Installation Guide Oracle Banking APIs Release 21.1.0.0.0

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Installation Guide

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### 1. Preface

## 1.1 Intended Audience

This document is intended for the following audience:

- Customers
- Partners

## 1.2 **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.

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http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit

http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs\_if you are hearing impaired.

## 1.4 Structure

This manual is organized into the following categories:

Preface gives information on the intended audience. It also describes the overall structure of the User Manual.

The subsequent chapters describes following details:

- Introduction
- Preferences & Database
- Configuration / Installation.

## 1.5 Related Information Sources

For more information on Oracle Banking APIs Release 21.1.0.0.0, refer to the following documents:

Oracle Banking APIs Installation Manuals



## 2. Introduction

## 2.1 Purpose of the Document

The purpose of the OBAPI Installation Manual is to provide a step by step overview on the installation process of the solution.

#### It includes:

- Reference to prerequisites software installation required for OBAPI & OBDX installer
- Setup of OBAPI with Oracle's own Core Banking and Origination Products along with Thirdparty HOST system.
- Running the installation in silent mode
- Advanced Configurations (Post installation)
- Installation Verification
- Multi-Entity Installation and configuration
- Best Practice
- Troubleshoot Overview

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## 3. Prerequisites

OBAPI pre-requisite software should be installed and available before proceeding.

For OBAPI pre-requisite software setup refers document "Oracle Banking Digital Experience Installer Pre-Requisite Setup Manual".

#### Installer Pre-requisite verification

Post installation of OBAPI Installer prerequisite software's, verification can be done using below steps.

**Note:** Verification should be performed on Server where Oracle Weblogic is locally installed and by OS user (which is owner for Oracle Weblogic home directory) for non-root steps. The same user will be used to execute installer.

#### **Oracle Instant client**

Step 1: Login using root user.

Step 2: Run below command to verify if Oracle Instant client is installed.

#### rpm -qa | grep oracle

```
bash-4.2# rpm -qa | grep oracle oraclelinux-release-7.7-1.0.5.el7.x86_64 oracle-epel-release-el7-1.0-2.el7.x86_64 oracle-instantclient19.3-basic-19.3.0.0.0-1.x86_64 oracle-inux-release-el7-1.0-8.el7.x86_64 oracle-release-el7-1.0-2.el7.x86_64 bash-4.2#
```

**Note:** Above package verification command is specific to Oracle Linux and RHEL distributions only. For other Linux distributions or OS please refer to OS specific package manager documentation.

#### Python:

Step 1: Execute python -V command

#### python -V

```
bash-4.2# python3 -V
Python 3.8.0
bash-4.2#
```

Note: Ensure Python 2.7.5 supported version is installed. Above command should reflect the same.



#### cx\_Oracle & Urwid:

Step 1: Execute python command

#### python

**Note:** Ensure Python 3.8.0 version should be available in PATH variable. Above execution should be done using Python 3.8.0.

Step 2: Import Urwid and check version

```
import urwid (Press Enter)
```

urwid.\_\_version\_\_

If version is displayed, then Urwid is installed and available for use.

**Note:** Ensure Urwid 2.1.2 supported version is installed. Above command should reflect the same.

Step 3: Similarly import cx\_Oracle and check version

import cx\_Oracle (Press Enter)

cx Oracle.version

```
bash-4.2# python3
Python 3.8.0 (default, Mar 23 2021, 21:01:27)
[GCC 4.8.5 20150623 (Red Hat 4.8.5-44.0.3)] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> import cx_Oracle
>>> cx_Oracle.version
'8.1.0'
>>>
```

If version is displayed, then cx\_Oracle is installed and available for use.

Note: Ensure cx\_Oracle 8.1.0 supported version is installed. Above command should reflect the same.



#### Python 3.8 for Linux Operating System: --

```
Step 1: Execute below commands to install the dependencies
        yum -y groupinstall development
        yum -y install zlib-devel
        yum install openssl-devel -y
        yum install zlib-devel bzip2-devel openssl-devel ncurses-devel sqlite-devel
        yum install zlib-devel bzip2-devel openssl-devel ncurses-devel sqlite-devel -y
        yum install python38-pip -y
        yum install libreadline-gplv2-dev libncursesw5-dev libssl-dev libsglite3-dev tk-dev
                                                                                                 libgdbm-
dev libc6-dev libbz2-dev -y
        yum install -y libffi-devel
        yum install python36u-devel -y
        yum install python38u-devel -y
        yum install yum-utils -y
        yum install epel-release -y
        yum install python3.8-pip -y
        yum install python3-pip -y
Note: In case wget is not installed, perform following step to install wget
        yum install wget
        #Download the python.tar.xz of the required version
        wget https://www.python.org/ftp/python/3.8.0/Python-3.8.0.tar.xz
        #Untar the Python tar file
        tar xJf Python-3.8.0.tar.xz
```



cd Python-3.8.0

./configure

make install

make

#Navigate to the Python-<version> directory and run the below commands

# $\underline{\text{Step 2}}$ : To install the Python3 compatible libraries to Python2.7 , configuration of pip needs to be done

cd /root

mkdir .pip

vi ~/.pip/pip.conf

[global]

trusted-host = pypi.python.org

pypi.org

files.pythonhosted.org

Step3: Give permission to pip.conf file and a soft link needs to be created.

Note: pip version 20.1.1

In -s ~/.pip/pip.conf /etc/pip.conf
Is -Irt ~/.pip/pip.conf
chmod 777 /root/.pip/pip.conf
Is -Irt ~/.pip/pip.conf
pip3 list
pip3 install --upgrade pip

Step4: Once above steps are executed successfully install the following required modules.

pip3 install cx-Oracle==8.1.0 pip3 install urwid==2.1.2

**Home** 



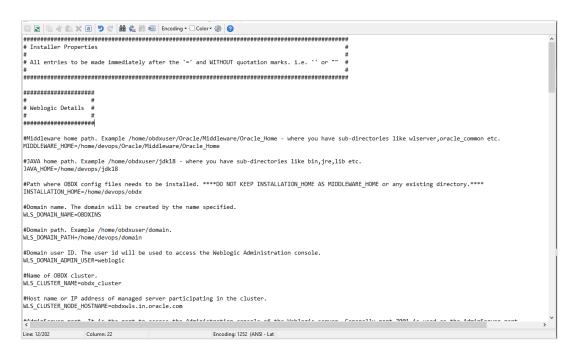
## 4. Installation

#### **Pre-Installation**

Install all the prerequisite software and packages mentioned above

#### Steps of Installation

- Download and extract the installer zip file (Base).
- Navigate to "<OBAPI INSTALLER DIR>/core/config"
- Open the "installer.properties" file to maintain key configurations for BASE ENTITY (OBDX\_BU)



#### IMPORTANT:

- Enter the values right after the "="sign
- DO NOT change anything to the left of the "="
- DO NOT change any of the flag values or pre-filled values (such as WLS\_JDBC\_DIGX\_NAME, WLS\_JDBC\_DIGX\_JNDI, Flag values etc) available in "Factory Shipped" section.
- Ensure there is no blank space after "=" sign, except specific flavor specific configuration.
- Throughout this document consider UBS as UBS core banking with OBPM as payments engine.



Only below parameters should be set in installer.properties file.

Component	Parameter	Description	Example
	OBAPI_DATABASE_HOST NAME	Enter the hostname of the database server which would host the database schema for OBAPI and Weblogic RCU	abc.xyc.com
	OBAPI_DATABASE_PORT	Enter the port number of the database listener	1521
	OBAPI_DATABASE_SID	Enter the Oracle <b>Service Name</b> for database instance	obapidb.in.oracl e.com
	OBAPI_DATABASE_SYS_ USER	Enter the username with 'sys' privileges	Sys
DB details (for Weblogic RCU and	POST_FIX	For OBAPI schema name like "OBAPI_DEV" POST FIX is 'DEV'. SHOULD BE IN UPPERCASE ONLY.	DEV
OBAPI schema)	OBAPI_DBA_DIRECTORY_ NAME	Enter the directory name in which you want the OBAPI schema tablespace datafile to be created. Enter Logical name (i.e. DIRECTORY_NAME column) from DBA_DIRECTORIES table NOT the physical path.	OBAPI_DIR
	OBAPI_AUDIT_DBA_DIRE CTORY_NAME	Enter the directory name in which you want the OBAPI AUDIT tablespace datafile to be created. Enter Logical name (i.e. DIRECTORY_NAME column) from DBA_DIRECTORIES table NOT the physical path.	OBAPI_AUDIT_ DIR



Component	Parameter	Description	Example	
	EHMS_DATABASE_HOSTNAME	Enter the hostname for EHMS database server	abc.xyz.com	
	EHMS_DATABASE_PORT	Enter the port number of EHMS database listener	1521	
	EHMS_SCHEMA_NAME	Enter the Complete OBAPI-EXT (B1A1) HostInterfaceschema name you want installer to create as new schema.  SHOULD BE IN UPPERCASE ONLY.	EHMS182SCHE MA	
EHMS DB details (to be configured only in-case of FLAVOR as UBS,FCORE &OBPM)	EHMS_DBA_DIRECTORY_NAME	Enter the directory name in which you want the OBAPI-EXT (B1A1) schema tablespace datafile to be created. Enter Logical name (i.e. DIRECTORY_NAME column) from DBA_DIRECTORIES table NOT the physical path.	OPATCH_LOG_ DIR	
	EHMS_DATABASE_SYS_USER	Enter the username with 'sys' privileges	Sys	
	EHMS_DATABASE_SID	Enter the EHMS database Service Name	obapiehms.in.ora cle.com	
	EHMS_HOST_SCHEMA_NAME	Enter the EXISTING EHMS HOST schema name	OBAPIUBS	
	EHMS_CCY(to be configured for UBS and OBPM HOST only)	Enter the Country code for EHMS HOME Branch	GB	
	EHMS_HB (to be configured for UBS and OBPM HOST only)	Enter the Branch code for code for EHMS HOME Branch	АТ3	
	EHMS_FCORE_FCUBS_SCHEMA _NAME (to be configured for FCORE HOST only)	FCORE-FCUBS schema name	FCRUBSHOST	



Installation

Component	Parameter	Description	Example
	MIDDLEWARE_HOME	Oracle Weblogic Middleware home path. Example /home/obapiuser/Oracle/Middlewar e/Oracle_Home - where you have	/home/obapiuse r/Oracle/Middle ware/Oracle_Ho me
		sub-directories like wlserver,oracle_common etc.	
	JAVA_HOME	Path where JAVA (JDK) is installed	/home/obapiuse r/jdk18
	INSTALLATION_HOM E	Path where OBAPI is to be installed. All configuration files will be copied as a sub-directory "config" under this directory. DO NOT KEEP INSTALLATION_HOME AS MiddlewareHome.	/home/obapiuse r/obapi
	WLS_DOMAIN_PATH	Path where OBAPI Weblogic domain should be created. Users can now enter custom path as per their requirements.	/home/obapiuse r/domains
	WLS_CLUSTER_NAM E	Name of cluster; this cluster would have one single managed server.	obapi_cluster
Weblogic server details	WLS_CLUSTER_NOD E_HOSTNAME	Host name or IP address of managed server participating in the cluster. Currently only single node is supported.	abc.xyz.com
	WLS_ADMIN_SERVE R_PORT	Weblogic AdminServer port. It is the port to access the administration console of the Weblogic server. Generally port 7001 is used as the AdminServer port. Custom port are supported.	7001
	WLS_ADMIN_SERVE R_SSL_PORT	AdminServer SSL port. It is the port used to securely access (https) the administration console of the Weblogic server.	7002
	WLS_NODE_PORT	Node Manager Port. It is the port used by Node Manager to be configured for OBAPI domain.	5556



	Generally, 5556 is utilized as Node Manager Port. Custom ports are supported.	
WLS_MS_SERVER_N AME	Managed server name. This will be the name of the managed server created in the cluster followed by indexes. eg- If this is set as 'clip' managed servers would be clip1.	clip
WLS_MS_SERVER_P ORT	Managed Server Port. Managed server will utilize this port for hosting OBAPI components and associated resources. Custom ports are supported.	9001
WLS_DOMAIN_NAME	Enter Weblogic Domain name.	obapi_domain1
WLS_DOMAIN_ADMIN _USER	Domain user ID. The user id will be used to access the Weblogic Administration console.	weblogic
WLS_JMS_FILEUPLO AD_PS (to be configured for all OBAPI supported HOST)	Set the paths for the persistent store of the FileUpload JMS modules. DO NOT KEEP path as INSTALLATION_HOME or as sub directory inside INSTALLATION_HOME.	/scratch/obapi/ FileUpload
WLS_JMS_AUDIT_PS (to be configured for all OBAPI supported HOST)	Set the paths for the persistent store of the Audit JMS modules.  DO NOT KEEP path as INSTALLATION_HOME or as sub directory inside INSTALLATION_HOME.	/scratch/obapi/A udit
WLS_JMS_REPORT_ PS (to be configured for all OBAPI supported HOST)	Set the paths for the persistent store of the Reports JMS modules.  DO NOT KEEP path as INSTALLATION_HOME or as sub directory inside INSTALLATION_HOME.	/scratch/obapi/R eports
WLS_JMS_JPA_PS (to be configured for all OBAPI supported HOST)	Set the paths for the persistent store of the JPA JMS modules. DO NOT KEEP path as INSTALLATION_HOME or as sub directory inside INSTALLATION_HOME.	/scratch/obapi/J PA



	WLS_JMS_EXTSYSR ECEIVER_PS (to be configured for all OBAPI supported HOST)	Set the paths for the persistent store of the ExtSystemReceiver JMS modules. DO NOT KEEP path as INSTALLATION_HOME or as sub directory inside INSTALLATION_HOME.	/scratch/obapi/R eceiver
	WLS_JMS_EXTSYSSE NDER_PS (to be configured for all OBAPI supported HOST)	Set the paths for the persistent store of the ExtSystemSender JMS modules. DO NOT KEEP path as INSTALLATION_HOME or as sub directory inside INSTALLATION_HOME.	/scratch/obapi/S ender
RCU	OBAPI_RCU_STB_PR EFIX	STB schema name prefix. If schema pre-fix is 'OBAPI' then 'OBAPI_STB' would be the STB schema name.	OBAPI_STB
OBAPI Application Administrator user details	OBAPI_ADMIN_USER NAME	Set username for OBAPI application Admin user. USERNAME IS CASE SENSITIVE. In-case of OUD as provider username should be the User ID mentioned during user creation steps mentioned in pre-requisite document (refer To create User and mapping it to the Group section)	superadmin
	OBAPI_ADMIN_EMAIL	Enter the Email ID for OBAPI application admin user.	superadmin@or acle.com
	OBAPI_ADMIN_CONT ACT_NO	Enter the mobile number for OBAPI application admin user. COUNTRY CODE IS MUST.	+911234567890

Note: Apart from above any other property values should not be modified

Ensure ORACLE\_HOME, JAVA\_HOME variable are set and their binaries are available in PATH variable before proceeding.

Login with OS user which was used to perform OBAPI pre-requisite software installation (or has ownership on Oracle Weblogic home directory)

Ensure OBAPI Installation home and filestore path's maintained in installer.properties exists and user running the installer has read-write permissions.



#### **Installation Steps:**

From your terminal navigate to <OBAPI INSTALLER DIR>/

Enter the following command

#### Python3 runinstaller.py

Select the appropriate type of Installation



- OBAPI Installation: This option should be used for first-time installation or for first entity only. Existing
  installation should not utilize this option unless performing "Reinstall" on already installed
  environment.
- New Entity Creation: This option should be used for multi-entity installation only.



Post selection of installation type.

Select the appropriate host system for Installation



### Oracle FLEXCUBE Universal Banking (OBAPI with UBS)

Select Installation mode



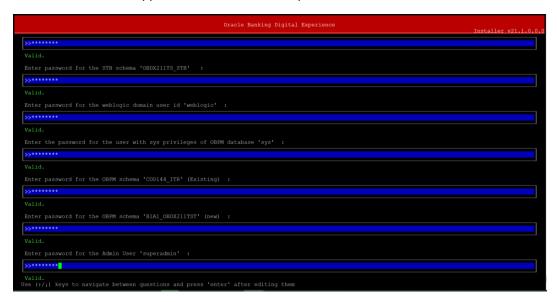


#### **Mode of Installation - New Installation**

New installation

In-case of a fresh installation of OBAPI with appropriate host system for the first run on server.

Below screens would appear to taken end-user input



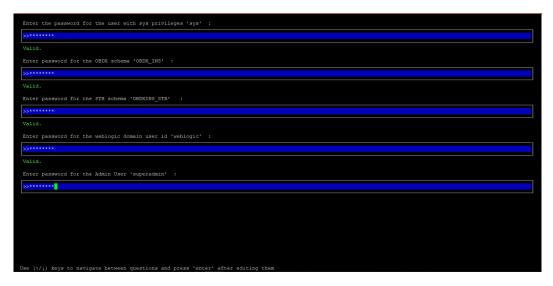
#### **Enter below passwords:**

- SYS privilege user password where OBAPI schema would be created
- OBAPI schema password
- OBAPI STB schema password
- Weblogic console administrator user password
- SYS privilege user password where UBS host schema exists
- Existing UBS HOST schema password
- New OBAPI EHMS schema password
- Password for OBAPI application administrative user (In-case of OUD as provider, password should be similar to one used while user creation in OUD (or User Password field))



#### Third Party System (OBAPI with THP)

Post Third Party System selection, enter the required credentials details



#### Enter below passwords:

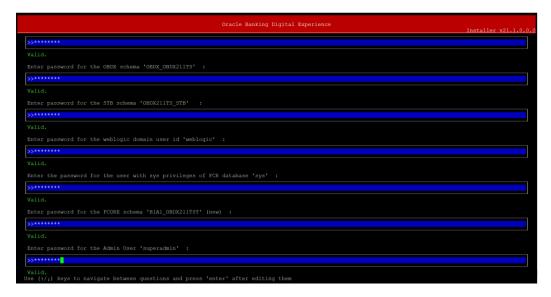
- SYS privilege user password where OBAPI schema would be created
- OBAPI schema password
- OBAPI STB schema password
- Weblogic console administrator user password

OBAPI application admin user password (In-case of OUD as provider, password should similar to one used while user creation in OUD (or User Password field))



#### **Oracle FLEXCUBE Core Banking (OBAPI with FCORE)**

Post Oracle FLEXCUBE Core Banking, enter the required credentials details



#### **Enter below passwords:**

- SYS privilege user password where OBAPI schema would be created
- OBAPI schema password
- OBAPI STB schema password
- Weblogic console administrator user password
- SYS privilege user password where FCORE host schema exists
- New OBAPI EHMS schema password
- Password for OBAPI application administrative user (In-case of OUD as provider, password should be similar to one used while user creation in OUD (or User Password field))



#### Oracle FLEXCUBE Universal Banking with Oracle Banking Payments (OBAPI with OBPM)

Enter the required credentials details

#### **Enter below passwords:**

- SYS privilege user password where OBAPI schema would be created
- OBAPI schema password
- OBAPI STB schema password
- Weblogic console administrator user password
- SYS privilege user password where OBPM host schema exists
- Existing OBPM HOST schema password
- New OBAPI EHMS schema password
- Password for OBAPI application administrative user (In-case of OUD as provider, password should be similar to one used while user creation in OUD (or User Password field))

#### **Mode of Installation - Reinstall**





In-case of an existing OBAPI installation that you want to overwrite OR in case of a previously failed installation user can opt for this option.

#### **Pre-requisites**

- Weblogic domain processes should be down (i.e. AdminServer, NodeManager, Managed Servers, Derby etc)
- No open session (user should not be logged-in) with OBAPI database schema (and OBAPI EHMS schema in-case of OBAPI UBS;OBPM and FCORE flavor) and RCU schema.

Over-write the policies files (Day0Policy.csv; Entitlement.csv; Resources.csv and Task.csv) from OBAPI Product zip into <OBAPI INSTALLER DIR>/installables/policies directory

#### **Key pointers**

- OBAPI schema (and OBAPI EHMS schema in-case of OBAPI UBS flavor) and RCU schema would be dropped and recreated (as per installer.properties). Tablespace would be re-used.
- Weblogic domain (as per installer.properties) would be deleted and created again.
- Installation Home would be cleaned up (all files/ sub-directories would be deleted) and re-created again.

Note: All input screens are similar to new installation option and as per the host system opted.

#### **Installation Status**

After selecting the mode and entering all required details, the status is displayed (as shown below) on the terminal to indicate the progress of the installation.



#### When the installation completes, the below message is displayed

```
Any 13 Asia (1977) And Composed Composed (1977) And Composed Compo
```

**Home** 



## 5. Installation using Silent Mode

This chapter describes how to run the OBAPI installer in silent mode.

#### What is silent-mode installation?

During installation in silent mode, the installation program reads the details for your configuration parameters (flavor; mode; passwords etc) from the environment variables (same session in which installer is executed) and installer properties that you set before beginning the installation. The installation program does not display any configuration options during the installation process.

#### **Steps for Silent-Mode Installation**

- Download and extract the installer zip file (Base non localization version).
- Navigate to "<OBAPI INSTALLER DIR>/core/config"
- Open the "installer.properties" file to maintain key configurations for BASE ENTITY (OBDX\_BU)
   \*\*Refer to page 9 to 14 (step 4) for filling up installer.properties.
- Set the environment variables, as shown below

```
export FLAVOUR=OBPM
export MODE=New
export DB_SYS_PASSWORD=welcome1
export SCHEMA_PASS=welcome1
export STBPassword=welcome1
export DomainPassword=welcome1
export EHMS_DATABASE_SYS_PASS=welcome1
export EHMS_HOST_SCHEMA_NAME_PASS=welcome1
export EHMS_SCHEMA_PASS=welcome1
export EHMS_SCHEMA_PASS=welcome1
export DBAuthPassword=welcome1
export LD_LIBRARY_PATH=/usr/lib/oracle/19.10/client64/lib/:$LD_LIBRARY_PATH_
```



Below parameters should be set as environment variables, depending on the Host system the installer should be executed.

Host	Parameter	Description	Example
	FLAVOUR	Flavour for installation  UBS for Oracle FLEXCUBE Universal Banking	export FLAVOUR=OBPM or export FLAVOUR=FCORE
Environment variables to set for flavor:UBSFC		14.4.0.0.0 (OBAPI with UBS)	
ORE		FCORE for Oracle FLEXCUBE Core Banking 11.8.0.0.0 (OBAPI with FCORE)	
	MODE	Mode of installation.	export MODE=New
		'New' in-case of a fresh installation of OBAPI for the first run on server	or export MODE=Clean
		'Clean' in-case of an existing OBAPI installation that you want to overwrite OR in case of a previously failed installation or re- installation	
	DB_SYS_PASSWORD	Sys user password of OBAPI database (Existing)	export DB_SYS_PASSWORD=obapi18 2sys
	SCHEMA_PASS	Password for new schema on OBAPI database	export SCHEMA_PASS=obapi#182
	STBPassword	Password for RCU STB schema	export STBPassword=obapi182#stb



DomainPassword	Password for Weblogic Administrator console	export DomainPassword=wlsadmn
EHMS_DATABASE_SY S_PASS	Sys user password of EHMS HOST database (Existing)	export EHMS_DATABASE_SYS_PASS =obapiehmssys
EHMS_HOST_SCHEM A_NAME_PASS  ** Only required for	Password of existing EHMS HOST schema (Existing)	export EHMS_HOST_SCHEMA_NAME _PASS =obapiehmshost
UBS & OBPM Host. Ignore this parameter in-case of FCORE Host		
EHMS_SCHEMA_PASS	Password for new OBAPI EHMS schema on EHMS HOST database	export EHMS_SCHEMA_PASS=obapi1 82ehms
DBAuthPassword	Password for new OBAPI Administrator user of OBAPI application (In-case of OUD as provider, password should similar to one used while user creation in OUD(or User Password field))	export DBAuthPassword=obapiadmn
FLAVOUR	Flavour for installation  'OBAPI' for Third Party System 1.0 (OBAPI with THP)	export FLAVOUR=OBAPI
Mode	Mode of installation.  'New' in-case of a fresh installation of OBAPI for the first run on server	export MODE=New or export MODE=Clean



Environment variables to set for flavor:		'Clean' in-case of an existing OBAPI installation that you want to overwrite OR in case of a previously failed installation or re- installation	
OBAPI (Third-party HOST)	DB_SYS_PASSWORD	Sys user password of OBAPI database (Existing)	export DB_SYS_PASSWORD= obapi182sys
	SCHEMA_PASS	Password for new schema on OBAPI database	export SCHEMA_PASS=obapi#182
	STBPassword	Password for RCU STB schema	export STBPassword=obapi#stb
	DomainPassword	Password for Weblogic Administrator console	export DomainPassword=wlsadmn
	DBAuthPassword	Password for new OBAPI Administrator user of OBAPI application (In-case of OUD as provider, password should similar to one used while user creation in OUD(or User Password field))	export DBAuthPassword=obapiadmn

Run the runInstaller.py file with '--silent' argument along with '--base' option

[devops@obdxwls OBDX\_Installer]\$ python3 runInstaller.py --silent --base

#### **Installation Status**

The status is displayed on the terminal to indicate the progress of the installation.



#### When the installation completes, the below message is displayed

```
er/installables/app/components/obdx/deploy/cbdx.app.core.domain.est], to obdx_cluster AdminServer. >
2000 333158 W GNT- Clafco cDME Deployment SPD cBML-26011b Cinitating deploy operation for application, obdx.thirdparty.app.domain [archive: /scratch/obdx.rstallables/app/components/obdx/deploy/obdx.thirdparty.app.domain application, obdx.app.rest.idm [archive: /scratch/obdx/OBDX_Installables/app/components/obdx/deploy/obdx.thirdparty.app.domain.application, obdx.app.rest.idm [archive: /scratch/obdx/OBDX_Installables/app/components/obdx/deploy/obdx.app.rest.idm.earl, to obdx_cluster application, obdx.app.rest.idm [archive: /scratch/obdx/OBDX_Installables/app/components/obdx/deploy/dact.app.rest.idm.earl, to obdx_cluster. >
2000 3132106 PM GNT- Clafco cJRE Deployment SPD cBML-26011b Clafitating deploy operation for application, additMOBEAR [archive: /scratch/obdx/OBDX_Installer/inbles/app/components/obdx/deploy/dact.MREAR.earl, to obdx_cluster. >
2000 3132106 PM GNT- Clafco cJRE Deployment SPD cBML-26011b Clafitating deploy operation for application, additMOBEAR [archive: /scratch/obdx/OBDX_Installer/inbles/app/components/obdx/deploy/dox/deploy/dact.MREAR.earl, to obdx_cluster. >
2000 3132107 PM GNT- Clafco cJRE Deployment SPD cBML-26011b Clafitating deploy operation for application, obdx.app.mdb.report [archive: /scratch/obdx/OBDX_Installates/app/components/obdx/deploy/dox.app.mdb.report.earl, to obdx_cluster. >
2000 3132107 PM GNT- Clafco cJRE Deployment SPD cBML-26011b Clafitating deploy operation for application, obdx.app.mdb.report [archive: /scratch/obdx/OBDX_Installates/app/components/obdx/deploy/obdx.app.mb.report.earl, to obdx_cluster. >
2000 3132107 PM GNT- Clafco cJRE Deployment SPD cBML-26011b Clafitating deploy operation for application, obdx.app.cauth [archive: /scratch/obdx/OBDX_Installates/app/components/obdx/deploy/obdx.app.cauth.earl, to obdx_cluster. >
2000 3132108 PM GNT- Clafco cJRE Deployment SPD cBML-26011b Clafitating deploy operation for application, obdx.app.oauth [archive: /scratch/obdx/
      ever started
fully created and configured OBDX201UBS domain
2020 3:33:55 PM GMT> <Marning> <GND1> <MEL-050001> <MELContext.close() was called in a different thread than the one in which it was created.>
  OBDX PRODUCT INSTALLATION COMPLETED SUCCESSFULLY <><<
```

**Home** 



## 6. Installer Verification

Each execution creates a new directory as <DDMonthHHMM> under <OBAPI INSTALLER DIR>/ExecInstances directory where installer execution logs as described below are stored.

Log Description	PATH	
Summarized Installer Activity Log	<obapi dir="" installer="">/ExecInstances/<ddmonthhhmm> /logs/obapi_installer.log</ddmonthhhmm></obapi>	
Summarized Database Logs	<pre><obapi dir="" installer="">/ExecInstances/<ddmonthhhmm> /logs/db/DB_installation.log</ddmonthhhmm></obapi></pre>	
Detailed OBAPI DB Logs per SQL file	<pre><obapi dir="" installer="">/ExecInstances/<ddmonthhhmm> /logs/db/OBAPI/*</ddmonthhhmm></obapi></pre>	
Detailed EHMS schema Logs per	<obapi dir="" installer="">/ExecInstances/<ddmonthhhmm> /logs/db/<ehmshost>/*</ehmshost></ddmonthhhmm></obapi>	
SQL file (specific to EHMS host system only)	<ehmshost> - values such as; FCORE; OBPM;; UBS</ehmshost>	
RCU Logs	<pre><obapi dir="" installer="">/ExecInstances/<ddmonthhhmm> /logs/app/obapi_stb_rcu_1600.log</ddmonthhhmm></obapi></pre>	
Weblogic Configuration Logs	<pre><obapi dir="" installer="">/ExecInstances/<ddmonthhhmm> /logs/app/obapi_wls_post.log</ddmonthhhmm></obapi></pre>	
	<pre><obapi dir="" installer="">/ExecInstances/<ddmonthhhmm> /logs/db/Entitlement.log</ddmonthhhmm></obapi></pre>	
	<pre><obapi dir="" installer="">/ExecInstances/<ddmonthhhmm> /logs/db/Task.log</ddmonthhhmm></obapi></pre>	
	<obapi dir="" installer="">/ExecInstances/<ddmonthhhmm> /logs/db/Dashboard_seed.log</ddmonthhhmm></obapi>	
Detailed OBAPI policy seeding logs	Note: Check for SEVERE keyword; If found refer to Troubleshot section to re-run the policy	
	<pre><obapi dir="" installer="">/ExecInstances/<ddmonthhhmm> /logs/db/seedPolicies.log</ddmonthhhmm></obapi></pre>	
Policy seeding execution Log		



In-case non-empty refer to Troubleshot section to re-run the policy		Note: Should be empty if no errors during policy execution. In-case non-empty refer to Troubleshot section to re-run the policy
---------------------------------------------------------------------	--	---------------------------------------------------------------------------------------------------------------------------------

Check all the logs for any errors.

**Home** 



# 7. Installer Scope

OBAPI Installer currently covers below activities:

Flavor: Third Party system (OBAPI with THP)

Flavor	Activity	Detailed Activity List	New Installation	Reinstall
		Create Tablespace		NA
		Create Schema and Role	1	√ (drop and recreate objects)
		Grants	√	√
	OBAPI DB Setup	Load DB object (DDL's and DML's)	V	<b>V</b>
		Compile Schema	√	√
		Policy Seeding	√	√
	Wohlogia Satus and	RCU schema and Create Domain	V	√ (drop and recreate RCU schema's)
OBAPI with		Create and Configure AdminServer, Machine, Managed Server and Cluster	<b>V</b>	√
		Configure NodeManager	√	√
		Configure JDBC	<b>V</b>	1
	Weblogic Setup and Configuration	Configure DB Authenticator, JMS servers, Persistent stores and JMS Modules	<b>V</b>	NA  √ (drop and recreate objects)  √  √  √  √  √  √ (drop and recreate RCU schema's)  √
		Application Deployment	√	√
		JTA	<b>V</b>	√
		Enable Production Mode	<b>V</b>	√
		Start AdminServer and NodeManager	√	√



Flavor	Activity	Detailed Activity List	New Installation	Reinstall
	OBAPI Configuration	Copy config files into OBAPI Installation Home	<b>V</b>	√ (Delete old and copy new from installer zip)

### Flavor: Oracle FLEXCUBE Core Banking (OBAPI with FCORE)

Flavor	Activity	Detailed Activity List	New Installation	Reinstall
	OBAPI DB Setup	Create Tablespace	<b>√</b>	NA
		Create Schema and Role	<b>V</b>	√ (drop and recreate objects)
		Grants	√	√
		Load DB object (DDL's and DML's)	<b>V</b>	√
		Compile Schema	√	√
		Policy Seeding	√	√
	EHMS DB Setup	Create Tablespace	√	NA
OBAPI with FCORE		Create Schema and Role	<b>V</b>	√ (drop and recreate objects)
		Grants	<b>√</b>	√
		Load DB object (DDL's and DML's)	<b>V</b>	√
		Compile Schema	$\checkmark$	√
	Weblogic Setup and Configuration	RCU schema and Create Domain	<b>V</b>	√ (drop and recreate RCU schema's)
		Create and Configure AdminServer, Machine, Managed Server and Cluster	٨	٨
		Configure NodeManager	√	√



Flavor	Activity	Detailed Activity List	New Installation	Reinstall
		Configure JDBC	√	√
		Configure DB Authenticator, JMS servers, Persistent stores and JMS Modules	V	V
		Application Deployment	√	√
		JTA	√	√
		Enable Production Mode	√	√
		Start AdminServer and NodeManager	V	<b>V</b>
	OBAPI Configuration	Copy config files into OBAPI Installation Home	<b>V</b>	√ (Delete old and copy new from installer zip)



### Flavor: Oracle FLEXCUBE Universal Banking with Oracle Banking Payments (OBAPI with OBPM)

Flavor	Activity	Detailed Activity List	New Installation	Reinstall
	OBAPI DB Setup	Create Tablespace	√	NA
		Create Schema and Role	√	√ (drop and recreate objects)
		Grants	√	√
		Load DB object (DDL's and DML's)	<b>V</b>	<b>V</b>
		Execute OBPM HOST specific scripts	<b>√</b>	V
		Compile Schema	√	<b>√</b>
		Policy Seeding	√	√
	EHMS DB Setup	Create Tablespace	√	NA
OBAPI with OBPM (14.4.0.0.0 version)		Create Schema and Role	√	√ (drop and recreate objects)
		Grants	√	√
		Load DB object (DDL's and DML's)	√	<b>V</b>
		Compile Schema	√	√
	Weblogic Setup and Configuration	RCU schema and Create Domain	V	√ (drop and recreate RCU schema's)
		Create and Configure AdminServer, Machine, Managed Server and Cluster	√	√
		Configure NodeManager	√	√
		Configure JDBC	√	√
		Configure DB Authenticator, JMS servers, Persistent stores and JMS Modules	√	√



Flavor	Activity	Detailed Activity List	New Installation	Reinstall
		Application Deployment	$\checkmark$	
		JTA	$\checkmark$	√
		Enable Production Mode	√	√
		Start AdminServer and NodeManager	V	√
	OBAPI Configuration	Copy config files into OBAPI Installation Home	√	√ (Delete old and copy new from installer zip)

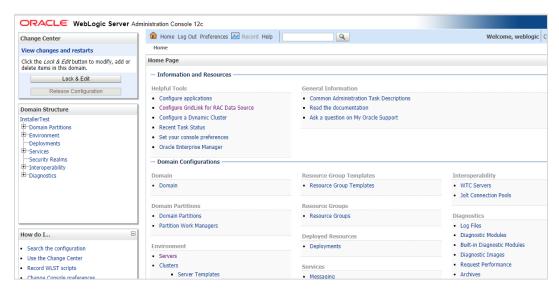
**Home** 



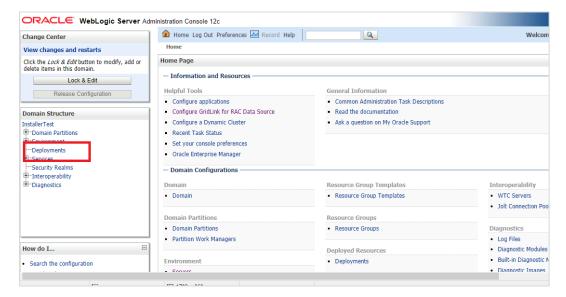
## 8. Post Installation Steps

Once Installation is successful and no errors are observed, proceed with below set of steps.

Login Weblogic Admin console.



In the left panel of the Console, Click on **Deployments**, A table in the right pane displays all deployed Enterprise Applications and Application Modules.

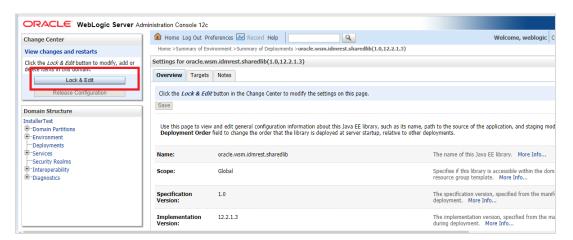




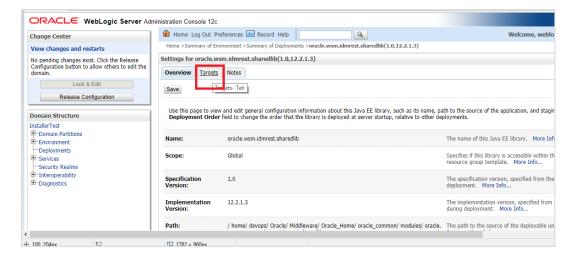
In the table, locate the **oracle.wsm.idmrest.sharedlib(1.0,12.2.1.3)** library to re-target and click on its name.



## Click on Lock & Edit

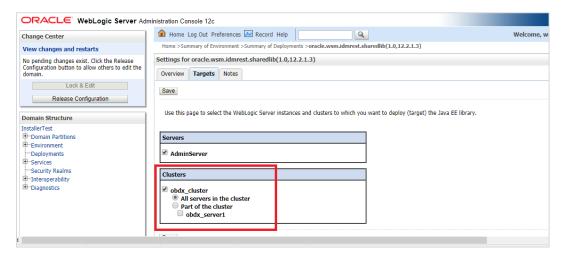


## Click on Targets Tab





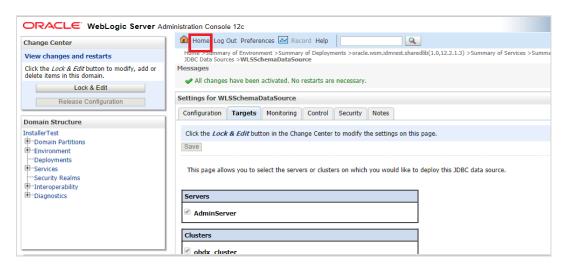
In the Servers box, select Cluster if it is not already selected and click Save.



# Click on Activate Changes.

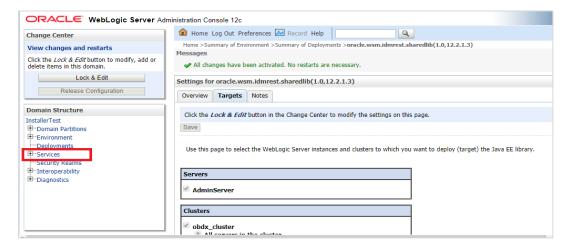


#### Click on Home Tab





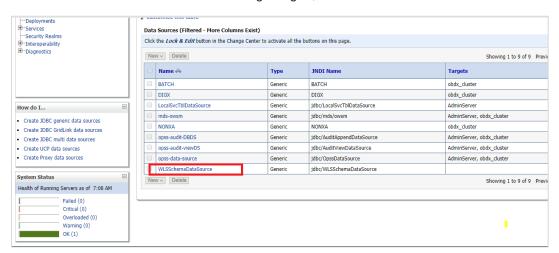
# In the left panel of the Console, Click on Services,



#### Click on Data Sources

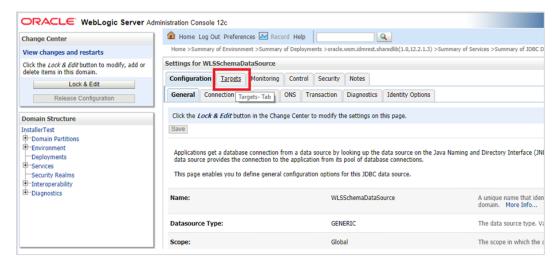


# Locate WLSSchemaDataSource to change target ,click on its name

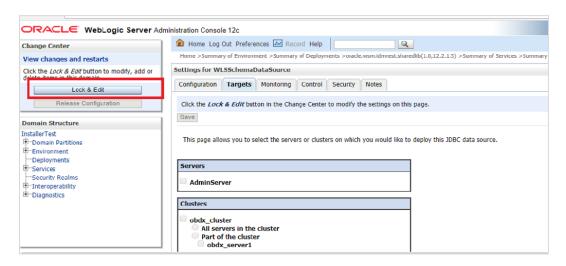




## Click on Targets Tab

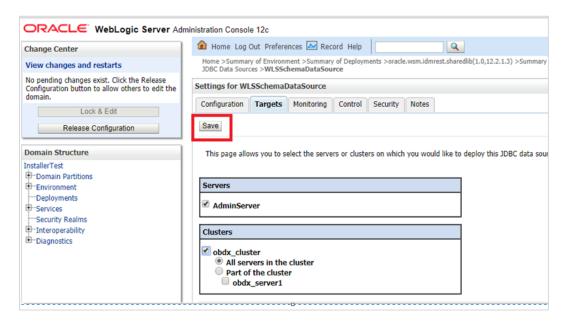


## Click on Lock & Edit

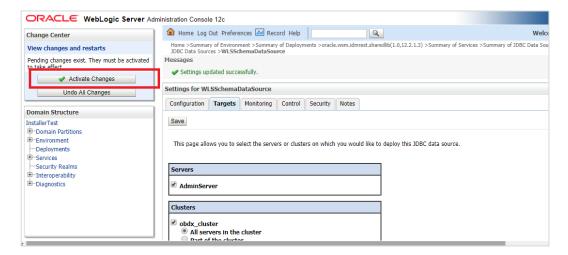


In the Servers Box, select AdminServer & OBAPI Cluster and Click on Save





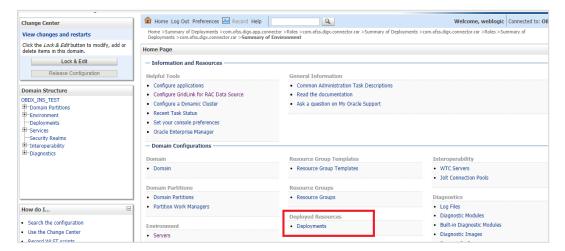
## Click on Activate Changes





# **Outbound credential mappings**

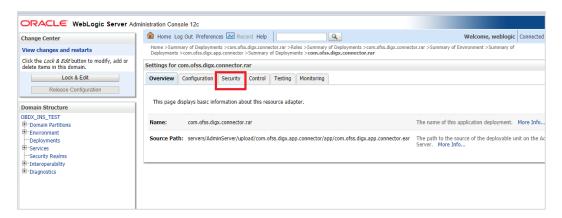
Login Weblogic Admin Console. Click on Deployments.



# Click on com.ofss.digx.app.connector > com.ofss.digx.connector.rar



## Click on Security Tab > Outbound Credential Mappings

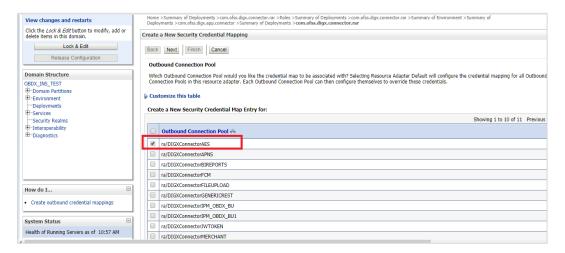




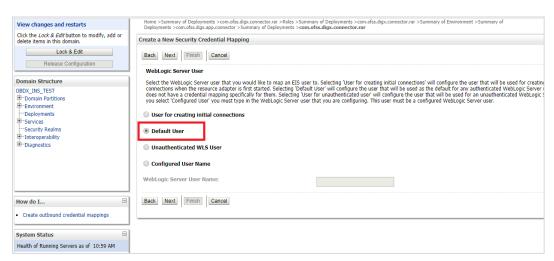
#### Click on New



# Select ra/DIGXConnectorAES > Next



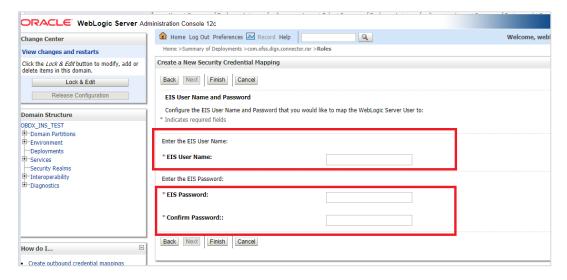
#### Select "Default User" > Next



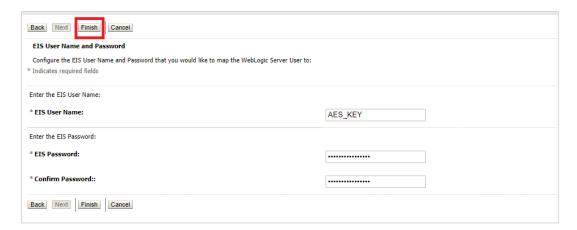


# Enter "EIS User Name" should be set to AES\_KEY

Enter "EIS Password" . Password should be any 16 characters.



#### Click 'Finish'



## Check AES\_KEY mapping is created successfully.





## **Apply JRF Template**

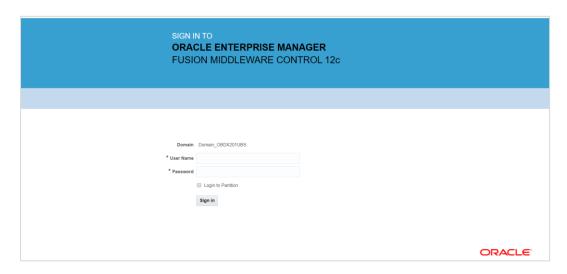
To apply JRF template follow below steps.

• To do this, ensure that the Admin Server is running. Login to the EM (Enterprise Manager) Console using the following URL:

http://<hostname>:<admin\_port>/em

#### Note:

- 1) EM console would be available on same hostname and port which was used for Weblogic Admin Console for OBAPI domain (created via installer), just replace the "/console" with "/em".
- 2) If EM console URL is giving error then please refer below troubleshooting page

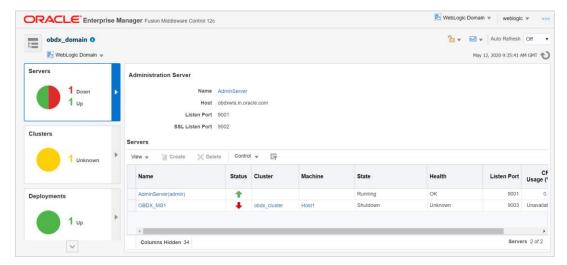


 Enter Weblogic administrator username and password (same used for Weblogic administrator console login)

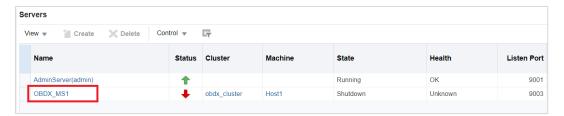




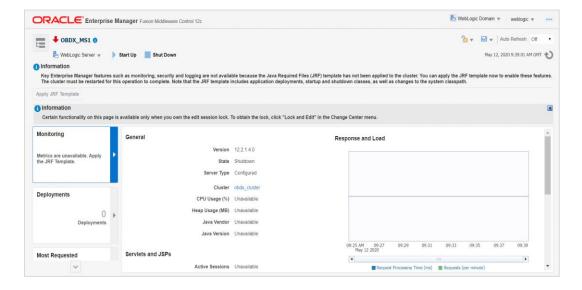
Click on Sign In



Click on the Managed Server (as highlighted below)

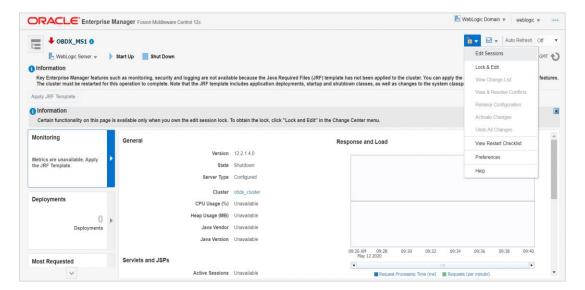


Note: Depending on installer.properties, Managed server will differ from above screenshot.

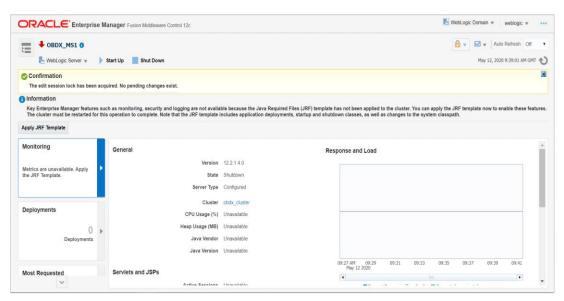




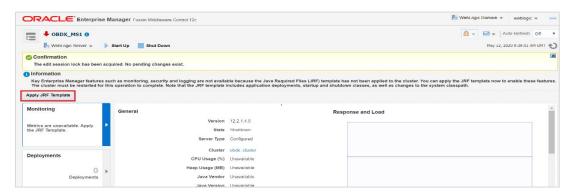
• Click on "Lock and Edit" option (as shown in screenshot).



You will see below screen stating the edit session confirmation



Click on "Apply JRF Template" option (as shown in screenshot).

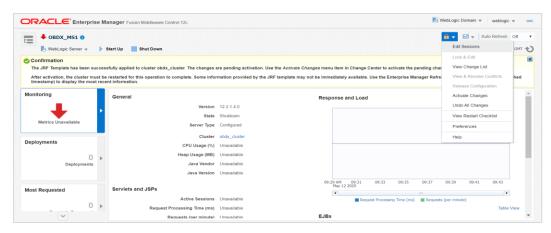




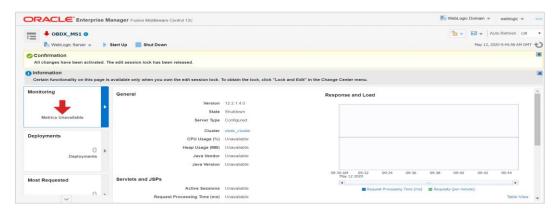
Is JRF successfully applied, you will get below Confirmation.



• Click on "Activates Changes" option (as shown in screenshot).



Post activation you will receive below Confirmation.



#### **Configuring the Connector Credential Store**

This step is required to setup the encryption key required for encryption of certain sensitive data within the OBAPI application.

For more information, refer the Oracle Banking Digital Experience Connector Credential Store Guide.pdf

Functionality / Module	OutBound Connection Pool Name
VAM	ra/DIGXConnectorOBVAM



#### **Configure User Lockout attributes in Weblogic**

The User Lockout attributes in Weblogic under Home>Security Realms>myrealm need to be in sync with the Password Policy Maintained in LDAP or DBAuthenticator. In case of DBAuthenticator it has to be in sync with Password Policy Maintenance in OBAPI.

Check for below values & change accordingly.

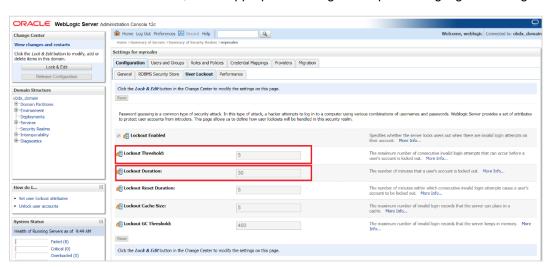
1]Lockout Threshold: It should be equal to Invalid attempts of Password Policy Maintenance.

2]Lockout Duration: It should be equal to property under prop\_id "USER\_LOCK\_PERIOD" maintained in DIGX\_FW\_CONFIG\_ALL\_B table.

In case of OUD or other LDAP it needs to be sync with the Password Policy configured in LDAP. For e.g.: Refer to below values configured in OUD.



Once the values are available, make appropriate change in respective highlighted configuration.



Save and Activate Changes

Restart AdminServer



# **OBAPI Application logging**

To enable OBAPI activation logging make below change to logging.xml present at \${domain.home}/config/fmwconfig/servers/\${ManagedServer}.

```
-]$ cd /home/devops/domain/OBDX182 UBS140/config/fmwconfig/servers/OBDX UBS141/
              OBDX_UBS141]$ 1s -1tr
           devops devops 4096 Jul
                                    4 06:33 diagnostics-registration
           devops devops
                          2286 Jul
                                     4 06:33 dms_config.xml
           devops devops
                          4096 Jul
                                     4 06:33 dfw
                                     4 06:33 dfw_config.xml
           devops devops
                          1796 Jul
                                     4 06:33 logging.xml
           devops devops 11250 Jul
                                      06:35 loggers.exclude
            devops devops
                           109 Jul
devops@
              OBDX UBS141]$
```

Open logging.xml and make a new entry under <log\_handlers> tag using below code template:

Below is a sample implementation for log handlers file.



# </log\_handler>

```
| Property name | name | component | name | compone
```

Add loggers under <loggers> tag using below template:

Note: Replace the #BANKCODE# with bank code.

Below is a sample implementation for loggers file



## **Eclipselink logging**

To modify eclipselink logging make changes in <INSTALLATION\_HOME>\config\META-INF\persistence.xml using below link :

https://wiki.eclipse.org/EclipseLink/Examples/JPA/Logging

# Change logging level during runtime

To change OBAPI application logging level at runtime (when OBAPI application is up and running) do following steps.

To do this, ensure that the Admin Server is running. Login to the EM (Enterprise Manager) Console using the following URL:

http://<hostname>:<admin\_port>/em

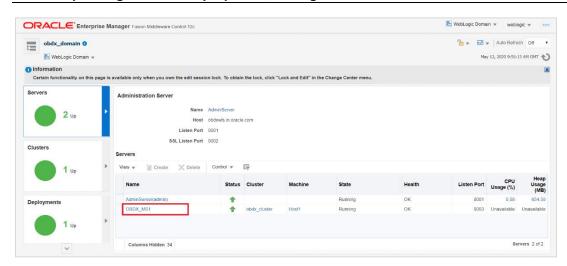


**Note:** EM console would be available on same hostname and port which was used for Weblogic Admin Console for OBAPI domain (created via installer), just replace the "/console" with "/em".



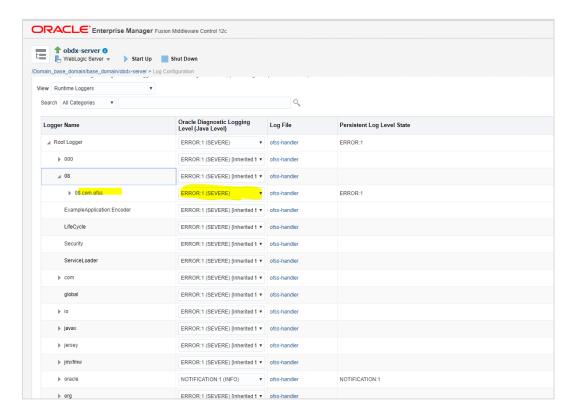
Click on OBAPI\_MS1

Note: Depending on installer.properties, Managed server will differ from above screenshot.



- In Weblogic Domain menu click on Logs -> Logs Configurations
- Select the logger and change the logging level and then click on apply.





Note: Logger name should be defined in logging.xml.

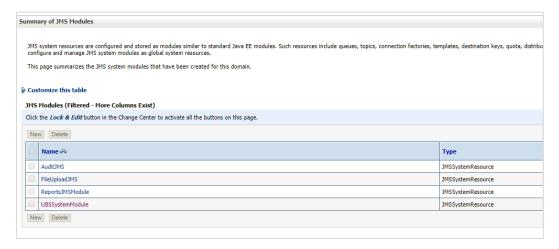


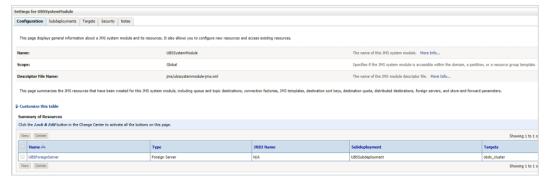
# Oracle FLEXCUBE Universal Banking (OBAPI with UBS)

If during installer execution Oracle FLEXCUBE Universal Banking (OBAPI with UBS) is selected, then below steps needs to be done manually.

## **Foreign Server**

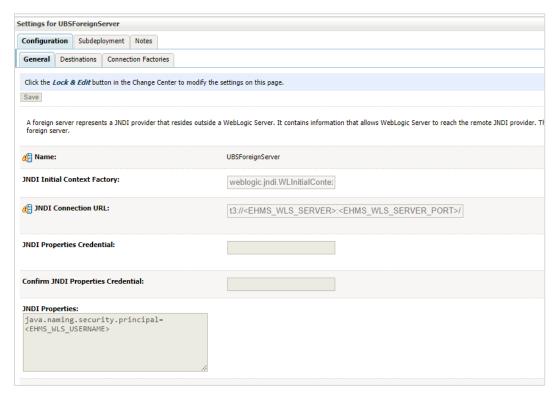
 Login into Weblogic Admin console (OBAPI domain created using installer) and Browse to Summary of JMS Modules > UBSSystemModule (as shown below)



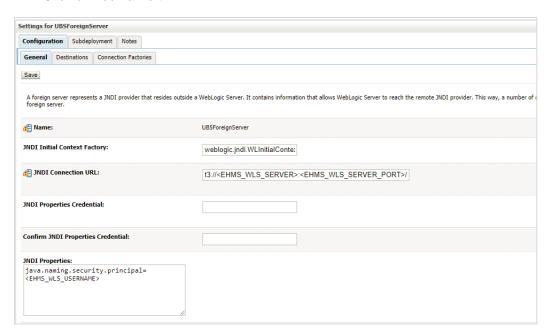




# • Click on UBSForeignServer



## Click on Lock & Edit





Set below configurations with:

JNDI Connection URL –Replace <EHMS\_WLS\_SERVER> with hostname or IP address of UBS HOST Weblogic server and <EHMS\_WLS\_SERVER\_PORT> with port number of UBS HOST Weblogic Managed server (where NOTIFY\_DEST\_QUEUE and NOTIFY\_DEST\_QUEUE\_FCDB are mapped).

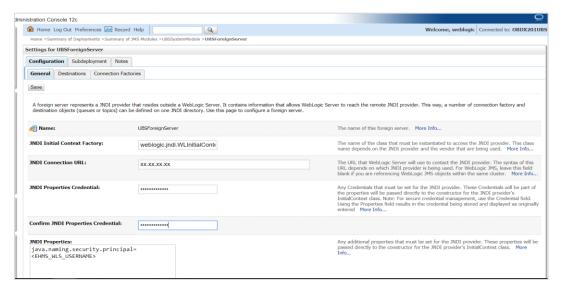
JNDI Properties Credential – Password for username set in JNDI properties

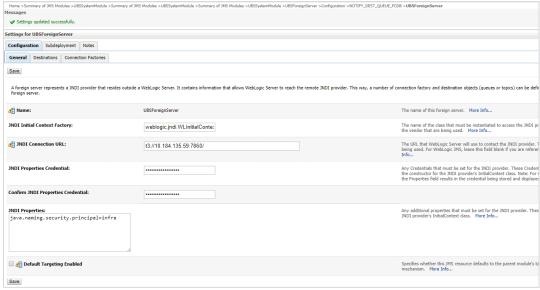
Confirm JNDI Properties Credential - Confirm password for username set in JNDI properties

**JNDI Properties** – Value to be set as "java.naming.security.principal=<EHMS\_WLS\_USERNAME>", where

username is the login user of UBS Weblogic Admin Console (user which created the primary local queues for UBS).

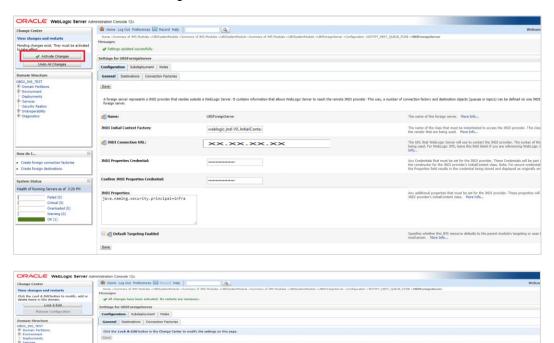
Click on Save







Click on Activate Changes

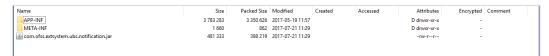


# **Deployment of notification MDB application**

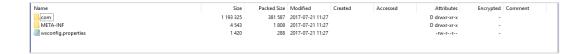
Before deployment of obapi.externalsystem.ubs.notification.mdb.ear application, kindly perform below steps:

 Open the obapi.externalsystem.ubs.notification.mdb.ear (EAR file is available <OBAPI INSTALLER DIR>/installables/app/components/ubs/deploy/obapi.externalsystem.ubs.notification.mdb.ear) using any archiving tools (i.e.: 7-zip)

Any additional properties that must be set for the INDL propeler's Initial Contest class. More Info.

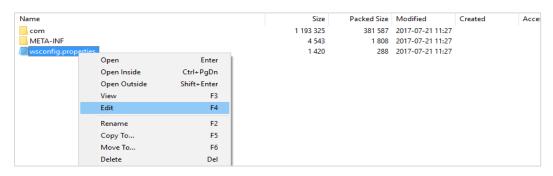


Double click on com.ofss.extsystem.ubs.notification.jar





Open the wsconfig.properties to edit





 Change the URL for AlertProcessorService.url,FileProcessedNotifProcessorService.url and AlertProcessorService.targetUnit(Note the hostname and port should be of OBAPI managed server created by installer. Entity ID should be OBDX\_BU for Base entity)

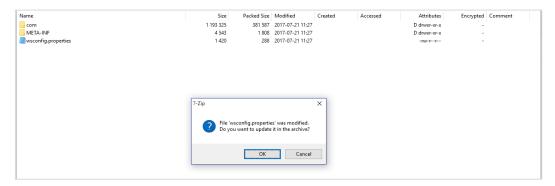




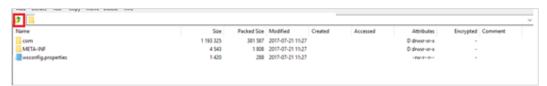




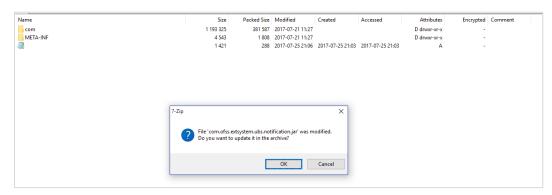
- Save changes.
- Click OK.



Navigate back to obapi.externalsystem.ubs.notification.mdb.ear

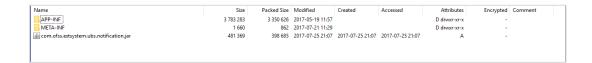


Click OK



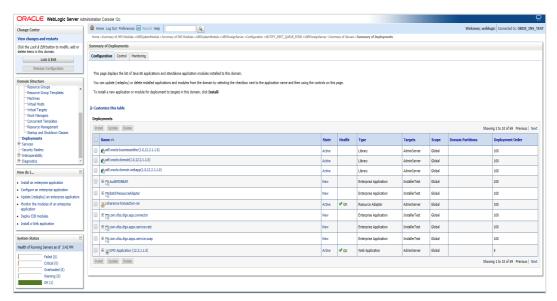


The date-timestamp would be updated (as seen below) once the change is saved.

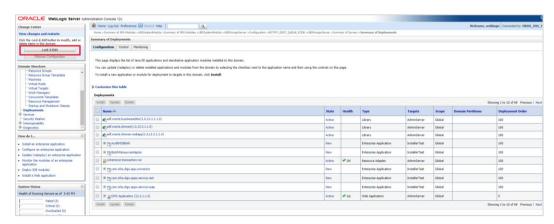


Deploy the updated obapi.externalsystem.ubs.notification.mdb.ear using below steps.

 Login into Weblogic Admin Console (OBAPI domain created using installer) and navigate to Deployments



Click Lock & Edit





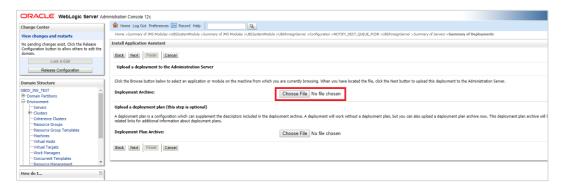
Click on Install



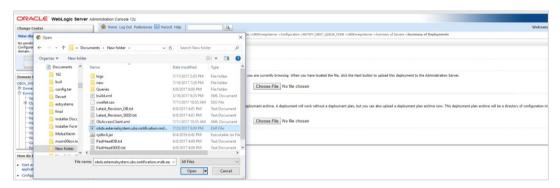
Click on Upload your file(s)



Click on Choose File under Deployment Archive



Navigate to customized obapi.externalsystem.ubs.notification.mdb.ear and click Open

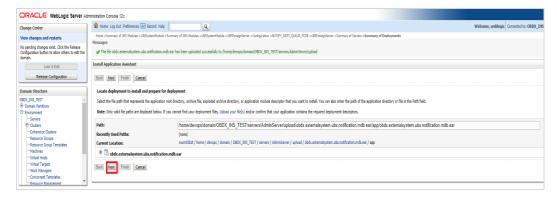




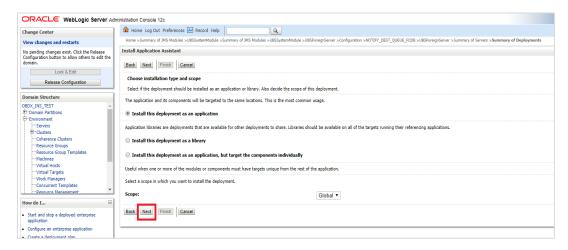
#### Click Next



#### Click Next

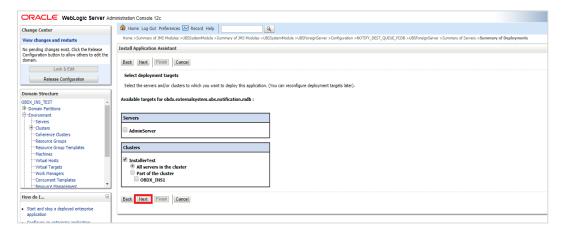


Select "Install this deployment as an application" and click Next

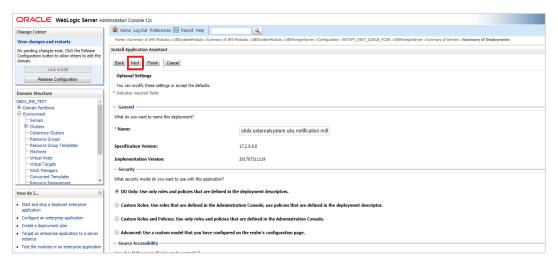




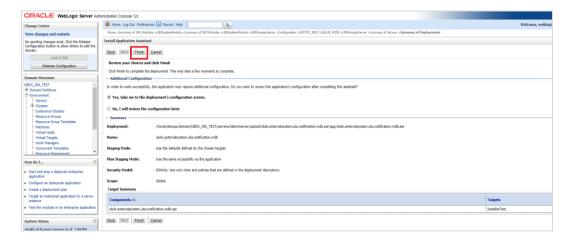
## Select Cluster as target and click Next



#### Click Next

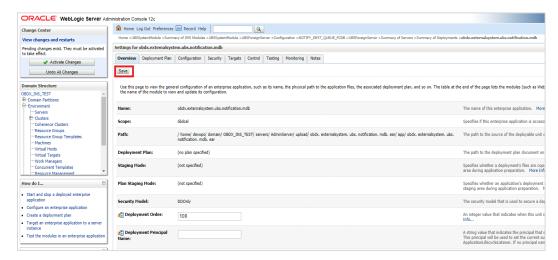


#### Click Finish.

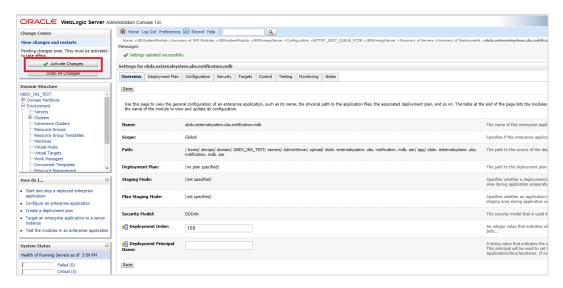


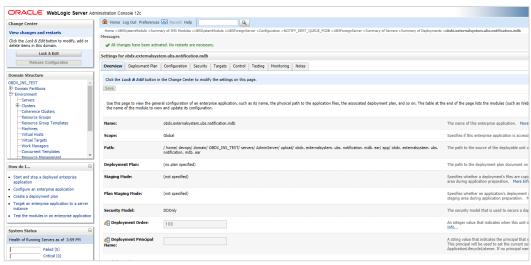


#### Click Save.



#### Click Activate Changes







#### Oracle FLEXCUBE Universal Banking with Oracle Banking Payments (OBAPI with OBPM)

If during installer execution Oracle FLEXCUBE Universal Banking with Oracle Banking Payments (OBAPI with OBPM) is selected, then below steps needs to be done manually.

#### Foreign Server

 Login into Weblogic Admin console (OBAPI domain created using installer) and Browse to Summary of JMS Modules > OBPMSystemModule > OBPMForeignServer (as shown below)



Refer to earlier steps mentioned for **UBS HOST UBSForeignServer and make similar changes in OBPMForeignServer**.

## **Deployment of notification MDB application**

Before deployment of obapi.externalsystem.obpm.notification.mdb.ear application, make changes similar to obapi.externalsystem.ubs.notification.mdb.ear before deployment.

## Fileupload with UBS

Refer below document for File upload configuration with UBS

Oracle Banking Digital Experience File Upload Report Configuration

## **Origination with UBS**

Refer below document (section 5 and 6) for enabling Origination with UBS

Oracle Banking Digital Experience UBS Origination Setup and Configuration



# Trade Finance (LC and BG) with OBTFPM

Refer below document for enabling 'Letter Of Credit' issuance and 'Bank Guarantee' issuance with Oracle Banking Trade Finance Management.

Oracle Banking Mid-Office Product Setup and Configuration Guide

# **OHS**

OHS server needs to be configured for all FLAVOR's as a mandatory activity.

To configure OHS server follow steps mentioned in below document before proceeding further.

Oracle Banking Digital Experience OHS User Interface Configuration

## Feedback module:

In order to enable Scale (Rating) icons please refer the section **Creating Procedure** of **Oracle Banking Digital Experience Content Upload Guide** user manual.

**Home** 



# 9. OBAPI Product Verification

Start managed server and verify all deployed applications are in Active state (as shown below).



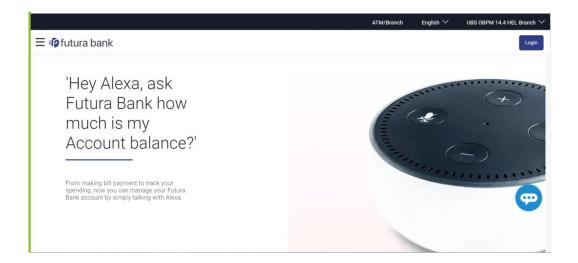
To login into application, new user needs to be created (if not already done) in OUD refer section Creating Groups and System Admin User on LDAP Server of document "Oracle Banking Digital Experience Installer Pre-Requisite Setup Manual" mentioned in section 8.5 Related Information Sources.

To verify the installation, launch below URL

http://<OHS server ip or hostname>:<OHS port>



Check if the page loads successfully.



## **Day1 Configuration**

# **Universal Banking Solution (OBAPI with UBS)**

Refer below document (Section 3. System Configuration) for Day1 configuration required for integration with UBS

Oracle Banking Digital Experience System Configuration

Once day1 is completed, application is available for end-user transactions.

Note: Post Day1 restart of Managed server is mandatory

#### Third Party System (OBAPI with THP)

Refer below document (Section 5. System Configuration – Host System as Third Party) for Day1 configuration required for integration with Third-party System

Oracle Banking Digital Experience System Configuration

Once day1 is completed, application is available for end-user transactions.

Note: Post Day1 restart of Managed server is mandatory



## **Chat Bot Configuration:**

Refer below document for Chat Bot configuration.

Oracle Banking Digital Experience Chatbot Configuration

## **Mobile Application Builder:**

Refer below documents for Mobile Applications build and setup.

Oracle Banking Digital Experience Mobile Application Builder-Android

Oracle Banking Digital Experience Mobile Application Builder-iOS

## Mid Office Configuration:

Refer below document for Mid Office Configurations i.e. Trade Finance, Corporate Lending.

Oracle Banking Mid-Office Product Setup and Configuration Guide.

#### **Account Uniqueness Configuration:**

Some core banking systems support same account number in multiple branches within the entity. OBAPI has support for such core banking systems. However, the configuration is not enabled by default. In case the Bank has core banking system which supports and provides same account numbers across multiple branches, the following scripts should be executed per entity for enabling the support.

```
Insert into DIGX_FW_CONFIG_ALL_O (PROP_ID, PREFERENCE_NAME, PROP_VALUE,
    DETERMINANT_VALUE, CREATED_BY, CREATION_DATE, LAST_UPDATED_BY,
    LAST_UPDATED_DATE)
    values
    ('obapi.host.account.uniqueness','ExtSystemsConfig','BRANCH','<ENTITY_ID>','ofss
    user',sysdate,'ofssuser',sysdate);

Insert into DIGX_FW_CONFIG_ALL_O (PROP_ID, PREFERENCE_NAME, PROP_VALUE,
    DETERMINANT_VALUE, CREATED_BY, CREATION_DATE, LAST_UPDATED_BY,
    LAST_UPDATED_DATE)
    values
    ('obdx.host.accountbranch.delimiter','ExtSystemsConfig','@~','<ENTITY_ID>','ofss
    user',sysdate,'ofssuser',sysdate);
```

**Note:** Please ensure that <ENTITY\_ID> has been replaced with correct Entity ID for the corresponding entity.

**Home** 



# 10. Configuration for OUD/OAM

In-case installation needs to be done using OUD/ OAM provider, below steps needs to be performed manually.

#### Weblogic configuration/ deployment

#### REST EAR deployment:

Undeploy obapi.app.rest.idm from deployments.

Deploy obapi.app.rest from Installer zip (<OBAPI INSTALLER DIR>\installables\app\components\obapi\deploy\obapi.app.rest.ear).

Refer to manual deployment steps provided for obapi.externalsystem.ubs.notification.mdb.ear application

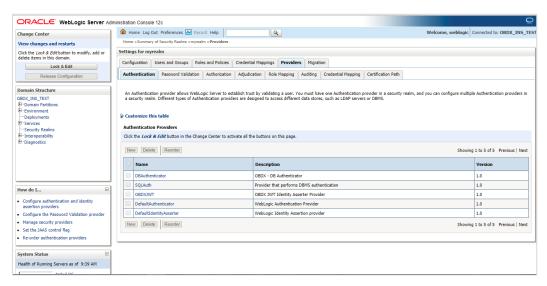
#### Security Realms

To configure your own Oracle LDAP to use instead of the default embedded LDAP, which comes with Oracle Weblogic Server.

 To do this, ensure that the Admin Server is running. Login to the Weblogic Console for OBAPI domain (created by Installer) using the following URL:

#### http://<hostname>:<admin\_port>/console

Now, go to Security Realms > myrealm > Providers

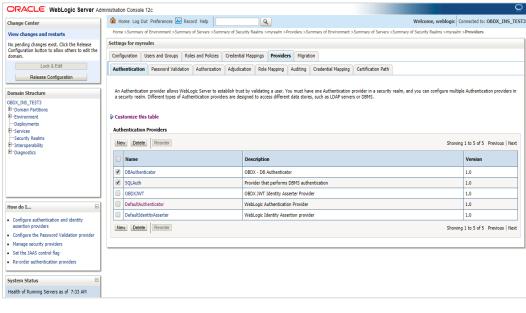


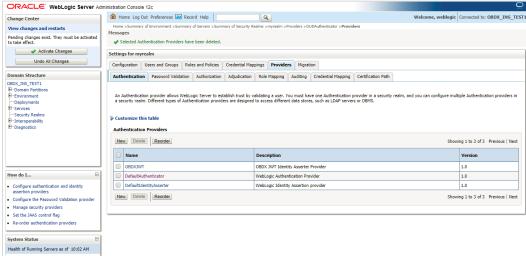


- Now click on "Lock & Edit" in order to edit the details.
- Delete the following Authenticators under providers-> **Authentication**:

# **DBAuthenticator**

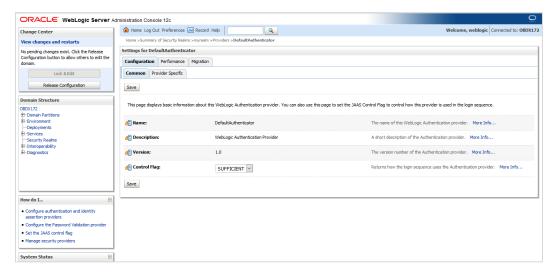
#### **SQLAuth**



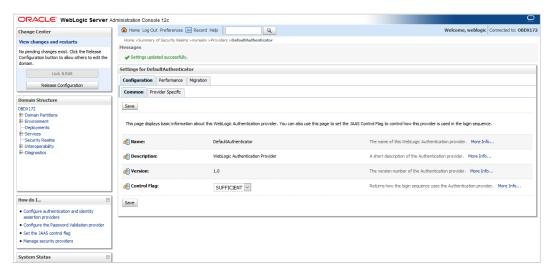




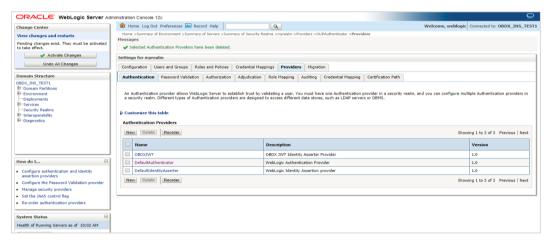
Click on 'DefaultAuthenticator" provider and change the Control Flag to SUFFICIENT



Click on Save button to save the changes



Navigate Back to Security Realms > myrealm > Providers

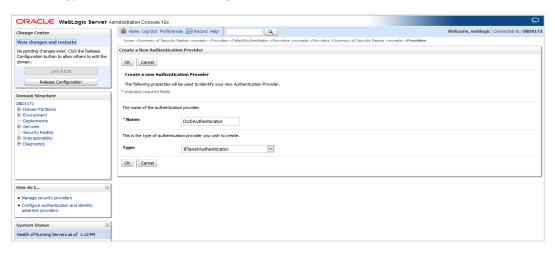


Now, click on New and enter the below details and click Save.

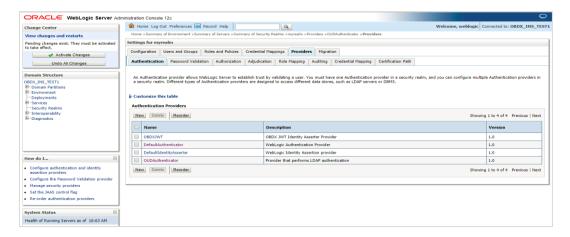


Name: OUDAuthenticator

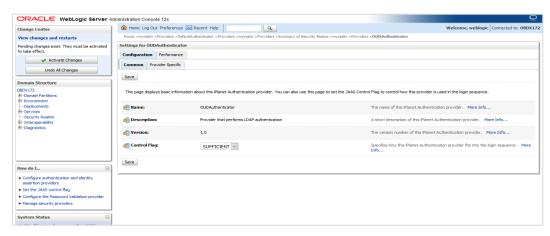
Type: OracleUnifiedDirectoryAuthenticator



Click on OK Button.

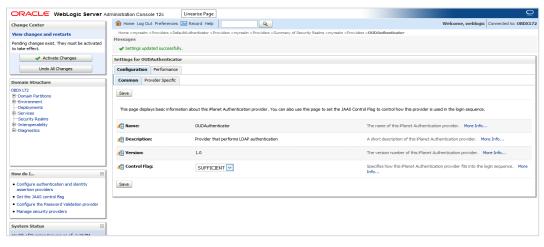


# Now Click on OUDAuthenticator and select Control Flag as "SUFFICIENT"



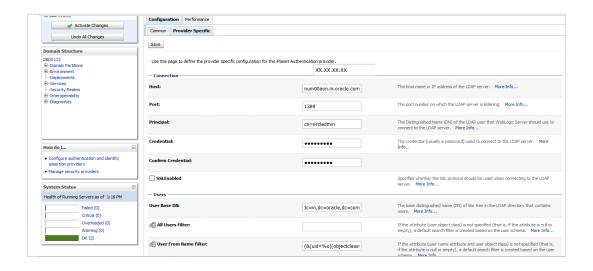
Click on Save Button.



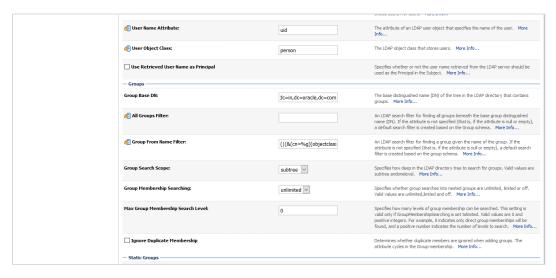


• Now under Provider Specific tab set the details of LDAP where the server should point. Refer to the following table for more information:

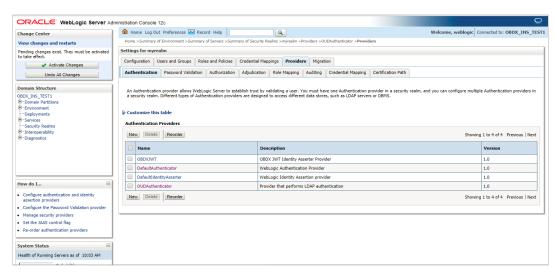
Property	Value
Host	This is the LDAP Server (OUD) Hostname
Port	This is the LDAP Server (OUD) Port. E.g. 1389
Principal	This is the Administrator Account name. E.g. cn=orcladmin
Credential	This is the Administrator Account password.
Confirm Credential	Confirm the Administrator Account password.
UserBase DN	This is the OUD user search base For e.g.: cn=Users, dc=in,dc=oracle,dc=com
GroupBase DN	This is the OUD group search base For e.g.: cn=Groups, dc=in,dc=oracle,dc=com







- Click on Save to update the changes.
- Navigate Back to Security Realms > myrealm > Providers

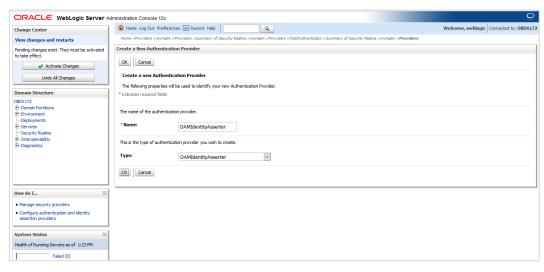


Now, click on New and enter the below details and click Save.

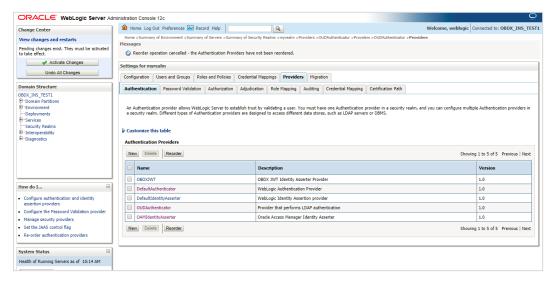
Name: OAMIdentityAsserter

Type: OAMIdentityAsserter

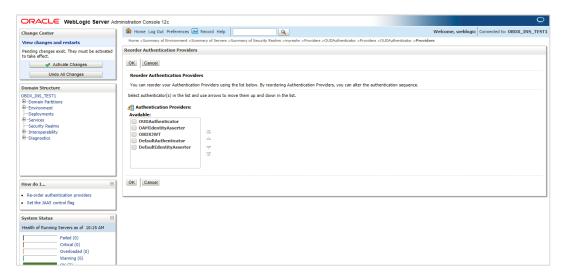




Click on OK Button.

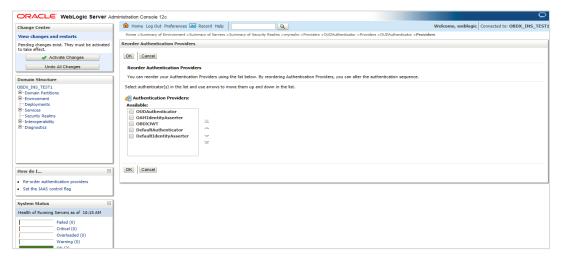


Click on Reorder Button.

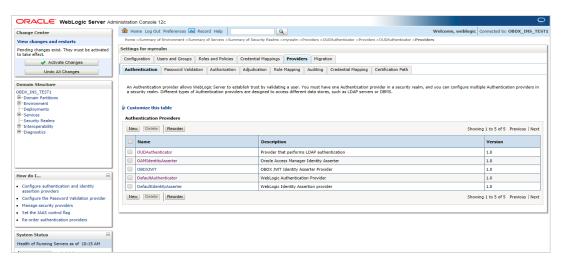




 Reorder the providers so that LDAP Provider (OUDAuthenticator) gets highest priority followed by OAMIdentityAsserter, OBAPIJWT, DefaultAuthenticator, DefaultIdentityAsserter.



Click on OK Button.



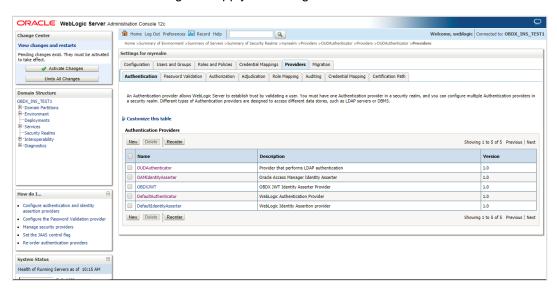
Set the OAuth URL for OBAPIJWT





Sample OAuth URL: <a href="http://<hostname>:<port>/digx-auth/v1/token/info">http://<hostname</a> and port should be replaced with OAM Server setup).

Click on Activate Changes to apply the changes.



- Now go to the <DOMAIN\_PATH>/<DOMAIN\_NAME>/config/fmwconfig/
- Open jps-config.xml

Replace the line: <serviceInstanceRef ref="idstore.custom"/>

With <serviceInstanceRef ref="idstore.ldap"/>

```
</serviceInstance>
    <serviceInstance name="policystore.db" provider="policystore.provider">
       propertySetRef ref="props.db.1"/>
    </serviceInstance>
 </serviceInstances>
  <jpsContexts default="default">
     <jpsContext name="default">
       <serviceInstanceRef ref="keystore.db"/>
       <serviceInstanceRef ref="policystore.db"/>
       <serviceInstanceRef ref="audit.db"/>
       <serviceInstanceRef ref="trust"/>
       <serviceInstanceRef ref="pdp.service"/>
       <serviceInstanceRef ref="attribute"/>
       <serviceInstanceRef ref="idstore.custom"/>
     <jpsContext name="bootstrap_credstore_context">
       <serviceInstanceRef ref="pootstrap.credstore"/:
<serviceInstanceRef ref="keystore"/>
    </jpsContext>
    </
    </jpsContext>
/jpsConfig>
```



```
serviceInstance name="policystore.db" provider="policystore.provider"
        cpropertySetRef ref="props.db.1"/>
    </serviceInstance>
 </serviceInstances>
 <jpsContexts default="default">
    <jpsContext name="default">
       <serviceInstanceRef ref="credstore.db"/>
       <serviceInstanceRef ref="keystore.db"/>
       <serviceInstanceRef ref="policystore.db"/>
        <serviceInstanceRef ref="audit.db"/>
       <serviceInstanceRef ref="trust"/>
       <serviceInstanceRef ref="pdp.service"/>
       <serviceInstanceRef ref="attribute"/>
       <serviceInstanceRef ref="idstore.ldap"/>
    </jpsContext>
    <jpsContext_name="bootstrap_credstore_context">
    <serviceInstanceRef_ref="bootstrap.credstore"/>
        <serviceInstanceRef ref="keystore"/>
    </jpsContext>
    <jpsContext name="bootstrap_credstore_context_local">
        <serviceInstanceRef ref="bootstrap.credstore.local"/>
    </jpsContext>
 </ipsContexts>
/jpsConfig>
```

- Now Shutdown the Admin server.
- Now, again start the Admin Server using the command,

<DOMAIN\_PATH>/<DOMAIN\_NAME>/bin/startWeblogic.sh

Run the following script into OBAPI Schema:

```
update DIGX_FW_CONFIG_ALL_B set prop_value = 'ipm1.0,ORACLEBI12.2.1.2,GENERIC1.0,OAM122130,OUD1.0' where prop_id = '01' and category id = 'extxfaceadapterconfig';
```

commit;

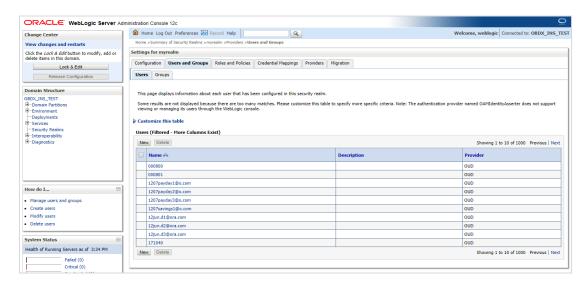
Restart Managed Server

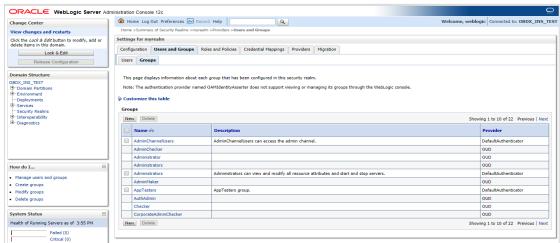
#### Verification

Post Admin and Managed Servers restart, login into Admin Console and browse to Security Realms > myrealm > Users and Groups.

Under Users tab additional LDAP users would be populated and additional LDAP groups can be seen under Groups tab.









# 11. Multi Entity

To add entity to existing OBAPI with supported host system follow below steps.

- > Add entity through OBAPI Web application, using
  - User Manual Oracle Banking Digital Experience System Configuration User Manual
- In case of OBTFPM integration, following document should be referred.
- > Oracle Banking Mid-Office Product Setup and Configuration Guide Running OBAPI installer

Ensure that Managed server should be down and Admin server should be running state.

Ensure ORACLE\_HOME, JAVA\_HOME variable are set and their binaries are available in PATH variable before proceeding.

Login with OS user which was used to perform OBAPI software installation (or has ownership on Oracle Weblogic home directory)

Ensure OBAPI installation details (OBAPI DB; WLS etc) are maintained in installer.properties and user running the installer has read-write permissions.

- From your terminal navigate to <OBAPI INSTALLER DIR>
- Enter the following command

#### python3 runInstaller.py

Select installation type as 'New Entity Creation'



Below screen will appear after selecting add entity

```
Enter the entity code :

SOBOX_BU1

Valid.
Enter password for the OBDX Schema :

S>********
```



## Enter below information:

- Entity code which has been added from screen
- OBAPI schema password

If an entity code belongs to UBS / OBPM host following screen (below screenshot are for OBPM; for UBS same input are required) will appear:

```
Enter the OBFM143 DB port :

Enter the OBFM143 DB port :

Enter the OBFM143 DB port :

Enter the OBFM143 SID :

Enter the Directory name for Tablespace creation (DBA_DIRECTORIES) :

Enter the Directory name for Tablespace creation (DBA_DIRECTORIES) :

Enter the username with 'sys' privileges :

Enter password for the user with sys privileges :

Enter existing veblogic admin password :

Enter existing veblogic admin password :

Use (1/1) keys to navigate between questions and press 'enter' after editing them
```

```
Enter the OBPM143 DB hostname :

SHUMMAB012:in,ozacle,com

Valid.

Enter the OBPM143 DB port :

SNESSO

Valid.

Enter the OBPM143 DD :

SNOBMABS.in.ozacle.com

Valid.

Enter the Directory name for Tablespace creation (DBA_DIRECTORIES) :

SYBS_DIR

Valid.

Enter the Directory name for Tablespace creation (DBA_DIRECTORIES) :

SYBS_DIR

Valid.

Enter the username with 'sys' privileges :

Says

Valid.

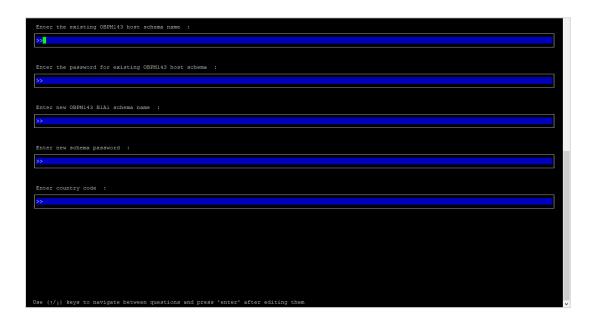
Enter passoord for the user with sys privileges :

SYBS_COMMAND SYBS_CO
```



## Enter below details:

- Hostname of the database host server
- Port of the database host server
- Host database Service Name
- Oracle directory name in which you want the database datafile (dbf) to be created. Enter only the name NOT the path.
- Username with 'sys' privileges
- SYS privilege user password where UBS schema would be created
- Weblogic console administrator user password



# Enter below details:

- EXISTING Host schema name
- Password for EXISTING schema
- Complete EHMS (HostInterface) schema name you want installer to create as new schema
- Password for New schema
- Country Code of entity branch



## Installation Status in case of UBS / OBPM

After entering all required details, the status is displayed (as shown below) on the terminal to indicate the progress of the installation.

```
Geographomous | 12 pythom runinstaller.py |

TEATING COS DETAILED TRANSPORTED | 12 pythom runinstaller.py |

TEATING COS DETAILED TRANSPORTED | 12 pythom runinstaller.py |

TEATING COS DETAILED TRANSPORTED | 12 pythom runinstaller.py |

TEATING COS DETAILED TRANSPORTED | 12 pythom runinstaller.py |

TEATING COS DETAILED TRANSPORTED | 12 pythom runinstaller.py |

TEATING COS DETAILED TRANSPORTED | 12 pythom runinstaller.py |

TEATING COS DETAILED TRANSPORTED | 12 pythom runinstaller.py |

TEATING COS DETAILED TRANSPORTED | 12 pythom runinstaller.py |

TEATING COS DETAILED TRANSPORTED | 12 pythom runinstaller.py |

TEATING COS DETAILED TRANSPORTED | 12 pythom runinstaller.py |

TEATING COS DETAILED TRANSPORTED | 12 pythom runinstaller.py |

TEATING COS DETAILED TRANSPORTED | 12 pythom runinstaller.py |

TEATING TEATING COST DETAILED TRANSPORTED | 12 pythom runinstaller.py |

TEATING TEATING COST DETAILED TRANSPORTED | 12 pythom runinstaller.py |

TEATING TEATING TRANSPORTED | 12 pythom runinstaller.py |

TEATING TRANSPORTED | 12 pythom runins
```

When the installation completes, the below message is displayed

```
P @obdowls:/scratch/obdu/v4/08DX_183.0.0.0
 Execution of ubs_object_scripts.sql completed 
Execution of execute-seeds.sql started
 xecution of execute-seeds.sql completed
  CCESSFULLY installed UBS database
 xecuted DIGX_FW_CONFIG_ALL_O.sql successfully
 tarting Entity Configuration
 Calling WLST
 Initializing WebLogic Scripting Tool (WLST) ...
Welcome to Weblogic Server Administration Scripting Shell
Type help() for help on available commands
 onnecting to t3://obdxwls.in.oracle.com:9001 with userid weblogic ...
uccessfully connected to Admin Server "AdminServer" that belongs to domain "CBIX183INS".
 arning: An insecure protocol was used to connect to the server.
 o ensure on-the-wire security, the SSL port or Admin port should be used instead.
 ocation changed to edit tree.
 This is a writable tree with DomainWBean as the root.
 To make changes you will need to start an edit session via startEdit().

To more help, use help('edit').
 tarting an edit session
  tivating all your changes, this may take a while .
 he edit lock associated with this edit session is released once the activation is completed.
 BDX_BUL_BIA1 created successfully.
Exiting WebLogic Scripting Tool.
[devops@obdxwls
```



Post successful installation refer to "Section 8: Post Installation steps" for manual steps to be performed for UBS additional entity (sub-section : Oracle FLEXCUBE Universal Banking (OBAPI with UBS)).

# If an entity code belongs to Third-party host following screen will appear:

```
[devops@ OBDX_Installer]$ export Entity_Code=OBDX_BU1
[devops@ OBDX_Installer]$ export SCHEMA_PASS=welcome1
[devops@ OBDX_Installer]$ export FLAVOUR=OBDX
[devops@ OBDX_Installer]$ python runInstaller.py --silent --addEntity
Password validated for OBDX_183INS
Execution of DB script for OBDX_BU1 started
Executed DIGX_FW_CONFIG_ALL_O.sql successfully
Execution completed.
[devops@ OBDX_Installer]$

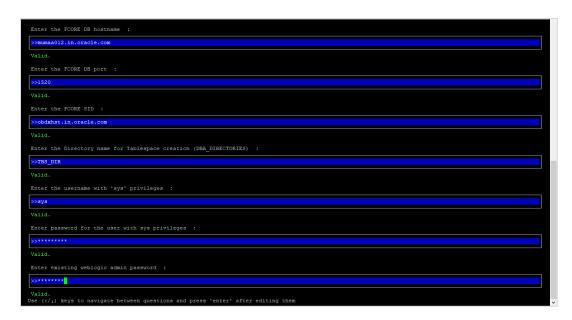
OBDX_Installer]$
```

No additional steps/ configuration are required.



# If an entity code belongs to Oracle FLEXCUBE Core Banking host following screen will appear:



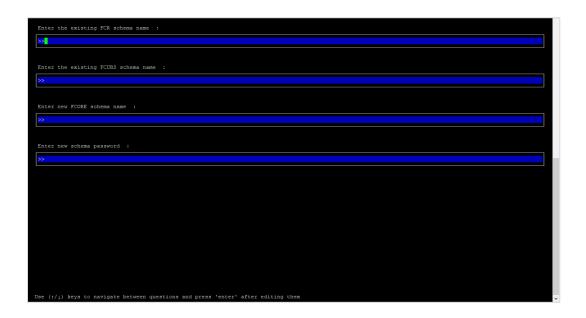


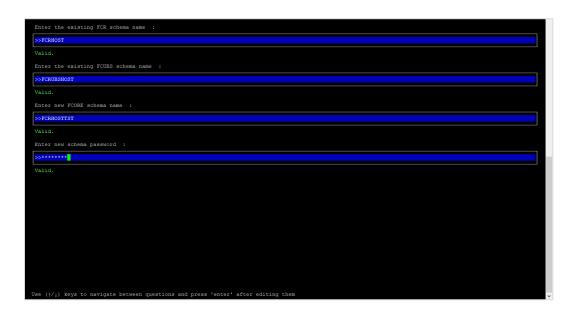
#### Enter below details:

- Hostname of the FCORE database host server
- Port of the FCORE database host server
- FCORE Host database Service Name
- Oracle directory name in which you want the database datafile (dbf) to be created. Enter only the name NOT the path.
- Username with 'sys' privileges
- SYS privilege user password where FCORE schema would be created



Weblogic console administrator user password





#### Enter below details:

- EXISTING FCORE HOST schema name
- EXISTING FCORE FCUBS schema name
- Complete EHMS (HostInterface) schema name you want installer to create as new schema
- Password for New EHMS schema

# **Installation status for FCORE Add entity**



After entering all required details, the status is displayed (as shown below) on the terminal to indicate the progress of the installation.

```
### Cobdawka/cratch/obda/CBDX_intables

Execution of foote_object_scripts.sql started

Execution of foote_object_arcipts.sql completed

Execution of foote_object_arcipts.sql completed

Execution of execute-seeds.sql started

Execution of execute-seeds.sql completed

SUCCESSTULIY installed FOOK database

Starting Entity Configuration

Calling MLST

Initializing WebLogic Scripting Tool (WLST) ...

Welcome to WebLogic Scripting Tool (WLST) ...

Welcome to WebLogic Scripting Tool (WLST) ...

Welcome to Starting Entity Configuration Scripting Shell

Type help() for help on available commands

Connecting to 13://obdaxls.in.oracle.com;9001 with userid weblogic ...

Successfully connected to Admin Server "AdminServer" that belongs to domain "OBEXLESINS".

Warning; An insecure protocol was used to connect to the server.

To ensure on-the-wire security, the SSL port or Admin port should be used instead.

Location changed to edit tree.

This is a writable tree with DomainWBean as the root.

To make changes you will need to start an edit session via startEdit().

For more help, use help('edit').

For more help, use help('edit').

Creating Band source OBEX, SUL pland

Starting an edit session.

The edit lock associated with this edit session is released once the activation is completed.

Activation completed

OBEX_SUL_Bland created successfully.

Exiting WebLogic Scripting Tool.

Entity Successfully configured.

[detrops@blodwls_GOBEX_Installer]5
```

# No additional steps/ configuration are required.

Post successful installation refer to "Section 8: Post Installation steps" for manual steps to be performed for OBPM additional entity (sub-section: Oracle FLEXCUBE Universal Banking with Oracle Banking Payments (OBAPI with OBPM)).



# 12. Multi-entity installation using Silent Mode

This chapter describes how to run the OBAPI installer for add entity in silent mode.

Ensure that Managed server should be down and Admin server should be running.

Ensure ORACLE\_HOME, JAVA\_HOME variable are set and their binaries are available in PATH variable before proceeding.

Login with OS user which was used to perform OBAPI software installation (or has ownership on Oracle Weblogic home directory)

### Steps for Silent-Mode Installation

Set the environment variables, as shown below.

```
OBDX_Installer]$ export Entity_Code=OBDX_BU7

OBDX_Installer]$ export SCHEMA_PASS=welcome1

OBDX_Installer]$ export ENTITY_EHMS_DATABASE_HOSTNAME=hostanme.in.oracle.com

OBDX_Installer]$ export ENTITY_EHMS_DATABASE_PORT=1520

OBDX_Installer]$ export ENTITY_EHMS_DATABASE_SID=obdxdb.in.oracle.com

OBDX_Installer]$ export ENTITY_EHMS_DATABASE_SID=obdxdb.in.oracle.com

OBDX_Installer]$ export ENTITY_EHMS_DATABASE_SYS_USER=sys

OBDX_Installer]$ export ENTITY_EHMS_DATABASE_SYS_USER=sys

OBDX_Installer]$ export ENTITY_EHMS_DATABASE_SYS_PASS=welcome1

OBDX_Installer]$ export ENTITY_EHMS_SCHEMA_NAME=welcome1

OBDX_Installer]$ export ENTITY_EHMS_SCHEMA_PASS=welcome1

OBDX_Installer]$ export ENTITY_EHMS_HOST_SCHEMA_NAME_FCUBS140

OBDX_Installer]$ export ENTITY_EHMS_HOST_SCHEMA_NAME_PASS=welcome1

OBDX_Installer]$ export ENTITY_EHMS_HOST_SCHEMA_NAME_PASS=FCUBS140

OBDX_Installer]$ export ENTITY_EHMS_HOST_SCHEMA_NAME_PASS=FCUBS140

OBDX_Installer]$ export ENTITY_EHMS_HOST_SCHEMA_NAME_PASS=FCUBS140

OBDX_Installer]$ export ENTITY_EHMS_HOST_SCHEMA_NAME_PASS=FCUBS140

OBDX_Installer]$ export ENTITY_EHMS_CCY=GB

OBDX_Installer]$ export ENTITY_EHMS_CCY=GB
```

Below parameters should be set in environment variables

Parameter	Descriptio n	Example
Entity_Code	Entity code which has been entered from screen	export Entity_Code=OBDX_BU7
SCHEMA_PASS	Password for existing OBAPI schema	export SCHEMA_PASS=devops#obapi182



	Parameter	Descriptio n	Example
Environme nt variables to set for flavor:	ENTITY_EHMS_DATAB ASE_HOSTNAME	Hostname of the EHMS HOST database host server	export ENTITY_EHMS_DATABASE_HOST NAME=xx.xx.xx.xx
UBS (14.4.0.0.0 release)	ENTITY_EHMS_DATAB ASE_PORT	Port of the EHMS HOST database host server	export ENTITY_EHMS_DATABASE_PORT =1521
OBPM (14.4.0.0.0 release)	ENTITY_EHMS_DATAB ASE_SID	EHMS Host database Service Name	export ENTITY_EHMS_DATABASE_SID=o bapidb.in.oracle.com
	ENTITY_EHMS_DBA_DI RECTORY_NAME	Oracle Directory name in which you want the EHMS (HostInterf ace) schema datafile (dbf). Enter only the name and NOT the path	export ENTITY_EHMS_DBA_DIRECTORY_ NAME=TBS_DIR
	ENTITY_EHMS_DATAB ASE_SYS_USER	Username with 'sys' privileges	export ENTITY_EHMS_DATABASE_SYS_ USER=sys
	ENTITY_EHMS_DATAB ASE_SYS_PASS	Password for EHMS sys user	export ENTITY_EHMS_DATABASE_SYS_ PASS=devops@sys



Parameter	Descriptio n	Example
ENTITY_EHMS_SCHEM A_NAME	Complete EHMS (HostInterf ace) schema name you want installer to create as new schema.	export ENTITY_EHMS_SCHEMA_NAME=O BAPIEHMS
ENTITY_EHMS_SCHEM A_PASS	Password for new EHMS schema on EHMS HOST database	export ENTITY_EHMS_SCHEMA_PASS=d evops#ehms
ENTITY_EHMS_HOST_S CHEMA_NAME	EXISTING EHMS Host schema name	export ENTITY_EHMS_HOST_SCHEMA_N AME=EHMSHOST
ENTITY_EHMS_HOST_S CHEMA_NAME_PASS  **This parameter is only required for UBS & OBPM Host	Password of existing HOST EHMS schema (Existing)	export ENTITY_EHMS_HOST_SCHEMA_N AME_PASS=ehmshst
WLS_DOMAIN_PASS	Password for Weblogic admin console	export WLS_DOMAIN_PASS=weblogic182
**This parameter is only required for UBS & OBPM Host	Country Code for new or additional entity home branch	export ENTITY_EHMS_CCY=GB
ENTITY_EHMS_FCORE_ FCUBS_SCHEMA_NAM E	FCORE- FCUBS HOST schema name	export ENTITY_EHMS_FCORE_FCUBS_S CHEMA_NAME=FCRUBSHOST



	Parameter	Descriptio n	Example
	**This parameter is only required for FCORE		
Environme nt variables to set for flavor:	Entity_Code	Entity code which has been entered from screen	export Entity_Code=OBDX_BU1
OBAPI (Third-party HOST)	SCHEMA_PASS	Password for existing OBAPI schema	export SCHEMA_PASS=welcome1

Run the runInstaller.py file with '--silent ' argument along with '--addEntity'

```
/]$ export Entity_Code=OBDX_BU7
/]$ export SCHEMA_PASS=devops#obdx182
[devops@
[devops@
                                      /]$ export ENTITY EHMS DATABASE HOSTNAME=mt ××.××.××.
[devops@
                                     /]$ export ENTITY_EHMS_DATABASE_PORT=1521
/]$ export ENTITY_EHMS_DATABASE_SID=obdxdb.in.oracle.com
[devops@
                                    /]$ export ENTITY_EHMS_DATABASE_SID=obdxdb.in.oracle.com
/]$ export ENTITY_EHMS_DBA_DIRECTORY_NAME=TBS_DIR
/]$ export ENTITY_EHMS_DATABASE_SYS_USER=sys
/]$ export ENTITY_EHMS_DATABASE_SYS_PASS=devops@sys
/]$ export ENTITY_EHMS_SCHEMA_NAME=OBDXEHMS
/]$ export ENTITY_EHMS_SCHEMA_PASS=devops#ehms
/]$ export ENTITY_EHMS_HOST_SCHEMA_NAME=FCUBS140
/]$ export ENTITY_EHMS_HOST_SCHEMA_NAME_PASS=FCUBS140HST
/]$ export WLS_DOMAIN_PASS=weblogic182
/]$ export ENTITY_EHMS_CCY=GB
[devops@
[devops@
[devops@
[devops@
[devops@
 [devops@
[devops@
[devops@
                                     /]$ export ENTITY_EHMS_CCY=GB
/]$ python runInstaller.py --silent --addEntity
[devops@
 devops@
```

# Installation Status in case of Oracle FLEXCUBE Core Banking, Oracle FLEXCUBE Universal Banking, Oracle FLEXCUBE Universal Banking with Oracle Banking Payments

After entering all required details, the status is displayed (as shown below) on the terminal to indicate the progress of the installation.



```
### Cobdawla/cratch/obd/CBDX_intables

Execution of twis object_scripts.sql completed

Execution of execute-seeds.sql started

Execution of execute-seeds.sql scapitered

Execution of execute-seeds.sql scapitered

EXECUTION Interalled UBSAIL database

Interest BIOG_PM_CONITG_All_O.sql successfully

Starting Entity Configuration

Calling MEST

Initializing WebLogic Scripting Tool (WLST) ...

Welcome to is://obdavls.in.orasele.coms900 with userid weblogic ...

Successfully connected to Admin Server "Administration Scripting Shell

Type help() for help on available commands

Connecting to is://obdavls.in.orasele.coms900 with userid weblogic ...

Successfully connected to Admin Server "Administration to domain "OBEXISSINS".

Wanning: An insecure protocol was used to connect to the server.

To ensure on-the-wire security, the SSL port or Admin port should be used instead.

Location changed to edit tree.

Initial changed to edit tree.

The ske changes of the start an edit session via startEdit().

For more help, use belp('edit').

Creating Data source OBEN_BULL Blail

Starting an edit session, be sure to save and activate your changes once you are done.

Activating all your changes, this may take a while ...

The sdit lock associated with this edit session is released once the activation is completed.

Activating all your changes, this may take a while ...

The sdit lock associated with this edit session is released once the activation is completed.

Activating all your changes, this may take a while ...

Exiting WebLogic Scripting Tool.

Entity successfully configured.
```

When the installation completes, the below message is displayed

```
Execution of ubs. object. Scripts.sql. completed
fxecution of execute-seeds.sql started
fxecution of execute-seeds.sql started
fxecution of execute-seeds.sql scompleted
fxecution of execute-seeds.sql scompleted
fxecution of execute-seeds.sql scompleted
fxecution of execute-seeds.sql completed
fxecution of execute-seeds.sql scompleted
fxecution of provided started
fxecution of execute-seeds.sql completed
fxecution of execute of execute seeds on the activation is completed.
fxecution of execute-seeds.sql completed.
fxecution of execute-seeds.sql completed.
fxecution of execute seeds.sql completed.
fxecution of execute seeds on the activation is completed.
fxecution of execute seeds on the activation is completed.
fxecution of execute seeds.sql completed.
fxecution of execute seeds on the activation is completed.
fxecution of execute seeds on the activation is completed.
fxecution of execute seeds on the fact of execute seeds on
```

Post successful installation refer to "Section 8: Post Installation steps" for manual steps to be performed for

- UBS additional entity (sub-section : Oracle FLEXCUBE Universal Banking Solution (OBAPI with UBS))
- OBPM additional entity (sub-section: Oracle FLEXCUBE Universal Banking with Oracle Banking Payments (OBAPI with OBPM))



# Installation Status in case of other hosts as Add Entity

After entering all required details, the status is displayed (as shown below) on the terminal to indicate the progress of the installation.

> THP(third party as entity)

```
[dewops] OSDX_Installer]& python runInstaller.py --silent --addEntity
Password validated for OSDX_183INS
Execution of DB script for OSDX_BUI started
Executed DIGX_FW_CONFIG_ALL_O.sql successfully
Execution completed.
```



# 13. OBAPI Product Security

Refer below document for OBAPI product security configuration

Oracle Banking Digital Experience Security Guide



# 14. OBAPI Product - Best Practice

# 14.1 Tablespace for AUDIT INDEX

The index's used by AUDIT table should be moved into new tablespace from current AUDIT tablespace.

Follow below steps

- Create a new tablespace
- Give quota to OBAPI schema

alter user <OBAPI\_SCHEMA> quota unlimited on <OBAPI\_AUDIT\_INDEX\_TABLESPACE>;

- Drop and create below index by mapping the newly created tablespace
  - OBAPI\_Installer\installables\db\OBAPI\ddl\oracle\audit\ IDX\_DIGX\_AL\_API\_AUDIT\_LOGGING.sql
  - OBAPI\_Installer\installables\db\OBAPI\ddl\oracle\audit\ IDX\_DIGX\_AL\_API\_AUDIT\_LOG\_HIST.sql
  - OBAPI\_Installer\installables\db\OBAPI\ddl\oracle\audit\IDX\_DIGX\_AL\_AUDIT\_LOGGIN G.sql
  - OBAPI\_Installer\installables\db\OBAPI\ddl\oracle\audit\ IDX\_DIGX\_AL\_AUDIT\_LOGGING\_1.sql
  - OBAPI\_Installer\installables\db\OBAPI\ddl\oracle\audit\ IDX\_DIGX\_AL\_AUDIT\_LOGGING\_2.sql
  - OBAPI\_Installer\installables\db\OBAPI\ddl\oracle\audit\ IDX\_DIGX\_AL\_AUDIT\_LOGGING\_3.sql
  - OBAPI\_Installer\installables\db\OBAPI\ddl\oracle\audit\ IDX\_DIGX\_AL\_AUDIT\_LOGGING\_4.sql
  - OBAPI\_Installer\installables\db\OBAPI\ddl\oracle\audit\IDX\_DIGX\_AL\_AUDIT\_LOGGIN G\_DETAILS.sql



# 15. JPA and OBAPI multi-cluster

In a multi-cluster environment, below JPA related changes should be implemented

- Go to Weblogic server
- Open config\META-INF\persistence.xml
- Append below configuration for all data-source

Replace with respective hostname or IP and Port no (this should be the managed server port number which hosts the JPA queues in the cluster)

## Key pointers;

- Multi-cluster here refer's to :
  - Single cluster with multiple nodes (2 or more physical servers hosting the OBAPI product)
  - 2 or more Weblogic cluster's
- Ensure these (persistence.xml) changes are available to all Managed server by maintaining appropriate classpath



# 16. Troubleshoot Overview

This section describes how to troubleshoot OBAPI setup.

## **Invalid database password**

This topic contains troubleshooting information if you receive an error when attempting to connect to the database server.

If you get the following error:

Try one of the following:

- Verify that the database is running.
- Check Network connectivity between Weblogic Server and Database server.
- Check the database configuration in installer.properties file
- Verify that the entered password is correct.

#### cx oracle module

This topic contains troubleshooting information about problems with cx\_Oracle python module.

If you get the following error:

```
[ opt]# python
Python 2.7.5 (default, Sep 5 2016, 02:30:38)
[GCC 4.8.5 20150623 (Red Hat 4.8.5-9)] on linux2
Type "help", "copyright", "credits" or "license" for more information.
>>> import cx_Oracle
Traceback (most recent call last):
File "<stdin>", line 1, in <module>
ImportError: libclntsh.so. cannot open shared object file: No such file or directory
>>> exit()

opt|#
```



Execute the below command:

```
export LD_LIBRARY_PATH=/usr/lib/oracle/19.3/client64/lib:$LD_LIBRARY_PATH python
```

```
import cx_Orace
cx Oracle. version
```

```
[devops@ /|$ export LD_LIBRARY_PATH=/usr/lib/oracle/18.3/client64/lib/:$LD_LIBRARY_PATH
[devops@ /|$ python
Python 2.7.5 (default, Apr 11 2018, 17:41:36)
[GCC 4.8.5 20150623 (Red Hat 4.8.5-28.0.1)] on linux2
Type "help", "copyright", "credits" or "license" for more information.
>>> import cx_Oracle
>>> cx_Oracle___version__
'7.3.0'
```

## **Failed Database Scripts**

This topic contains troubleshooting information in case of database script failures.

If you get the following error in DB\_installation.log:

```
2017-07-13 13:45:41,051 DEBUG Executed /scratch/jenkins/OBDX_Installer/ExecInstances/13Jul1338/db/UBS/seed/MSTFORNATS.sql successful 2017-07-13 13:45:41,081 DEBUG Executed /scratch/jenkins/OBDX_Installer/ExecInstances/13Jul1338/db/UBS/seed/mstdevice.sql successful 2017-07-13 13:45:41,747 DEBUG Executed /scratch/jenkins/OBDX_Installer/ExecInstances/13Jul1338/db/UBS/seed/MSTENTITYUSERTYPELANG.sql successful 2017-07-13 13:45:41,796 ERROR Executed /scratch/jenkins/OBDX_Installer/ExecInstances/13Jul1338/db/UBS/seed/mstlang.sql failed
```

Check the detailed log of the failed SQL file at <OBAPI INSTALLER DIR>/ExecInstances/<DDMonthHHMM> /logs/db folder.

## **Failure of Policy Seeding**

This topic contains troubleshooting information if policy seeding fails during installation.

If you get the following error:

```
Policy seeding failed. Please see logs for more details
```

Try one of the following:

Check if Entitlement.log is created on following path <OBAPI INSTALLER DIR>/ExecInstances/<DDMonthHHMM>/logs/db/ and contains any SEVERE errors for Entitlement policy seeding.

Check if Task.log is created on following path <OBAPI INSTALLER DIR>/ExecInstances/<DDMonthHHMM>/logs/db/ and contains any SEVERE errors for Task policy seeding.

Check if Dashboard\_seed.log is created on following path <OBAPI INSTALLER DIR>/ExecInstances/<DDMonthHHMM>/logs/db/ and contains any SEVERE errors for Dashboard policy seeding.



Check the seedPolicies.log in <OBAPI INSTALLER</li>
 DIR>/ExecInstances/<DDMonthHHMM>/logs/db/ directory if it contains any runtime errors generated during execution of the policies Seeding in OBAPI schema

Fix the problem by following below steps:

- Login to OBAPI installer server
- Over-write the policies files (Day0Policy.csv; Entitlement.csv; Resources.csv and Task.csv) from OBAPI Product zip into <OBAPI INSTALLER DIR>/installables/policies directory
- ➢ Browse to <OBAPI INSTALLER DIR>\ installables\policies
- Edit Entitlement\_log4j.properties , Task\_log4j.properties & Dashboard\_seed\_log4j.properties . Replace <logs\_path> with directory where policy seeding logs will be generated

e.g

```
# default file output is in user's home directory.
"java.acil.logging.fileHandler.paccern %"/java%a.log
java.util.logging.FileHandler.pattern = <logs_path>/Task.log
java.util.logging.FileHandler.limit = 50000
java.util.logging.FileHandler.count = 1
#java.util.logging.FileHandler.formatter = java.util.logging.XMLFormatter
java.util.logging.FileHandler.formatter = java.util.logging.SimpleFormatter
java.util.logging.SimpleFormatter.format= [%1$tc] %4$s: %2$s - %5$s %6$s%n
# Limit the message that are printed on the console to INFO and above.
java.util.logging.ConsoleHandler.level = OFF
java.util.logging.ConsoleHandler.formatter = java.util.logging.SimpleFormatter
# default file output is in user's home directory.
#java.util.logging.FileHandler.pattern = %h/java%u.log
java.util.logging.FileHandler.pattern = /scratch/Task.log
java.util.logging.FileHandler.limit = 50000
java.utii.logging.FileHandier.count = 1
#java.util.logging.FileHandler.formatter = java.util.logging.XMLFormatter
java.util.logging.FileHandler.formatter = java.util.logging.SimpleFormatter
java.util.logging.SimpleFormatter.format= [%1$tc] %4$s: %2$s - %5$s %6$s%n
```

Run below command manually if "SEVERE" error logs are found in Task.log

java -jar -Djava.util.logging.config.file='<logs.properties>' com.ofss.digx.utils.feed.data.task.jar "Task.csv" "oracle.jdbc.OracleDriver,<OBAPI Schema name>,<OBAPI Schema password>,jdbc:oracle:thin:@<OBAPI DB hostname or IP>:<OBAPI DB listener port>/<OBAPI Service Name>"



#### for e.g.:

java -jar -Djava.util.logging.config.file='Task\_log4j.properties' com.ofss.digx.utils.feed.data.task.jar 'Task.csv' "oracle.jdbc.OracleDriver,OBAPI\_THP181,Welcome#1,jdbc:oracle:thin:@xx.xx.xx.xx.1521/OBAPI"

Run below command manually if "SEVERE" error logs are found in Entitlement.log

java -jar -Djava.util.logging.config.file='<logs.properties>'
com.ofss.digx.utils.entitlement.feed.data.jar 'Resources.csv,Entitlement.csv,Day0Policy.csv'
'KERNEL' "oracle.jdbc.OracleDriver,<OBAPI Schema name>,<OBAPI Schema
password>,jdbc:oracle:thin:@<OBAPI DB hostname or IP>:<OBAPI DB listener port>/<OBAPI
Service Name>"

### for e.g.:

java -jar -Djava.util.logging.config.file='Entitlement\_log4j.properties' com.ofss.digx.utils.entitlement.feed.data.jar 'Resources.csv,Entitlement.csv,Day0Policy.csv' 'KERNEL' "oracle.jdbc.OracleDriver,OBAPI\_THP201,Welcome#1,jdbc:oracle:thin:@xx.xx.xx.xx:1521/OBAPI"

Note: Please remove the space between multiple csv's if there is any.

Run below command manually if "SEVERE" error logs are found in Dashboard\_seed.log

java -jar -Djava.util.logging.config.file='<logs.properties>' com.ofss.digx.utils.dashboard.jar '<path>/ dashboard\_json' "oracle.jdbc.OracleDriver,<OBAPI Schema name>,<OBAPI Schema password>,jdbc:oracle:thin:@<OBAPI DB hostname or IP>:<OBAPI DB listener port>/<OBAPI Service Name>"

#### for e.g.:

java -jar -Djava.util.logging.config.file= Dashboard\_seed\_log4j.properties' com.ofss.digx.utils.dashboard.jar '/installables/policies/dashboard\_json' "oracle.jdbc.OracleDriver,OBAPI\_THP201,Welcome#1,jdbc:oracle:thin:@xx.xx.xx.xx:1521/OBAPI

Post successfully execution, restart Managed server.

# Error while accessing EM console

Disable the libOVD adapter, change the <active>true</active> to <active>false</active> in <Domain>/config/fmwconfig/ovd/default/adapters.os\_xml and restart domain servers.



