

Oracle® Banking Digital Experience

Host Integration Guide



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Contents

Preface

Purpose	i
Audience	i
Documentation Accessibility	i
Critical Patches	i
Diversity and Inclusion	ii
Related Resources	ii
Conventions	ii
Screenshot Disclaimer	ii
Acronyms and Abbreviations	ii

1 Introduction

1.1 Overview (OBDX-FCUBS Integration)	1
1.2 OBDX Integration Model	1
1.3 OBDX Adapter Project Model	2

2 FCUBS Adapter Implementation

2.1 Guideline to Implement Adapter	1
2.2 Inquiry Operation on FCUBS	2
2.3 Transactional Operation on FCUBS	3
2.3.1 Create FCUBS SOAP Client Instance	4
2.3.2 Get FCUBSHeader Values	4

3 OBDX-FCUBS Configuration/ Installation

3.1 Server Setup	1
3.1.1 Create Data source with JNDI name as defined in config/jdbc.properties file	1
3.1.2 Get FCUBSHeader Values	2
3.2 Deployment	3

4	Configuration for Integration of FCUBS Interaction with OBDX Mailbox	
5	Configuration for Attachments in OBDX Mailbox or Interaction Module	
6	Configurations for OBRH Integration	
6.1	Configurations for connecting to OBRH	2
6.1.1	OBRH of OBMA setup	2
6.1.2	OBRH (Standalone) of OBDX setup	4
6.2	FCUBS OBRH Configuration	6

Index

List of Figures

6-1	<u>OBRH (Standalone) of OBDX setup</u>	<u>4</u>
6-2	<u>Example 1. With proxy pass</u>	<u>5</u>
6-3	<u>Example 2. With location for OBDX</u>	<u>6</u>

Preface

- [Purpose](#)
- [Audience](#)
- [Documentation Accessibility](#)
- [Critical Patches](#)
- [Diversity and Inclusion](#)
- [Related Resources](#)
- [Conventions](#)
- [Screenshot Disclaimer](#)
- [Acronyms and Abbreviations](#)

Purpose

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

Audience

This document is intended for the following audience:

- Customers
- Partners

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Oracle is fully committed to diversity and inclusion. Oracle respects and values having a diverse workforce that increases thought leadership and innovation. As part of our initiative to build a more inclusive culture that positively impacts our employees, customers, and partners, we are working to remove insensitive terms from our products and documentation. We are also mindful of the necessity to maintain compatibility with our customers' existing technologies and the need to ensure continuity of service as Oracle's offerings and industry standards evolve. Because of these technical constraints, our effort to remove insensitive terms is ongoing and will take time and external cooperation.

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

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	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.

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

- [Overview \(OBDX-FCUBS Integration\)](#)
This topic provides information on **Overview (OBDX-FCUBS Integration)**. This document is intended to outline the integration of OBDX (Oracle Banking Digital Experience) with FCUBS (Oracle FLEXCUBE Universal Banking).
- [OBDX Integration Model](#)
This topic provides information on **OBDX Integration Model**.
- [OBDX Adapter Project Model](#)
This topic provides information on **OBDX Adapter Project Model**. Above Integration model depicts the OBDX adapter integration with core banking system, Integration can be accomplished by concrete adapter implementations.

1.1 Overview (OBDX-FCUBS Integration)

This topic provides information on **Overview (OBDX-FCUBS Integration)**. This document is intended to outline the integration of OBDX (Oracle Banking Digital Experience) with FCUBS (Oracle FLEXCUBE Universal Banking).

OBDX is the digital banking solution platform that enables single-view of a customer's entire banking world.

It ensures that the program is closely aligned to the business strategies identified and provides accelerated path towards realizing business value.

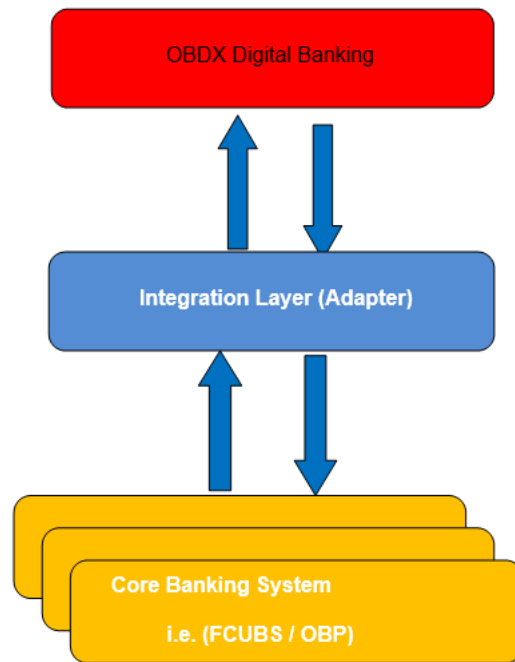
It provides the prerequisite operations to be performed on the customer banking world, which is exposed in the form of REST web service API's to decouple presentation and service layer. OBDX needs to be integrated with one of core banking systems to retrieve the customer banking details and execute the set of operations on the core banking system as per the service requirement.

OBDX has adapter layer to integrate with core banking operations. It provides a set of adapter specifications (Java Interfaces) which can be implemented for host specific service invocation. Adapter layer decouples the services from core banking operation. Any number of core banking system can be integrated with OBDX by implementing adapter classes, Adapter layer is responsible for mapping service request /response with host specific request and response.

This document exhibits the integration between core system & OBDX including the basic attributes involved in integration process.

1.2 OBDX Integration Model

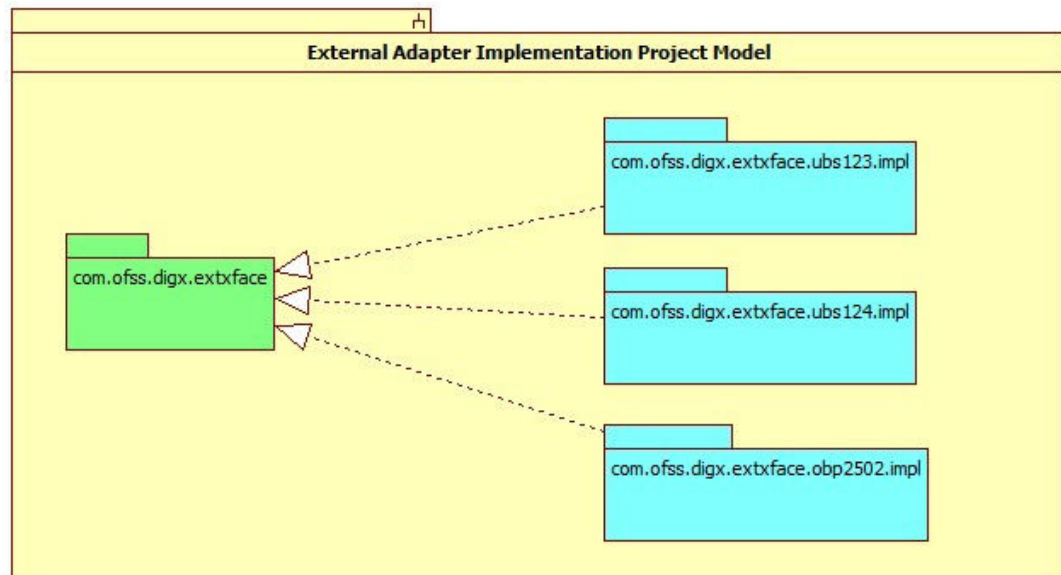
This topic provides information on **OBDX Integration Model**.



1.3 OBDX Adapter Project Model

This topic provides information on **OBDX Adapter Project Model**. Above Integration model depicts the OBDX adapter integration with core banking system, Integration can be accomplished by concrete adapter implementations.

Following model illustrates OBDX adapter specifications and its concrete adapter implementation relationship project model.



In above model, project `com.ofss.digx.extxface` contains all the adapter specifications (Java Interface) for external facing adapters. The concrete implementation classes of the adapter interfaces will reside in the host specific adapter implementation project.

Example: To integrate with FCUBS 12.4 core banking system, adapter interfaces should be implemented for host specific service invocation and concrete implementation adapter classes will reside in `com.ofss.digx.extxface.ubs124.impl` project.

2

FCUBS Adapter Implementation

This topic provides information on **FCUBS Adapter Implementation**. To process the request with FCUBS core banking system, OBDX has set of adapter specifications which would be implemented for host specific services invocation.

Concrete implementation adapter classes need to be created by implementing respective adapters interface and interface defining methods should be implemented.

Concrete adapter defining methods may have two types of operation:

- Inquiry Operation
- Transactional Operation

Inquiry operation is process to interchange data between OBDX and FCUBS core banking system without altering customer banking state. It queries on the host system to fetch needed information required for tracking, summarizing the details or processing the transactional operation.

Example: Fetch Customer detail, Accounts detail.

Transactional operation will request to host system for altering/creating end user banking states.

Example: Payments, Account Opening.

- [Guideline to Implement Adapter](#)
This topic provides information on **Guideline to Implement Adapter**.
- [Inquiry Operation on FCUBS](#)
This topic provides information on **Inquiry Operation on FCUBS**. To inquire data on core banking system, FCUBS provides a set of database view/synonyms object to inquire the required information.
- [Transactional Operation on FCUBS](#)
This topic provides information on **Transactional Operation on FCUBS**. For processing transactional operations, FCUBS core banking system exposes SOAP web services.

2.1 Guideline to Implement Adapter

This topic provides information on **Guideline to Implement Adapter**.

1. Adapter implementation class must implement the respective interface and provide implementations for all methods defined in the interface.
2. Any exception while invoking core banking services must be translated into OBDX exception (`com.ofss.digx.infra.exceptions.Exception`) and host error code(s) should be mapped to an OBDX error code.

2.2 Inquiry Operation on FCUBS

This topic provides information on **Inquiry Operation on FCUBS**. To inquire data on core banking system, FCUBS provides a set of database view/synonyms object to inquire the required information.

A connector schema is required which hosts the required views, synonyms, functions and procedures for querying data in FCUBS. OBDX relies on a middleware API packaged as “com.ofss.extsystem.ubs” which provides host adapters that interact with the connector schema to fetch the required information. To invoke these host adapters, the static Java method `com.ofss.extsystem.ubs.business.extsystems.HostAdapterManager.processRequest(HostRequestDTO)` needs to be invoked from within OBDX adapter implementation. The `HostRequestDTO` class must be provided with the required request information.

All the FCUBS middleware adapters are configured with unique a request id in the database table `MSTHOSTINTERFACE`. `HostAdapterManager` identifies the adapter class for given request id configured in `MSTHOSTINTERFACE` table and invoke the `processRequest()` method of respective adapter class.

Following steps are required to invoke the host adapter:

1. Create the Request DTO object and fill required fields.
2. Build host request by calling
`com.ofss.extsystem.ubs.business.extsystems.HostAdapterHelper.buildHostRequest(RequestDTO)` method.
3. Invoke `HostAdapterManager.processRequest(HostRequestDTO)` with the `HostRequestDTO` created by invoking the method in step 2.

Reference:

```

HostRequestDTO hostRequest= null;

HostResponseDTO hostResponse = null;

AccountDetailsRequest AccountDetailsRequest = new
AccountDetailsRequest();

    AccountDetailsRequest.userContext = new UserContextDTO();

    AccountDetailsRequest.userContext.idEntity = "B001";

    AccountDetailsRequest.userContext.idTxn = "PAR";

    AccountDetailsRequest.userContext.idRequest =
"PARTYACCOUNTREL";

    AccountDetailsRequest.userContext.serviceVersion = 0;

    AccountDetailsRequest.userContext.refIdEntity = "B001";

    AccountDetailsRequest.userContext.userType = "EN1";

    AccountDetailsRequest.account = new AccountNoInputDTO();

    AccountDetailsRequest.account.idCustomer = partyId;

    AccountDetailsRequest.account.acctType = accountType;

    hostRequest =
HostAdapterHelper.buildHostRequest(AccountDetailsRequest);

try {

HostResponse = HostAdapterManager.processRequest (hostRequest);

    } catch (java.lang.Exception e) {

logger.log (Level.SEVERE, formatter.format.Message ("<exception
message with request parameter>"));

```

2.3 Transactional Operation on FCUBS

This topic provides information on **Transactional Operation on FCUBS**. For processing transactional operations, FCUBS core banking system exposes SOAP web services.

To invoke the SOAP web services, SOAP client stubs need to be generated with the help of WSDL exposed by FCUBS. The thus generated client stubs should be included in classpath and configure database entries in DIGX_FW_CONFIG_OUT_WS_CFG_B table. Create instance of FCUBS Soap client service using `com.ofss.fc.infra.ws.JAXWSFactory.createServiceStub(String, String)` and invoke the respective methods with required request payload.

`com.ofss.fc.infra.ws.JAXWSFactory.createServiceStub(String, String)` method will instantiate the respective SOAP client services by passing the service and operation name. It uses the DIGX_FW_CONFIG_OUT_WS_CFG_B database table to retrieve the SOAP WSDL URL, End point service name and proxy services name for instantiating the client services, so all the relevant database entries should be configured in database table for each service operations.

Following step to invoke the soap service:

1. Generate SOAP client stubs from WSDL file.
 2. Insert the database entry in DIGX_FW_CONFIG_OUT_WS_CFG_B table for the respective service and operation.
 3. Get the SOAP client services instance by invoking `com.ofss.fc.infra.ws.JAXWSFactory.createServiceStub(String, String)` method.
 4. Create request header instance and fill the mandatory fields.
 5. Create request body instance and fill the essential detail.
 6. Invoke the respective SOAP method by passing the request parameter containing request header and body.
- [Create FCUBS SOAP Client Instance](#)
This topic provides information on **Create FCUBS SOAP Client Instance**. Create an instance of soap client services by invoking `JAXWSFactory.createServiceStub` method by passing service id and operation name arguments to identify the service.
 - [Get FCUBSHeader Values](#)
This topic provides information on **Get FCUBSHeader Values**. Each and every FCUBS soap request requires header object of class `FCUBSHeaderType`.

2.3.1 Create FCUBS SOAP Client Instance

This topic provides information on **Create FCUBS SOAP Client Instance**. Create an instance of soap client services by invoking `JAXWSFactory.createServiceStub` method by passing service id and operation name arguments to identify the service.

Important: A database entry must be available for respective service and operation in `DIGX_FW_CONFIG_OUT_WS_CFG_B` database table.

```
FCUBSAccServiceSEI)JAXWSFactory.createServiceStub
(WebServiceConstants.FCUBS_ACCOUNT_SERVICE_SPI,
WebServiceConstants.CREATE_TD_ACCOUNT);
```

2.3.2 Get FCUBSHeader Values

This topic provides information on **Get FCUBSHeader Values**. Each and every FCUBS soap request requires header object of class `FCUBSHeaderType`.

The class `com.ofss.digx.ubs.adapter.impl.RequestHeader`, provides all properties to set in FCUBS SOAP request header object.

A `RequestHeader` object should be instantiated by invoking `AbstractAdapterHelper.getRequestHeader` method and set all the required properties in FCUBS soap request header object.

```
com.ofss.digx.FCUBS.adapter.impl.AbstractAdapterHelper.getRequestHeader(String, String, String)
```

Create the Adapter helper instance and retrieve Request Header Object.

```
AbstractAdapterHelper helper =
    AbstractAdapterHelper.getInstance();RequestHeader
    header = helper.getRequestHeader("IA", "FCUBSAccService",
    "ModifyIATDCustAcc");
```

Instantiate the request header and fill the essential details:

```
MODIFYTDCUSTACCFSSFSREQ createTDRequest = new MODIFYTDCUSTACCFSSFSREQ();
FCUBSHEADERType fcUBSHeaderType =
new
FCUBSHEADERType();fcUBSHeaderType.setUSERID(header.getUserid());fcUBSHeaderType.setCORRELID(head
er.getCorrelid());
fcUBSHeaderType.setMSGID(header.getMsgid());fcUBSHeaderType.setDESTINATION(header.getDestination());
fcUBSHeaderType.setMSGSTAT(MsgStatType.fromValue(header.getMsgstat()));
fcUBSHeaderType.setSOURCE(header.getSource());fcUBSHeaderType.setBRANCH(helper.getHostBranchId(termD
eposit.getTermDepositAccountId().getValue()));
fcUBSHeaderType.setUBSCOMP(UBSCOMPTYPE.fromValue(header.getUbscomp()));fcUBSHeaderType.setMODU
LEID(header.getModuleid());
fcUBSHeaderType.setSERVICE(header.getService());fcUBSHeaderType.setOPERATION(header.getOperation());
fcUBSHeaderType.setSOURCEOPERATION(header.getSourceoperation());createTDRequest.setFCUBSHEADER(fc
UBSHeaderType);
```

Invoke the FCUBS SOAP service

```
FCUBSAccServiceSEI clientProcess =
(FCUBSAccServiceSEI)
JAXWSFactory.createServiceStub(WebServiceConstants.FCUBS_ACCOUNT_SERVICE_SPI,
WebServiceConstants.CREATE_TD_ACCOUNT);MODIFYTDCUSTACCFSSFSRESresponse =
clientProcess.modifyTDCustAccFS(createTDRequest);
```


3

OBDX-FCUBS Configuration/ Installation

This topic provides information on **OBDX-FCUBS Configuration/ Installation**. To inquire the banking information, FCUBS provides a set of database views/synonyms. These are created on a connector schema which is created at the time of installation of the product.

A datasource must be created on the application server where the application has been deployed. The name of the datasource must be specified in the jdbc.properties file for the property name FCON.A1.JNDI.NAME, FCON.AP.JNDI.NAME and FCON.B1A1.JNDI.NAME.

Below properties should be define in config/jdbc.properties file

```
FCAT.WEBSERVER.ID=ZZFCAT.APPSERVER.ID=ZZFCAT.ROUTER.DAEMON.NAME=ROUTERDISPLAY.M
ESSAGE.
ID=NFCAT.LDB.DATABASE.NAME=ORACLE
FCON.A1.LDB.DRIVER=oracle.jdbc.driver.OracleDriverFCON.A1.LDB.
URL=%%DB_CONNECT_STRING%%FCON.A1.JNDI.NAME=B1A1FNDI.A1.ABCD=
FCON.AP.LDB.DRIVER=oracle.jdbc.
driver.OracleDriverFCON.AP.LDB.URL=%%DB_CONNECT_STRING%
%FCON.AP.JNDI.NAME=B1A1FNDI.AP.ABCD= B001.
A1=B1A1FNDI.B1A1.ABCD=FCON.B1A1.JNDI.NAME=B1A1FCON.B1A1.LDB.DRIVER=oracle.jdbc.driver.Ora
cleDriverFCON.
B1A1.LDB.URL=%%DB_CONNECT_STRING%%
```

- [Server Setup](#)
- [Deployment](#)

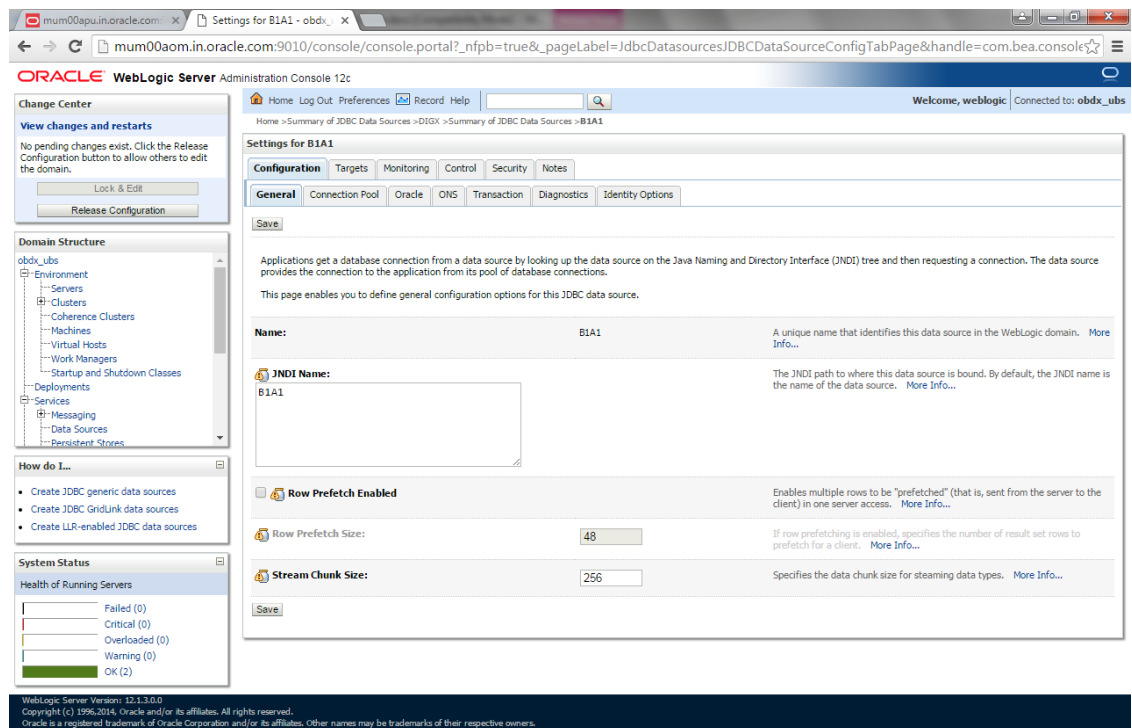
This topic provides information on **Deployment**. We have FCUBS deployable ear containing all the jar files required to invoke the FCUBS adapter.

3.1 Server Setup

- [Create Data source with JNDI name as defined in config/jdbc.properties file](#)
This topic describes the systematic instruction to **Create Data source with JNDI name as defined in config/jdbc.properties file** option.
- [Get FCUBSHeader Values](#)
This topic provides information on **Get FCUBSHeader Values**. Each and every FCUBS soap request requires header object of class FCUBSHeaderType.

3.1.1 Create Data source with JNDI name as defined in config/jdbc.properties file

This topic describes the systematic instruction to **Create Data source with JNDI name as defined in config/jdbc.properties file** option.



Please note that in case of multi entity scenario, the JNDI name should be in the format <ENTITY_ID>_B1A1. For example, for entity identifier as 'OBDX_BU', the JNDI name will be OBDX_BU_B1A1.

3.1.2 Get FCUBSHeader Values

This topic provides information on **Get FCUBSHeader Values**. Each and every FCUBS soap request requires header object of class FCUBSHeaderType.

The class `com.ofss.digx.ubs.adapter.impl.RequestHeader`, provides all properties to set in FCUBS SOAP request header object.

A RequestHeader object should be instantiated by invoking `AbstractAdapterHelper.getRequestHeader` method and set all the required properties in FCUBS soap request header object.

```
com.ofss.digx.FCUBS.adapter.impl.AbstractAdapterHelper.getRequestHeader(String, String, String)
```

Create the Adapter helper instance and retrieve Request Header Object.

```
AbstractAdapterHelper helper =
    AbstractAdapterHelper.getInstance();RequestHeader
    header = helper.getRequestHeader("IA", "FCUBSAccService",
    "ModifyIATDCustAcc");
```

Instantiate the request header and fill the essential details:

```
MODIFYTDCUSTACCFSSFSREQ createTDRequest = new MODIFYTDCUSTACCFSSFSREQ();
FCUBSHEADERTYPE fcUBSHeaderType =
new
FCUBSHEADERTYPE();fcUBSHeaderType.setUserID(header.getUserid());fcUBSHeaderType.setCORRELID(head
er.getCorrelid());
fcUBSHeaderType.setMSGID(header.getMsgid());fcUBSHeaderType.setDESTINATION(header.getDestination());
```

```
fcUBSHeaderType.setMSGSTAT(MsgStatType.fromValue(header.getMsgstat()));
fcUBSHeaderType.setSOURCE(header.getSource());fcUBSHeaderType.setBRANCH(helper.getHostBranchId(termD
eposit.getTermDepositAccountId().getValue());
fcUBSHeaderType.setUBSCOMP(UBSCOMPType.fromValue(header.getUbscomp()));fcUBSHeaderType.setMODU
LEID(header.getModuleid());
fcUBSHeaderType.setSERVICE(header.getService());fcUBSHeaderType.setOPERATION(header.getOperation());
fcUBSHeaderType.setSOURCEOPERATION(header.getSourceoperation());createTDRequest.setFCUBSHEADER(fc
UBSHeaderType);
```

Invoke the FCUBS SOAP service

```
FCUBSAccServiceSEI clientProcess =
    (FCUBSAccServiceSEI)
JAXWSFactory.createServiceStub(WebServiceConstants.FCUBS_ACCOUNT_SERVICE_SPI,
WebServiceConstants.CREATE_TD_ACCOUNT);MODIFYTDCUSTACCFSSFSRESresponse =
    clientProcess.modifyTDCustAccFS(createTDRequest);
```

3.2 Deployment

This topic provides information on **Deployment**. We have FCUBS deployable ear containing all the jar files required to invoke the FCUBS adapter.

Following deployable should be deployed on OBDX server:

obdx.extsystem.domain.ear

It contains all the related libraries required to process FCUBS system request.

4

Configuration for Integration of FCUBS Interaction with OBDX Mailbox

This topic provides information on **Configuration for Integration of FCUBS Interaction with OBDX Mailbox**. Out of the box installation OBDX provided with the mailbox to interact within OBDX i.e. Back Office user of the banks in the OBDX will be able to access the mail send by the customer.

If the OBDX Mails by the customer need to be integrated with the FCUBS Interaction module then the below steps should be taken care of.

Assumption: Installation of OBDX has been completed and configuration of all the entity requires in the system has been completed.

Execute below scripts in the OBDX Admin Schema to configure entity specific integration of mailbox with interaction module in FCUBS.

```
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('MAILBOX_PROCESSOR','MailboxProcessor','com.ofss.digx.app.collaboration.service.mailbox.message.mail.processor.RemoteMailboxProcessor','OBDX_BU1','superadmin',sysdate,'superadmin',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('MAIL_REPOSITORY_ADAPTER','RepositoryAdapterFactories','com.ofss.digx.domain.collaboration.entity.mailbox.message.mail.repository.adapter.RemoteMailRepositoryAdapter,com.ofss.digx.domain.collaboration.entity.mailbox.message.mail.repository.adapter.LocalMailRepositoryAdapter','OBDX_BU1','superadmin',sysdate,'superadmin',sysdate);
```

Highlighted values can be varied based on the entity configuration require to be integrated with FCUBS interaction module.

5

Configuration for Attachments in OBDX Mailbox or Interaction Module

This topic provides information on **Configuration for Attachments in OBDX Mailbox or Interaction Module**. By default the mailbox attachment will be integrated to OIPM. If the Bank wants to change this then below are the configuration steps.

1. If bank want to use local database to save uploaded document i.e. other than OIPM then below script need to be executed on OBDX Admin schema. This will point content service to the local data base for mailbox attachment specifically.

```
UPDATE DIGX_FW_CONFIG_ALL_B SET  
PROP_VALUE='com.ofss.digx.domain.content.entity.repository.adapter.LocalContentRepositoryAdapter'  
WHEREPROP_ID = 'IM_CONTENT_REPOSITORY_ADAPTER'
```

2. If bank want to use OIPM server to manage uploaded document then below script need to be executed on OBDX Admin schema. This will point content service to the OIPM server for mailbox attachment specifically.

```
UPDATE DIGX_FW_CONFIG_ALL_B SET  
PROP_VALUE='com.ofss.digx.domain.content.entity.repository.adapter.RemoteContentRepositoryAdapter'  
WHEREPROP_ID = 'IM_CONTENT_REPOSITORY_ADAPTER'
```

6

Configurations for OBRH Integration

This topic provides information on **Configurations for OBRH Integration**. Use the following guidelines to integrate with OBRH from the OBDX adapter.

To call OBRH endpoint from adapter, add entry of

OBRHEndPoint(`com.ofss.digx.extxface.impl.endpoint.OBRHEndPoint`)
against your "interfaceId" in `digx_fw_config_all_b` for Category id as "ExtXfaceConfig".
The "interfaceId" should be the unique service name defined in the OBRH for specific consumer.

To configure which serializer and deserializer should be called for your Request,

Add `prop_id` entry in `digx_fw_config_all_b` as "`com.ofss.digx.extxface.impl.endpoint.OBRHEndPoint_<interfaceId>`" and `prop_value`, as which Serializer Deserializer should be used (JSON or XML)

For JSON: "`com.ofss.digx.extxface.impl.endpoint.serde.JsonSerDe`" (this is the default class picked if no specific entry is made)

For XML: "`com.ofss.digx.extxface.impl.endpoint.serde.XmlSerDe`"

Category id is "ExtXfaceConfig".

OBRH is shipped with OBDX in standalone way only if customer does not have any OBMA product installed. For customers with OBMA installation, OBRH of that setup must only be used.

The following configurations are maintained for OBRH-OBDX integration.

1. DIGX_FW_CONFIG_ALL_B

Category Id	Prop_id	Prop_Value (Default_value)
CredentialPropertyStore	OBRH_USER_PASSWORD	27753d4e463db94b64ab096facb916ff24670adfa0b5769ad9
authenticationConfig	OBRH_ENCODING	BASE64 (Sends credentials in base 64) PLATO_ENCRYPTION (Encrypts credentials)
authenticationConfig	OBRH_EXPIRYTIME	\${OBRH_EXPIRYTIME}
authenticationConfig	OBRH_TOKEN_PATH	token
ExtXfaceConfig	<code>com.ofss.digx.extxface.impl.endpoint.OBRHEndPoint_<interfaceId></code>	<code>com.ofss.digx.extxface.impl.endpoint.serde.JsonSerDe</code> (JSON is default value, you can SerDe you want for this request)
ExtXfaceConfig	<interfaceId>	<code>com.ofss.digx.extxface.impl.endpoint.OBRHEndPoint</code>
CredentialPropertyStore	OBRH_USER_NAME	OBDX

2. DIGX_FW_CONFIG_VAR_B

Prop_id	Prop_Value (Default_value)	ENV_ID
OBRH_HOST_IP	whf00lse.in.oracle.com	OBDX
OBRH_HOST_PORT	7002	OBDX
OBRH_EXPIRYTIME	300	OBDX

3. DIGX_FW_CONFIG_ADAPTER_PROP_B

HOST_ID	TRANSACTION_TYPE	PROP_ID	PROP_VALUE (Default_value)
OBRH	ALL	APP_ID	CMNCORE
OBRH	ALL	USER_ID	OBDX
OBRH	ALL	BRANCH_CODE	4
OBRH	ALL	SERVICE_CONSUMER	OBDX
OBRH	ALL	TOKEN_APP_ID	SECSRV001

4. DIGX_FW_CONFIG_ADAPTER_PROP_B

Service Id	CONTEXT_URL	SERVICE_URL
tokenOBRH	http://\${OBRH_HOST_IP}:\${OBRH_HOST_PORT}	api-gateway/platojwtauth
serviceOBRH	http://\${OBRH_HOST_IP}:\${OBRH_HOST_PORT}	api-gateway/cmc-obrh-services/route/dispatch

Apart from above predefined properties, we have provision to add additional headers. Kindly add your additional headers as a key-value pair in newly added variable "headersMap" of "com.ofss.digx.extxface.impl.dto.ExternalSystemRequest". Refer OBRH User Manual for its usage.

- [Configurations for connecting to OBRH](#)
- [FCUBS OBRH Configuration](#)
This topic provides information on **FCUBS OBRH Configuration**. Execute the following script at OBDX digx database and restart the managed server.

6.1 Configurations for connecting to OBRH

- [OBRH of OBMA setup](#)
This topic provides information on **OBRH of OBMA setup**.
- [OBRH \(Standalone\) of OBDX setup](#)
This topic provides information on **OBRH (Standalone) of OBDX setup**.

6.1.1 OBRH of OBMA setup

This topic provides information on **OBRH of OBMA setup**.

1. **GENERATE_ENCRYPTED_OBRH_PASSWORD**
To configure and add credentials for obrh follow the steps mentioned in the below document with <DataSeedFlag> set to N.
 - **Oracle Banking Digital Experience Credential Store Setup Guide**
Copy the obrh password displayed in the terminal for further steps.

2. DIGX_FW_CONFIG_ALL_B

Category Id	Prop_id	Prop_Value (Default_value)
authenticationConfig	OBRH_ENCODING	BASE64 (Sends credentials in base 64) PLATO_ENCRYPTION (Encrypts credentials)
authenticationConfig	OBRH_EXPIRYTIME	\${OBRH_EXPIRYTIME}
authenticationConfig	OBRH_TOKEN_PATH	token
ExtXfaceConfig	com.ofss.digx.extxface.impl.endpoint.OBRHEndPoint_<interfaceId>	com.ofss.digx.extxface.impl.endpoint.serde.JsonSerDe (JSON is default value, you can SerDe you want for this request)
ExtXfaceConfig	<interfaceId>	com.ofss.digx.extxface.impl.endpoint.OBRHEndPoint

3. DIGX_FW_CONFIG_VAR_B

Prop_id	Prop_Value (Default_value)	ENV_ID
OBRH_HOST_IP	whf00lse.in.oracle.com	OBDX
OBRH_HOST_PORT	7002	OBDX
OBRH_EXPIRYTIME	300	OBDX
CredentialPropertyStore	OBRH_USER_NAME	OBDX
CredentialPropertyStore	OBRH_USER_PASSWORD	27753d4e463db94b64ab096fabc916ff24670adfa0b5769ad9

4. DIGX_FW_CONFIG_ADAPTER_PROP_B

HOST_ID	TRANSACTION_TYPE	PROP_ID	PROP_VALUE (Default_value)
OBRH	ALL	APP_ID	CMNCORE
OBRH	ALL	USER_ID	OBDX
OBRH	ALL	BRANCH_CODE	004
OBRH	ALL	SERVICE_CONSUMER	OBDX
OBRH	ALL	TOKEN_APP_ID	SECSRV001

5. DIGX_FW_CONFIG_OUT_RS_CFG_B

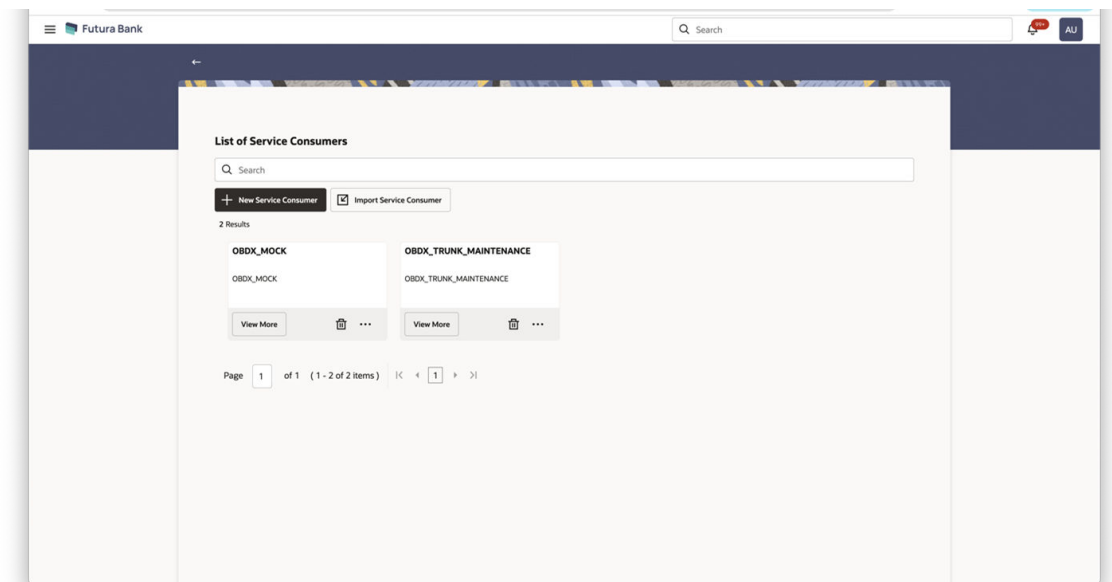
Service Id	CONTEXT_URL	SERVICE_URL
tokenOBRH	http://\${OBRH_HOST_IP}:\${OBRH_HOST_PORT}	api-gateway/platojwtauth
serviceOBRH	http://\${OBRH_HOST_IP}:\${OBRH_HOST_PORT}	api-gateway/cmc-obrh-services/route/dispatch

Apart from above predefined properties, we have provision to add additional headers. Kindly add your additional headers as a key-value pair in newly added variable "headersMap" of "com.ofss.digx.extxface.impl.dto.ExternalSystemRequest". Refer OBRH User Manual for its usage.

6.1.2 OBRH (Standalone) of OBDX setup

This topic provides information on **OBRH (Standalone) of OBDX setup**.

Figure 6-1 OBRH (Standalone) of OBDX setup



```
update digx_fw_config_out_rs_cfg_b
set auth_type='APIKEY' where service_id='tokenOBRH';
update digx_fw_config_out_rs_cfg_b
  set service_url='cmc-obrh-services/route/dispatch'
where service_id='serviceOBRH';
update digx_fw_config_var_b set prop_value='<OBRH MS Host>'
  where prop_id='OBRH_HOST_IP';
update digx_fw_config_var_b set prop_value='<OBRH MS Port>'
  where prop_id='OBRH_HOST_PORT';
update DIGX_FW_CONFIG_var_b set prop_value='<OBDX MS Host>'
  where prop_id='OBDX.APP.HOST';
update digx_fw_config_var_b
set prop_value='<OBDX MS Port>'
  where prop_id='OBDX.APP.PORT'
```

Note

In case of OBRH/OBDX cluster, a load balancer must be deployed and that host/port must be configured in above queries

Update SERVICE_CONSUMER in DIGX_FW_CONFIG_ADAPTER_PROP_B

Add/Update in below query. Value can be any random string.

```
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
('AUTH_API_KEY','SecurityConstants',
'3D1F0C582545CD4D047A496108D06E456C590F53956D44BFBB3902656CB919DE467071377813B4278A92E9
5934261421E6651BA43607472DCC352E4C',
'01','superadmin',null,'superadmin',sysdate);
```

Restart OBDX & OBRH MS

OHS Configurations

In obdx.conf from installer. Check proxy pass values and note that order is maintained. /digx must be below /digx-cmc, /digx-sms. If using location/locationMatch tag for digx, remove proxy pass for /digx and move /digx-cmc, /digx-sms above location/locationMatch tag.

Note

Cluster is not required for /digx-cmc, /digx-sms as they are used for OBRH/ML maintenances only.

In below entries replace host and ports as –

17004 – OBRH MS

17005 – OHS port

Figure 6-2 Example 1. With proxy pass

```
ProxyPass "/digx-cmc-obrh-services/obrh/v1/" "http://mum00boa.in.oracle.com:17004/cmc-obrh-services/"
ProxyPassReverse "/digx-cmc-obrh-services/obrh/v1/" "http://mum00boa.in.oracle.com:17004/cmc-obrh-services/"

ProxyPass "/digx-cmc-ml-indb-services/" "http://mum00boa.in.oracle.com:17004/cmc-ml-indb-services/"
ProxyPassReverse "/digx-cmc-ml-indb-services/" "http://mum00boa.in.oracle.com:17004/cmc-ml-indb-services/"

ProxyPass "/digx-sms-core-services/sms-core-service/rbac/ui" "http://mum00boa.in.oracle.com:17005/public/rbac.json"
ProxyPassReverse "/digx-sms-core-services/sms-core-service/rbac/ui" "http://mum00boa.in.oracle.com:17005/public/rbac.json"

ProxyPass "/digx-cmc-branch-services/corebanks" "http://mum00boa.in.oracle.com:17005/public/corebanks.json"
ProxyPassReverse "/digx-cmc-branch-services/corebanks" "http://mum00boa.in.oracle.com:17005/public/corebanks.json"

ProxyPassMatch "/digx(.*)" "http://mum00boa.in.oracle.com:17003/digx$1"
ProxyPassReverse "/digx(.*)" "http://mum00boa.in.oracle.com:17003/digx$1"
```

Figure 6-3 Example 2. With location for OBDX

```

ProxyPass "/digx-cmc-obrh-services/obrh/v1/" "http://mum00boa.in.oracle.com:17004/cmc-obrh-services/"
ProxyPassReverse "/digx-cmc-obrh-services/obrh/v1/" "http://mum00boa.in.oracle.com:17004/cmc-obrh-services/"

ProxyPass "/digx-cmc-ml-indb-services/" "http://mum00boa.in.oracle.com:17004/cmc-ml-indb-services/"
ProxyPassReverse "/digx-cmc-ml-indb-services/" "http://mum00boa.in.oracle.com:17004/cmc-ml-indb-services/"

ProxyPass "/digx-sms-core-services/sms-core-service/rbac/ui" "http://mum00boa.in.oracle.com:17005/public/rbac.json"
ProxyPassReverse "/digx-sms-core-services/sms-core-service/rbac/ui" "http://mum00boa.in.oracle.com:17005/public/rbac.json"

ProxyPass "/digx-cmc-branch-services/corebanks" "http://mum00boa.in.oracle.com:17005/public/corebanks.json"
ProxyPassReverse "/digx-cmc-branch-services/corebanks" "http://mum00boa.in.oracle.com:17005/public/corebanks.json"

<LocationMatch "/digx(.*)">
    SetHandler weblogic-handler
    WebLogicCluster <HOST>:<PORT>
    FileETag None
</ifModule> mod_headers.c>
    Header unset ETag
    Header set Cache-Control "max-age=0, no-cache, no-store, must-revalidate"
    Header set Pragma "no-cache"
    Header set Expires "Wed, 11 Jan 1984 05:00:00 GMT"
</ifModule>
</LocationMatch>

```

6.2 FCUBS OBRH Configuration

This topic provides information on **FCUBS OBRH Configuration**. Execute the following script at OBDX digx database and restart the managed server.

```
../installables/db/UBS/DIGX_FW_CONFIG_ALL_O.sql
```

Note

'%ENTITY_ID%' should be replaced with entity identifier (For example 'OBDX_BU')

Index

C

Configuration for Attachments in OBDX Mailbox or Interaction Module, [1](#)
Configuration for Integration of FCUBS Interaction with OBDX Mailbox, [1](#)
Configurations for connecting to OBRH, [2](#)
Configurations for OBRH Integration, [1](#)
Create Data source with JNDI name as defined in config/jdbc.properties file, [1](#)
Create FCUBS SOAP Client Instance, [4](#)

D

Deployment, [3](#)

F

FCUBS Adapter Implementation, [1](#)
FCUBS OBRH Configuration, [6](#)

G

Get FCUBSHeader Values, [4](#), [2](#)
Guideline to Implement Adapter, [1](#)

I

Inquiry Operation on FCUBS, [2](#)

O

OBDX Adapter Project Model, [2](#)
OBDX Integration Model, [1](#)
OBDX-FCUBS Configuration/ Installation, [1](#)
OBRH (Standalone) of OBDX setup, [4](#)
OBRH of OBMA setup, [2](#)
Overview (OBDX-FCUBS Integration), [1](#)

T

Transactional Operation on FCUBS, [3](#)