

# Oracle® Banking Digital Experience

## Auto Categorization of Spend Transactions



Release 25.1.0.0.0

G38582-01

July 2025

ORACLE®

Copyright © 2015, 2025, Oracle and/or its affiliates.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software, software documentation, data (as defined in the Federal Acquisition Regulation), or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, then the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs (including any operating system, integrated software, any programs embedded, installed, or activated on delivered hardware, and modifications of such programs) and Oracle computer documentation or other Oracle data delivered to or accessed by U.S. Government end users are "commercial computer software," "commercial computer software documentation," or "limited rights data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, reproduction, duplication, release, display, disclosure, modification, preparation of derivative works, and/or adaptation of i) Oracle programs (including any operating system, integrated software, any programs embedded, installed, or activated on delivered hardware, and modifications of such programs), ii) Oracle computer documentation and/or iii) other Oracle data, is subject to the rights and limitations specified in the license contained in the applicable contract. The terms governing the U.S. Government's use of Oracle cloud services are defined by the applicable contract for such services. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle®, Java, MySQL, and NetSuite are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Inside are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Epyc, and the AMD logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information about content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services unless otherwise set forth in an applicable agreement between you and Oracle. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services, except as set forth in an applicable agreement between you and Oracle.

# Contents

## Preface

---

|                             |    |
|-----------------------------|----|
| Purpose                     | iv |
| Audience                    | iv |
| Documentation Accessibility | iv |
| Critical Patches            | iv |
| Diversity and Inclusion     | v  |
| Conventions                 | v  |
| Related Resources           | v  |
| Screenshot Disclaimer       | v  |
| Acronyms and Abbreviations  | v  |

## 1 Auto Categorization Of Spend Transactions

---

## 2 Categorization Of Spend Transactions Using ML Engines

---

## Index

---

# Preface

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

## Documentation Accessibility

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

### **Access to Oracle Support**

Oracle customer access to and use of Oracle support services will be pursuant to the terms and conditions specified in their Oracle order for the applicable services.

## Critical Patches

Oracle advises customers to get all their security vulnerability information from the Oracle Critical Patch Update Advisory, which is available at [Critical Patches, Security Alerts and](#)

**Bulletins.** All critical patches should be applied in a timely manner to ensure effective security, as strongly recommended by [Oracle Software Security Assurance](#).

## Diversity and Inclusion

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                                                                                                                                |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| <b>boldface</b>        | 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.                          |
| <code>monospace</code> | 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

## Auto Categorization Of Spend Transactions

This topic provides information on **Auto Categorization Of Spend Transactions**.

### Scenario:

If a Spend transaction description contains keyword "Big Bazaar" then that transaction should get auto-categorized as follows:

Category → Shopping

Subcategory → Groceries

### Maintenance steps:

1. Create a Category and a Subcategory as required after login as an Admin user.
2. Note the CATEGORY\_ID column value of the newly created Category & Subcategory from the table DIGX\_SP\_SPEND\_CATEGORY (Eg: 10 and 101 respectively).
3. Insert a row in table DIGX\_RL\_SPEND as below (Note the ID column value which is '10001' in this example).

Sample script:

```
insert into DIGX_RL_SPEND
      (ID, CREATED_BY, CREATION_DATE, LAST_UPDATED_BY, LAST_UPDATED_DATE,
       OBJECT_STATUS,  OBJECT_VERSION_NUMBER, NAME, DESCRIPTION,
       DETERMINANT_VALUE)
      values ('10001', '', sysdate , '', sysdate , '', 1,'SpendRule',
       'SpendDTODesc', 'OBDX_BU');
```

4. Insert a row in table DIGX\_RL\_CONDITION as below:

- a. ID as any unique value
- b. RULE\_ID as provided in the DIGX\_RL\_SPEND table above
- c. EXPRESSION\_OBJECT value should contain the keyword as follows:

```
utl_raw.cast_to_raw('{ "@class" : "
com.ofss.digx.app.spendanalysis.dto.rule.SpendCategorizationExpressionFa
ctValueDTO",
      "keyword" : "Big Bazaar" }')
```

- d. OUTCOME\_OBJECT value should contain the corresponding Category & Subcategory ID as follows (Subcategory is NOT mandatory):

```
utl_raw.cast_to_raw('{ "@class" : "
com.ofss.digx.app.spendanalysis.dto.rule.SpendCategorizationOutcomeFactV
alueDTO",
      "category" : "10", "subCategory" : "101" }')
```

- e. OPERATOR value should be 'CONTAINS' (No other operators are supported out of the box)

Sample script:

```
insert into
    DIGX_RL_CONDITION (ID, RULE_ID, OPERATOR, OUTCOME_OBJECT,
    EXPRESSION_OBJECT, CREATED_BY,
    CREATION_DATE, LAST_UPDATED_BY, LAST_UPDATED_DATE,
    OBJECT_STATUS, OBJECT_VERSION_NUMBER,
    DETERMINANT_VALUE) values ('103', '10001',
    'CONTAINS', utl_raw.cast_to_raw('{"@class" :

"com.ofss.digx.app.spendanalysis.dto.rule.SpendCategorizationOutcomeFact
ValueDTO", "category" :
    "10", "subCategory" :
    "101"}'),
    utl_raw.cast_to_raw('{"@class" :

"com.ofss.digx.app.spendanalysis.dto.rule.SpendCategorizationExpressionF
actValueDTO", "keyword" : "Big
Bazaar"}'), '', null, '',
    null, '', 1, 'OBDX_BU');
```

5. Insert such rows in table DIGX\_RL\_CONDITION for each keyword & Category-Subcategory combination as required by the Bank.
6. Verify the following properties (select \* from DIGX\_FW\_CONFIG\_ALL\_B where category\_id = 'ruleconfig');
  - a. IS\_RULE\_EVALUATION\_REQUIRED → Y
  - b. SPEND\_EVALUATOR → com.ofss.digx.app.spendanalysis.ruleengine.evaluator.SpendRuleEvaluator (out of the box Spend rule evaluator)
  - c. SPEND\_RULE\_NAME → SpendRule (As per the value of NAME column in DIGX\_RL\_SPEND table)
  - d. SPEND\_DEFAULT\_CATEGORY\_ID → This property is used for maintaining default category, if no keyword is match from all maintained rules.

Below attached screenshot entry is required for setting default category. We need to update the entry from day one configuration screen. We have to maintain the Category ID in this configuration value.



#### Note:

If below entry is not maintain and no rule is matched, then no category is set against the spend transaction.

**Figure 1-1** “System configuration” screen with required entry for setting default category

The screenshot shows the 'System configuration' screen for 'futura bank'. The interface includes a search bar at the top with the text 'What would you like to do today?'. Below the search bar, there is a table of configuration parameters. The 'Default Spend Transaction Category' is highlighted in orange. At the bottom left, there are 'Edit' and 'Cancel' buttons.

|                                                         |                 |                                        |               |
|---------------------------------------------------------|-----------------|----------------------------------------|---------------|
| OBCM token expiry time in seconds                       | 60              | Months for SCF Limit Expiry            | 2             |
| Host Server IP for Oracle Financial Lending and Leasing | 10.184.132.101  | OBTf Port                              |               |
| Document upload maximum allowed size in bytes.          | 5242880         | OBCFPM Application Id - Amend facility | FCLTYP        |
| OBCL Source Code                                        | EXTSYS          | OBVAM User Id                          | OBDXUSER      |
| SCF Finance App Id                                      | SCFFIN          | OBSCF Maintenances Application Id      | OBSCFCMMMAINT |
| Oracle Live Experience Cloud User ID                    | oraclefsgbuobdx | Maximum Days To Setup Cash Flow        | 180           |
| OBSCF Port                                              | <PORT>          | IPM Host application name              |               |
| Receivables/Payables Management User Id                 | SWETA           | OBTf Entity Id                         | 47AFFTF1      |
| Invoice Image Upload Use Case Name                      | corplm/OBDX     | ASP token expiry time in seconds       | 60            |
| Default <b>Spend</b> Transaction Category               | 25              |                                        |               |

## 2

# Categorization Of Spend Transactions Using ML Engines

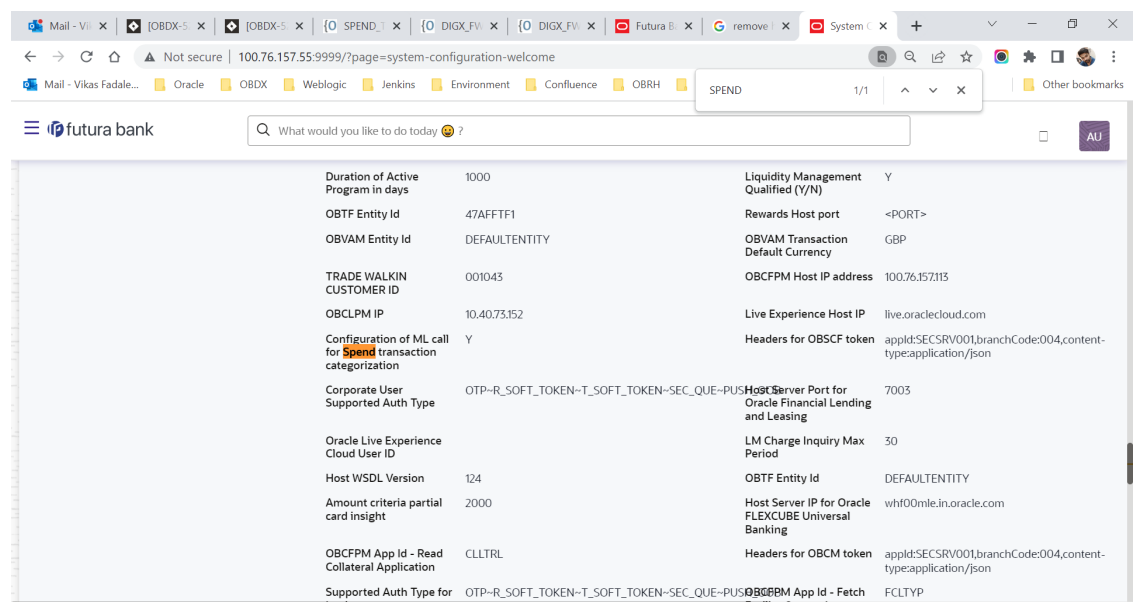
This topic provides information on **Categorization Of Spend Transactions Using ML Engines**.

Bank must use their own Third-party ML Engine provider and customized adapter. If they don't have ML engine provider, then they have to disable the ML Engine call using **Configuration of ML call for Spend transaction categorization** flag as mentioned ahead. If in case categories provided by ML engine does not exist in the system, then system will create those categories.

To activate the ML engine call, we have to set **Configuration of ML call for Spend transaction categorization** flag as Y. If in case, we don't set this value then by default ML engine service is in inactive state.

We can be able to update the flag with the help of **System configuration** screen with Admin Type Role.

**Figure 2-1 System configuration screen with Admin Type Role**



Below entry are required to activate ML engine interface call.

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
('<<ENTITY_ID>>.com.ofss.digx.extxface.spendanalysis.adapter.transaction.ISpend
dUncategorizedTransactionAdapter
```

---

```

.getSpendTransactionCategory','ExtxfaceAdapterPreference',
<<Fully qualified packagename and class name of customized adapter class>>
    ','01','ofssuser',to_timestamp(sysdate,'DD-MON-RR HH.MI.SSXFF
AM'),'ofssuser',to_timestamp(sysdate,'DD-MON-RR HH.MI.SSXFF AM'));
Insert into
DIGX_FW_CONFIG_ALL_O (PROP_ID,PREFERENCE_NAME,PROP_VALUE,DETERMINANT_VALUE,CREA
TED_BY,CREATION_DATE,LAST_UPDATED_BY,LAST_UPDATED_DATE)
    values ('<< Key used in OBRH to map ML call
>>','ExtXfaceConfig','com.ofss.digx.extxface.impl.endpoint.OBRHEndPoint',
'<<ENTITY_ID>>','ofssuser',to_timestamp(sysdate,'DD-MON-RR HH.MI.SSXFF
AM'),'ofssuser',to_timestamp(sysdate,'DD-MON-RR HH.MI.SSXFF AM'));

```

# Index

## A

---

Auto Categorization Of Spend Transactions, [1-1](#)

## C

---

Categorization Of Spend Transactions Using ML  
Engines, [2-1](#)