

Application Installation Guide

Oracle Financial Services Lending and Leasing

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Application Installation Guide
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Oracle Financial Services Software Limited

Oracle Park

Off Western Express Highway
Goregaon (East)
Mumbai, Maharashtra 400 063
India

Worldwide Inquiries:

Phone: +91 22 6718 3000

Fax: +91 22 6718 3001

www.oracle.com/financialservices/

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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 is a nine step process.

1. [Installing Software](#)
2. [Creating Domains, Repositories, Data Sources](#)
3. [Configuring Policies](#)
4. [Deploying Application](#)
5. [Enabling SSL](#)
6. [Launching Application](#)
7. [Mapping Enterprise Group with Application Role](#)
8. [Configuring Oracle BI Publisher for Application](#)
9. [Configuring JNDI name for HTTP Listener](#)

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. Sun JDK Version 1.8.0_66 or above <http://www.oracle.com/technetwork/java/javase/downloads/index.html>
 2. Oracle WebLogic Server 12c Version 12.2.1.0.0
(<http://www.oracle.com/technetwork/middleware/weblogic/downloads/index.html>)
Navigate to Fusion Middleware Infrastructure Installer.

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.

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

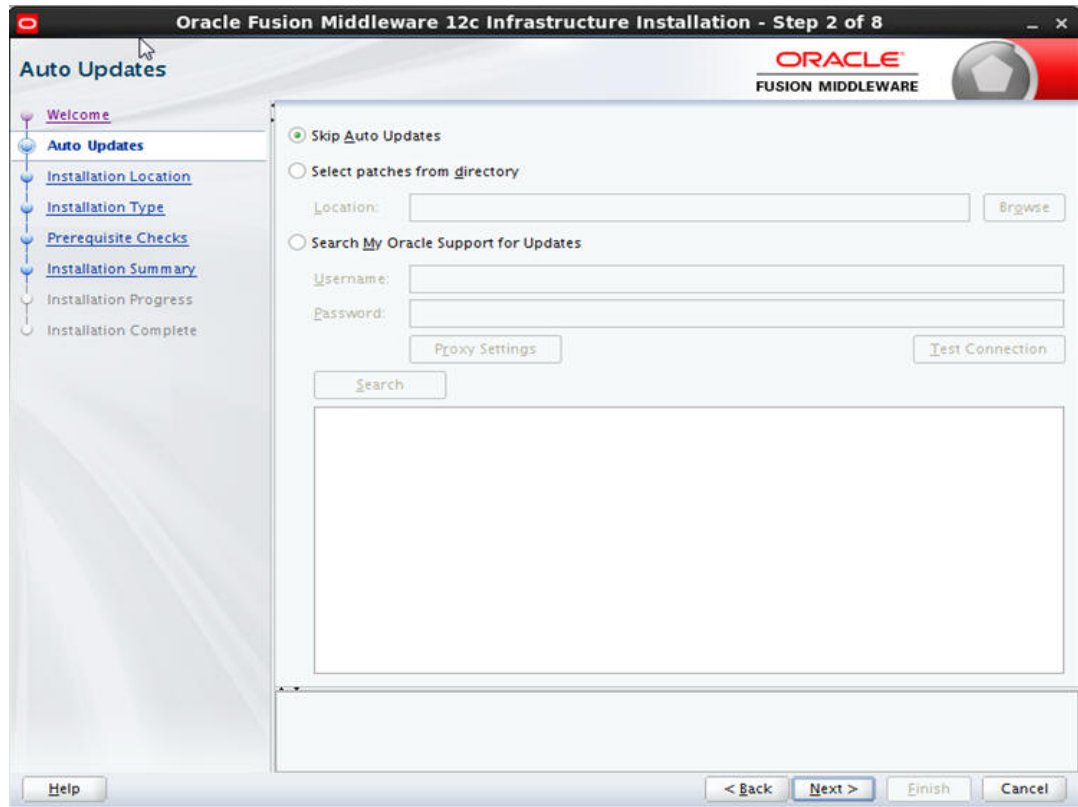
2.1 Installing Oracle WebLogic Server 12c

To install using generic Weblogic installer -

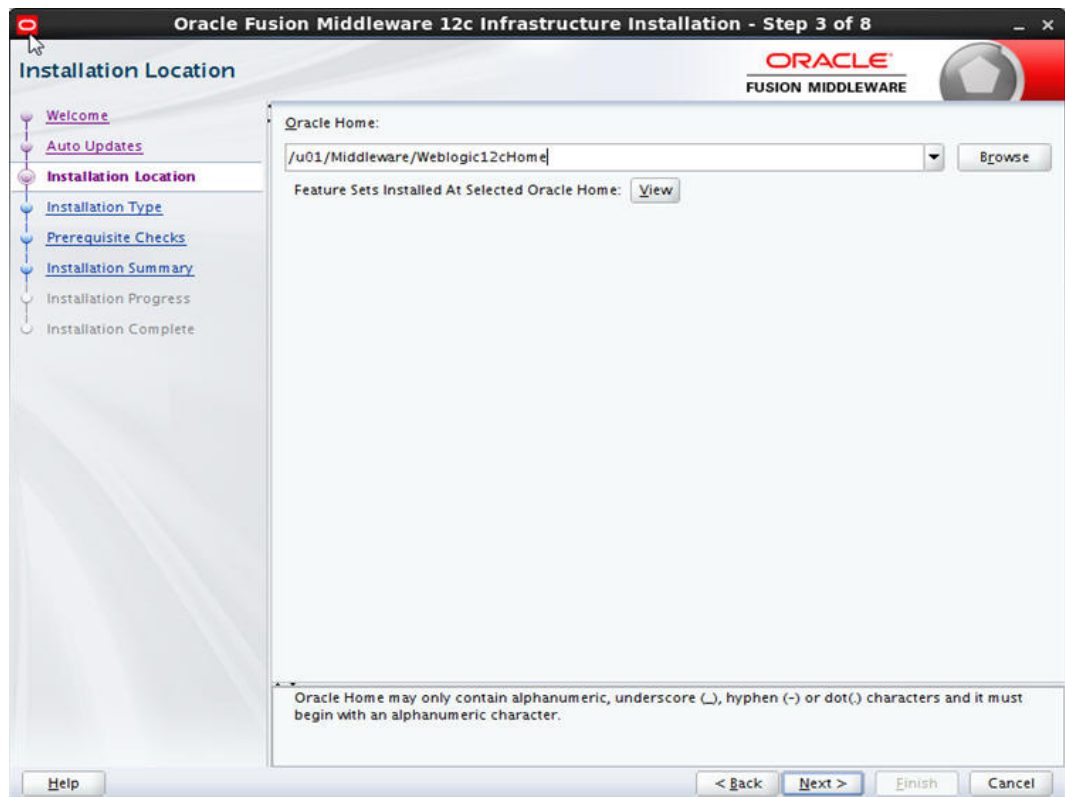
1. Run the command → `java -jar fmw_12.2.1.0.0_infrastructure.jar`
2. Welcome screen is displayed as shown below.



3. Click **Next** to continue.

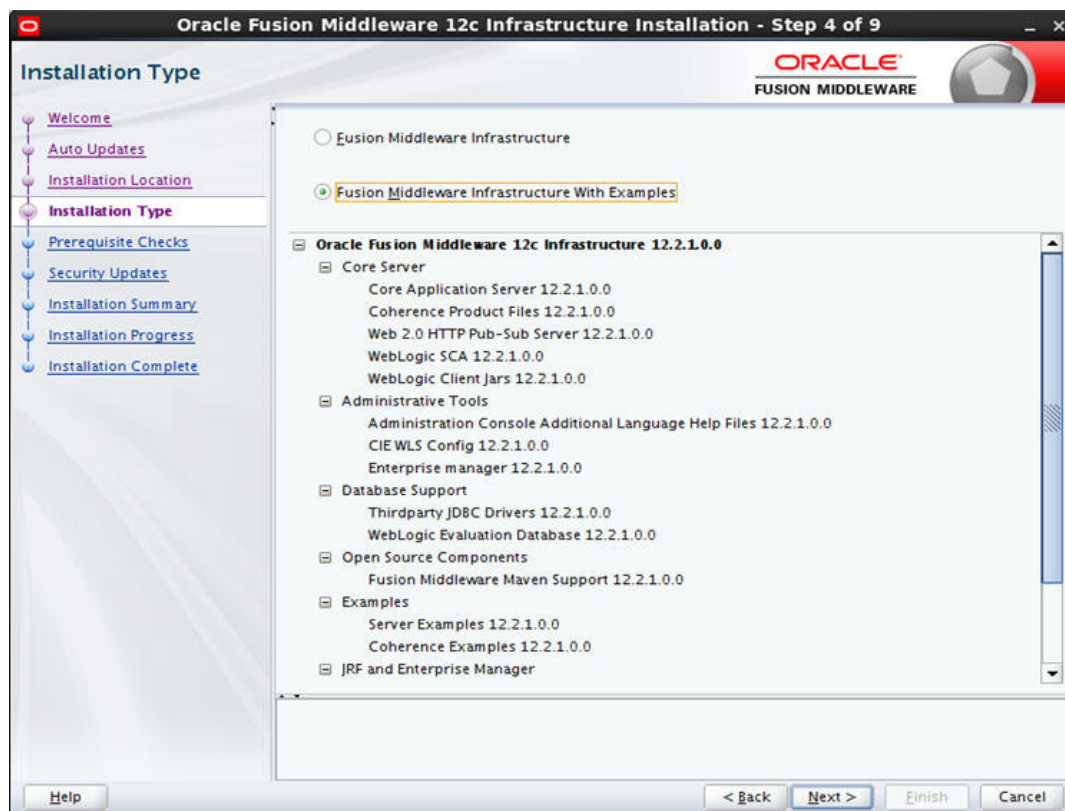


4. Select **Skip Auto Updates** and Click **Next**.



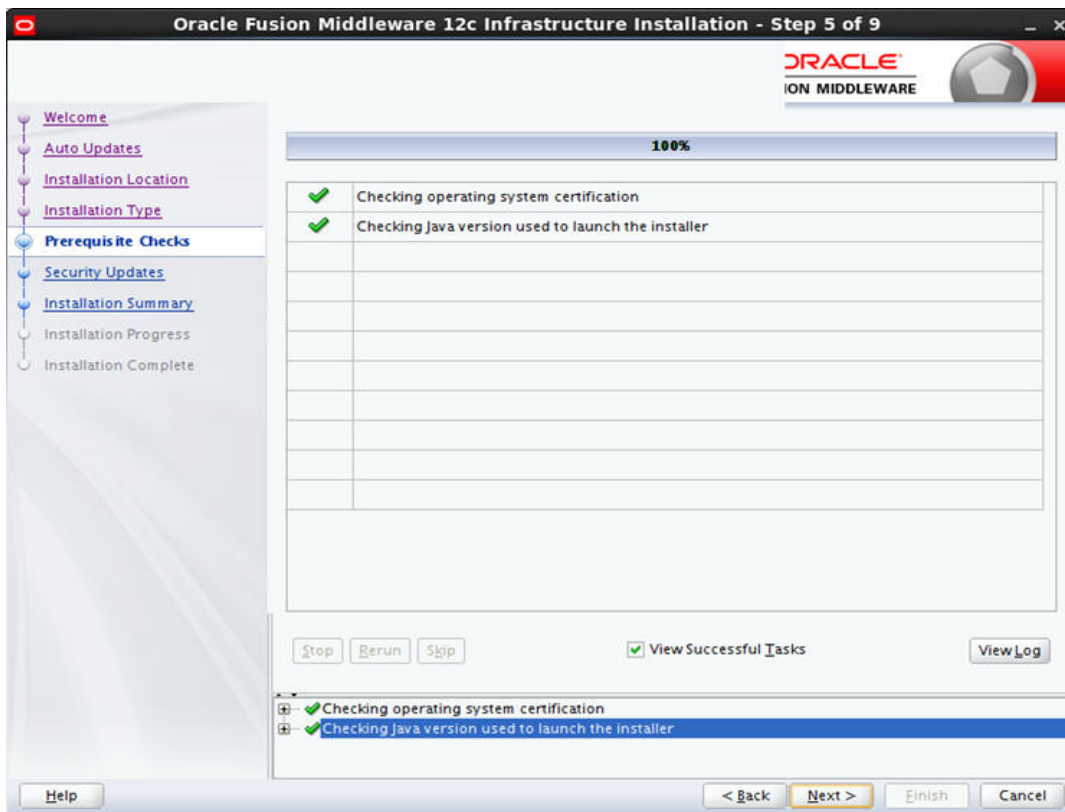
5. Specify the path for **Middleware Home Directory**, and then click **Next**.

6. The following window is displayed..

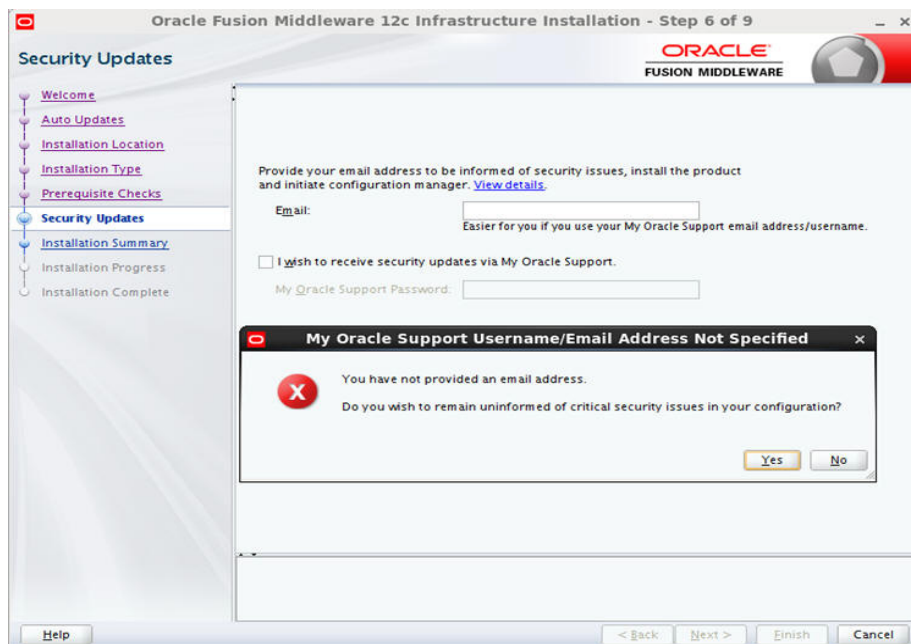


7. Select Fusion Middleware Infrastructure with Examples.

8. Click **Next** to continue.

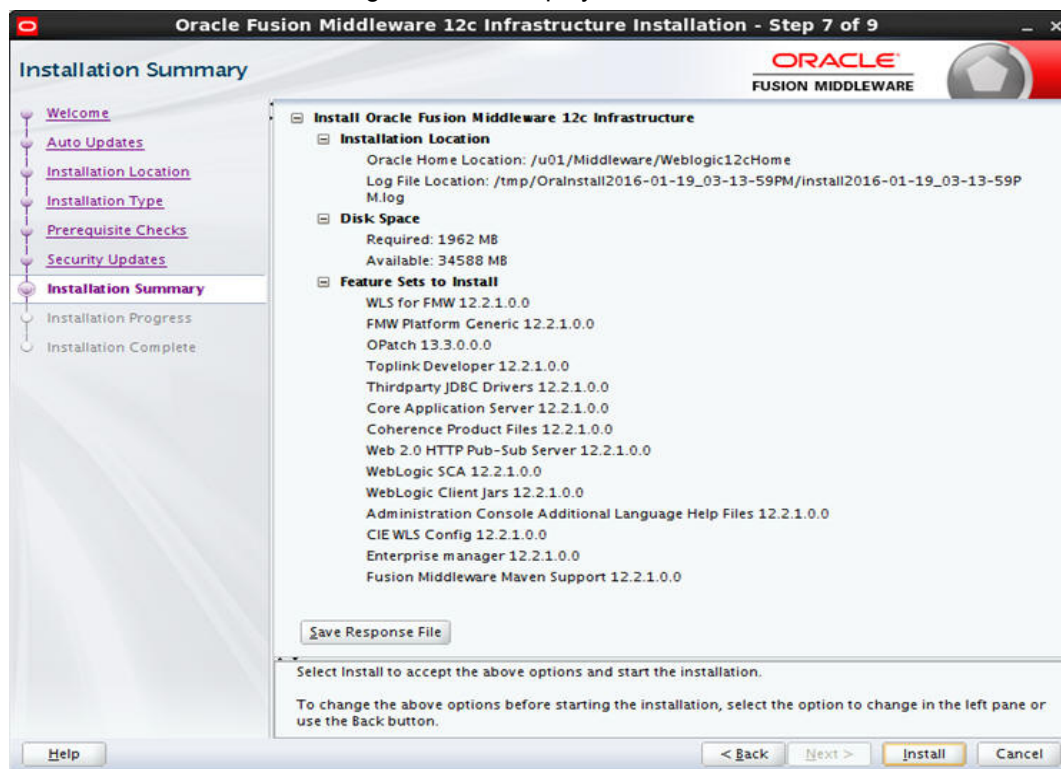


9. Click **Next** to continue..

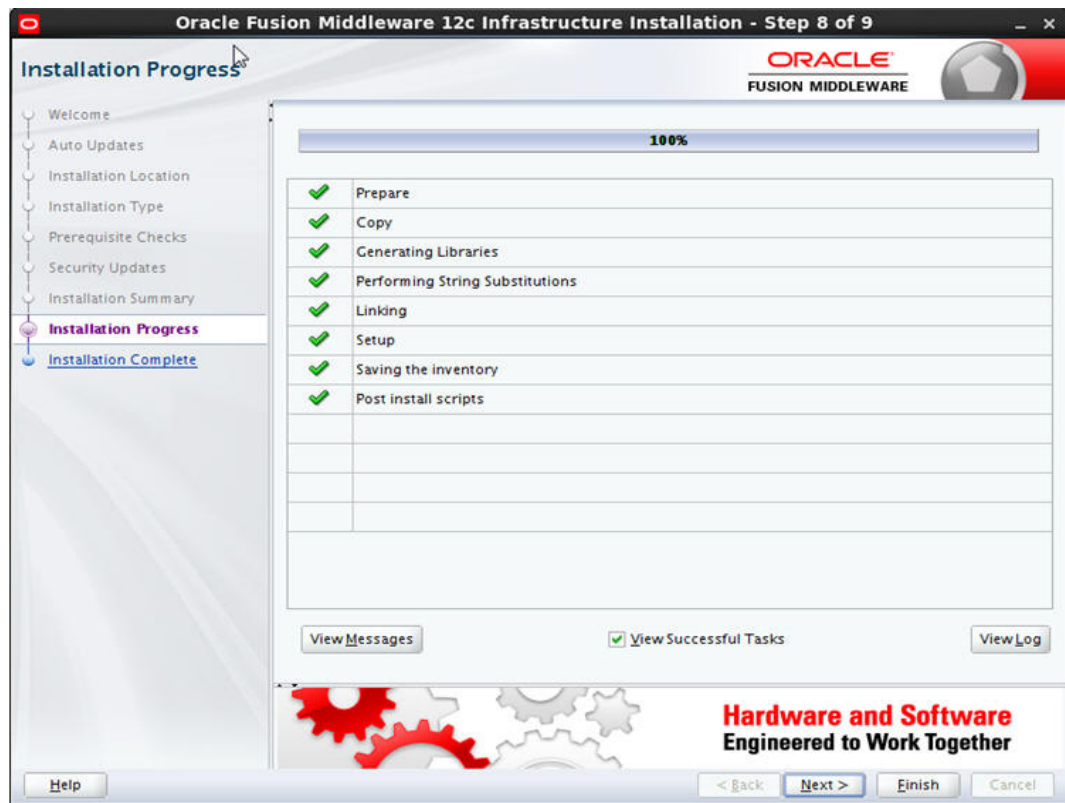


10. Uncheck the check box as in the above screen and click Next. Confirmation window is displayed. Click on Yes.

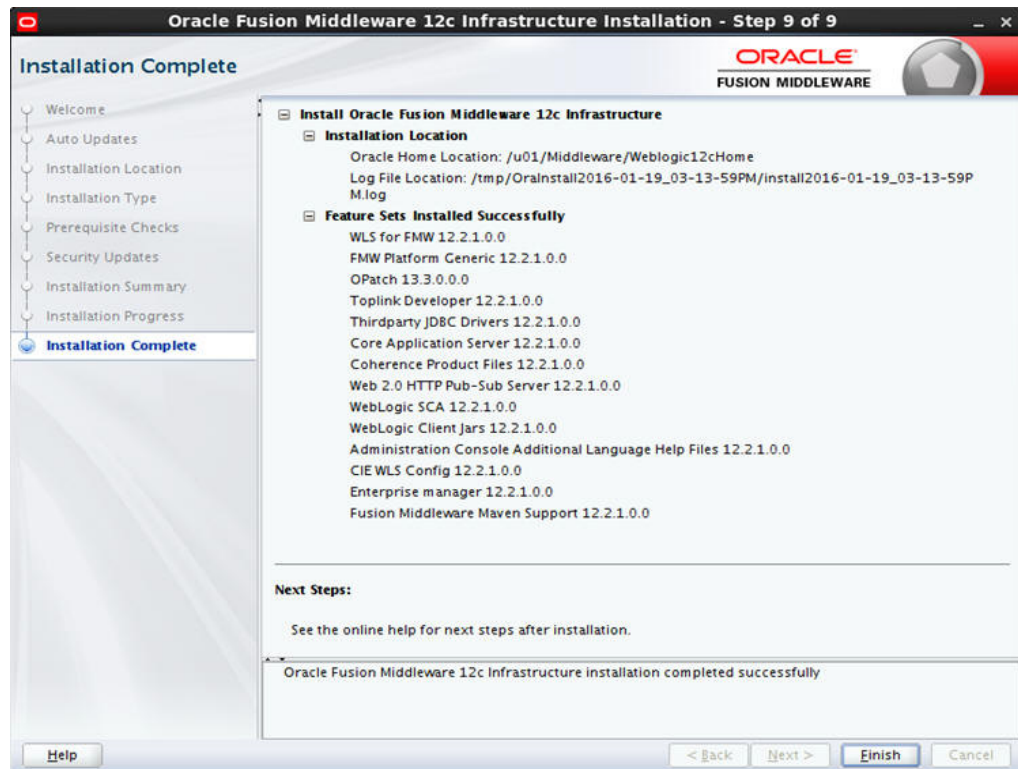
11. Click on Next. The following window is displayed.



12. Click on **Install**. The weblogic installation starts. After it is done the following window is displayed..



13. Click on **Next**...



14. Click **Finish** to close the window.

3. Creating Domains, Repositories, Data Sources

3.1 Creating Domain and Servers

1. In Unix/Linux machine, once the Oracle WebLogic Server is installed, navigate to the following path.

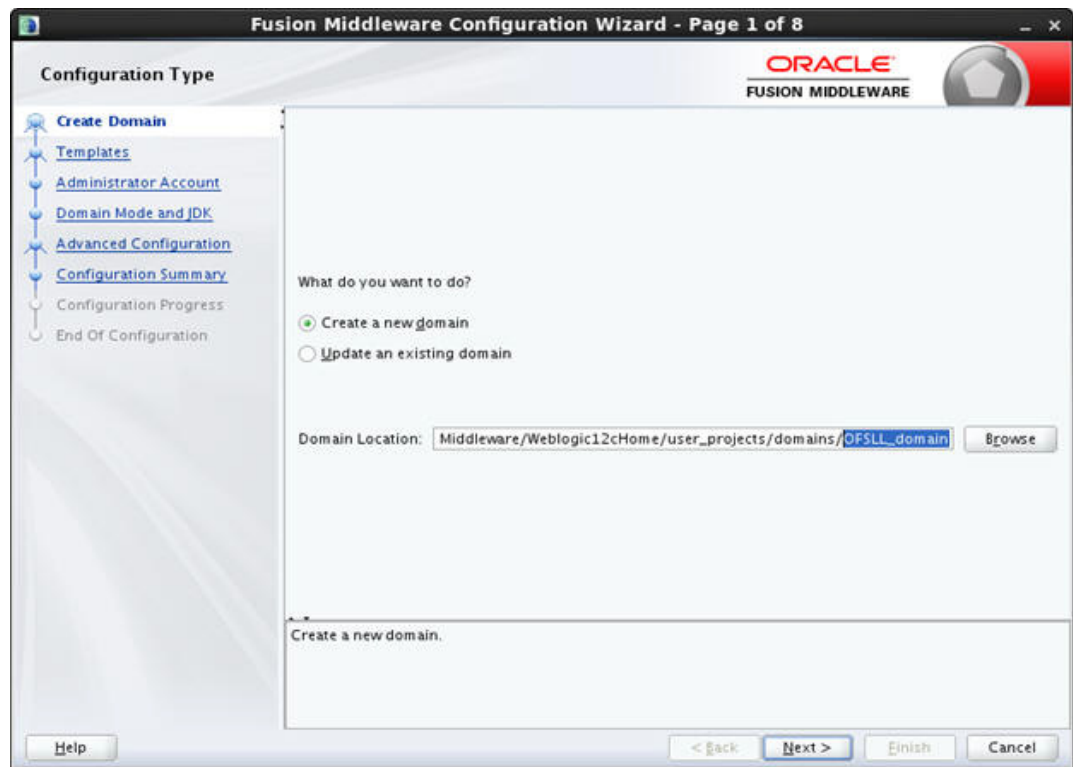
<WL_HOME>/wlserver/common/bin

Note

Use XManager for remote UNIX/LINUX machine. Refer [XManager Usage](#).

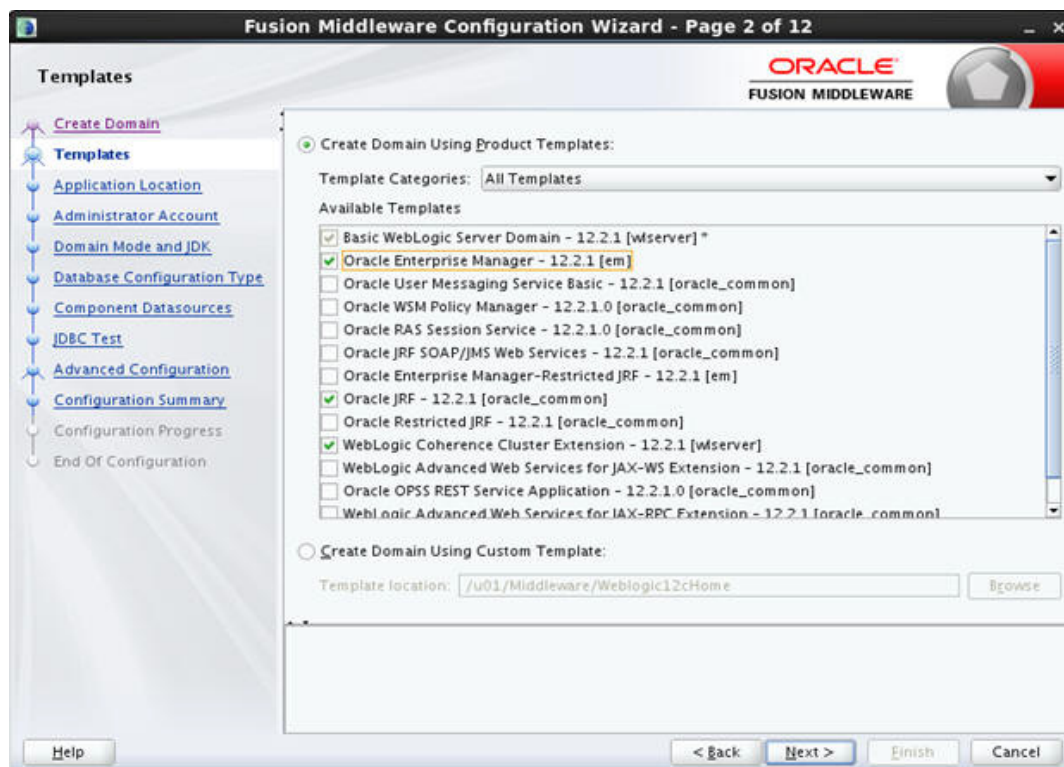
Here, WL_HOME is **/home/Oracle/Middleware**.

2. In Unix run **config.sh**,
3. Click Configuration Wizard icon.



4. Select **Create a new domain** and give the Domain Location.

5. Click **Next** to continue. The following window is displayed.

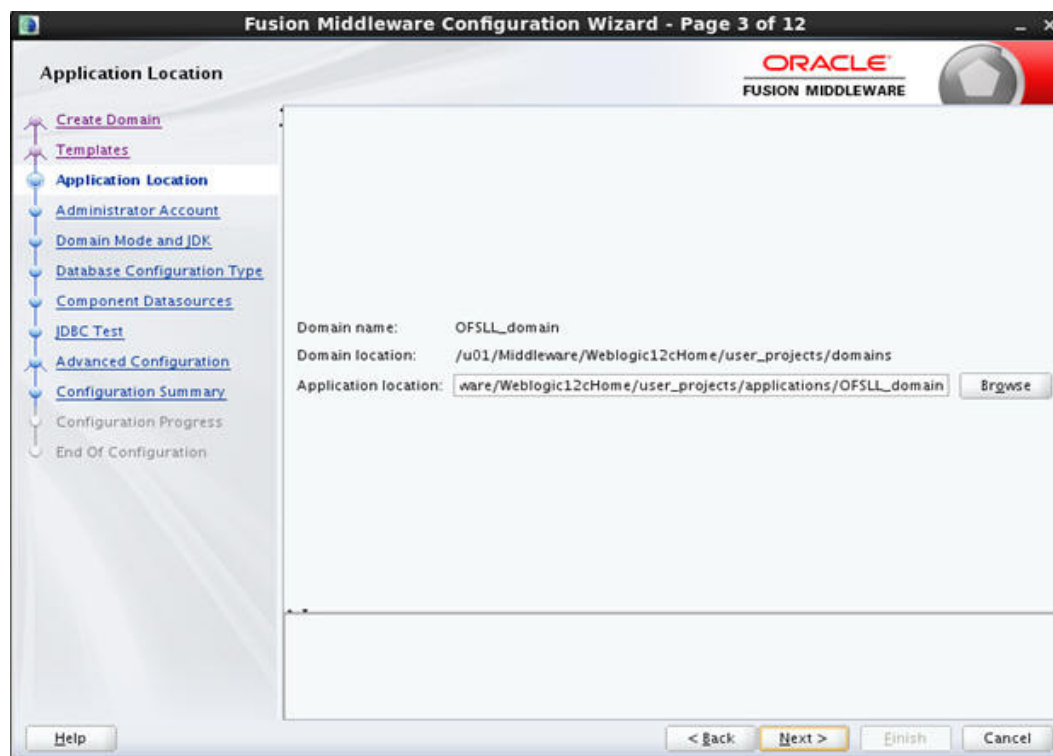


6. Select **Create Domain Using Product Templates** option.

7. Select **Oracle Enterprise Manager - 12.2.1 [em]** check box.

8. Select **Oracle JRF - 12.2.1 [oracle_common]** check box.

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



10. Enter **Domain Name** and click **Next**. The following window is displayed.

11. Edit Domain Location, if needed.

Fusion Middleware Configuration Wizard - Page 4 of 12

ORACLE
FUSION MIDDLEWARE

Administrator Account

- Create Domain
- Templates
- Application Location
- Administrator Account**
- Domain Mode and JDK
- Database Configuration Type
- Component Datasources
- JDBC Test
- Advanced Configuration
- Configuration Summary
- Configuration Progress
- End Of Configuration

Name: weblogic

Password:

Confirm Password:

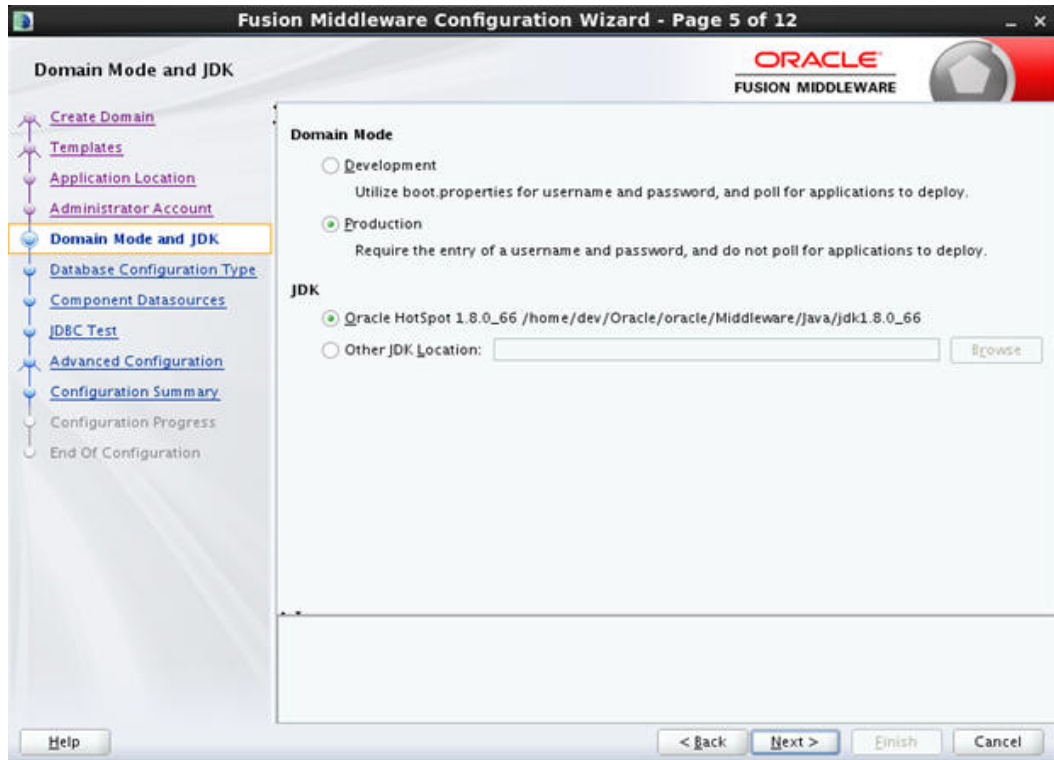
Must be the same as the password. Password must contain at least 8 alphanumeric characters with at least one number or special character.

Help < Back Next > Finish Cancel

12. Enter credentials for the following:

- Name
- User password
- Confirm user password
- Description

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

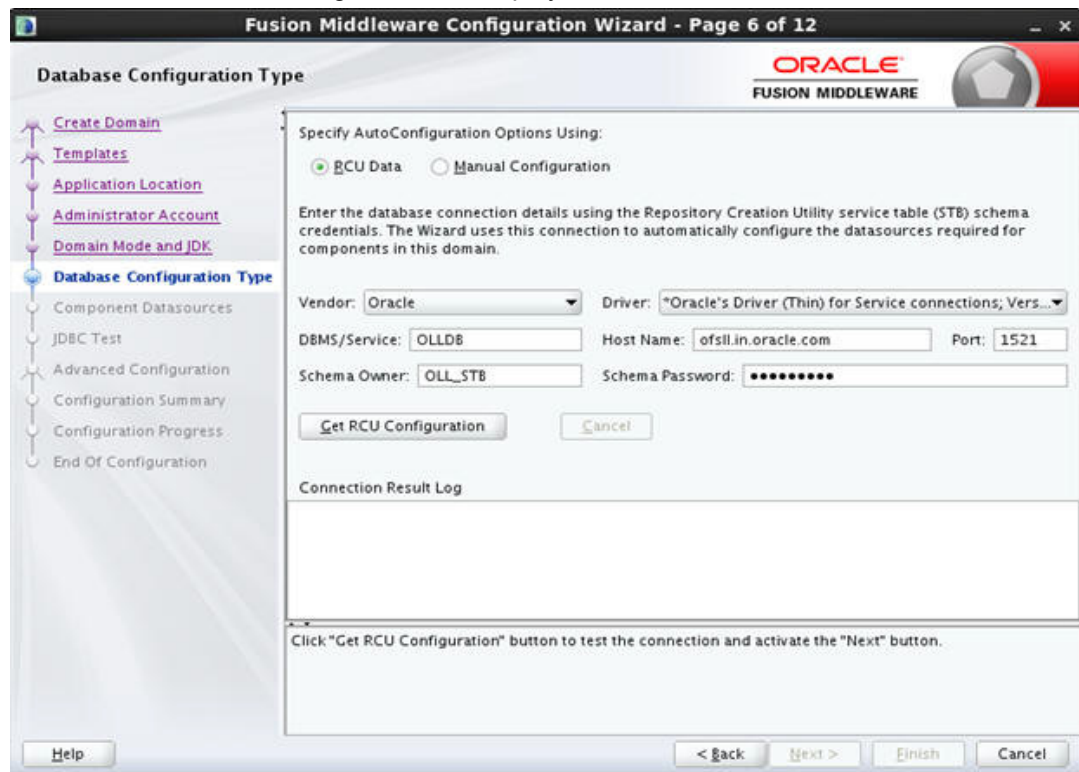


14. Select **Production Mode** and **JDK** from **Available JDKs**

OR

Select **Other JDK** option to select any other JDK.

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



16. Provide the RCU data and click on Get RCU Configuration. The following window is displayed.

Database Configuration Type

Specify AutoConfiguration Options Using:

☒ RCU Data ☐ Manual Configuration

Enter the database connection details using the Repository Creation Utility service table (STB) schema credentials. The Wizard uses this connection to automatically configure the datasources required for components in this domain.

Vendor: Oracle Driver: *Oracle's Driver (Thin) for Service connections; Vers...

DBMS/Service: OLDB Host Name: ofsil.in.oracle.com Port: 1521

Schema Owner: OLL_STB Schema Password:

Connection Result Log

Connecting to the database server...OK.
Retrieving schema data from database server...OK.
Binding local schema components with retrieved data...OK.

Successfully Done.

Click "Next" button to continue.

17. Click on **Next** to continue..

JDBC Component Schema

Vendor: Driver:

DBMS/Service: Host Name: Port:

Schema Owner: Schema Password:

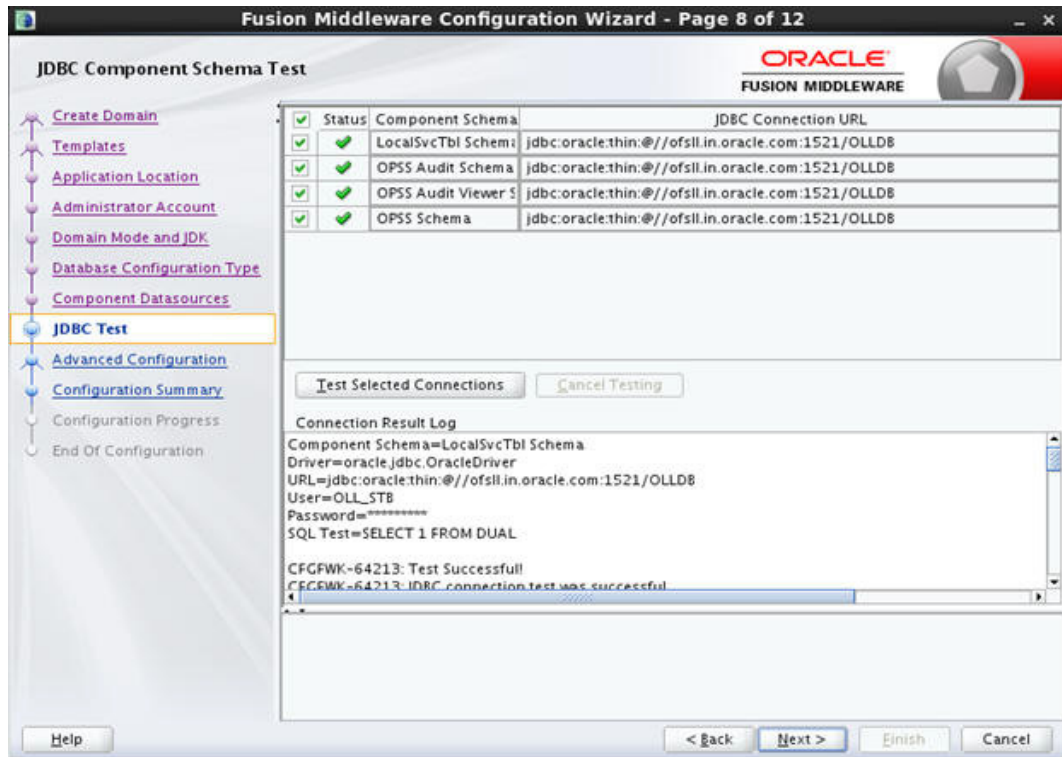
Oracle RAC configuration for component schemas:

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

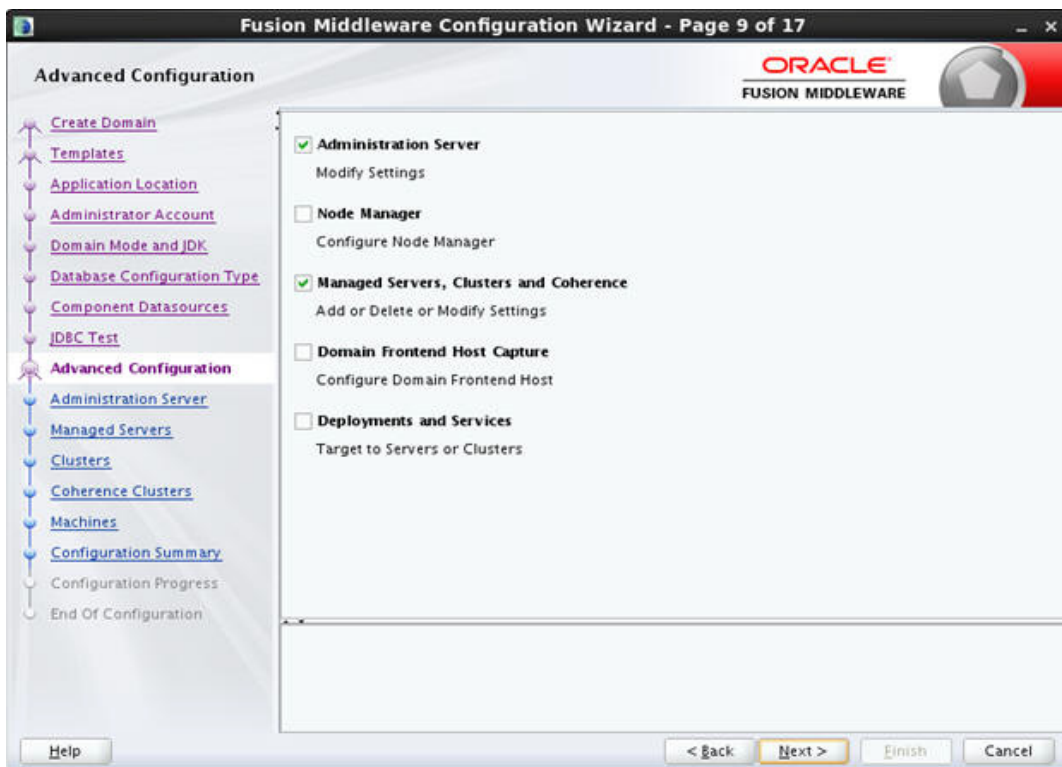
Edits to the data above will affect all checked rows in the table below:

<input type="checkbox"/>	Component Schema	DBMS/Service	Host Name	Port	Schema Owner	Schema Password
<input type="checkbox"/>	LocalSvcTbl Schema	OLDB	ofsil.in.oracle.coi	1521	OLL_STB
<input type="checkbox"/>	OPSS Audit Schema	OLDB	ofsil.in.oracle.coi	1521	OLL_JAU_APPE
<input type="checkbox"/>	OPSS Audit Viewer Sch	OLDB	ofsil.in.oracle.coi	1521	OLL_JAU_VIEW
<input type="checkbox"/>	OPSS Schema	OLDB	ofsil.in.oracle.coi	1521	OLL_OPSS

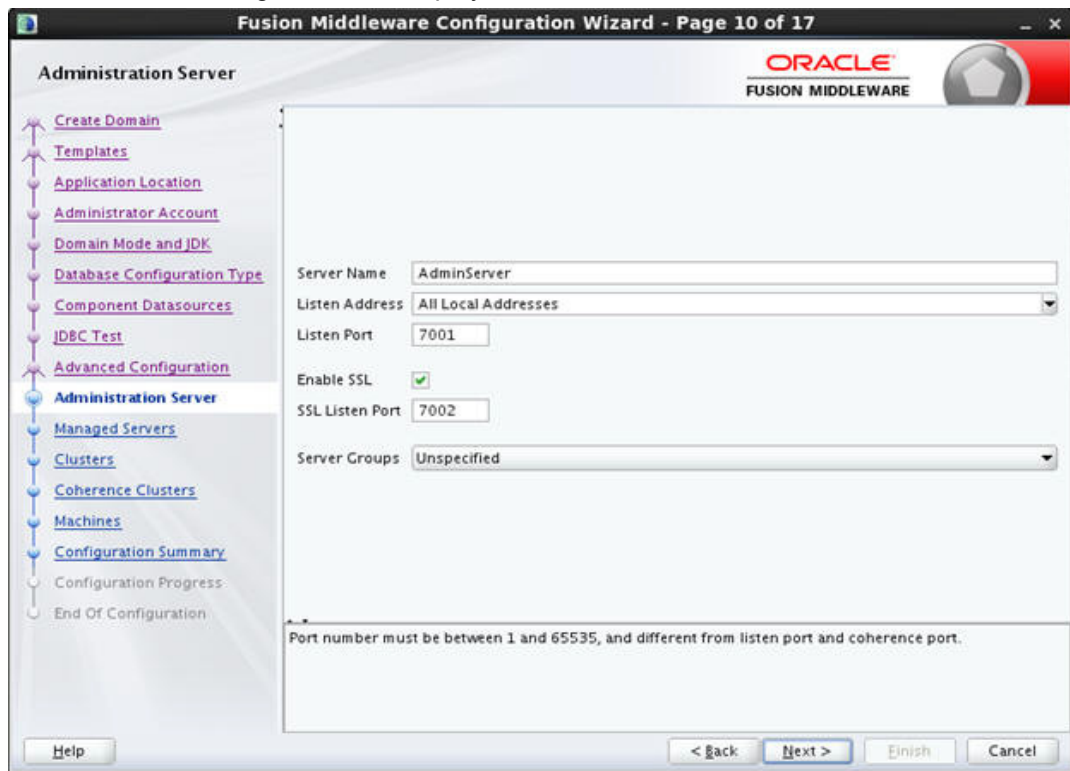
18. . Click on **Next** to continue.



19. Click on **Next** to continue.



20. Select Administration Server and Managed Servers, Clusters and Machines and click Next. The following window is displayed..

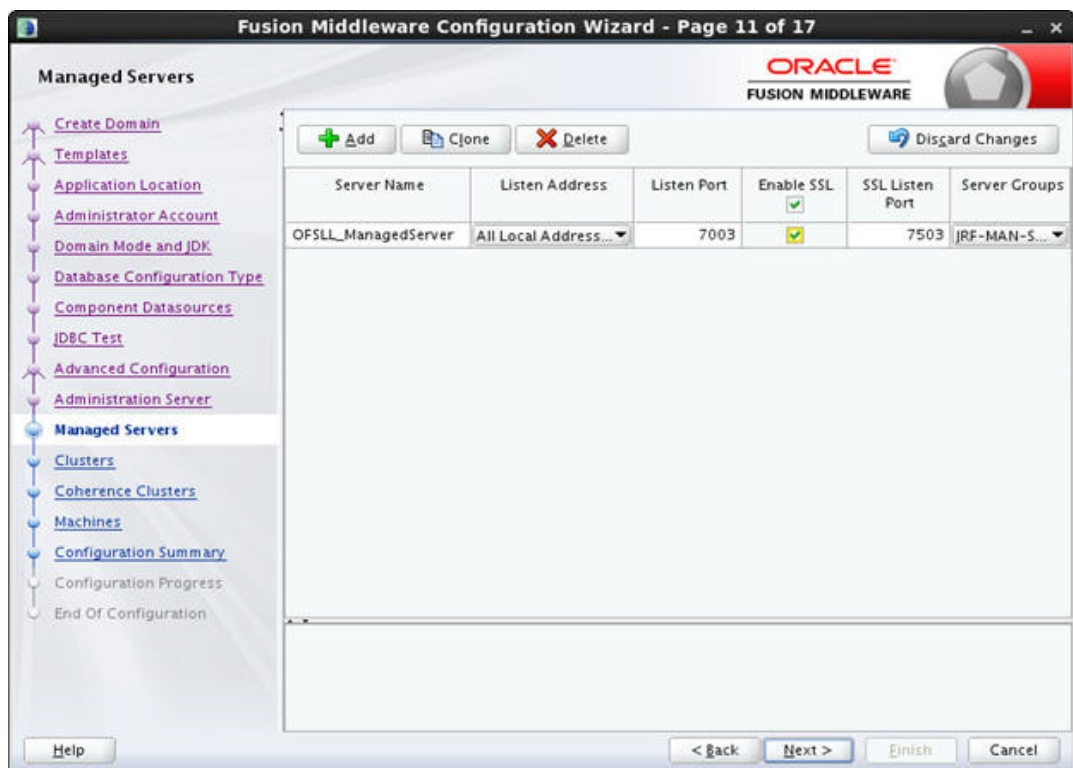


The screenshot shows the 'Administration Server' configuration page. The left sidebar contains a tree view with the following items: Create Domain, Templates, Application Location, Administrator Account, Domain Mode and JDK, Database Configuration Type, Component Datasources, JDBC Test, Advanced Configuration, Administration Server (selected), Managed Servers, Clusters, Coherence Clusters, Machines, 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: 7001
- Enable SSL: ☒
- SSL Listen Port: 7002
- Server Groups: Unspecified

A note at the bottom states: 'Port number must be between 1 and 65535, and different from listen port and coherence port.' The bottom of the window has buttons for Help, < Back, Next >, Finish, and Cancel.

21. Enter Administration Server Name and Listen Port details. Check the SSL port and click **Next**. The following window is displayed.

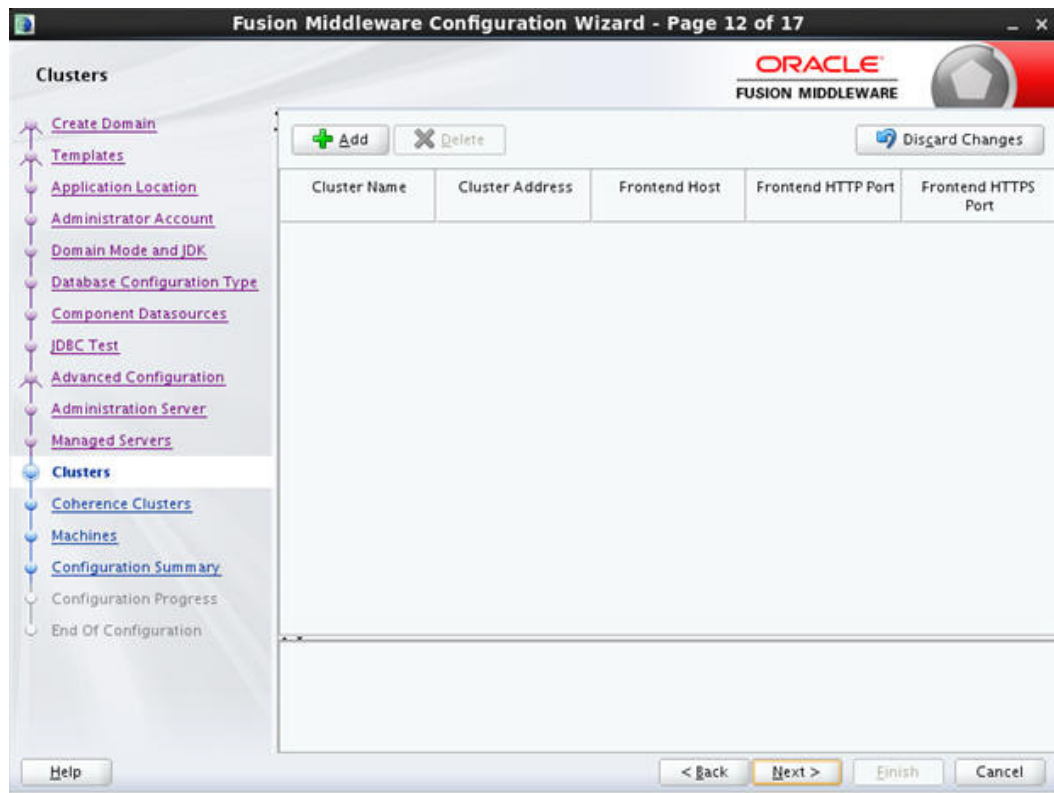


The screenshot shows the 'Managed Servers' configuration page. The left sidebar is the same as in the previous window, with 'Managed Servers' selected. The main area contains a table with the following columns: Server Name, Listen Address, Listen Port, Enable SSL, SSL Listen Port, and Server Groups. The table has one row with the following data:

Server Name	Listen Address	Listen Port	Enable SSL	SSL Listen Port	Server Groups
OFSLL_ManagedServer	All Local Address...	7003	<input checked="" type="checkbox"/>	7503	JRF-MAN-S...

At the top of the table area are buttons: + Add, Clone, X Delete, and Discard Changes. The bottom of the window has buttons for Help, < Back, Next >, Finish, and Cancel.

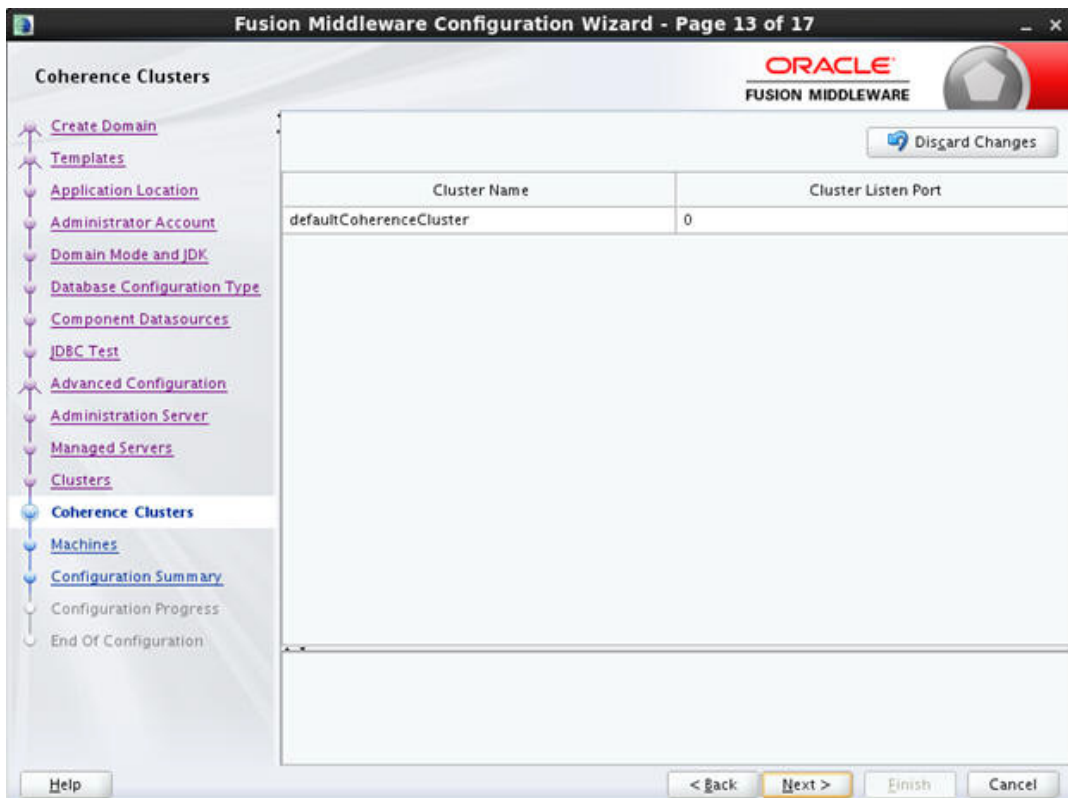
22. Click Add button. Enter Name and Listen Port details in Configure Managed Servers window. Check the SSL port and click Next. The following window is displayed.



The screenshot shows the 'Clusters' configuration page of 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 (selected), Coherence Clusters, Machines, Configuration Summary, Configuration Progress, and End Of Configuration. The main area has a table with the following columns: Cluster Name, Cluster Address, Frontend Host, Frontend HTTP Port, and Frontend HTTPS Port. Above the table are buttons for '+ Add', 'X Delete', and 'Disgard Changes'. At the bottom are buttons for '< Back', 'Next >', 'Finish', and 'Cancel'.

Cluster Name	Cluster Address	Frontend Host	Frontend HTTP Port	Frontend HTTPS Port
--------------	-----------------	---------------	--------------------	---------------------

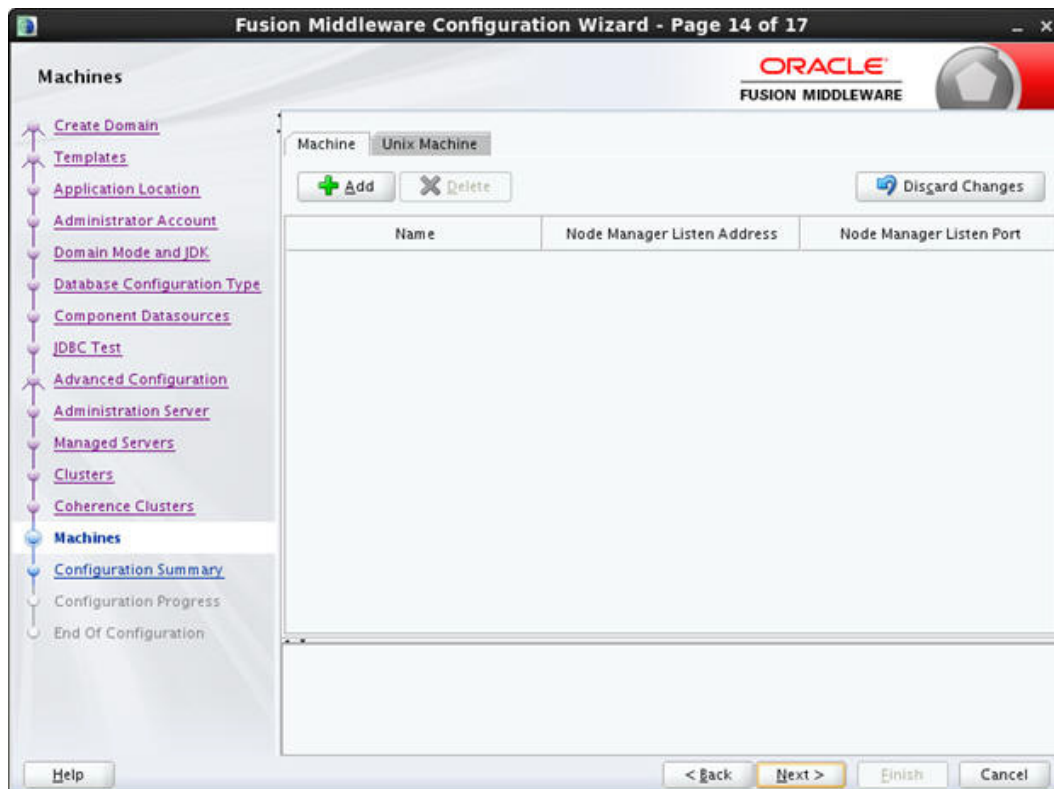
23. Configure as required and click **Next**. The following window is displayed.



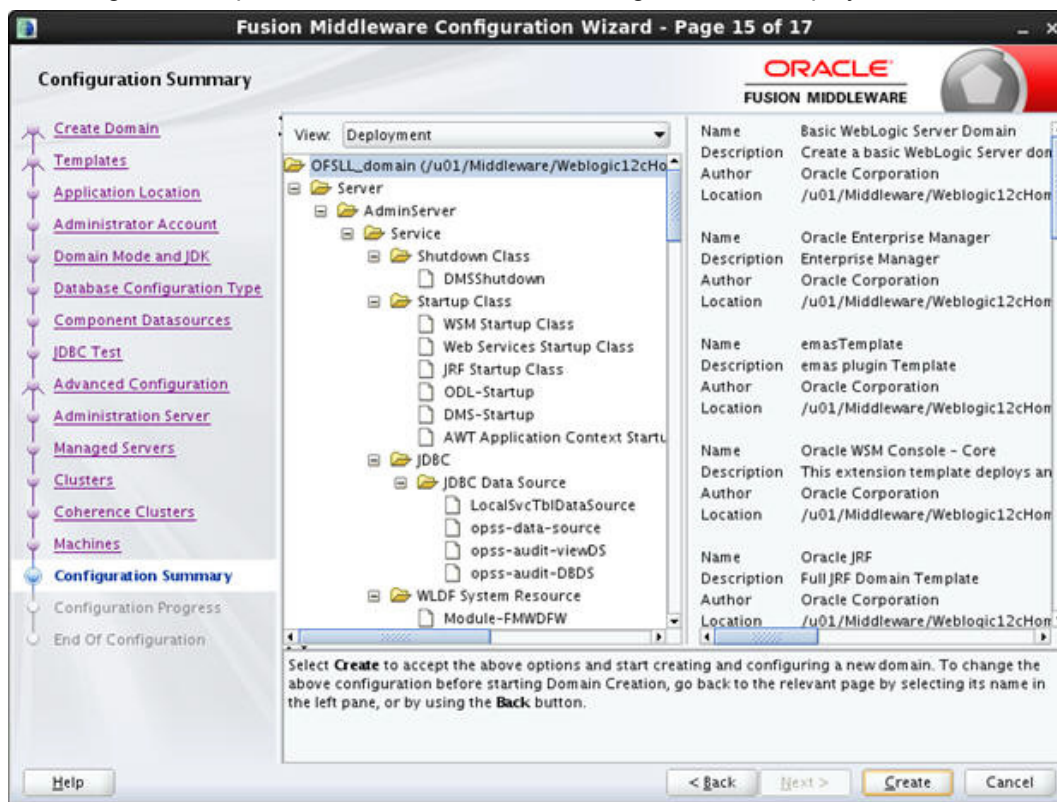
The screenshot shows the 'Coherence Clusters' configuration page of the Fusion Middleware Configuration Wizard. The left sidebar is the same as in the previous screenshot, with 'Coherence Clusters' selected. The main area has a table with the following columns: Cluster Name and Cluster Listen Port. Above the table are buttons for 'Disgard Changes'. At the bottom are buttons for '< Back', 'Next >', 'Finish', and 'Cancel'. The table contains one row with the following data:

Cluster Name	Cluster Listen Port
defaultCoherenceCluster	0

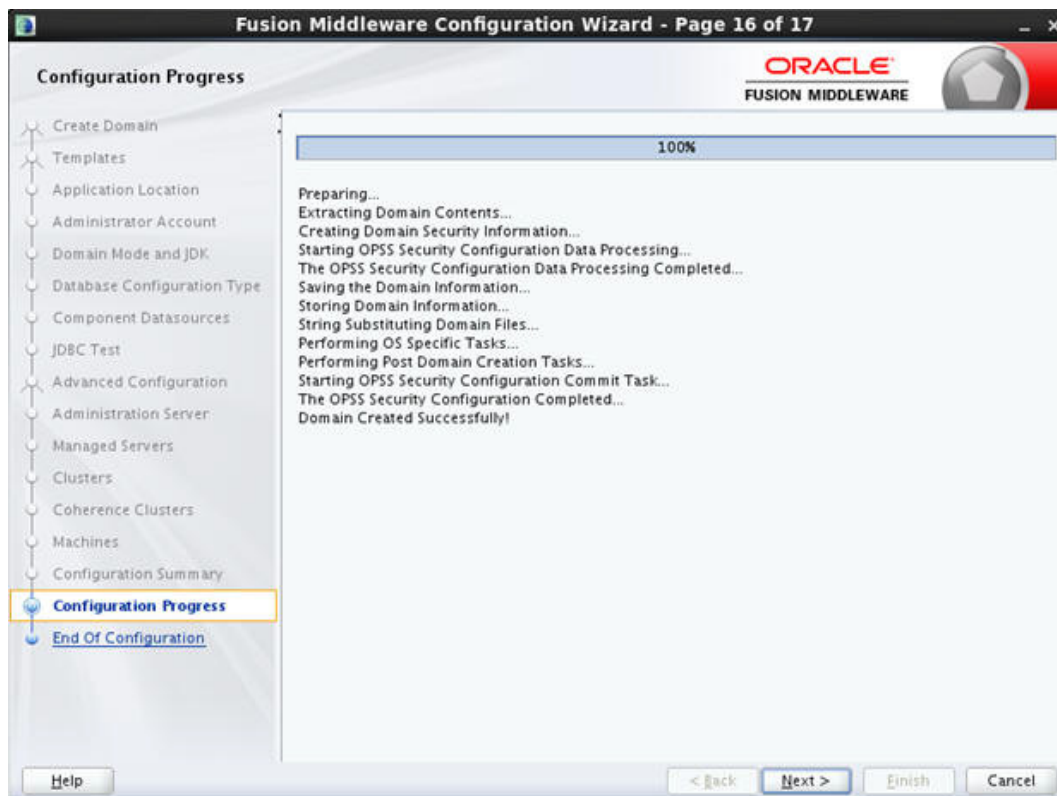
24. Configure as required and click Next. The following window is displayed.



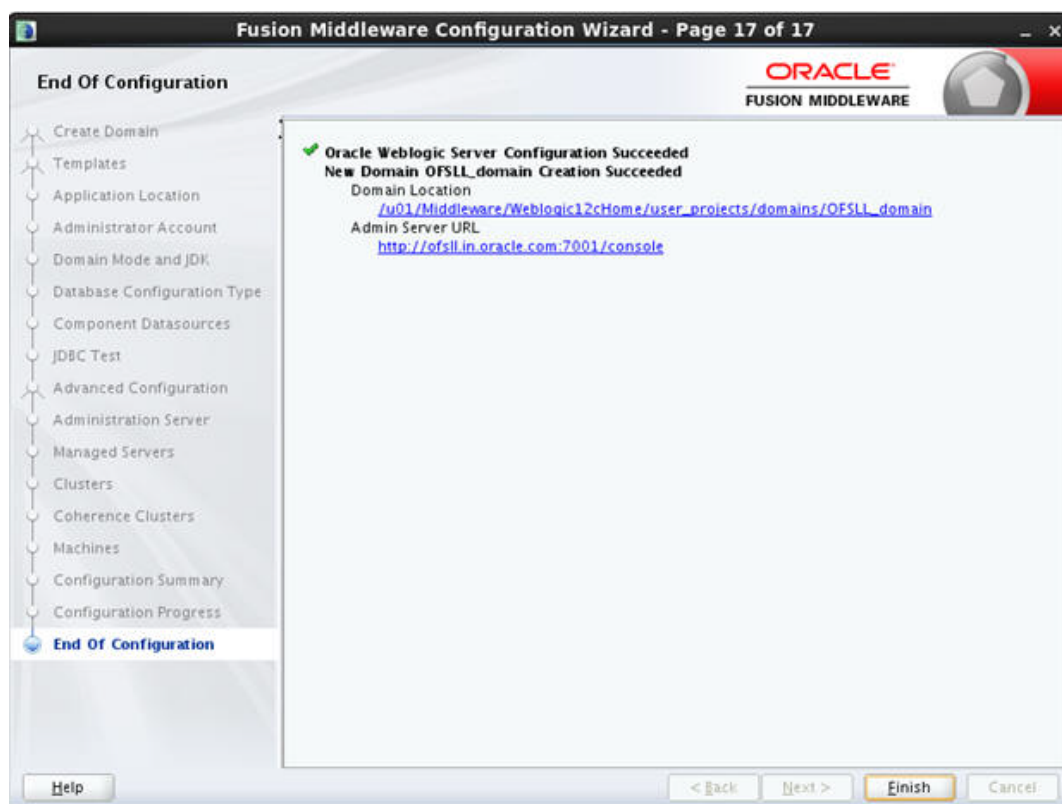
25. Configure as required and click Next. The following window is displayed.



26. Click Create. The following window is displayed.



27. Click **Next** to continue.



28. 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"
```

29. 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 &
```

30. 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 "&"

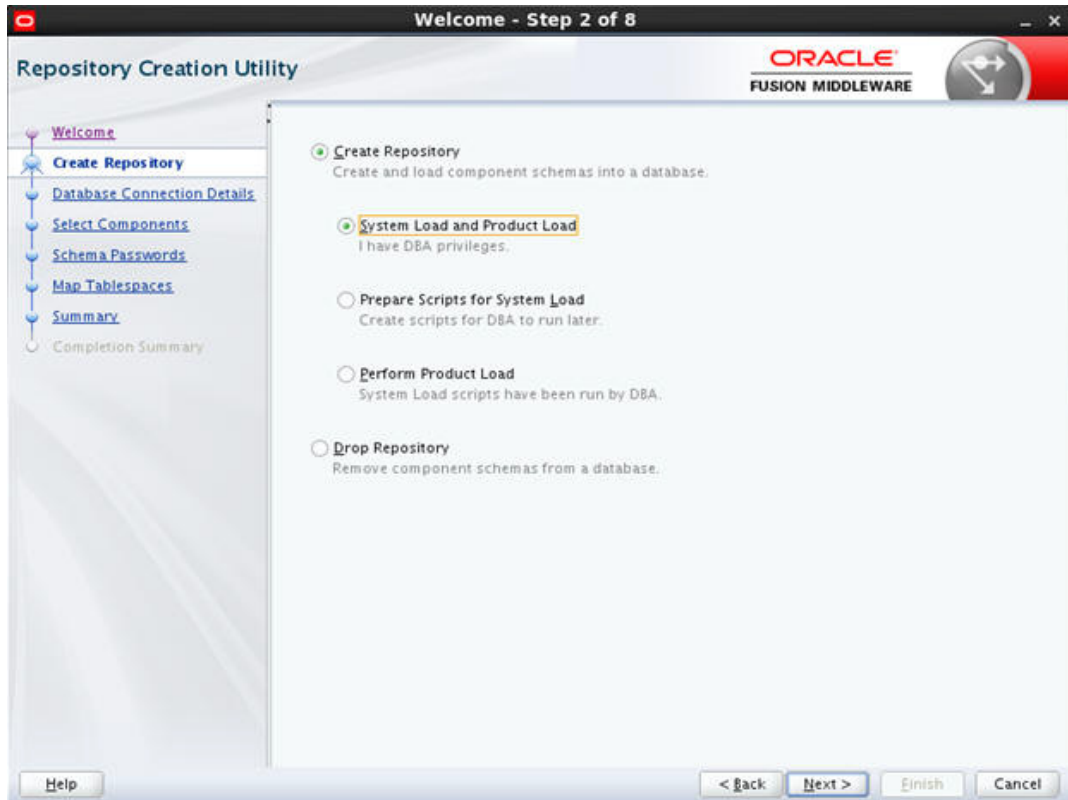
```
$ nohup ./startManagedWebLogic.sh {ManagedServer_name} {AdminServer URL} &
```

3.2 Creating Schemas using Repository Creation Utility

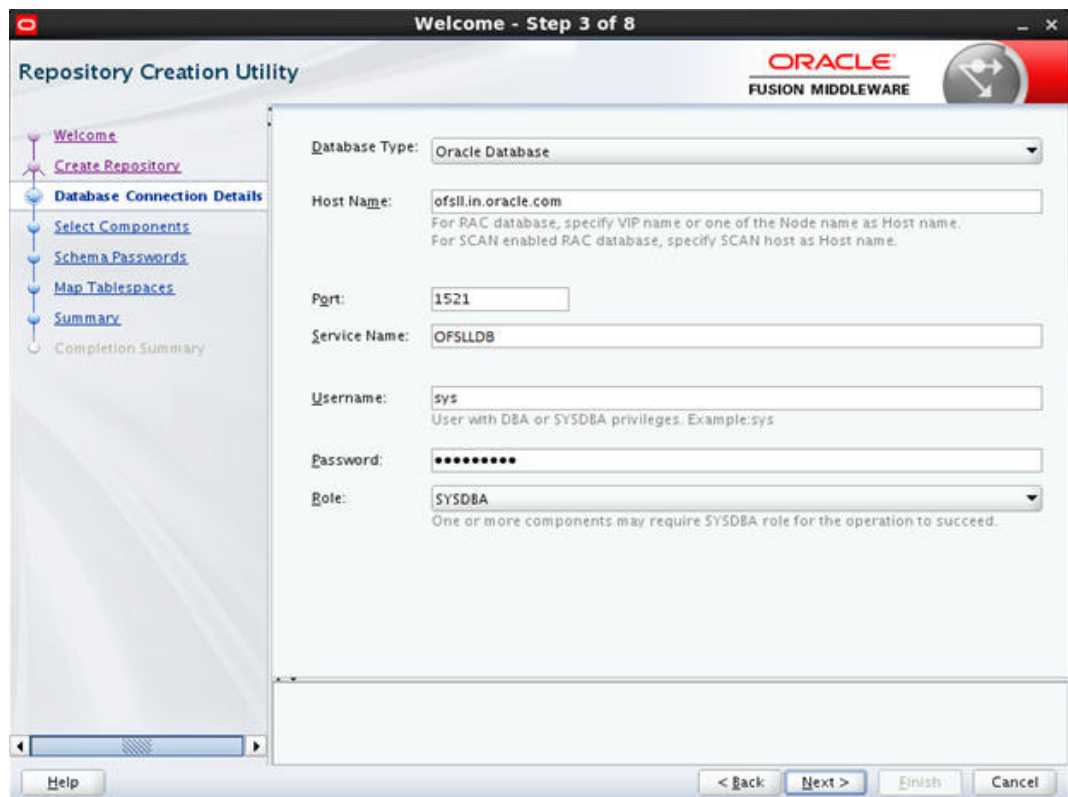
1. Open command prompt on Unix and browse to <WL_HOME>/oracle_common/bin and run ./rcu. The following window is displayed.



2. Click on **Next** to continue..



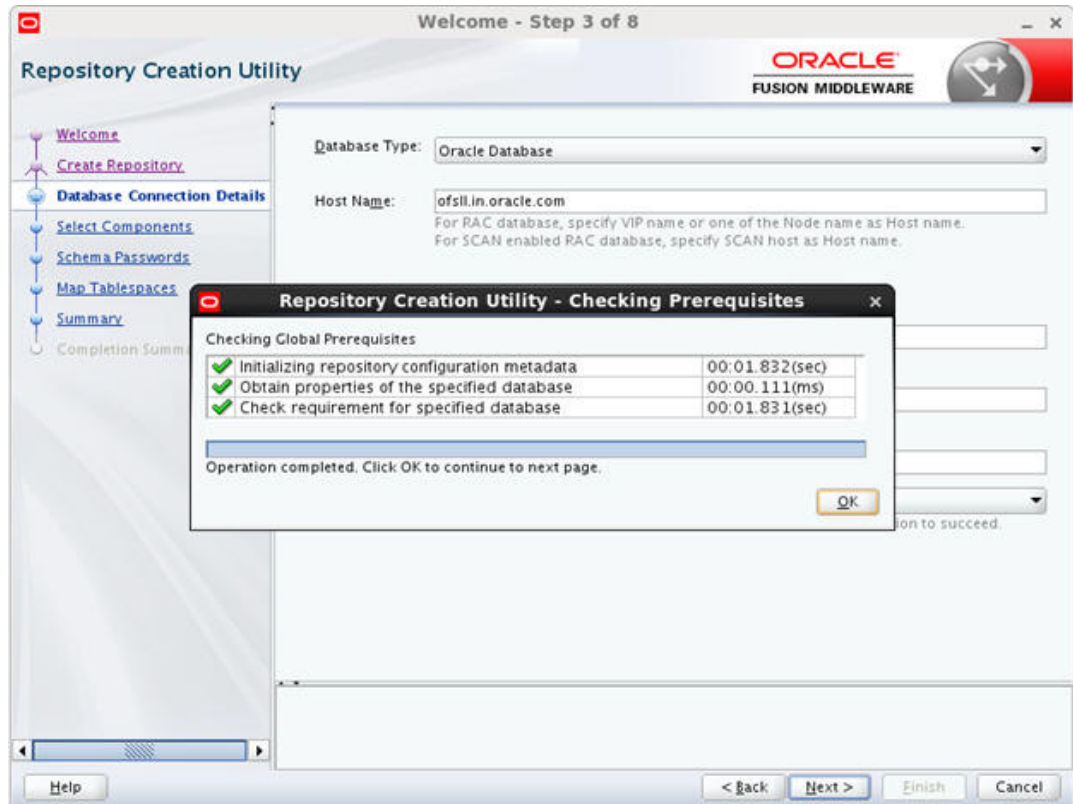
3. Select **Create Repository** and **System Load and Product Load** and click **Next**. The following screen is displayed..



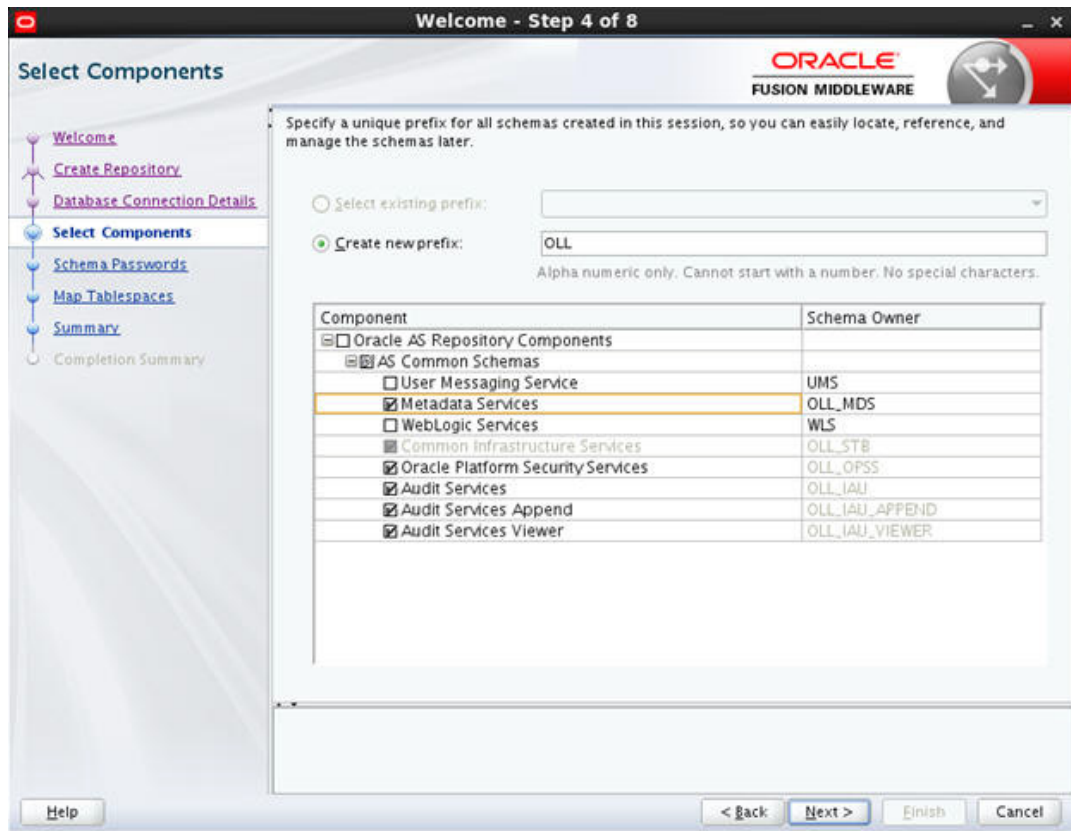
4. Provide database details where you want to create schemas, as shown in the above screen. Click on Next. The following window is displayed.

Note

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

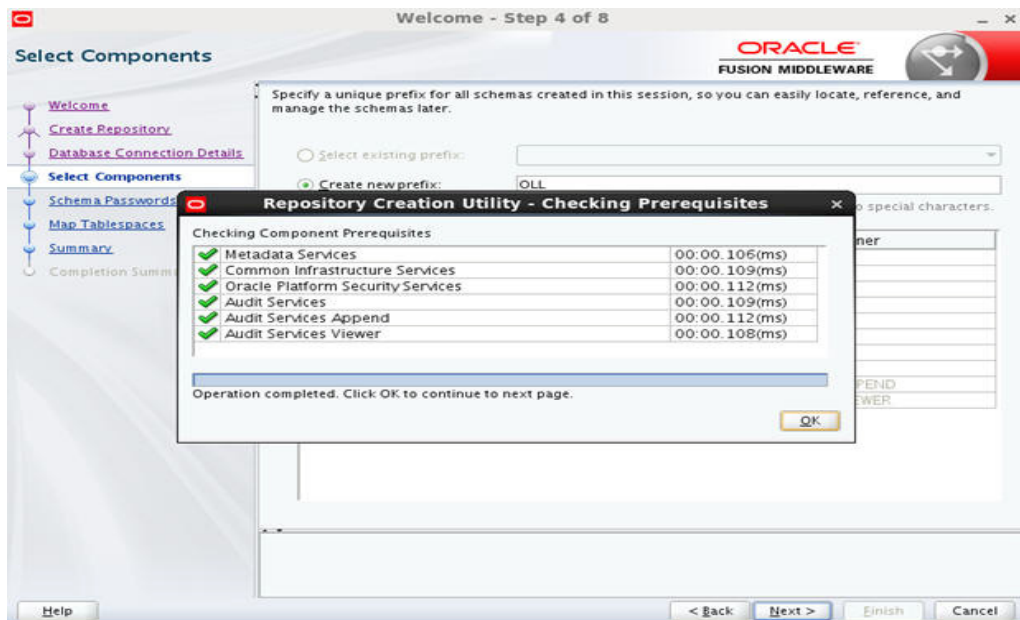


5. Click on OK. Click on Next to continue.



6. Select **Create a new Prefix** option and specify value. For example, OLL. Check **Metadata Services** and **Oracle Platform Security Services** as shown in the above screen.

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



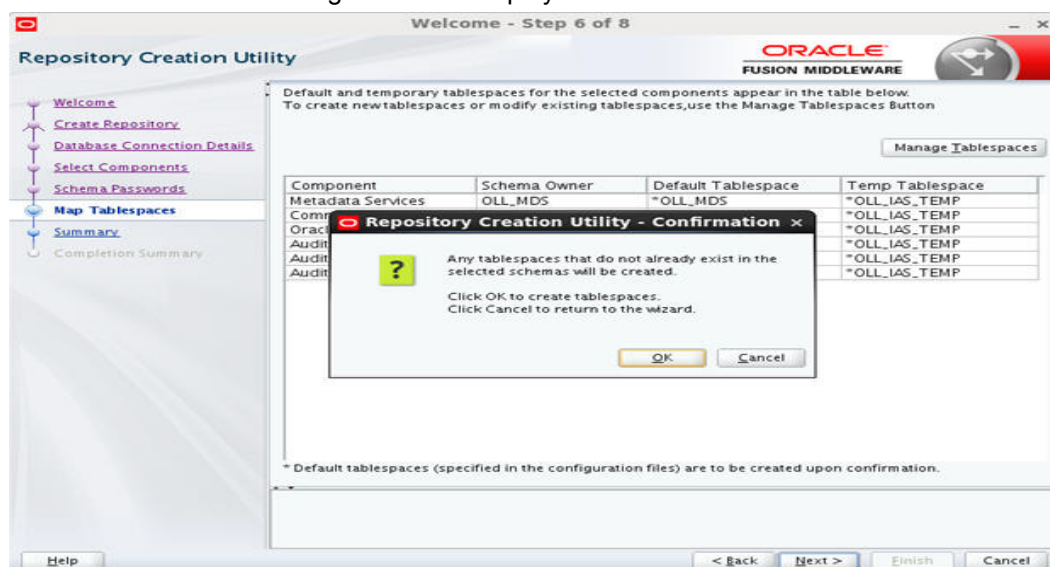
8. Click **Next**..

9. Select **Use Same Password for all schemas** and provide the Password OR **Select Specify different passwords for all schemas** and provide Schema Passwords for each server.

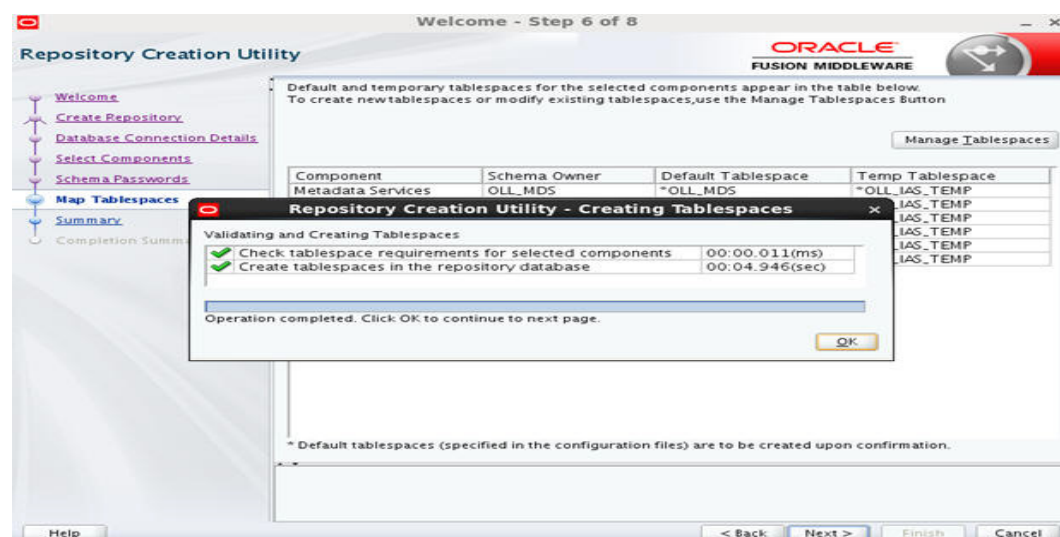
10. Click on Next to continue..

Component	Schema Owner	Default Tablespace	Temp Tablespace
Metadata Services	OLL_MDS	*OLL_MDS	*OLL_IAS_TEMP
Common Infrastructure...	OLL_STB	*OLL_STB	*OLL_IAS_TEMP
Oracle Platform Securi...	OLL_OPSS	OLL_IAS_OPSS	*OLL_IAS_TEMP
Audit Services	OLL_IAU	*OLL_IAU	*OLL_IAS_TEMP
Audit Services Append	OLL_IAU_APPEND	*OLL_IAU	*OLL_IAS_TEMP
Audit Services Viewer	OLL_IAU_VIEWER	*OLL_IAU	*OLL_IAS_TEMP

11. Click **Next**. The following window is displayed.



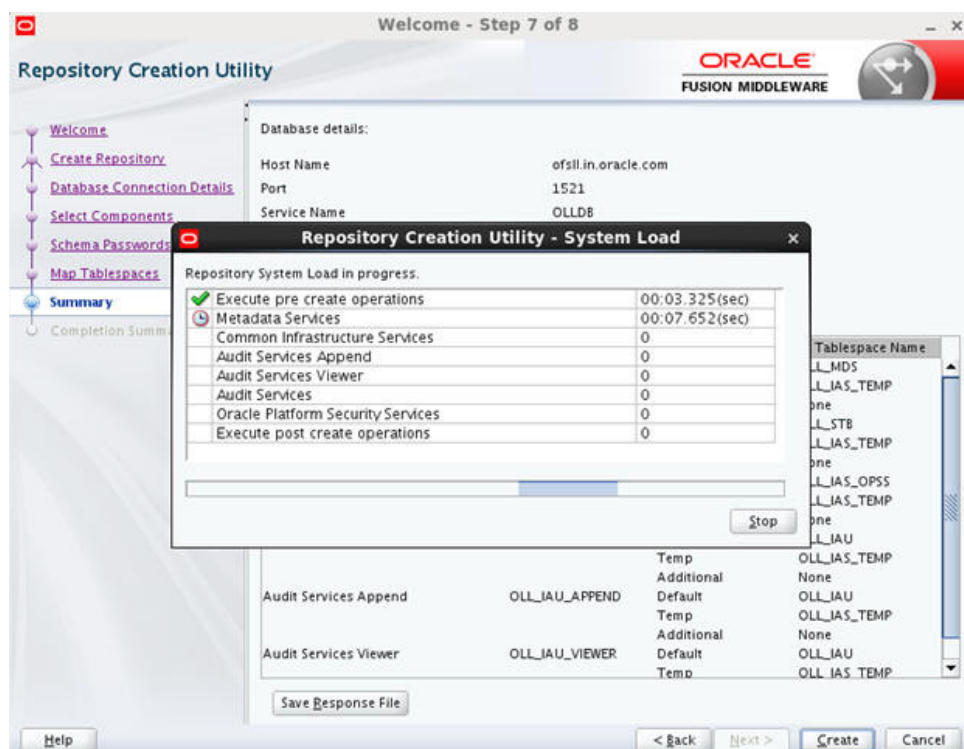
12. Click **OK**. The following window is displayed.

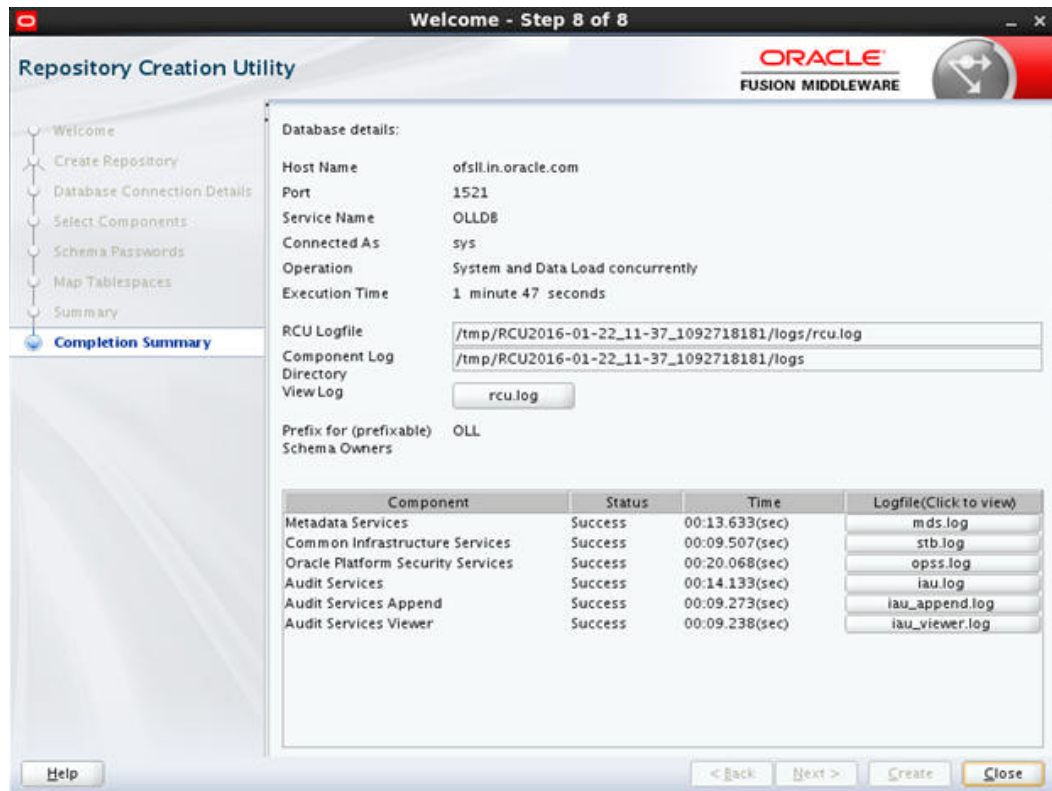


13. Click **OK**. The following window is displayed.



14. Click **Create**. The following windows are displayed.



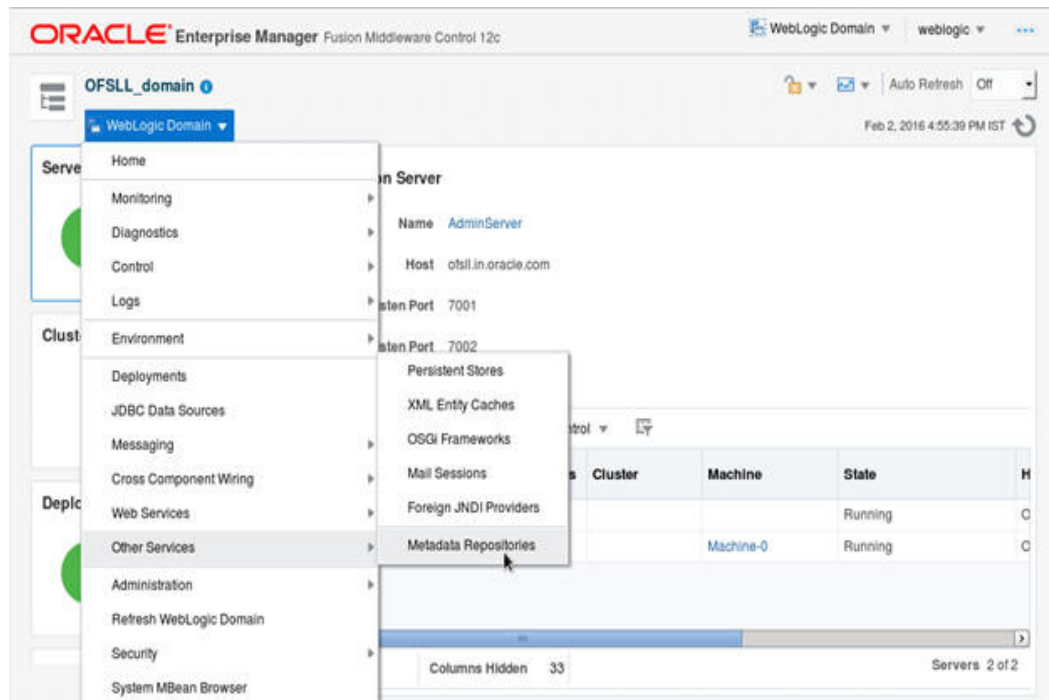


15. Click **Close** to close the window.

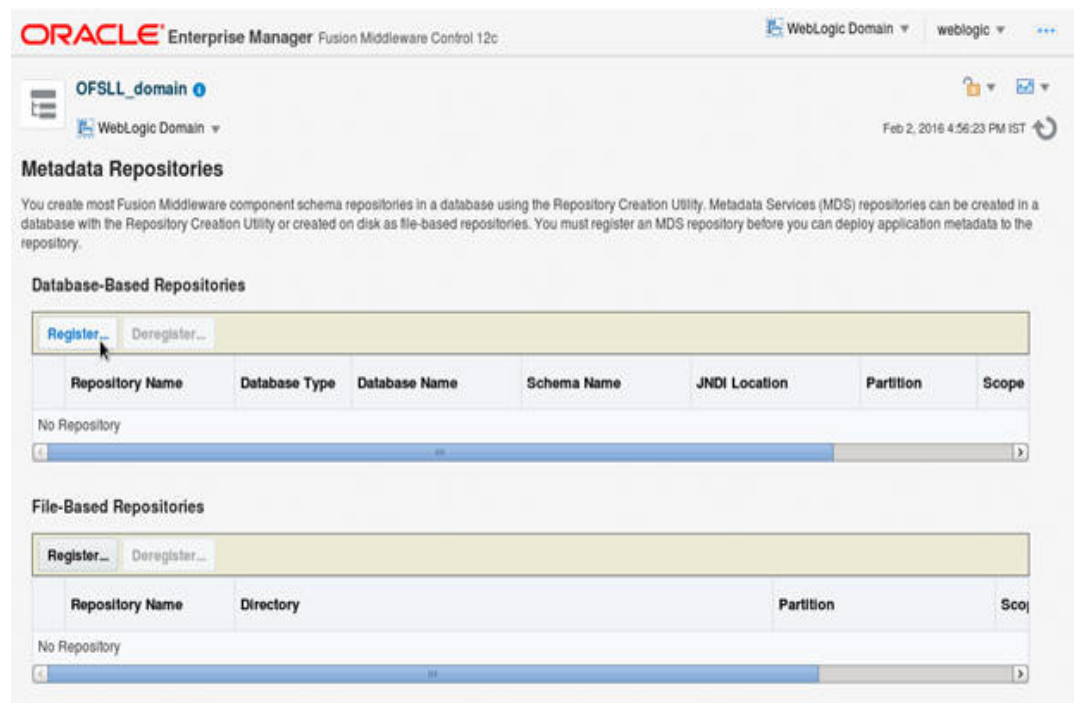
3.3 Creating Metadata Repository

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>).



2. Click on domain name OFSLL_domain on the left side panel.
3. Expand Weblogic domain OFSLL_domain and click Metadata Repositories on right side panel, as shown above screen.
4. The following window is displayed.



5. Click Register button. The following window is displayed.

OFSLL_domain

WebLogic Domain

Feb 2, 2016 4:56:56 PM IST

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: otsll.in.oracle.com

* Port: 1521

* Service Name: OFSLLDB

* 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.

Repository Name

Schema Password

Help < Back Next > Finish Cancel

6. Enter database instance details under Database Connection Information section and click **Query**.
7. All available schemas in the given database instance are listed.
8. Select the schema you require and enter **Repository Name (adf)** and the password under Selected Repository – Schema **OLL_MDS** section.
9. Click OK. The following window is displayed.

ORACLE Enterprise Manager Fusion Middleware Control 12c

WebLogic Domain weblogic

Feb 2, 2016 4:56:56 PM IST

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: otsll.in.oracle.com

* Port: 1521

* Service Name: OFSLLDB

* User Name: sys

* Password: [masked]

Role: SYSDBA

Query

Metadata Repository	Is Registered?	Schema Name	Version	Status	Modified Time
MDS	false	OLL_MDS	12.2.1.0.0	VALID	Jan 22, 2016 6:53:57 PM IST

Selected Repository - Schema: OLL_MDS

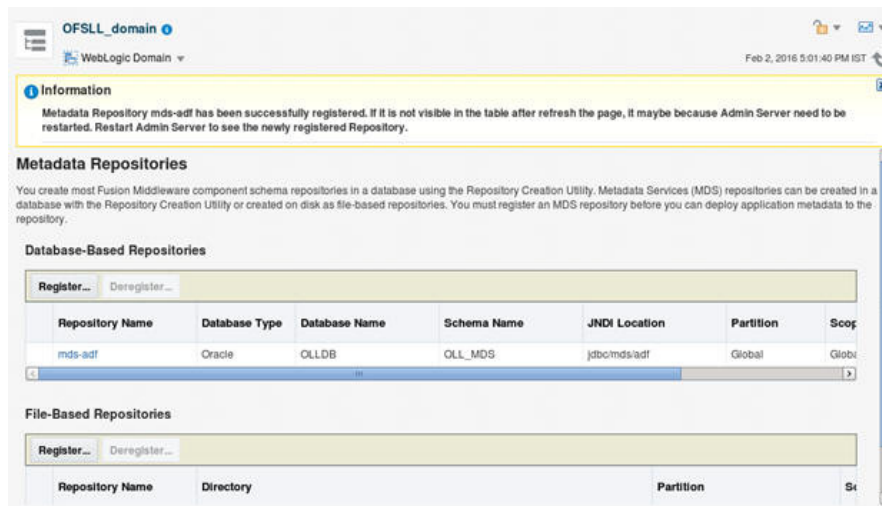
The selected schema can be registered only if it has not already been registered.

* Repository Name: adf

* Schema Password: [masked]

Help < Back Next > Finish Cancel

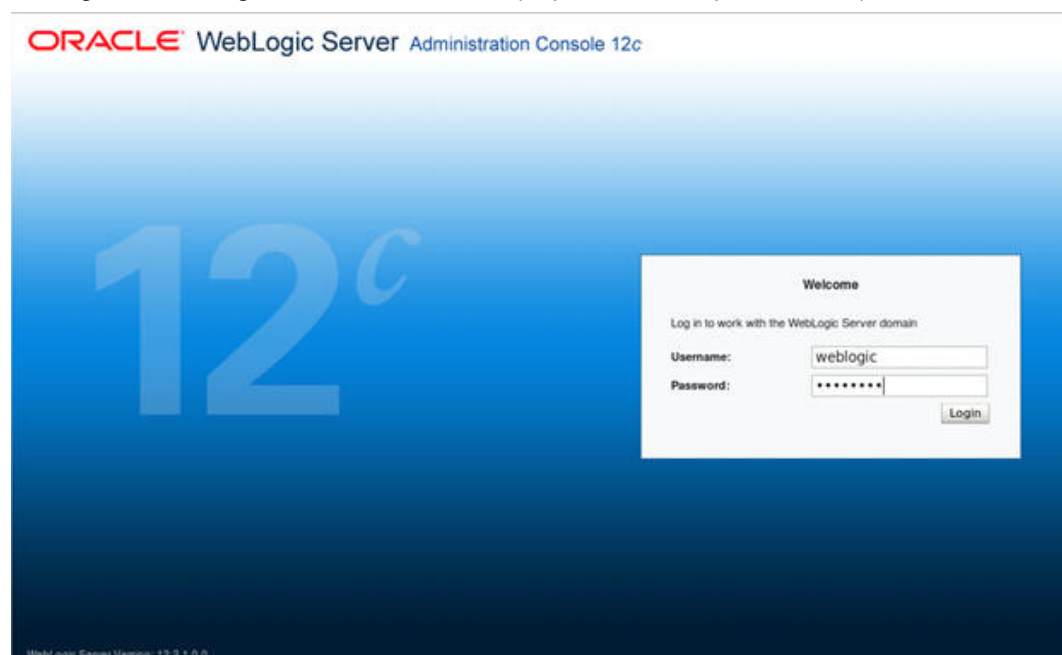
10. Click Repository name **mds-adf** on left panel. You can even select it from right panel.



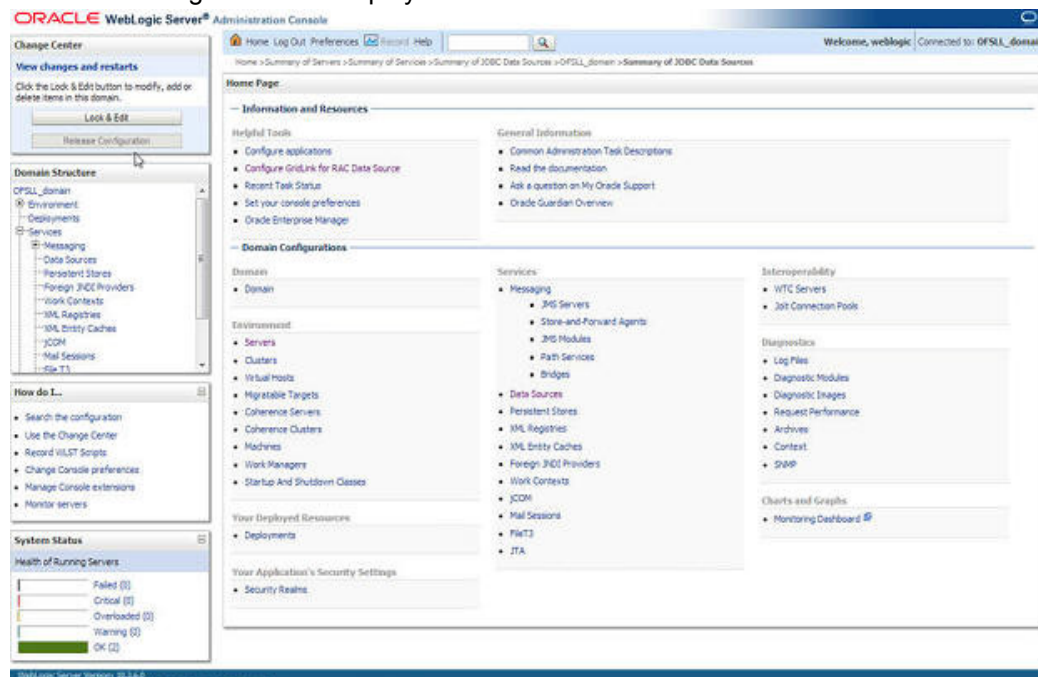
11. Click Add and target to OFSLL_AdminSever and OFSLL_ManagedServer as on right panel.

3.4 Creating Data Source

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

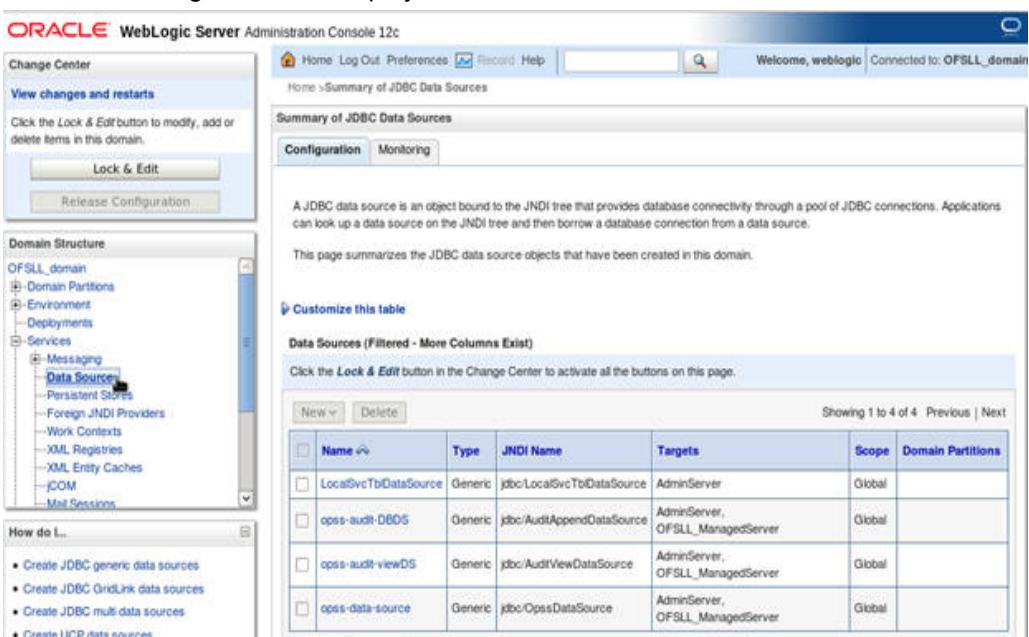


2. The following window is displayed.



3. Click Domain Name → Services → Data Sources.

4. The following window is displayed.



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

Configuration button to allow others to edit the domain.

Lock & Edit
Release Configuration

Domain Structure

OFSLL_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

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

Back Next Finish Cancel

JDBC Data Source Properties

The following properties will be used to identify your new JDBC data source:

* Indicates required fields

What would you like to name your new JDBC data source?

Name: OFSLL

What scope do you want to create your data source in?

Scope: Global

What JNDI name would you like to assign to your new JDBC Data Source?

JNDI Name: jdbc/ofsllDBConnDS

What database type would you like to select?

Database Type: Oracle

Back Next Finish Cancel

- Enter Data source **Name**
- Enter **JNDI Name** as `jdbc/ofsllDBConnDS`.
- Select **Oracle** as **Database Type** and click **Next**. The following window is displayed.

ORACLE WebLogic Server Administration Console 12c

Home Log Out Preferences Record Help

Welcome, weblogic Connected to: OFSLL_domain

Home > Summary of JDBC Data Sources > Summary of Security Realms > Summary of JDBC Data Sources

Create a New JDBC Data Source

Back Next Finish Cancel

JDBC Data Source Properties

The following properties will be used to identify your new JDBC data source:

Database: Oracle
Type:

What database driver would you like to use to create database connections? Note: * indicates that the driver is explicitly supported by Oracle WebLogic Server.

Database Driver: *Oracle's Driver (Thin) for instance connections; Versions:Any

Back Next Finish Cancel

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

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

Home > Summary of JDBC Data Sources > Summary of Security Realms > Summary of JDBC Data Sources

Create a New JDBC Data Source

Back Next Finish Cancel

Transaction Options

You have selected non-XA JDBC driver to create database connection in your new data source.

Does this data source support global transactions? If yes, please choose the transaction protocol for this data source.

☒ **Supports Global Transactions**

Select this option if you want to enable non-XA JDBC connections from the data source to participate in global transactions using the *Logging Last Resource* (LLR) transaction optimization. Recommended in place of Emulate Two-Phase Commit.

☐ **Logging Last Resource**

Select this option if you want to enable non-XA JDBC connections from the data source to emulate participation in global transactions using JTA. Select this option only if your application can tolerate heuristic conditions.

☐ **Emulate Two-Phase Commit**

Select this option if you want to enable non-XA JDBC connections from the data source to participate in global transactions using the one-phase commit transaction processing. With this option, no other resources can participate in the global transaction.

☒ **One-Phase Commit**

Back Next Finish Cancel

11. Click **Next**. The following window is displayed.

Release Configuration

Structure

- main
- in Partitions
- nment
- ments
- es
- ssaging
- ta Sources
- rsistent Stores
- reign JNDI Providers
- rk Contexts
- AL Registries
- AL Entity Caches
- DM
- st Sessions

JDBC generic data sources

LLR-enabled JDBC data sources

Status

Running Servers

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

Define Connection Properties

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

Database Name: OFSLLDB

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

Host Name: ofsil.in.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: OFSLL143

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

Password: *****

Confirm Password: *****

Additional Connection Properties:

oracle.jdbc.DRCPConnectionClass:

Back Next Finish Cancel

12. 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: OFSSL_domain

Home > Summary of JDBC Data Sources > Summary of Security Realms > 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:@ofssl.in.oracle.com:1521:OFSLD8

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

Database User Name: OFSSL143

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: *****

13. Click **Test Configuration**. The following window is displayed.

ORACLE WebLogic Server Administration Console

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

Home > Summary of Servers > Summary of Services > Summary of JDBC Data Sources > OFSSL_domain > Summary of JDBC Data Sources

Messages

Connection test succeeded.

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:@ofssl222

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

Database User Name: OFSSL141

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)

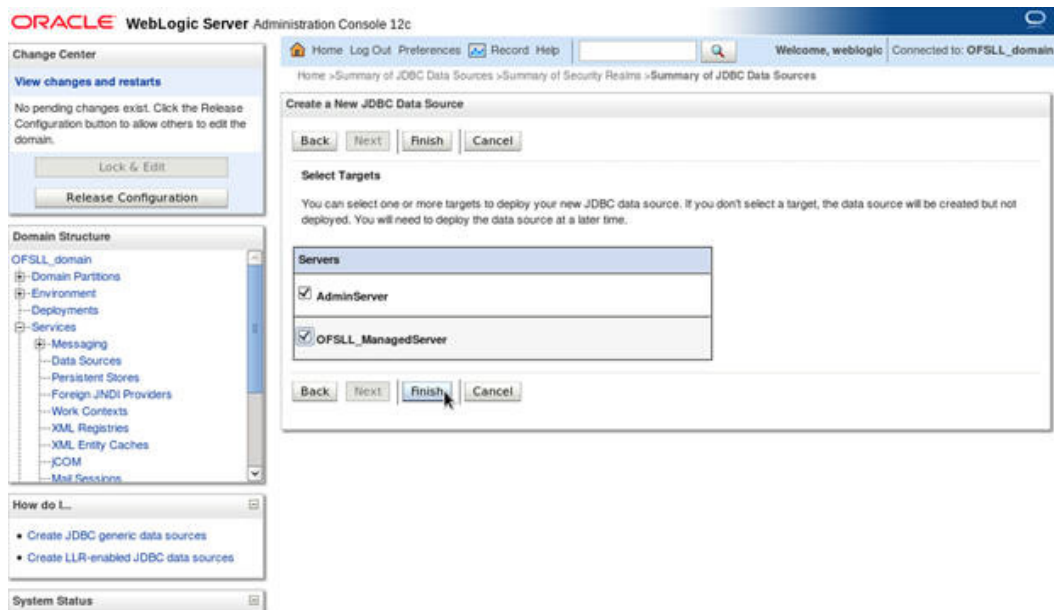
Password: *****

Confirm Password: *****

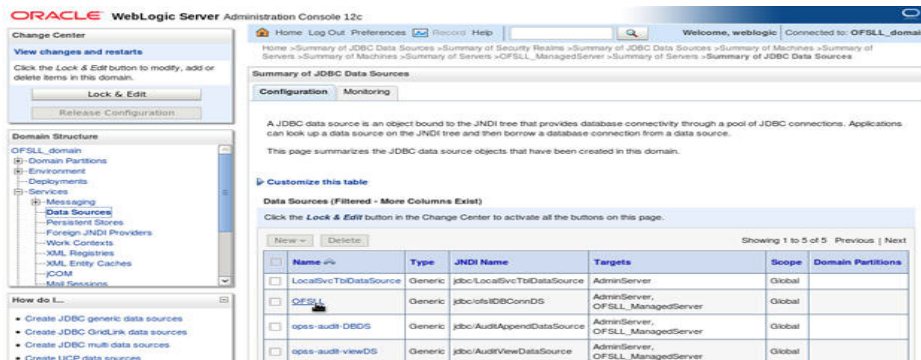
What are the properties to pass to the JDBC driver when creating database connections?

Properties: user=OFSSL141

14. Displays confirmation message as “Connection test succeeded”. Click **Next**. The following window is displayed.



15. Select target Servers **AdminServer** and **ManagedServer** and click **Finish**. The following window is displayed.



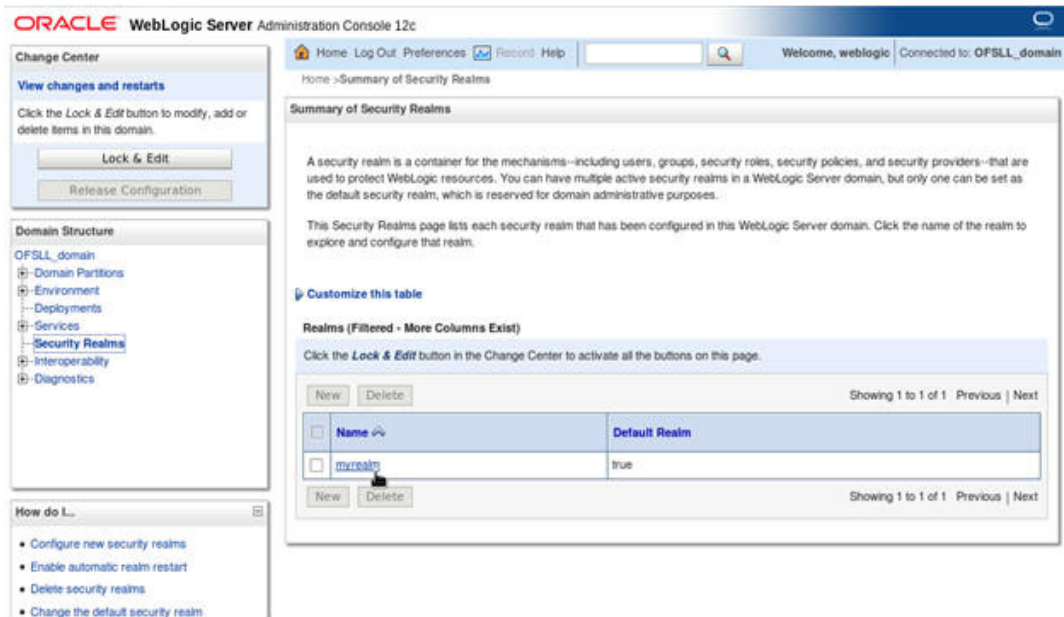
16. Click **Activate Changes** on the left panel.

Update the following parameters in JDBC data source connection pool:

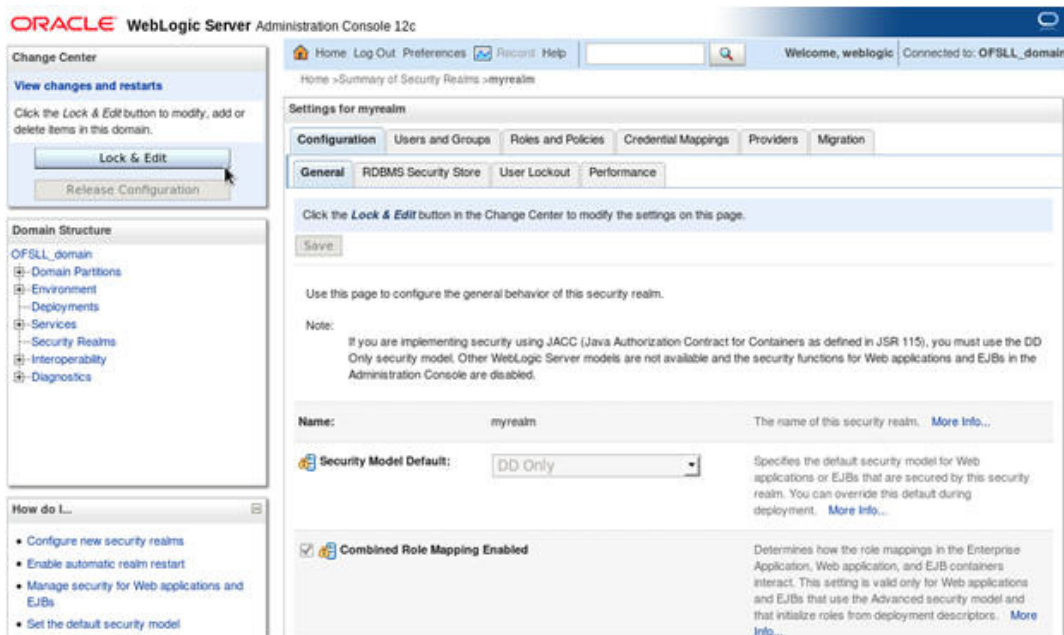
1. Select **Services**→**Data Sources**→select the **OFSLL** data source→**Connection Pool**.
2. Initial capacity and Maximum capacity is defaulted to 15, if the number of concurrent users are more this needs to be increased.
3. Click **Advanced** button and update the following:
 - Inactive Connection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

3.5 Creating SQL Authentication Provider

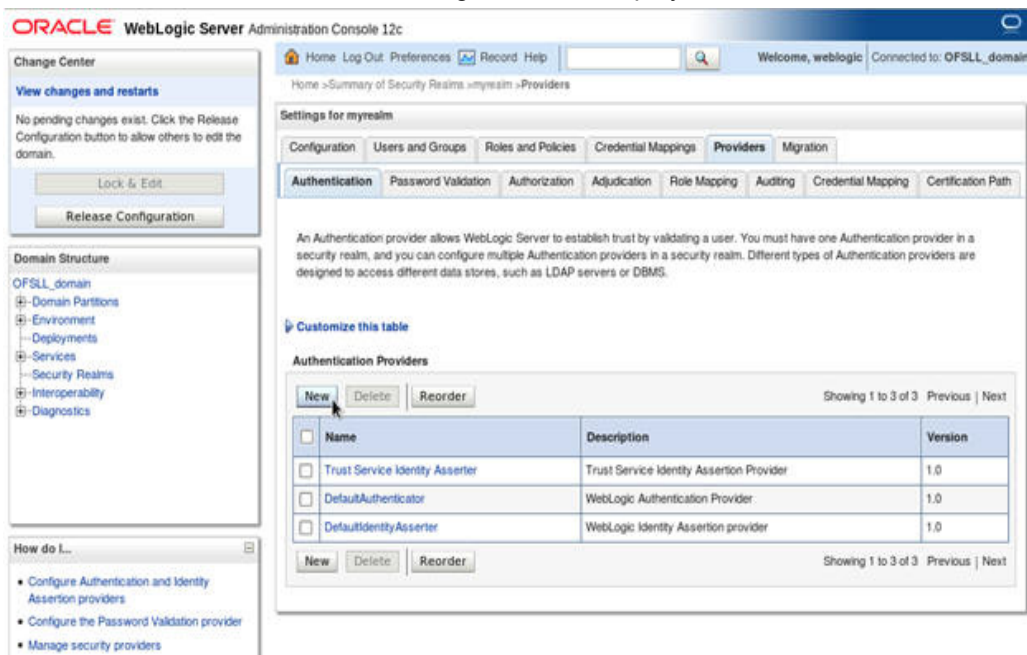
1. Login to WebLogic server administration console and click Security Realms in left panel. The following window is displayed.



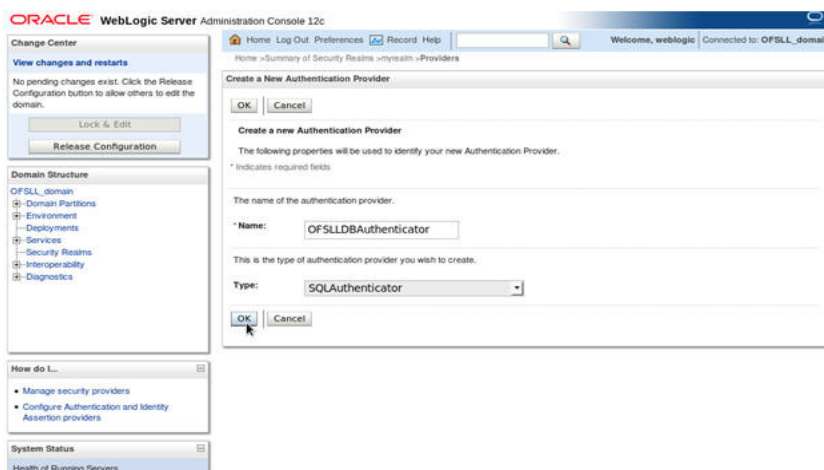
2. Click **myrealm** on right panel. The following window is displayed.



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: **OFSLLDDBAuthenticator**

Type: **SQLAuthenticator**

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

Oracle WebLogic Server Administration Console 12c

Home > Summary of Security Realms > myrealm > Providers

Settings for myrealm

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

Authentication Password Validation Authorization Adjudication Role Mapping Auditing Credential Mapping Certification Path

An Authentication provider allows WebLogic Server to establish trust by validating a user. You must have one Authentication provider in a security realm, and you can configure multiple Authentication providers in a security realm. Different types of Authentication providers are designed to access different data stores, such as LDAP servers or DBMS.

Customize this table

Authentication Providers

New Delete Reorder Showing 1 to 4 of 4 Previous | Next

<input type="checkbox"/>	Name	Description	Version
<input type="checkbox"/>	Trust Service Identity Asserter	Trust Service Identity Assertion Provider	1.0
<input type="checkbox"/>	DefaultAuthenticator	WebLogic Authentication Provider	1.0
<input type="checkbox"/>	DefaultIdentityAsserter	WebLogic Identity Assertion provider	1.0
<input type="checkbox"/>	OFSLDDBAuthenticator	Provider that performs DBMS authentication	1.0

New Delete Reorder Showing 1 to 4 of 4 Previous | Next

Change Center

View changes and restarts

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

Activate Changes

Undo All Changes

Domain Structure

OFSLD_domain

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

How do I...

- Configure Authentication and Identity Assertion providers
- Configure the Password Validation provider
- Manage security providers
- Set the JAAS control flag
- Re-order Authentication providers

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

Oracle WebLogic Server Administration Console 12c

Home > myrealm > Summary of Security Realms > myrealm > Providers > myrealm > Providers > OFSLDDBAuthenticator > Summary of Services > Summary of JDBC Data Sources > Providers

Settings for myrealm

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

Authentication Password Validation Authorization Adjudication Role Mapping Auditing Credential Mapping Certification Path

An Authentication provider allows WebLogic Server to establish trust by validating a user. You must have one Authentication provider in a security realm, and you can configure multiple Authentication providers in a security realm. Different types of Authentication providers are designed to access different data stores, such as LDAP servers or DBMS.

Customize this table

Authentication Providers

New Delete Reorder Showing 1 to 4 of 4 Previous | Next

<input type="checkbox"/>	Name	Description	Version
<input type="checkbox"/>	OFSLDDBAuthenticator	Provider that performs DBMS authentication	1.0
<input type="checkbox"/>	DefaultAuthenticator	WebLogic Authentication Provider	1.0
<input type="checkbox"/>	DefaultIdentityAsserter	WebLogic Identity Assertion provider	1.0
<input type="checkbox"/>	Trust Service Identity Asserter	Trust Service Identity Assertion Provider	1.0

New Delete Reorder Showing 1 to 4 of 4 Previous | Next

Change Center

View changes and restarts

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

Activate Changes

Undo All Changes

Domain Structure

OFSLD_domain

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

How do I...

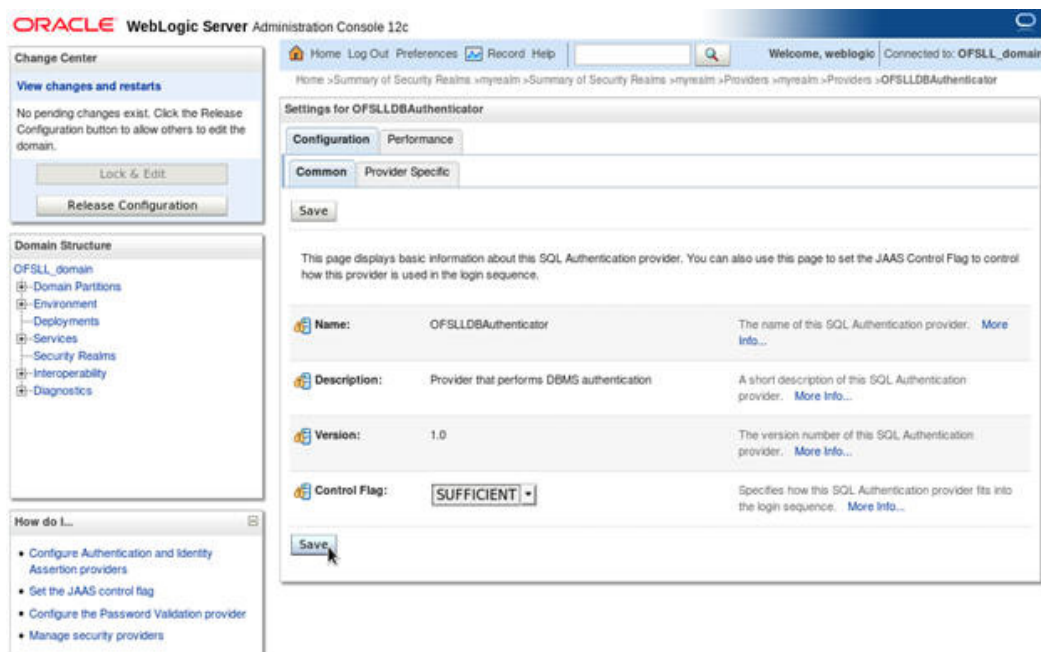
- Configure Authentication and Identity Assertion providers
- Configure the Password Validation provider

Authentication order should be maintained as mentioned in the above screen.

8. **OFSLDDBAuthenticator** will be displayed as above.

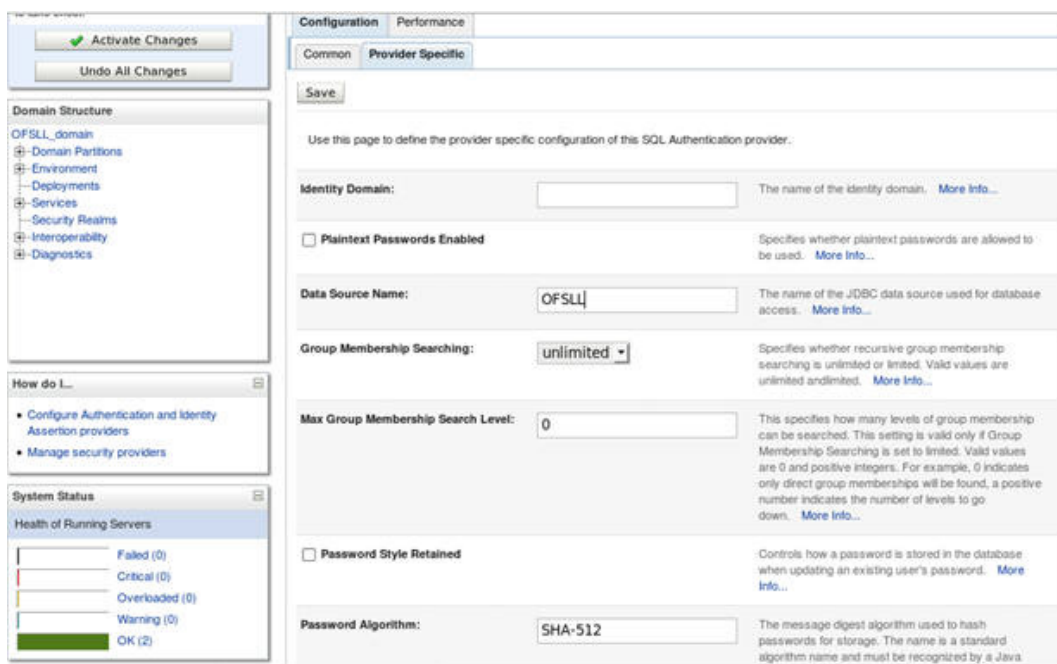
9. Click on **OFSLDDBAuthenticator**.

10. The following window is displayed.



11. Select SUFFICIENT as the **Control Flag** and click Save.

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



13. Provide the following values in corresponding fields.

Data Source Name: **OFSLL**

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 GROUPEMEM- 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 GROUPEMEM- 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	

The screenshot shows a configuration page for the OFSLL application. It contains several sections for SQL statements:

- SQL Remove Group Member:** The input field contains `MEMBER_GROUP_CODE = ?`. A description on the right states: "The SQL statement used to remove a member from a group. The SQL statement requires a single parameter: the username or group name removed. [More Info...](#)"
- Descriptions Supported:** A checkbox is checked. A description on the right states: "Indicates whether user and group descriptions are supported by the database used by the application. [More Info...](#)"
- SQL Get User Description:** The input field contains `WHERE UAU_USER_CODE = ?`. A description on the right states: "The SQL statement used to retrieve the description of a specific user. Only valid if Descriptions are enabled. The SQL statement requires a single parameter for the username and must return a resultSet containing at most a single record for the user description. [More Info...](#)"
- SQL Set User Description:** The input field contains `WHERE UAU_USER_CODE = ?`.
- SQL Get Group Description:** The input field contains `WHERE UGR_GROUP_CODE = ?`. A description on the right states: "The SQL statement used to retrieve the description of a group. Only valid if Descriptions are enabled. The SQL statement requires a single parameter for the group name and must return a resultSet containing at most a single record for the group description. [More Info...](#)"
- SQL Set Group Description:** The input field contains `WHERE UGR_GROUP_CODE = ?`. A description on the right states: "The SQL statement used to specify a description for a group. Only valid if Descriptions are enabled. The SQL statement requires two parameters: the group description and the group name."

At the bottom left, there is a **Save** button with a mouse cursor pointing to it.

14. 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.

Run the script "crt_app_user.sql script" as a OFSLL application owner user.

```
SQL*Plus: Release 12.1.0.2.0 Production on Thu Feb 4 12:47:05 2016
Copyright (c) 1982, 2014, Oracle. All rights reserved.

Enter user-name: OFSLL143TEST1
Enter password:
Last Successful login time: Thu Feb 04 2016 12:02:37 +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 opt
ions

SQL> @/home/dev/Desktop/crt_app_user.sql;
Enter the name of the OFSLL 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: 9999777321
Enter the Fax Number for this user: 9999888321

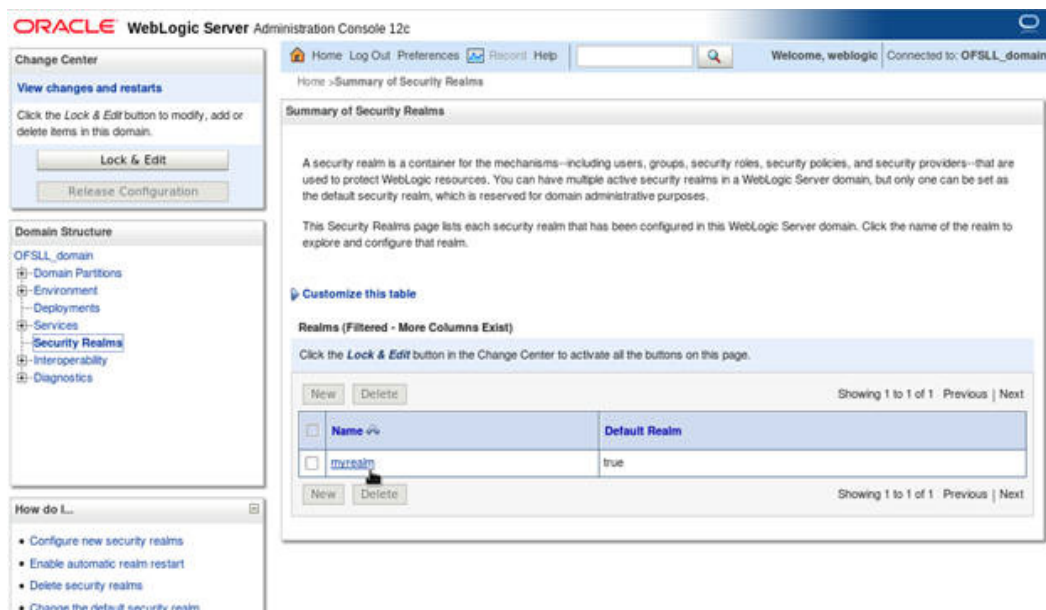
1 row created.

1 row created.

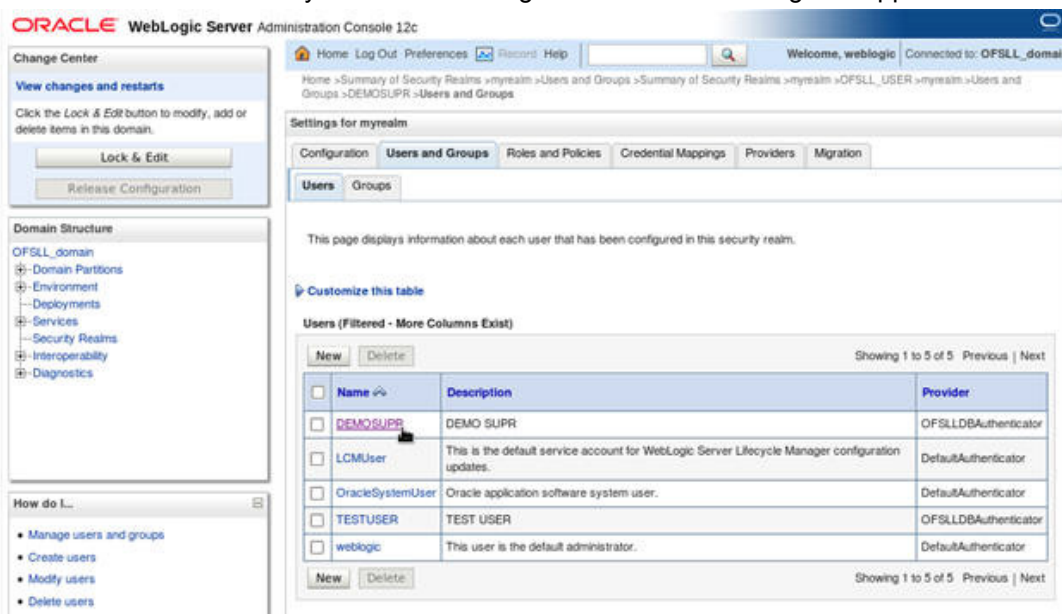
1 row created.

SQL> █
```

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



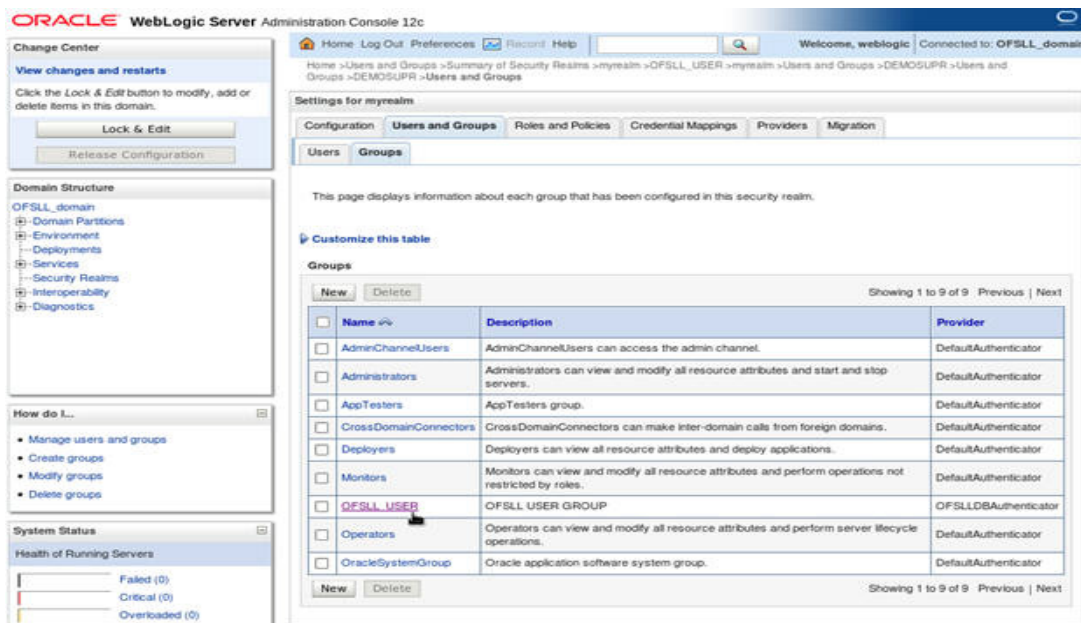
1. Select **Users** tab under **Users and Groups**.
2. If SQLAuthenticator is configured as a Security Provider for the OFSSL application, the Users are automatically created in weblogic when created through an application.



3.6.2 Creating User Groups

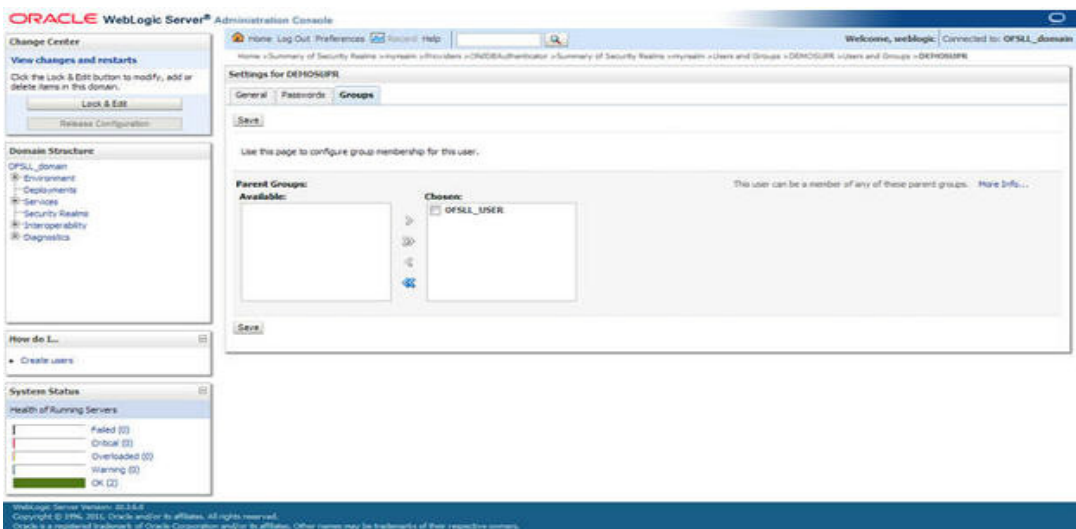
1. Select **Groups** tab under **Users and Groups**.

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.



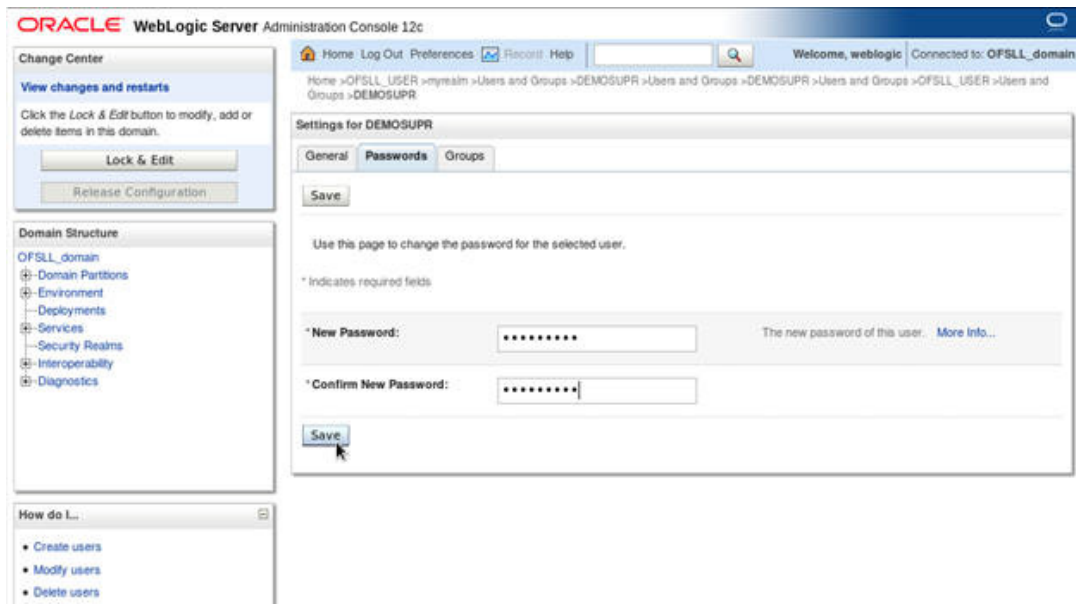
3.6.3 Assigning Users to Groups

The USERS are automatically mapped to default application group - OFSLL_USER.

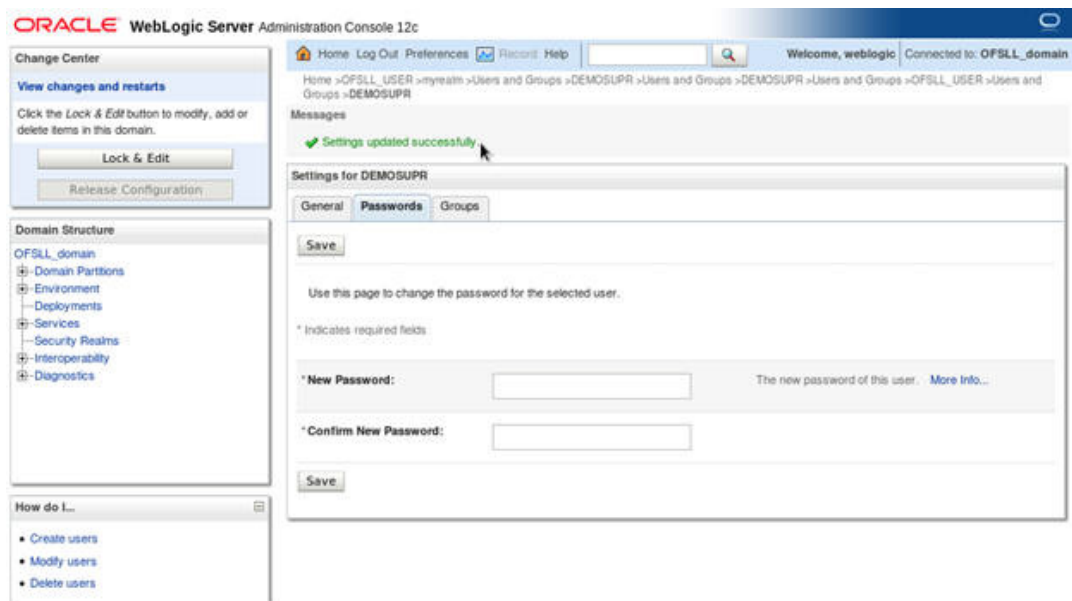


3.6.4 Resetting password via weblogic console

1. Click on **User**. Select **Passwords** tab. Enter the new password and confirm password.



2. Click on **Save**. The following window displayed.



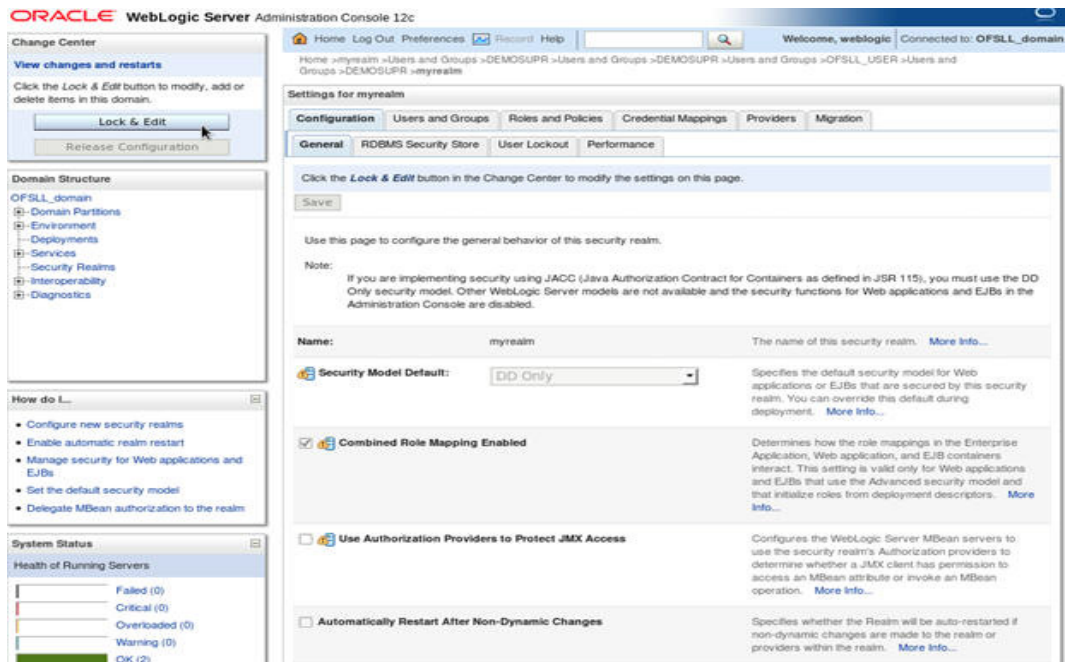
3.7 Implementing JMX Policy for Change Password

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

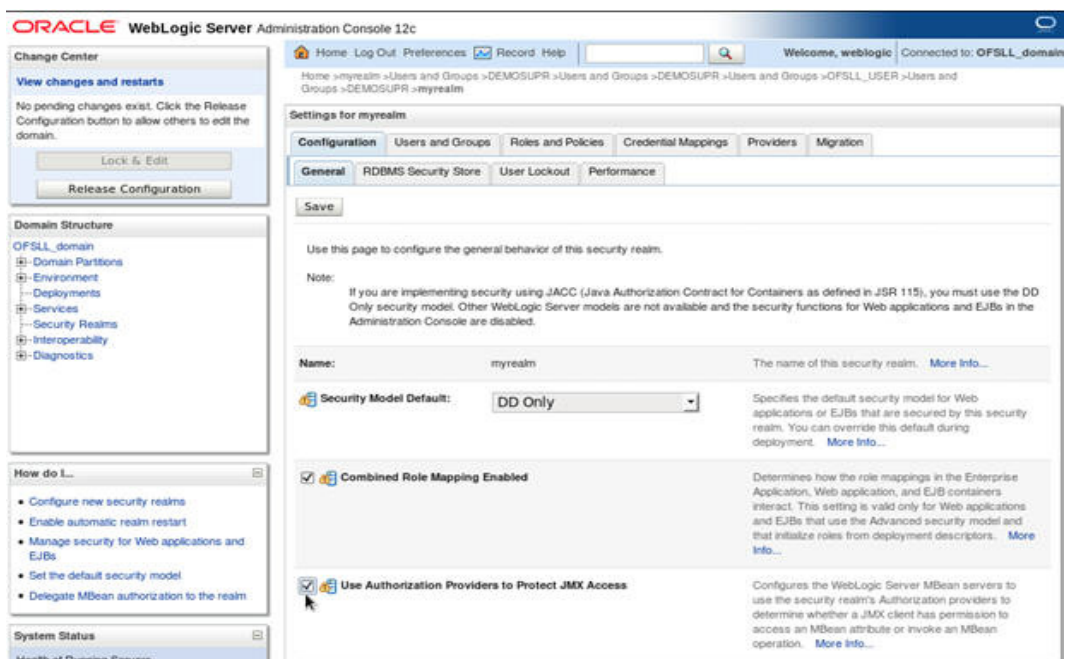
Note

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**



3. To enable JMX policy select the "Use Authorization Providers to Protect JMX Access" check box on the right panel



4. Click **Save** and restart the server.
5. Re-login to console.
6. Click **Domain** → **Security** → **myrealm** → **Roles and Policies** → **Realm Policies**

Note

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

Oracle WebLogic Server Administration Console 12c

Home > Summary of Security Realms > myrealm > Realm Roles > Realm Policies > Realm Policies

Settings for myrealm

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

Realm Roles **Realm Policies**

Use this table to access or create security policies for this security realm. The Root Level Policies node in the Name column provides access to root level policies (which apply to all resources of a given type). All other nodes provide access to policies that apply to resource instances.

Notes:

- This table does not provide access to policies for instances of JNDI resources or Work Context resources. To see these policies, view the Security tab for each JNDI node or Work Context object instance.
- If you imported policies for Web applications or EJBs from deployment descriptors using the Install Application Assistant, you must activate changes to access the policies.
- To view or modify JMX policies in the Administration Console, you must first delegate MBean authorization to the realm's Authorization providers.

Customize this table

Policies

Create Policy Showing 1 to 9 of 9 Previous | Next

Name	Resource Type	Policy
Coherence Clusters		
Deployments		
Domain		
JCOM		
JDBC		
JMS		
JMX Policy Editor		
Root Level Policies		

7. Click on JMX Policy Editor to configure

Oracle WebLogic Server Administration Console 12c

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

JMX Policy Editor

Back Next Create Policy Cancel

Select the Policy Scope

- To apply this policy to all instances of an MBean, select GLOBAL SCOPE.
- To apply this policy only to an MBean instance that is used to manage a specific deployment or resource, select the deployment or resource.

Scopes

Scope
GLOBAL SCOPE
Deployments
JDBC System Resources
JMS System Resources
WLDf System Resources

Back Next Create Policy Cancel

8. Select GLOBAL SCOPE

9. Click Next

<input type="checkbox"/>	weblogic.security.providers.authentication
<input type="radio"/>	ActiveDirectoryAuthenticatorMBean
<input type="radio"/>	CustomDBMSAuthenticatorMBean
<input type="radio"/>	DefaultAuthenticatorMBean
<input type="radio"/>	DefaultIdentityAsserterMBean
<input type="radio"/>	IPPlanetAuthenticatorMBean
<input type="radio"/>	LDAPAuthenticatorMBean
<input type="radio"/>	LDAPX509IdentityAsserterMBean
<input type="radio"/>	NegotiateIdentityAsserterMBean
<input type="radio"/>	NovellAuthenticatorMBean
<input type="radio"/>	OpenLDAPAuthenticatorMBean
<input type="radio"/>	OracleInternetDirectoryAuthenticatorMBean
<input type="radio"/>	OracleUnifiedDirectoryAuthenticatorMBean
<input type="radio"/>	OracleVirtualDirectoryAuthenticatorMBean
<input type="radio"/>	ReadOnlySQLAuthenticatorMBean
<input checked="" type="radio"/>	SQLAuthenticatorMBean
<input type="radio"/>	VirtualUserAuthenticatorMBean
<input type="checkbox"/>	weblogic.security.providers.authorization
<input type="checkbox"/>	weblogic.security.providers.credentials
<input type="checkbox"/>	weblogic.security.providers.pk
<input type="checkbox"/>	weblogic.security.providers.saml
<input type="checkbox"/>	weblogic.security.providers.xacml.authorization

WebLogic Server Version: 12.2.1.0.0
Copyright (c) 1996-2015, 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.

10. Select `weblogic.security.providers.authentication`.

11. Select "SQLAuthenticatorMBean". Click **Next**.

F 5887 (0)

- Critical (0)
- Overloaded (0)
- Warning (0)
- OK (2)

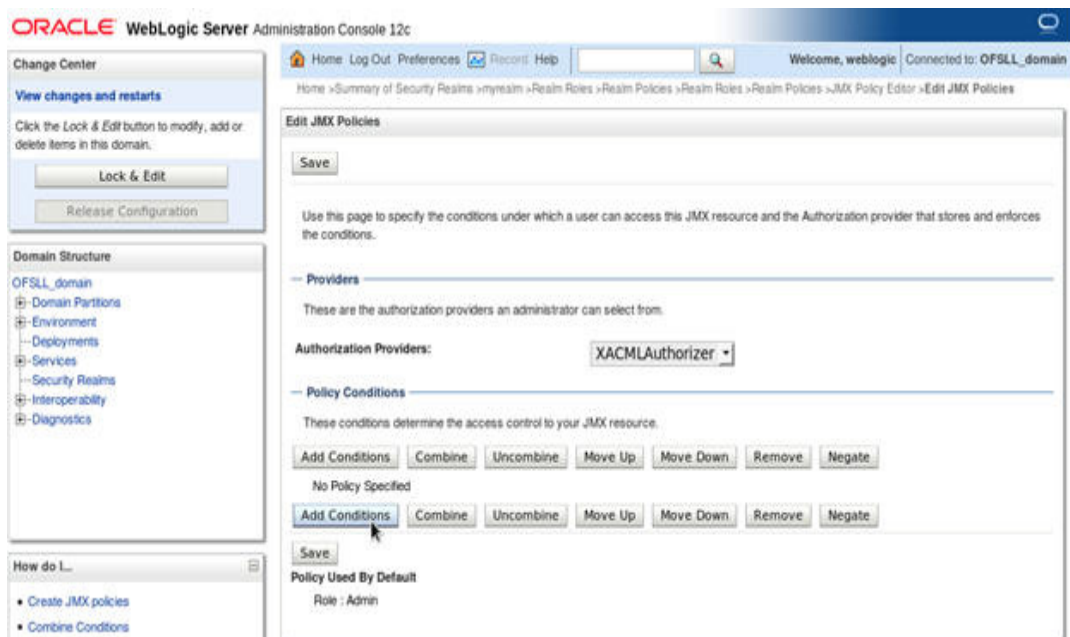
<input type="radio"/> Operations: Permission to Invoke	
<input type="radio"/> addMemberToGroup	
<input type="radio"/> advance	
<input checked="" type="radio"/> changeUserPassword	
<input type="radio"/> close	
<input type="radio"/> createGroup	
<input type="radio"/> createUser	
<input type="radio"/> getCurrentName	
<input type="radio"/> getGroupDescription	
<input type="radio"/> getUserDescription	
<input type="radio"/> groupExists	
<input type="radio"/> haveCurrent	
<input type="radio"/> isMember	
<input type="radio"/> isSet	
<input type="radio"/> listGroupMembers	
<input type="radio"/> listGroups	
<input type="radio"/> listMemberGroups	
<input type="radio"/> listUsers	
<input type="radio"/> removeGroup	
<input type="radio"/> removeMemberFromGroup	
<input type="radio"/> removeUser	
<input type="radio"/> resetUserPassword	
<input type="radio"/> setGroupDescription	
<input type="radio"/> setUserDescription	
<input type="radio"/> unset	
<input type="radio"/> userExists	View Existing Policy Conditions
<input type="radio"/> web_getDisplayName	
<input type="radio"/> Create instances of this MBean using MBean server methods.	
<input type="radio"/> Unregister instances of this MBean using MBean server methods.	

Back **Next** **Create Policy** **Cancel**

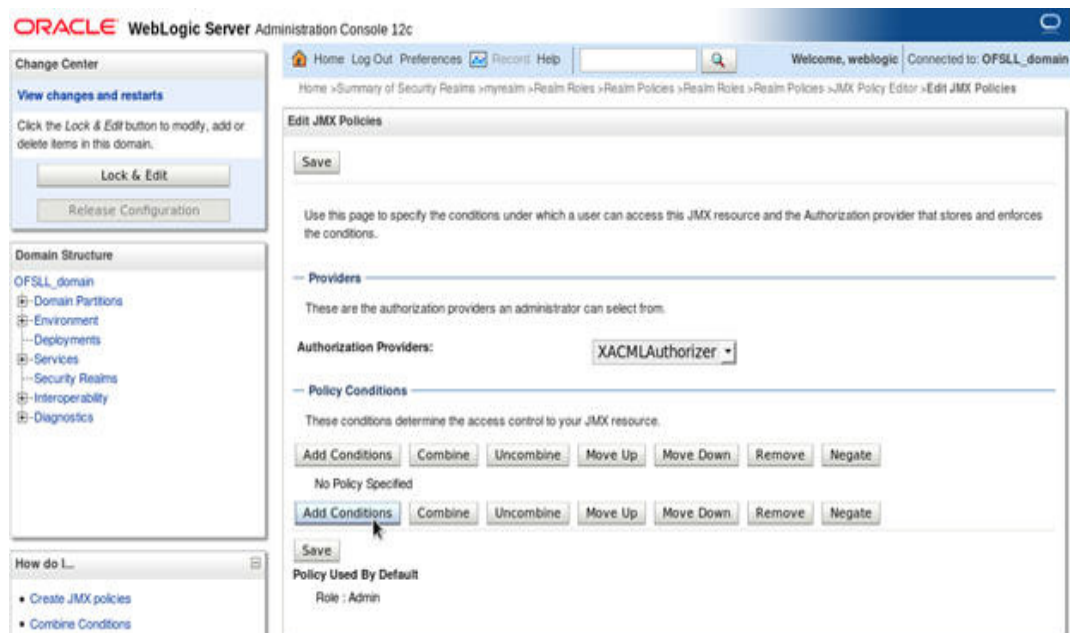
12. Expand **"Operations: Permissions to Invoke"** and select **"ChangePassword"**

13. Click "Create Policy"

14. It opens the below screen for Authorization providers where you can add conditions to setup the policy.



15. Click **Add Condition**. The below screen will be displayed.



16. For **Predicate List**, select **Group** for configuration.

17. Click Next.

The screenshot shows the Oracle WebLogic Server Administration Console 12c interface. The left sidebar contains the 'Change Center' with a 'View changes and restarts' link and 'Lock & Edit'/'Release Configuration' buttons. Below is the 'Domain Structure' tree showing 'OFSSL_domain' and its sub-nodes. At the bottom is a 'How do I...' section with links to 'Create JMX policies' and 'Combine Conditions'. The main content area is titled 'Edit JMX Policies' and includes a breadcrumb trail: 'Home > Summary of Security Realms > myrealm > Realm Roles > Realm Policies > Realm Policies > JMX Policy Editor > Edit JMX Policies'. The page has 'Back', 'Next', 'Finish', and 'Cancel' buttons at the top. The 'Edit Arguments' section contains instructions and a 'Group Argument Name' field with an 'Add' button. Below this is a list box containing 'OFSSL_USER' with a 'Remove' button. At the bottom, the 'Finish' button is highlighted with a mouse cursor.

18. Select user roles for application.

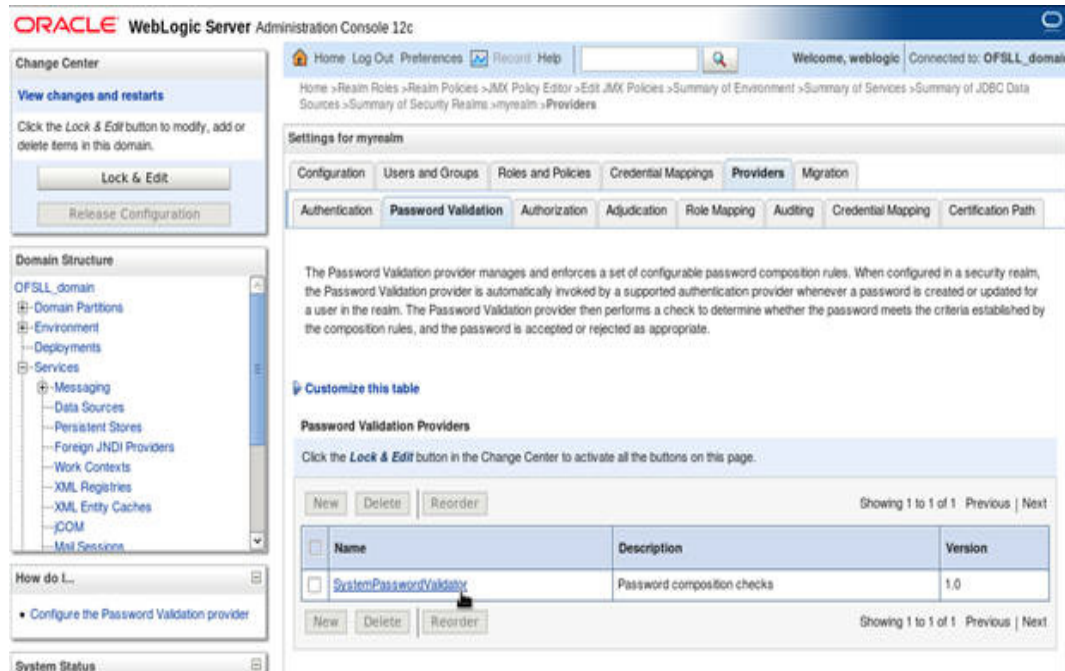
19. Click Finish. Click on Save to complete the configuration. The following window will be displayed.

This screenshot shows the 'Edit JMX Policies' page after clicking 'Finish'. The 'Save' button is now visible at the top left of the main content area. The 'Providers' section shows 'XACMLAuthorizer' selected. The 'Policy Conditions' section has a 'Group : OFSSL_USER' checkbox. At the bottom, the 'Override Policy' section shows 'Role : Admin'. The 'Save' button is highlighted with a mouse cursor.

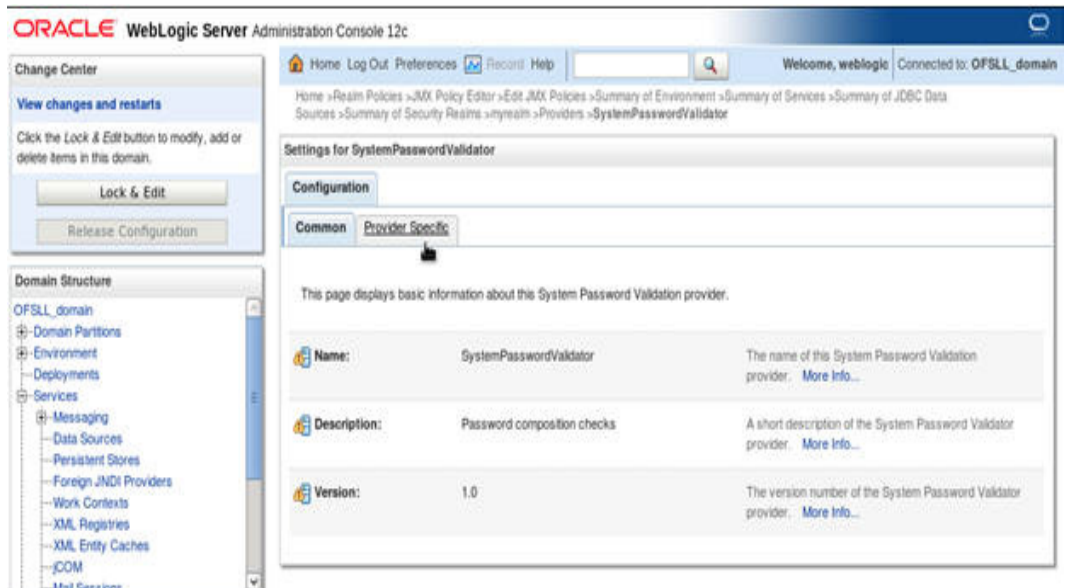
4. Configuring Policies

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** as shown below. The following window is displayed



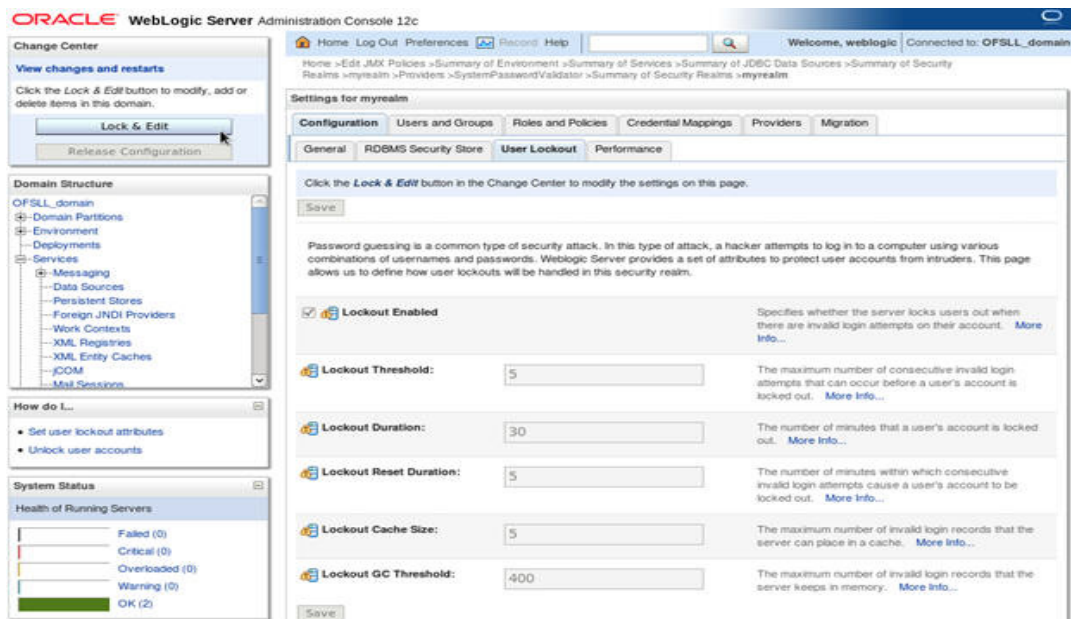
3. Click **SystemPasswordValidator** link. The following window is displayed



4. Click **Provider Specific** Tab.
5. Configure the password policy as per the requirement. The following window is displayed. Click Save.

4.2 Configuring User Lockout Policy

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



2. 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>)

Domain: Domain_OFSLL_domain

* User Name: weblogic

* Password: [masked]

Login

ORACLE

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

ORACLE Enterprise Manager Fusion Middleware Control 12c

WebLogic Domain | weblogic

OFSLL_domain

Servers: 2 Up

Administration Server

Name: AdminServer

Host: ofssl.in.oracle.com

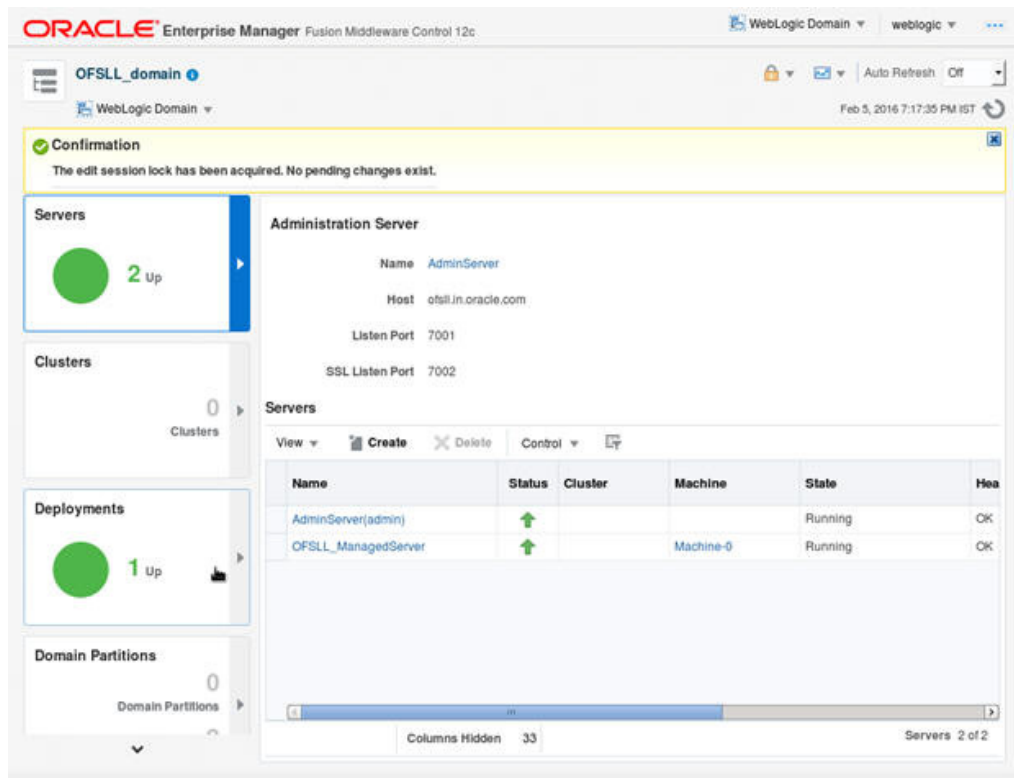
Listen Port: 7001

SSL Listen Port: 7002

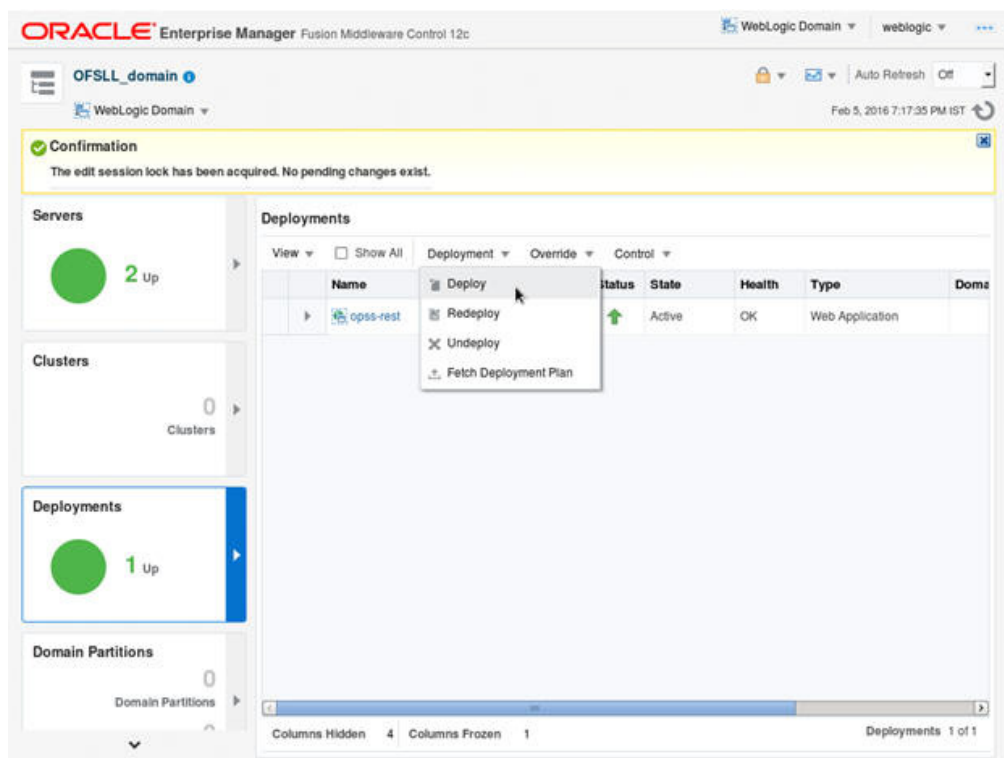
Name	Status	Cluster	Machine	State
AdminServer(admin)	Running			Running
OFSLL_ManagedServer	Running		Machine-0	Running

Columns Hidden: 33

Servers: 2 of 2



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



- Click Choose File button and select OFSSL application archive file i.e. ofssl_143.ear.

ORACLE® Enterprise Manager Fusion Middleware Control 12c

weblogic

OFSLL_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.
Browse... otsl143.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.
Browse... No file selected.
☐ Deployment plan is on the server where Enterprise Manager is running.

Information
Use this page to deploy applications that require Metadata Services (MDS). Applications that take advantage of the Oracle Application Development Framework (Oracle ADF) or the Oracle Service Component Framework (Oracle SCF) must be deployed to a target that supports MDS. If your application is a Service Component Framework (SCF) composite, use the SCM Composite deployment page. If your application is not a composite or it does not use MDS repository or ADF connections, then you can deploy your application using the Oracle WebLogic Administration Console.

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

ORACLE® Enterprise Manager Fusion Middleware Control 12c

weblogic

OFSLL_domain

Select Archive **Select Target** Application Attributes Deployment Settings

Deploy Java EE Application: Select Target Back Step 2 of 4 **Next** Cancel

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	OK
<input checked="" type="checkbox"/>	OFSLL_ManagedServer	Oracle WebLogic Server	OK

6. Check target server as per the requirement **OFSLL_ManagedServer** and click **Next**.

7. The following window is displayed.

ORACLE® Enterprise Manager Fusion Middleware Control 12c

weblogic

OFSLL_domain

Select Archive Select Target **Application Attributes** Deployment Settings

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

Deployment Type Application


* Application Name otsl143
Archive Version V14.3.0.0-b262
Deployment Plan Version

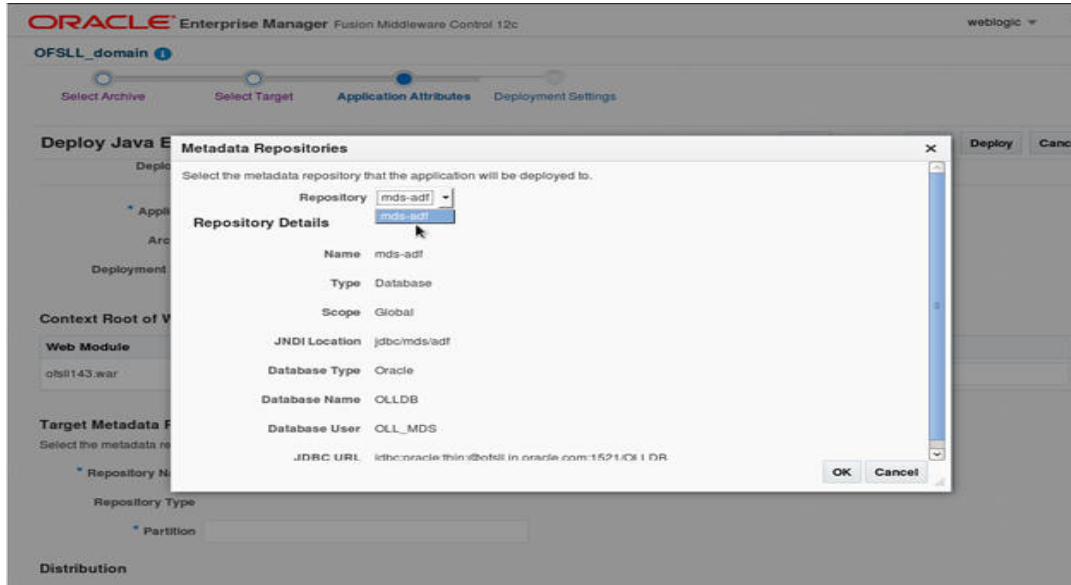
Context Root of Web Modules

Web Module	Context Root
otsl143.war	otsl143

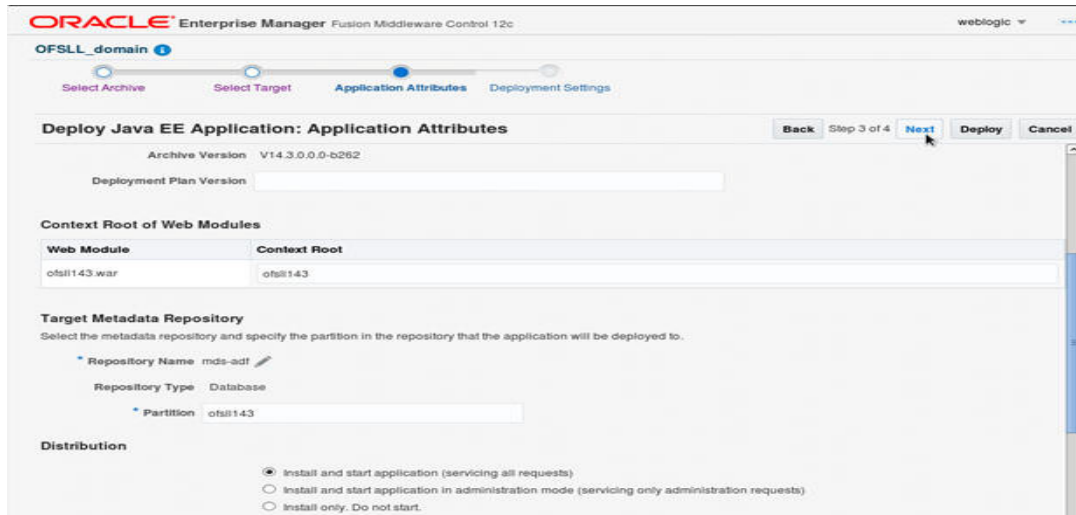
Target Metadata Repository
Select the metadata repository and specify the partition in the repository that the application will be deployed to.

* Repository Name Not specified in archive
Repository Type Select or view the target metadata repository
* Partition

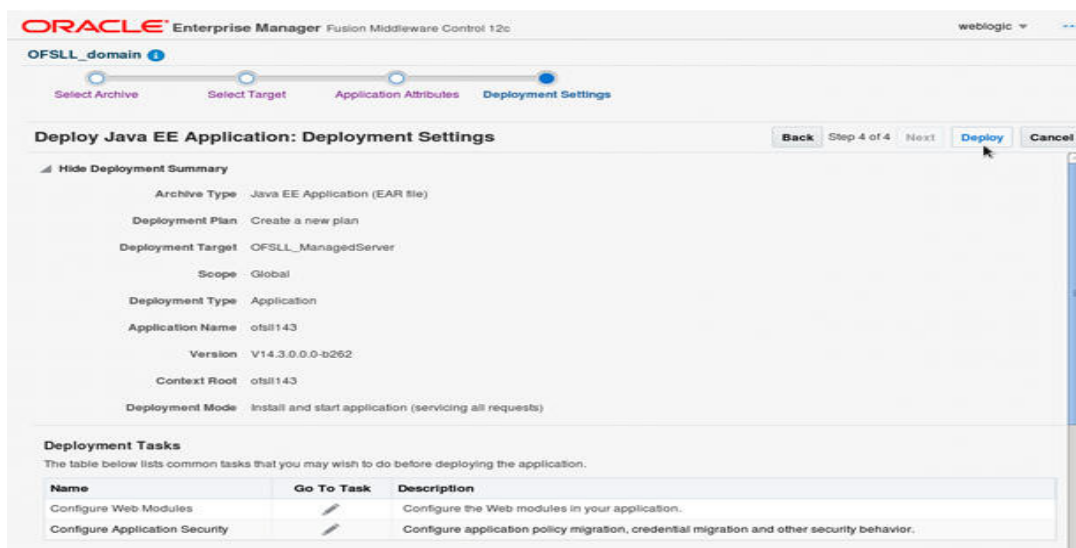
8. Click  button to select Repository Name. The following window is displayed.



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



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



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



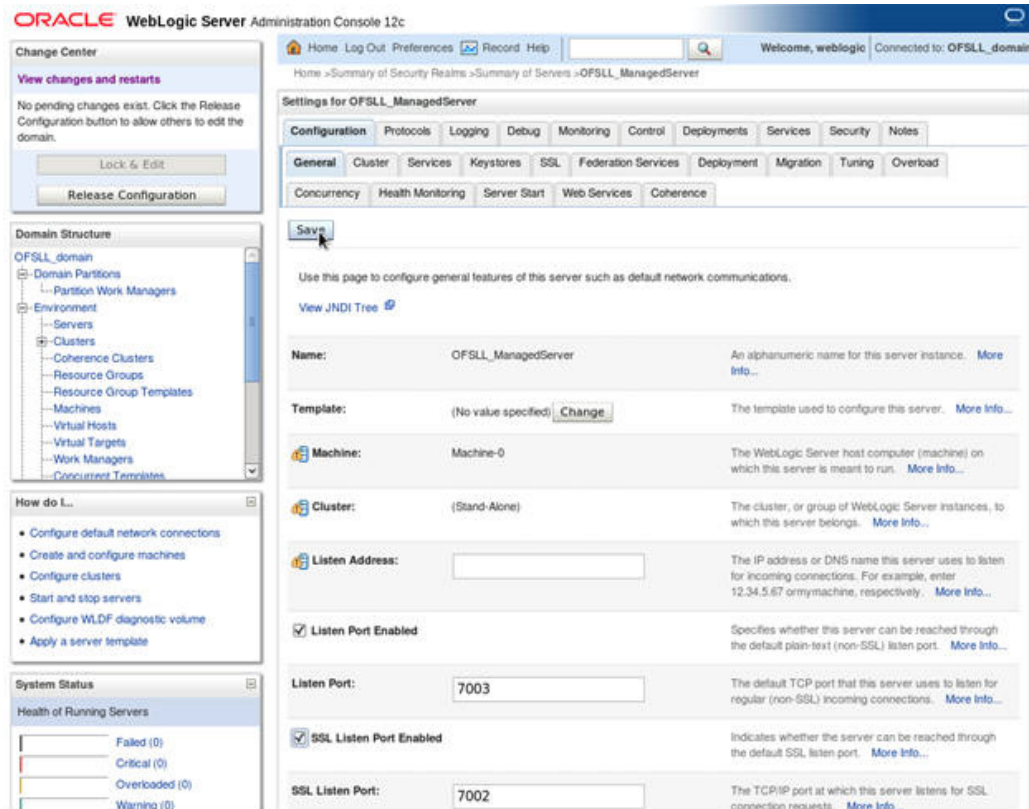
12. Click Close once the message "Deploy operation completed" is displayed.

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.



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

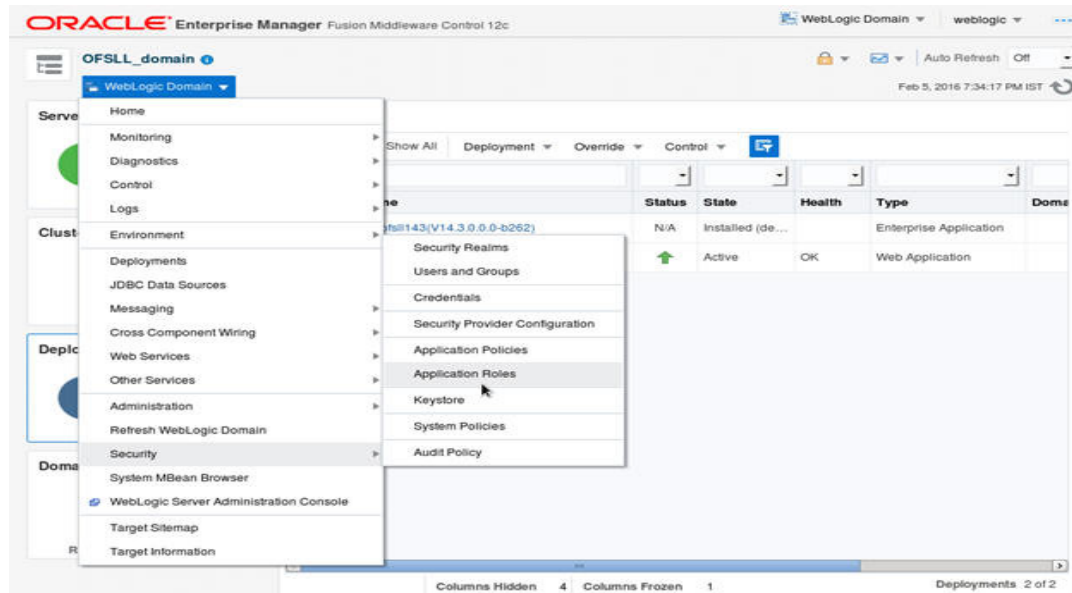
Note

It is recommended to disable http protocol.

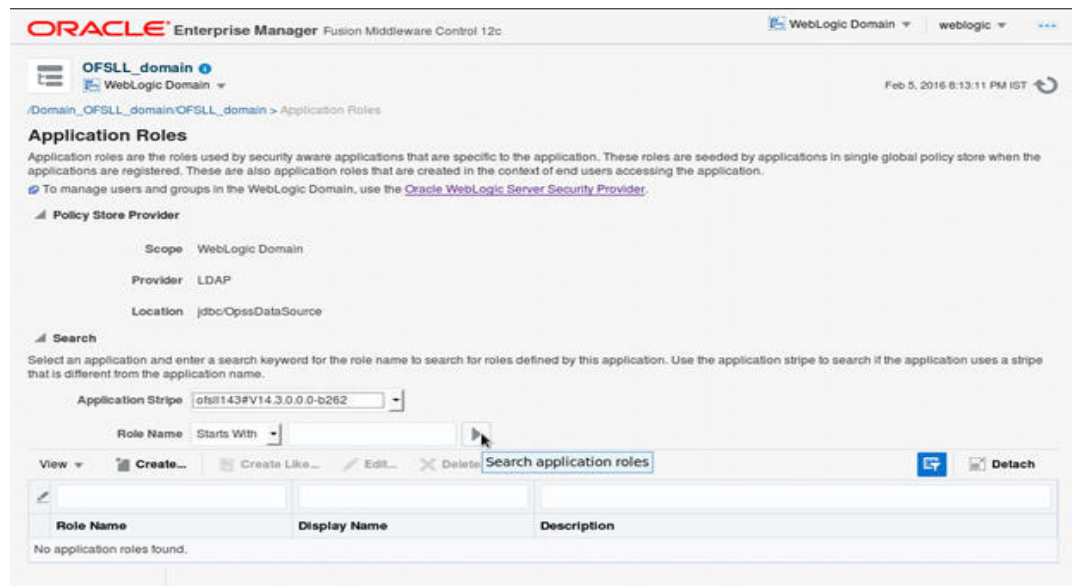
7. Mapping Enterprise Group with Application Role

Follow the below steps to add an user to the group

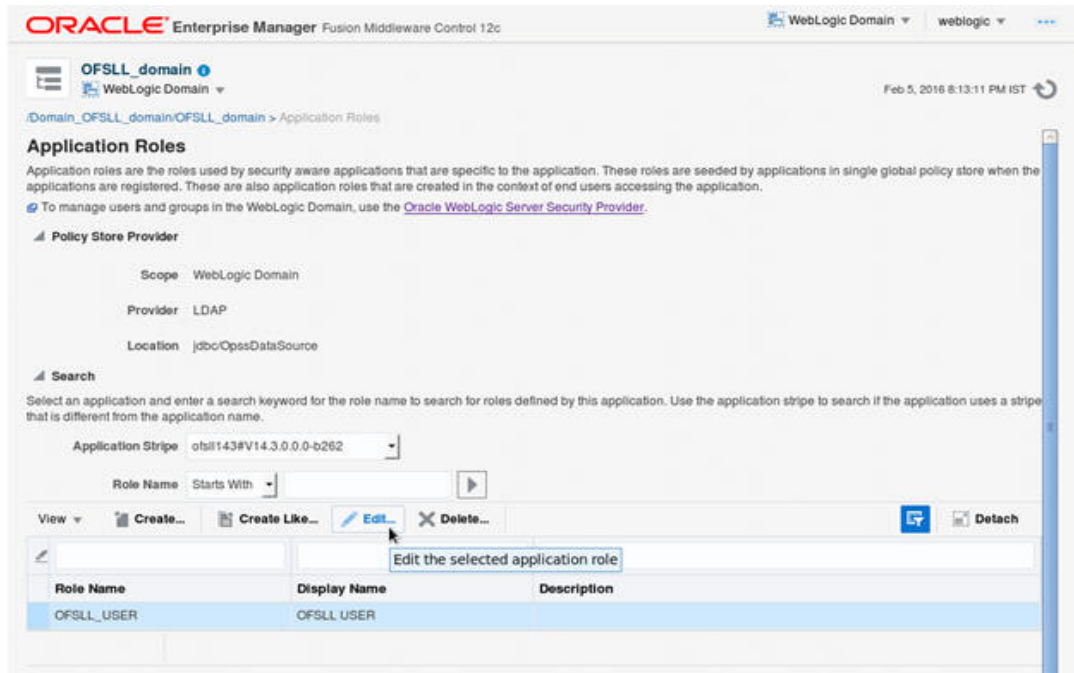
1. Login to Oracle Enterprise Manager 12c console (<http://hostname:port/em>).
2. Click **WebLogic Domain** → **Security** → **Application Roles** on the right panel.



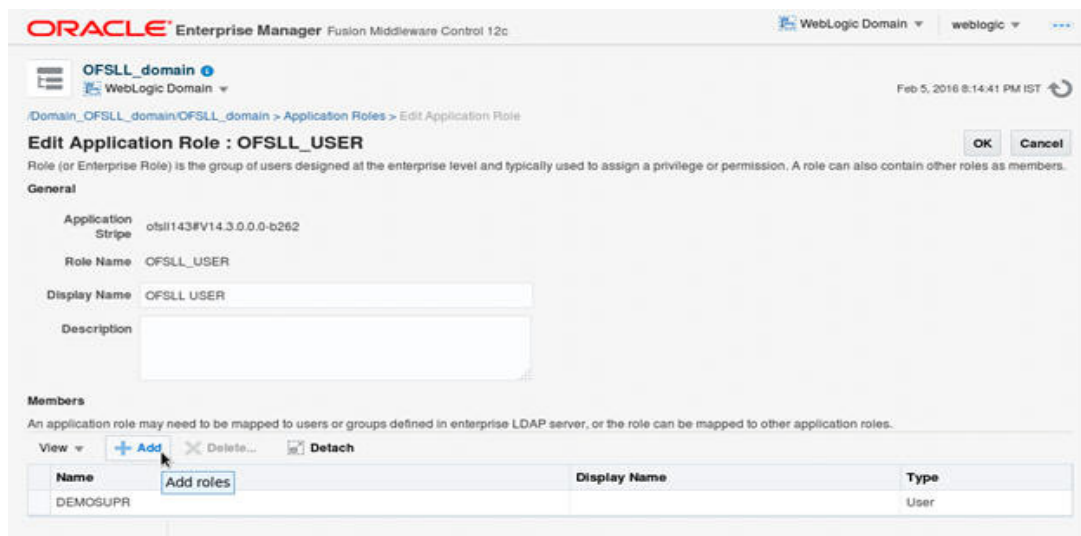
3. Select Application Stripe from the drop-down menu.
4. Click the arrow head button. Details of the existing Roles are displayed below:



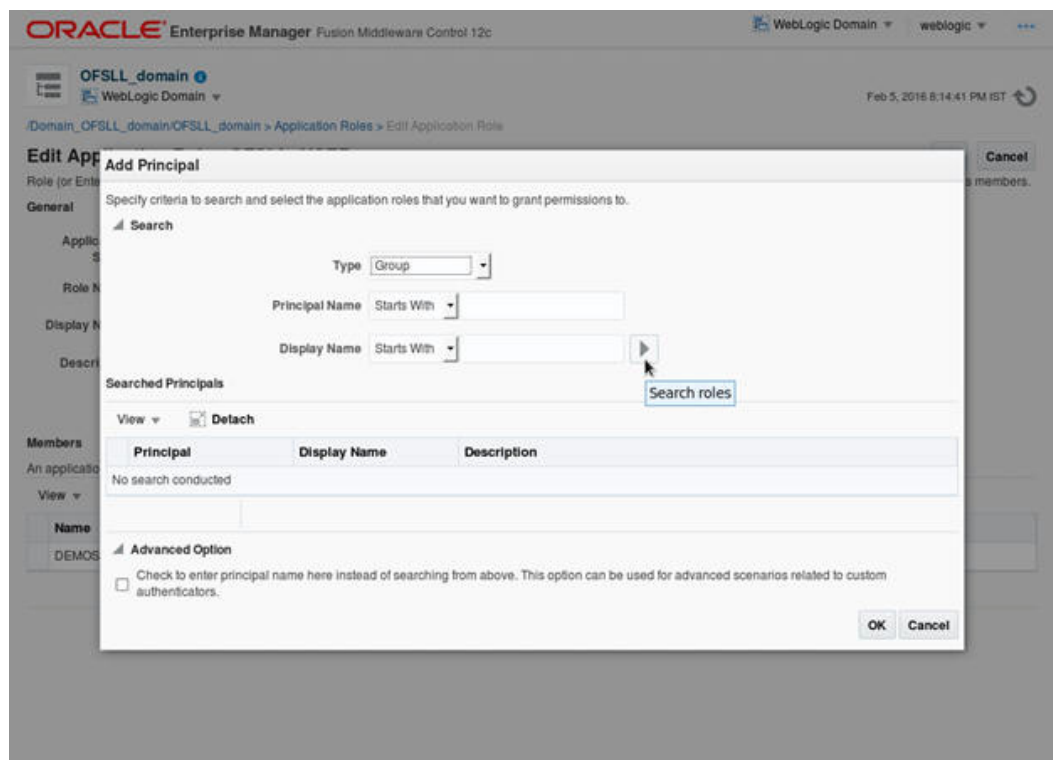
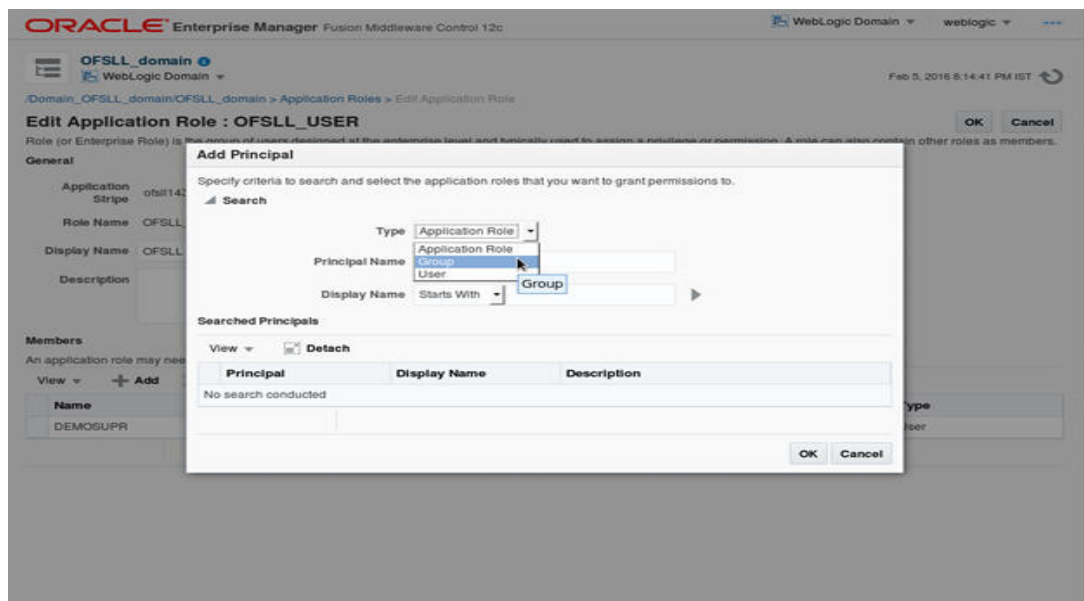
5. Select the **Role Name**. Membership details of the selected Role Name are displayed under **Membership for "role_name"**..



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



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.



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

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.

OK Cancel

ORACLE Enterprise Manager Fusion Middleware Control 12c

WebLogic Domain weblogic

Feb 5, 2016 8:14:41 PM IST

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: ofssl143#V14.3.0.0-b262

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

OK Cancel

10. Click OK. 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 ▾

OFSLL_domain

WebLogic Domain ▾

Feb 5, 2016 8:20:15 PM IST

Information

An application role OFSLL_USER has been updated.

/Domain_OFSLL_domain/OFSLL_domain > Application Roles

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.

To manage users and groups in the WebLogic Domain, use the [Oracle WebLogic Server Security Provider](#).

Policy Store Provider

Scope WebLogic Domain

Provider LDAP

Location jdbc:OpsDataSource

Search

Select an application and enter a search keyword for the role name to search for roles defined by this application. Use the application stripe to search if the application uses a stripe that is different from the application name.

Application Stripe

ofsl143#V14.3.0.0.0-b262

Role Name

Starts With

View ▾

Create...

Create Like...

Edit...

Delete...

Detach

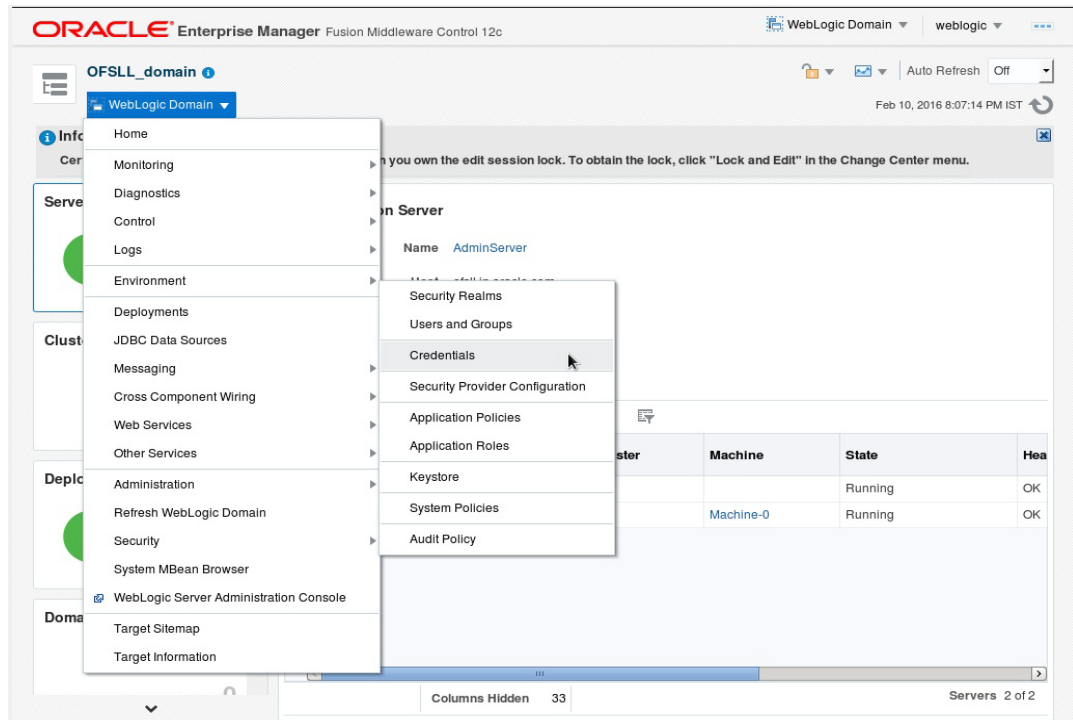
Role Name	Display Name	Description
OFSLL_USER	OFSLL USER	

7-5

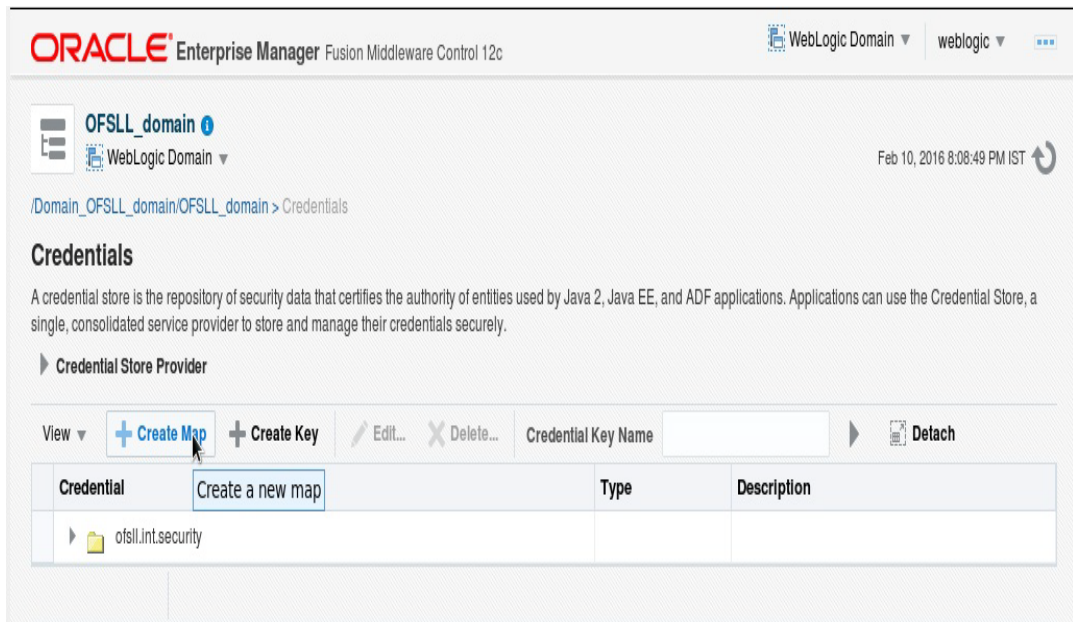
ORACLE®

8. Configuring JNDI name for HTTP Listener

1. Click **WebLogic Domain** on the right panel. Select **Security** → **Credentials**.



2. On clicking **Credentials** the following window is displayed.



3. Click on **Create Map**. The following window is displayed.

The screenshot shows the Oracle Enterprise Manager interface for the 'OFSLL_domain' WebLogic Domain. The 'Credentials' section is active, displaying a description of the credential store. Below this, the 'Create Map' dialog box is open. It contains a text field for 'Map Name' with the value 'ofsl.http.listener.jndi'. At the bottom right of the dialog are 'OK' and 'Cancel' buttons.

ORACLE® Enterprise Manager Fusion Middleware Control 12c

WebLogic Domain ▼ weblogic ▼

OFSLL_domain ⓘ
WebLogic Domain ▼

Feb 10, 2016 8:08:49 PM IST ↺

/Domain_OFSLL_domain/OFSLL_domain > Credentials

Credentials

A credential store is the repository of security data that certifies the authority of entities used by Java 2, Java EE, and ADF applications. Applications can use the Credential Store, a single, consolidated service provider to store and manage their credentials securely.

► Credential Store Provider

View ▼ + Create Map + Create Key Edit... Delete... Credential Key Name Detach

Credential	Type	Description
------------	------	-------------

Create Map

A credential is uniquely identified by a map name and a key name. Typically, the map name corresponds with the name of an application and all credentials with the same map name define a logical group of credentials, such as the credentials used by the application. All map names in a credential store must be distinct.

* Map Name ofsl.http.listener.jndi

OK Cancel

4. Enter Map name as '**ofsl.http.listener.jndi**'.
5. Click **OK**. The following window is displayed.

The screenshot shows the Oracle Enterprise Manager interface after the 'Create Map' action. A yellow information banner at the top states: 'The credential map, ofsl.http.listener.jndi, has been created.' Below the banner, the 'Credentials' section is active, showing a table with two entries: 'ofsl.http.listener.jndi' and 'ofsl.int.security'.

ORACLE® Enterprise Manager Fusion Middleware Control 12c

WebLogic Domain ▼ weblogic ▼

OFSLL_domain ⓘ
WebLogic Domain ▼

Feb 10, 2016 8:08:49 PM IST ↺

/Domain_OFSLL_domain/OFSLL_domain > Credentials

Credentials

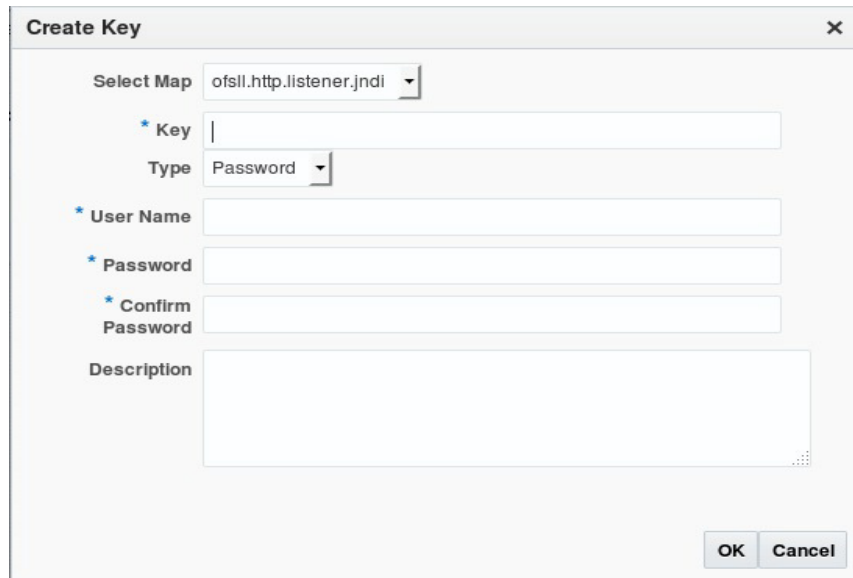
A credential store is the repository of security data that certifies the authority of entities used by Java 2, Java EE, and ADF applications. Applications can use the Credential Store, a single, consolidated service provider to store and manage their credentials securely.

► Credential Store Provider

View ▼ + Create Map + Create Key Edit... Delete... Credential Key Name Detach

Credential	Type	Description
ofsl.http.listener.jndi		
ofsl.int.security		

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



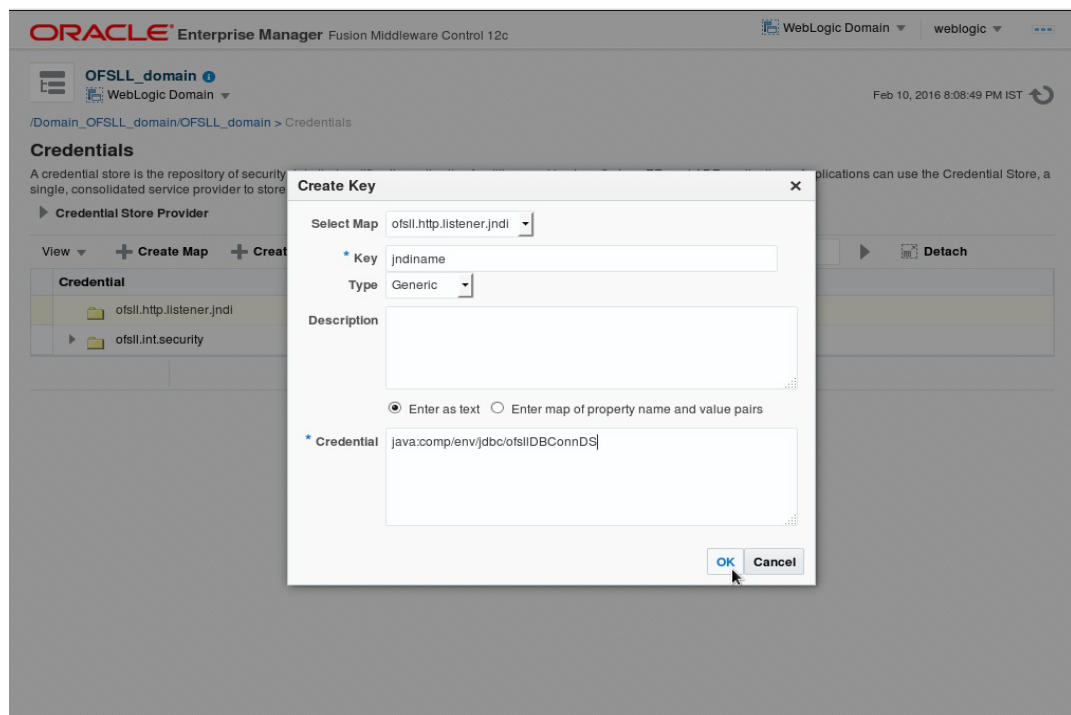
The 'Create Key' dialog box is shown. It has a title bar with 'Create Key' and a close button. The 'Select Map' dropdown is set to 'ofssl.http.listener.jndi'. The 'Key' field is empty. The 'Type' dropdown is set to 'Password'. There are three fields for 'User Name', 'Password', and 'Confirm Password', all of which are empty. There is a large 'Description' text area, also empty. At the bottom right are 'OK' and 'Cancel' buttons.

7. Enter the details as per your requirement.

Key: jndiname

Credential: java:comp/env/jdbc/ofsslIDBConnDS

Type: Generic



The screenshot shows the Oracle Enterprise Manager interface. The background displays the 'Credentials' section for the 'OFSSL_domain'. A 'Create Key' dialog box is overlaid on top. In this dialog, the 'Select Map' is 'ofssl.http.listener.jndi', the 'Key' is 'jndiname', and the 'Type' is 'Generic'. The 'Credential' field contains 'java:comp/env/jdbc/ofsslIDBConnDS'. The 'Enter as text' radio button is selected. The 'OK' button is highlighted with a mouse cursor.

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

ORACLE® Enterprise Manager Fusion Middleware Control 12c

WebLogic Domain ▾ weblogic ▾

Feb 10, 2016 8:08:49 PM IST ↻

Information

The credential key, jndiname, has been created.

/Domain_OFSSL_domain/OFSSL_domain > Credentials

Credentials

A credential store is the repository of security data that certifies the authority of entities used by Java 2, Java EE, and ADF applications. Applications can use the Credential Store, a single, consolidated service provider to store and manage their credentials securely.

► **Credential Store Provider**

View ▾ + Create Map + Create Key Edit... Delete... Credential Key Name Detach

Credential	Type	Description
▶ ofssl.http.listener.jndi		
▶ ofssl.int.security		

9. Configuring Oracle BI Publisher for Application

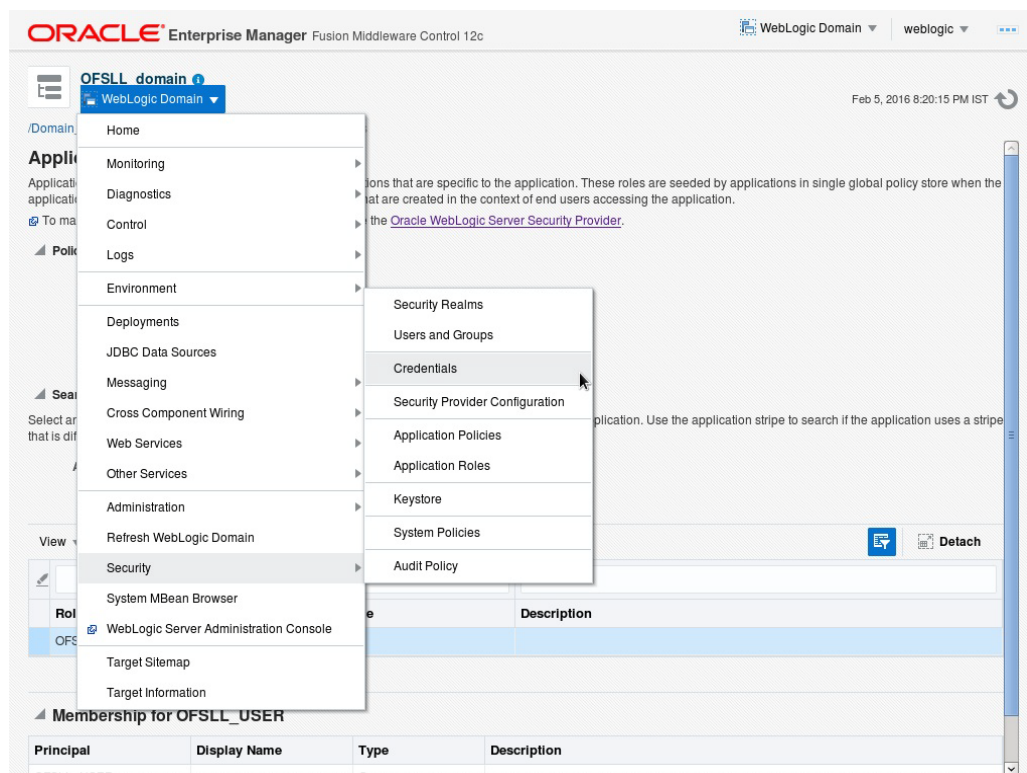
1. Copy the OfsslCommonCSF.jar from /WEB-INF/lib available in the staging area to \$DOMAIN_HOME/lib
2. Update the setDomainEnv.sh file (\$MW_HOME/user_projects/domains/mydomain/bin directory) by appending the above jar file path –

EXTRA_JAVA_PROPERTIES="..... \${EXTRA_JAVA_PROPERTIES}
-Dofssl.csf.path=\${DOMAIN_HOME}"

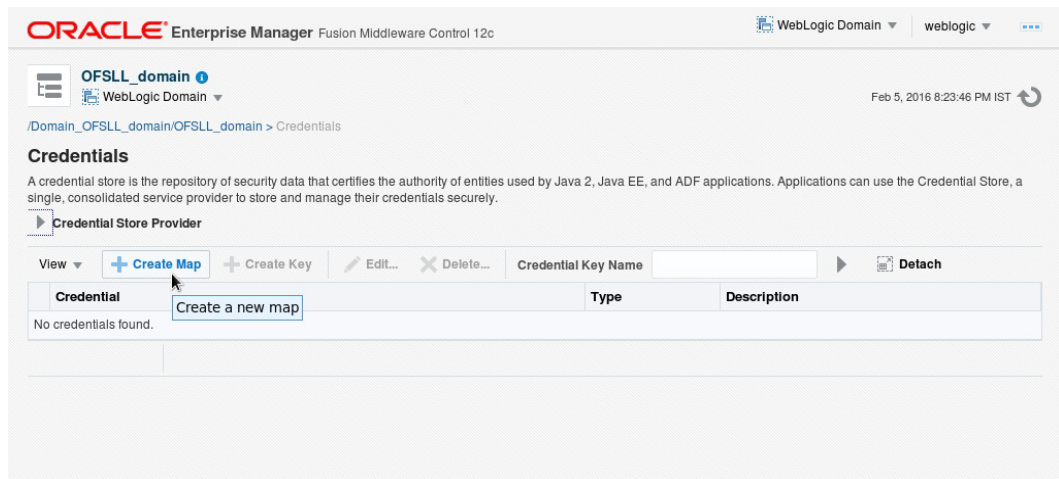
3. Configure Security via EMconsole

Note

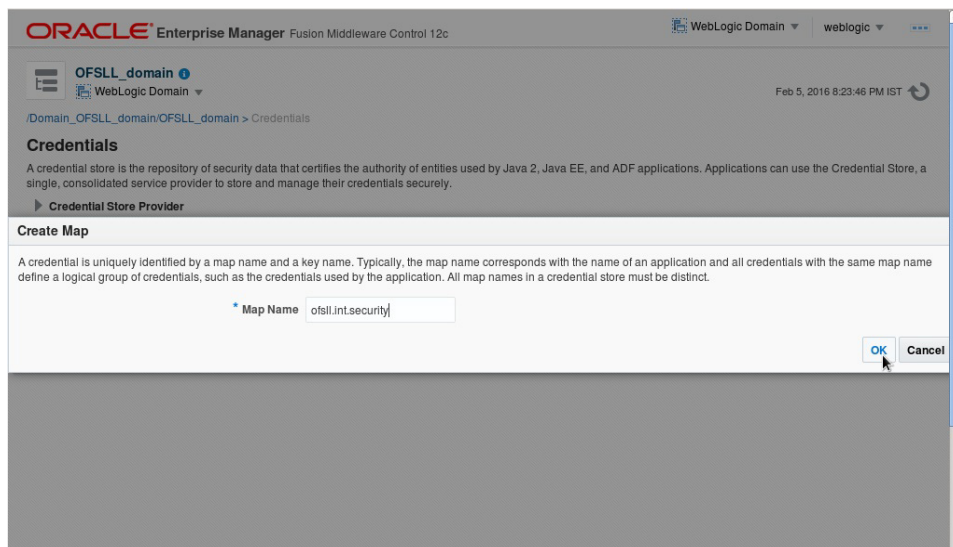
It is assumed that BI Publisher is installed and configured. Refer BI Publisher Guide for further details.



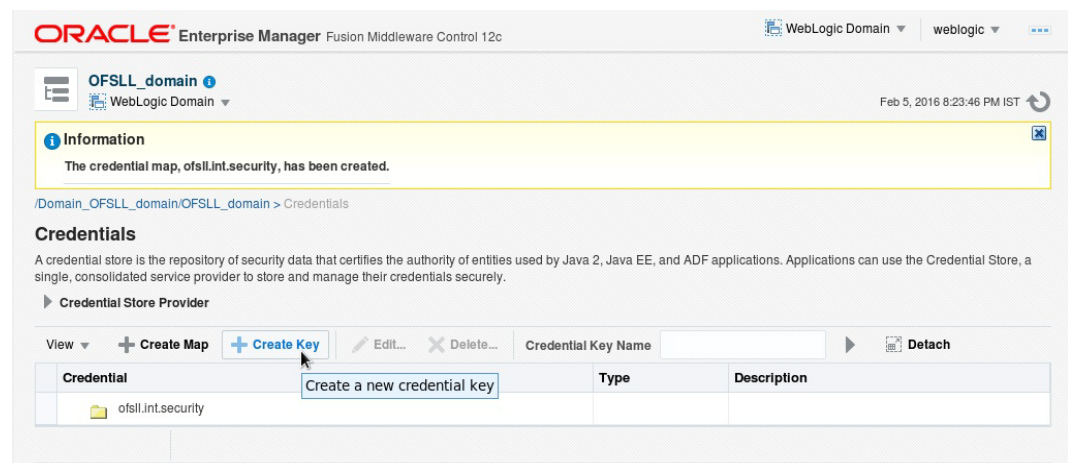
- Click WebLogic Domain on the right panel. Select Security -> Credentials. Click 'Create Map'.



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

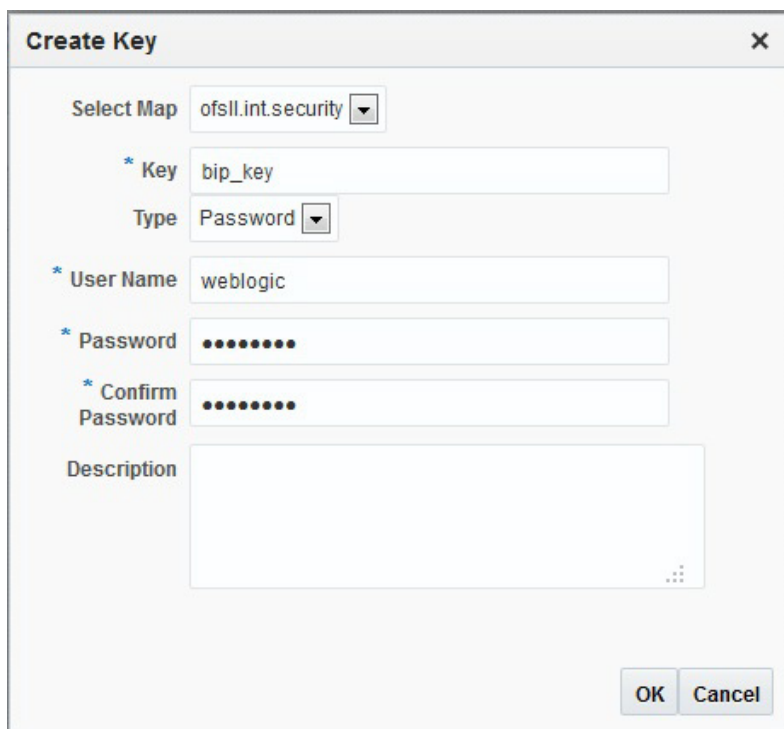


- Click OK.



- Click **Create Key** Button.
- Enter the details as per your requirement.

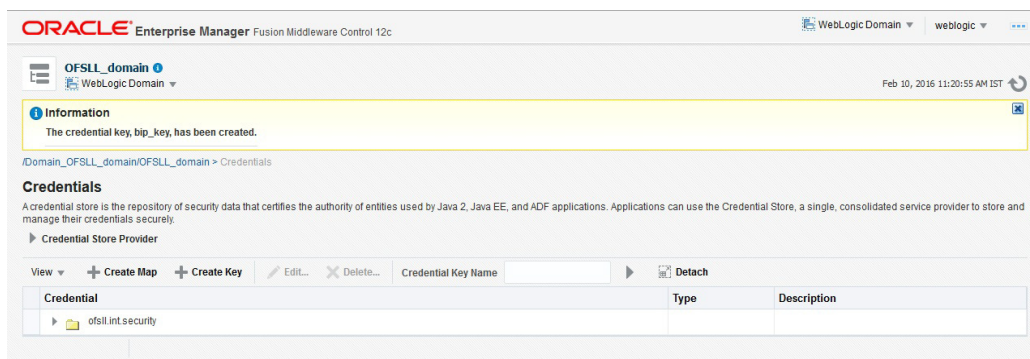
9. And provide User Name and Password of BI Publisher console.



The 'Create Key' dialog box is shown with the following fields:

- Select Map:** ofssl.int.security (dropdown)
- * Key:** bip_key (text field)
- Type:** Password (dropdown)
- * User Name:** weblogic (text field)
- * Password:** (password field with dots)
- * Confirm Password:** (password field with dots)
- Description:** (empty text area)
- Buttons:** OK, Cancel

10. Click **OK**. The following window is displayed.

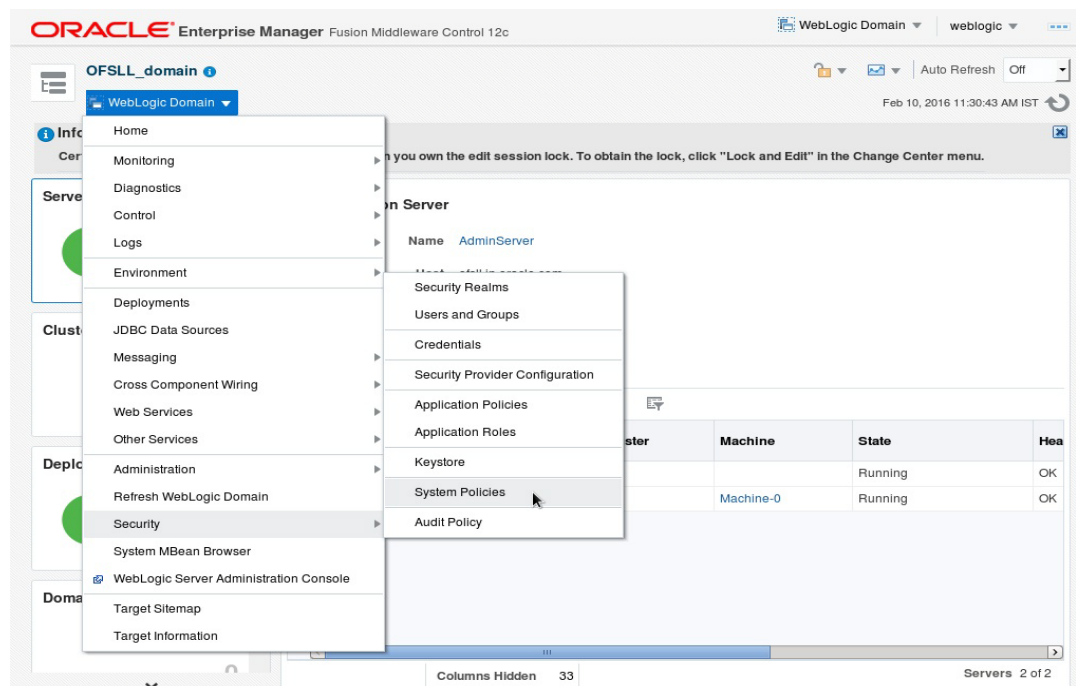


The screenshot shows the Oracle Enterprise Manager console with the following details:

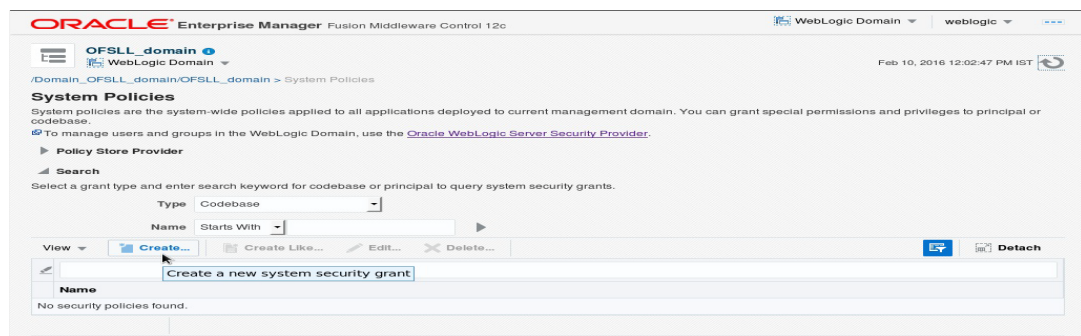
- Page Header:** ORACLE Enterprise Manager Fusion Middleware Control 12c, WebLogic Domain, weblogic, Feb 10, 2016 11:20:55 AM IST.
- Breadcrumbs:** /Domain_OFSSL_domain/OFSSL_domain > Credentials
- Information Message:** The credential key, bip_key, has been created.
- Credentials Section:** A credential store is the repository of security data that certifies the authority of entities used by Java 2, Java EE, and ADF applications. Applications can use the Credential Store, a single, consolidated service provider to store and manage their credentials securely.
- Credential Store Provider:** A table with the following data:

Credential	Type	Description
ofssl.int.security		

11. On the left panel, right click on the domain OFSLL_domain > Security > System Policies. The following window is displayed.



12. Click Create.



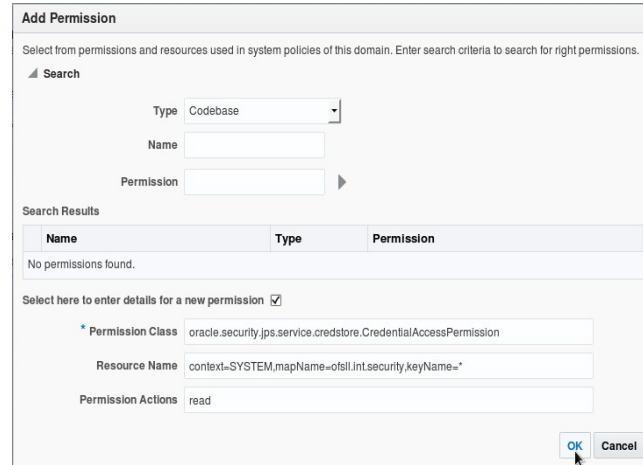
13. The following window is displayed. Enter the codebase as "file:\${ofsl.csf.path}/lib/OfsllCommonCSF.jar" and click Add.



14. 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



Add Permission

Select from permissions and resources used in system policies of this domain. Enter search criteria to search for right permissions.

Search

Type: Codebase
 Name:
 Permission:

Search Results

Name	Type	Permission
No permissions found.		

Select here to enter details for a new permission ☒

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

Permission Actions: read

OK Cancel

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=ofssl.http.listener.jndi,keyName=*
 - Permission Actions: read
2. Click OK. The following window is displayed.



ORACLE Enterprise Manager Fusion Middleware Control 12c

WebLogic Domain weblogic

Feb 10, 2016 7:45:05 PM IST

OFSLL_domain

WebLogic Domain

/Domain_OFSLL_domain/OFSLL_domain > System Policies > Create System Grant

Create System Grant

There are two different types of system policies supported by application server: principal policy and codebase policy. Principal policy grants permissions and privileges to a list of users or roles. Codebase policy grants permissions and privileges to a codebase, which is mostly URL or location of jar file in file system. Codebase can be either absolute path or relative path.

Grant To: Codebase

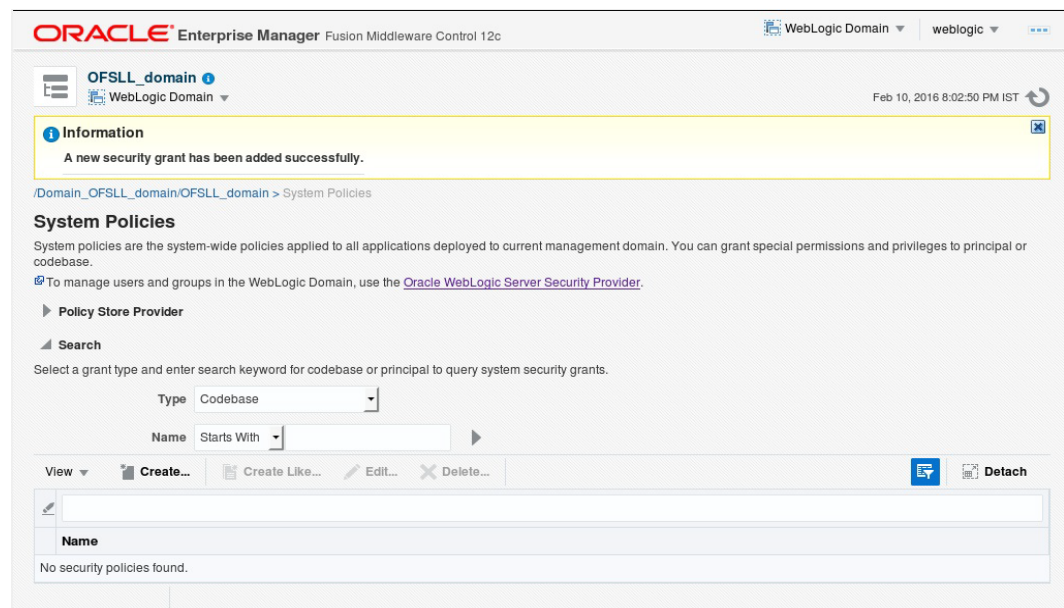
* Codebase: file:\${ofssl.csf.path}/lib/OfsslCommonCSF.jar

Permissions

Permission Class	Resource Name	Permission Actions
oracle.security.jps.service.credstore.CredentialAc...	context=SYSTEM,mapName=ofssl.int.security.keyName=*	read
oracle.security.jps.service.credstore.CredentialAc...	context=SYSTEM,mapName=ofssl.http.listener.jndi.keyName=*	read

View Add Edit... Delete... Detach

3. Click OK. The following window is displayed.



ORACLE Enterprise Manager Fusion Middleware Control 12c

WebLogic Domain weblogic

Feb 10, 2016 8:02:50 PM IST

OFSLL_domain

WebLogic Domain

/Domain_OFSLL_domain/OFSLL_domain > System Policies

System Policies

System policies are the system-wide policies applied to all applications deployed to current management domain. You can grant special permissions and privileges to principal or codebase.

To manage users and groups in the WebLogic Domain, use the [Oracle WebLogic Server Security Provider](#).

Policy Store Provider

Search

Select a grant type and enter search keyword for codebase or principal to query system security grants.

Type: Codebase

Name: Starts With

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

Name
No security policies found.

10. Launching Application

Verifying Successful Application Deployment and Launching Application

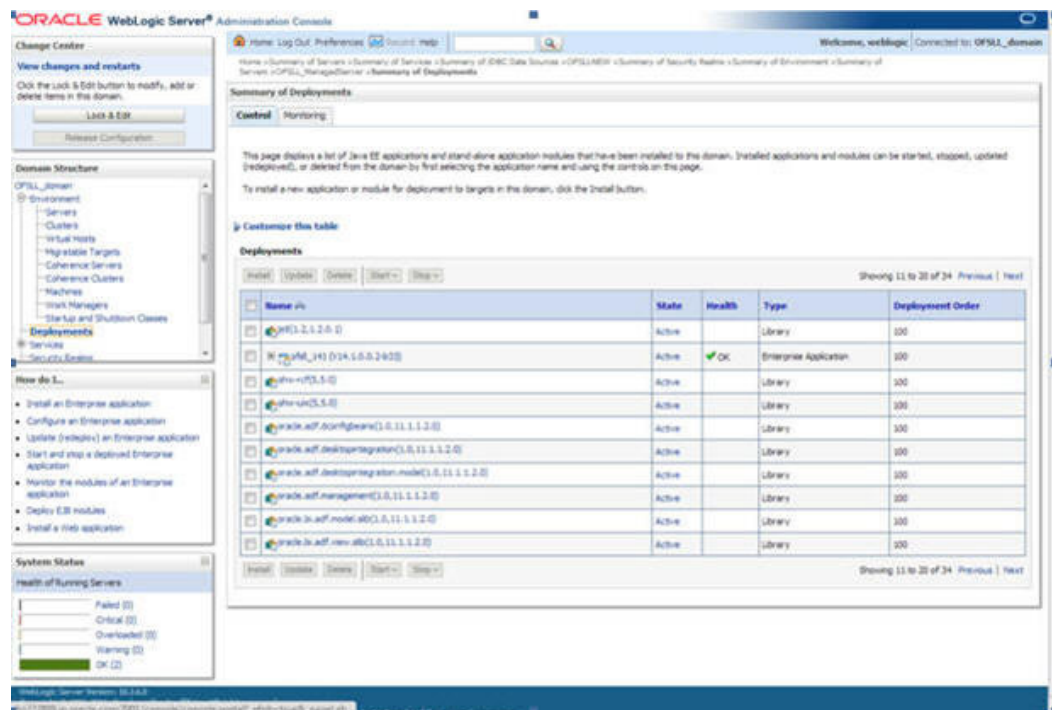
Successful Application deployment can be verified by following:

- Making sure that the state is ACTIVE and health in 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

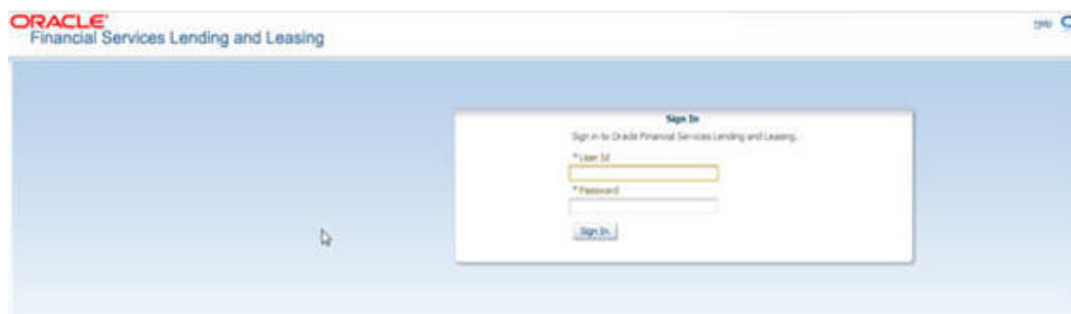
1. Verify if the deployed OFSLL application is **Active**.



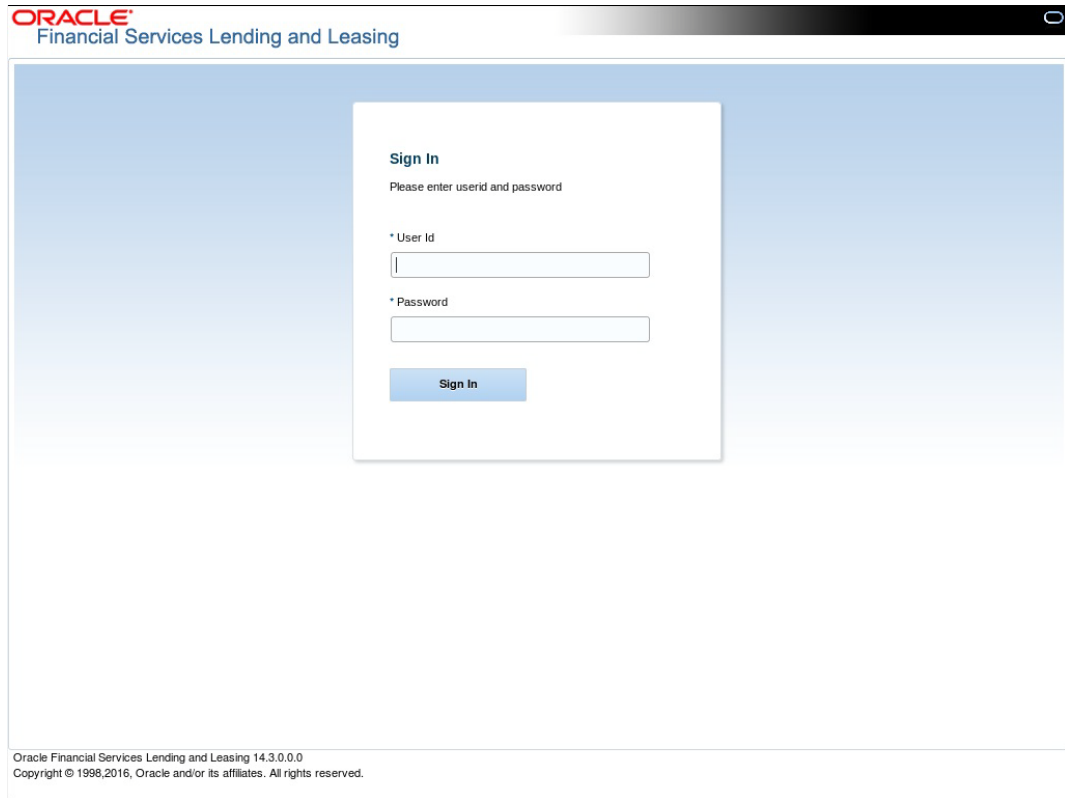
2. The URL of the OFSLL application will be

<https://<hostname>:<Port>/<ContextName>/faces/pages/OfsllSignIn.jsf>

(Example: <https://localhost:7003/ofsl143/faces/pages/OfsllSignIn.jsf>)

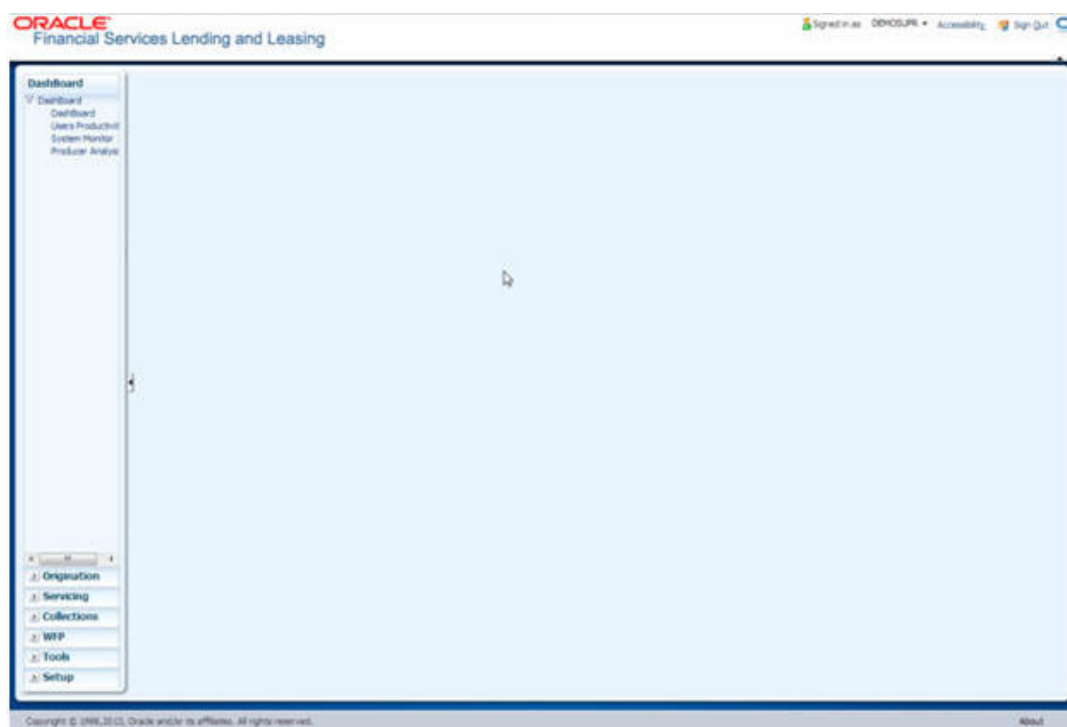


3. Login with the user credentials that was created in Users Creation.



The screenshot shows the Oracle Financial Services Lending and Leasing application window. The title bar reads "ORACLE Financial Services Lending and Leasing". The main content area features a "Sign In" dialog box with the text "Please enter userid and password". Below this text are two input fields: "* User Id" and "* Password". A blue "Sign In" button is positioned at the bottom of the dialog box. At the bottom of the application window, a footer contains the text: "Oracle Financial Services Lending and Leasing 14.3.0.0.0 Copyright © 1998,2016, Oracle and/or its affiliates. All rights reserved."

4. After successful login, the following screen is displayed



11. Installing Upgrade

There is an infrastructure upgrade required (from 11g fusion middleware to 12c fusion middleware) when upgrading from OFSLL 14.2.0.0.0 to OFSLL 14.3.0.0.0.

Hence, it is recommended to install a new 12c fusion middleware infrastructure and deploy the 14.3.0.0.0 OFSLL application.