WebServices Installation Guide

Oracle Financial Services Lending and Leasing

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WebServices Installation Guide

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1. Preface

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.

This guide covers the following processes.

- Installing WebServices Database Objects
- Configuring RESTful WebService

1.1   Prerequisites

1. Download and Install the Oracle Fusion Middleware 12c Version 12.2.1.3.0 (Fusion Middleware Infrastructure installer) from http://www.oracle.com/technetwork/middleware/fusion-middleware/downloads/index.html#close. They are also available from the following sources:

   - Oracle Software Delivery Cloud (http://edelivery.oracle.com/)
   - Oracle Technology Network (OTN)

2. It is assumed that the Oracle Financial Services Lending and Leasing DB is installed and configured, before running the WebServices installer.

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

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2. Installing WebServices Database Objects

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

Run $ ./installofsllxwsdb.sh

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

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

```
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.

```
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
```

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 'y' when prompted for.

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```
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
```

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 'y' when prompted for.
Oracle SID	Enter the Name of Oracle Instance. Enter 'y' when prompted for.

```
   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
```

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The script lists and sets the CRITICAL environment variables

```
.........
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'.

```
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/ofsll_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 ofsllprd): OFSLLREL

Enter the password for this userid: █
```

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

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

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The script installs the objects.

```
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 Com
```

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

3. Configuring RESTful WebService

Follow the below steps to configure RESTful WebService.

- Create Data Sources for RESTful WebService
- OAuth Implementation
- Deploy RESTful WebService

3.1 Create Data Sources for RESTful WebService

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

2. On successful login, the following window is displayed.
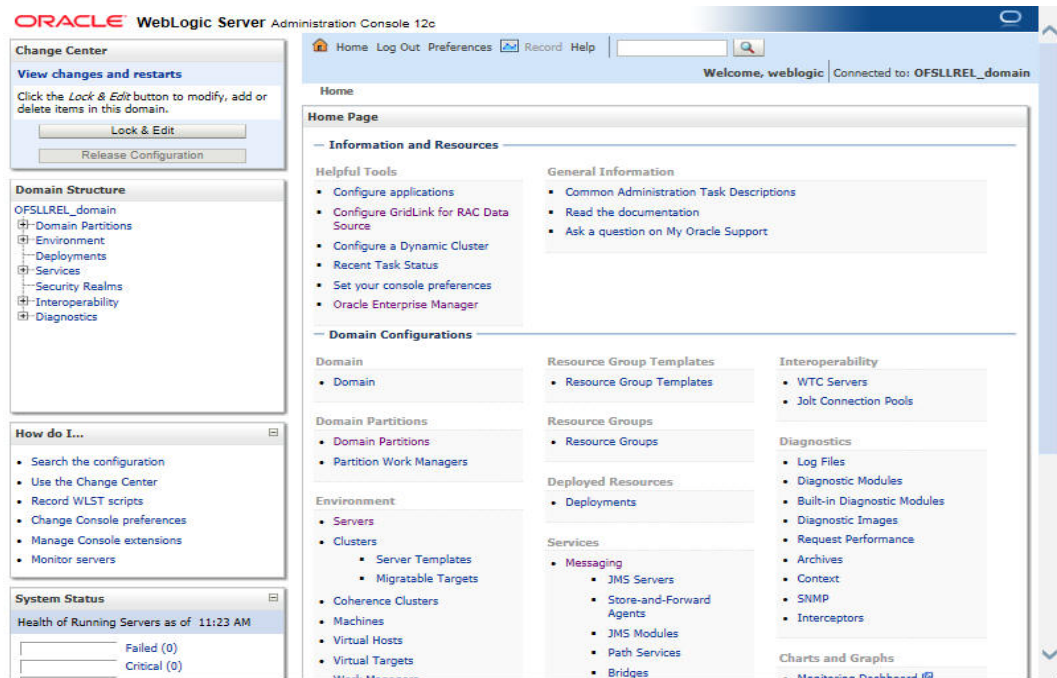
3. Click Domain Name > Services > Data Sources. The following window is displayed.
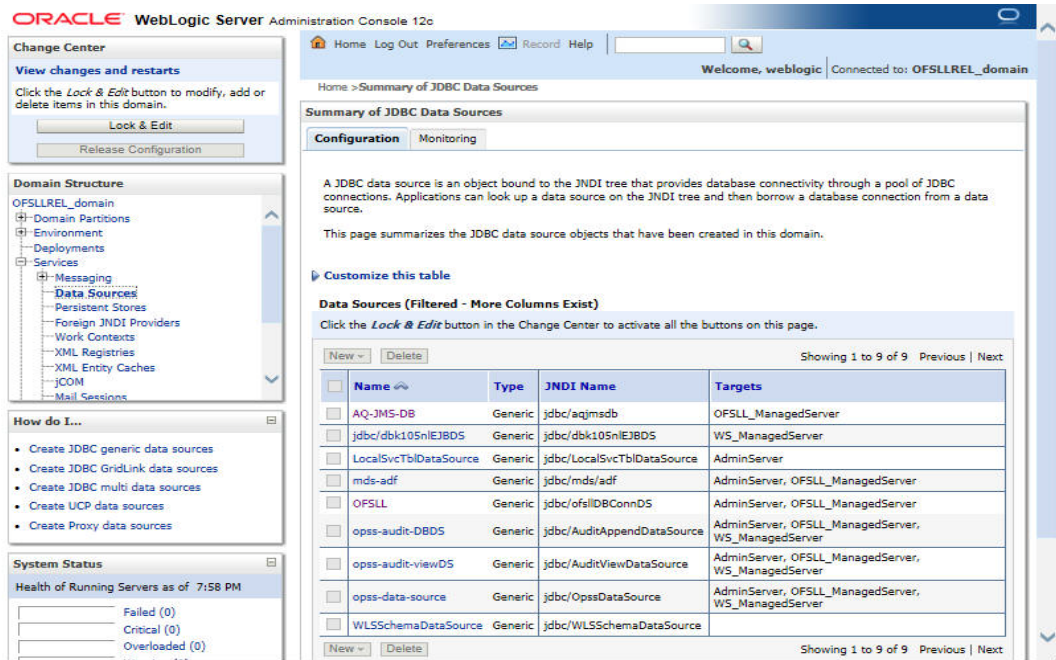
4. Click 'Lock & Edit' button on the left panel. Click 'New' on right panel and select 'Generic Data Source'.
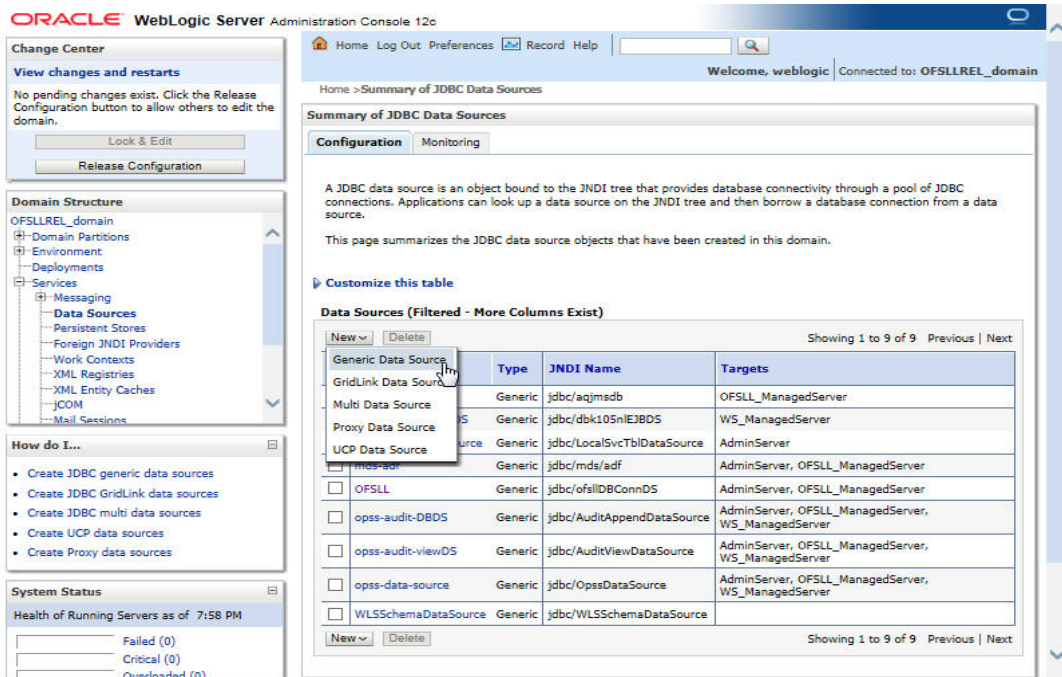
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5. The following window is displayed.
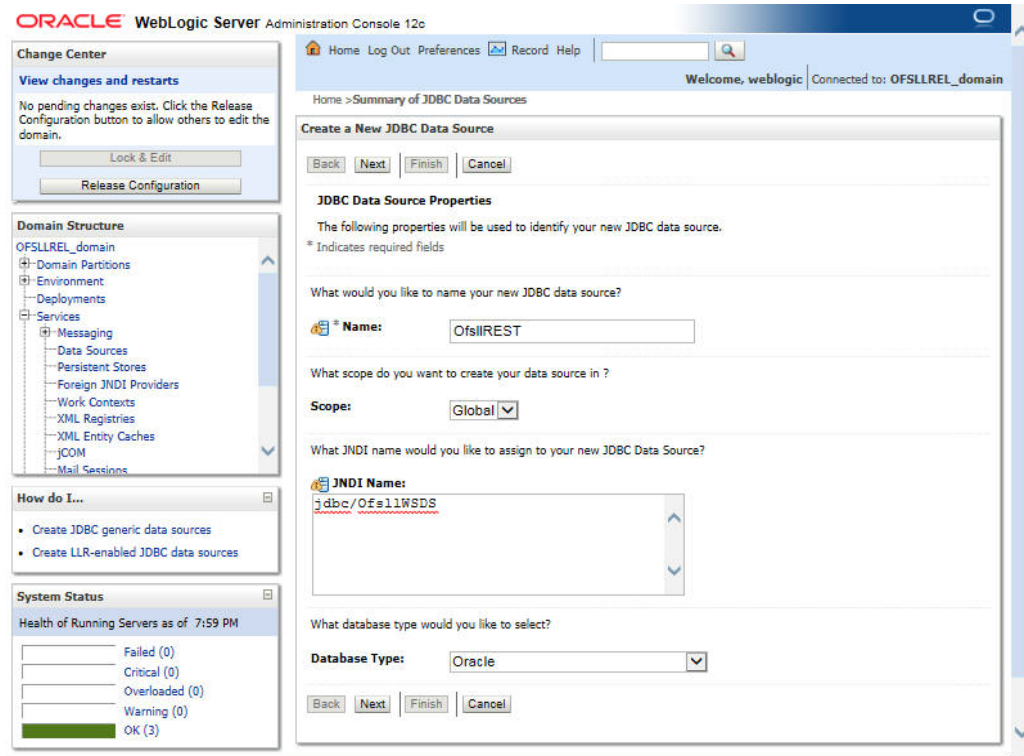
6. Specify the following details:

   – Enter Data source Name

   – Enter the JNDI Name as 'jdbc/OfsllWSDS'.

   – Select 'Oracle' as Database Type.

7. Click 'Next'. The following window is displayed.
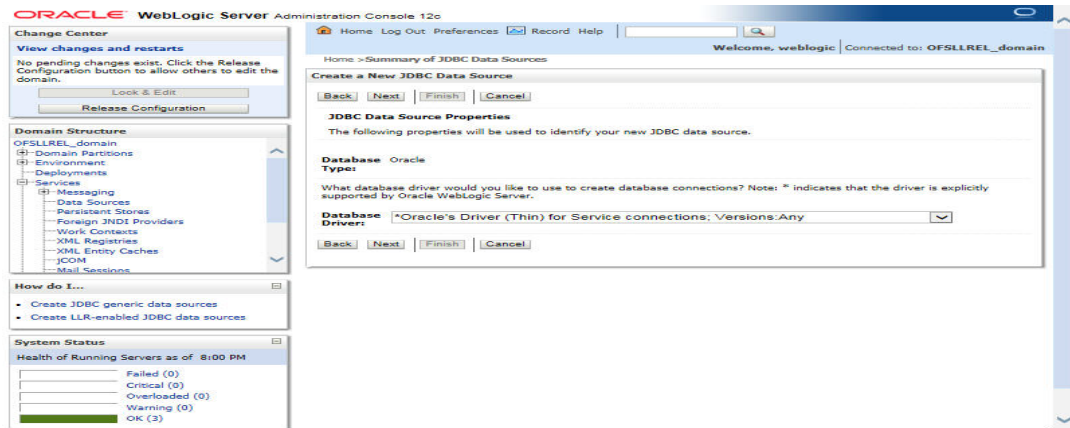
8. Select the Database Driver 'Oracle's Driver(Thin) for Services connections;Versions:Any'.

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9. Click 'Next'. The following window is displayed.
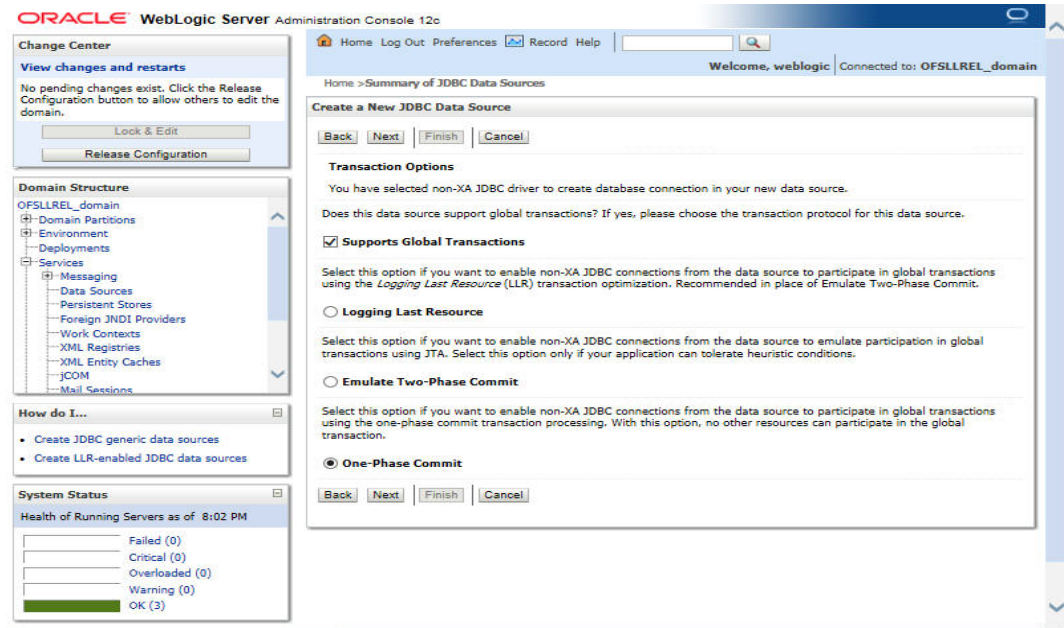
10. Click 'Next'. The following window is displayed.
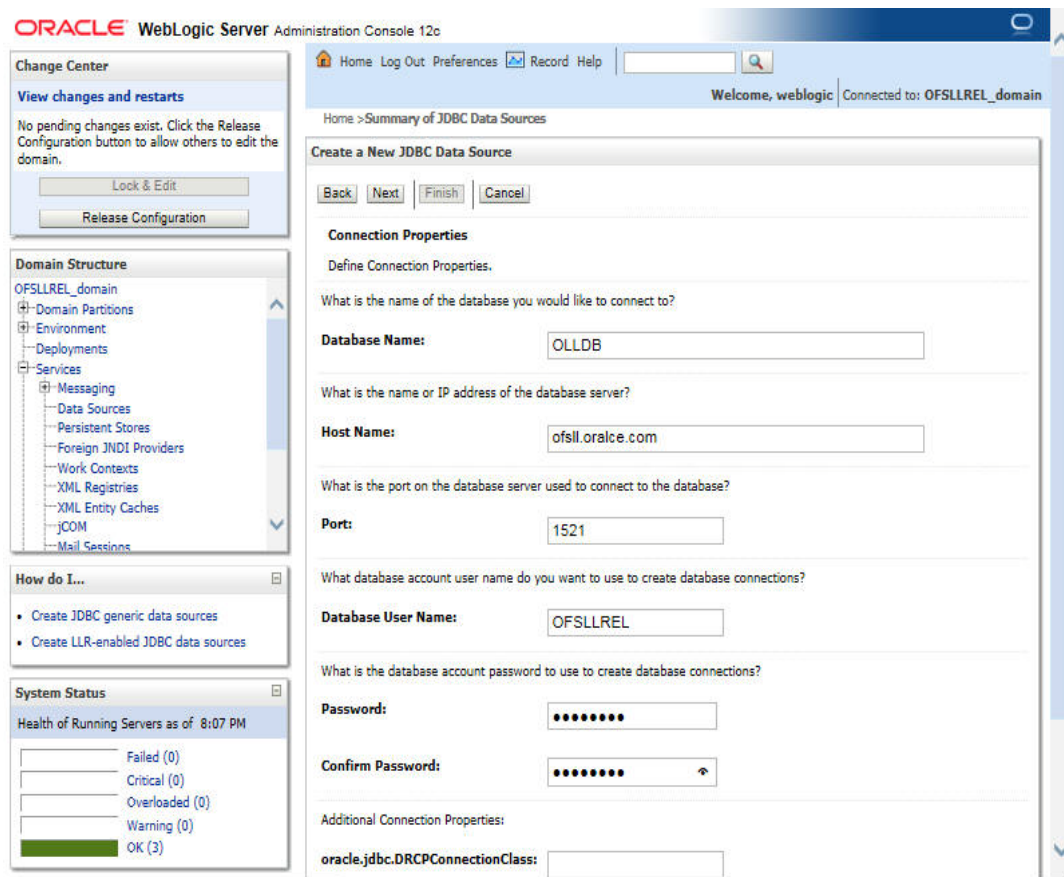
11. Enter the Database details.

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

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

14. Click 'Next'. The following window is displayed.
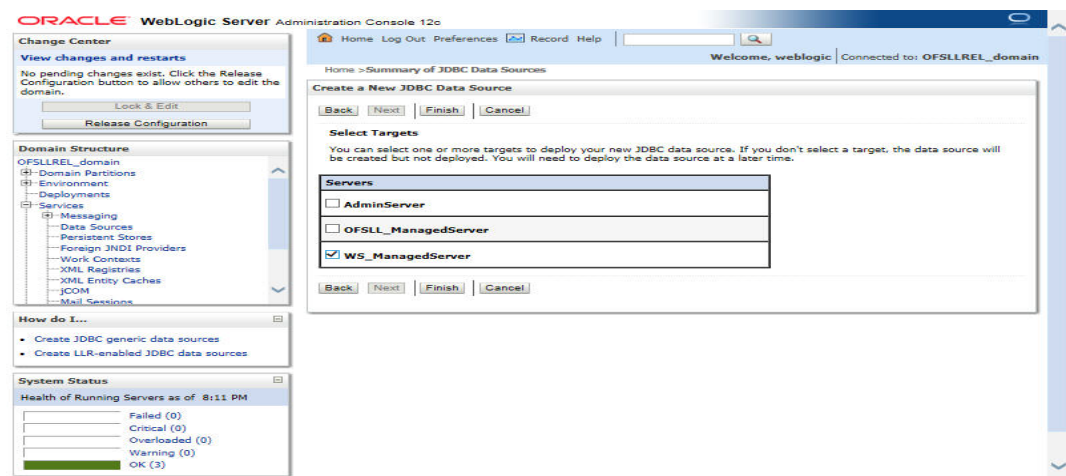
15. Select target Server as 'WS_ManagedServer'.

16. Click Advanced button and update the 'Inactive Connection Timeout' to 300 seconds.

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17. Click 'Finish' to activate the changes.

3.2   OAuth Implementation

(Optional) To extend OFSLL SaaS, OAuth2 can be used for securing OFSLL web services user access Authentication.
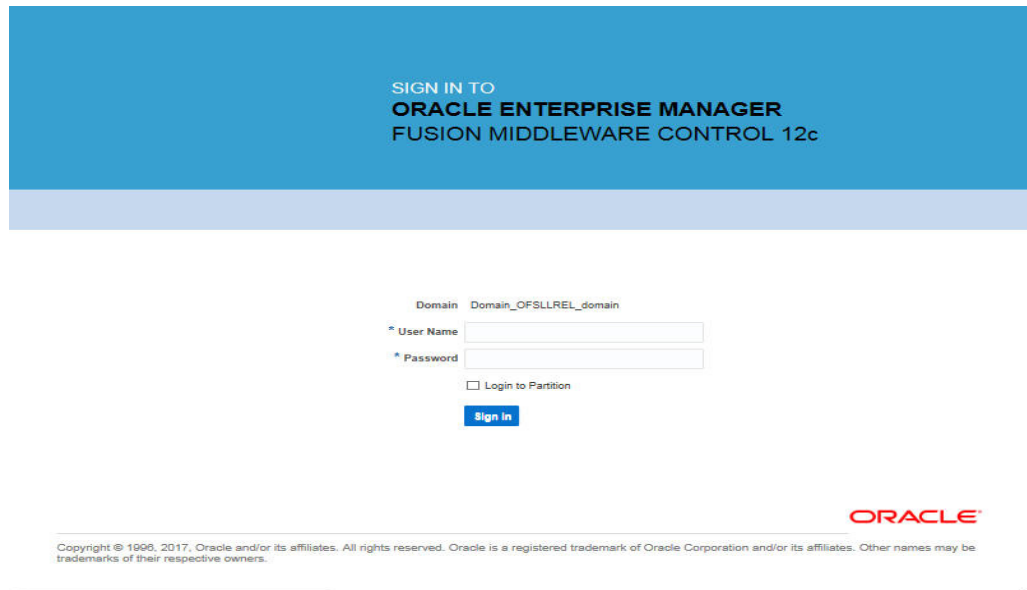
Web services authentication using OAuth2 is one of the best approach for securing user authentication to extend OFSLL SaaS. This uses Oracle / Non-Oracle PaaS to authenticate service access request from an external partner application without sharing OFSLL environment access credentials (UID / Password) 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: https://docs.oracle.com/cd/F16599_01/references.htm.

3.3   Deploy RESTful WebService

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

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

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.

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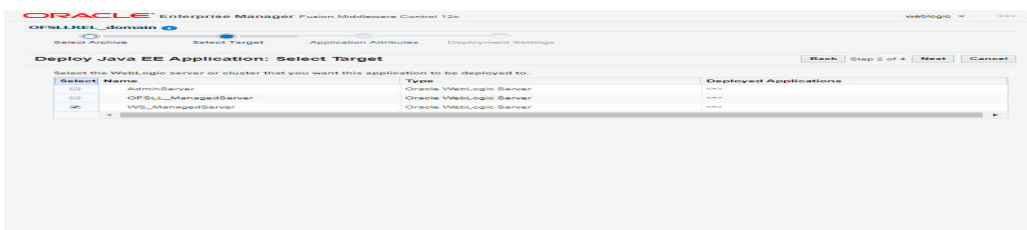5. Select 'Deploy' from the Deployment drop-down list. The following window is displayed.
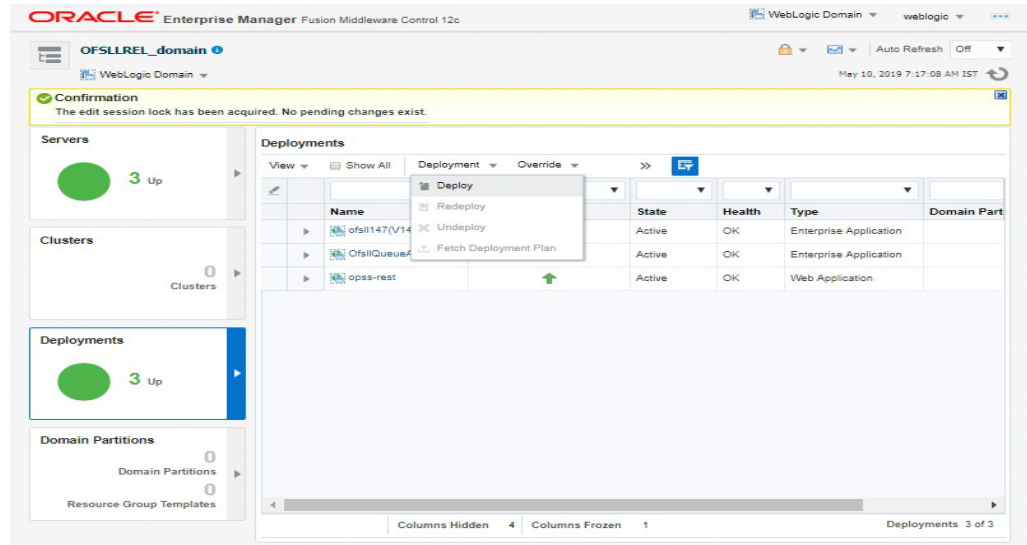
6. The following window is displayed.
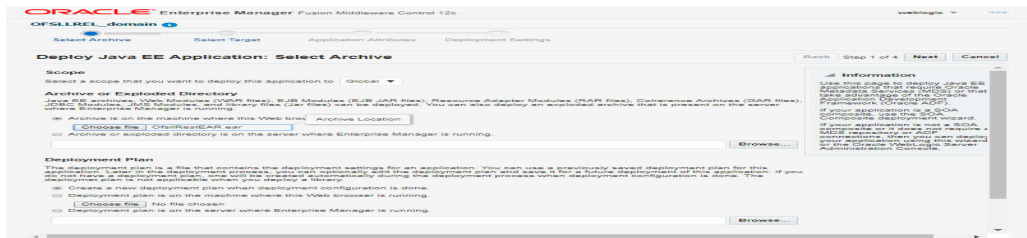
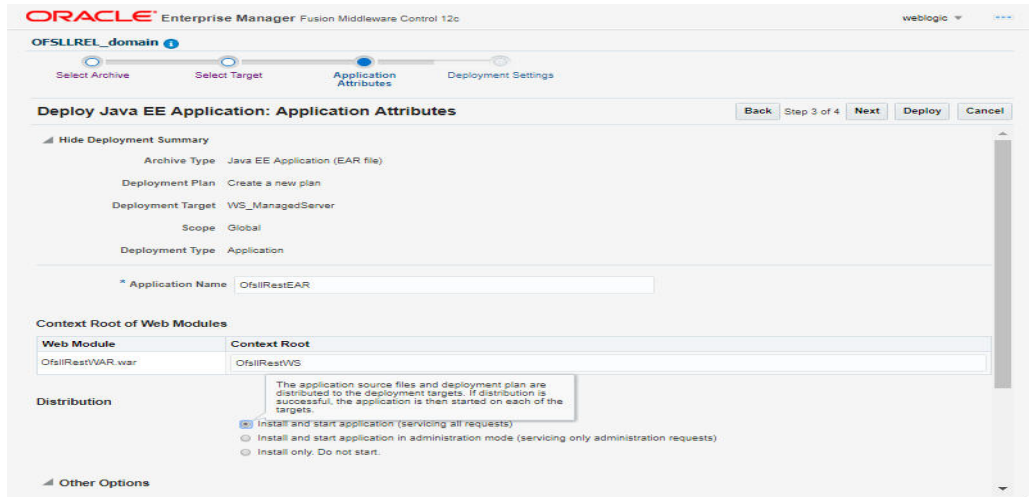7. Browse to the folder containing the WebService. Eg: C:/OfsllRestEAR.ear

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

9. Select the server on which the WebService needs to be deployed.

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

11. Select the option 'Install and start application (servicing all requests)'.

12. Check the context root and click 'Next'.The following window is displayed.
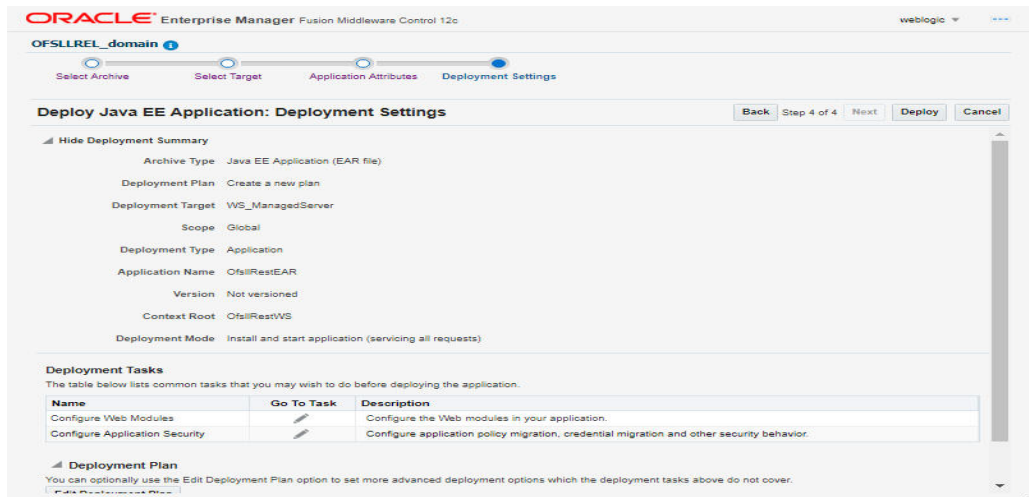
13. Click 'Deploy'. On successful deployment, the following window is displayed.

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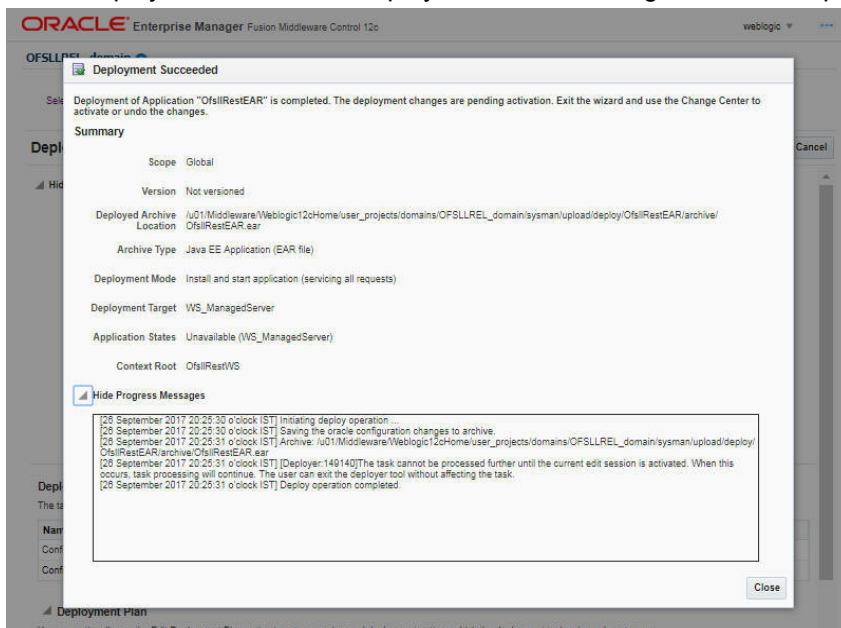
14. Click 'Close'. Post deployment, you need to activate the changes by selecting 'Active Changes' option from 'Edit Session' drop-down list as indicated in step 4 above.

To Identify the RESTful Webservice URL

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

2. Click 'Deployments' Under Configuration tab and select 'OfsllRestEAR' services. The following window is displayed.

3. Click 'Testing' tab and expand 'OfsllRestWS'. The following window is displayed.

4. You can view the 'OfsllRestful' 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

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