# Installation Guide Oracle Banking Digital Experience Patchset Release 22.2.4.0.0

Part No. F72987-01

June 2024



Installation Guide

June 2024

Oracle Financial Services Software Limited

Oracle Park

Off Western Express Highway

Goregaon (East)

Mumbai, Maharashtra 400 063

India

Worldwide Inquiries:

Phone: +91 22 6718 3000 Fax:+91 22 6718 3001

www.oracle.com/financialservices/

Copyright © 2006, 2024, Oracle and/or its affiliates. All rights reserved.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

U.S. GOVERNMENT END USERS: Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate failsafe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

This software or hardware and documentation may provide access to or information on content, products and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.

# **Table of Contents**

1.	Pre	eface	<b>1–</b> 1
	1.1	Intended Audience	<b>1</b> –1
	1.2	Documentation Accessibility	<b>1</b> –1
	1.3	Access to Oracle Support	<b>1</b> –1
	1.4	Structure	<b>1</b> –1
	1.5	Related Information Sources	1–1
2.	Int	troduction	2-1
:	2.1	Purpose of the Document	2-1
3.	Pre	erequisites	3-1
4.	Ins	stallation	<b>4-</b> 1
5.	Ins	stallation using Silent Mode	5-1
6.	Ins	staller Verification	6-1
7.	Ins	staller Scope	7-1
8.	Ро	ost Installation Steps	8-1
9.	OB	BDX Logging Configuration	<b>9-</b> 1
10	. (	OBDX Product Verification	10–1
11	. 1	Multi Entity	11–1
12	. 1	Multi-entity installation using Silent Mode	12–1
13	. (	OBDX Product Security	13–1
14	. (	OBDX Product – Best Practice	14–1
	14.1	Tablespace for AUDIT INDEX	14–1
15		JPA and OBDX multi-cluster	15–1
16	7	Troubleshoot Overview	16–1

## 1. Preface

## 1.1 Intended Audience

This document is intended for the following audience:

- Customers
- Partners

## 1.2 **Documentation Accessibility**

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

## 1.3 Access to Oracle Support

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

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

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

## 1.4 Structure

This manual is organized into the following categories:

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

The subsequent chapters describes following details:

- Introduction
- Preferences & Database
- Configuration / Installation.

## 1.5 Related Information Sources

For more information on Oracle Banking Digital Experience Patchset Release 22.2.4.0.0, refer to the following documents:

Oracle Banking Digital Experience Installation Manuals



## 2. Introduction

## 2.1 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 Thirdparty HOST system.
- Running the installation in silent mode
- Advanced Configurations (Post installation)
- Installation Verification
- Multi-Entity Installation and configuration
- Best Practice
- Troubleshoot Overview

Home



# 3. 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 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**

Step 1: Login using root user.

<u>Step 2</u>: 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:

Step 1: Execute python -V command

#### python3.8 -V

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

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



#### cx\_Oracle & Urwid:

Step 1: Execute python command

#### python

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

Step 2: Import Urwid and check version

import urwid (Press Enter)

urwid.\_\_version\_\_

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

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

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

Step 3: Similarly import cx\_Oracle and check version

import cx Oracle (Press Enter)

cx\_Oracle.version

```
[root@ci_ 172 Python-3.8.0]# python3.8

Python 3.8.0 (default, Jun 8 2021, 11:06:31)

[GCC 8.4.1 20200928 (Red Hat 8.4.1-1.0.1)] on linux

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

>>> import cx_Oracle

>>> cx_Oracle.version

'8.1.0'

>>>
```

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

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

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

Step 1: Execute below commands to install the python 3.8.0



dnf groupinstall 'development tools'

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

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

tar -xzvf Python-3.8.0.tgz

cd Python-3.8.0

./configure --enable-optimizations

make altinstall

python3.8 -version

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

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

```
pip3.8 install --upgrade pip
```

pip3.8 install cx-Oracle==8.3

pip3.8 install urwid==2.1.2

**Home** 



## 4. Installation

#### **Pre-Installation**

Install all the prerequisite software and packages mentioned above

#### Steps of Installation

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



#### **IMPORTANT**:

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



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

Component	Parameter	Description	Example
	OBDX_DATABASE_HOST NAME	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 <b>Service Name</b> for database instance	obdxdb.in.oracle .com
	OBDX_DATABASE_SYS_U SER	Enter the username with 'sys' privileges	Sys
DB details (for OBDX	POST_FIX	For OBDX schema name like "OBDX_DEV" POST FIX is 'DEV'. SHOULD BE IN UPPERCASE ONLY.	DEV
schema)	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_DIREC TORY_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



Component	Parameter	Description	Example
	EHMS_DATABASE_HOSTNAME	Enter the hostname for EHMS database server	abc.xyz.com
	EHMS_DATABASE_PORT	Enter the port number of EHMS database listener	1521
	EHMS_SCHEMA_NAME	Enter the Complete OBDX- EXT (B1A1) HostInterfaceschema name you want installer to create as new schema.	EHMS182S CHEMA
		SHOULD BE IN UPPERCASE ONLY.	
EHMS DB details (to be configured only in-case of FLAVOR as UBS,FCORE &OBPM)	EHMS_DBA_DIRECTORY_NAME	Enter the directory name in which you want the 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_L OG_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	FCRUBSHO ST



Installation

Component	Parameter	Description	Example Insta
	MIDDLEWARE_HOME	Oracle Weblogic Server home path. Example /home/obdxuser/Oracle/Middlewar e/Oracle_Home - where you have sub-directories like wlserver,oracle_common etc.	/home/obdxuser /Oracle/Middlew are/Oracle_Ho me
	JAVA_HOME	Path where JAVA (JDK) is installed	/home/obdxuser /jdk11_0_14
	FLYWAY_HOME	Path where FLYWAY is installed	/home/obdxuser /flyway-8.3
	DB_WITH_FLYWAY_E XECUTION	Database execution type	YES or NO
	GRADLE_HOME	Path where GRADLE is installed	/home/obdxuser /gradle-7.9
	MavenRepositoryUrl	Path where maven-repo under installer folder	\$installerDir/inst allables/maven- repo
Weblogic server	GradleRepositoryUrl	Path where gradle-repo under installer folder	\$installerDir/inst allables/gradle- repo
uetans	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	7001



Component	Parameter	Description	Example
		port. Custom port are supported.	
	WLS_ADMIN_SERVER _SSL_PORT	AdminServer SSL port. It is the port used to securely access (https) the administration console of the Weblogic server.	7002
	WLS_NODE_PORT	Node Manager Port. It is the port used by Node Manager to be configured for OBDX domain. Generally, 5556 is utilized as Node Manager Port. Custom ports are supported.	5556
	WLS_MS_SERVER_NA ME	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_PO RT	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_FILEUPLOA D_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



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/A udit
	WLS_JMS_REPORT_P S (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/R eports
	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/J PA
	WLS_JMS_EXTSYSRE CEIVER_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/R eceiver
	WLS_JMS_EXTSYSSE NDER_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/S ender
OBDX Application Administrator user details	OBDX_ADMIN_USERN AME	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@or acle.com



Component	Parameter	Description	Example
	OBDX_ADMIN_CONTA CT_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.



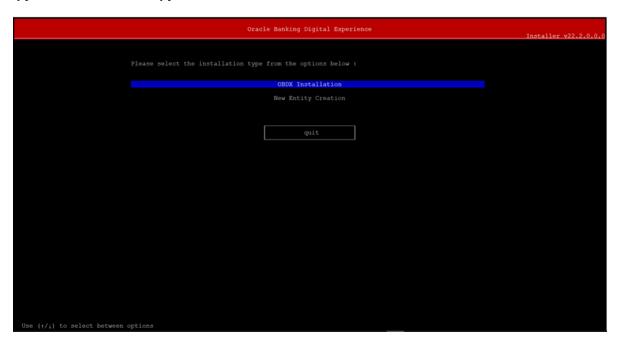
### **Installation Steps:**

From your terminal navigate to <OBDX INSTALLER DIR>/

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

Enter the following command

#### python3.8 runInstaller.py



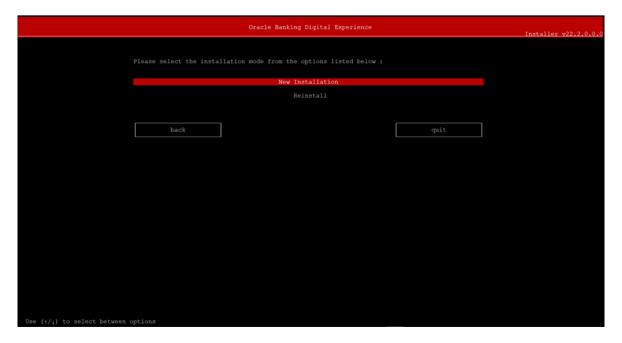
Select the appropriate host system for Installation





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

Select Installation mode

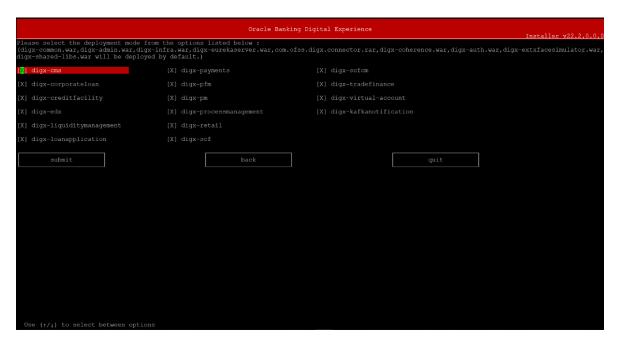


#### **Mode of Installation - New Installation**

New installation

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





#### **Type of Deployment**

Select the wars which you want to deploy. Some wars will be deployed by default. There are in total 25 wars.

Below screens would appear to taken end-user input



#### Enter below passwords:

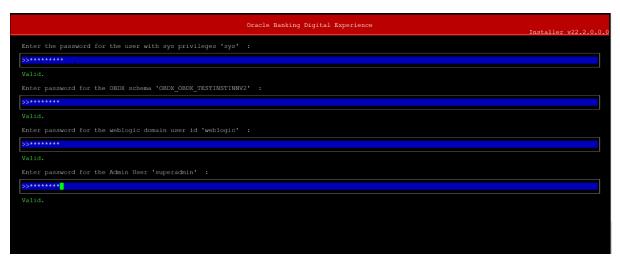
- SYS privilege user password where OBDX schema would be created
- OBDX schema password
- Weblogic console administrator user password
- SYS privilege user password where UBS host schema exists



- Existing UBS HOST schema password
- New OBDX EHMS schema password
- Password for OBDX application administrative user (In-case of OUD as provider, password should be similar to one used while user creation in OUD (or User Password field))

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

Post Third Party System selection, enter the required credentials details



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

- SYS privilege user password where OBDX schema would be created
- OBDX schema password
- Weblogic console administrator user password
   OBDX application admin user password

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

Post Oracle FLEXCUBE Core Banking, enter the required credentials details



```
Enter the password for the user with sys privileges 'sys' :

Valid.

Enter password for the OBCX schema 'OBCX_OBCX22IDEV' :

Valid.

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

Valid.

Enter the password for the user with sys privileges of FCR database 'sys' :

Valid.

Enter the password for the FCORE schema 'BIAI_OBCX22IDEV' (new) :

Valid.

Enter password for the FCORE schema 'BIAI_OBCX22IDEV' (new) :

Valid.

Enter password for the Admin User 'superadmin' :

Valid.

Enter password for the Admin User 'superadmin' :
```

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

- SYS privilege user password where OBDX schema would be created
- OBDX schema password
- Weblogic console administrator user password
- SYS privilege user password where FCORE host schema exists
- New OBDX EHMS schema password
- Password for OBDX application administrative user

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

Enter the required credentials details



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

- SYS privilege user password where OBDX schema would be created
- OBDX schema password
- Weblogic console administrator user password
- SYS privilege user password where OBPM host schema exists
- Existing OBPM HOST schema password
- New OBDX EHMS schema password
- Password for OBDX application administrative user

#### **Mode of Installation – Reinstall**



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.



#### **Installation Status**

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

#### If DB\_WITH\_FLYWAY\_EXECUTION set to NO

#### If DB\_WITH\_FLYWAY\_EXECUTION set to YES



```
Database Path: //UD/app/oracle/oradata/OFCDB009_Bomlog/OFCDB009_BOMIOg/B2169F48980C1E32E053C305F40A9E33/datafile
Creating Tablespace.
Tablespace Created
Creating User...
User Created
Creating Goals...
Execution of clip_master_script_main.sql started
Execution of clip_master_script_main.sql started
Execution of clip_constraints_main.sql completed
SUCCESSFULY installed OBEX database

SUCCESSFULY installed OBEX database

STarting OBPM Database Installation...
Tablespace Created
Creating User...
User Created
Creating User...
Execution of table-scripts_main.sql started
Execution of table-scripts_main.sql completed
Execution of table-scripts_main.sql completed
Execution of table-scripts_main.sql started
Execution of table-scripts_main.sql started
Execution of table-scripts_main.sql started
Execution of table-scripts_main.sql started
Execution of obps_object_scripts_main.sql scripts_main.sql scripts_main.eql scripts_main.eql
```

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

```
Starting WEBLOGIC Setup and Configuration...

Weblogic Domain Created Successfully
Generating 2,048 bit DSA key pair and self-signed certificate (SHA256withDSA) with a validity of 9,999 days
for: CNN-Developer, OU-Department, O-Company, L-City, ST-State, C-CA
[Storing /scratch/app/domains/obdx_mod_domain/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 /scratch/app/domains/obdx_mod_domain/authserver.keystore -destkeystore /scratch/app/domains/obdx_mod_domain/authserver.keystore -destkeystore /scratch/app/domains/obdx_mod_domain/authserver.keystore -deststoretype pkcs1
2".

Starting Datasource Creation...
Datasource created Successfully
Starting JMS Creation...
JMS Created Successfully
Starting Deployent Creation...
Deployment created Successfully
Successfully Setup and Configured WEBLOGIC...

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

[devops@obdxwls OBDX_Installer]$
```

Home



# 5. 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.

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

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

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

Host	Parameter	Description	Example
	FLAVOUR	Flavour for installation	export FLAVOUR=OBPM or
Environment variables to set for flavor:UBSFC		UBS for Oracle FLEXCUBE Universal Banking 146.0.0.0 (OBDX with UBS)	export FLAVOUR=FCORE
ORE		FCORE for Oracle FLEXCUBE Core Banking 11.8.0.0.0 (OBDX with FCORE)	



MODE	Mode of installation.	export MODE=New
	'New' in-case of a fresh installation of OBDX for the first run on server	or export MODE=Clean
	'Clean' in-case of an existing OBDX installation that you want to overwrite OR in case of a previously failed installation or re- installation	
DB_SYS_PASSWORD	Sys user password of OBDX database (Existing)	export DB_SYS_PASSWORD=obdx18 2sys
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_SY S_PASS	Sys user password of EHMS HOST database (Existing)	export EHMS_DATABASE_SYS_PASS =obdxehmssys
EHMS_HOST_SCHEM A_NAME_PASS	Password of existing EHMS HOST schema (Existing)	export EHMS_HOST_SCHEMA_NAME _PASS =obdxehmshost
** Only required for UBS & OBPM Host. Ignore this parameter in-case of FCORE Host		
EHMS_SCHEMA_PASS	Password for new OBDX EHMS schema on EHMS HOST database	export EHMS_SCHEMA_PASS=obdx1 82ehms
wars_to_deploy	Mention the optional wars to be 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
	FLAVOUR	Flavour for installation  'OBDX' for Third Party System 1.0 (OBDX with THP)	export FLAVOUR=OBDX
Environment variables to set for flavor:	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 reinstallation	export MODE=New or export MODE=Clean
OBDX (Third-party HOST)	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\_WITH\_FLYWAY\_EXECUTION set to NO

```
>>>> STARTING OBDX FRODUCT INSTALLATION <<<<

The are excuting the db with DB WITH FLYRWY EMECUTION-NO

STARTING OBDX Instanse Installation with OBBW WITH STARTY EMECUTION-NO

STARTING OBDX Instanse Installation with OBBW WITHOUT STARTY EMECUTION-NO

STARTING OBDX Instanse Installation with OBBW WITHOUT STARTY EMECUTION-NO

STARTING OBDX Instanse Installation with OBBW WITHOUT STARTY EMECUTION OF THE STARTY EMECUTION OF THE STARTY EMECUTION OF THE STARTY OF THE STARTY EMECUTION OF THE STARTY OF THE ST
```

If DB\_WITH\_FLYWAY\_EXECUTION set to YES



```
assword validated for sy:
 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_bomlcq/OFCDB009_BOM1CQ/B2169F489B0C1E32E053C305F40A9E33/datafile
Database Path: /u02/app/oracle/oradata/OFCDB009_bomlcq/OFCDB009_BOM1CQ/B2169F489B0C1E32E053C305F40A9E33/datafile
 reating Tablespace...
Tablespace Created
Creating User...
User Created
 reating Role...
Rose Greater

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
 reating Tablespace...
 ablespace Created
 reating User...
Roles Created
 Executing OBPM Grants...
 DBPM 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/OBDX21ITESTII/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/OBDX21ITESTII/authserver.keystore -destkeystore /home/devops/domain/OBDX21ITESTII/authserver.keystore -deststoretype pkcs12".

Starting 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]$ ]
```

<u>Home</u>



# 6. 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.

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



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

Check all the logs for any errors.

**Home** 



# 7. Installer Scope

OBDX Installer currently covers below activities:

Flavor: Third Party system (OBDX with THP)

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

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



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



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

Flavor	Activity	Detailed Activity List	New Installation	Reinstall
	OBDX DB Setup	Create Tablespace	√	NA
		Create Schema and Role	<b>√</b>	√ (drop and recreate objects)
		Grants	√	√
		Load DB object (DDL's and DML's)	√	√
		Execute OBPM HOST specific scripts	<b>√</b>	√
		Compile Schema	√	√
		Policy Seeding	√	√
	EHMS DB Setup	Create Tablespace	√	NA
OBDX with OBPM (14.6.0.0.0 version)		Create Schema and Role	<b>√</b>	√ (drop and recreate objects)
		Grants	√	√
		Load DB object (DDL's and DML's)	<b>√</b>	√
		Compile Schema	√	√
	Weblogic Setup and Configuration	Create and Configure AdminServer, Machine, Managed Server and		
		Cluster	$\sqrt{}$	$\sqrt{}$
		Configure NodeManager	√	√
		Configure JDBC	V	√
		JMS servers, Persistent stores and JMS Modules	√	V
		Application Deployment	V	√
		JTA	V	√
		Enable Production Mode	√	√



Flavor	Activity	Detailed Activity List	New Installation	Reinstall
		Start AdminServer and NodeManager	$\checkmark$	<b>√</b>
	OBDX Configuration	Copy config files into OBDX Installation Home	V	√ (Delete old and copy new from installer zip)

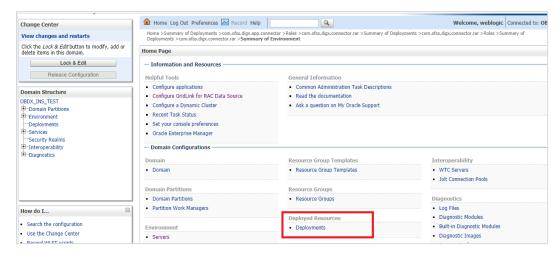
**Home** 



# 8. Post Installation Steps

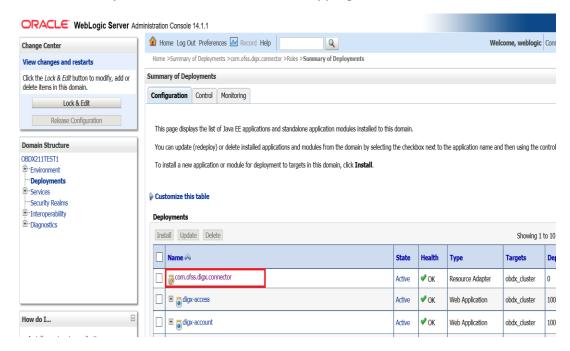
# **Outbound credential mappings**

Login Weblogic Admin Console. Click on Deployments.

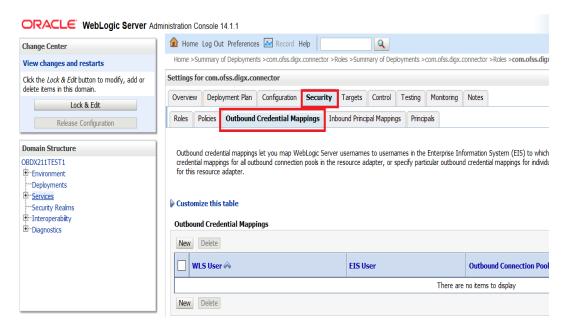


Click on com.ofss.digx.connector

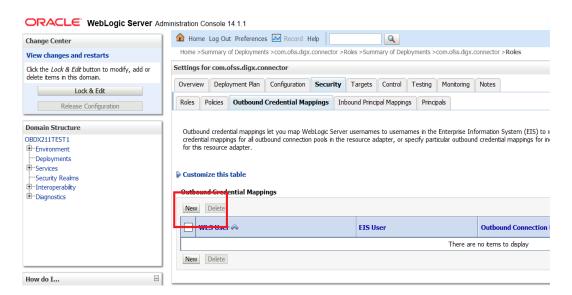
## Click on Security Tab > Outbound Credential Mappings





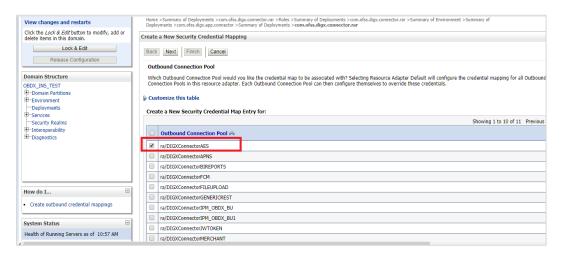


#### Click on New

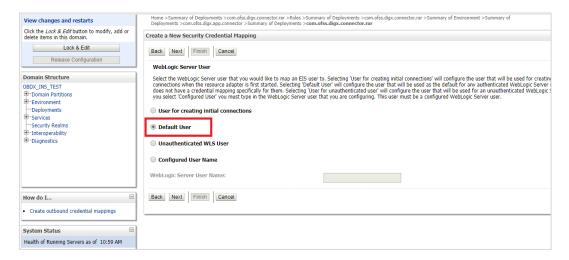


Select ra/DIGXConnectorAES > Next



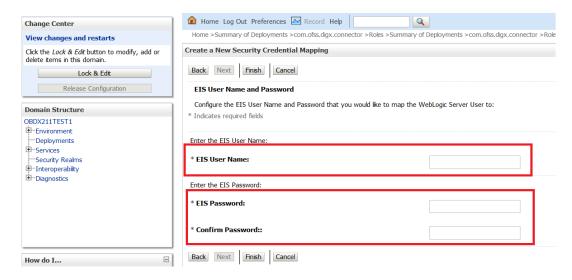


#### Select "Default User" > Next



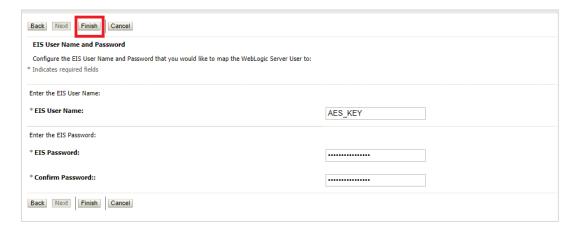
# Enter "EIS User Name" should be set to AES\_KEY

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





#### Click 'Finish'



# Check AES\_KEY mapping is created successfully.



## **Configuring the Connector Credential Store**

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

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

Functionality / Module	OutBound Connection Pool Name
VAM	ra/DIGXConnectorOBVAM

# 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 Digital Experience 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

#### 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.

#### WAR deployments

Domainwise deployments			
Sr No	Module	Mandatory (Y/N)	
1	digx-admin	Y	
2	digx-common	Υ	
3	digx-auth	Υ	
4	digx-infra	Υ	
5	digx-coherence	Υ	
6	digx-eurekaserver	Υ	
7	digx-shared-libs	Υ	
8	digx-extxfacesimulator	Υ	
9	digx-cms	N	
10	digx-corporateloan	N	
11	digx-creditfacility	N	
12	digx-edx	N	
13	digx-kafkanotification	N	
14	digx-liquiditymanagement	N	
15	digx-loanapplication	N	
16	digx-payments	N	
17	digx-pfm	N	
18	digx-pm	N	
19	digx-processmanagement	N	



#### Post Installation Steps

20	digx-retail	N
21	digx-scf	N
22	digx-scfcm	N
23	digx-tradefinance	N
24	digx-virtual-account	N



# 9. 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.

 Use the attached sample reference file and copy it to any physical path. (For example, /scratch/obdx/domains/obdx\_domain/logbackOverride.xml)
 Sample code :

#### 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"</pre>
level="info"/>
    <logger name="com.ofss.digx.app.sms.service.user.User"</pre>
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)

- i. To configure package logging level: <logger name="com.ofss.digx.app.sms.service.user.login" level="info"/>
- ii. 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 →

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.

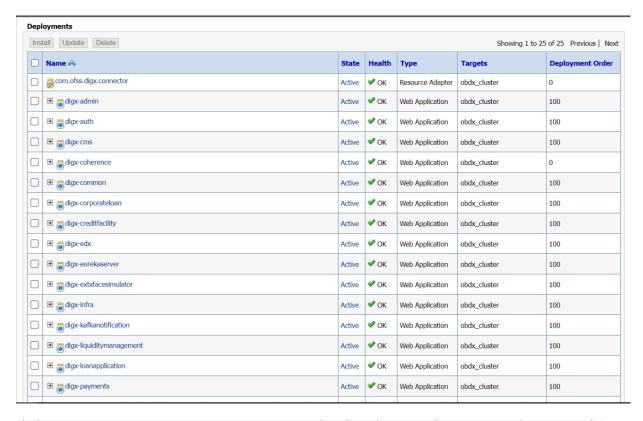


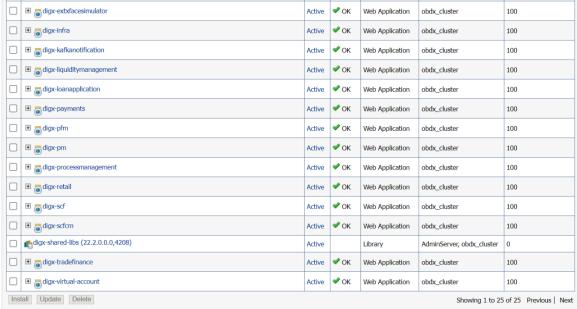


# 10. OBDX Product Verification

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

Domainwise deployment wars status



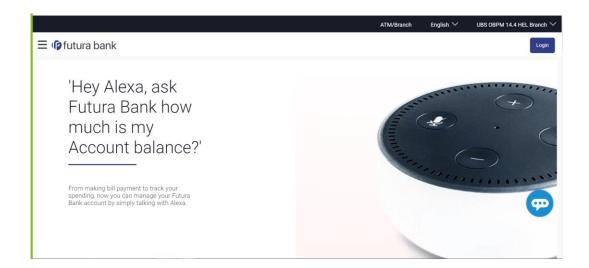




To verify the installation, launch below URL

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

Check if the page loads successfully.



# **Day1 Configuration**

#### **Universal Banking Solution (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>','ofssu ser',sysdate,'ofssuser',sysdate);

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

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



# 11. 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 User Manual
- 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 the OBPM DB port :

Enter the OBPM DB port :

Enter the OBPM DB port :

Enter the OBPM SID :

Enter the Directory name for Tablespace creation (DBA_DIRECTORIES) :

Enter the Directory name for Tablespace creation (DBA_DIRECTORIES) :

Enter the username with 'sys' privileges :

Enter password for the user with sys privileges :

Enter existing weblogic admin password :

Solution (JA) keys to navigate between questions and press 'enter' after editing them
```

```
Enter the OBEM DB hostname :

>>whf00jmlEin.oracle.com

Valid.

Enter the OBEM DB port :

>>1522

Valid.

Enter the OBEM SID :

>>oracle.com

Valid.

Enter the Directory name for Tablespace creation (DBA_DIRECTORIES) :

>>TBS_DIR

Valid.

Enter the username with 'sys' privileges :

>>ays

Valid.

Enter the username with 'sys' privileges :

>>ays

Valid.

Enter password for the user with sys privileges :

>>ays

Valid.

Enter existing weblogic admin password :

|>ays to navigate between questions and press 'enter' after editing them
```

#### Enter below details:

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



```
Enter the existing OBFM host schema name :

Enter the password for existing OBFM host schema :

Enter new OBPM BIAl schema name :

Enter new Schema password :

Enter new schema password :

Enter country code :
```

#### Enter below details:

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

## Installation Status in case of UBS / OBPM

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

When the installation completes, the below message is displayed



```
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_B1Al

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_B1Al 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 (OBDX with UBS)).

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

```
[Ubdagage Marght om 202 OBDX_Installer]$ python3 runInstaller.py Execution of DB script for OBDXBU4 started Executed DIGX_FW_CONFIG_ALL_O.sql successfully Execution completed.
```

No additional steps/ configuration are required.

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



```
Enter the FCORE DB port :

Enter the FCORE DB port :

Enter the FCORE DB port :

Enter the FCORE SID :

Enter the Directory name for Tablespace creation (DBA_DIRECTORIES) :

Enter the Directory name for Tablespace creation (DBA_DIRECTORIES) :

Enter the username with 'sys' privileges :

Enter the username with sys privileges :

Enter password for the user with sys privileges :

Enter existing weblogic admin password :

Enter existing weblogic admin password :

Enter existing weblogic admin password :
```



## Enter below details:

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



```
Enter the existing FCR schema name :

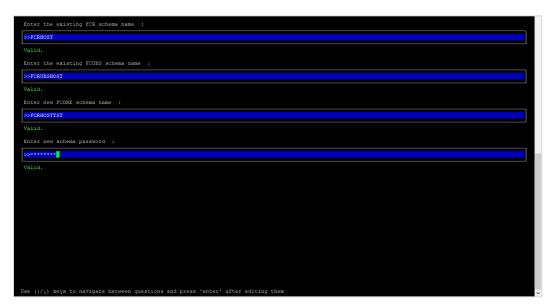
Enter the existing FCRS schema name :

Enter new FCORE schema name :

Enter new schema password :

Enter new schema password :

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



## Enter below details:

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



#### Installation status for FCORE Add entity

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

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

```
Starting Entity Configuration

Calling WLST

Initializing WebLogic Scripting Tool (WLST) ...

Welcome to WebLogic Server Administration Scripting Shell

Type help() for help on available commands

Connecting to t3://100.76.133.230:7001 with userid weblogic ...

Successfully connected to Admin Server "AdminServer" that belongs to domain "OBDX211TEST".

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

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

Location changed to edit tree.

This is a writable tree with DomainMBean as the root.

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

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

Creating Data source OBDXBU3_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

OBDXBU3_BlAl created successfully.

Exiting WebLogic Scripting Tool.

Entity successfully configured.
```

#### No additional steps/ configuration are required.

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



# 12. 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

Set the environment variables, as shown below.

```
OBDX_Installer]$ export Entity_Code=OBDX_BU7
OBDX_Installer]$ export SCHEMA_PASS=welcome1
OBDX_Installer]$ export ENTITY_EHMS_DATABASE_HOSTNAME=hostanme.in.oracle.com
OBDX_Installer]$ export ENTITY_EHMS_DATABASE_PORT=1520
OBDX_Installer]$ export ENTITY_EHMS_DATABASE_SID=obdxdb.in.oracle.com
OBDX_Installer]$ export ENTITY_EHMS_DATABASE_SID=obdxdb.in.oracle.com
OBDX_Installer]$ export ENTITY_EHMS_DATABASE_SYS_USER=sys
OBDX_Installer]$ export ENTITY_EHMS_DATABASE_SYS_USER=sys
OBDX_Installer]$ export ENTITY_EHMS_DATABASE_SYS_PASS=welcome1
OBDX_Installer]$ export ENTITY_EHMS_SCHEMA_NAME=welcome1
OBDX_Installer]$ export ENTITY_EHMS_SCHEMA_PASS=welcome1
OBDX_Installer]$ export ENTITY_EHMS_HOST_SCHEMA_NAME_FCUBS140
OBDX_Installer]$ export ENTITY_EHMS_HOST_SCHEMA_NAME_PASS=welcome1
OBDX_Installer]$ export ENTITY_EHMS_HOST_SCHEMA_NAME_PASS=FCUBS140
OBDX_Installer]$ export ENTITY_EHMS_HOST_SCHEMA_NAME_PASS=FCUBS140
OBDX_Installer]$ export ENTITY_EHMS_HOST_SCHEMA_NAME_PASS=FCUBS140
OBDX_Installer]$ export ENTITY_EHMS_HOST_SCHEMA_NAME_PASS=FCUBS140
OBDX_Installer]$ export ENTITY_EHMS_CCY=GB
OBDX_Installer]$ export ENTITY_EHMS_CCY=GB
```

Below parameters should be set in environment variables

	Parameter	Description	Example
Environment variables to set for flavor: FCORE UBS (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#ob dx182
OBPM (14.6.0.0.0 release)	ENTITY_EHMS_DAT ABASE_HOSTNAM E	Hostname of the EHMS HOST database host server	export ENTITY_EHMS_DATABASE_ HOSTNAME=xx.xx.xx.xx



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



	Parameter	Description	Example
	ENTITY_EHMS_HO ST_SCHEMA_NAME _PASS	Password of existing HOST EHMS schema (Existing)	export ENTITY_EHMS_HOST_SCHE MA_NAME_PASS=ehmshst
	**This parameter is only required for UBS & OBPM Host		
	WLS_DOMAIN_PAS S	Password for Weblogic admin console	export WLS_DOMAIN_PASS=weblo gic182
	**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_FCO RE_FCUBS_SCHEM A_NAME	FCORE-FCUBS HOST schema name	export ENTITY_EHMS_FCORE_FCU BS_SCHEMA_NAME=FCRU BSHOST
	**This parameter is only required for FCORE		
Environment variables to set for flavor: OBDX (Thirdparty 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

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



```
[devops@
[devops@
                   /]$ export Entity Code=OBDX BU7
                   /]$ export SCHEMA PASS=devops#obdx182
[devops@
[devops@
                   /]$ export ENTITY EHMS DATABASE HOSTNAME= XX.XX.XX
[devops@
                   /]$ export ENTITY EHMS DATABASE PORT=1521
                   /]$ 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
/]$ export ENTITY_EHMS_DATABASE_SYS_PASS=devops@sys
/]$ export ENTITY_EHMS_SCHEMA_NAME=OBDXEHMS
/]$ export ENTITY_EHMS_SCHEMA_PASS=devops#ehms
[devops@
[devops@
[devops@
[devops@
                   /]$ export ENTITY EHMS HOST SCHEMA NAME=FCUBS140
[devops@
[devops@
                   /]$ export ENTITY EHMS HOST SCHEMA NAME PASS=FCUBS140HST
                   /]$ export WLS DOMAIN PASS=weblogic182
[devops@
                   /]$ export ENTITY EHMS CCY=GB
[devops@
[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

```
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_BIAl

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



# Installation Status in case of other hosts as Add Entity

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

• THP(third party as entity)

```
[devops] OSEX_Installer]S python runInstaller.py --silent --addEntity
Password validated for OSEX_ISSINS
Execution of DS script for OSEX_BUI started
Executed DIGX_FW_CONFIG_ALL_O.sql successfully
Execution completed.
```



# 13. OBDX Product Security

Refer below document for OBDX product security configuration

Oracle Banking Digital Experience Security Guide



# 14. OBDX Product - Best Practice

# 14.1 Tablespace for AUDIT INDEX

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

Follow below steps

- Create a new tablespace
- Give quota to 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\_LOGGIN G.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\_LOGGIN G\_DETAILS.sql



# 15. 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

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



# 16. 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:

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

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

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

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



#### for e.g.:

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

#### for e.g.:

java -jar -Djava.util.logging.config.file='Entitlement\_log4j.properties' com.ofss.digx.utils.entitlement.feed.data.jar 'Resources.csv,Entitlement.csv,Day0Policy.csv' 'KERNEL' "oracle.jdbc.OracleDriver,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>"

#### for e.g.:

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

Post successfully execution, restart Managed server.

