Oracle® Banking Digital Experience OBO Mid-Office and Third Party Setup and Configuration Guide





Oracle Banking Digital Experience OBO Mid-Office and Third Party Setup and Configuration Guide, Release 25.1.0.0.0 G38603-01

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Preface

Purpose

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

Audience

This document is intended for the following audience:

- Customers
- Partners

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

Related Resources

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

- Oracle Banking Digital Experience Installation Manuals
- Oracle Banking Digital Experience Licensing Manuals

Screenshot Disclaimer

Personal information used in the interface or documents is dummy and does not exist in the real world. It is only for reference purposes; actual screens that appear in the application may vary based on selected browser, theme, and mobile devices.

Acronyms and Abbreviations

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

Table 1 Acronyms and Abbreviations

| Abbreviation | Description |
|--------------|-----------------------------------|
| OBDX | Oracle Banking Digital Experience |

1

Introduction

This document is intended as a guide to set up OBDX 25.1.0.0.0 originations with OBO 14.8.0.0.0 and Third-Party releases.



2

Prerequisites OBO

This topic provides information on Prerequisites OBO.

The following are the prerequisites required in Oracle banking Origination (OBO) so as to successfully integrate with Oracle Banking Digital Experience (OBDX).

2.1 OBO Version

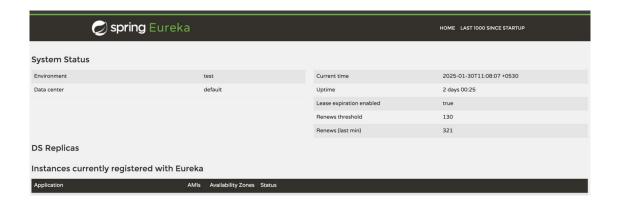
This topic provides information on OBO Version.

This information is required to identify the version of OBO that is integrated with OBDX. Depending on the OBO and OBDX versions, integrated features and services may vary, making it essential to confirm the specific version for accurate setup and configuration. Refer Introduction for details on OBO-OBDX version compatibility.

2.2 Eureka URL

This topic provides information on Eureka URL.

The OBO Eureka URL, which is shared by the OBO team, is mandatory for the configuration of OBRH-OBDX. Eureka is used to list down all the services that are up and running at OBO and we will config the same at OBRH to either manually add ip/port or to add the service name of the API.



2.3 OBO Users and configuration

This topic provides information on **OBO Users and configuration**.

The following 3 users must be created with required functionality / services / roles access in OBO before testing the integration with OBDX. These users are used to invoke OBO services documented in step 3.2. Eureka URL

- OBDX This user is required for the OBDX/OBRH configuration to call OBO endpoints directly. These calls are made to the OBO host and do not pass through the API Gateway Router.
- 2. OBDXAPI1 This user is required for the OBDX/OBRH configuration to communicate with the Document Management System (DMS) also known as Content. The DMS is used to manage all documents centrally across both OBDX and OBO. Since both systems use a centralized DMS, maintaining this user and its permissions is mandatory. All api-gateway or api-gateway-router requests through the API use this user.
- 3. OBDXUSER This user is required to access OBO AppShell application login to perform tasks such as verifying product maintenance, managing business processes, acquiring tasks, processing applications, and handling other OBO-related tasks. This ensures that all applications submitted through OBDX are correctly processed and validated within the OBO system.

Note:

- As per the above configuration, DO NOT use OBDX or OBDXAPI1 to log into the OBO application. Doing so could cause API failures within the application, leading to errors such as Bad Credential or Token Expired.
- Ensure that the above three users have access to OBO services and OBRH consumers.

2.4 User Access Testing

2.4.1 Token Generation

This topic provides information on **Token Generation**.

The Token Generation API is used to check user access.

protocol: http/https check in Eureka for service api-gateway-router

ip: api-gateway-router ip

port: api-gateway-router port

user: encrypted user

password: encrypted password



```
Note:
```

Use user/password in Base64 or PLATO encryption.

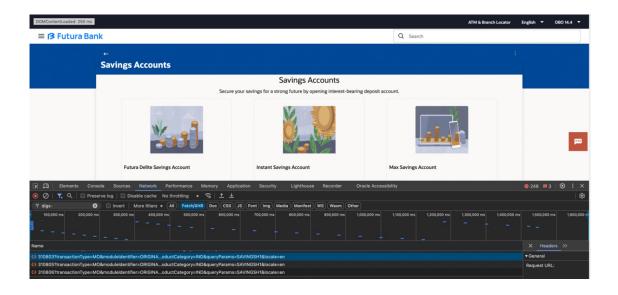
To find the encryption type, use the following query:

```
SELECT * FROM digx_fw_config_all_b WHERE CATEGORY_ID = 'authenticationConfig'; Response: The token returned by this API will be used in the subsequent API.
```

2.4.2 Access Any document related API with the Above Token

This topic provides information on Access Any document related API with the Above Token.

image_id: You will get this ID in the product listing API. In the above api 310803 is image id



2.5 SSL certificate

This topic provides information on SSL certificate.

The OBO Eureka URL has listed discovery services. In case all these service are running securely on **https**, then an SSL certificate is mandatory to be installed on the OBDX/OBRH



servers. This should be provided by the OBO team. Once certificates are installed on the OBDX and OBRH servers, only then can any OBO API be accessed through the OBDX/OBRH servers and respective applications. As per OBDX standards, all API calls should be HTTPs only.

If SSL is not installed correctly then you may get the following error. In this case, you will be required to re-install the SSL certificate.

2.6 OBO Business products

This topic provides information on OBO Business products.

Ensure that all OBO business products are maintained in OBO with the proper process set up by the OBO maintenance team, so that they are available and can be accessed by the OBDX channel before integrating with OBDX.

2.7 OBO Regional maintenance

This topic provides information on **OBO Regional maintenance**.

All regional maintenances should be in place on the OBO setup. This can be either for the US (United States) region or RW (Rest of the world). RW will always be considered as the the default configuration.

2.8 OBO API testing via postman

This topic provides information on **OBO API testing via postman**.

OBO API's testing: The below curl command is used to test the OBO APIs before integrating with OBDX application and to check if it is working with expected headers

Product listing

This API is used to fetch the list of products that are maintained in OBO.

- To verify and set <protocol>://<ip>:<port>
- Open Eureka URL and search for endpoint obremo-rpmbusinessproductdetails-services

- Open result URL in new tab and refer protocol, IP, and port for use in curl
- <user id> : User created in OBO e.g. OBDXAPI1
-
branch_code> : OBO branch code
- cproduct type>:
 - S for savings
 - * C for current account
 - L for loan
 - * T for term deposite
 - R for creadit card
 - V for auto loan
 - * H for home loan
 - * E for education loan

2. Read application

This API is used to fetch application details using the application number.

```
curl --location
    '<protocol>://<host>:<port>/obremo-rpm-process-driver-services/
service/getData/<application_id>'
    \--header 'branchCode: <branch_code>'
    \--header 'appId: RPMPROCESSDRIVER'
    \--header 'entityId: DEFAULTENTITY'
    \--header 'userId: <user_id>'
    \--header 'Content-Type:
    application/json'
```

- Follow the steps of Product listing api to set protocol, chranch_code, <user_id
 Open Eureka URL and search for endpoint obremo-rpm-process-driver-services
- <application_id> Enter the application number, for which you have to fetch details

3. Enumeration

This API fetches a list of values from OBO, e.g. The following API is used to fetch the list of values maintained for the Salutation dropdown.

```
curl --location
    '<protocol>://<host>:<port>/obpy-party-maintenance-service/
service/v1/retail/getAll?entityCode=<entity_code>'
    \--header 'Content-Type:
    application/json' \--header 'userId: <user_id>'
    \--header 'appId: PRTONB'
    \--header 'branchCode: <branch_code>'
    \--header 'entityId: DEFAULTENTITY'
    \--header 'authToken: TOEKN'
```

4. Get Token



This API is used to generate a token. This token will further be used in any api-gateway call.

```
curl --location 'protocol>://<host>:<port>/api-gateway/platojwtauth/'
\--header 'appId: SECSRV001' \--header 'Content-Type: application/json'--
data '
{"username": "<encoded user name>","password": "<encoded password> "}'
```

- Follow the steps of Product listing api to set protocol

 Open Eureka URL and search for end-point apigateway-router
- Please refer the OBRH encoding technical documentation to check the encoding that is used by the application for user name and password setup.

Base64 is standard encoding use the same to set above username and password.

5. Document type

This API is used to fetch the list of primary document types that the user can upload in the application.

- Follow the steps of Product listing api to set protocol, chanch_code\B
 Open Eureka URL and search for end-point apigateway-router
- Kindly refer the Get Token API response to set Bearer <token>

Note:

Contact OBO consulting team for any query related to OBO API e.g. Product creation, maintenance and others.



Prerequisites OBRH

This topic provides information on Prerequisites OBRH.

Refer the OBRH technical documentation for details on OBRH configurations to import service consumer and other OBRH related maintenances.

3.1 OBRH Origination Configuration

This topic describes the systematic instruction to **OBRH Origination Configuration** option.

Follow the steps defined below to configure origination users:

- Go to the service consumer OBDX_TRUNK or OBDX (check the name mentioned in installer as the same needs to be imported in OBRH).
- Click on View More. By default, the tab will be on Environment Variables. Select Edit Group on ORIGINATION_CONFIG
- 3. Configure the user and branch code.
 - For OBO_USER, OBO_BRANCH, OBPY_USER, OBPY_BRANCH configuration, refer OBO Users creation and configuration-step2.
 - For CMC_USER, CMC_BRANCH configuration, refers OBO Users creation and configuration (Point 2)



• For JUMIO_AUTH: Check with the bank to check if Jumio vendor integration with the license version is enabled for KYC purposes; if not, keep these value as blank or configure the Jumio bearer token, followed by Basic ..., refer **Jumio Configuration**.



3.2 Origination Service Provider

This topic provides information on **Origination Service Provider**.

The following list of service providers is applicable for originations and their respective their endpoints.

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

Table 3-1 Service Providers

| Service Consumer | End Point |
|--|--|
| PLATO-APIGATEWAY-ROUTER | api-gateway |
| OBREMO_LOANAPPLICATIONS | obremo-rpm-lo- loanapplications |
| OBREMO_COMMON | obremo-rpm-cmn- applicantservices |
| OBREMO_RPM_CMN_APPLICANTSERVICES | obremo-rpm-cmn- applicantservices |
| OBREMO_PROJECTION | obremo-rpm-projection- services |
| OBREMO_PROCESS_DRIVER_SERVICE | obremo-rpm-process-driver- services |
| OBREMO_RPM_CMN_APPLICANTSERVICES | obremo-rpm-cmn- applicantservices |
| OBREMO_RPM_BUSINESSPRODUCTDETAILS_SERVICES | obremo-rpm- businessproductdetails- services |
| OBREMO-RPM-BUSINESSPROCESS-SERVICES | obremo-rpm- businessprocess-services |
| OBREMO_MAINTENACE | obremo-rpm-maintenance- services |
| OBPY | obpy-party-maintenance- service |
| OBPY_PARTY_SEARCH | obpy-party-services |
| OBPY_PARTY_MAINTANANCE | obpy-party-maintenance- service |
| CMC_BUSINESS_OVERRIDES | cmc-businessoverrides- services |
| CMC_OPDS_QUESTIONNAIRE | cmc-opds-services |
| CMC_OPDS | cmc-opds-services |
| CMC_CUSTOMER_SERVICES | cmc-customer-services |
| CMC_CURRENCY_SERVICES | cmc-currency-services |
| CMC_BASE_SERVICE | cmc-base-service |

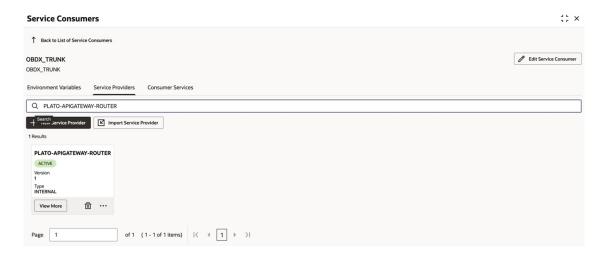
3.3 Config Service Provider

This topic provides information on Config Service Provider.

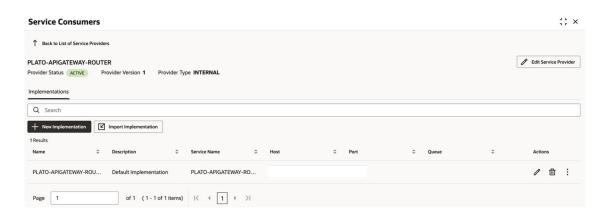
Consider the following example as a guide on how to configure service provider e.g. PLATO-APIGATEWAY-ROUTER.

The **PLATO-APIGATEWAY-ROUTER** service provider is utilized for generating API gateway tokens prior to using any document API. As documents uploaded by users contain sensitive information that is important for both the bank and the user. Therefore, it is essential to transmit these documents securely through the API gateway.

Search PLATO-APIGATEWAY-ROUTER in Service Providers.



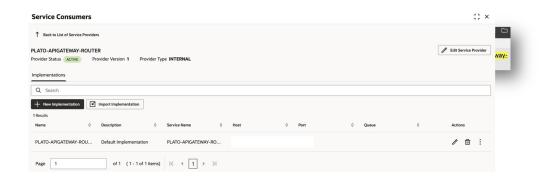
Select View More on PLATO-APIGATEWAY-ROUTER, click on the Edit icon.



There are two ways to configure the host and port: Using the manual method or through service discovery.

- 1. Manual Method: Configure protocol(https/http), host, and port, refer the **OBO API Testing: Get Token** for further information or follow the steps below.
 - Navigate to the Eureka URL
 - On this page, you can search for the endpoint that you need to configure.





- Open the Search Result in a new tab.
- Copy Protocol(https/http), Host, and Port.
- Configure the same in the service provider.
- 2. Using Service discovery: Enable Eureka using the **Eureka Instance** toggle button and enter the service name which is found in the Eureka search.



 For JWT_TOKEN, to config Username and Password, refer OBO Users and configuration-step2 (This is only required in the case of the token service; it is optional for other service consumers.)



3.4 Testing Consumer service via postman

This topic provides information on **Testing Consumer service via postman**.

After the above OBRH configuration is completed, use the below curl command to test that all service consumers are functioning as expected.

Example Testing READ_APPLICATION Consumer service

- 1. Generate token and configure <protocol>, <ip>, <port>, <user_id>, <Bearer_Token> first refer to OBO API Testing: Get Token
- 2. Use Bearer token in the below curl command.
- 3. <application id> Enter the application number of the data you need to fetch.
- <service consumer> Enter the name of the service consumer e.g. OBDX TRUNK
- <consumer service> Here we are fetching data from READ APPLICATION

```
\--header 'Content-Type: application/json'
    \--header 'appId: CMNCORE'
    \--header 'userId: <user_id>'
    \--header 'branchCode: <branch_code>'
    \--header 'SERVICE-CONSUMER:
    <service_consumer>' \--header 'SERVICE-CONSUMER-SERVICE:
     <consumer_service>' \--header 'entityId: DEFAULTENTITY'
    \--header 'Authorization: <Bearer Token>'
    \--data '{"applicationId":
    "<application_id>"}'
```



4

Database Configuration

This topic provides information on **Database Configuration**. The following configurations need to be carried out post installation.

4.1 System Configuration

This topic provides information on **System Configuration**.

Complete day one maintenance from the admin screen. Refer the **User Manual Oracle Banking Digital Experience System Configuration** document for details on day one maintenances. These are mandatory configurations required for the application to work and should be completed before the application can be used.

Origination specific fields



4.2 Additional (functional) Configuration

4.2.1 Configuring Repository adapter for Application

This topic provides information on Configuring Repository adapter for Application.

- OBO Host Configuration: No Configuration required.
- Third Party Configuration:

If local (database) storage is required for third party entity following query needs to be executed.

```
Insert into DIGX_FW_CONFIG_ALL_O

(PROP_ID, PREFERENCE_NAME, PROP_VALUE, DETERMINANT_VALUE, CREATED_BY, CREATION_D
```

```
ATE, LAST_UPDATED_BY, LAST_UPDATED_DATE)

values('RPM_APPLICATION_REPOSITORY_ADAPTER', 'RepositoryAdapterFactories','c
om.ofss.digx.domain.origination.
entity.application.repository.adapter.LocalApplicationRepositoryAdapter,com
.ofss.digx.domain.origination.entity.
application.repository.adapter.RemoteApplicationRepositoryAdapter','OBDX_BU
',null,sysdate,'ofssuser',sysdate);
```

4.2.2 Configuring Repository adapter for Application Tracker

This topic provides information on Configuring Repository adapter for Application Tracker.

OBO Host Configuration:

No Configuration required.

Third Party Configuration:

If local (database) storage is required for third party entity following query needs to be executed.

4.2.3 Configuring Repository adapter for Product Documents

This topic provides information on Configuring Repository adapter for Product Documents.

- OBO Host Configuration:
 - No Configuration required.
- Third Party Configuration:

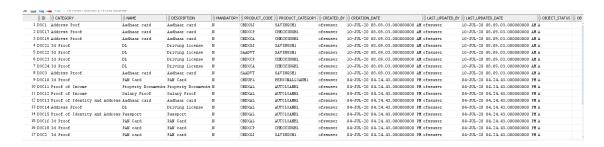
If bank wants to fetch list of documents from OBDX local storage then a separate entry in DIGX_FW_CONFIG_ALL_O table is required.





This local storage table for product documents is DIGX OR PRODUCT DOCUMENTS.

Insert queries as per the screenshot of this table below:



A sample query is defined below for reference:

4.2.4 Configuring Repository adapter for Mid Office Content Repository

This topic provides information on **Configuring Repository adapter for Mid Office Content Repository**.

OBO Host Configuration:

No Configuration required.

Third Party Configuration:

Execute the following query, which will fetch content from the local database:

4.2.5 Configuring Adapter Preference for Entity

This topic provides information on **Configuring Adapter Preference for Entity**.

OBO Host Configuration:

Execute following query to find adapter preference of the entity.

```
select * from digx_fw_config_all_o where prop_id = 'OBDX_BU';
```

Update prop value of above selected record such that RPM14.4 should be after UBS12.4

A sample adapter preference is defined as below.

```
UBS14.4, UBS14.3, UBS14.2, UBS14.1, UBS14.0, UBS12.4, 

RPM14.4, OBCL14.3, OBCLPM14.3, ELCM14.3, OBVAM14.4, OBVAM14.3, OBSCF14.4, OBSCF14.3, A SP14.4, INV14.4, CMS14.4, OBCFPM14.4, OBCFPM14.3, OBLM14.4, OBLM14.2, OBIC14.4, OBTF14.4, MIDOFFICE1.0, TP1.0
```

Execute the following query to update adapter preference.

```
update digx_fw_config_all_o set prop_value='<Updated_Adapter_Preference>'
where prop_id = 'OBDX_BU';
```

Third Party Configuration:

No Configuration required.

4.2.6 Configuring Origination Workflow (Loan Requirement Step)

This topic provides information on **Configuring Origination Workflow (Loan Requirement Step)**.

OBO Host Configuration:

No Configuration required.

Third Party Configuration:

Execute following queries to update UI component names of origination workflow steps.

Product Configuration

This topic provides information on **Product Configuration**.

To enable products execute the following script.

```
update digx_or_product_category set status='ACTIVE' where
determinant value=<entity id> and id='<required product>';
```

Example Complete the following steps to activate a CASA Savings product with id SAVINGSH1:

```
update digx_or_product_category set status='ACTIVE' where
determinant value='OBDX BU' and id='SAVINGSH1';
```

To enable all supported products, execute the following script.

```
update digx_or_product_category set status='ACTIVE' where
determinant_value='OBDX_BU' and id in
('SAVINGSH1','CHECKINGH1','AUTOLOANH1','PERSONALLOANH1','HOMELOANH1','EDUCA
TIONLOANH1','TERMDEPOSITH1','CREDITCARDH1');
```

 To enable existing customers to apply for all supported products, execute the following script:

```
update digx_or_product_category set EXISTING_CUST_FLOW='Y' where
determinant_value='OBDX_BU' and id in ('SAVINGSH1',
'CHECKINGH1','AUTOLOANH1','PERSONALLOANH1','HOMELOANH1','EDUCATIONLOANH1','
TERMDEPOSITH1','CREDITCARDH1', 'TERMLOANH1', 'CAPITALLOANH1');
```



National ID Configuration

This topic provides information on **National ID Configuration**.

OBDX Origination supports National ID verification as a mode of Online KYC. To enable this KYC mode for a specific product category, customise the origination workflow for the specific product category, through the administrator login.

If the Bank wants to enable National ID verification such as Aadhar Card, then the Bank will have to undertake customization depending on the KYC vendor which they have selected for the same. OBDX provides extension to undertake customization to integrate third party National ID KYC APIs.

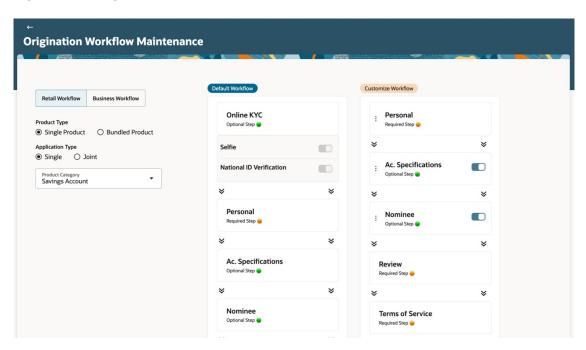


Figure 6-1 Origination Workflow Maintenance

7

DMS Configuration

This topic provides information on **DMS Configuration**.

A **Document Management System** is mandatory for OBDX and OBO integration. In OBDX, documents are either stored locally in the database or sent to the OBO team, which manages in their DMS server.

Refer Adapter database script for details on how documents can be stored locally.

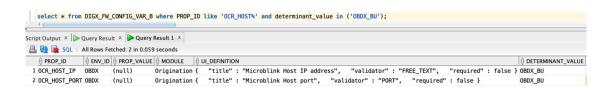


OCR Configuration

This topic provides information on OCR Configuration.

Post Day 1 configuration for OCR:

In DIGX_FW_CONFIG_VAR_B, make entry of hostname and port corresponding to determinant value or change via System configuration follow Origination specific fields Microblink Host IP address and Microblink Host post.



✓ Note:

If the bank is using **Microblink** as the third party OCR platform then the configurations defined below, need to be carried out. In case of any other platform, the hostname and port number should be changed accordingly.

9

Security Changes

This topic provides information on **Security Changes**.

The OTP authentication generates JWT Token which remains active for 15 mins. The property defined below, can be updated to change the token expiration time in the digx_fw_config_all_b table. This token expiration time is valid for each individual OTP. Hence, if the token expiration time is 15 minutes and even if the user opts to have the OTP re-sent, the new OTP will be valid for another 15 minutes after it has been sent.

ORG_REG_LINK_TIMEOUT



10

Enumeration Configuration

This topic provides information on **Enumeration Configuration**.

Configuration for local enumeration:

Following table contain origination related database entries in DIGX_FW_CONFIG_ALL_B, DIGX_FW_CONFIG_ALL_Oand DIGX_FW_ENUM_REPRESENTATIONS

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

Table 10-1 Origination related database entries

| Enumeration <prop_id></prop_id> | Type of Enumeration < PROP_VALUE > | Enum Key <enum_fqn></enum_fqn> |
|---|------------------------------------|---------------------------------------|
| OR_TD_MATURITY_INSTRUCTION | LOCAL_CLOSE_ENUM | fetchTDMaturityInstruction |
| CHEQUEBOOKLEAVES | LOCAL_OPEN_ENUM | getChequeBookLeaves |
| COUNTRY | LOCAL_OPEN_ENUM | getCountry |
| ISDCODE | LOCAL_OPEN_ENUM | getISDCode |
| OR_APPLICANT_RELATIONS | LOCAL_OPEN_ENUM | fetchApplicantRelations |
| OR_DIMENSION_MEASURE_TYPE | LOCAL_OPEN_ENUM | fetchDimensionMeasureTyp e |
| OR_DISBURSEMENT_MODE | LOCAL_OPEN_ENUM | fetchDisbursementMode |
| OR_EDUCATION_LOAN_ADMISSSIO N_STATUS | LOCAL_OPEN_ENUM | fetchEducationLoanAdmissi onStatus |
| OR_EDUCATION_LOAN_COURSE_T YPES | LOCAL_OPEN_ENUM | fetchEducationLoanCourseT ypes |
| OR_HOME_LOAN_PURPOSE | LOCAL_OPEN_ENUM | fetchHomeLoanPurpose |
| OR_INSIDER_PROFILE | LOCAL_OPEN_ENUM | fetchInsiderProfile |
| OR_PROPERTY_STATUS | LOCAL_OPEN_ENUM | fetchPropertyStatus |
| OR_REPAYMENT_MODE | LOCAL_OPEN_ENUM | fetchRepaymentMode |
| OR_STAKEHOLDER_TYPES | LOCAL_OPEN_ENUM | fetchStakeHolderTypes |
| OR_STATE | LOCAL_OPEN_ENUM | getUsState |
| OR_VEHICLE_CATEGORY | LOCAL_OPEN_ENUM | fetchVehicleCategory |
| RELATIONSHIP_SERVING_OFFICER | LOCAL_OPEN_ENUM | getRelationShipServingOffic er |
| EMPLOYMENTTYPE | REMOTE_OPEN_ENUM | getEmploymentType |
| OR_APPLICANT_DOCUMENT_TYPE | REMOTE_OPEN_ENUM | fetchApplicantDocumentTyp e |
| OR_APPLICANT_LOCATION | REMOTE_OPEN_ENUM | fetchApplicantLocation |
| OR_COUNTRY_OF_REGISTRATION | REMOTE_OPEN_ENUM | fetchCountryOfRegistration |
| OR_CUSTOMER_CATEGORY | REMOTE_OPEN_ENUM | fetchCustomerCategory |
| OR_EMPLOYER_NAME | REMOTE_OPEN_ENUM | getEmployerNames |
| OR_INSIDER_PROFILE_ROLE | REMOTE_OPEN_ENUM | fetchInsiderProfileRole |
| OR_MODE_OF_OPERATION | REMOTE_OPEN_ENUM | fetchModeOfOperation |
| OR_PREFERRED_CURRENCY | REMOTE_OPEN_ENUM | fetchPreferredCurrency |
| OR_PROFESSIONS | REMOTE_OPEN_ENUM | fetchProfessions |

Table 10-1 (Cont.) Origination related database entries

| Enumeration <prop_id></prop_id> | Type of Enumeration < PROP_VALUE > | Enum Key <enum_fqn></enum_fqn> |
|---------------------------------|------------------------------------|--------------------------------|
| OR_STATES | REMOTE_OPEN_ENUM | fetchStates |
| OR_SUFFIX | REMOTE_OPEN_ENUM | fetchSuffix |
| SERVICE_BRANCH | REMOTE_OPEN_ENUM | getServiceBranch |
| FINANCIAL_ASSETS_TYPE | REMOTE_OPEN_ENUM | financialAssetsTypes |
| FINANCIAL_EXPENSE_FREQUENC Y | REMOTE_OPEN_ENUM | getExpenseFrequency |
| FINANCIAL_EXPENSE_TYPE | REMOTE_OPEN_ENUM | getFinancialExpense |
| FINANCIAL_INCOME_FREQUENCY | REMOTE_OPEN_ENUM | getIncomeFrequency |
| FINANCIAL_INCOME_TYPE | REMOTE_OPEN_ENUM | getFinancialIncome |
| FINANCIAL_LIABILITY_FREQUENCY | REMOTE_OPEN_ENUM | getLiabilityFrequency |
| FINANCIAL_LIABILITY_TYPE | REMOTE_OPEN_ENUM | getFinancialLiability |
| GENDER | REMOTE_OPEN_ENUM | getGender |
| IDENTIFICATIONTYPES | REMOTE_OPEN_ENUM | GetTaxType |
| MARITALSTATUS | REMOTE_OPEN_ENUM | getMaritalStatus |
| OR_CITIZENSHIP_BY | REMOTE_OPEN_ENUM | fetchCitizenshipBy |
| OR_EMPLOYMENT_CATEGORY | REMOTE_OPEN_ENUM | fetchEmploymentCategory |
| OR_ORGANIZATION_CATEGORY | REMOTE_OPEN_ENUM | fetchOrganizationCategory |
| OR_ORGANIZATION_OPERATIONS | REMOTE_OPEN_ENUM | fetchOrganizationOperations |
| OR_RANK | REMOTE_OPEN_ENUM | fetchRank |
| OR_DEPENDENT_TYPE | REMOTE_OPEN_ENUM | fetchDependentType |
| OR_CONTACT_SUBTYPE | REMOTE_OPEN_ENUM | fetchContactSubType |

Local Enum Configuration

Refer to the following SQL script for store enum locally to fetch LOV from the database.

```
Insert into DIGX_FW_CONFIG_ALL_B (PROP_ID, PREFERENCE_NAME, PROP_VALUE,
DETERMINANT_VALUE, CREATED_BY,
CREATION_DATE, LAST_UPDATED_BY, LAST_UPDATED_DATE) values
('GENDER', 'EnumerationConfig', 'LOCAL_OPEN_ENUM',
'OBDX_BU', null, sysdate, null, null)
```

For local enumeration, the respective data is stored in the below table. Refer to column 3 for the **ENUM_FQN.**

```
select * from DIGX_FW_ENUM_REPRESENTATIONS where ENUM_FQN in ('<Enum Key>')
```

Remote Enum Configuration

For remote enumeration refer following SQL script.

The following is an example of an override database entry for existing records in DIGX_FW_CONFIG_ALL_B table.

('OR_STATES','EnumerationConfig','REMOTE_OPEN_ENUM','OBDX_BU',null,sysdate,null,null)

Here OR_STATES fetch the LOV from integrated Mid office enumeration maintenance route via OBRH, so below 2 database sql scripts are required.

Note:

To convert a remote enumeration to a local one, update the PROP_VALUE from REMOTE_OPEN_ENUM to LOCAL_OPEN_ENUM and make the corresponding entry in the DIGX_FW_ENUM_REPRESENTATIONS table.

OBDX-OBO Kafka consumer configuration

This topic provides information on **OBDX-OBO Kafka consumer configuration**.

Below script use for verifying database based kafka consumer properties

Select * from DIGX_FW_CONFIG_ALL_B where PROP_ID like 'externalSystermAlertMessage%'

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

Table 11-1 Origination related database entries

| PROP_ID | PROP_VALUE | Description |
|--|--|---|
| externalSystemAlertMessage@auto.co mmit.interval.ms | 1000 | A commit is triggered after 1,000 messages |
| externalSystemAlertMessage@auto.offs et.reset | earliest / latest | Is it always going to start consuming from start or last checkpoint |
| externalSystemAlertMessage@bootstra p.servers | | List of host/port pairs to use for establishing the initial connection to the Kafka cluster. |
| externalSystemAlertMessage@enable.a | false | If set to |
| uto.commit | | true |
| | | , the consumer's offset will be periodically committed in the background. |
| externalSystemAlertMessage@group.id | obdx-obo-consumer | Name of the group that the consumer joins to read messages from a given topic or topics. |
| externalSystemAlertMessage@sasl.jaas .config | org.apache.kafka.common.se curity.scram.ScramLoginMod ule required username="xxx" password="xxx"; | This configuration property used to specify the Java Authentication and Authorization Service (JAAS) configuration for SASL authentication in Kafka |
| externalSystemAlertMessage@sasl.mec hanism | SCRAM-SHA-256 | This configuration property used to specify the Java Authentication and Authorization Service (JAAS) configuration for SASL authentication in Kafka |
| externalSystemAlertMessage@security. protocol | SASL_SSL | Type of Security protocol |
| externalSystemAlertMessage@session.t imeout.ms | 30000 | Session timeout in milliseconds |



Table 11-1 (Cont.) Origination related database entries

| PROP_ID | PROP_VALUE | Description |
|--|---|---------------|
| externalSystemAlertMessage@ssl.endp oint.identification.algorithm | | SSL Algorithm |
| externalSystemAlertMessage@ssl.trusts tore.location | /scratch/app/domain/ obdx_domain/ KafkaServerKeystore.jks | SSL Location |
| externalSystemAlertMessage@ssl.trusts tore.password | | SSL password |
| externalSystemAlertMessage@target.un it | OBDX_BU | Entity name |

Please follow following steps

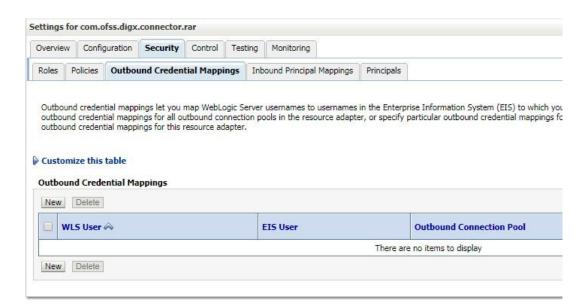
- 1. Login into Weblogicconsole.
- 2. Click on Deployments.
- 3. Expand by clicking '+' icon present in front of **com.ofss.digx.app.connectorapplication** as shown below.



4. Click com.ofss.digx.connector.rar as shown below.



5. Click 'Security' tab and then click 'Outbound Credential Mappings' sub tab as shown below.



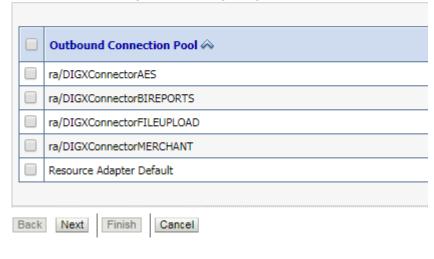
6. Click on 'New' button. Following screen will be appearing.



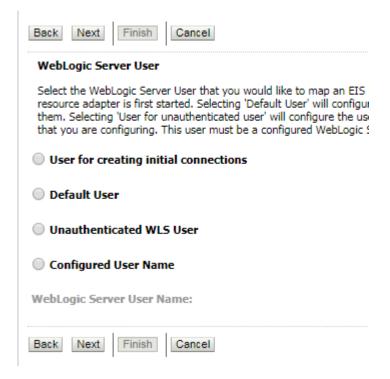
Which Outbound Connection Pool would you like the credential map to be associate resource adapter. Each Outbound Connection Pool can then configure themselves to

Customize this table

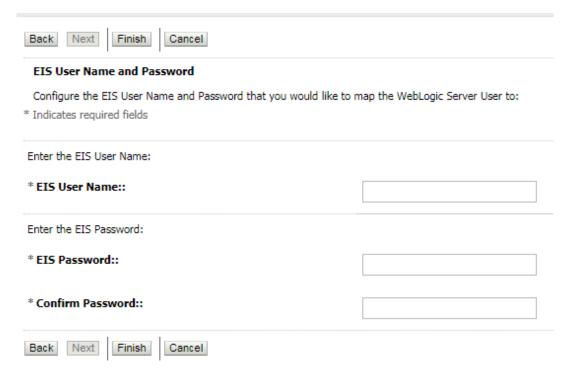
Create a New Security Credential Map Entry for:



- 7. Select 'ra/DIGXConnectorAES'.
- 8. Click 'Next' button. Following screen will be appearing.



- 9. Select 'Default User' .
- 10. Click 'Next' button. Following screen will be appearing.



- 11. Enter following details and then click 'Finish' button.
 - EISUser Name → AES_KEY
 - EISPassword → "Desired password"
 - Confirm Password → "Desired password"

12. Restart the manage server to activate the changes.



OBRH Configuration

This topic provides information on **OBRH Configuration**.

During Bank Implementation, it is assumed that OBRH is installed and configured as part of OBO installation. For OBDX and mid Office OBO integration using OBRH, the following configurations need to be done.

- Carry out all the steps mentioned under the OBRH Integration Configuration section in the OBRH Configuration document. The service provider for mid-office product OBO endpoints configured in OBRH is "OBO".
- 2. After all the steps mentioned above are completed, the user will need to execute some scripts for the host APIs that are to be consumed via OBRH. These are the scripts to pick the third party adapter implementation instead of the host specific implementations as well as to call the OBRH endpoint for the configured interfaces. The scripts are available at the following location:

/Installables/db/OFLO/DIGX_FW_CONFIG_ALL_O.sql



'%ENTITY_ID%' should be replaced with the entity identifier (For Example if the entity during implementation is OBDX_BU then '%ENTITY_ID%' should be replaced by 'OBDX_BU').

3. The list of Interface name that integrated with OBDX-Origination using OBRH as follows: For more information on fields, refer to the field description table.

Table 12-1 The list of Interface name that are integrated with OBDX-Origination using OBRH

| Interface ID | OBDX Screen | Description |
|-------------------------------|------------------------------------|--|
| READ_PARTY_ADDITIONAL_DETAILS | Internal Call – no screen | This service is used to define the sections to be displayed in the application form of an existing customer. |
| OR_APPLICATIONOFFER_READ | Application tracker details | This service is used to fetch and display the offer letter in the application tracker. |
| OR_APPLICATIONOFFER_CREATE | Application tracker details | This service is called to accept or reject the offer. |
| APPLICATION_DELETE | Delete Application on tracker page | This service is used to delete an application form from the application tracker. |

Table 12-1 $\,$ (Cont.) The list of Interface name that are integrated with OBDX-Origination using OBRH

| Interface ID | OBDX Screen | Description |
|------------------------------------|---|---|
| APPLICATION_TRACKER | Application Mobile Tracker | This service is used to display the applications, mapped to a specific mobile number, in the application tracker. |
| OR_CLARIFICATION_LIST | Application tracker details | This service is called to invoke the to and fro communications in the application tracker. |
| OR_CLARIFICATION_UPDATE | Application tracker details | This service is called to update the to and fro communications in the application tracker. |
| EXTRACT_TEXT_BASE64 | Document upload screen | Regarding the OCR document, extract information from the document. |
| NI_NATIONALIDVERIFICATION_VALIDATE | National ID validation | This service is used to validate the national ID number that has been entered. |
| NI_NATIONALIDVERIFICATION_INITIATE | National ID verification screen | This service is used to initiate the National ID verification process. |
| CREATE_APPLICATION | After verifying mobile number | This service is used to request the creation of an application in OBO. |
| ORG_PRODUCT_LIST_CREDITCARDH1 | Selection of Credit card from products | This service is used to fetch and display the list of Credit Card products from OBO. |
| ORG_PRODUCT_LIST_TERMDEPOSITH1 | Selection of Term Deposit from products | This service is used to fetch and display the list of Term Deposit products from OBO. |
| ORG_PRODUCT_LIST_CHECKINGH1 | Selection of Checking Account from products | This service is used to fetch and display the list of Checking Account products from OBO. |
| ORG_PRODUCT_LIST_SAVINGSH1 | Selection of Saving Account from products | This service is used to fetch and display the list of Savings Account products from OBO. |



Table 12-1 $\,$ (Cont.) The list of Interface name that are integrated with OBDX-Origination using OBRH

| Interface ID | OPPY Carrage | Deceristics |
|---|---|--|
| Interface ID | OBDX Screen | Description |
| ORG_PRODUCT_LIST_AUTOLOANH1 | Selection of Auto Loan from products | This service is used to fetch and display the list of Auto Loan products from OBO. |
| ORG_PRODUCT_LIST_HOMELOANH1 | Selection of Home Loan from products | This service is used to fetch and display the list of Home Loan products from OBO. |
| ORG_PRODUCT_LIST_EDUCATIONLOANH1 | Selection of Education Loan from products | This service is used to fetch and display the list of Education Loan products from OBO. |
| ORG_PRODUCT_LIST_PERSONALLOANH1 | Selection of Personal Loan from products | This service is used to fetch and display the list of Personal Loan products from OBO. |
| ORG_PRODUCT_LIST_WALLETH1 | Selection of Wallet from products | This service is used to fetch and display the list of Wallet products from OBO. |
| ENUMERATION_LIST_GETSERVICEBRANCH | Personal Information screen | This service is used to fetch and display values under the Service Branch LOV, applicable for U.S. Military Service Members. |
| ENUMERATION_LIST_FETCHINSIDERPROFILER OLE | Personal Information Screen | This service is used to fetch and display the values under the Role LOV, that is valid for the applicant or if the applicant is related to an insider of the bank. |
| CITY_LIST | Personal Information Screen | This service is used to fetch and display the values under the City LOV which is part of the address list of fields. |
| READ_APPLICATION | On each segment / step | This service is used to fetch the details defined in the application that was initiated in OBO, so that the same can be displayed in the application tracker. |



Table 12-1 $\,$ (Cont.) The list of Interface name that are integrated with OBDX-Origination using OBRH

| Interface ID | OBDX Screen | Description |
|--------------------------------|--|--|
| UPDATE_APPLICATION | On each segment / step | This service is invoked after each step in the OBDX application form to update the application in OBO. |
| ORG_PRODUCT_LIST_CAPITALLOANH1 | Selection of Working Capital Loan from business products | This service is used to fetch and display the list of Working Capital Loan Business products from OBO. |
| ORG_PRODUCT_LIST_TERMLOANH1 | Selection of Term Loan from business products | This service is used to fetch and display the list of Term Loan Business products from OBO. |
| OR_CASA_OFFER_CREATE | Application tracker details | This service is used to accept or reject the CASA overdraft offer. |
| CASA_OFFER_DETAILS | Application tracker details | This service is used to fetch and display the CASA overdraft offer in the application tracker. |
| CONTENT_CREATE_ORIGINATION | Upload Document Section | This service is used to upload documents to OBO. |
| CONTENT_DELETE_ORIGINATION | View Document Section | Delete Uploaded Documents from OBO |
| CONTENT_LIST_ORIGINATION | List Uploaded Documents | This service is used to fetch and display the list of the applicant's documents, from OBO. |
| CONTENT_READ_ORIGINATION | Read Document | This service is used to view the applicant's documents. |
| ADDRESS_MAINTENANCE | After application initiated | To identify if Address is Communication / Residence from OBPY as Default |
| BUSINESS_OVERRIDES | After application submit | This service is used to accept all business rules / segment skipped during the application, in OBO. |



Table 12-1 $\,$ (Cont.) The list of Interface name that are integrated with OBDX-Origination using OBRH

| Interface ID | OBDX Screen | Description |
|--|-----------------------------------|---|
| READ_PARTY_FROM_CIFID_SERVICE_MEMBER | Personal Information Screen | This service is used to read service member details from the CIF id entered. |
| READ_PARTY_FROM_CIFID_STAKEHOLDER | Stakeholder Information Screen | This service is used to read stakeholder details from the CIF id entered. |
| OR_QUESTIONNAIRE | Account Specification Screen | This service is used to fetch and display the questionnaire applicable for a CASA application, from OBO. |
| OR_QUESTIONNAIRE_CONSENT | Terms of Service Screen | This service is used to fetch questionnaire consents for the product application, from OBO |
| ENUMERATION_LIST_FETCHBUSINESSPROPER TYTYPES | Collateral screen | This service is used to fetch the values to be displayed under the Property Type LOV, in case the collateral being added is of type 'Property'. |
| ENUMERATION_LIST_FETCHCITIZENSHIPBY | Business Details screen | List of Citizen Ship By |
| ENUMERATION_LIST_FETCHCOUNTRYOFREGIS TRATION | Business Details screen | This service is used to fetch the values to be displayed under the Country of Registration LOV. |
| ENUMERATION_LIST_FETCHEMPLOYERNAME | Employment Information Screen | This service is used to fetch the values to be displayed under the Company/ Employer Name LOV. |
| ENUMERATION_LIST_FETCHEMPLOYMENTCATE GORY | Employment Information Screen | This service is used to fetch the values to be displayed under the Occupation field. |
| ENUMERATION_LIST_FETCHEMPLOYMENTSTAT US | Employment Information Screen | This service is used to fetch the values to be displayed under the Employment Status LOV. |
| ENUMERATION_LIST_FETCHORGANIZATIONCAT EGORY | Employment Information Screen | This service is used to fetch the values to be displayed under the Organization Category LOV. |



Table 12-1 $\,$ (Cont.) The list of Interface name that are integrated with OBDX-Origination using OBRH

| Interfece ID | OBDV Career | Description |
|--|---|--|
| Interface ID | OBDX Screen | Description |
| ENUMERATION_LIST_FETCHPREFERREDCURR ENCY | Account Specification | This service is used to fetch the values to be displayed under the Preferred Currency LOV. |
| ENUMERATION_LIST_FETCHSUFFIX | Personal Information Screen | This service is used to fetch the values to be displayed under the Suffix LOV. |
| ENUMERATION_LIST_GETFINANCIALEXPENSE | Financial Information screen | This service is used to fetch the values to be displayed under the Expense Type LOV. |
| ENUMERATION_LIST_GETFINANCIALINCOME | Financial Information screen | This service is used to fetch the values to be displayed under the Income Mode LOV. |
| ENUMERATION_LIST_FINANCIALASSETSTYPES | Financial Information screen | List of Financial Asset Types |
| ENUMERATION_LIST_GETFINANCIALLIABILITY | Financial Information screen | This service is used to fetch the values to be displayed under the Liability Type LOV. |
| ENUMERATION_LIST_GETGENDER | Personal Information screen | This service is used to fetch the values to be displayed under the Gender LOV. |
| ENUMERATION_LIST_GETMARITALSTATUS | Personal Information screen | This service is used to fetch the values to be displayed under the Marital Status LOV. |
| ENUMERATION_LIST_GETNOMINEERELATIONS | Nomination information screen | This service is used to fetch the values to be displayed under the Relationship with Application LOV under the Nominee/ Beneficiary Information section. |
| OR_CREATE_DOCUMENT | Personal Information screen | This service is used to create documents in the application form. |
| OR_LIST_DOCUMENTS | Personal Information screen Application Tracker | This service is used to fetch the list of documents uploaded by the applicant. |



Table 12-1 $\,$ (Cont.) The list of Interface name that are integrated with OBDX-Origination using OBRH

| Interface ID | OBDX Screen | Description |
|---|--|--|
| VERIFY_DEDUPE | Personal Information screen | This service is used to perform duplicate check of the applicants in case of joint applications. |
| OR_VALIDATE | Personal / Nominee / Guardian / Stake holder Information | Check whether the applicant is a minor or an adult. |
| | screen | Check for women- specific products (applicable only in the US). |
| OR_ORACLE_KYC | Terms and Condition screen | This service is used to send the ID documents to the mid office for KYC, once the application is submitted. |
| ENUMERATION_LIST_FETCHCUSTOMERCATEG ORY | SMB Business Information page | This service is used to define the customer category. |
| READ_PARTY_FROM_CIFID_INSIDER | Personal Information screen (US) | Read party details for cif/party id |
| | | This service is used to verify details of the Insider from the CIF ID defined, in case the applicant is related to an insider of the bank. |
| ENUMERATION_LIST_FETCHVEHICLETYPES | Collateral | This service is used to fetch and the values under the Type of Vehicle LOV, applicable if the collateral type selected is Vehicle. |
| ENUMERATION_LIST_FETCHPROFESSIONS | Employment Information screen | This service is used to fetch and display the values under the Profession LOV, applicable in case the Employment Type (Occupation in OBDX) is Self Employed. |
| ENUMERATION_LIST_GETEMPLOYMENTTYPE | Employment Information screen | This service is used to fetch and display the values under the Employment Type (Occupation in OBDX) LOV. |



Table 12-1 $\,$ (Cont.) The list of Interface name that are integrated with OBDX-Origination using OBRH

| Interface ID | OBDX Screen | Description |
|---|---|---|
| ENUMERATION_LIST_GETEXPENSEFREQUENC Y | Financial Information/ Profile | This service is used to fetch the supported frequency for an expense. |
| ENUMERATION_LIST_GETINCOMEFREQUENCY | Financial Information/ Profile | This service is used to fetch the supported frequency for an income. |
| ENUMERATION_LIST_GETLIABILITYFREQUENCY | Financial Information/ Profile | This service is used to fetch the supported frequency for a liability. |
| ENUMERATION_LIST_FETCHORGANIZATIONOP ERATIONS | Employment Information | This service is used to fetch and display the values supported as Organization Operations (Demographics in OBO). |
| ENUMERATION_LIST_GETTAXTYPE[GS15] | | List of Identification type |
| ENUMERATION_LIST_QRY_PARTY_PREFIX | Personal Information screen | This service is used to fetch and display the values supported as Title |
| OR_GET_DOCUMENT | Upload document screen | This service is used to fetch and display the types of documents supported to be uploaded. |
| OR_GET_PRODUCT_DOCUMENT_LIST | Upload document screen | This service is used to fetch and display the types of documents supported for the product that can be uploaded. |
| ENUMERATION_LIST_FETCHSTATES | Address right panel | This service is used to fetch and display the values to be available under the States LOV which is part of the Address list of fields. |
| ENUMERATION_LIST_FETCHMODEOFOPERATION | Checking/Savings Account Specifications | This service is used to fetch and display the values to be available under the Mode of Operation LOV, applicable in case of Joint Applications. |
| OR_BUSINESS_PROCESS | Funding | Consent sends by OBDX if skip any segment |



Table 12-1 $\,$ (Cont.) The list of Interface name that are integrated with OBDX-Origination using OBRH

| Interface ID | OBDX Screen | Description |
|--|---|--|
| OR_PRODUCT_DOCUMENT_LIST | Document upload screen | List of primary category documents of products supports |
| ENUMERATION_LIST_FETCHAPPLICANTDOCUM ENTTYPE | Document upload screen | This service fetches the types of documents that are supported, to be uploaded, for the product at the applicant level. |
| OR_ENUMERATION_LOOKUP | Personal Information screen | All obpy enumeration call from this API (alternate) |
| INITIATE_EARLY_KYC | Personal Information screen | This service is used to send the personal information required to perform early KYC, to OBO. |
| READ_PARTY_PERSONAL_DETAILS | Personal Information | This service is used to read the existing customer's personal information from the CIF ID. |
| OR_RELATIONSHIP_PRICING | EMI calculator | Relationship base Pricing calculator |
| OR_STANDARD_SCHEDULE | All Loan products – Loan Information | This service is used to fetch and display the standard loan repayment schedule based on information provided. |
| ENUMERATION_LIST_FETCHRANK | Region US – Personal Information | This service is used to fetch and display the values under the Rank LOV, applicable for Service Members. |
| ENUMERATION_LIST_FETCHDEPENDENTTYPE | Region US – Personal Information. Service Member / Insider | This service is used to fetch and display the values to capture relationship of the applicant with the Service Member, in case the applicant is a dependent of a service member. |
| ENUMERATION_LIST_FETCHREJECTREASONS | Application Tracker | this service is used to fetch the list of values to be available as reasons for rejection, in case the applicant chooses to reject the loan/CASA overdraft offer. |



Table 12-1 $\,$ (Cont.) The list of Interface name that are integrated with OBDX-Origination using OBRH

| Interface ID | OBDX Screen | Description |
|--------------|---------------------------------|----------------------|
| GENERIC_CODE | Repayment / Disbursement screen | Fetch branch details |

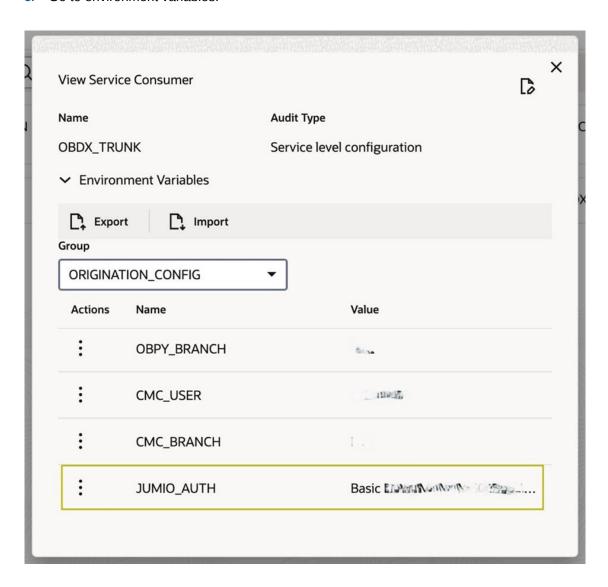


Jumio Configuration

This topic provides information on **Jumio Configuration**.

The Non-Assisted KYC flow or selfie KYC flow, requires users to activate the Jumio check for licensing verification.

- 1. Login to https://customer-portal.netverify.com/ and note bearer token.
- 2. Bearer token is required to update in OBRH Service consumer.
- Go to environment variables.



Trouble shooting and Assumptions

This topic provides information on Trouble shooting and Assumptions.

Issue: Content API failing, or Origination product details cannot be seen on screen.
 Assumption: This is due to the content API IP and port not being properly configured in the database.

Steps to Troubleshoot:

- First, test the API using Postman. Refer: OBO API testing via postman-steps 4and5.
- Configure the user and branch name correctly. Refer to the OBRH Origination config for CMC user configuration and properly configure the Origination service consumer for the DMS server.
- 2. **Issue:** Final submit is failing for mandate details.

Assumption: This is because we are not sending all segments to OBO, as the OBDX channel is responsible for sending only the mandatory segments to OBO.

Steps to Troubleshoot: Check the request and response OBRH logs for BUSINESS_OVERRIDE, as after calling this API from OBDX, it is responsible for sending consents to OBO to handle the remaining mandatory segments managed by OBO.

Issue: National ID Verification failed, and access denied for doc upload.
 Assumption: This is a UI issue; some required fields might not be loaded on the Personal Information screen due to the regional requirements of the framework.

Steps to Troubleshoot: UI validation needs to be handled to check which fields are present on the Personal Information screen.

4. Issue: "TIMED OUT EXCEPTION." While fetching workflows after login.

OR

Not able to proceed after login as registered user

Assumption: This is an existing user use case in which the user logs in, navigates to the Origination product offerings page from the kebab menu, starts a new application, selects any product, and the API fails with a timeout error. If you check the OBDX logs, you might find the error as shown below.

```
ERROR com.ofss.digx.app.origination.service.product.Product - Exception
from fetchDocuments()
for requestDTO DomainObjectDTO [auditSequence=1, createdBy=null,
creationDate=null, entityStatus=null,
lastUpdatedBy=null, lastUpdatedDate=null, recordStatus=null, version=1] in
class com.ofss.digx.app.
origination.service.product.Product
com.ofss.digx.infra.exceptions.Exception: null
```

Steps to Troubleshoot: This is because the content API is not configured correctly. Refer to issue no.1 to fix any content API failures.

Issue: Document type ID, name and Description in Remote Product Repository Adapter.

Assumption: OBDX either stores the document locally in the database or sends it to OBO. Since we are configuring the remote adapter, the document will be sent to the DMS server.

We need to ensure that the maintenance of this API is correctly done on the OBO side.

Steps to Troubleshoot: Refer **OBO API testing via Postman-point5**. There are two APIs: List of Categories and Category Sub-Type. The second API depends on the response of the first API.

Test with Postman first before testing via the OBDX application.

- 6. Issue: After entering financial information, Application update call failed.
 Assumption: In the financial information section, there is a bug that was rectified and fixed in the previous release, and the same fix has been added in this release.
- 7. **Issue**: Personal Loan Application for new customer is failing at OBDX with Error "SUM OF INDIVIDUAL REPAYMENT SHARES SHOULD BE EQUAL TO 100%".
 - Assumption: This issue might be related to the mandate segment.
 Steps to Troubleshoot: This issue needs to be rectified from the logs, and the OBDX request should check if the mandatory details have been sent to OBO, as well as whether the same mandate segment is received in the OBO response.
- 8. Issue: JUMIO Flow is failing.

Assumption: This could be a Jumio API issue that gives us a non-compliance response

Steps to Troubleshoot: Test the Jumio API with Postman and check if it is giving a compliance response or not. If it is giving a non-compliance response, check with the Jumio team.

```
curl --location
''''com/api/netverify.com/api/netverify/v2/scans/
<reference_no>/data' \
    --header 'Accept: application/json,text/plain,image/jpeg,*/*' \
    --header 'Authorization: Basic xxxx'
```

Issue: Details of the existing user are missing in originations application.
 Assumption: In UBS, the expected mandatory fields might be missing. Also, check if the OBPY API is providing the same user details.

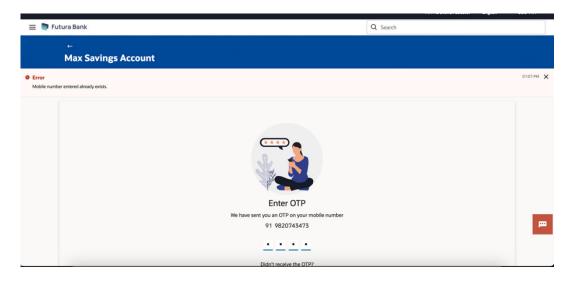
Steps to Troubleshoot: In UBS, * denotes mandatory fields, and the same will be read in OBDX.

Refer to the API below that fetches user details from OBPY, and verify the UBS API response details.

10. Issue: Mobile number entered already exists

Assumption: This issue occurs when an existing customer tries to initiate a new application using the prospect flow with an existing mobile number.

Steps to Troubleshoot: An already onboarded user attempting to use the same mobile number to initiate the prospect flow is an invalid use case. Ask them to log in and initiate the application.



Below are a few assumptions

- Online KYC is entirely dependent on the bank's site. The bank will define the mode of verification that needs to be enabled for Online KYC.
- A DMS server is mandatory from the OBDX perspective, as required documents are read, uploaded, or deleted from that system.
- If the bank is using a customized alert system for email, SMS, or other media, the bank is responsible for troubleshooting any issues related to integration with other systems.
- If any OBO API takes more than 1 minute, check with the OBO team to resolve the issue.
- Check the type of encoding used in the system to encode the username and password example

```
select * from digx_fw_config_all_b where prop_id='OBRH_ENCODING' update value to PLATO ENCRYPTION
```

 If OBO APIs are using HTTPS, then check for SSL installation on the OBDX and OBRH servers.



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