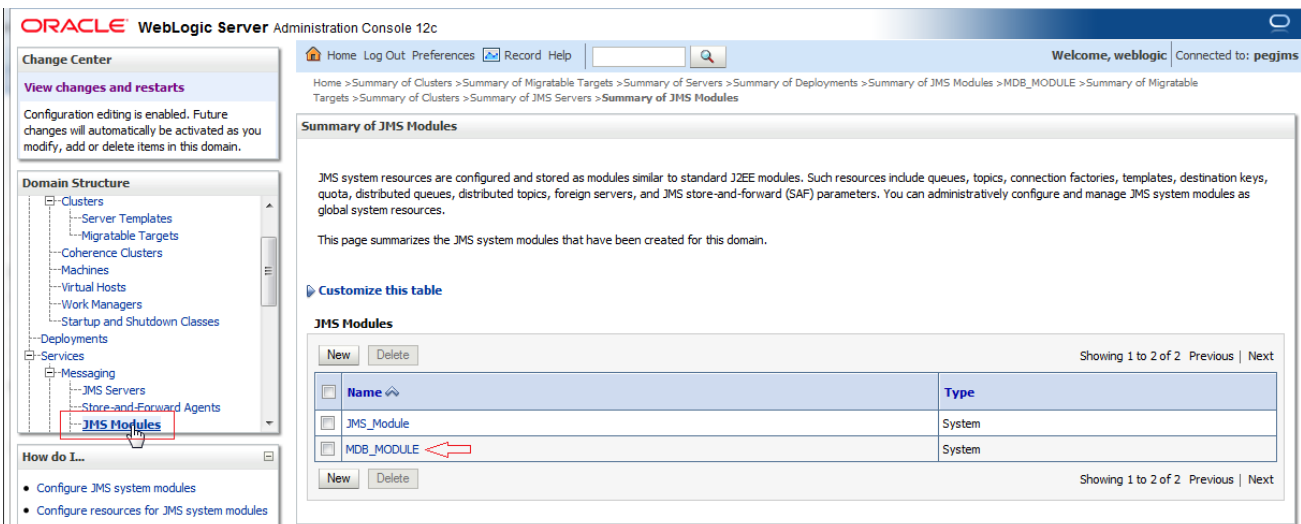
3) Select target as Cluster-App and click on **Next**



4) Select CheckBox and Click on **Finish**



5) **MDB_MODULE** is created



6.2 Foreign Server Creation

1) In MDB_MODULE, Click on New Resource, Select **Foreign Server**

ORACLE WebLogic Server Administration Console 12c

Home > Summary of Servers > Summary of Deployments > Summary of JMS Modules > MDB_MODULE > Summary of Migratable Targets > Summary of Clusters > Summary of JMS Servers > Summary of JMS Modules > MDB_MODULE > Summary of JMS Modules

Summary of JMS Modules

JMS system resources are configured and stored as modules similar to standard J2EE modules. Such resources include queues, topics, connection factories, templates, destination keys, quota, 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.

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

Customize this table

JMS Modules

New Delete Showing 1 to 2 of 2 Previous | Next

| Name | Type |
|------------|--------|
| JMS_Module | System |
| MDB_MODULE | System |

New Delete Showing 1 to 2 of 2 Previous | Next

2) Click on Configuration → **New**

ORACLE WebLogic Server Administration Console 12c

Home > Summary of Deployments > Summary of JMS Modules > MDB_MODULE > Summary of Migratable Targets > Summary of Clusters > Summary of JMS Servers > Summary of JMS Modules > MDB_MODULE > Settings for MDB_MODULE

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...](#)

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, distributed destinations, foreign servers, and store-and-forward parameters.

Customize this table

Summary of Resources

New Delete Showing 0 to 0 of 0 Previous | Next

| Name | Type | JNDI Name | Subdeployment | Targets |
|-------------------------------|------|-----------|---------------|---------|
| There are no items to display | | | | |

New Delete Showing 0 to 0 of 0 Previous | Next

3) Select Foreign Server and Click on Next

The screenshot shows the Oracle WebLogic Server Administration Console 12c interface. The breadcrumb trail is: Home > Summary of Deployments > Summary of JMS Modules > MDB_MODULE > Summary of Migratable Targets > Summary of Clusters > Summary of JMS Servers > Summary of JMS Modules > MDB_MODULE > Summary of JMS Modules > MDB_MODULE.

The main content area is titled "Create a New JMS System Module Resource". It includes navigation buttons: Back, Next (highlighted with a red box), Finish, and Cancel.

The section "Choose the type of resource you want to create." contains the following options:

- 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...](#)
- 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: Defines foreign messaging providers or remote WebLogic Server instances that are not part of the current domain. [More Info...](#)

The "Foreign Server" option is selected and highlighted with a red box. The left sidebar shows the "Domain Structure" tree with "Foreign Server" selected under "Services".

4) Enter name and Click on Next

The screenshot shows the "Foreign Server Properties" configuration page in the Oracle WebLogic Server Administration Console 12c. The breadcrumb trail is: Home > Summary of Deployments > Summary of JMS Modules > MDB_MODULE > Summary of Migratable Targets > Summary of Clusters > Summary of JMS Servers > Summary of JMS Modules > MDB_MODULE > Summary of JMS Modules > MDB_MODULE.

The main content area is titled "Create a New JMS System Module Resource" and "Foreign Server Properties". It includes navigation buttons: Back, Next (highlighted with a red box), Finish, and Cancel.

The section "Foreign Server Properties" contains the following text:

The following properties will be used to identify your new foreign server. The current module is MDB_MODULE.

* Indicates required fields

* Name: ForeignServer-1

The "Next" button is highlighted with a red box, and a red arrow points to the "Name" field.

5) Click on Advanced Targeting

The screenshot shows the Oracle WebLogic Server Administration Console. The main window displays the 'Create a New JMS System Module Resource' dialog. The 'Advanced Targeting' button is highlighted with a red arrow. The dialog contains the following text:

Create a New JMS System Module Resource

Back Next Finish Advanced Targeting Cancel

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

Use this page to view and accept the default targets where this JMS resource will be targeted. The default targets are based on the parent JMS system module targets. If you do not want to accept the default targets, then click **Advanced Targeting** to use the subdeployment mechanism for targeting this resource.

The following JMS module targets will be used as the default targets for your new JMS system module resource. If the module's targets are changed, this resource will also be retargeted appropriately.

Targets:

| Clusters | |
|-------------------------------------|----------------------------|
| <input type="checkbox"/> | Cluster-App |
| <input checked="" type="checkbox"/> | All servers in the cluster |

Back Next Finish Advanced Targeting Cancel

6) Click on Create New SubDeployment

The screenshot shows the Oracle WebLogic Server Administration Console. The main window displays the 'Create a New JMS System Module Resource' dialog. The 'Create a New SubDeployment' button is highlighted with a red arrow. The dialog contains the following text:

Create a New JMS System Module Resource

Back Next Finish Cancel

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

Use this page to select a subdeployment to assign this system module resource. A subdeployment is a mechanism by which 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: (none) Create a New Subdeployment

What targets do you want to assign to this subdeployment?

7) Enter Name as MDB_SUB and Click on OK

The screenshot shows the Oracle WebLogic Server Administration Console. The main window displays the 'Create a New SubDeployment' dialog. The 'Create a New SubDeployment' button from the previous step is highlighted with a red arrow. The dialog contains the following text:

Create a New SubDeployment

OK Cancel

Subdeployment Properties

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

Subdeployment Name: MDB_SUB

OK Cancel

8) Select Target as Cluster-App and Click on Finish

ORACLE WebLogic Server Administration Console 12c

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

Home > DC_JMS_Template-0 > Summary of Server Templates > DC_JMS_Template-0 > Summary of Servers > Summary of JMS Modules > JMS_MODULE > Summary of JMS Modules > MDB_MODULE > Summary of JMS Modules > MDB_MODULE

Create a New JMS System Module Resource

Back Next Finish Cancel

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

Use this page to select a subdeployment to assign this system module resource. A subdeployment is a mechanism by which 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: MDB_SUB Create a New Subdeployment

What targets do you want to assign to this subdeployment?

Targets :

Servers

AdminServer

Clusters

Cluster-App
 All servers in the cluster

JMS Servers

JMSServer-1

Back Next Finish Cancel

9) Foreign Server is created

ORACLE WebLogic Server Administration Console 12c

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

Home > Summary of Deployments > Summary of JMS Modules > MDB_MODULE > Summary of Migratable Targets > Summary of Clusters > Summary of JMS Servers > Summary of JMS Modules > MDB_MODULE > Summary of JMS Modules > MDB_MODULE

Messages

✓ All changes have been activated. No restarts are necessary.
 ✓ The foreign server was created successfully.

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...](#)

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, distributed destinations, foreign servers, and store-and-forward parameters.

Customize this table

Summary of Resources

New Delete Showing 1 to 1 of 1 Previous | Next

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

New Delete Showing 1 to 1 of 1 Previous | Next

6.3 Foreign Server Configuration

1) Click on ForeignServer-1

The screenshot shows the Oracle WebLogic Server Administration Console. The left sidebar contains navigation menus for Change Center, Domain Structure, How do I..., System Status, and Health of Running Servers. The main content area displays the 'Settings for MDB_MODULE' page, which includes a 'Configuration' tab and a 'Summary of Resources' table. The table has columns for Name, Type, JNDI Name, Subdeployment, and Targets. A red arrow points to the 'ForeignServer-1' entry in the table.

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

2) Enter the JNDI URL as Cluster URL(JMS Managed Servers) and Click on Save

The screenshot shows the Oracle WebLogic Server Administration Console. The left sidebar contains navigation menus for Change Center, Domain Structure, How do I..., System Status, and Health of Running Servers. The main content area displays the 'Settings for ForeignServer-1' page, which includes a 'Configuration' tab and a 'General' sub-tab. The 'JNDI Connection URL' field is filled with 't3://10.184.148.185:7106,10.184.148.189:7107'. A 'Save' button is visible at the top of the configuration area.

3) Click on Connection Factories

ORACLE WebLogic Server Administration Console 12c

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

Home > MDB_MODULE > Summary of Migratable Targets > Summary of Clusters > Summary of JMS Servers > Summary of JMS Modules > MDB_MODULE > Summary of JMS Modules > MDB_MODULE > ForeignServer-1 > Configuration

Settings for ForeignServer-1

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)

New Delete Showing 0 to 0 of 0 Previous | Next

| Name | Local JNDI Name | Remote JNDI Name |
|-------------------------------|-----------------|------------------|
| There are no items to display | | |

New Delete Showing 0 to 0 of 0 Previous | Next

4) Create MDBQCF Connection Factory

ORACLE WebLogic Server Administration Console 12c

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

Home > MDB_MODULE > Summary of Migratable Targets > Summary of Clusters > Summary of JMS Servers > Summary of JMS Modules > MDB_MODULE > Summary of JMS Modules > MDB_MODULE > ForeignServer-1 > Configuration

Create a New Foreign JMS Connection Factory

OK Cancel

Foreign Connection Factory Properties

The following properties will be used to identify your new foreign connection factory.

* Indicates required fields

* Name: MDBQCF

Local JNDI Name: MDBQCF

Remote JNDI Name: MDBQCF

OK Cancel

5) Click on Destination

ORACLE WebLogic Server Administration Console 12c

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

Home > MDB_MODULE > Summary of Migratable Targets > Summary of Clusters > Summary of JMS Servers > Summary of JMS Modules > MDB_MODULE > Summary of JMS Modules > MDB_MODULE > ForeignServer-1 > Configuration

Messages

All changes have been activated. However, 1 items must be restarted for the changes to take effect.

Settings for ForeignServer-1

Configuration Subdeployment Notes

General Destinations **Connection Factories**

Configuration - Destinations - Tab

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)

New Delete Showing 1 to 1 of 1 Previous | Next

| Name | Local JNDI Name | Remote JNDI Name |
|--------|-----------------|------------------|
| MDBQCF | MDBQCF | MDBQCF |

New Delete Showing 1 to 1 of 1 Previous | Next

6) Create MDB_QUEUE

The screenshot shows the Oracle WebLogic Server Administration Console. The breadcrumb path is: Home > JMS Modules > MDB_MODULE > ForeignServer-1 > MDB_MODULE > ForeignServer-1 > Summary of Servers > JMS Modules > MDB_MODULE > ForeignServer-1 > Configuration. The page title is "Settings for ForeignServer-1". There are three tabs: "Configuration", "Subdeployment", and "Notes". The "Configuration" tab is active, and within it, the "Destinations" sub-tab is selected. The page contains a text block explaining foreign destinations and a table titled "Foreign Destinations". The table is currently empty, with the text "There are no items to display".

The screenshot shows the Oracle WebLogic Server Administration Console with the "Create a New Foreign JMS Destination" dialog box open. The breadcrumb path is: Home > MDB_MODULE > Summary of Migratable Targets > Summary of Clusters > Summary of JMS Servers > Summary of JMS Modules > MDB_MODULE > Summary of JMS Modules > MDB_MODULE > ForeignServer-1 > Configuration. The dialog box has "Foreign Destination Properties" and contains the following fields: "Name" (MDB_QUEUE), "Local JNDI Name" (MDB_QUEUE), and "Remote JNDI Name" (MDB_QUEUE). The "Name" field is marked with an asterisk as required. The "OK" button is highlighted with a mouse cursor.

7) Similarly Create MDB_QUEUE_RESPONSE, MDB_QUEUE_DLQ

The screenshot shows the Oracle WebLogic Server Administration Console with the "Create a New Foreign JMS Destination" dialog box open. The breadcrumb path is: Home > MDB_MODULE > Summary of Migratable Targets > Summary of Clusters > Summary of JMS Servers > Summary of JMS Modules > MDB_MODULE > Summary of JMS Modules > MDB_MODULE > ForeignServer-1 > Configuration. The dialog box has "Foreign Destination Properties" and contains the following fields: "Name" (MDB_QUEUE_RESPC), "Local JNDI Name" (MDB_QUEUE_RESPONSE), and "Remote JNDI Name" (MDB_QUEUE_RESPONSE). The "Name" field is marked with an asterisk as required. The "OK" button is highlighted with a mouse cursor.

ORACLE WebLogic Server Administration Console 12c

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

Home > MDB_MODULE > Summary of Migratable Targets > Summary of Clusters > Summary of JMS Servers > Summary of JMS Modules > MDB_MODULE > Summary of JMS Modules > MDB_MODULE > ForeignServer-1 > Configuration

Messages
All changes have been activated. However 1 items must be restarted for the changes to take effect.

Settings for ForeignServer-1
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

| Name ↕ | Local JNDI Name | Remote JNDI Name |
|--------------------|--------------------|--------------------|
| MDB_QUEUE | MDB_QUEUE | MDB_QUEUE |
| MDB_QUEUE_RESPONSE | MDB_QUEUE_RESPONSE | MDB_QUEUE_RESPONSE |

Showing 1 to 2 of 2 Previous | Next

ORACLE WebLogic Server Administration Console 12c

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

Home > MDB_MODULE > Summary of Migratable Targets > Summary of Clusters > Summary of JMS Servers > Summary of JMS Modules > MDB_MODULE > Summary of JMS Modules > MDB_MODULE > ForeignServer-1 > Configuration

Create a New Foreign JMS Destination

OK Cancel

Foreign Destination Properties

The following properties will be used to identify your new foreign destination.

* Indicates required fields

* Name: MDB_QUEUE_DLQ

Local JNDI Name: MDB_QUEUE_DLQ

Remote JNDI Name: MDB_QUEUE_DLQ

OK Cancel

ORACLE WebLogic Server Administration Console 12c

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

Home > MDB_MODULE > Summary of Migratable Targets > Summary of Clusters > Summary of JMS Servers > Summary of JMS Modules > MDB_MODULE > Summary of JMS Modules > MDB_MODULE > ForeignServer-1 > Configuration

Messages
All changes have been activated. However 1 items must be restarted for the changes to take effect.

Settings for ForeignServer-1
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

| Name ↕ | Local JNDI Name | Remote JNDI Name |
|--------------------|--------------------|--------------------|
| MDB_QUEUE | MDB_QUEUE | MDB_QUEUE |
| MDB_QUEUE_DLQ | MDB_QUEUE_DLQ | MDB_QUEUE_DLQ |
| MDB_QUEUE_RESPONSE | MDB_QUEUE_RESPONSE | MDB_QUEUE_RESPONSE |

Showing 1 to 3 of 3 Previous | Next

8) After all the resources are created, **Restart** the Admin and Managed Servers.

7. Application Deployment

1) Deploy the EAR with Target as Cluster-App

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...

- Start and stop a deployed Enterprise application

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

Home > JMS Modules > MDB_MODULE > ForeignServer-1 > JMS Modules > Summary of Deployments > Summary of Servers > Summary of Deployments > Summary of Servers > Summary of Deployments > GWMDB

Settings for GWMDB

Overview Deployment Plan Configuration Security **Targets** Control Testing Monitoring Notes

Use this page to specify the WebLogic Server instances and clusters to which you want to deploy this Enterprise application. These settings determine where the application is deployed at server startup time.

Target Assignments

Change Targets Showing 1 to 1 of 1 Previous Next

| Component | Type | Current Targets |
|-----------------|------------------------|------------------|
| GWMDB | Enterprise Application | Cluster-App |
| GW_MDB_Bean.jar | EJB | (None specified) |

Change Targets Showing 1 to 1 of 1 Previous Next

2) Health Should be OK if JMS is configured properly, otherwise Warning will be displayed

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...

- Install an Enterprise application
- Configure an Enterprise application
- Update (redeploy) an Enterprise application
- Start and stop a deployed Enterprise application
- Monitor the modules of an Enterprise application

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

Home > Summary of Environment > Summary of Servers > Summary of Deployments > JMS Modules > MDB_MODULE > Summary of Environment > Summary of Servers > Summary of Deployments > GWMDB > Summary of Deployments

Summary of Deployments

Control Monitoring

This page displays a list of Java EE applications and stand-alone application modules that have been installed to this domain. Installed applications and modules can be started, stopped, updated (redeployed), or deleted from the domain by first selecting the application name and using the controls on this page.

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

Customize this table

Deployments

Install Update Delete Start Stop Showing 1 to 5 of 5 Previous Next

| Name | State | Health | Type | Deployment Order |
|-----------------|--------|--------|------------------------|------------------|
| FCUBSApp | Active | OK | Enterprise Application | 100 |
| GWEJB | Active | OK | Enterprise Application | 100 |
| GWMDB | Active | OK | Enterprise Application | 100 |
| jax-rs(1.1.1.9) | Active | OK | Library | 100 |
| SWEJB | Active | OK | Enterprise Application | 100 |

Install Update Delete Start Stop Showing 1 to 5 of 5 Previous Next

8. Frequently Asked Questions

8.1 Application and JMS Cluster Deployed on Same Cluster

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

- 1) Foreign Server Creation is not required
- 2) Targets should be given accordingly during SubDeployment Creation

8.2 Application Shows Warning upon Restart of Managed Servers

Managed Servers Start Order

- 1) Stop all managed servers.
- 2) Start only the JMS Cluster managed servers.
- 3) After these are started then start the App Cluster managed servers.

Even after proper JMS setup when the managed servers are restarted Health of the Application is Warning

The screenshot shows the Oracle WebLogic Server Administration Console. The main content area displays the 'Summary of Deployments' page. A table lists the deployed applications and modules. The 'GWMDB' application is highlighted with a red box, showing a 'Warning' health status. The table has columns for Name, State, Health, Type, and Deployment Order.

| Name | State | Health | Type | Deployment Order |
|---------------------|--------|----------------|------------------------|------------------|
| FCUBSApp (12.0.3.0) | Active | OK | Enterprise Application | 100 |
| GWEJB | Active | OK | Enterprise Application | 100 |
| GWMDB | Active | Warning | Enterprise Application | 100 |
| JAX-WS (1.1.1.9) | Active | | Library | 100 |
| SWEJB | Active | OK | Enterprise Application | 100 |

- 1) Force Stop the Application
- 2) Then Start the Application, this would resolve the Warning and the Health of Deployment is changed to OK.

8.3 Securing File Store Data

In order 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.

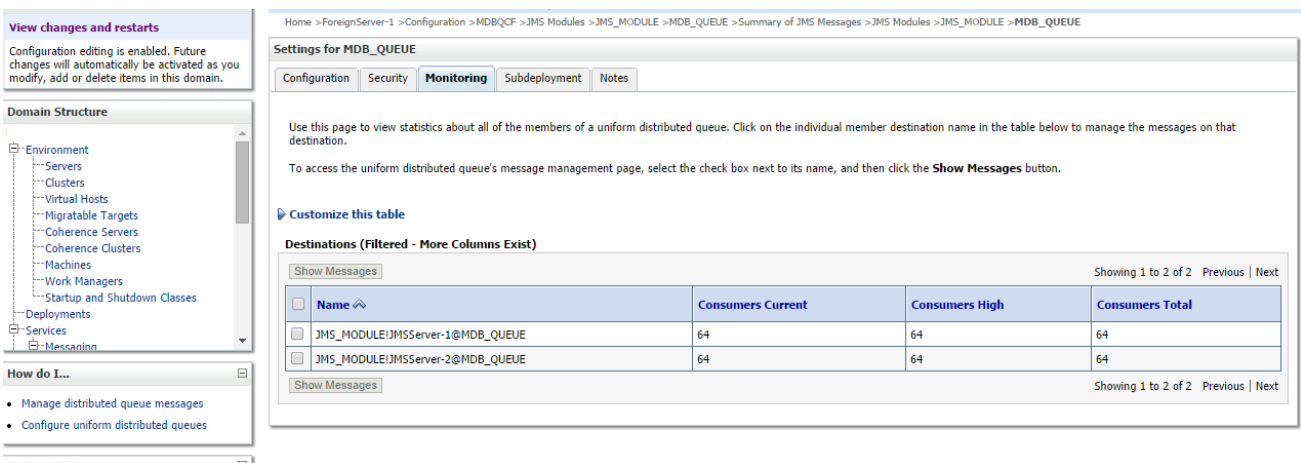
8.4 t3s Protocol

To secure the communication with the JMS Server use 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 server template and the port number used in the URL should be secure port.

8.5 How to Test the Deployment

1) Navigate to Services → JMS Modules → JMS_MODULE → MDB_QUEUE → MONITORING



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

Home > ForeignServer-1 > Configuration > MDB_QCF > JMS Modules > JMS_MODULE > MDB_QUEUE > Summary of JMS Messages > JMS Modules > JMS_MODULE > MDB_QUEUE

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

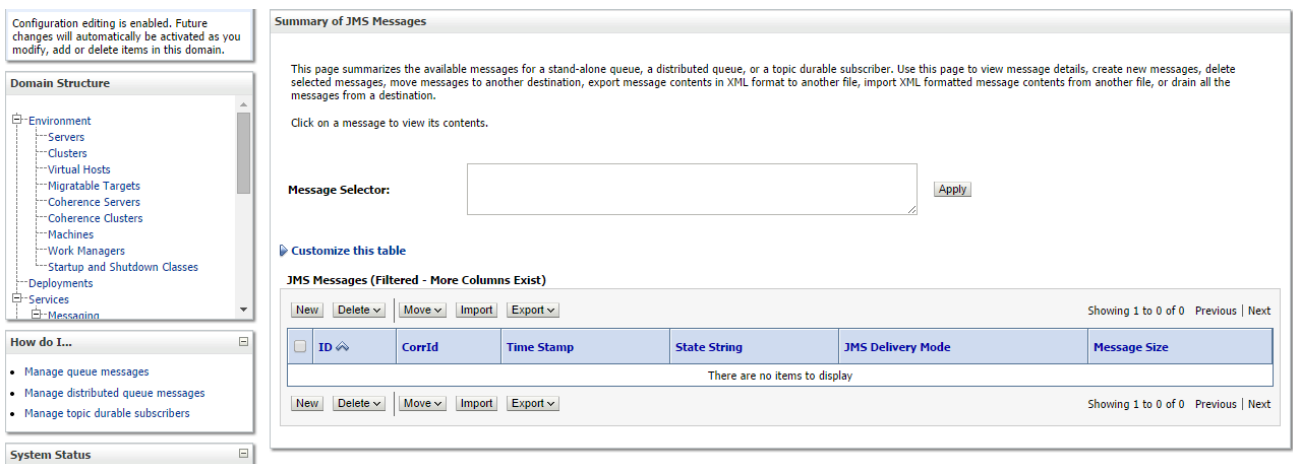
Destinations (Filtered - More Columns Exist)

Show Messages Showing 1 to 2 of 2 Previous | Next

| <input type="checkbox"/> | Name ↕ | Consumers Current | Consumers High | Consumers Total |
|--------------------------|-----------------------------------|-------------------|----------------|-----------------|
| <input type="checkbox"/> | JMS_MODULE:JMS5Server-1@MDB_QUEUE | 64 | 64 | 64 |
| <input type="checkbox"/> | JMS_MODULE:JMS5Server-2@MDB_QUEUE | 64 | 64 | 64 |

Show Messages Showing 1 to 2 of 2 Previous | Next

2) Select any one Server and Click on Show Messages



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

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:

Customize this table

JMS Messages (Filtered - More Columns Exist)

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

| <input type="checkbox"/> | 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 on New and enter the Message in Body and Click on OK

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 > MDBQCF > 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: 4

Delivery Mode: Persistent

Delivery Time: -1

Redelivery Limit: -1

Body:

4) Message is Sent

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 > MDBQCF > 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:<257876.1411126889162.0> | | 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) Verify at backend or in the MDB log if the message is processed successfully.

8.6 Increase maximum number of message-driven bean threads

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 custom work manager

- 1) Modify the MDB deployment descriptor and redeploy the EAR
- 2) Create Custom Workmanager and add constraints to limit the number of the max MDB threads

8.6.1 Modify weblogic-ejb-jar.xml

- 1) Add below line to the weblogic-ejb-jar.xml of the MDB Ear
<dispatch-policy>GWMDBWM</dispatch-policy>

```
weblogic-ejb-jar.xml * ×
<?xml version="1.0" encoding="UTF-8"?>
<weblogic-ejb-jar
  xmlns="http://xmlns.oracle.com/weblogic/weblogic-ejb-jar"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://xmlns.oracle.com/weblogic/weblogic-ejb-jar http://xmlns.oracle.com/weblogic-enterprise-bean">
  <ejb-name>GWMDB</ejb-name>
  <!-- EJB Reference Descriptions STARTS-->
  <!-- EJB Resource Reference Descriptions STARTS-->
  <resource-description>
    <res-ref-name>FLEXTEST_WORLD</res-ref-name>
    <jndi-name>FLEXTEST_WORLD</jndi-name>
  </resource-description>
  <resource-description>
    <res-ref-name>MDBQCF</res-ref-name>
    <jndi-name>MDBQCF</jndi-name>
  </resource-description>
  <!-- EJB Resource Reference Descriptions ENDS-->
  <!-- EJB Resource environment Reference Descriptions STARTS-->
  <resource-env-description>
    <resource-env-ref-name>MDB_QUEUE_RESPONSE</resource-env-ref-name>
    <jndi-name>MDB_QUEUE_RESPONSE</jndi-name>
  </resource-env-description>
  <resource-env-description>
    <resource-env-ref-name>MDB_QUEUE_DLQ</resource-env-ref-name>
    <jndi-name>MDB_QUEUE_DLQ</jndi-name>
  </resource-env-description>
  <resource-env-description>
    <resource-env-ref-name>SW_MDB_QUEUE_RESPONSE</resource-env-ref-name>
    <jndi-name>SW_MDB_QUEUE_RESPONSE</jndi-name>
  </resource-env-description>
  <!-- EJB Resource environment Reference Descriptions ENDS-->
  <!-- EJB Reference Descriptions ENDS -->
  <dispatch-policy>GWMDBWM</dispatch-policy>
</weblogic-enterprise-bean>
</weblogic-ejb-jar>
```

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

8.6.2 Work Manager Creation

- 1) Login into weblogic console, navigate to Domain → Environment → WorkManager
Create new workmanager with the name GWMDBWM(as mentioned in property file) by following below steps

Oracle WebLogic Server Administration Console 12c

Home Log Out Preferences Record Help

Welcome, weblogic Connected to: FCUBSDomain

Home > Summary of Work Managers > MaxThreadsConstraint-0 > Summary of Work Managers > WorkManager-0 > Summary of Work Managers > MaxThreadsConstraint-0 > Summary of Servers > Summary of Environment > Summary of Servers > Summary of Work Managers

Create a New Work Manager Component

Back Next Finish Cancel

Select Work Manager Definition type

What type of Work Manager, Request Class or Constraint do you want to create?

- Work Manager**
- Response Time Request Class
- Fair Share Request Class
- Context Request Class
- Maximum Threads Constraint
- Minimum Threads Constraint
- Capacity Constraint

Back Next Finish Cancel

Oracle WebLogic Server Administration Console 12c

Home Log Out Preferences Record Help

Welcome, weblogic Connected to: FCUBSDomain

Home > Summary of Work Managers > MaxThreadsConstraint-0 > Summary of Work Managers > WorkManager-0 > Summary of Work Managers > MaxThreadsConstraint-0 > Summary of Servers > Summary of Environment > Summary of Servers > Summary of Work Managers

Create a New Work Manager Component

Back Next Finish Cancel

Work Manager Properties

The following properties will be used to identify your new Work Manager.

* Indicates required fields

What would you like to name your new Work Manager?

* Name:

Back Next Finish Cancel

Oracle WebLogic Server Administration Console 12c

Home Log Out Preferences Record Help

Welcome, weblogic Connected to: FCUBSDomain

Home > Summary of Work Managers > MaxThreadsConstraint-0 > Summary of Work Managers > WorkManager-0 > Summary of Work Managers > MaxThreadsConstraint-0 > Summary of Servers > Summary of Environment > Summary of Servers > Summary of Work Managers

Create a New Work Manager Component

Back Next Finish Cancel

Select deployment targets

You can target the Work Manager to any of these WebLogic Server instances or Clusters. Select the same targets on which you will deploy applications that reference the Work Manager.

Available targets :

| | |
|-------------------------------------|----------------------------|
| Servers | |
| <input type="checkbox"/> | AdminServer |
| Clusters | |
| <input checked="" type="checkbox"/> | Cluster-App |
| <input type="radio"/> | All servers in the cluster |
| <input type="checkbox"/> | Cluster-JMS |
| <input type="radio"/> | All servers in the cluster |

Back Next Finish Cancel

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

Home > Summary of Work Managers > MaxThreadsConstraint-0 > Summary of Work Managers > WorkManager-0 > Summary of Work Managers > MaxThreadsConstraint-0 > Summary of Servers > Summary of Environment > Summary of Servers > Summary of Work Managers

Messages

- Work Manager created successfully

Summary of Work Managers

A Work Manager defines a set of request classes and thread constraints that manage work performed by WebLogic Server instances. This page displays the global Work Managers, request classes and thread constraints defined for this domain.

Global Work Managers are defined at the domain level. You can also define application-level and module-level Work Managers.

Customize this table

Global Work Managers, Request Classes and Constraints

| Name | Type | Targets |
|---------|--------------|-------------|
| GWMBWIM | Work Manager | Cluster-App |

Showing 1 to 1 of 1 Previous | Next

2) Create new Max Thread Constraint and in the Count field give the desired thread count

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

Home > Summary of Work Managers > MaxThreadsConstraint-0 > Summary of Work Managers > WorkManager-0 > Summary of Work Managers > MaxThreadsConstraint-0 > Summary of Servers > Summary of Environment > Summary of Servers > Summary of Work Managers

Create a New Work Manager Component

Back Next Finish Cancel

Select Work Manager Definition type

What type of Work Manager, Request Class or Constraint do you want to create?

- Work Manager
- Response Time Request Class
- Fair Share Request Class
- Context Request Class
- Maximum Threads Constraint**
- Minimum Threads Constraint
- Capacity Constraint

Back Next Finish Cancel

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

Home > Summary of Work Managers > MaxThreadsConstraint-0 > Summary of Work Managers > WorkManager-0 > Summary of Work Managers > MaxThreadsConstraint-0 > Summary of Servers > Summary of Environment > Summary of Servers > Summary of Work Managers

Create a New Work Manager Component

Back Next Finish Cancel

Maximum Threads Constraint Properties

The following properties will be used to identify your new Max Threads Request Class.

* Indicates required fields

What would you like to name the new Maximum Threads Constraint?

* Name: MaxThreadsConstraint-0

What is the maximum number of concurrent threads to allocate for requests? Enter either a fixed thread count or the name of a Data Source whose size will be used for the constraint.

Count: 25

Data Source:

Back Next Finish Cancel

Change Center

View changes and restarts

Pending changes exist. They must be activated to take effect.

Activate Changes

Undo All Changes

Domain Structure

FCUBSDomain

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 - Machines
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 - Work Managers
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- Diagnostics

How do I...

- Create application-scoped constraints
- Create application-scoped request classes
- Create application-scoped Work Managers

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Welcome, weblogic Connected to: FCUBSDomain

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Create a New Work Manager Component

Back Next Finish Cancel

Select deployment targets

You can target the Work Manager to any of these WebLogic Server instances or Clusters. Select the same targets on which you will deploy applications that reference the Work Manager.

Available targets :

Servers

AdminServer

Clusters

Cluster-App
 All servers in the cluster

Cluster-JMS
 All servers in the cluster

Back Next Finish Cancel

Change Center

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Messages

Maximum Threads Constraint created successfully

Summary of Work Managers

A Work Manager defines a set of request classes and thread constraints that manage work performed by WebLogic Server instances. This page displays the global Work Managers, request classes and thread constraints defined for this domain.

Global Work Managers are defined at the domain level. You can also define application-level and module-level Work Managers.

Customize this table

Global Work Managers, Request Classes and Constraints

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

| Name | Type | Targets |
|------------------------|----------------------------|-------------|
| GWMBWM | Work Manager | Cluster-App |
| MaxThreadsConstraint-0 | Maximum Threads Constraint | Cluster-App |

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

3) Modify the newly created workmanager and assign the Maximum Thread Constraint that is created in above step.

View changes and restarts

Pending changes exist. They must be activated to take effect.

Activate Changes

Undo All Changes

Domain Structure

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How do I...

- Create application-scoped constraints
- Create application-scoped request classes
- Create application-scoped Work Managers
- Create global constraints
- Create global request classes
- Create global Work Managers

System States

Health of Running Servers

Home > MaxThreadsConstraint-0 > Summary of Work Managers > WorkManager-0 > Summary of Work Managers > MaxThreadsConstraint-0 > Summary of Servers > Summary of Environment > Summary of Servers > Summary of Work Managers > GWMBWM

Settings for GWMBWM

Configuration Targets Notes

Save

Use this page to define the request classes and constraints for the selected global Work Manager.

Name: (No value specified) The user-specified name of this MBean instance. More Info...

Request Class: (None configured) New A request class associated with this Work Manager. This may be a FairShareRequestClass, ResponseTimeRequestClass, or a ContentRequestClass. More Info...

Minimum Threads Constraint: (None configured) New The minimum number of threads allocated to resolve deadlocks. More Info...

Maximum Threads Constraint: (None configured) New The maximum number of concurrent threads that can be allocated to execute requests. More Info...

Capacity Constraint: (None configured) New The total number of requests that can be queued or executing before WebLogic Server begins rejecting requests. More Info...

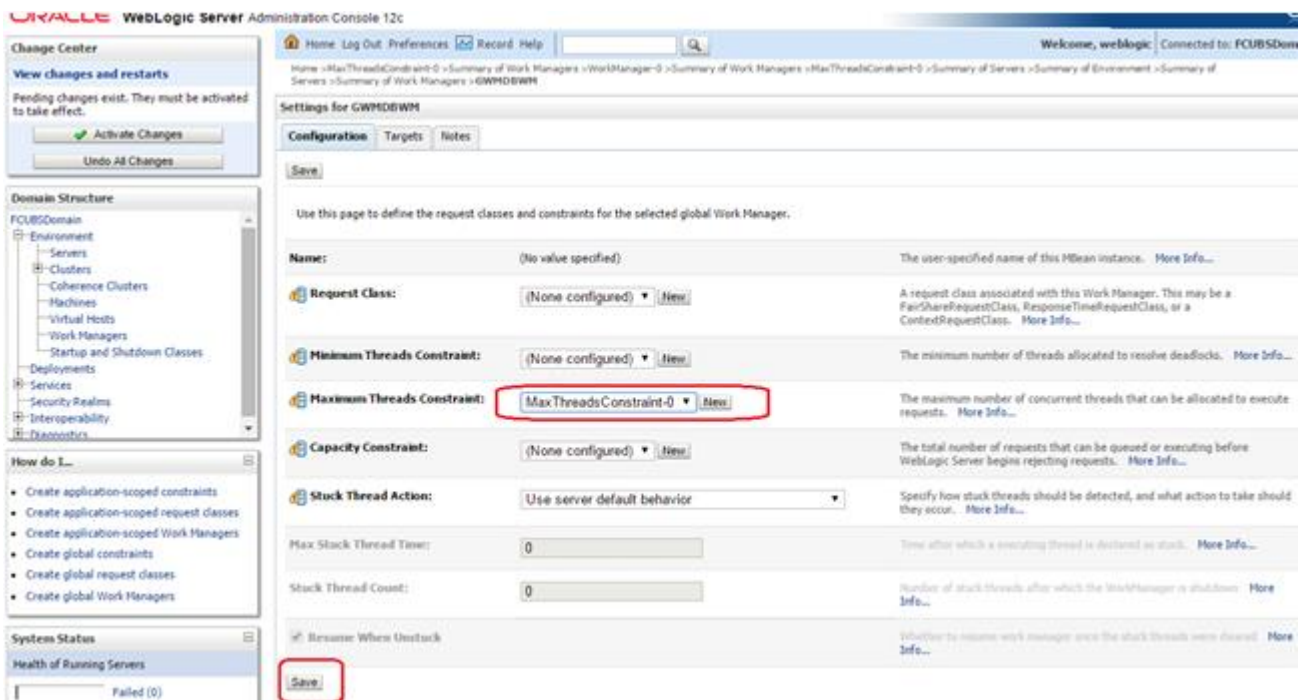
Stuck Thread Action: Use server default behavior Specify how stuck threads should be detected, and what action to take should they occur. More Info...

Max Stuck Thread Time: 0 Time after which a executing thread is declared as stuck. More Info...

Stuck Thread Count: 0 Number of stuck threads after which the WorkManager is shutdown. More Info...

Resume When Unstuck Whether to resume work manager once the stuck threads were cleared. More Info...

Save



- 4) Restart managed servers and notice the change in the number of consumers for the QUEUE's.

8.7 How High Availability is achieved

- 1) Application Server:
MDB_MODULE and the GWEJB ear are deployed in a cluster. 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 any one goes down other will handle the messages.
- 3) FileStore:
File store is a cluster file system or database where if one node goes down then other will handle the requests.
- 4) DB Server:
Database is installed in RAC mode where it has more than 1 node, if a node goes down then other nodes will handle messages.

8.8 How to setup for Scheduler/Notifications

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

8.9 What other modules uses JMS Queue's

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

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

8.10 References

- 1) FCUBS_12.1_Weblogic12c_Middleware_Practices.doc
- 2) GATEWAY_Applications_WL.doc
- 3) Resource_Creation_WL.doc



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