

Application Installation Guide

# **Oracle Financial Services Lending and Leasing**

Release 14.4.0.0.0

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Application Installation Guide  
October 2017  
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# 1. Preface

This document contains notes and installation steps needed to install and setup Oracle Financial Services Lending and Leasing. Oracle Financial Services Lending and Leasing relies on several pieces of Oracle software in order to run and this document is in no way meant to replace Oracle documentation supplied with these Oracle products or available via Oracle technical support. The purpose of this document is only meant to supplement the Oracle documentation and to provide Oracle Financial Services Lending and Leasing specific installation instructions.

*For recommendations on security configuration, refer Security Configuration Guide.*

It is assumed that anyone installing Oracle Financial Services Lending and Leasing will have a thorough knowledge and understanding of Oracle Weblogic Server 12c, Oracle BI Publisher 12c.

Application installation consists of following steps.

- [Installing Software](#)
- [Creating Domains, Repositories, Data Sources](#)
- [Configuring Policies](#)
- [Deploying Application](#)
- [Enabling SSL](#)
- [Mapping Enterprise Group with Application Role](#)
- [Configuring JNDI name for HTTP Listener](#)
- [Configure AQ-JMS Bridge](#)
- [Configuring Oracle BI Publisher for Application](#)
- [Launching Application](#)
- [Installing Upgrade](#)

## 1.1 Prerequisites

The following software are required to install Oracle Financial Services Lending and Leasing application and they are available from the following sources:

- Oracle Software Delivery Cloud (<http://edelivery.oracle.com/>)
  - Oracle Technology Network (OTN)
1. JDK Version 1.8.0\_144 or above <http://www.oracle.com/technetwork/java/javase/downloads/index.html>
  2. Oracle WebLogic Server 12c Version 12.2.1.3.0 (<http://www.oracle.com/technetwork/middleware/weblogic/downloads/index.html>)  
Navigate to Fusion Middleware Infrastructure Installer.
  3. JVM/JDK are to be downloaded and installed prior to installing the Weblogic Server.

---

### Note

Please use all 64-bit software's for machine hosted with 64-bit O/S.

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## 1.2 **Audience**

This document is intended for system administrators or application developers who are installing Oracle Financial Services Lending and Leasing Application.

## 1.3 **Conventions Used**

Term	Refers to
Application	Oracle Financial Services Lending and Leasing

---

## 2. Installing Software

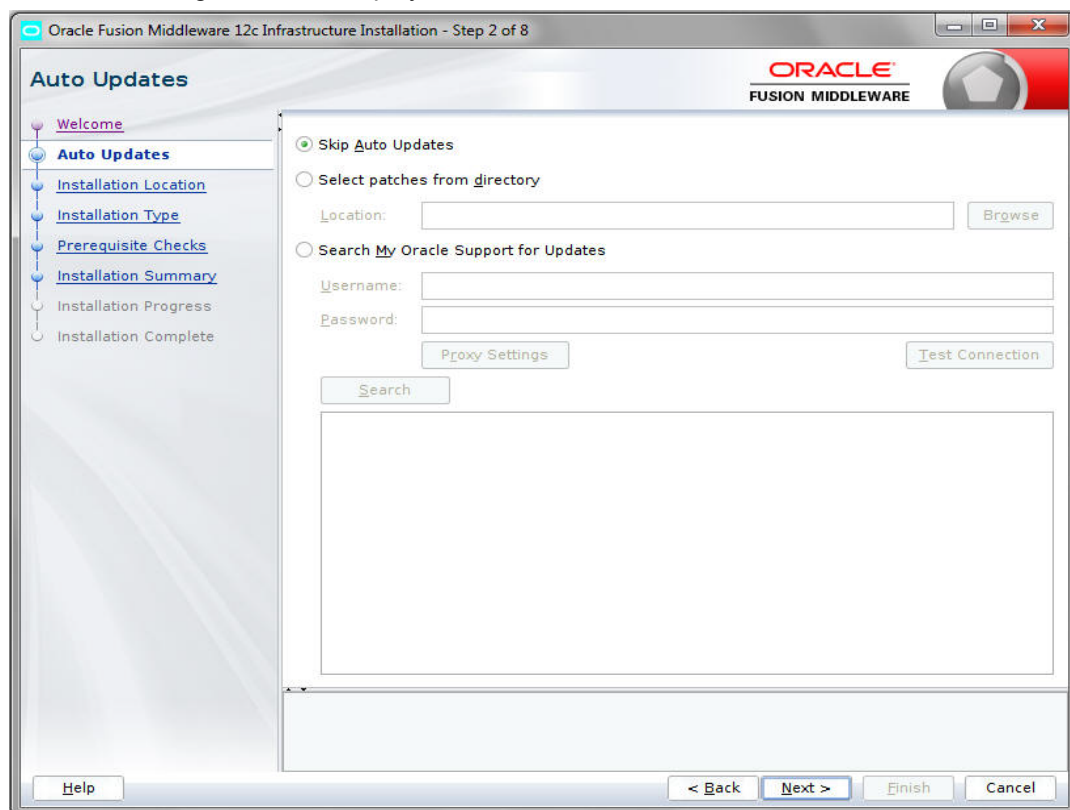
### 2.1 Installing Oracle WebLogic Server 12c

#### To install using generic Weblogic installer

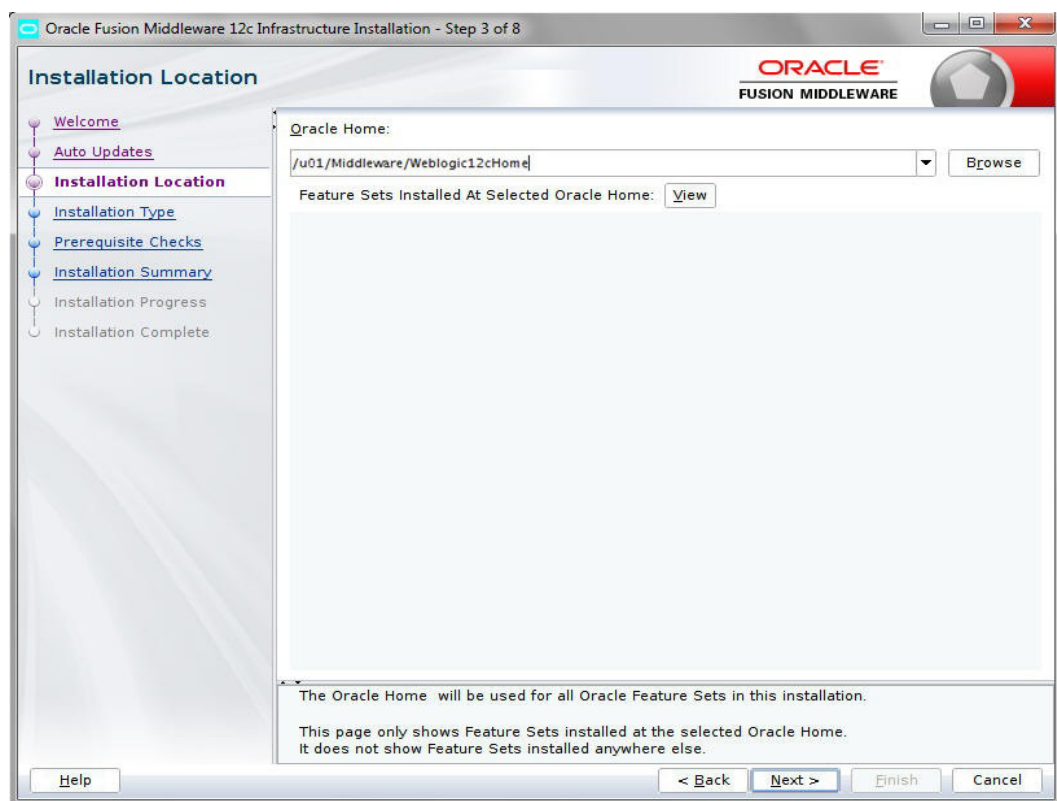
1. Run the command > `java -jar fmw_12.2.1.3.0_infrastructure.jar`
2. Welcome screen is displayed as shown below. Click Next.



3. The following window is displayed.

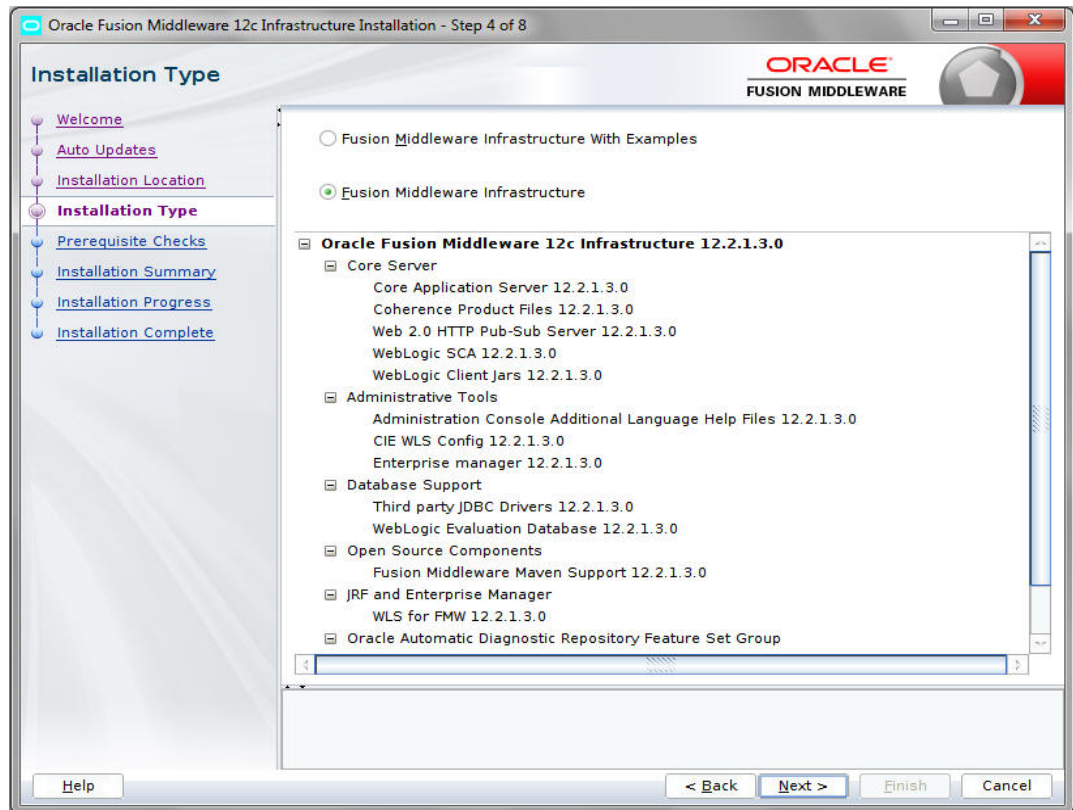


4. Select 'Skip Auto Updates' and Click 'Next'.

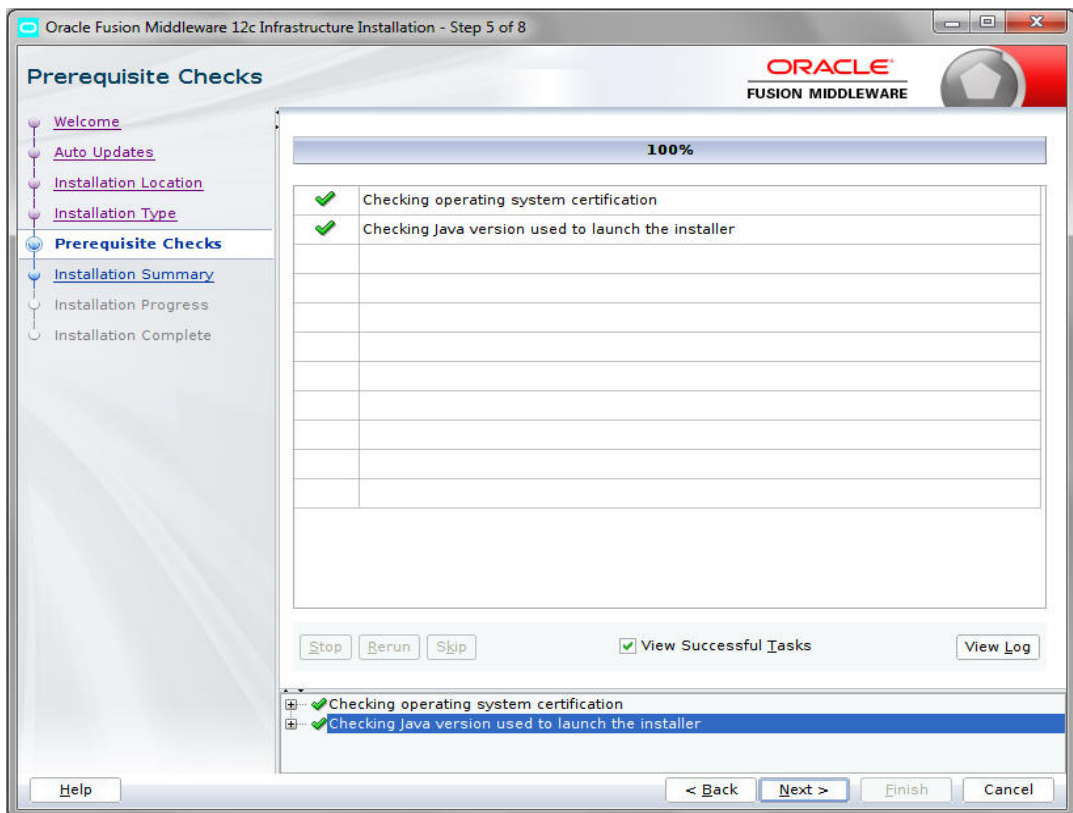


5. Specify the path for Middleware Home Directory.

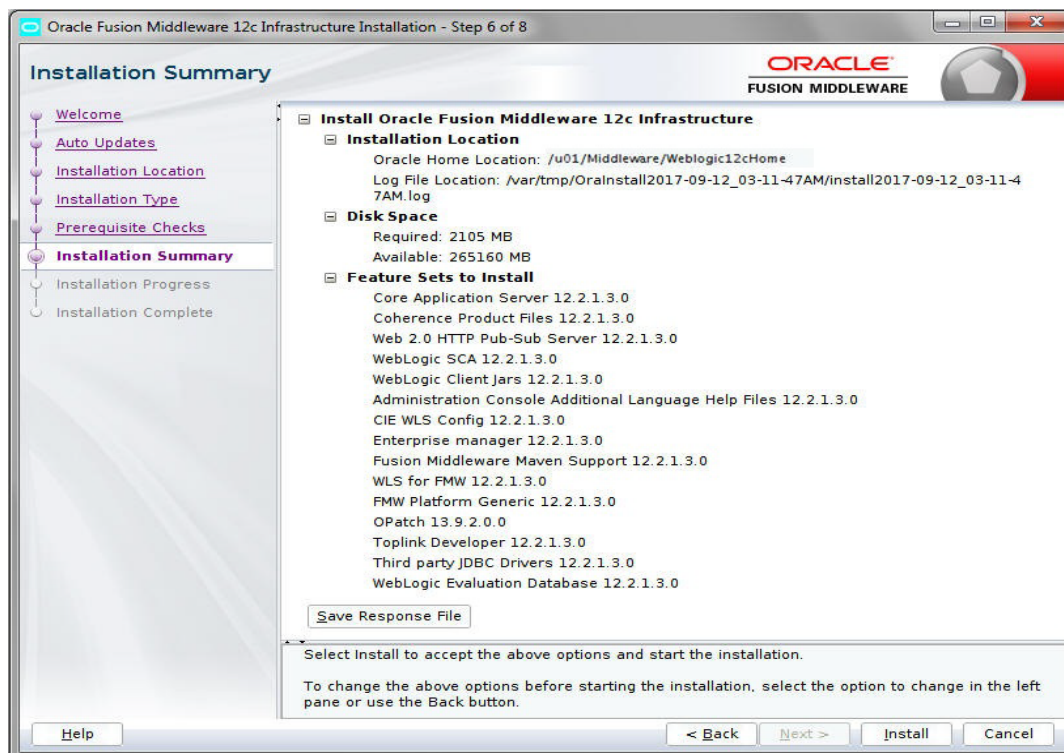
6. Click 'Next'. The following window is displayed.



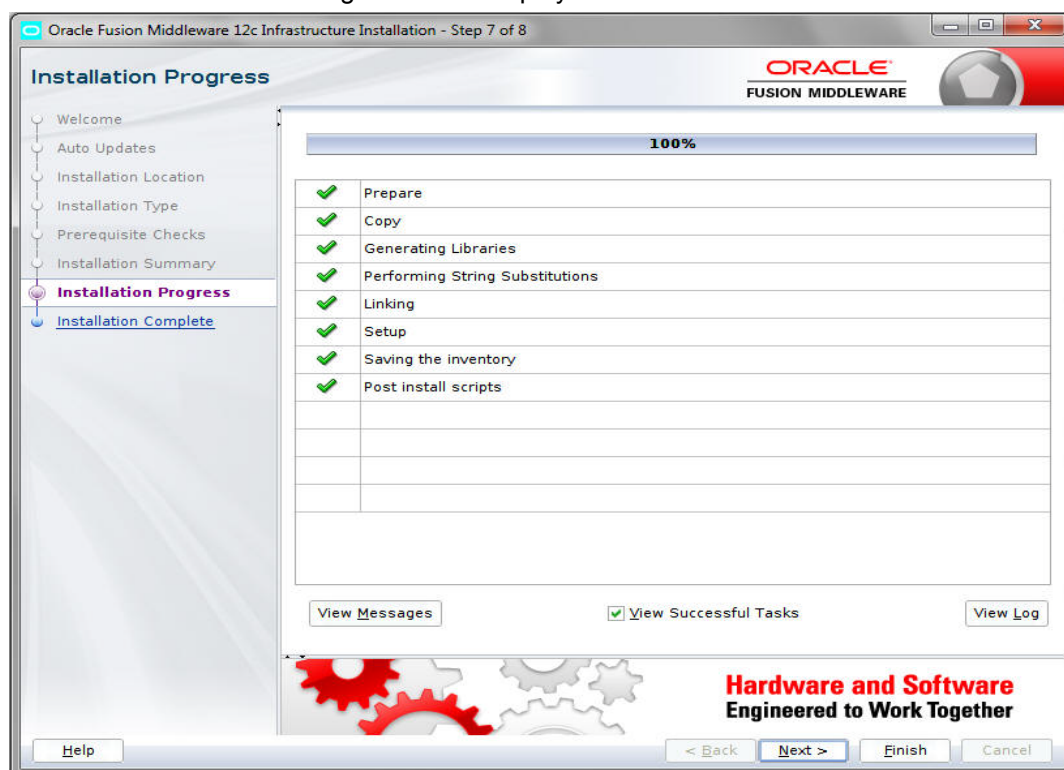
7. Select the option 'Fusion Middleware Infrastructure'. Click 'Next'.



8. Click 'Next'. The following window is displayed.

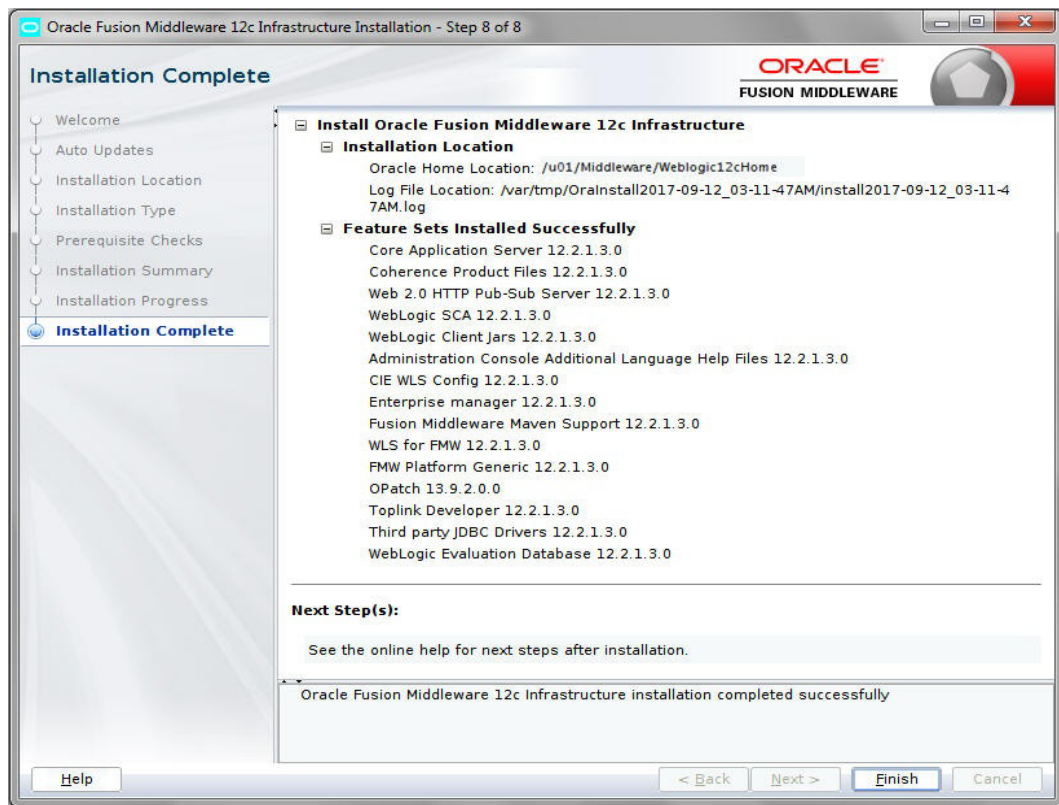


9. Click 'Next'. The following window is displayed.





10. Click 'Install'. The weblogic installation starts. Once done, the following window is displayed.



11. Click 'Finish' to close the window.



---

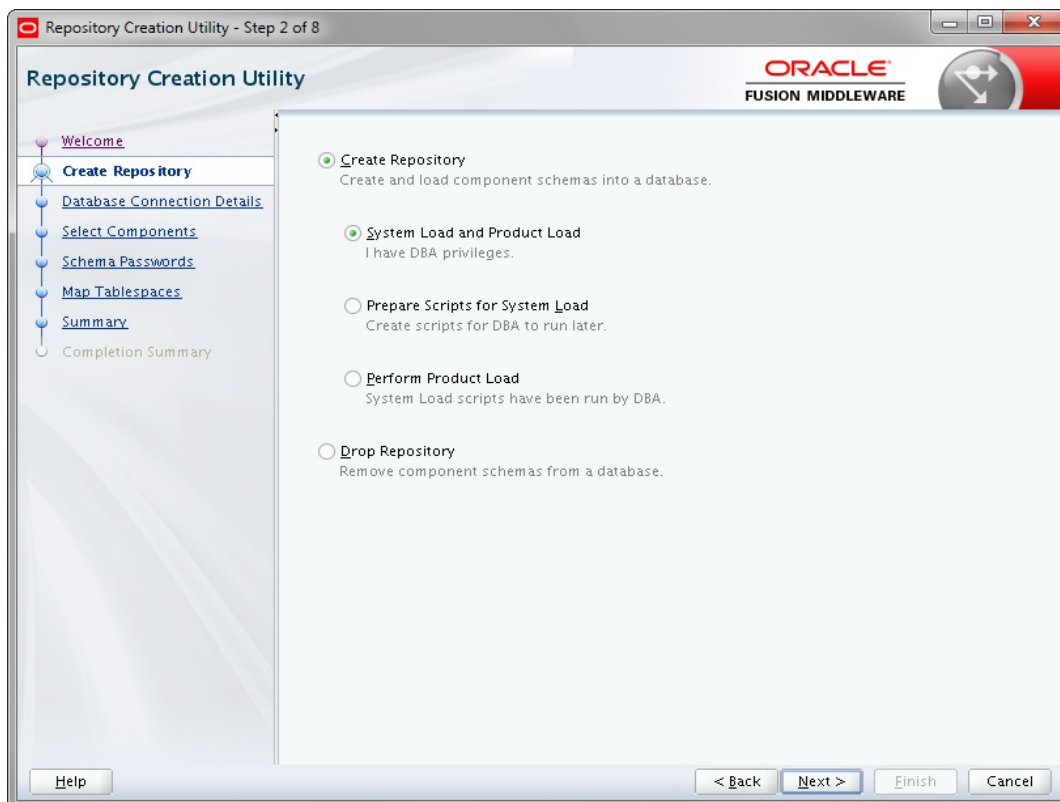
## 3. Creating Domains, Repositories, Data Sources

### 3.1 Creating Schemas using Repository Creation Utility

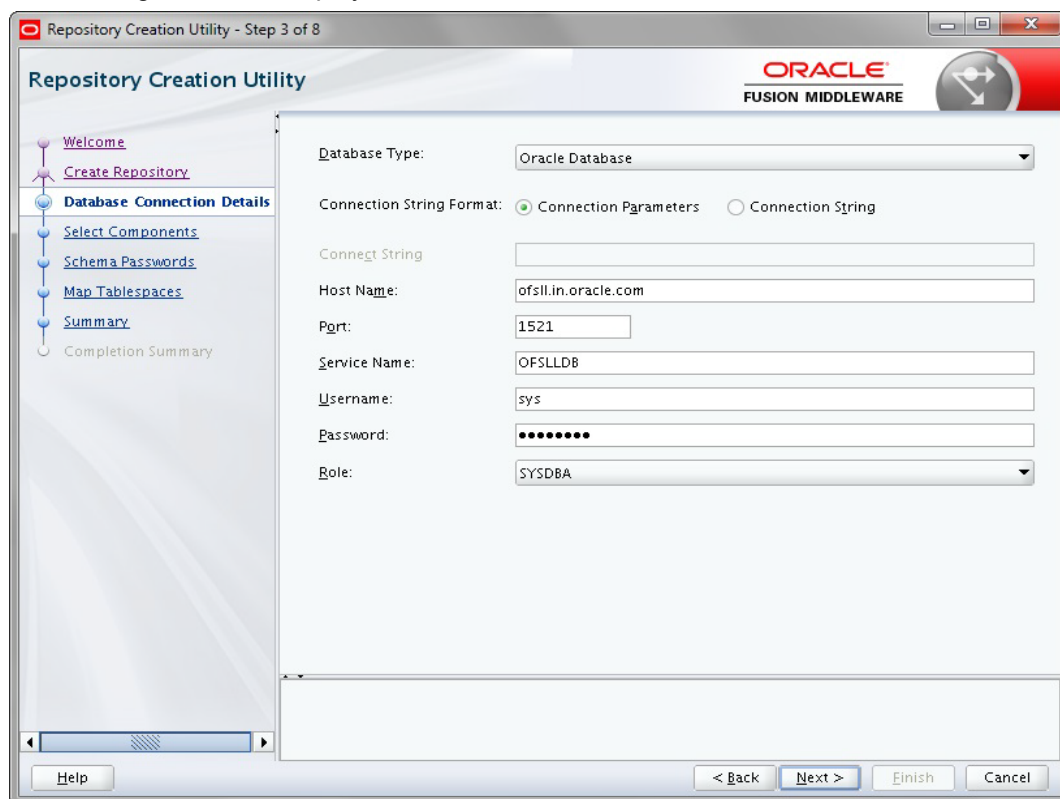
1. Open command prompt on Unix and browse to <WL\_HOME>/oracle\_common/bin and run ./rcu. The following window is displayed.



2. Click 'Next'. The following window is displayed.



3. Select 'Create Repository' and select 'System Load and Product Load'. Click 'Next'. The following window is displayed.

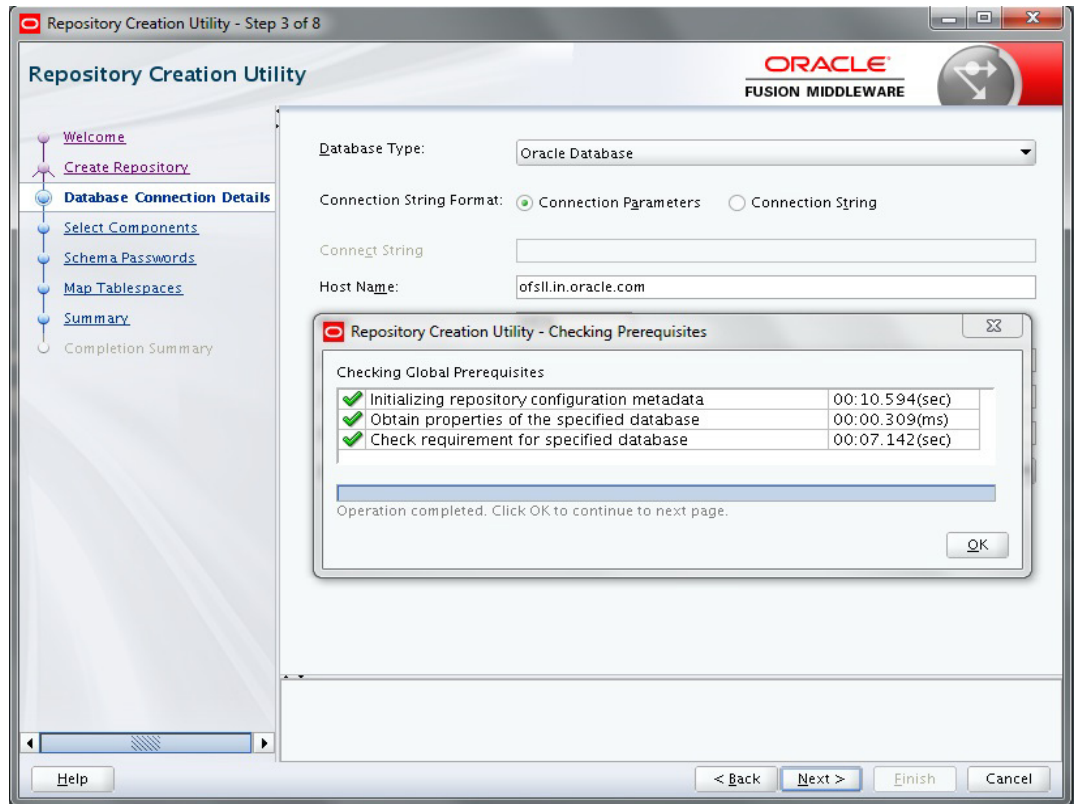


4. Provide database details where you want to create schemas, as shown in the above screen.

## Note

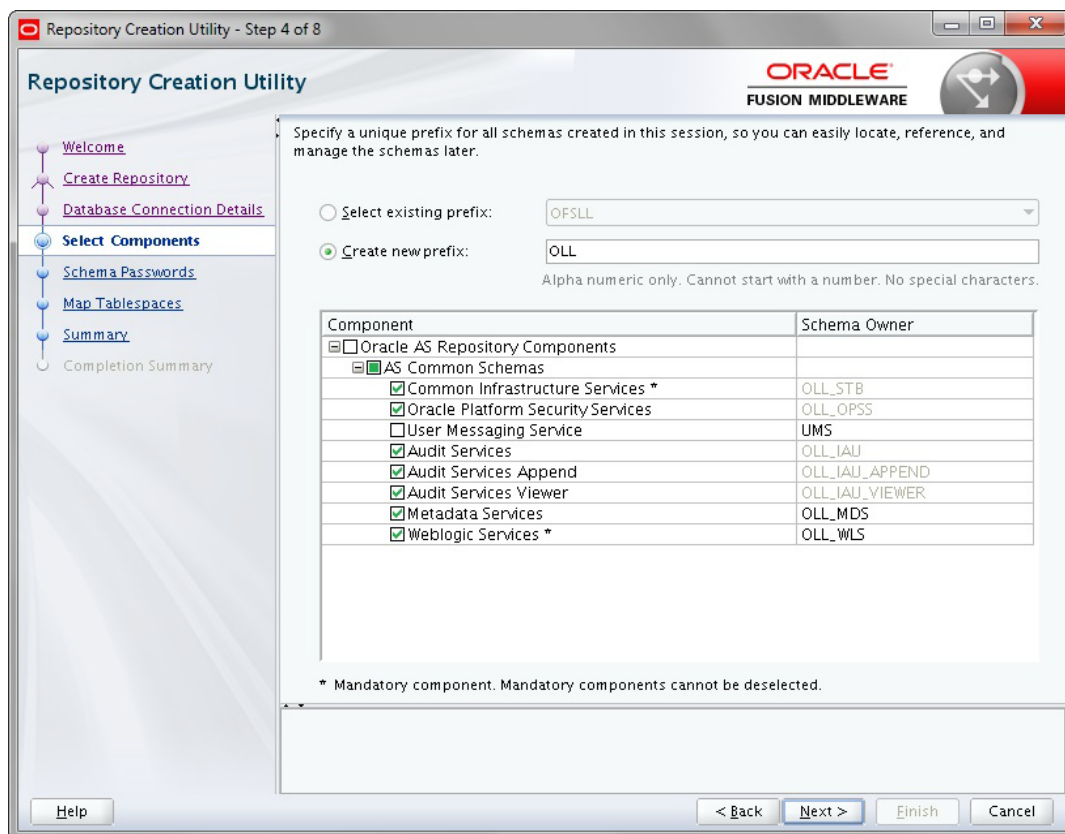
You will require a user with SYSDBA role to create schemas.

5. Click 'Next'. The following window is displayed.

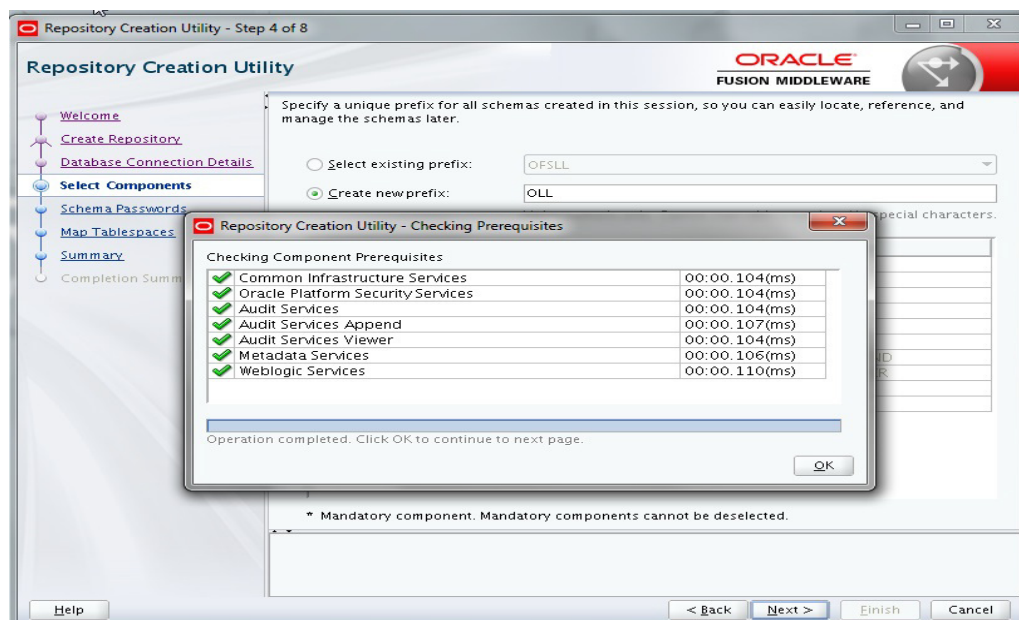


6. Click 'OK' in the confirmation dialog.

7. Click 'Next' the following window is displayed.



8. Select 'Create new Prefix' option and specify the value. For example, OLL.
9. Select the options 'Metadata Services' and 'Oracle Platform Security Services' as shown in the above screen. Click 'Next'. The following window is displayed.



10. Click 'Next'. The following window is displayed.

Repository Creation Utility - Step 5 of 8

ORACLE  
FUSION MIDDLEWARE

Repository Creation Utility

Define passwords for main and auxiliary schema users.

☒ Use same passwords for all schemas

Password: .....

Alpha numeric only. Cannot start with a number.  
No special characters except: \$, #, \_.

Confirm Password: .....

☐ Use main schema passwords for auxiliary schemas

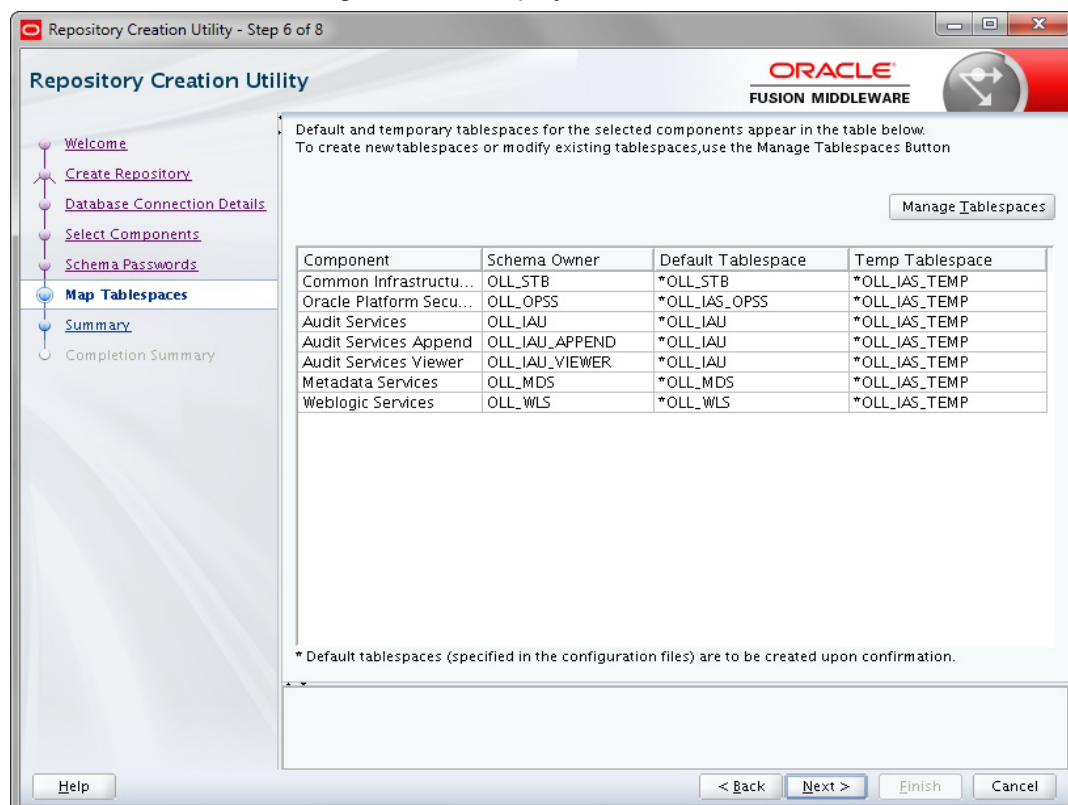
☐ Specify different passwords for all schemas

< Back Next > Finish Cancel

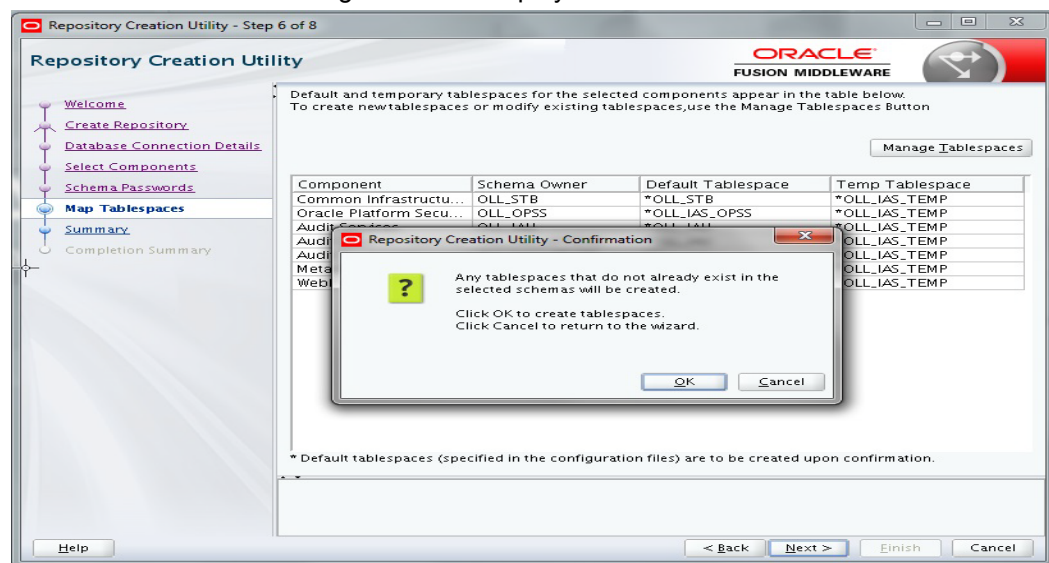
11. You can select one of the following:

- Select 'Use same password for all schemas' and specify the password.
- Select 'Specify different passwords for all schemas' and specify Schema Passwords for each schema.

12. Click 'Next'. The following window is displayed.



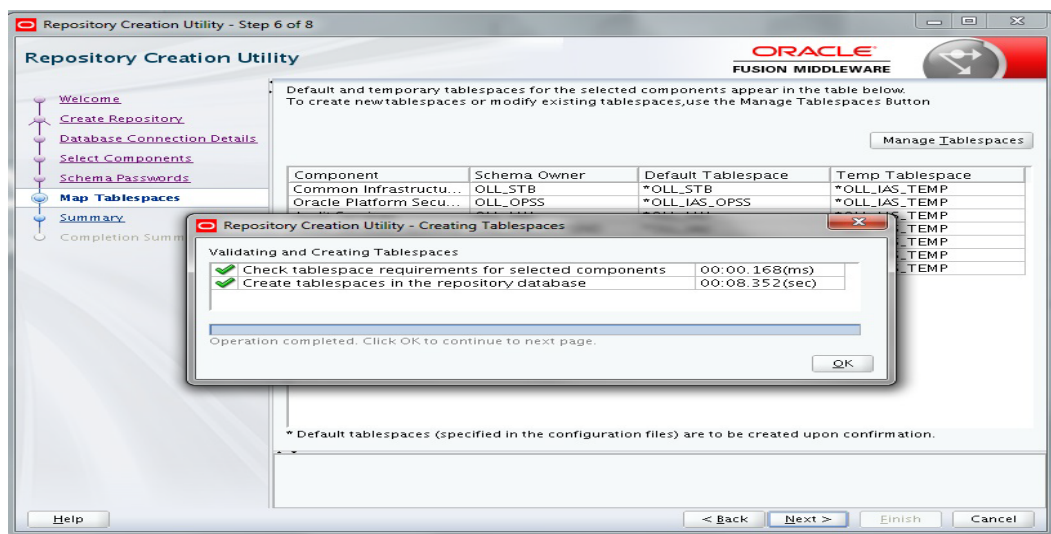
13. Click 'Next'. The following window is displayed.



14. Click 'OK' in the confirmation dialog.



15. Click 'Next'. The following window is displayed.



16. Click 'OK' in the confirmation dialog. The following window is displayed.



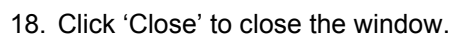
The screenshot shows the "Repository Creation Utility - System Load" dialog box. The main window behind it displays the "Database details:" section with the following information:

Host Name	Port	Service Name
ofsl.oracle.com	1521	OLDB

The "Repository System Load in progress." dialog box contains a table showing the estimated time for various operations:

Operation	Estimated Time
Execute pre create operations	00:02.886(sec)
Common Infrastructure Services	00:01.068(sec)
Audit Services Append	0
Audit Services Viewer	0
Weblogic Services	0
Audit Services	0
Oracle Platform Security Services	0
Execute post create operations	0

A progress bar at the bottom of the dialog indicates the current status of the system load process.





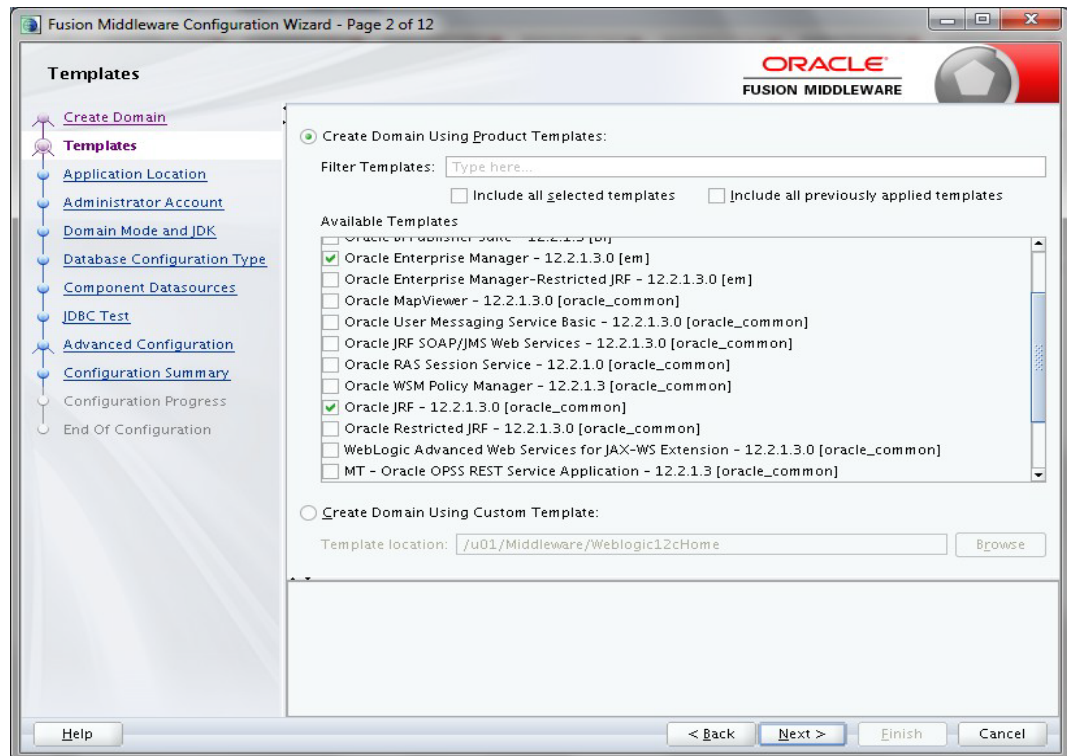
## 3.2 Creating Domain and Servers

1. In Unix/Linux machine, once the Oracle WebLogic Server is installed, navigate to the following path - <WL\_HOME>/oracle\_common/common/bin (Here, WL\_HOME is /home/Oracle/Middleware).
2. In Unix, run 'config.sh'



3. Select 'Create a new domain' and specify the Domain Location.

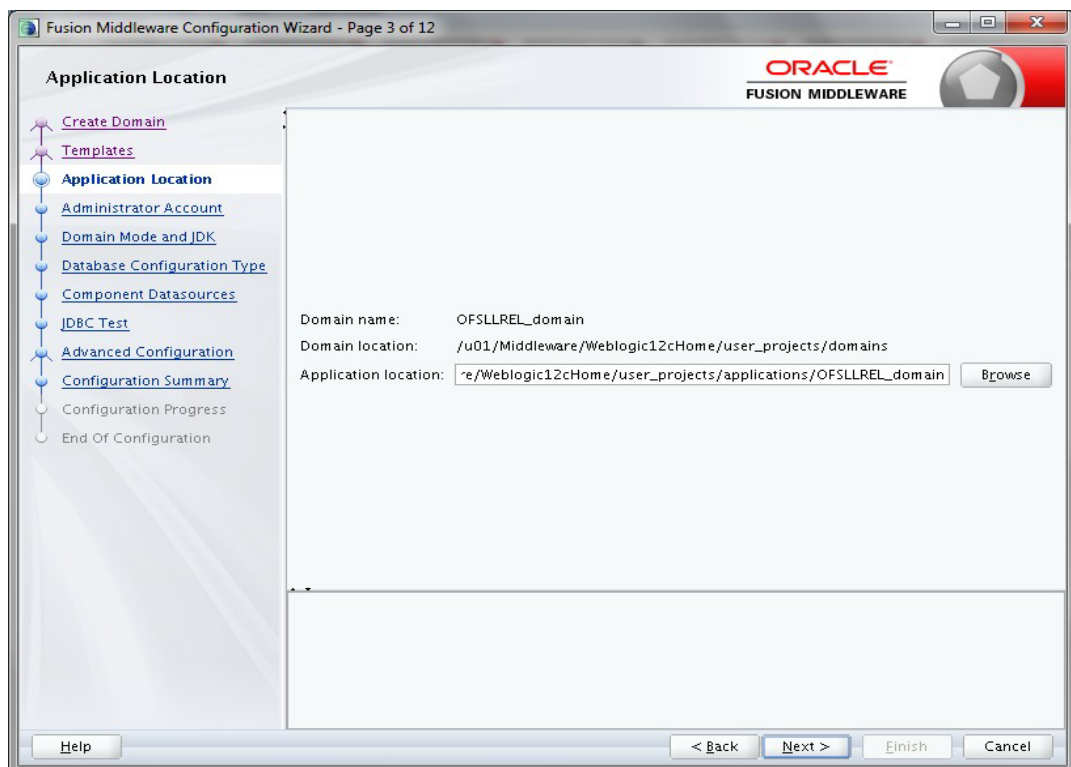
4. Click 'Next'. The following window is displayed.



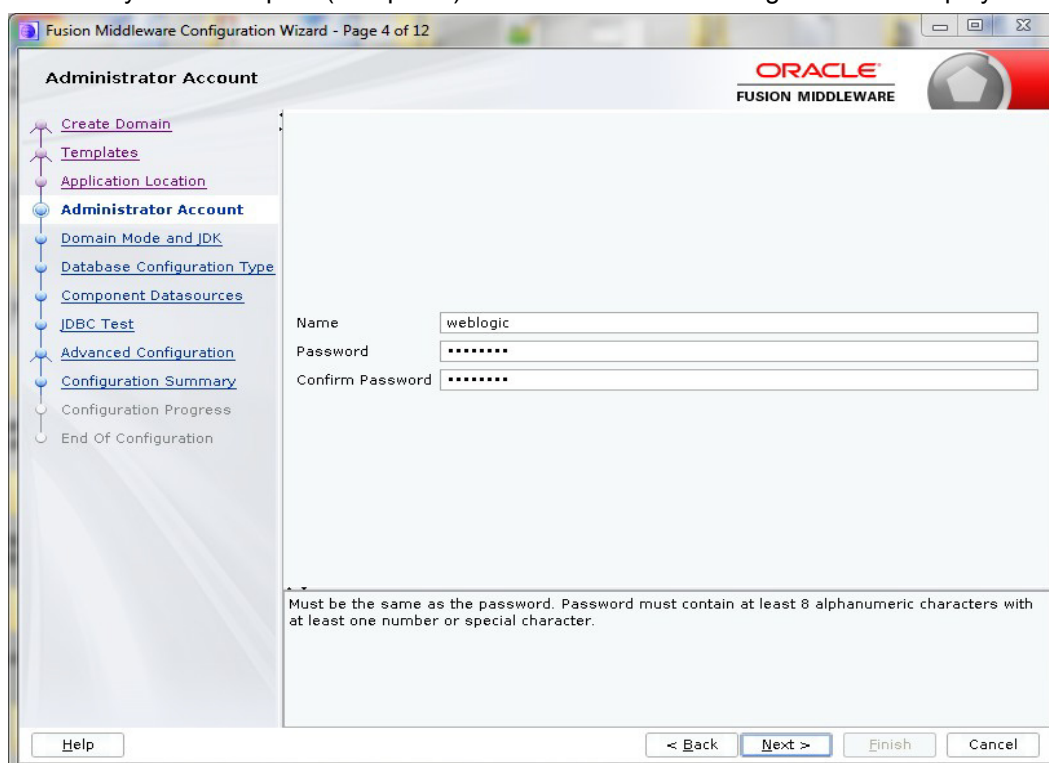
5. Select the option 'Create Domain Using Product Templates' in the list of available templates and select 'Oracle Enterprise Manager - 12.2.1.3.0 [em]'. On selection, the following options are auto-selected:

- Oracle JRF - 12.2.1.3.0 [oracle\_common]
- Weblogic coherence cluster Extension-12.2.1.3.0 [wlserver]

6. Click 'Next'. The following window is displayed.

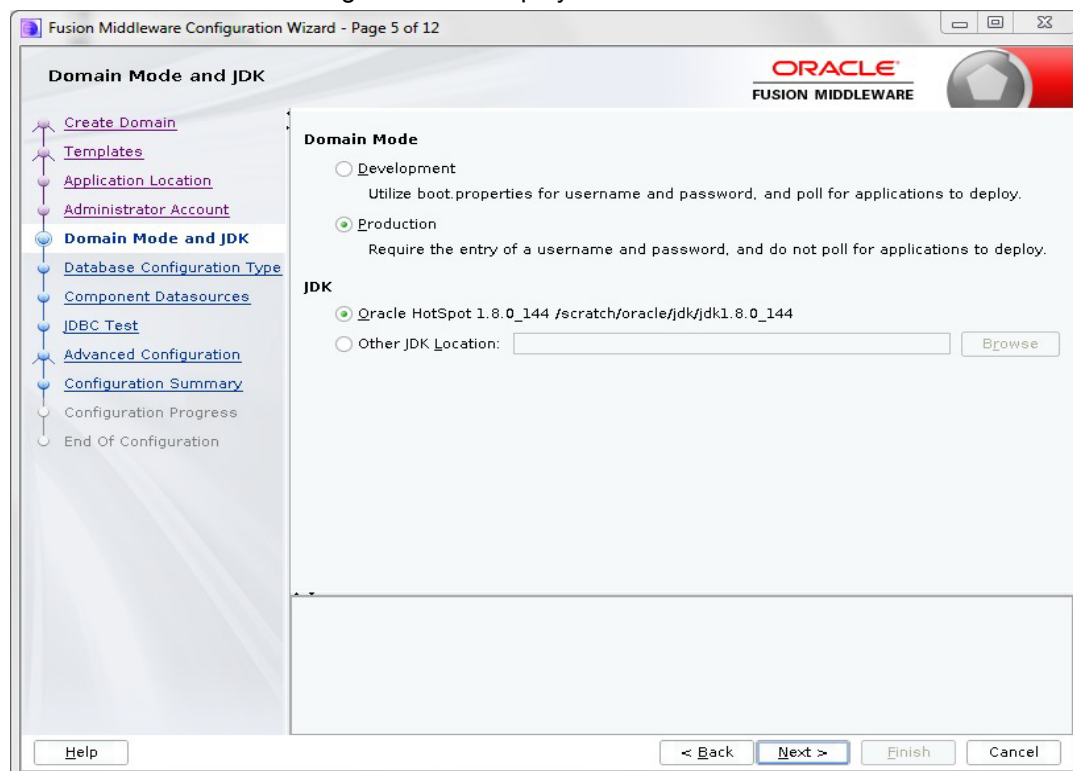


7. Specify the Domain Name in the 'Application location' field. You can click browse to directly select the path (if required). Click 'Next'. The following window is displayed.



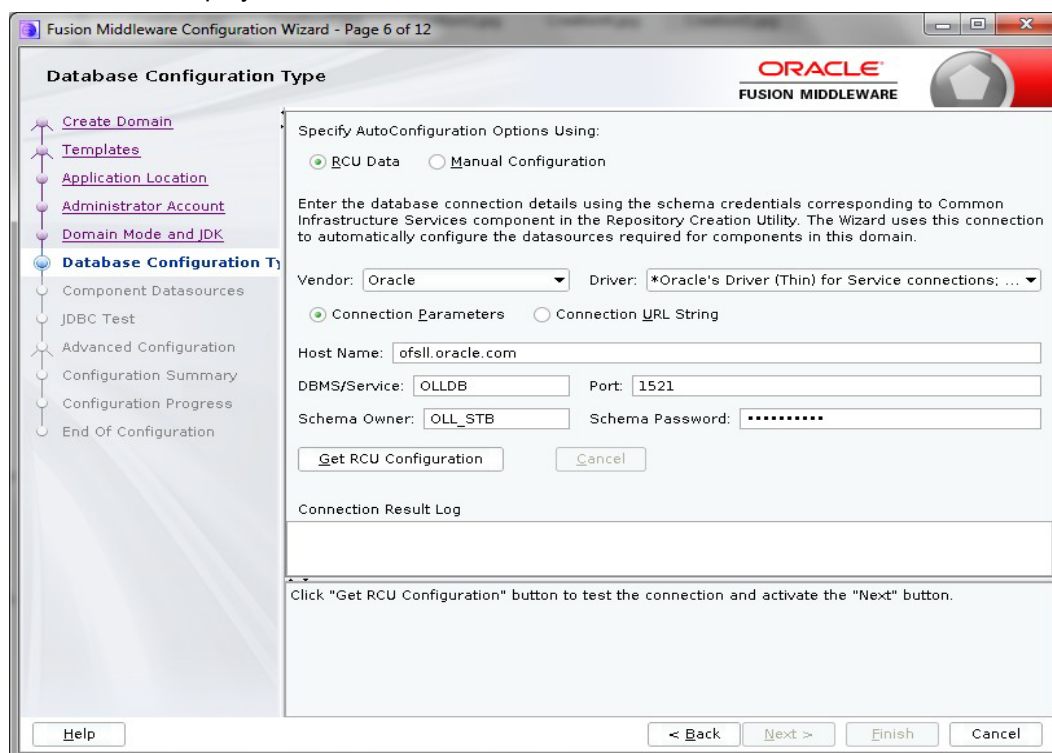
The screenshot shows the 'Administrator Account' step of the Fusion Middleware Configuration Wizard. The left sidebar contains a tree view with the following items: Create Domain, Templates, Application Location, Administrator Account (selected), Domain Mode and JDK, Database Configuration Type, Component Datasources, JDBC Test, Advanced Configuration, Configuration Summary, Configuration Progress, and End Of Configuration. The main area has three input fields: 'Name' with the value 'weblogic', 'Password' with masked characters '\*\*\*\*\*', and 'Confirm Password' with masked characters '\*\*\*\*\*'. Below these fields is a note: 'Must be the same as the password. Password must contain at least 8 alphanumeric characters with at least one number or special character.' At the bottom are buttons for 'Help', '< Back', 'Next >', 'Finish', and 'Cancel'.

8. Enter credentials for the following:
- Name
  - Password
  - Confirm Password
9. Click 'Next'. The following window is displayed.



The screenshot shows the 'Domain Mode and JDK' step of the Fusion Middleware Configuration Wizard. The left sidebar is identical to the previous step, with 'Domain Mode and JDK' selected. The main area is divided into two sections. The 'Domain Mode' section has two radio buttons: 'Development' (unselected) and 'Production' (selected). Below 'Production' is a note: 'Require the entry of a username and password, and do not poll for applications to deploy.' The 'JDK' section has two radio buttons: 'Oracle HotSpot 1.8.0\_144 /scratch/oracle/jdk/jdk1.8.0\_144' (selected) and 'Other JDK Location:' (unselected). Next to 'Other JDK Location:' is a text input field and a 'Browse' button. At the bottom are buttons for 'Help', '< Back', 'Next >', 'Finish', and 'Cancel'.

10. Select the Domain Mode as 'Production' and 'JDK' from Available JDKs. You can also select any other JDK by selecting 'Other JDK Location' option. Click 'Next'. The following window is displayed.



**Database Configuration Type**

Specify AutoConfiguration Options Using:

☒ RCU Data ☐ Manual Configuration

Enter the database connection details using the schema credentials corresponding to Common Infrastructure Services component in the Repository Creation Utility. The Wizard uses this connection to automatically configure the datasources required for components in this domain.

Vendor:  Driver:

☒ Connection Parameters ☐ Connection URL String

Host Name:

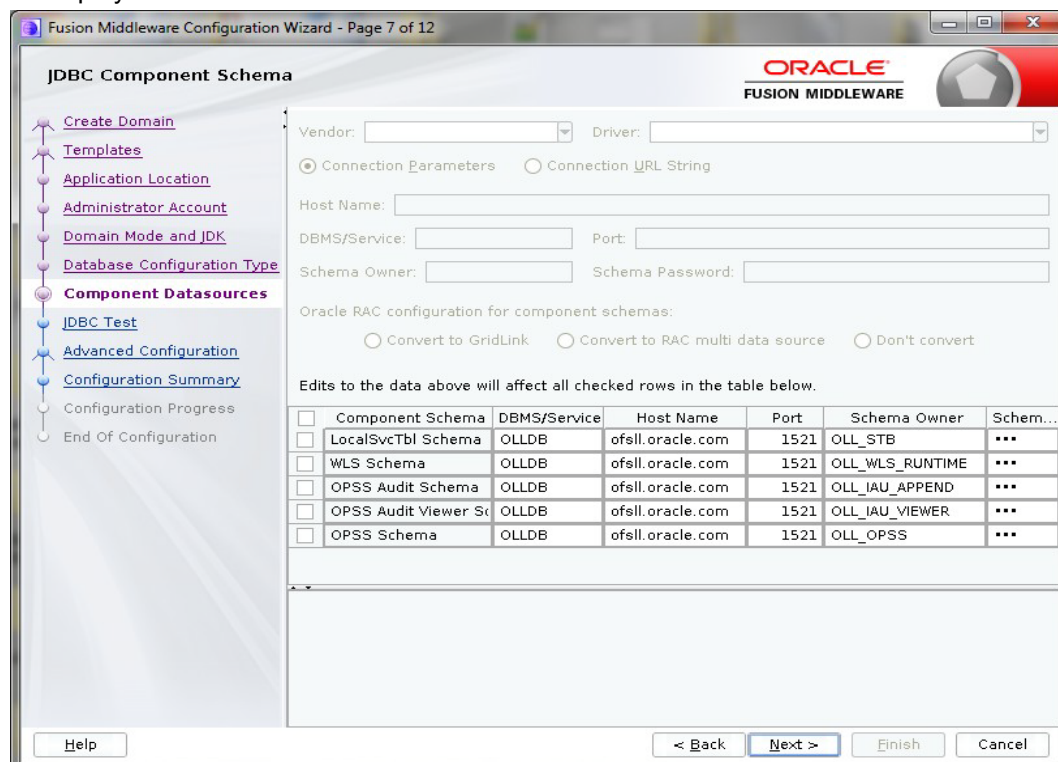
DBMS/Service:  Port:

Schema Owner:  Schema Password:

Connection Result Log

Click "Get RCU Configuration" button to test the connection and activate the "Next" button.

11. Specify the RCU data and click on 'Get RCU Configuration'. The following window is displayed.



**JDBC Component Schema**

Vendor:  Driver:

☒ Connection Parameters ☐ Connection URL String

Host Name:

DBMS/Service:  Port:

Schema Owner:  Schema Password:

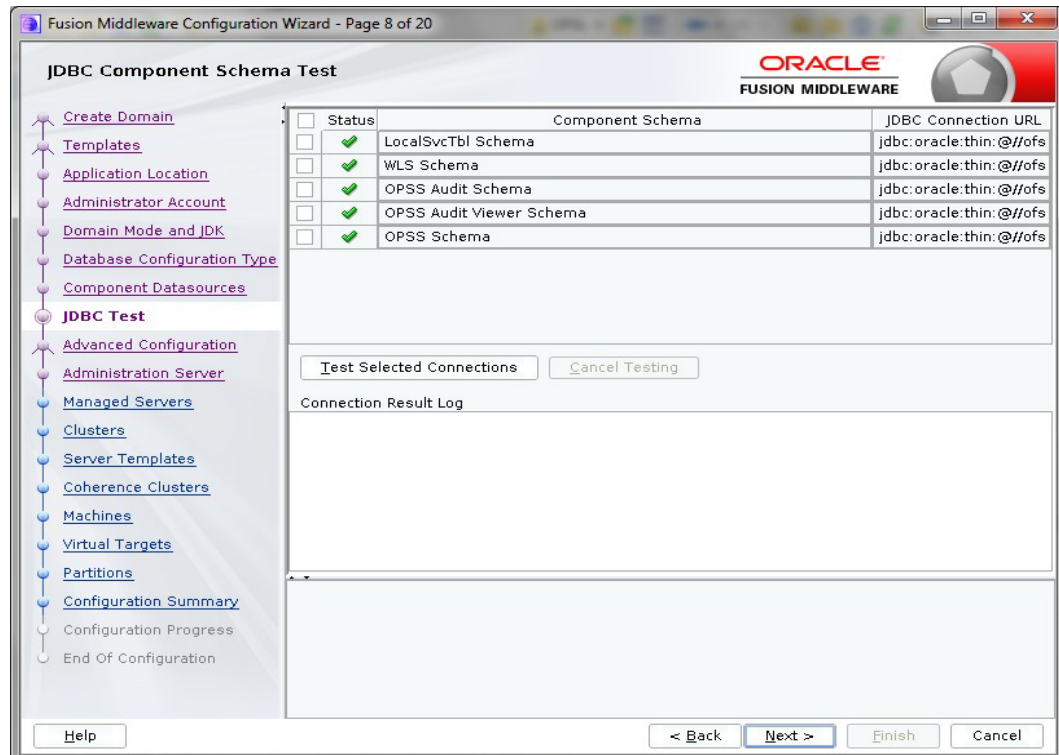
Oracle RAC configuration for component schemas:

☐ Convert to GridLink ☐ Convert to RAC multi data source ☐ Don't convert

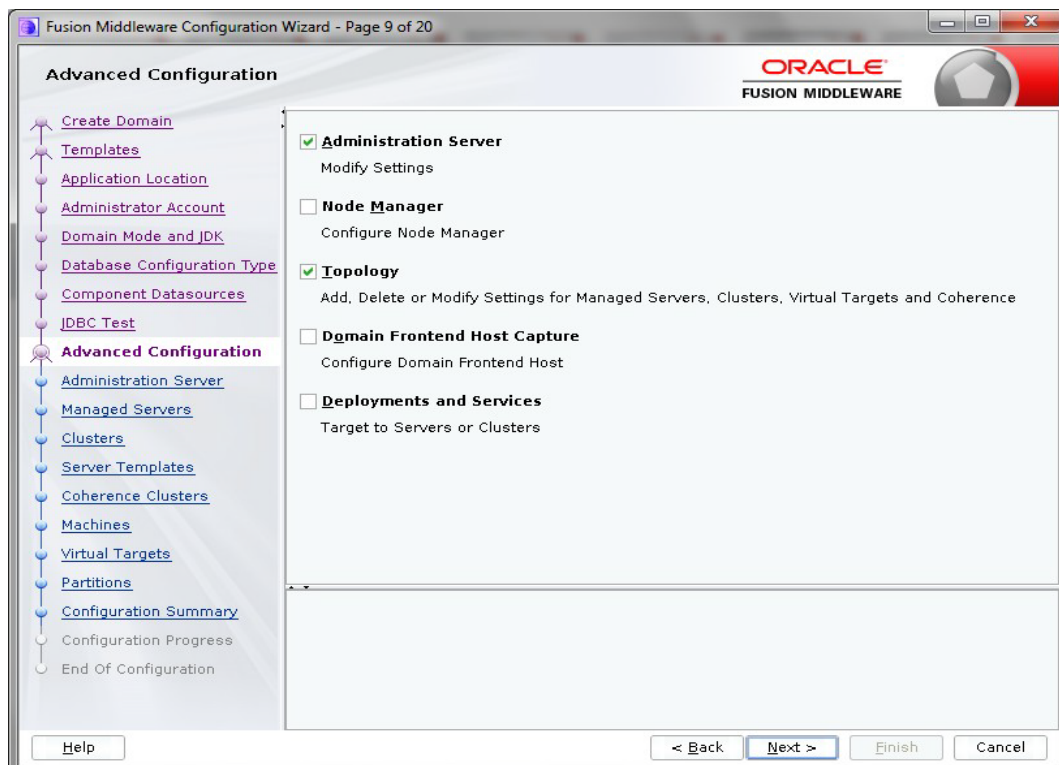
Edits to the data above will affect all checked rows in the table below.

<input type="checkbox"/>	Component Schema	DBMS/Service	Host Name	Port	Schema Owner	Schem...
<input type="checkbox"/>	LocalSvcTbl Schema	OLLDB	ofsl.oracle.com	1521	OLL_STB	...
<input type="checkbox"/>	WLS Schema	OLLDB	ofsl.oracle.com	1521	OLL_WLS_RUNTIME	...
<input type="checkbox"/>	OPSS Audit Schema	OLLDB	ofsl.oracle.com	1521	OLL_IAU_APPEND	...
<input type="checkbox"/>	OPSS Audit Viewer S	OLLDB	ofsl.oracle.com	1521	OLL_IAU_VIEWER	...
<input type="checkbox"/>	OPSS Schema	OLLDB	ofsl.oracle.com	1521	OLL_OPSS	...

12. Click 'Next'. The following window is displayed.



13. Click 'Next'. The following window is displayed.





14. Select 'Administration Server' and 'Topology' and click 'Next'. The following window is displayed.

The screenshot shows the 'Administration Server' configuration window. The left sidebar contains a tree view with the following items: Create Domain, Templates, Application Location, Administrator Account, Domain Mode and JDK, Database Configuration Type, Component Datasources, JDBC Test, Advanced Configuration, **Administration Server**, Managed Servers, Clusters, Server Templates, Coherence Clusters, Machines, Virtual Targets, Partitions, Configuration Summary, Configuration Progress, and End Of Configuration. The main area contains the following fields:

- Server Name: AdminServer
- Listen Address: All Local Addresses
- Listen Port: 9001
- Enable SSL: ☐
- SSL Listen Port:
- Server Groups: Unspecified

Below the fields, a note states: "Port number must be between 1 and 65535, and different from SSL listen port and coherence port." At the bottom, there are buttons for Help, < Back, Next >, Finish, and Cancel.

15. Enter Administration 'Server Name' and 'Listen Port' details. Click 'Next'. The following window is displayed.

The screenshot shows the 'Managed Servers' configuration window. The left sidebar is identical to the previous window, with 'Managed Servers' now selected. The main area contains a table with the following columns: Server Name, Listen Address, Listen Port, Enable SSL, SSL Listen Port, and Server Groups. There are also buttons for Add, Clone, Delete, and Disard Changes.

Server Name	Listen Address	Listen Port	Enable SSL	SSL Listen Port	Server Groups
OFSLL_ManagedServer	All Local Address...	9003	<input checked="" type="checkbox"/>	9503	JRF-MAN-S...
WS_ManagedServer	All Local Address...	9004	<input type="checkbox"/>	Disabled	JRF-MAN-S...

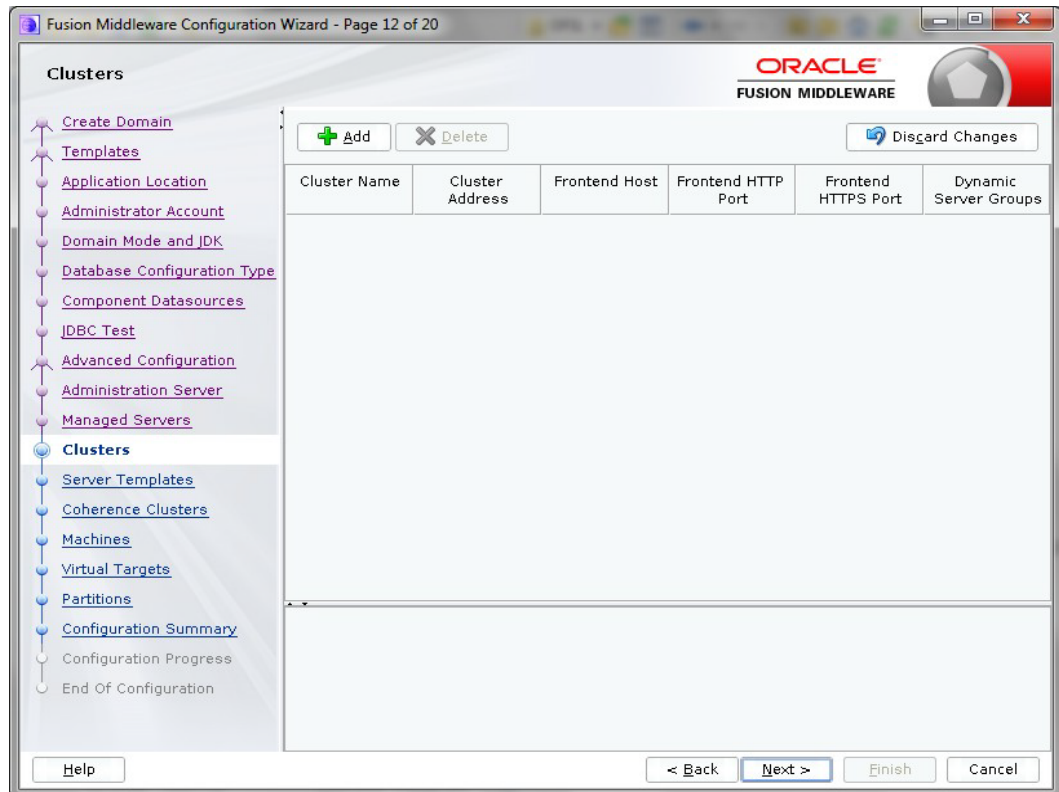
At the bottom, there are buttons for Help, < Back, Next >, Finish, and Cancel.

16. Click 'Add' button to create 'ManagedServer'.
17. Select the Server Group as 'JRF-MAN-SVR'. *Selecting this server group ensures that the Oracle JRF services are targeted to the specific Managed Servers created.*

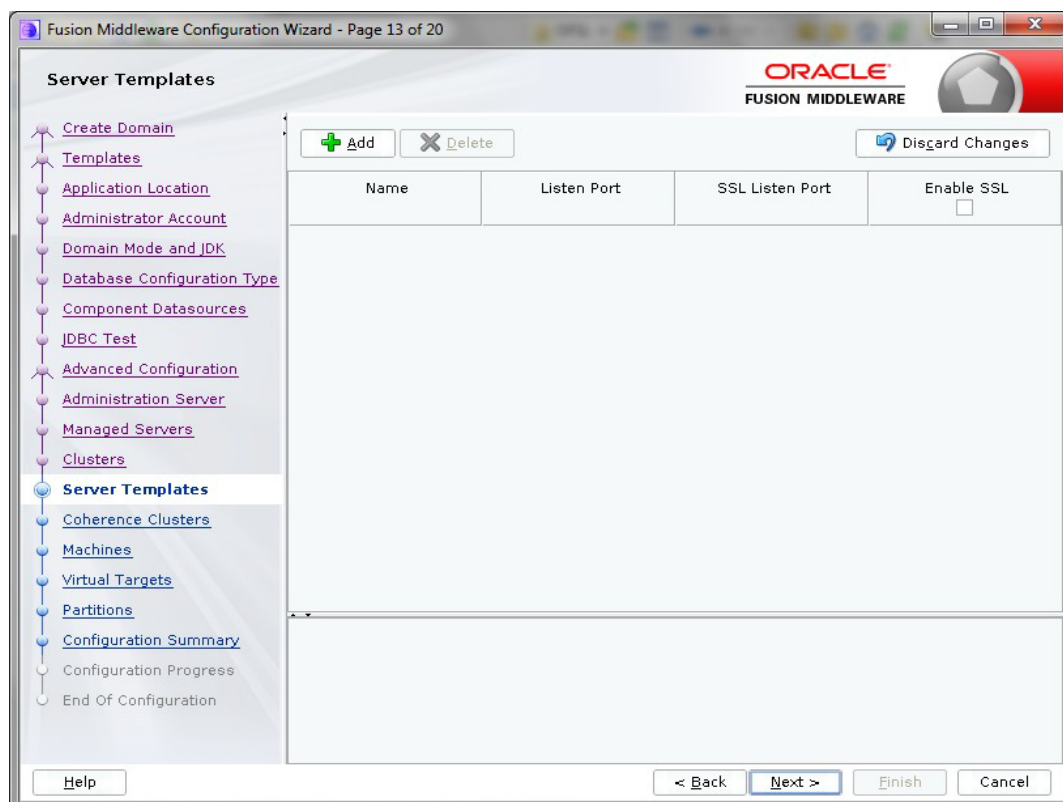
## Note

It is recommended to create two managed servers, one each for UI and Web Services.

18. Click 'Next'. The following window is displayed.



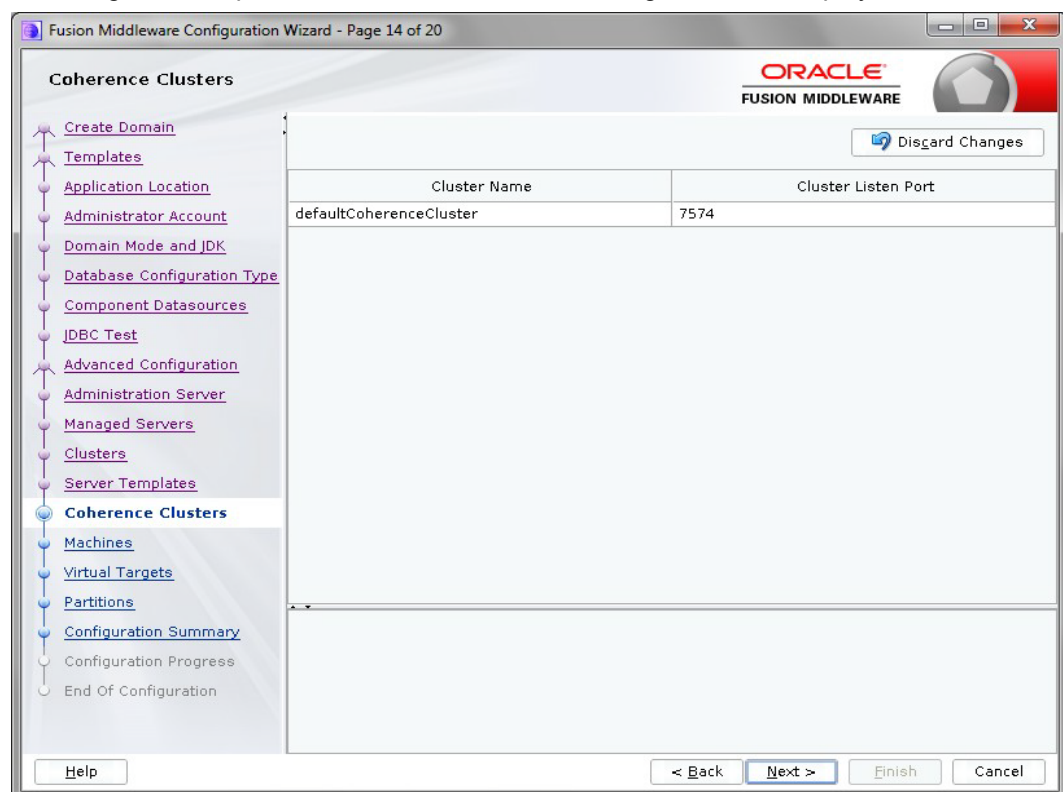
19. Configure as required and click 'Next'. The following window is displayed.



The screenshot shows the 'Server Templates' window in the Fusion Middleware Configuration Wizard. The left sidebar contains a tree view with the following items: Create Domain, Templates, Application Location, Administrator Account, Domain Mode and JDK, Database Configuration Type, Component Datasources, JDBC Test, Advanced Configuration, Administration Server, Managed Servers, Clusters, **Server Templates** (selected), Coherence Clusters, Machines, Virtual Targets, Partitions, Configuration Summary, Configuration Progress, and End Of Configuration. The main area has a table with columns: Name, Listen Port, SSL Listen Port, and Enable SSL. The 'Enable SSL' column has a checkbox. Above the table are buttons for '+ Add', 'X Delete', and 'Disgard Changes'. At the bottom are buttons for '< Back', 'Next >', 'Finish', and 'Cancel'. The Oracle logo and 'FUSION MIDDLEWARE' text are in the top right corner.

Name	Listen Port	SSL Listen Port	Enable SSL
------	-------------	-----------------	------------

20. Configure as required and click 'Next'. The following window is displayed.

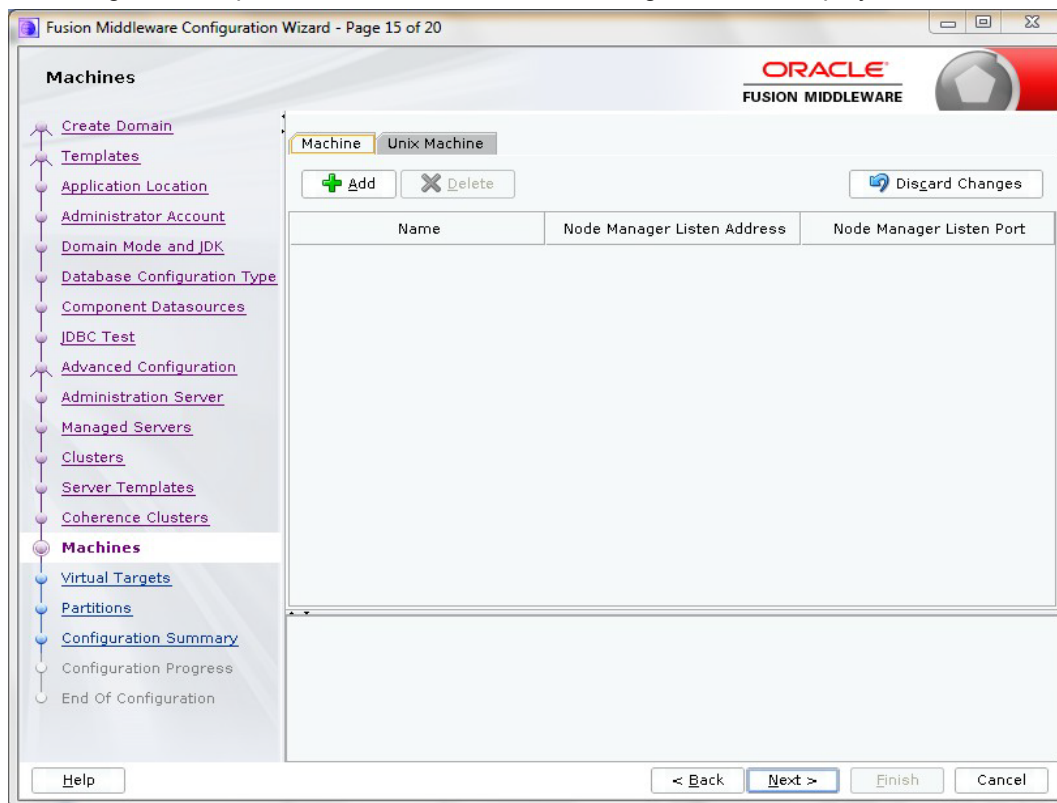


The screenshot shows the 'Coherence Clusters' window in the Fusion Middleware Configuration Wizard. The left sidebar is identical to the previous window, with 'Coherence Clusters' selected. The main area has a table with columns: Cluster Name and Cluster Listen Port. The first row contains the values 'defaultCoherenceCluster' and '7574'. Above the table is a button for 'Disgard Changes'. At the bottom are buttons for '< Back', 'Next >', 'Finish', and 'Cancel'. The Oracle logo and 'FUSION MIDDLEWARE' text are in the top right corner.

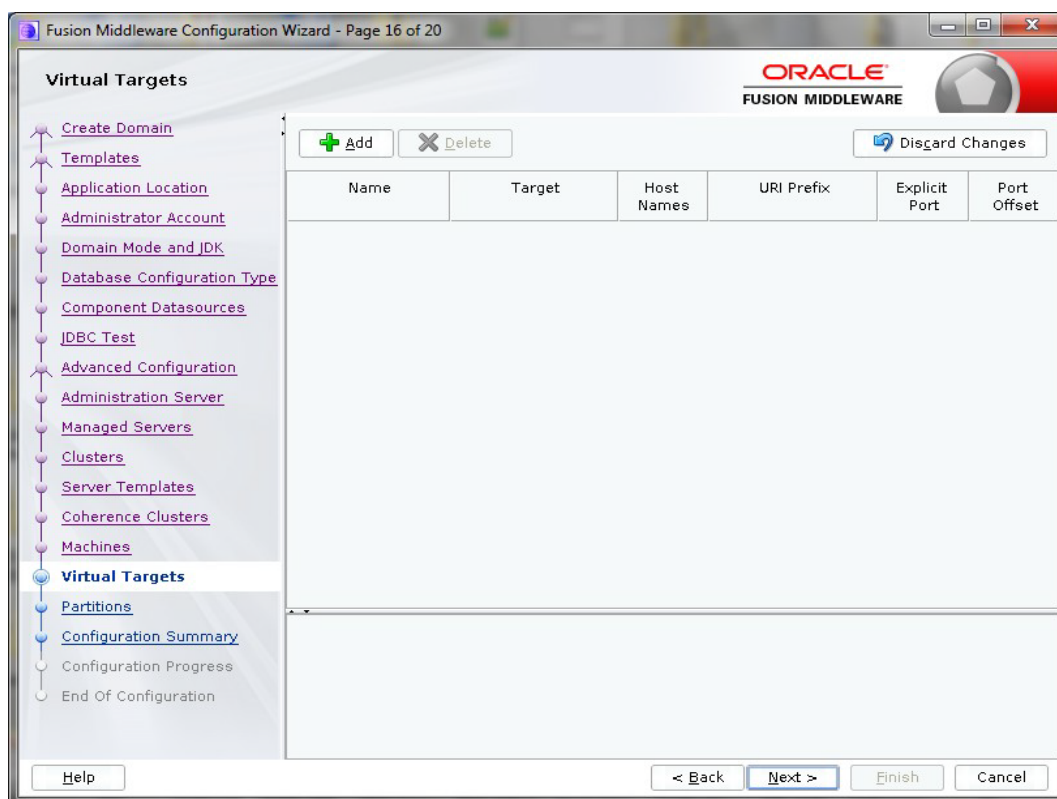
Cluster Name	Cluster Listen Port
defaultCoherenceCluster	7574



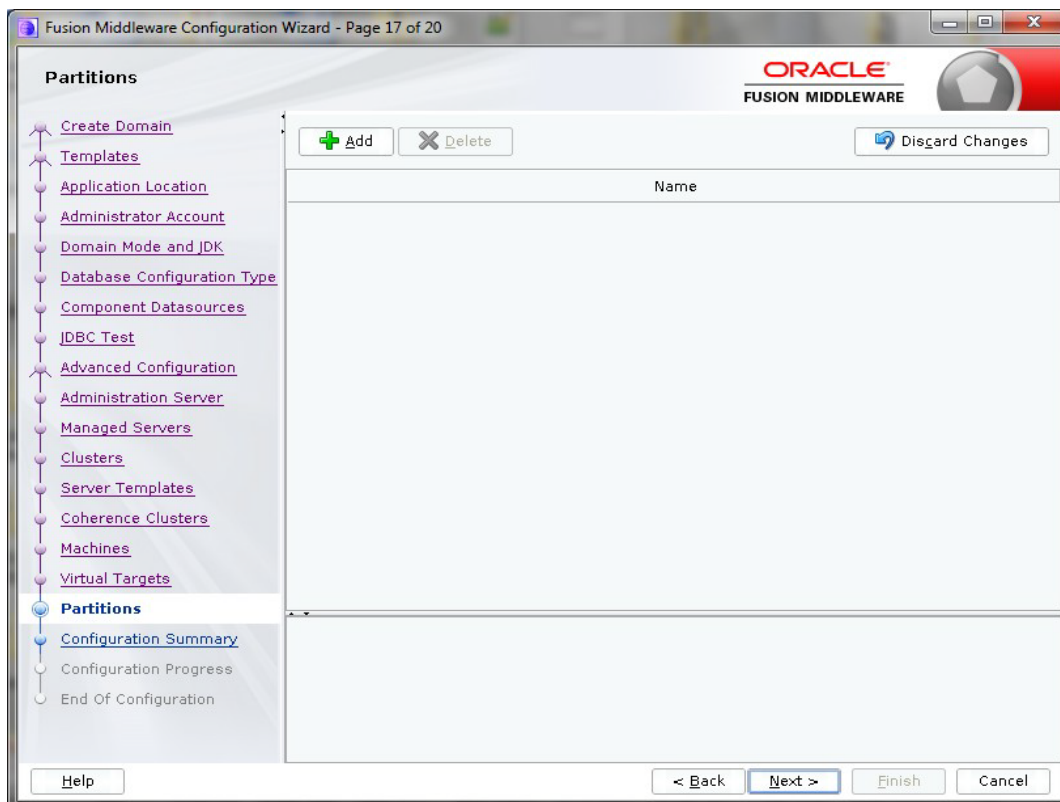
21. Configure as required and click 'Next'. The following window is displayed.



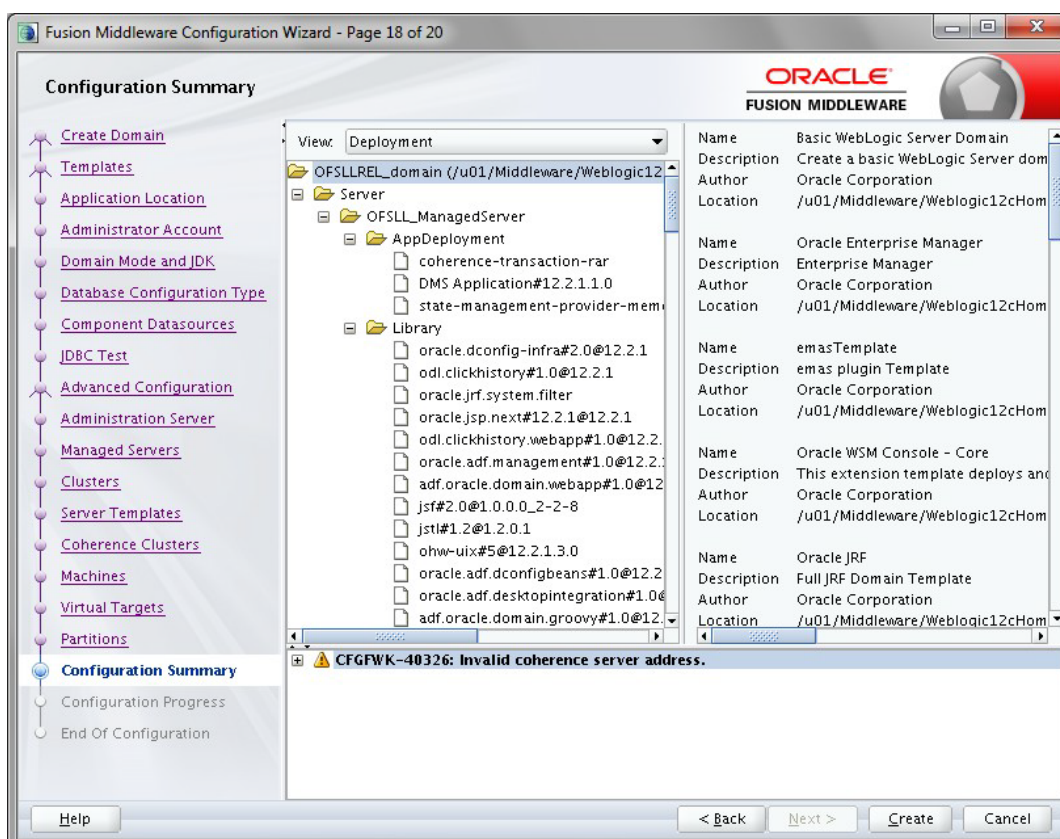
22. Click 'Create'. The following window is displayed.



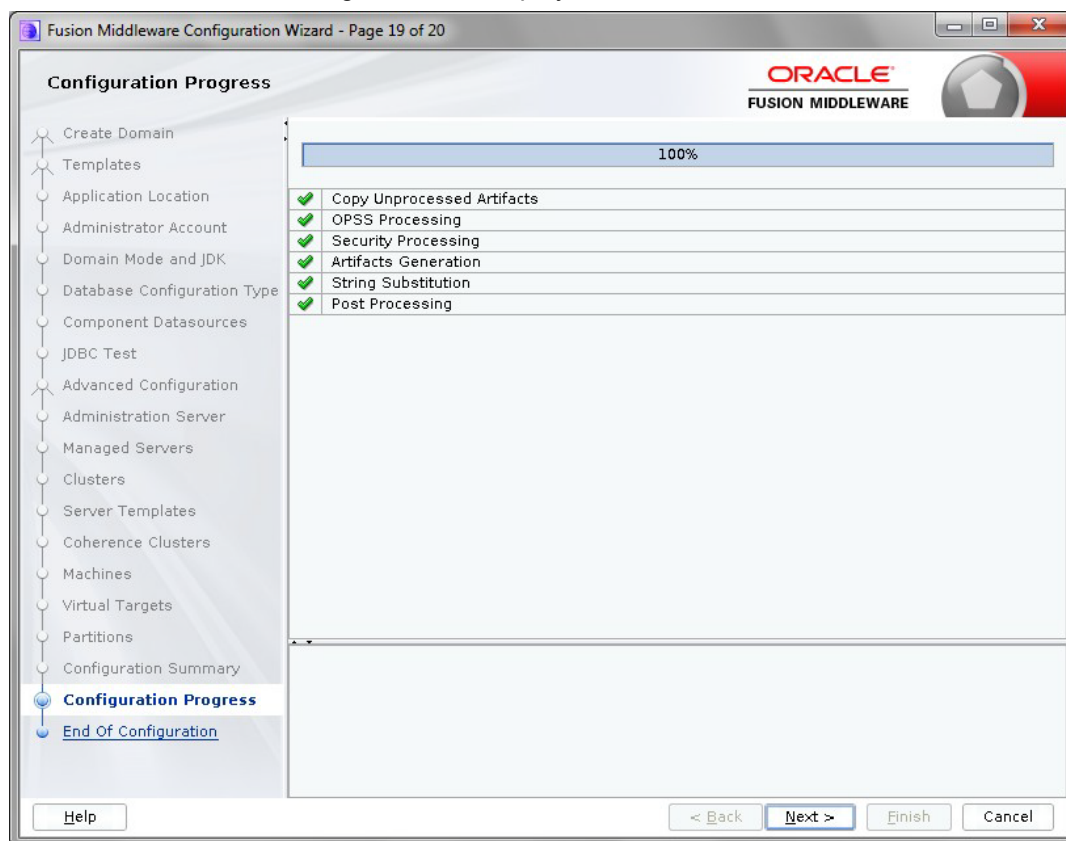
23. Click 'Next'. The following window is displayed.



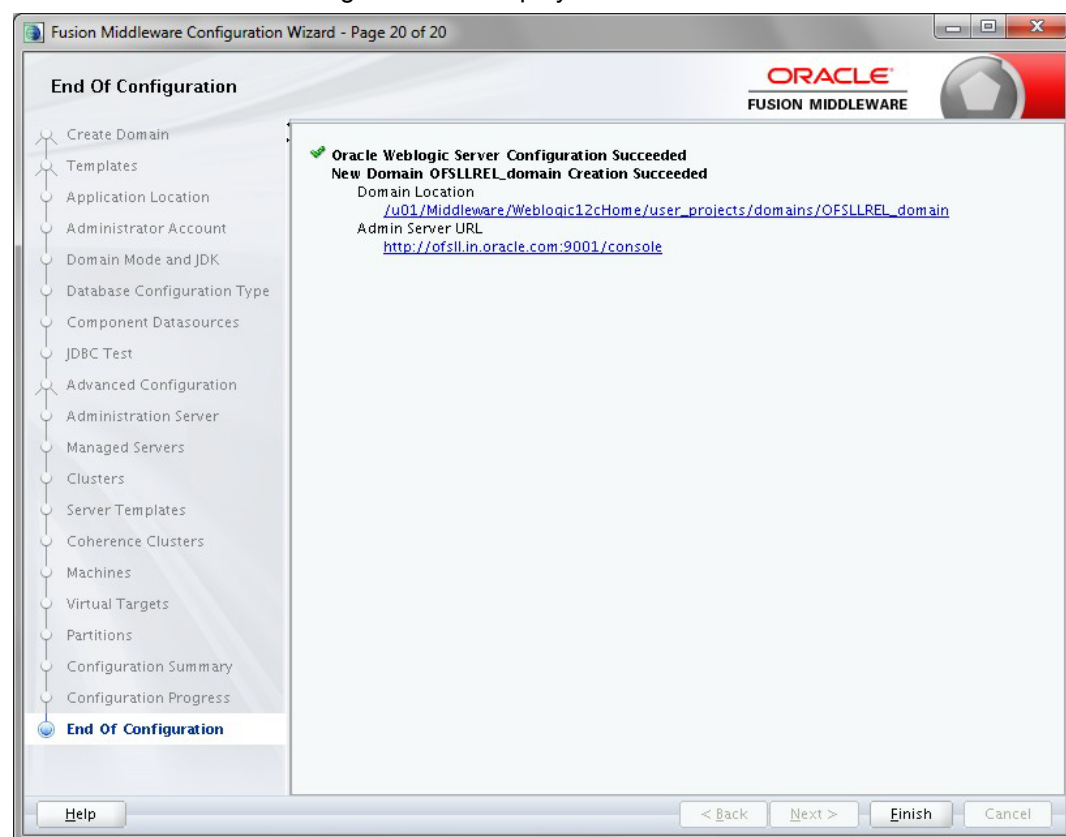
24. Click 'Next'. The following window is displayed.



25. Click 'Next'. The following window is displayed.



26. Click 'Next'. The following window is displayed.



27. Once the creation of the Domain is complete, click 'Finish' to close the window.

---

## Note

The default Weblogic installation will be running JVM with 512MB, this has to be increased for the ADF managed server. Say, for a 2 CPU Quad Core with 16 GB it could have the JVM running at 8 GB as:

```
USER_MEM_ARGS="-Xms8192m -Xmx8192m -XX:PermSize=2048m -XX:Max-PermSize=2048m"
```

---

28. The "\$MW\_HOME/user\_projects/domains/<mydomain>" directory contains a script that can be used to start the Admin server.

- \$ cd \$MW\_HOME/user\_projects/domains/<mydomain>/bin
- \$ ./startWebLogic.sh

If the server is required to be running and access to command line needs to be returned use "nohup" and "&"

```
$ nohup ./startWebLogic.sh &
```

29. To Start Managed Server

- \$ cd \$MW\_HOME/user\_projects/domains/<mydomain>/bin
- \$ ./startManagedWebLogic.sh {ManagedServer\_name} {AdminServer URL}

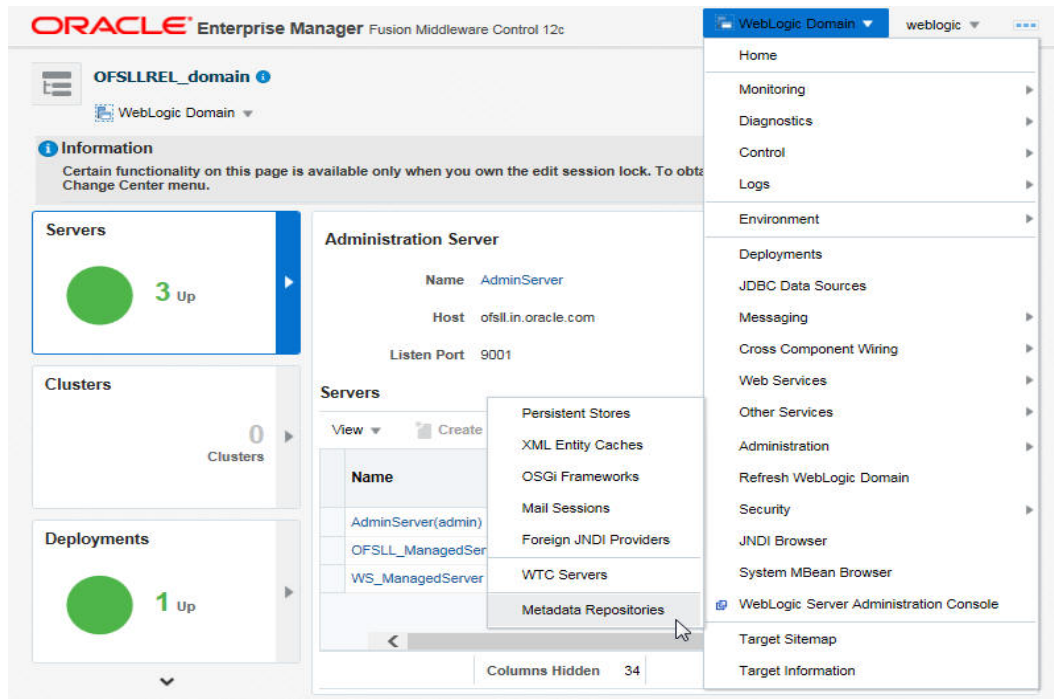
If the server is required to be running and access to command line needs to be returned use "nohup" and "&"

```
$ nohup ./startManagedWebLogic.sh {ManagedServer_name} {AdminServer URL} &
```

## 3.3 Creating Metadata Repository

Assuming that **OLL\_MDS** schema is created using Oracle Repository Creation Utility (RCU) as mentioned in [Creating Schemas using Repository Creation Utility](#) section, follow the below steps to create the repository.

1. Login to Oracle Enterprise Manager 12c console (<http://hostname:port/em>).





- Click on domain name OFSLLREL\_domain on the left side panel.
- Expand Weblogic domain OFSLLREL\_domain and click 'Metadata Repositories' option, as shown in the above screen.
- The following window is displayed.

**ORACLE® Enterprise Manager** Fusion Middleware Control 12c

WebLogic Domain | weblogic | Sep 15, 2017 6:22:12 PM IST

**OFSLLREL\_domain**

**Metadata Repositories**

You create most Fusion Middleware component schema repositories in a database using the Repository Creation Utility. Metadata Services (MDS) repositories can be created in a database with the Repository Creation Utility or created on disk as file-based repositories. You must register an MDS repository before you can deploy application metadata to the repository.

**Database-Based Repositories**

Register... Deregister...

Repository Name	Database Type	Database Name	Schema Name	JNDI Location	Partition
No Repository					

**File-Based Repositories**

Register... Deregister...

Repository Name	Directory	Partition
No Repository		

- Click 'Register' button. The following window is displayed.

**ORACLE® Enterprise Manager** Fusion Middleware Control 12c

WebLogic Domain | weblogic | Sep 15, 2017 6:31:32 PM IST

**OFSLLREL\_domain**

**Register Database-Based Metadata Repository**

A repository stores information used by Application Server components and other applications. A metadata repository must be registered to be operational. A database-based repository is created using the Repository Creation Utility. To register, input database connection information and click Query, then select one of the Metadata Repository and click OK button.

OK Cancel

**Database Connection Information**

Database Type: ☒ Oracle ☐ SQL Server ☐ IBM DB2 ☐ MySQL

\* Host Name: ofsl.Oracle.com

\* Port: 1521

\* Service Name: OLLDB

\* User Name: sys

\* Password: [masked]

Role: SYSDBA

Query

Metadata Repository	Is Registered?	Schema Name	Version	Status	Modified Time
No Repository					

**Selected Repository**

The selected schema can be registered only if it has not already been registered.

- Enter database instance details under Database Connection Information section and click 'Query'. All available schemas in the given database instance are listed.
- Select the schema you require and in the Selected Repository – Schema OLL\_MDS section, enter 'Repository Name' (adf) and the password.

8. Click 'OK'. The following window is displayed.

**Register Database-Based Metadata Repository**

A repository stores information used by Application Server components and other applications. A metadata repository must be registered to be operational. A database-based repository is created using the Repository Creation Utility. To register, input database connection information and click Query, then select one of the Metadata Repository and click OK button.

**Database Connection Information**

Database Type: ☒ Oracle ☐ SQL Server ☐ IBM DB2 ☐ MySQL

\* Host Name: ofsl.oracle.com

\* Port: 1521

\* Service Name: OLLODB

\* User Name: sys

\* Password: \*\*\*\*\*

Role: SYSDBA

Query

Metadata Repository	Is Registered?	Schema Name	Version	Status	Modified Time
MDS	false	OFSLL_MDS	12.2.1.0.0	VALID	Jun 9, 2017 2:17:58 PM IST
MDS	false	LL_MDS	12.2.1.3.0	VALID	Sep 15, 2017 8:41:02 AM IST
MDS	false	OFSLL1_MDS	12.2.1.3.0	VALID	Sep 12, 2017 7:38:12 PM IST
MDS	false	OLL_MDS	12.2.1.3.0	VALID	Sep 11, 2017 8:28:20 PM IST

**Selected Repository - Schema: LL\_MDS**

The selected schema can be registered only if it has not already been registered.

\* Repository Name: adf

\* Schema Password: \*\*\*\*\*

9. Click Repository name 'mds-adf' on left panel. You can even select it from right panel.

**Metadata Repositories**

You create most Fusion Middleware component schema repositories in a database using the Repository Creation Utility. Metadata Services (MDS) repositories can be created in a database with the Repository Creation Utility or created on disk as file-based repositories. You must register an MDS repository before you can deploy application metadata to the repository.

**Database-Based Repositories**

Register... Deregister...

Repository Name	Database Type	Database Name	Schema Name	JNDI Location	P
mds-adf	Oracle	orcl.in.oracle.com	LL_MDS	jdbc/mds/adf	G

**File-Based Repositories**

Register... Deregister...

Repository Name	Directory	Partitions
-----------------	-----------	------------

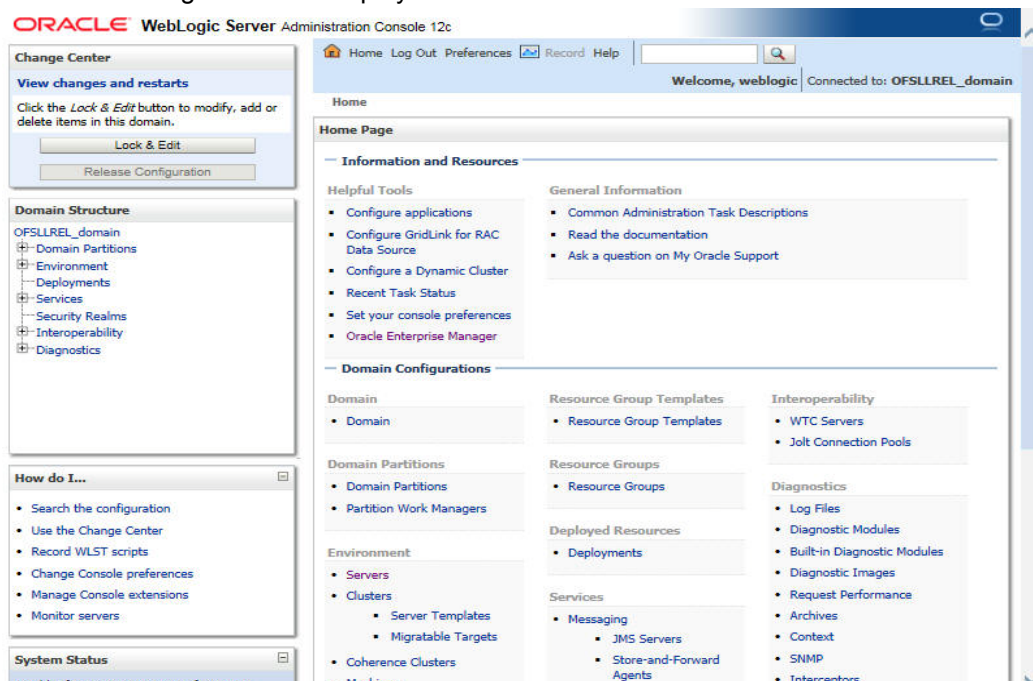
10. Click 'Add' and target to AdminSever and OFSLL\_ManagedServer as on right panel.

## 3.4 Creating Data Source

1. Login to WebLogic Server 12c console (<http://hostname:port/console>).

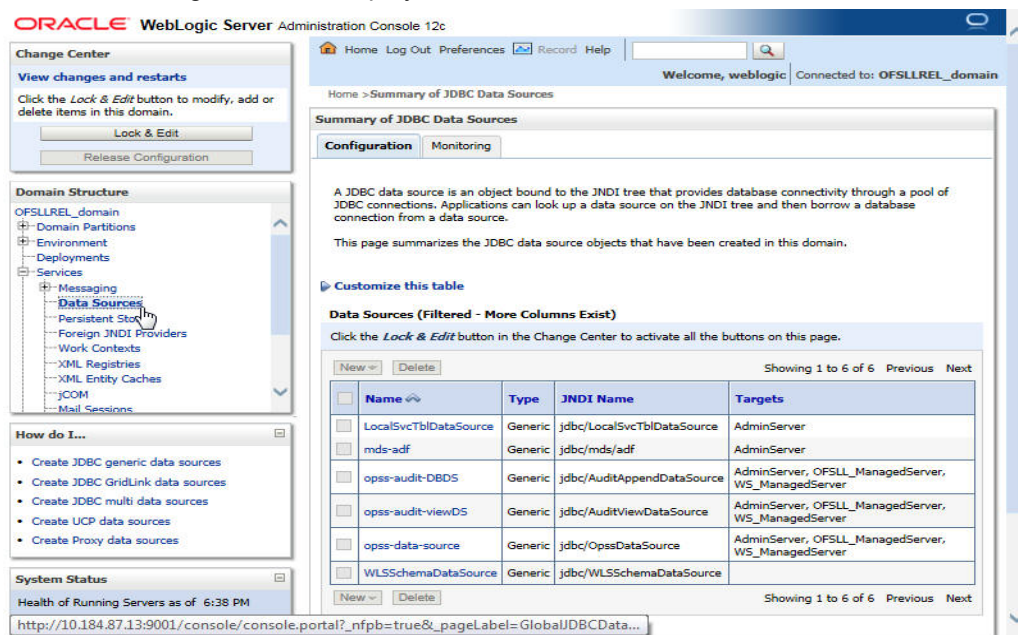


2. The following window is displayed.

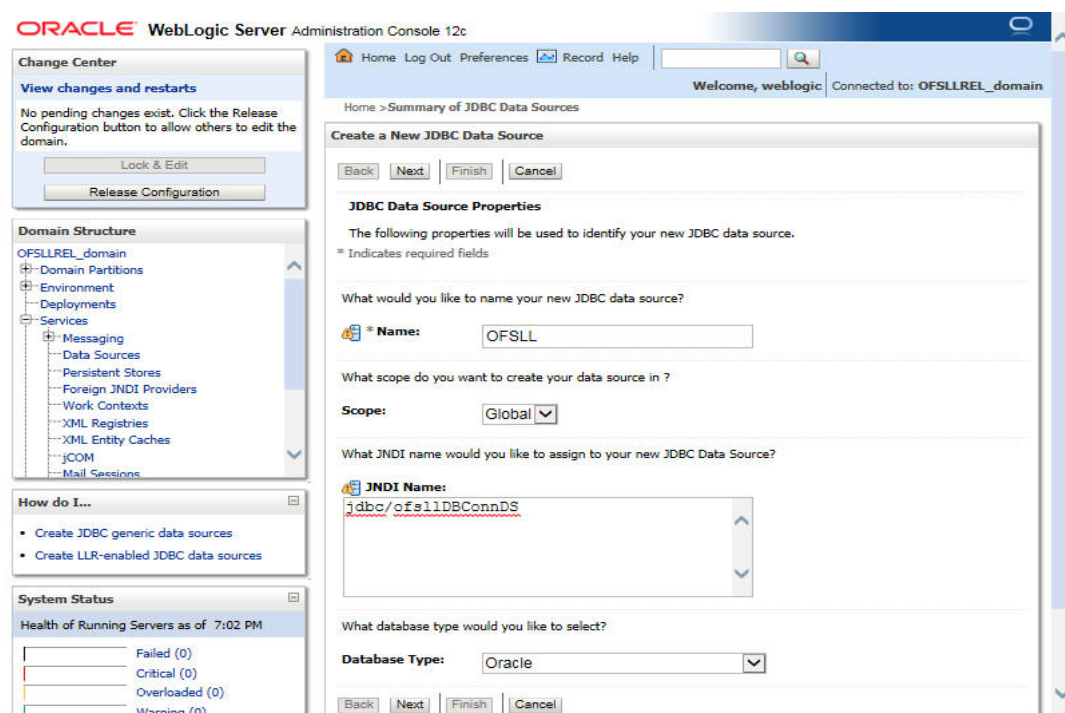


3. Click Domain Name > Services > Data Sources.

4. The following window is displayed.



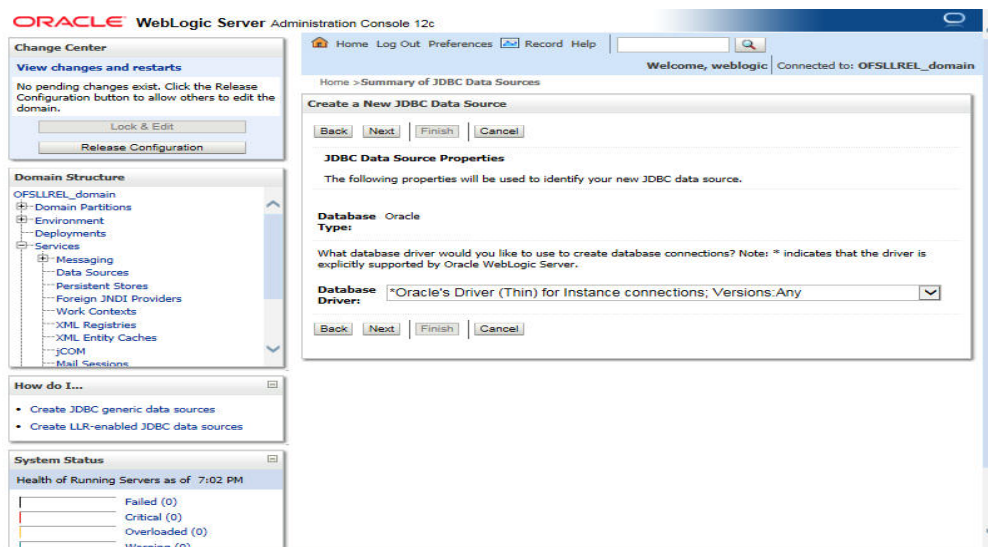
5. Click 'Lock & Edit' button on the left panel. Click 'New' on right panel and select Generic Data Source.



6. Enter Data source 'Name', JNDI Name as 'jdbc/ofslIDBConnDS' and select 'Oracle' as Database Type.

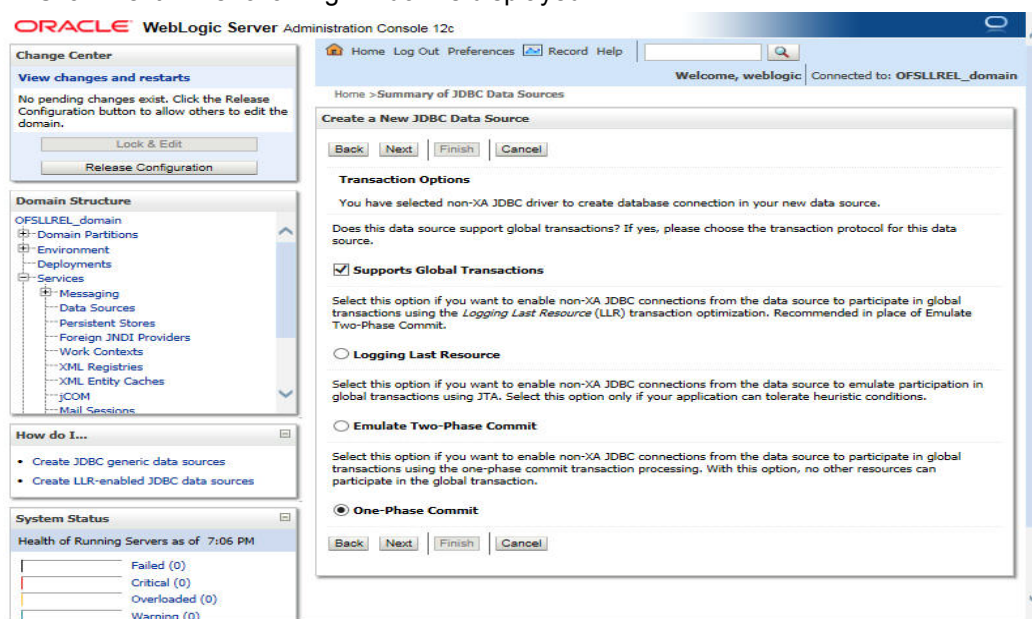


7. Click 'Next'. The following window is displayed.



8. Select the Database Driver 'Oracle's Driver(Thin) for Instance connections; Versions:Any' as shown above.

9. Click 'Next'. The following window is displayed.



10. Click 'Next'. The following window is displayed.

**ORACLE WebLogic Server Administration Console 12c**

Home Log Out Preferences Record Help

Welcome, weblogic Connected to: OFSLREL\_domain

Home > Summary of JDBC Data Sources

**Create a New JDBC Data Source**

Back Next Finish Cancel

**Connection Properties**

Define Connection Properties.

What is the name of the database you would like to connect to?

**Database Name:** OLLDB

What is the name or IP address of the database server?

**Host Name:** ofsl.oracle.com

What is the port on the database server used to connect to the database?

**Port:** 1521

What database account user name do you want to use to create database connections?

**Database User Name:** OFSLREL

What is the database account password to use to create database connections?

**Password:** .....

**Confirm Password:** .....

Additional Connection Properties:

**Change Center**

View changes and restarts

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

Lock & Edit

Release Configuration

**Domain Structure**

OFSLREL\_domain

- Domain Partitions
- Environment
- Deployments
- Services
  - Messaging
  - Data Sources
  - Persistent Stores
  - Foreign JNDI Providers
  - Work Contexts
  - XML Registries
  - XML Entity Caches
  - JCOM
  - Mail Sessions

**How do I...**

- Create JDBC generic data sources
- Create LLR-enabled JDBC data sources

**System Status**

Health of Running Servers as of 7:06 PM

Failed (0)
Critical (0)
Overloaded (0)
Warning (0)

11. Enter Database details click 'Next'. The following window is displayed.

**ORACLE WebLogic Server Administration Console 12c**

Home Log Out Preferences Record Help

Welcome, weblogic Connected to: OFSLREL\_domain

Home > Summary of JDBC Data Sources

**Create a New JDBC Data Source**

Test Configuration Back Next Finish Cancel

**Test Database Connection**

Test the database availability and the connection properties you provided.

What is the full package name of JDBC driver class used to create database connections in the connection pool?

(Note that this driver class must be in the classpath of any server to which it is deployed.)

**Driver Class Name:** oracle.jdbc.OracleDriver

What is the URL of the database to connect to? The format of the URL varies by JDBC driver.

**URL:** jdbc:oracle:thin:@ofsl.oracle.com:1521:OLLDB

What database account user name do you want to use to create database connections?

**Database User Name:** OFSLREL

What is the database account password to use to create database connections?

(Note: for secure password management, enter the password in the Password field instead of the Properties field below)

**Password:** .....

**Confirm Password:** .....

What are the properties to pass to the JDBC driver when creating database connections?

**Properties:**

**Change Center**

View changes and restarts

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

Lock & Edit

Release Configuration

**Domain Structure**

OFSLREL\_domain

- Domain Partitions
- Environment
- Deployments
- Services
  - Messaging
  - Data Sources
  - Persistent Stores
  - Foreign JNDI Providers
  - Work Contexts
  - XML Registries
  - XML Entity Caches
  - JCOM
  - Mail Sessions

**How do I...**

- Create JDBC generic data sources
- Create LLR-enabled JDBC data sources

**System Status**

Health of Running Servers as of 7:17 PM

Failed (0)
Critical (0)
Overloaded (0)
Warning (0)
OK (3)

12. Click 'Test Configuration'. The following window is displayed.

The screenshot shows the Oracle WebLogic Server Administration Console. The left sidebar contains the 'Change Center', 'Domain Structure' tree, 'How do I...' help links, and 'System Status'. The main content area displays the 'Create a New JDBC Data Source' wizard. The 'Test Database Connection' step is active, showing a 'Connection test succeeded' message. The wizard includes fields for 'Driver Class Name' (oracle.jdbc.OracleDriver), 'URL' (jdbc:oracle:thin:@ofssl.oracle.com:1521:OLDB), 'Database User Name' (OFSSLREL), and 'Password' (masked with dots). Navigation buttons at the top of the wizard include 'Test Configuration', 'Back', 'Next', 'Finish', and 'Cancel'.

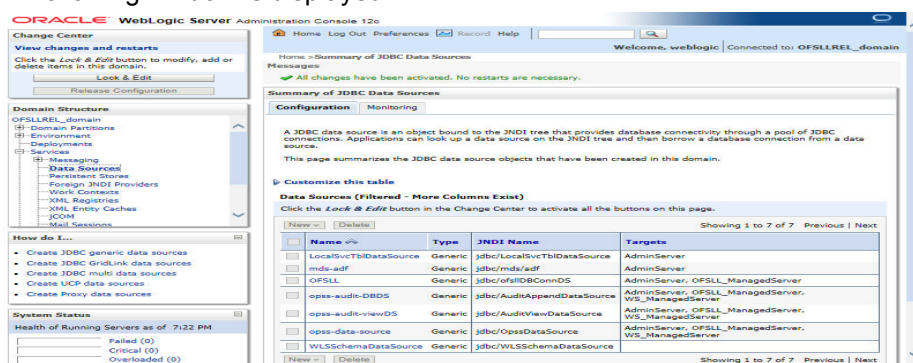
13. Displays confirmation message as 'Connection test succeeded'. Click 'Next'. The following window is displayed.

The screenshot shows the same Oracle WebLogic Server Administration Console, but the wizard has progressed to the 'Select Targets' step. The 'Connection test succeeded' message is still visible. The 'Select Targets' section contains a table with the following data:

Servers
<input checked="" type="checkbox"/> AdminServer
<input checked="" type="checkbox"/> OFSSL_ManagedServer
<input type="checkbox"/> WS_ManagedServer

Below the table are navigation buttons: 'Back', 'Next', 'Finish', and 'Cancel'.

14. Select target Servers 'AdminServer' and 'OFSLL\_ManagedServer' and click 'Finish'. The following window is displayed.



15. Click 'Activate Changes' on the left panel.

#### Update the following parameters in JDBC data source connection pool:

1. Select Services > Data Sources > select the OFSLL data source > Connection Pool.
2. Initial capacity and Maximum capacity is defaulted to 15, if the number of concurrent users are more this needs to be increased.
3. Click Advanced button and update the following:
  - Inactive Connection Timeout=900
  - Uncheck the 'Wrap Data Types' parameter for better performance.
4. Click 'Save'.

---

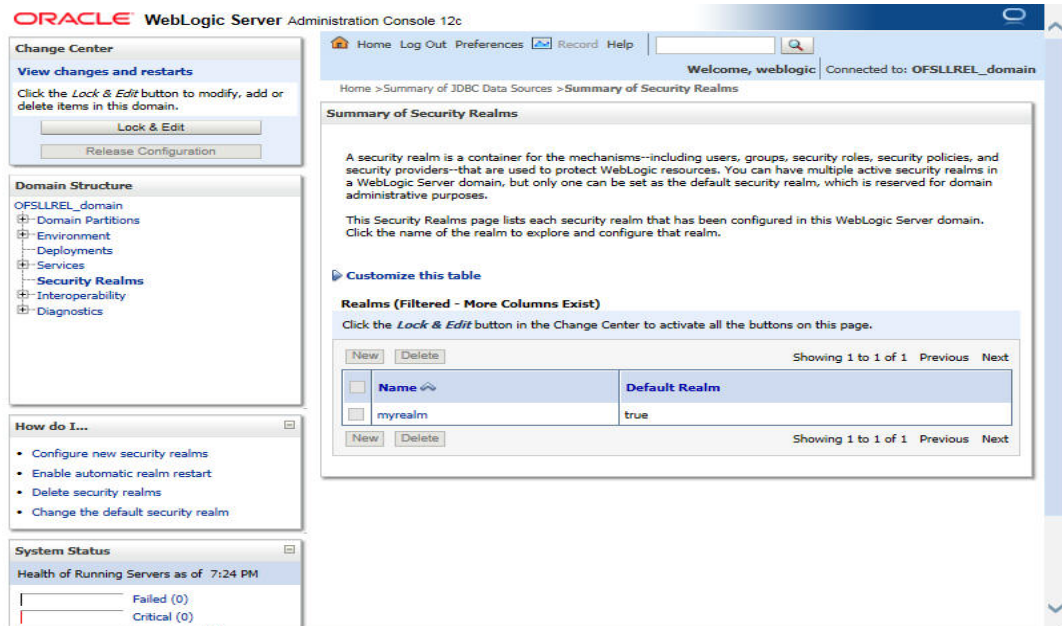
#### Note

User Authentication and Management is outside of Oracle Financial Services Lending and Leasing application. Organizations can use an LDAP implementation for authentication. For Development and Testing purpose, the following sections can be configured for authentication:

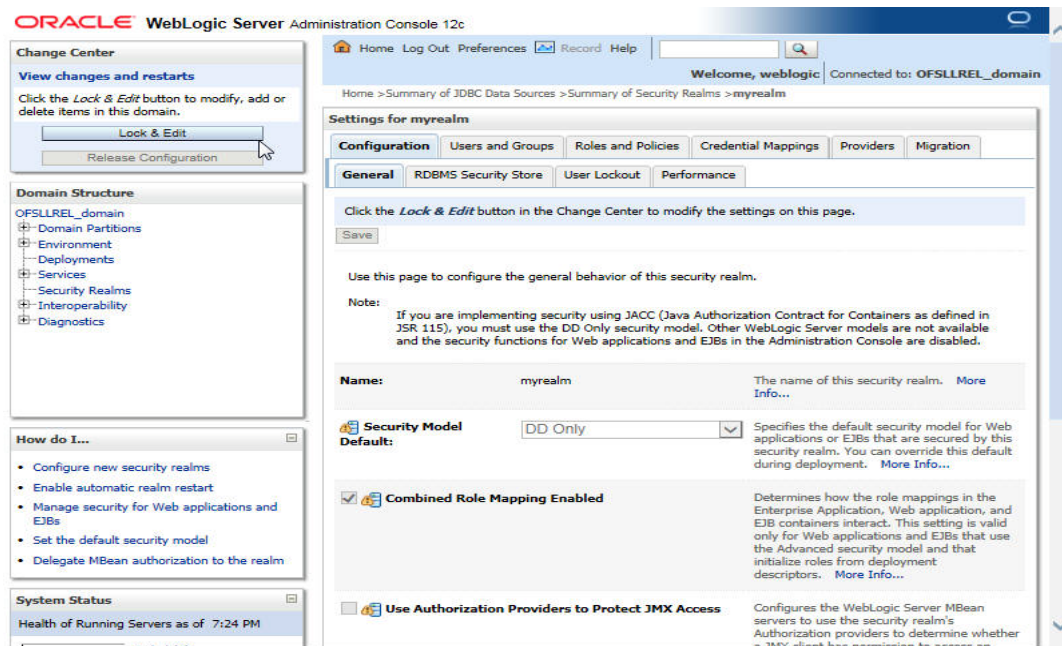
- 3.5 Creating SQL Authentication Provider
  - 3.6 Creating User Groups and Users
  - 3.7 Implementing JMX Policy for Change Password
  - 4.1 Configuring Password Policy for SQL Authenticator
  - 4.2 Configuring User Lockout Policy
-

## 3.5 Creating SQL Authentication Provider

1. Login to WebLogic server administration console and click 'Security Realms' in left panel. The following window is displayed.

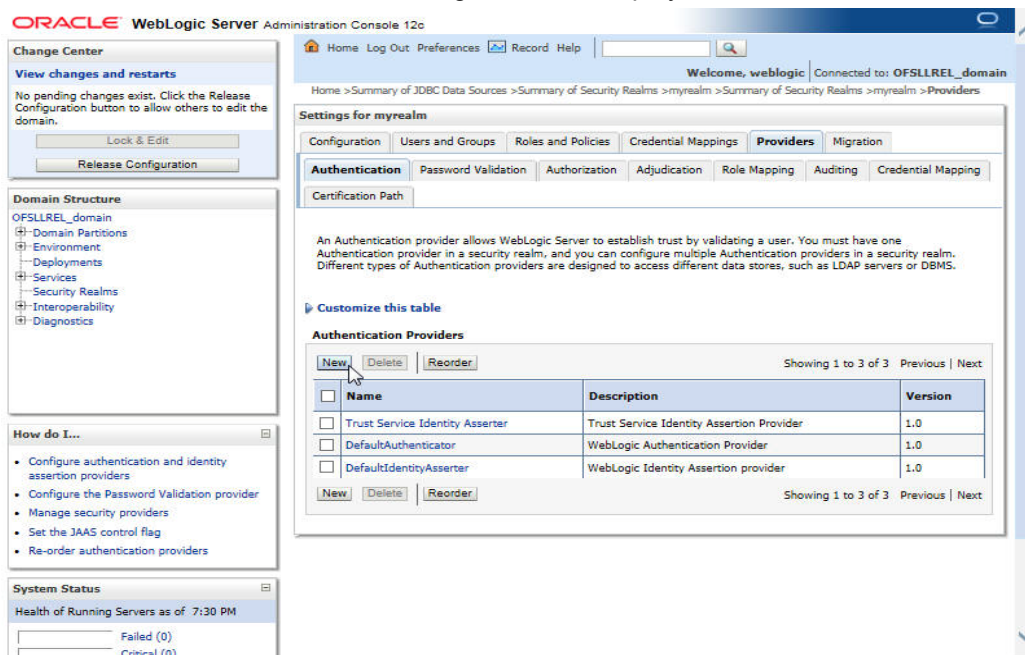


2. Click 'myrealm' on right panel. The following window is displayed.

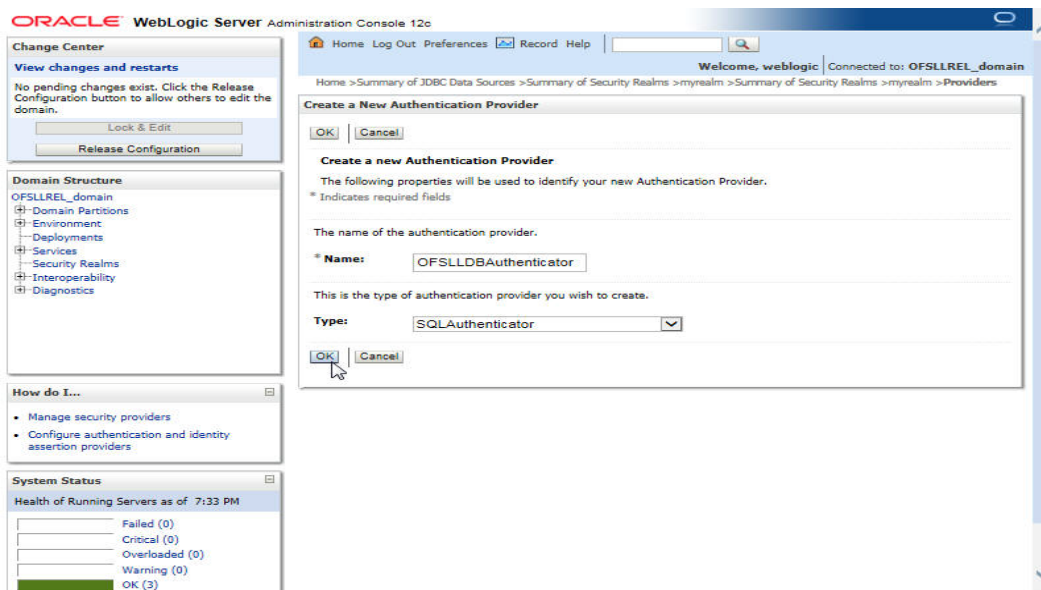




3. Click on Providers tab. The following window is displayed.



4. Click 'Lock & Edit' to unlock the screen and click 'New' button in Authentication Providers sub tab. The following window is displayed.

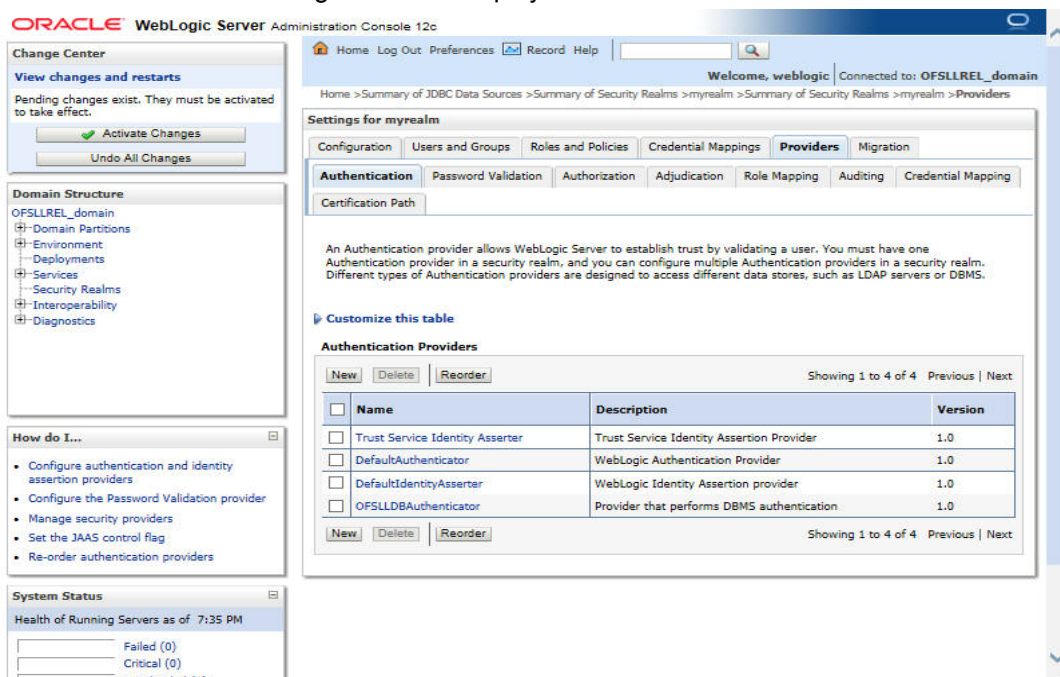


5. Create Authentication provider with following values:

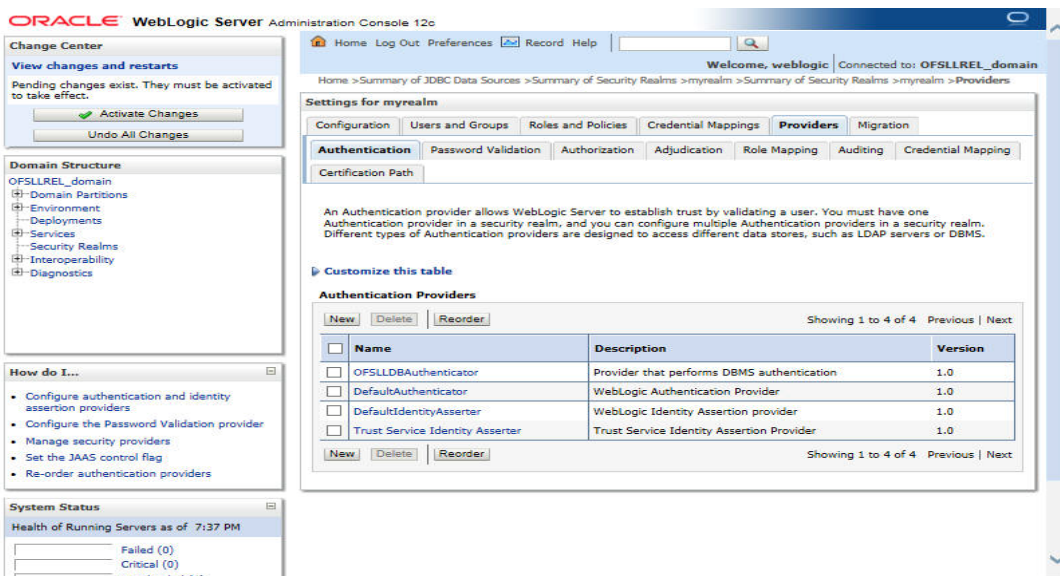
- Name: OFSLDLDBAuthenticator
- Type: SQLAuthenticator



6. Click 'OK'. The following window is displayed.

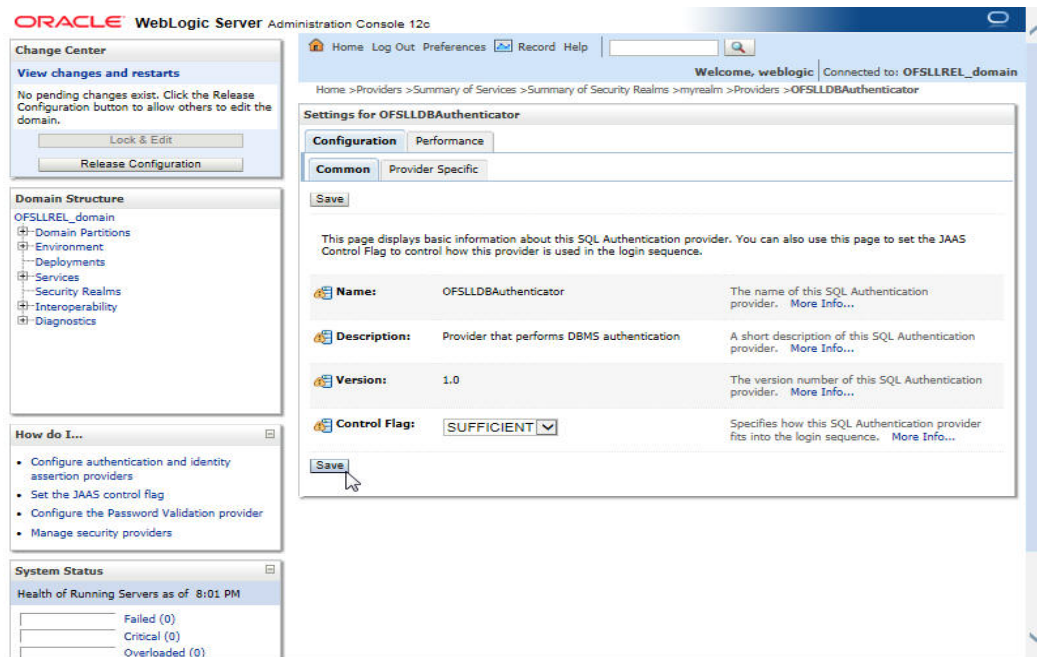


7. Click on 'Activate Changes'. The following window is displayed.



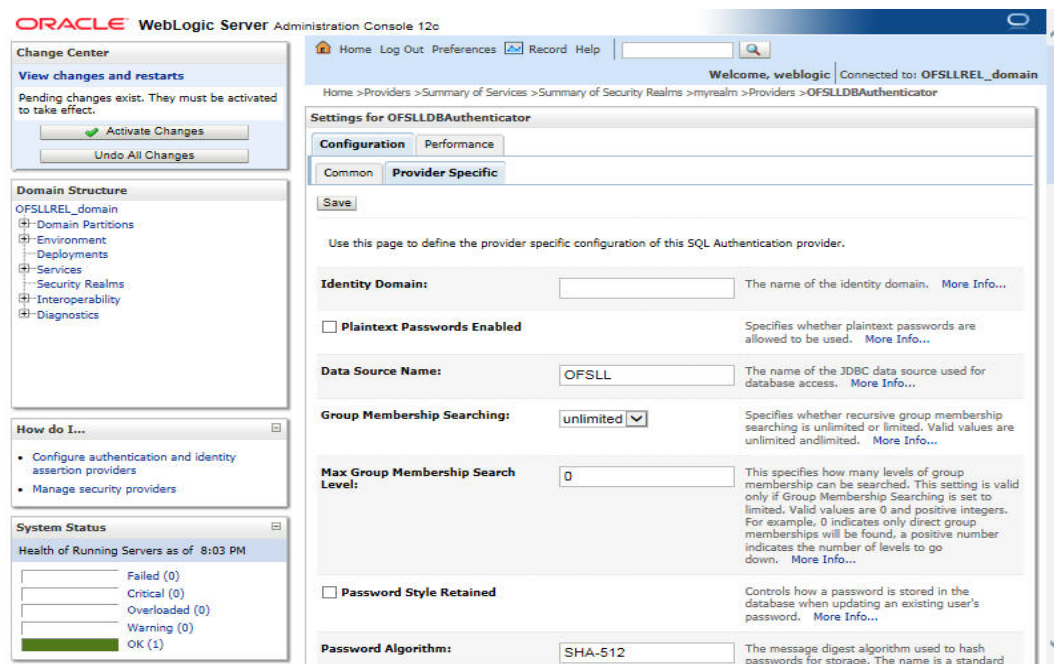
Authentication order should be maintained as mentioned in the above screen. 'OFSLLDBAuthenticator' will be displayed as above.

8. Click on 'OFSLDBAuthenticator'. The following window is displayed.



9. Select 'SUFFICIENT' as the Control Flag and click 'Save'.

10. Click Provider Specific sub tab under Configuration tab. The following window is displayed.



11. Specify the following values in corresponding fields:

- Data Source Name: OFSL
- Password Style Retained: Uncheck
- Password Algorithm: SHA-512
- Password Style: SALTEDHASHED

- Provide the SQL Queries from the column Corresponding SQL Queries as per OFSLL Tables as given below.

Operation	Default SQL Query from Weblogic	Corresponding SQL Queries as per our Tables
SQL Get Users Password:	SELECT U_PASS- WORD FROM USERS WHERE U_NAME = ?	SELECT UAU_USR_PASSWORD FROM USER_AUTHORISATIONS WHERE UAU_USR_CODE = ?
SQL Set User Password:	UPDATE USERS SET U_PASSWORD = ? WHERE U_NAME = ?	UPDATE USER_AUTHORISATIONS SET UAU_USR_PASSWORD = ? WHERE UAU_USR_CODE = ?
SQL User Exists:	SELECT U_NAME FROM USERS WHERE U_NAME = ?	SELECT UAU_USR_CODE FROM USER_AUTHORISATIONS WHERE UAU_USR_CODE = ?
SQL List Users:	SELECT U_NAME FROM USERS WHERE U_NAME LIKE ?	SELECT UAU_USR_CODE FROM USER_AUTHORISATIONS WHERE UAU_USR_CODE LIKE ?
SQL Create User:	INSERT INTO USERS VALUES ( ? , ? , ? )	INSERT INTO USER_AUTHORISA- TIONS(UAU_USR_CODE, UAU_USR_ PASSWORD,UAU_DESC) VALUES(?,?,?)
SQL Remove User:	DELETE FROM USERS WHERE U_NAME = ?	DELETE FROM USER_AUTHORISA- TIONS WHERE UAU_USR_CODE= ?
SQL List Groups:	SELECT G_NAME FROM GROUPS WHERE G_NAME LIKE ?	SELECT UGR_GROUP_CODE FROM USER_GROUPS WHERE UGR_GROUP_CODE LIKE ?
SQL Group Exists:	SELECT G_NAME FROM GROUPS WHERE G_NAME = ?	SELECT UGR_GROUP_CODE FROM USER_GROUPS WHERE UGR_GROUP_CODE = ?
SQL Create Group:	INSERT INTO GROUPS VALUES ( ? , ? )	INSERT INTO USER_GROUPS(UGR_GROUP_CODE,U GR_GROUP_DESC) VALUES(?,?)
SQL Remove Group:	DELETE FROM GROUPS WHERE G_NAME = ?	DELETE FROM USER_GROUPS WHERE UGR_GROUP_CODE = ?
SQL Is Mem- ber:	SELECT G_MEMBER FROM GROUPMEM- BERS WHERE G_NAME = ? AND G_MEMBER = ?	SELECT UGM_MEMBER_USR_CODE FROM USER_GROUP_MEMBERS WHERE UGM_MEM- BER_GROUP_CODE= ? AND UGM_MEMBER_USR_CODE = ?
SQL List Mem- ber Groups:	SELECT G_NAME FROM GROUPMEM- BERS WHERE G_MEMBER = ?	SELECT UGM_MEM- BER_GROUP_CODE FROM USER_GROUP_MEMBERS WHERE UGM_MEMBER_USR_CODE= ?

Operation	Default SQL Query from Weblogic	Corresponding SQL Queries as per our Tables
SQL List Group Members:	SELECT G_MEMBER FROM GROUPMEMBERS WHERE G_NAME = ? AND G_MEMBER LIKE ?	SELECT UGM_MEMBER_USR_CODE FROM USER_GROUP_MEMBERS WHERE UGM_MEMBER_GROUP_CODE= ? AND UGM_MEMBER_USR_CODE LIKE ?
SQL Remove Group Memberships:	DELETE FROM GROUPMEMBERS WHERE G_MEMBER = ? OR G_NAME = ?	DELETE FROM USER_GROUP_MEMBERS WHERE UGM_MEMBER_USR_CODE= ? OR UGM_MEMBER_GROUP_CODE= ?
SQL Add Member To Group:	INSERT INTO GROUPMEMBERS VALUES( ?, ?)	INSERT INTO USER_GROUP_MEMBERS (UGM_MEMBER_GROUP_CODE,UGM_MEMBER_USR_CODE) VALUES(?,?)
SQL Remove Member From Group:	DELETE FROM GROUPMEMBERS WHERE G_NAME = ? AND G_MEMBER = ?	DELETE FROM USER_GROUP_MEMBERS WHERE UGM_MEMBER_GROUP_CODE= ? AND UGM_MEMBER_USR_CODE= ?
SQL Remove Group Member:	DELETE FROM GROUPMEMBERS WHERE G_NAME = ?	DELETE FROM USER_GROUP_MEMBERS WHERE UGM_MEMBER_GROUP_CODE= ?
SQL Get User Description:	SELECT U_DESCRIPTION FROM USERS WHERE U_NAME = ?	SELECT UAU_DESC FROM USER_AUTHORISATIONS WHERE UAU_USR_CODE = ?
SQL Set User Description:	UPDATE USERS SET U_DESCRIPTION = ? WHERE U_NAME = ?	UPDATE USER_AUTHORISATIONS SET UAU_DESC= ? WHERE UAU_USR_CODE= ?
SQL Get Group Description:	SELECT G_DESCRIPTION FROM GROUPS WHERE G_NAME = ?	SELECT UGR_GROUP_DESC FROM USER_GROUPS WHERE UGR_GROUP_CODE= ?
SQL Set Group Description:	UPDATE GROUPS SET G_DESCRIPTION = ? WHERE G_NAME = ?	UPDATE USER_GROUPS SET UGR_GROUP_DESC= ? WHERE UGR_GROUP_CODE= ?
Provider Name	OFSLLDBAuthenticator	

**SQL Remove Member From Group:**  The SQL statement used to remove a member from a group. The SQL statement requires two parameters: the group name and the group member being deleted from the group. [More Info...](#)

**SQL Remove Group Member:**  The SQL statement used to remove a member from a group. The SQL statement requires a single parameter: the username or group name being removed. [More Info...](#)

☒ **Descriptions Supported** Indicates whether user and group descriptions are supported by the database used by the authentication provider. [More Info...](#)

**SQL Get User Description:**  The SQL statement used to retrieve the description of a specific user. Only valid if Descriptions Supported is enabled. The SQL statement requires a single parameter for the username and must return a resultSet containing at most a single record containing the user description. [More Info...](#)

**SQL Set User Description:**  The SQL statement used to specify a description for a user. Only valid if Descriptions Supported is enabled. The SQL statement requires two parameters: the user name and the user description. [More Info...](#)

**SQL Get Group Description:**  The SQL statement used to retrieve the description of a group. Only valid if Descriptions Supported is enabled. The SQL statement requires a single parameter for the group name and must return a resultSet containing at most a single record containing the group description. [More Info...](#)

**SQL Set Group Description:**  The SQL statement used to specify a description for a group. Only valid if Descriptions Supported attribute is enabled. The SQL statement requires two parameters: the group description and the group name. [More Info...](#)

WebLogic Server Version: 12.2.1.3.0  
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12. Click 'Save'.

---

### Note

Application server needs to be restarted for these changes to take effect.

---

## 3.6 Creating User Groups and Users

### 3.6.1 Creating Users

Create an OFSLL application super user to login to the application.

A script is provided in the distribution media in the dba\_utils folder to create an user.

---

### Note

By default there are no users created to login to OFSLL application.

---

Login as application schema owner and run the script 'crt\_app\_user.sql script' to create OFSSL application user.

```
SQL*Plus: Release 12.1.0.2.0 Production on Sat Sep 16 10:35:29 2017
Copyright (c) 1982, 2014, Oracle. All rights reserved.

Enter user-name: OFSSLREL
Enter password:
Last Successful login time: Sat Sep 16 2017 10:38:03 +05:30
Connected to:
Oracle Database 12c Enterprise Edition Release 12.1.0.2.0 - 64bit Production
With the Partitioning, OLAP, Advanced Analytics and Real Application Testing options

SQL> @crt_app_user.sql
Enter the name of the OFSSL App user Id you
Want to create user: DEMOSUPR
Enter the First Name for this user: DEMO
Enter the Last Name for this user: SUPR
Enter the Phone Number for this user: 9997778886
Enter the Fax Number for this user: 6655544422

1 row created.

1 row created.

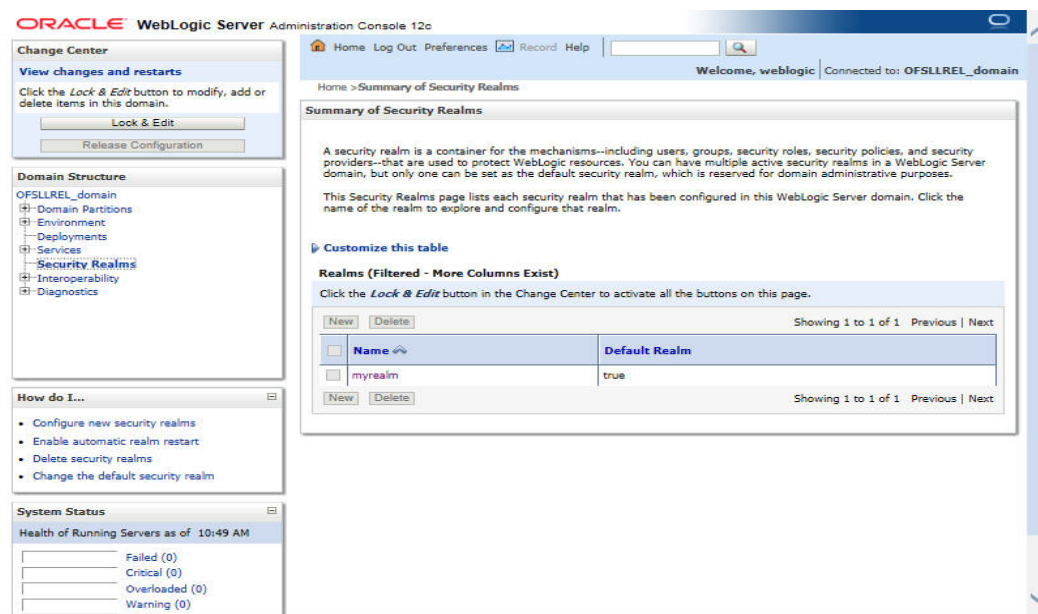
1 row created.

SQL> commit;

Commit complete.

SQL>
```

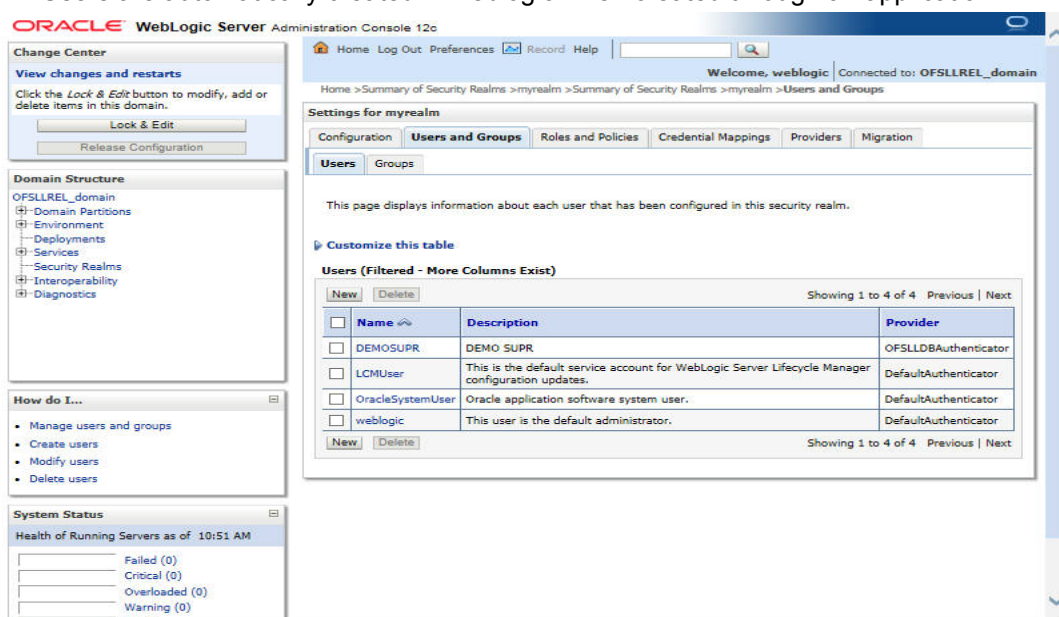
1. Login into WebLogic server console.
2. Click 'Security Realms' on the left panel.
3. Click 'myrealm' on the right panel..



4. Select 'Users' tab under Users and Groups.

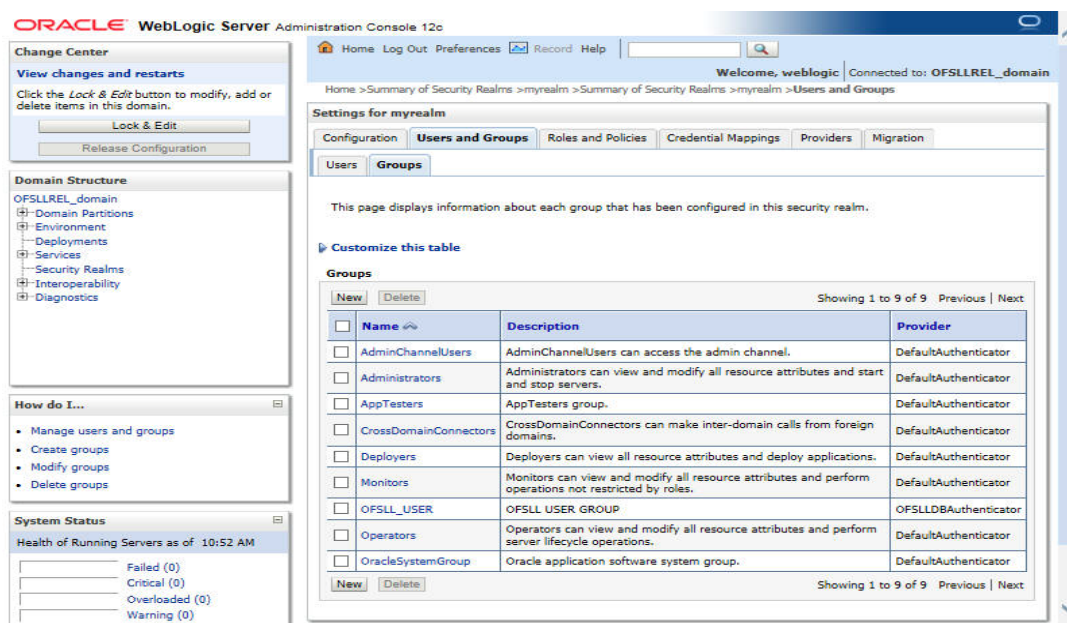


5. If SQLAuthenticator is configured as a Security Provider for the OFSLL application, the Users are automatically created in weblogic when created through an application.



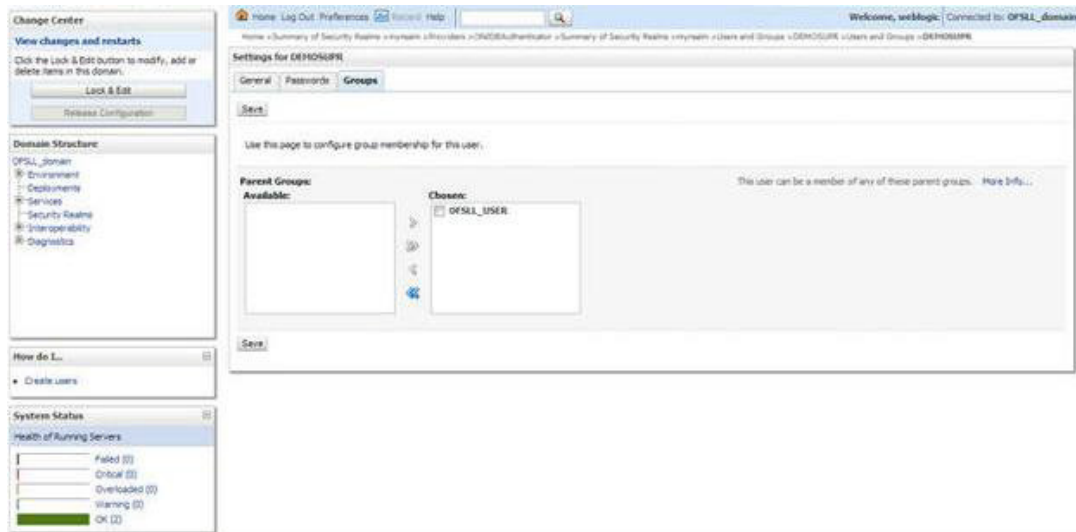
### 3.6.2 Creating User Groups

1. Select 'Groups' tab under Users and Groups.
2. If SQLAuthenticator is configured as a Security Provider for the OFSLL application, the Groups are automatically created in weblogic when created through an application.



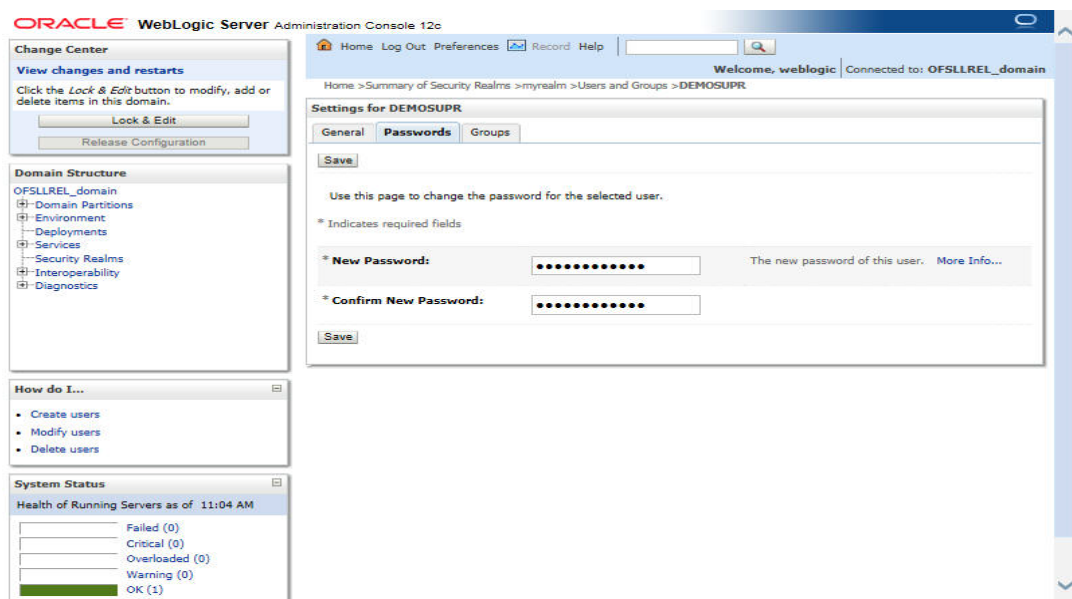
### 3.6.3 Assigning Users to Groups

The USERS are automatically mapped to default application group - OFSLL\_USER.

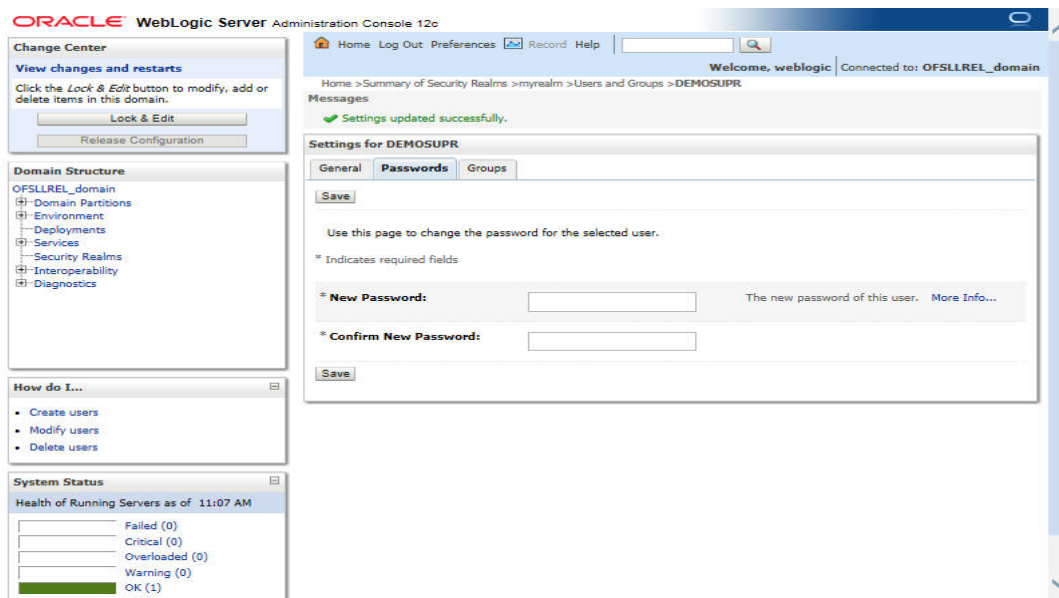


### 3.6.4 Resetting password via weblogic console

1. Click on 'User'. Select Passwords tab and enter new password and confirm password.



2. Click 'Save'. The following window displayed.



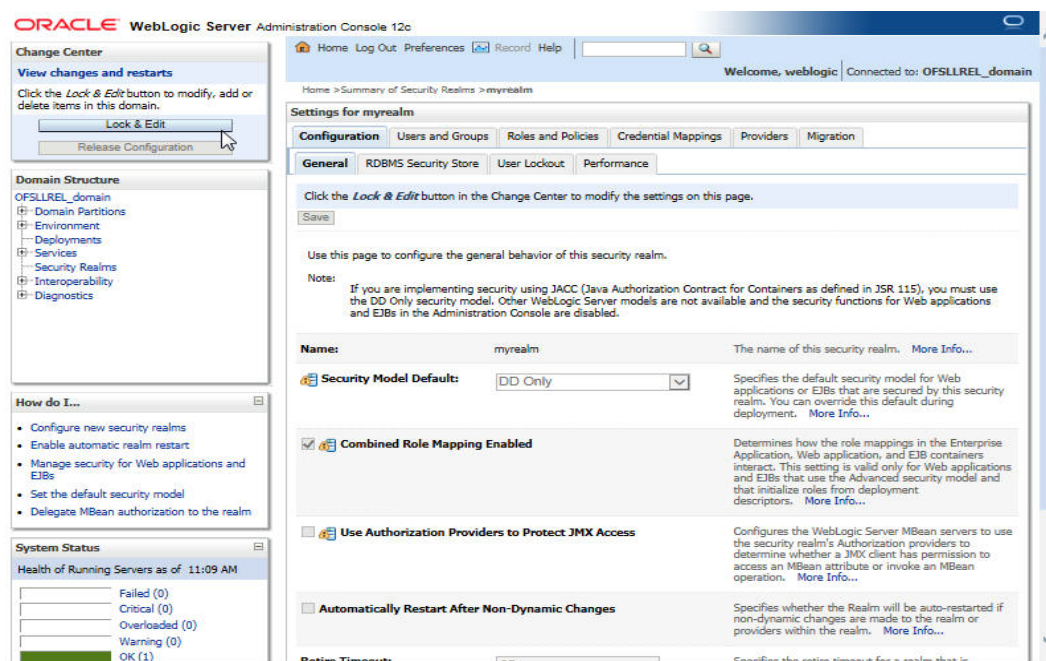
### 3.7 Implementing JMX Policy for Change Password

1. Login to Oracle WebLogic Server 12c console (<http://hostname:port/console>)

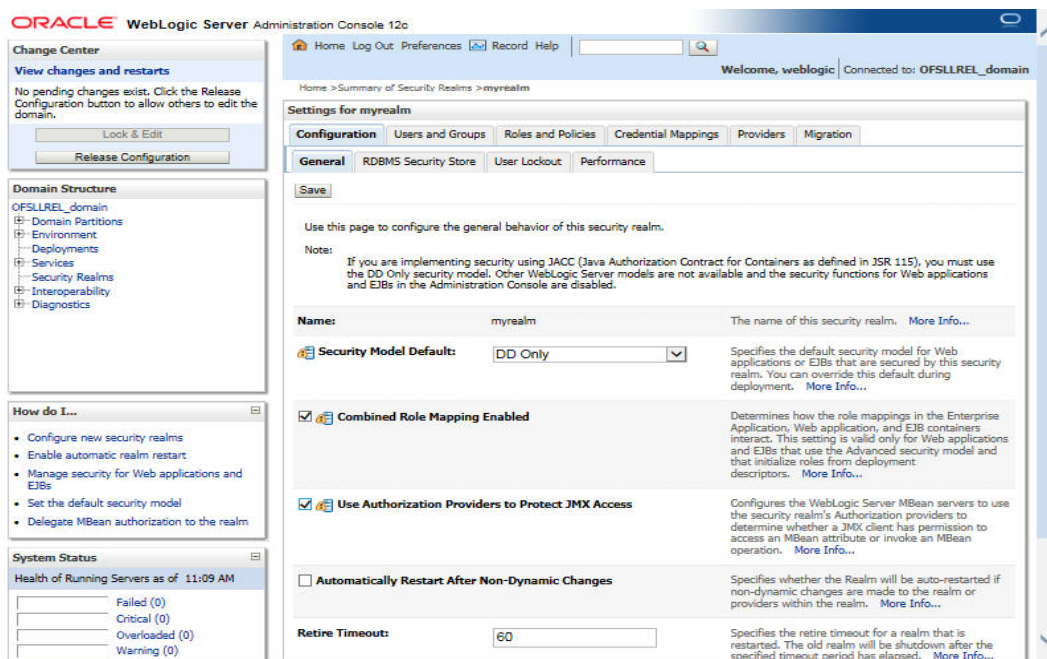
#### Note

The Change Password feature uses the JMX Policy configured on the domain. Hence, the AdminServer is required to be up and running to enable this.

2. Click **Domain > Security > myrealm > Configuration**



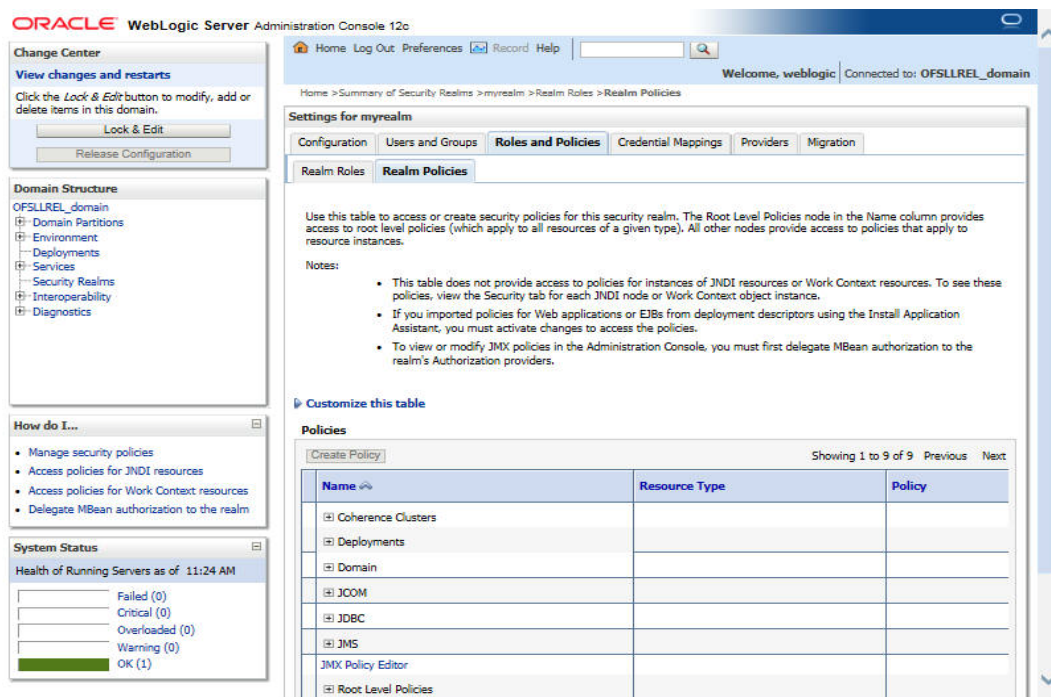
- To enable JMX policy select the 'Use Authorization Providers to Protect JMX Access' check box on the right panel



- Click 'Save' and restart the server.
- Re-login to console.
- Click Domain > Security > myrealm > Roles and Policies > Realm Policies

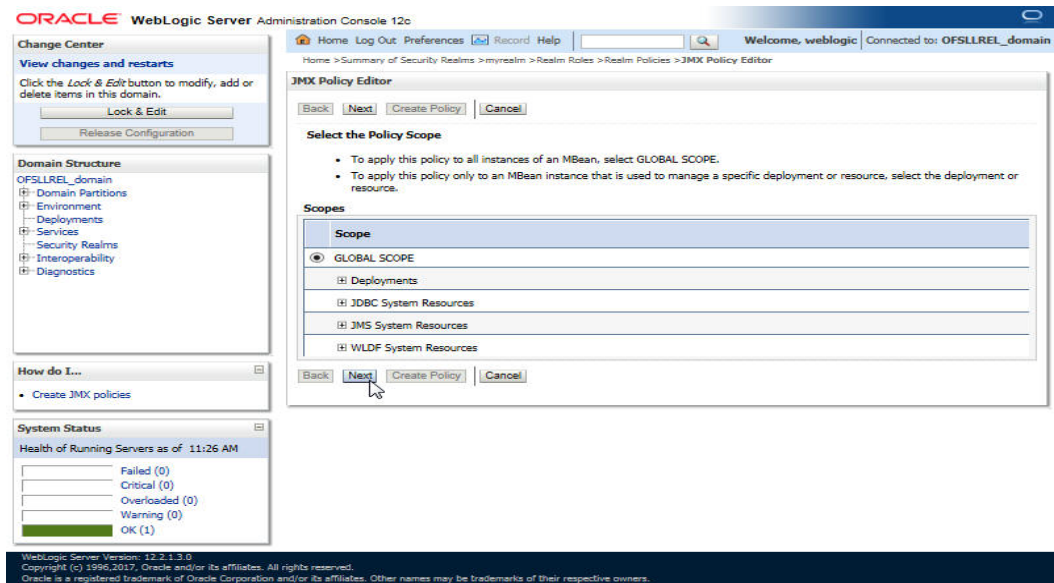
Note

If server is not restarted, JMX Policy Editor option will not appear

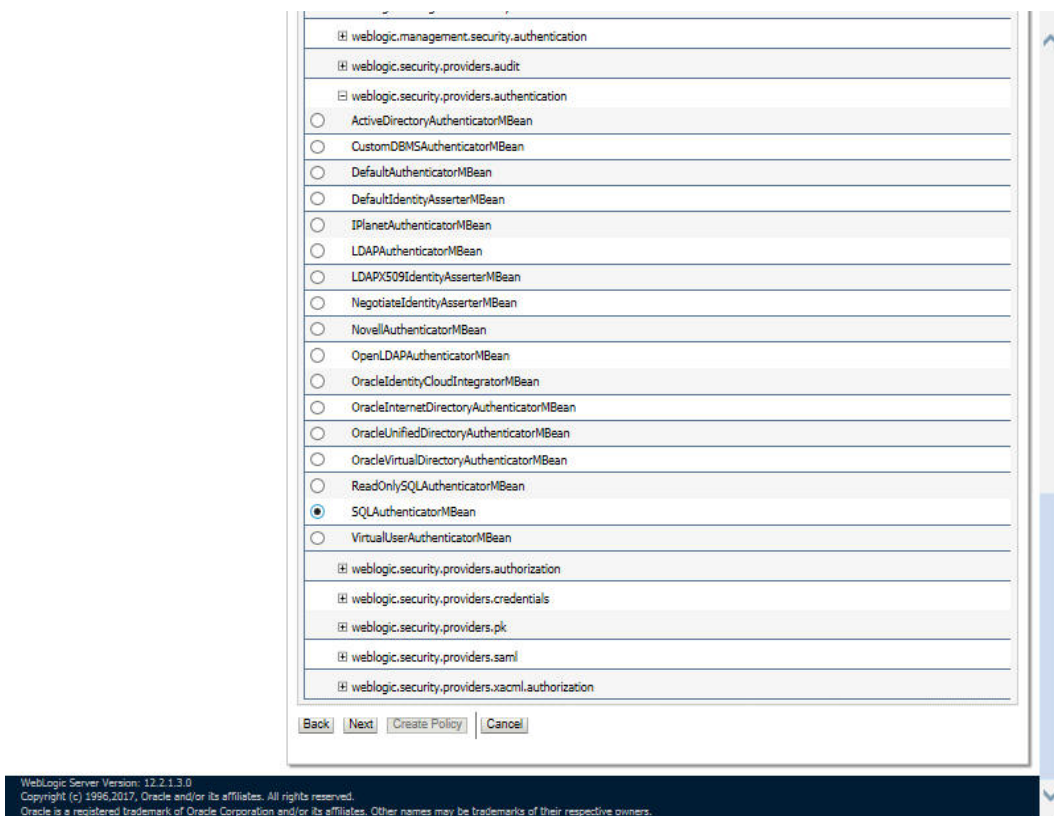




## 7. Click on JMX Policy Editor to configure

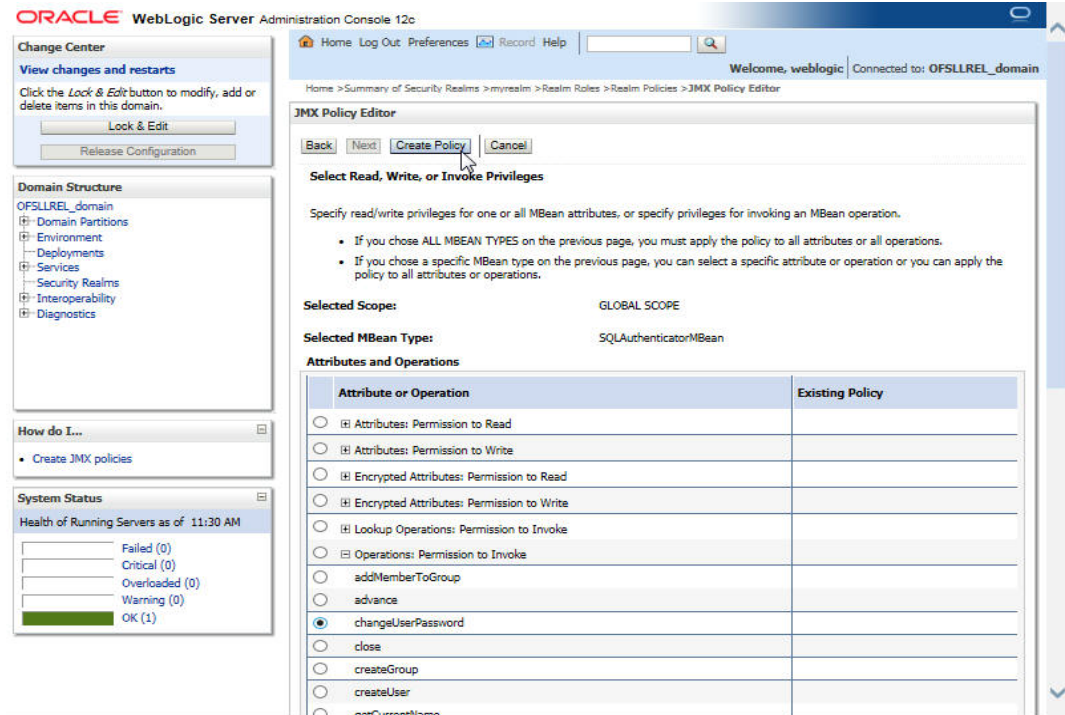


## 8. Select 'GLOBAL SCOPE' and click 'Next'.



## 9. Select weblogic.security.providers.authentication.

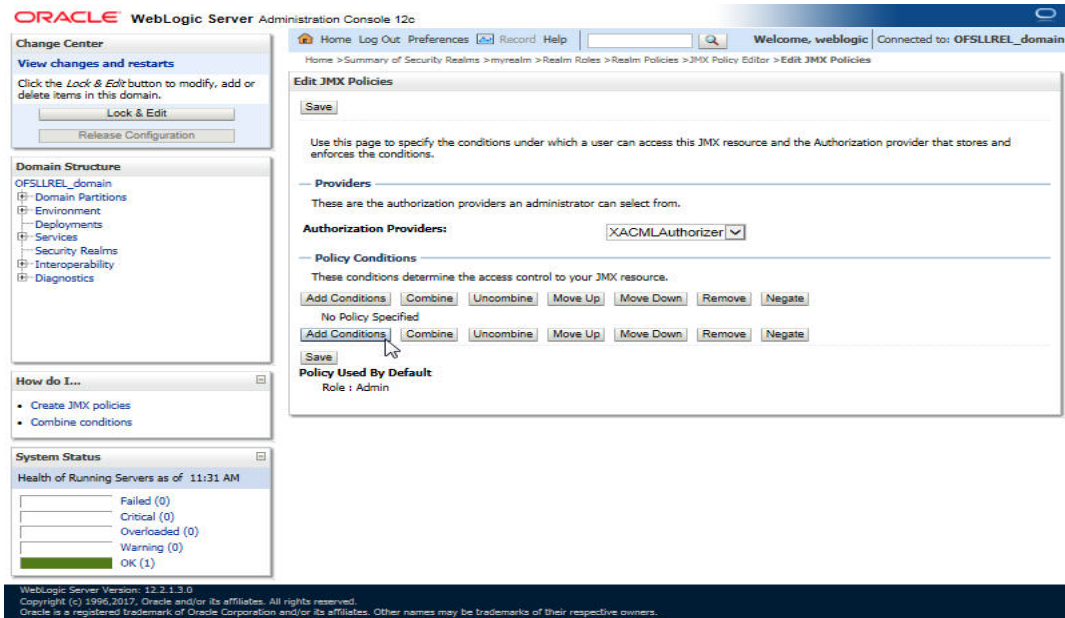
10. Select 'SQLAuthenticatorMBean'. Click 'Next'.



11. Expand 'Operations: Permissions to Invoke' and select 'ChangeUserPassword'.

12. Click 'Create Policy'. The following window is displayed for Authorization providers where you can add conditions to setup the policy.

13. Click 'Add Condition'. The below screen will be displayed.





14. For Predicate List, select Group for configuration. Click 'Next'.

ORACLE WebLogic Server Administration Console 12c

Home Log Out Preferences Record Help Welcome, weblogic Connected to: OFSLLREL\_domain

Home > Summary of Security Realms > myrealm > Realm Roles > Realm Policies > JMX Policy Editor > Edit JMX Policies

**Edit JMX Policies**

Back Next Finish Cancel

**Edit Arguments**

On this page you will fill in the arguments that pertain to the predicate you have chosen.

Add one or more groups to this condition. If you add multiple groups, the condition evaluates as true if the user is a member of ANY of the groups.

Group Argument Name:  Add Remove

Back Next Finish Cancel

WebLogic Server Version: 12.2.1.3.0  
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15. Select user roles for application.

16. Click 'Finish'. Click 'Save' to complete the configuration. The following window will be displayed.

ORACLE WebLogic Server Administration Console 12c

Home Log Out Preferences Record Help Welcome, weblogic Connected to: OFSLLREL\_domain

Home > Summary of Security Realms > myrealm > Realm Roles > Realm Policies > JMX Policy Editor > Edit JMX Policies

**Edit JMX Policies**

Save

Use this page to specify the conditions under which a user can access this JMX resource and the Authorization provider that stores and enforces the conditions.

**Providers**

These are the authorization providers an administrator can select from.

**Authorization Providers:**

**Policy Conditions**

These conditions determine the access control to your JMX resource.

Add Conditions Combine Uncombine Move Up Move Down Remove Negate

☐ Group : OFSLL\_USER

Add Conditions Combine Uncombine Move Up Move Down Remove Negate

Save

**Overridden Policy**

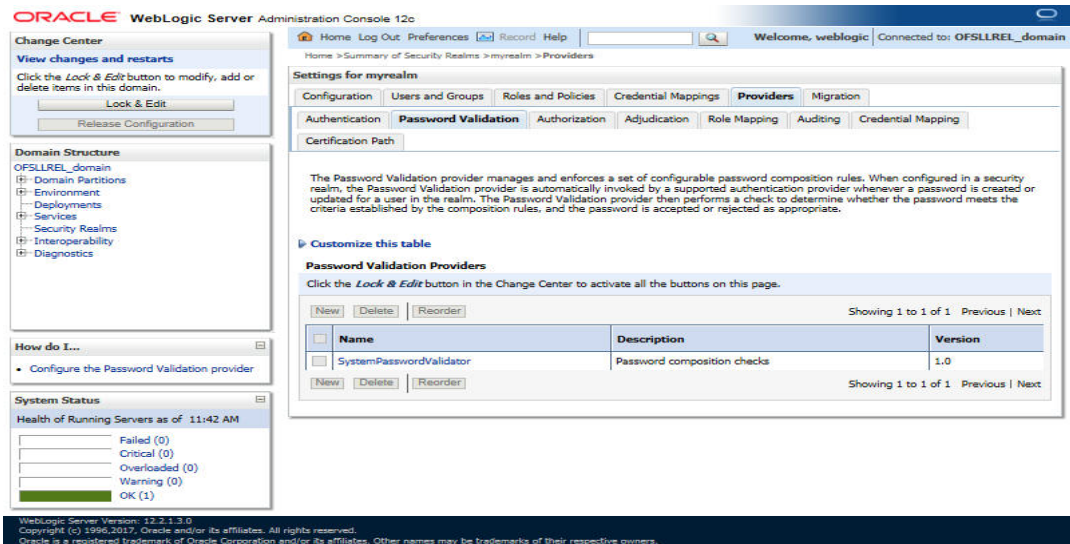
Role : Admin

WebLogic Server Version: 12.2.1.3.0  
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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.

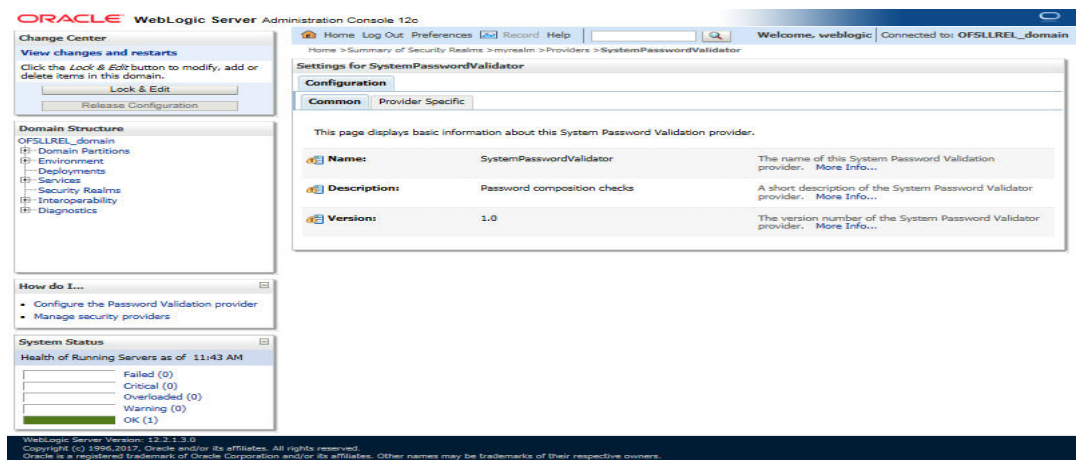
## 4. Configuring Policies

### 4.1 Configuring Password Policy for SQL Authenticator

1. Login to the WebLogic Server administration console with user login credentials.
2. Browse to Security Realms > myrealm > Providers > Password Validation as shown below. The following window is displayed



3. Click 'SystemPasswordValidator' link. The following window is displayed.



4. Click Provider Specific Tab.

- Configure the password policy as per the requirement. An example is provided in the following window.

☐ Reject if Password Contains the User Name Reversed

To determine whether the password can contain or be equal to the reverse username, this check will be case insensitive. If the value is "true", the password must not contain or be equal to the reverse username. [More Info...](#)

**How do I...**

- Configure the Password Validation provider
- Manage security providers

**System Status**

Health of Running Servers as of 11:44 AM

Failed (0)
Critical (0)
Overloaded (0)
Warning (0)
OK (1)

**— Password Length Policies —**

**Minimum Password Length:**  Specifies the minimum number of characters that the password may contain. Note: If the Default Authentication provider is configured in the realm, make sure that this number is consistent with the one configured for that provider. [More Info...](#)

**Maximum Password Length:**  Specifies the maximum number of characters that the password may contain. To be accepted, the password may not contain a greater number of characters than the value specified. Specifying 0 results in no restriction on password length. [More Info...](#)

**— Character Policies —**

**Maximum Instances of Any Character:**  Specifies the maximum number of times any one character may appear in the password. [More Info...](#)

**Maximum Consecutive Characters:**  Specifies the maximum number of times that a character may appear consecutively in the password. [More Info...](#)

**Minimum Number of Alphabetic Characters:**  Specifies the minimum number of alphabetic characters that a password must contain. [More Info...](#)

**Minimum Number of Numeric Characters:**  Specifies the minimum number of numeric characters that must appear in the password. [More Info...](#)

**Minimum Number of Lower Case Characters:**  Specifies the minimum number of lowercase characters that a password must contain. [More Info...](#)

**Minimum Number of Upper Case Characters:**  Specifies the minimum number of uppercase characters that a password must contain. [More Info...](#)

**Minimum Number of Non-Alphanumeric Characters:**  Specifies the minimum number of non-alphanumeric characters (also known as special characters, such as %, \*, #, or ) that must appear in the password. [More Info...](#)

**Minimum Number of Non-Alphabetic Characters:**  Specifies the minimum number of numeric or special characters (such as %, \*, #, or ) that a password must contain. [More Info...](#)

[Save](#)

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- Click 'Save'.

## 4.2 Configuring User Lockout Policy

- To Change User lockout policy, browse to **Security Realms > myrealm > Configuration Tab > User Lockout Tab**. The following window is displayed

**ORACLE WebLogic Server Administration Console 12c**

Home Log Out Preferences Record Help

Welcome, weblogic Connected to: OFSLLREL\_domain

Home > Summary of Security Realms > myrealm

**Settings for myrealm**

**Configuration** Users and Groups Roles and Policies Credential Mappings Providers Migration

**General** RDBMS Security Store **User Lockout** Performance

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

[Save](#)

Password guessing is a common type of security attack. In this type of attack, a hacker attempts to log in to a computer using various combinations of usernames and passwords. WebLogic Server provides a set of attributes to protect user accounts from intruders. This page allows us to define how user lockouts will be handled in this security realm.

☒ **Lockout Enabled** Specifies whether the server locks users out when there are invalid login attempts on their account. [More Info...](#)

**Lockout Threshold:**  The maximum number of consecutive invalid login attempts that can occur before a user's account is locked out. [More Info...](#)

**Lockout Duration:**  The number of minutes that a user's account is locked out. [More Info...](#)

**Lockout Reset Duration:**  The number of minutes within which consecutive invalid login attempts cause a user's account to be locked out. [More Info...](#)

**Lockout Cache Size:**  The maximum number of invalid login records that the server can place in a cache. [More Info...](#)

**Lockout GC Threshold:**  The maximum number of invalid login records that the server keeps in memory. [More Info...](#)

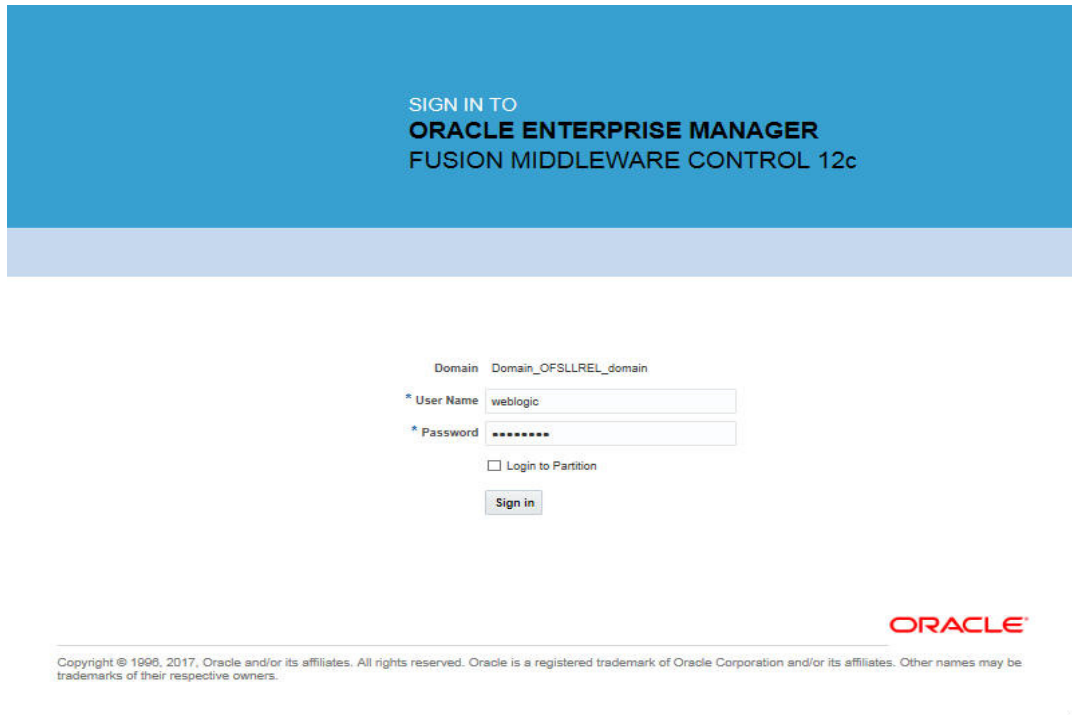
[Save](#)

- Configure the User Lockout details as per the requirement. An example is provided above.

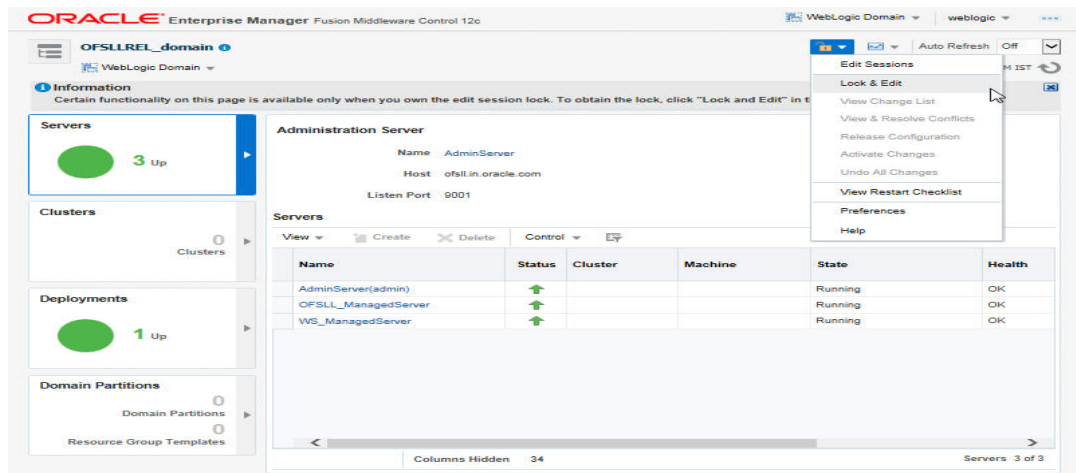
## 5. Deploying Application

### 5.1 Deploying Application

1. Login to the Oracle Enterprise Manager 12c console . (i.e. <http://hostname:port/em>)



2. Click on 'Lock and Edit' as shown below.



Name	Status	Cluster	Machine	State	Health
AdminServer(admin)	Running			Running	OK
OFSLI_ManagedServer	Running			Running	OK
WS_ManagedServer	Running			Running	OK

3. The following window is displayed.

**Confirmation**  
The edit session lock has been acquired. No pending changes exist.

**Servers**  
3 Up

**Clusters**  
0 Clusters

**Deployments**  
1 Up

**Domain Partitions**  
0 Domain Partitions  
0 Resource Group Templates

**Administration Server**  
Name: AdminServer  
Host: ofsl.in.oracle.com  
Listen Port: 9001

**Servers**

Name	Status	Cluster	Machine	State	Health
AdminServer(admin)	↑			Running	OK
OFSLM_ManagedServer	↑			Running	OK
WS_ManagedServer	↑			Running	OK

Columns Hidden: 34 Servers: 3 of 3

4. Click on Deployments in the left panel. To deploy go to Deployments option in the menu as shown below.

**Confirmation**  
The edit session lock has been acquired. No pending changes exist.

**Servers**  
3 Up

**Clusters**  
0 Clusters

**Deployments**  
1 Up

**Domain Partitions**  
0 Domain Partitions  
0 Resource Group Templates

**Deployments**

Name	Status	State	Health	Type	Domain Part
opss-rest	↑	Active	OK	Web Application	

Context Menu Options:  
 Deploy  
 Redeploy  
 Undeploy  
 Fetch Deployment Plan

Columns Hidden: 4 Columns Frozen: 1 Deployments: 1 of 1

- Click 'Choose File' button and select OFSLL application archive file i.e. ofssl\_144.ear. Choose the 'Deployment Plan' (if any).

**ORACLE® Enterprise Manager Fusion Middleware Control 12c**

**OFSLLREL\_domain**

Select Archive | Select Target | Application Attributes | Deployment Settings

**Deploy Java EE Application: Select Archive** Back Step 1 of 4 Next Cancel

**Scope**  
Select a scope that you want to deploy this application to: Global ▼

**Archive or Exploded Directory**  
Java EE archives, Web Modules (WAR files), EJB Modules (EJB JAR files), Resource Adapter Modules (RAR files), Coherence Archives (GAR files), JDBC Modules, JMS Modules, and library files (Jar files) can be deployed. You can also deploy an exploded archive that is present on the server where Enterprise Manager is running.

☒ Archive is on the machine where this Web browser is running. Archive Location  
Choose file: ofssl\_144.ear

☐ Archive or exploded directory is on the server where Enterprise Manager is running. Browse...

**Deployment Plan**  
The deployment plan is a file that contains the deployment settings for an application. You can use a previously saved deployment plan for this application. Later in the deployment process, you can optionally edit the deployment plan and save it for a future deployment of this application. If you do not have a deployment plan, one will be created automatically during the deployment process when deployment configuration is done. The deployment plan is not applicable when you deploy a library.

☒ Create a new deployment plan when deployment configuration is done.

☐ Deployment plan is on the machine where this Web browser is running. Choose file: No file chosen

☐ Deployment plan is on the server where Enterprise Manager is running. Browse...

**Information**  
Use this page to deploy Java EE applications that require Oracle Metadata Services (MDS) or that take advantage of the Oracle Application Development Framework (Oracle ADF).  
If your application is a SOA composite, use the SOA Composite deployment wizard.  
If your application is not a SOA composite or it does not require MDS repository or ADF connections, then you can deploy your application using this wizard or the Oracle WebLogic Server Administration Console.

---

## Note

A deployment plan can be used to easily change an application's WebLogic Server configuration for a specific environment without modifying existing deployment descriptors.

---



## Sample plan.xml

```
<?xml version='1.0' encoding='UTF-8'?>
<deployment-plan xmlns="http://xmlns.oracle.com/weblogic/deployment-plan" xmlns:xsi="http://www.w3.org/2001/XMLSchema"
http://xmlns.oracle.com/weblogic/deployment-plan http://xmlns.oracle.com/weblogic/deployment-plan/1.0/deployment-p
<application-name>ofall144</application-name>
<variable-definition>
  <variable>
    <name>Web_ofall144_contextRoot</name>
    <value>ofall144</value>
  </variable>
</variable-definition>
<module-override>
  <module-name>ofall_144.ear</module-name>
  <module-type>ear</module-type>
  <module-descriptor external="false">
    <root-element>weblogic-application</root-element>
    <uri>META-INF/weblogic-application.xml</uri>
  </module-descriptor>
  <module-descriptor external="false">
    <root-element>application</root-element>
    <uri>META-INF/application.xml</uri>
    <variable-assignment>
      <name>Web_ofall144_contextRoot</name>
      <xpath>/application/module/web/[context-root="ofall144"]/context-root</xpath>
      <operation>replace</operation>
    </variable-assignment>
  </module-descriptor>
  <module-descriptor external="true">
    <root-element>wldf-resource</root-element>
    <uri>META-INF/weblogic-diagnostics.xml</uri>
  </module-descriptor>
</module-override>
<module-override>
  <module-name>ofall144.war</module-name>
  <module-type>war</module-type>
  <module-descriptor external="false">
    <root-element>weblogic-web-app</root-element>
    <uri>WEB-INF/weblogic.xml</uri>
  </module-descriptor>
  <module-descriptor external="false">
    <root-element>web-app</root-element>
    <uri>WEB-INF/web.xml</uri>
  </module-descriptor>
</module-override>
```

6. Click 'Next'. The following window is displayed.

Oracle Enterprise Manager Fusion Middleware Control 12c

OFSLREL\_domain

Select Archive Select Target Application Attributes Deployment Settings

Deploy Java EE Application: Select Target

Select the WebLogic server or cluster that you want this application to be deployed to.

Select	Name	Type	Deployed Applications
<input type="checkbox"/>	AdminServer	Oracle WebLogic Server	None
<input checked="" type="checkbox"/>	OFSLManagedServer	Oracle WebLogic Server	None
<input type="checkbox"/>	WS_ManagedServer	Oracle WebLogic Server	None

Back Step 2 of 4 Next Cancel

7. Check target server as per the requirement 'OFSLL\_ManagedServer' and click 'Next'. The following window is displayed.

ORACLE® Enterprise Manager Fusion Middleware Control 12c

weblogic

OFSLLREL\_domain

Select Archive Select Target Application Attributes Deployment Settings

Deploy Java EE Application: Application Attributes

Back Step 3 of 4 Next Deploy Cancel

Hide Deployment Summary

Archive Type Java EE Application (EAR file)

Deployment Plan Create a new plan

Deployment Target OFSLL\_ManagedServer

Scope Global

Deployment Type Application

\* Application Name ofsll144

Archive Version V14.4.0.0-b77

Deployment Plan Version

Context Root of Web Modules

Web Module	Context Root
ofsll144.war	ofsll144

Target Metadata Repository

Select the metadata repository and specify the partition in the repository that the application will be deployed to.

\* Repository Name Not specified in archive

8. Click  button to select Repository Name. The following window is displayed.

ORACLE® Enterprise Manager Fusion Middleware Control 12c

weblogic

OFSLLREL\_domain

Select Archive Select Target Application Attributes Deployment Settings

Deploy Java EE Application: Application Attributes

Back Step 3 of 4 Next Deploy Cancel

Hide Deployment Summary

Archive Type Java EE Application (EAR file)

Deployment Plan Create a new plan

Deployment Target OFSLL\_ManagedServer

Scope Global

Deployment Type Application

\* Application Name ofsll144

Archive Version V14.4.0.0-b77

Deployment Plan Version

Context Root of Web Modules

Web Module	Context Root
ofsll144.war	ofsll144

Target Metadata Repository

Select the metadata repository and specify the partition in the repository that the application will be deployed to.

\* Repository Name Not specified in archive

Metadata Repositories

Select the metadata repository that the application will be deployed to.

Repository mds-adf

Repository Details

Name mds-adf

Type Database

Scope Global

Data Source mds-adf

JNDI Location jdbc/mds/adf

Database Type Oracle

Database Name orcl.in.oracle.com

Database User LL\_MDS

JDBC URL jdbc:oracle:thin:@10.184.87.13:1521/orcl.in.oracle.com

OK Cancel

9. Select Repository as per requirement and click 'OK'.

ORACLE® Enterprise Manager Fusion Middleware Control 12c

weblogic

OFSSLREL\_domain 1

Select Archive Select Target Application Attributes Deployment Settings

Deploy Java EE Application: Application Attributes Back Step 3 of 4 Next Deploy Cancel

**Target Metadata Repository**  
Select the metadata repository and specify the partition in the repository that the application will be deployed to.

\* Repository Name mds-adf

Repository Type Database

\* Partition ofsl144

**Distribution**

☒ Install and start application (servicing all requests)  
☐ Install and start application in administration mode (servicing only administration requests)  
☐ Install only. Do not start.

**Other Options**

**Application Source Accessibility**

☒ Use the defaults defined by the deployment's targets. Recommended selection.  
☐ Copy this application onto every target. During deployment, the files will be copied automatically to the managed servers to which the application is targeted.  
☐ Make the application accessible from the source location that it will be deployed on. You must ensure that each target can reach the location.

**Deployment Plan Source Accessibility**

☒ Use the same accessibility as the application.  
☐ Copy the deployment plan onto every target. During deployment, the files will be copied automatically to the managed servers to which the application is targeted.  
☐ Make the deployment plan accessible from the source location that it will be deployed on. You must ensure that each target can reach the location.

10. Enter Partition name as per the requirement and click 'Next'.

ORACLE® Enterprise Manager Fusion Middleware Control 12c

weblogic

OFSSLREL\_domain 1

Select Archive Select Target Application Attributes Deployment Settings

Deploy Java EE Application: Deployment Settings Back Step 4 of 4 Next Deploy Cancel

**Hide Deployment Summary**

Archive Type Java EE Application (EAR file)

Deployment Plan Create a new plan

Deployment Target OFSSL\_ManagedServer

Scope Global

Deployment Type Application

Application Name ofsl144

Version V14.4.0.0-b77

Context Root ofsl144

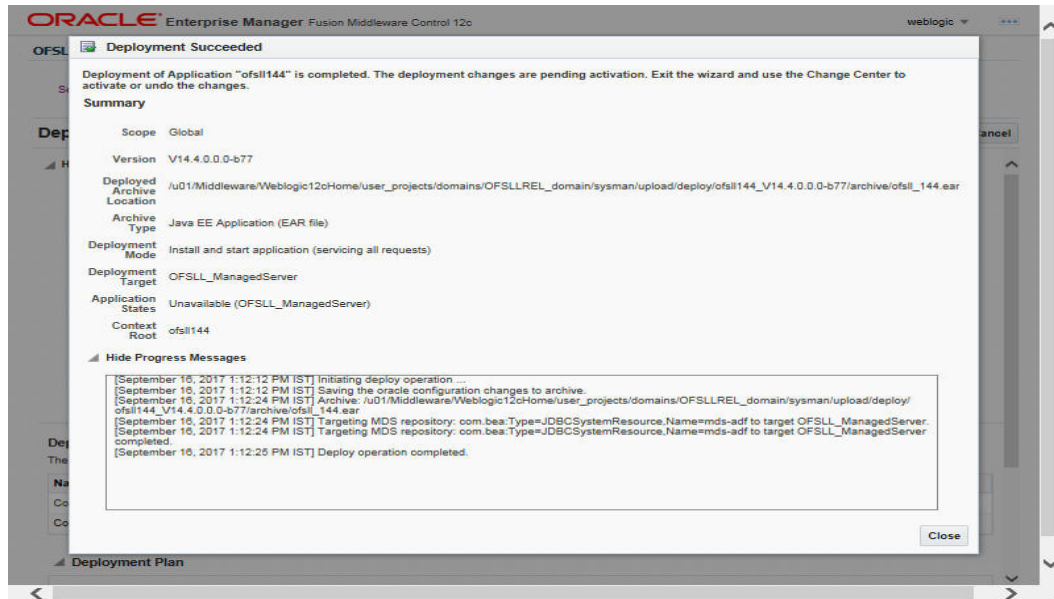
Deployment Mode Install and start application (servicing all requests)

**Deployment Tasks**  
The table below lists common tasks that you may wish to do before deploying the application.

Name	Go To Task	Description
Configure Web Modules		Configure the Web modules in your application.
Configure Application Security		Configure application policy migration, credential migration and other security behavior.

**Deployment Plan**

11. Click 'Deploy'. The following window is displayed



12. Click Close once the message 'Deploy operation completed' is displayed.

## 6. Enabling SSL

The application is accessible only via https protocol; hence, after the deployment of the application, you need to enable SSL.

### To enable SSL

1. Login to console.
2. \$Domain\_Home > Servers > Manage Servers > Configuration > General. The below screen is displayed.

The screenshot displays the Oracle WebLogic Server console interface. On the left, the 'Domain Structure' tree shows the hierarchy: OFSSLREL\_domain > Environment > Deployments > Services > OFSSL\_ManagedServer. Below this, the 'System Status' section shows the health of running servers as of 1:22 PM, with 3 servers in 'OK' status. The main panel shows the 'Settings for OFSSL\_ManagedServer' configuration page. The 'General' tab is selected, and the 'SSL' sub-tab is active. The 'Listen Port Enabled' checkbox is checked, and the 'SSL Listen Port' is set to 9503. The 'Client Cert Proxy Enabled' checkbox is unchecked.

Property	Value	Description
Name	OFSSL_ManagedServer	An alphanumeric name for this server instance. <a href="#">More Info...</a>
Template	(No value specified) <a href="#">Change...</a>	The template used to configure this server. <a href="#">More Info...</a>
Machine	(None)	The WebLogic Server host computer (machine) on which this server is meant to run. <a href="#">More Info...</a>
Cluster	(Stand-Alone)	The cluster, or group of WebLogic Server instances, to which this server belongs. <a href="#">More Info...</a>
Listen Address		The IP address or DNS name this server uses to listen for incoming connections. For example, enter 12.34.5.67 or mymachine, respectively. <a href="#">More Info...</a>
<input checked="" type="checkbox"/> Listen Port Enabled		Specifies whether this server can be reached through the default plain-text (non-SSL) listen port. <a href="#">More Info...</a>
Listen Port	9003	The default TCP port that this server uses to listen for regular (non-SSL) incoming connections. <a href="#">More Info...</a>
<input checked="" type="checkbox"/> SSL Listen Port Enabled		Indicates whether the server can be reached through the default SSL listen port. <a href="#">More Info...</a>
SSL Listen Port	9503	The TCP/IP port at which this server listens for SSL connection requests. <a href="#">More Info...</a>
<input type="checkbox"/> Client Cert Proxy Enabled		Specifies whether the HttpClusterServlet proxies the client certificate in a special header. <a href="#">More Info...</a>

3. Check the 'SSL Listen Port Enabled' check box.
4. Specify the port for 'SSL Listen Port'.

### Note

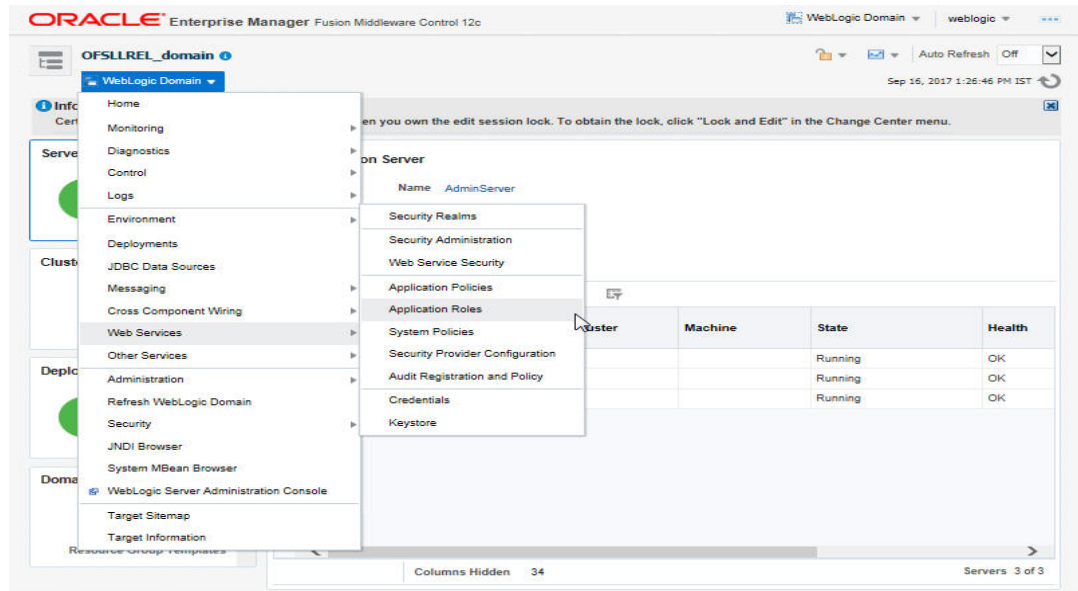
It is recommended to disable http protocol.



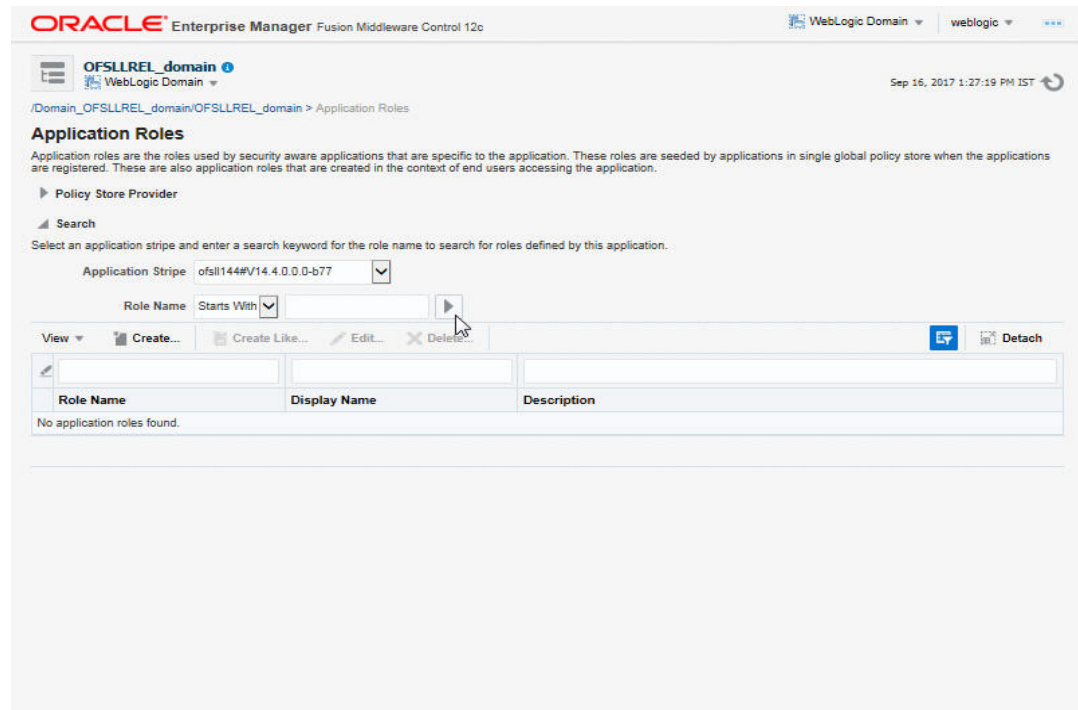
## 7. Mapping Enterprise Group with Application Role

Follow the below steps to add an user to the group

1. Login to Oracle Enterprise Manager 12c console (<http://hostname:port/em>).
2. Click WebLogic Domain > Security > Application Roles on the right panel.



3. Select Application Stripe from the drop-down menu.
4. Click the arrow head button. Details of the existing Roles are displayed below:



5. Select the 'Role Name'. Membership details of the selected Role Name are displayed under Membership for "role\_name"..

**Application Roles**

Application roles are the roles used by security aware applications that are specific to the application. These roles are seeded by applications in single global policy store when the applications are registered. These are also application roles that are created in the context of end users accessing the application.

Policy Store Provider

Search

Select an application stripe and enter a search keyword for the role name to search for roles defined by this application.

Application Stripe: ofsl144#V14.4.0.0.0-b77

Role Name: Starts With

View Create... Create Like... Edit... Delete... Detach

Role Name	Display Name	Description
OFSLL_USER	OFSLL USER	

Membership for OFSLL\_USER

Principal	Display Name	Type	Description
DEMOSUPR		User	

6. Click 'Edit'. The following window is displayed.

**Edit Application Role : OFSLL\_USER**

Role (or Enterprise Role) is the group of users designed at the enterprise level and typically used to assign a privilege or permission. A role can also contain other roles as members.

General

Application Stripe: ofsl144#V14.4.0.0.0-b77

Role Name: OFSLL\_USER

Display Name: OFSLL USER

Description:

Members

An application role may need to be mapped to users or groups defined in enterprise LDAP server, or the role can be mapped to other application roles.

View Add Delete... Detach

Name	Display Name	Type
DEMOSUPR		User

7. Click 'Add'. Select type as Group. Click on the arrow head button.

8. Follow the given steps to select the Principal 'OFSLL\_USER' to add and click OK. The following window is displayed.

**ORACLE® Enterprise Manager Fusion Middleware Control 12c**

WebLogic Domain weblogic

### Add Principal

Specify criteria to search and select the application roles that you want to grant permissions to.

**Search**

Type: **Group**

Principal Name: Starts With

Display Name: Starts With

Searched Principals

View ▾ Detach

Principal	Display Name	Description
No search conducted		

**Advanced Option**

☐ Check to enter principal name here instead of searching from above. This option can be used for advanced scenarios related to custom authenticators.

OK Cancel

9. Check the check box in Advanced options. Enter the name of Group manually.

**ORACLE® Enterprise Manager Fusion Middleware Control 12c**

WebLogic Domain weblogic

### Add Principal

Specify criteria to search and select the application roles that you want to grant permissions to.

**Search**

Type: **Group**

Principal Name: Starts With

Display Name: Starts With

Searched Principals

View ▾ Detach

Principal	Display Name	Description
AdminChannelUsers		AdminChannelUsers can access the admin channel.
Administrators		Administrators can view and modify all resource attributes and start and stop servers.
AppTesters		AppTesters group.
CrossDomainConnectors		CrossDomainConnectors can make inter-domain calls from foreign domains.
Deployers		Deployers can view all resource attributes and deploy applications.
Monitors		Monitors can view and modify all resource attributes and perform operations not restricted by roles.
Operators		Operators can view and modify all resource attributes and perform server lifecycle operations.
OracleSystemGroup		Oracle application software system group.

**Advanced Option**

☒ Check to enter principal name here instead of searching from above. This option can be used for advanced scenarios related to custom authenticators.

Type: **Group** \* Principal Name: **OFSLL\_USER** Enter 256 or fewer characters.

OK Cancel

10. Click 'OK'.

**ORACLE** Enterprise Manager Fusion Middleware Control 12c

WebLogic Domain | weblogic

Sep 16, 2017 1:30:04 PM IST

**OFSLLREL\_domain**

/Domain\_OFSLLREL\_domain/OFSLLREL\_domain > Application Roles > Edit Application Role

### Edit Application Role : OFSLL\_USER

Role (or Enterprise Role) is the group of users designed at the enterprise level and typically used to assign a privilege or permission. A role can also contain other roles as members.

**General**

Application Stripe: ofsl144#V14.4.0.0.0-b77

Role Name: OFSLL\_USER

Display Name: OFSLL USER

Description:

**Members**

An application role may need to be mapped to users or groups defined in enterprise LDAP server, or the role can be mapped to other application roles.

View | Add | Delete... | Detach

Name	Display Name	Type
DEMOSUPR		User
OFSLL_USER		Group

11. The following window is displayed with the confirmation message as 'The Application role of 'group\_name' has been updated'.

**ORACLE** Enterprise Manager Fusion Middleware Control 12c

WebLogic Domain | weblogic

Sep 16, 2017 1:35:05 PM IST

**OFSLLREL\_domain**

/Domain\_OFSLLREL\_domain/OFSLLREL\_domain > Application Roles

**Information**

An application role OFSLL\_USER has been updated.

### Application Roles

Application roles are the roles used by security aware applications that are specific to the application. These roles are seeded by applications in single global policy store when the applications are registered. These are also application roles that are created in the context of end users accessing the application.

Policy Store Provider

Search

Select an application stripe and enter a search keyword for the role name to search for roles defined by this application.

Application Stripe: ofsl144#V14.4.0.0.0-b77

Role Name: Starts With

View | Create... | Create Like... | Edit... | Delete... | Detach

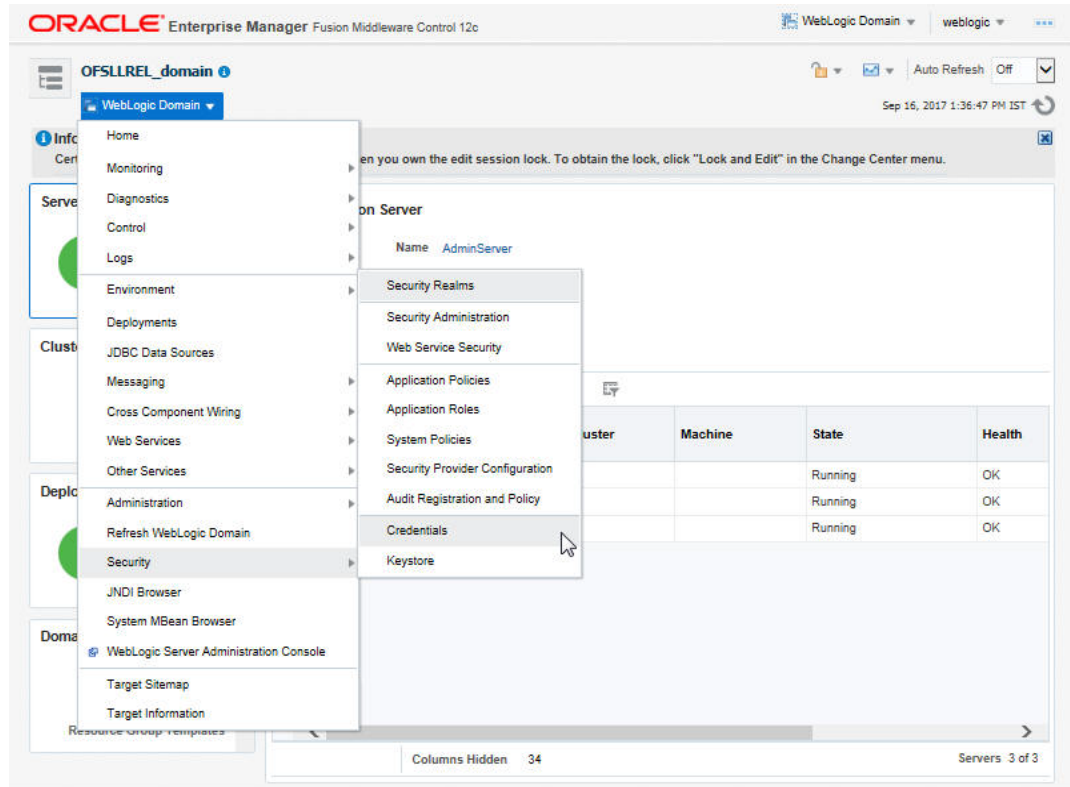
Role Name	Display Name	Description
OFSLL_USER	OFSLL USER	

**Membership for OFSLL\_USER**

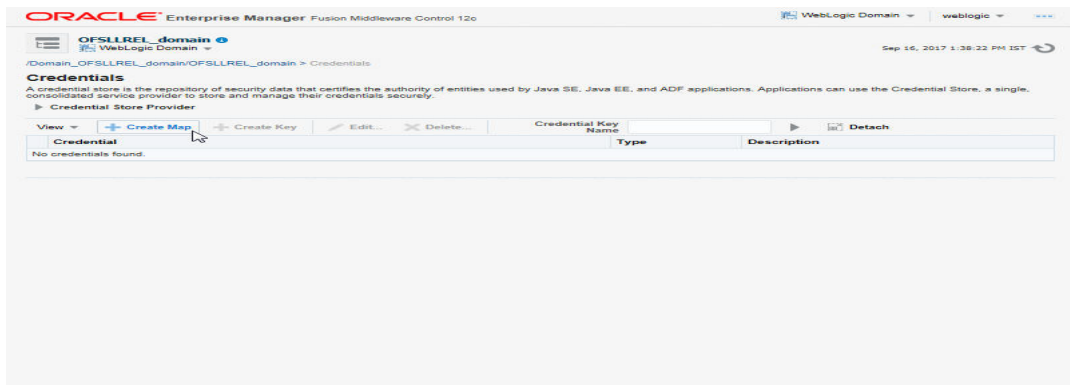
Principal	Display Name	Type	Description
DEMOSUPR		User	
OFSLL_USER		Group	

## 8. Configuring JNDI name for HTTP Listener

1. Click 'WebLogic Domain' on the right panel. Select Security > Credentials.

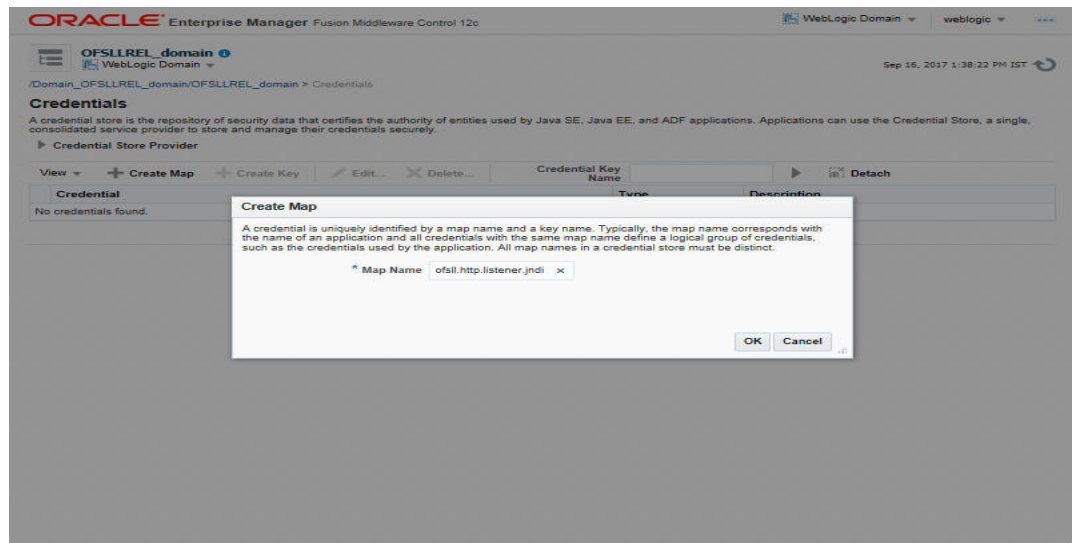


2. Click 'Credentials'. The following window is displayed.



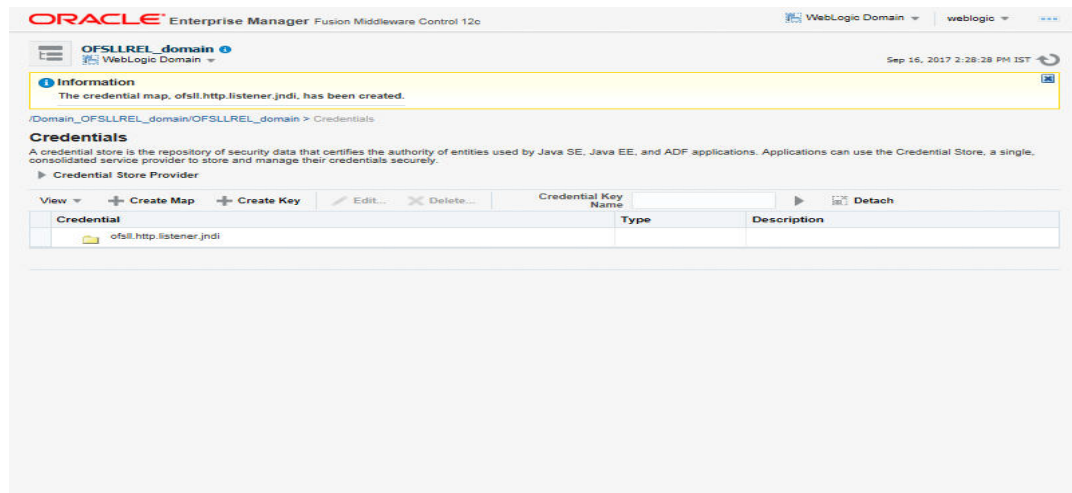


3. Click 'Create Map'. The following window is displayed.

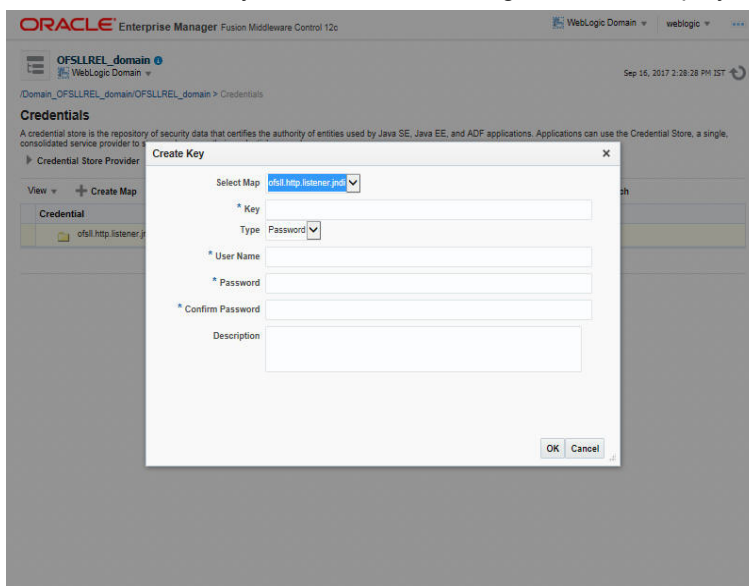


4. Enter Map name as 'ofssl.http.listener.jndi'.

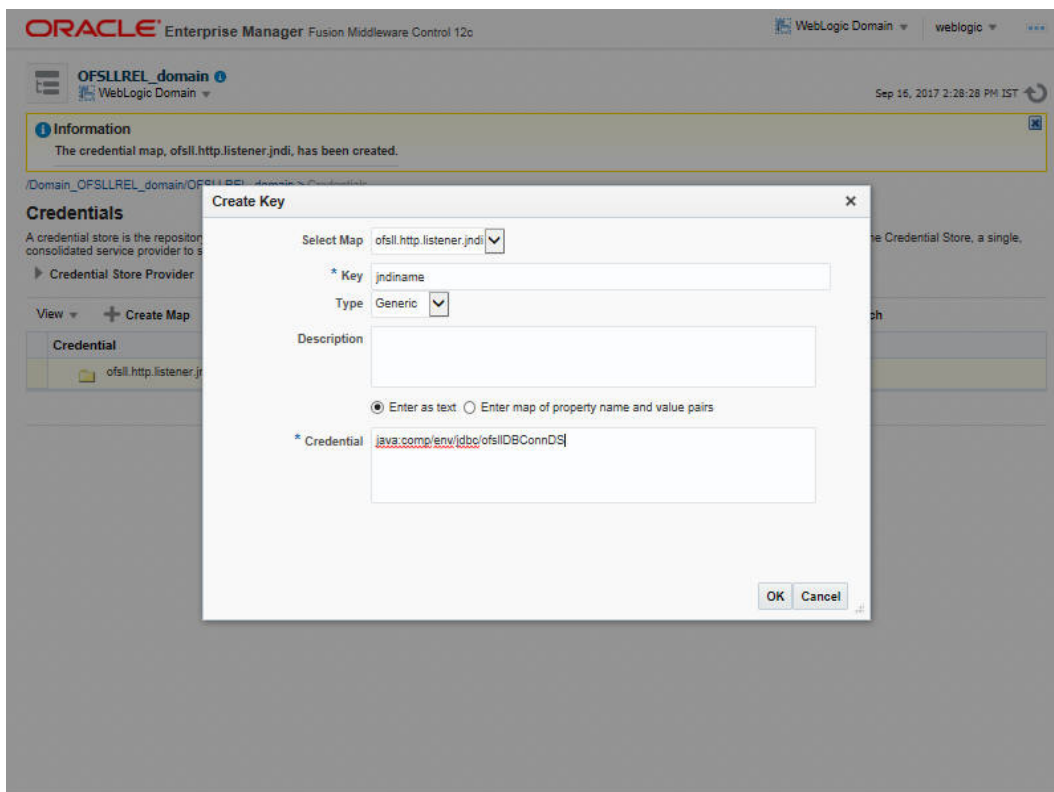
5. Click 'OK'. The following window is displayed.



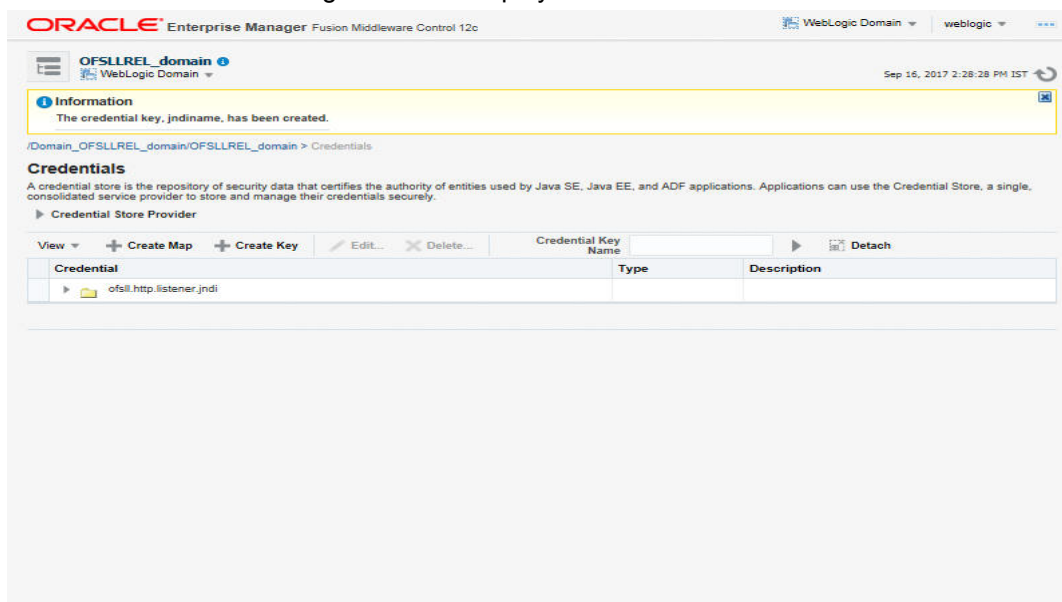
6. Click 'Create Key' Button. The following window is displayed.



7. Enter the following details as per your requirement.
- Key: jndiname
  - Credential: java:comp/env/jdbc/ofslIDBConnDS
  - Type:Generic



8. Click 'OK'. The following window is displayed.



---

## 9. Configure AQ-JMS Bridge

The following steps are to be performed to configure the AQ-JMS Bridge through the Weblogic Console:

- Create Data Sources for AQ-JMS Bridge
- Configure MDB Flow
- AQ-JMS Topic Setup
- Create Credentials and System Policies
- Deploy MDB EJB

---

### Note

Ensure that MDB EJB is not configured and deployed (i.e. OfstlAppQueue.ear deployment) on the same server on which the other WebServices are deployed.

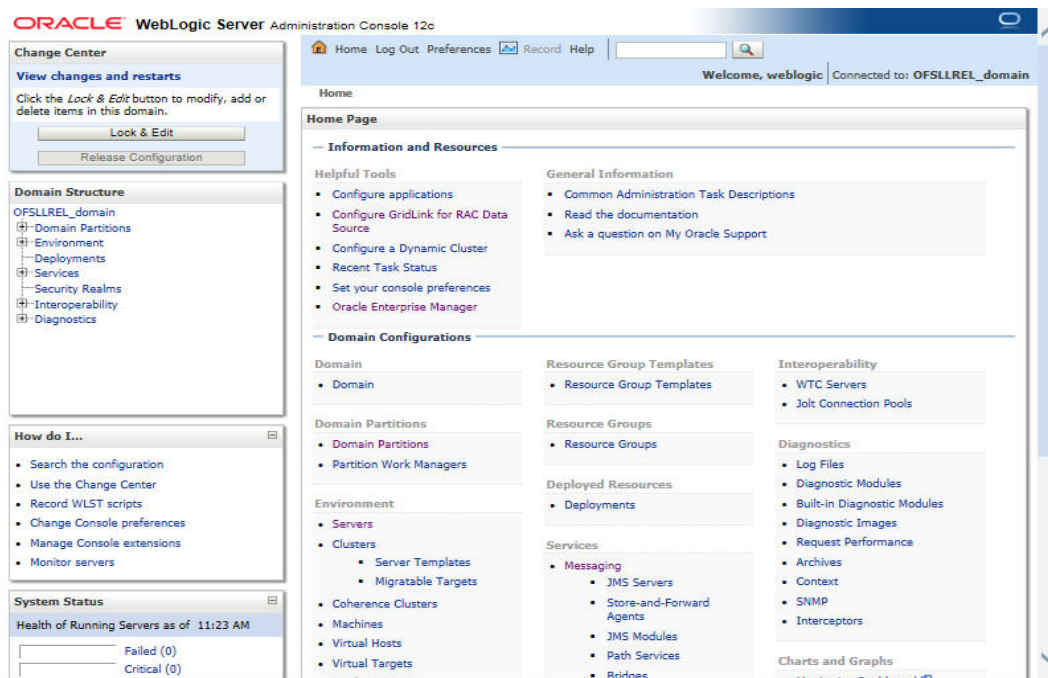
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### 9.1 Create Data Sources for AQ-JMS Bridge

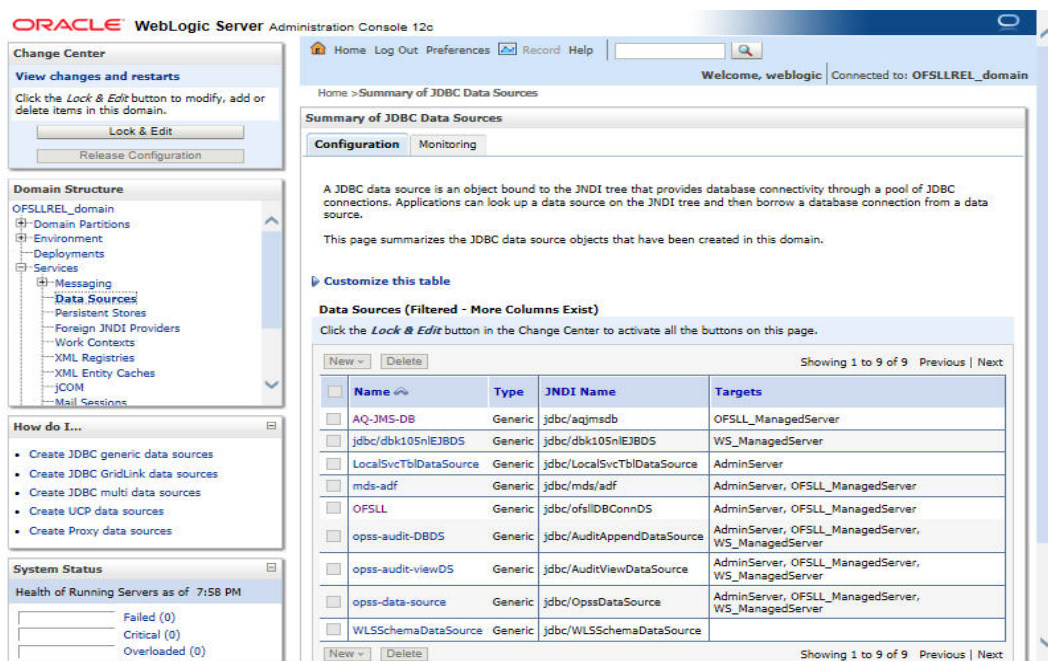
1. Login to Oracle Weblogic 12c console (<http://hostname:port/console>).



2. On successful login, the following window is displayed.



3. Click Domain Name > Services > Data Sources. The following window is displayed.



4. Click 'Lock & Edit' button on the left panel. Click 'New' on right panel and select 'Generic Data Source'.

The screenshot shows the Oracle WebLogic Server Administration Console. On the left, the 'Change Center' has the 'Lock & Edit' button highlighted. Below it, the 'Domain Structure' tree shows 'Data Sources' expanded. The 'How do I...' section lists various data source types. The 'System Status' section shows the health of running servers. The main panel displays the 'Summary of JDBC Data Sources' page, which includes a 'Configuration' tab and a 'Monitoring' tab. The 'Data Sources' table is shown, with the 'New' button highlighted. The table lists various data sources, including 'Generic Data Source', 'GridLink Data Source', 'Multi Data Source', 'Proxy Data Source', 'UCP Data Source', 'mcs-ads', 'OFSLL', 'opss-audit-DBDS', 'opss-audit-viewDS', 'opss-data-source', and 'WLSSchemaDataSource'.

5. The following window is displayed.

The screenshot shows the 'Create a New JDBC Data Source' window. The 'JDBC Data Source Properties' section is visible, showing the following fields:

- Name:** AQ-JMS-DB
- Scope:** Global
- JNDI Name:** jdbc/aqjmsdb
- Database Type:** Oracle

The window also includes a 'What database type would you like to select?' section with a dropdown menu for 'Database Type'.

6. Specify the following details:
- Enter Data source Name
  - Enter the JNDI Name as 'jdbc/aqjmsdb'.

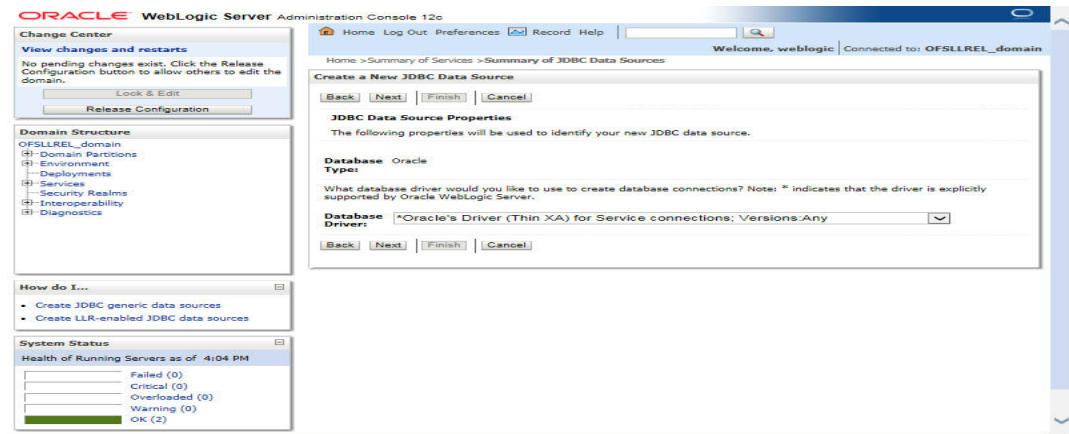


## Note

If required, you may specify any other JNDI name, but ensure to use the same JNDI name during other configuration steps.

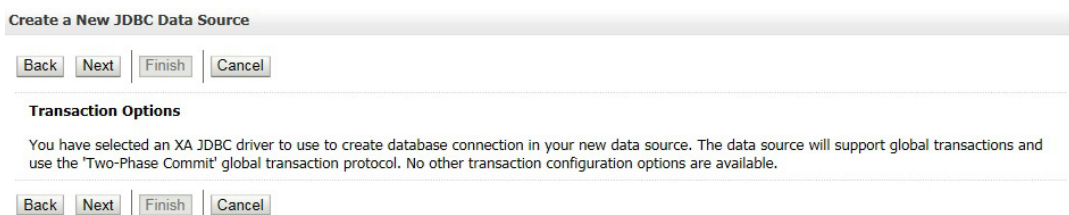
- Select 'Oracle' as Database Type.

7. Click 'Next'. The following window is displayed.



8. Select the Database Driver 'Oracle's Driver(Thin XA) for Services connections;Versions:Any'.

9. Click 'Next'. The following window is displayed.



10. Click 'Next'. The following window is displayed.

**ORACLE WebLogic Server Administration Console 12c**

Home Log Out Preferences Record Help

Welcome, weblogic Connected to: OFSSLREL\_domain

Home > Summary of JDBC Data Sources

### Create a New JDBC Data Source

Back Next Finish Cancel

#### Connection Properties

Define Connection Properties.

What is the name of the database you would like to connect to?

**Database Name:** OLLDB

What is the name or IP address of the database server?

**Host Name:** ofssl.oracle.com

What is the port on the database server used to connect to the database?

**Port:** 1521

What database account user name do you want to use to create database connections?

**Database User Name:** OFSSLREL

What is the database account password to use to create database connections?

**Password:** [REDACTED]

**Confirm Password:** [REDACTED]

Additional Connection Properties:

**oracle.jdbc.DRCPConnectionClass:** [REDACTED]

**Change Center**

**View changes and restarts**

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

Look & Edit

Release Configuration

**Domain Structure**

- OFSSLREL\_domain
  - Domain Partitions
  - Environment
    - Deployments
    - Services
      - Messaging
      - Data Sources
      - Persistent Stores
      - Foreign JNDI Providers
      - Work Contexts
      - XML Registries
      - XML Entity Caches
      - JCOM
      - Mail Sessions

**How do I...**

- Create JDBC generic data sources
- Create LLR-enabled JDBC data sources

**System Status**

Health of Running Servers as of 8:07 PM

	Failed (0)
	Critical (0)
	Overloaded (0)
	Warning (0)
	OK (3)

11. Enter the Database details.

12. Click 'Next'. The following window is displayed.

The screenshot shows the Oracle WebLogic Server Administration Console. The left sidebar contains the 'Change Center', 'Domain Structure' (showing OFSLLREL\_domain > Environment > Services > Data Sources), 'How do I...', and 'System Status'. The main area displays the 'Create a New JDBC Data Source' wizard. The 'Test Database Connection' step is active, with the following fields and values:

- Driver Class Name:** oracle.jdbc.OracleDriver
- URL:** jdbc:oracle:thin:@//ofssl.oracle.com:1521/OLLDB
- Database User Name:** OFSLLREL
- Password:** (masked with dots)
- Confirm Password:** (masked with dots)

The 'Test Configuration' button is highlighted in the top navigation bar.

13. Click 'Test Configuration'. On completion, displays a confirmation message as 'Connection test succeeded'.

14. Click 'Next'. The following window is displayed.

The screenshot shows the Oracle WebLogic Server Administration Console. The left sidebar contains the 'Change Center', 'Domain Structure' (showing OFSLLREL\_domain > Environment > Services > Data Sources), 'How do I...', and 'System Status'. The main area displays the 'Create a New JDBC Data Source' wizard. The 'Select Targets' step is active, showing a list of servers with 'OFSLL\_ManagedServer' selected.

Servers
<input type="checkbox"/> AdminServer
<input checked="" type="checkbox"/> OFSLL_ManagedServer
<input type="checkbox"/> WS_ManagedServer

The 'Next' button is highlighted in the top navigation bar.

15. Select target Server as 'OFSLL\_ManagedServer'.

16. Click 'Finish' to activate the changes.

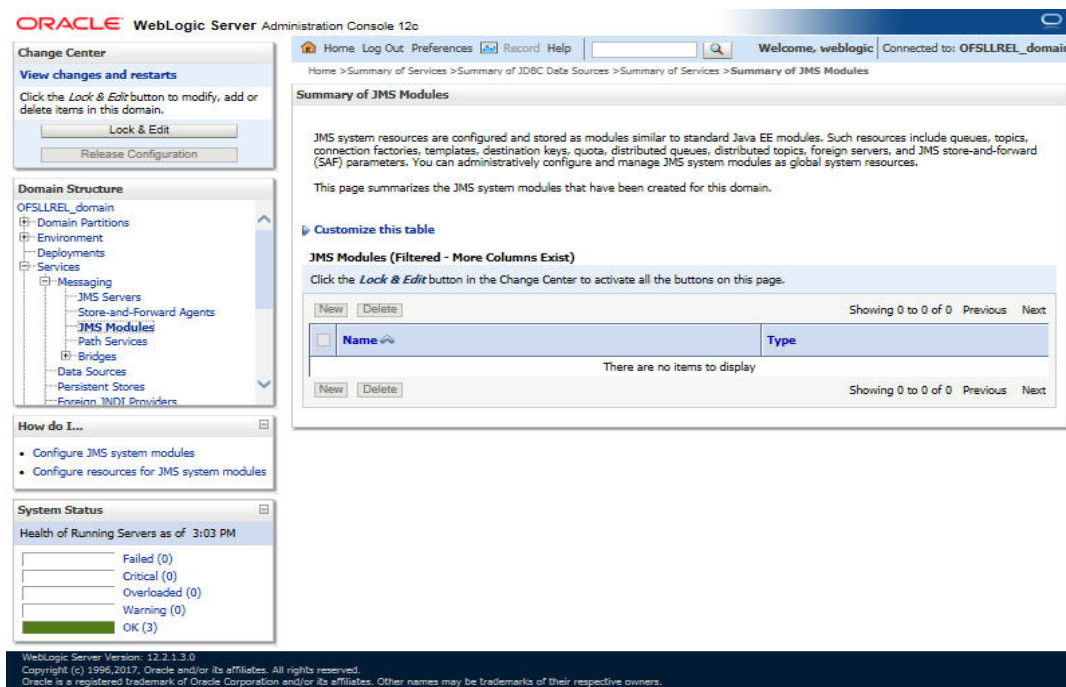
### Update the following parameters in JDBC data source connection pool:

1. Select Services > Data Sources > select the AQ\_JMS\_DB data source > Connection Pool.
2. Initial capacity and Maximum capacity is defaulted to 30, if the number of concurrent users are more this needs to be increased.
3. To Enable GRI (Generic Recovery Interface) CLOB logging from MDB to DB, click Advanced button and deselect the 'Wrap Data Types' check box.
4. Click 'Save' and restart the Managed server.

## 9.2 Configure MDB Flow

To configure the MDB Flow from Weblogic Console, do the following:

1. Login to Oracle Weblogic 12c console (<http://hostname:port/console>).
2. On the left pane, click 'Services'.
3. In Messaging tree click 'JMS Modules'. The following window is displayed.



4. Click 'New'. The following screen is displayed.

**ORACLE WebLogic Server Administration Console 12c**

Home Log Out Preferences Record Help Welcome, weblogic Connected to: OFSLREL\_domain

**Create JMS System Module**

Back Next Finish Cancel

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

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

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

Scope:

What would you like to name the descriptor file name? If you do not provide a name, a default will be assigned.

Descriptor File Name:

Where would you 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

WebLogic Server Version: 12.2.1.3.0  
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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.

5. Specify the following details:

- Name: AQJMSModule
- Descriptor File Name: AQJMSModule

6. Click 'Next'. The following window is displayed.

**ORACLE WebLogic Server Administration Console 12c**

Home Log Out Preferences Record Help Welcome, weblogic Connected to: OFSLREL\_domain

**Create JMS System Module**

Back Next Finish Cancel

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

Use this page to select the server or cluster on which you would like to deploy this JMS system module. You can reconfigure targets later if you wish.

Targets:

Servers
<input type="checkbox"/> AdminServer
<input checked="" type="checkbox"/> OFSLL_ManagedServer
<input type="checkbox"/> WS_ManagedServer

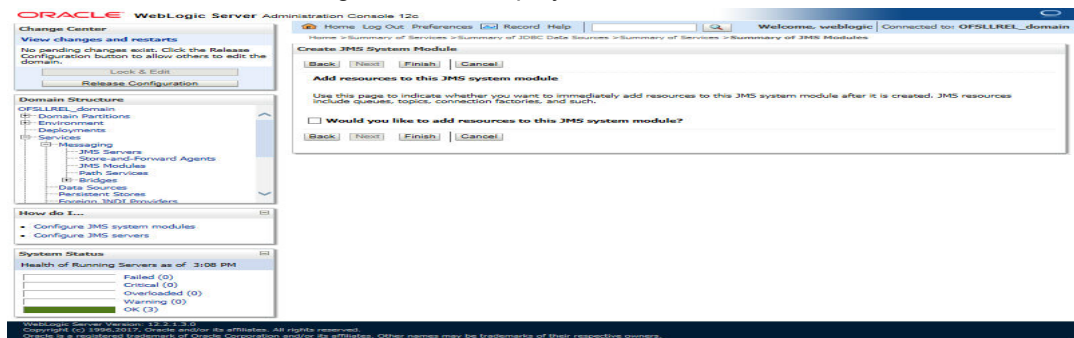
Back Next Finish Cancel

WebLogic Server Version: 12.2.1.3.0  
Copyright (c) 1996, 2017, Oracle and/or its affiliates. All rights reserved.  
Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

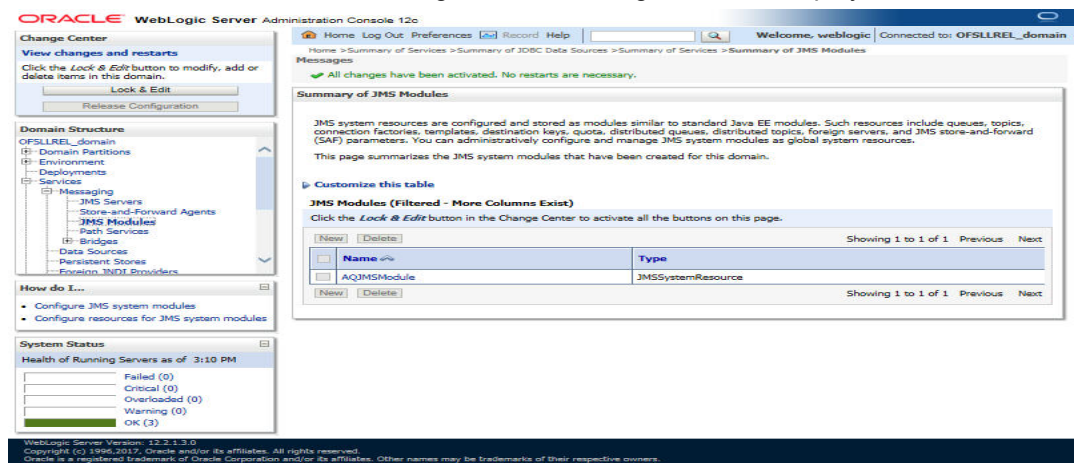
7. Select target servers as 'OFSLL\_ManagedServer'.



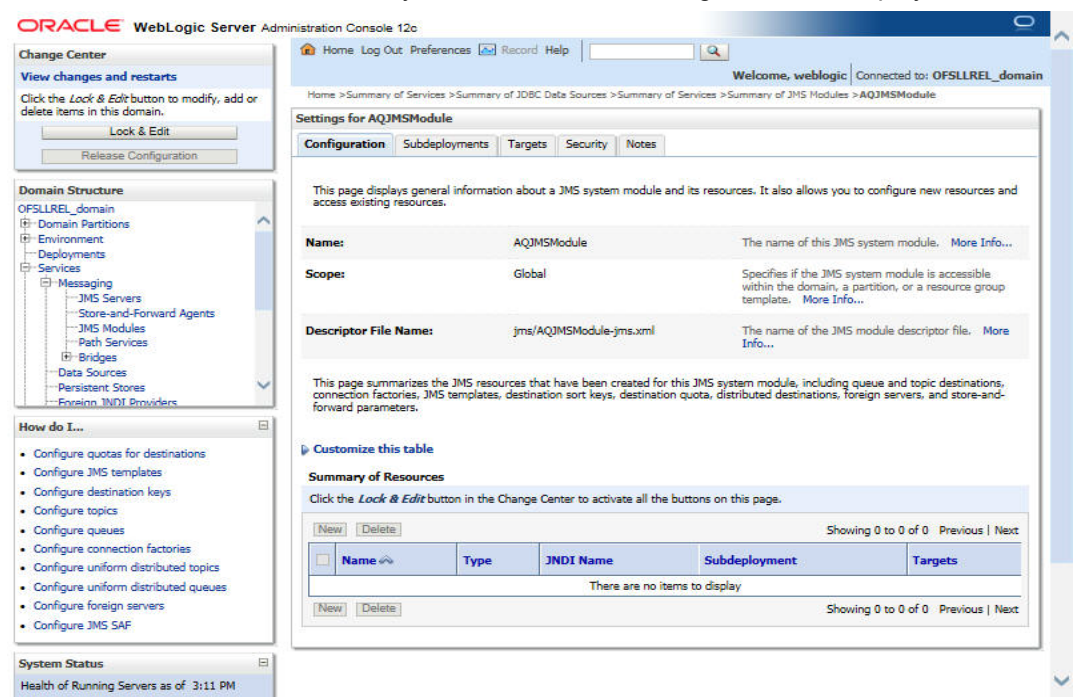
8. Click 'Next'. The following window is displayed.



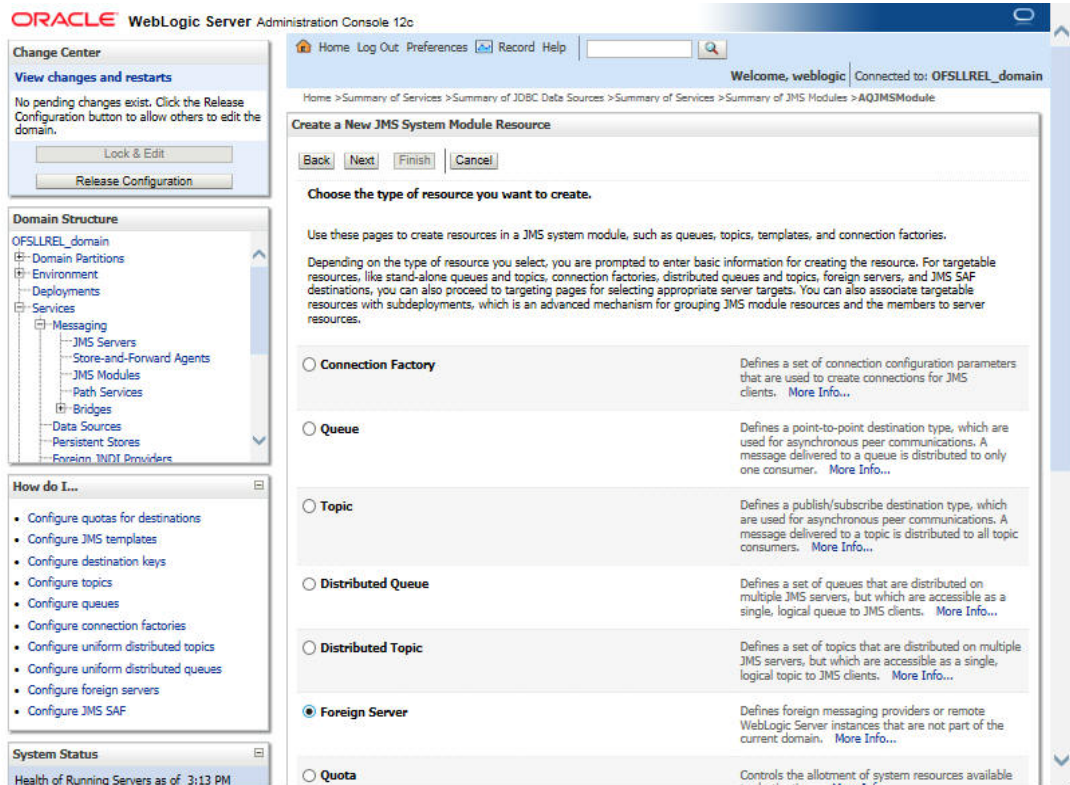
9. Click 'Finish' to activate the changes. The following window is displayed.



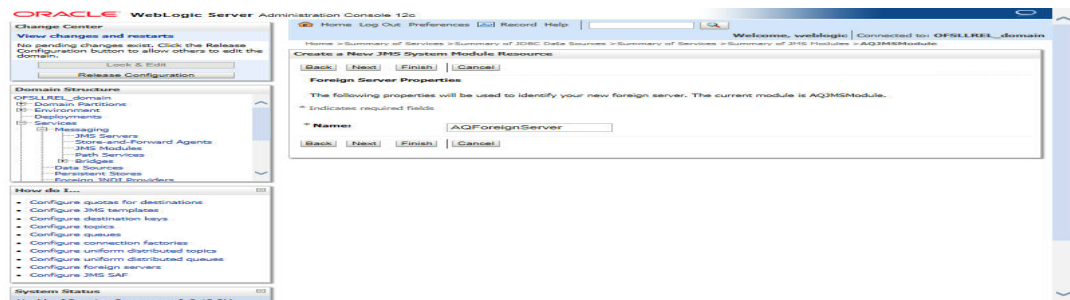
10. Click on the JMS Module that you created. The following window is displayed.



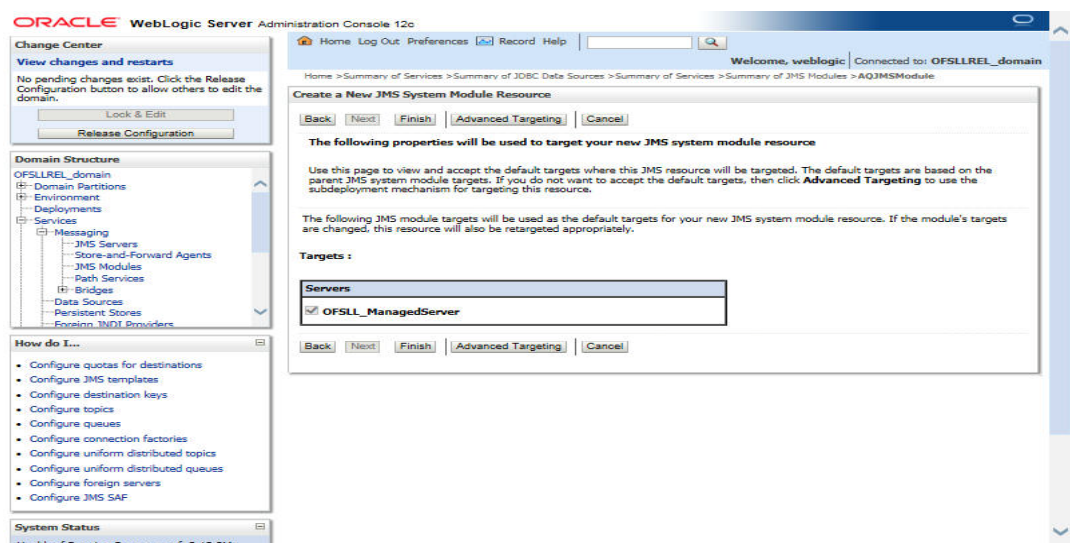
11. Click 'New' in 'Summary of Resources' section. The following window is displayed.



12. Select 'Foreign Server' as the option for type of resource to be created and click 'Next'. The following window is displayed.



13. Specify the name of the Foreign Server as 'AQForeignServer' and click 'Next'. The following window is displayed.



14. Click 'Finish' and activate the changes. The following window is displayed.

The screenshot displays the Oracle WebLogic Server Administration Console. The top navigation bar includes 'Home', 'Log Out', 'Preferences', 'Record', and 'Help'. The main content area shows the 'Settings for AQJMSModule' page, which is part of a breadcrumb trail: 'Home > Summary of Services > Summary of JDBC Data Sources > Summary of Services > Summary of JMS Modules > AQJMSModule'. A message at the top states: 'The foreign server was created successfully.' The page has tabs for 'Configuration', 'Subdeployments', 'Targets', 'Security', and 'Notes'. The 'Configuration' tab is active, showing general information about the JMS system module. It includes fields for 'Name' (AQJMSModule), 'Scope' (Global), and 'Descriptor File Name' (jms/AQJMSModule-jms.xml). Below this is a 'Summary of Resources' table with one entry: 'AQForeignServer' of type 'Foreign Server'. The left sidebar contains a 'Domain Structure' tree and a 'How do I...' section with links to various configuration tasks.

**Change Center**  
View changes and restarts  
Pending changes exist. They must be activated to take effect.  
[Activate Changes](#)  
[Undo All Changes](#)

**Domain Structure**  
OFSLREL\_domain  
├── Domain Partitions  
├── Environment  
├── Deployments  
├── Services  
│ ├── Messaging  
│ │ ├── JMS Servers  
│ │ ├── Store-and-Forward Agents  
│ │ ├── JMS Modules  
│ │ ├── Path Services  
│ │ ├── Bridges  
│ │ ├── Data Sources  
│ │ ├── Persistent Stores  
│ │ └── Foreign JNDI Providers  
│ └── ...  
└── ...

**How do I...**  
• [Configure quotas for destinations](#)  
• [Configure JMS templates](#)  
• [Configure destination keys](#)  
• [Configure topics](#)  
• [Configure queues](#)  
• [Configure connection factories](#)  
• [Configure uniform distributed topics](#)  
• [Configure uniform distributed queues](#)  
• [Configure foreign servers](#)  
• [Configure JMS SAF](#)

**System Status**  
Health of Running Servers as of 3:17 PM

**Settings for AQJMSModule**  
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:** AQJMSModule  
The name of this JMS system module. [More Info...](#)

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

**Descriptor File Name:** jms/AQJMSModule-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**  
Showing 1 to 1 of 1 Previous | Next

<input type="checkbox"/>	Name	Type	JNDI Name	Subdeployment	Targets
<input type="checkbox"/>	AQForeignServer	Foreign Server	N/A	Default Targeting	OFSLM_ManagedServer

Showing 1 to 1 of 1 Previous | Next

15. Click on the Foreign Server that you created. The following window is displayed.

The screenshot displays the Oracle WebLogic Server Configuration console. On the left, the 'Domain Structure' tree shows the hierarchy: OFSSLREL\_domain > Domain Partitions > Environment > Deployments > Services > Messaging > JMS Servers. Below this, the 'How do I...' section lists 'Create foreign connection factories' and 'Create foreign destinations'. The 'System Status' section shows the health of running servers as of 3:19 PM, with 0 Failed, 0 Critical, 0 Overloaded, 0 Warning, and 3 OK servers.

The main configuration window is titled 'Configuration' and has tabs for 'General', 'Destinations', and 'Connection Factories'. The 'General' tab is active, showing the configuration for the foreign server 'AQForeignServer'. The 'Name' field is 'AQForeignServer'. The 'JNDI Initial Context Factory' is set to 'oracle.jms.AQjmsInitialContextFactory'. The 'JNDI Connection URL' is empty. The 'JNDI Properties' field contains 'datasource=jdbc/aqjmsdb'. The 'Default Targeting Enabled' checkbox is checked.

Help text explains that a foreign server represents a JNDI provider that resides outside a WebLogic Server. It contains information that allows WebLogic Server to reach the remote JNDI provider. The name of the class that must be instantiated to access the JNDI provider is 'oracle.jms.AQjmsInitialContextFactory'. The URL that WebLogic Server will use to contact the JNDI provider is the 'JNDI Connection URL'. Any Credentials that must be set for the JNDI provider are entered in the 'JNDI Properties' field. Any additional properties that must be set for the JNDI provider are entered in the 'JNDI Properties' field.

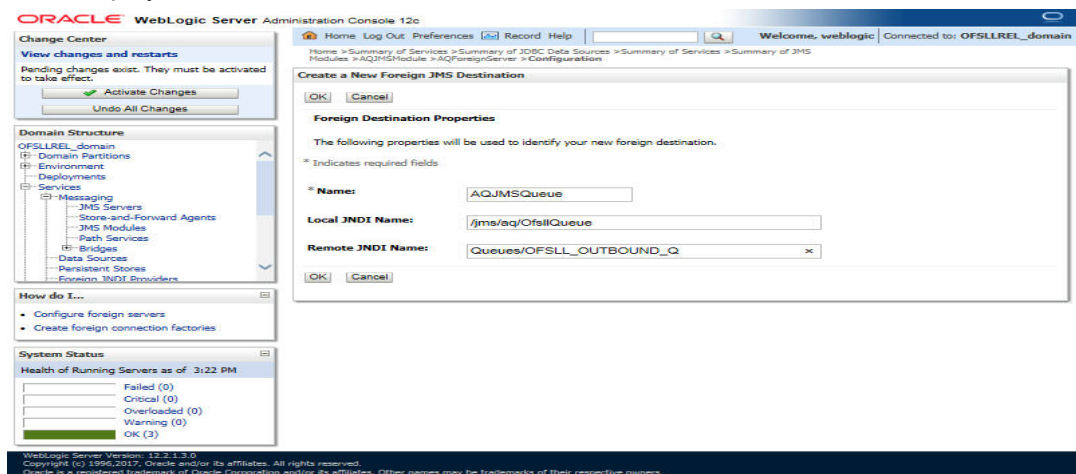
16. Specify the following details:

- Enter JNDI Initial Context Factory as 'oracle.jms.AQjmsInitialContextFactory'.
- JNDI Properties as 'datasource=jdbc/aqjmsdb'.
- Ensure 'Default Targeting Enabled' option is selected.

17. Click 'Save'.



18. Select 'Destinations' Tab and click 'New' to create new destination. The following window is displayed.

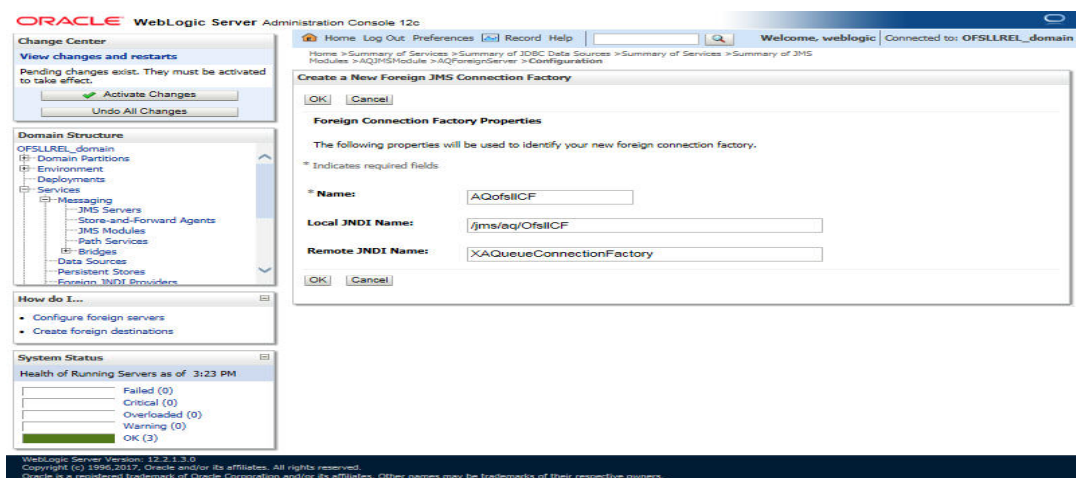


19. Specify the following details:

- Name: AQJMSQueue
- LocalJNDI Name: /jms/aq/OfsllQueue
- Remote JNDI Name: Queues/OFSLL\_OUTBOUND\_Q

20. Click 'OK' and save the changes.

21. Select 'Connection Factories' Tab and click 'New' to add new connection factory. The following window is displayed.



22. Specify the following details:

- Name: AQOfsllCF
- Local JNDI Name: /jms/aq/OfsllCF
- Remote JNDI Name: XAQueueConnectionFactory

23. Click 'OK' and save the changes.

## 9.3 AQ-JMS Topic Setup

AQ-JMS Topic Bridge facilitates for group publishing to set of subscribed users. In a configured setup, a published message is sent to all the interested subscribers. Accordingly zero to many subscribers will receive a copy of the same message.



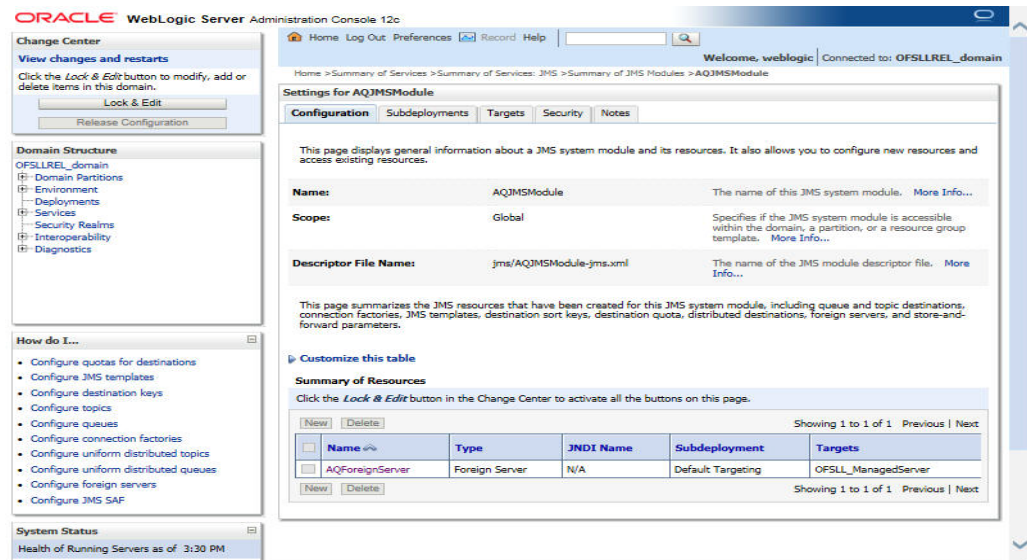
### 9.3.1 Create AQ-JMS Topic Bridge

To configure the AQ JMS Topic from Weblogic console, do the following:

1. Login to Oracle Weblogic 12c console (<http://hostname:port/console>).
2. On the left pane, select Services > Messaging > JMS Modules. The following window is displayed.



3. Click 'AQJMSModule'. The following window is displayed.



4. In the Summary of Resources section, click 'New'. The following window is displayed.

The screenshot shows the Oracle WebLogic Server Administration Console. On the left, the 'Change Center' and 'Domain Structure' are visible. The main area displays the 'Create a New JMS System Module Resource' dialog. The dialog has a 'Choose the type of resource you want to create.' section with radio buttons for 'Connection Factory', 'Queue', 'Topic', 'Distributed Queue', 'Distributed Topic', 'Foreign Server' (selected), and 'Quota'. Each option has a brief description and a 'More Info...' link. The 'Foreign Server' option is selected, and the 'Next' button is highlighted.

5. Select 'Foreign Server' as the option for type of resource to be created and click 'Next'. The following window is displayed.

The screenshot shows the 'Foreign Server Properties' dialog. The dialog has a 'Names' section with a text field containing 'OfsllTopicFS'. The 'Next' button is highlighted.

6. Specify the name of the Foreign Server as 'OfsllTopicFS' and click 'Next'. The following window is displayed.

The screenshot shows the 'Advanced Targeting' dialog. The dialog has a 'Servers' section with a list box containing 'Ofsll\_ManagedServer'. The 'Next' button is highlighted.

7. Click 'Finish' and activate the changes.
8. Click on the Foreign Server that you created. The following window is displayed.

The screenshot shows the 'General' tab of a foreign server configuration window. On the left, there is a 'Domain Structure' tree with 'OFSLREL\_domain' selected. Below it, 'How do I...' links are provided for creating foreign connection factories and destinations. The 'System Status' section shows the health of running servers as of 3:36 PM, with all components in an 'OK' state.

The main configuration area includes the following fields:

- Name:** OfslTopicFS
- JNDI Initial Context Factory:** oracle.jms.AQjmsInitialContextFactory
- JNDI Connection URL:** (Empty)
- JNDI Properties Credential:** (Empty)
- Confirm JNDI Properties Credential:** (Empty)
- JNDI Properties:** datasource=jdbc/aqjmsdb
- Default Targeting Enabled:** (Checked)

Each field has a 'More Info...' link for additional details. A 'Save' button is located at the top left of the configuration area.

9. Specify the following details and click 'Save'.
  - Enter JNDI Initial Context Factory as 'oracle.jms.AQjmsInitialContextFactory'.
  - JNDI Properties as 'datasource=jdbc/aqjmsdb'.
  - Ensure 'Default Targeting Enabled' checkbox is selected.
10. Select 'Destinations' tab and click 'New' to create new destination. The following window is displayed.

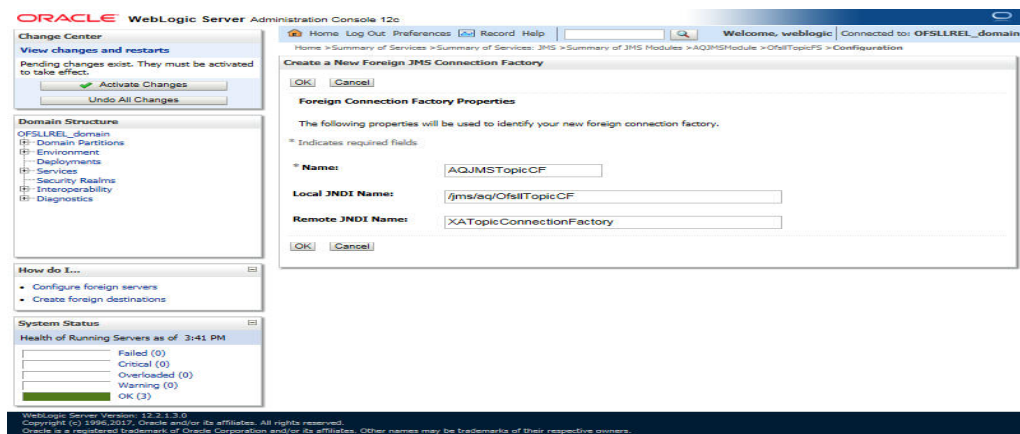
The screenshot shows the 'Create a New Foreign JMS Destination' dialog box. The left sidebar is similar to the previous screenshot, but the 'How do I...' link for 'Configure foreign servers' is highlighted. The dialog box has the following fields:

- Name:** AQJMSTopic
- Local JNDI Name:** /jms/aq/OfslITopic
- Remote JNDI Name:** Topics/OFSLL\_OUTBOUND\_TOPIC

There are 'OK' and 'Cancel' buttons at the bottom of the dialog. The background shows the 'Destinations' tab selected in the console.

11. Specify the following details and click 'OK' to save the changes.
  - Name: AQJMSTopic
  - LocalJNDI Name: /jms/aq/OfslITopic
  - Remote JNDI Name: Topics/OFSLL\_OUTBOUND\_TOPIC

- Select 'Connection Factories' tab and click 'New' to add new connection factory. The following window is displayed.



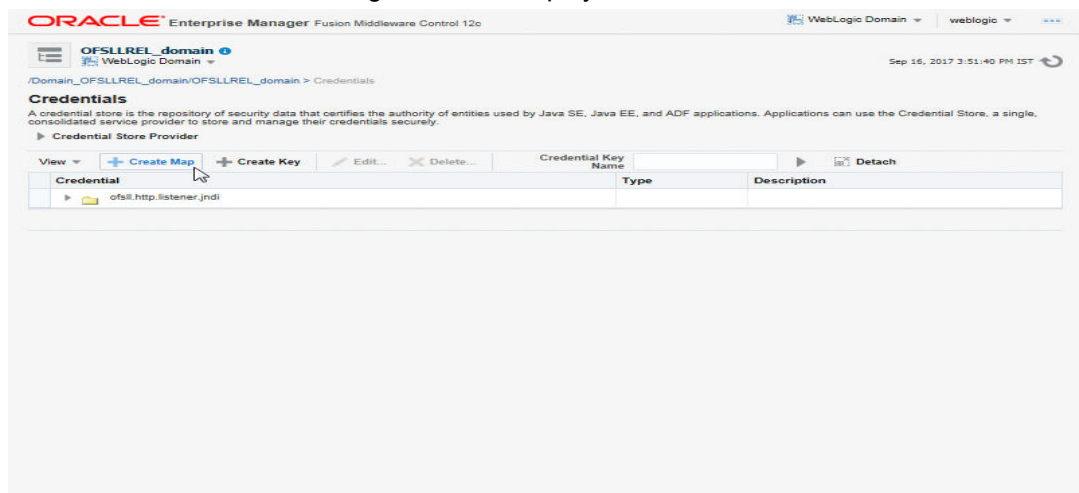
- Specify the following details and Click 'OK' to save the changes.

- Name: AQJMSTopicCF
- Local JNDI Name: /jms/aq/OfsllTopicCF
- Remote JNDI Name: XATopicConnectionFactory

## 9.4 Create Credentials and System Policies

In order to Configure MDB flow, you need to create credentials and system policies. The credentials are accessed through CSF framework which is managed by Oracle WebLogic Server. The keys are managed by Maps and Maps need to be given with Permissions.

- Login to Oracle Enterprise Manager (<http://hostname:port/em>).
- On the left panel, right click on OFSLLREL\_domain and select Security > System Policies > Credentials. The following window is displayed.

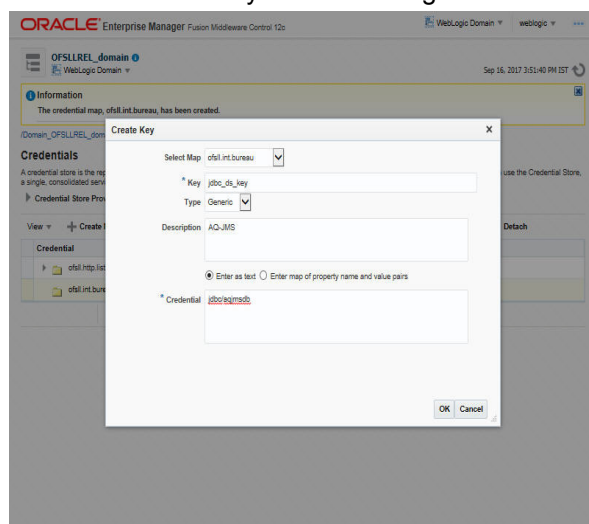


- Click 'Create Map'. The following window is displayed.



- Enter Map Name as 'ofsll.int.bureau' and click 'OK'.

5. Click 'Create Key'. The following window is displayed.



6. Specify the following details:

- Select Map as 'ofsl.int.bureau' from the drop down list.
- Specify Key as 'jdbc\_ds\_key'
- Select Type as 'Generic' from the drop down list.
- Specify the Credential as 'jdbc/aqjmsdb'.

7. Click 'OK'.

8. Similarly you need to create the following Maps and corresponding keys as indicated in following table.

Maps	Keys	Description
ofsl.int.bureau		This map is used to setup keys for all credit bureau interfaces
	ProxyServer	Name of the proxyServer to be configured
	ProxyPort	Port to which ProxyServer is running.
	ExpEcalsURL	The Experian Connection URL to be configured.
	ExpDirectExperianEnabled	If you set value as true, then you would be setting ecals response URL. Else, the Ecals request URL
	ExpCertPath	The location of .jks file which contains the valid certificate for Experian Credit Bureau.
	ExpBusUserNamePassword	Login Credentials to be configured for Experian Business reports.
	ExpConUserNamePassword	Login Credentials to be configured for Experian Consumer reports.
	EfxURL	The Equifax Connection URL to be configured.
	EfxCertPath	The location of .jks file which contains the valid certificate for Equifax Credit Bureau.



Maps	Keys	Description
	EfxUserNamePassword	Login credentials to be configured for accessing Equifax Reports.
	TucCertPath	The location of .p12 file which contains valid certificate for Transunion Bureau .
	TucCertPassword	The password that requires to read the valid .p12 certificate for the Transunion Bureau.
	TucUserNamePassword	Login credentials to be configured for accessing Transunion reports
	TucConnectionURL	The Transunion URL to be configured.
	jdbc_ds_key	Datasource configured to retrieve data for bureau.
	source	Configured as EXTERNAL for actual call.
ofsl.int.out bound		This map is used to setup keys for the Route-One and Dealer track call back from OFSLL.
	roUserNamePassword	Login Credentials used at the time of call back from OFSLL to RouteOne Interface.
	dtUsernamePassword	Login Credentials used at the time of Call back from OFSLL to Dealer Track Interface.
	jdbc_ds_key	Datasource configured to retrieve data for out-bound Resources.
	roPostDealerUsername-Passwd	Credentials required to upload the dealer details to Route One Portal
	roPostDealerWbsURL	Route One Post Dealer Web Service url
	roDealerUploadURL	Route One URL to upload the Dealer details
	dtPostDealerUsername-Passwd	Credentials required to upload the dealer details to Dealer Track Portal
	dtPostDealerWbsURL	Dealer Track Post Dealer Web Service url
	dtDealerUploadURL	Dealer Track URL to upload the Dealer details
ofsl.int.bip		This Map is used to setup all the Keys required to setup interface with BIP to generate reports.
	local_top_dir	Define the path of the local BIP server where you would like place the generated BIP reports.
	email_from_addr	Define the From Email address to be used while sending email for the generated BIP reports.

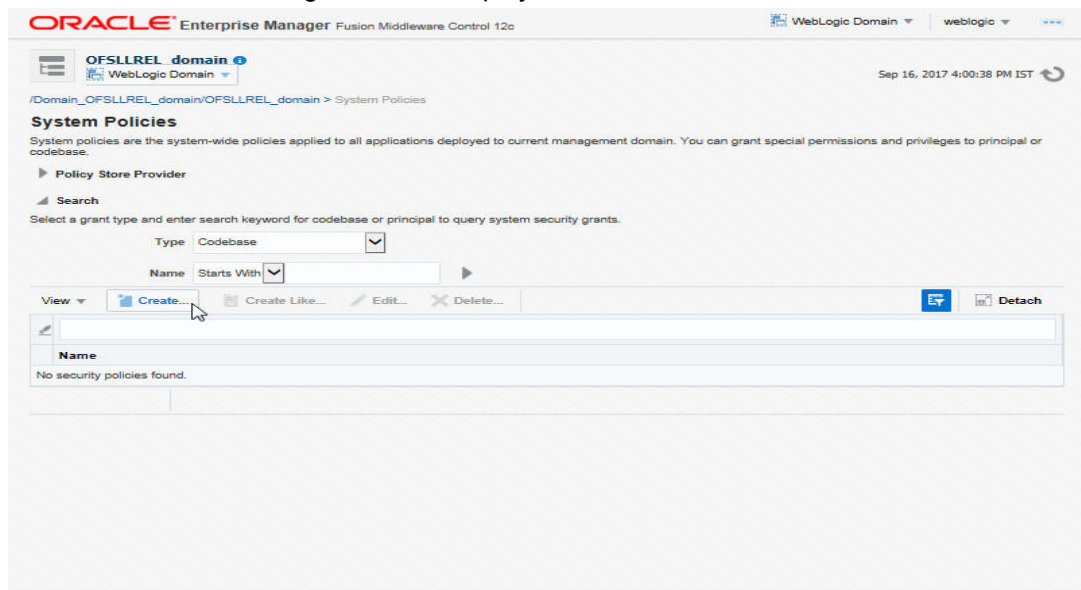
Maps	Keys	Description
	emailBodyContentPath	The path for 'file.properties' file that contains the content of the subject and body required while sending letter, report or correspondence as mail to the applicant or producer.  For example; /tmp/file.properties  *Refer to note below for details on 'file.properties' file creation for email configuration.
	fax_server	Configure the name of Fax server to be used to fax the generated BIP reports.
	jdbc_ds_key	Datasource configured to retrieve data for BIP.
ofssl.int.file transfer		This map is used to setup keys for all credit bureau interfaces
	sftp_key	Credentials to login to SFTP server(Username/ Password)
	sftp_top_dir	Top root directory for SFTP server
	sftp_servers	SFTP server names
ofssl.int.se curity	bip_key	This is BIP login credentials
ofssl.int.gri	GriURL	GRI web service URL to be configured.
	GriAPIKey	GRI API key to be configured
	ProxySet	System Level Proxy Enabled/Disabled. Value can be either true or false.  True= proxy required False = proxy not required
	ProxyHost	Name of the proxyServer to be configured. Set only if ProxySet =true.
	ProxyPort	Port on which ProxyServer is running. Set only if ProxySet =true.
	jdbc_ds_key	Datasource configured to retrieve the request XML for GRI.
	GriCertPath	The location of .jks file which contains the valid certificate for GRI.  Configure only when a valid certificate is available.
ofssl.int.co mmon		This map is used to setup keys for common JMS Queue
	OfsslJMSQueueJNDI	The JMS queue JNDI name to be configured

Maps	Keys	Description
	OfsllJMSQueueCF	The JMS queue connection factory to be configured
	OfsllJMSServerURL	The JMS server url to be configured. Ex: t3://<JMS server host>:<JMS server port>

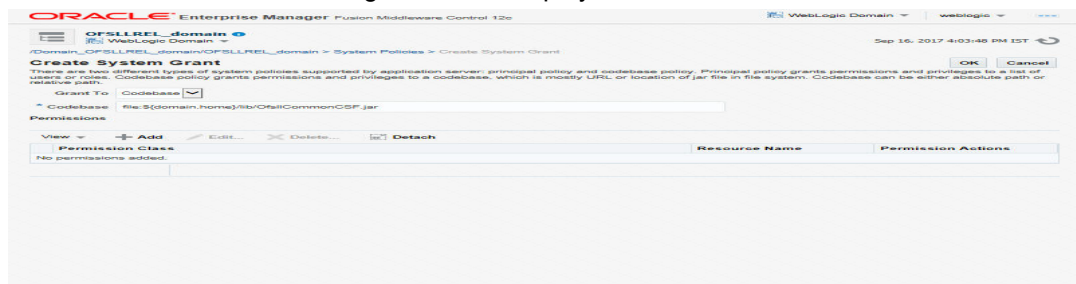
\* A new file(file.properties) needs to be created and copied to the application server in the same path as mentioned in the value corresponding to the key 'emailBodyContentPath' under the map 'ofsll.int.bip'. The file should have the following contents:

- letter\_subject='Text that is configurable and would be the subject of the mail'
- letter\_body='Text that is configurable and would be the body of the mail'
- correspondence\_subject='Text that is configurable and would be the subject of the mail'
- correspondence\_body='Text that is configurable and would be the body of the mail'
- report\_subject='Text that is configurable and would be the subject of the mail'
- report\_body='Text that is configurable and would be the body of the mail'

9. On the left panel, right click on OFSLLREL\_domain and select Security > System Policies. The following window is displayed.

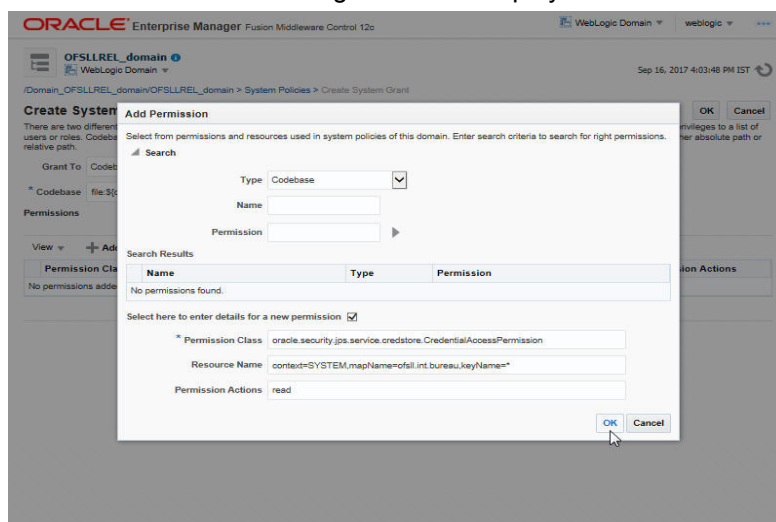


10. Click 'Create'. The following window is displayed.



11. Enter the codebase as 'file:\${domain.home}/lib/OfsllCommonCSF.jar'

12. Click 'Add'. The following window is displayed.



13. Select the check box 'Select here to enter details for a new permission'.

14. Specify the following details as the first permission class.

Permission Class	Resource Name	Permission Actions
oracle.security.jps.service.credstore.CredentialAccessPermission	context=SYSTEM,mapName=ofsll.int.bureau,keyName=*	read
oracle.security.jps.service.credstore.CredentialAccessPermission	context=SYSTEM,mapName=ofsll.int.filetransfer,keyName=*	read
oracle.security.jps.service.credstore.CredentialAccessPermission	context=SYSTEM,mapName=ofsll.int.outbound,keyName=*	read
oracle.security.jps.service.credstore.CredentialAccessPermission	context=SYSTEM,mapName=ofsll.int.bip,keyName=*	read
oracle.security.jps.service.credstore.CredentialAccessPermission	context=SYSTEM,mapName=ofsll.int.gri,keyName=*	read
oracle.security.jps.service.credstore.CredentialAccessPermission	context=SYSTEM,mapName=ofsll.int.common,keyName=*	read
oracle.security.jps.service.credstore.CredentialAccessPermission	context=SYSTEM,mapName=ofsll.int.listener.jndi,keyName=*	read

15. Click 'OK'.

## 9.5 JMS Queue Configuration

JMS queue is used to hold webservice invocation exception messages. It provides a mechanism for third parties to handle communication related failures.

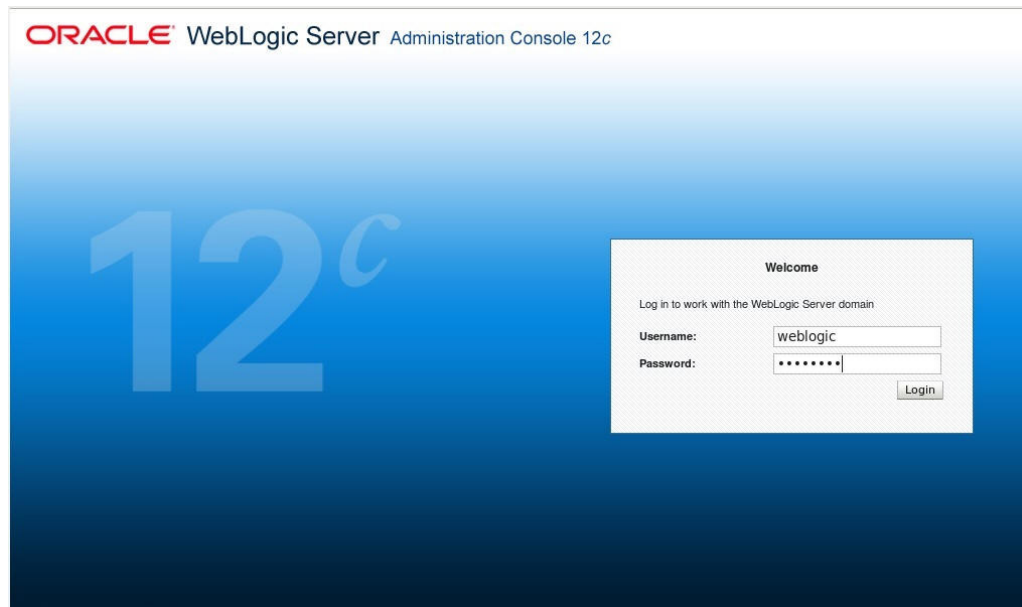
Perform the following steps to configure JMS queue in application server.

- [Create JMS Server](#)
- [Create JMS Module](#)
- [Subdeployment](#)

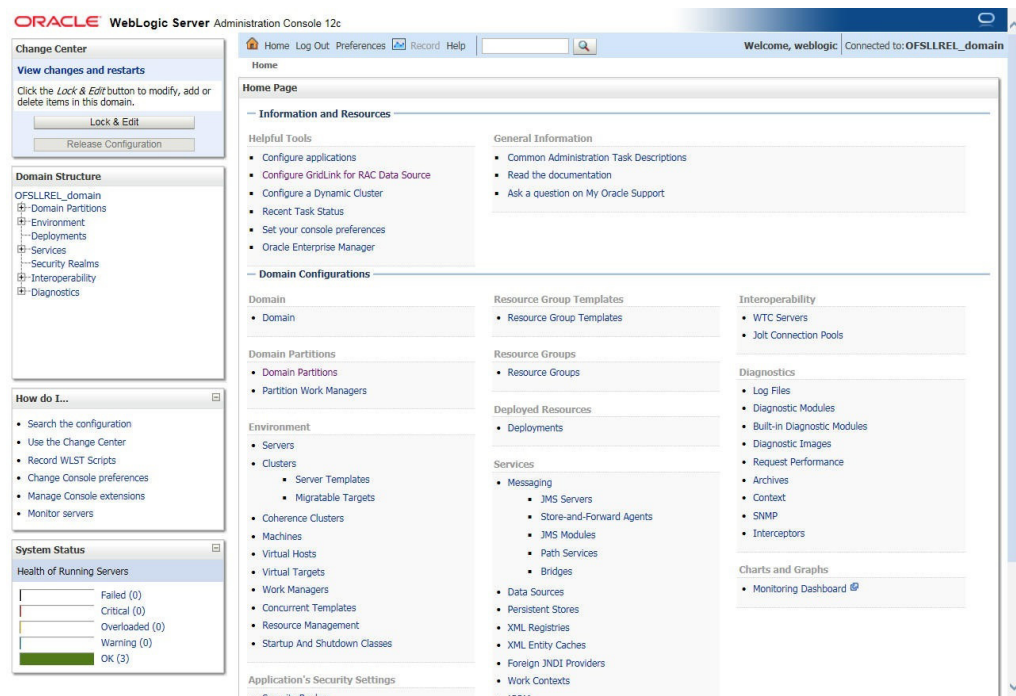
- Create JMS Connection Factory
- Create JMS Queue

### 9.5.1 Create JMS Server

1. Login to WebLogic Server 12c console (<http://hostname:port/console>). The following screen is displayed.



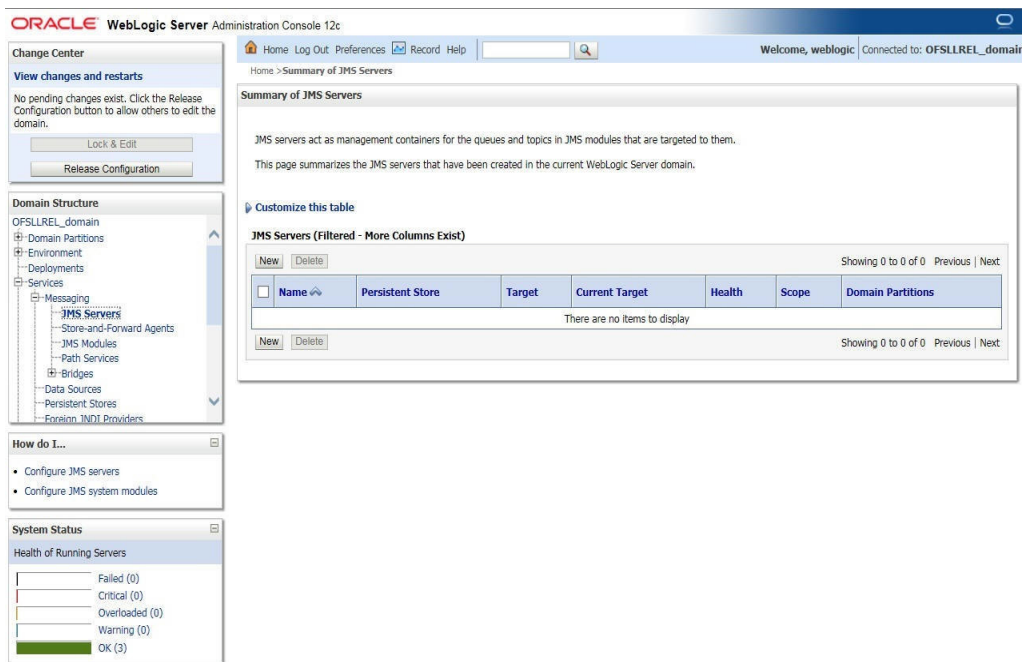
2. Specify the Weblogic administrator user name and password and click 'Log In'. The Oracle Weblogic home page is displayed.



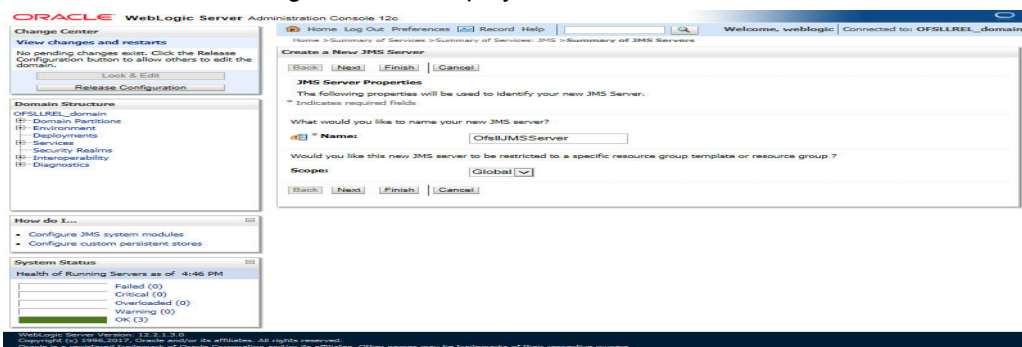
3. Click Domain Name > Services > Messaging > JMS Server.



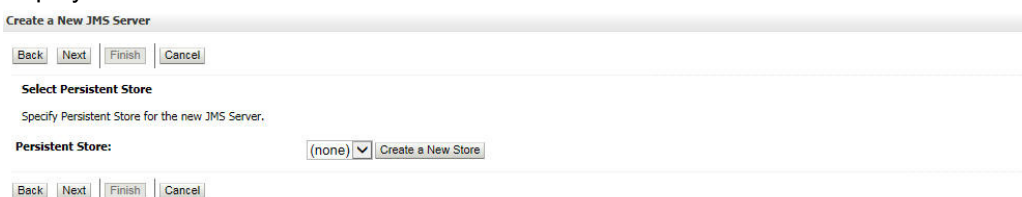
4. In the main window, click 'Lock & Edit'. The following window is displayed.



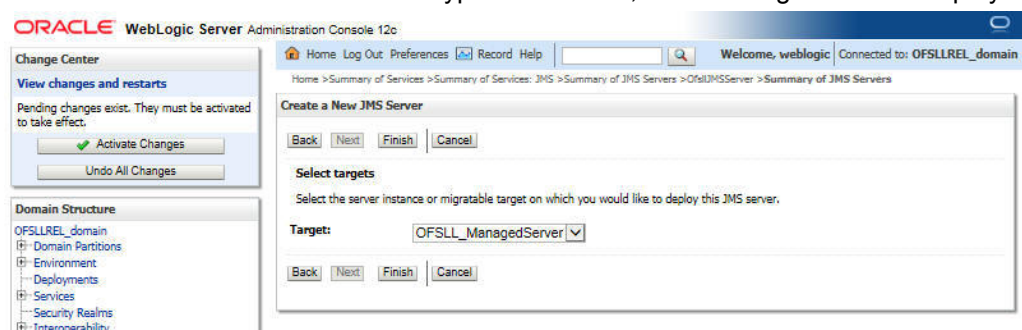
5. Click 'New'. The following window is displayed.



6. Specify the JMS Server Name as 'OfsIIMSServer'. Click 'Next', the following window is displayed.

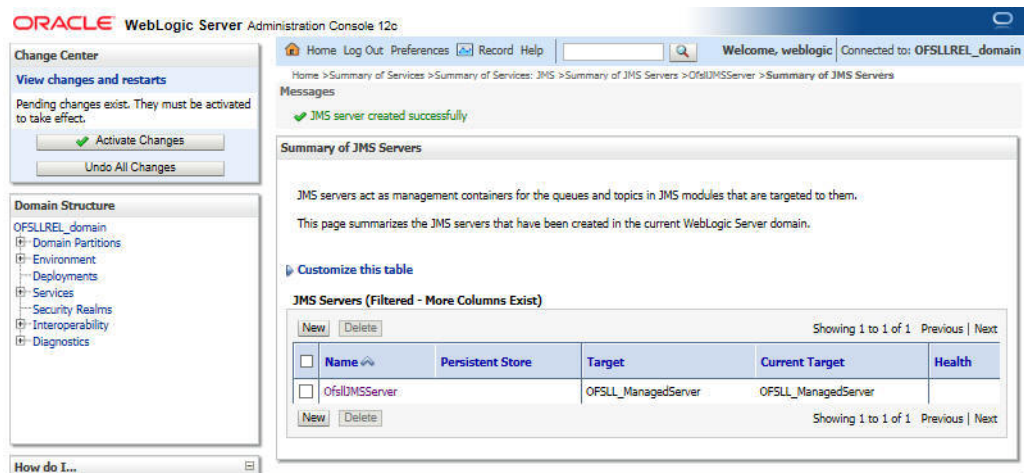


7. Select 'None' as the Persistent Store type. Click 'Next', the following window is displayed.



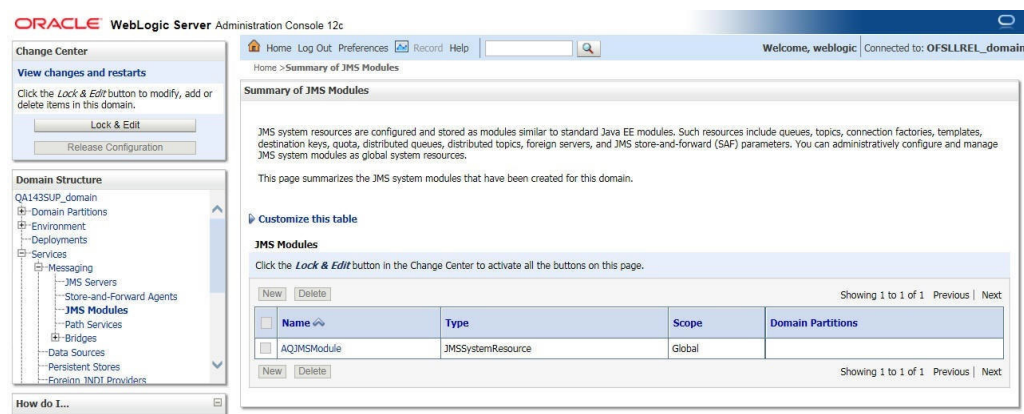
8. Select the target managed server and click 'Finish'.

- Click 'Activate Changes' under Change Center. Once done, the following window is displayed:

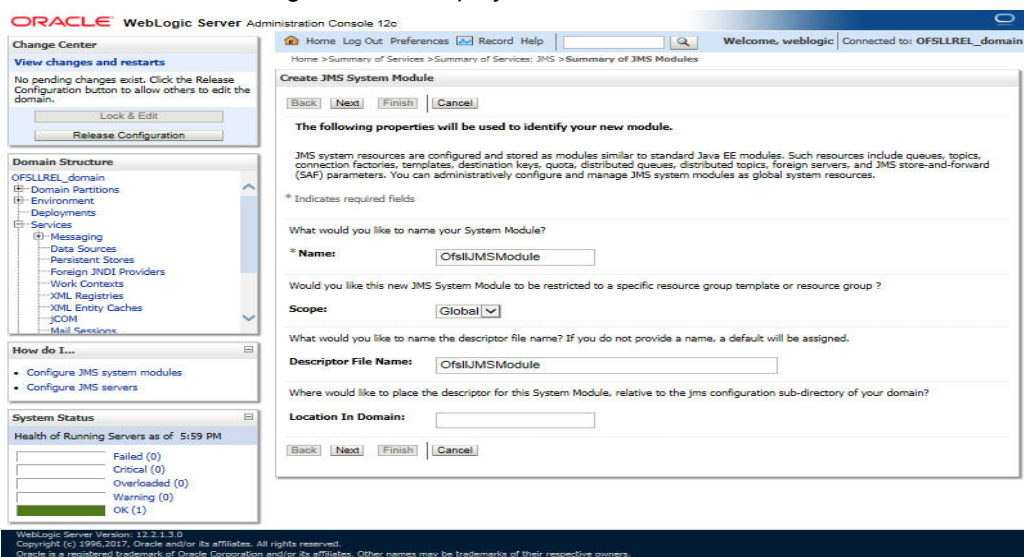


## 9.5.2 Create JMS Module

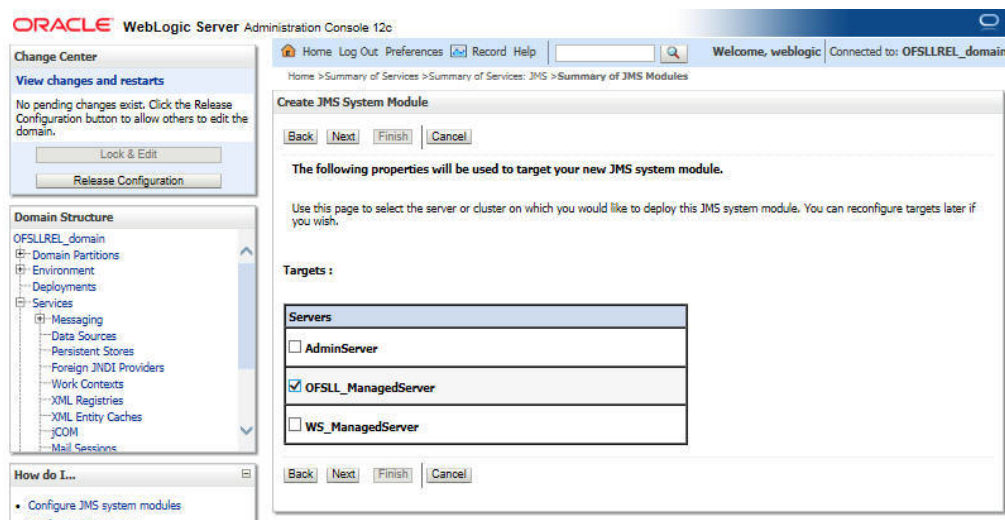
- Login to WebLogic Server 12c console (<http://hostname:port/console>) by specifying the Weblogic administrator user name and password.
- Click Domain Name > Services > Messaging > JMS Modules. The following window is displayed.



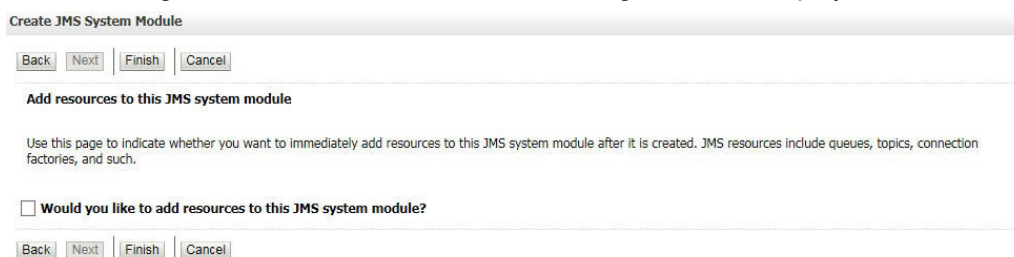
- Click 'New'. The following screen is displayed.



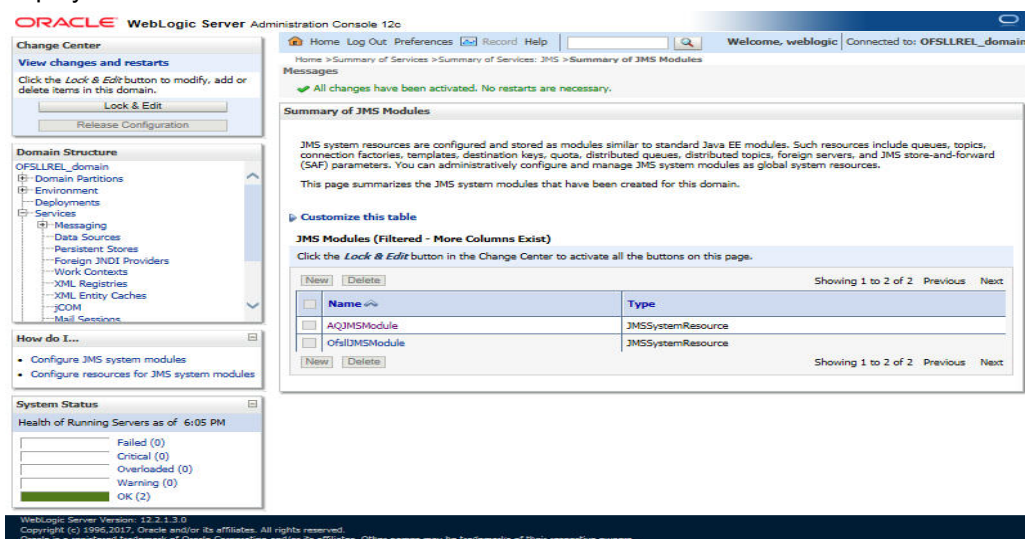
4. Specify the following details:
  - Enter the System Module Name as 'OfsllJMSModule'
  - Enter the Description File Name as 'OfsllJMSModule'
5. Click 'Next'. The following screen is displayed.



6. Select the target server and click 'Next'. The following window is displayed.



7. Click 'Finish' to save and activate the changes. Once done, the following window is displayed.



## 9.5.3 Subdeployment

1. Login to WebLogic Server 12c console (<http://hostname:port/console>) by specifying the Weblogic administrator user name and password.

- Click Domain Name > Services > Messaging > JMS Modules. The main window displays the list of JMS modules available.
- Select the created JMS module 'OfsllJMSModule' and click 'Subdeployments' tab. The following window is displayed.

Settings for OfslJMSModule

Configuration **Subdeployments** Targets Security Notes

This page displays subdeployments created for a JMS system module. A subdeployment is a mechanism by which JMS module resources (such as queues, topics, and connection factories) are grouped and targeted to a server resource (such as JMS servers, server instances, or cluster).

[Customize this table](#)

**Subdeployments**

New Delete Showing 0 to 0 of 0 Previous Next

Name	Resources	Targets
There are no items to display		

New Delete Showing 0 to 0 of 0 Previous Next

- Click 'New'. The following screen is displayed.

ORACLE WebLogic Server Administration Console 12c

Home Log Out Preferences Record Help Welcome, weblogic Connected to: OFSLREL\_domain

Home > Summary of Services > Summary of Services: JMS > Summary of JMS Modules > OfslJMSModule

**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:** OfsllJMSSD

Back Next Finish Cancel

- Specify the Subdeployment Name as 'OfsllJMSSD'. Click 'Next', the following window is displayed.

ORACLE WebLogic Server Administration Console 12c

Home Log Out Preferences Record Help Welcome, weblogic Connected to: OFSLREL\_domain

Home > Summary of Services > Summary of Services: JMS > Summary of JMS Modules > OfslJMSModule

**Create a New Subdeployment**

Back Next Finish Cancel

**Targets**

Please select targets for the Subdeployment

**Servers**

☐ OfslL\_ManagedServer

**JMS Servers**

☒ OfslJMSServer

Back Next Finish Cancel

- Select the check box against the newly created JMS Server and click 'Finish'. Once done, the following window is displayed.

Settings for OfslJMSModule

Configuration **Subdeployments** Targets Security Notes

This page displays subdeployments created for a JMS system module. A subdeployment is a mechanism by which JMS module resources (such as queues, topics, and connection factories) are grouped and targeted to a server resource (such as JMS servers, server instances, or cluster).

[Customize this table](#)

**Subdeployments**

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

New Delete Showing 1 to 1 of 1 Previous Next

Name	Resources	Targets
OfsllJMSSD		OfsllJMSServer

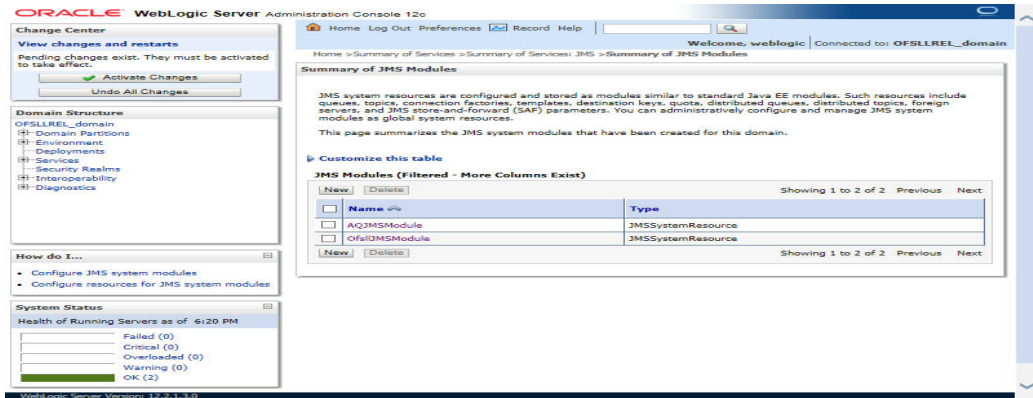
New Delete Showing 1 to 1 of 1 Previous Next

You can further click 'New' to create more Queues and repeat the steps explained above.



## 9.5.4 Create JMS Connection Factory

1. Login to WebLogic Server 12c console (<http://hostname:port/console>) by specifying the Weblogic administrator user name and password.
2. Click Domain Name > Services > Messaging > JMS Modules. The main window displays the list of JMS modules available.
3. Select the newly created JMS module 'OfsllJMSModule'. The following window is displayed.



4. Click 'New'. The following window is displayed.

Settings for OfslJMSModule

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

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

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

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

[Customize this table](#)

**Summary of Resources**

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

Name	Type	JNDI Name	Subdeployment	Targets
OfslJMSQueue	Queue	jms/OfslJMSQueue	OfslJMSSD	OfslJMSServer

5. Click 'Next'. The following window is displayed.

Create a New JMS System Module Resource

Back Next Finish Cancel

**Choose the type of resource you want to create.**

Use these pages to create resources in a JMS system module, such as queues, topics, templates, and connection factories.

Depending on the type of resource you select, you are prompted to enter basic information for creating the resource. For targetable resources, like stand-alone queues and topics, connection factories, distributed queues and topics, foreign servers, and JMS SAF destinations, you can also proceed to targeting pages for selecting appropriate server targets. You can also associate targetable resources with subdeployments, which is an advanced mechanism for grouping JMS module resources and the members to server resources.

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

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



6. Select 'Connection Factory' option and click 'Next'. The following window is displayed.

to take effect.

Activate Changes

Undo All Changes

**Domain Structure**

Ofsllrel\_domain

- Domain Partitions
- Environment
- Deployments
- Services
- Security Realms
- Interoperability
- Diagnostics

**How do I...**

- Configure quotas for destinations
- Configure JMS templates
- Configure destination keys
- Configure topics
- Configure queues
- Configure connection factories
- Configure uniform distributed topics
- Configure uniform distributed queues
- Configure foreign servers
- Configure JMS SAF

**System Status**

Health of Running Servers as of 6:22 PM

Failed (0)
Critical (0)
Overloaded (0)
Warning (0)

**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 OfslJMSModule.

\* Indicates required fields

What would you like to name your new connection factory?

\* Name: OfslJMSCF

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

JNDI Name: jms/OfslJMSCF

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

Subscription Sharing Policy: Exclusive

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

Client ID Policy: Restricted

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

Maximum Messages per Session: 10

Should this connection factory create sessions that are JTA aware, and create XA queues and XA topics?

☒ XA Connection Factory Enabled

Should the authenticated user name be attached to sent messages if the JMS destination is configured to support this behavior?

7. Specify the following details:

- Enter the Name of the Connection Factory as 'OfsllJMSCF'
- Enter the JNDI Name as 'jms/OfsllJMSCF'
- Select the check box 'XA Connection Factory Enabled'

8. Click 'Next'. The following window is displayed.

**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 :**

Servers
<input checked="" type="checkbox"/> OfslLREL_ManagedServer

Back Next Finish Advanced Targeting Cancel

- Click 'Advanced Targeting'. The following window is displayed.

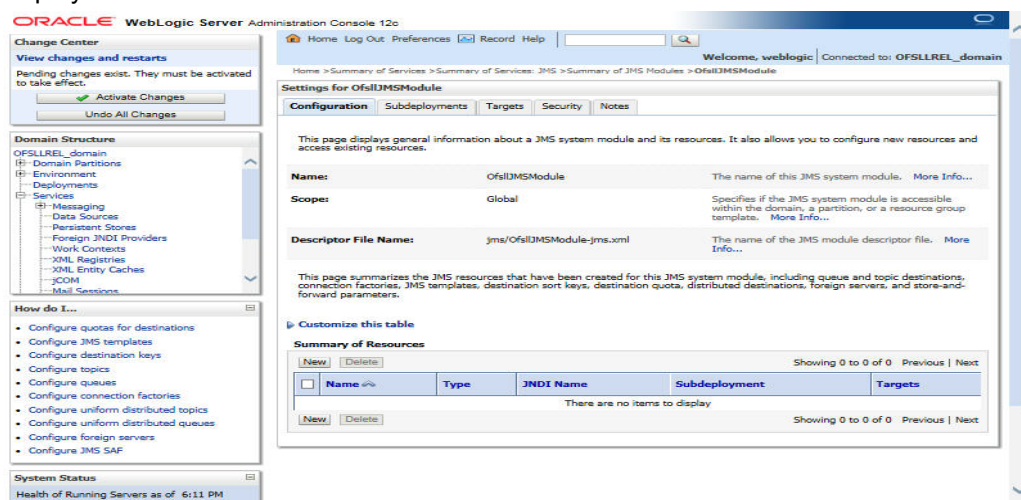
- Select the Subdeployments as 'OfsllJMSSD' from the drop down list.
- Under JMS Servers, select the check box against 'OfsllJMSServer'.
- Click 'Finish' to save and activate the changes. Once done, the following window is displayed.

Name	Type	JNDI Name	Subdeployment	Targets
OfslJMSSCF	Connection Factory	jms/OfslJMSSCF	OfslJMSSD	OfslJMSServer
OfslJMSQueue	Queue	jms/OfslJMSQueue	OfslJMSSD	OfslJMSServer

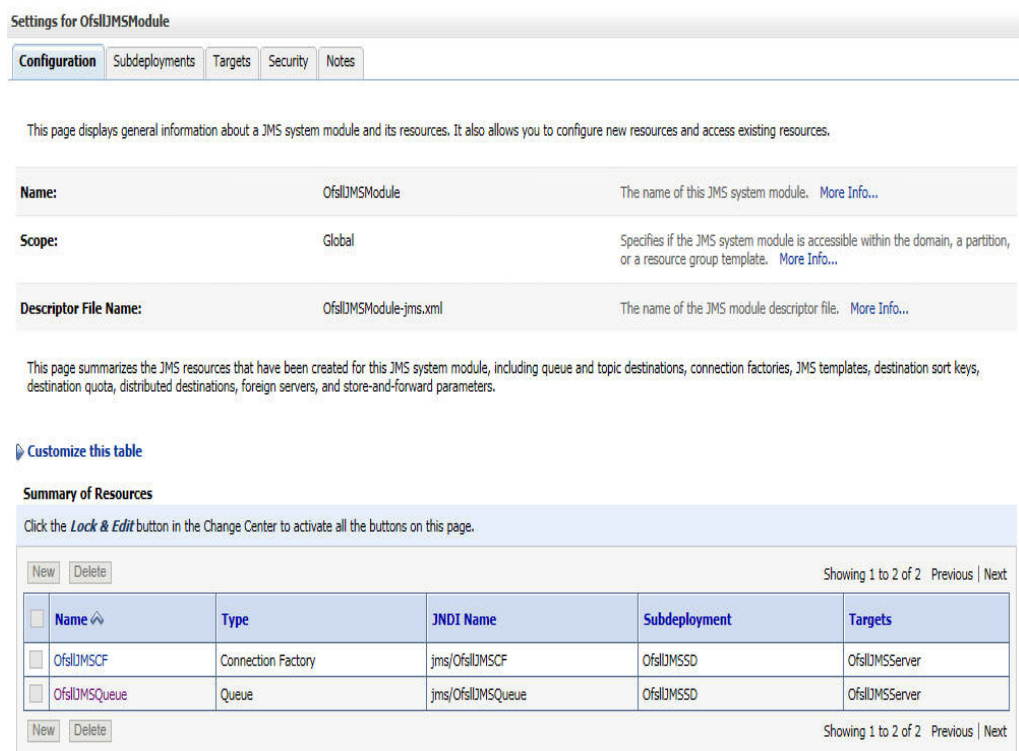
### 9.5.5 Create JMS Queue

- Login to WebLogic Server 12c console (<http://hostname:port/console>) by specifying the Weblogic administrator user name and password.
- Click Domain Name > Services > Messaging > JMS Modules. The main window displays the list of JMS modules available.

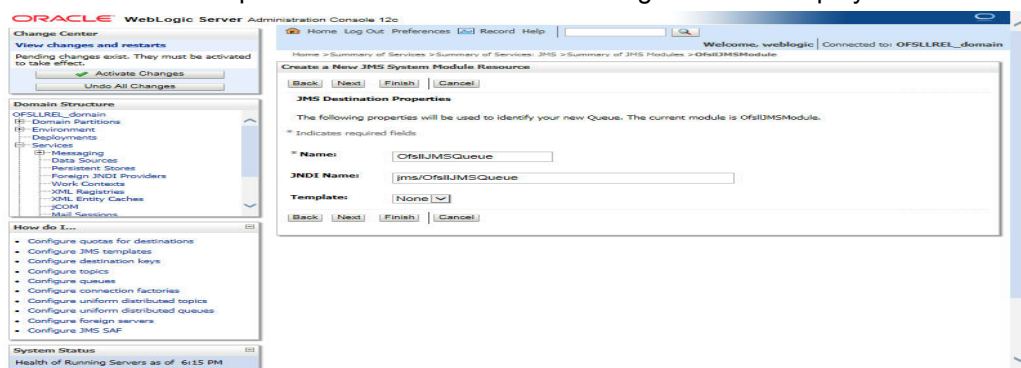
3. Select the newly created JMS module 'OfsllJMSModule'. The following window is displayed.



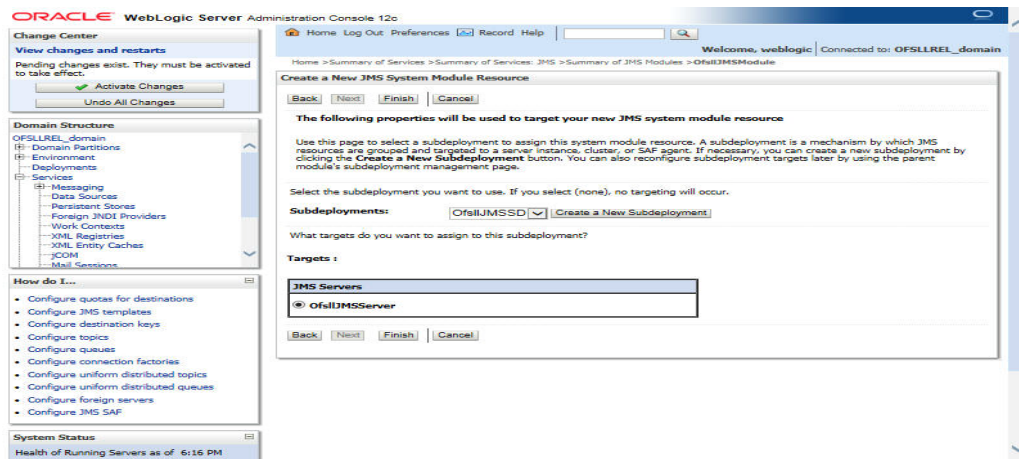
4. Click 'New'. The following window is displayed.



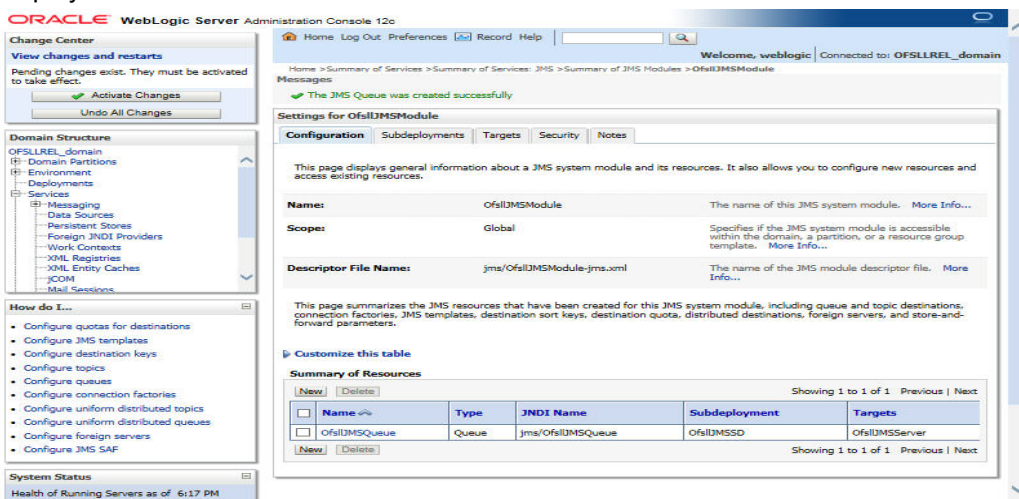
5. Select the 'Queue' option and click 'Next'. The following window is displayed.



6. Specify the following details while creating new JMS System Module Resources:
  - Enter the Name of the Queue as 'OfsllJMSQueue'
  - Enter the JNDI Name as 'jms/OfsllJMSQueue'
  - Select the Template as 'None'
7. Click 'Next'. The following window is displayed.



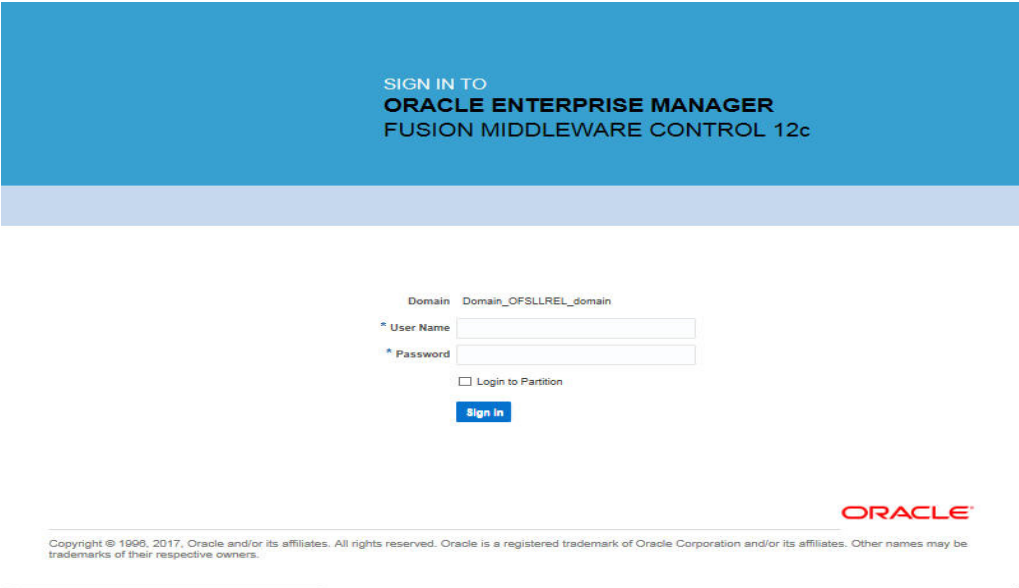
8. Select the Subdeployments as 'OfsllJMSSD' from the drop-down list.
9. Click 'Finish' to save and activate the changes. Once done, the following window is displayed.



You can further click 'New 'to create more Queues and repeat the steps explained above.

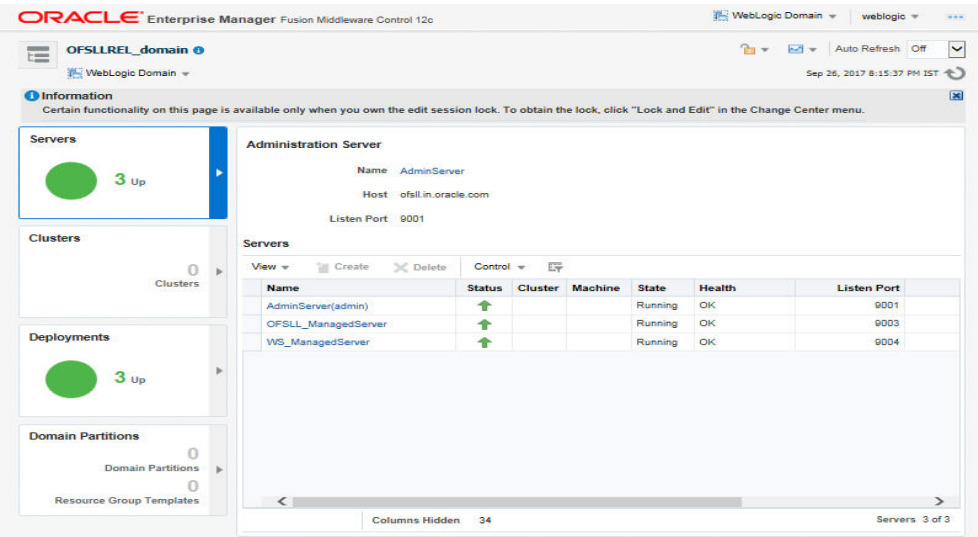
## 9.6 Deploy MDB EJB

1. Login to Web Logic application server enterprise manager (e.g.:<http://hostname:port/em>)



The image shows the login page for Oracle Enterprise Manager Fusion Middleware Control 12c. It features a blue header with the text "SIGN IN TO ORACLE ENTERPRISE MANAGER FUSION MIDDLEWARE CONTROL 12c". Below the header, there is a login form with fields for "Domain" (set to "Domain\_OFSSLREL\_domain"), "User Name", and "Password". There is a "Login to Partition" checkbox and a "Sign in" button. At the bottom, there is an Oracle logo and a copyright notice: "Copyright © 1996, 2017, Oracle and/or its affiliates. All rights reserved. Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners."

2. Enter valid login credentials. The following window is displayed.



The image shows the Oracle Enterprise Manager console for the "OFSSLREL\_domain". The left sidebar contains navigation links for "Servers", "Clusters", "Deployments", "Domain Partitions", and "Resource Group Templates". The main content area displays the "Administration Server" details, including its name "AdminServer", host "ofssl.in.oracle.com", and listen port "9001". Below this, there is a table showing the status of various servers.

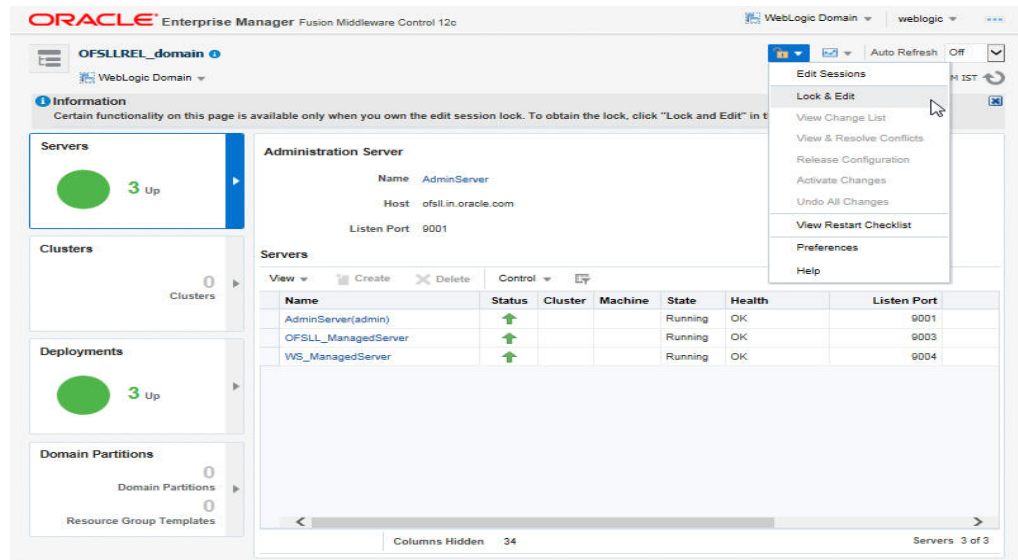
Name	Status	Cluster	Machine	State	Health	Listen Port
AdminServer(admin)	Running			Running	OK	9001
OFSSL_ManagedServer	Running			Running	OK	9003
WS_ManagedServer	Running			Running	OK	9004

At the bottom of the console, there is a status bar showing "Columns Hidden: 34" and "Servers: 3 of 3".

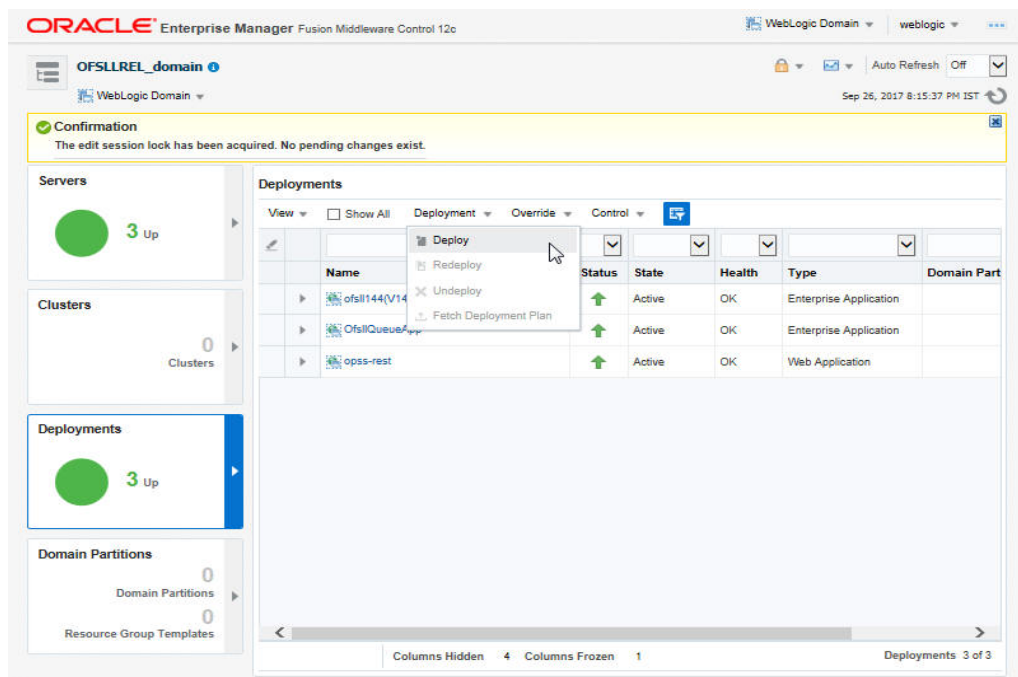
3. Select 'Lock & Edit' option in the lock drop-down list available in the header.



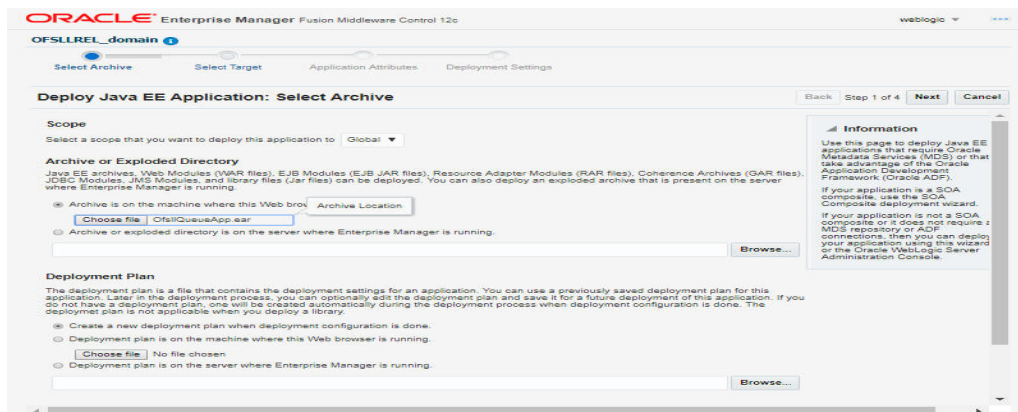
4. Click 'Deployment' in the left panel. The following window is displayed.



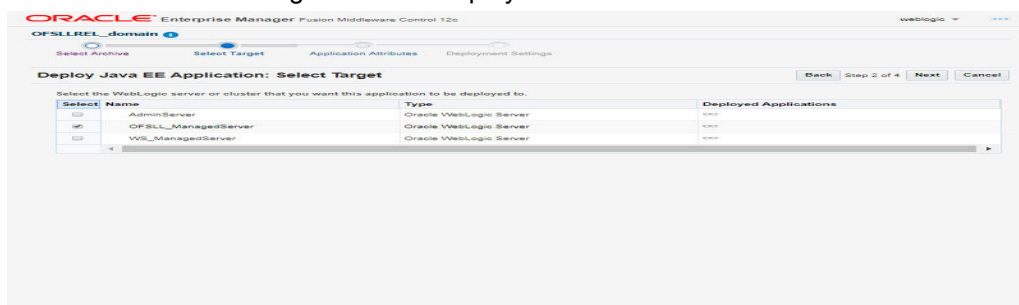
5. Select 'Deploy' from the Deployment drop-down list. The following window is displayed.



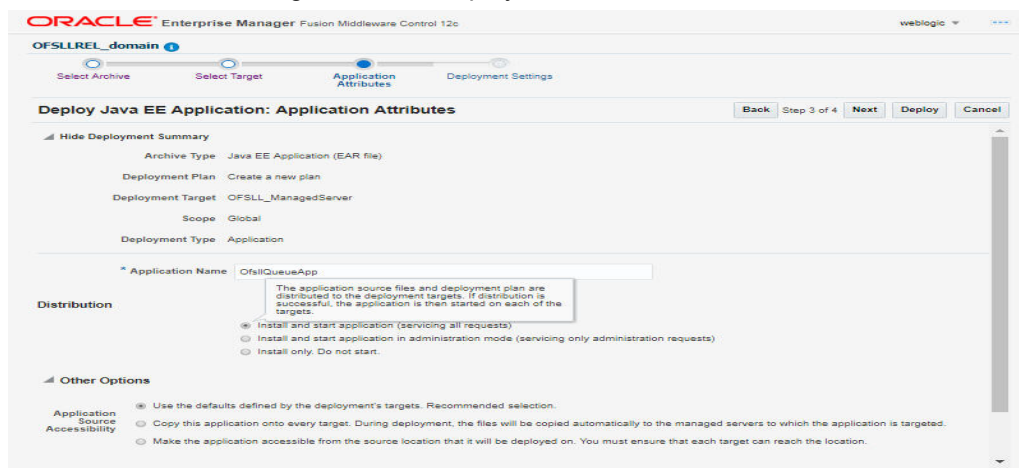
6. The following window is displayed.



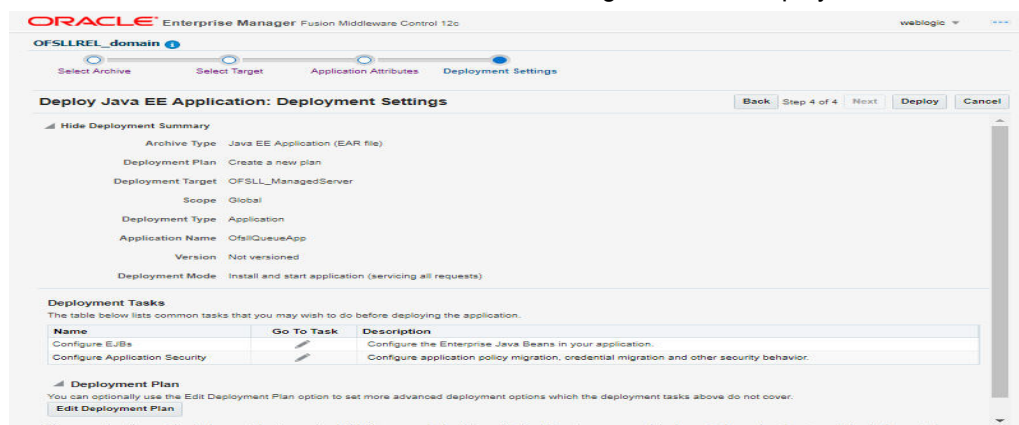
7. Browse to the folder containing the MDB EJB. Eg: C:/OfsllQueueApp.ear
8. Click 'Next'. The following window is displayed.



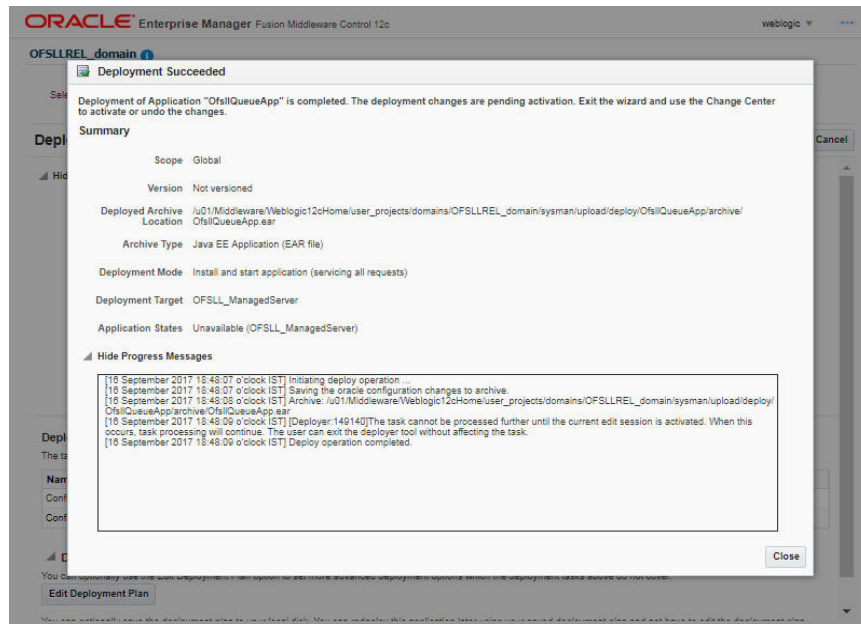
9. Select the server on which the MDB EJB needs to be deployed.
10. Click 'Next'. The following window is displayed.



11. Select the option 'Install and start application (servicing all requests)'.
12. Check the context root and click 'Next'. The following window is displayed.



13. Click 'Deploy'. On successful deployment, the following window is displayed.



14. Click 'Close'. Post deployment, you need to activate the changes by selecting 'Active Changes' option from 'Edit Session' drop-down list as indicated in step 4 above.

---

#### Note

While starting the 'OFSLLREL\_ManagedServer', always start with option '-DUseSun-HttpHandler=true' to enforce the weblogic server to uses SUN SSL implementation.

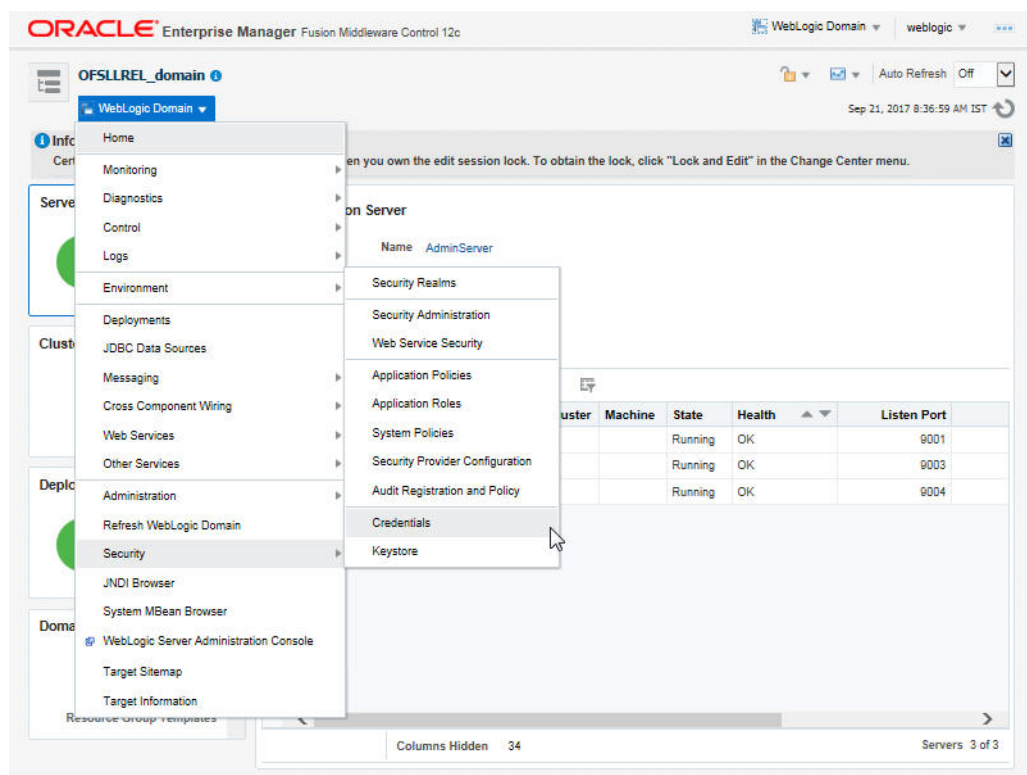
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## 10. Configuring Oracle BI Publisher for Application

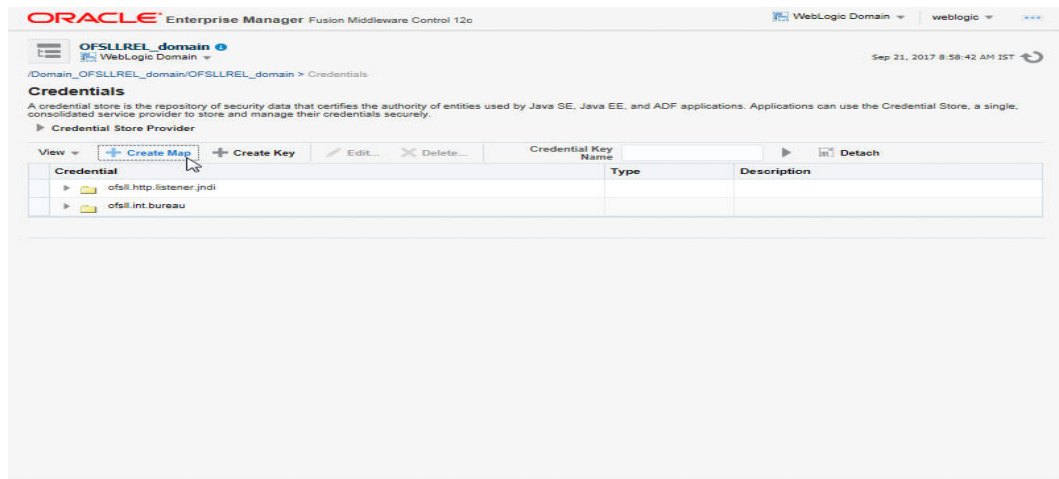
1. Copy the OfsslCommonCSF.jar from /WEB-INF/lib available in the staging area to \$DOMAIN\_HOME/lib
2. Update the setDomainEnv.sh file (\$MW\_HOME/user\_projects/domains/mydomain/bin directory) by appending the above jar file path – EXTRA\_JAVA\_PROPERTIES="..... \${EXTRA\_JAVA\_PROPERTIES} -Dofssl.csf.path=\${DOMAIN\_HOME}"
3. Configure Security via EMconsole

### Note

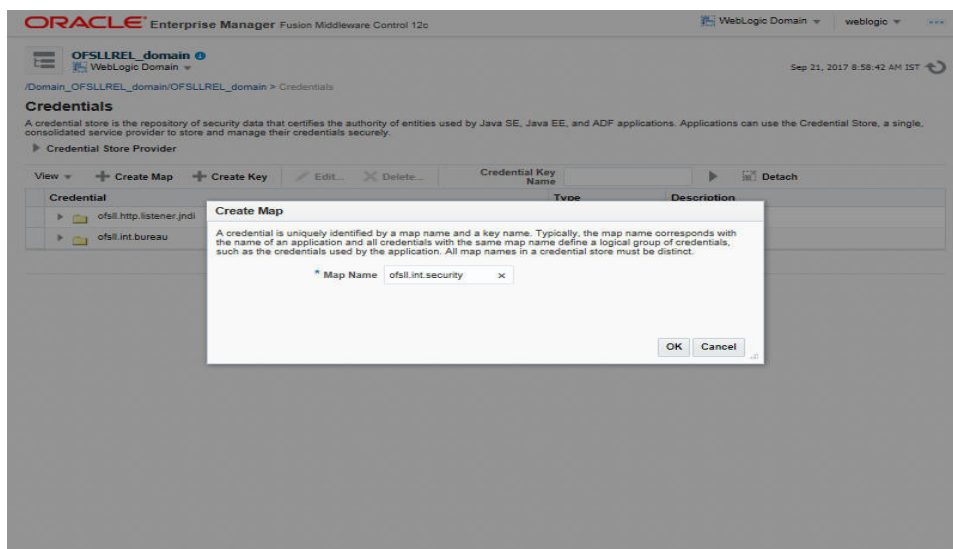
It is assumed that BI Publisher is installed and configured. Refer BI Publisher Guide for further details.



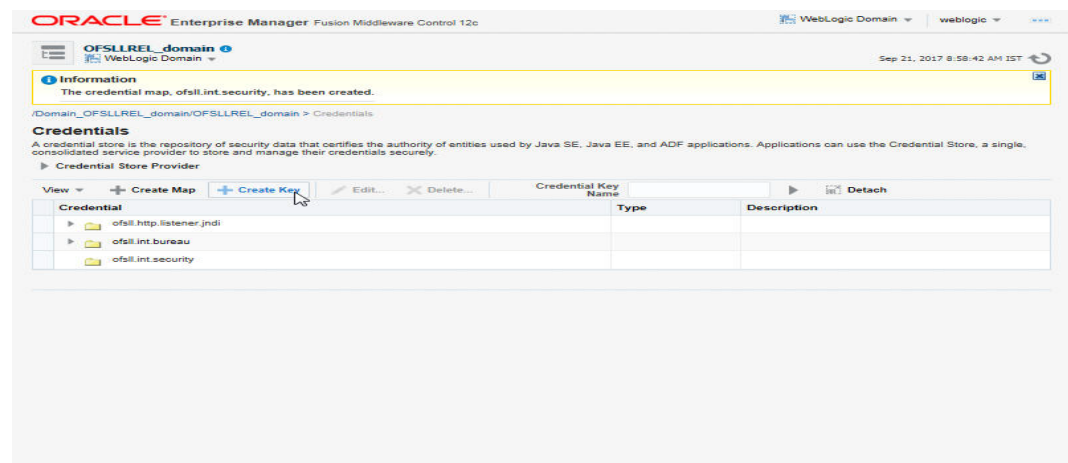
- Click WebLogic Domain on the right panel. Select Security > Credentials. Click 'Create Map'.



- Enter the Map Name: ofsl.int.security.



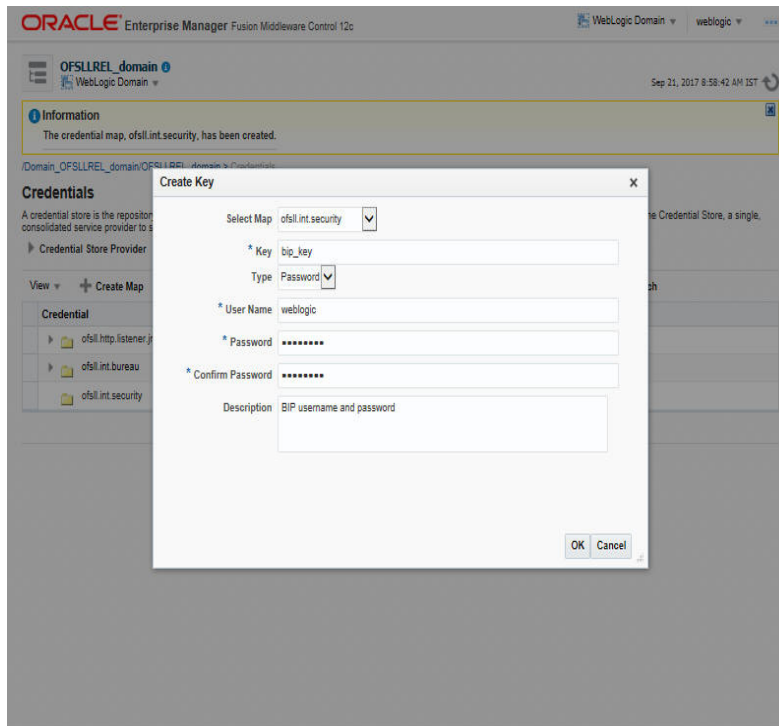
- Click 'OK'.



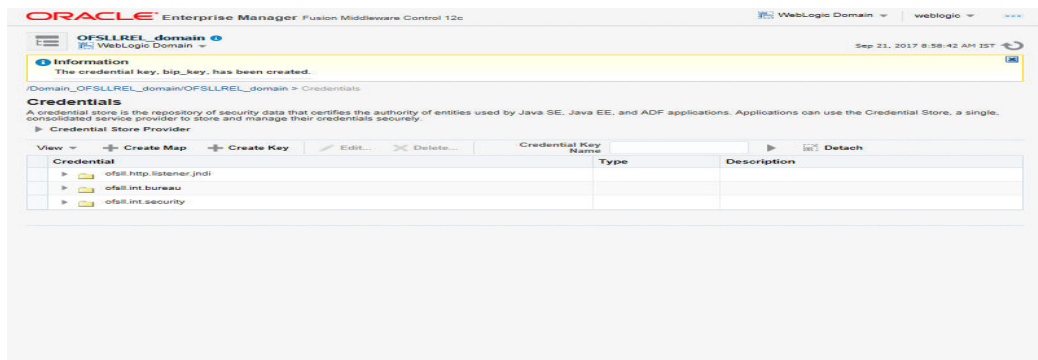
- Click 'Create Key' Button.



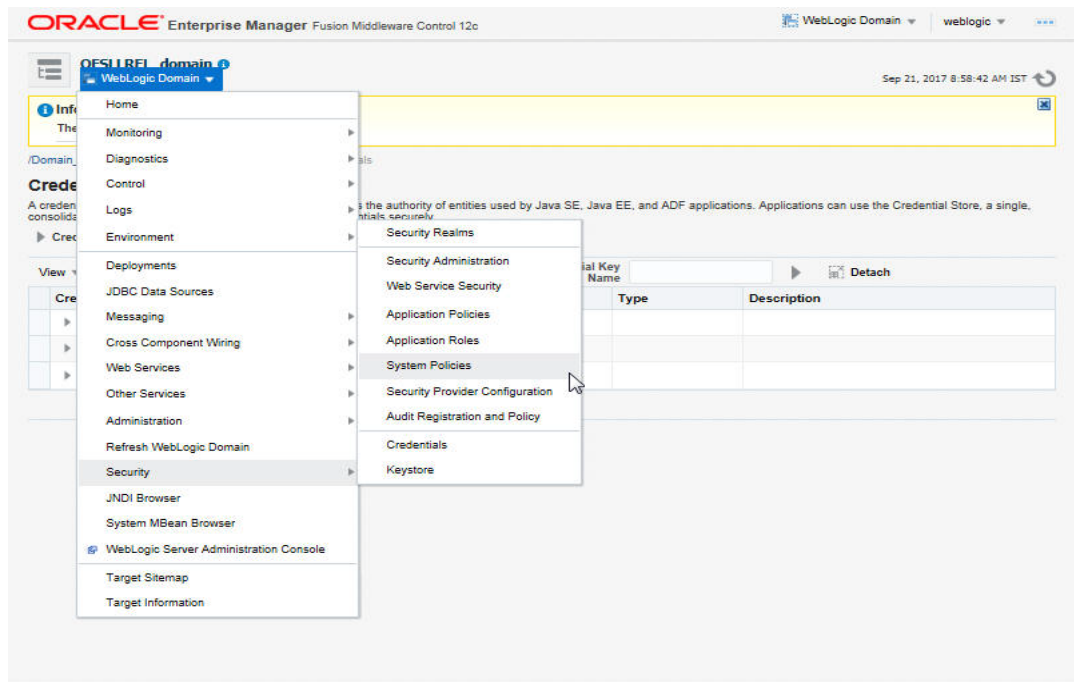
8. Enter the details as per your requirement. Specify 'User Name' and 'Password' of BI Publisher console.



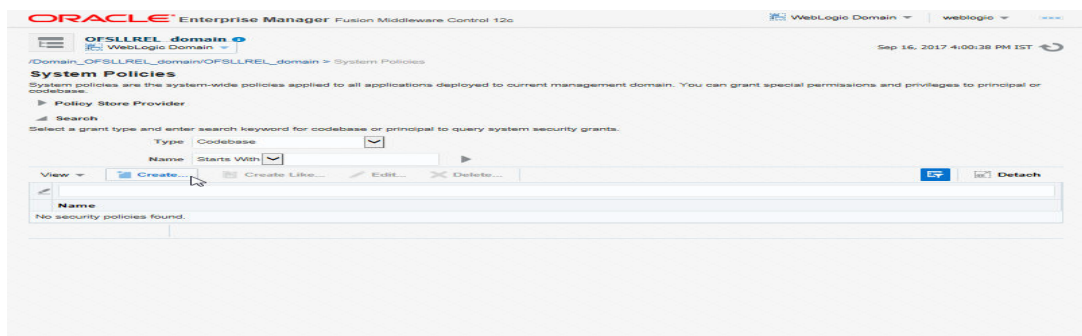
9. Click 'OK'. The following window is displayed.



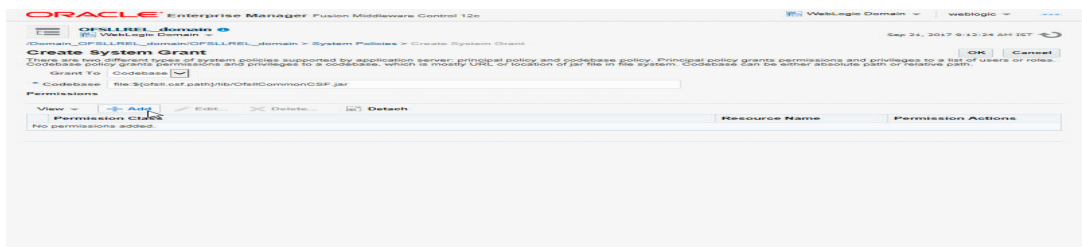
10. On the left panel, right click on the domain OFSLL\_domain > Security > System Policies. The following window is displayed.



11. Click 'Create'.



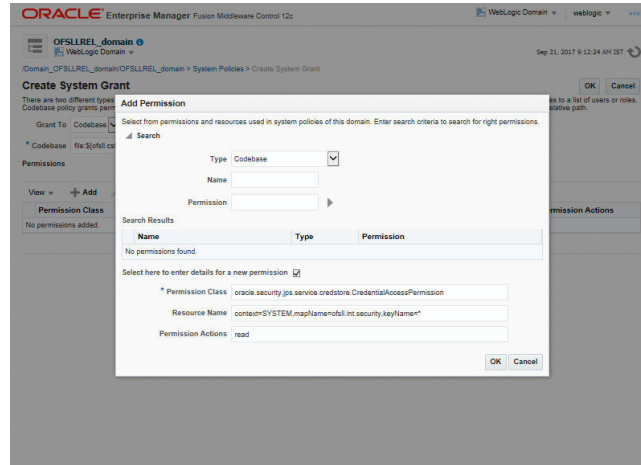
12. The following window is displayed. Enter the codebase as 'file:\${ofsl.csf.path}/lib/OfsllCommonCSF.jar' and click 'Add'.



13. The following window is displayed. Select the checkbox 'Select here to enter details for a new permission' and enter the following details as the first permission class.

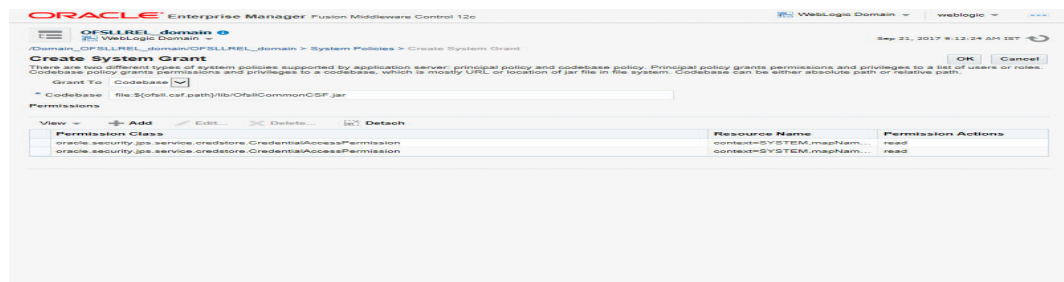
- Permission Class:  
oracle.security.jps.service.credstore.CredentialAccessPermission
- Resource Name: context=SYSTEM,mapName=ofsl.int.security,keyName=\*

- Permission Actions: read

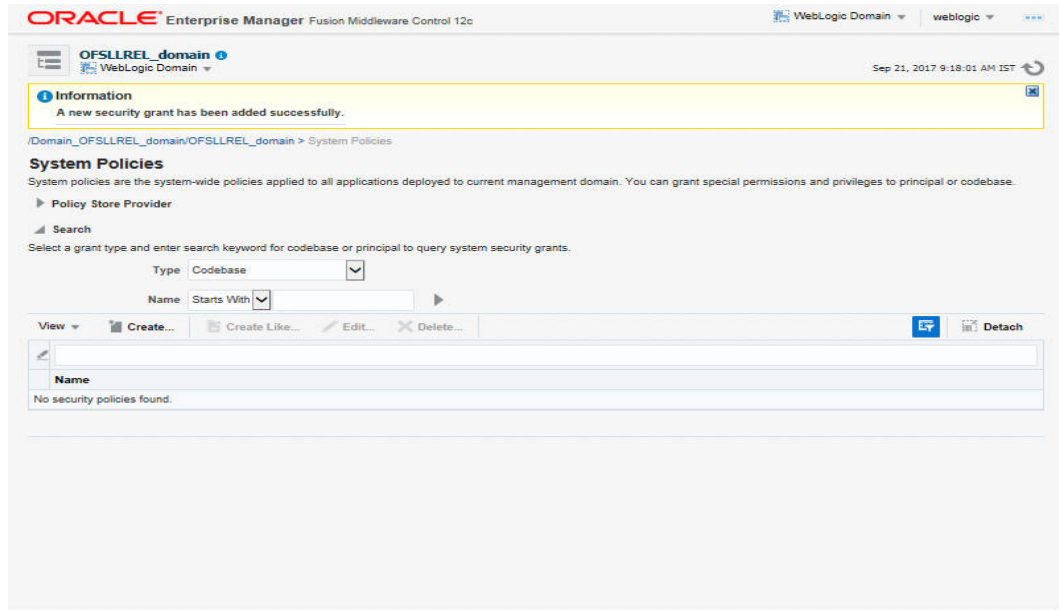


## Configuring JNDI Name for http Listener

1. Similarly, click Add to add the second permission class. Select the check box 'Select here to enter details for a new permission' and enter the following details as the second permission class.
  - Permission Class: oracle.security.jps.service.credstore.CredentialAccessPermission
  - Resource Name: context=SYSTEM,mapName=ofsl.http.listener.jndi,keyName=\*
  - Permission Actions: read
2. Click 'OK'. The following window is displayed.



3. Click 'OK'. The following window is displayed.



# 11. Launching Application

## Verifying Successful Application Deployment and Launching Application

Successful Application deployment can be verified by following:

- Making sure that the state is ACTIVE and health is OK in the Weblogic.
- Access and log into the application.

After you enable SSL you can launch the application via https:\\ protocol.

### To launch application

1. Verify if the deployed OFSLL application is 'Active'.

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

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

**Customize this table**

**Deployments**

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<input type="checkbox"/>	Name	State	Health	Type	Targets	Scope	Domain Partition
<input type="checkbox"/>	em_core_ppc_pojo_jar	Active		Library	AdminServer	Global	
<input type="checkbox"/>	em_error(12.4,12.1.0.4.0)	Active		Library	AdminServer	Global	
<input type="checkbox"/>	em_sdkcore_ppc_public_pojo_jar	Active		Library	AdminServer	Global	
<input type="checkbox"/>	jsf(2.0.1.0.0.0-2-2-8)	Active		Library	AdminServer, OFSLL_ManagedServer, WS_ManagedServer	Global	
<input type="checkbox"/>	jstl(1.2.1.2.0.1)	Active		Library	AdminServer, OFSLL_ManagedServer, WS_ManagedServer	Global	
<input type="checkbox"/>	log4j_jar(1.3.1.2.15)	Active		Library	AdminServer	Global	
<input type="checkbox"/>	odl.clickhistory(1.0.12.2.1)	Active		Library	AdminServer, OFSLL_ManagedServer, WS_ManagedServer	Global	
<input type="checkbox"/>	odl.clickhistory.webapp(1.0.12.2.1)	Active		Library	AdminServer, OFSLL_ManagedServer, WS_ManagedServer	Global	
<input type="checkbox"/>	ofsl144 (V14.4.0.0.0-b77)	Active	OK	Enterprise Application	OFSLL_ManagedServer	Global	
<input type="checkbox"/>	OfslQueueApp	Active	OK	Enterprise Application	OFSLL_ManagedServer	Global	

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WebLogic Server Version: 12.2.1.3.0  
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2. The URL of the OFSLL application will be of the format - https://<hostname>:<Port>/<ContextName>/faces/pages/OfslSignIn.jsf (Example: https://localhost:7003/ofsl/faces/pages/OfslSignIn.jsf)



3. Login with the user credentials that was created in Users Creation.

The screenshot shows the Oracle Financial Services Lending and Leasing application window. The title bar includes the Oracle logo and the text "Financial Services Lending and Leasing". The main content area features a "Sign In" dialog box with the instruction "Please enter userid and password". It contains two input fields: "User Id" and "Password", both preceded by an asterisk. Below the fields is a blue "Sign In" button. At the bottom of the window, a footer displays the version "Oracle Financial Services Lending and Leasing 14.4.0.0.0" and the copyright notice "Copyright © 1998,2017, Oracle and/or its affiliates. All rights reserved."

4. After successful login, the following screen is displayed

The screenshot shows the Oracle Financial Services Lending and Leasing application window after a successful login. The title bar includes the Oracle logo, the text "Financial Services Lending and Leasing", and a user welcome message "Welcome, FFUSER" with a dropdown arrow, an "Accessibility" link, and a "Sign Out" button. The main content area features a "SEARCH MENU" bar at the top. Below it is a "DashBoard" section with a list of items: "DashBoard", "Users Productivity", "System Monitor", "Producer Analysis", and "Process Files". At the bottom of the dashboard are several expandable sections: "Origination", "Servicing", "Collections", "WFP", "Tools", and "Setup". A "Warning" dialog box is displayed in the center, stating "You have previous open logins. (SYS-SYS-SYS-00005)" with an "OK" button. At the bottom of the window, a footer displays the copyright notice "Copyright © 1998,2017, Oracle and/or its affiliates. All rights reserved." and an "About" link.

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## 12. Installing Upgrade

There is an infrastructure upgrade required (from 12.2.1.0.0 fusion middleware to 12.2.1.3.0 fusion middleware) when upgrading from OFSLL 14.3.1.0.0 to OFSLL 14.4.0.0.0.

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### **Note**

OFSLL 14.4.0.0.0 can also be deployed on Fusion Middleware 12.2.1.0.0. Please apply the patch 26948858 on top of Fusion Middleware 12.2.1.0.0.

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