Oracle Banking Digital Experience

Installer User Guide
Release 16.2.0.0.0

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ORACLE®

Installer User Guide

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1. Preface

1.1 Intended Audience

This document is intended for the following audience:

- Customers
- Partners

1.2 Documentation Accessibility

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

1.3 Access to Oracle Support

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

1.4 Structure

This manual is organized into the following categories:

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

The subsequent chapters cover following:

- Introduction
- Prerequisites
- Installation
- Post Installation Steps

1.5 Related Information Sources

For more information on Oracle Banking Digital Experience Release 16.2.0.0.0, refer to the following documents:

- Oracle Banking Digital Experience Licensing Guide
- Oracle Banking Digital Experience Installer Pre-Requisite Setup Manual
- Oracle Banking Digital Experience UBS Setup Manual
- Oracle Banking Digital Experience US LZN Installer Manual
- Oracle Banking Digital Experience OHS UI Configuration Manual

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:

- Prerequisites software installation required for OBDX & OBDX installer
- Setup of OBDX with Oracle's own Core Banking and Origination Products.
- Advanced Configurations (Post installation)
- Installation Verification

3. Prerequisites

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

For OBDX pre-requisite software setup refer document “Oracle Banking Digital Experience Installer Pre-Requisite Setup Manual” mentioned in section 1.5 Related Information Sources

OBDX installer prerequisites are as below :

Software	Version
OS	RHEL 7.x
Python	2.7.5
Python Packages required	cx_Oracle v5.2.1
	Urwid 1.3.1
Oracle Instant client	12.1

3.1 Prerequisite software installation

Below steps assume Python 2.7.5 and Oracle Instant client is installed and available on server.

Note: These steps require root login on server where OBDX software pre-requisite are performed (i.e. Server which host Oracle Weblogic)

cx_Oracle

Step 1: Download cx_Oracle from Python packages website.

Note: Kindly ensure correct rpm package is downloaded as per Python (2.7.5) and Oracle database (12c) version.

For .e.g.: cx_Oracle-5.2.1-12c-py27-1.x86_64.rpm for Python 2.7.5 and Oracle 12c

Step 2: Login as root onto the server and install the cx_Oracle rpm package (downloaded in earlier section).

For e.g.: We can use below command for installation

rpm –ivh cx_Oracle-5.2.1-12c-py27-1.x86_64.rpm

```
[root@         setup]# rpm -ivh cx_Oracle-5.2.1-12c-py27-1.x86_64.rpm
Preparing...                          ################################# [100%]
Updating / installing...
   1:cx_Oracle-5.2.1-1                ################################# [100%]
```

Urwid

Step 1: Download Urwid from Urwid (or urwid.org) website.

Note: Support version for Urwid is 1.3.1 (urwid-1.3.1.tar.gz)

Step 2: Extract the tar file as shown below

```
[root@          setup]# tar -zxvf urwid-1.3.1.tar.gz
urwid-1.3.1/urwid/tests/test_container.py
urwid-1.3.1/urwid/tests/test_util.py
urwid-1.3.1/urwid/tests/test_vterm.py
urwid-1.3.1/urwid/tests/test_graphics.py
urwid-1.3.1/urwid/tests/test_listbox.py
urwid-1.3.1/urwid/tests/test_widget.py
urwid-1.3.1/urwid/tests/__init__.py
urwid-1.3.1/urwid/tests/test_doctests.py
```

Step 3: Browse into the extracted directory and run below command

python setup.py build_py

```
[root@          urwid-1.3.1]# python setup.py build_py
running build_py
creating build
creating build/lib.linux-x86_64-2.7
creating build/lib.linux-x86_64-2.7/urwid
copying urwid/lcd_display.py -> build/lib.linux-x86_64-2.7/urwid
copying urwid/canvas.py -> build/lib.linux-x86_64-2.7/urwid
copying urwid/escape.py -> build/lib.linux-x86_64-2.7/urwid
copying urwid/signals.py -> build/lib.linux-x86_64-2.7/urwid
copying urwid/main_loop.py -> build/lib.linux-x86_64-2.7/urwid
copying urwid/command_map.py -> build/lib.linux-x86_64-2.7/urwid
copying urwid/old_str_util.py -> build/lib.linux-x86_64-2.7/urwid
```

Note: Ensure Python 2.7.5 version should be available in PATH variable. Above execution should be done using Python 2.7.5.

Step 4: Execute below command to perform Urwid installation

python setup.py install

```
[root@          urwid-1.3.1]# python setup.py install
running install
running bdist_egg
running egg_info
writing urwid.egg-info/PKG-INFO
writing top-level names to urwid.egg-info/top_level.txt
writing dependency_links to urwid.egg-info/dependency_links.txt
reading manifest file 'urwid.egg-info/SOURCES.txt'
reading manifest template 'MANIFEST.in'
warning: no files found matching 'CHANGELOG'
writing manifest file 'urwid.egg-info/SOURCES.txt'
installing library code to build/bdist.linux-x86_64/egg
running install_lib
running build_py
running build_ext
```

Note: Ensure Python 2.7.5 version should be available in PATH variable. Above execution should be done using Python 2.7.5.

3.2 Prerequisite software installation verification

Post installation of prerequisite software, verification can be done using below steps.

Note: Verification should be performed using OS user (which is owner for Oracle Weblogic home directory) which will be used to execute installer.

cx_Oracle & Urwid

Step 1: Execute python command

python

Note: Ensure Python 2.7.5 version should be available in PATH variable. Above execution should be done using Python 2.7.5.

Step 2: Import Urwid and check version

mport urwid (Press Enter)

urwid.__version__

```
[              urwid-1.3.1]# python
Python 2.7.5 (default, May  8 2014, 17:35:19)
[GCC 4.8.2 20140120 (Red Hat 4.8.2-16)] on linux2
Type "help", "copyright", "credits" or "license" for more information.
>>> import urwid
>>> urwid.__version__
'1.3.1'
```

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

Step 3: Similarly import cx_Oracle and check version

import cx_Oracle (Press Enter)

x_Oracle.version

```
>>> import cx_Oracle
>>> cx_Oracle.version
'5.2.1'
```

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

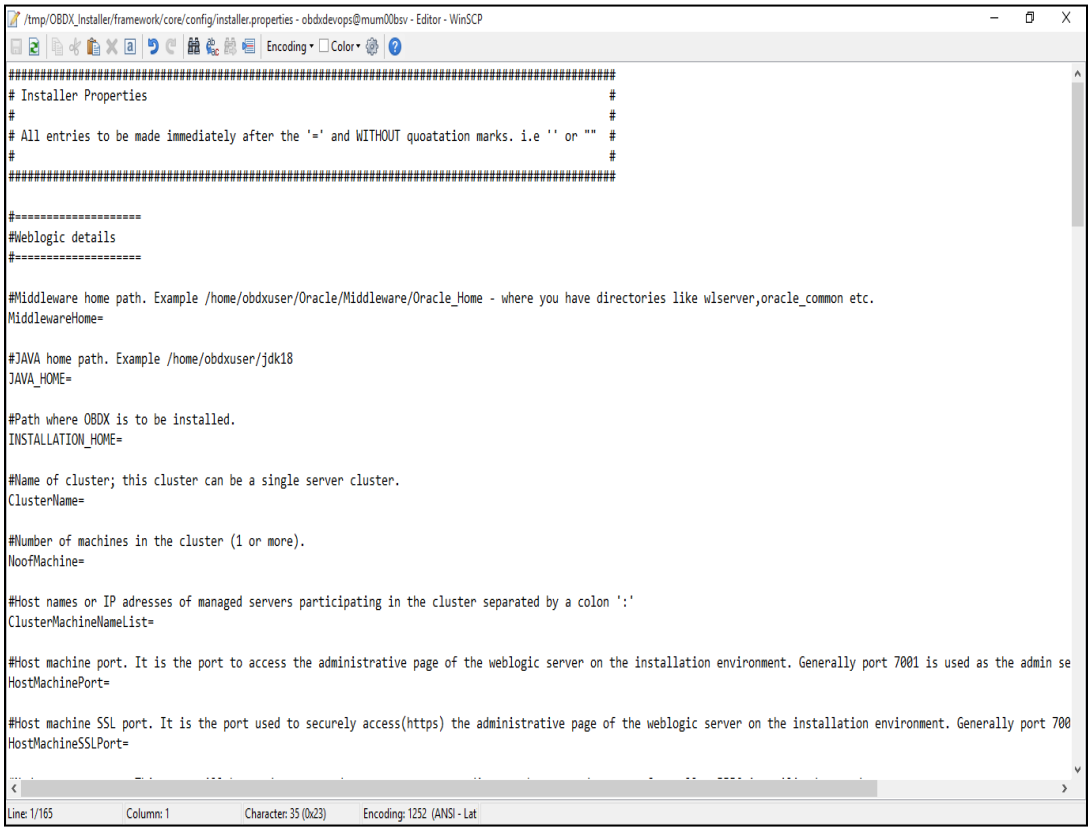
4. Installation

Pre-Installation

- Install all the prerequisite software and packages mentioned above

Steps of Installation

- Download and extract the installer zip file.
- Navigate to “OBDX_Installer\framework\core\config”
- Open the “installer.properties” file



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 DataSourceName, DataSourceJNDI, Flag values etc).
- Ensure there is no blank space after “=” sign

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

	Parameter	Description	Example
OBDX DB	DatabaseHostName	Enter the Hostname of the server which would host the database schema for OBDX	ofss310759
	DatabaseHostPort	Enter the port no. of the database host	1521
	DatabaseHostSID	The Oracle System ID (SID) is used to uniquely identify a particular database on a system. This should be the same SID used during the database installation.	orcl.db.docker
	DB_SYS_USER	Enter the username with 'sys' privileges	sys
	POST_FIX	For schema name like "OBDX_DEV" POST FIX is 'DEV'	DEV123
	DIRECTORY_NAME	Enter the Oracle directory name in which you want the database to be created. Enter only the name NOT the path	OPATCH_LOG_DIR
OBDX UBS	DatabaseHostName UBS	Enter the Username for the UBS database host	ofss310759
	DatabaseHostPortUBS	Enter the host port where UBS database exists	1521
	SCHEMA_NAME_UBS	Enter the COMPLETE UBS schema name you want to create	UBSSCHEMA123
	DIRECTORY_NAME_UBS	Enter the Oracle Directory name in which you want the UBS schema. Enter only the name and NOT the path	OPATCH_LOG_DIR
	DB_SYS_USER_UBS	Enter the username with 'sys' privileges	sys
	DatabaseHostSID_UBS	Enter the UBS database SID	orcl.db.docker
	UBS_SCHEMA	Enter the EXISTING UBS schema name	OBDXUBS

WEBLOGIC SERVER	MiddlewareHome	Middleware home path. Example /home/obdxuser/Oracle/Middleware/Oracle_Home - where you have directories like wlserver,oracle_common etc.	/home/obdxuser/Oracle/Middleware/Oracle_Home
	JAVA_HOME	Path where JAVA is installed	/home/obdxuser/jdk18
	INSTALLATION_HOME	Path where OBDX is to be installed. All configuration files will be copied as a sub-directory “config” under this directory.	/home/obdxuser/obdx
	ClusterName	Name of cluster; this cluster can be a single server cluster.	obdx_cluster
	NoofMachine	Number of machines in the cluster (1 or more).	1
	ClusterMachineNameList	Host names or IP adresses of managed servers participating in the cluster separated by a colon ':'	ofss310759
	HostMachinePort	Host machine port. It is the port to access the administrative page of the weblogic server on the installation environment. Generally port 7001 is used as the admin server port.	7001
	HostMachineSSLPort	Host machine SSL port. It is the port used to securely access(https) the administrative page of the weblogic server on the installation environment. Generally port 7002 is used as the admin server port.	7002
	NodeManagerPort	Node manager port. This port will be used to run node manager corressponding to the managed server. Generally, 5556 is utilised as node manager port.	5556
	ManagedServerName	Managed server name. This will be the name of all the managed servers created in the cluster followed by indexes. eg- If this is set as 'clip' managed servers would be clip1,clip2 etc.	clip
	ManagedServerPort	Managed Server Port. Managed server on different cluster machines will utilise	9001

		this port for hosting OBDX components and associated resources.	
	DomainName	Domain name. A domain is utilised to configure managed servers. The domain will be created by the name specified.	obdx_domain1
	DomainUserID	Domain user ID and password. In order to restrict the access of domain, credentials are needed. The user id will be used to access the weblogic server.	weblogic
	AsyncFailureLogFile Store	Set the paths for the persistence stores of the AsyncFailure JMS modules	/scratch/obdx/ AsyncFailure
	FileUploadFileStore	Set the paths for the persistence stores of the FileUpload JMS modules	/scratch/obdx/ FileUpload
	AuditFileStore	Set the paths for the persistence stores of the Audit JMS modules	/scratch/obdx/Audit
	JMSForeignServerU RL	Set the IP and port for UBS Managed server where JMS queue are available (Specific to OBDX – UBS flavor)	10.184.135.59:7860
RCU	STBSchemaPrefix	STB schema name prefix. If schema name is OBDX_STB then OBDX is the prefix.	OBDXSTB40

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.

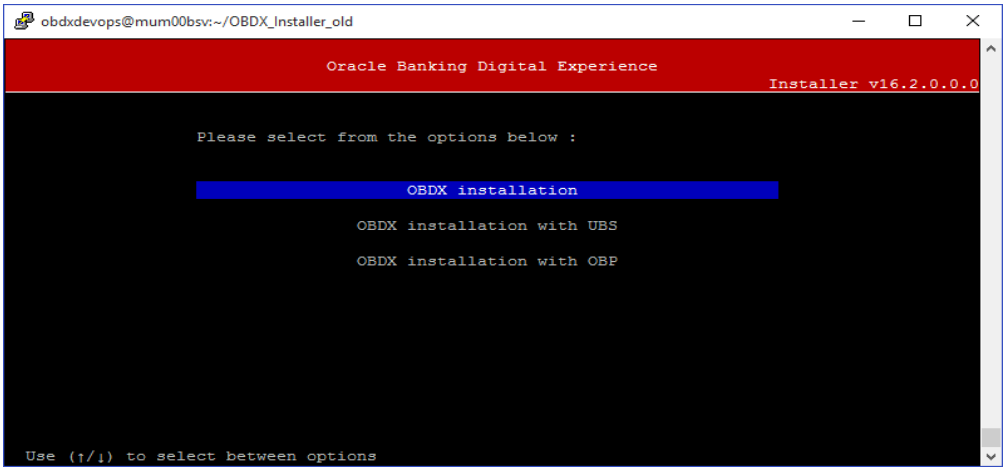
Login with OS user which was used to perform OBDX software installation (or has ownership on Oracle Weblogic home directory)

Ensure OBDX Installation home and filestore path maintained in installer.properties exists and user running the installer has read-write permissions.

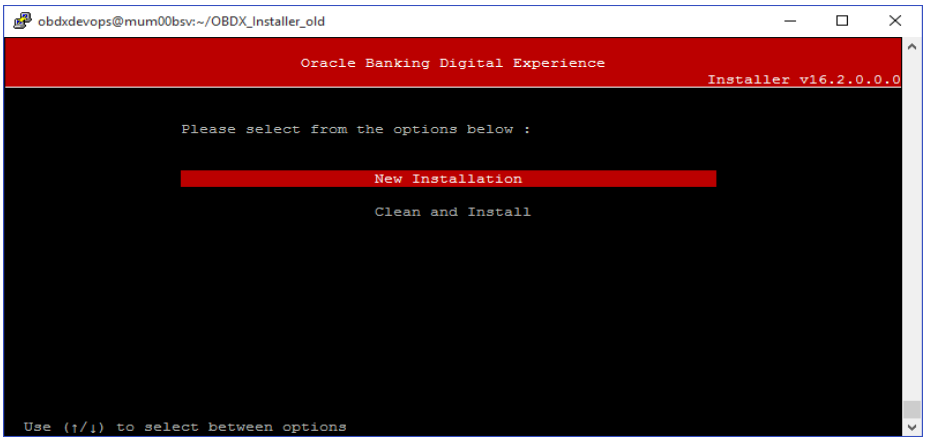
- From your terminal navigate to OBDX_Installer/
- Enter the following command

  python runInstaller.py

Select the appropriate flavor for Installation



Select the mode of Installation



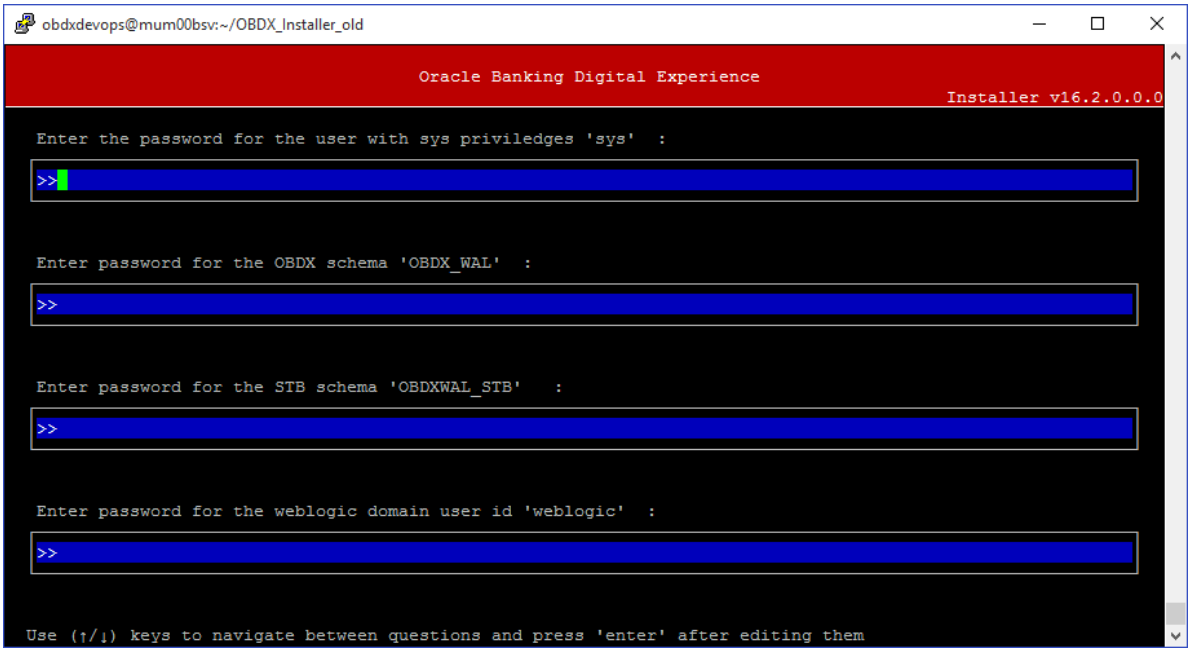
Mode of Installation

- New installation

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

Below screens would appear with respective to flavor selected

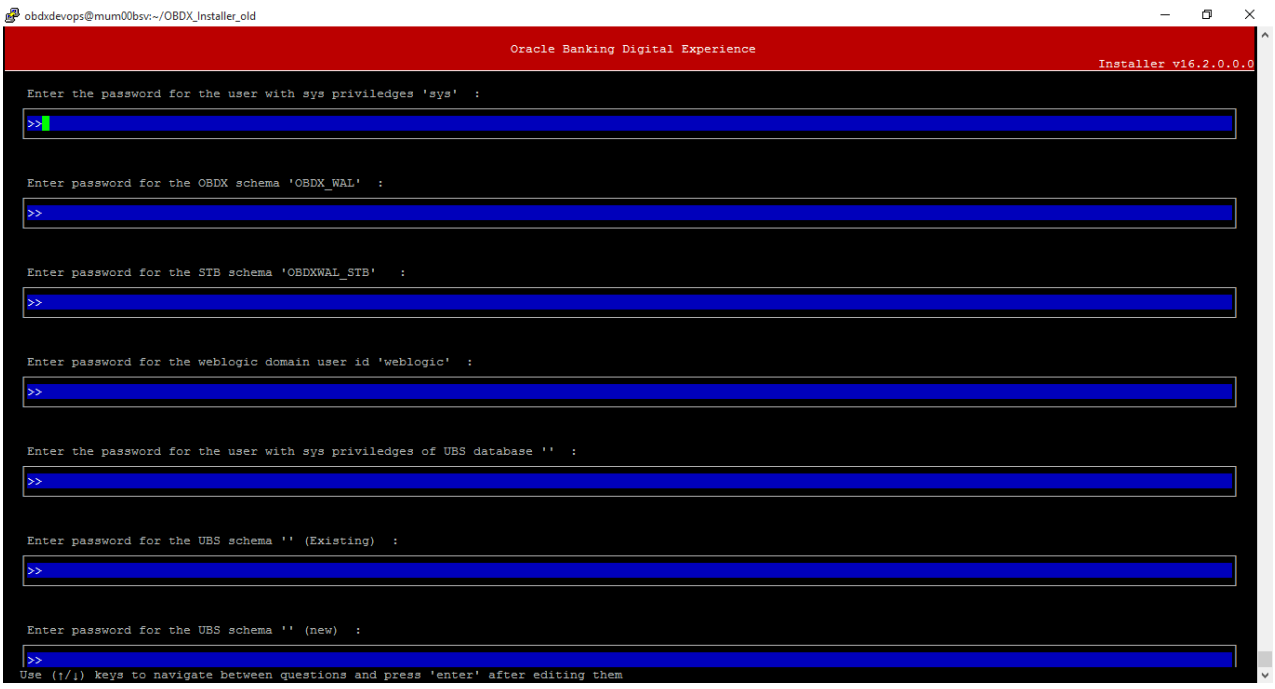
OBDX



Enter below passwords:

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

OBDX with UBS



Enter below passwords:

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

OBDX with OBP

No additional input required. Screen is same as seen in OBDX flavor.

- Clean and Install

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 EXT schema in-case of OBDX UBS flavor)
- All RCU schemas should be dropped manually in-case you want to re-use. Else before proceeding change the **STBSchemaPrefix** to new value in **installer.properties**.

Key pointers

- OBDX schema (and OBDX EXT 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.

Note: All input screens are similar to new installation option and as per the flavor opted.

5. Installer verification

Each execution creates a new directory as <DDMonthHHMM> under OBDX_Installer/ExecInstances directory where output logs as describe are stored.

Log Description	PATH
Summarized Installer Activity Log	OBDX_Installer/ExecInstances/<DDMonthHHMM> /logs/obdx_installer.log
Summarized Database Logs	OBDX_Installer/ExecInstances/<DDMonthHHMM> /logs/db/DB_installation.log
Detailed OBDX DB Logs per SQL file	OBDX_Installer/ExecInstances/<DDMonthHHMM> /logs/db/OBDX/*
Detailed UBS DB Logs per SQL file	OBDX_Installer/ExecInstances/<DDMonthHHMM> /logs/db/UBS/*
RCU Logs	OBDX_Installer/ExecInstances/<DDMonthHHMM> /logs/app/obdx_stb_rcu_1600.log
Weblogic Configuration Logs	OBDX_Installer/ExecInstances/<DDMonthHHMM> /logs/app/obdx_wls_post.log

Check all the logs for any errors.

6. Installer Scope

OBDX Installer currently covers below activities:

Flavor: OBDX

Flavor	Activity	Detailed Activity List	New Installation	Clean and Install
OBDX	OBDX DB Setup			
		Create Tablespace	√	NA
		Create Schema and Role	√	√ (drop and create)
		Grants	√	√
		Load DB object (DDL's and DML's)	√	√
		Compile Schema	√	√
	Weblogic Setup and Configuration	Create Domain	√	√ (drop and create)
		Create and Configure AdminServer, Machine, Managed Server and Cluster	√	√
		Configure NodeManager	√	√
		Configure JDBC	√	√
		Configure JMS servers, Persistent stores and JMS Modules	√	√
		Application Deployment	√	√
		JTA	√	√
		Apply JRF	√	√
		Enable Production Mode	√	√
		Start AdminServer and NodeManager	√	√
	OBDX Configuration	Copy Config files into OBDX Installation Home	√	√

Flavor: OBDX and UBS

Flavor	Activity	Detailed Activity List	New Installation	Clean and Install
OBDX with UBS	OBDX DB Setup			
		Create Tablespace	√	NA
		Create Schema and Role	√	√ (drop and create)
		Grants	√	√
		Load DB object (DDL's and DML's)	√	√
		Compile Schema	√	√
	OBDX EXTSYSTEM DB Setup	Create Tablespace	√	NA
		Create Schema and Role	√	√ (drop and create)
		Grants	√	√
		Load DB object (DDL's and DML's)	√	√
		DB Link pointing to OBDX Schema	√	√
		Compile Schema	√	√
	Weblogic Setup and Configuration	Create Domain	√	√ (drop and create)
		Create and Configure AdminServer, Machine, Managed Server and Cluster	√	√
		Configure NodeManager	√	√
		Configure JDBC	√	√
		Configure JMS servers, Persistent stores and JMS Modules	√	√
		Application Deployment	√	√
		JTA	√	√
		Apply JRF	√	√
		Enable Production Mode	√	√
		Start AdminServer and	√	√

Flavor	Activity	Detailed Activity List	New Installation	Clean and Install
		NodeManager		
	OBDX Configuration	Copy Config files into OBDX Installation Home	√	√
		Preferences.xml	√	√

Flavor: OBDX and OBP

Flavor	Activity	Detailed Activity List	New Installation	Clean and Install
OBDX with OBP	OBDX DB Setup			
		Create Tablespace	√	NA
		Create Schema and Role	√	√ (drop and create)
		Grants	√	√
		Load DB object (DDL's and DML's)	√	√
		Compile Schema	√	√
	Weblogic Setup and Configuration	Create Domain	√	√ (drop and create)
		Create and Configure AdminServer, Machine, Managed Server and Cluster	√	√
		Configure NodeManager	√	√
		Configure JDBC	√	√
		Configure JMS servers, Persistent stores and JMS Modules	√	√
		Application Deployment	√	√
		JTA	√	√
		Apply JRF	√	√
		Enable Production Mode	√	√
		Start AdminServer and NodeManager	√	√

Flavor	Activity	Detailed Activity List	New Installation	Clean and Install
	OBDX Configuration	Copy Config files into OBDX Installation Home	√	√
		Preferences.xml	√	√

7. Post Installation Steps

Once Installation is successful and no errors are observed, proceed with below set of steps.

Security Realms in Weblogic

Configure your own LDAP to use instead of the default embedded LDAP, which comes with Oracle Weblogic Server.

- To do this, ensure that the Admin Server is running. Login to the Weblogic Console using the following URL:

  http://<hostname>:<oam_admin_port>/console

- Now, go to Security Realms > myrealm > Providers
- Click on '**DefaultAuthenticator**" provider and change the Control Flag to SUFFICIENT and Save the changes.
- Delete the **Trust Service Identity Asserter**
- Now, click on New and enter the below details and click Save.

  Name : OUDAuthenticator

  Type : IPlanetAuthenticator

  Control Flag : SUFFICIENT

- Click on the new OUDAuthenticator Provider and under Provider Specific tab and set the details of LDAP where the server should point. Refer to the following table for more information:

Property	**Value**
Host	This is the LDAP Server (OUD/Open LDAP) Hostname
Port	This is the LDAP Server (OUD/Open LDAP) Port. E.g. 1389
Principal	This is the Administrator Account name. E.g. cn=orcladmin
Credential	This is the Administrator Account password.
UserBase DN	This is the OUD/ OpenLDAP user search base For e.g.: cn=Users, dc=in,dc=oracle,dc=com
GroupBase DN	This is the OUD/ OpenLDAP group search base For e.g.: cn=Groups, dc=in,dc=oracle,dc=com

- Click on Save to update the changes.
- Now, click on New and enter the below details and click Save.

  Name : OAMIdentityAsserter

  Type : OAMIdentityAsserter

- Click on Save to update the changes.

- Click on Save and reorder the providers so that LDAP Provider (OUDAuthenticator) gets highest priority followed by OAMIdentityAsserter, DefaultAuthenticator, DefaultIdentityAsserter.
- Click Save to apply the changes and shutdown the Admin Server for restart.
- Now, again start the Admin Server using the command,

  <Oracle_Home>/user_projects/domains/<OAM_domain>/bin/startWeblogic.sh

Verification

Post Admin Server restart, login into Admin Console and browse to Security Realms > myrealm > Users and Groups.

Under Users tab additional LDAP users would be populated and additional LDAP groups can be seen under Groups tab.

OBDX & UBS

If during installer execution OBDX with UBS is selected, then below steps needs to be done manually.

Foreign_Server

Login into Weblogic Admin console and Browse to Summary of JMS Modules > UBSSystemModule > UBSForeignServer

Set below configurations with:

JNDI Properties Credential – Password for username set in JNDI properties
Confirm JNDI Properties Credential – Confirm password for username set in JNDI properties
JNDI Properties – Value to be set as “java.naming.security.principal=<username>”

Username is the login user of UBS Weblogic Admin Console (user which created the primary local queues for UBS).

obdx.externalsystem.ubs.notification.mdb.ear

Deploy the obdx.externalsystem.ubs.notification.mdb.ear from OBDX_Installer/installables/app/components/ubs/deploy with target as OBDX cluster.

Note: obdx.externalsystem.ubs.notification.mdb.ear should be installed as Application and not Library

Day1_DB_configuration

Refer below document for Day1 configuration required for integration with UBS

Oracle Banking Digital Experience UBS Setup Manual

Note: Managed server can be started post above configuration are done.

OBDX & OBP

To setup OBDX 16.2.0.0.0 US LZN refer below documents

Oracle Banking Digital Experience US LZN Installer Manual

Note: Managed server can be started post above configuration are done.

OHS

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

Oracle Banking Digital Experience OHS UI Configuration Manual

8. OBDX Product verification

Verify all the configuration are correctly done and managed server with all deployed application's are in Active state.

To verify the installation, launch below URL

URL : http://<OHS server ip or hostname>:<OHS port>/admin/pages/dashboard.html
Login : superadmin / superadmin

Check if the page loads successfully.