

Payments Installation Checklist

Oracle Banking Payments

Release 14.7.5.0.0

Part No. G15796-01

[September 2024]





Oracle Banking Payments
WebLogic Server Configuration Checklist
September 2024
Version 14.7.5.0.0

Oracle Financial Services Software Limited
Oracle Park
Off Western Express Highway
Goregaon (East)
Mumbai, Maharashtra 400 063
India

Worldwide Inquiries:
Phone: +91 22 6718 3000
Fax: +91 22 6718 3001
www.oracle.com/financialservices/

Copyright © 2017, 2024 Oracle and/or its affiliates. All rights reserved.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

U.S. GOVERNMENT END USERS: Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate failsafe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

This software or hardware and documentation may provide access to or information on content, products and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.



Table of Contents

TABLE OF CONTENTS 1-1

1. PREFACE 1-1

1.1 INTRODUCTION.....1-1

1.2 AUDIENCE.....1-1

1.3 DOCUMENTATION ACCESSIBILITY1-1

2. PAYMENTS INSTALLATION CHECKLIST2

2.1 CHECKLIST FOR INSTALLATION ON WEBLOGIC SERVER.....2

1. Preface

1.1 Introduction

This document briefs the list of checklists to validate Payments Installation, to make it compatible to Oracle Banking Payments 14.3.

1.2 Audience

This document is intended for the following audience:

- Implementation & IT Staff

1.3 Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc> .

2. Payments Installation Checklist

2.1 Checklist for Installation on WebLogic Server

Below are the list of steps to validate Server Configuration post successful installation of Oracle Banking Payments:

1. Check the WebLogic version, JDK version on the Application server and Oracle Client version.
The versions should be as per the latest certified version specified in the Release document.
2. Below WebLogic, parameters should be checked as part of Oracle Banking Payments Installation for the WebLogic Domain created.
 - a. Under Domain--> Configuration Tab --> Web Applications
 - b. Options 'JSP Compiler Backwards Compatible' and 'Archived Real Path Enabled' should be checked.
3. Missing Server Id setup at server start-up for single server or cluster installations.

Identify the Managed Server in which the Application EAR is deployed

- a. Login to the WebLogic Console
- b. Navigate to Environment --> Servers
- c. From the List of Servers, locate and click on the Managed Server in which the Application EAR is deployed

The screenshot shows the Oracle WebLogic Server Administration Console. On the left, the 'Domain Structure' tree has 'Servers' highlighted. The main area displays the 'Summary of Servers' page. A table lists the servers:

Name	Type	Cluster	Machine	State	Health	Listen Port
Admin142(admin)	Configured			RUNNING	OK	4001
ServerU1	Configured		Machine1	RUNNING	OK	4010
ServerU2	Configured		Machine1	RUNNING	OK	4024

A red callout bubble points to the 'ServerU1' row with the text: 'Click the Managed Server for Server Configuration'.

Verifying Arguments for Reference Number Generation

- a. After clicking the Managed Server, navigate to 'Server Start' tab under the 'Configuration Tab'
- b. Verify the Arguments as shown below

-Dserver.id=1

- c. In case of cluster setup, each managed server, which is part of the cluster where the application is deployed, should have a different server id.
For eg for Managed server, “Server1” the value should be given as

-Dserver.id=1

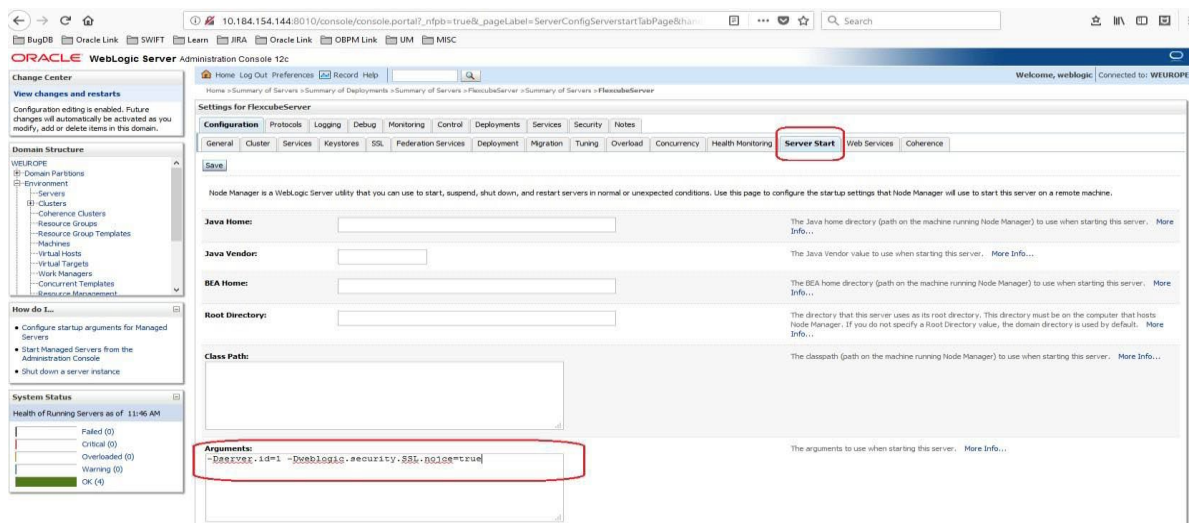
For Managed server Server2, the value should be given as

-Dserver.id=2

Different values can be given for managed server upto 99.

Note

Parameter ‘-Dserver.id=1’ is required for the Reference Number Generation in Oracle Banking Payments Transaction screens. If not set, Oracle Banking Payments Transaction screens on launch will report Error on click of NEW



5. JMS Load Balancing Configuration

For each of the Distributed Queue Connection Factory, disable the “Server Affinity” flag.
This ensures that the messages get distributed uniformly across all the managed servers in a cluster.

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

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

How do I...

- Configure connection factories

System Status

Health of Running Servers as of 10:47 AM

Home Log Out Preferences Record Help

Welcome, weblogic Connected to J

Home > Summary of JMS Modules > PMJMSModule > ACCINT_QCF

Messages

All changes have been activated. No restarts are necessary.

Settings for ACCINT_QCF

Configuration Subdeployment Notes

General Default Delivery Client Transactions Flow Control **Load Balance** Security

Click the **Lock & Edit** button in the Change Center to modify the settings on this page.

Save

Use this page to define the load balancing configuration parameters for this JMS connection factory, which includes enabling load balancing and server affinity.

☒ **Load Balancing Enabled** Specifies whether non-anonymous producers created through a connection factory are load balanced within a distributed destination on a per-call basis. [More Info...](#)

☐ **Server Affinity Enabled** Specifies whether a server instance that is load balancing consumers or producers across multiple members destinations of a distributed destination, will first attempt to load balance across any other physical destinations that are also running on the same server instance. [More Info...](#)

Producer Load Balancing Policy: Per-Member

The Producer Load Balancing Policy restricts where a JMS Message Producer can load balance its messages among members of a distributed destination (DD). [More Info...](#)

Save

6. Non Transactional Datasource Configuration

Datasource which do not have the “Supports Global Transactions” flag enabled are referred as Non-Transactional Datasource, as they do not come under the Container/Server managed transactions.

Settings for jdbc/fcjddevDS

Configuration Targets Monitoring Control Security Notes

General Connection Pool Oracle ONS **Transaction** Diagnostics Identity Options

Click the **Lock & Edit** button in the Change Center to modify the settings on this page.

Save

The transaction protocol for a JDBC data source determines how connections from the data source are handled during transaction processing (XA) or non-global (local).

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

☐ **Supports Global Transactions** Select this option to participate in global transactions.

☒ **Logging Last Resource** Enables a non-XA transaction using the Logging Last Resource protocol. Recommended for non-XA transactions.

☐ **Emulate Two-Phase Commit** Enables a non-XA transaction using the Emulate Two-Phase Commit protocol. Recommended for non-XA transactions.

☐ **One-Phase Commit** Enables a non-XA transaction using the One-Phase Commit protocol. Recommended for non-XA transactions.

For such Datasources, the inactive connection timeout seconds must be configured to a positive value. This helps to avoid the Connection Leak scenario. The suggested value is 30

seconds.

Settings for jdbc/fcdevDS

Configuration Targets Monitoring Control Security Notes

General **Connection Pool** Oracle ONS Transaction Diagnostics Identity Options

Click the **Lock & Edit** button in the Change Center to modify the settings on this page.

Save

The connection pool within a JDBC data source contains a group of JDBC connections that applications reserve, use, and then return to the pool. The connection pool and the connections within it are

Use **Advanced**

☒ **Test Connections On Reserve** Enables WebLogic Server to test a connection before giving it to a client. (Requires that you specify a Test Table Name.) [More Info...](#)

Test Frequency: 120 The number of seconds a WebLogic Server instance waits between attempts when testing unused connections. (Requires that you specify a Test Table Name.) Connections that fail the test are closed and reopened re-establish a valid physical connection. If the test fails again, the multiple connection requests in rapid succession

Inactive Connection Timeout: 30 The number of inactive seconds on a reserved Server reclaims the connection and releases it to the pool. [More Info...](#)

7. Transactional Datasources Configuration

Datasource for which the “Supports Global Transactions” flag is enabled referred as Transactional Datasource, as they come under the Container/Server managed transactions.

Settings for jdbc/fcdevDS_GTXN

Configuration Targets Monitoring Control Security Notes

General Connection Pool Oracle ONS **Transaction** Diagnostics Identity Options

Click the **Lock & Edit** button in the Change Center to modify the settings on this page.

Save

The transaction protocol for a JDBC data source determines how connections from the data source are handled during transaction processing. Transactions within a JDBC data source are either global (XA) or non-global (local).

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

☒ **Supports Global Transactions** Select this option to enable non-XA connections from the data source to participate in global transactions. [More Info...](#)

☒ **Logging Last Resource** Enables a non-XA JDBC connection to participate in distributed transactions using the Logging Last Resource (LLR) transaction optimization. Recommended in place of Emulate Two-Phase Commit. [More Info...](#)

☐ **Emulate Two-Phase Commit** Enables a non-XA JDBC connection to emulate participation in distributed transactions using JTA. Select this option only if your application can tolerate heuristic conditions. [More Info...](#)

☐ **One-Phase Commit** Enables a non-XA JDBC connection to participate in distributed transactions

For such data sources ensure that “Logging Last Resource” option is selected.

Settings for jdbc/fcjdevDS_GTXN

Configuration Targets Monitoring Control Security Notes

General **Connection Pool** Oracle ONS Transaction Diagnostics Identity Options

Click the **Lock & Edit** button in the Change Center to modify the settings on this page.

Save

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

Use this |

Advanced

☐ Test Connections On Reserve

Inactive Connection Timeout:

“Inactive Connection Timeout” seconds must be set to 0. For the transactional Datasources as they participate in the container transaction, the timeout is governed by the JTA timeout seconds.

8. Data Source Setup Verification

- d. Navigate to the Data Sources Configuration.
- e. Below Data Sources must be mapped in the Data Sources Configuration.
 - i. Jdbc/fcjdevDS
 - ii. Jdbc/fcjdevDS_GTXN
 - iii. Jdbc/fcjdevDS_XA
- f. Additional Data Sources for Co-deployed
 - i. jdbc/fcjdevDS_ASYNC

ORACLE WebLogic Server Administration Console 12c

Home Log Out Preferences Record Help Welcome, pminfra

Home > 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)

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

Name	Type	JNDI Name	Targets	Scope	Domain Partitions
jdbc/fcdevDS	Generic	jdbc/fcdevDS	ServerA1, ServerWPS, ServerSchd	Global	
jdbc/fcdevDS_GTXN	Generic	jdbc/fcdevDS_GTXN	ServerA1, ServerWPS	Global	
jdbc/fcdevDS_XA	Generic	jdbc/fcdevDS_XA	ServerA1, ServerSchd	Global	
jdbc/fcSchedulerDS	Generic	jdbc/fcSchedulerDS	ServerA1, ServerSchd	Global	

Showing 1 to 4 of 4

How do I...
 • Create JDBC generic data sources
 • Create JDBC GridLink data sources
 • Create JDBC multi data sources
 • Create UCP data sources
 • Create Proxy data sources

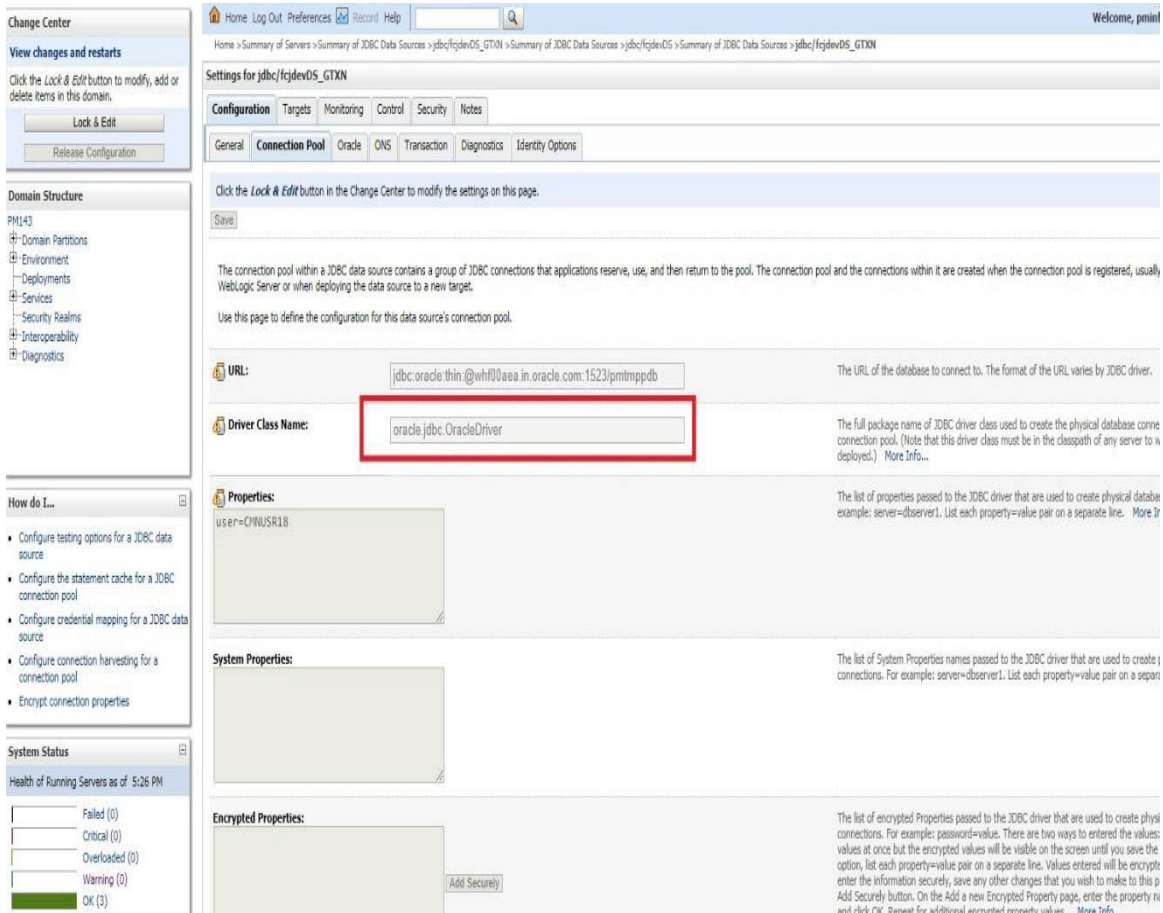
System Status
 Health of Running Servers as of 10:23 AM

g. Below listed Data Sources must be configured as NXA (Please refer to the below screenshot for Jdbc/fcdevDS_GTXN)

- i. Jdbc/fcdevDS
- ii. Jdbc/fcdevDS_GTXN
- iii. jdbc/fcdevDS_ASYNC

h. Below listed Data Sources must be configured as XA

- i. Jdbc/fcdevDS_XA

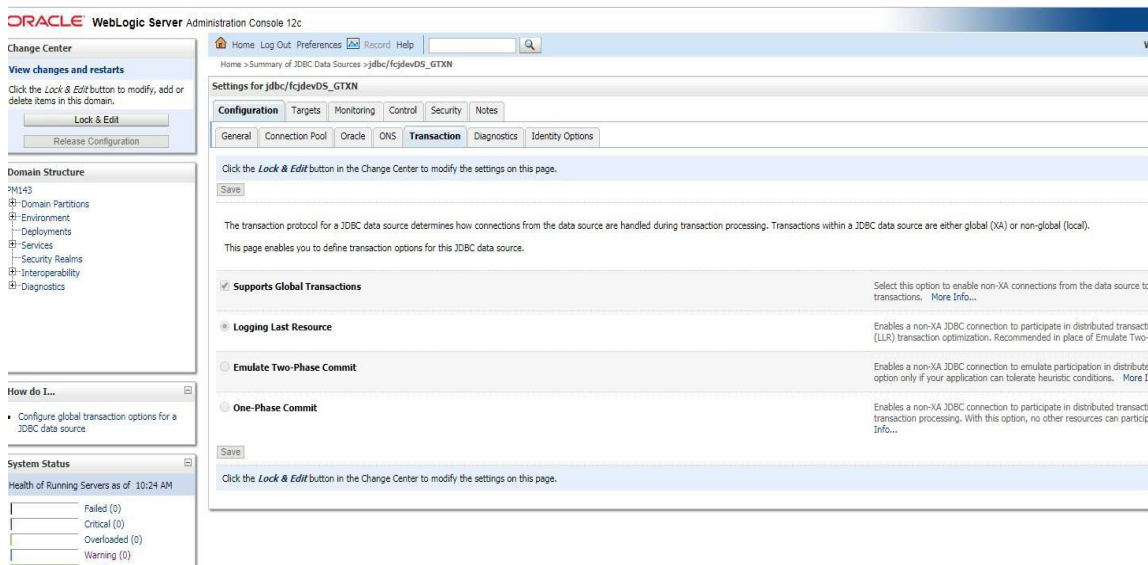


- i. Below options must be enabled for the GTXN Data Source - Jdbc/fcjddevDS_GTXN
 - i. Supports Global transactions
 - ii. Logging Last Resource

During creation of this datasource a table will be created in the connected database with the table name as WL_LLRL_'managed_server_name'

Here the managed server will be the name of the target server associated with the datasource.

For JDBC LLR 2PC transactions, if the transaction data is too large to fit in the LLR table, the transaction will fail with a rollback exception during commit. This can occur if your application adds many transaction properties during transaction processing. In this case, the database administrator can drop the existing table and create a new LLR table with the same name or alter the column with larger recSize value for RECORDSTR data column. The RECORDSTR data column must be the DBMS's variable string column type with the DBMS's maximum size. In this way, the DBMS allocates as much space as the data needs for a given row.



9. Target Server for Datasources created

- a. If Payments EAR is deployed with embedded Scheduler, all datasources should point to the single Managed Server, where the application is deployed.
- b. If Payments EAR and Scheduler EAR are deployed on two different Servers
 - i. Below datasources should be targeted to Managed Server where application is deployed.

jdbc/fcjddevDS
 jdbc/fcjddevDS_GTXN
 jdbc/fcjddevDS_XA

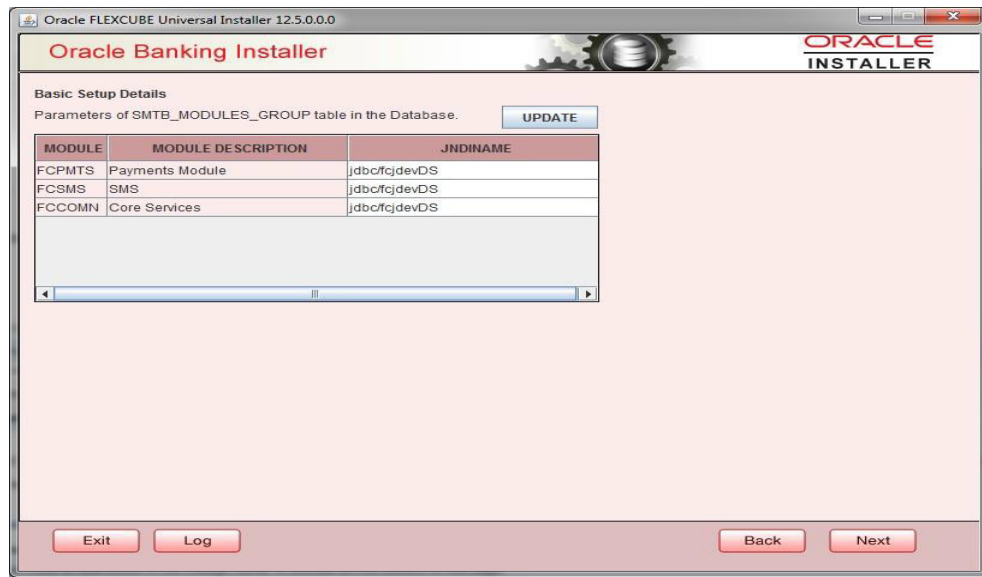
- ii. Below datasources should be targeted to Managed Server where Scheduler is deployed.

jdbc/fcjddevDS
 jdbc/fcjddevDS_XA

10. Verifying data in SMTB_MODULES_GROUP Table

- i. JNDI Names Input during Installation process must be verified with records in the SMTB_MODULES_GROUP table
- ii. JNDI name provided here should be created on console.

Below is the screenshot of Data Input during installation



Below is the screenshot of records in the SMTB_MODULES_GROUP table

	MODULE_GROUP_ID	MODULE_GROUP_DESC	JNDINAME	RELEASE
1	FCCOMN	Core Services	jdbc/fcjdevDS	14.3.0.5.0
2	FCSMS	SMS	jdbc/fcjdevDS	14.3.0.5.0
3	FCPMTS	Payments Module	jdbc/fcjdevDS	14.3.0.5.0

11. All queues mentioned in the Resource List should be mandatorily created. For all queues where Error queue needs to be defined, the below setting should be done.
 - a. 'Expiration Policy' should be maintained as 'Redirect' and 'Error Destination' as the error Queue. Keep Redelivery Limit as zero.

Home Log Out Preferences Record Help Welcome, pminfra Connected to: PM143

Home > Summary of JDBC Data Sources > Summary of JMS Servers > PMJMServer > Summary of JMS Modules > PMJMSMODULES > jms/EXTACSYS_REQ_IN > Summary of JMS Modules > PMJMSMODULES > EMS_IN

Settings for EMS_IN

Configuration Monitoring Control Security Subdeployment Notes

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

Click the **Lock & Edit** button in the Change Center to modify the settings on this page.

Save

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

Redelivery Delay Override:	-1	The delay, in milliseconds, before rolled back or recovered messages are redelivered, regardless of the RedeliveryDelay specified by the consumer and/or connection factory. Redelivered queue messages are put back into their originating destination; redelivered topic messages are put back into their originating subscription. The default value (-1) specifies that the destination will not override the RedeliveryDelay setting specified by the consumer and/or connection factory. More Info...
Redelivery Limit:	0	The number of redelivery tries a message can have before it is moved to the error destination. This setting overrides any redelivery limit set by the message sender. If the redelivery limit is configured, but no error destination is configured, then persistent and non-persistent messages are simply dropped (deleted) when they reach their redelivery limit. More Info...
Expiration Policy:	Redirect	The message Expiration Policy to use when an expired message is encountered on a destination. The valid expiration policies are: More Info...
Expiration Logging Format:		The policy that defines what information about the message is logged when the Expiration Policy is set to Log. The valid logging policy values are: More Info...
Error Destination:	EMS_IN_E	The name of the target error destination for messages that have expired or reached their redelivery limit. If no error destination is configured, then such messages are simply dropped. If a message has expired or reached its redelivery limit, and the Expiration Policy is set to Redirect, then the message is moved to the specified Error Destination. More Info...

Save

Click the **Lock & Edit** button in the Change Center to modify the settings on this page.

12. In case of Standalone and co-deployed setup for Payments, the below external queues should have the setup as mentioned

jms/SNCK_RES_IN
 jms/SNCK_RES_BKP_IN
 jms/FP_SNCK_RES_IN
 jms/FP_SNCK_RES_BKP_IN
 jms/EXT_PRICE_RES_IN
 jms/EXT_PRICE_RES_BKP_IN
 jms/EXTACSYS_REQ_IN
 jms/ECA_RES_BKP_IN
 jms/FP_ECA_RES_BKP_IN
 jms/ECA_RES_IN
 jms/ACC_ENTRY_RES_BKP_IN
 jms/ECR_RES_IN
 jms/ECR_RES_BKP_IN
 jms/EXTRATESYS_REQ_BKP_IN
 jms/EXTRATESYS_REQ_IN

- Options Expiry Policy should be maintained as Redirect and error destination as Error queue in Delivery Failure. Keep Redelivery Limit as zero.
- In Tab Overrides, value for 'Time-to-Live Override' should be maintained as 2000.

13. In case of co-deployed setup, for external queue MDB_QUEUE_RESPONSE, check if

- Options Expiry Policy is maintained as Redirect and error destination as jms/ACC_ENTRY_RES_BKP_IN in Delivery Failure. Redelivery Limit should be 0.
- In Tab Overrides, value for 'Time-to-Live Override' should be maintained as 2000.

14. Check if following Gateway ears are deployed on the Application Server for co-deployed setup.

- GW EJB
- GW MDB

15. 'SYSTEM' user should be present and debug should be enabled in case debugs needs to be generated for checking the response error from FCUBS.

16. User role should be granted to SYSTEM user for the branch from where transaction is posted to MDB.

17. Check the maintenance for tables

- PMTM_JOB_PARAM

- For Parameter PM.CTX.PROVIDER property maintain the below value "t3://Weblogic_IP:Server_Port" or t3://Host Name:Server_Port
Here Host Name is the name of the Application Server or IP of the Application Server.
Server_Port is the listen port configured on the application Managed Server where application is deployed.
- For parameter PM.CTX.FACTORY value should be weblogic.jndi.WLInitialContextFactory

- PMTM_SYSTEM_PARAMETERS

- For PARAM_NAME "PM.CTX.FACTORY", update the PARAM_VALUE as 'weblogic.jndi.WLInitialContextFactory'.
- For PARAM_NAME "PM_CTX_PROVIDER", update the PARAM_VALUE for Non-Cluster setup as "t3://Weblogic_IP:Server_Port" or "t3://Host Name:Server_Port"
and for Cluster setup as "t3://HOST NAME1: PORT 1, HOST NAME2:PORT 2"
 - Here Host Name is the name of the Application Server or IP of the Application Server.
 - Server_Port is the listen port configured on the application Managed Server where application is deployed.
- For PARAM_NAME "PM.CTX.CONNFACTORY" the appropriate connection factory needs to be provided which is created in JMS Server for e.g jms/PMQCF.
- For PARAM_NAME "C2B_FILE_PATH", give the C2B path maintained in the Application server.
- For PARAM_NAME "DD_FILE_PATH" property, give the DD path maintained in the Application server.
- For PARAM_NAME "DEBUG_PATH" property, give the PM DEBUG path maintained in the Application server.
- For PARAM_NAME "DISPATCH_PATH" property, give the DISPATCH path maintained in the Application server.

- CSTB_PARAM

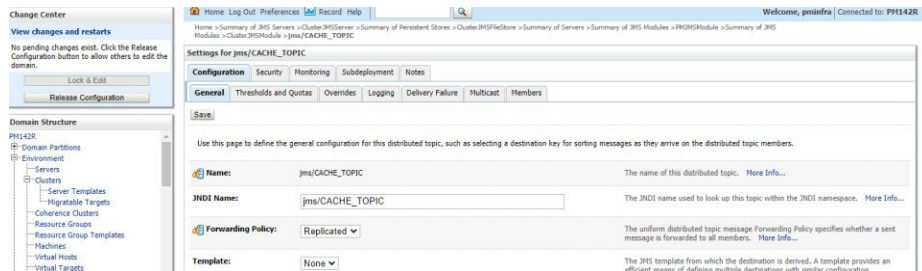
- Check if the below parameters PM.CTX.FACTORY, PM_CTX_PROVIDER and PM.CTX.CONNFACTORY exist in CSTB_PARAM. In case parameters exists, it should have the same value as in PMTM_SYSTEM_PARAMETERS. The parameters need not be maintained

in case it's already maintained in PMTM_SYSTEM_PARAMETERS.

- CSTM_EXTERNAL_SERVER_DETAILS

- i. For field "CONTEXT_PROV_URL", update the values for Non-Cluster setup as "t3://Weblogic_IP:Server_Port" or "t3://Host Name:Server_Port" and for Cluster setup as "t3://HOST NAME1: PORT 1, HOST NAME2:PORT 2" in web-logic application server.
- iii. Value for QUEUE_FCTRY_JNDI should be 'jms/PMQCF'
- iv. Value for CACHE_QUEUE_JNDI should be 'jms/CACHE_TOPIC'

18. Please ensure the topic CACHE_TOPIC is created and present in the weblogic JMS Server. In case of cluster and non-cluster setup, the 'Forwarding policy' of the distributed Topic should be "Replicated" for the uniform Distributed Topic, otherwise the Caching would not work properly.



19. If External JSUIXML path is checked as required during property creation, all UIXML and JS files (plus copy of old Rolled-up JSUIXML) should be copied to the external path after EAR creation.

20. All EMS folders should be created on the Application server with full rights.

21. Check if the value for below EMS properties are correctly defined in fcubs.properties.

EMS_INIT_CTX_FACT=weblogic.jndi.WLInitialContextFactory

- i. Non Cluster Setup

EMS_PRVDR_URL= t3://Weblogic_IP:Server_Port

t3://Weblogic_IP:Server_Port" or "t3://Host Name:Server_Port"

- a. Here Host Name is the name of the Application Server Server or IP of the Application Server.
- b. Server_Port is the listen port configured on the application Managed Server where application is deployed.

- ii. Cluster Setup

In case of external load balancer, it should be the Host Name or IP and port of the Load balancer.

EMS_PRVDR_URL= t3://Weblogic_IP:Server_Port

In case of internal load balancer, specify the Host name and IP as below of all managed servers used in the Cluster

EMS_PRVDR_URL= t3://HOST NAME1: PORT 1, HOST NAME2:PORT 2

22. Debug paths should be created on the Application server with full rights. Data Store table CSTB_DEBUG_USERS should be populated with value Y if debug is to be generated for a logged in user.
23. Below maintenances should be done for both Co-deployed and Standalone. Details can be checked in FCUBS-Oracle Banking Payments Integration document.
 - a. Sanctions System Maintenance (PMDSNCKM)
 - b. ECA System Maintenance (PMDECAMT)
 - c. Accounting System Maintenance (PMDACCMT)
 - d. Queue Connection Profile Maintenance (PMDQPROF)