

Oracle® Banking APIs

Installation Guide



Patchset Release 22.2.5.0.0

G15758-01

October 2024

The Oracle logo, consisting of a solid red square with the word "ORACLE" in white, uppercase, sans-serif font centered within it.

ORACLE®

Oracle Banking APIs Installation Guide, Patchset Release 22.2.5.0.0

G15758-01

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Purpose

This guide is designed to help acquaint you with the Oracle Banking APIs application. This guide provides answers to specific features and procedures that the user need to be aware of the module to function successfully.

Audience

This document is intended for the following audience:

- Customers
- Partners

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Diversity and Inclusion

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

Conventions

The following text conventions are used in this document:

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

Related Resources

For more information on any related features, refer to the following documents:

- [Oracle Banking APIs Installation Manuals](#)

Screenshot Disclaimer

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

Acronyms and Abbreviations

The list of the acronyms and abbreviations used in this guide are as follows:

Table 1 Acronyms and Abbreviations

Abbreviation	Description
OBAPI	Oracle Banking APIs

1

Introduction

- [Purpose of the Document](#)

1.1 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 & 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

2

Prerequisites

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

For OBAPI pre-requisite software setup refers document “**Oracle Banking API 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

1. Login using root user.
2. Run below command to verify if Oracle Instant client is installed.

```
rpm -qa | grep oracle
```

```
[root@cfss-4110-17]# 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-19.10.0.0-1.x86_64
[root@cfss-4110-17]#
```

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:

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.

cx Oracle & Urwid:

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.

2. Import Urwid and check version

```
import urwid (Press Enter) urwid.__version__
```

```
[root@cf~ - ~]# 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.

3. Similarly import cx_Oracle and check version

```
import cx_Oracle (Press Enter)
cx_Oracle.version
```

```
[root@C1: ~]# 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 :

1. Execute below commands to install the python 3.8.0

```
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 -xzf Python-3.8.0.tgz
cd Python-3.8.0
./configure --enable-optimizations
make altinstall
python3.8 -version
```

```
[root@C1: ~]# python3.8 -V
Python 3.8.0
```

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

```
pip3.8 install --upgrade pip
pip3.8 install cx-Oracle==8.3
```

```
[root@C1: ~]# pip3.8 install cx-Oracle==8.1.0
Collecting cx-Oracle==8.1.0
  Downloading https://files.pythonhosted.org/packages/5f/3a/f63cf2cee42b32874af13f0a2deb5d4a1448b2fc39b36ab11e3369f00c/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@centos7 ~]# 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
```


Component	Parameter	Description	Example
DB details (for OBAPI schema)	OBDX_DATABASE_HOSTNAME	Enter the hostname of the database server which would host the database schema for OBAPI	abc.xyc.com
	OBDX_DATABASE_PORT	Enter the port number of the database listener	1521
	OBDX_DATABASE_SID	Enter the Oracle Service Name for database instance	obxdb.in.oracle.com
	OBDX_DATABASE_SYS_USERNAME	Enter the username with 'sys' privileges	Sys
	POST_FIX	For OBAPI schema name like "OBDX_DEV" POST FIX is 'DEV'.	DEV
SHOULD BE IN UPPERCASE ONLY.			
	OBDX_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.	OBDX_DIR
	OBDX_AUDIT_DBA_DIRECTORY_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.	OBDX_AUDIT_DIR
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.	EHMS182SCHEMA
SHOULD BE IN UPPERCASE ONLY.			

Component	Parameter	Description	Example
	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	obdxehms.in.oracle.com
	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	FCRUBSHOST
Weblogic server details	MIDDLEWARE_HOME	Oracle Weblogic Server home path. Example /home/obdxuser/Oracle/Middleware/Oracle_Home - where you have sub-directories like wlsuser,oracle_common etc.	/home/obdxuser/Oracle/Middleware/Oracle_Home
	JAVA_HOME	Path where JAVA (JDK) is installed	/home/obdxuser/jdk11_0_14
	FLYWAY_HOME	Path where FLYWAY is installed	/home/obdxuser/flyway-8.3
	DB_WITH_FLYWAY_EXECUTION	Database execution type	YES or NO
	GRADLE_HOME	Path where GRADLE is installed	/home/obdxuser/gradle-7.9
	MavenRepositoryUrl	Path where maven-repo under installer folder	\$installerDir/installables/maven-repo
	GradleRepositoryUrl	Path where gradle-repo under installer folder	\$installerDir/installables/gradle-repo

Component	Parameter	Description	Example
	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/obdxuser/obapi
	WLS_DOMAIN_PATH	Path where OBAPI Weblogic domain should be created. Users can now enter custom path as per their requirements.	/home/obdxuser/domains
	WLS_CLUSTER_NAME	Name of cluster; this cluster would have one single managed server.	obdx_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
	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

Component	Parameter	Description	Example
	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.	obdx_domain1
	WLS_DOMAIN_ADMIN_USER	Domain user ID. The user id will be used to access the Weblogic Administration console.	weblogic
	WLS_NODE_TYPE	Weblogic Node Manager type	Plain/SSL
	WLS_MACHINE_NAME	Weblogic Node Manager machine name	obdx_machine
	APP_ROOT_DIR	Any empty directory path	/scratch/app/dir
	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

Component	Parameter	Description	Example
	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 directory inside INSTALLATION_HOME.	/scratch/obapi/JPA
	WLS_JMS_EXTSYSRECEIVER_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_EXTSYSSENDER_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

Component	Parameter	Description	Example
OBAPI Application Administrator user details	OBDX_ADMIN_USERNAME	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
	OBDX_ADMIN_EMAIL	Enter the Email ID for OBAPI application admin user.	superadmin@oracle.com
	OBDX_ADMIN_CONTACT_NO	Enter the mobile number for OBAPI application admin user.	+911234567890

COUNTRY CODE IS MUST.

**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:

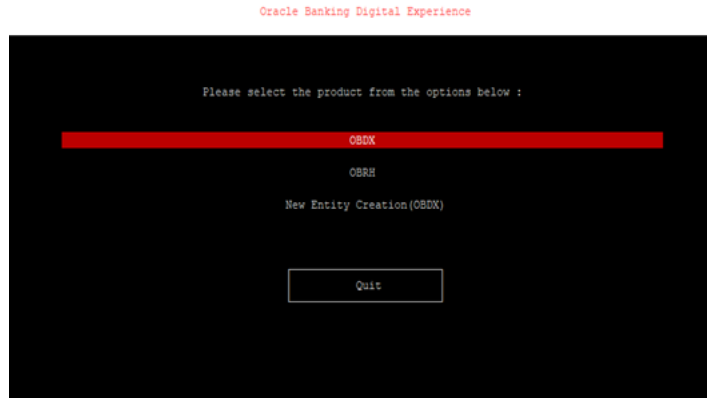
- From your terminal navigate to `<OBAPI INSTALLER DIR>/`

```
[devops@obdxwls OBDX_Installer]$ ls -la
total 8
drwxrwxrwx  6 1002 1012  118 May  4 15:40 .
drwxr-xr-x  5 1002 1012   77 May  4 15:39 ..
drwxrwxrwx  2 1002 1012    6 May  4 09:03 ExecInstances
-rwxrwxrwx  1 1002 1012    0 May  4 09:05 __init__.py
drwxrwxrwx  5 1002 1012   60 May  4 09:05 core
drwxrwxrwx  5 1002 1012   69 May  4 09:03 framework
drwxrwxrwx 17 1002 1012  223 May  4 11:11 installables
-rwxrwxrwx  1 1002 1012 4372 May  4 09:05 runInstaller.py
[devops@obdxwls OBDX_Installer]$ python3.8 runInstaller.py
```

- Enter the following command

```
python3.8 runInstaller.py
```

Select the appropriate host system for Installation

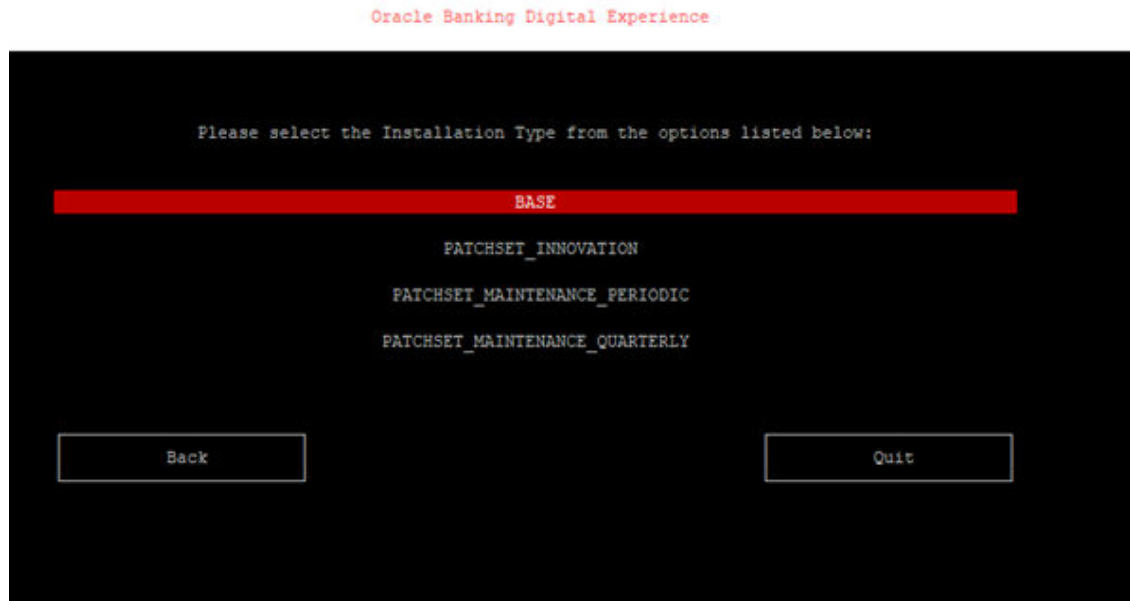


Select the appropriate product for Installation

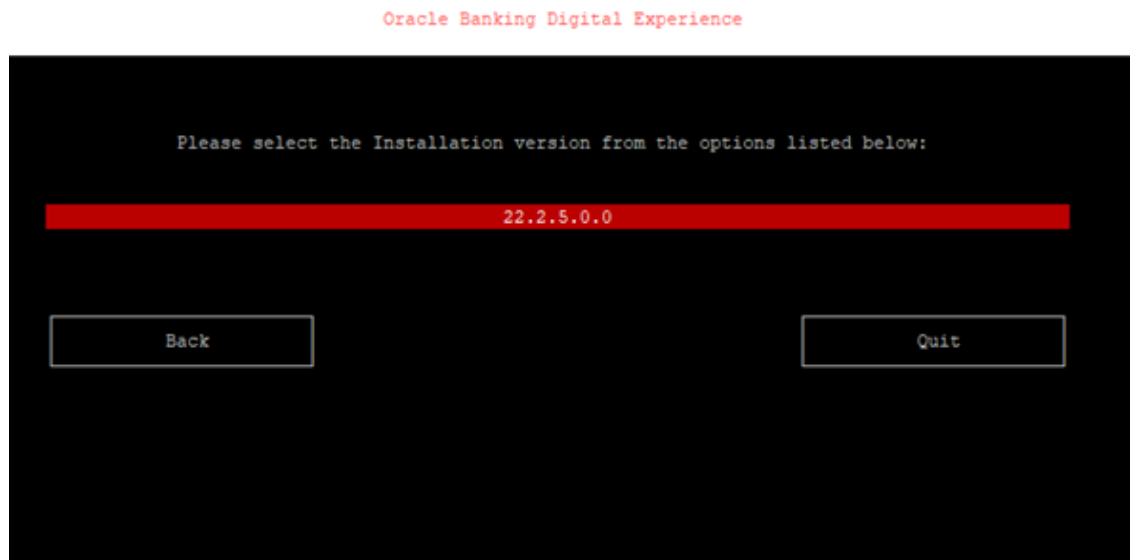


Oracle FLEXCUBE Universal Banking (OBAPI with UBS)

Select Installation type for the particular release



Select Installation version



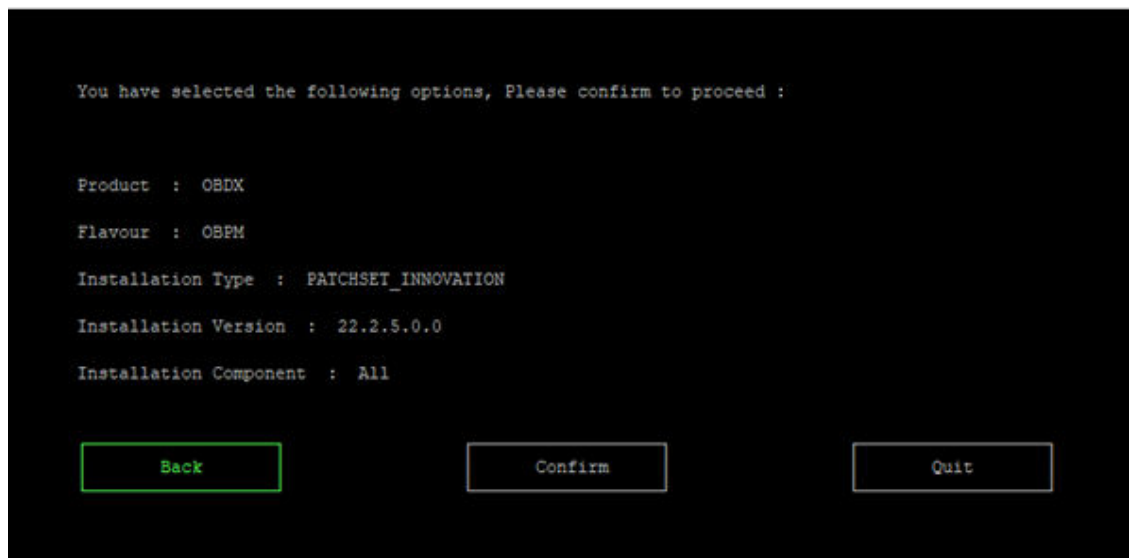
Select Installation component All (Database+App), App(Only application), Database(Only Database)

Oracle Banking Digital Experience



Select for Confirm to proceed, Back to return to first page, Quit to exit from installer run.

Summary Screen



Post confirmation below screen will appear to take end-user input.

```

Oracle Banking Digital Experience

Enter password for the OBIX schema 'OBIX_NAV' :
>>

Enter password for the weblogic domain user id 'weblogic' :
>>

Enter password for the OBPM schema '$2111_UBS144D' (B1A1) :
>>

Enter password for the OBPM schema 'COD144_ITR' (Host) :
>>

```

```

Oracle Banking Digital Experience

Enter the UBS DB hostname :
>>

Enter the UBS DB port :
>>

Enter the UBS SID :
>>

Enter the existing UBS schema name :
>>

Enter the existing UBS schema password :
>>

Enter the host UBS schema name :
>>

```

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))

Third Party System (OBAPI with THP)

Post Third Party System selection, enter the required credentials details

```

Oracle Banking Digital Experience
Installer v22.2.0.0.0

Enter the password for the user with sys privileges 'sys' :
>>*****
Valid.
Enter password for the OBDX schema 'OBDX_OBDX_TESTINSTINNV2' :
>>*****
Valid.
Enter password for the weblogic domain user id 'weblogic' :
>>*****
Valid.
Enter password for the Admin User 'superadmin' :
>>*****
Valid.

```

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

```

Enter the password for the user with sys privileges 'sys' :
>>*****
Valid.
Enter password for the OBDX schema 'OBDX_OBDX221DEV' :
>>*****
Valid.
Enter password for the weblogic domain user id 'weblogic' :
>>*****
Valid.
Enter the password for the user with sys privileges of FCR database 'sys' :
>>*****
Valid.
Enter password for the FCORE schema 'BIA1_OBDX221DEV' (new) :
>>*****
Valid.
Enter password for the Admin User 'superadmin' :
>>*****
Valid.
Use (f/) 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
- 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

```

>>*****
Valid.
Enter password for the OBDX schema 'OBDX_OBDX22DOM1' :
>>*****
Valid.
Enter password for the weblogic domain user id 'weblogic' :
>>*****
Valid.
Enter the password for the user with sys privileges of OBPM database 'sys' :
>>*****
Valid.
Enter password for the OBPM schema 'COD144_ITR' (Existing) :
>>*****
Valid.
Enter password for the OBPM schema 'BIA1_OBDX22DOM1' (new) :
>>*****
Valid.
Enter password for the Admin User 'superadmin' :
>>*****
Valid.
Use (t/i) 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
- 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

```

Oracle Banking Digital Experience
Installer v19.1.0.0.0

Please select the installation mode from the
options listed below :

New Installation
Reinstall

Use (t/i) to select between options

```

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.

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.

If `DB_WITH_FLYWAY_EXECUTION` set to **NO**

```
>>>> STARTING OBFX PRODUCT INSTALLATION <<<<

<<<< Please check the logs file available at ExecInstances/09May1657/logs/app for any error >>>>>>

We are executing the db with DB_WITH_FLYWAY_EXECUTION=NO
Starting OBFX Database Installation with OBPM FLAVOR
Database Path: /u02/app/oracle/oradata/OFCD8009_bom1cq/OFCD8009_BOM1CQ/B2169F489B0C1E32E053C305F40A9E33/datafile
Database Path: /u02/app/oracle/oradata/OFCD8009_bom1cq/OFCD8009_BOM1CQ/B2169F489B0C1E32E053C305F40A9E33/datafile
Creating Tablespace...
Tablespace Created
Creating User...
User Created
Creating Role...
Role Created
Executing Grants...
Execution of clip_master_script_main.sql started
Execution of clip_master_script_main.sql completed
Execution of clip_constraints_main.sql started
Execution of clip_constraints_main.sql completed
Execution of clip_seeds_executable_main.sql started
Execution of clip_seeds_executable_main.sql completed
SUCCESSFULLY installed OBFX database

Starting OBPM Database Installation...
Database Path: /scratch/app/oradata/ORAI9C
Creating Tablespace...
Tablespace Created
Creating User...
User Created
Creating Role...
Roles Created
Executing Grants...
Executing OBPM Grants...
Execution of table-scripts_main.sql started
Execution of table-scripts_main.sql completed
Execution of uba_object_scripts_main.sql started
Execution of uba_object_scripts_main.sql completed
Execution of obpm_object_scripts_main.sql started
Execution of obpm_object_scripts_main.sql completed
Execution of execute-seeds_main.sql started
```

If `DB_WITH_FLYWAY_EXECUTION` set to **YES**

When the installation completes, the below message is displayed

```
[devops@obdxwls OBDX_Installer]$ python3.8 runinstaller.py
['BASE', 'OBPM', 'New', 'MODULE']

>>> STARTING OBDX PRODUCT INSTALLATION <<<<

<<<< Please check the logs file available at ExecInstances/09May1817/logs/app for any error >>>>>

We are executing the db with DB_WITH_FLYWAY EXECUTION=YES
Starting OBDX Database Installation with OBPM FLAVOR
Database Path: /u02/app/oracle/oradata/OFCD009_bomlcq/OFCD009_BOM1CQ/B2169F489B0C1E32E053C305F40A9E33/datafile
Database Path: /u02/app/oracle/oradata/OFCD009_bomlcq/OFCD009_BOM1CQ/B2169F489B0C1E32E053C305F40A9E33/datafile
Creating Tablespace...
Tablespace Created
Creating User...
User Created
Creating Role...
Role Created
Executing Grants...
OBDX Scripts execution on progress...Please hold on it might take sometime
OBDX Scripts execution Successfully
SUCCESSFULLY installed OBDX database

Starting OBPM Database Installation...
Database Path: /scratch/app/oradata/ORA19C
Creating Tablespace...
Tablespace Created
Creating User...
User Created
Creating Role...
Roles Created
Executing Grants...
Executing OBPM Grants...
OBPM Scripts execution on progress...Please hold on it might take sometime
```

```
Database Path: /u02/app/oracle/oradata/OFCD009_bomlcq/OFCD009_BOM1CQ/B2169F489B0C1E32E053C305F40A9E33/datafile
Database Path: /u02/app/oracle/oradata/OFCD009_bomlcq/OFCD009_BOM1CQ/B2169F489B0C1E32E053C305F40A9E33/datafile
Creating Tablespace...
Tablespace Created
Creating User...
User Created
Creating Role...
Role Created
Executing Grants...
Execution of clip_master_script_main.sql started
Execution of clip_master_script_main.sql completed
Execution of clip_constraints_main.sql started
Execution of clip_constraints_main.sql completed
Execution of clip_seeds_executable_main.sql started
Execution of clip_seeds_executable_main.sql completed
SUCCESSFULLY installed OBDX database

Starting OBPM Database Installation...
Database Path: /scratch/app/oradata/ORA19C
Creating Tablespace...
Tablespace Created
Creating User...
User Created
Creating Role...
Roles Created
Executing Grants...
Executing OBPM Grants...
Execution of table-scripts_main.sql started
Execution of table-scripts_main.sql completed
Execution of ubs_object_scripts_main.sql started
Execution of ubs_object_scripts_main.sql completed
Execution of obpm_object_scripts_main.sql started
Execution of obpm_object_scripts_main.sql completed
Execution of execute-seeds_main.sql started
Execution of execute-seeds_main.sql completed
Execution of obpm-seeds_main.sql started
Execution of obpm-seeds_main.sql completed
SUCCESSFULLY installed OBPM database
Executed DIGX_FW_CONFIG_ALL_0.sql successfully
Executed DIGX_FW_CONFIG_OBPM.sql successfully
Executed DIGX_FW_CONFIG_VAR_B.sql successfully
Executed DIGX_FW_CONFIG_UBS_ALL_0.sql successfully
Policy seeding execution processing ...
```

When the installation completes, the below message is displayed

```
Starting WEBLOGIC Setup and Configuration...
Weblogic Domain Created Successfully
Generating 2,048 bit DSA key pair and self-signed certificate (SHA256withDSA) with a validity of 9,999 days
for: CN=Developer, OU=Department, O=Company, L=City, ST=State, C=CA
[Storing /scratch/app/domains/obdx_mod_domain/authserver.keystore]

Warning:
The J0EK5 keystore uses a proprietary format. It is recommended to migrate to PKCS12 which is an industry standard format using "keytool -importkeystore -src
keystore /scratch/app/domains/obdx_mod_domain/authserver.keystore -destkeystore /scratch/app/domains/obdx_mod_domain/authserver.keystore -deststoretype pkcs
12".

Starting Datasource Creation...
Datasource created Successfully
Starting JMS Creation...
JMS created Successfully
Starting Deployment Creation...
Deployment created Successfully

Successfully Setup and Configured WEBLOGIC...

>>> OBDX PRODUCT INSTALLATION COMPLETED SUCCESSFULLY <<<<

[devops@obdxwls OBDX_Installer]$
```

4

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.

Below values to be exported before running installer in silent mode.

```
export PRODUCT=" "  
export FLAVOUR=" "  
export INSTALLER_VERSION=""  
export Installation_Type=" "  
export COMPONENT=""  
export DB_SYS_PASSWORD=""  
export SCHEMA_PASS=""  
export DomainPassword=""  
export DBAuthPassword=""  
export EHMS_SCHEMA_PASS=""  
export EHMS_HOST_SCHEMA_NAME_PASS=" "  
export ENTITY_EHMS_DATABASE_HOSTNAME=" "  
export ENTITY_EHMS_DATABASE_PORT=""  
export ENTITY_EHMS_DATABASE_SID=" "  
export ENTITY_EHMS_DATABASE_SYS_USER=" "  
export ENTITY_EHMS_DATABASE_SYS_PASS=" "  
export ENTITY_SCHEMA_NAME=""  
export ENTITY_SCHEMA_PASS=" "  
export ENTITY_EHMS_HOST_SCHEMA_NAME=" "  
export ENTITY_EHMS_HOST_SCHEMA_NAME_PASS=" "
```

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:UBSCORE	FLAVOUR	Flavour for installation UBS for Oracle FLEXCUBE Universal Banking 14.6.0.0.0 (OBAPI with UBS) FCORE for Oracle FLEXCUBE Core Banking 11.8.0.0.0 (OBAPI with FCORE)	export FLAVOUR=OBPM or export FLAVOUR=FCORE
	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=obdx182sys
	SCHEMA_PASS	Password for new schema on OBAPI database	export SCHEMA_PASS=obapi#182
	DomainPassword	Password for Weblogic Administrator console	export DomainPassword=wlsadmn

Host	Parameter	Description	Example
	EHMS_DATABASE_SY S_PASS	Sys user password of EHMS HOST database (Existing)	export EHMS_DATABASE_SY S_PASS=obdxehmssys
	EHMS_HOST_SCHEMA _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 =obdxehmshost
	EHMS_SCHEMA_PASS	Password for new OBAPI EHMS schema on EHMS HOST database	export EHMS_SCHEMA_PASS =obdx182ehms
	wars_to_deploy	Mention the optional wars to deployed	export wars_to_deploy=digx- cms.war,digx- corporateloan.war,digx- payments.war
	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=obd xadm
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= obdx182sys
	SCHEMA_PASS	Password for new schema on OBAPI database	export SCHEMA_PASS=obapi #182
	DomainPassword	Password for Weblogic Administrator console	export DomainPassword=wlsa dmn

Host	Parameter	Description	Example
	wars_to_deploy	Mention the optional wars to deployed	export wars_to_deploy=digx-cms.war,digx-corporateloan.war,digx-payments.war
	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=obd xadm

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.

If **DB_WITH_FLYWAY_EXECUTION** set to **NO**

```
>>> STARTING OBDX PRODUCT INSTALLATION <<<<

<<<< Please check the logs file available at ExecInstances/12May0626/logs/app for any error >>>>>

We are executing the db with DB_WITH_FLYWAY_EXECUTION=NO
Starting OBDX Database Installation with OBPM FLAVOR
Database Path: /u02/app/oracle/oradata/OFCD009_bomlcq/OFCD009_BOM1CQ/B2169F489B0C1E32E053C305F40A9E33/datafile
Database Path: /u02/app/oracle/oradata/OFCD009_bomlcq/OFCD009_BOM1CQ/B2169F489B0C1E32E053C305F40A9E33/datafile
Creating Tablespace...
Tablespace Created
Creating User...
User Created
Creating Role...
Role Created
Executing Grants...
Execution of clip_master_script_main.sql started
Execution of clip_master_script_main.sql completed
Execution of clip_constraints_main.sql started
Execution of clip_constraints_main.sql completed
Execution of clip_seeds_executable_main.sql started
Execution of clip_seeds_executable_main.sql completed
SUCCESSFULLY installed OBDX database

Starting OBPM Database Installation...
Database Path: /scratch/app/oradata/ORAI9C
Creating Tablespace...
Tablespace Created
Creating User...
User Created
Creating Role...
Roles Created
Executing Grants...
Executing OBPM Grants...
Execution of table-scripts_main.sql started
Execution of table-scripts_main.sql completed
Execution of obs_object_scripts_main.sql started
Execution of obs_object_scripts_main.sql completed
Execution of obpm_object_scripts_main.sql started
Execution of obpm_object_scripts_main.sql completed
Execution of execute-seeds_main.sql started
```

If **DB_WITH_FLYWAY_EXECUTION** set to **YES**

When the installation completes, the below message is displayed

```

Password validated for sys
Password validated for sys
Password validated for COD144_ITR

>>>> STARTING OBDX PRODUCT INSTALLATION <<<<

<<<< Please check the logs file available at ExecInstances/12May0721/logs/app for any error >>>>>>

We are excuting the db with DB WITH FLYWAY_EXECUTION=YES
Starting OBDX Database Installation with OBPM FLAVOR
Database Path: /u02/app/oracle/oradata/OFADB009_bom1cq/OFADB009_BOM1CQ/B2169F489B0C1E32E053C305F40A9E33/datafile
Database Path: /u02/app/oracle/oradata/OFADB009_bom1cq/OFADB009_BOM1CQ/B2169F489B0C1E32E053C305F40A9E33/datafile
Creating Tablespace...
Tablespace Created
Creating User...
User Created
Creating Role...
Role Created
Executing Grants...
OBPM Scripts execution on progress...Please hold on it might take sometime
OBPM Scripts execution Successfully
SUCCESSFULLY installed OBPM database

Starting OBPM Database Installation...
Database Path: /scratch/app/oradata/OA19C
Creating Tablespace...
Tablespace Created
Creating User...
User Created
Creating Role...
Roles Created
Executing Grants...
Executing OBPM Grants...
OBPM Scripts execution on progress...Please hold on it might take sometime

```

When the installation completes, the below message is displayed

```

Gradle Build Created Successfully
Starting Weblogic Domain Creation...

Starting WEBLOGIC Setup and Configuration...
Weblogic Domain Created Successfully
Generating 2,048 bit DSA key pair and self-signed certificate (SHA256withDSA) with a validity of 9,999 days
for: CN=Developer, OU=Department, O=Company, L=City, ST=State, C=CA
[Storing /home/devops/domain/OBDX211TEST11/authserver.keystore]

Warning:
The JCEKS keystore uses a proprietary format. It is recommended to migrate to PKCS12 which is an industry standard format using "keytool -importkeystore -src
keystore /home/devops/domain/OBDX211TEST11/authserver.keystore -destkeystore /home/devops/domain/OBDX211TEST11/authserver.keystore -deststoretype pkcs12".
Starting Datasource Creation...
Datasource created Successfully
Starting JMS Creation...
JMS created Successfully
Starting Deployment Creation...
Deployment created Successfully

Successfully Setup and Configured WEBLOGIC...

>>>> OBDX PRODUCT INSTALLATION COMPLETED SUCCESSFULLY <<<<

[devops@obdxwls OBDX_Installer]$

```


5

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/obdx_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/app_debug.log <OBAPI INSTALLER DIR>/ExecInstances/<DDMonthHHMM> /logs/app/domain.log <OBAPI INSTALLER DIR>/ExecInstances/<DDMonthHHMM> /logs/app/datasource.log <OBAPI INSTALLER DIR>/ExecInstances/<DDMonthHHMM> /logs/app/jms.log <OBAPI INSTALLER DIR>/ExecInstances/<DDMonthHHMM> /logs/app/deployment.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 Troubleshoot 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 Troubleshoot section to re-run the policy

Check all the logs for any errors.

6

Installer Scope

OBAPI Installer currently covers below activities:

Flavor: Third Party system (OBAPI with THP)

Flavor	Activity	Detailed Activity List	New Installation	Reinstall	
	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	✓	✓	
	OBAPI with THP	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			✓	✓	
OBAPI Configuration	OBAPI Configuration	Copy config files into OBAPI Installation Home	✓	✓ (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 with THP	OBAPI DB Setup	Create Tablespace	✓	NA
		Create Schema and Role	✓	✓ (drop and re-create objects)
		Grants	✓	✓

Flavor	Activity	Detailed Activity List	New Installation	Reinstall
		Load DB object (DDL's and DML's)	✓	✓
		Compile Schema	✓	✓
		Policy Seeding	✓	✓
		Create Tablespace	✓	NA
		Create Schema and Role	✓	✓ (drop and re-create objects)
	EHMS DB Setup	Grants	✓	✓
		Load DB object (DDL's and DML's)	✓	✓
		Compile Schema	✓	✓
		Create and Configure AdminServer, Machine, Managed Server and Cluster	✓	✓
		Configure NodeManager	✓	✓
		Configure JDBC	✓	✓
	Weblogic Setup and Configuration	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)

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

Flavor	Activity	Detailed Activity List	New Installation	Reinstall
		Create Tablespace	✓	NA
		Create Schema and Role	✓	✓ (drop and re-create objects)
		Grants	✓	✓
		Load DB object (DDL's and DML's)	✓	✓
	OBAPI DB Setup	Execute OBPM HOST specific scripts	✓	✓
		Compile Schema	✓	✓
		Policy Seeding	✓	✓

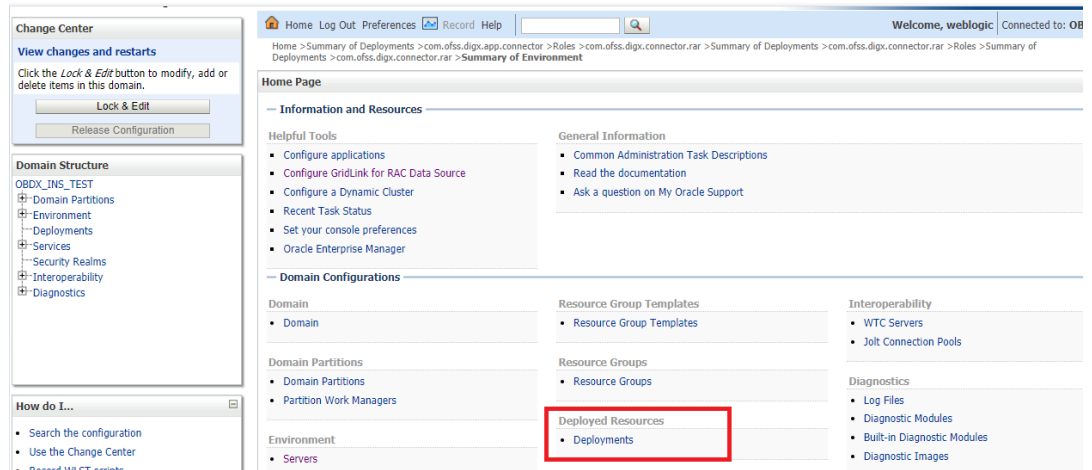
Flavor	Activity	Detailed Activity List	New Installation	Reinstall
	EHMS DB Setup	Create Tablespace	✓	NA
		Create Schema	✓	✓ (drop and re-create objects)
		Grants	✓	✓
		Load DB object (DDL's and DML's)	✓	✓
		Compile Schema	✓	✓
	Weblogic Setup and Configuration	Create and Configure AdminServer, Machine,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

7

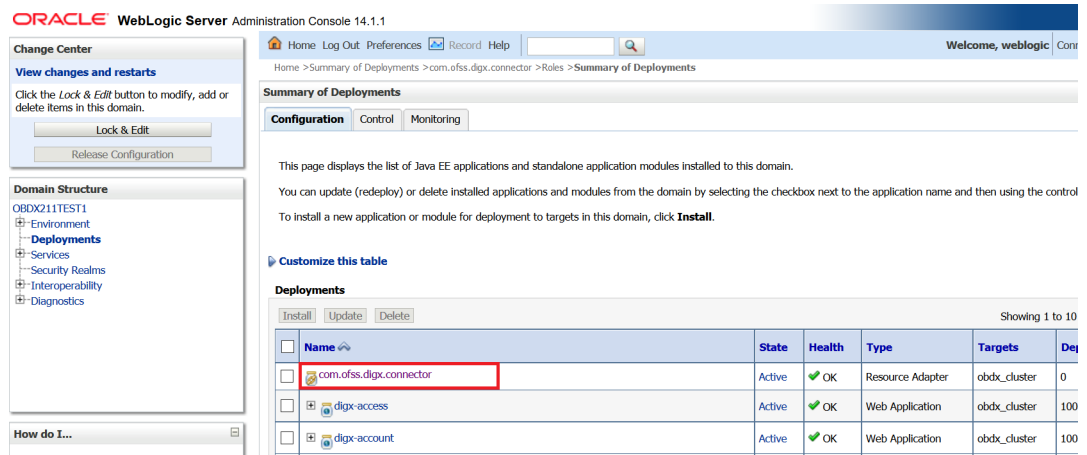
Post Installation Steps

Outbound credential mappings

1. Login Weblogic Admin Console. Click on **Deployments**.



2. Click on com.ofss.digx.connector .
3. Click on **Security Tab** → **Outbound Credential Mappings**.



ORACLE WebLogic Server Administration Console 14.1.1

Home Log Out Preferences Record Help

Home > Summary of Deployments > com.ofss.digx.connector > Roles > Summary of Deployments > com.ofss.digx.connector > Roles > com.ofss.digx.connector

Settings for com.ofss.digx.connector

Overview Deployment Plan Configuration **Security** Targets Control Testing Monitoring Notes

Roles Policies **Outbound Credential Mappings** Inbound Principal Mappings Principals

Outbound credential mappings let you map WebLogic Server usernames to usernames in the Enterprise Information System (EIS) to which credential mappings for all outbound connection pools in the resource adapter, or specify particular outbound credential mappings for individual for this resource adapter.

Customize this table

Outbound Credential Mappings

New Delete

<input type="checkbox"/>	WLS User	EIS User	Outbound Connection Pool
There are no items to display			

New Delete

4. Click on **New**.

ORACLE WebLogic Server Administration Console 14.1.1

Home Log Out Preferences Record Help

Home > Summary of Deployments > com.ofss.digx.connector > Roles > Summary of Deployments > com.ofss.digx.connector > Roles

Settings for com.ofss.digx.connector

Overview Deployment Plan Configuration **Security** Targets Control Testing Monitoring Notes

Roles Policies **Outbound Credential Mappings** Inbound Principal Mappings Principals

Outbound credential mappings let you map WebLogic Server usernames to usernames in the Enterprise Information System (EIS) to which credential mappings for all outbound connection pools in the resource adapter, or specify particular outbound credential mappings for individual for this resource adapter.

Customize this table

Outbound Credential Mappings

New Delete

<input type="checkbox"/>	WLS User	EIS User	Outbound Connection Pool
There are no items to display			

New Delete

5. Select **ra/DIGXConnectorAES** → **Next**.

View changes and restarts

Click the *Lock & Edit* button to modify, add or delete items in this domain.

Lock & Edit

Release Configuration

Domain Structure

OBDX_INS_TEST

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

How do I...

• Create outbound credential mappings

System Status

Health of Running Servers as of 10:57 AM

Home > Summary of Deployments > com.ofss.digx.connector.rar > Roles > Summary of Deployments > com.ofss.digx.connector.rar > Summary of Environment > Summary of Deployments > com.ofss.digx.app.connector > Summary of Deployments > com.ofss.digx.connector.rar

Create a New Security Credential Mapping

Back Next Finish Cancel

Outbound Connection Pool

Which Outbound Connection Pool would you like the credential map to be associated with? Selecting Resource Adapter Default will configure the credential mapping for all Outbound Connection Pools in this resource adapter. Each Outbound Connection Pool can then configure themselves to override these credentials.

Customize this table

Create a New Security Credential Map Entry for:

Showing 1 to 10 of 11 Previous

<input type="checkbox"/>	Outbound Connection Pool
<input checked="" type="checkbox"/>	ra/DIGXConnectorAES
<input type="checkbox"/>	ra/DIGXConnectorAPNS
<input type="checkbox"/>	ra/DIGXConnectorBIREPORTS
<input type="checkbox"/>	ra/DIGXConnectorFCM
<input type="checkbox"/>	ra/DIGXConnectorFILEUPLOAD
<input type="checkbox"/>	ra/DIGXConnectorGENERICREST
<input type="checkbox"/>	ra/DIGXConnectorIPM_OBDX_BU
<input type="checkbox"/>	ra/DIGXConnectorIPM_OBDX_BU1
<input type="checkbox"/>	ra/DIGXConnectorJWTOKEN
<input type="checkbox"/>	ra/DIGXConnectorMERCHANT

6. Select “Default User” → Next.

View changes and restarts
Click the *Lock & Edit* button to modify, add or delete items in this domain.
Lock & Edit
Release Configuration

Domain Structure
OBDX_INS_TEST
Domain Partitions
Environment
Deployments
Services
Security Realms
Interoperability
Diagnostics

How do I...
Create outbound credential mappings

System Status
Health of Running Servers as of 10:59 AM

Home > Summary of Deployments > com.ofss.digx.connector.rar > Roles > Summary of Deployments > com.ofss.digx.connector.rar > Summary of Environment > Summary of Deployments > com.ofss.digx.app.connector > Summary of Deployments > com.ofss.digx.connector.rar

Create a New Security Credential Mapping
Back Next Finish Cancel

WebLogic Server User
Select the WebLogic Server user that you would like to map an EIS user to. Selecting 'User for creating initial connections' will configure the user that will be used for creating connections when the resource adapter is first started. Selecting 'Default User' will configure the user that will be used as the default for any authenticated WebLogic Server user that does not have a credential mapping specifically for them. Selecting 'User for unauthenticated user' will configure the user that will be used for an unauthenticated WebLogic Server user. Selecting 'Configured User' you must type in the WebLogic Server user that you are configuring. This user must be a configured WebLogic Server user.

User for creating initial connections
 Default User
 Unauthenticated WLS User
 Configured User Name

WebLogic Server User Name:

Back Next Finish Cancel

7. Enter “EIS User Name”. It should be set to AES_KEY.

8. Enter “EIS Password”. Password should be any 16 characters.

Change Center
View changes and restarts
Click the *Lock & Edit* button to modify, add or delete items in this domain.
Lock & Edit
Release Configuration

Domain Structure
OBDX211TEST1
Environment
Deployments
Services
Security Realms
Interoperability
Diagnostics

How do I...
Record Help

Home > Summary of Deployments > com.ofss.digx.connector > Roles > Summary of Deployments > com.ofss.digx.connector > Role

Create a New Security Credential Mapping
Back Next Finish Cancel

EIS User Name and Password
Configure the EIS User Name and Password that you would like to map the WebLogic Server User to:
* Indicates required fields

Enter the EIS User Name:
* EIS User Name:

Enter the EIS Password:
* EIS Password:

* Confirm Password:

Back Next Finish Cancel

9. Click **Finish**.

Back Next Finish Cancel

EIS User Name and Password
Configure the EIS User Name and Password that you would like to map the WebLogic Server User to:
* Indicates required fields

Enter the EIS User Name:
* EIS User Name:

Enter the EIS Password:
* EIS Password:

* Confirm Password:

Back Next Finish Cancel

10. Check AES_KEY mapping is created successfully.

Customize this table

Outbound Credential Mappings

<input type="checkbox"/> WLS User ↕	EIS User	Outbound Connection Pool
<input type="checkbox"/> Default	AES_KEY	ra/DIGXConnectorAES

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**.

Functionality / Module	OutBound Connection Pool Name
VAM	ra/DIGXConnectorOBVAM

Fileupload with UBS

Refer below document for File upload configuration with UBS

- **Oracle Banking APIs File Upload Report Configuration** user manual.

Origination with OBO

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

- **Oracle Banking APIs OBO and Third Party Setup and Configuration** user manual.

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** user manual.

OHSOHS 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** user manual.

Feedback module:

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

8

OBAPI Logging Configuration

Logging Level Configuration with SLF4J & Logback in Weblogic

Logging at package and class levels can be externalized/customized by maintaining a common logback file outside the application for all the wars. This file will be configured as a server start argument.

1. Use the attached sample reference file and copy it to any physical path. (For example, /scratch/obapi/domains/obapi_domain/logbackOverride.xml)
logbackOverride.xml

```
<configuration scan="true"
    scanPeriod="10 minutes">

    <appender name="STDOUT"
        class="ch.qos.logback.core.ConsoleAppender">
<!-- encoders are assigned the type
ch.qos.logback.classic.encoder.PatternLayoutEncoder by
default -->
    <encoder>
<pattern>%date{dd MMM yyyy;HH:mm:ss.SSS} [%thread] %X{ecid}
    %-5level %logger{100}[%X{FILE_IDENTIFIER} %X{FILE_REF_ID}] -
    %msg%n</pattern>        </encoder>
    </appender>
    <!-- <logger name="com.ofss.digx.app.sms.service.user.login"
        level="info"/> <logger
name="com.ofss.digx.app.sms.service.user.User" level="debug"/>
    -->
    <root level="ERROR">
<appender-ref ref="STDOUT" />
    </root>
</configuration>
```

2. Configure the same above path in server start arguments as follows.
-Dlogback.configurationFile=/scratch/obapi/domains/obapi_domain/
logbackOverride.xml

Enable package and class level logging :

If you want to change the logging level of a particular class or a package, you can do so by adding the following snippet in the external logback file and taking managed server restart. (Refer to the sample file)

- a. To configure package logging level:
<logger name="com.ofss.digx.app.sms.service.user.login" level="info"/>
- b. To configure class logging level :
<logger name="com.ofss.digx.app.sms.service.user.User" level="debug"/>

 **Note:**

In order to get the changes reflected without server restart, you can add a "scan" attribute to the <configuration> element in the external logback file. By default, the configuration file will be scanned for changes once every minute. To configure your desired scan period, add the attribute "scanPeriod" with value in milliseconds, seconds, minutes, or hours.

For example,

```
<configuration scan="true" scanPeriod="2 minutes">
```

This will scan for the configuration file every 2 minutes for any changes.

Redirecting stdout and stderr logs into a log file :

To redirect standard out and error logs to a log file, please follow the below steps.

Login to Weblogic console → Take Lock & Edit session → Go to Servers inside Environment menu à

Click on the managed server → Go to Logging tab → Advanced → Check the boxes "Redirect stdout logging enabled" and "Redirect stderr logging enabled" as shown below.

Platform Logger Levels: 	Specifies the platform logger and the associated level names set through the WebLogic Server configuration. More Info...
<input checked="" type="checkbox"/>  Redirect stdout logging enabled	Specifies whether the stdout of the JVM in which a WebLogic Server instance runs is redirected to the WebLogic logging system. When this attribute is enabled, the stdout content is published to all the registered log destinations, such as the server terminal console and log file. More Info...
<input checked="" type="checkbox"/>  Redirect stderr logging enabled	Specifies whether the stderr of the JVM in which a WebLogic Server instance runs is redirected to the WebLogic Logging system. When this attribute is enabled, the stderr content is published to all the registered log destinations, such as the server terminal console and log file. More Info...
<input type="checkbox"/> Log monitoring enabled	Enable or disable log monitoring. More Info...

9

OBAPI Product Verification

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

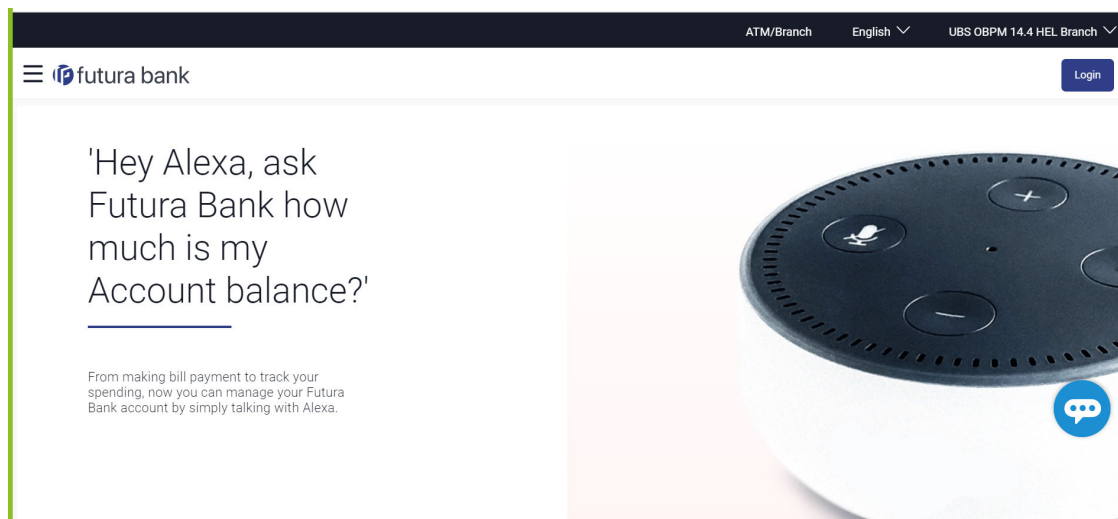
Domainwise deployment wars status

Deployments						
<input type="button" value="Install"/> <input type="button" value="Update"/> <input type="button" value="Delete"/> Showing 1 to 25 of 25 Previous Next						
<input type="checkbox"/>	Name	State	Health	Type	Targets	Deployment Order
<input type="checkbox"/>	com.ofss.digx.connector	Active	OK	Resource Adapter	obdx_cluster	0
<input type="checkbox"/>	digx-admin	Active	OK	Web Application	obdx_cluster	100
<input type="checkbox"/>	digx-auth	Active	OK	Web Application	obdx_cluster	100
<input type="checkbox"/>	digx-cms	Active	OK	Web Application	obdx_cluster	100
<input type="checkbox"/>	digx-coherence	Active	OK	Web Application	obdx_cluster	0
<input type="checkbox"/>	digx-common	Active	OK	Web Application	obdx_cluster	100
<input type="checkbox"/>	digx-corporateloan	Active	OK	Web Application	obdx_cluster	100
<input type="checkbox"/>	digx-creditfacility	Active	OK	Web Application	obdx_cluster	100
<input type="checkbox"/>	digx-edx	Active	OK	Web Application	obdx_cluster	100
<input type="checkbox"/>	digx-eurekaserver	Active	OK	Web Application	obdx_cluster	100
<input type="checkbox"/>	digx-exbfacsimulator	Active	OK	Web Application	obdx_cluster	100
<input type="checkbox"/>	digx-infra	Active	OK	Web Application	obdx_cluster	100
<input type="checkbox"/>	digx-kafkanotification	Active	OK	Web Application	obdx_cluster	100
<input type="checkbox"/>	digx-liquiditymanagement	Active	OK	Web Application	obdx_cluster	100
<input type="checkbox"/>	digx-loanapplication	Active	OK	Web Application	obdx_cluster	100
<input type="checkbox"/>	digx-payments	Active	OK	Web Application	obdx_cluster	100

<input type="checkbox"/>	digx-exbfacsimulator	Active	OK	Web Application	obdx_cluster	100
<input type="checkbox"/>	digx-infra	Active	OK	Web Application	obdx_cluster	100
<input type="checkbox"/>	digx-kafkanotification	Active	OK	Web Application	obdx_cluster	100
<input type="checkbox"/>	digx-liquiditymanagement	Active	OK	Web Application	obdx_cluster	100
<input type="checkbox"/>	digx-loanapplication	Active	OK	Web Application	obdx_cluster	100
<input type="checkbox"/>	digx-payments	Active	OK	Web Application	obdx_cluster	100
<input type="checkbox"/>	digx-pfm	Active	OK	Web Application	obdx_cluster	100
<input type="checkbox"/>	digx-pm	Active	OK	Web Application	obdx_cluster	100
<input type="checkbox"/>	digx-processmanagement	Active	OK	Web Application	obdx_cluster	100
<input type="checkbox"/>	digx-retail	Active	OK	Web Application	obdx_cluster	100
<input type="checkbox"/>	digx-scf	Active	OK	Web Application	obdx_cluster	100
<input type="checkbox"/>	digx-scfcm	Active	OK	Web Application	obdx_cluster	100
<input type="checkbox"/>	digx-shared-libs (22.2.0.0,4208)	Active		Library	AdminServer, obdx_cluster	0
<input type="checkbox"/>	digx-tradefinance	Active	OK	Web Application	obdx_cluster	100
<input type="checkbox"/>	digx-virtual-account	Active	OK	Web Application	obdx_cluster	100

Showing 1 to 25 of 25 Previous | Next

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 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

Mobile Application Builder:

Refer below documents for Mobile Applications build and setup.

Oracle Banking APIs Mobile Application Builder-Android

Oracle Banking APIs 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>', 'of
ssuser', 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>', 'o
fssuser', sysdate, 'ofssuser', sysdate);

```



Note:

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

10

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
- 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)

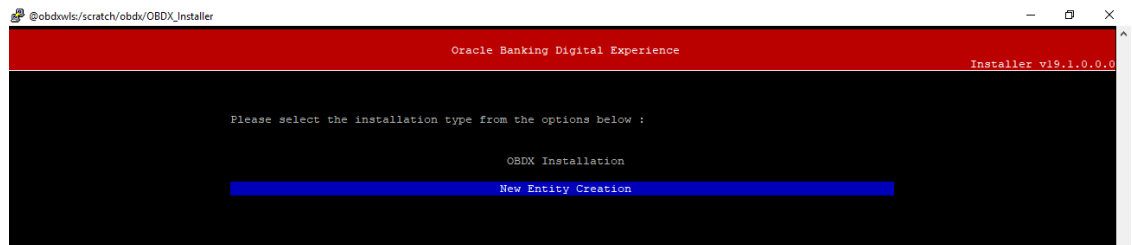
Ensure OBAPI installation details (OBAPI DB; WLS etc) are maintained in `installer.properties` and user running the installer has read-write permissions.

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.

```
@obdwls/scratch/obdv/OBDX_Installer
Oracle Banking Digital Experience
Installer v19.1.0.0.0

Enter the entity code :
>>OBDX_BUI
Valid.
Enter password for the OBDX Schema :
>>*****

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

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 OBPM DB hostname :
>>

Enter the OBPM DB port :
>>

Enter the OBPM 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 OBPM DB hostname :
>>whf00jml.in.oracle.com
Valid.
Enter the OBPM DB port :
>>1522
Valid.
Enter the OBPM SID :
>>oral9c.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 :
>>*****
Use (↑/↓) keys to navigate between questions and press 'enter' after editing them

```

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 the existing OBPM host schema name :
>>
Enter the password for existing OBPM host schema :
>>
Enter new OBPM BIAL 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:\develops\flexcube\obpm\OBPM_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 progress...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

```
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 successfully.

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:

```
[obdx@obdxvm ~]$ python3 runInstaller.py
Execution of DB script for OBDXBU4 started
Executed DIGX_FW_CONFIG_ALL_0.sql successfully
Execution completed.
```

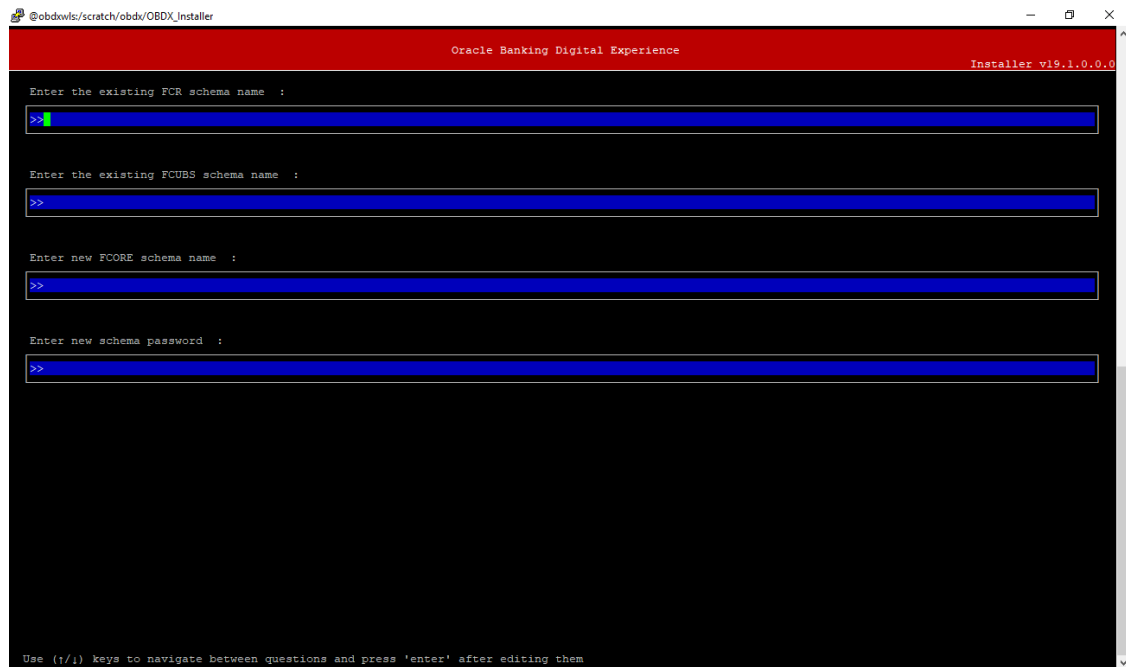
No additional steps/ configuration are required.

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



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



```

@obdwls/scratch/obdv/OBDX_Installer
Oracle Banking Digital Experience
Installer v19.1.0.0.0

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 (t/l) 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

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.

```

[obdwls@obdv ~]$ 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 progress...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 successfully.
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)).

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

1. 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=hostname.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

Environment variables	Parameter	Description	Example
Environment variables to set for flavor: FCORE UBS (14.6.0.0.0 release) OBPM (14.6.0.0.0 release)	Entity_Code	Entity code which has been entered from screen	<code>export Entity_Code=OBDX_BU7</code>
	SCHEMA_PASS	Password for existing OBAPI schema	<code>export SCHEMA_PASS=devops#obapi182</code>
	ENTITY_EHMS_DATABASE_HOSTNAME	Hostname of the EHMS HOST database host server	<code>export ENTITY_EHMS_DATABASE_HOSTNAME=xx.xx.xx.xx</code>
	ENTITY_EHMS_DATABASE_HOST_PORT	Port of the EHMS HOST database host server	<code>export ENTITY_EHMS_DATABASE_HOST_PORT=1521</code>
	ENTITY_EHMS_DATABASE_HOST_SID	EHMS Host database Service Name	<code>export ENTITY_EHMS_DATABASE_HOST_SID=obdxdb.in.oracle.com</code>

Environment variables	Parameter	Description	Example
	<code>ENTITY_EHMS_DBA_DI RECTORY_NAME</code>	Oracle Directory name in which you want the EHMS (HostInterface) schema datafile (dbf). Enter only the name and NOT the path	<code>export ENTITY_EHMS_DBA_DI RECTORY_NAME=TBS_D IR</code>
	<code>ENTITY_EHMS_DATABA SE_SYS_USER</code>	Username with 'sys' privileges	<code>export ENTITY_EHMS_DATABA SE_SYS_USER=sys</code>
	<code>ENTITY_EHMS_DATABA SE_SYS_PASS</code>	Password for EHMS sys user	<code>export ENTITY_EHMS_DATABA SE_SYS_PASS=devops @sys</code>
	<code>ENTITY_EHMS_SCHEMA _NAME</code>	Complete EHMS (HostInterface) schema name you want installer to create as new schema.	<code>export ENTITY_EHMS_SCHEMA _NAME=OBAPIEHMS</code>
	<code>ENTITY_EHMS_SCHEMA _PASS</code>	Password for new EHMS schema on EHMS HOST database	<code>export ENTITY_EHMS_SCHEMA _PASS=devops#ehms</code>
	<code>ENTITY_EHMS_HOST_S HEMA_NAME</code>	EXISTING EHMS Host schema name	<code>export ENTITY_EHMS_HOST_S HEMA_NAME=EHMSSHOS T</code>
	<code>ENTITY_EHMS_HOST_S HEMA_NAME_PASS</code>	Password of existing HOST EHMS schema (Existing) **This parameter is only required for UBS & OBPM Host	<code>export ENTITY_EHMS_HOST_S HEMA_NAME_PASS=eh mshst</code>
	<code>WLS_DOMAIN_PASS</code>	Password for Weblogic admin console	<code>export WLS_DOMAIN_PASS=we blogic182</code>
	<code>ENTITY_EHMS_CCY</code>	Country Code for new or additional entity home branch **This parameter is only required for UBS & OBPM Host	<code>export ENTITY_EHMS_CCY=GB</code>
	<code>ENTITY_EHMS_FCORE_ FCUBS_SCHEMA_NAME</code>	FCORE-FCUBS HOST schema name **This parameter is only required for FCORE	<code>export ENTITY_EHMS_FCORE_ FCUBS_SCHEMA_NAME= FCRUBSHOST</code>
Environment variables to set for flavor: OBAPI (Third-party HOST)	<code>Entity_Code</code>	Entity code which has been entered from screen	<code>export Entity_Code=OBDX_B U1</code>
	<code>SCHEMA_PASS</code>	Password for existing OBAPI schema	<code>export SCHEMA_PASS=welcom e1</code>

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

```
[devops@ /]$
[devops@ /]$ export Entity_Code=OBDX_BU7
[devops@ /]$ export SCHEMA_PASS=devops#obdx182
[devops@ /]$ export ENTITY_EHMS_DATABASE_HOSTNAME=mumaa012.in.oracle.com
[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 successfully.
Exiting WebLogic Scripting Tool.
Entity successfully configured.
```

Post successful installation refer to section [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))

3. 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)

```
[@vcops] OGCX_Installer]$ python runinstaller.py --silent --addEntity
Password validated for OGCX_1@311R3
Execution of DB scripts for OGCX_B01 started
Executed D17X_FW_CONFIG_ALL_0.sql successfully
Execution completed.
```

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OBAPI Product Security

Refer below document for OBAPI product security configuration

Oracle Banking APIs Security Guide

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OBAPI Product – Best Practice

- [Tablespace for AUDIT INDEX](#)

13.1 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  
  _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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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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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:



```
Oracle Banking Digital Experience
Enter the password for the user with sys privileges 'sys' :
>>*****
Invalid input. Please enter a valid password.
```

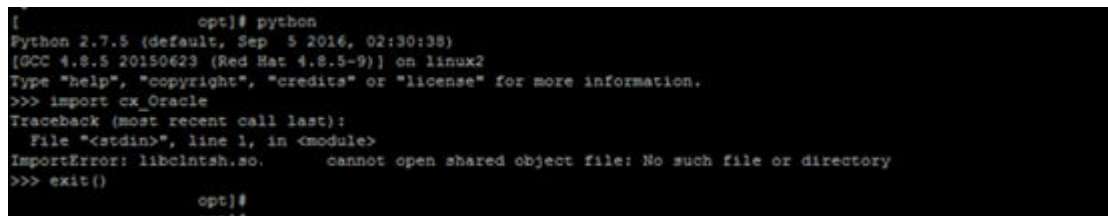
Try one of the following:

- 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/19.10/client64/lib:$LD_LIBRARY_PATH
python
import cx_Oracle
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:

```
/scratch/obddevops/OBDX_Installer/ExecInstances/13Jul1338/logs/db/DB_installation.log - obddevops@mum0a0qk - Editor - WinSCP
2017-07-13 13:43:32,302 DEBUG Executed /scratch/jenkins/OBDX_Installer/ExecInstances/13Jul1338/db/UBS/entity_objects/TYPE/TY_ACTB_VD_BAL_INPUT.sql successful
2017-07-13 13:43:32,322 DEBUG Executed /scratch/jenkins/OBDX_Installer/ExecInstances/13Jul1338/db/UBS/entity_objects/TYPE/TY_ACTB_VD_BAL_RETURN.sql successful
2017-07-13 13:43:32,325 DEBUG Executed /scratch/jenkins/OBDX_Installer/ExecInstances/13Jul1338/db/UBS/entity_objects/SYN/FCC_ACWMS_ALL_AC_ENTRIES.syn successful
2017-07-13 13:43:32,332 DEBUG Executed /scratch/jenkins/OBDX_Installer/ExecInstances/13Jul1338/db/UBS/entity_objects/SYN/fcc_cltbs_liq_settlements.syn successful
2017-07-13 13:43:32,393 DEBUG Executed /scratch/jenkins/OBDX_Installer/ExecInstances/13Jul1338/db/UBS/entity_objects/SPC/DIGX_CLOSING_BAL_HIST.spc successful
2017-07-13 13:43:35,287 DEBUG Executed /scratch/jenkins/OBDX_Installer/ExecInstances/13Jul1338/db/UBS/entity_objects/SPC/DIGX_CLOSING_BAL_HIST.sp successful
2017-07-13 13:43:42,883 DEBUG Executed /scratch/jenkins/OBDX_Installer/ExecInstances/13Jul1338/db/UBS/entity_objects/30B/FCDX_COMPILE_SCHEMA.sql successful
2017-07-13 13:43:42,898 DEBUG Executed /scratch/jenkins/OBDX_Installer/ExecInstances/13Jul1338/db/UBS/entity_objects/VW/Fcat_vw_account_movements1.vw successful
2017-07-13 13:43:42,898 DEBUG total scripts=652
2017-07-13 13:43:42,898 DEBUG scripts successfully executed=644
2017-07-13 13:43:42,911 DEBUG Running execute-seeds.sql
2017-07-13 13:43:42,911 DEBUG Executing /scratch/jenkins/OBDX_Installer/ExecInstances/13Jul1338/db/UBS/execute-seeds.sql
2017-07-13 13:44:02,450 DEBUG Executed /scratch/jenkins/OBDX_Installer/ExecInstances/13Jul1338/db/UBS/seed/APPLDATA.sql successful
2017-07-13 13:44:15,511 DEBUG Executed /scratch/jenkins/OBDX_Installer/ExecInstances/13Jul1338/db/UBS/seed/APPLICATIONMESSAGE.sql successful
2017-07-13 13:44:15,521 DEBUG Executed /scratch/jenkins/OBDX_Installer/ExecInstances/13Jul1338/db/UBS/seed/MSTAPPSEQUENCE.sql successful
2017-07-13 13:44:15,616 DEBUG Executed /scratch/jenkins/OBDX_Installer/ExecInstances/13Jul1338/db/UBS/seed/MSTENTITYNETWORKCODES.sql successful
2017-07-13 13:44:17,379 DEBUG Executed /scratch/jenkins/OBDX_Installer/ExecInstances/13Jul1338/db/UBS/seed/MSTHOSTAPPDATAMAP.sql successful
2017-07-13 13:44:19,485 DEBUG Executed /scratch/jenkins/OBDX_Installer/ExecInstances/13Jul1338/db/UBS/seed/MSTHOSTINTERFACE.sql successful
2017-07-13 13:44:21,468 DEBUG Executed /scratch/jenkins/OBDX_Installer/ExecInstances/13Jul1338/db/UBS/seed/MSTPRODUCTMAP.sql successful
2017-07-13 13:44:27,224 DEBUG Executed /scratch/jenkins/OBDX_Installer/ExecInstances/13Jul1338/db/UBS/seed/MSTPROPERTIES.sql successful
2017-07-13 13:44:28,778 DEBUG Executed /scratch/jenkins/OBDX_Installer/ExecInstances/13Jul1338/db/UBS/seed/MSTQUERY.sql successful
2017-07-13 13:45:39,980 DEBUG Executed /scratch/jenkins/OBDX_Installer/ExecInstances/13Jul1338/db/UBS/seed/MSTUIDOWNLOADPARAMS.sql successful
2017-07-13 13:45:40,174 DEBUG Executed /scratch/jenkins/OBDX_Installer/ExecInstances/13Jul1338/db/UBS/seed/SW_HATL_DIR.sql successful
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/MSTENTITYUSERYPELANG.sql successful
2017-07-13 13:45:41,796 ERROR Executed /scratch/jenkins/OBDX_Installer/ExecInstances/13Jul1338/db/UBS/seed/mstlang.sql failed
2017-07-13 13:45:41,796 DEBUG total scripts=15
2017-07-13 13:45:41,797 DEBUG scripts successfully executed=14
2017-07-13 13:45:42,137 DEBUG Connected to mum00apd.in.oracle.com on port 1522
2017-07-13 13:45:49,609 DEBUG SUCCESSFULLY installed UBS database
2017-07-13 13:45:49,612 DEBUG Creating ABOUT table
2017-07-13 13:45:49,643 DEBUG Connected to obdxdn.in.oracle.com on port 1521
2017-07-13 13:45:49,651 DEBUG Executed DIGX_FW_ABOUT_UBS.sql successful
```

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 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>"
```

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>"
```

e.g.

```
java -jar -Djava.util.logging.config.file='Entitlement_log4j.properties'
com.ofss.digx.utils.entitlement.feed.data.jar 'Resources.csv,Entitlement.c
sv,
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>"
```

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.

16

List of Topics

This user manual is organized as follows:

Table 16-1 List of Topics

Topics	Description
Preface	This topic provides information on the introduction, intended audience, list of topics, and acronyms covered in this guide.
Introduction	This topic provides a step by step overview on the installation process of the solution.
Pre-requisite	This topic provides information about prerequisites software installation required for OBDX & OBDX installer.
Installation using Silent Mode	This topic describes how to run the OBDX installer in silent mode.
Installer Verification	This topic explains the installer verification.
Installer Scope	This topic provides information about activities covered by OBDX Installer such as Third Party system (OBDX with THP) Oracle FLEXCUBE Core Banking (OBDX with FCORE), Oracle FLEXCUBE Universal Banking with Oracle Banking Payments (OBDX with OBPM).
Post Installation Steps	This topic describes post installation steps.
OBAPI Logging Configuration	This topic provides information about the logging configuration in WebLogic standard edition.
OBAPI Product Verification	This topic provides information about the how to verify all deployed applications are in Active state.
Multi Entity	This topic describes steps to add entity to existing OBDX with supported host system.
Multi-entity installation using Silent Mode	This topic describes how to run the OBDX installer for add entity in silent mode.
OBAPI Product Security	This topic provides information about the OBDX product security configuration.
OBAPI Product – Best Practice	This topic provides information on best practises followed in OBDXsuch as space for AUDIT INDEX.
JPA and OBAPI multi-cluster	This topic provides information about the JPA related changes to be implemented in a multi-cluster environment.
Troubleshoot Overview	This topic describes how to troubleshoot OBDX setup.

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