## Auto Categorization of Spend Transactions Guide Oracle Banking APIs Patchset Release 22.2.3.0.0

Part No. F72988-01

February 2024



Auto Categorization of Spend Transactions Guide February 2024

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### 1. Preface

### 1.1 Intended Audience

This document is intended for the following audience:

- Customers
- Partners

### 1.2 **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.

### 1.3 Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit

http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit

http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs\_if you are hearing impaired.

#### 1.4 Structure

This manual is organized into the following categories:

Preface gives information on the intended audience. It also describes the overall structure of the User Manual.

The subsequent chapters describes following details:

- Introduction
- Preferences & Database
- Configuration / Installation.

#### 1.5 Related Information Sources

For more information on Oracle Banking APIs Patchset Release 22.2.3.0.0, refer to the following documents:

- Oracle Banking APIs Installation Manuals
- Oracle Banking APIs Licensing Guide



# 2. 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).
- 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.SpendCategorizationExpressionFactValueDTO
",
"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.SpendCategorizationOutcomeFactValueDTO",
"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.SpendCategorizationOutcomeFactVa
lueDTO",
"category" : "10",
"subCategory" : "101"
}'), utl raw.cast to raw('{
"@class" :
"com.ofss.digx.app.spendanalysis.dto.rule.SpendCategorizationExpressionFac
tValueDTO",
"keyword" : "Big Bazaar"
}'), '', null, '', null, '', 1, 'OBDX BU');
```

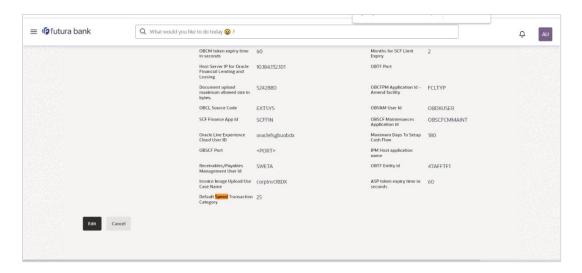
- 5. Insert such rows in table DIGX\_RL\_CONDITION for each keyword & Category-Subcategory combination as required by the Bank.
- 6. Verify the following properties (select \* from DIGX\_FW\_CONFIG\_ALL\_B where category\_id = 'ruleconfig';):
  - a. IS\_RULE\_EVALUATION\_REQUIRED --> Y
  - SPEND\_EVALUATOR -->
     com.ofss.digx.app.spendanalysis.ruleengine.evaluator.SpendRuleEvaluator (out of the
     box Spend rule evaluator)
  - 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.



#### Auto Categorization Of Spend Transactions



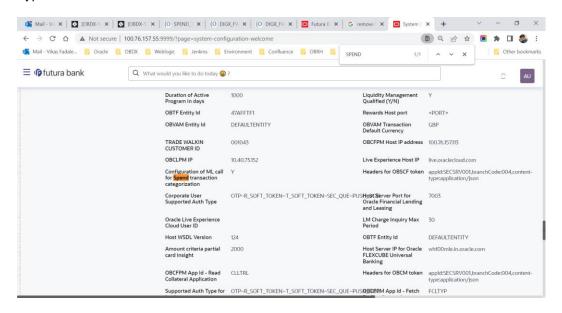


### 3. Categorization Of Spend Transactions Using ML Engine

ML Engine will do the auto categorization on user spend expenditure. It will auto map the category base on transaction description. If in case category does not exist in the system, then first it will create it and then map it to the transaction.

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.



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,CRE ATION\_DATE,LAST\_UPDATED\_BY,LAST\_UPDATED\_DATE) values ('<<ENTITY\_ID>>.com.ofss.digx.extxface.spendanalysis.adapter.transaction.ISpendUnCategoriz edTransactionAdapter.getSpendTransactionCategory','ExtxfaceAdapterPreference','com.ofss.dig x.extxface.spendanalysis.impl.SpendDDATransactionAdapter','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,CREATED\_BY,CRE ATION\_DATE,LAST\_UPDATED\_BY,LAST\_UPDATED\_DATE) values ('SPEND\_DDA\_TRANSACTION\_CATEGORIZATION','ExtXfaceConfig','com.ofss.digx.extxface.i mpl.endpoint.OBRHEndPoint','<<ENTITY\_ID>>','ofssuser',to\_timestamp(sysdate,'DD-MON-RR HH.MI.SSXFF AM'));

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