Installation Guide
Oracle Banking APIs
Patchset Release 21.1.5.0.0

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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.

1.3 Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit

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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 Patchset Release 21.1.5.0.0, refer to the following documents:

- Oracle Banking APIs Installation Manuals

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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 OBDX & OBAPI installer

- Setup of OBAPI with Oracle's own Core Banking and Origination Products along with Third-party 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 APIs 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

```
[root@          pt]# rpm -qa | grep oracle
oracle-cloud-agent-1.11.4-5207.el8.x86_64
oraclelinux-release-8.3-1.0.4.el8.x86_64
oraclelinux-release-el8-1.0-16.0.1.el8.x86_64
oracle-cloud-agent-1.10.0-4792.el8.x86_64
oraclelinux-developer-release-el8-1.0-6.el8.x86_64
oracle-epel-release-el8-1.0-3.el8.x86_64
oracle-logos-80.5-1.0.6.el8.x86_64
oracle-instantclient19.10-basic-19.10.0.0.0-1.x86_64
[root@cfss-         pt]#
```

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

python3.8 -V

```
[root@             ~]# python3.8 -V
Python 3.8.0
```

Note: Ensure Python 3.8.0 supported version is installed. Above command should reflect the same.

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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__

```
[root@      3 Python-3.8.0]# python3.8
Python 3.8.0 (default, Jun  8 2021, 11:06:31)
[GCC 8.4.1 20200928 (Red Hat 8.4.1-1.0.1)] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> import urwid
>>> urwid.__version__
'2.1.2'
>>>
```

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

```
[root@        Python-3.8.0]# python3.8
Python 3.8.0 (default, Jun  8 2021, 11:06:31)
[GCC 8.4.1 20200928 (Red Hat 8.4.1-1.0.1)] 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 python 3.8.0

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dnf groupinstall 'development tools'

dnf install bzip2-devel expat-devel gdbm-devel ncurses-devel openssl-devel readline-devel wget sqlite-devel tk-devel xz-devel zlib-devel libffi-devel

wget https://www.python.org/ftp/python/3.8.0/Python-3.8.0.tgz

tar -xzvf Python-3.8.0.tgz

cd Python-3.8.0

./configure --enable-optimizations

make altinstall

python3.8 –version

```
[root@~ ~]# python3.8 -V
Python 3.8.0
```

Step2: Once above steps are executed successfully install the following required modules.

    pip3.8 install --upgrade pip

pip3.8 install cx-Oracle==8.1.0

```
root@o.       Python-3.8.0]# pip3.8 install cx-Oracle==8.1.0
Collecting cx-Oracle==8.1.0
  Downloading https://files.pythonhosted.org/packages/5f/3a/f63cf2cee42b32874af13f0a2deb5d4a1448b2fc39bff36ab11e3369f00c/cx_Oracle-8.1.0-cp38-cp38-manylinux1_x86_64.whl (825kB)
     | 829kB 138kB/s
Installing collected packages: cx-Oracle
Successfully installed cx-Oracle-8.1.0
```

pip3.8 install urwid==2.1.2

```
[root@c  ~-   ..J Python-3.8.0]# pip3.8 install urwid==2.1.2
Collecting urwid==2.1.2
  Using cached urwid-2.1.2.tar.gz (634 kB)
Using legacy 'setup.py install' for urwid, since package 'wheel' is not installed.
Installing collected packages: urwid
    Running setup.py install for urwid ... done
Successfully installed urwid-2.1.2
```

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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)

```
##################################################################################
# Installer Properties                                                          #
#                                                                               #
# All entries to be made immediately after the '=' and WITHOUT quotation marks. i.e. '' or "" #
#                                                                               #
##################################################################################

#####################
#                   #
# Weblogic Details  #
#                   #
#####################

#Middleware home path. Example /home/obdxuser/Oracle/Middleware/Oracle_Home - where you have sub-directories like wlserver,oracle_common
etc.
MIDDLEWARE_HOME=/home/devops/Oracle/Middleware/Oracle_Home

#JAVA home path. Example /home/obdxuser/jdk18 - where you have sub-directories like bin,jre,lib etc.
JAVA_HOME=/home/devops/jdk1.8.0_241

#GRADLE home path. Example /home/obdxuser/flyway - where you have sub-directories like bin,jre,lib etc.
FLYWAY_HOME=/scratch/obdx/flyway-7.5.1

#Path where OBDX config files needs to be installed. ****DO NOT KEEP INSTALLATION_HOME AS MIDDLEWARE_HOME or any existing directory.****
INSTALLATION_HOME=/scratch/obdx/INS

#Domain name. The domain will be created by the name specified.
WLS_DOMAIN_NAME=OBDX211TEST1

#Domain path. Example /home/obdxuser/domain.
WLS_DOMAIN_PATH=/home/devops/domain

#Domain user ID. The user id will be used to access the Weblogic Administration console.
WLS_DOMAIN_ADMIN_USER=weblogic
```

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.

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

Component	Parameter	Description	Example
DB details (for OBAPI schema)	**OBAPI_DATABASE_HOST NAME**	Enter the hostname of the database server which would host the database schema for OBAPI	abc.xyc.com
	OBAPI_DATABASE_PORT	Enter the port number of the database listener	1521
	OBAPI_DATABASE_SID	Enter the Oracle **Service Name** for database instance	obapidb.in.oracle.com
	OBAPI_DATABASE_SYS_ USER	Enter the username with 'sys' privileges	Sys
	POST_FIX	For OBAPI schema name like "OBAPI_DEV" POST FIX is 'DEV'. **SHOULD BE IN UPPERCASE ONLY.**	DEV
	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

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Component	Parameter	Description	Example
EHMS DB details (to be configured only in-case of FLAVOR as UBS,FCORE &OBPM)	**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.**	EHMS182S CHEMA
	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_L OG_DIR
	EHMS_DATABASE_SYS_USER	Enter the username with 'sys' privileges	Sys
	EHMS_DATABASE_SID	Enter the EHMS database Service Name	obapiehms.i n.oracle.co m
	EHMS_HOST_SCHEMA_NAME	Enter the EXISTING EHMS HOST schema name	OBDXUBS
	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	AT3
	EHMS_FCORE_FCUBS_SCHEMA _NAME (to be configured for FCORE HOST only)	FCORE-FCUBS schema name	FCRUBSHO ST

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Component	Parameter	Description	Example
	MIDDLEWARE_HOME	Oracle Weblogic Server home path. Example /home/obapiuser/Oracle/Middleware/Oracle_Home - where you have sub-directories like wlserver,oracle_common etc.	/home/obapiuser/Oracle/Middleware/Oracle_Home
	JAVA_HOME	Path where JAVA (JDK) is installed	/home/obapiuser/jdk18
	FLYWAY_HOME	Path where FLYWAY is installed	/home/obapiuser/flyway-7.9.2
	INSTALLATION_HOME	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/obapiuser/obapi
	WLS_DOMAIN_PATH	Path where OBAPI Weblogic domain should be created. Users can now enter custom path as per their requirements.	/home/obapiuser/domains
Weblogic server details	**WLS_CLUSTER_NAME**	Name of cluster; this cluster would have one single managed server.	obapi_cluster
	WLS_CLUSTER_NODE_HOSTNAME	Host name or IP address of managed server participating in the cluster. **Currently only single node is supported.**	abc.xyz.com
	WLS_ADMIN_SERVER_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_SERVER_SSL_PORT	AdminServer SSL port. It is the port used to securely access (https) the administration console of the Weblogic server.	7002

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	WLS_NODE_PORT	Node Manager Port. It is the port used by Node Manager to be configured for OBAPI domain. Generally, 5556 is utilized as Node Manager Port. **Custom ports are supported.**	5556
	WLS_MS_SERVER_NAME	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_PORT	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_FILEUPLOAD_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/Audit
	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/Reports
	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**	/scratch/obapi/JPA

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		directory inside **INSTALLATION_HOME.**	
	WLS_JMS_EXTSYS RECEIVER_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/Receiver
	WLS_JMS_EXTSYSS ENDER_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/Sender
OBAPI Application Administrator user details	**OBAPI_ADMIN_USE RNAME**	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_EMA IL	Enter the Email ID for OBAPI application admin user.	superadmin@oracle.com
	OBAPI_ADMIN_CON TACT_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.

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Installation Steps:

- From your terminal navigate to <OBAPI INSTALLER DIR>/

```
[              OBDX_Installer]$ pwd
/scratch/OPSFE/OBDX_Installer
[              OBDX_Installer]$ ls -ltr
total 20
-rwxrwxrwx  1 54323 wheel 2569 Jun 28 12:04 runInstaller.py
drwxrwxrwx 12 54323 wheel 4096 Jun 28 12:04 installables
-rwxrwxrwx  1 54323 wheel    0 Jun 28 12:04 __init__.py
drwxrwxrwx  5 54323 wheel 4096 Jun 29 13:15 core
drwxrwxrwx  5 54323 wheel 4096 Jun 29 13:15 framework
drwxrwxrwx  7 54323 wheel 4096 Jul  2 10:47 ExecInstances
[              OBDX_Installer]$
```

- Enter the following command

python3.8 runInstaller.py

Select the appropriate host system for Installation

Oracle FLEXCUBE Universal Banking (OBAPI with UBS)

Select Installation mode

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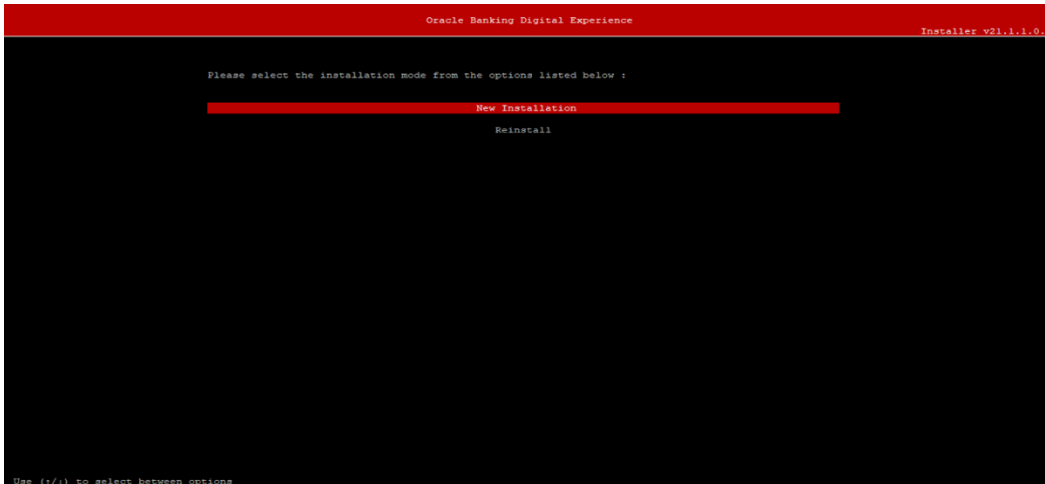
Mode of Installation - New Installation

- 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
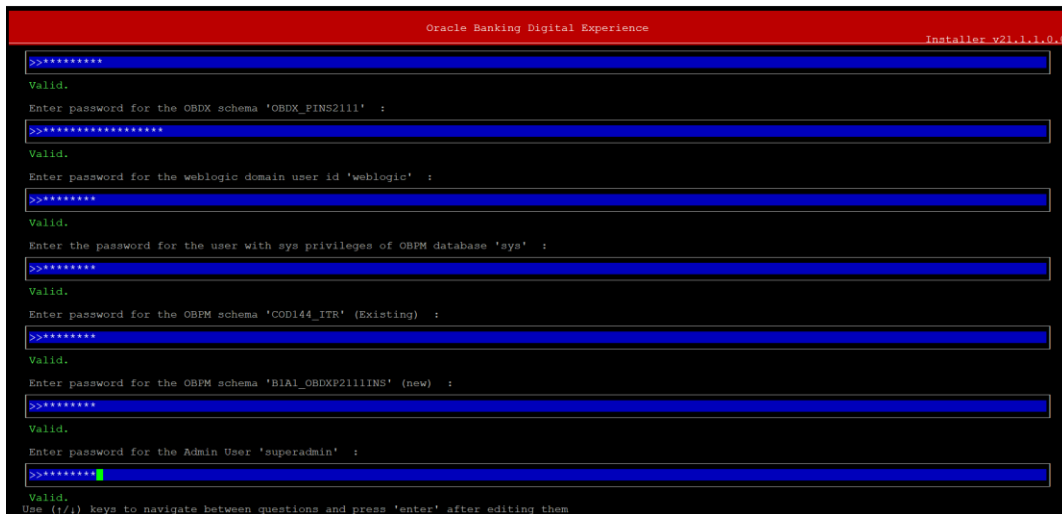
Enter below passwords:

- SYS privilege user password where OBAPI schema would be created
- OBAPI schema password
- 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))

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Third Party System (OBAPI with THP)

Post Third Party System selection, enter the required credentials details

```
                          Oracle Banking Digital Experience
                                                                   Installer v21.1.1.0.0
   Enter the password for the user with sys privileges 'sys'  :
   >>*********
   Valid.
   Enter password for the OBDX schema 'OBDX_PINS2111'  :
   >>*****************
   Valid.
   Enter password for the weblogic domain user id 'weblogic'  :
   >>********
   Valid.
   Enter password for the Admin User 'superadmin'  :
   >>********
   Valid.




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

Enter below passwords:

- SYS privilege user password where OBAPI schema would be created

- OBAPI schema password

- Weblogic console administrator user password

  OBAPI application admin user password

Oracle FLEXCUBE Core Banking (OBAPI with FCORE)

Post Oracle FLEXCUBE Core Banking, enter the required credentials details

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Enter below passwords:

- SYS privilege user password where OBAPI schema would be created

- OBAPI 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

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

Enter the required credentials details

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Enter below passwords:

- SYS privilege user password where OBAPI schema would be created

- OBAPI 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

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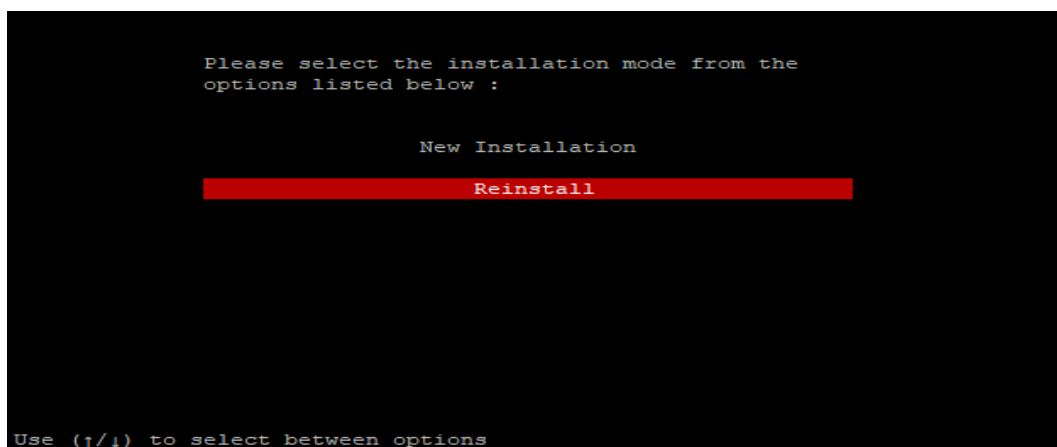
In-case of an existing OBAPI installation that you want to overwrite OR in case of a previously failed installation user can opt for this option.

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).

  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) 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.

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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

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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

```
[devops@obdxwls OBDX_Installer]$ export FLAVOUR=OBPM
[devops@obdxwls OBDX_Installer]$ export MODE=New
[devops@obdxwls OBDX_Installer]$ export DB_SYS_PASSWORD=welcome1
[devops@obdxwls OBDX_Installer]$ export SCHEMA_PASS=welcome1
[devops@obdxwls OBDX_Installer]$ export DomainPassword=welcome1
[devops@obdxwls OBDX_Installer]$ export EHMS_DATABASE_SYS_PASS=welcome1
[devops@obdxwls OBDX_Installer]$ export EHMS_HOST_SCHEMA_NAME_PASS=welcome1
[devops@obdxwls OBDX_Installer]$ export EHMS_SCHEMA_PASS=welcome1
[devops@obdxwls OBDX_Installer]$ export DBAuthPassword=welcome1
[devops@obdxwls OBDX_Installer]$ 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
Environment variables to set for flavor:UBSFCORE	**FLAVOUR**	Flavour for installation **UBS** for Oracle FLEXCUBE Universal Banking 14.4.0.0.0 (OBAPI with UBS) **FCORE** for Oracle FLEXCUBE Core Banking 11.8.0.0.0 (OBAPI with FCORE)	**export FLAVOUR=OBPM** or **export FLAVOUR=FCORE**

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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**
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 UBS & OBPM Host. Ignore this parameter in-case of FCORE Host**	Password of existing EHMS HOST schema (Existing)	**export EHMS_HOST_SCHEMA_NAME _PASS =obapiehmshost**
EHMS_SCHEMA_PASS	Password for new OBAPI EHMS schema on EHMS HOST database	**export EHMS_SCHEMA_PASS=obapi1 82ehms**

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	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**
Environment variables to set for flavor: **OBAPI (Third-party HOST)**	**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 '**Clean**' in-case of an existing OBAPI installation that you want to overwrite OR in case of a previously failed installation or re-installation	**export MODE=New** **or** **export MODE=Clean**
	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**
	DomainPassword	Password for Weblogic Administrator console	**export DomainPassword=wlsadmn**

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	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]$ python3.8 runInstaller.py --silent
```

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

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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 INSTALLER DIR>/ExecInstances/<DDMonthHHMM> /logs/obapi_installer.log
Summarized Database Logs	<OBAPI INSTALLER DIR>/ExecInstances/<DDMonthHHMM> /logs/db/DB_installation.log
Detailed OBAPI DB Logs per SQL file	<OBAPI INSTALLER DIR>/ExecInstances/<DDMonthHHMM> /logs/db/OBAPI/OBAPI.log
Detailed EHMS schema Logs per SQL file (specific to EHMS host system only)	<OBAPI INSTALLER DIR>/ExecInstances/<DDMonthHHMM> /logs/db/<EHMSHOST>/<EHMSHOST>.log <EHMSHOST> - values such as; FCORE; OBPM;
Weblogic Configuration Logs	<OBAPI INSTALLER DIR>/ExecInstances/<DDMonthHHMM> /logs/app/obapi_wls_post.log
Detailed OBAPI policy seeding logs	<OBAPI INSTALLER DIR>/ExecInstances/<DDMonthHHMM> /logs/db/Entitlement.log <OBAPI INSTALLER DIR>/ExecInstances/<DDMonthHHMM> /logs/db/Task.log <OBAPI INSTALLER DIR>/ExecInstances/<DDMonthHHMM> /logs/db/Dashboard_seed.log Note: Check for SEVERE keyword; If found refer to Troubleshot section to re-run the policy
Policy seeding execution Log	<OBAPI INSTALLER DIR>/ExecInstances/<DDMonthHHMM> /logs/db/seedPolicies.log Note: Should be empty if no errors during policy execution. In-case non-empty refer to Troubleshot section to re-run the policy

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Check all the logs for any errors.

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7. Installer Scope

OBAPI Installer currently covers below activities:

Flavor: Third Party system (OBAPI with THP)

Flavor	Activity	Detailed Activity List	New Installation	Reinstall
OBAPI with THP	OBAPI DB Setup	Create Tablespace	√	NA
		Create Schema and Role	√	√ (drop and re-create objects)
		Grants	√	√
		Load DB object (DDL's and DML's)	√	√
		Compile Schema	√	√
		Policy Seeding	√	√
	Weblogic Setup and Configuration	Create and Configure AdminServer, Machine, Managed Server and Cluster	√	√
		Configure NodeManager	√	√
		Configure JDBC	√	√
		JMS servers, Persistent stores and JMS Modules	√	√
		Application Deployment	√	√
		JTA	√	√
		Enable Production Mode	√	√
		Start AdminServer and NodeManager	√	√
	OBAPI Configuration	Copy config files into OBAPI Installation Home	√	√ (Delete old and copy new from installer zip)

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Flavor: Oracle FLEXCUBE Core Banking (OBAPI with FCORE)

Flavor	Activity	Detailed Activity List	New Installation	Reinstall
OBAPI with FCORE	OBAPI DB Setup	Create Tablespace	√	NA
		Create Schema and Role	√	√ (drop and re-create objects)
		Grants	√	√
		Load DB object (DDL's and DML's)	√	√
		Compile Schema	√	√
		Policy Seeding	√	√
	EHMS DB Setup	Create Tablespace	√	NA
		Create Schema and Role	√	√ (drop and re-create objects)
		Grants	√	√
		Load DB object (DDL's and DML's)	√	√
		Compile Schema	√	√
	Weblogic Setup and Configuration	Create and Configure AdminServer, Machine, Managed Server and Cluster	√	√
		Configure NodeManager	√	√
		Configure JDBC	√	√
		JMS servers, Persistent stores and JMS Modules	√	√
		Application Deployment	√	√
		JTA	√	√
		Enable Production Mode	√	√

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Flavor	Activity	Detailed Activity List	New Installation	Reinstall
		Start AdminServer and NodeManager	√	√
	OBAPI Configuration	Copy config files into OBAPI Installation Home	√	√ (Delete old and copy new from installer zip)

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

Flavor	Activity	Detailed Activity List	New Installation	Reinstall
OBAPI with OBPM (14.4.0.0.0 version)	OBAPI DB Setup	Create Tablespace	√	NA
		Create Schema and Role	√	√ (drop and re-create objects)
		Grants	√	√
		Load DB object (DDL's and DML's)	√	√
		Execute OBPM HOST specific scripts	√	√
		Compile Schema	√	√
		Policy Seeding	√	√
	EHMS DB Setup	Create Tablespace	√	NA
		Create Schema and Role	√	√ (drop and re-create objects)
		Grants	√	√
		Load DB object (DDL's and DML's)	√	√
		Compile Schema	√	√
	Weblogic Setup and Configuration	Create and Configure AdminServer, Machine, Managed Server and Cluster	√	√
		Configure NodeManager	√	√
		Configure JDBC	√	√
		JMS servers, Persistent stores and JMS Modules	√	√
		Application Deployment	√	√
		JTA	√	√
		Enable Production Mode	√	√

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Flavor	Activity	Detailed Activity List	New Installation	Reinstall
		Start AdminServer and NodeManager	√	√
	OBAPI Configuration	Copy config files into OBAPI Installation Home	√	√ (Delete old and copy new from installer zip)

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8. Post Installation Steps

Outbound credential mappings

Login Weblogic Admin Console. Click on Deployments.
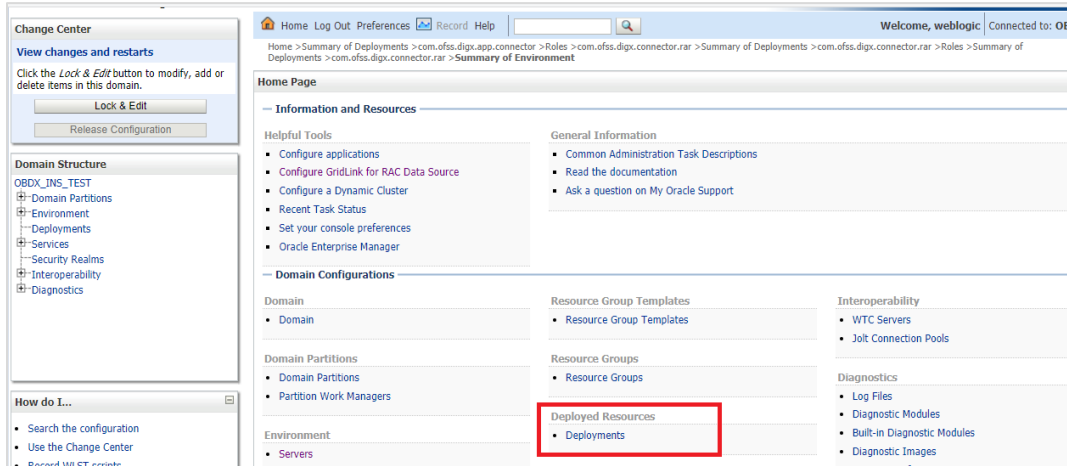
Click on com.ofss.digx.connector

Click on **Security** Tab > **Outbound Credential Mappings**
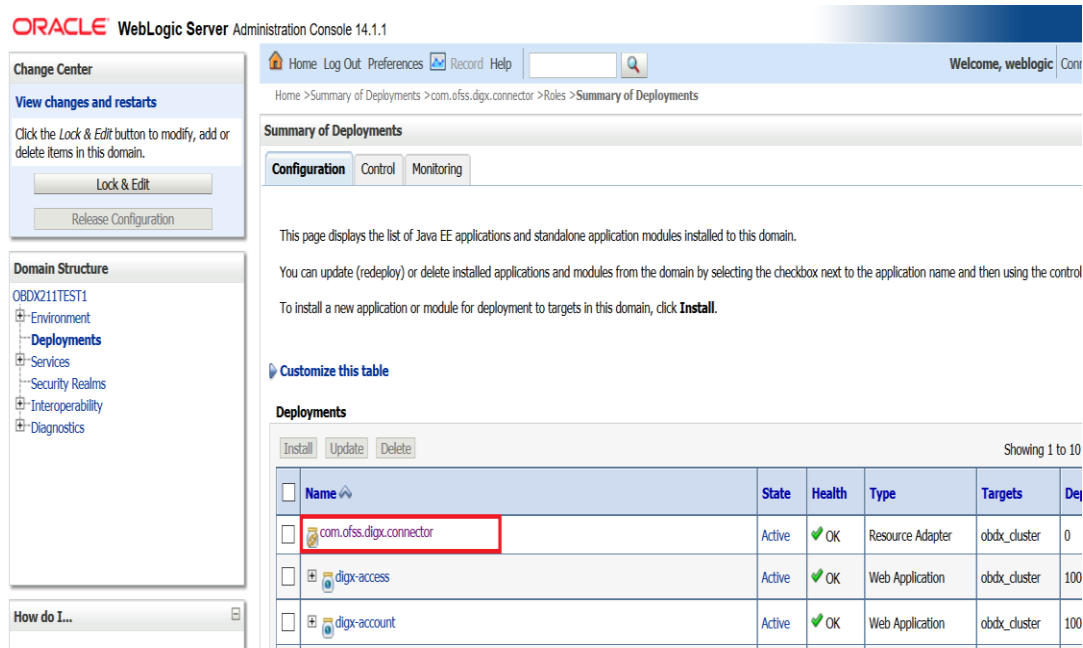
Click on **New**

Select **ra/DIGXConnectorAES > Next**
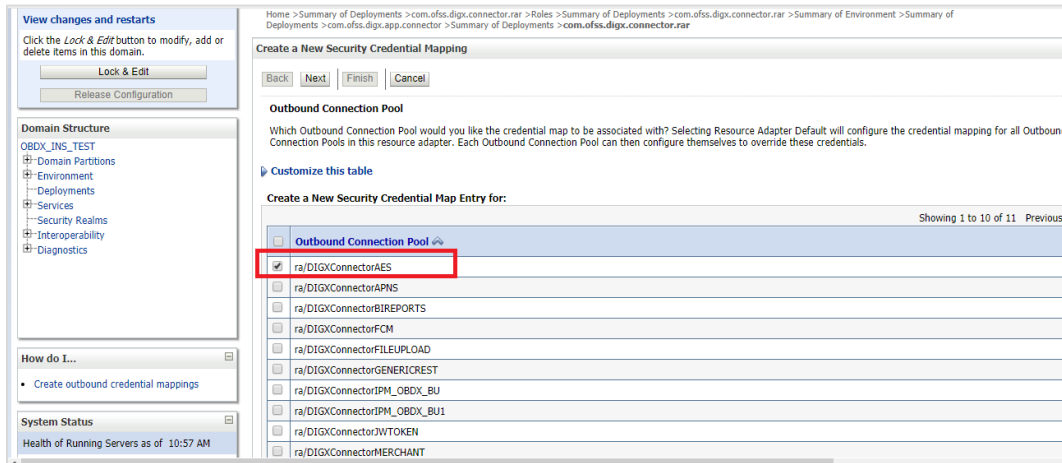
Select "**Default User**" > **Next**
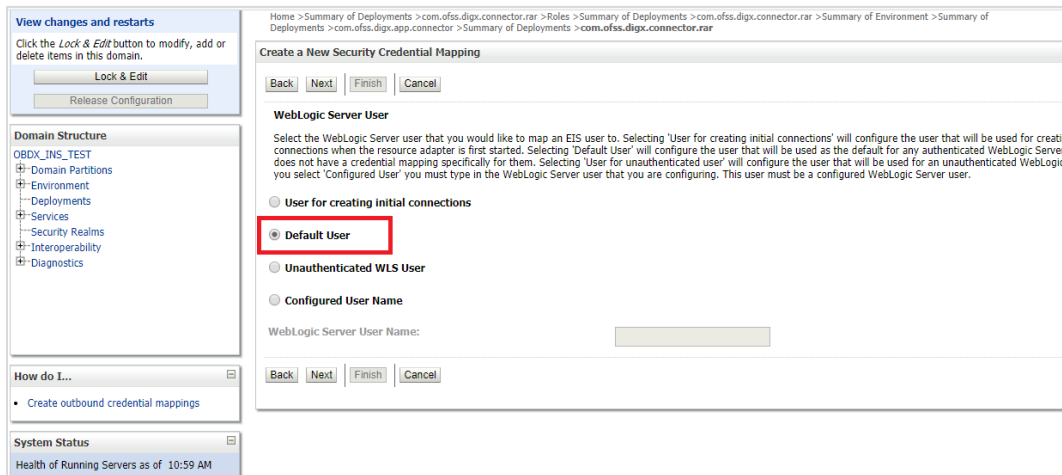
Enter "EIS User Name" should be set to AES_KEY

Enter "EIS Password" . Password should be any 16 characters.
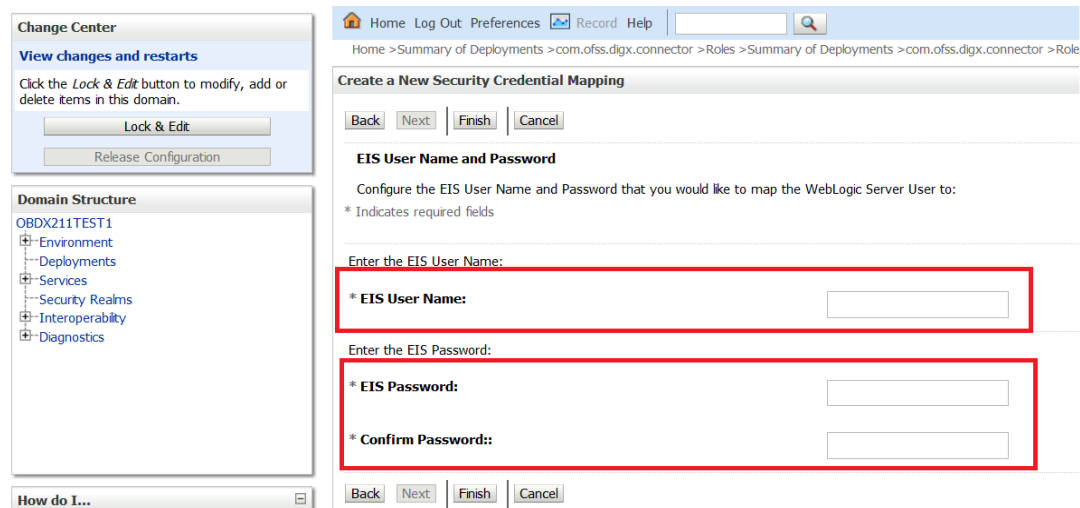
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Click '**Finish'**

Check AES_KEY mapping is created successfully.

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 APIs Connector Credential Store Guide.pdf**

Functionality / Module	OutBound Connection Pool Name
VAM	ra/DIGXConnectorOBVAM

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)

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Summary of JMS Modules

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

This page summarizes the JMS system modules that have been created for this domain.

▷ **Customize this table**

JMS Modules (Filtered - More Columns Exist)

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

New   Delete

	Name ⌃	Type
☐	AuditJMS	JMSSystemResource
☐	FileUploadJMS	JMSSystemResource
☐	ReportsJMSModule	JMSSystemResource
☐	UBSSystemModule	JMSSystemResource

New   Delete

Settings for UBSSystemModule

Configuration | Subdeployments | Targets | Security | Notes

This page displays general information about a JMS system module and its resources. It also allows you to configure new resources and access existing resources.

Name:	UBSSystemModule	The name of this JMS system module. More Info...
Scope:	Global	Specifies if the JMS system module is accessible within the domain, a partition, or a resource group template.
Descriptor File Name:	jms/ubssystemmodule-jms.xml	The name of the JMS module descriptor file. More Info...

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

▷ **Customize this table**

Summary of Resources

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

New   Delete   Showing 1 to 1 o

	Name ⌃	Type	JNDI Name	Subdeployment	Targets
☐	UBSForeignServer	Foreign Server	N/A	UBSSubdeployment	obdx_cluster

New   Delete   Showing 1 to 1 o

- Click on UBSForeignServer

Settings for UBSForeignServer

Configuration | Subdeployment | Notes

General | Destinations | Connection Factories

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

Save

A foreign server represents a JNDI provider that resides outside a WebLogic Server. It contains information that allows WebLogic Server to reach the remote JNDI provider. Th foreign server.

Name:	UBSForeignServer
JNDI Initial Context Factory:	weblogic.jndi.WLInitialConte:
JNDI Connection URL:	t3://<EHMS_WLS_SERVER>:<EHMS_WLS_SERVER_PORT>/
JNDI Properties Credential:	
Confirm JNDI Properties Credential:	

JNDI Properties:

```
java.naming.security.principal=
<EHMS_WLS_USERNAME>
```

- 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

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 APIs File Upload Report Configuration**

Origination with UBS

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

●   **Oracle Banking APIs 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.

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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 APIs OHS User Interface Configuration**

Feedback module:

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

WAR deployments and dependencies

Mandatory deployment		
Sr No	Module	Description
1	digx-alerts	Alerts configuration and management
2	digx-approval	Transaction approvals for admin and corporate business user
3	digx-audit	Audit logging for all transactions
4	digx-auth	Login authentication & oAuth functionality
5	digx-brand	Brand Management
6	digx-common	Common REST APIs used across all modules like enumerations
7	digx-config	System configuration & dashboard management
8	digx-cutoff	Transaction cutoff management
9	digx-eurekaserver	Service registration of modules
10	digx-finlimit	Limits Maintenance and Utilization
11	digx-login	Manages user login and logout functionality
12	digx-me	Multientity management
13	digx-party	Party management
14	digx-security	Authorization and Authentication management
15	digx-shared-libs	Common framework libraries shared across all modules
16	digx-sms	User & Credential management
17	digx-user	User profile management
18	digx-account	Accounts framework
19	digx-dda	Demand deposits
20	digx-connector	Weblogic connector to store secure information / credetials

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Optional WAR deployment			
Sr. No	War	Dependent Modules	Functionality
1	digx-access		Account and transaction access management for party and user
2	digx-oauth		oAuth Maintenance
3	digx-accountaggregation		Account aggregation feature allows retail users to link their external bank accounts to OBAPI.
4	digx-accountrelationship		To set up the transaction access logic for Bank's retail customers from OBAPI based on their account -mode of operation or relationship.
5	digx-analytics		Capturing UI events for analytics
6	digx-associatedparty	digx-content	Associated Party Management for corporate user
		digx-scf	
7	digx-berlinaisp	digx-obc	Berlin Open Banking Accounts
8	digx-berlinpiisp	digx-obc	Berlin Open Banking Funds Confirmation
9	digx-berlinpisp	digx-obc	Berlin Open Banking Payments
10	digx-budget	digx-common	Budget management for retail user
		digx-payment	
		digx-spendanalysis	
11	digx-bulkadmin		File upload maintenances for admin
12	digx-bulkcms	digx-bulkadmin	File upload in Cash management for corporate user
13	digx-bulkinvoice	digx-bulkadmin	File upload in Invoice management for corporate user
14	digx-bulkpayment	digx-bulkadmin	File upload in Payments for corporate user
15	digx-bulkscf	digx-bulkadmin	File upload in Supply chain finance for corporate user
16	digx-bulktradefinance	digx-bulkadmin	File upload in Trade finance for corporate user
		digx-tradefinance	
17	digx-bulkvam	digx-bulkadmin	File upload in Virtual account management for corporate user
		digx-vam	
18	digx-card	digx-payment	Credit card operations for retail user
		digx-dda	
		digx-location	
19	digx-chatbot		Chatbot functionality for retail and corporate user
20	digx-cms	digx-associatedparty	Cash management module for corporate user
		digx-dda	
		digx-forexdeal	
		digx-invoice	
		digx-pm	

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		digx-vam	
21	digx-collaboration	digx-content	Mailers are information or messages published by the Bank, to communicate about the Bank's Products, services and other information to its users.
22	digx-content		File document upload , read and deletion related operation by retail, corporate and admin users.
23	digx-creditfacility	digx-processmanagement digx-content	Credit facility module for corporate user
24	digx-ebpp	digx-dda digx-account digx-content digx-location digx-card	Electronic bill payments for retail user
25	digx-extxfacesimulator		Simulator for Third Party Host Implementation
26	digx-feedback	digx-security	Feedback module for retail and corporate user
27	digx-forexdeal	digx-payment digx-pm	Forex deal for corporate user
28	digx-goal	digx-common digx-content digx-payment digx-dda	Goal module for retail user
29	digx-insight		Provides insight to retail user according to his activities
30	digx-invoice	digx-associatedparty digx-cms digx-scf	Invoice management module for corporate user
31	digx-liquiditymanagement	digx-forexdeal	Liquidity management module for corporate user
32	digx-loan	digx-dda digx-location digx-payment	Loan module for retail and corporate user
33	digx-loanapplication	digx-loan digx-account digx-content digx-creditfacility digx-processmanagement	Loan origination module for corporate user
34	digx-location		Location module for retail and corporate user
35	digx-mobile		Mobile module
36	digx-nlp	digx-content digx-invoice digx-scf	Enables corporate users to perform operations like Automatic Invoice Creation and Automatic

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			Purchase Order Creation in Invoice Management and Supply Chain Finance.
37	digx-obc		Openbanking Fine Graining Of Consent
		digx-content	
		digx-payment	
		digx-td	
		digx-dda	
		digx-config	
		digx-common	
38	digx-origination	digx-user	Origination module for retail user
		digx-forexdeal	
		digx-party	
		digx-location	
		digx-pm	
		digx-content	
		digx-vam	
		digx-social	
39	digx-payment	digx-wallet	Payments module for retail and corporate user
40	digx-pm		Product maintenance related operations
41	digx-processmanagement		
		digx-security	
		digx-user	
		digx-sms	
		digx-payment	
		digx-party	
42	digx-report	digx-dda	Report module for retail anc corporate user
43	digx-rewards		Rewards module for retail user
		digx-associatedparty	
		digx-invoice	Supply chain finance module for corporate user
44	digx-scf	digx-pm	
45	digx-smsbanking		SMS banking
46	digx-social		Twitter Payments
		digx-dda	Spend analysis module for retail user
47	digx-spendanalysis	digx-payment	
		digx-dda	
48	digx-sr	digx-content	Service request module
		digx-dda	
		digx-location	Term deposit module for retail and corpoarte user
49	digx-td	digx-payment	
		digx-content	
		digx-creditfacility	
		digx-dda	Trade finance module for corporate user
50	digx-tradefinance	digx-forexdeal	
51	digx-ukaisp	digx-obc	UK Open Banking Accounts

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52	digx-ukcbpii	digx-obc	UK Open Banking Funds Confirmation
53	digx-ukpisp	digx-obc	UK Open Banking Payments
54	digx-vam	digx-location	Virtual account management for corporate user
		digx-account	
55	digx-wallet	digx-payment	Wallet module for retail user
		digx-dda	
		digx-sms	
56	digx-wm	digx-party	Wealth management module for retail user
		digx-pm	
		digx-user	
		digx-dda	

Note – After executing Post installation steps please refer **User Manual Oracle Banking APIs Core** - **Section 40:Security Keys** and perform **API key generation** to help authentication server handle non authenticated requests.

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9. OBAPI Logging Configuration

Logging Configuration in WebLogic Standard Edition

WebLogic converts the **java.util.logging** levels into WebLogic Logging Levels when we use Platform Loggers. Refer Table (Fig-A) for Logging Level conversion. (**Case Sensitive**)

To change the logging level at package level in OBAPI Application can be achieved with below Steps

1. Go to the OBAPI Application Server à Click Logging
2. Go to **Advance** and set the values in **Platform Loggers Levels** as per the Package level logging requirements.
   e.g. To set the logging level for
   package **<bankcode>.com.ofss.fc** and **com.ofss.digx**

         i.   <bankcode>.com.ofss.fc=Info
         ii.   com.ofss.digx=Error
3. **Save** and **Restart** the server

JAVA	WebLogic
SEVERE	Error
WARNING	Warning
INFO	Info
CONFIG	Debug
FINE	Debug
FINER	Trace
FINEST	Trace

(Fig-A)

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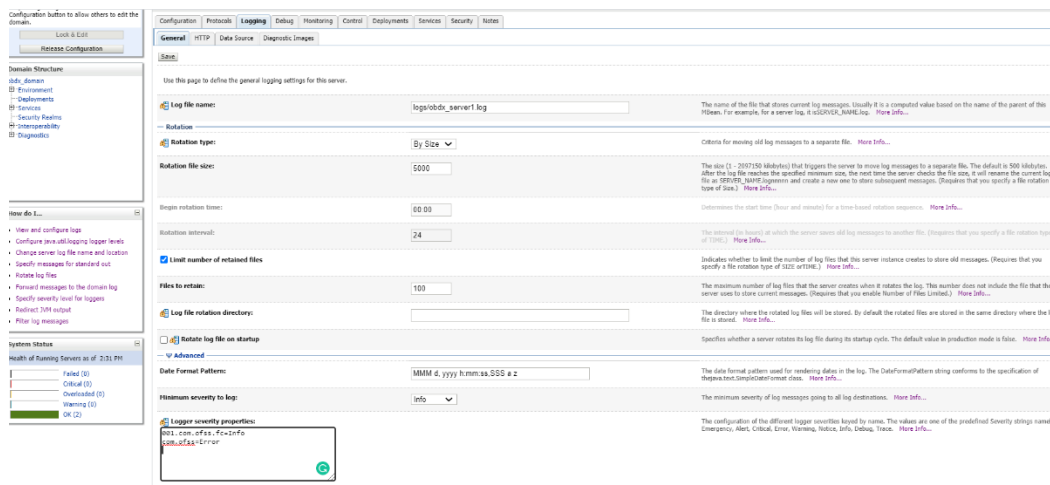
10. OBAPI Product Verification

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

|					
☐	com.ofss.digx.connector	Active	✔ OK	Resource Adapter	obdx_cluster	0
☐	⊞ digx-access	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-account	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-accountaggregation	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-accountrelationship	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-alerts	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-analytics	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-approval	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-associatedparty	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-audit	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-auth	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-berlinaisp	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-berlinpiisp	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-berlinpisp	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-brand	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-budget	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-bulkadmin	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-bulkcms	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-bulkinvoice	Active	✔ OK	Web Application	obdx_cluster	100

☐	⊞ digx-bulkpayment	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-bulkscf	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-bulktradefinance	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-bulkvam	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-card	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-chatbot	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-cms	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-collaboration	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-common	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-config	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-content	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-creditfacility	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-cutoff	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-dda	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-ebpp	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-eurekaserver	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-extxfacesimulator	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-feedback	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ digx-finlimit	Active	✔ OK	Web Application	obdx_cluster	100

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☐	⊞ 🔒 digx-forexdeal	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-goal	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-insight	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-invoice	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-liquiditymanagement	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-loan	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-loanapplication	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-location	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-login	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-me	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-mobile	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-nlp	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-oauth	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-obc	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-origination	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-party	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-payment	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-pm	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-processmanagement	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-report	Active	✔ OK	Web Application	obdx_cluster	100

☐	⊞ 🔒 digx-rewards	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-scf	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-security	Active	✔ OK	Web Application	obdx_cluster	100
☐	🔒 digx-shared-libs (21.1.0.0.0,312)	Active		Library	AdminServer, obdx_cluster	0
☐	⊞ 🔒 digx-sms	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-smsbanking	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-social	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-spendanalysis	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-sr	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-td	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-tradefinance	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-ukaisp	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-ukcbpii	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-ukpisp	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-user	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-vam	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-wallet	Active	✔ OK	Web Application	obdx_cluster	100
☐	⊞ 🔒 digx-wm	Active	✔ OK	Web Application	obdx_cluster	100

To verify the installation, launch below URL

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

Check if the page loads successfully.
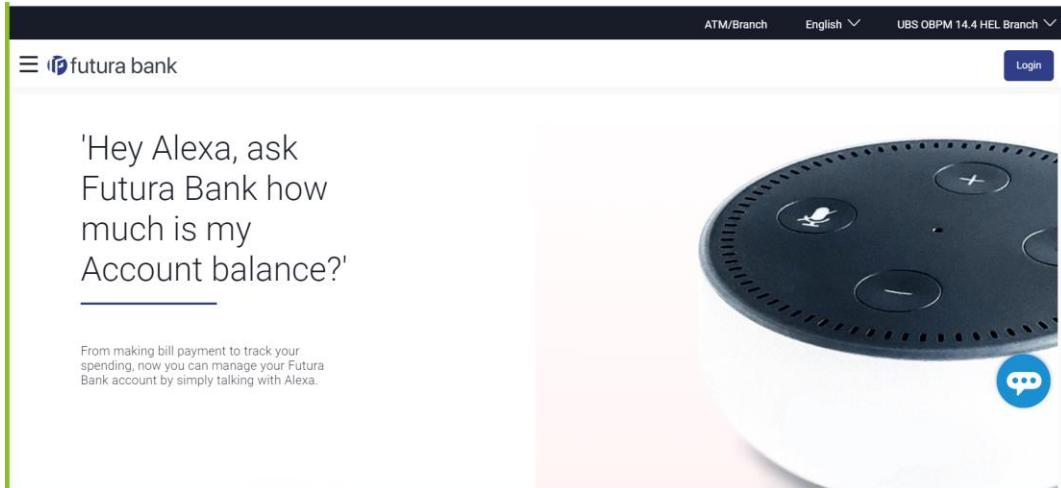
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Day1 Configuration

Universal Banking Solution (OBAPI with UBS)

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

Oracle Banking APIs 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 APIs 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 APIs Chatbot Configuration

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<u>Mobile Application Builder:</u>

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
('obapi.host.accountbranch.delimiter','ExtSystemsConfig','@~','<ENTITY_ID>','ofs
suser',sysdate,'ofssuser',sysdate);
```

Note: Please ensure that <ENTITY_ID> has been replaced with correct Entity ID for the corresponding entity.

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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 APIs 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'
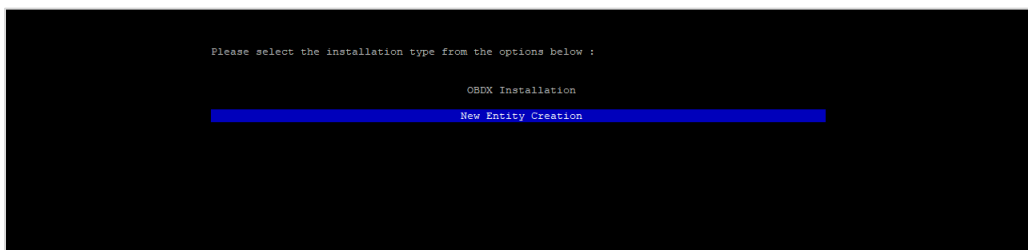
Below screen will appear after selecting add entity
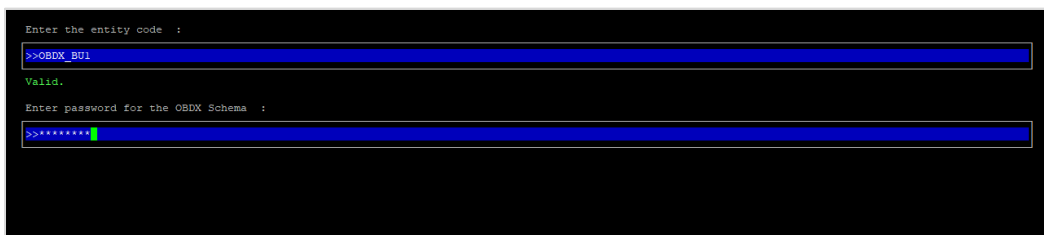
Enter below information:

- Entity code which has been added from screen

- OBAPI schema password

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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 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

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```
Enter the existing OBPM host schema name  :
>>
Enter the password for existing OBPM host schema  :
>>
Enter new OBPM B1A1 schema name  :
>>
Enter new schema password  :
>>
Enter country code  :
>>
```

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.

```
[c     de  ops      m  .  '  OBDX_Installer]$ python3 runInstaller.py

Starting OBPM Database Installation...
Creating Tablespace...
Tablespace Created
Creating User...
User Created
Creating Role...
Roles Created
Executing Grants...
Executing OBPM  Grants...
OBPM Scripts execution on progess...Please hold on it might take sometime
Scripts execution Successfully
SUCCESSFULLY installed OBPM database
Executed DIGX_FW_CONFIG_ALL_O.sql successfully
Executed DIGX_FW_CONFIG_UBS_ALL_O.sql successfully
```

When the installation completes, the below message is displayed

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```
Starting Entity Configuration

Calling WLST

Initializing WebLogic Scripting Tool (WLST) ...

Welcome to WebLogic Server Administration Scripting Shell

Type help() for help on available commands

Connecting to t3://100.76.133.230:7001 with userid weblogic ...
Successfully connected to Admin Server "AdminServer" that belongs to domain "OBDX211TEST".

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 DomainMBean as the root.
To make changes you will need to start an edit session via startEdit().
For more help, use help('edit').

Creating Data source OBDXBU2_B1A1
Starting an edit session ...
Started edit session, be sure to save and activate your changes once you are done.
Activating all your changes, this may take a while ...
The edit lock associated with this edit session is released once the activation is completed.
Activation completed
OBDXBU2_B1A1 created sucessfully.


Exiting WebLogic Scripting Tool.


Entity successfully configured.
```

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:

```
[obdxswg wfcglx vm 232 OBDX_Installer]$ python3 runInstaller.py
Execution of DB script for OBDXBU4 started
Executed DIGX_FW_CONFIG_ALL_O.sql successfully
Execution  completed.
```

No additional steps/ configuration are required.

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

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```
Enter the FCORE DB hostname  :
>>█
Enter the FCORE DB port  :
>>
Enter the FCORE SID  :
>>
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 weblogic admin password  :
>>
Use (↑/↓) keys to navigate between questions and press 'enter' after editing them
```

```
Enter the FCORE DB hostname  :
>>mumaa012.in.oracle.com
Valid.
Enter the FCORE DB port  :
>>1520
Valid.
Enter the FCORE SID  :
>>obdxhst.in.oracle.com
Valid.
Enter the Directory name for Tablespace creation (DBA_DIRECTORIES)  :
>>TBS_DIR
Valid.
Enter the username with 'sys' privileges  :
>>sys
Valid.
Enter password for the user with sys privileges  :
>>*********
Valid.
Enter existing weblogic admin password  :
>>********█
Valid.
Use (↑/↓) keys to navigate between questions and press 'enter' after editing them
```

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

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```
Enter the existing FCR schema name  :
>>
Enter the existing FCUBS schema name  :
>>
Enter new FCORE schema name  :
>>
Enter new schema password  :
>>
Use (↑/↓) keys to navigate between questions and press 'enter' after editing them
```



```
Enter the existing FCR schema name  :
>>FCRHOST
Valid.
Enter the existing FCUBS schema name  :
>>FCRUBSHOST
Valid.
Enter new FCORE schema name  :
>>FCRHOSTTST
Valid.
Enter new schema password  :
>>********
Valid.
Use (↑/↓) keys to navigate between questions and press 'enter' after editing them
```

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

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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.

```
[ob          DX_Installer]$ python3 runInstaller.py

Starting FCORE Database Installation...
Creating Tablespace...
Tablespace Created
Creating User...
User Created
Creating Role...
Roles Created
Executing Grants...
FCORE Scripts execution on progess...Please hold on it might take sometime
Scripts execution Successfully
SUCCESSFULLY installed FCORE database
Executed DIGX_FW_CONFIG_ALL_O.sql successfully
```

```
Starting Entity Configuration

Calling WLST

Initializing WebLogic Scripting Tool (WLST) ...

Welcome to WebLogic Server Administration Scripting Shell

Type help() for help on available commands

Connecting to t3://100.76.133.230:7001 with userid weblogic ...
Successfully connected to Admin Server "AdminServer" that belongs to domain "OBDX211TEST".

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 DomainMBean as the root.
To make changes you will need to start an edit session via startEdit().
For more help, use help('edit').

Creating Data source OBDXBU3_B1A1
Starting an edit session ...
Started edit session, be sure to save and activate your changes once you are done.
Activating all your changes, this may take a while ...
The edit lock associated with this edit session is released once the activation is completed.
Activation completed
OBDXBU3_B1A1 created sucessfully.


Exiting WebLogic Scripting Tool.


Entity successfully configured.
```

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)).

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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_DBA_DIRECTORY_NAME=TBS_DIR
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 WLS_DOMAIN_PASS=welcome1
OBDX_Installer]$ export ENTITY_EHMS_HOST_SCHEMA_NAME_PASS=FCUBS140
OBDX_Installer]$ export ENTITY_EHMS_CCY=GB
OBDX_Installer]$ python runInstaller.py --silent --addEntity
```

Below parameters should be set in environment variables

	Parameter	Description	Example
Environment variables to set for flavor: **FCORE UBS (14.4.0.0.0 release)** **OBPM (14.4.0.0.0 release)**	**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**
	ENTITY_EHMS_DATABASE_HOSTNAME E	Hostname of the EHMS HOST database host server	**export ENTITY_EHMS_DATABASE_HOSTNAME=xx.xx.xx.xx**

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	Parameter	Description	Example
	ENTITY_EHMS_DAT ABASE_PORT	Port of the EHMS HOST database host server	**export ENTITY_EHMS_DATABASE_ PORT=1521**
	ENTITY_EHMS_DAT ABASE_SID	EHMS Host database Service Name	**export ENTITY_EHMS_DATABASE_ SID=obapidb.in.oracle.com**
	ENTITY_EHMS_DB A_DIRECTORY_NA ME	Oracle Directory name in which you want the EHMS (HostInterface) schema datafile (dbf). Enter only the name and NOT the path	**export ENTITY_EHMS_DBA_DIREC TORY_NAME=TBS_DIR**
	ENTITY_EHMS_DAT ABASE_SYS_USER	Username with 'sys' privileges	**export ENTITY_EHMS_DATABASE_ SYS_USER=sys**
	ENTITY_EHMS_DAT ABASE_SYS_PASS	Password for EHMS sys user	**export ENTITY_EHMS_DATABASE_ SYS_PASS=devops@sys**
	ENTITY_EHMS_SCH EMA_NAME	Complete EHMS (HostInterface) schema name you want installer to create as new schema.	**export ENTITY_EHMS_SCHEMA_N AME=OBDXEHMS**
	ENTITY_EHMS_SCH EMA_PASS	Password for new EHMS schema on EHMS HOST database	**export ENTITY_EHMS_SCHEMA_P ASS=devops#ehms**
	ENTITY_EHMS_HO ST_SCHEMA_NAME	EXISTING EHMS Host schema name	**export ENTITY_EHMS_HOST_SCHE MA_NAME=EHMSHOST**

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	Parameter	Description	Example
	ENTITY_EHMS_HOST_SCHEMA_NAME_PASS ****This parameter is only required for UBS & OBPM Host**	Password of existing HOST EHMS schema (Existing)	**export ENTITY_EHMS_HOST_SCHEMA_NAME_PASS=ehmshst**
	WLS_DOMAIN_PASS	Password for Weblogic admin console	**export WLS_DOMAIN_PASS=weblogic182**
	ENTITY_EHMS_CCY ****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_NAME ****This parameter is only required for FCORE**	FCORE-FCUBS HOST schema name	**export ENTITY_EHMS_FCORE_FCUBS_SCHEMA_NAME=FCRUBSHOST**
Environment variables to set for flavor: **OBAPI (Third-party HOST)**	**Entity_Code**	Entity code which has been entered from screen	**export Entity_Code=OBDX_BU1**
	SCHEMA_PASS	Password for existing OBAPI schema	**export SCHEMA_PASS=welcome1**

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

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

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.

When the installation completes, the below message is displayed

```
Starting Entity Configuration

Calling WLST

Initializing WebLogic Scripting Tool (WLST) ...

Welcome to WebLogic Server Administration Scripting Shell

Type help() for help on available commands

Connecting to t3://100.76.133.230:7001 with userid weblogic ...
Successfully connected to Admin Server "AdminServer" that belongs to domain "OBDX211TEST".

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 DomainMBean as the root.
To make changes you will need to start an edit session via startEdit().
For more help, use help('edit').

Creating Data source OBDXBU2_B1A1
Starting an edit session ...
Started edit session, be sure to save and activate your changes once you are done.
Activating all your changes, this may take a while ...
The edit lock associated with this edit session is released once the activation is completed.
Activation completed
OBDXBU2_B1A1 created sucessfully.


Exiting WebLogic Scripting Tool.


Entity successfully configured.
```

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))

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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)

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13. OBAPI Product Security

Refer below document for OBAPI product security configuration

Oracle Banking APIs Security Guide

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14. OBAPI Product – Best Practice

14.1 <u>Tablespace for AUDIT INDEX</u>

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_LOGGING.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_LOGGING_DETAILS.sql

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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

<property name="eclipselink.cache.coordination.jms.host" value="t3://<WEBLOGIC-HOST-NAME OR IP>:<MANAGED-SERVER-PORT>/" />

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

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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:

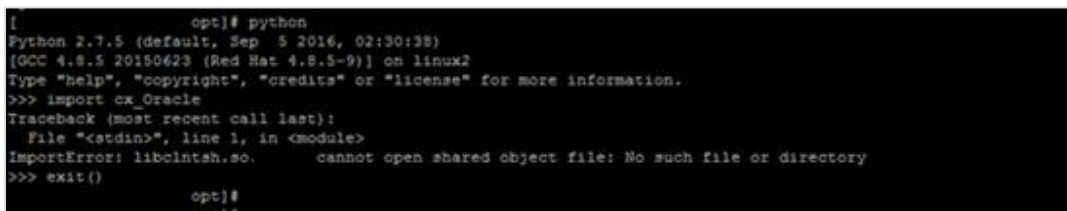Try one of the following:

- 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:

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Execute the below command:

export LD_LIBRARY_PATH=/usr/lib/oracle/19.10/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/MSTFORMATS.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.

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- Check the seedPolicies.log in <OBAPI INSTALLER 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.util.logging.FileHandler.pattern = %h/java%u.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.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
```

➢ 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>"

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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.

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