# Oracle® Banking APIs Installation Guide





Oracle Banking APIs Installation Guide, Release 25.1.0.0.0

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### **Preface**

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- Documentation Accessibility
- Critical Patches
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### Purpose

This guide is designed to help acquaint you with the Oracle Banking Digital Experience 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

# **Documentation Accessibility**

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Bulletins. All critical patches should be applied in a timely manner to ensure effective security, as strongly recommended by Oracle Software Security Assurance.

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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.
italic	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



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### 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



# **Prerequisites**

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

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

Installer Pre-requisite Installation

#### Python 3.11 for Linux Operating System: --

1. Execute below commands to install the python 3.11.9

```
[devops@obdxwls /]$ python3.11 -V
Python 3.11.9
```

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

```
pip3.11 install --upgrade pip
pip3.11 install cx-Oracle==8.3
```

```
root@~ Python-3.11.0]# pip3.11 install cx-Oracle==8.1.0

Collecting cx-Oracle==8.1.0

Downloading https://files.pythonhosted.org/packages/51/3a/f63cf2eec42b32874af13f0a2deb5d41a/
829kB 130kB/s

Installing collected packages: cx-Oracle

Successfully installed cx-Oracle-8.1.0
```

```
pip3.11 install urwid==2.6.14
```

```
root@~ Python-3.11.0]# pip3.11 install urwid==2.6.14

Collecting urwid==2.6.14
  Using cached urwid-2.6.14.tar.gz (650 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-2.6.14
```

#### Installer Pre-requisite verification

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



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**

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

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

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.



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**

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

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

```
[devops@obdxwls /]$ python3.11 -V
Python 3.11.9
```

#### 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

```
python3.11 -V
```

```
[devops@obdxwls /]$ python3.11

Python 3.11.9 (main, Dec 9 2024, 00:00:00) [GCC 11.5.0 20240719 (Red Hat 11.5.0-2.0.1)] on linux

Type "help", "copyright", "credits" or "license" for more information.

>>> import urwid

>>> urwid.__version__
'2.6.14'

>>> ■
```

#### Note:

Ensure Python 3.11.9 supported version is installed. Above command should reflect the same.

#### cx Oracle & Urwid:



1. Execute python command

python



Ensure Python 3.11.0 version should be available in PATH variable. Above execution should be done using Python 3.11.0.

2. Import Urwid and check version

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

```
[devops@obdxwls /]$ python3.11
Python 3.11.9 (main, Dec 9 2024, 00:00:00) [GCC 11.5.0 20240719 (Red Hat 11.5.0-2.0.1)] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> import cx_Oracle
>>> cx_Oracle.version
'8.3.0"
>>> ■
```

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

#### Note:

Ensure Urwid 2.6.14 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
```

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

### Note:

Ensure cx\_Oracle 8.3.3 supported version is installed. Above command should reflect the same.

### 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>/ installables/OBAPI/BASE/25.1.0.0.0/config.
- Open the "installer.properties" file to maintain key configurations for BASE ENTITY (OBAPI\_BU)

#### **IMPORTANT**:

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

Only below parameters should be set in installer.properties file

Component	Parameter	Description	Example
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	obdxdb.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'.	DEV
		SHOULD BE IN UPPERCASE ONLY.	
	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_DIR ECTORY_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
configured only in-	EHMS_DATABASE_HOSTN AME	Enter the hostname for EHMS database server	abc.xyz.com
case of FLAVOR as UBS,FCORE&OBPM)	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	EHMS182SCHEMA
		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_U SER	Enter the username with 'sys' privileges	Sys
	EHMS_DATABASE_SID	Enter the EHMS database Service Name	obdxehms.in.oracle.com
	EHMS_HOST_SCHEMA_NA ME	Enter the EXISTING EHMS HOST schema name	OBAPIUBS
	EHMS_CCY(to be configured for UBS and OBPM HOST only)	Enter the Country code for EHMS HOME Branch	GB
	EHMS_HB (to be configured for UBS and OBPM HOST only)	Enter the Branch code for code for EHMS HOME Branch	AT3
	EHMS_FCORE_FCUBS_SC HEMA_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/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/ jdk17_0_124
	DB_EXECUTION_TYPE_H OME	Path where FLYWAY is installed	/home/obapiuser/ (flyway-8.3)
		For CX_ORACLE, no need to update/can be empty	[No update required for cx_oracle]
	DB_EXECUTION_TYPE	Database execution type	FLYWAY/CX_ORACLE
	GRADLE_HOME	Path where GRADLE is installed	/home/obapiuser/ gradle-7.9



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.	/home/obapiuser/obapi
		DO NOT KEEP INSTALLATION_HO ME AS MiddlewareHome.	
	WLS_DOMAIN_PATH	Path where OBAPI Weblogic domain should be created. Users can now enter custom path as per their requirements.	/home/obapiuser/ domains
	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_SS L_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.	obapi_domain1
	WLS_DOMAIN_ADMIN_US ER	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	obapi_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.	/scratch/obapi/ FileUpload
		DO NOT KEEP path as INSTALLATION_HO ME or as sub directory inside INSTALLATION_HO ME.	
	WLS_JMS_AUDIT_PS (to be configured for all OBAPI supported HOST)	Set the paths for the persistent store of the Audit JMS modules.	/scratch/obapi/Audit
		DO NOT KEEP path as INSTALLATION_HO ME or as sub directory inside INSTALLATION_HO ME.	



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_HO ME or as sub directory inside INSTALLATION_HO ME.	/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_HO ME or as sub directory inside INSTALLATION_HO ME.	/scratch/obapi/JPA
	WLS_JMS_EXTSYSRECEI VER_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_HO ME or as sub directory inside INSTALLATION_HO ME.	/scratch/obapi/Receiver
	WLS_JMS_EXTSYSSENDE R_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_HO ME or as sub directory inside INSTALLATION_HO ME.	/scratch/obapi/Sender



Component	Parameter	Description	Example
OBAPI Application Administrator user details	OBAPI_ADMIN_USERNAM E	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 prerequisite document (refer To create User and mapping it to the Group section)	superadmin
	OBAPI_ADMIN_EMAIL	Enter the Email ID for OBAPI application admin user.	superadmin@oracle.com
	OBAPI_ADMIN_CONTACT _NO	Enter the mobile number for OBAPI application admin user.	+911234567890
		COUNTRY CODE IS MUST.	



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.

#### Note:

When Proceeding with Product as OBRH or OBAPI+OBRH then only need to update OBRH\_config.properties.

Navigate to "<OBAPI INSTALLER DIR>/ installables/OBAPI/BASE/25.1.0.0.0/config"

Open the "OBRH\_config.properties" file to maintain key configurations for BASE ENTITY (OBRH).



```
MManaged Server name. This will be the name of managed server created in the OBRH cluster. i.e. If this is set as 'clip' managed se WLS_OBRH_MS_SERVER_NAME=obrh_server1

#Name of OBRH cluster.

WLS_OBRH_CLUSTER_NAME=obrh_cluster

#Managed Server port. Managed server in OBRH cluster will utilize this port for hosting OBDX components and associated resources.

#Enter the Database server hostname which will host OBRH and Weblogic RCU schema.

OBRH_DATABASE_HOSTNAME=********

#Enter the Database server listener port no.

OBRH_DATABASE_PORT=61521

#OBRH_DATABASE_SID=obdx

#Enter the username with 'sys' privileges (Generally its 'sys').

OBRH_DATABASE_SYS_USER=sys

#Enter the directory name in which you want the OBRH schema tablespace datafile to be created.

#Logical name (i.e. DIRECTORY_NAME column) from DBA_DIRECTORIES table.

OBRH_DBA_DIRECTORY_NAME=OPATCH_LOG_DIR

#Enter the CMNCORE_SCHEMA_NAME.

CMNCORE_SCHEMA_PASSWORD=
```

#### **IMPORTANT:**

- Enter the values right after the "="sign
- DO NOT change anything to the left of the "="
- Ensure there is no blank space after "=" sign, except specific flavor specific configuration.
   Throughout this document consider UBS as UBS core banking with OBPM as payments engine.

Only below parameters should be set in OBRH\_config.properties file

Component	Parameter	Description	Example
DB details (for OBAPI schema)	OBRH_DATABASE_HO STNAME	Enter the hostname of the database server which would host the database schema for OBRH	abc.xyc.com
	OBRH_DATABASE_PO	Enter the port number of the database listener	61521
	OBRH_DATABASE_SID	Enter the Oracle <b>Service Name</b> for database instance	obapidb.in.oracle.com
	OBRH_DATABASE_SY S_USER	Enter the username with 'sys' privileges	sys
	PLATO_SCHEMA_NAM E	Enter the PLATO SCHEMA name.	OBRH_PLATO
	OBRH_DBA_DIRECTO RY_NAME	Enter the directory name in which you want the OBRH 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



Component	Parameter	Description	Example
Weblogic server details	WLS_OBRH_MS_SERV ER_NAME	Managed server name. This will be the name of the managed server created in the cluster. eg- If this is set as "obrh_server" managed servers would be "obrh_server"	obrh_server
	WLS_OBRH_CLUSTER _NAME	Name of cluster; this cluster would have one single managed server.	obrh_cluster
	WLS_OBRH_MS_SERV ER_PORT	Managed Server Port. Managed server will utilize this port for hosting OBRH components and associated resources. Custom ports are supported.	7005

#### 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 OBRH pre-requisite software installation (or has ownership on Oracle Weblogic home directory)

Ensure OBRH and OBAPI+OBRH Installation home and filestore path's maintained in installer.properties

And OBRH\_config.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 36
drwxrwxrwx 7 devops devops 4096 Mar 13 05:46
drwxrwxrwx 4
               1002
                     1012
                            81 Mar 12 10:35
drwxrwxrwx 10 devops devops 4096 Mar 17 06:25 ExecInstances
                            0 Mar 12 09:44
-rwxrwxrwx 1 devops devops
                                               init__.py
drwxrwxrwx 6 devops devops 103 Mar 17 06:25 core
-rwxrwxrwx 1 devops devops
                              0 Mar
                                    12
                                       12:40 digx-dashboard.log
           1 devops devops 5060 Mar 13 06:08 digx-entitlement-feed-data.log
-rw-r--r--
-rw-r--r-- 1 devops devops
                            376 Mar 13 06:08 digx-feed-data-task.log
drwxrwxrwx 6 devops devops
                             112 Mar 12 11:03 framework
drwxrwxrwx 3 devops devops
                             18 Mar 12 09:44 installables
                              97 Mar 13 05:46 logs
drwxr-xr-x 2 devops devops
-rwxrwxrwx 1 devops devops 14180_Mar 12 18:39 runInstaller.py
```



Enter the following command

python3.11 runInstaller.py

Installation Process

### 3.1 Installation Process

The installation process involves selecting the product, installation flavor, and other required configurations.

#### Note:

- The Back button is available on every screen, allowing users to navigate one step back.
- The Quit option is present on every page, enabling users to terminate the installation.
- Step 1: Selecting the Product
- Step 2: Selecting the Installation Flavour
- Step 3: Selecting the Installation Type
- Step 4: Selecting the Installation Version
- Step 5: Selecting the Component
- Step 6: Selecting the Installation Mode
- Step 7: Verification Screen
- Step 8: Entering Required Credentials
- Step9: OBAPI Routing Hub screen appears
- Step10: Finalizing Installation

### 3.1.1 Step 1: Selecting the Product

You will be prompted to select one of the following products:

- 1. OBDX
- 2. OBRH
- 3. OBDX + OBRH
- 4. New Entity Creation (OBDX)

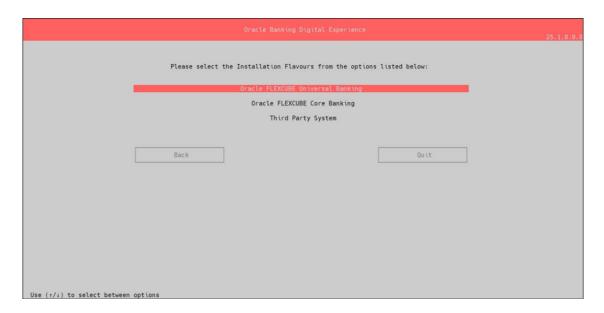




### 3.1.2 Step 2: Selecting the Installation Flavour

Next, choose one of the three installation flavours:

- 1. Oracle FLEXCUBE Universal Banking (OBPM)
- 2. Oracle FLEXCUBE Core Banking (FCORE)
- 3. Third Party System (THP)



### 3.1.3 Step 3: Selecting the Installation Type

Select the Installation Type as:

Base (for new installations)



If need to go 1 step back, need to select back. Else proceed with selecting Installation Flavour.



### 3.1.4 Step 4: Selecting the Installation Version

Choose the Installation Version as:

• **25.1.0.0.0** (in our case)



# 3.1.5 Step 5: Selecting the Component

You have three options to choose from:

- 1. All Installs both Database and Application
- 2. App Installs only the Application



#### 3. Database – Installs only the Database



### 3.1.6 Step 6: Selecting the Installation Mode

Choose the appropriate installation mode:

- New Installation Use this option for a fresh installation of DB or App.
- 2. **Reinstall** Use this option to delete the existing component and reinstall it.

In-case of an existing OBDX 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 OBDX database schema (and OBDX EHMS schema in-case of OBDX UBS;OBPM and FCORE flavor).

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

#### **Key pointers**

- OBDX schema (and OBDX EHMS schema in-case of OBDX 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 recreated again.



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

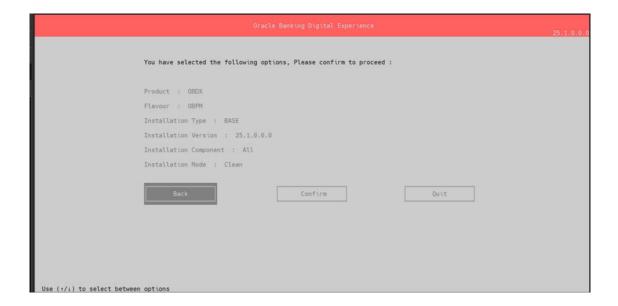


# 3.1.7 Step 7: Verification Screen

At this step, verify the selected configurations:

- Product
- Flavour
- Installation Type
- Installation Version
- Installation Component
- Installation Mode

If everything is correct, proceed by selecting **Confirm**. If there are any mismatches, select **Back** and correct the selections.



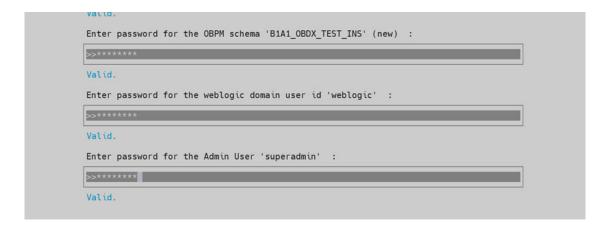
### 3.1.8 Step 8: Entering Required Credentials

You will be prompted to enter the following passwords during installation:

#### FOR OBPM:

- 1. New SYS Password for the Database
- 2. New Schema Password (For Schema Name mentioned in the property file)
- 3. Existing SYS Password for the Database
- 4. Existing Database Schema Password
- 5. New Schema Password for B1A1
- WebLogic Password (for WebLogic administration)
- 7. Superadmin User Password





#### FOR FCORE:

- 1. New SYS Password for the Database
- 2. New Schema Password (For Schema Name mentioned in the property file)

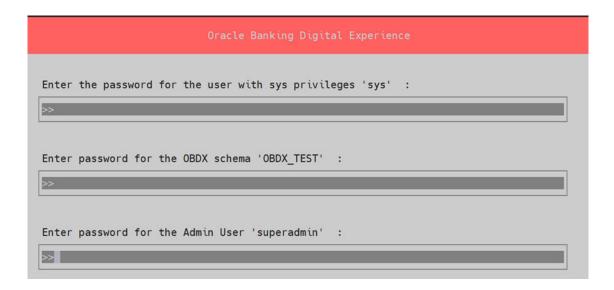


- 3. Existing SYS Password for the Database
- 4. Existing Database Schema Password
- 5. New Schema Password for B1A1
- 6. WebLogic Password (for WebLogic administration)
- 7. Superadmin User Password



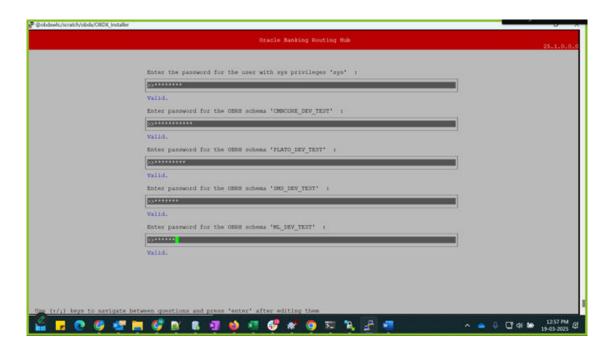
#### FOR THP:

- New SYS Password for the Database
- 2. New Schema Password (For Schema Name mentioned in the property file)
- 3. Superadmin User Password



### 3.1.9 Step9: OBAPI Routing Hub screen appears

In this screen, need to fill schema passwords and sys password details [THIS SCREEN WILL APPEAR ONLY WHEN SELECTING (OBAPI+OBRH) AS PRODUCT



### 3.1.10 Step10: Finalizing Installation

After entering the required credentials, press **ENTER** to start the final installation process.

```
[devops@obdxwls OBDX_Installer]$ python3.11 runInstaller.py

Product : OBDX
Flavour : OBPM
Installation Type : BASE
Installation Version : 25.1.0.0.0
Installation Component : Database
Installation Mode : New
DB Execution Type : CX_ORACLE

>>>> STARTING OBDX PRODUCT INSTALLATION <<<</pre>
Tablespace with name OBDXOBRH_TESTING_NE and AUDIT_OBDXOBRH_TESTING_NE exists
Creating User...
```



# 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>/installables/OBAPI/BASE/25.1.0.0.0/core/config
- Open the installer.properties file to maintain key configurations for BASE ENTITY (obapi\_BU)

Set the environment variables, as shown below

```
[devops@obdxwls OBDX_Installer]$ export JAVA_HOME=/scratch/app/java
[devops@obdxwls OBDX_Installer]$ export PRODUCT=OBDX
[devops@obdxwls OBDX_Installer]$ export FLAVOUR=OBPM
[devops@obdxwls OBDX_Installer]$ export INSTALLER_VERSION=25.1.0.0.0
[devops@obdxwls OBDX_Installer]$ export Installation_Type=BASE
[devops@obdxwls OBDX_Installer]$ export MODE=New
[devops@obdxwls OBDX_Installer]$ export COMPONENT=App
[devops@obdxwls OBDX_Installer]$ export DB_SYS_PASSWORD=******
[devops@obdxwls OBDX_Installer]$ export SCHEMA_PASS=******
[devops@obdxwls OBDX_Installer]$ export DomainPassword=******
[devops@obdxwls OBDX_Installer]$ export DBAuthPassword=******
[devops@obdxwls OBDX_Installer]$ export EHMS_DATABASE_SYS_PASS=******
[devops@obdxwls OBDX_Installer]$ export EHMS_HOST_SCHEMA_NAME_PASS=*******
[devops@obdxwls OBDX_Installer]$ export EHMS_HOST_SCHEMA_NAME_PASS=******
```

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 14.6.0.0.0 (OBAPI with UBS)  FCORE for Oracle FLEXCUBE Core Banking 11.8.0.0.0 (OBAPI with FCORE)	export FLAVOUR=OBPM or export FLAVOUR=FCORE
	JAVA_HOME	Path for Java	export JAVA_HOME=/ scratch/app/java
	PRODUCT	Need to select Product as OBAPI/OBRH/ OBAPI+OBRH	export PRODUCT=OBAPI
	INSTALLER_VERSION	Specify Installer Version	export INSTALLER_VERSION =25.1.0.0.0



<sup>\*\*</sup>Refer to page 9 to 14 (step 4) for filling up installer.properties.

Host	Parameter	Description	Example
	Installation_Type	Specify Type of Installer	export Installation_Type=BAS E
	MODE	Mode of installation.	export MODE=New
		<b>New</b> 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	
	COMPONENT	Need to specify: App: When only App need to be Installed	export COMPONENT=App
		Database: When only Database needs to be Installed	
		All: When both Database and App needs to be installed	
	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=wlsa dmn
	EHMS_DATABASE_SY S_PASS	Sys user password of EHMS HOST database (Existing)	export EHMS_DATABASE_SY S_PASS=obapiehmssy s
	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 =obapiehmshost
	EHMS_SCHEMA_PASS	EHMS_SCHEMA_PASS	Password for new OBAPI EHMS schema on EHMS HOST database



Host	Parameter	Description	Example
	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=oba piadmn
	JAVA_HOME	Path for Java	export JAVA_HOME=/ scratch/app/java
	PRODUCT	Need to select Product as OBAPI/OBRH/ OBAPI+OBRH	export PRODUCT=OBAPI
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
	INSTALLER_VERSION	Specify Installer Version	export INSTALLER_VERSION =25.1.0.0.0
	Installation_Type	Specify Type of Installer	export Installation_Type=BAS E
	Mode	Mode of installation.	export MODE=New
		<b>New</b> 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	
	COMPONENT	Need to specify: App: When only App need to be Installed	export COMPONENT=App
		need to be installed	
		Database: When only Database needs to be Installed	
		Database: When only Database needs to be	
	DB_SYS_PASSWORD	Database: When only Database needs to be Installed All: When both Database and App needs to be	export DB_SYS_PASSWORD= obapi182sys



Host	Parameter	Description	Example
	DomainPassword	Password for Weblogic Administrator console	export DomainPassword=wlsa dmn
	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=oba piadmn

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

```
[devops@obdxwls OBDX_Installer]$ python3.11 runInstaller.py --silent
```

#### **Installation Status**

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

If DB EXECUTION TYPE set to  ${f FLYWAY}$ 

If  $\ensuremath{\mathsf{DB}}\xspace = \ensuremath{\mathsf{EXECUTION}}\xspace = \ensuremath{\mathsf{TYPE}}\xspace$  set to  $\ensuremath{\mathsf{CX}}\xspace = \ensuremath{\mathsf{ORACLE}}\xspace$ 

When the installation completes, the below message is displayed



```
[devops@obdxwls OBDX_Installer]$ python3.11 runInstaller.py

Product : OBDX
Flavour : OBPM
Installation Type : BASE
Installation Version : 25.1.0.0.0
Installation Component : Database
Installation Mode : New
DB Execution Type : CX_ORACLE

>>>> STARTING OBDX PRODUCT INSTALLATION <<<</pre>
Tablespace with name OBDXOBRH_TESTING_NE and AUDIT_OBDXOBRH_TESTING_NE exists
Creating User...
```

When the installation completes, the below message is displayed

```
Starting Flyway execution for User: SMS_DEV_TEST

Please wait...it may take some time...

Flyway executed successfully for User: SMS_DEV_TEST.

Starting Flyway execution for User: ML_DEV_TEST

Please wait...it may take some time...

Flyway executed successfully for User: ML_DEV_TEST

Please wait...it may take some time...

Flyway executed successfully for User: ML_DEV_TEST.

Starting Gradle Build Creation please wait for some time ...

Fadle Build Created Successfully

Starting WEBLOGIC Setup and Configuration...

Starting WEBLOGIC Setup and Configuration...

Neblogic Domain Created Successfully

Starting Demain Created Successfully

Starting JMS Creation...

MMS created Successfully

Starting Deployment creation...

Deployment created Successfully

Successfully Setup and Configured WEBLOGIC...

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

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 dir="" installer="">/ExecInstances/<ddmonthhhmm> /logs/ OBAPI_installer.log</ddmonthhhmm></obapi>
Summarized Database Logs	<obapi dir="" installer="">/ExecInstances/<ddmonthhhmm> /logs/db/ DB_installation.log</ddmonthhhmm></obapi>
Detailed OBAPI DB Logs per SQL file	<obapi dir="" installer="">/ExecInstances/<ddmonthhhmm> /logs/db/ OBAPI/OBAPI.log</ddmonthhhmm></obapi>
Detailed EHMS schema Logs per SQL file (specific to EHMS host system only)	<pre><obapi dir="" installer="">/ExecInstances/<ddmonthhhmm> /logs/db/ <ehmshost>/<ehmshost>.log <ehmshost> - values such as; FCORE; OBPM;</ehmshost></ehmshost></ehmshost></ddmonthhhmm></obapi></pre>
Weblogic Configuration Logs	<pre><obapi dir="" installer="">/ExecInstances/<ddmonthhhmm> /logs/app/ app_debug.log</ddmonthhhmm></obapi></pre>
	<obapi dir="" installer="">/ExecInstances/<ddmonthhhmm> /logs/app/domain.log</ddmonthhhmm></obapi>
	<obapi dir="" installer="">/ExecInstances/<ddmonthhhmm> /logs/app/ datasource.log</ddmonthhhmm></obapi>
	<obapi dir="" installer="">/ExecInstances/<ddmonthhhmm> /logs/app/jms.log</ddmonthhhmm></obapi>
	<obapi dir="" installer="">/ExecInstances/<ddmonthhhmm> /logs/app/deployment.log</ddmonthhhmm></obapi>
Detailed OBAPI policy seeding logs	<obapi dir="" installer="">/ExecInstances/<ddmonthhhmm> /logs/db/ Entitlement.log <obapi dir="" installer="">/ExecInstances/ <ddmonthhhmm> /logs/db/Task.log <obapi dir="" installer="">/ ExecInstances/<ddmonthhhmm> /logs/db/Dashboard_seed.log</ddmonthhhmm></obapi></ddmonthhhmm></obapi></ddmonthhhmm></obapi>



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



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



Log Description	PATH
OBRH DB LOGS (When Product is selected as OBRH or OBAPI+OBRH)	<obapi dir="" installer="">/ExecInstances/<ddmonthhhmm> /logs/db/OBRH</ddmonthhhmm></obapi>
OBRH APP LOGS (When Product is selected as OBRH or OBAPI+OBRH)	<obapi dir="" installer="">/ExecInstances/<ddmonthhhmm> /logs/app</ddmonthhhmm></obapi>

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
		Create Tablespace	✓	NA
		Create Schema and Role	✓	√ (drop and re- create objects)
	OBAPI DB Setup	Grants	✓	✓
	OBAPI DB Selup	Load DB object (DDL's and DML's)	<b>✓</b>	<b>✓</b>
		Compile Schema	✓	✓
		Policy Seeding	✓	✓
	Weblogic Setup and Configuration	Create and Configure AdminServer, Machine, Managed Server and Cluster	✓	✓
OBAPI with THP		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)

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	<b>✓</b>	√ (drop and re- create objects)	
		Grants	✓	✓



Flavor	Activity	Detailed Activity List	New Installation	Reinstall
		Load DB object (DDL's and DML's)	<b>✓</b>	✓
		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)	✓	<b>✓</b>
		Compile Schema	✓	✓
		Create and Configure AdminServer, Machine, Managed Server and Cluster	✓	<b>✓</b>
		Configure NodeManager	✓	✓
		Configure JDBC	✓	✓
	Weblogic Setup and Configuration	JMS servers, Persistent stores and JMS Modules	✓	✓
		Application Deployment	✓	✓
		JTA	✓	✓
		Enable Production Mode	<b>✓</b>	✓
		Start AdminServer and NodeManager	<b>✓</b>	✓
	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
OBAPI with OBPM (14.6.0.0.0 version)	OBAPI DB Setup	Create Schema and Role	<b>✓</b>	√ (drop and re- create objects)
		Grants	✓	✓
		Load DB object (DDL's and DML's)	<b>✓</b>	<b>✓</b>
		Execute OBPM HOST specific scripts	✓	✓
		Compile Schema	✓	✓
		Policy Seeding	✓	✓



Flavor	Activity	Detailed Activity List	New Installation	Reinstall
		Create Tablespace	✓	NA
		Create Schema and Role	✓	√ (drop and recreate objects)
	EHMS DB Setup	Grants	✓	✓
		Load DB object (DDL's and DML's)	✓	✓
		Compile Schema	✓	✓
		Create and Configure AdminServer, Machine, Managed Server and Cluster	<b>V</b>	<b>~</b>
		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)

OBAPI+OBRH Installer currently covers below activities:

Flavor: Third Party system (OBAPI+OBRH with THP)

Detailed Activity List

**New Installation** 

Flavor	Activity	Detailed Activity List	New Installation	Reinstall
OBAPI+OBRH	OBAPI+OBRH DB	Create Tablespace	✓	NA
with THP	with THP Setup	Create Schema and Role	<b>✓</b>	√ (drop and recreate objects)
		Grants	✓	<b>✓</b>
		Load DB object (DDL's and DML's)	<b>✓</b>	<b>✓</b>
	Compile Schema	✓	✓	
		Policy Seeding	✓	✓



Flavor	Activity	Detailed Activity List	New Installation	Reinstall
	Weblogic Setup and Configuration	Create and Configure AdminServer, Machine, Managed Server and Cluster	✓	✓
		Configure NodeManager	✓	<b>✓</b>
		Configure JDBC	✓	✓
		JMS servers, Persistent stores and JMS Modules	✓	✓
		Application Deployment	✓	✓
		JTA	✓	✓
		Enable Production Mode	✓	✓
		Start AdminServer and NodeManager	✓	✓
	OBAPI+OBRH Configuration	Copy config files into OBAPI+OBRH 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+OBRH	OBAPI+OBRH DB	Create Tablespace	✓	NA
with FCORE	Setup	Create Schema and Role	<b>✓</b>	√ (drop and re- create objects)
		Grants	✓	✓
		Load DB object (DDL's and DML's)	<b>✓</b>	✓
		Compile Schema	✓	✓
		Policy Seeding	✓	$\checkmark$
	EHMS DB Setup	Create Tablespace	✓	NA
		Create Schema and Role	<b>✓</b>	√ (drop and re- create objects)
		Grants	✓	$\checkmark$
		Load DB object (DDL's and DML's)	✓	✓
		Compile Schema	✓	✓
	Weblogic Setup and Configuration	Create and Configure AdminServer, Machine, Managed Server and Cluster	<b>✓</b>	✓
		Configure NodeManager	✓	✓
		Configure JDBC	$\checkmark$	✓



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

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

Flavor	Activity	Detailed Activity List	New Installation	Reinstall
OBAPI+OBRH	OBAPI+OBRH DB	Create Tablespace	✓	NA
with OBPM (14.6.0.0.0 version)	Setup	Create Schema and Role	✓	√ (drop and re- create objects)
Version		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 recreate 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	✓	✓



Flavor	Activity	Detailed Activity List	New Installation	Reinstall
		Application Deployment	<b>✓</b>	✓
		JTA	✓	✓
		Enable Production Mode	✓	✓
		Start AdminServer and NodeManager	<b>✓</b>	✓
	OBAPI+OBRH Configuration	Copy config files into OBAPI+OBRH Installation Home	✓	✓ (Delete old and copy new from installer zip)



## Post Installation Steps

#### **Credential Store Mapping**

The OBAPI system utilizes external integrations to facilitate seamless communication with various services. To establish these connections, credentials are required to authenticate and authorize access. These credentials are not hardcoded but rather initialized post-installation. They are subsequently encrypted and stored within the database, ensuring confidentiality and integrity. Upon application startup, the credentials undergo decryption, enabling secure loading into the system. This subsequent section outlines the procedures and guidelines for configuring and managing these credentials within the OBAPI environment.

To configure and add credentials follow the steps mentioned in the below document

Oracle Banking APIs Credential Store Setup Guide

#### Fileupload with UBS

Refer below document for File upload configuration with UBS

Oracle Banking APIs File Upload Report Configuration

#### Origination with OBO

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

Oracle Banking APIs OBO Mid-Office and Third Party Setup and Configuration Guide
 Trade Finance (LC and BG) with OBTFPM

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

Oracle Banking Mid-Office Product Setup and Configuration Guide

#### **OHS**

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

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

Oracle Banking 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.

Table 7-1 WAR deployments

Sr No	Module	Mandatory (Y/N)
Domainwise deployment	s	
2	digx-common	Υ
4	digx-infra	Υ
5	digx-coherence	Υ

Table 7-1 (Cont.) WAR deployments

Sr No	Module	Mandatory (Y/N)
8	digx-extxfacesimulator	Υ
9	digx-cms	N
10	digx-corporateloan	N
11	digx-creditfacility	N
12	digx-edx	N
14	digx-liquiditymanagement	N
16	digx-payments	N
17	digx-pfm	N
19	digx-processmanagement	N
20	digx-retail	N
21	digx-scf	N
22	digx-scfcm	N
23	digx-tradefinance	N
24	digx-virtual-account	N
25	digx-genai	Υ
26	digx-ml-Indb	Υ
27	digx-sms	Υ
28	digx-ukob	Υ
29	digx-webauthn	Υ
30	weblogic-remote-cconsole-app	Υ

#### **Enabling Kafka in OBAPI**

#### Overview

OBAPI now supports Apache Kafka as a messaging system in addition to JMS. Kafka provides high throughput, scalability, and fault tolerance, making it an excellent choice for event-driven architectures. OBAPI will work with either JMS or Kafka but not both simultaneously. This section explains how to enable Kafka.

#### 1. Enable Kafka

- JMS is the default messaging system in OBAPI.
- Enable Kafka only if you want to switch the existing message system to Kafka by executing the following configuration queries in the database. If not enabled, the system will continue using JMS.

#### Configuration Queries:

UPDATE DIGX\_FW\_CONFIG\_ALL\_B SET prop\_value = 'KAFKA' WHERE prop\_id = 'MESSAGE\_BROKER\_TYPE';

UPDATE DIGX\_FW\_CONFIG\_ALL\_B SET prop\_value = '{HOSTIP}:{HOSTPORT}' WHERE prop\_id = 'bootstrap.servers';

Replace {HOSTIP}:{HOSTPORT} with the IP address and port of the Kafka broker running the Kafka service.

Note:

Ensure that Kafka is properly installed before making this change.

If you want to migrate the existing messaging system to Kafka, you need to implement Kafka consumer and producer equivalents for all the customized JMS queues and topics. Also, If there are any new customized Kafka topics to be created, the corresponding producer and consumer implementations must be developed. Refer to **Section: Messaging System Integration for OBAPI** in the document **Oracle Banking APIs Extensibility Guide** for the detailed steps and guidelines in implementing Kafka and JMS.

OBAPI Pre-defined External Kafka Topic Configurations

OBAPI listens to the following external Topics of OBVAM(Oracle Banking Virtual Account Management), OBLM(Oracle Banking Liquidity Management) and OBO(Oracle Banking Origination).

- Im.accountnotification
- vam.virtualaccountnotification
- vam.accountstatusnotification
- vac.accountfacilitynotification
- externalSystemAlertMessage

For these Topics, the following properties need to be updated in the table DIGX\_FW\_CONFIG\_ALL\_B. Details should be obtained from the respective HOST system. If the HOST does not support the SSL property, it should be removed.

```
PROP ID
CATEGORY ID
PROP_VALUE
        <topic name>@ssl.truststore.password
KAFKA CONFIG
<truststore password>
        <topic name>@sasl.jaas.config
KAFKA CONFIG org.apache.kafka.common.security.scram.ScramLogin
Module required
        username="<jaas username>" password="<jaas password>";
        <topic name>@bootstrap.servers
KAFKA CONFIG
<host ip>:<host port>
        <topic name>@ssl.truststore.location
KAFKA CONFIG
<truststore location>
        <topic name>@security.protocol
KAFKA CONFIG
<security protocol>
        <topic name>@sasl.mechanism KAFKA CONFIG <sasl mechanism>
```



## **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.

 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"</pre>
        scanPeriod="10 minutes">
        <appender name="STDOUT"</pre>
        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  $\rightarrow$  Take Lock & Edit session  $\rightarrow$  Go to Servers inside Environment menu à

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





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### **OBAPI** Product Verification

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

Weblogic login URL has been changed from "http://<IP Address>/console" to "http://<IP Address>/rconsole"

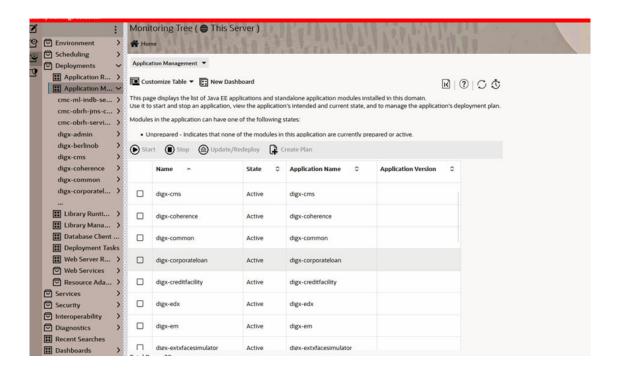
To make these changes, Please follow below Documentation:

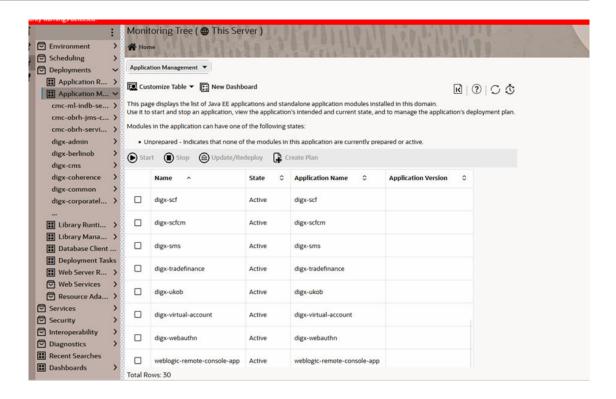
https://docs.oracle.com/en/middleware/fusion-middleware/weblogic-remote-console/administer/set-console.html#GUID-34B825B0-644B[...]3-9F50-7745E20D830B

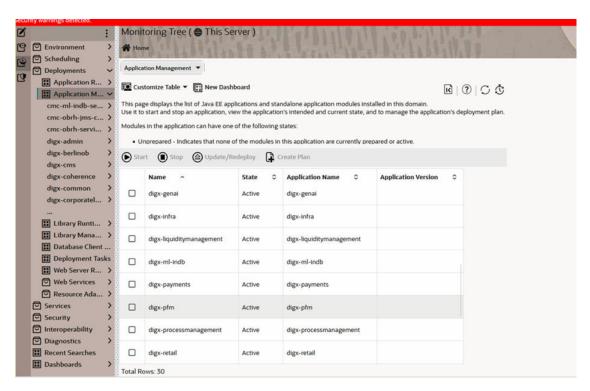
#### Deployment wars status

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

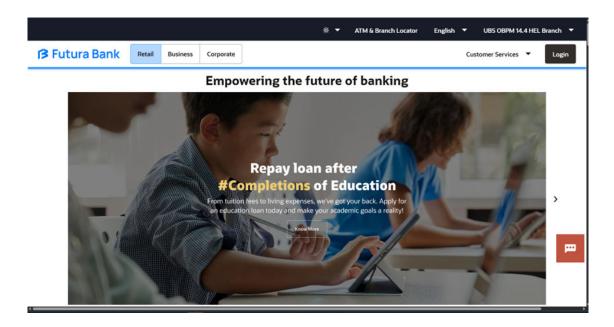
Domainwise deployment wars status







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.



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.



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 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>','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:

Ensure that <ENTITY\_ID> has been replaced with correct Entity ID for the corresponding entity.



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## 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
- 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>

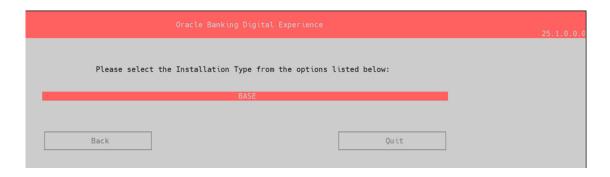
Enter the following command

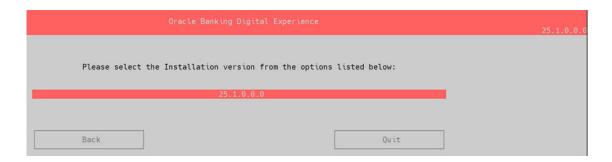
python3 runInstaller.py

Select installation type as 'New Entity Creation'.



Below screen will appear after selecting add entity.



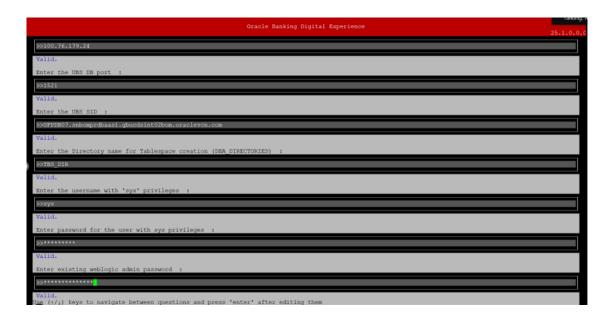




#### Enter below information:

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

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

```
devops@obdxwls OBDX_Installer}$ python3 runInstaller.py

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

tarting UBS Database Installation...
reating Tablespace...
ablespace Created
reating User...
ser Created
reating Role...
oles Created
xecuting Grants...
xecution of table-scripts_main.sql started
xecution of table-scripts_main.sql completed
xecution of ubs_object_scripts_main.sql started
```

#### 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.

```
devops@obdxwls OBDX_Installer]$ python3 runInstaller.py

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

data ting UBS Database Installation...

data ting Tablespace...
data ting User...
data ti
```

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)**).

No additional steps/ configuration are required.

## 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.

```
[obdxdevops@ofss-mum-5556 ~]$ export Installer_Version="25.1.0.0.0"
[obdxdevops@ofss-mum-5556 ~]$ export Installation_Type="BASE"
[obdxdevops@ofss-mum-5556 ~]$ export Entity_Code="*******"
[obdxdevops@ofss-mum-5556 ~]$ export SCHEMA_PASS="*******"
[obdxdevops@ofss-mum-5556 ~]$ export ENTITY_EHMS_DATABASE_HOSTNAME="100.76.179.24"
[obdxdevops@ofss-mum-5556 ~]$ export ENTITY_EHMS_DATABASE_PORT="1.52.1"
[obdxdevops@ofss-mum-5556 ~]$ export ENTITY_EHMS_DATABASE_SID="0FPDB07.snbomprdbaas1.gbucdsint02bom.oraclevcn.com"
[obdxdevops@ofss-mum-5556 ~]$ export ENTITY_EHMS_DATABASE_SYS_USER="sys"
[obdxdevops@ofss-mum-5556 ~]$ export ENTITY_EHMS_DATABASE_SYS_USER="sys"
[obdxdevops@ofss-mum-5556 ~]$ export ENTITY_EHMS_DATABASE_SYS_PASS="*****"
[obdxdevops@ofss-mum-5556 ~]$ export ENTITY_EHMS_DATABASE_SYS_PASS="*****"
[obdxdevops@ofss-mum-5556 ~]$ export ENTITY_EHMS_SCHEMA_PASS="*****"
[obdxdevops@ofss-mum-5556 ~]$ export ENTITY_EHMS_SCHEMA_PASS="*****"
[obdxdevops@ofss-mum-5556 ~]$ export ENTITY_EHMS_SCHEMA_PASS="******"
[obdxdevops@ofss-mum-5556 ~]$ export ENTITY_EHMS_SCHEMA_PASS="******"
[obdxdevops@ofss-mum-5556 ~]$ export ENTITY_EHMS_SCHEMA_NAME="C00144_ITR"
[obdxdevops@ofss-mum-5556 ~]$ export ENTITY_EHMS_HOST_SCHEMA_NAME="C00144_ITR"
[obdxdevops@ofss-mum-5556 ~]$ export ENTITY_EHMS_CY=GB
```

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	export Entity_Code=OBDX_B U7
	SCHEMA_PASS	Password for existing OBAPI schema	export SCHEMA_PASS=devops #obapi182
	ENTITY_EHMS_DATABA SE_HOSTNAME	Hostname of the EHMS HOST database host server	export ENTITY_EHMS_DATABA SE_HOSTNAME=xx.xx. xx.xx
	ENTITY_EHMS_DATABA SE_PORT	Port of the EHMS HOST database host server	export ENTITY_EHMS_DATABA SE_PORT=1521
	ENTITY_EHMS_DATABA SE_SID	EHMS Host database Service Name	export ENTITY_EHMS_DATABASE_SID=obdxdb.in.oracle.com

Environment variables	Parameter	Description	Example
	ENTITY_EHMS_DBA_DI RECTORY_NAME	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_DI RECTORY_NAME=TBS_D IR
	ENTITY_EHMS_DATABA SE_SYS_USER	Username with 'sys' privileges	export ENTITY_EHMS_DATABA SE_SYS_USER=sys
	ENTITY_EHMS_DATABA SE_SYS_PASS	Password for EHMS sys user	export ENTITY_EHMS_DATABA SE_SYS_PASS=devops @sys
	ENTITY_EHMS_SCHEMA _NAME	Complete EHMS (HostInterface) schema name you want installer to create as new schema.	export ENTITY_EHMS_SCHEMA _NAME=OBAPIEHMS
	ENTITY_EHMS_SCHEMA _PASS	Password for new EHMS schema on EHMS HOST database	export ENTITY_EHMS_SCHEMA _PASS=devops#ehms
	ENTITY_EHMS_HOST_S CHEMA_NAME	EXISTING EHMS Host schema name	export ENTITY_EHMS_HOST_S CHEMA_NAME=EHMSHOS T
	ENTITY_EHMS_HOST_S CHEMA_NAME_PASS **This parameter is only required for UBS & OBPM Host	HOST EHMS schema	export ENTITY_EHMS_HOST_S CHEMA_NAME_PASS=eh mshst
	WLS_DOMAIN_PASS	Password for Weblogic admin console	export WLS_DOMAIN_PASS=we blogic182
	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:	Entity_Code	Entity code which has been entered from screen	export Entity_Code=OBDX_B U1
OBAPI (Third-party HOST)	SCHEMA_PASS	Password for existing OBAPI schema	export SCHEMA_PASS=welcom e1

<sup>2.</sup> Run the **runInstaller.py** file with '--silent' argument along with '--addEntity'.



```
devops@
                   /]$ export Entity_Code=OBDX_BU7
[devops@
                   /]$ export SCHEMA PASS=devops#obdx182
/]$ export ENTITY_EHMS_DATABASE_HOSTNAME=mumaa012.in.oracle.com
[devops@
[devops@
                   /]$ export ENTITY EHMS DATABASE PORT=1521
[devops@
                   /]$ export ENTITY_EHMS_DATABASE_SID=obdxdb.in.oracle.com
/]$ export ENTITY_EHMS_DBA_DIRECTORY_NAME=TBS_DIR
[devops@
devops@
[devops@
                   /]$ export ENTITY EHMS DATABASE SYS USER=sys
                   /]$ export ENTITY_EHMS_DATABASE_SYS_PASS=devops@sys
/]$ export ENTITY_EHMS_SCHEMA_NAME=OBDXEHMS
[devops@
[devops@
[devops@
                   /]$ export ENTITY EHMS SCHEMA PASS=devops#ehms
                   /]$ export ENTITY EHMS HOST SCHEMA NAME=FCUBS140
/]$ export ENTITY EHMS HOST SCHEMA NAME PASS=FCUBS140HST
devops@
[devops@
                   /]$ export WLS_DOMAIN_PASS=weblogic182
devops@
                   /]$ export ENTITY EHMS CCY=GB
devops@
                    /]$ python runInstaller.py --silent --addEntity
[devops@
```

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

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

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_BlAl

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_BlAl 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)

(darops) OBCX installer;0 python runinstaller.py --silent --addfinity Password validated for OBCX 191183 Execution of DB script for OBCX\_BUI started Executed DIOX\_FW\_CONFIG\_ALL\_O.sql successfully Execution completed.



## Steps to Create Credential Mapping

#### **Credential Store Mapping**

The OBDX system utilizes external integrations to facilitate seamless communication with various services. To establish these connections, credentials are required to authenticate and authorize access. These credentials are not hardcoded but rather initialized post-installation. They are subsequently encrypted and stored within the database, ensuring confidentiality and integrity. This subsequent section outlines the procedures and guidelines for configuring and managing these credentials within the OBDX environment.

To utilize the credential mapping functionality, retrieve the **com.ofss.digx.CredentialsStore.jar** file from the designated location:

OBDX Installer/installables/OBDX/BASE/25.1.0.0.0/utils/tools

#### **Running the Credential Mapping Application**

Execute the application using the following command:

java -jar com.ofss.digx.CredentialsStore.jar <csv\_file> <DataBaseCredentials> <DataSeedFlag>

#### **Command Parameters:**

1. <csv file>

Provide the path to your CSV file containing user credentials by replacing <csv\_file> with the actual file location.

#### **CSV File Format Requirements**

The CSV file must adhere to the following structure:

- Contain exactly three columns: type, username, and password
- Include a header row with column names: type,username,password
- Subsequent rows should contain individual credential entries, with each row representing a distinct set of credentials
- Ensure that the value in the type column is unique for each credential entry

Example CSV File

Table 12-1 WAR deployments

type	username	password
MERCHANT	OBDX	PASSWORD111

<DataBaseCredentials>

Specify the <DataBaseCredentials> parameter as a comma-delimited string comprising the following components:

- Database username
- Password

JDBC URL (in the format jdbc:oracle:thin:@host:port/service id)

The expected format for <DataBaseCredentials> is: username,password,jdbc url.

Example: User, Password 123, jdbc: oracle: thin:@host:port/service\_id

Ensure accurate input of these values to establish a successful connection to the database.

#### <DataSeedFlag>

To control the seeding of data into the digx\_fw\_credentials table, set the <DataSeedFlag> parameter to 'Y' to populate the table with the generated credentials. Alternatively, specify 'N' to simply display the credentials without persisting them to the database.

Example command to run this

```
java -jar com.ofss.digx.CredentialsStore.jar data.csv
DB_USER,DB_PASSWORD,jdbc:oracle:thin:@//HOST:PORT/SERVICE_ID Y
```

Upon executing this utility, you will obtain an encrypted password, which can then be utilized in conjunction with other credentials. Subsequently, these credentials will be populated into the database.

#### Extensibility:

To leverage custom credentials inserted into the system, utilize the following code snippet:

Replace < custom type > with the desired type associated with the custom credentials.

#### Import:

Import the jar implementation

```
com.ofss.digx.infra:com.ofss.digx.infra.crypto.impl:$libs digxVersion
```

into your gradle project

To ensure proper configuration, verify that the entry in the digx\_fw\_config\_all\_b table has a prop\_id of **credential\_impl**, a category\_id of **CredentialStore**, and a PROP\_VALUE of **com.ofss.digx.infra.cred.DatabaseCredentialSStore**. Confirm that these values match exactly to guarantee correct functionality. If discrepancies are found, update the entry accordingly to reflect the specified values.

The AES key is no longer required to be explicitly inserted, as it is dynamically generated by the system when the utility is run and stored within the keystore located at <code>DIGX\_FW\_KEYSTORE</code>.

For any encryption operations that require the use of the AES key, utilize the SymmetricCryptographyProviderFactory class, which is available in the same JAR, instead of relying on the credential. This approach streamlines the encryption process and enhances overall security.

SymmetricCryptographyProviderFactory.getInstance().getLatestProvider().encryp
t(data);

 $\label{thm:condition} Symmetric Cryptography Provider Factory. getInstance (). getLatest Provider (). decrypt (data);$ 



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# **OBAPI Product Security**

Refer below document for OBAPI product security configuration

**Oracle Banking APIs Security Guide** 



### **OBAPI Product – Best Practice**

Tablespace for AUDIT INDEX

### 14.1 Tablespace for AUDIT INDEX

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

#### Follow below steps

- Create a new tablespace
- Give quota to OBAPI schema

```
alter user <OBAPI_SCHEMA> quota unlimited on
<OBAPI AUDIT INDEX TABLESPACE>;
```

- Drop and create below index by mapping the newly created tablespace
  - OBAPI\_Installer\installables\db\OBAPI\ddl\oracle\audit\
     IDX DIGX AL API AUDIT LOGGING.sql
  - OBAPI\_Installer\installables\db\OBAPI\ddl\oracle\audit\
     IDX\_DIGX\_AL\_API\_AUDIT\_LOG\_HIST.sql
  - OBAPI\_Installer\installables\db\OBAPI\ddl\oracle\audit\IDX\_DIGX\_AL\_AUDIT 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

### 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



### 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:

```
[root@server ~]# python3
Python 3.11.9 (main, Mar 25 2025, 10:00:00) [GCC 10.2.1 20210130 (Red Hat 10.2.1-11)] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> import cx_Oracle
Traceback (most recent call last):
   File "<stdin>", line 1, in <module>
cx_Oracle.DatabaseError: DPI-1047: 64-bit Oracle Client library cannot be loaded: "libclntsh.so"
```

#### Execute the below command:

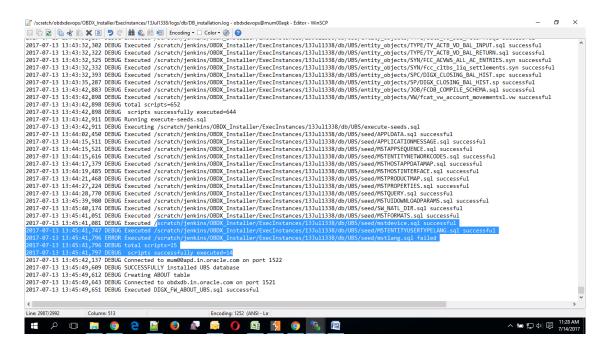
```
export LD_LIBRARY_PATH=/usr/lib/oracle/19.10/client64/lib:$LD_LIBRARY_PATH
python
   import cx_Orace
   cx_Oracle.__version__
```

```
[devops@server /]$ export LD_LIBRARY_PATH=/usr/lib/oracle/18.3/client64/lib/:$LD_LIBRARY_PATH
[devops@server /]$ python3
Python 3.11.9 (main, Mar 25 2025, 10:00:00) [GCC 10.2.1 20210130 (Red Hat 10.2.1-11)] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> import cx_Oracle
>>> cx_Oracle.__version__
'8.3.0'
```

#### **Failed Database Scripts**

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

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



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.

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</pre>
```

```
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.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,DayOPolicy.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,
DayOPolicy.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:1521/OBAPI"
```

Post successfully execution, restart Managed server.

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