Oracle® Banking Digital Experience
Berlin Open Banking Configuration Guide

Release 25.1.1.0.0

G43919-01

October 2025

ORACLE®

Oracle Banking Digital Experience Berlin Open Banking Configuration Guide, Release 25.1.1.0.0

G43919-01

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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.

Before you Begin

Kindly refer to our **Getting Started User Guide** for common elements, including Symbols and Icons, Conventions Definitions, and so forth.

Pre-requisites

Specify **User ID** and **Password**, and login to **Home** screen.

Audience

This document is intended for the following audience:

- Customers
- Partners

Documentation Accessibility

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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.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.

Convention	Meaning
`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

Post-requisites

After finishing all the requirements, please log out from the **Home** screen.

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Objective and Scope

This topic provides information on **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

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Technology Stack

This topic provides information on **Technology Stack**. **Software**

Software	Version
Java	Java JDK or JRE version 11
OBDX/OBAPI	22.2.5.0.0
OAuth	OBDX 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

This topic provides information on **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 Digital Experience Installation Guide.**

- OAuth Setup

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Headers Configuration

This topic provides information on **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.

<u>**System Headers:**</u> 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_CFG_CONFIG_ALL_B
(PROP_ID,PROFILE,PROP_VALUE,ENTITY_SPECIFIC,EDITABLE,MANDATORY_OVERRIDE,PROPER
TY_GROUP,CREATED_BY,CREATION_DATE,LAST_UPDATED_BY,LAST_UPDATED_DATE,OBJECT_VER
SION_NUMBER,MODULE,IS_ENUMERATED,SEQUENCE,VALIDATION,OBJECT_STATUS) values
('OpenbankingSystemHeaders.berlin. .%%HEADERNAME%%','%%PROFILEVALUE%%','%
%HEADERVALUE%
%','N','N','N',null,'SYSTEM',sysdate,'SYS',sysdate,1,'openbanking','N',-1,'.*'
,null);
```

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

select * from digx_cfg_config_all_b where prop_id like '%OpenbankingSystemHeaders%';

<u>**Configuration Headers:**</u> 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_CFG_CONFIG_ALL_B
(PROP_ID,PROFILE,PROP_VALUE,ENTITY_SPECIFIC,EDITABLE,MANDATORY_OVERRIDE,PROPER
TY_GROUP,CREATED_BY,CREATION_DATE,LAST_UPDATED_BY,LAST_UPDATED_DATE,OBJECT_VER
SION_NUMBER,MODULE,IS_ENUMERATED,SEQUENCE,VALIDATION,OBJECT_STATUS) values
('OpenbankingConfigHeaders.berlin.%%HEADER NAME%%','%%PROFILEVALUE%%','%
%HEADERVALUE%
%','N','N','N',null,'SYSTEM',sysdate,'SYS',sysdate,1,'openbanking','N',-1,'.*'
,null);
```

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

select * from digx_cfg_config_all_b where prop_id like '%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_CFG_CONFIG_ALL_B
(PROP_ID,PROFILE,PROP_VALUE,ENTITY_SPECIFIC,EDITABLE,MANDATORY_OVERRIDE,PROPER
TY_GROUP,CREATED_BY,CREATION_DATE,LAST_UPDATED_BY,LAST_UPDATED_DATE,OBJECT_VER
SION_NUMBER,MODULE,IS_ENUMERATED,SEQUENCE,VALIDATION,OBJECT_STATUS) values
('OpenbankingApiConfigHeaders. %%API_PATH%%.%%HTTP_METHOD%%','%%PROFILEVALUE%
%','%%HEADERVALUE%
%','N','N','N',null,'SYSTEM',sysdate,'SYS',sysdate,1,'openbanking','N',-1,'.*'
,null);
```

Example: `Insert into DIGX_CFG_CONFIG_ALL_B`
```
(PROP_ID,PROFILE,PROP_VALUE,ENTITY_SPECIFIC,EDITABLE,MANDATORY_OVERRIDE,PROPER
TY_GROUP,CREATED_BY,CREATION_DATE,LAST_UPDATED_BY,LAST_UPDATED_DATE,OBJECT_VER
SION_NUMBER,MODULE,IS_ENUMERATED,SEQUENCE,VALIDATION,OBJECT_STATUS) values
('OpenbankingApiConfigHeaders.accounts/{account-id}/
balances.GET','DEV','Consent-
ID','N','N','N',null,'SYSTEM',sysdate,'SYS',sysdate,1,'openbanking','N',-1,'.*
',null);
```

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

select * from digx_cfg_config_all_b where prop_id like '%OpenbankingApiConfigHeaders%';

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Properties

This topic provides information on **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_CFG_CONFIG_ALL_B`

Category-Id: OpenBankingConfig

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

Table 5-1   DIGX_CFG_CONFIG_ALL_B

Property Id	Property Value (Out of the Box)	Purpose
`OpenBankingConfig.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.

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

Table 5-2   AUTH_CONFIG

Property Id	Property Value	Purpose
`AuthServerConfig.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
`AuthServerConfig.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

- **UI Configuration**
  This topic provides information on **UI Configuration**.

- **Code_challenge and Code_verifier configuration**
  This topic provides information on **Code_challenge and Code_verifier configuration**.

6.1 UI Configuration

This topic provides information on **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

This topic provides information on **Code_challenge and Code_verifier configuration**.

Table: AUTH_CONFIG

Category-Id: AuthServerConfig

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

Table 6-1   AUTH_CONFIG

Property Id	Property Value	Purpose
AuthServerConfig .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

This topic provides information on **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_OBDX_ERROR_MAP` table.

The contents of the table are as follows:

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

Table 7-1   Table 1

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_OBDX_ERROR_MAP(DIGX_ERROR_CODE,BERLIN_ERROR_CODE,PATH,URL)
values ('%%OBDX 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_OBDX_ERROR_MAP;
```

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

```
Insert into DIGX_CFG_CONFIG_ALL_B
(PROP_ID,PROFILE,PROP_VALUE,ENTITY_SPECIFIC,EDITABLE,MANDATORY_OVERRIDE,PROPER
TY_GROUP,CREATED_BY,CREATION_DATE,LAST_UPDATED_BY,LAST_UPDATED_DATE,OBJECT_VER
SION_NUMBER,MODULE,IS_ENUMERATED,SEQUENCE,VALIDATION,OBJECT_STATUS) values
('OpenBankingErrorConfig.%%HTTP Status code%%','PROFILEVALUE','%%Error
Message%
%','N','N','N',null,'SYSTEM',sysdate,'SYS',sysdate,1,'openbanking','N',-1,'.*'
,null);
```

Below Query is used to check the Open Banking HTTP status codes in the system

```
select * from digx_cfg_config_all_b where prop_id like
'%OpenBankingErrorConfig%';
```

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