Oracle® Banking Digital Experience

Installation Guide

Release 25.1.0.0.0
G38594-01
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Oracle Banking Digital Experience Installation Guide, Release 25.1.0.0.0

G38594-01

Contents

Preface

Purpose

This guide is designed to help acquaint you with the Oracle Banking 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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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 Digital Experience Installation Manuals
- Oracle Banking Digital Experience Licensing 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; actual screens that appear in the application may vary based on selected browser, theme, and mobile devices.

Acronyms and Abbreviations

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

Table 1 Acronyms and Abbreviations

Abbreviation	Description
OBDX	Oracle Banking Digital Experience

1
Introduction

1.1 Purpose of the Document

This topic provides information on **Purpose of the Document**.

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

It includes:

- Reference to prerequisites software installation required for OBDX & OBDX installer
- Setup of OBDX 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

This topic provides information on **Prerequisites**.

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

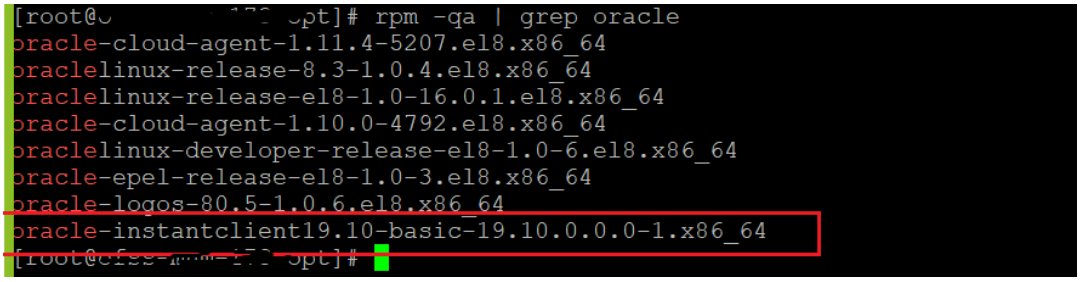
For OBDX pre-requisite software setup refers document **Oracle Banking Digital Experience Installer Pre-Requisite Setup Manual**.

Installer Pre-requisite Installation

Python 3.11 for Linux Operating System : --

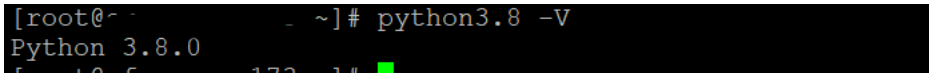
1. Execute below commands to install the python 3.11.9

```
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-develwget
            https://www.python.org/ftp/python/3.11.9/Python-3.11.9.tgz
        tar -xzvf
            Python-3.11.9.tgzcd
            Python-3.11.9./configure
            --enable-optimizationsmake
            altinstallpython3.11
            -version
```



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

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



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

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

Installer Pre-requisite verification

Post installation of OBDX 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@ ... Python-3.8.0]# python3.8
Python 3.8.0 (default, Jun  8 2021, 11:06:31)
[GCC 8.4.1 20200928 (Red Hat 8.4.1-1.0.1)] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> import cx_Oracle
>>> cx_Oracle.version
'8.1.0'
>>>
```

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

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

Installer Pre-requisite verification

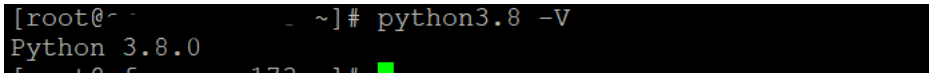
Post installation of OBDX Installer prerequisite software's, verification can be done using below steps.

> **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
```



> **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
```

> **Note:**
>
> Ensure Python 3.11.9 supported version is installed. Above command should reflect the same.

cx_Oracle & Urwid:

1. Execute python command

```
python
```

> **Note:**
>
> 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__
```

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

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
```

```
[root@c  ...  Python-3.8.0]# python3.8
Python 3.8.0 (default, Jun  8 2021, 11:06:31)
[GCC 8.4.1 20200928 (Red Hat 8.4.1-1.0.1)] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> import cx_Oracle
>>> cx_Oracle.version
'8.1.0'
>>>
```

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

> **Note:**
>
> Ensure cx_Oracle 8.3.3 supported version is installed. Above command should reflect the same.

3
Installation

This topic provides information on **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 “<OBDX INSTALLER DIR>/ installables/OBDX/BASE/25.1.0.0.0/config.
- Open the “installer.properties” file to maintain key configurations for BASE ENTITY (OBDX_BU)

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

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

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

#JAVA home path. Example /home/obdxuser/jdk18 - where you have sub-directories like bin,jre,lib etc.
JAVA_HOME=/scratch/app/java

#DB_WITH_FLYWAY_EXECUTION YES OR NO. Example if we want to execution of db with cx_Oracle then value will be NO.
DB_WITH_FLYWAY_EXECUTION=NO

#FLYWAY_HOME home path. Example /home/obdxuser/flyway - where you have sub-directories like bin,jre,lib etc.
FLYWAY_HOME=/home/devops/flyway-7.9.2

#GRADLE HOME path. Example /home/obdxuser/gradle
GRADLE_HOME=/scratch/obdx/gradle/gradle-7.4

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

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

#Domain path. Example /home/obdxuser/domain.
WLS_DOMAIN_PATH=/scratch/app/domains

#application root directory
APP_ROOT_DIR=/scratch/app/application
```

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

For more information on fields, refer to the field description table.

Table 3-1 Table 1

Component	Parameter	Description	Example
DB details (for OBDX schema)	**OBDX_DATABASE_HOSTNAME**	Enter the hostname of the database server which would host the database schema for OBDX	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	obdxdb.in.oracle.com
	OBDX_DATABASE_SYS_USER	Enter the username with 'sys' privileges	Sys
	POST_FIX	For OBDX schema name like "OBDX_DEV" POST FIX is 'DEV'. **SHOULD BE IN UPPERCASE ONLY.**	DEV
	OBDX_DBA_DIRECTORY_NAME	Enter the directory name in which you want the OBDX 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 OBDX 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

Table 3-1 (Cont.) Table 1

Component	Parameter	Description	Example
	EHMS_SCHEMA_NAME	Enter the Complete OBDX-EXT (B1A1) HostInterfaceschema name you want installer to create as new schema. **SHOULD BE IN UPPERCASE ONLY.**	EHMS182SCHEMA
	EHMS_DBA_DIRECTORY_NAME	Enter the directory name in which you want the OBDX-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 wlserver,oracle_common etc.	/home/obdxuser/Oracle/ Middleware/ Oracle_Home
	JAVA_HOME	Path where JAVA (JDK) is installed	/home/obdxuser/ jdk17_0_124
	DB_EXECUTION_TYPE_HOME	Path where FLYWAY is installed	/home/obdxuser/ (flyway-8.3)

Table 3-1 (Cont.) Table 1

Component	Parameter	Description	Example
		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/obdxuser/gradle-7.9
	INSTALLATION_HOME	Path where OBDX 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/obdx
	WLS_DOMAIN_PATH	Path where OBDX 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

Table 3-1 (Cont.) Table 1

Component	Parameter	Description	Example
	WLS_NODE_PORT	Node Manager Port. It is the port used by Node Manager to be configured for OBDX domain. Generally, 5556 is utilized as Node Manager Port. Custom ports are supported.	5556
	WLS_MS_SERVER_NAME	Managed server name. This will be the name of the managed server created in the cluster followed by indexes. eg- If this is set as 'clip' managed servers would be clip1.	Clip
	WLS_MS_SERVER_PORT	Managed Server Port. Managed server will utilize this port for hosting OBDX 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 OBDX 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/obdx/FileUpload

Table 3-1 (Cont.) Table 1

Component	Parameter	Description	Example
	WLS_JMS_AUDIT_PS (to be configured for all OBDX 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/obdx/Audit
	WLS_JMS_REPORT_PS (to be configured for all OBDX 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/obdx/Reports
	WLS_JMS_JPA_PS (to be configured for all OBDX 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/obdx/JPA
	WLS_JMS_EXTSYSRECEIVER_PS (to be configured for all OBDX 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/obdx/Receiver

Table 3-1 (Cont.) Table 1

Component	Parameter	Description	Example
	WLS_JMS_EXTSYSSENDER_PS(to be configured for all OBDX 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/obdx/Sender
OBDX Application Administrator user details	**OBDX_ADMIN_USERNAME**	Set username for OBDX 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 OBDX application admin user.	superadmin@oracle.com
	OBDX_ADMIN_CONTACT_NO	Enter the mobile number for OBDX application admin user. **COUNTRY CODE IS MUST.**	+911234567890

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

Ensure `ORACLE_HOME, JAVA_HOME` variable are set and their binaries are available in PATH variable before proceeding.

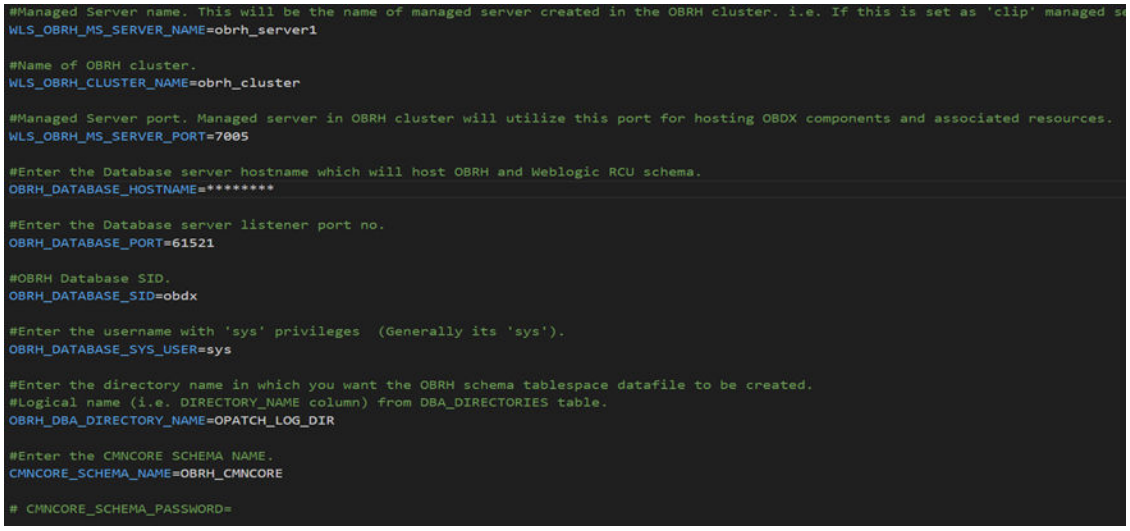
Login with OS user which was used to perform OBDX pre-requisite software installation (or has ownership on Oracle Weblogic home directory)

Ensure OBDX 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 OBDX+OBRH then only need to update OBRH_config.properties.

Navigate to “<OBDX INSTALLER DIR>/ installables/OBDX/BASE/25.1.0.0.0/config”

Open the “OBRH_config.properties” file to maintain key configurations for BASE ENTITY (OBRH).



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

For more information on fields, refer to the field description table.

Table 3-2 Table 1

Component	Parameter	Description	Example
DB details (for OBDX schema)	**OBRH_DATABASE_HOSTNAME**	Enter the hostname of the database server which would host the database schema for OBRH	abc.xyc.com
	OBRH_DATABASE_PORT	Enter the port number of the database listener	61521
	OBRH_DATABASE_SID	Enter the Oracle **Service Name** for database instance	obdxdb.in.oracle.com

Table 3-2 (Cont.) Table 1

Component	Parameter	Description	Example
	OBRH_DATABASE_SYS_USER	Enter the username with 'sys' privileges	sys
	PLATO_SCHEMA_NAME	Enter the PLATO SCHEMA name.	OBRH_PLATO
	OBRH_DBA_DIRECTORY_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
Weblogic server details	**WLS_OBRH_MS_SERVER_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_SERVER_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 OBDX+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 <OBDX 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

```
python3.11 runInstaller.py
```

- Installation Process
  This topic provides information on **Installation Process**.

3.1 Installation Process

This topic provides information on **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
  This topic provides information on **Selecting the Product**.
- Step 2: Selecting the Installation Flavour
  This topic provides information on **Selecting the Installation Flavour**.
- Step 3: Selecting the Installation Type
  This topic provides information on **Selecting the Installation Type**.
- Step 4: Selecting the Installation Version
  This topic provides information on **Selecting the Installation Version**.
- Step 5: Selecting the Component
  This topic provides information on **Selecting the Component**.
- Step 6: Selecting the Installation Mode
  This topic provides information on **Selecting the Installation Mode**.

- Step 7: Verification Screen
  This topic provides information on **Verification Screen**.
- Step 8: Entering Required Credentials
  This topic provides information on **Entering Required Credentials**.
- Step9: OBDX Routing Hub screen appears
  This topic provides information on **OBDX Routing Hub screen appears**.
- Step10: Finalizing Installation
  This topic provides information on **Finalizing Installation**.

3.1.1 Step 1: Selecting the Product

This topic provides information on **Selecting the Product**.

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

> **Note:**
>
> Select **OBDX+OBRH** if you do not have any OBMA product Installed. If you want to Install OBRH then please Install from OBMA products.

1. **OBDX**
2. **OBRH (Not Supported)**
3. **OBDX + OBRH**
4. **New Entity Creation (OBDX)**

3.1.2 Step 2: Selecting the Installation Flavour

This topic provides information on **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

This topic provides information on **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

This topic provides information on **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

This topic provides information on **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

This topic provides information on **Selecting the Installation Mode**.

Choose the appropriate installation mode:

1. **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 re-created again.

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

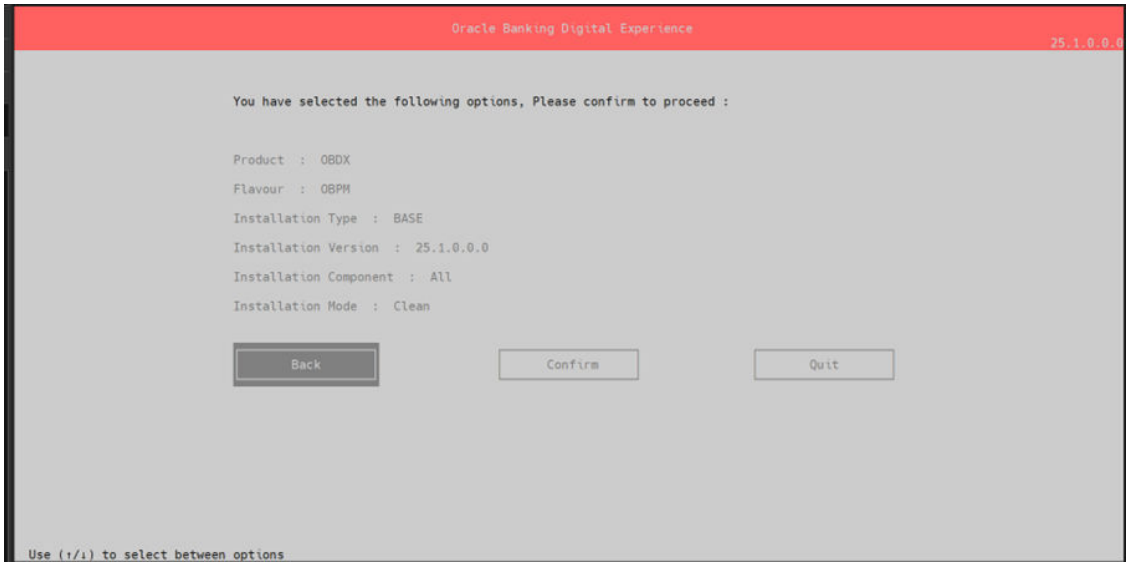
3.1.7 Step 7: Verification Screen

This topic provides information on **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.



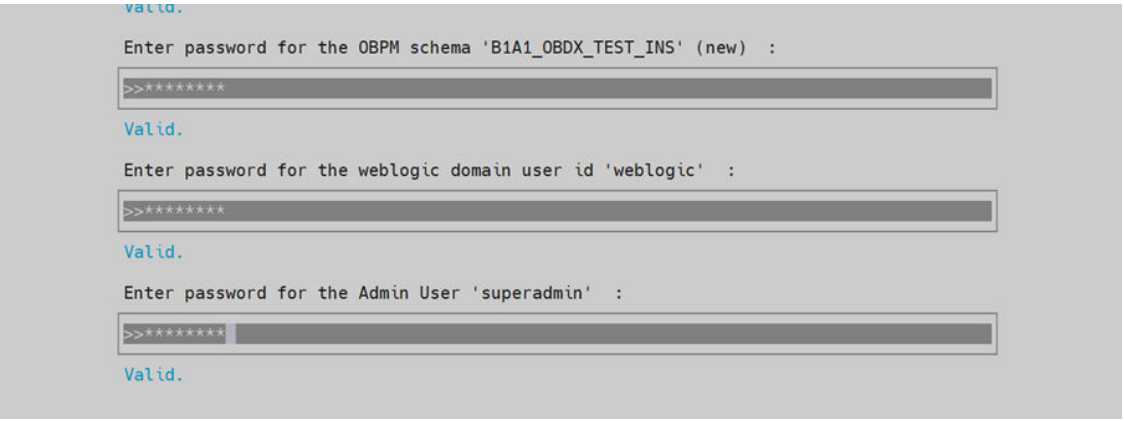
3.1.8 Step 8: Entering Required Credentials

This topic provides information on **Entering Required Credentials**.

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

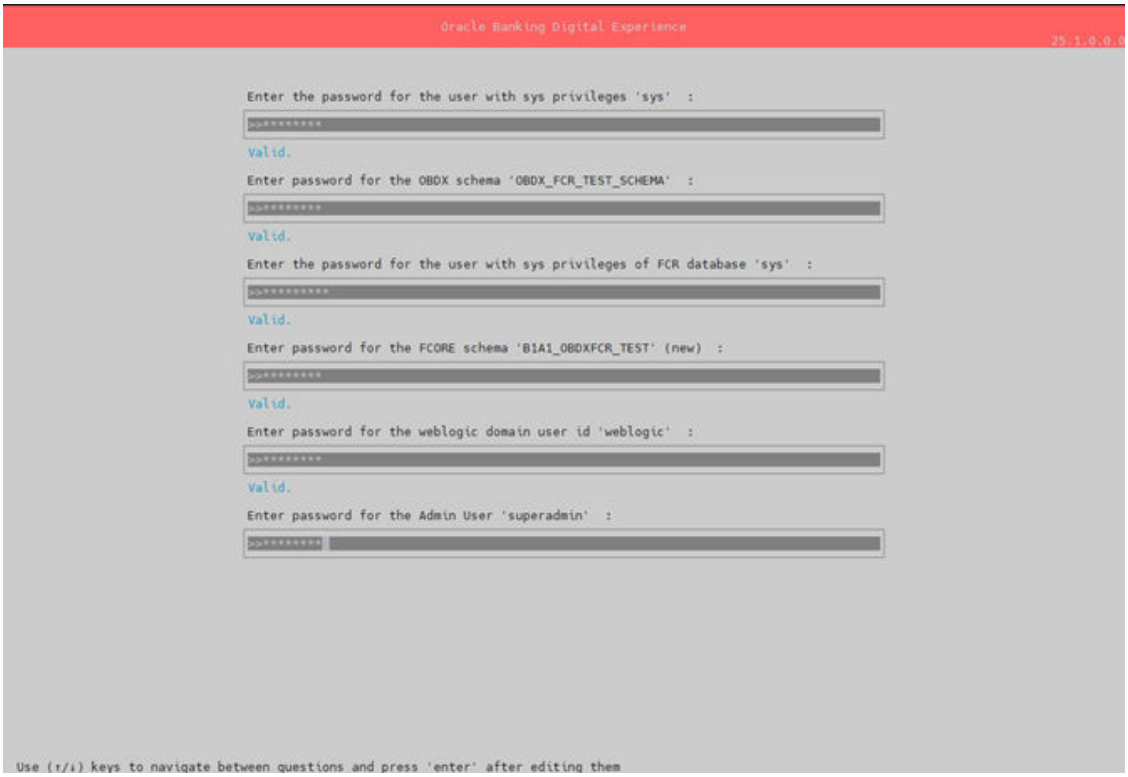
FOR OBPM:

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**
6. **WebLogic Password** (for WebLogic administration)
7. **Superadmin User Password**



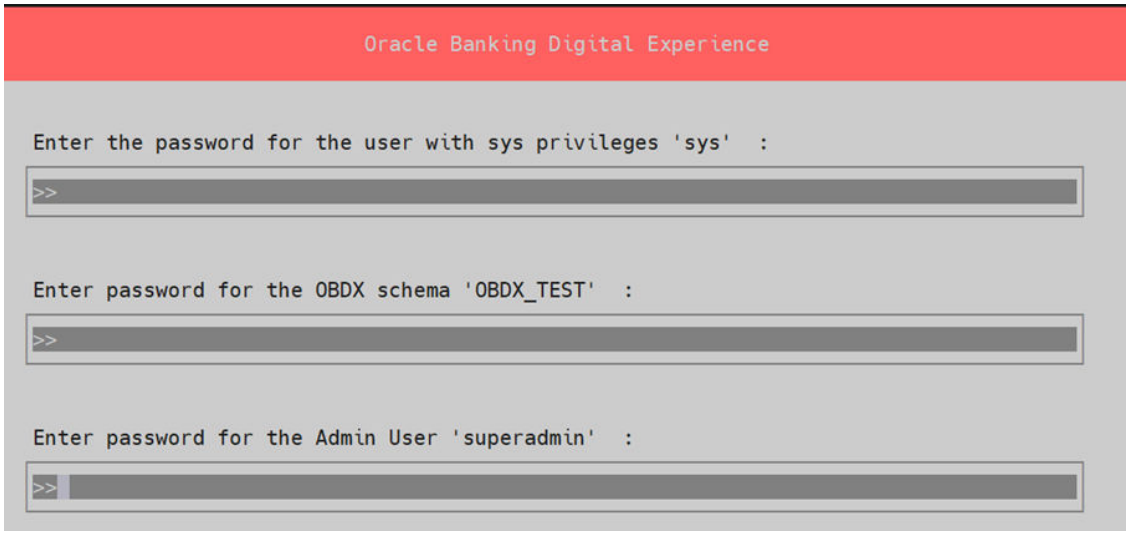
FOR FCORE:

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:

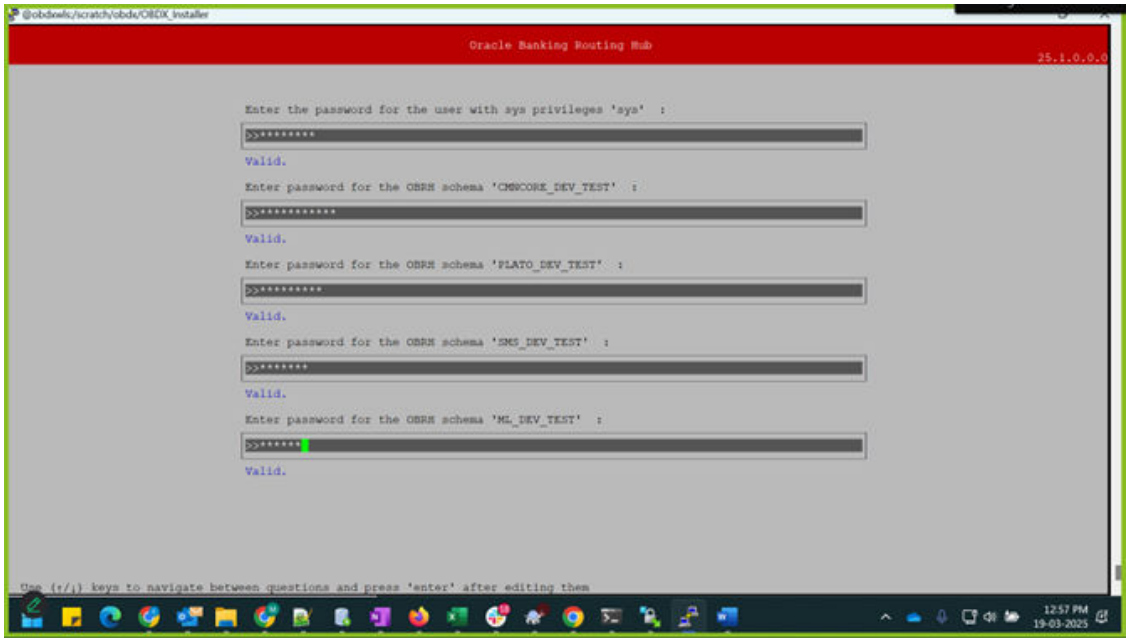
1. **New SYS Password** for the **Database**
2. **New Schema Password** (For Schema Name mentioned in the property file)
3. **Superadmin User Password**



3.1.9 Step9: OBDX Routing Hub screen appears

This topic provides information on **OBDX Routing Hub screen appears**.

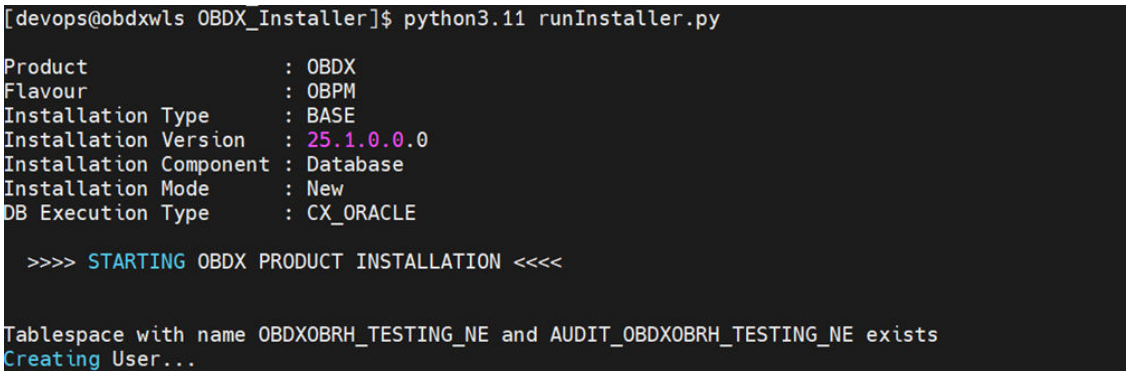
In this screen, need to fill schema passwords and sys password details [THIS SCREEN WILL APPEAR ONLY WHEN SELECTING (OBDX+OBRH) AS PRODUCT



3.1.10 Step10: Finalizing Installation

This topic provides information on **Finalizing Installation**.

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



4

Installation using Silent Mode

This topic provides information on **Installation using Silent Mode**.

This chapter describes how to run the OBDX 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 **<OBDX INSTALLER DIR>/installables/OBDX/BASE/25.1.0.0.0/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.

For more information on fields, refer to the field description table.

Table 4-1 Table 1

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 (OBDX with UBS) **FCORE** for Oracle FLEXCUBE Core Banking 11.8.0.0.0 (OBDX 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 OBDX/OBRH/OBDX+OBRH	export PRODUCT=OBDX
	INSTALLER_VERSION	Specify Installer Version	**export INSTALLER_VERSION=25.1.0.0.0**
	Installation_Type	Specify Type of Installer	**export Installation_Type=BASE**

Table 4-1 (Cont.) Table 1

Host	Parameter	Description	Example
	MODE	Mode of installation. **New** in-case of a fresh installation of OBDX for the first run on server **Clean** in-case of an existing OBDX installation that you want to overwrite OR in case of a previously failed installation or re-installation	**export MODE=New** **or** **export MODE=Clean**
	COMPONENT	Need to specify : App: When only App need to be Installed Database: When only Database needs to be Installed All: When both Database and App needs to be installed	**export COMPONENT=App**
	DB_SYS_PASSWORD	Sys user password of OBDX database (Existing)	**export DB_SYS_PASSWORD=obdx182sys**
	SCHEMA_PASS	Password for new schema on OBDX database	**export SCHEMA_PASS=obdx#182**
	DomainPassword	Password for Weblogic Administrator console	**export DomainPassword=wlsadmn**
	EHMS_DATABASE_SYS_PASS	Sys user password of EHMS HOST database (Existing)	**export EHMS_DATABASE_SYS_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	**EHMS_SCHEMA_PASS**	Password for new OBDX EHMS schema on EHMS HOST database
	DBAuthPassword	Password for new OBDX Administrator user of OBDX application (In-case of OUD as provider, password should similar to one used while user creation in OUD(or User Password field))	**export DBAuthPassword=obdxadmn**
	JAVA_HOME	Path for Java	export JAVA_HOME=/scratch/app/java
	PRODUCT	Need to select Product as OBDX/OBRH/OBDX+OBRH	export PRODUCT=OBDX

Table 4-1 (Cont.) Table 1

Host	Parameter	Description	Example
Environment variables to set for flavor: **OBDX (Third-party HOST)**	**FLAVOUR**	Flavour for installation 'OBDX' for Third Party System 1.0 (OBDX with THP)	**export FLAVOUR=OBDX**
	INSTALLER_VERSION	Specify Installer Version	**export INSTALLER_VERSION=25.1.0.0.0**
	Installation_Type	Specify Type of Installer	**export Installation_Type=BASE**
	Mode	Mode of installation. '**New**' in-case of a fresh installation of OBDX for the first run on server '**Clean**' in-case of an existing OBDX installation that you want to overwrite OR in case of a previously failed installation or re-installation	**export MODE=New** **or** **export MODE=Clean**
	COMPONENT	Need to specify : App: When only App need to be Installed Database: When only Database needs to be Installed All: When both Database and App needs to be installed	**export COMPONENT=App**
	DB_SYS_PASSWORD	Sys user password of OBDX database (Existing)	**export DB_SYS_PASSWORD=obdx182sys**
	SCHEMA_PASS	Password for new schema on OBDX database	**export SCHEMA_PASS=obdx#182**
	DomainPassword	Password for Weblogic Administrator console	**export DomainPassword=wlsadmn**
	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 OBDX Administrator user of OBDX application (In-case of OUD as provider, password should similar to one used while user creation in OUD(or User Password field))	**export DBAuthPassword=obdxadmn**

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_EXECUTION_TYPE set to` **FLYWAY**

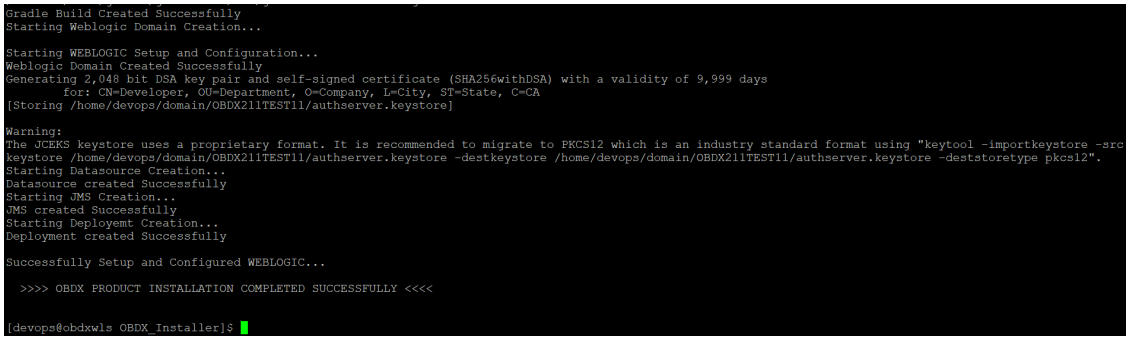
```
  >>>> STARTING OBDX PRODUCT INSTALLATION <<<<


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


We are excuting the db with DB_WITH_FLYWAY_EXECUTION=NO
Starting OBDX Database Installation with OBPM FLAVOR
Database Path: /u02/app/oracle/oradata/OFCDB009_bom1cq/OFCDB009_BOM1CQ/B2169F489B0C1E32E053C305F40A9E33/datafile
Database Path: /u02/app/oracle/oradata/OFCDB009_bom1cq/OFCDB009_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
```

If `DB_EXECUTION_TYPE set to` **CX_ORACLE**

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/OFCDB009_bom1cq/OFCDB009_BOM1CQ/B2169F489B0C1E32E053C305F40A9E33/datafile
Database Path: /u02/app/oracle/oradata/OFCDB009_bom1cq/OFCDB009_BOM1CQ/B2169F489B0C1E32E053C305F40A9E33/datafile
Creating Tablespace...
Tablespace Created
Creating User...
User Created
Creating Role...
Role Created
Executing Grants...
OBDX Scripts execution on progess...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 progess...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 Deployemt Creation...
Deployment created Successfully
Successfully Setup and Configured WEBLOGIC...
>>>> OBDX PRODUCT INSTALLATION COMPLETED SUCCESSFULLY <<<<
[devops@obdxwls OBDX_Installer]$

5

Installer Verification

This topic provides information on **Installer Verification**.

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

For more information on fields, refer to the field description table.

Table 5-1 Table 1

Log Description	PATH
Summarized Installer Activity Log	<OBDX INSTALLER DIR>/ExecInstances/<DDMonthHHMM> /logs/obdx_installer.log
Summarized Database Logs	<OBDX INSTALLER DIR>/ExecInstances/<DDMonthHHMM> /logs/db/DB_installation.log
Detailed OBDX DB Logs per SQL file	<OBDX INSTALLER DIR>/ExecInstances/<DDMonthHHMM> /logs/db/OBDX/OBDX.log
Detailed EHMS schema Logs per SQL file (specific to EHMS host system only)	<OBDX INSTALLER DIR>/ExecInstances/<DDMonthHHMM> /logs/db/<EHMSHOST>/<EHMSHOST>.log <EHMSHOST> - values such as; FCORE; OBPM;
Weblogic Configuration Logs	<OBDX INSTALLER DIR>/ExecInstances/<DDMonthHHMM> /logs/app/app_debug.log <OBDX INSTALLER DIR>/ExecInstances/<DDMonthHHMM> /logs/app/domain.log <OBDX INSTALLER DIR>/ExecInstances/<DDMonthHHMM> /logs/app/datasource.log <OBDX INSTALLER DIR>/ExecInstances/<DDMonthHHMM> /logs/app/jms.log <OBDX INSTALLER DIR>/ExecInstances/<DDMonthHHMM> /logs/app/deployment.log
Detailed OBDX policy seeding logs	<OBDX INSTALLER DIR>/ExecInstances/<DDMonthHHMM> /logs/db/Entitlement.log <OBDX INSTALLER DIR>/ExecInstances/<DDMonthHHMM> /logs/db/Task.log <OBDX INSTALLER DIR>/ExecInstances/<DDMonthHHMM> /logs/db/Dashboard_seed.log **Note:** Check for SEVERE keyword; If found refer to Troubleshot section to re-run the policy

Table 5-1 (Cont.) Table 1

Log Description	PATH
Policy seeding execution Log	<OBDX INSTALLER DIR>/ExecInstances/<DDMonthHHMM> /logs/db/seedPolicies.log **Note:** Should be empty if no errors during policy execution. In-case non-empty refer to Troubleshot section to re-run the policy
OBRH DB LOGS (When Product is selected as OBRH or OBDX+OBRH)	<OBDX INSTALLER DIR>/ExecInstances/<DDMonthHHMM> /logs/db/OBRH
OBRH APP LOGS (When Product is selected as OBRH or OBDX+OBRH)	<OBDX INSTALLER DIR>/ExecInstances/<DDMonthHHMM> /logs/app

Check all the logs for any errors.

6

Installer Scope

This topic provides information on **Installer Scope**.

OBDX Installer currently covers below activities:

Flavor: Third Party system (OBDX with THP)

For more information on fields, refer to the field description table.

Table 6-1 Table 1

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

Flavor: Oracle FLEXCUBE Core Banking (OBDX with FCORE)

For more information on fields, refer to the field description table.

Table 6-2 Table 2

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

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

For more information on fields, refer to the field description table.

Table 6-3 Table 3

Flavor	Activity	Detailed Activity List	New Installation	Reinstall
OBDX with OBPM (14.6.0.0.0 version)	OBDX DB Setup	Create Tablespace	✓	NA
		Create Schema and Role	✓	✓ (drop and re-create objects)
		Grants	✓	✓
		Load DB object (DDL's and DML's)	✓	✓
		Execute OBPM HOST specific scripts	✓	✓
		Compile Schema	✓	✓
		Policy Seeding	✓	✓
	EHMS DB Setup	Create Tablespace	✓	NA
		Create Schema and Role	✓	✓ (drop and re-create objects)
		Grants	✓	✓
		Load DB object (DDL's and DML's)	✓	✓
		Compile Schema	✓	✓
	Weblogic Setup and Configuration	Create and Configure AdminServer, Machine, Managed Server and Cluster	✓	✓
		Configure NodeManager	✓	✓
		Configure JDBC	✓	✓
		JMS servers, Persistent stores and JMS Modules	✓	✓
		Application Deployment	✓	✓
		JTA	✓	✓
		Enable Production Mode	✓	✓
		Start AdminServer and NodeManager	✓	✓
	OBDX Configuration	Copy config files into OBDX Installation Home	✓	✓(Delete old and copy new from installer zip)

OBDX+OBRH Installer currently covers below activities:

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

Detailed Activity List

New Installation

For more information on fields, refer to the field description table.

Table 6-4 Table 4

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

Flavor: Oracle FLEXCUBE Core Banking (OBDX with FCORE)

For more information on fields, refer to the field description table.

Table 6-5 Table 5

Flavor	Activity	Detailed Activity List	New Installation	Reinstall
OBDX+OBRH with FCORE	OBDX+OBRH 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	✓	✓

Table 6-5 (Cont.) Table 5

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

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

For more information on fields, refer to the field description table.

Table 6-6 Table 6

Flavor	Activity	Detailed Activity List	New Installation	Reinstall
OBDX+OBRH with OBPM (14.6.0.0.0 version)	OBDX+OBRH DB Setup	Create Tablespace	✓	NA
		Create Schema and Role	✓	✓ (drop and re-create objects)
		Grants	✓	✓
		Load DB object (DDL's and DML's)	✓	✓

Table 6-6 (Cont.) Table 6

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

7

Post Installation Steps

This topic provides information on **Post Installation Steps**.

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. 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 OBDX environment.

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

- **Oracle Banking Digital Experience Credential Store Setup Guide**

Fileupload with UBS

Refer below document for File upload configuration with UBS

- **Oracle Banking Digital Experience 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 Digital Experience OHS User Interface Configuration** user manual.

Feedback module:

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

Table 7-1 WAR deployments

Sr No	Module	Mandatory (Y/N)
Domainwise deployments		
2	digx-common	Y

Table 7-1 (Cont.) WAR deployments

Sr No	Module	Mandatory (Y/N)
4	digx-infra	Y
5	digx-coherence	Y
8	digx-extxfacesimulator	Y
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	Y
26	digx-ml-Indb	Y
27	digx-sms	Y
28	digx-ukob	Y
29	digx-webauthn	Y
30	weblogic-remote-cconsole-app	Y

Enabling Kafka in OBDX

Overview

OBDX 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. OBDX 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 OBDX.
   - 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 OBDX** in the document **Oracle Banking Digital Experience Extensibility Guide** for the detailed steps and guidelines in implementing Kafka and JMS.

- OBDX Pre-defined External Kafka Topic Configurations

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

- lm.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>
```

8

OBDX Logging Configuration

This topic provides information on **OBDX 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/obdx/domains/obdx_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/obdx/domains/obdx_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"/>`

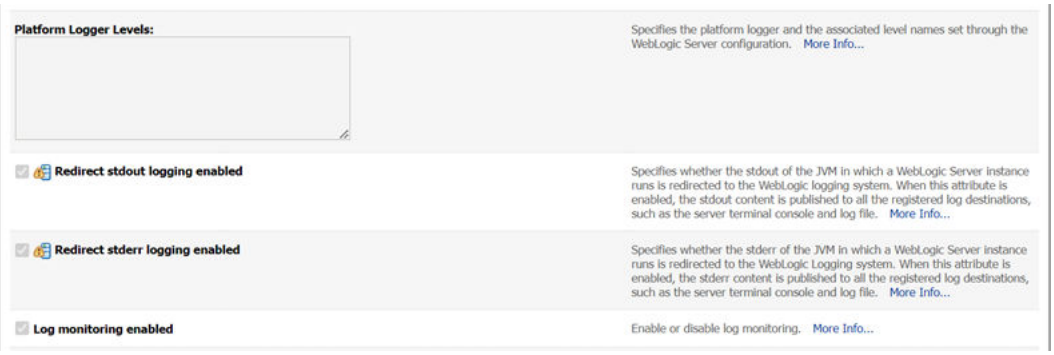
> **Note:**
>
> In order to get the changes reflected without server restart, you can add a "scan" attribute to the <configuration> element in the external logback file. By default, the configuration file will be scanned for changes once every minute. To configure your desired scan period, add the attribute "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.



9

OBDX Product Verification

This topic describes the systematic instruction to **OBDX Product Verification** option.

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”

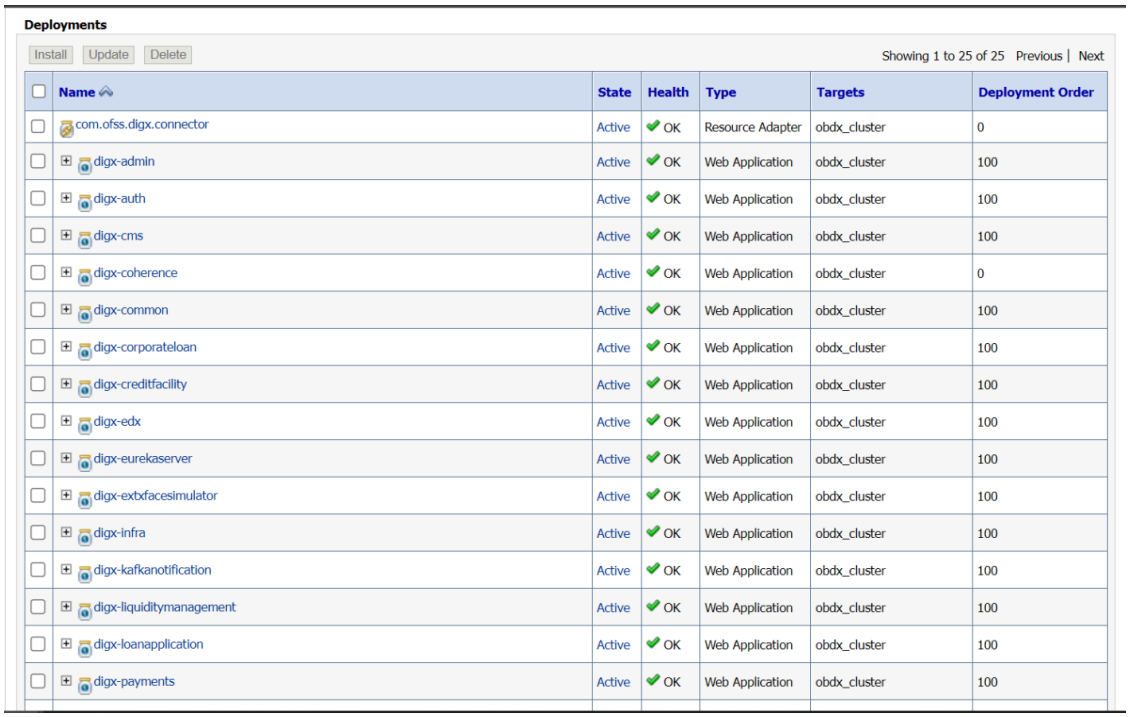
To make these changes,Please follow below Documentation:

`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



Deployments

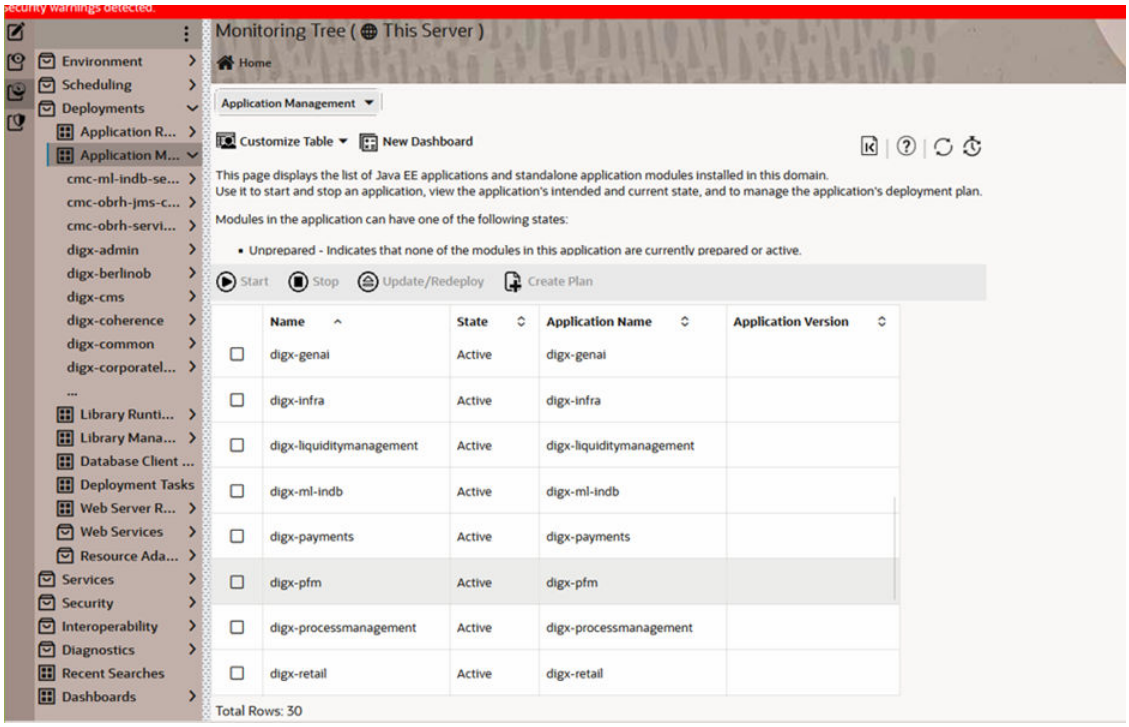
Install | Update | Delete — Showing 1 to 25 of 25 Previous | Next

Name	State	Health	Type	Targets	Deployment Order
com.ofss.digx.connector	Active	OK	Resource Adapter	obdx_cluster	0
digx-admin	Active	OK	Web Application	obdx_cluster	100
digx-auth	Active	OK	Web Application	obdx_cluster	100
digx-cms	Active	OK	Web Application	obdx_cluster	100
digx-coherence	Active	OK	Web Application	obdx_cluster	0
digx-common	Active	OK	Web Application	obdx_cluster	100
digx-corporateloan	Active	OK	Web Application	obdx_cluster	100
digx-creditfacility	Active	OK	Web Application	obdx_cluster	100
digx-edx	Active	OK	Web Application	obdx_cluster	100
digx-eurekaserver	Active	OK	Web Application	obdx_cluster	100
digx-extxfacesimulator	Active	OK	Web Application	obdx_cluster	100
digx-infra	Active	OK	Web Application	obdx_cluster	100
digx-kafkanotification	Active	OK	Web Application	obdx_cluster	100
digx-liquiditymanagement	Active	OK	Web Application	obdx_cluster	100
digx-loanapplication	Active	OK	Web Application	obdx_cluster	100
digx-payments	Active	OK	Web Application	obdx_cluster	100

☐	digx-extxfacesimulator	Active	OK	Web Application	obdx_cluster	100
☐	digx-infra	Active	OK	Web Application	obdx_cluster	100
☐	digx-kafkanotification	Active	OK	Web Application	obdx_cluster	100
☐	digx-liquiditymanagement	Active	OK	Web Application	obdx_cluster	100
☐	digx-loanapplication	Active	OK	Web Application	obdx_cluster	100
☐	digx-payments	Active	OK	Web Application	obdx_cluster	100
☐	digx-pfm	Active	OK	Web Application	obdx_cluster	100
☐	digx-pm	Active	OK	Web Application	obdx_cluster	100
☐	digx-processmanagement	Active	OK	Web Application	obdx_cluster	100
☐	digx-retail	Active	OK	Web Application	obdx_cluster	100
☐	digx-scf	Active	OK	Web Application	obdx_cluster	100
☐	digx-scfcm	Active	OK	Web Application	obdx_cluster	100
☐	digx-shared-libs (22.2.0.0.0,4208)	Active		Library	AdminServer, obdx_cluster	0
☐	digx-tradefinance	Active	OK	Web Application	obdx_cluster	100
☐	digx-virtual-account	Active	OK	Web Application	obdx_cluster	100

Install Update Delete

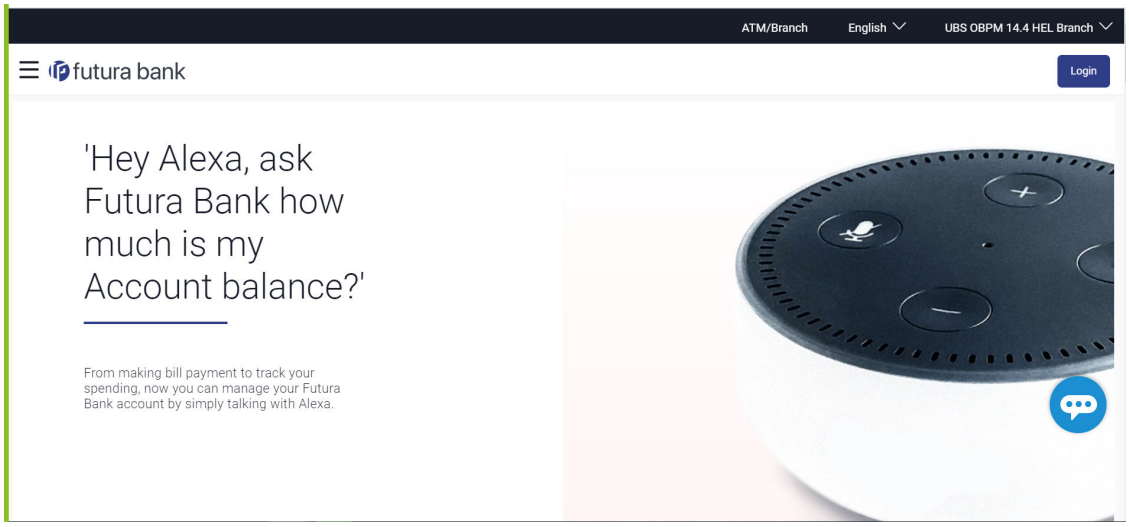
Showing 1 to 25 of 25 Previous | Next



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 (OBDX with UBS)

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

Oracle Banking Digital Experience System Configuration

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

> **Note:**
>
> Post Day1 restart of Managed server is mandatory

Third Party System (OBDX with THP)

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

Oracle Banking Digital Experience System Configuration

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

> **Note:**
>
> Post Day1 restart of Managed server is mandatory

Chat Bot Configuration:

Refer below document for Chat Bot configuration.

Oracle Banking Digital Experience Chatbot Configuration

Mobile Application Builder:

Refer below documents for Mobile Applications build and setup.

Oracle Banking Digital Experience Mobile Application Builder-Android

Oracle Banking Digital Experience Mobile Application Builder-iOS

Mid Office Configuration:

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

Oracle Banking Mid-Office Product Setup and Configuration Guide.

Account Uniqueness Configuration:

Some core banking systems support same account number in multiple branches within the entity. OBDX 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
('obdx.host.account.uniqueness','ExtSystemsConfig','BRANCH','<ENTITY_ID>','ofs
suser',sysdate,
'ofssuser',sysdate);
Insert into DIGX_FW_CONFIG_ALL_O (PROP_ID, PREFERENCE_NAME, PROP_VALUE,
DETERMINANT_VALUE,
CREATED_BY, CREATION_DATE, LAST_UPDATED_BY, LAST_UPDATED_DATE)
values
('obdx.host.accountbranch.delimiter','ExtSystemsConfig','@~','<ENTITY_ID>','of
ssuser',sysdate,'ofssuser',sysdate);
```

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

10

Multi Entity

This topic provides information on **Multi Entity**.

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

- Add entity through OBDX 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 OBDX 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 OBDX software installation (or has ownership on Oracle Weblogic home directory)

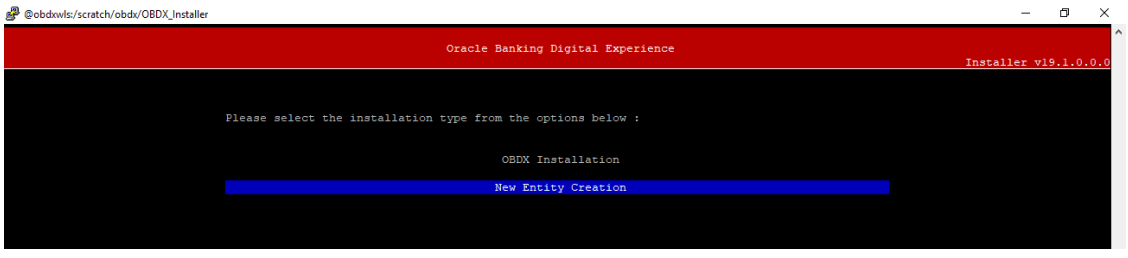
Ensure OBDX installation details (OBDX DB; WLS etc) are maintained in installer.properties and user running the installer has read-write permissions.

From your terminal navigate to <OBDX INSTALLER DIR>

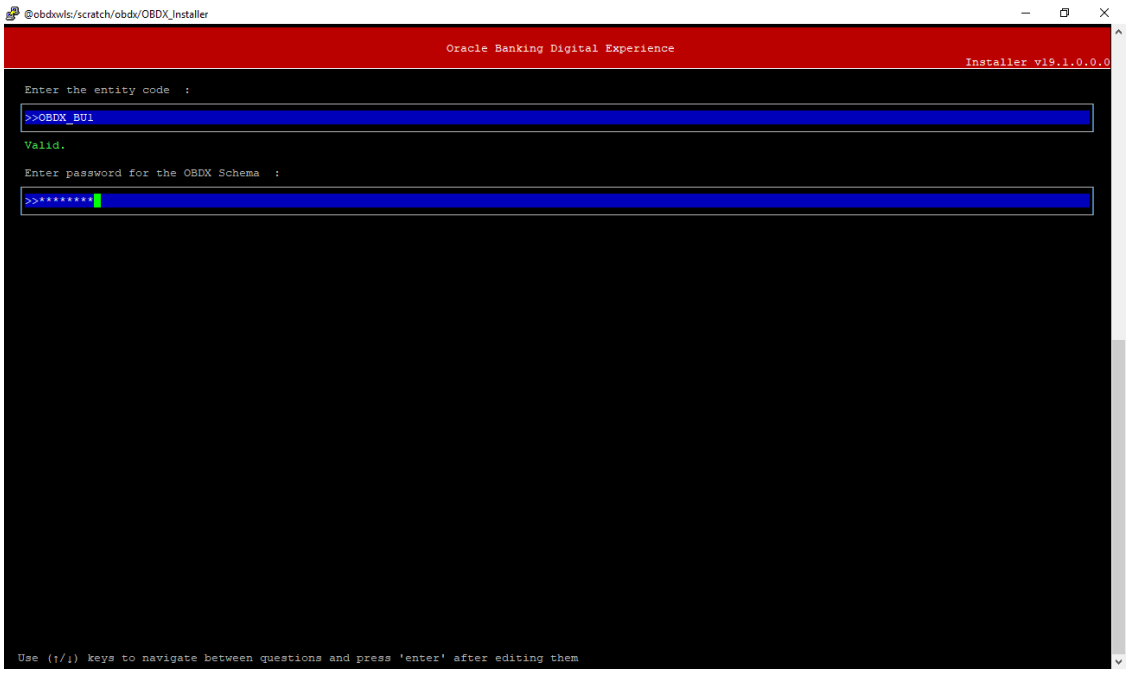
Enter the following command

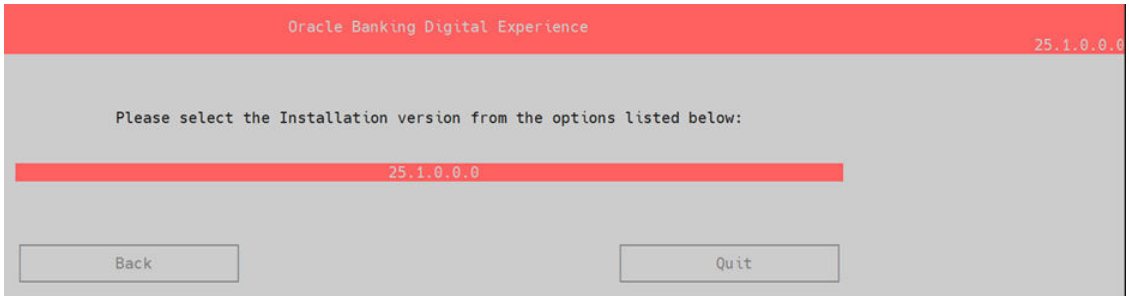
```
python3 runInstaller.py
```

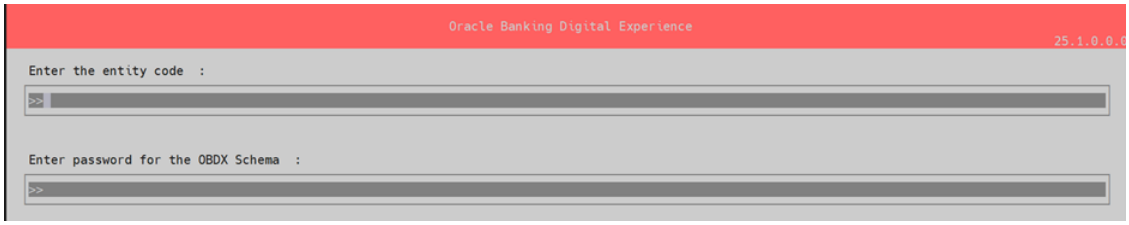
Select installation type as ‘New Entity Creation’.



Below screen will appear after selecting add entity.



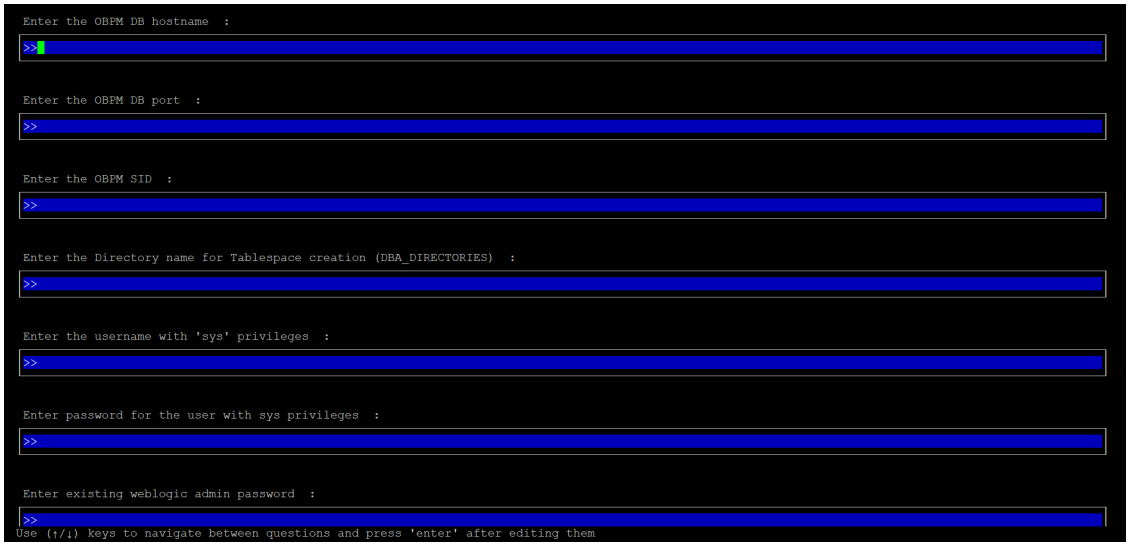


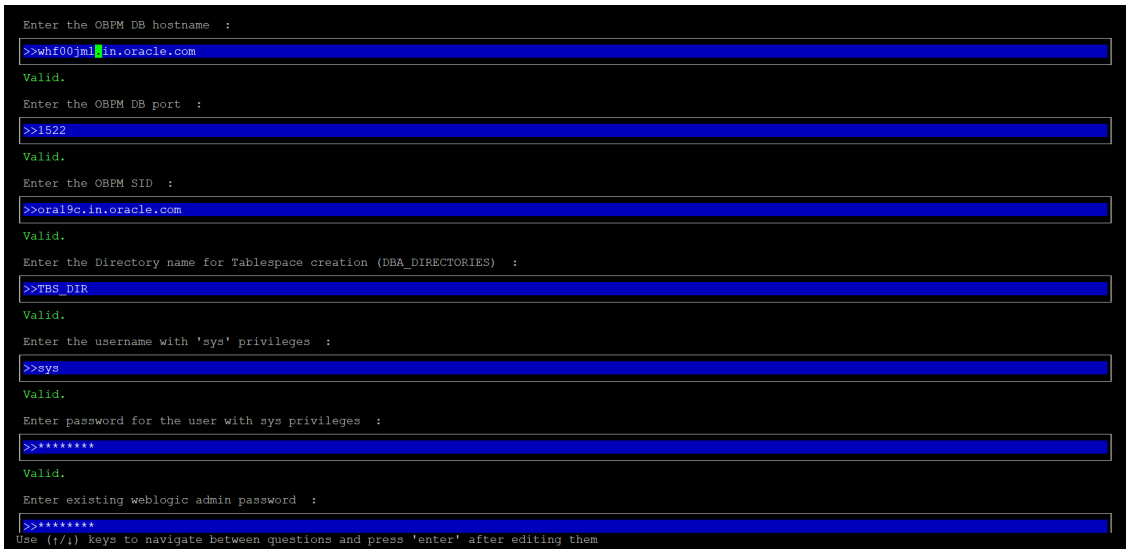


Enter below information:

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

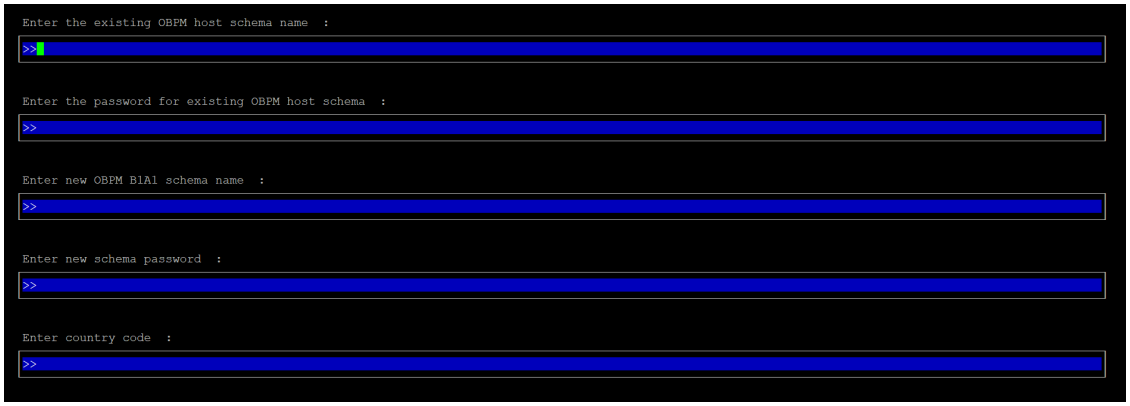
If an entity code belongs to UBS / OBPM host following screen (below screenshot are for OBPM ; for UBS same input are required) will appear:





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

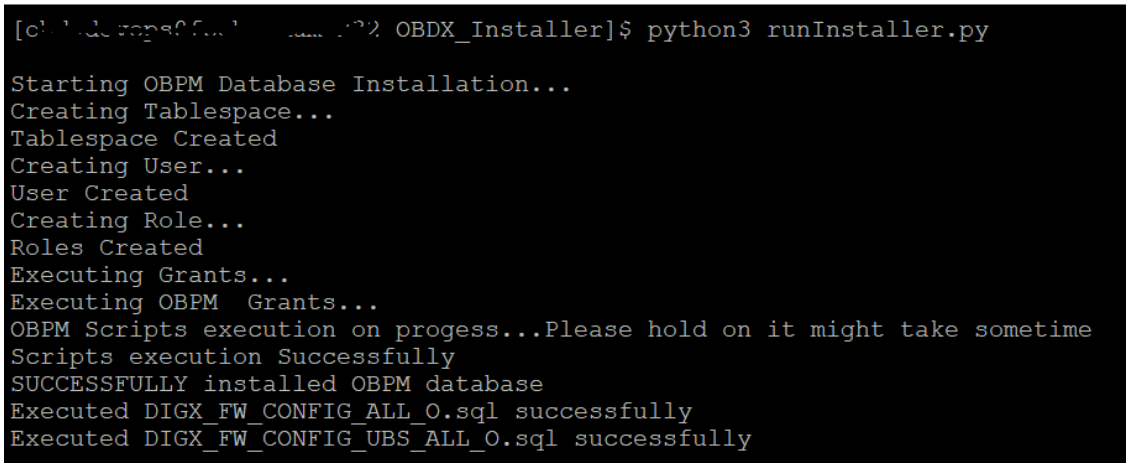


Enter below details:

- 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.



When the installation completes, the below message is displayed

```
Starting Entity Configuration

Calling WLST

Initializing WebLogic Scripting Tool (WLST) ...

Welcome to WebLogic Server Administration Scripting Shell

Type help() for help on available commands

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

Warning: An insecure protocol was used to connect to the server.
To ensure on-the-wire security, the SSL port or Admin port should be used instead.

Location changed to edit tree.
This is a writable tree with DomainMBean as the root.
To make changes you will need to start an edit session via startEdit().
For more help, use help('edit').

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


Exiting WebLogic Scripting Tool.


Entity successfully configured.
```

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

No additional steps/ configuration are required.

11

Multi-entity installation using Silent Mode

This topic provides information on **Multi-entity installation using Silent Mode**.

This chapter describes how to run the OBDX 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 OBDX 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=hostanme.in.oracle.com
OBDX_Installer]$ export ENTITY_EHMS_DATABASE_PORT=1520
OBDX_Installer]$ export ENTITY_EHMS_DATABASE_SID=obdxdb.in.oracle.com
OBDX_Installer]$ export ENTITY_EHMS_DBA_DIRECTORY_NAME=TBS_DIR
OBDX_Installer]$ export ENTITY_EHMS_DATABASE_SYS_USER=sys
OBDX_Installer]$ export ENTITY_EHMS_DATABASE_SYS_PASS=welcome1
OBDX_Installer]$ export ENTITY_EHMS_SCHEMA_NAME=welcome1
OBDX_Installer]$ export ENTITY_EHMS_SCHEMA_PASS=welcome1
OBDX_Installer]$ export ENTITY_EHMS_HOST_SCHEMA_NAME=FCUBS140
OBDX_Installer]$ export ENTITY_EHMS_HOST_SCHEMA_NAME_PASS=welcome1
OBDX_Installer]$ export WLS_DOMAIN_PASS=welcome1
OBDX_Installer]$ export ENTITY_EHMS_HOST_SCHEMA_NAME_PASS=FCUBS140
OBDX_Installer]$ export ENTITY_EHMS_CCY=GB
OBDX_Installer]$ python runInstaller.py --silent --addEntity
```

Below parameters should be set in environment variables

For more information on fields, refer to the field description table.

Table 11-1 Table 1

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_BU7`
	`SCHEMA_PASS`	Password for existing OBDX schema	`export SCHEMA_PASS=devops#obdx182`
	`ENTITY_EHMS_DATABASE_HOSTNAME`	Hostname of the EHMS HOST database host server	`export ENTITY_EHMS_DATABASE_HOSTNAME=xx.xx.xx.xx`

Table 11-1 (Cont.) Table 1

Environment variables	Parameter	Description	Example
	ENTITY_EHMS_DATABASE_PORT	Port of the EHMS HOST database host server	export ENTITY_EHMS_DATABASE_PORT=1521
	ENTITY_EHMS_DATABASE_SID	EHMS Host database Service Name	export ENTITY_EHMS_DATABASE_SID=obdxdb.in.oracle.com
	ENTITY_EHMS_DBA_DIRECTORY_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_DIRECTORY_NAME=TBS_DIR
	ENTITY_EHMS_DATABASE_SYS_USER	Username with 'sys' privileges	export ENTITY_EHMS_DATABASE_SYS_USER=sys
	ENTITY_EHMS_DATABASE_SYS_PASS	Password for EHMS sys user	export ENTITY_EHMS_DATABASE_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=OBDXEHMS
	ENTITY_EHMS_SCHEMA_PASS	Password for new EHMS schema on EHMS HOST database	export ENTITY_EHMS_SCHEMA_PASS=devops#ehms
	ENTITY_EHMS_HOST_SCHEMA_NAME	EXISTING EHMS Host schema name	export ENTITY_EHMS_HOST_SCHEMA_NAME=EHMSHOST
	ENTITY_EHMS_HOST_SCHEMA_NAME_PASS **This parameter is only required for UBS & OBPM Host	Password of existing HOST EHMS schema (Existing)	export ENTITY_EHMS_HOST_SCHEMA_NAME_PASS=ehmshst
	WLS_DOMAIN_PASS	Password for Weblogic admin console	export WLS_DOMAIN_PASS=weblogic182
	ENTITY_EHMS_CCY **This parameter is only required for UBS & OBPM Host	Country Code for new or additional entity home branch	export ENTITY_EHMS_CCY=GB
	ENTITY_EHMS_FCORE_FCUBS_SCHEMA_NAME **This parameter is only required for FCORE	FCORE-FCUBS HOST schema name	export ENTITY_EHMS_FCORE_FCUBS_SCHEMA_NAME=FCRUBSHOST
Environment variables to set for flavor: OBDX (Third-party HOST)	Entity_Code	Entity code which has been entered from screen	export Entity_Code=OBDX_BU1
	SCHEMA_PASS	Password for existing OBDX schema	export SCHEMA_PASS=welcome1

2. 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

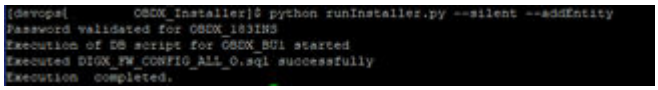
```
Starting Entity Configuration

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 sucessfully.


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



12

Steps to Create Credential Mapping

This topic provides information on **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

   For more information on fields, refer to the field description table.

   Table 12-1 WAR deployments

Type	Username	Password
MERCHANT	OBDX	PASSWORD111

2. <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,Password123,jdbc:oracle:thin:@host:port/service_id

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

3. <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:

```
ICredentialStore
                store =
CredentialStoreFactory.getCredentials(CredentialStoreKeys.CREDENTIAL_IPMLEMENT
ATION);
Credential credentials = store.getCredentials(<custom_type>);
```

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 `DIGX_FW_KEYSTORE`.

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);
SymmetricCryptographyProviderFactory.getInstance().getLatestProvider().decryp
t(data);
```

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OBDX Product Security

This topic provides information on **OBDX Product Security**. Refer below document for OBDX product security configuration

Oracle Banking Digital Experience Security Guide

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OBDX Product – Best Practice

14.1 Tablespace for AUDIT INDEX

This topic provides information on **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 OBDX schema

```
alter user <OBDX_SCHEMA> quota unlimited on
        <OBDX_AUDIT_INDEX_TABLESPACE>;
```

- Drop and create below index by mapping the newly created tablespace
  - `OBDX_Installer\installables\db\OBDX\ddl\oracle\audit\IDX_DIGX_AL_API_AUDIT_LOGGING.sql`
  - `OBDX_Installer\installables\db\OBDX\ddl\oracle\audit\IDX_DIGX_AL_API_AUDIT_LOG_HIST.sql`
  - `OBDX_Installer\installables\db\OBDX\ddl\oracle\audit\IDX_DIGX_AL_AUDIT_LOGGING.sql`
  - `OBDX_Installer\installables\db\OBDX\ddl\oracle\audit\IDX_DIGX_AL_AUDIT_LOGGING_1.sql`
  - `OBDX_Installer\installables\db\OBDX\ddl\oracle\audit\IDX_DIGX_AL_AUDIT_LOGGING_2.sql`
  - `OBDX_Installer\installables\db\OBDX\ddl\oracle\audit\IDX_DIGX_AL_AUDIT_LOGGING_3.sql`
  - `OBDX_Installer\installables\db\OBDX\ddl\oracle\audit\IDX_DIGX_AL_AUDIT_LOGGING_4.sql`
  - `OBDX_Installer\installables\db\OBDX\ddl\oracle\audit\IDX_DIGX_AL_AUDIT_LOGGING_DETAILS.sql`

15

JPA and OBDX multi-cluster

This topic provides information on **JPA and OBDX 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 OBDX 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 topic provides information on **Troubleshoot Overview**.

This section describes how to troubleshoot OBDX 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:

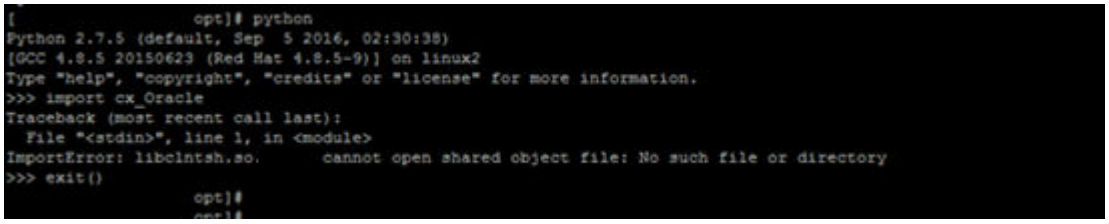
Try one of the following:

- 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:



Execute the below command:

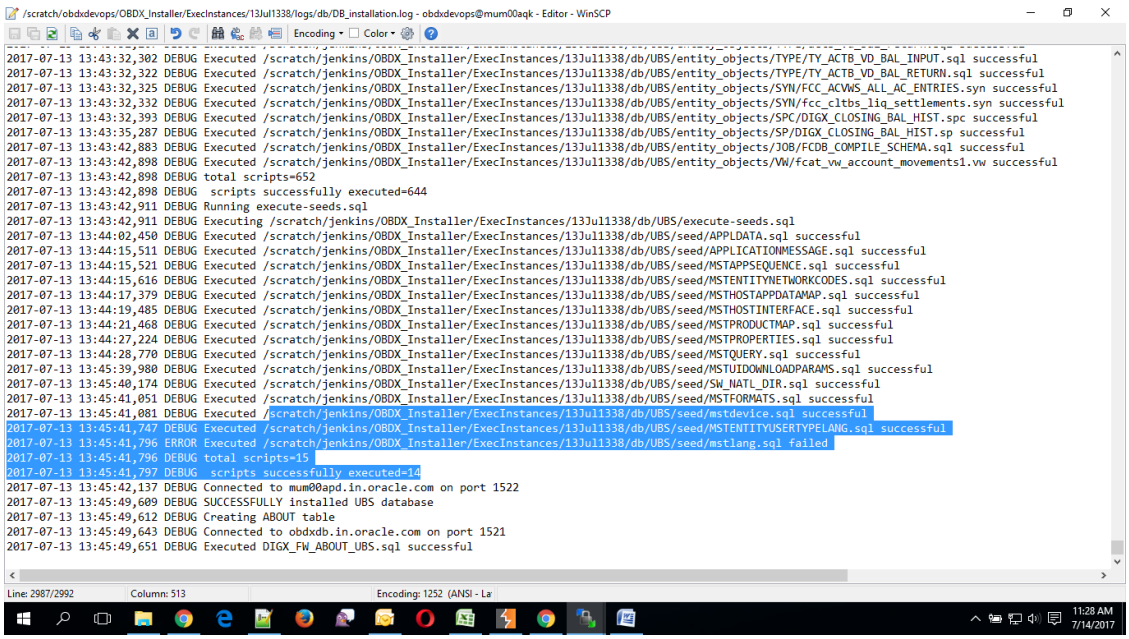
```
export LD_LIBRARY_PATH=/usr/lib/oracle/19.10/client64/lib:$LD_LIBRARY_PATH
python
    import cx_Orace
    cx_Oracle.__version__
```

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

Failed Database Scripts

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

If you get the following error in DB_installation.log:



Entitlement.log :

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 <OBDX INSTALLER DIR>/ExecInstances/<DDMonthHHMM>/logs/db/ and contains any SEVERE errors for Entitlement policy seeding.

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

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

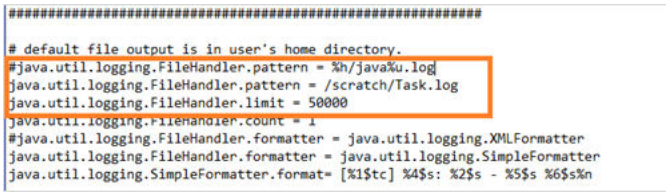
Fix the problem by following below steps:

- Login to OBDX installer server
- 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
- Browse to <OBDX 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
```



- 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,
<OBDX Schema name>,<OBDX Schema password>,jdbc:oracle:thin:@<OBDX DB
hostname or
IP>:<OBDX DB listener port>/<OBDX 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,OBDX_THP181,Welcome#1,
jdbc:oracle:thin:@xx.xx.xx.xx:1521/OBDX"
```

- 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,<OBDX Schema name>,
<OBDX Schema password>,jdbc:oracle:thin:@<OBDX DB hostname
or IP>:<OBDX DB listener port>/<OBDX 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,OBDX_THP201,Welcome#1,
jdbc:oracle:thin:@xx.xx.xx.xx:1521/OBDX"
```

> **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,<OBDX Schema name>,
<OBDX Schema password>,jdbc:oracle:thin:@<OBDX DB hostname or
IP>:<OBDX DB listener port>/<OBDX 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,OBDX_THP201,
Welcome#1,jdbc:oracle:thin:@xx.xx.xx.xx:1521/OBDX"
```

- Post successfully execution, restart Managed server.

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