Oracle® Banking APIs

Berlin Open Banking Configuration Guide

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Oracle Banking APIs Berlin Open Banking Configuration Guide, Patchset Release 22.2.6.0.0

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Preface

Purpose

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

Audience

This document is intended for the following audience:

- Customers
- Partners

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

Conventions

The following text conventions are used in this document:

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

Related Resources

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

- Oracle Banking APIs Installation 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.

Acronyms and Abbreviations

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

Table 1 Acronyms and Abbreviations

Abbreviation	Description
OBAPI	Oracle Banking APIs

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Objective and Scope

Background

Open Banking Configuration Document provides the various configurations required to enable Berlin Open Banking in OBAPI.

Scope

- Headers Configuration
- Properties
- OAuth Configuration
- Code Convention and Extensibility

2 Technology Stack

Software

Software	Version
Java	Java JDK or JRE version 11
OBDX/OBAPI	22.2.6.0.0
OAuth	OBAPI Internal OAuth

Abbreviations

Abbreviations	Description
OOTB	Out of the Box
TPP	Third Party Providers
ASPSP	Account Servicing Payment Service Provider

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Pre-requisites

Below softwares to be installed

- Java JDK or JRE version 11 or higher must be installed. For installation of Java please refer **Oracle Banking APIs Installation Guide.**
- OAuth Setup

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Headers Configuration

There are three types of headers configuration available for Berlin Open Banking.

- System Headers (i.e. Mandatory Headers and its respective value validation)
- Configuration Headers (i.e. Mandatory Headers).
- API Configuration Headers (i.e. Mandatory Headers of a specific API)

Below are the configuration steps and Out of the box header already configured in the system.

System Headers: Both Header name and Header value are validated for System Headers.

For configuring more system headers, below script is to be executed in the OBAPI Admin schema.

```
Insert into DIGX_FW_CONFIG_ALL_B (PROP_ID, CATEGORY_ID,
PROP_VALUE,FACTORY_SHIPPED_FLAG, PROP_COMMENTS, SUMMARY_TEXT,
CREATED_BY,CREATION_DATE, LAST_UPDATED_BY, LAST_UPDATED_DATE,
        OBJECT_STATUS,OBJECT_VERSION_NUMBER) values ('berlin.%%HEADERNAME%
%','OpenbankingSystemHeaders','%%HEADERVALUE%%','N',null,'Open
        Banking','ofssuser',sysdate,'ofssuser',sysdate,'Y',1);
```

Below Query is used to check the System Headers in the system

select * from digx_fw_config_all_b where category_id = 'OpenbankingSystemHeaders';

Configuration Headers: As of now in OOTB one header has been added as mandatory - “X-Request-ID”. This header is required to be sent by the TPP to the ASPSP mandatorily with any value.

Only header name is validated in case of Configuration Headers.

For configuring more config headers, below script is to be executed in the OBDX/OBAPI Admin schema.

```
Insert into DIGX_FW_CONFIG_ALL_B (PROP_ID, CATEGORY_ID, PROP_VALUE,
FACTORY_SHIPPED_FLAG, PROP_COMMENTS, SUMMARY_TEXT, CREATED_BY,
        CREATION_DATE, LAST_UPDATED_BY, LAST_UPDATED_DATE, OBJECT_STATUS,
OBJECT_VERSION_NUMBER)values ('berlin.%%HEADER NAME%%','

OpenbankingConfigHeaders',null,'N',null,'OpenBanking','ofssuser',sysdate,'ofss
user',sysdate,'Y',1);
```

Below Query is used to check the System Headers in the system

```
select * from digx_fw_config_all_b where category_id =
'OpenbankingConfigHeaders';
```

API Configuration Headers : As of now in OOTB multiple headers have been added as mandatory. This header is required to be sent by the TPP to the ASPSP mandatorily with a corresponding suitable value.

Header name is validated if the entry is made for requested API only in case of API Configuration Headers.

For configuring more api config headers, below script is to be executed in the OBDX/OBAPI Admin schema.

```
Insert into DIGX_FW_CONFIG_ALL_B (PROP_ID, CATEGORY_ID, PROP_VALUE,
FACTORY_SHIPPED_FLAG,
          PROP_COMMENTS, SUMMARY_TEXT, CREATED_BY, CREATION_DATE,
LAST_UPDATED_BY,
          LAST_UPDATED_DATE, OBJECT_STATUS, OBJECT_VERSION_NUMBER) values ('%
%API_PATH%%.%%HTTP_METHOD%%',' OpenbankingApiConfigHeaders',%%HEADER NAME%
%,'N',null,'Open
          Banking','ofssuser',sysdate,'ofssuser',sysdate,'Y',1);
```

Example:

```
Insert into DIGX_FW_CONFIG_ALL_B (PROP_ID, CATEGORY_ID, PROP_VALUE,
FACTORY_SHIPPED_FLAG, PROP_COMMENTS,
        SUMMARY_TEXT, CREATED_BY, CREATION_DATE, LAST_UPDATED_BY,
LAST_UPDATED_DATE, OBJECT_STATUS, OBJECT_VERSION_NUMBER) values
        ('accounts/{account-id}/
balances.GET','OpenbankingApiConfigHeaders',’Consent-
ID’,'N',null,'OpenBanking','ofssuser',sysdate,'ofssuser',sysdate,'Y',1);
```

Below Query is used to check the System Headers in the system

```
select * from digx_fw_config_all_b where category_id = 'OpenbankingApiConfigHeaders';
```

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Properties

Below are the properties required to be updated in the Berlin Open Banking. Please find the below properties, its purpose and OOTB values.

Table: DIGX_FW_CONFIG_ALL_B

Category-Id: OpenBankingConfig

Property Id	Property Value (Out of the Box)	Purpose
CONSENT_EXPIRYDAYS	90	This value is used to check if expiry date send by TPP for the Account Access Consent is not more than 90 days and if it is more than 90 days then ASPSP will reject this value

Table: AUTH_CONFIG

Category-Id: AuthServerConfig

> **Note:**
>
> Prior to changing the value of SIGNER to X509RS256 or X509PS256, make sure to generate Public and Private Key Pair in Security Keys Section by logging in as admin.

Property Id	Property Value	Purpose
SIGNER	MAC/no row – MAC Signer X509RS256 – x509 signed token with RS256 algorithm X509PS256 - x509 signed token with PS256 algorithm	The algorithm used to generate JWT token
OAUTH_REDIRECT_HOST_PORT	http://{{HOST}}:{{PORT}}	'HOST' refers to the hostname/IP of the application 'PORT' refers to the application's port

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OAuth Configuration

6.1 UI Configuration

1. OAuth Identity Domain Maintenance will require below maintenance to configure UI Component for Authorizing consent. Kindly refer “Core User Manual → OAuth 2.0 → Identity Domain Definition” for detailed “Identity Domain Definition” setup.
   The value of Consent Page URL (Menu → OAuth → Identity Domain Maintenance) is configured as `http://host:port?existingDashboard=true&homeComponent=authorize-consent-berlin&homeModule=open-banking&applicationType=auth&menuNavigationAvailable=false`.
2. Please ensure that digx-berlinob.war is deployed and it is in active state.
3. Navigate to <ui_deploy_folder>/framework/js/api-catalogue.js and please ensure below snippet if domain is set as "berlinob" for obc.

```
abc: {
application: "abc",
defaultVersion: "v1",
domain: "berlinob"
},
```

6.2 Code_challenge and Code_verifier configuration

Table: AUTH_CONFIG

Category-Id: AuthServerConfig

Property Id	Property Value	Purpose
isCodeChallengeEnabled	true/false	To enable/disable code_challenge and code_verifier funtionality. The default value is ‘false’.

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Extensibility and Code Conventions

Error Message Framework

The Error Message Framework helps convert the OBAPI error response according to the BERLIN Open Banking Specifications.

The error response structure for Open Banking Read/Write APIs is as follows:

```
 { “tppMesages” :
[
{ “category” : “”,  “path” : “”,  “code” : “”, “text” :
“”
 }
 ]
 }
```

The Berlin Open Banking specified error response is handled using `DIGX_OB_BERLIN_OBAPI_ERROR_MAP` table.

The contents of the table are as follows:

Column Name	Description
`DIGX_ERROR_CODE`	Represents the OBAPI error codes. This is a Primary and Unique Key
`BERLIN_ERROR_CODE`	Represents the Open Banking specified error code
`PATH`	Represents the reference to the JSON Path of the field with error. Can be null.
`URL`	Represents the URL to help remediate the problem, or provide more information etc. Can be null.

For mapping OBAPI error codes with Berlin Open Banking specified codes below script can be used:

```
Insert into
DIGX_OB_BERLIN_OBAPI_ERROR_MAP(DIGX_ERROR_CODE,BERLIN_ERROR_CODE,PATH,URL)
values ('%%OBAPI ErrorCode%%',%%Open Banking specified error code%%','%%Path%
%', '%%URL%%');
```

Below Query is used to check the OBAPI errors mapped with BERLIN Open Banking specified error codes in the system

```
select * from DIGX_OB_BERLIN_OBAPI_ERROR_MAP;
```

For configuring HTTP status codes with custom message, below script can be used:

```
Insert into DIGX_FW_CONFIG_ALL_B (PROP_ID, CATEGORY_ID, PROP_VALUE,
FACTORY_SHIPPED_FLAG,
PROP_COMMENTS, SUMMARY_TEXT, CREATED_BY,CREATION_DATE, LAST_UPDATED_BY,
LAST_UPDATED_DATE, OBJECT_STATUS, OBJECT_VERSION_NUMBER)


values ('%%HTTP Status code%%','OpenBankingErrorConfig','%%Error Message%
%','N',null,
'OpenBanking Error Message','ofssuser',sysdate,'ofssuser',sysdate,'Y',1);
```

Below Query is used to check the Open Banking HTTP status codes in the system select * from digx_fw_config_all_b where category_id = ' OpenBankingErrorConfig';

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