FLEXCUBE UBS Oracle GL Adapter MDB Deployment
Installation
Oracle FLEXCUBE Universal Banking
Release 12.1.0.0.0
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Installation Steps

1.1 Prerequisite

✓ Ensure that the basic KERNEL Environment Setup is done.

[Please refer ADOGL_Installation.doc.]

1.2 Steps

Follow the steps given below only if the Oracle10g Application Server is to be configured with Oracle10gAS JMS.

Refer OC4J_ADOGL_OracleASJMS_Queue_Installation.doc to create the OC4J JMS Destinations and Connection Factories.

A. Modify ejb-jar.xml

Open the file <KERNEL INSTALL DIR>\ADOGL MDB\config\ejb-jar.xml in any editor for editing.

Please **add** the following tag in the <message-driven> tag:

<message-driven-destination>

<destination-type>javax.jms.Queue</destination-type>

</message-driven-destination>

Save the file in the same folder after modification.

Please ensure the file has a similar section as the one shown below in the <message-driven> tag:

- ADOGL_DS is the name of the database instance
- ADOGL_MDBQCF is the OGL Queue connection Factory.
- NOTIFY_DEST_QUEUE_DLQ is the OGL Dead Letter Queue.



```
<resource-ref>
         <res-ref-name>ADOGL_DS</res-ref-name>
         <res-type>javax.sql.XADataSource</res-type>
         <res-auth>Container</res-auth>
</resource-ref>
<resource-ref>
         <description>Queue connection factory for MDB Gateway</description>
         <res-ref-name>ADOGL_MDBQCF</res-ref-name>
         <res-type>javax.jms.XAQueueConnectionFactory</res-type>
         <res-auth>Container</res-auth>
</resource-ref>
<resource-env-ref>
        <description>MDB Dead Letter Queue</description>
        <resource-env-ref-name>NOTIFY_DEST_QUEUE_DLQ</resource-env-ref-name>
         <resource-env-ref-type>javax.jms.Queue</resource-env-ref-type>
</resource-env-ref>
```

[NOTE: Please ensure that the name of the database instance is case sensitive and should always be capital letters.]

B. Modify orion-ejb-jar.xml

Open the file

<KERNEL_INSTALL_DIR>\ADOGL_MDB\config\OC4J\orion-ejb-jar.xml in any editor for editing.

Please ensure the following tag in the <enterprise-beans> tag:

<message-driven-deployment
name="ADOGL_MDB_Bean"</pre>



```
connection-factory-location="ADOGL_MDBQCF"

destination-location="NOTIFY_DEST_QUEUE"

listener-threads="50"

subscription-name="ADOGLMDBSUB"

transaction-timeout="172800"
```

Save the file in the same folder after modification.

C. Configure Service parameters

Open <KERNEL_INSTALL_DIR>\ADOGL_MDB\config\ADOGL_MDB_Prop.properties file in an editor and give appropriate values for the properties shown below.

1. ADOGL_MDB_JMS_QCF: This property specifies the location of the OGL Notify MDB Queue connection factory.

E.g. ADOGL_MDBQCF

2. ADOGL_MDB_JMS_QUEUE_NAME: This property specifies the location of the OGL Destination Queue.

E.g.: NOTIFY_DEST_QUEUE

3. ADOGL_MDB_JMS_DLQ_CF: This property specifies the location of the OGL Notify Dead Letter MDB Queue connection factory.

E.g.: ADOGL_MDBQCF

4. ADOGL_MDB_JMS_DLQ: This property specifies the location of the OGL Destination Dead Letter Queue connection factory.

E.g.: NOTIFY_DEST_QUEUE_DLQ



5. MAX_CLOB_LEN: This property specifies the length till which oracle considers the incoming text as string. For Oracle 10g R2 Database, it should be 32512.

e.g. MAX_CLOB_LEN=32512

6. DB_TIMEOUT: This property is the timeout in SECONDS for which the FCUBS EJB Gateway will wait for PL/SQL to finish its processing.

If database does not return within this timeout, the call to PL/SQL will be assumed to be failed.

E.g.: 200

7. MSG_SCHEMA_CON_POOLNAME: This property specifies the JNDI name of the data source to which the first connection happens.

[NOTE: The value of this property has to be one of the datasources ref><resource-ref> in ejb-jar.xml.]

maintained as <resource-

[NOTE: This name must be same as the database instance name and must be in upper case.]

E.g.: ADOGL_DS

8. LOGGER_PATH: This property is the absolute path to the adogl_mdb_logger.cfg file along with file name.

[NOTE: File separator must be "/".]

[NOTE: The OGL interfaces provided at the site should be accessible from the OGL Adapter MDB.To ensure this; please specify the following property values carefully.]

ADOGL_EJB_JNDI_NAME: The JNDI location of the OGL Bean. The JNDI name of the Bean
can be obtained from the in the <session> tag of ejb-jar.xml located in the OGL Enterprise
Archive (EAR) file

E.g.: OGL EJB FACADE Bean

(In ejb-jar.xml)

<ejb-name >OGL_EJB_FACADE_Bean



 ADOGL_EJB_CALL_TYPE: The type of call could be either REMOTE or LOCAL depending on whether the OGL EJB Façade bean has to be called remotely or locally.

E.g.: REMOTE

11. ADOGL_EJB_CTX_FACTORY: This property specifies the Initial Context factory to lookup remote OGL EJB provided.

For Oracle10g AS, the value is:

com.evermind.server.rmi.RMIInitialContextFactory

12. ADOGL_EJB_SERVER_URL: This property specifies the provider URL for the Initial Context. For Oracle10g AS, the value is:

ormi://10.80.4.116:23791/OGL_EJB_FACADE_Bean

Note:

- ✓ OGL_EJB_FACADE_Bean is the Application name with which the bean is deployed.
- √ 23791 is the default port.
- √ 10.80.4.116 is the host machine IP Address.
- 13. ADOGL_EJB_SECURITY_PRINCIPAL: This property is the username for the Oracle10g AS remote EJB access. Specify the administrator user name of Oracle 10g AS provided during Oracle 10g AS installation.

E.g.: oc4jadmin

14. ADOGL_EJB_SECURITY_CREDENTIALS: This property is the password for the Oracle10g AS remote EJB access. It has to be decrypted and stored here for security reasons. The password decryption can be done by using a batch file "ChangePassword.bat".

The ADOGL_MDB_Prop.properties will look as given below.

ADOGL_EJB_JNDI_NAME=AQBridgeFacade ADOGL_EJB_CALL_TYPE=REMOTE ADOGL_EJB_CTX_FACTORY=com.evermind.server.rmi.RMIInitialContextFactory ADOGL_EJB_SERVER_URL=ormi://10.80.4.116:23791/AQBridgeFacade ADOGL_EJB_SECURITY_PRINCIPAL= ADOGL_EJB_SECURITY_CREDENTIALS= ADOGL_MDB_JMS_QCF=ADOGL_MDBQCF ADOGL_MDB_JMS_QUEUE_NAME=NOTIFY_DEST_QUEUE ADOGL_MDB_JMS_DLQ_CF=ADOGL_MDBQCF ADOGL_MDB_JMS_DLQ=NOTIFY_DEST_QUEUE_DLQ MAX CLOB LEN=32512 DB TIMEOUT=200 MSG_SCHEMA_CON_POOLNAME=FLEXTEST.WORLD

LOGGER_PATH=D:/Kernel7.2/ADOGL_MDB/config/adogl_mdb_logger.cfg



D. Configure logger parameters

Open <KERNEL_INSTALL_DIR>\ADOGL_MDB\config\adogl_mdb_logger.cfg file in an editor and change the value of the property "AD.LOGGER.FPATH" to

<KERNEL_INSTALL_DIR>/ADOGL_MDB/log/.

E.g.:- If the value of your <KERNEL_INSTALL_DIR> is D:\Kernel7.2, then the entry for this property should be

AD.LOGGER.FPATH= D:/Kernel7.2/ADOGL_MDB/log/

[NOTE: Give AD.LOGGER.FPATH with forward slash (/) as file separator and remember to give a slash at the end.]

E. Run the build file

✓ For WINDOWS

- Go to the folder <KERNEL_INSTALL_DIR>\setup in the command prompt, type "set_env" and press enter.
- Change directory to <KERNEL_INSTALL_DIR>\ADOGL_MDB\setup\OC4J in the command prompt, type "ant" and press enter.

✓ For UNIX

- Go to the folder <KERNEL_INSTALL_DIR>/setup in the shell prompt, type "set_env.sh" and press enter.
- Change directory to <KERNEL_INSTALL_DIR>/ADOGL_MDB/setup/OC4J in the shell prompt, type "ant" and press enter.

[NOTE: Please make sure that you get a message BUILD SUCCESSFUL after compilation.]

F. Change the Password (for OGL Bean access from the Adapter only)



- (i) cd <KERNEL_INSTALL_DIR>\ADOGL_MDB\setup
- (ii) Type "ChangePassword" at the command prompt.
- (iii) Enter the Properties file name as ADOGL_MDB_Prop.properties
- (iv) Enter the User ID Property Name : ADOGL_EJB_SECURITY_PRINCIPAL
- (v) Enter the User ID: The administrator user Id provided during the Oracle 10g AS installation
- (vi) Enter the password property name: ADOGL_EJB_SECURITY_CREDENTIALS
- (vii) Enter the password: The administrator password provided during Oracle 10g AS installation.

G. Deploy the MDB in application server

1. Stop the application server.

If the application server is already running, then stop the application server as follows:

✓ For WINDOWS

Set JAVA_HOME and ORACLE_HOME with the paths in your machine e.g.

set ORACLE_HOME=D:\Oracle10gAS
set JAVA_HOME=%ORACLE_HOME%\jdk

- Go to the <APP_SERVER_HOME>/bin directory in the command prompt

 E.g. cd %APP_SERVER_HOME%\bin
- Type oc4j –shutdown –port 23791 –password <admin_password>
 e.g. oc4j –shutdown –port 23791 –password oc4jadmin
 This will stop the server.

✓ For UNIX

e.g.

Set JAVA_HOME and ORACLE_HOME with the paths in your machine

export ORACLE_HOME=/home/Oracle10gAS
export JAVA_HOME=\${ORACLE_HOME}/jdk

Go to the <APP_SERVER_HOME>/bin directory in the command prompt
 e.g. cd \${APP_SERVER_HOME}/bin



Type oc4j -shutdown -port 23791 -password <admin_password>

e.g. oc4j -shutdown -port 23791 -password oc4jadmin

This will stop the server.

2. Start the application server.

✓ For WINDOWS

Set JAVA_HOME and ORACLE_HOME with the paths in your machine

e.g.

set ORACLE_HOME=D:\Oracle10gAS

set JAVA_HOME=%ORACLE_HOME%\jdk

Go to the <APP_SERVER_HOME>/bin directory in the command prompt

e.g. cd %APP_SERVER_HOME%\bin

Type oc4j –start

This will start the server. Ensure that you get no error during start up. If the server start up is proper we shall get the following screen.

✓ For UNIX

Set JAVA_HOME and ORACLE_HOME with the paths in your machine.

e.g.

export ORACLE_HOME=/home/Oracle10gAS

export JAVA_HOME=\${ORACLE_HOME}/jdk

Go to the <APP_SERVER_HOME>/bin directory in the command prompt

E.g. cd \${APP_SERVER_HOME}/bin

- Type **oc4j** -start

This will start the server. Ensure that you get no error during start up.

3. Open the Administrative Console of Oracle Enterprise Manager

✓ Open an internet browser and type the OC4J Admin Console URL Address of the server.

e.g. <u>http://10.80.4.116:8888/em</u>

Where, 10.80.4.116 is the machine IP Address on which OC4J is running.

✓ Login to Administrative Console

Enter OC4J administrator username/password and press Login.

| Application S | | 3 0 | |
|---------------|------------|-----------|-------|
| Login | | | |
| | | | |
| * | User Name | oc4jadmin | |
| | * Password | ••••• | |
| | | | Login |

4. For each "res-ref-name" in ejb-jar.xml create an XA DataSource in Oracle 10g Application Server

[Refer: OC4J ADOGL DataSource Creation.doc]

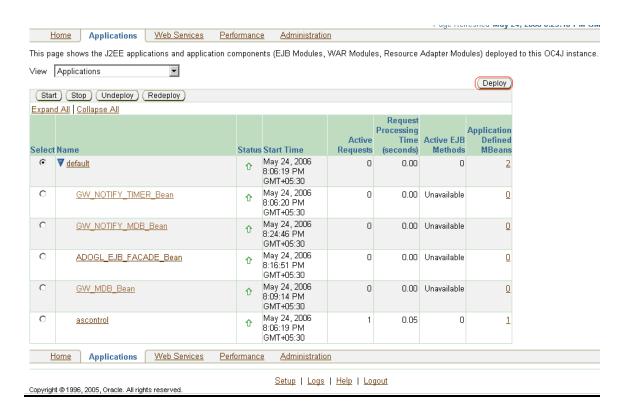
5. Create OracleASJMS Queues and Queue Connection Factories in Oracle 10g Application Server

[Refer: OC4J_ADOGL_OracleASJMS_Queue_Installation.doc]



6. Deploy ADOGL_MDB_Bean.ear

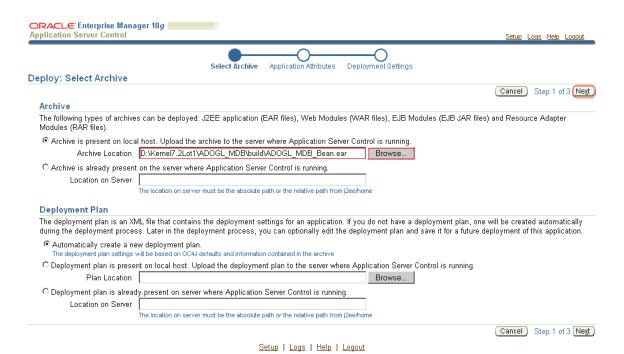
✓ Click on Applications -> Deploy.



- ✓ Click Browse
- ✓ Specify the local path of the enterprise archive file:

<KERNEL_INSTALL_DIR>/ADOGL_MDB/build/ADOGL_MDB_Bean.ear

✓ Click Next.



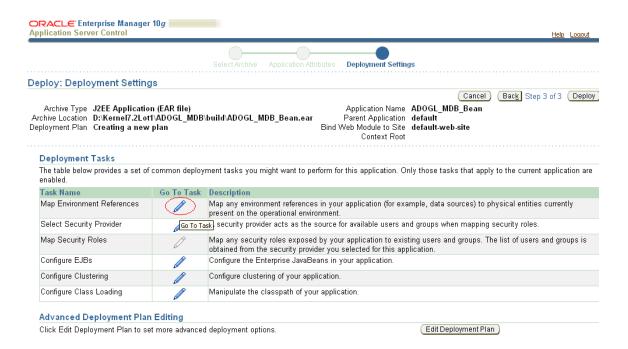
8. The following screen is displayed.

✓ Click Next.





✓ Click" Map Environment References"



✓ Map to JNDI Location

[Note: The JNDI names by default are in the table given below. These names can be modified if required in the following screen of the OEM console. In such a situation, remember to modify the corresponding entries in ejb-jar.xml and the ADOGL_MDB_Prop.properties file]

| Resource Reference | JNDI Location |
|-----------------------|-----------------------|
| ADOGL_MDBQCF | ADOGL_MDBQCF |
| ADOGL_DS | ADOGL_DS |
| NOTIFY_DEST_QUEUE_DLQ | NOTIFY_DEST_QUEUE_DLQ |

✓ Click OK



Deployment Settings: Map Environment References

(Cancel) (OK)

Archive Type J2EE Application (EAR file) Archive Location D:\Kernel7.2Lot1\ADOGL_MDB\build\ADOGL_MDB_Bean.ear Deployment Plan Creating a new plan

Application Name ADOGL_MDB_Bean Parent Application default Bind Web Module to Site default-web-site

Map Resource References

The table below lists all resource manager connection factory references found in your application. Resource references need to be associated with the JNDI names of physical entities on the system where the selected instance/cluster is running.

| Resource | | | Referenced By | | |
|-----------|---|--------------------------|--------------------|-----------------|----------------------|
| Reference | Description | Туре △ | Module | Enterprise Bean | Map to JNDI Location |
| | Queue connection factory for MDB Gateway | YAQueueConnectionFactory | ADOGL_MDB_Bean.jar | ADOGL_MDB_Bean | ADOGL_MDBQCF |
| ADOGL_DS | | javax.sql.XADataSource | ADOGL_MDB_Bean.jar | ADOGL_MDB_Bean | ADOGL_DS |

Map Resource Environment References

The table below lists all resource environment references found in your application. A resource environment reference needs to be bound to an administered object in the target operational environment.

| Resource Environment | | | Referenced By | | |
|-----------------------|--------------------------|---------------------|--------------------|-----------------|-------------------------|
| Reference | Description | Туре 🛆 | Module | Enterprise Bean | Map to JNDI Location |
| NOTIFY_DEST_QUEUE_DLQ | MDB Dead Letter Queue | javax.jms. Queue | ADOGL_MDB_Bean.jar | ADOGL_MDB_Bean | NOTIFY_DEST_QUEUE_DLQ 🚀 |

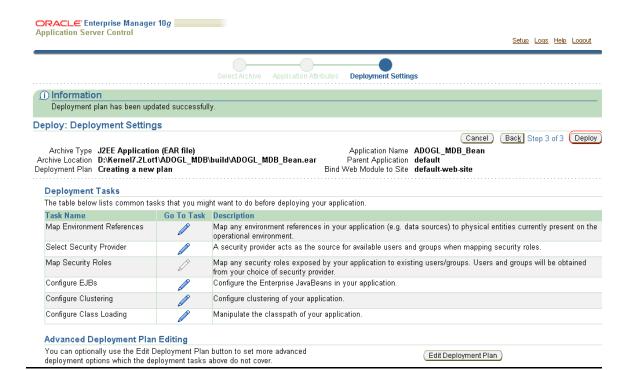
Map Message Destinations

The table below lists all message destinations found in your application. Logical destinations need to be mapped to physical destinations in the target operational environment.

11. The following screen is displayed.

Click Deploy





Please ensure the ADOGL_MDB_Bean is successfully deployed.

✓ Click Return

Application Server Control

Setup Logs Help Logout

■ Confirmation

Return

The Application "ADOGL_MDB_Bean" has been successfully deployed.

Progress Messages

```
Progress Messages

[May 24, 2006 8:31:27 PM] Application Deployer for ADOGL_MDB_Bean STARTS.
[May 24, 2006 8:31:27 PM] Copy the archive to D:\Oracle10gASy\2ee\home\applications\ADOGL_MDB_Bean.ear
[May 24, 2006 8:31:27 PM] Initialize D:\Oracle10gASy\2ee\home\applications\ADOGL_MDB_Bean.ear
[May 24, 2006 8:31:27 PM] Unpacking ADOGL_MDB_Bean.ear
[May 24, 2006 8:31:27 PM] Done unpacking ADOGL_MDB_Bean.ear
[May 24, 2006 8:31:27 PM] Initialize D:\Oracle10gASy\2ee\home\applications\ADOGL_MDB_Bean.ear
[May 24, 2006 8:31:27 PM] Initializing ClassLoader(s)
[May 24, 2006 8:31:27 PM] Initializing ClassLoader(s)
[May 24, 2006 8:31:27 PM] Loading connector(s)
[May 24, 2006 8:31:28 PM] Starting up resource adapters
[May 24, 2006 8:31:28 PM] Compiling EJB generated code
[May 24, 2006 8:31:28 PM] Compiling EJB generated code
[May 24, 2006 8:31:28 PM] Committing ClassLoader(s)
[May 24, 2006 8:31:28 PM] Committing ClassLoader(s)
[May 24, 2006 8:31:28 PM] Started application: ADOGL_MDB_Bean
[May 24, 2006 8:31:28 PM] Started application: ADOGL_MDB_Bean
[May 24, 2006 8:31:28 PM] Started application: ADOGL_MDB_Bean
[May 24, 2006 8:31:28 PM] Started application : ADOGL_MDB_Bean
[May 24, 2006 8:31:28 PM] Started application : ADOGL_MDB_Bean
[May 24, 2006 8:31:28 PM] Binding web application(s) to site default-web-site begins...
[May 24, 2006 8:31:28 PM] Binding web application(s) to site default-web-site ends..
[May 24, 2006 8:31:28 PM] Binding web application(s) to site default-web-site ends..
[May 24, 2006 8:31:28 PM] Binding web application(s) to site default-web-site ends..
[May 24, 2006 8:31:28 PM] Binding web application(s) to site default-web-site ends..
[May 24, 2006 8:31:28 PM] Binding web application(s) to site default-web-site ends..
[May 24, 2006 8:31:28 PM] Binding web application(s) to site default-web-site ends..
[May 24, 2006 8:31:28 PM] Binding web application(s) to site default-web-site ends..
```

Return

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Setup | Logs | Help | Logout

Appendix

1.1 Configuring ADOGL MDB with IBM WebSphere MQ

Follow the steps given below only if the Oracle10g Application Server is to be configured with *IBM WebSphere MQ*.

Before going ahead with the steps given below, ensure the IBM WebSphere MQ Destinations, Connection Factories and their Bindings are created.

[Note: The path of the .bindings files needs to be specified in orion-application.xml]

Please refer to WAS_ADOGL_WebSphereMQ_Installation.doc Section 1.4 to create them.

The Resource Adapter (used to connect to IBM WebSphere MQ) related files are as given below and are located at

<KERNEL_INSTALL_DIR>\ADOGL_MDB\config\OC4J

- √ oc4j-connectors.xml
- √ oc4j-ra.xml
- √ orion-application.xml
- ✓ orion-ejb-jar.xml
- ✓ ra.xml

In addition, changes have been made to

√ ejb-jar.xml (located at <KERNEL_INSTALL_DIR>\ADOGL_MDB\config)



1. Modify oc4j-connectors.xml

Specify all the Queues involved as given below:

2. Modify oc4j-ra.xml

Specify the Queue Connection Factories involved as given below:

```
<connector-factory location="ADOGL_MDBQCF" connector-name="WebSphereMQC">
        <connectionfactory-interface>javax.jms.XAQueueConnectionFactory</connectionfactory-interface>
        <config-property name="jndiLocation" value="ADOGL_MDBQCF"/>
        </connector-factory>
```

3. Modify orion-application.xml

Define the Resource Provider to be used by the Notify MDB.



[Note: Ensure the .bindings file is located in the correct path given below as value of the property name, java.naming.provider.url]

4. Modify orion-ejb-jar.xml

Mention the Resource Adapter name and the Resource references as shown below.

```
<message-driven-deployment name="ADOGL_MDB_Bean"
    resource-adapter="WebSphereMQC"
    listener-threads="100"
    subscription-name="ADOGL_MDB_Bean_Sub"
    transaction-timeout="172800">

<!-- Resource Ref mappings -->
    <resource-ref-mapping name="ADOGL_DS" location="ADOGL_DS" />
```

5. Modify ra.xml

Specify the Queues and the Queue Connection Factory involved as given below:

```
<!-- Queue admin object -->
<adminobject>

<adminobject-interface>javax.jms.Queue</adminobject-interface>

<adminobject-class>oracle.j2ee.ra.jms.generic.AdminObjectQueueImpl</adminobject-class>

<config-property>

<config-property-name>jndiName</config-property-name>

<config-property-type>java.lang.String</config-property-type>

<config-property-value>NOTIFY_DEST_QUEUE</config-property-value>

</config-property>

<config-property>

<config-property-name>resourceProviderName</config-property-name>
```

```
<config-property-type>java.lang.String</config-property-type>
         <config-property-value>WebSphereMQRP</config-property-value>
       </config-property>
</adminobject>
<outbound-resourceadapter>
   <connection-definition>
         <managedconnectionfactory-class>
               oracle.j2ee.ra.jms.generic.ManagedXAQueueConnectionFactoryImpl
         </managedconnectionfactory-class>
         <connectionfactory-interface>
               javax.jms.XAQueueConnectionFactory
         </connectionfactory-interface>
         <connectionfactory-impl-class>
              oracle.j2ee.ra.jms.generic.XAQueueConnectionFactoryWrapper
         </connectionfactory-impl-class>
         <connection-interface>javax.jms.XAConnection</connection-interface>
         <connection-impl-class>
              oracle.j2ee.ra.jms.generic.ConnectionWrapper
         </connection-impl-class>
         <config-property>
           <config-property-name>jndiLocation</config-property-name>
           <config-property-type>java.lang.String</config-property-type>
           <config-property-value>ADOGL_MDBQCF</config-property-value>
         </config-property>
  </connection-definition>
```

6. Modify ejb-jar.xml

Specify the Queue the ADOGL MDB is listening to in the <activation-config> tag as shown below:

```
<activation-config>
    <activation-config-property>
            <activation-config-property-name>DestinationType</activation-config-property-name>
            <activation-config-property-value>javax.jms.Queue</activation-config-property-value>
     </activation-config-property>
     <activation-config-property>
           <activation-config-property-name>DestinationName</activation-config-property-name>
            <activation-config-property-value>
                  NOTIFY_DEST_QUEUE
           </activation-config-property-value>
     </activation-config-property>
     <activation-config-property>
            <activation-config-property-name>
                  ConnectionFactoryJndiName
            </activation-config-property-name>
            <activation-config-property-value>ADOGL_MDBQCF</activation-config-property-value>
       </activation-config-property>
</activation-config>
```



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