

# Oracle® Financial Services Lending and Leasing WebServices Installation Guide



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ORACLE®

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# Preface

This topic contains following sub-topics:

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## Purpose

This document contains notes and installation steps needed to install WebServices.

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 the WebServices product 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 WebServices.

## Prerequisites

1. JDK Version jdk-21.0.7 <https://www.oracle.com/java/technologies/javase/jdk21-archive-downloads.html>
2. Download and Install the Oracle Fusion Middleware 14c Version 14.1.2.0.0 (Fusion Middleware Infrastructure installer) from <https://www.oracle.com/middleware/technologies/weblogic-server-installers-downloads.html>. They are also available from the following sources:
  - Oracle Software Delivery Cloud (<http://edelivery.oracle.com/>)
  - Oracle Technology Network (OTN)
3. It is assumed that the Oracle Financial Services Lending and Leasing DB is installed and configured, before running the Web Services installer.

## Audience

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

## Documentation Accessibility

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

### Access to Oracle Support

Oracle customer access to and use of Oracle support services will be pursuant to the terms and conditions specified in their Oracle order for the applicable services.

## Critical Patches

Oracle advises customers to get all their security vulnerability information from the Oracle Critical Patch Update Advisory, which is available at [Critical Patches, Security Alerts and Bulletins](#). All critical patches should be applied in a timely manner to make sure effective security, as strongly recommended by [Oracle Software Security Assurance](#).

## Diversity and Inclusion

Oracle is fully committed to diversity and inclusion. Oracle respects and values having a diverse workforce that increases thought leadership and innovation. As part of our initiative to build a more inclusive culture that positively impacts our employees, customers, and partners, we are working to remove insensitive terms from our products and documentation. We are also mindful of the necessity to maintain compatibility with our customers' existing technologies and the need to ensure continuity of service as Oracle's offerings and industry standards evolve. Because of these technical constraints, our effort to remove insensitive terms is ongoing and will take time and external cooperation.

## Conventions

The following text conventions are used in this document:

**Table**    **Convention**

Convention	Meaning
<b>boldface</b>	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
<code>monospace</code>	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

## Screenshot Disclaimer

Personal information used in the interface or documents is dummy and does not exist in the real world. It is only for reference purposes.

# 1

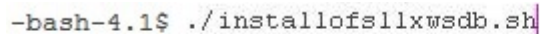
## Install WebServices Database Objects

The following section deals with installation of WebServices Database Objects.

Download and unzip the WebServices database (ofsslxwsdb.zip) to a staging folder.

Run \$ ./installofsslxwsdb.sh

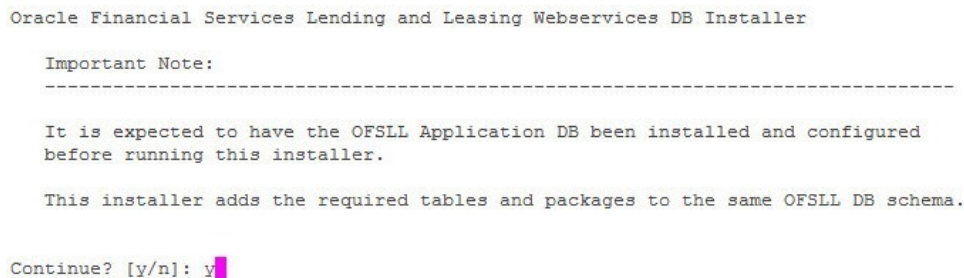
**Figure 1-1 Command prompt window 1**



```
-bash-4.1$ ./installofsslxwsdb.sh
```

This installer adds the required tables and packages to the application database.

**Figure 1-2 Command prompt window 2**



```
Oracle Financial Services Lending and Leasing Webservices DB Installer

Important Note:
-----

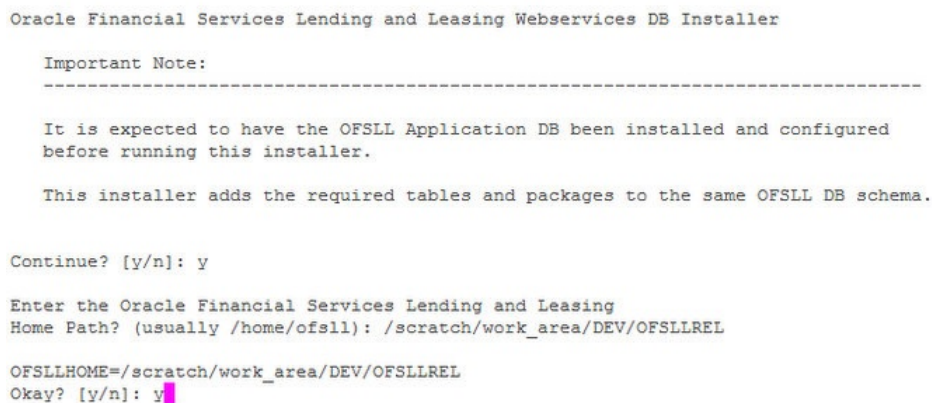
It is expected to have the OFSLL Application DB been installed and configured
before running this installer.

This installer adds the required tables and packages to the same OFSLL DB schema.

Continue? [y/n]: y
```

Enter y when prompted to continue.

**Figure 1-3 Command prompt window 3**



```
Oracle Financial Services Lending and Leasing Webservices DB Installer

Important Note:
-----

It is expected to have the OFSLL Application DB been installed and configured
before running this installer.

This installer adds the required tables and packages to the same OFSLL DB schema.

Continue? [y/n]: y

Enter the Oracle Financial Services Lending and Leasing
Home Path? (usually /home/ofssl): /scratch/work_area/DEV/OFSLLREL

OFSLLHOME=/scratch/work_area/DEV/OFSLLREL
Okay? [y/n]: y
```

**Table 1-1 Script Prompts**

Script Prompts	Description and Action Required
Oracle Financial Services Lending and Leasing Home Path	Enter the path to the home directory. This is referred to as \$OFSLL_HOME. Enter <b>y</b> when prompted for.

**Figure 1-4 Command prompt window 4**

```

Oracle Financial Services Lending and Leasing Webservices DB Installer

Important Note:
-----

It is expected to have the OFSLL Application DB been installed and configured
before running this installer.

This installer adds the required tables and packages to the same OFSLL DB schema.

Continue? [y/n]: y

Enter the Oracle Financial Services Lending and Leasing
Home Path? (usually /home/ofsll): /scratch/work_area/DEV/OFSLLREL

OFSLLHOME=/scratch/work_area/DEV/OFSLLREL
Okay? [y/n]: y

Enter the Oracle DB Home Path? /scratch/app/db12c/product/12.1.0/dbhome_1

ORAHOME=/scratch/app/db12c/product/12.1.0/dbhome_1
Okay? [y/n]: y

Enter the Oracle SID? ORCL
INSTANCENAME=ORCL
Okay? [y/n]: y

```

**Table 1-2 Script Prompts**

Script Prompts	Description and Action Required
Oracle DB Home Path	Enter the path to the Oracle DB home directory. This is referred to as \$ORACLE_HOME. Enter <b>y</b> when prompted for.
Oracle SID	Enter the Name of Oracle Instance. Enter <b>y</b> when prompted for.

**Figure 1-5 Command prompt window 5**

```

Important Note:
-----

Here is a list of CRITICAL environment variables and their settings:

PATH=/usr/lib64/qt-3.3/bin:/usr/kerberos/sbin:/usr/kerberos/bin:/bin:/usr/bin:/usr/dev_infra/platform/bin:/usr/dev_infra/generic/bin:
11R6/bin:/usr/local/ade/bin:/scratch/app/db12c/product/12.1.0/dbhome_1/bin
ORACLE_HOME=/scratch/app/db12c/product/12.1.0/dbhome_1
ORACLE_SID=ORCL
OFSLL_HOME=/scratch/work_area/DEV/OFSLLREL

With the above environment, you should be able start SQLPlus and connect
to the database. If you cannot, correct the environment and restart the
script to continue.

Continue? [y/n]: y

```

The script lists and sets the CRITICAL environment variables.

**Figure 1-6 Command prompt window 6**

```

.....
Oracle Financial Services Lending and Leasing Webservices Database Object Installation

The following items are available for installation:

      1. database types           (512)
      2. database tables         (47)
      3. database views          (295)
      4. database trigger        (4)
      5. database package specs  (412)
      6. database package bodies (420)
      7. database indexes        (30)
      8. System Seed Data        (0)

Continue with Installation? [y/n] : █

```

Enter **y** when prompted to continue. A list of items available for installation are listed. Enter **y** when prompted to **Continue with Installation**.

**Figure 1-7 Command prompt window 7**

```

Oracle Financial Services Lending and Leasing Webservices Database Object Installation

The following items are available for installation:

      1. database types           (173)
      2. database tables         (47)
      3. database views          (157)
      4. database trigger        (4)
      5. database package specs  (254)
      6. database package bodies (262)
      7. database indexes        (30)
      8. System Seed Data        (0)

Continue with Installation? [y/n] : y

Log files will be located in /scratch/work_area/DEV/OFSLLREL/logs/ofsl1_xws_install_logs
Press Enter to Continue...

Enter the Oracle userid (schema name) that will own the Oracle Financial Services Lending and Leasing
objects? (usually ofsl1prd): OFSLLREL

Enter the password for this userid: █

```

Sets the path for the location of log files. Press **Enter** to continue.

**Table 1-3 Script Prompts**

Script Prompts	Description and Action Required
Oracle User ID that will own the Oracle Financial Services Lending and Leasing objects	Valid User ID
Password for this User ID	Valid Password

The script installs the objects.



**Figure 1-8 Command prompt window 8**

```
PL/SQL procedure successfully completed.  
  
PL/SQL procedure successfully completed.  
  
PL/SQL procedure successfully completed.  
  
PL/SQL procedure successfully completed.  
  
PL/SQL procedure successfully completed.  
  
Commit complete.  
  
Recompiling Invalid Objects...  
Oracle Financial Services Lending and Leasing Webservices DB Object Installation Complete.
```

While installing, the script recompiles the invalid objects and completes the installation of DB objects.

# 2

## Configure RESTful WebService

Follow the below steps to configure RESTful WebService.

- [Creating Data Sources for RESTful WebService](#)
- [Statement Timeout Configuration](#)
- [OAuth Implementation](#)
- [Deploying RESTful WebService](#)
- [Deploying RESTful Credit Bureau WebService](#)

### 2.1 Creating Data Sources for RESTful WebService

Please follow the below steps to create data Sources for RESTful WebService.

1. Login to Oracle Weblogic 14c em (<http://hostname:port/em>).

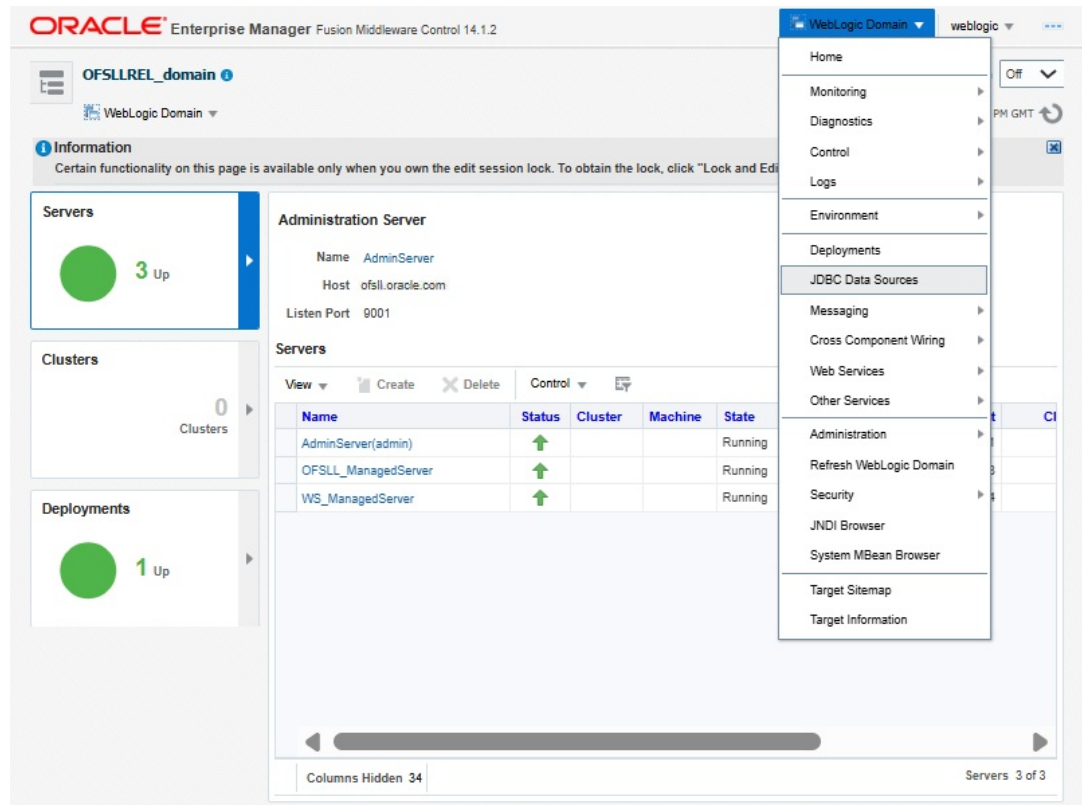
**Figure 2-1 Create RESTful WebService 1**



2. Click **WebLogic Domain > JDBC Data Sources**.

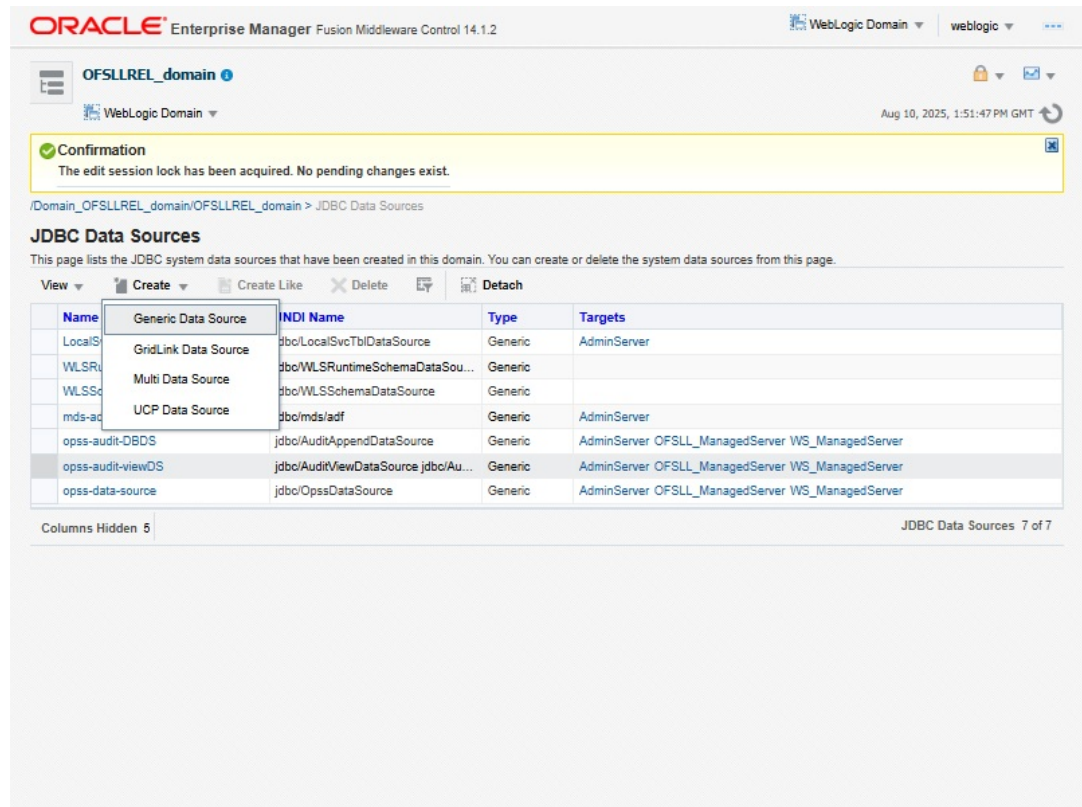
The following window is displayed.

Figure 2-2 Create RESTful WebService 3



3. Click **Lock & Edit** on the Change Center. Click '**Create**' and select 'Generic Data Source'. The following window is displayed.

Figure 2-3 Create RESTful WebService 4



4. Specify the following details:
  - a. Enter Data source Name: OfsslREST
  - b. Click on **Select**

The following window is displayed.

ORACLE® Enterprise Manager Fusion Middleware Control 14.1.2 weblogic

**Create a JDBC Data Source: Data Source Properties** Back Step 1 of 5 Next Cancel

Applications get a database connection from a data source by looking up the data source on the Java Naming and Directory Interface (JNDI) tree and then requesting a connection. The data source provides the connection to the application from its pool of database connections. Use this page to define the general configuration options for this JDBC data source.

\* Data Source Name

Scope

Type

Database Type

\* Driver Class Name

JNDI Name

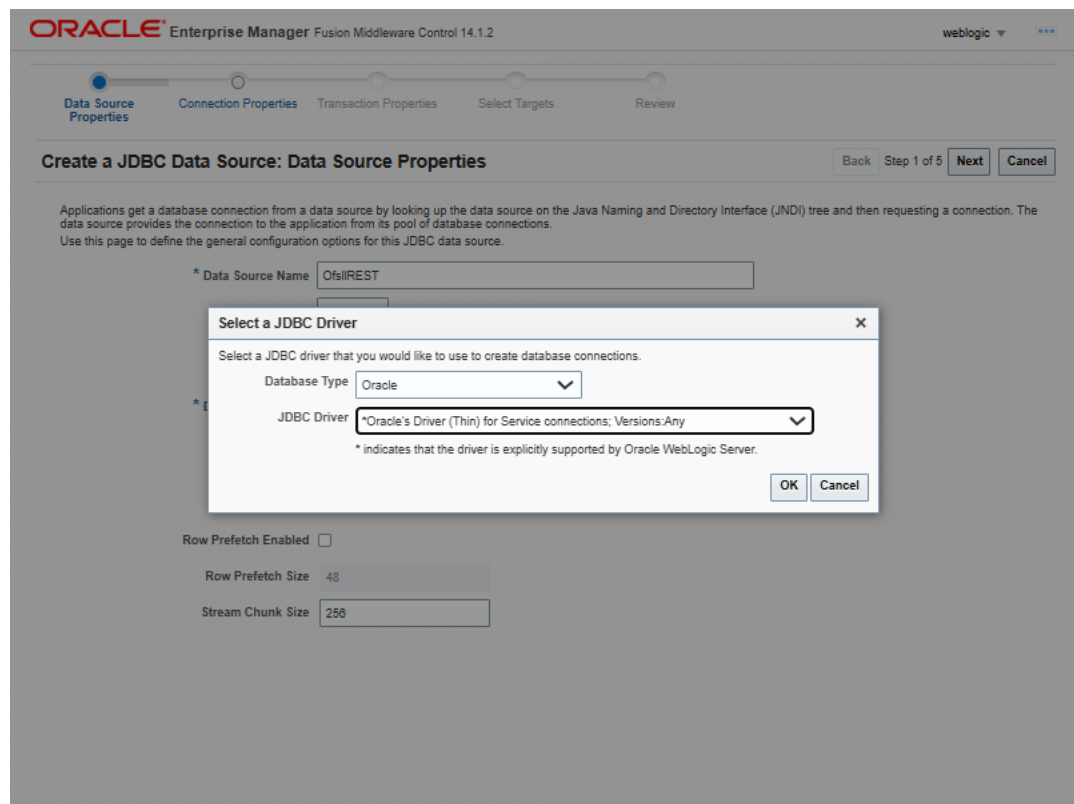
Row Prefetch Enabled ☐

Row Prefetch Size

Stream Chunk Size

5. Select the Database Driver 'Oracle's Driver(Thin) for Services connections;Versions:Any'
6. Click **Ok**.

The following window is displayed.



7. Specify the following details:

- Enter the JNDI Name as 'jdbc/OfsIIWSDS'.
- Click **Next**.

**ORACLE® Enterprise Manager Fusion Middleware Control 14.1.2** weblogic ▾

**Create a JDBC Data Source: Data Source Properties** Back Step 1 of 5 **Next** Cancel

Applications get a database connection from a data source by looking up the data source on the Java Naming and Directory Interface (JNDI) tree and then requesting a connection. The data source provides the connection to the application from its pool of database connections. Use this page to define the general configuration options for this JDBC data source.

\* Data Source Name   
Scope Global ▾  
Type Generic  
Database Type Oracle  
\* Driver Class Name  Select...  
JNDI Name   
Row Prefetch Enabled ☐  
Row Prefetch Size   
Stream Chunk Size

8. Click **Next**.

The following window is displayed.

**ORACLE® Enterprise Manager Fusion Middleware Control 14.1.2** weblogic ▾

**Create a JDBC Data Source: Connection Properties** Back Step 2 of 5 **Next** Cancel

Use this page to define the connection properties for this JDBC data source.

**Database Connection Information**

Driver Class Name oracle.jdbc.OracleDriver  
\* Database URL  Generate URL and Properties ...  
Password   
Confirm Password   
Test Table Name or SQL Statement  Test Database Connection

**Properties**  
Enter the properties passed to the JDBC driver that are used to create physical database connections. For example: server=dbserver1.  
+ Add

Name	Value	Delete
(No properties found)		

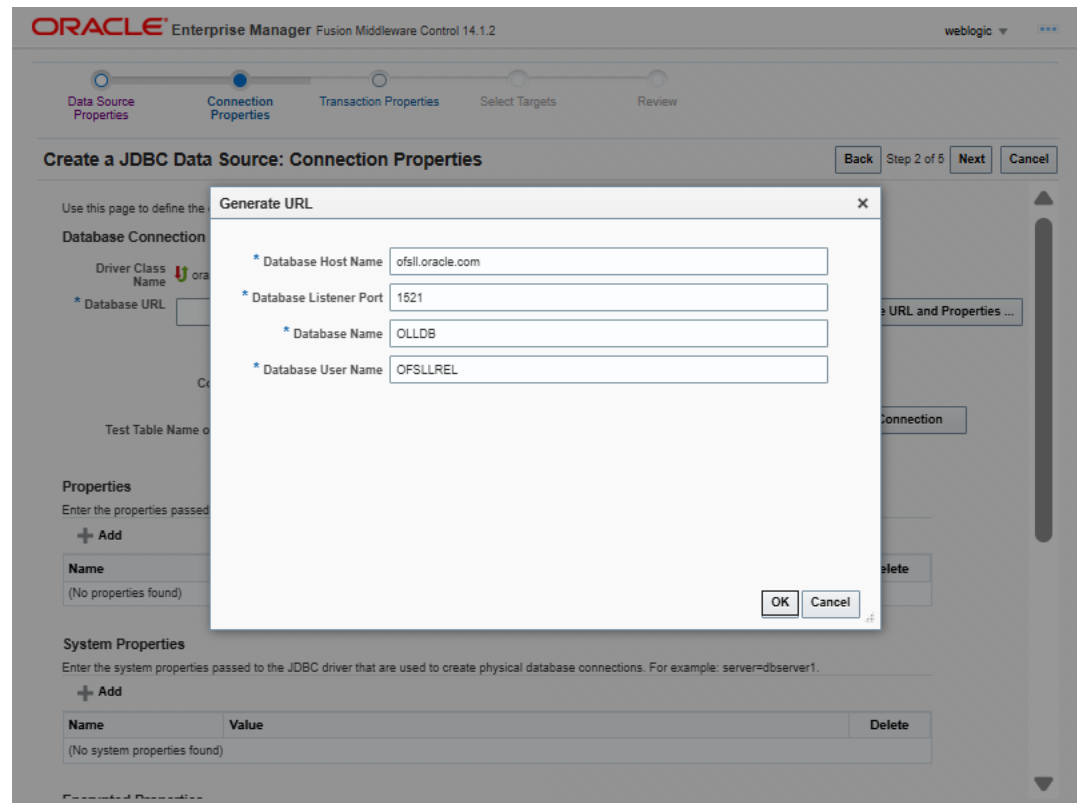
**System Properties**  
Enter the system properties passed to the JDBC driver that are used to create physical database connections. For example: server=dbserver1.  
+ Add

Name	Value	Delete
(No system properties found)		

9. Enter the Database details.

- Click **Ok**.

The following window is displayed.



10. Enter OFSLL DB schema “Password” and Confirm Password”.

- Click **Test Database Connection**. On completion, displays a confirmation message as ‘Connection test succeeded’.



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weblogic

Step 2 of 5

### Create a JDBC Data Source: Connection Properties

Use this page to define the connection properties for this JDBC data source.

**Database Connection Information**

Driver Class Name: oracle.jdbc.OracleDriver

\* Database URL: jdbc:oracle:thin:@//ofall.oracle.com:1521/OLDB

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

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

Test Table Name or SQL Statement: SQL ISVALID

Test Database Connection

**Properties**

Enter the properties passed to the JDBC driver that are used to create physical database connections. For example: server=dbserver1.

+ Add

Name	Value	Delete
user	OFSLREL	X

**System Properties**

Enter the system properties passed to the JDBC driver that are used to create physical database connections. For example: server=dbserver1.

+ Add

Name	Value	Delete
(No system properties found)		

11. Initial capacity and Maximum capacity is defaulted to 30, if the number of concurrent users are more this needs to be increased.

The following window is displayed.

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Step 2 of 5

### Create a JDBC Data Source: Connection Properties

**System Properties**

Enter the system properties passed to the JDBC driver that are used to create physical database connections. For example: server=dbserver1.

+ Add

Name	Value	Delete
(No system properties found)		

**Encrypted Properties**

The list of encrypted properties passed to the JDBC driver that are used to create physical database connections. For example: password=value.

+ Add Securely

Name	Value	Edit Securely	Delete
(No encrypted properties found)			

**Connection Pool Properties**

\* Initial Capacity: 1

\* Maximum Capacity: 30

\* Minimum Capacity: 1

\* Statement Cache Type: LRU

\* Statement Cache Size: 10

Advanced

12. Click **Advanced** and update the 'Inactive Connection Timeout' to 300 seconds.

- Click **Next**.

The following window is displayed.

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Data Source Properties Connection Properties Transaction Properties Select Targets Review

Create a JDBC Data Source: Connection Properties

Back Step 2 of 5 Next Cancel

Advanced

Test Connections On Reserve ☐

Test Frequency (seconds) 120

Seconds to Trust an Idle Pool Connection 10

Shrink Frequency (seconds) 900

Init SQL

Login Delay (seconds) 0

Connection Creation Retry Frequency (seconds) 0

Inactive Connection Timeout (seconds) 300

Maximum Waiting for Connection 2147483647

Connection Reserve Timeout (seconds) 10

Statement Timeout -1

Ignore In-Use Connections ☒

Pinned-To-Thread ☐

Remove Infected Connections Enabled ☒

Wrap Data Types ☒

13. Click **Next**.

The following window is displayed.

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Data Source Properties Connection Properties Transaction Properties Select Targets Review

Create a JDBC Data Source: Transaction Properties

Back Step 3 of 5 Next Create Cancel

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

Transaction Options

☒ Supports Global Transactions

☒ One-Phase Commit

☐ Emulate Two-Phase Commit

☐ Logging Last Resource

14. Click **Next**.

- Select target Server as 'WS\_ManagedServer'.

The following window is displayed.

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Data Source Properties Connection Properties Transaction Properties **Select Targets** Review

Create a JDBC Data Source: Select Targets

Back Step 4 of 5 **Next** Create Cancel

Use this page to select the servers or clusters on which you would like to deploy this JDBC data source. If you don't select a target, the data source will be created but not deployed. You will need to deploy the data source at a later time.

Name	Type
<input type="checkbox"/> AdminServer	Oracle WebLogic Server
<input type="checkbox"/> OFSLL_ManagedServer	Oracle WebLogic Server
<input checked="" type="checkbox"/> WS_ManagedServer	Oracle WebLogic Server

15. Click **Create** to activate the changes

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[Data Source Properties](#)
[Connection Properties](#)
[Transaction Properties](#)
[Select Targets](#)
[Review](#)

**Create a JDBC Data Source: Review** Back Step 5 of 5 Next **Create** Cancel

Review the settings for your new JDBC data source.

Data Source Name: OfslIREST  
 Scope: Global  
 Type: Generic  
 Driver Class Name: oracle.jdbc.OracleDriver  
 JNDI Name: jdbc/OfslIWSDS  
 Database URL: jdbc:oracle:thin:@//ofslil.oracle.com:1521/OLDB

**Properties**

Name	Value
user	OFSLREL

**System Properties**

Name	Value
(No system properties found)	

Transaction Options: Supports global transactions and use the 'One-Phase Commit' global transaction protocol.

**Targets**

Name	Type
WS_ManagedServer	Oracle WebLogic Server

## 16. Activate Changes from Change Center.

**ORACLE® Enterprise Manager Fusion Middleware Control 14.1.2** WebLogic Domain weblogic

**OFSLREL\_domain** WebLogic Domain

**Confirmation**  
JDBC Data Source "OfslIREST" has been created successfully. The changes are pending activation. Use the change center to activate.

/Domain\_OFSLREL\_domain/OFSLREL\_domain > JDBC Data Sources

**JDBC Data Sources**  
This page lists the JDBC system data sources that have been created in this domain. You can create or delete the system data sources from this page.

View Create Create Like Delete Detach

Name	JNDI Name	Type	Targets
LocalSvcTbIDataSource	jdbc/LocalSvcTbIDataSource	Generic	AdminServer
OFSL	jdbc/ofslIDBConnDS	Generic	AdminServer OFSL_ManagedServer
OfslIREST	jdbc/OfslIWSDS	Generic	WS_ManagedServer
QueueAppDS	jdbc/QueueAppDS	Generic	OFSL_ManagedServer
WLSRuntimeSchemaDataSource	jdbc/WLSRuntimeSchemaDataSource	Generic	
WLSSchemaDataSource	jdbc/WLSSchemaDataSource	Generic	
mds-adf	jdbc/mds/adf	Generic	OFSL_ManagedServer AdminServer
opss-audit-DBDS	jdbc/AuditAppendDataSource	Generic	AdminServer OFSL_ManagedServer WS_ManagedServer
opss-audit-viewDS	jdbc/AuditViewDataSource jdbc/Au...	Generic	AdminServer OFSL_ManagedServer WS_ManagedServer
opss-data-source	jdbc/OpssDataSource	Generic	AdminServer OFSL_ManagedServer WS_ManagedServer

Columns Hidden: 5 JDBC Data Sources 10 of 10

**Change Center Context Menu:**

- Edit Sessions
- Lock & Edit
- View Change List
- View & Resolve Conflicts
- Release Configuration
- Activate Changes**
- Undo All Changes
- View Restart Checklist
- Preferences
- Help

## 2.2 Statement Timeout Configuration

When APIs are integrated with Client systems, you may need to specify how long your client system waits for an API call to complete before a timeout occurs. If the Client system times out earlier than the API call, you may see inappropriate responses.

Hence, a client timeout value higher than the API response time is required to avoid such a situation.

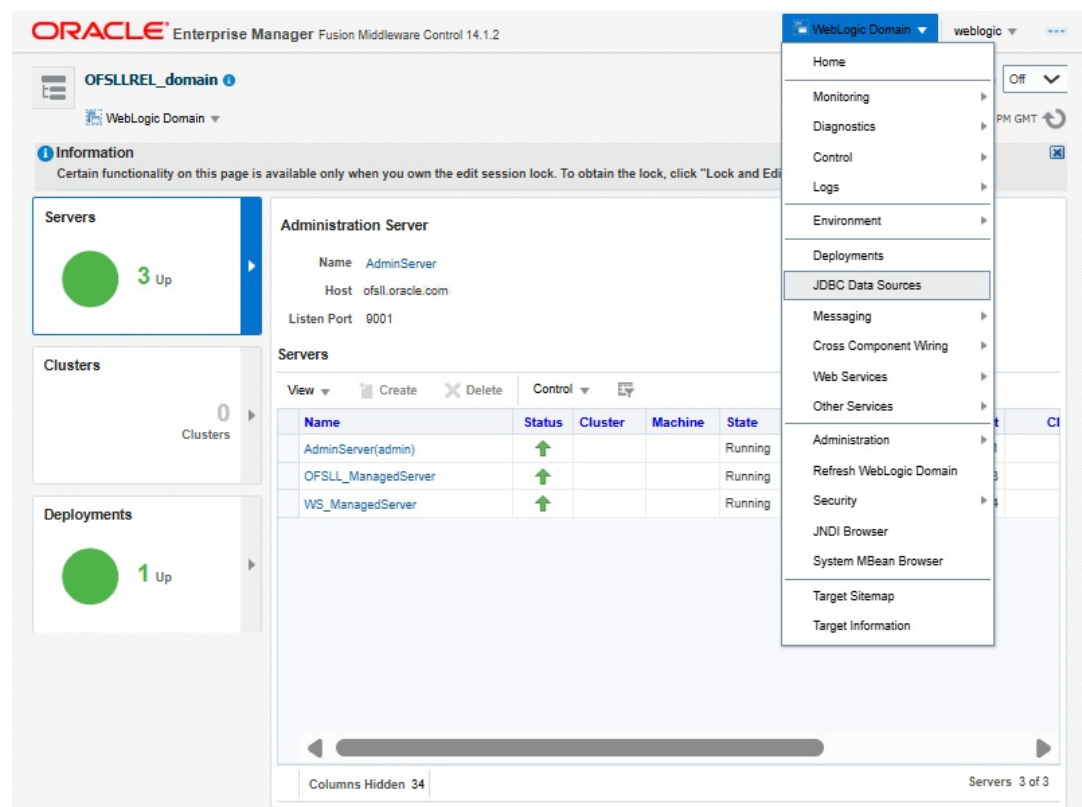
Ensure that the time out settings is always defined in decreasing order. Which means, the time out value of managed components configured between the 'Client Server' and 'OFSLL Managed Servers' should have decreasing value so that last managed server before OFSLL has least timeout value.

Follow the below steps to set the statement timeout value.

1. Login to WebLogic Server 14c em (<http://hostname:port/em>) using the valid credentials.
2. Click **WebLogic Domain > JDBC Data Sources**.

The following screen is displayed.

**Figure 2-4 JDBC Data Sources window**



3. Click on the configured Restful data source.  
for example 'OfsllREST'
4. Navigate to Configuration > Connection Pool.

The following screen is displayed.

Figure 2-5 Connection Pool tab

The screenshot displays the Oracle Enterprise Manager Fusion Middleware Control interface. The breadcrumb path is: /Domain\_OFSLLREL\_domain/OFSLLREL\_domain > JDBC Data Sources > Settings for Data Source. The page title is 'JDBC Data Source : OfsllREST'. The 'Configuration' tab is selected, and the 'Connection Pool' sub-tab is active. The 'Database Connection Information' section contains the following fields: Driver Class Name (oracle.jdbc.OracleDriver), Database URL (jdbc:oracle:thin:@//ofsll.oracle.com:1521/OLLDDB), Password (masked with asterisks), and Confirm Password (masked with asterisks). A 'Test Database Connection' button is present. The 'Test Table Name or SQL Statement' field contains 'SQL ISVALID'. The 'Properties' section has an 'Add' button and a table with one row: Name 'user', Value 'OFSLLREL', and a 'Delete' button. The interface also shows a 'Save' and 'Revert' button in the top right of the configuration area.

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WebLogic Domain weblogic

Aug 29, 2025, 12:33:27 AM GMT

/Domain\_OFSLLREL\_domain/OFSLLREL\_domain > JDBC Data Sources > Settings for Data Source

**JDBC Data Source : OfsllREST**

Configuration Targets Monitoring Control Tags Security Notes

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

**Information**  
Certain functionality on this page is available only when you own the edit session lock. To obtain the lock, click "Lock and Edit" in the Change Center menu.

Save Revert

Use this page to define the connection properties for this JDBC data source.

**Database Connection Information**

\* Driver Class Name oracle.jdbc.OracleDriver

\* Database URL jdbc:oracle:thin:@//ofsll.oracle.com:1521/OLLDDB

Password \*\*\*\*\*

Confirm Password \*\*\*\*\*

Test Table Name or SQL Statement SQL ISVALID **Test Database Connection**

**Properties**  
Enter the properties passed to the JDBC driver that are used to create physical database connections. For example: server=dbserver1.

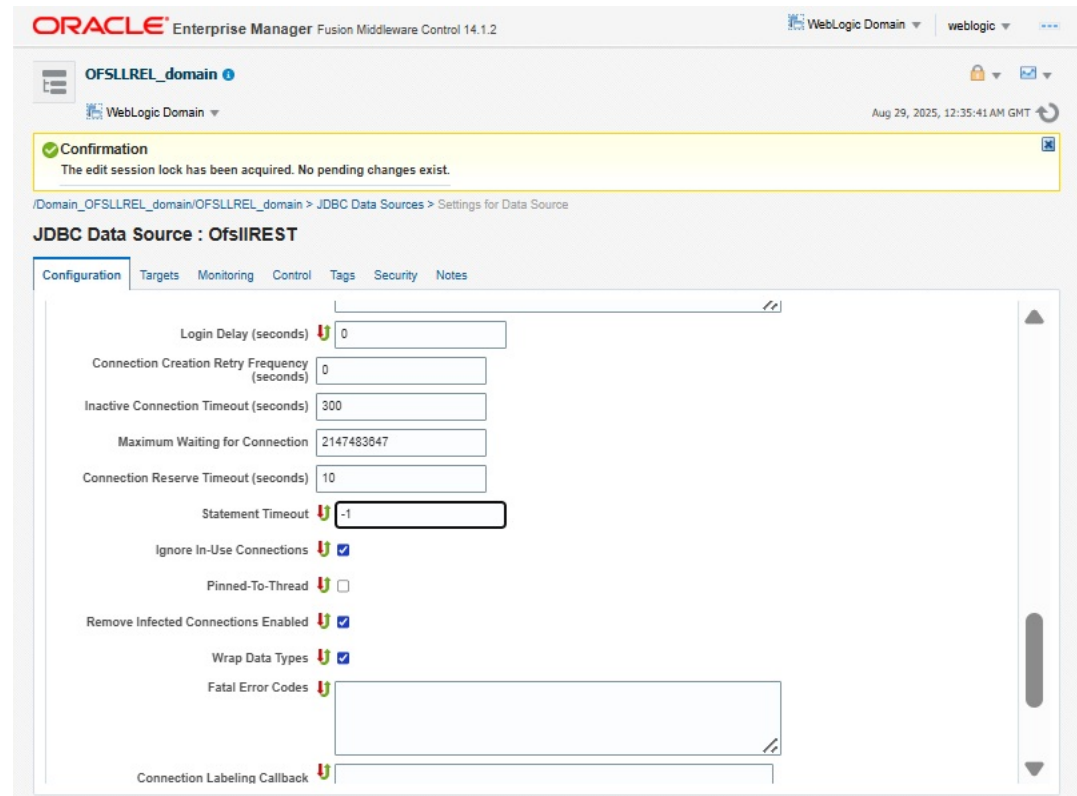
+ Add

Name	Value	Delete
user	OFSLLREL	X

5. Click **Lock & Edit** option from the Change Center menu.
6. Scroll down and click the **Advance** option.

The following screen is displayed.

Figure 2-6 Advance option - Statement Timeout



7. Set the **Statement Timeout** value as appropriate. This is the time after which a statement currently being executed will time out. For more information, refer to **Guidelines\_OFSLL API Timeout Period.pdf** shared along with fix.
8. Once done, for changes to take effect, you need to restart the Data Source. Click on the **View changes and restarts** from the Change Center menu.

## 2.3 OAuth Implementation

(Optional) To extend OFSLL SaaS, OAuth2 can be used for securing OFSLL web services user access Authentication.

Web services authentication using OAuth2 is one of the best approach for securing user authentication to extend OFSLL SaaS. This uses Oracle / Non-Oracle PaaS to authenticate service access request from an external partner application without sharing OFSLL environment access credentials (UID / Password) and leverages the built-in support for OAuth 2.0.

OAuth 2.0 is an open standard token-exchange technology for verifying a user's identity across multiple systems and domains without risking the exposure of a password.

For detailed information, refer to the [OAuth Implementation Guide](#) shared in OTN library.

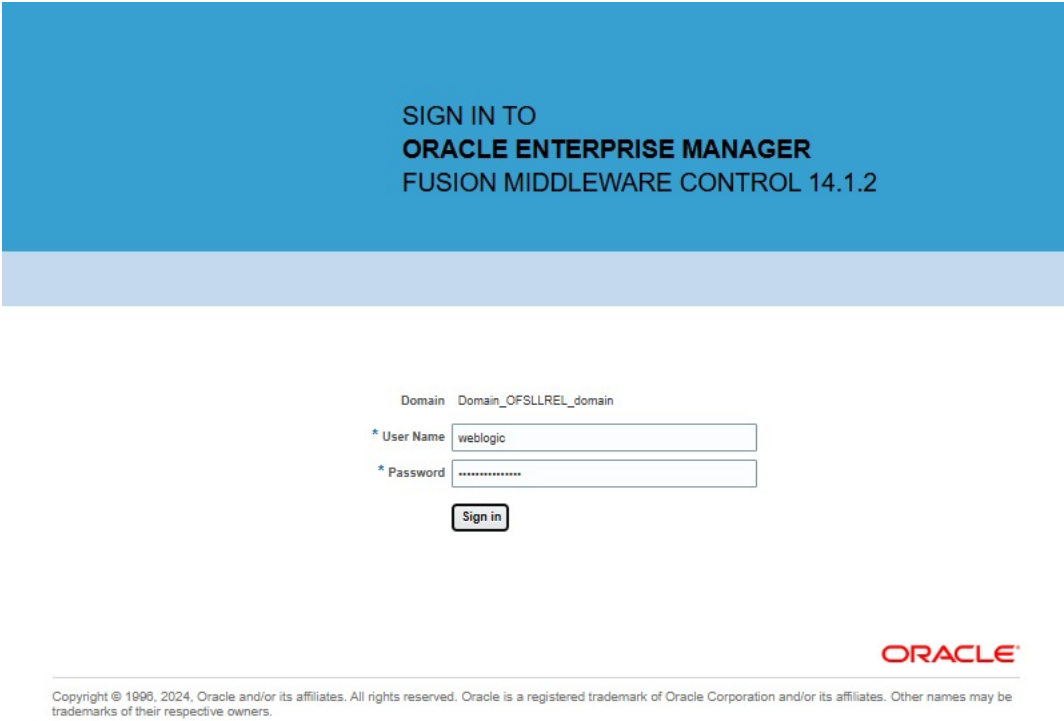
## 2.4 Deploying RESTful WebService

Please follow the below steps to deploy RESTful WebService.

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

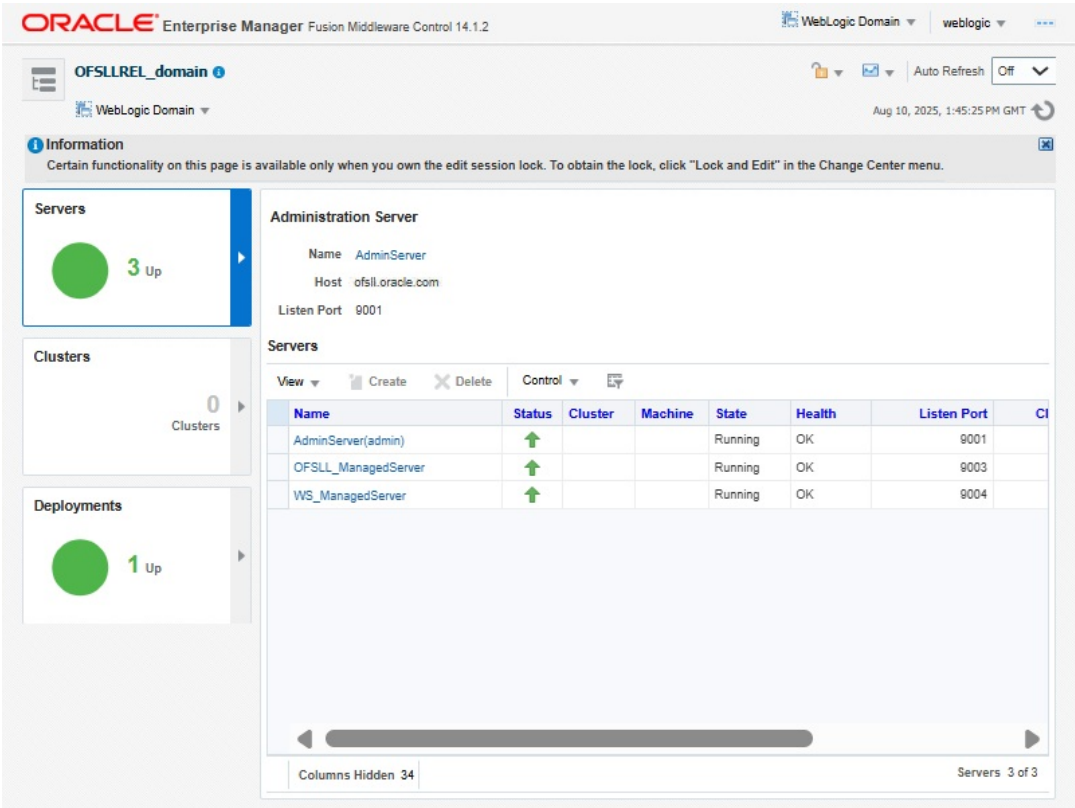


Figure 2-7 Deploy RESTful WebService 1



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

Figure 2-8 Deploy RESTful WebService 2

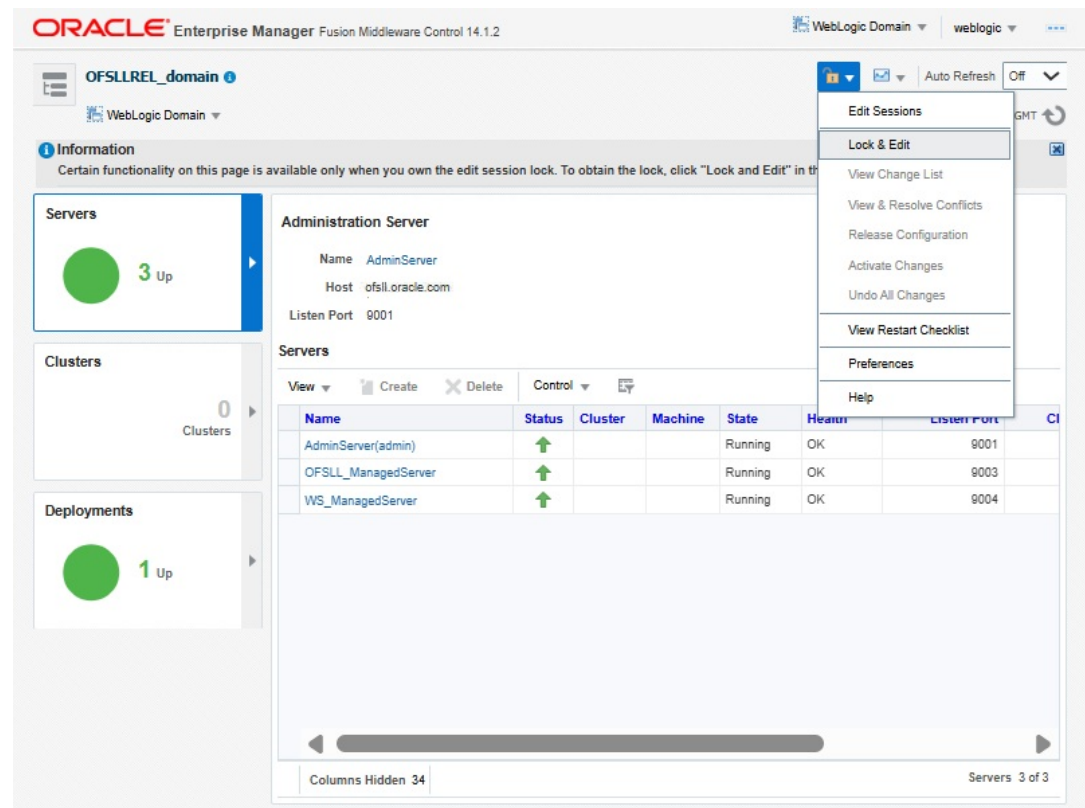




3. Select **Lock & Edit** option in the lock drop-down list available in the header.
4. Click **Deployment** in the left panel. Select **Lock & Edit** option in the lock drop-down list available in the header.

The following window is displayed.

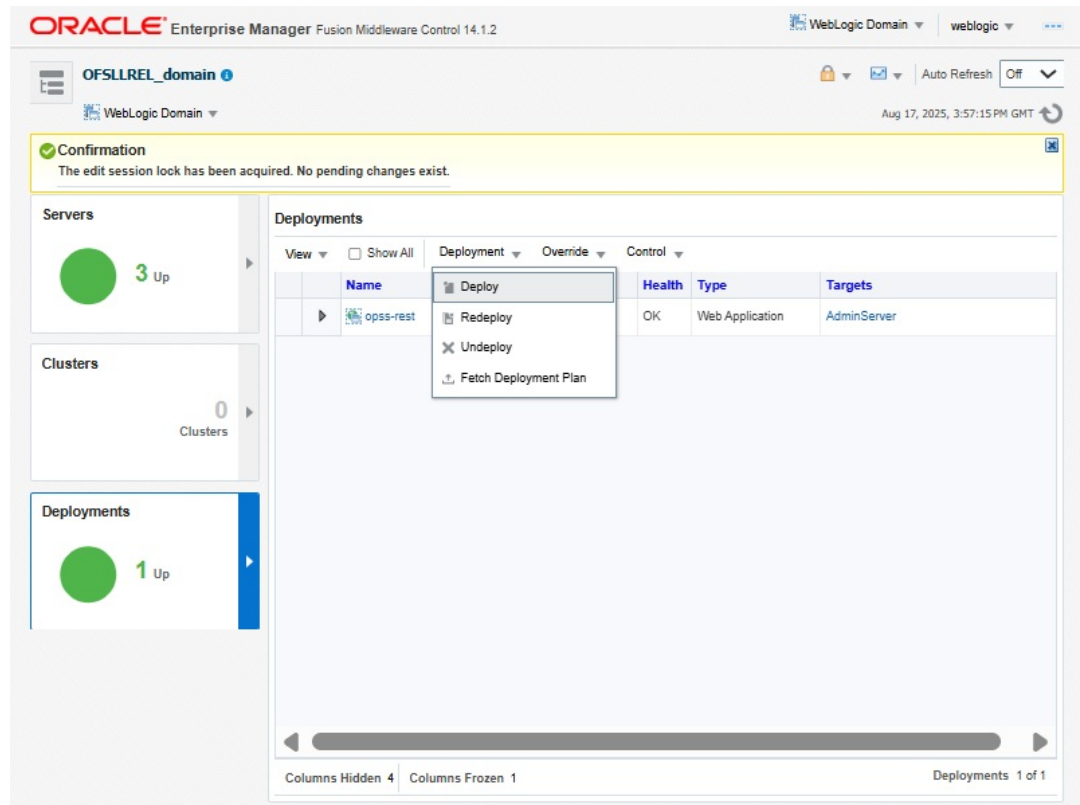
**Figure 2-9 Deploy RESTful WebService 3**



5. Select **Deploy** from the Deployment drop-down list.

The following window is displayed.

Figure 2-10 Deploy RESTful WebService 4



6. The following window is displayed.

Figure 2-11 Deploy RESTful WebService 5

**ORACLE® Enterprise Manager Fusion Middleware Control 14.1.2** weblogic

**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.  
Choose File OfsllRestEAR.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.  
Choose File No file chosen

☐ 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 Compoc deployment wizard.  
If your application is not a SOA composite or it does not require MDS repository or ADF connections, then you can depk your application using this wizar or the Oracle WebLogic Server Administration Console.

7. Browse to the folder containing the WebService. Eg: C:\OfsllRestEAR.ear
8. Click **Next**.

The following window is displayed.

**Figure 2-12 Deploy RESTful WebService 6**

ORACLE® Enterprise Manager Fusion Middleware Control 14.1.2

OFSSLREL\_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	oo
<input type="checkbox"/>	OFSSL_ManagedServer	Oracle WebLogic Server	oo
<input checked="" type="checkbox"/>	WS_ManagedServer	Oracle WebLogic Server	oo

9. Select the server on which the WebService needs to be deployed.
10. Click **Next**.

The following window is displayed.

Figure 2-13 Deploy RESTful WebService 7

ORACLE® Enterprise Manager Fusion Middleware Control 14.1.2

weblogic

OFSLMREL\_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 OFSLM\_ManagedServer

Scope Global

Deployment Type Application

\* Application Name OfsllRestEAR

Context Root of Web Modules

Web Module	Context Root
OfsllRestWAR.war	OfsllRestWS

Distribution

☒ Install and start application (servicing all requests)

☐ Install and start application in administration mode (servicing only administration requests)

☐ Install only. Do not start.

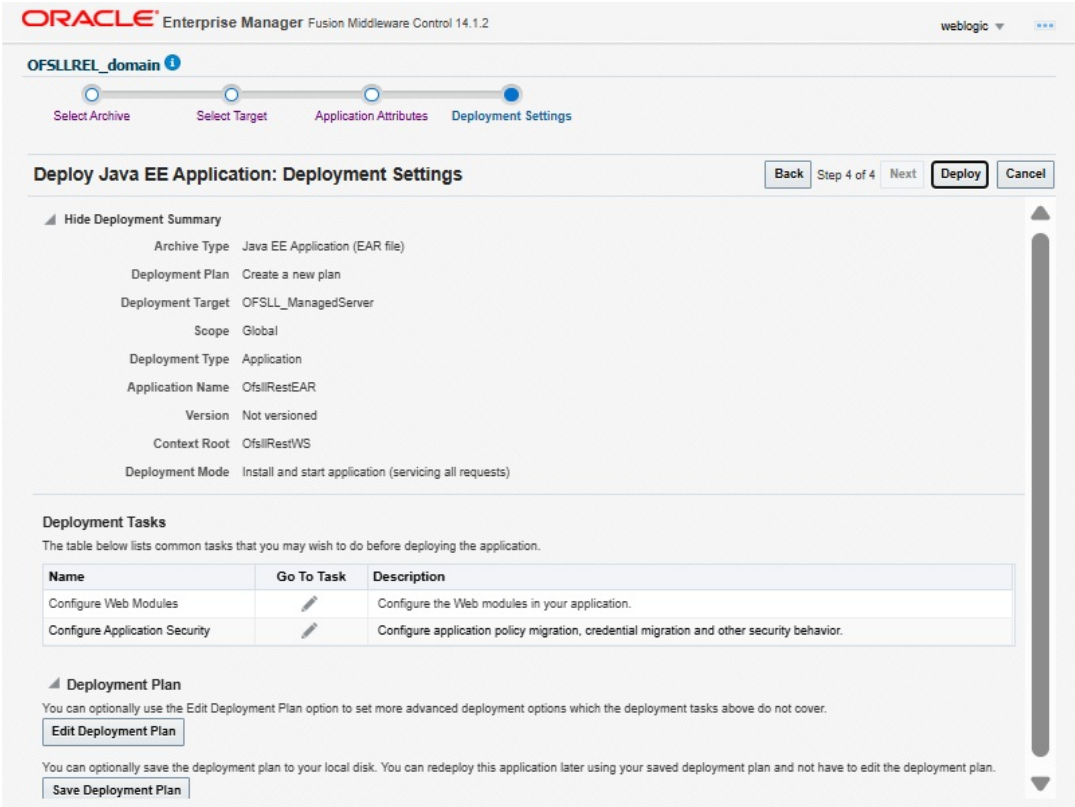
Other Options

11. Select the option **Install and start application (servicing all requests)**.
12. Check the context root and click **Next**.

The following window is displayed.

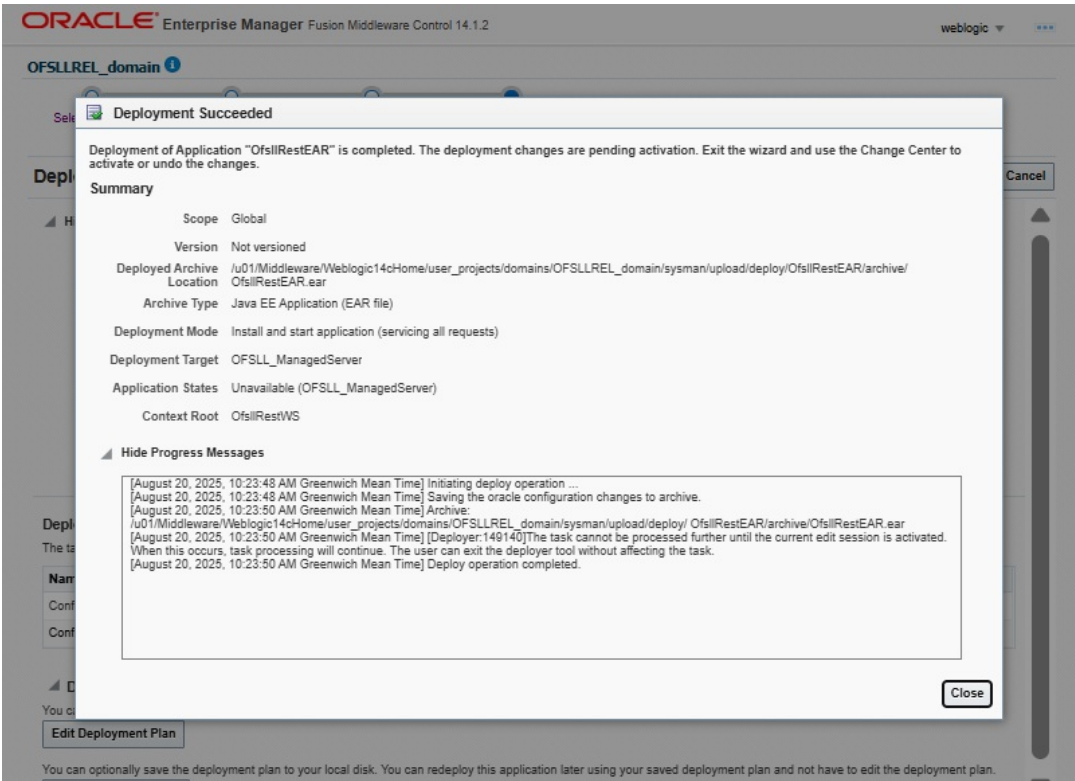


Figure 2-14    Deploy RESTful WebService 8



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

Figure 2-15    Deploy RESTful WebService 9



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.

The next step is to **Identifying the RESTful Webservice URL**.

- [Identifying the RESTful Webservice URL](#)

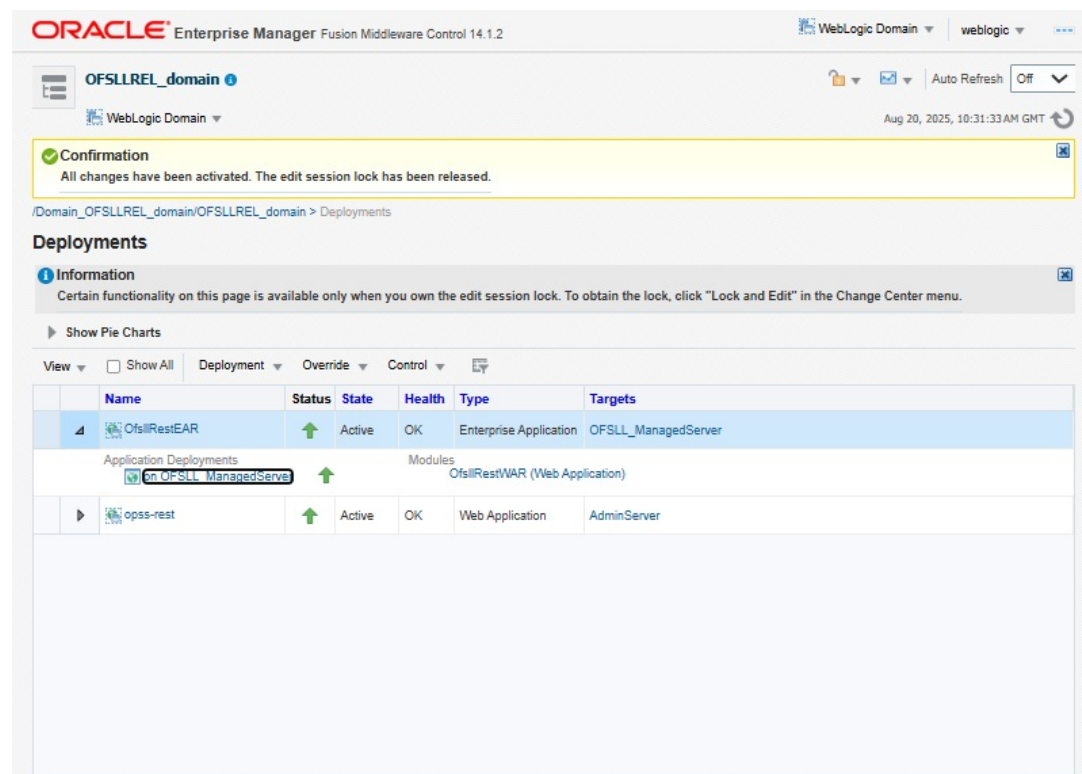
## 2.4.1 Identifying the RESTful Webservice URL

The following section briefs how to identify the RESTful Webservice URL.

1. Login to WebLogic Server 14c em (<http://hostname:port/em>).
2. Click **Deployments** and expand **OFSllRestEAR** services.
  - Click **Application Deployment**.

The following window is displayed.

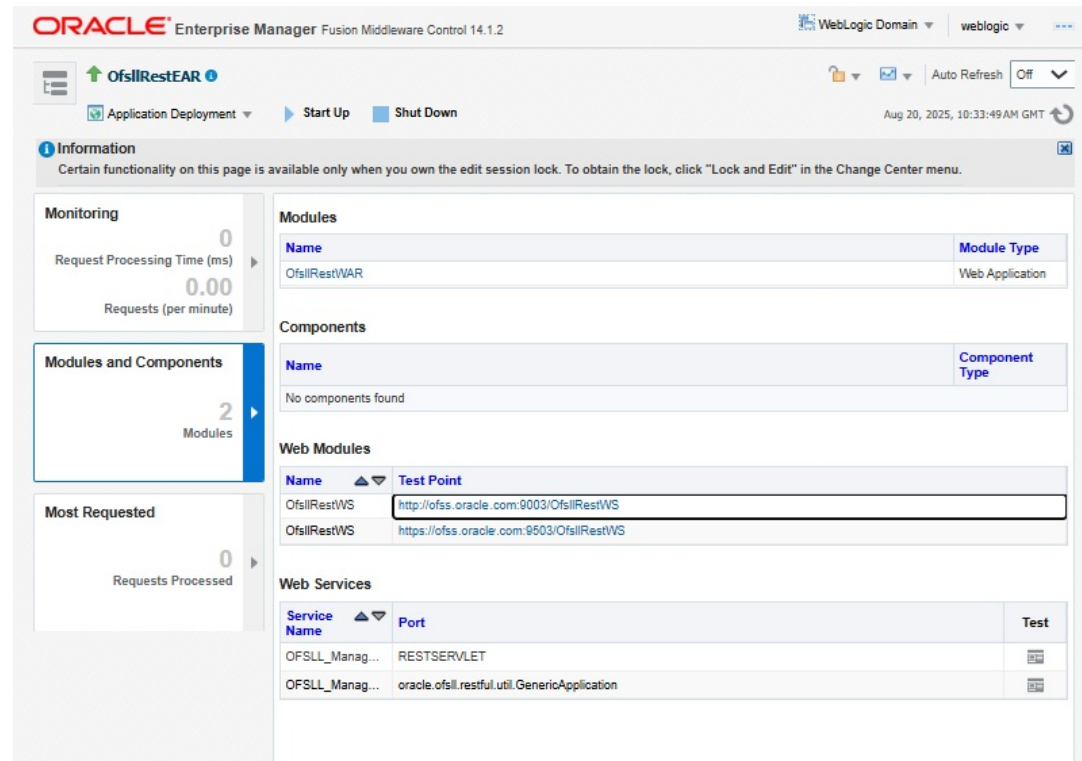
**Figure 2-16 Identifying URL 1**



3. Click **Modules and components**.

The following window is displayed.

Figure 2-17 Identifying URL 2



4. You can view the **OfssRestful** Services URL as shown.
5. Swagger documentation for RESTful web services can be accessed using the following URL type - `http://<server_name>;<port>/<Application_context>/swagger.json`

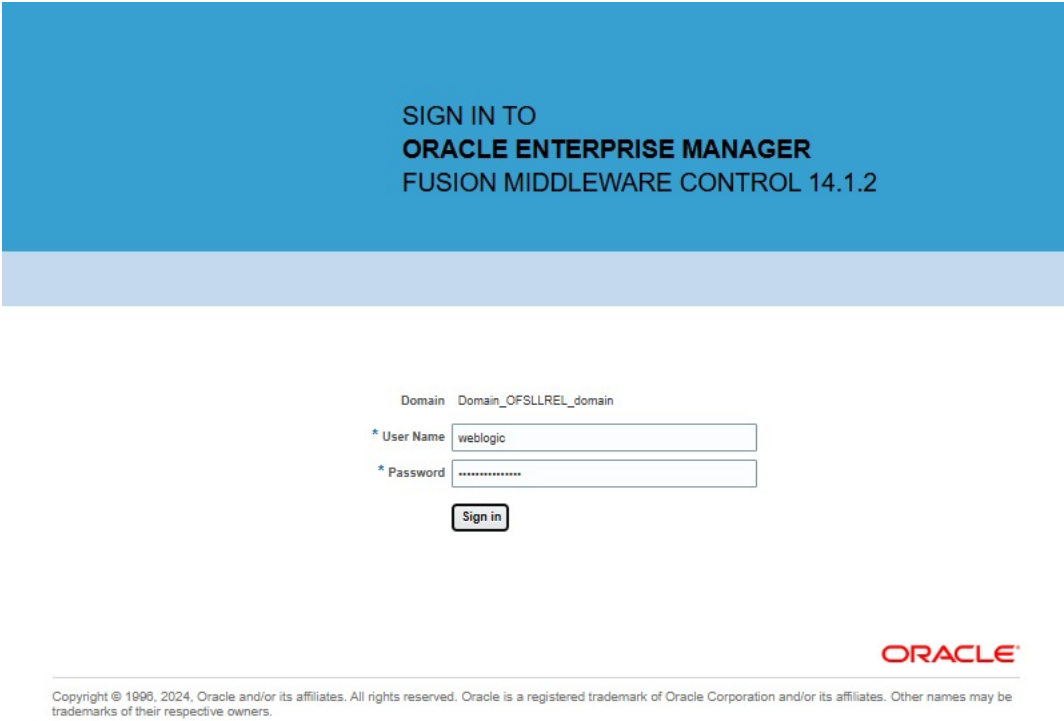
## 2.5 Deploying RESTful Credit Bureau WebService

Please follow the below steps to deploy RESTful Credit Bureau WebService.

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

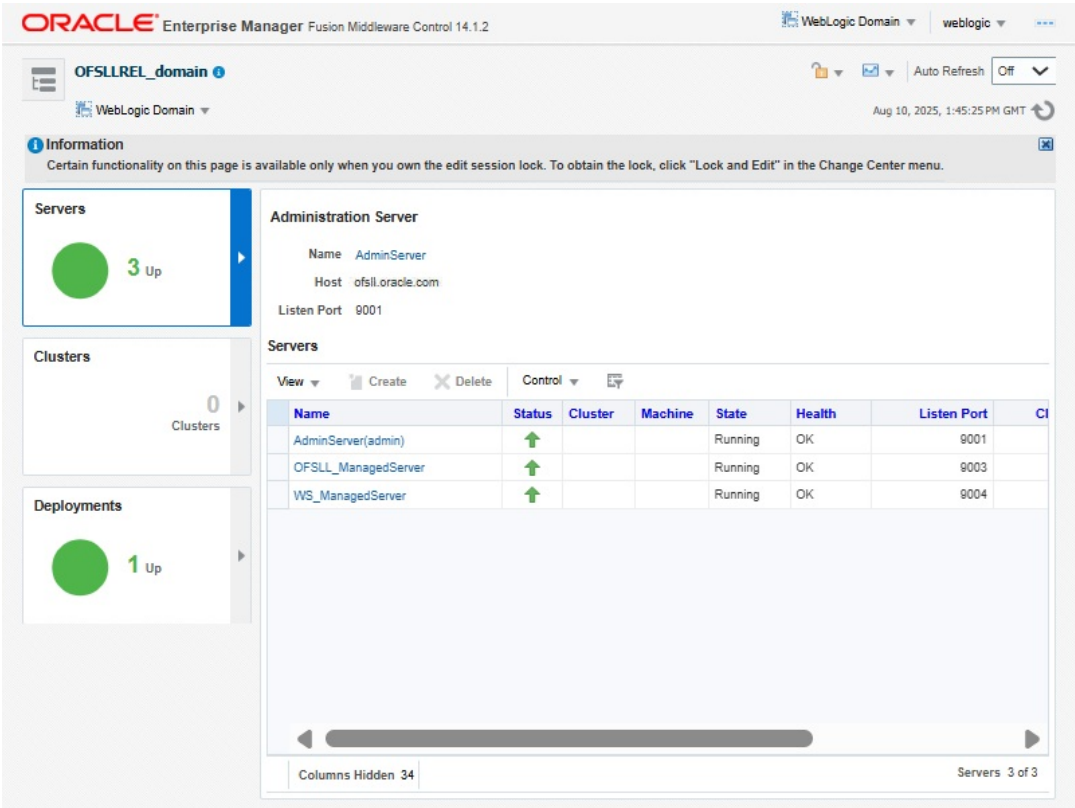


Figure 2-18    Deploy Bureau WebService 1



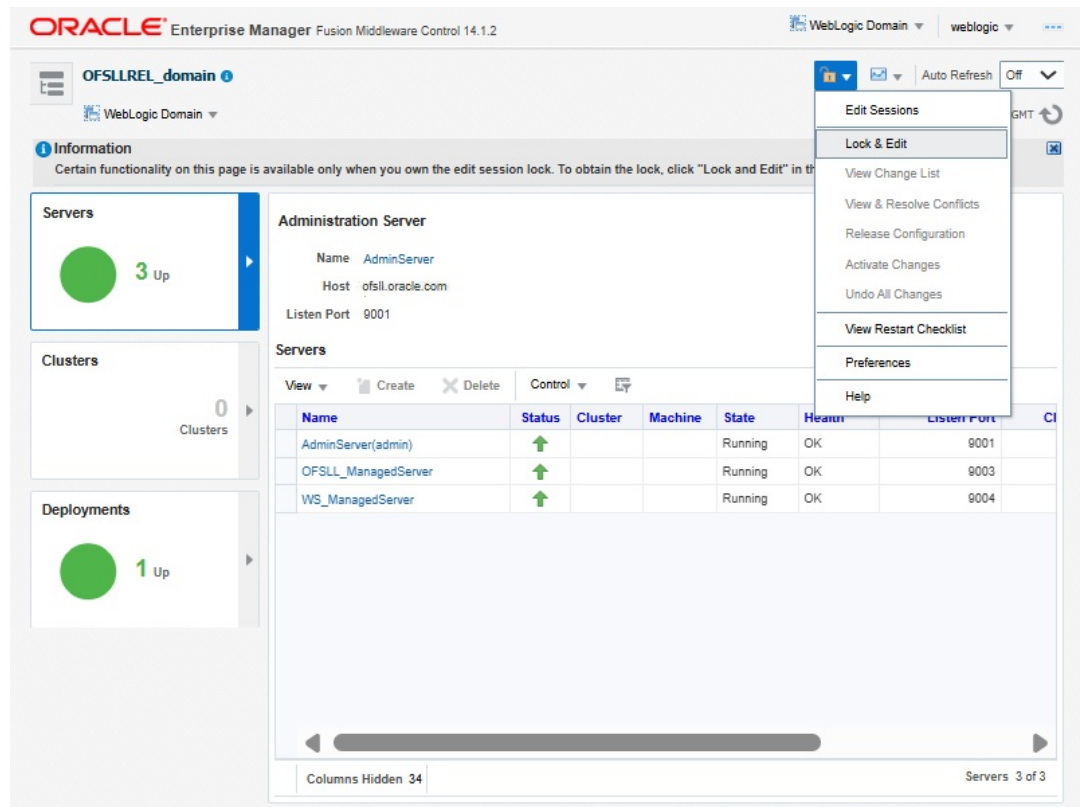
2. Enter valid login credentials.
- The following window is displayed.

Figure 2-19    Deploy Bureau WebService 2



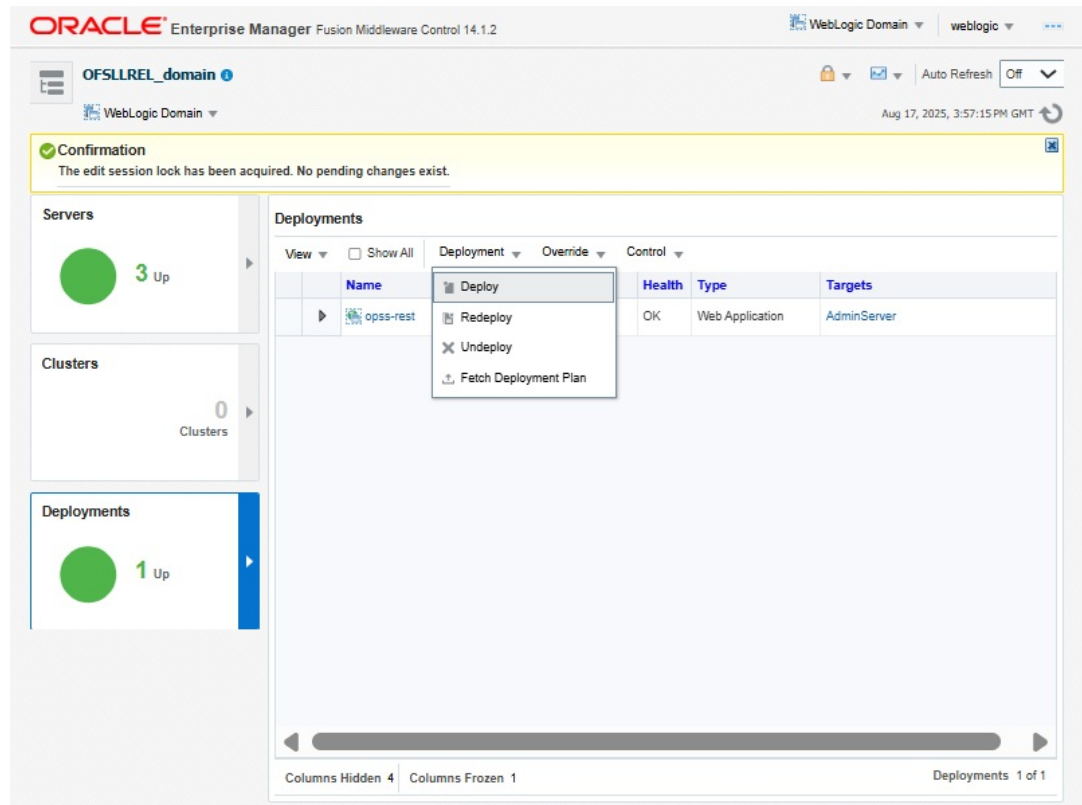
3. Select **Lock & Edit** option in the lock drop-down list available in the header.
  4. Click **Deployment** in the left panel.
- The following window is displayed.

**Figure 2-20 Deploy Bureau WebService 3**



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

Figure 2-21 Deploy Bureau WebService 4



6. The following window is displayed.

Figure 2-22 Deploy Bureau WebService 5

**ORACLE® Enterprise Manager Fusion Middleware Control 14.1.2** weblogic

**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 OracleFSSLBureauAPI.war

☐ 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.

7. Browse to the folder containing the Credit Bureau WebService. For example: C: / OracleFSSLBureauAPI.war
8. Click **Next**.

The following window is displayed.

**Figure 2-23 Deploy Bureau WebService 6**

ORACLE® Enterprise Manager Fusion Middleware Control 14.1.2

weblogic

OFSLLREL\_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	oo
<input type="checkbox"/>	OFSLL_ManagedServer	Oracle WebLogic Server	oo
<input checked="" type="checkbox"/>	WS_ManagedServer	Oracle WebLogic Server	oo

9. Select the server on which the WebService needs to be deployed.
10. Click **Next**.

The following window is displayed.

Figure 2-24 Deploy Bureau WebService 7

ORACLE® Enterprise Manager Fusion Middleware Control 14.1.2

OFSSLREL\_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 Web Module (WAR file)

Deployment Plan Create a new plan

Deployment Target WS\_ManagedServer

Scope Global

Deployment Type Application

\* Application Name OracleFSLLBureauAPI

Context Root of Web Modules

Web Module	Context Root
OracleFSLLBureauAPI.war	OracleFSLLBureauAPI

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

11. Select the option **Install and start application (servicing all requests)**.
12. Check the context root and click **Next**.

The following window is displayed.



Figure 2-25 Deploy Bureau WebService 8

ORACLE® Enterprise Manager Fusion Middleware Control 14.1.2

weblogic

OFSLLREL\_domain

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	Web Module (WAR file)
Deployment Plan	Create a new plan
Deployment Target	WS_ManagedServer
Scope	Global
Deployment Type	Application
Application Name	OracleFSLLBureauAPI
Version	Not versioned
Context Root	OracleFSLLBureauAPI
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 Application Security		Configure application policy migration, credential migration and other security behavior.

**Deployment Plan**

You can optionally use the Edit Deployment Plan option to set more advanced deployment options which the deployment tasks above do not cover.

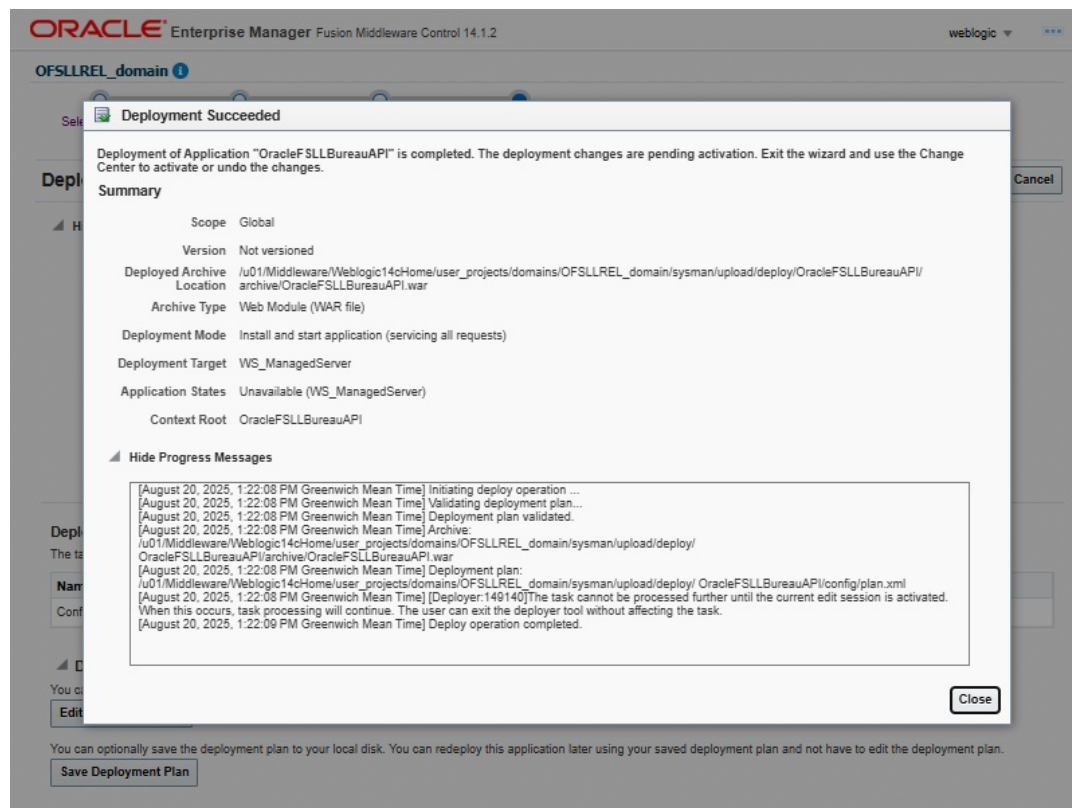
[Edit Deployment Plan](#)

You can optionally save the deployment plan to your local disk. You can redeploy this application later using your saved deployment plan and not have to edit the deployment plan.

[Save Deployment Plan](#)

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

Figure 2-26 Deploy Bureau WebService 9



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.

The next step is to create.

- [Creating Credentials and System Policies for Credit Bureau Interface](#)

## 2.5.1 Creating Credentials and System Policies for Credit Bureau Interface

In order Configure Credit Bureau interface, 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.

Create the following Maps and corresponding keys as indicated in following table.

Table 2-1 Maps and corresponding keys

Maps	Keys	Description
ofsl.int.bureau	creditbureau_auth_mode_adapter	There are two modes: BASIC - On selecting this option, you need to define User Name and Password to authenticate. OAUTH2.0 - On selecting this option, you need to define additional enabled fields such as Grant Type, Client Id, Client Secret, Identity Domain, Token and Header Key.
	creditbureau_adapter	If Authentication mode is selected as BASIC, specify the Basic Authentication User Name and Password.



Table 2-1 (Cont.) Maps and corresponding keys

Maps	Keys	Description
	creditbureau_servi- ceurl_adapter	BureauApi or Third party RestAPI end point url.
	ProxyAuthentica- tionEnabled	Indicator used to validate proxy.
	ProxyEnabled	Indicator is for whether Proxy server info need to be set or not.
	ProxyPort	Port to which ProxyServer is running.
	ProxyServer	Name of the proxyServer to be configured
	<Bureau_name>_cert_p ath	The location of certificate file which contains the valid certificate for Credit Bureau.
	<Bureau_name>_cert_p assword	The password that requires to read the valid certificate for the Credit Bureau.
	<Bureau Name>_con- sumer_code	Consumer credentials to be configured for request creation of third party.
	<Bureau Name>_to- ken_indicator	Indicator used for whether third party token request needs to be create or not.
	<Bureau Name>_cert_- check_indicator	Indicator used for whether certificate validation is required or not.

**Note**

For certificate creation, please refer to **Interface\_Certificate\_Configuration.pdf** document available in the release bundle.