

Common Core User Guide  
Oracle Banking Electronic Data Exchange for Corporates  
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**ORACLE®**

Oracle Banking Common Core User Guide

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# 1. Preface

## 1.1 Introduction

This user guide is designed to help you quickly get acquainted with the many functions routinely executed every day.

## 1.2 Audience

This user guide is intended for the central administrator of the Bank who controls the system and application parameters and ensures smooth functionality and flexibility of the banking application.

## 1.3 Document 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>.

## 1.4 Acronyms and Abbreviations

Following are some of the acronyms and abbreviations you are likely to find in this user manual:

**Table 1: Acronyms and Abbreviations**

Abbreviation	Description
System	Core Maintenance Module
NLP	Natural Language Processing
REST	Representational State Transfer

## 1.5 List of Topics

This user guide is organized as follow:

**Table 2: List of Topics**

Topics	Description
<b>Core Maintenance</b>	This topic describes about Core Maintenance module.
<b>NLP Framework</b>	This topic describes about NLP Framework.

Topics	Description
<b>Machine Learning Framework</b>	This topic describes about Machine Learning Framework.
<b>File Upload</b>	This topic describes about the various file upload features supported in common core maintenances.
<b>Error Codes and Messages</b>	This topic describes list of error codes and messages.
<b>Glossary</b>	This topic provides list of glossary and their definitions.
<b>List of Menus</b>	This topic has alphabetical list of Core Maintenance processes with page references for quick navigation.
<b>Reference and Feedback</b>	This topic provides the reference documents and information about feedback and support.

## 1.6 Related Documents



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












- Oracle Banking Security Management System User Guide
- Getting Started User Guide

## 1.7 Symbols and Icons



The following are some of the Symbols you are likely to find in the guide:

**Table 3: Symbols and Icons - Common**

Symbol/Icon	Function
→	Represents Results
	Minimize
	Maximize
×	Close

Symbol/Icon	Function
	Perform Search
	Open a list
	Add a new record
K	Navigate to the first record
⌘	Navigate to the last record
<	Navigate to the previous record
>	Navigate to the next record
	Grid view
	List view
	Refresh
	Click this icon to add a new row.
	Click this icon to delete an existing row.
	Click to view the created record.
	Click to modify the fields.
	Click to unlock, delete, authorize or view the created record.

**Table 4: Symbols and Icons – Audit Details**

Symbol/Icon	Function
	A user
	Date and time







Symbol/Icon	Function
	Unauthorized or Closed status
	Authorized or Open status

Table 5: Symbols and Icons - Widget

Symbol/Icon	Function
	Open status
	Unauthorized status
	Closed status
	Authorized status

## 1.8 Basic Actions

Most of the screens contain buttons to perform all or few of the basic actions. The table below gives a snapshot of them:

Table 6: Basic Actions

Actions	Description
<b>New</b>	<p>Click to add a new record. When you click New, system displays a new record enabling you to specify the required data. It is mandatory to specify details for the fields marked with '*' symbol.</p> <hr/> <p>Note: This button is displayed only for the records that are already created.</p>
<b>Save</b>	<p>Click to save the details entered or selected in the screen.</p>
<b>Unlock</b>	<p>Click to update the details of an existing record. System displays an existing record in editable mode.</p> <hr/> <p>Note: This button is displayed only for the records that are already created.</p>

Actions	Description
<b>Authorize</b>	<p>Click to authorize the record created. A maker of the screen is not allowed to authorize the same. Only a checker can authorize a record.</p> <hr/> <p>Note: This button is displayed only for the already created records. For more information on the process, see Authorization Process.</p>
<b>Approve</b>	<p>Click to approve the initiated record.</p> <hr/> <p>Note: This button is displayed, once you click <b>Authorize</b>.</p>
<b>Audit</b>	<p>Click to view the maker details, checker details of the particular record.</p> <hr/> <p>Note: This button is displayed only for the records that are already created.</p>
<b>Close</b>	<p>Click to close a record. This action is available only when a record is created.</p>
<b>Confirm</b>	<p>Click to confirm the action you performed.</p>
<b>Cancel</b>	<p>Click to cancel the action you performed.</p>
<b>Compare</b>	<p>Click to view the comparison through the field values of old record and the current record.</p> <hr/> <p>Note: This button is displayed in the widget, once you click <b>Authorize</b>.</p>
<b>View</b>	<p>Click to view the details in a particular modification stage.</p> <hr/> <p>Note: This button is displayed in the widget, once you click <b>Authorize</b>.</p>
<b>View Difference only</b>	<p>Click to view a comparison through the field element values of old record and the current record, which has undergone changes.</p> <hr/> <p>Note: This button is displayed, once you click <b>Compare</b>.</p>
<b>Expand All</b>	<p>Click to expand and view all the details in the sections.</p> <hr/> <p>Note: This button is displayed, once you click <b>Compare</b>.</p>

Actions	Description
<b>Collapse All</b>	Click to hide the details in the sections. <hr/> <u>Note: This button is displayed, once you click <b>Compare</b>.</u> <hr/>
<b>OK</b>	Click to confirm the details in the screen.

---

## 2. Core Maintenance

This section is designed to help you quickly get acquainted with the many functions routinely executed everyday.

This section contains the following topics:

- 2.1 Additional Field Maintenance
- 2.2 Advice
- 2.3 Amount Text Language
- 2.4 BIC Directory
- 2.5 Branch EOD
- 2.6 Country Code
- 2.7 Currency Definition
- 2.8 Currency Exchange Rate
- 2.9 Currency Holiday Master
- 2.10 Currency Pair Definition
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- 2.17 External Chart Account
- 2.18 External Customer
- 2.19 External Customer Account
- 2.20 External Customer Account Structured Address
- 2.21 External Virtual Account Structured Address
- 2.22 Forget Process
- 2.23 Host Code
- 2.24 Language Code
- 2.25 Local Holiday



- 2.26 Media
- 2.27 Multi-Currency Account Linkage
- 2.28 Process Code
- 2.29 System Dates
- 2.30 Transaction Code
- 2.31 Upload Source
- 2.32 Upload Source Preference
- 2.33 Pricing Source System
- 2.34 Integrating Bureau Integration Service with Oracle Banking Routing Hub
- 2.35 Bureau Integration Service
- 2.36 Credit Bureau Display
- 2.37 Lookup
- 2.38 Criteria
- 2.39 System Parameter
- 2.40 Integrating Decision Service with Oracle Banking Routing Hub
- 2.41 Decision Service
- 2.50 Scoring Feature and Scoring Model
- 2.52 Decision Grade Matrix
- 2.53 Pricing
- 2.54 Execution Summary

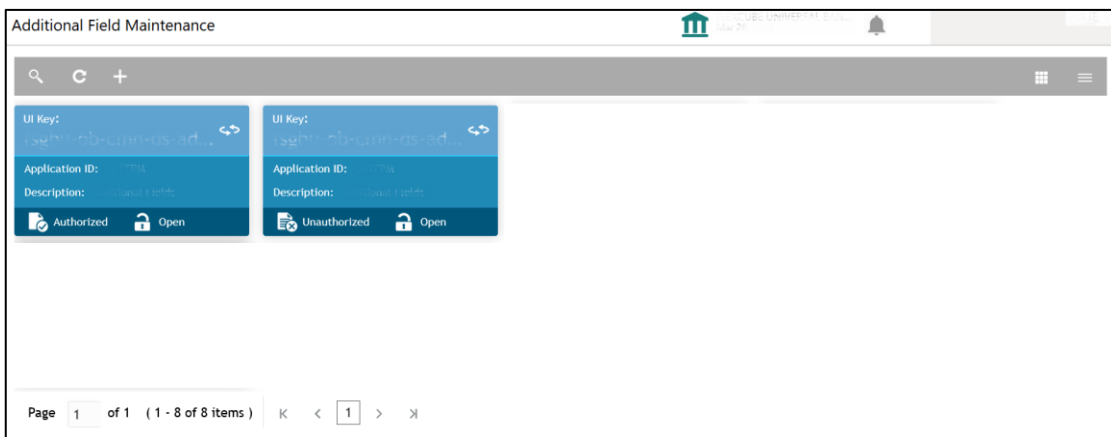
## 2.1 Additional Field Maintenance

This screen is used to configure and maintain the additional fields for the transaction screens. To process this screen, perform the following steps:

1. From **Home screen**, click **Core Maintenance**. Under **Core Maintenance**, click **Additional Field Maintenance**.

→ The **Additional Field Maintenance Summary** screen is displayed.

**Figure 1: Additional Field Maintenance Summary**



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

**Table 7: Additional Field Maintenance Summary – Field Description**

Field	Description
<b>UI Key</b>	Displays the UI key of the additional field.
<b>Application ID</b>	Displays the related application ID of the additional field.
<b>Description</b>	Displays the description of the additional field.
<b>Status</b>	Displays the status of the record.

2. On **Additional Field Maintenance Summary** screen, click **+** icon.

→ The **Additional Fields Maintenance** screen is displayed.

**Figure 2: Additional Fields Maintenance**

3. On **Additional Fields Maintenance** screen, specify the fields. For more information on fields, refer to the field description table below.

**Table 8: Additional Fields Maintenance – Field Description**

Field	Description
<b>Component Name</b>	Click Search icon and select the component name from the list of
<b>Product Code</b>	Click Search icon and select the product code from the list of values.
<b>Product Name</b>	Displays the product name for the specified product code.
<b>Description</b>	Displays the description as <b>Additional</b> Fields, and it can be modified.
<b>Application ID</b>	Displays the Application ID.
<b>Construct Additional Fields MetaData</b>	Specify the details under this section to configure metadata for each field.
<b>Select</b>	Check this box to select/unselect a row.
<b>Field ID</b>	Specify the field ID.
<b>Field Label</b>	Specify the field label.
<b>Category</b>	Specify the category.
<b>Field Type</b>	Select the field type from the drop-down values.
<b>Edit</b>	Click this icon to edit the fields in the row.
<b>Mandatory</b>	Check this box if the field needs to be configured as mandatory.
<b>Construct Validation MetaData</b>	Specify the details under this section for validations to be applied on configured fields.
<b>Select</b>	Check this box to select/unselect a row.

Field	Description
<b>Validation Name</b>	Specify the validation name.
<b>Validation Template To Use</b>	Select the template to be used for the validation.
<b>Custom Error Message</b>	Specify the error message that needs to be displayed for the
<b>Edit Arguments</b>	Click this icon to edit the fields in the row.

- Click **Save**. You can view the confirmation advice details in the [Additional Field Maintenance Summary](#).

## 2.2 Advice

You can configure various BIP advices that are available for the process.

This section contains following subsections:

- 2.2.1 Advice Summary
- 2.2.2 Advice Maintenance

### 2.2.1 Advice Summary

The summary screen provides a list of configured advice. You can configure an advice for a process using the Advice Maintenance. To process this screen, perform the following steps:

- From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Advice**.
- Under **Advice**, click **View Advice**.

→ The **View Advice** screen is displayed.

**Figure 3: View Advice**



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

**Table 9: View Advice – Field Description**

Field	Description
<b>Advice Name</b>	Displays the name of the advice.
<b>Advice Description</b>	Displays information about the advice.
<b>Micro Service Name</b>	Displays the name of the micro service.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

## 2.2.2 Advice Maintenance

The maintenance screen allows you to configure advices. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Advice**.
2. Under **Advice**, click **Create Advice**.

→ The **Create Advice** screen is displayed.

**Figure 4: Create Advice**

3. On **Create Advice** screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

**Table 10: Create Advice – Field Description**

Field	Description
<b>Advice Name</b>	Specify the name of the advice.
<b>Advice Description</b>	Specify the information about the advice.
<b>Micro Service Name</b>	Specify the name of the micro service.
<b>Swift Micro Service</b>	Specify the information about the swift micro service.
<b>Micro Service Endpoint</b>	Specify the endpoint micro service.
<b>Application Name</b>	Specify the application name for which advice is generated.
<b>Application Description</b>	Specify the additional information about the application.
<b>Media</b>	Search and select the required media.
<b>Branch</b>	Search and select the required branch.
<b>Currency</b>	Search and select the required currency.
<b>Report Locale</b>	Specify the locale report details.
<b>Report Absolute Path</b>	Specify the report absolute path.
<b>Format</b>	Select a download file format for an advice from the dropdown list. The formats available are, PDF, PPTX, HTML, XLS, and RTF.
<b>Swift Endpoint</b>	Specify the swift endpoint.

4. Click **Save**. You can view the confirmation advice details in the [Advice Summary](#).

## 2.3 Amount Text Language

You can configure an amount text language.

This section contains following subsections:

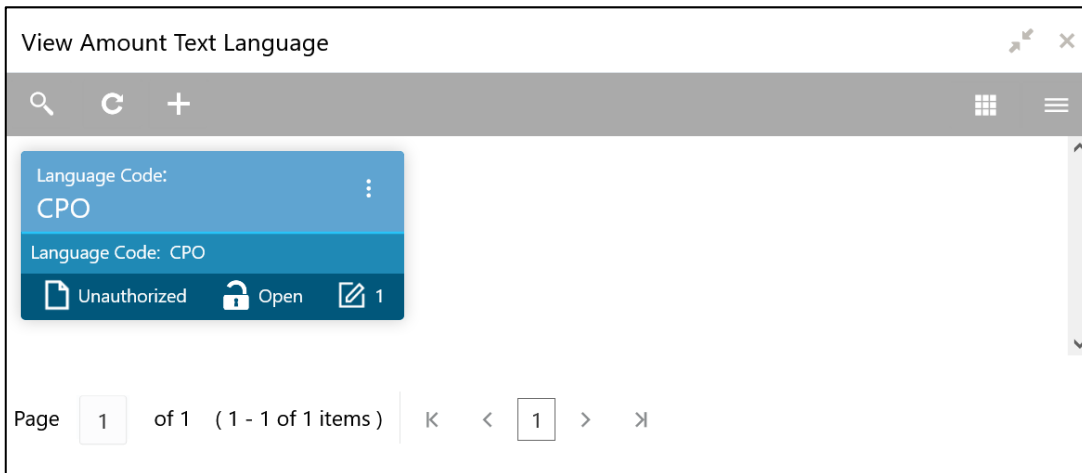
- 2.3.1 Amount Text Language Summary
- 2.3.2 Amount Text Language Maintenance

### 2.3.1 Amount Text Language Summary

The summary screen provides a list of configured amount text language. You can configure an amount text language using the [Amount Text Language Maintenance](#). To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Amount Text Language**.
2. Under **Amount Text Language**, click **View Amount Text Language**.  
 → The **View Amount Text Language** screen is displayed.

**Figure 5: View Amount Text Language**



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

**Table 11: View Amount Text Language – Field Description**

Field	Description
<b>Language Code</b>	Displays the language code associated with the amount word.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

### **2.3.2 Amount Text Language Maintenance**

The maintenance screen allows you to configure amount text language. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Amount Text Language**.
2. Under **Amount Text Language**, click **Create Amount Text Language**.  
 → The **Create Amount Text Language** screen is displayed.

**Figure 6: Create Amount Text Language**

3. On **Create Amount Text Language** screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below. .

**Table 12: Create Amount Text Language – Field Description**

Field	Description
<b>Language Code</b>	Search and select the required language code.
<b>Amount Word Currency List</b>	Specify the amount word currency details.
<b>CCY Symbol</b>	Specify the CCY symbols.
<b>Decimals As Fraction</b>	Select a decimals as fraction value from the drop-down list.
<b>Final Text</b>	Specify the final text for the amount word currency list.
<b>CCY</b>	Search and select the CCY.
<b>Post Decimal</b>	Specify the post decimal details.
<b>Pre Decimal</b>	Specify the pre decimal details.
<b>Text Before</b>	Select an option for the before text.



Field	Description
<b>Text Between</b>	Specify the text that must appear between the amount word currency list.
<b>Amount Word Text List</b>	Specify the amount word text details.
<b>Amount</b>	Select the amount details.
<b>One Flag</b>	Select an option for the amount word text list.
<b>Text</b>	Specify the text for the amount word.

4. Click **Save**. You can view the configured amount text language details in the [Amount Text Language Summary](#).

## 2.4 BIC Directory

As part of setting up basic information, you must maintain Bank Identifier Codes (BIC). You can configure the BIC directory for a customer.

This section contains following subsections:

- 2.4.1 BIC Directory Summary
- 2.4.2 BIC Directory Maintenance

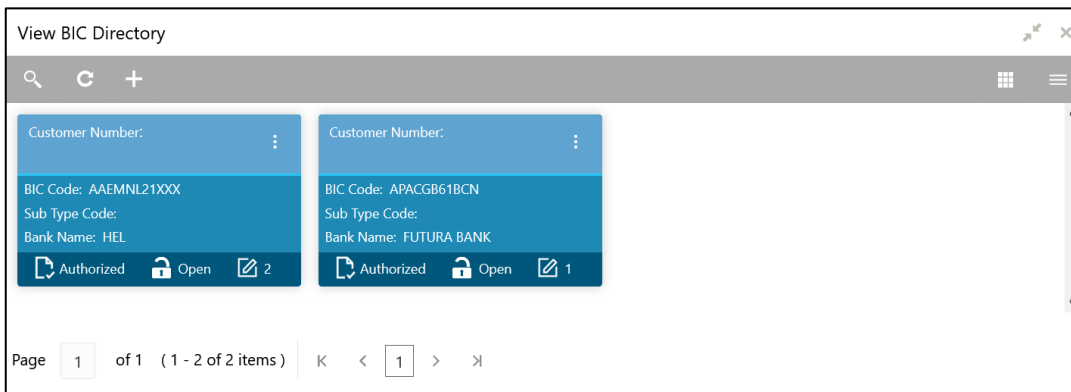
### 2.4.1 BIC Directory Summary

The summary screen provides a list of configured BIC directory. You can configure the BIC directory using the [BIC Directory Maintenance](#). To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **BIC Directory**.
2. Under **BIC Directory**, click **View BIC Directory**.

→ The **View BIC Directory** screen is displayed.

**Figure 7: View BIC Directory**



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

**Table 13: View BIC Directory – Field Description**

Field	Description
<b>Customer Number</b>	Displays the number of the customer.
<b>Sub-type Code</b>	Displays the sub-type code associated with the customer number.
<b>BIC Code</b>	Displays the defined BIC code for the associated customer
<b>Bank Name</b>	Displays the name of the bank.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

## 2.4.2 BIC Directory Maintenance

The maintenance screen allows you to configure a BIC directory for a customer. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **BIC Directory**.
2. Under **BIC Directory**, click **Create BIC Directory**.

→ The **Create BIC Directory** screen is displayed.

**Figure 8: Create BIC Directory**

3. On **Create BIC Directory** screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below. .

**Table 14: Create BIC Directory – Field Description**

Field	Description
<b>BIC Code</b>	Specify the unique BIC Code by which the bank is identified by SWIFT.
<b>Bank Name</b>	Specify the name for the bank.
<b>Customer Number</b>	Search and select the required customer number.
<b>Customer Name</b>	Based on the <b>Customer Number</b> selected, the information is auto-populated.
<b>Bank Address 1-3</b>	Based on the <b>Customer Number</b> selected, the information is auto-populated.
<b>SWIFT Key</b>	Specify the swift key details.

Field	Description
<b>Telex Key</b>	Specify the unique telex key for the BIC directory.
<b>SWIFT Key Arrangement</b>	Select the SWIFT key arrangement from the drop-down list.
<b>Relationship</b>	Select one of the following options: <ul style="list-style-type: none"> <li>No: If selected, indicates that the BIC Entity is not a customer of your bank</li> <li>Mail: If selected, the BIC entity is not a recognized SWIFT entity but an address internal to your bank. In such cases, all correspondence directed to the particular BIC entity is sent as mail messages.</li> <li>Keys: If selected, a SWIFT/Telex connectivity exists between your bank and the bank for which you are maintaining details. Subsequently, you must specify the SWIFT/Telex Key in the adjacent field.</li> </ul>
<b>Sub-type Code</b>	Search and select the required sub-type code.
<b>BEI Indicator</b>	Based on the <b>Sub-type Code</b> selected, the information is auto-populated.
<b>ADB Member</b>	Select the ADB member from the drop-down list.
<b>Payment Message</b>	Specify the payment message details.
<b>MT103+ Preferred</b>	By default, this is disabled. If selected, indicates the counter party whose BIC code details you are capturing capacitate to receive payment messages in the MT 103 format.
<b>Blacklisted</b>	By default, this is disabled. If selected, indicates the BIC entity is blacklisted.
<b>CUG Member</b>	By default, this is disabled. If selected, indicates the BIC entity is a closed user group member. Remit Member: By default, this is disabled. If selected, indicates the customer is registered with MT 103 extended remittance information multiple user group.
<b>Update During Upload</b>	By default, this is disabled. If selected, updated the BIC directory during an upload.
<b>Multi-Customer Credit Transfer</b>	Specify the Multi-Customer Credit Transfer details.

Field	Description
<b>Multi-Customer Credit Transfer</b>	By default, this is disabled. If selected, indicates multiple credit transfer feature [MT102 support] exists between the bank and the BIC entity.
<b>Generate 102+</b>	By default, this is disabled. If selected, generates 102+ message.
<b>Maximum Size in Bytes</b>	Specify the maximum size.
<b>Request for Transfer</b>	Specify the Request for Transfer details.
<b>Generate MT101</b>	By default, this is disabled. If selected, indicates MT101 can be sent/received from this BIC. Select to generate MT101 message.
<b>Number of Transactions Per Page</b>	Specify the number of transactions to view per page. If you do not specify a value it is defaulted to 10.
<b>Real Customer Number</b>	Search and select the required real customer number.
<b>Real Customer Name</b>	Based on the <b>Real Customer Number</b> selected, the information is auto- populated.

4. Click **Save**. You can view the configure BIC directory in the [BIC Directory Summary](#).

## 2.5 Branch EOD

You can invoke End of Day (EOD) to indicate that all the activities for the day are complete. Activities can be performed on the system only after the system date is changed to the next working day and authorized.

Most of the automated functions are part of the beginning of day operations. Thereafter, some of them must be executed when the system is in the EOTI (End of Transaction Input) stage.

This section contains following subsections:

- 2.5.1 Branch EOD Summary
- 2.5.2 Branch EOD Maintenance
- 2.5.3 Branch EOD Invoke

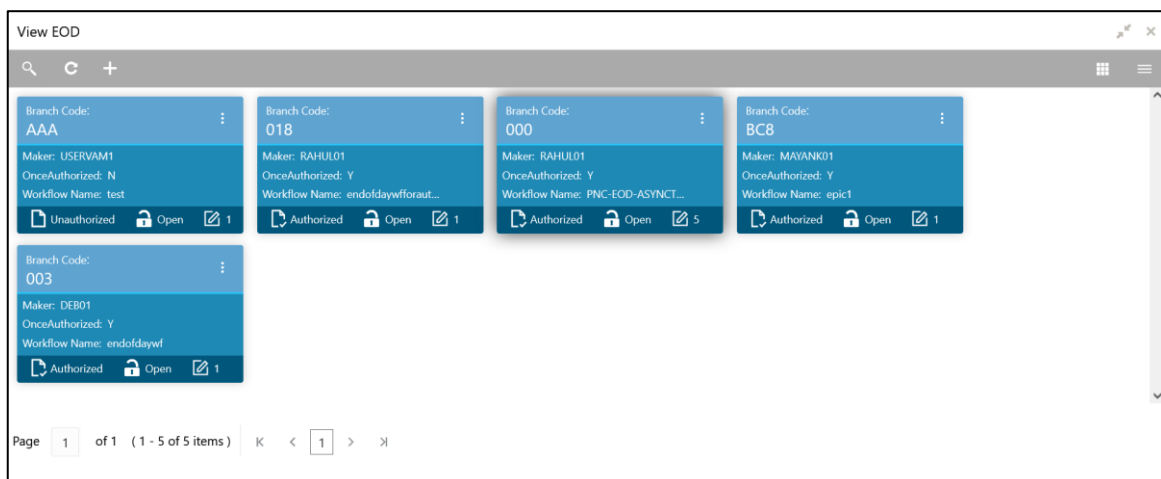
### 2.5.1 Branch EOD Summary

The summary screen provides list of branch workflow mappings. You can configure branch workflow mapping using the [Branch EOD Maintenance](#). To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Branch EOD**.
2. Under **Branch EOD**, click **View EOD**.

→ The **View EOD** screen is displayed.

**Figure 9: View EOD**



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

**Table 15: View EOD – Field Description**

Field	Description
<b>Branch Code</b>	Displays the branch code details.
<b>Workflow Name</b>	Displays the name of the workflow.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

## 2.5.2 Branch EOD Maintenance

The maintenance screen allows you to create/configure the EOD workflow with a Branch. To process this screen, perform the following steps:

From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Branch EOD**.

Under **Branch EOD**, click **Configure EOD**.

→ The **Configure EOD** screen is displayed.

**Figure 10: Configure EOD**

The screenshot shows the 'Configure EOD' interface. At the top, the title 'Configure EOD' is displayed. Below the title, there are three input fields arranged horizontally: 'Branch Code \*' (with a search icon), 'Description' (with a dropdown arrow), and 'Workflow Name \*' (with a dropdown arrow). The asterisks indicate that these fields are mandatory. At the bottom right of the form, there are two buttons: 'Save' and 'Cancel'.

- On **Configure EOD** screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

Table 16: Configure EOD – Field Description

Field	Description
Branch Code	Specify the branch code that is associated with the logged in user.
Description	Displays the description of the branch.
Workflow Name	Specify the workflow name that is already created.

For more information on EOD Workflow creation and related terminologies please refer to EOD Configuration Guide of the respective products.

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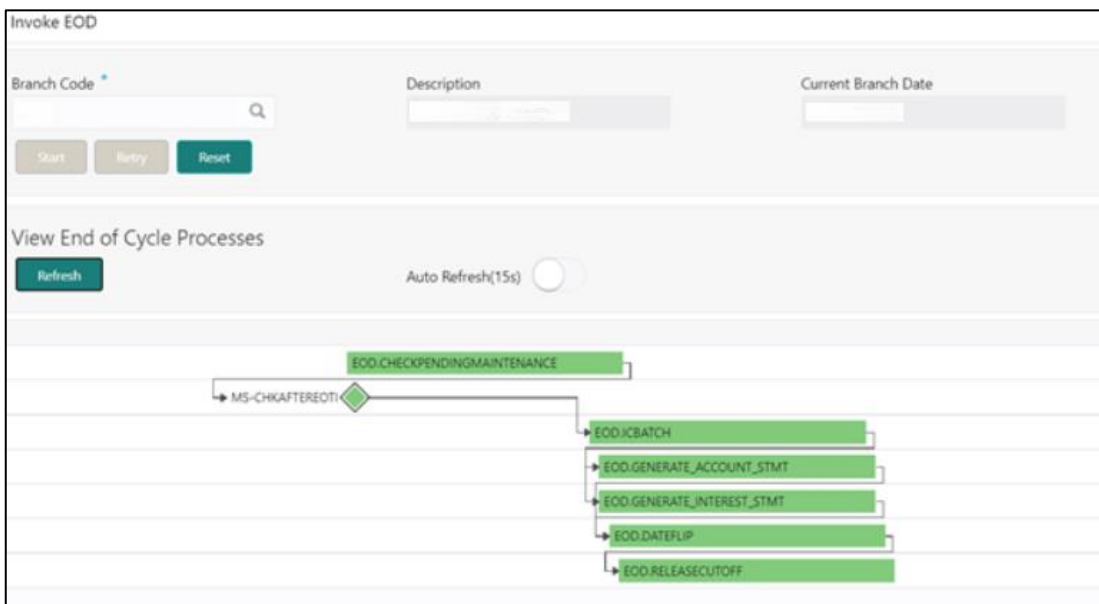
### 2.5.3 Branch EOD Invoke

The action screen allows you to invoke the branch EOD process as per branch and workflow mapping configured using [Branch EOD Maintenance](#). To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Branch EOD**.
2. Under **Branch EOD**, click **Invoke EOD**.

→ The **Invoke EOD** screen is displayed.

Figure 15: Invoke EOD



3. On **Invoke EOD** screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below.



**Table 17: Invoke EOD – Field Description**

Field	Description
<b>Branch Code</b>	Specify the branch code that is associated with the logged in user.
<b>Description</b>	Displays the description of the branch.
<b>Current Branch Date</b>	Displays the current branch date.

4. Click **Start** to invoke EOD for selected branch and Click **Refresh** to view the current status of batch.
5. Click **Retry** to restart the EOD workflow from the failed task.

---

**Note:** **Retry** button will be enabled only if the failed task status is encountered.

---

6. Click **Reset** to clear the branch selected.
7. Click **Refresh** to view the current status of batch.
8. Mouse-hover on the task to view the relevant details such as Start time, End time and Error if any.

**Table 18: EOD Task – Status Description**

Status	Description
<b>Green</b>	Task is completed
<b>Yellow</b>	Task is in progress
<b>Red</b>	Task failed due to some error.
<b>Grey</b>	Task is scheduled but not executed
<b>Diamond Shape</b>	Task has reached a milestone stage where execution will be paused. Right-click on milestone stage and select “Proceed” to resume batch execution.

For more information on EOD stages, please refer to EOD Configurations Guide of the respective products.

## 2.6 Country Code

You can configure a country code.

This section contains following subsections:

- 2.6.1 Country Code Summary
- 2.6.2 Country Code Maintenance

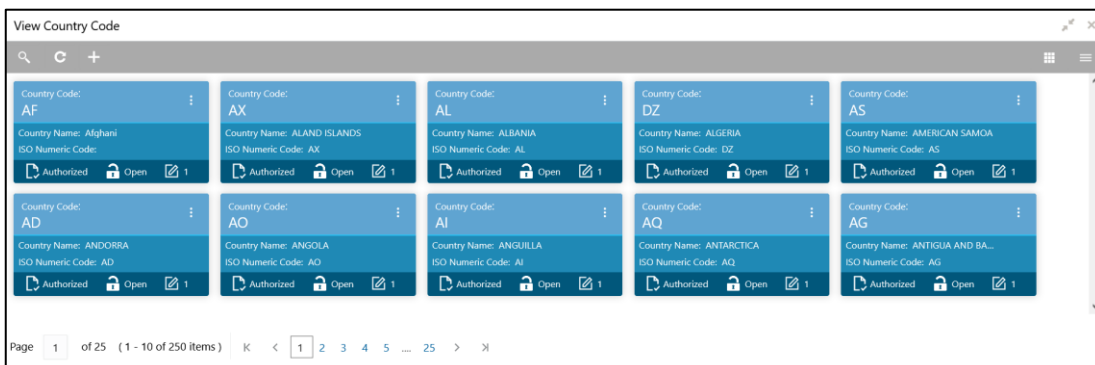
### 2.6.1 Country Code Summary

The summary screen provides a list of configured country code. You can configure a country code using the [Country Code Maintenance](#). To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Country Code**.
2. Under **Country Code**, click **View Country Code**.

→ The **View Country Code** screen is displayed.

**Figure 12: View Country Code**



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

**Table 19: View Country Code – Field Description**

Field	Description
<b>Country Code</b>	Displays the country code details.
<b>Country Name</b>	Displays the name of the country.
<b>ISO Numeric Code</b>	Displays the ISO numeric code details of the country code.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

## 2.6.2 Country Code Maintenance

The maintenance screen allows you to configure a country code. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Country Code**.
2. Under **Country Code**, click **Create Country Code**.

→ The **Create Country Code** screen is displayed.

**Figure 13: Create Country Code**

3. On **Create Country Code** screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

**Table 20: Create Country Code – Field Description**

Field	Description
<b>Country Code</b>	Specify the country code.
<b>Country Name</b>	Specify the name of the country.
<b>Alternate Country Code</b>	Specify the alternate country code.
<b>Region Code</b>	Specify the region code.
<b>ISO Country Code</b>	Specify the ISO country code.
<b>ISO Code</b>	Specify the ISO code.
<b>Limit Currency</b>	Specify the limit currency.
<b>Overall Limit</b>	Specify the overall limit.

Field	Description
<b>Blacklist</b>	By default, this is disabled. If selected, indicates the country is blacklisted.
<b>EU Member</b>	By default, this is disabled. If selected, indicates the country is recognized by Swift as a part of the Intra European countries.
<b>Generate 205</b>	By default, this is disabled. If selected, indicates the cover message 205COV or 205 need to be generated for transactions involving this country. If you do not select this option, RTGS, 202 or 202COV message is generated.
<b>IBAN Check Required</b>	By default, this is disabled. If selected, indicates check required for an IBAN is mandatory.
<b>BIC Clearing Code</b>	By default, this is disabled. If selected, indicates the National ID in the BIC plus file is the clearing code. During upload of clearing codes from BIC plus file, the records belong to countries against which this box is selected.
<b>Intra European</b>	By default, this is disabled. If selected, indicates the country is an intra European country.

4. Click **Save**. You can view the configured country code details in the [Country Code Summary](#).

## 2.7 Currency Definition

You can define the attributes of the currencies in which the bank can deal. For each currency, you can define attributes such as, the SWIFT code for the currency, the country the currency belongs, the interest method, the spot days, the settlement days, and so on.

Currencies can be maintained only at the Head Office. The list of currencies are available to the branches based on the currencies defined for the country linked to the branch.

This section contains following subsections:

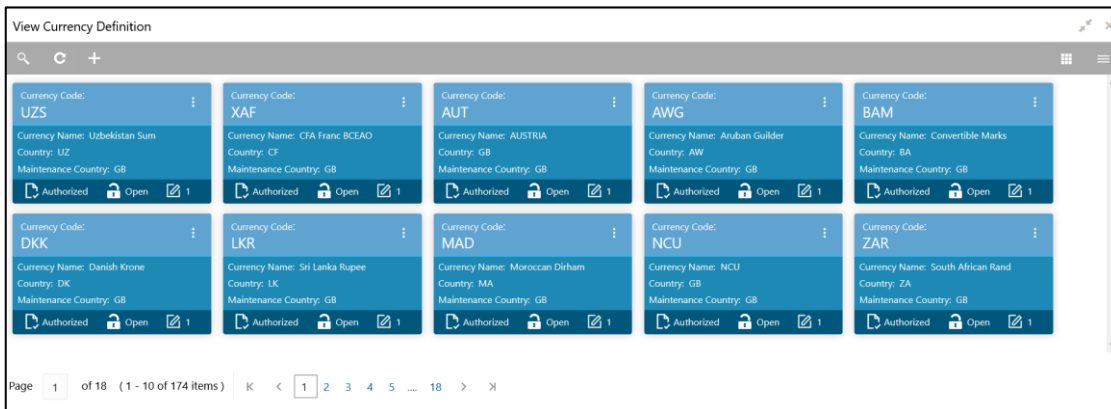
- [2.7.1 Currency Definition Summary](#)
- [2.7.2 Currency Definition Maintenance](#)

### 2.7.1 Currency Definition Summary

The summary screen provides a list of defined currency. You can define a currency using the [Currency Definition Maintenance](#). To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Currency Definition**.
2. Under **Currency Definition**, click **View Currency Definition**.  
→ The **View Currency Definition** screen is displayed.

**Figure 14: View Currency Definition**



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

**Table 21: View Currency Definition – Field Description**

Field	Description
<b>Currency Code</b>	Displays the code of the currency.
<b>Currency Name</b>	Displays the name of the currency.

Field	Description
<b>Alternate Currency Code</b>	Displays the code of the alternate currency.
<b>Country</b>	Displays the country associated with the currency.
<b>Maintenance Country</b>	Displays the maintenance country.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

## 2.7.2 Currency Definition Maintenance

The maintenance screen allows you to define currency. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Currency Definition**.
2. Under **Currency Definition**, click **Create Currency Definition**.

→ The **Create Currency Definition** screen is displayed.

**Figure 15: Create Currency Definition**

The screenshot shows the 'Create Currency Definition' form with the following sections and fields:

- Header:** Currency Code \* (mandatory), Maintenance Country \*
- Basic Information:** Currency Name, Currency Country \*, Currency Decimals \*, Currency Type, Currency Interest Method \*, ISO Numerical Currency Code, Currency Spot Days \*
- Advanced Settings:** Foreign Exchange Netting Days, Settlement Message Days \*, Position GL, Position Equivalent GL, Currency Tolerance Limit, Index Base Currency, Commodity Code
- Cut Off Time:** Cut Off Days, Cut Off Hour \*, Cut Off Min \*, CLS Currency
- Validation and Flags:** Generate 103+, Index Flag, Euro Conversion Required, New Cover Message Format Required, Validate Tag 50F
- Rounding:** Currency Round Rule \*, Currency Round Unit
- Currency Format Mask:** Currency Format Mask (with options for XXX,XXX,XXX,XXX and XXX,XXX,XXX,XXX)
- Euro Type:** Currency Euro Type (with options for EUR Currency, IN Currency, OUT Currency, EUTO Closed)
- Auto Exchange Rate:** Credit Auto Exchange Rate Limit, Debit Auto Exchange Rate Limit
- Currency Country Mapping:** Table with columns for Country code, Country Name, and Currency Code.

3. On **Create Currency Definition** screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

Table 22: Create Currency Definition – Field Description

Field	Description
<b>Currency Code</b>	Specify the currency code.
<b>Maintenance Country</b>	Search and select the required maintenance country.
<b>Currency Name</b>	Specify the name of the currency.
<b>Alternate Currency Code</b>	Specify the code of the alternate currency.
<b>Currency Type</b>	Specify the currency type.
<b>ISO Numerical Currency Code</b>	Specify the International Standardization Organization numerical currency code.
<b>Currency Country</b>	Search and select the required currency country.
<b>Currency Decimals</b>	Select the currency decimals.
<b>Currency Interest Method</b>	Select the currency interest method from the drop-down list.
<b>Currency Spot Days</b>	Select the number of spot working days applicable for the currency.
<b>Foreign Exchange Netting Days</b>	Select the number of days for the foreign exchange netting.
<b>Settlement Message Days</b>	Select the settlement message days.
<b>Position GL</b>	Search and select the required position GL.
<b>Position Equivalent GL</b>	Search and select the required position equivalent GL.
<b>Currency Tolerance Limit</b>	Specify the currency tolerance limit.
<b>Index Base Currency</b>	Search and select the required index base currency.
<b>Commodity Code</b>	By default, this is disabled. If selected, enables a commodity code.
<b>Cut Off Time</b>	Specify the cut off time details.
<b>Cut Off Days</b>	Select the cut off days for the payment transaction involving the currency.

<b>Field</b>	<b>Description</b>
<b>Cut Off Hour</b>	Select the hour of the day for the cut off.
<b>Cut Off Min</b>	Select the minute of the hour for the cut off.
<b>CLS Currency</b>	By default, this is disabled. If selected, allow customers of your bank to settle their FX deals via the CLS (Continuous Linked Settlements) Bank, you can identify the currency to be a CLS Currency. FX deals in the CLS currency is only eligible to be routed through the CLS bank.
<b>Generate 103+</b>	By default, this is disabled. If selected, generate outgoing MT 103 messages in the MT 103 + format.
<b>Index Flag</b>	By default, this is disabled. If selected, derives index rate of the currency.
<b>Euro Conversion Required</b>	By default, this is disabled. If selected, indicates the Euro conversion is required.
<b>New Cover Message Format Required</b>	By default, this is disabled. If selected, indicates a new cover message format is required.
<b>Validate Tag-50F</b>	By default, this is disabled. If selected, indicates validations must be performed for the 50F details captured for the ordering customer during contract input.
<b>Rounding</b>	Specify the Rounding details of currency.
<b>Currency Round Rule</b>	Select the currency round rule from the dropdown list.
<b>Currency Round Unit</b>	Select the currency round unit.
<b>Currency Format Mask</b>	Specify the currency format mask details.
<b>Currency Format Mask</b>	Select one of the currency format.
<b>Euro Type</b>	Specify the Euro Type details.
<b>Currency Euro Type</b>	Select one of the currency Euro type.
<b>Auto Exchange Rate</b>	Specify the Auto exchange rate details.



Field	Description
<b>Credit Auto Exchange Rate Limit</b>	Specify the credit automatic exchange rate limit.
<b>Debit Auto Exchange Rate Limit</b>	Specify the debit automatic exchange rate limit.
<b>Currency Country Mapping</b>	Specify the currency country mapping details.
<b>Country Code</b>	Search and select the required country code.
<b>Country Name</b>	Specify the name of the country.
<b>Currency Code</b>	Search and select the required currency code.

### Cut Off Time

Refers to the time by which all transactions involving a currency should be generated. For a currency, you can indicate the cut-off hour and minute. This time should be expressed in the local time of the bank.

The maintenance of a cut-off time for a currency has particular reference to outgoing funds transfers involving it.

Example: The value date of a funds transfer transaction (incoming payment) involving USD, is 3rd June 2018. The number of cut-off days specified for the currency is 2. This means that the payment must be received on or before 1st June 2018. If the payment is received on 1st June, it must be received before the cut-off time specified for USD.

If the USD cut-off time is 1200 hrs, if the payment is received on 1st June 2018, it must be received before 1200 hrs.

4. Click **Save**. You can view the defined currency in the [Currency Definition Summary](#).

## 2.8 Currency Exchange Rate

You can maintain exchange rates for a currency pair, the rates at which you buy and sell one currency for another. A bank determines its buy and sell rate for a currency pair by applying a spread (that is, its profit margin) to the mid-rate of the currency pair. Mid-rate is the basic rate at which a currency pair is exchanged.

The spread applied for a currency pair varies with the transaction type, while the mid-rate usually remains constant. Consequently, different rates are applicable to different transaction types. For instance dollars in currency are purchased at a certain rate, while USD traveler's checks are bought at a different rate. You can define a rate type which you would like to associate with a transaction type example: CASH, TRAVCHKS, and so on.

You can define the mid-rate, buy and sell spread applicable to each rate type; the buy and sell exchange rates are computed by the system. Buy rates and sell rates can either be maintained by individual branches or can be input by the HO and propagated to all the branches.

If the branch for which the rate is being uploaded or maintained is the head office branch, then the rate would be copied to all those branches that have the same country code as the head office branch.

If the branch for which the rate is being uploaded or maintained is not the head office branch, but it has the same country code as the head office branch, then the rate being uploaded or maintained would be specific to the branch and would not be copied to any other branch.

If the branch for which the rate is being uploaded or maintained is not the head office branch and also does not have the same country code as the head office branch, then the rate being maintained would be copied to all the branches that has the same country code linked as the branch for which the rate is being maintained or uploaded.

This section contains following subsections:

- [2.8.1 Currency Exchange Rate Summary](#)
- [2.8.2 Currency Exchange Rate Maintenance](#)

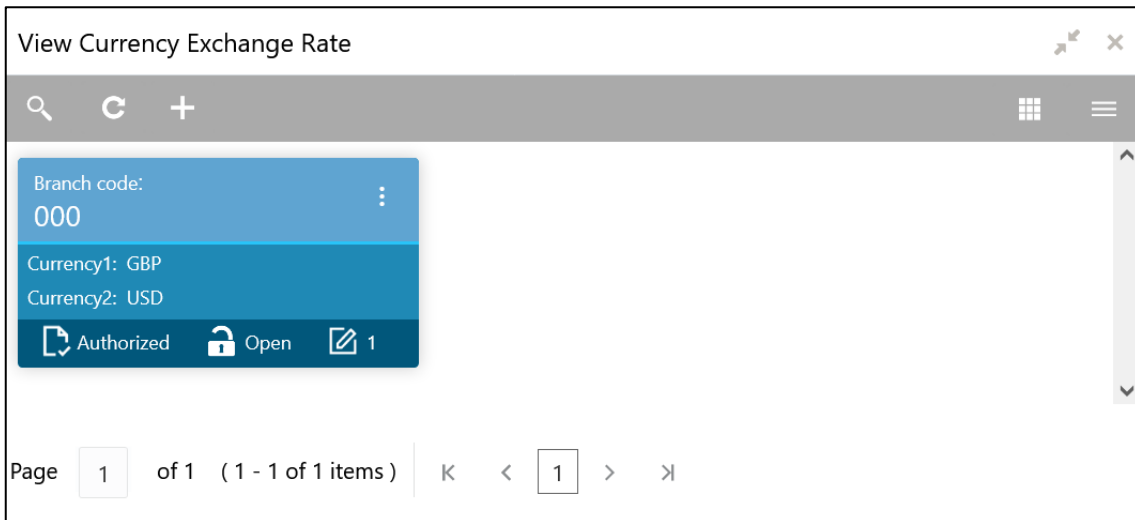
### 2.8.1 Currency Exchange Rate Summary

The summary screen provides a list of configured currency exchange rates. You can configure a currency exchange rate using the [Currency Exchange Rate Maintenance](#). To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Currency Exchange Rate**.

2. Under **Currency Exchange Rate**, click **View Currency Exchange Rate**.  
 → The **View Currency Exchange Rate** screen is displayed.

**Figure 16: View Currency Exchange Rate**



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

**Table 23: View Currency Exchange Rate – Field Description**

Field	Description
<b>Branch Code</b>	Displays the code of the branch.
<b>Currency 1-2</b>	Displays the currency associated with the branch code
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

## 2.8.2 Currency Exchange Rate Maintenance

The maintenance screen allows you to configure a currency exchange rate. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under Core Maintenance, click **Currency Exchange Rate**.
2. Under **Currency Exchange Rate**, click **Create Currency Exchange Rate**.  
→ The **Create Currency Exchange Rate** screen is displayed.

**Figure 17: Create Currency Exchange Rate**

3. On Create Entity screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

**Table 24: Create Currency Exchange Rate – Field Description**

Field	Description
<b>Branch Code</b>	Search and select the required branch code.
<b>Currency 1</b>	Search and select the required currency.
<b>Currency 2</b>	Search and select the required currency.
<b>Currency Rule</b>	Specify the currency rule details.
<b>Rate Type</b>	Select a rate type from the drop-down list.
<b>Buy Rate</b>	Displays the Buy Rate for the Currency Exchange. Buy Rate is calculated based on Spread Definition maintained in the Currency Pair Maintenance screen.

Field	Description
	<p>The effective spread is calculated using any of the following two methods:</p> <p><b>1. Percentage</b></p> <p>If the <b>Spread Definition</b> is selected as <b>Percentage</b>, then the buy rate is calculated as below:</p> <p>Buy Rate = Mid Rate-Buy Spread%</p> <p>Buy Spread% = Mid Rate*Buy Spread/100</p> <p>For example, 50*5/100 is 2.5 which is <b>Buy Spread</b>. Now <b>Buy Rate</b> will be 50-2.5 which is 47.5.</p> <p><b>2. Points</b></p> <p>If you select Spread Definition as Points then the buy rate is calculated as below:</p> <p>Buy Rate = Mid Rate-Buy Spread</p> <p>For example, if <b>Buy Spread</b> is 5, then <b>Buy Rate</b> is 50-5 = 45.</p>
<b>Buy Spread</b>	Specify the buy spread details.
<b>Mid Rate</b>	Specify the mid-rate details.
<b>Sale Spread</b>	Specify the sale spread details.
<b>Sale Rate</b>	<p>Displays the Sale Rate for the Currency Exchange. Sale Rate is calculated based on Spread Definition maintained in the Currency Pair Maintenance screen.</p> <p>The effective spread is calculated using any of the following two methods:</p> <p><b>1. Percentage</b></p> <p>If the <b>Spread Definition</b> is selected as <b>Percentage</b>, then the sale rate is calculated as below:</p> <p>Sale Rate = Mid Rate+Sale Spread%</p> <p>Sale Spread% = Mid Rate*Sale Spread/100</p> <p>For example, 50*5/100 is 2.5 which is Sale Spread. Now Sale Rate will be 50+2.5 which is 52.5.</p> <p><b>2. Points</b></p> <p>If you select Spread Definition as Points then the sale rate is calculated as below:</p> <p>Sale Rate = Mid Rate+Sale Spread</p> <p>For example, if Sale Spread is 5 then Sale Rate is 50+5 = 55.</p>
<b>Rate Date</b>	Select a rate date from the drop-down calendar.

4. Click **Save**. You can view the configured currency exchange rate details in the [Currency Exchange Rate Summary](#).

## 2.9 Currency Holiday Master

You can configure a yearly list of holidays, for the currencies, defined in the currency screen. The system uses the information maintained to check if any settlement involving a foreign currency (in the foreign Exchange, Money market, and Funds Transfer, Loans and Deposit modules) falls on that currency's holiday. If yes, the system displays a message stating and ask the user for an override.

For any schedule or contract maturing at a future date, five years hence, you can input the future date, only if the calendar for that year is maintained. The currency holiday is maintained at the bank level by the Head Office.

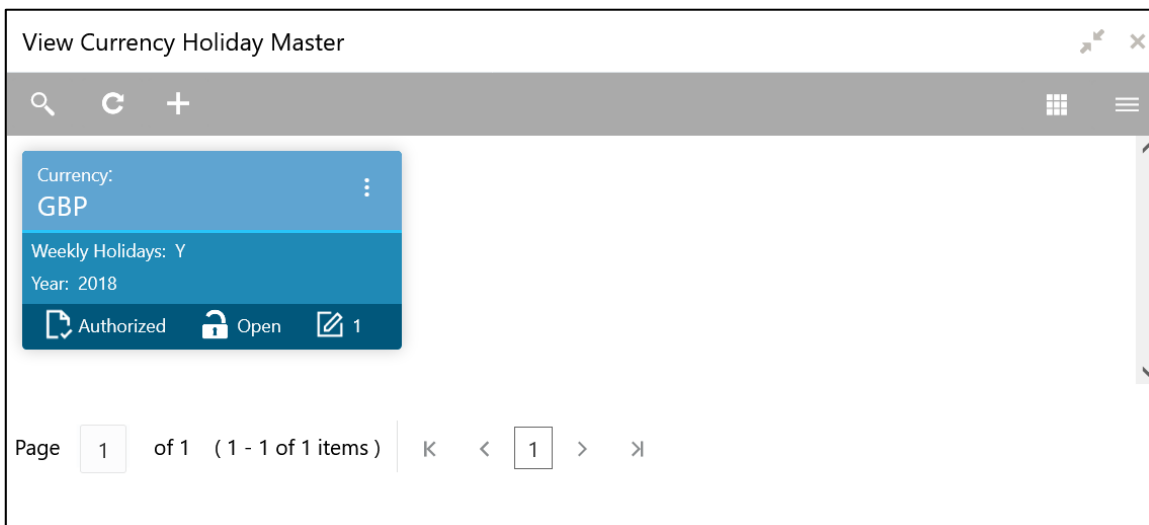
This section contains following subsections:

- [2.9.1 Currency Holiday Master Summary](#)
- [2.9.2 Currency Holiday Master Maintenance](#)

### 2.9.1 Currency Holiday Master Summary

The summary screen provides a list of configured currency holiday. You can configure a currency holiday using the [Currency Holiday Master Maintenance](#). To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Currency Holiday Master**.
2. Under **Currency Holiday Master**, click **View Currency Holiday Master**.  
→ The **View Currency Holiday Master** screen is displayed.

**Figure 18: View Currency Holiday Master**

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

**Table 25: View Currency Holiday Master – Field Description**

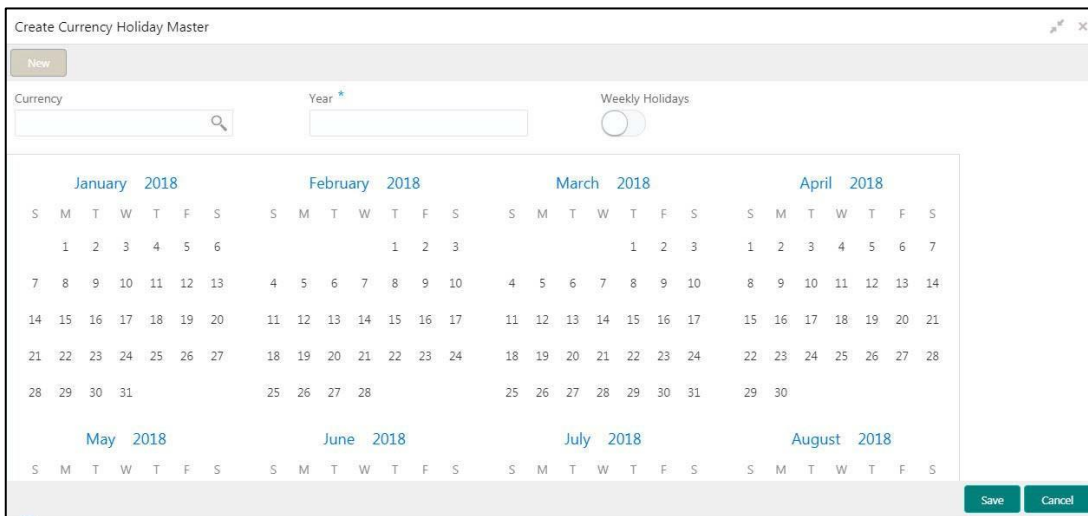
Field	Description
<b>Currency</b>	Displays the currency details.
<b>Weekly Holidays</b>	Displays the weekly holidays associated with the currency.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

## 2.9.2 Currency Holiday Master Maintenance

The maintenance screen allows you to configure a currency holiday. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Currency Holiday Master**.
2. Under **Currency Holiday Master**, click **Create Currency Holiday Master**.
  - The **Create Currency Holiday Master** screen is displayed.

**Figure 19: Create Currency Holiday Master**



3. On **Create Currency Holiday Master** screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

**Table 26: Create Currency Holiday Master – Field Description**

Field	Description
<b>Currency</b>	Search and select the required currency.
<b>Year</b>	Specify the year details.
<b>Weekly Holidays</b>	By default, this is disabled. If selected, indicates the weekly holidays.

4. Select the dates using the calendar. The selected dates appear in blue highlighted circle.
5. Click **Save**. You can view the configured currency holidays in the Currency Holiday Master Summary.



## 2.10 Currency Pair Definition

In the foreign exchange markets, the exchange rates for some currency pairs such as the USD-GBP or USD-JPY are easily obtainable, since these are frequently traded. The exchange rates of other currencies such as the ZAR-INR (South African Rand - Indian Rupee), which is not traded very often, is determined through a third currency. The third currency is usually the US dollar, since the US dollar is quoted in all trading centers.

You can define the static attributes of currency pairs for which a regular market quote is readily available. For other pairs, which do not have a regular market quote, you need to specify the third currency through which the system should compute the exchange rate. The currency pair is maintained at the bank level by the Head Office branch.

This section contains following subsections:

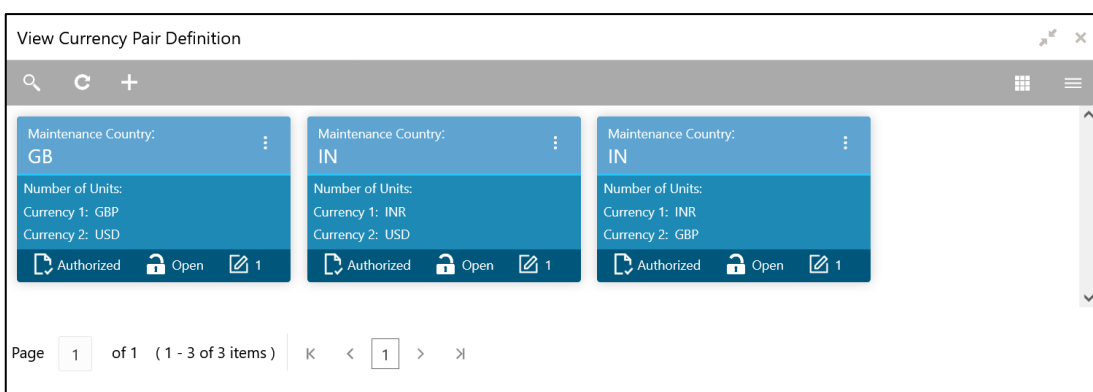
- [2.10.1 Currency Pair Definition Summary](#)
- [2.10.2 Currency Pair Definition Maintenance](#)

### 2.10.1 Currency Pair Definition Summary

The summary screen provides a list of define a currency pair. You can define a currency pair using the [Currency Pair Definition Maintenance](#). To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Currency Pair Definition**.
2. Under **Currency Pair Definition**, click **View Currency Pair Definition**.
  - The **View Currency Pair Definition** screen is displayed.

**Figure 20: View Currency Pair Definition**



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

**Table 27: View Currency Pair Definition – Field Description**

Field	Description
<b>Maintenance Country</b>	Displays the maintenance country details.
<b>Number of Units</b>	Displays the number of units.
<b>Currency 1-2</b>	Displays the currency associated with the country.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

## 2.10.2 Currency Pair Definition Maintenance

The maintenance screen allows you to define currency pair. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Currency Pair Definition**.
2. Under **Currency Pair Definition**, click **Create Currency Pair Definition**.

→ The **Create Currency Pair Definition** screen is displayed.

**Figure 21: Create Currency Pair Definition**

3. On **Create Currency Pair Definition** screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

Table 28: Create Currency Pair Definition – Field Description

Field	Description
<b>Currency 1-2</b>	<p>Search and select the required currency. A currency pair (specified as currency 1 and currency 2, in the currency pair) represents the two currencies for which you need to maintain exchange rates.</p> <p>To specify the pair, choose from the list provided against Currency 1. Select the pair for which you want to maintain parameters. The pair must be selected according to the quotation method followed by the market, which can be direct or indirect. Exchange rates can be defined for currency 1 against currency 2 or currency 2 against currency 1.</p>
<b>Maintenance Country</b>	Search and select the required maintenance country.
<b>Check through Currency</b>	By default, this is disabled. If selected, indicates a check through currency.
<b>Through Currency</b>	Search and select the required through currency for which the exchange rate between the currencies must be calculated.
<b>Number of Units</b>	Select one of the number of units.
<b>Points Multiplier</b>	Select the points multiplier.
<b>Quotation</b>	<p>Select one of the required quotation:</p> <ul style="list-style-type: none"> <li>Direct method the exchange rate for the currency pair is quoted as follows: Buy rate = mid rate - buy spread            Sell rate = mid rate + sell spread  <math>Ccy\ 1 = Rate \times Ccy\ 2</math></li> <li>Indirect method the exchange rate for the currency pair is quoted as follows: Buy rate = mid rate + buy spread            Sell rate = mid rate - sell spread  <math>Ccy\ 2 = Rate \times Ccy\ 1</math></li> </ul>
<b>Spread Definition</b>	<p>Select one spread definition. The effective spread can be calculated using any of the following two methods:</p> <ul style="list-style-type: none"> <li>Percentage: <math>Spread/100 \times mid\ rate</math></li> <li>Points: <math>Spread \times points\ multiplier</math></li> </ul>

Field	Description
	<p>The method of spread definition that you specify applies to two instances:</p> <ul style="list-style-type: none"> <li>• While maintaining exchange rates for the currency pair</li> <li>• While maintaining customer spread for the currency pair</li> </ul>

4. Click **Save**. You can view the defined currency pair details in the [Currency Pair Definition Summary](#).

## 2.11 Currency Rate Type

You can configure a currency rate type.

This section contains following subsections:

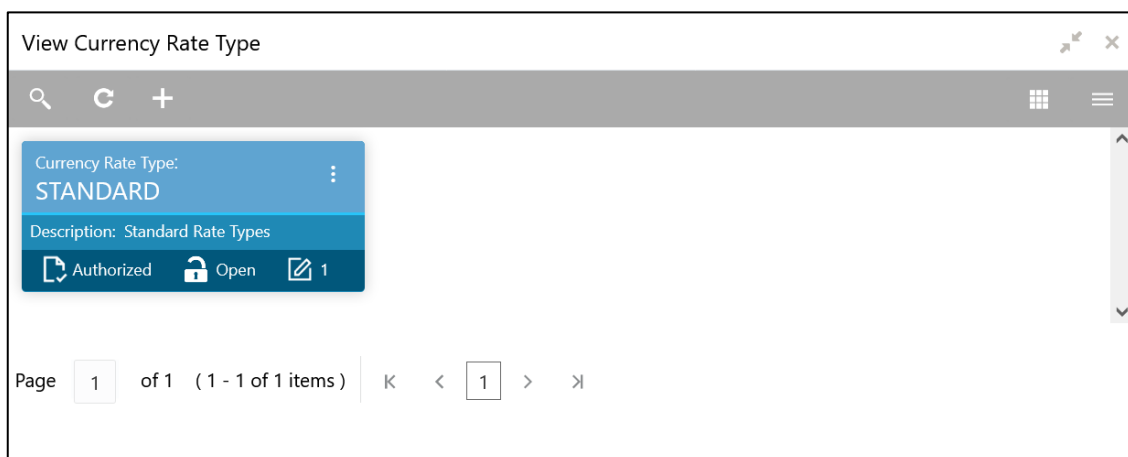
- [2.11.1 Currency Rate Type Summary](#)
- [2.11.2 Currency Rate Type Maintenance](#)

### 2.11.1 Currency Rate Type Summary

The summary screen provides a list of configured currency rate type. You can configure a currency rate type using the [Currency Rate Type Maintenance](#). To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Currency Rate Type**.
2. Under **Currency Rate Type**, click **View Currency Rate Type**.
  - The **View Currency Rate Type** screen is displayed.

**Figure 22: View Currency Rate Type**



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

**Table 29: View Currency Rate Type – Field Description**

Field	Description
<b>Currency Rate Type</b>	Displays the currency rate type.
<b>Description</b>	Displays additional information about the currency rate type.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

### 2.11.2 Currency Rate Type Maintenance

The maintenance screen allows you to configure currency rate type. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Currency Rate Type**.
2. Under **Currency Rate Type**, click **Create Currency Rate Type**.
  - The **Create Currency Rate Type** screen is displayed.

**Figure 23: Create Currency Rate Type**

3. On **Create Currency Rate Type** screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

**Table 30: Create Currency Rate Type – Field Description**

Field	Description
<b>Currency Rate Type</b>	Specify the currency rate type.
<b>Currency Rate Type Description</b>	Specify additional information about the currency rate type.

4. Click **Save**. You can view the configured currency rate type details in the [Currency Rate Type Summary](#).

## 2.12 Customer Access Group

You can configure a customer access group.

This section contains following subsections:

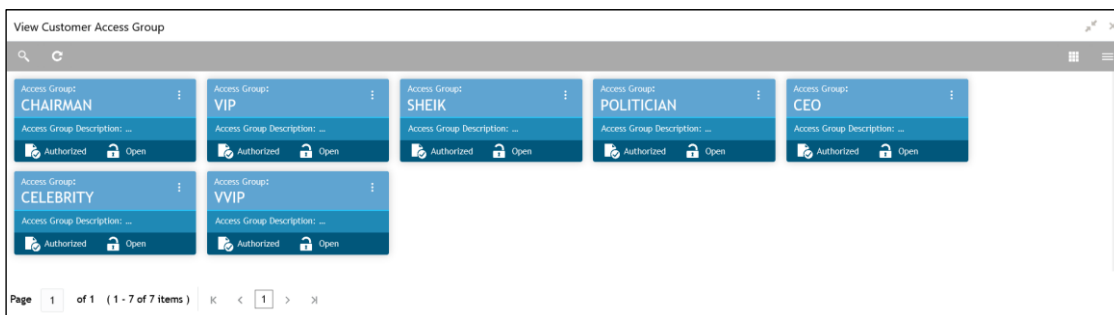
- [2.12.1 Customer Access Group Summary](#)
- [2.12.2 Customer Access Group Maintenance](#)

### 2.12.1 Customer Access Group Summary

The summary screen provides a list of configured customer access group. You can configure a customer access group using the [Customer Access Group Maintenance](#). To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Customer Access Group**.
2. Under **Customer Access Group**, click **View Customer Access Group**.  
→ The **View Customer Access Group** screen is displayed.

**Figure 24: View Customer Access Group**



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

**Table 31: View Customer Access Group – Field Description**

Field	Description
<b>Access Group</b>	Displays the access group.
<b>Access Group Description</b>	Displays additional information about the customer access group.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

## 2.12.2 Customer Access Group Maintenance

The maintenance screen allows you to configure a customer access group. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Customer Access Group**.
2. Under **Customer Access Group**, click **Create Customer Access Group**.
  - The **Create Customer Access Group** screen is displayed.

**Figure 25: Create Customer Access Group**

3. On **Create Customer Access Group** screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

**Table 32: Create Customer Access Group – Field Description**

Field	Description
<b>Access Group</b>	Specify the access group.
<b>Access Group Description</b>	Specify the additional information about the access group.

4. Click **Save**. You can view the configured customer access group details in the Customer Access Group Summary.

---

Note: Customer Access Group can be linked at the user level to restrict unauthorized access to Customer details. Refer **Oracle Banking Security Management System User Guide** for more details.

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## 2.13 Customer Category

You can configure a customer category.



This section contains following subsections:

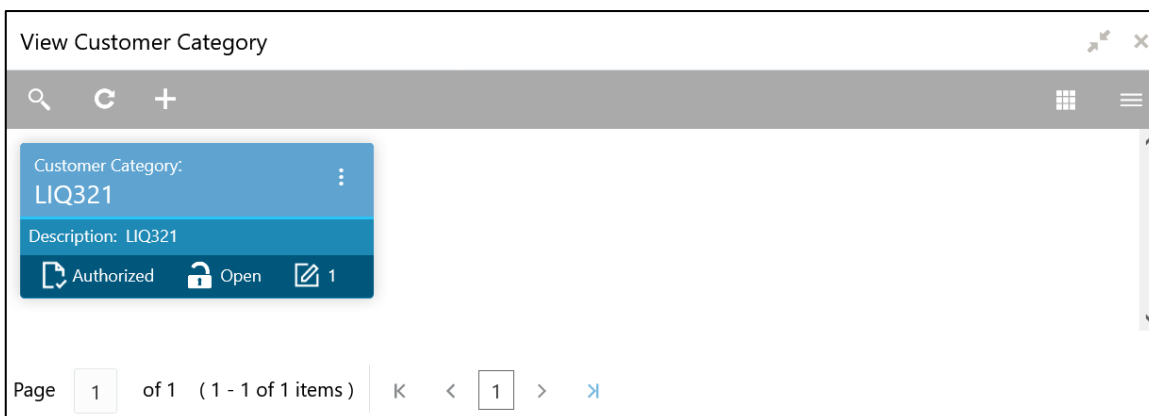
- [2.13.1 Customer Category Summary](#)
- [2.13.2 Customer Category Maintenance](#)

### 2.13.1 Customer Category Summary

The summary screen provides a list of configured customer category. You can configure a customer category using the [Customer Category Maintenance](#). To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Customer Category**.
2. Under **Customer Category**, click **View Customer Category**.  
→ The **View Customer Category** screen is displayed.

**Figure 26: View Customer Category**



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

**Table 33: View Customer Category – Field Description**

Field	Description
<b>Customer Category</b>	Displays the customer category.
<b>Description</b>	Displays additional information about the customer category.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

## 2.13.2 Customer Category Maintenance

The maintenance screen allows you to configure a customer category. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Customer Category**.
2. Under **Customer Category**, click **Create Customer Category**.
  - The **Create Customer Category** screen is displayed.

**Figure 27: Create Customer Category**

3. On **Create Customer Category** screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

**Table 34: Create Customer Category – Field Description**

Field	Description
<b>Customer Category</b>	Specify the customer category.
<b>Customer Category Description</b>	Specify the additional information about the customer category.
<b>Populate Changes</b>	By default, this is disabled. If selected, displays the changes.

4. Click **Save**. You can view the configured customer category details in the [Customer Category Summary](#).

## 2.14 ECA System

You can configure the External Credit Approval (ECA) system.

This section contains following subsections:

- [2.14.1 ECA System Summary](#)
- [2.14.2 ECA System Maintenance](#)

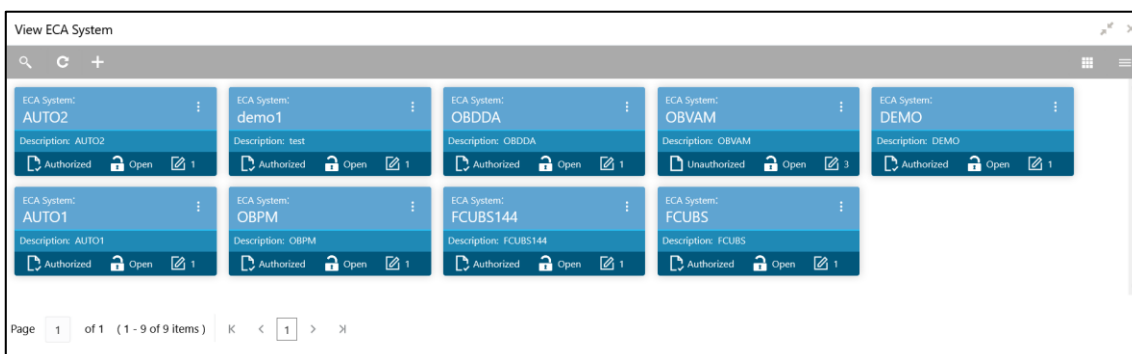
### 2.14.1 ECA System Summary

The summary screen provides a list of configured ECA system. You can configure the ECA system details using the ECA System Maintenance. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **ECA System**.
2. Under **ECA System**, click **View ECA System**.

→ The **View ECA System** screen is displayed.

**Figure 28: View ECA System**



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

**Table 35: View ECA System – Field Description**

Field	Description
<b>Description</b>	Displays any additional information of the ECA system.
<b>ECA System</b>	Displays the name of the ECA system.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

## 2.14.2 ECA System Maintenance

The maintenance screen allows you to configure ECA system details. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **ECA System**.
2. Under **ECA System**, click **Create ECA System**.

→ The **Create ECA System** screen is displayed.

**Figure 29: Create ECA System**

3. On **Create ECA System** screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

**Table 36: Create ECA System – Field Description**

Field	Description
<b>Source System</b>	Specify the source system.
<b>Description</b>	Specify the additional information about the ECA system.

4. Click **Save**. You can view the configure ECA system details in the [ECA System Summary](#).

## 2.15 External Bank Parameters

You can configure bank level parameters.

This section contains following subsections:

- [2.15.1 External Bank Parameters Summary](#)
- [2.15.2 External Bank Parameters Maintenance](#)

### 2.15.1 External Bank Parameters Summary

The summary screen provides a list of configured external bank parameters. You can configure the external bank parameters using the [External Bank Parameters Maintenance](#). To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **External Bank Parameters**.
2. Under **External Bank Parameters**, click **View External Bank Parameters**.
  - The **View External Bank Parameters** screen is displayed.

**Figure 30: View External Bank Parameters**



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

**Table 37: View External Bank Parameters – Field Description**

Field	Description
<b>Head Office Branch</b>	Displays the head office branch details.
<b>Maker</b>	Displays the name of the user who has configured the bank details.
<b>Once Authorized</b>	Indicates if the record is authorized once or not.
<b>Bank Code</b>	Displays the code of the bank.

Field	Description
<b>Bank Name</b>	Displays the name of the bank.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

## 2.15.2 External Bank Parameters Maintenance

The maintenance screen allows you to configure external bank parameters. The Bank Code will be auto-created for an entity when the entity is created. Please refer the **View External Bank Parameters** screen for the bank code created. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **External Bank Parameters**.
2. Under **External Bank Parameters**, click **Create External Bank Parameters**.  
→ The **Create External Bank Parameters** screen is displayed.

**Figure 31: Create External Bank Parameters**

3. On **Create External Bank Parameters** screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

**Table 38: Create External Bank Parameters – Field Description**

Field	Description
<b>Bank Code</b>	Specify the code for the bank.
<b>Bank Name</b>	Specify the name of the bank.

Field	Description
Head Office Branch	Search and select the required head office branch.
Branch Description	Based on the Head Office Branch selected, the information is auto-populated.
Number of Days to Forget Customer	Specify the number of days to inactive/forget the customer.

- Click **Save**. You can view the configure core bank parameter details in the [External Bank Parameters Summary](#).

## 2.16 External Branch Parameters

You can configure branch level parameters.

This section contains following subsections:

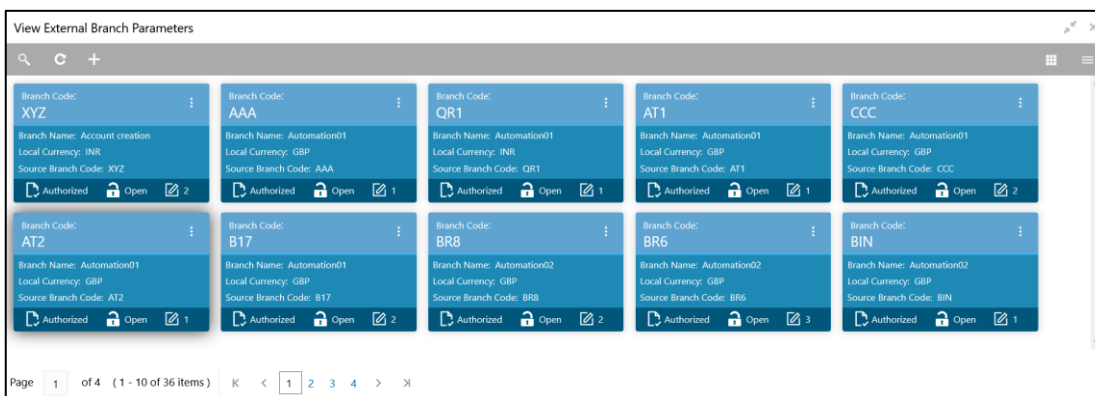
- [2.16.1 External Branch Parameters Summary](#)
- [2.16.2 External Branch Parameters Maintenance](#)

### 2.16.1 External Branch Parameters Summary

The summary screen provides a list of configured external branch parameters. You can configure the external branch parameters using the [External Branch Parameters Maintenance](#). To process this screen, perform the following steps:

- From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **External Branch Parameters**.
- Under **External Branch Parameters**, click **View External Branch Parameters**.  
 → The **View External Branch Parameters** screen is displayed.

**Figure 32: View External Branch Parameters**



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

**Table 39: View External Branch Parameters – Field Description**

Field	Description
<b>Branch Code</b>	Displays the code of the branch associated with the bank.
<b>Branch Name</b>	Displays the name of the branch associated with the bank.
<b>Local Currency</b>	Displays the local currency details.
<b>Source Branch Code</b>	Displays the code of the source branch.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

**NOTE:** The Branch Parameters for the Head Office (HO) Branch of the entity will get auto-created when the entity is defined in the Multi-Entity Maintenance. Further changes/configuration of the HO Branch can be performed by modifying the record for the HO Branch's Parameters

## 2.16.2 External Branch Parameters Maintenance

The maintenance screen allows you to configure the branch parameters. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **External Branch Parameters**.
2. Under **External Branch Parameters**, click **Create External Branch Parameters**.

→ The **Create External Branch Parameters** screen is displayed.

**Figure 33: Create External Branch Parameters**



3. On **Create External Branch Parameters** screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

**Table 40: Create External Branch Parameters – Field Description**

Field	Description
<b>Branch Details</b>	Specify the branch details.
<b>Branch Code</b>	Specify a branch code.
<b>Branch Name</b>	Specify a name for the branch.
<b>Local Currency</b>	Search and select the required local currency.
<b>Source System</b>	Search and select the required source system.
<b>Source Branch Code</b>	Specify a source branch code.
<b>Branch Address</b>	Specify the branch address details.
<b>Address Line 1-3</b>	Specify the address details.
<b>Other Details</b>	Specify the other details.
<b>Host Code</b>	Search and select the required host code.
<b>Country Code</b>	Based on the Host Code selected, the information is auto-populated.
<b>Host Name</b>	Specify the name for the host.
<b>Walk-in Customer</b>	Search and select the required walk-in customer.
<b>Weekly Holiday 1-2</b>	<p>Select a weekly holiday from the dropdown list.</p> <p><b>Note</b></p> <p>There are two days of weekly holiday depending on the geographical zone.</p> <ul style="list-style-type: none"> <li>• Auto Authorization: By default, it is disabled. If selected, the record is automatically authorized.</li> <li>• Report DSN: Specify the details of the report DSN.</li> </ul>
<b>Swift Address</b>	Specify the swift address details.
<b>SWIFT Address</b>	Search and select the required SWIFT address.

Field	Description
Default BIC	If selected, indicates the selected SWIFT address as the default BIC.

4. Click **Save**. You can view the configure branch parameter details in the [External Branch Parameters Summary](#).

## 2.17 External Chart Account

You can configure an external chart.

This section contains following subsections:

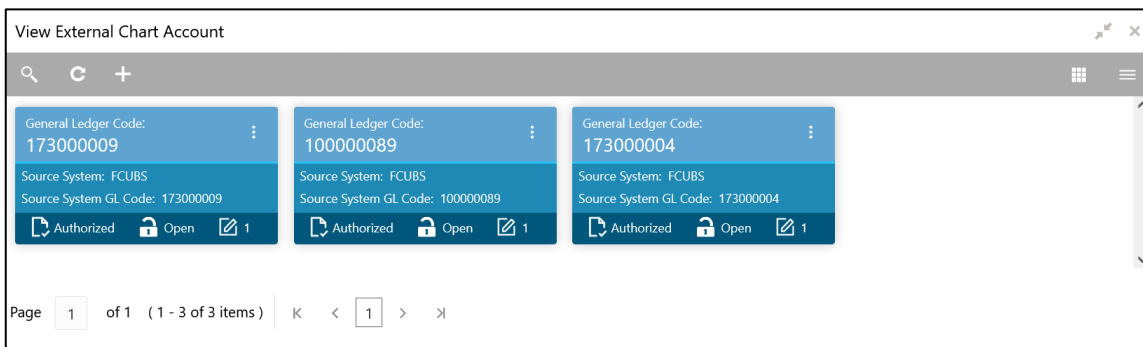
- [2.17.1 External Chart Account Summary](#)
- [2.17.2 External Chart Account Maintenance](#)

### 2.17.1 External Chart Account Summary

The summary screen provides a list of configured external chart accounts. You can configure an external chart account using the [External Chart Account Maintenance](#). To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **External Chart Account**.
2. Under **External Chart Account**, click **View External Chart Account**.
  - The **View External Chart Account** screen is displayed.

**Figure 34: View External Chart Account**



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

**Table 41: View External Chart Account – Field Description**

Field	Description
<b>General Ledger Code</b>	Displays the code of the general ledger.
<b>Source System</b>	Displays the source system.
<b>Source System GL Code</b>	Displays the GL code of the source system.
<b>Status</b>	Displays the status of the record.

<b>Modification Number</b>	Displays the number of modifications performed on the record.
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## 2.17.2 External Chart Account Maintenance

The maintenance screen allows you to configure external chart accounts. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **External Chart Account**.
2. Under **External Chart Account**, click **Create External Chart Account**.  
→ The **Create External Chart Account** screen is displayed.

**Figure 35: Create External Chart Account**

3. On **Create External Chart Account** screen, specify the fields. For more information on fields, refer to the field description table below.

**Table 42: Create External Chart Account – Field Description**

Field	Description
<b>General Ledger Code</b>	Specify the general ledger code.
<b>General Ledger Description</b>	Specify the additional information about the general ledger.
<b>Source System</b>	Search and select the required source system.
<b>Source System GL Code</b>	Specify the source system GL code.
<b>Category</b>	Select the category from the drop-down list.

Field	Description
<b>Blocked</b>	By default, this is disabled. If selected, indicates the external chart account is blocked.

4. Click **Save**. You can view the configured external chart details in the [External Chart Account Summary](#).

## 2.18 External Customer

You can configure the external customer details.

This section contains following subsections:

- [2.18.1 External Customer Summary](#)
- [2.18.2 External Customer Maintenance](#)

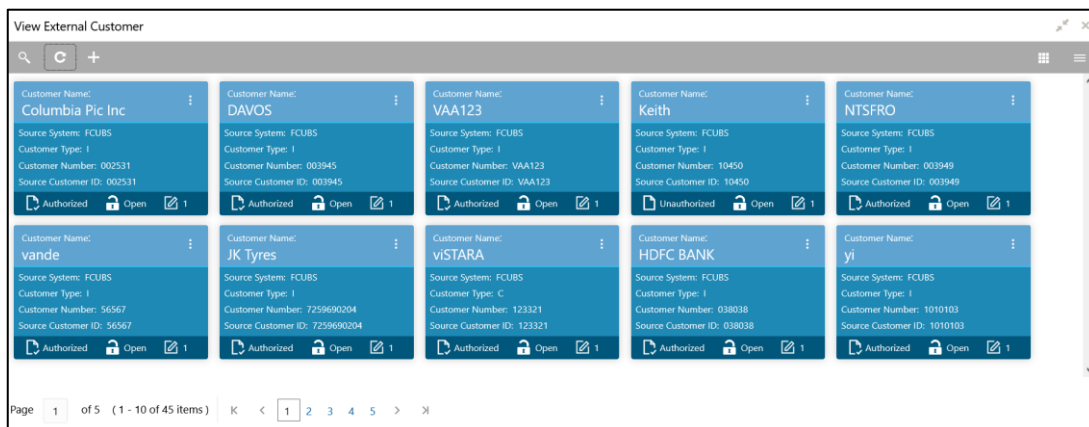
### 2.18.1 External Customer Summary

The summary screen provides a list of configured external customer details. You can configure the external customers using the [External Customer Maintenance](#). To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **External Customer**.
2. Under **External Customer**, click **View External Customer**.

→ The **View External Customer** screen is displayed.

**Figure 36: View External Customer**



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

**Table 43: View External Customer – Field Description**

Field	Description
<b>Customer Name</b>	Displays the name of the customer.
<b>Source System</b>	Displays the source system details.
<b>Customer Type</b>	Displays the type of the customer.
<b>Customer Number</b>	Displays the customer number associated with the customer name.

Field	Description
Source Customer ID	Displays the source of the customer ID associated with the customer name.
Status	Displays the status of the record.
Modification Number	Displays the number of modifications performed on the record.

## 2.18.2 External Customer Maintenance

The maintenance screen allows you to configure the external customer details. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **External Customer**.
2. Under **External Customer**, click **Create External Customer**.

→ The **Create External Customer** screen is displayed.

**Figure 37: Create External Customer**

3. On **Create External Customer** screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

**Table 44: Create External Customer – Field Description**

Field	Description
Customer Details	Specify the customer details.
Customer Number	Specify the number for the customer.
Customer Name	Specify the name for the customer.

<b>Field</b>	<b>Description</b>
<b>Short Name</b>	Specify the short name for the customer.
<b>Customer Type</b>	Select one of the options: <ul style="list-style-type: none"> <li>• Individual: If selected, the customer is an individual customer.</li> <li>• Corporate: If selected, the customer is a corporate customer.</li> <li>• Bank: If selected, the customer is a bank employee.</li> </ul>
<b>Source Customer ID</b>	Specify the source customer ID.
<b>Source System</b>	Search and select the required source system.
<b>Customer Category</b>	Search and select the required customer category.
<b>Relationship Manager ID</b>	Specify the relationship manager ID.
<b>Access Group</b>	Search and select the required access group.
<b>Address</b>	Specify the address details.
<b>Address Line 1-4</b>	Specify the customer address details.
<b>Country</b>	Search and select the required country.
<b>Other Details</b>	Specify the other details.
<b>Postal Code</b>	Specify the postal code details.
<b>Deceased</b>	By default, this is disabled. If selected, indicates the customer is deceased.
<b>Frozen</b>	By default, this is disabled. If selected, indicates the customer account is frozen.
<b>Whereabouts Unknown</b>	By default, this is disabled. If selected, indicates the customer's whereabouts are unknown.
<b>Sanction Check Required</b>	By default, this is disabled. If selected, indicates the sanction check is required.
<b>Walk-in Customer</b>	By default, this is disabled. If selected, indicates a walk-in customer.



Field	Description
Staff	By default, this is disabled. If selected, indicates a staff customer.
Language	Search and select the required language.
Nationality	Search and select the required nationality.

- Click **Save**. You can view the configured external customer details in the [External Customer Summary](#). In addition, the external customers can be directly replicated from the host system using service API.

## 2.19 External Customer Account

You can configure the external customer account details.

This section contains following subsections:

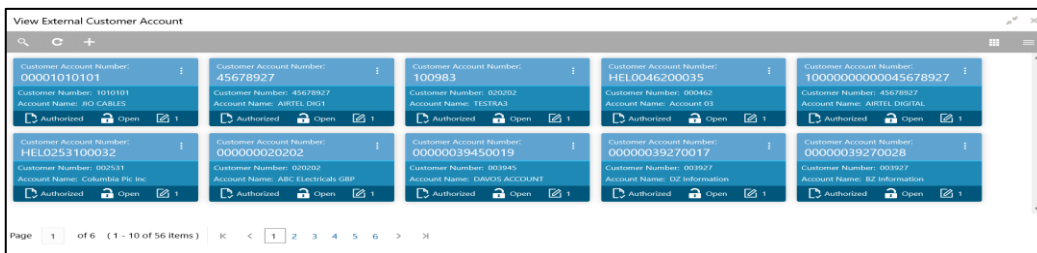
- [2.19.1 External Customer Account Summary](#)
- [2.19.2 External Customer Account Maintenance](#)

### 2.19.1 External Customer Account Summary

The summary screen provides a list of configured external customer accounts. You can configure the external customer accounts using the [External Customer Account Maintenance](#). To process this screen, perform the following steps:

- From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **External Customer Account**.
- Under **External Customer Account**, click **View External Customer Account**.  
→ The **View External Customer Account** screen is displayed.

**Figure 38: View External Customer Account**



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

**Table 45: View External Customer Account – Field Description**

Field	Description
<b>Customer Number</b>	Displays the customer number associated with the account name.
<b>Customer Account Number</b>	Displays the customer account number associated with the account name.
<b>Account Name</b>	Displays the name of the account.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

### 2.19.2 External Customer Account Maintenance

The maintenance screen allows you to configure external customer account details. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **External Customer Account**.
2. Under **External Customer Account**, click **Create External Customer Account**.

→ The **Create External Customer Account** screen is displayed.

**Figure 39: Create External Customer Account**

3. On **Create External Customer Account** screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

**Table 46: Create External Customer Account – Field Description**

<b>Field</b>	<b>Description</b>
<b>Account Details</b>	Specify the account details.
<b>Customer Account Number</b>	Specify the customer account number.
<b>Account Name</b>	Specify the name for an account.
<b>Customer Number</b>	Search and select the required customer number.
<b>Customer Name</b>	Based on the Customer Number selected, the information is auto-populated.
<b>Account Currency</b>	Search and select the required account currency.
<b>Account Class</b>	Select the account class from the drop-down list.
<b>Source Account Branch</b>	Search and select the required source account branch.
<b>Source Customer Account</b>	Based on the Source Account Branch selected, the information is auto- populated.
<b>Account IBAN</b>	Specify the account IBAN details.
<b>Address</b>	Specify the address details.
<b>Address Line 1-4</b>	Specify the address details.
<b>Country</b>	Search and select the required country.
<b>Other Details</b>	Specify the other details.
<b>No Credit</b>	By default, this is disabled. If selected, indicates the account does not have any credit facility.
<b>No Debit</b>	By default, this is disabled. If selected, indicates the account does not have any debit facility.
<b>Blocked</b>	By default, this is disabled. If selected, indicates the account status is blocked.
<b>Frozen</b>	By default, this is disabled. If selected, indicates the account status is frozen.
<b>Dormant</b>	By default, this is disabled. If selected, indicates the account status is dormant.

Field	Description
<b>External Credit Approval Required</b>	By default, this is disabled. If selected, indicates ECA check is required for the external customer account.
<b>External Credit Approval System</b>	Search and select the required external credit approval system.
<b>Host Code</b>	Specify the host code details.
<b>Account Open Date</b>	Select an effective date for the account from the dropdown calendar.

4. Click **Save**. You can view the configured external customer account details in the [External Customer Account Summary](#). In addition, the external customer accounts can be directly replicated from the host system using service API.

## 2.20 External Customer Account Structured Address

You can configure the external customer account structured address details.

This section contains following subsections:

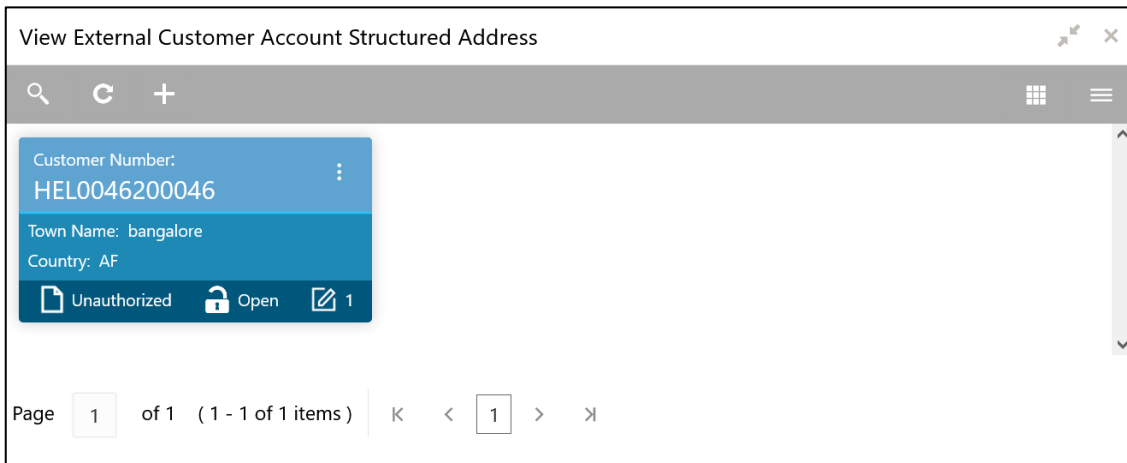
- [2.20.1 View External Customer Account Structured Address](#)
- [2.20.2 Create External Customer Account Structured Address](#)

### 2.20.1 View External Customer Account Structured Address

The summary screen provides a list of configured external customer account structured addresses. You can configure the external customer account structured address using the [Create External Customer Account Structured Address](#). To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **External Customer Account Structured Address**.
2. Under **External Customer Account Structured Address**, click **View External Customer Account Structured Address**.
  - The **View External Customer Account Structured Address** screen is displayed.

**Figure 40: View External Customer Account Structured Address**



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

**Table 47: View External Customer Account Structured Address – Field Description**

Field	Description
<b>Customer Number</b>	Displays the customer number.
<b>Town Name</b>	Displays the town name of the customer.

Field	Description
Country	Displays the country of the customer.
Status	Displays the status of the record.
Modification Number	Displays the number of modifications performed on the record.

### 2.20.2 Create External Customer Account Structured Address

The maintenance screen allows you to configure external customer account structured address. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **External Customer Account Structured Address**.
2. Under **External Customer Account Structured Address**, click **Create External Customer Account Structured Address**.

→ The **Create External Customer Account Structured Address** screen is displayed.

**Figure 41: Create External Customer Account Structured Address**

3. On **Create External Customer Account Structured Address** screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

**Table 48: Create External Customer Account Structured Address – Field Description**

Field	Description
Account Details	Specify the account details.

Field	Description
<b>Customer Account</b>	Search and select the required customer account.
<b>Account Name</b>	Specify the name for an account.
<b>Structured Address</b>	Specify the structured address details.
<b>Department</b>	Specify the department.
<b>Sub Department</b>	Search and select the required country.
<b>Street Name</b>	Specify the street name.
<b>Building Number</b>	Specify the building number.
<b>Building Name</b>	Specify the building name.
<b>Floor</b>	Specify the floor.
<b>Post Box</b>	Specify the post box details.
<b>Room</b>	Specify the room number.
<b>Post Code</b>	Specify the post code.
<b>Town Name</b>	Specify the town name.
<b>Town Location Name</b>	Specify the town location name.
<b>District Name</b>	Specify the district name.
<b>Country Sub Division</b>	Specify the country sub division.
<b>Country</b>	Specify the country name.

4. Click **Save**. You can view the configured external customer structured address details in [View External Customer Account Structured Address](#).

## 2.21 External Virtual Account Structured Address

You can view the external virtual account structured address details.

This section contains following subsections:

- [2.21.1 View External Virtual Account Structured Address](#)

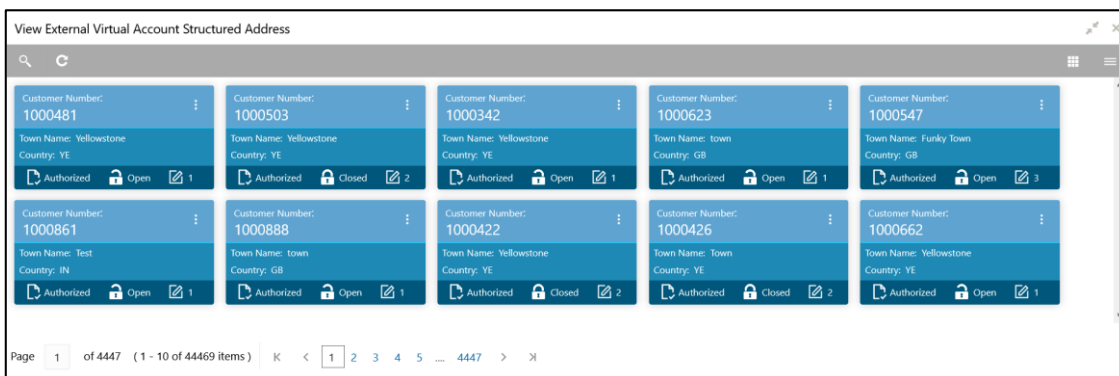
### 2.21.1 View External Virtual Account Structured Address

The summary screen provides a list of configured virtual account structured addresses. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **External Virtual Account Structured Address**.
2. Under **External Virtual Account Structured Address**, click **View External Virtual Account Structured Address**.

→ The **View External Virtual Account Structured Address** screen is displayed.

**Figure 42: View External Virtual Account Structured Address**



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

**Table 49: View External Virtual Account Structured Address – Field Description**

Field	Description
<b>Customer Number</b>	Displays the customer number.
<b>Town Name</b>	Displays the town name.
<b>Country</b>	Displays the country name.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.



Click on the specific tile to view the structured address details.

## 2.22 Forget Process

The Personally identifiable information (PII) is any data that could potentially identify a specific individual. PII data access can be controlled based on the user role and you can configure details of a customer who wants to be forgotten if the customer withdraws/does not avail the virtual account facility.

This section contains following subsections:

- [2.22.1 Forgotten Customers Summary](#)
- [2.22.2 Forget Customer Maintenance](#)

### 2.22.1 Forgotten Customers Summary

The summary screen provides a list of configured customer to be forgotten. You can configure a customer detail who wants to be forgotten using the [Forget Customer Maintenance](#). To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Forget Process**.
2. Under **Forget Process**, click **View Forgotten Customer**.
  - The **View Forgotten Customer** screen is displayed.

**Figure 43: View Forgotten Customers**



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

**Table 50: View Forgotten Customers – Field Description**

Field	Description
<b>Process Type</b>	Indicates if the process is initiated by the customer/bank
<b>Process ID</b>	Displays the forgotten customer's process ID.
<b>Maker</b>	Displays the name of the user who has configured the forgotten customer details.

Field	Description
Status	Displays the status of the record.
Modification Number	Displays the number of modifications performed on the record.

## 2.22.2 Forget Customer Maintenance

The maintenance screen allows you to configure a customer to be forgotten. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Forget Process**.
2. Under **Forget Process**, click **Forget Customer**.

→ The **Forget Customer** screen is displayed.

**Figure 44: Forget Customer**

3. On **Forget Customer** screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

**Table 51: Forget Customer – Field Description**

Field	Description
<b>Forget Customer Process ID</b>	Specify a forget customer process ID.
<b>Forget Customer Process Type</b>	Select one of the options <ul style="list-style-type: none"> <li>• Customer Initiated: If selected, indicates the customer has initiated the process.</li> <li>• Bank Initiated: If selected, indicates the bank has initiated the process.</li> </ul>

4. Click + to add a row and provide the customer/bank details.

5. Click **Save**. You can view the configured forgotten customers in the [Forgotten Customers Summary](#).

## 2.23 Host Code

You can group branches in the same zone or region under a host for specific processing. You can have multiple hosts depending on processing requirements.

This section contains following subsections:

- [2.23.1 Host Code Summary](#)
- [2.23.2 Host Code Maintenance](#)

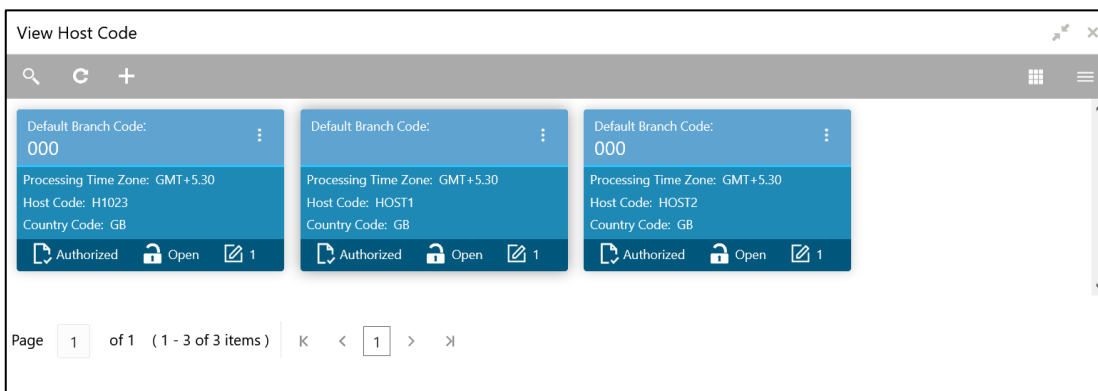
### 2.23.1 Host Code Summary

The summary screen provides a list of configured host codes. You can configure the host code using the [Host Code Maintenance](#). To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Host Code**.
2. Under **Host Code**, click **View Host Code**.

→ The **View Host Code** screen is displayed.

**Figure 45: View Host Code**



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

**Table 52: View Host Code – Field Description**

Field	Description
<b>Default Branch Code</b>	Displays the default branch code associated with the host code.
<b>Processing Time Zone</b>	Displays the processing time zone.
<b>Host Code</b>	Displays the host code details.
<b>Country Code</b>	Displays the country code details.
<b>Status</b>	Displays the status of the records.

Field	Description
<b>Modification Number</b>	Displays the number of modifications performed on the record.

### 2.23.2 Host Code Maintenance

The maintenance screen allows you to configure host code. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Host Code**.
2. Under **Host Code**, click **Create Host Code**.

→ The **Create Host Code** screen is displayed.

**Figure 46: Create Host Code**

3. On **Create Host Code** screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

**Table 53: Create Host Code – Field Description**

Field	Description
<b>Host Code</b>	Specify the host code details.
<b>Description</b>	Specify the additional information about the host code.
<b>Country Code</b>	Search and select the required country code.
<b>Processing Time Zone</b>	Specify the processing time zone details.
<b>Default Branch Code</b>	Search and select the required default branch code.

4. Click **Save**. You can view the configured host code details in the [Host Code Summary](#).

## 2.24 Language Code

You can configure a language code.

This section contains following subsections:

- [2.24.1 Language Code Summary](#)
- [2.24.2 Language Code Maintenance](#)

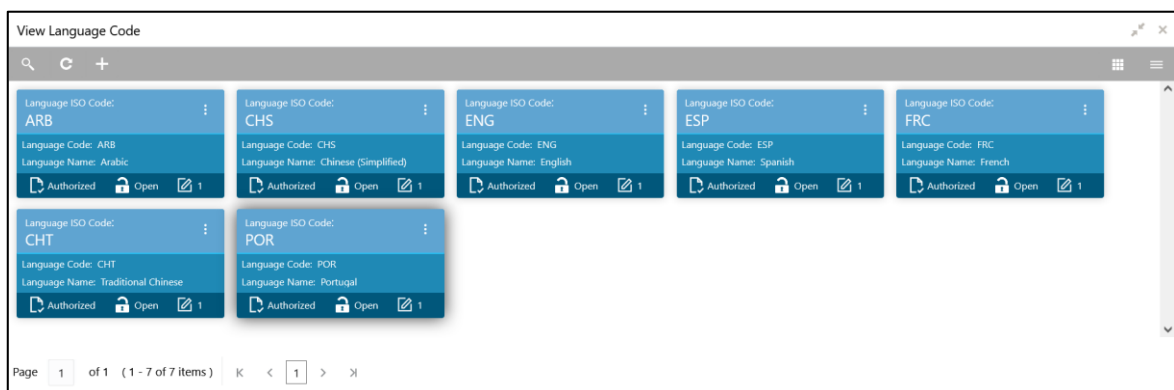
### 2.24.1 Language Code Summary

The summary screen provides a list of configured language code. You can configure a language code using the [Language Code Maintenance](#). To process this screen, perform the following steps:

1. From **Home** screen, **Core Maintenance**. Under **Core Maintenance**, click **Language Code**.
2. Under **Language Code**, click **View Language Code**.

→ The **View Language Code** screen is displayed.

**Figure 47: View Language Code**



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

**Table 54: View Language Code – Field Description**

Field	Description
<b>Language ISO Code</b>	Displays the default branch code associated with the host code.
<b>Language Code</b>	Displays the processing time zone.
<b>Language Name</b>	Displays the host code details.
<b>Status</b>	Displays the status of the records.
<b>Modification Number</b>	Displays the number of modifications performed on the record.



## 2.24.2 Language Code Maintenance

The maintenance screen allows you to configure a language code. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Language Code**.
2. Under **Language Code**, click **Create Language Code**.
  - The **Create Language Code** screen is displayed.

**Figure 48: Create Language Code**

3. On **Create Language Code** screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

**Table 55: Create Language Code – Field Description**

Field	Description
<b>Language Code</b>	Specify the code for the language.
<b>Language Name</b>	Specify the name for the language associated with the language code.
<b>Display Direction</b>	Specify the display direction.
<b>Language ISO Code</b>	Specify the language ISO code.

4. Click **Save**. You can view the configured language code details in the [Language Code Summary](#).

## 2.25 Local Holiday

You can configure a local holiday.

This section contains following subsections:

- [2.25.1 Local Holiday Summary](#)
- [2.25.2 Local Holidays Maintenance](#)

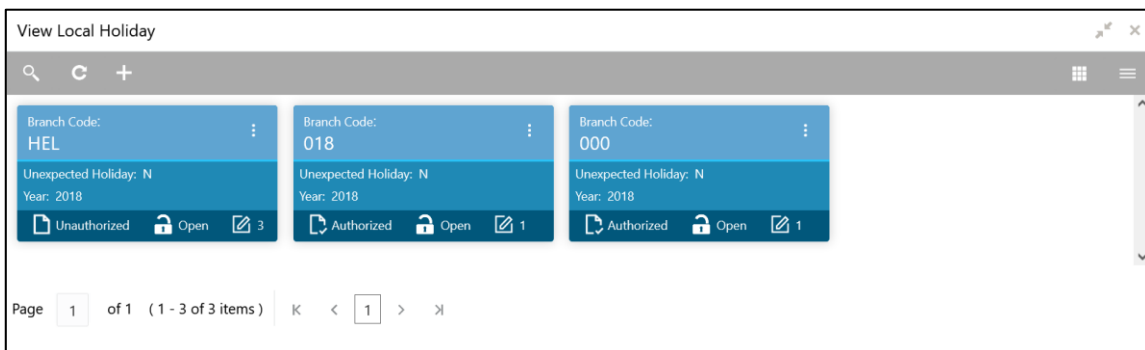
### 2.25.1 Local Holiday Summary

The summary screen provides a list of configured local holidays. You can configure a local holiday using the [Local Holidays Maintenance](#). To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Local Holiday**.
2. Under **Local Holiday**, click **View Local Holiday**.

→ The **View Local Holiday** screen is displayed.

**Figure 49: View Local Holiday**



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

**Table 56: View Local Holiday – Field Description**

Field	Description
<b>Branch Code</b>	Displays the code of the branch.
<b>Unexpected Holiday</b>	Indicates if the record is an unexpected holiday.
<b>Year</b>	Displays the year of the holiday.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

## 2.25.2 Local Holidays Maintenance

The maintenance screen allows you to configure local holidays. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Local Holiday**.
2. Under **Local Holiday**, click **Create Local Holiday**.
  - The **Create Local Holiday** screen is displayed.

**Figure 50: Create Local Holiday**

3. On **Create Local Holiday** screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

**Table 57: Create Local Holiday – Field Description**

Field	Description
<b>Branch Code</b>	Search and select the required branch code.
<b>Year</b>	Specify the year details.
<b>Weekly Holidays</b>	By default, this is disabled. If selected, you can define weekly holidays.
<b>Unexpected Holidays</b>	By default, this is disabled. If selected, you can define unexpected holidays.

4. Select the dates using the calendar. The selected dates appear in pink highlighted circle.
5. Click **Save**. You can view the configured local holiday details in the Local Holiday Summary.

## 2.26 Media

You can configure media information.

This section contains following subsections:

- [2.26.1 Media Summary](#)
- [2.26.2 Media Maintenance](#)

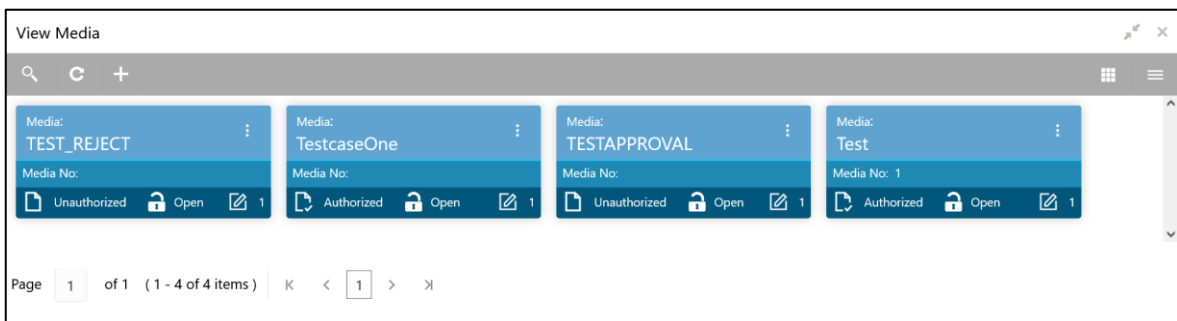
### 2.26.1 Media Summary

The summary screen provides a list of configured media. You can configure a media using the Media Maintenance. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Media**.
2. Under **Media**, click **View Media**.

→ The **View Media** screen is displayed.

**Figure 51: View Media**



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

**Table 58: View Media – Field Description**

Field	Description
<b>Media</b>	Displays the name of the media.
<b>Media Number</b>	Displays the number of the media.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

## 2.26.2 Media Maintenance

The maintenance screen allows you to configure media. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Media**.
2. Under **Media**, click **Create Media**.

→ The **Create Media** screen is displayed.

**Figure 52: Create Media**

3. On **Create Media** screen, specify the fields. The fields, which are marked with asterisk, are mandatory. For more information on fields, refer to the field description table below.

**Table 59: Create Media – Field Description**

Field	Description
<b>Media Code</b>	Specify a unique media code to identify while associating with an advice.
<b>Media Description</b>	Specify additional information about the media.
<b>Media Number</b>	Specify a unique number for the media type.
<b>Message Terminator</b>	Specify the padded characters to mark the end of an incoming messages.
<b>Message Suffix</b>	Specify the padding characters to mark the end of an outgoing messages.

Field	Description
<b>Stop Process</b>	By default, this option is disabled. If selected, halts the processing of incoming and outgoing messages.
<b>Padding Required</b>	By default, this option is disabled. If selected, pads the characters in every outgoing messages.
<b>TW (Test Word) Required Status</b>	By default, this option is disabled. If selected, enables the option for word testing.
<b>Media Priority</b>	Select a media priority from the spin box. When a message is dispatched to the customers, the media type used for sending the messages will be the one that is on high priority.
<b>Number of Character</b>	Select a number the padding characters should be repeated for the advice from the spin box.
<b>Media Details</b>	Specify the media details.
<b>Media Code</b>	Specify the unique media code to identify while associating with an advice.
<b>Compatible Media</b>	By default, this option is disabled. If selected, indicates the media is compatible.

- Click **Save**. You can view the configured media details in the [Media Summary](#).

## 2.27 Multi-Currency Account Linkage

The Multi-Currency Account (MCA) linkage enables the user to link the sub-accounts to a core multi-currency account. This section contains following subsections:

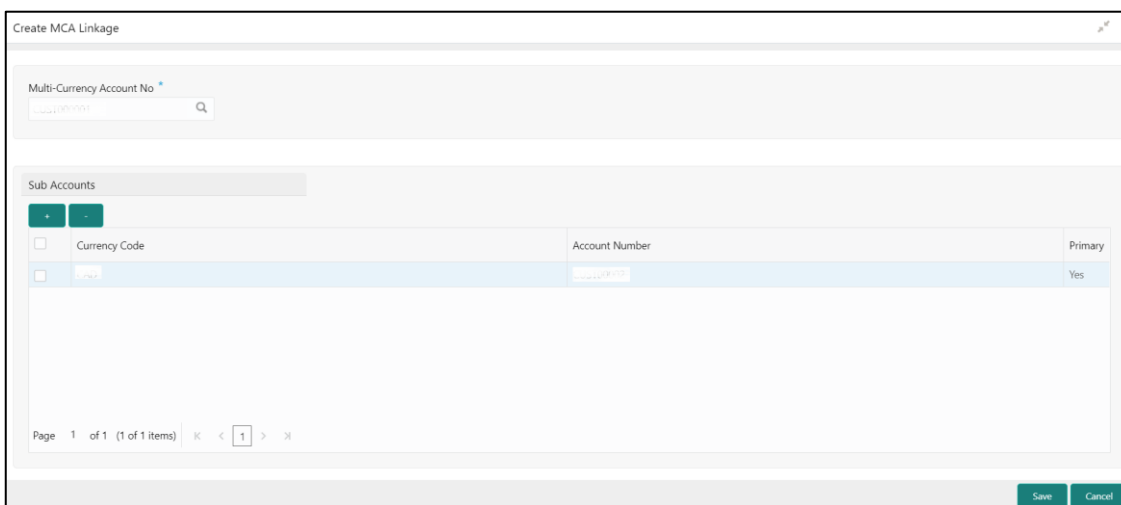
- [2.27.1 Create MCA Linkage](#)
- [2.27.2 View MCA Linkage](#)

### 2.27.1 Create MCA Linkage

This maintenance screen allows you to link the sub-accounts to a core multi-currency account. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Multi-Currency Account Linkage**.
2. Under **Multi-Currency Account Linkage**, click **Create MCA Linkage**.  
 → The **Create MCA Linkage** screen is displayed.

**Figure 53: Create MCA Linkage**



On **Create MCA Linkage** screen, specify the fields. The fields, which are marked with asterisk, are mandatory. For more information on fields, refer to the field description table below.

**Table 60: Create MCA Linkage – Field Description**

Field	Description
<b>Multi-Currency Account No</b>	Click search icon, and select the multi-currency account number from the list of values.
<b>Sub Accounts</b>	Displays the details of the sub accounts.

Field	Description
Currency Code	Specify the currency code of the sub account.
Account Number	Specify the account number of the sub account.
Primary	Select <b>Yes</b> , if the sub account is Primary. If it is not Primary, select <b>No</b> .

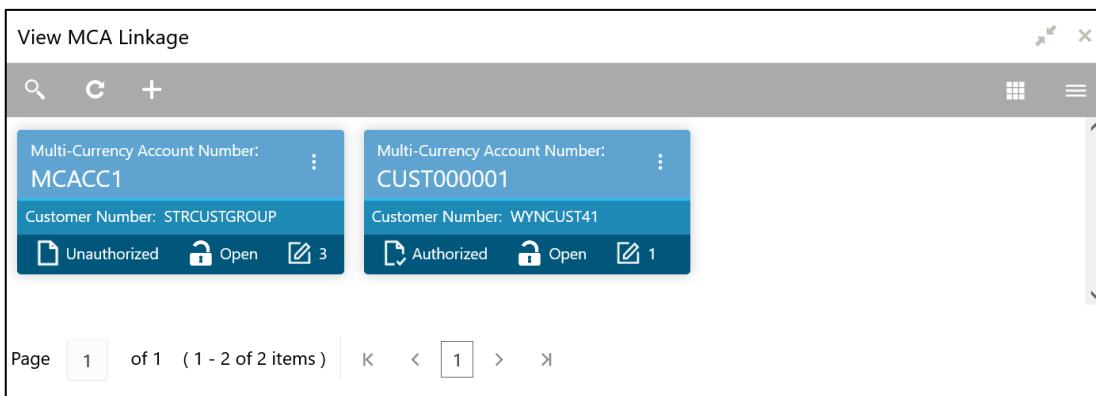
3. Click **Save**. You can view the configured sub-account details in the [View MCA Linkage](#).

### 2.27.2 View MCA Linkage

This summary screen provides a list of configured sub-accounts to a core multi-currency account. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Multi-Currency Account Linkage**.
2. Under **Multi-Currency Account Linkage**, click **View MCA Linkage**.  
→ The **View MCA Linkage** screen is displayed.

Figure 54: View MCA Linkage



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

Table 61: View MCA Linkage – Field Description

Field	Description
Multi-Currency Account Number	Displays the multi-currency account number.
Customer Number	Displays the customer number.
Status	Displays the status of the record.



<b>Field</b>	<b>Description</b>
<b>Modification Number</b>	Displays the number of modifications performed on the record.

## 2.28 Process Code

Process code enables the user to set the process code to the individual stages according to the process.

This section contains following subsections:

- [2.28.1 View Process Code](#)
- [2.28.2 Process Code Maintenance](#)

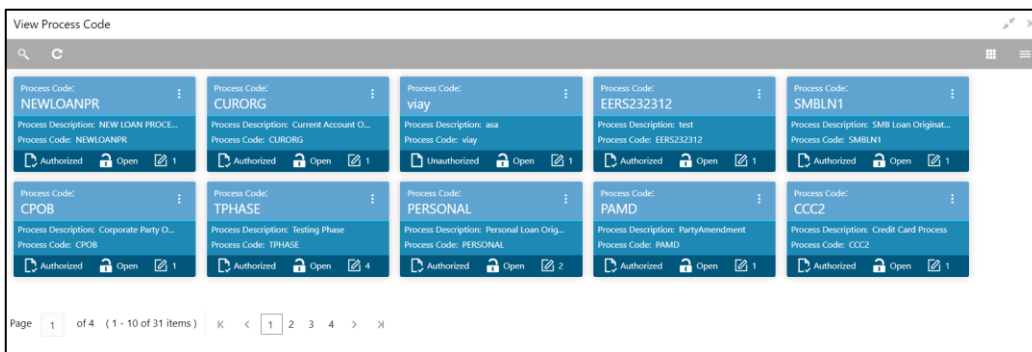
### 2.28.1 View Process Code

The summary screen provides a list of configured process codes. You can add a process code using the [Process Code Maintenance](#). To process this screen, perform the following steps:

3. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Process Code**.
4. Under **Process Code**, click **View Process Code**.

→ The **View Process Code** screen is displayed.

**Figure 55: View Process Code**



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

**Table 62: View Process Code – Field Description**

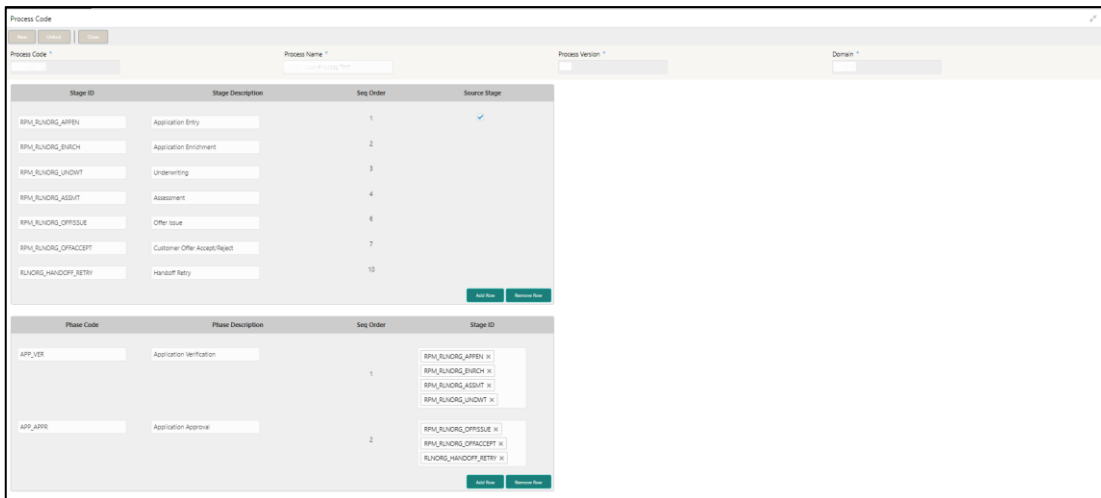
Field	Description
<b>Process Code</b>	Displays the process code.
<b>Description</b>	Displays the description of process code.
<b>Status</b>	Displays the status of the record.

## 2.28.2 Process Code Maintenance

Process Code Maintenance screen allows you to define the stages for a particular process. The process code information that is defined in this screen will be used in further business processing to construct the stages. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Process Code**.  
 → The **Process Code** screen is displayed.

**Figure 56: Process Code**



2. On **Process Code** screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

**Table 63: Process Code – Field Description**

Field	Description
<b>Process Code</b>	Specify the code.
<b>Process Name</b>	Specify the process name.
<b>Process Version</b>	Specify the process version.
<b>Domain</b>	Specify the process domain.
<b>Stage ID</b>	Specify the unique stage ID.
<b>Stage Description</b>	Specify the stage description.
<b>Seq Order</b>	Displays the sequential order of the stage in the entire process.

Field	Description
<b>Source Stage</b>	Select it to indicate if the specific stage is the source stage of the process.
<b>Add Row</b>	Click <b>Add Row</b> to add a row and to capture the stage details that needs to be mapped to the process code.
<b>Delete Row</b>	Click <b>Delete Row</b> to delete an existing row with stage details.
<b>Phase Code</b>	Specify the phase code.
<b>Phase Description</b>	Specify the phase description.
<b>Seq Order</b>	Displays the sequential order of the phase.
<b>Stage ID</b>	Select the stage ID from the drop down list. Available options in the drop-down will be based on Stage ID mentioned at Process Code level.
<b>Add Row</b>	Click <b>Add Row</b> to add a row and to capture the phase details that needs to be mapped to the process code.
<b>Delete Row</b>	Click <b>Delete Row</b> to delete an existing row with phase details.

3. Click **Save**. You can view the configured process codes in the [View Process Code](#).

## 2.29 System Dates

You can view the system date details.

This section contains following subsections:

- [2.29.1 System Dates Summary](#)

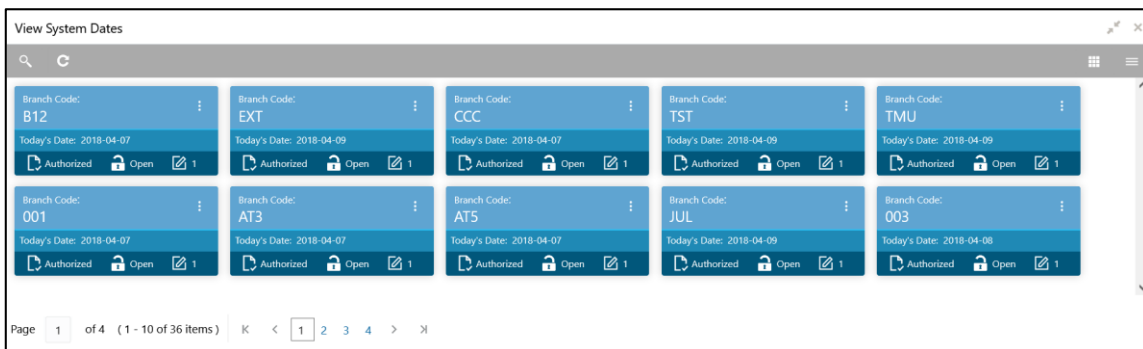
### 2.29.1 System Dates Summary

The summary screen provides a list of configured system date. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **System Dates**.
2. Under **System Dates**, click **View System Dates**.

→ The **View System Dates** screen is displayed.

**Figure 57: View System Dates**



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

**Table 64: View System Dates – Field Description**

Field	Description
<b>Branch Code</b>	Displays the code of the branch.
<b>Today's Date</b>	Displays system's current date.
<b>Today's Date in Text</b>	Displays the system's current date in words.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

**NOTE:** When the entity is created from the Multi-Entity Maintenances, the System Dates for the Head Office (HO) Branch would be automatically created

## 2.30 Transaction Code

You can configure the transaction code.

This section contains following subsections:

- [2.30.1 Transaction Code Summary](#)
- [2.30.2 Transaction Code Maintenance](#)

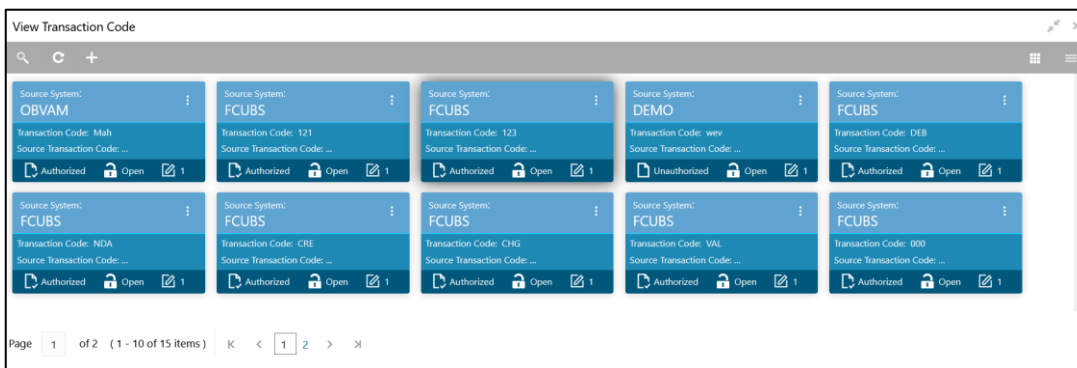
### 2.30.1 Transaction Code Summary

The summary screen provides a list of configured transaction code. You can configure a transaction code using the [Transaction Code Maintenance](#). To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Transaction Code**.
2. Under **Transaction Code**, click **View Transaction Code**.

→ The **View Transaction Code** screen is displayed.

**Figure 58: View Transaction Code**



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

**Table 65: View Transaction Code – Field Description**

Field	Description
<b>Source System</b>	Displays the source system details.
<b>Transaction Code</b>	Displays the transaction code details.
<b>Source Transaction Code</b>	Displays the source transaction code associated with the transaction code.
<b>Status</b>	Displays the status of the record,

<b>Modification Number</b>	Displays the number of modifications performed on the record.
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## 2.30.2 Transaction Code Maintenance

The maintenance screen allows you to configure transaction code details. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Transaction Code**.
2. Under **Transaction Code**, click **Create Transaction Code**.

→ The **Create Transaction Code** screen is displayed.

**Figure 59: Create Transaction Code**

3. On **Create Transaction Code** screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

**Table 66: Create Transaction Code – Field Description**

Field	Description
<b>Transaction Code</b>	Specify the transaction code details.
<b>Description</b>	Specify additional information about the transaction code.
<b>Source System</b>	Search and select the required source system.
<b>Source Transaction Code</b>	Specify the source transaction code details.

4. Click **Save**. You can view the configured transaction code details in the [Transaction Code Summary](#).



## 2.31 Upload Source

You can upload a source code.

This section contains following subsections:

- [2.31.1 Upload Source Summary](#)
- [2.31.2 Upload Source Maintenance](#)

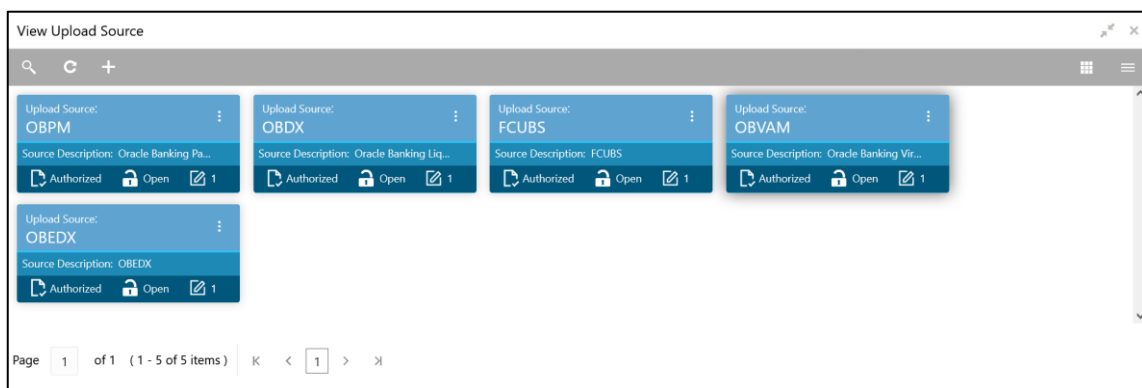
### 2.31.1 Upload Source Summary

The summary screen provides a list of configured source code. You can upload a source code using the [Upload Source Maintenance](#). To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Upload Source**.
2. Under **Upload Source**, click **View Upload Source**.

→ The **View Upload Source** screen is displayed.

**Figure 60: View Upload Source**



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

**Table 67: View Upload Source – Field Description**

Field	Description
<b>Upload Source</b>	Displays the upload source details.
<b>Source Description</b>	Displays information about the source code.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

## 2.31.2 Upload Source Maintenance

The maintenance screen allows you to upload source. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Upload Source**.
2. Under **Upload Source**, click **Create Upload Source**.

→ The **Create Upload Source** screen is displayed.

**Figure 61: Create Upload Source**

3. On **Create Upload Source** screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

**Table 68: Create Upload Source – Field Description**

Field	Description
<b>Source Code</b>	Specify the source code details.
<b>Source Description</b>	Specify additional information of the source code.
<b>Base Data from Flexcube</b>	By default, this is disabled. If selected, indicates the base data is from FLEXCUBE.
<b>System Authorization Required</b>	By default, this is disabled. If selected, indicates the system requires authorization.

4. Click **Save**. You can view the configured upload source details in the [Upload Source Summary](#).

## 2.32 Upload Source Preference

You can configure upload source preference.

This section contains following subsections:

- [2.32.1 Upload Source Preference Summary](#)
- [2.32.2 Upload Source Preference Maintenance](#)

### 2.32.1 Upload Source Preference Summary

The summary screen provides a list of configured upload source preferences. You can configure an upload source preference using the [Upload Source Preference Maintenance](#). To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Upload Source Preference**.
2. Under **Upload Source Preference**, click **View Upload Source Preference**.
  - The **View Upload Source Preference** screen is displayed.

**Figure 62: View Upload Source Preference**



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

**Table 69: View Upload Source Preference – Field Description**

Field	Description
<b>Source Code</b>	Displays the code of the source.
<b>Status</b>	Displays the status of the post upload.
<b>Purge Days</b>	Displays the number of purge days.

<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

### 2.32.2 Upload Source Preference Maintenance

The maintenance screen allows you to configure upload source preference. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Upload Source Preference**.
2. Under **Upload Source Preference**, click **Create Upload Source Preference**.  
 → The **Create Upload Source Preference** screen is displayed.

**Figure 63: Create Upload Source Preference**

3. On **Create Upload Source Preference** screen, specify the fields. For more information on fields, refer to the field description table below.

**Table 70: Create Upload Source Preference – Field Description**

Field	Description
<b>Source Code</b>	Search and select the required source code.
<b>Error Handling</b>	Specify the error handling details.
<b>On Error</b>	Select an error from the drop-down list.
<b>On Override</b>	Select an override from the drop-down list.
<b>On Repairable Exception</b>	Select the repairable exception from the drop-down list.

Field	Description
<b>On Queue Exception</b>	Select the queue exception from the drop-down list.
<b>Post Upload</b>	Specify the post upload details.
<b>Status</b>	Select a status from the dropdown list.
<b>Purge Days</b>	Specify the purging days if you want to maintain any days to be purged while processing interface.
<b>Allow Deferred Processing</b>	By default, this is disabled. If selected, defers process the upload source preference.
<b>Allow EOD with Deferred</b>	By default, this is disabled. If selected, processes the EOD with deferred.
<b>Deletion Allowed</b>	By default, this is disabled. If selected, deletes the upload source preferences.
<b>Reverse Allowed</b>	By default, this is disabled. If selected, reverses the upload source preferences.
<b>Amend Allowed</b>	By default, this is disabled. If selected, amends the upload source preferences.
<b>Proceed with EOD</b>	By default, this is disabled. If selected, proceeds with the EOD.

4. Click **Save**. You can view the configured upload source preference details in the [Upload Source Preference Summary](#).

## 2.33 Pricing Source System

You can configure the pricing source system.

This section contains following subsections:

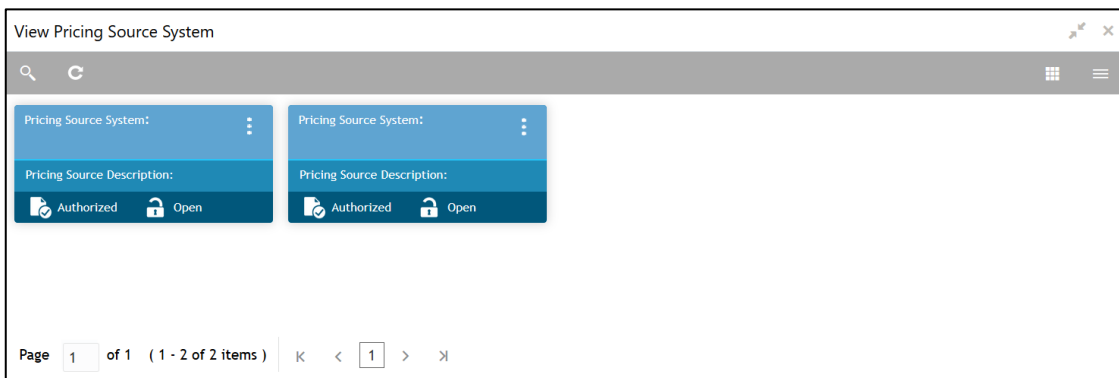
- [2.33.1 Pricing Source System Summary](#)
- [2.33.2 Pricing Source System Maintenance](#)

### 2.33.1 Pricing Source System Summary

The summary screen provides a list of configured Pricing Source system. You can configure the pricing source system details using the [Pricing Source System Maintenance](#). To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Pricing Source System**.
2. Under **Pricing Source System**, click **View Pricing Source System**.
  - The **View Pricing Source System** screen is displayed.

**Figure 64: View Pricing Source System**



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

**Table 71: View Pricing Source System – Field Description**

<b>Field</b>	<b>Description</b>
<b>Pricing Source System</b>	Displays the name of the Pricing Source system.
<b>Pricing Source System Description</b>	Displays any additional information of the Pricing Source system.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

## 2.33.2 Pricing Source System Maintenance

The maintenance screen allows you to configure Pricing Source System details. To process this screen, perform the following steps:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Pricing Source System**.
2. Under **Pricing Source System**, click **Create Pricing Source System**.
  - The **Create Pricing Source System** screen is displayed.

**Figure 65: Create Pricing Source System**

3. On **Create Pricing Source System** screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

**Table 72: Create Pricing Source System – Field Description**

Field	Description
<b>Pricing Source System</b>	Specify the pricing source system.
<b>Pricing Source Description</b>	Specify the additional information about the Pricing Source system.

4. Click **Save**. You can view the configure Pricing Source system details in the [Pricing Source System Summary](#).



## 2.34 Integrating Bureau Integration Service with Oracle Banking Routing Hub

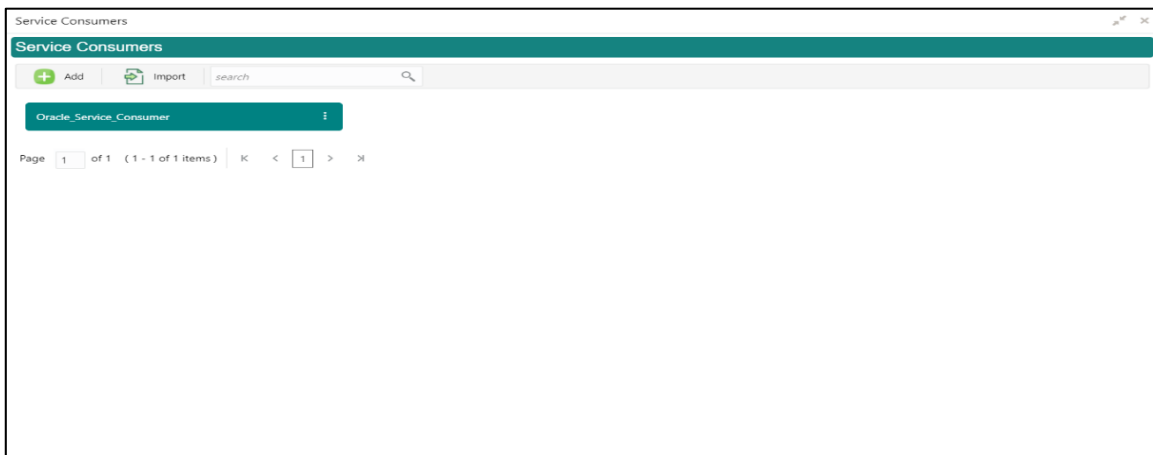
### 2.34.1 Oracle Banking Routing Hub Configuration

Need to import existing service consumer and providers in the system. Service Consumer is Oracle product, which invokes oracle banking routing hub API, oracle banking routing hub analyses evaluates destination product processor and transform data into format of the same. Service consumer comprises of the source and destination integration details.

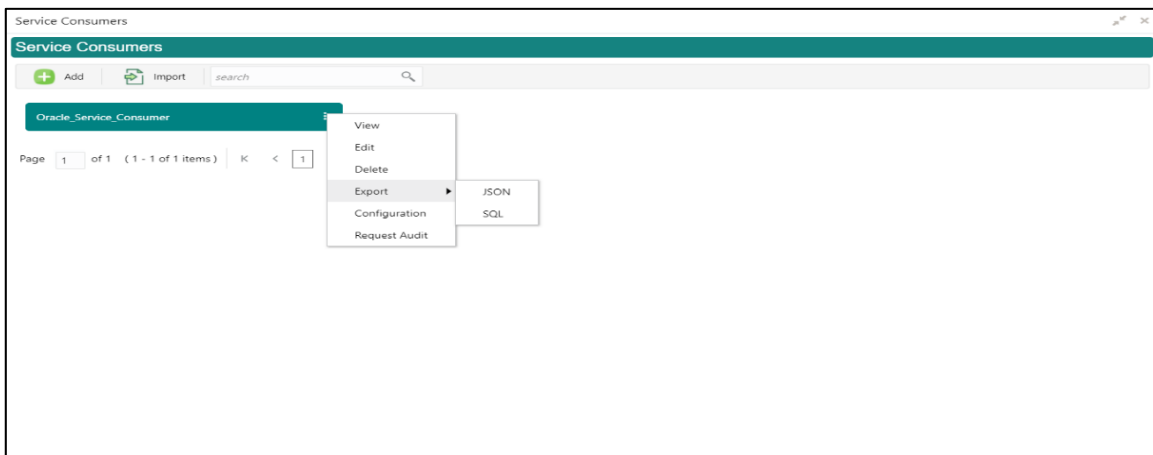
1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Routing Hub**.
2. Under **Routing Hub**, click **Service Consumers**.

→ The **Service Consumers** screen is displayed.

**Figure 66: Service Consumers**



**Figure 67: Oracle Banking Routing Hub Configuration**



**Table 73: Oracle Banking Routing Hub Configuration**

Component Name	Component Type	Condition	Comments
<b>Add</b>	Button		Pops up add dialog
<b>Import</b>	Button		Pops up import dialog
<b>Search</b>	Combo Box One		Provides search functionality with case insensitive (Service Consumer Name)
<b>View</b>	menu option	Non-editable	Pops up view dialog
<b>Edit</b>	menu option		Pops up edit dialog
<b>Delete</b>	menu option		
<b>Export</b>	Sub menu item		
<b>JSON</b>	menu option		Exports in JSON
<b>SQL</b>	menu option		Exports in SQL
<b>Configuration</b>	menu option		Pops up configuration dialog
<b>Request Audit</b>	menu option		Pops up request audit log

This section contains the following subsections:

- [2.34.1.1 Add](#)
- 2.34.1.2 Environment Variables
- 2.34.1.3 Import
- 2.34.1.4 View
- 2.34.1.5 Edit
- 2.34.1.6 Delete
- 2.34.1.7 JSON Export
- 2.34.1.8 SQL Export

### 2.34.1.1 **Add**

You can create service consumer manually.

On **Service Consumers** screen, click **Add** to create service consumer.

Figure 68: Add

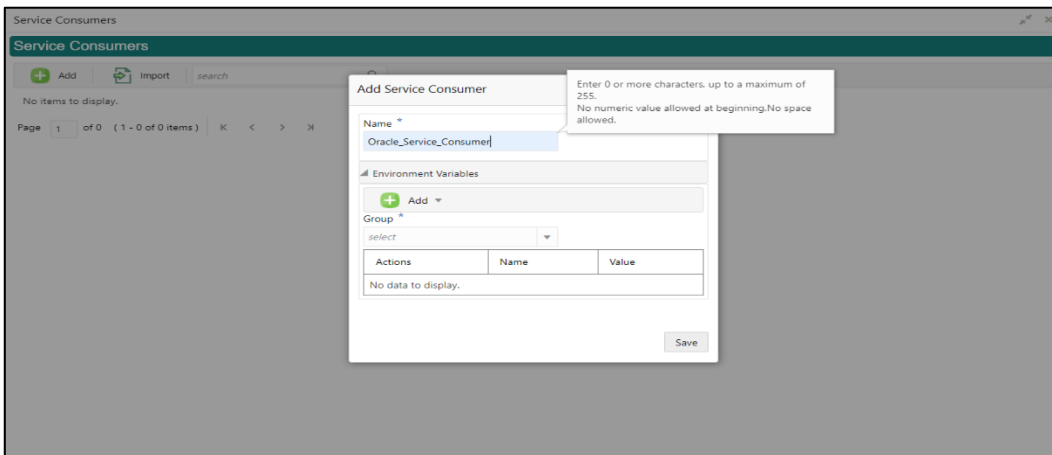


Table 74: Add

Component Name	Component Type	Is Mandatory	Data type	Validation	Comments
<b>Name</b>	Text Box	Yes	Alphanumeric with special characters	<ul style="list-style-type: none"> <li>Name cannot be blank</li> <li>Specify 0 or more characters, up to a maximum of 255</li> <li>No numeric value at beginning and no space allowed</li> </ul>	Unique Service Consumer name
<b>Environment Variables</b>	Table Content				
<b>Save</b>	Button				Saves the Service Consumer

### 2.34.1.2 Environment Variables

You can define the group of variables, which can be accessed through the specific consumer's configuration.

**Below is the syntax for accessing environment variables:**

\$env.Environment\_Group\_Name.Environment\_Variable\_Name  
 such as: \$env.COMMON.BRANCH\_CODE

Figure 69: Environment Variables

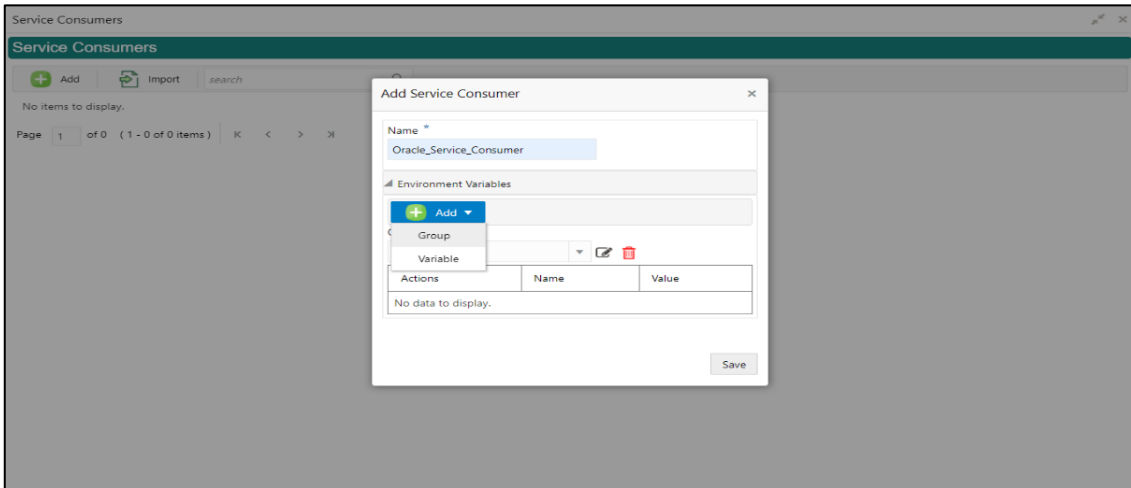


Figure 70: Environment Variables

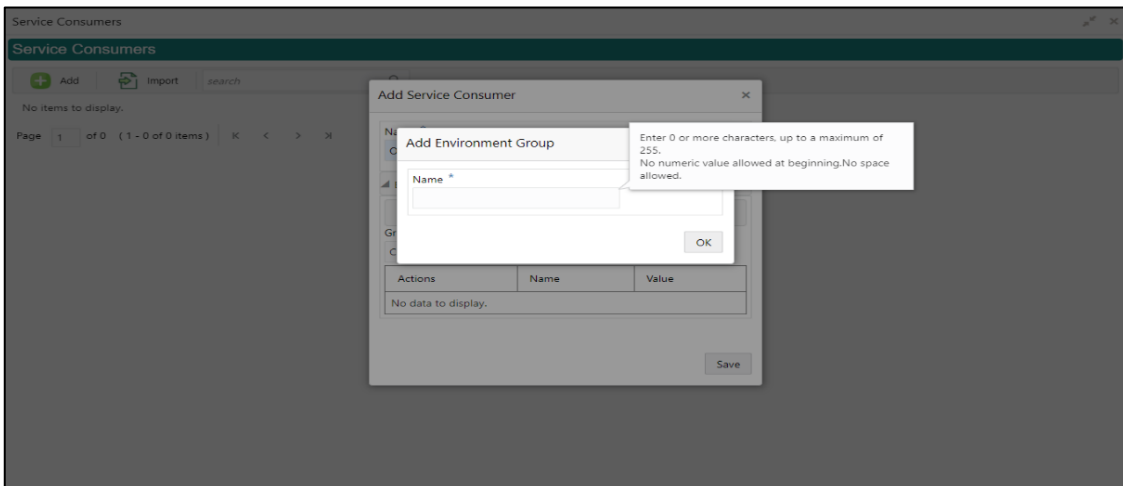


Figure 71: Environment Variables

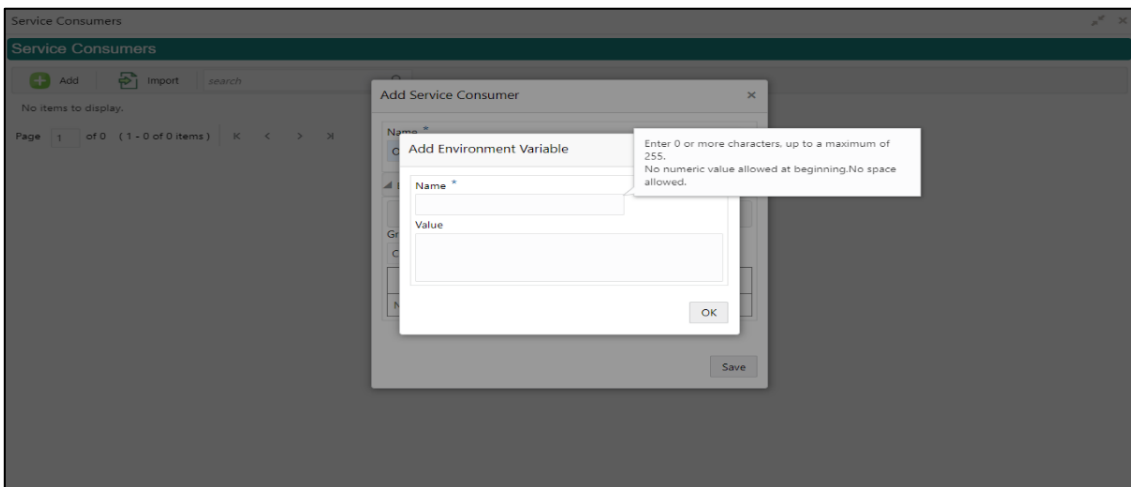


Table 75: Environment Variables

Component Name	Component Type	Is Mandatory	Data type	Validation	Comments
<b>Add</b>	Menu Item				
<b>Group</b>	Menu option				Pops up add group dialog
<b>Variable</b>	Menu option				Pops up add variable dialog
<b>Navigation: Service Consumer -&gt; Environment Variables -&gt; 3 dot icon (operation menu)</b>					
<b>Edit</b>	menu option / icon				Pops up edit dialog
<b>Delete</b>	menu option / icon				Deletes group / variable
<b>Environment Group / Variable</b>					
Name	Text Box	Yes	Alphanumeric with special characters	<ul style="list-style-type: none"> <li>Name cannot be blank</li> <li>Specify 0 or more characters, up to a maximum of 255</li> <li>No numeric value at beginning and no space allowed</li> </ul>	
Value	Text Area				Value can either be hardcoded or Velocity mapping.

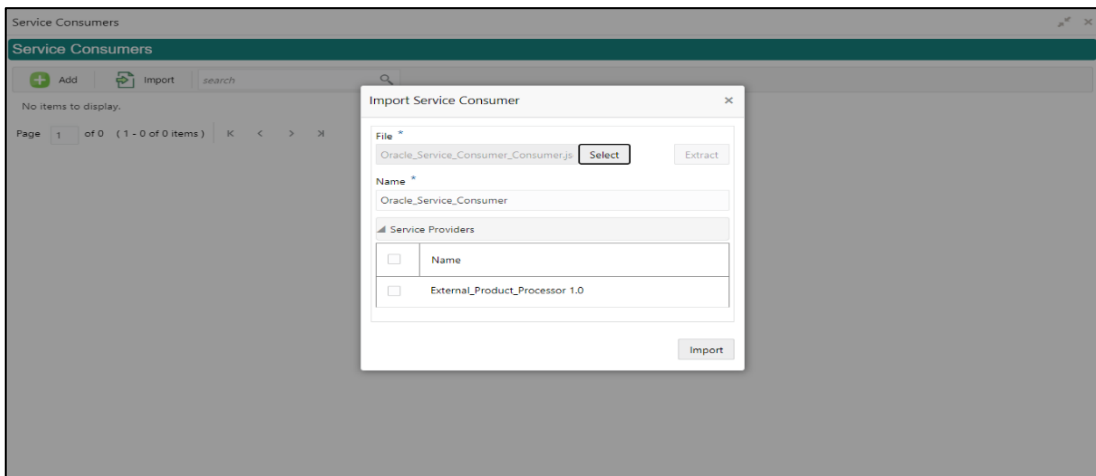
OK	Button				Saves the group / variable and displays it in the list
----	--------	--	--	--	--

**2.34.1.3 Import**

You can create a service consumer by importing the JSON file and manually selecting the service providers or select all providers that needs to be imported.

On **Service Consumers** screen, click **Import**.

*Figure 72: Import*



**Table 76: Import**

Component Name	Component Type	Is Mandatory	Data type	Validation	Condition	Comments
<b>File</b>	File picker	Yes		Allows only to select one file	Accepts only JSON file	Pops up file selection dialog box
<b>Extract</b>	Button	Yes				Extracts Consumer Name and Service Provider list from JSON file and displays it in the respective elements.

Component Name	Component Type	Is Mandatory	Data type	Validation	Condition	Comments
<b>Name</b>	Text Box	Yes	Alphanumeric with special characters	<ul style="list-style-type: none"> <li>Name cannot be blank</li> <li>Specify 0 or more characters , up to a maximum of 255</li> <li>No numeric value at beginning and no space allowed</li> </ul>	Editable	Unique
<b>Service Provider</b>	Collapsible Header & Content					Displays the list of service providers that are present in JSON file
<b>Import</b>	Button					Imports Service Consumer

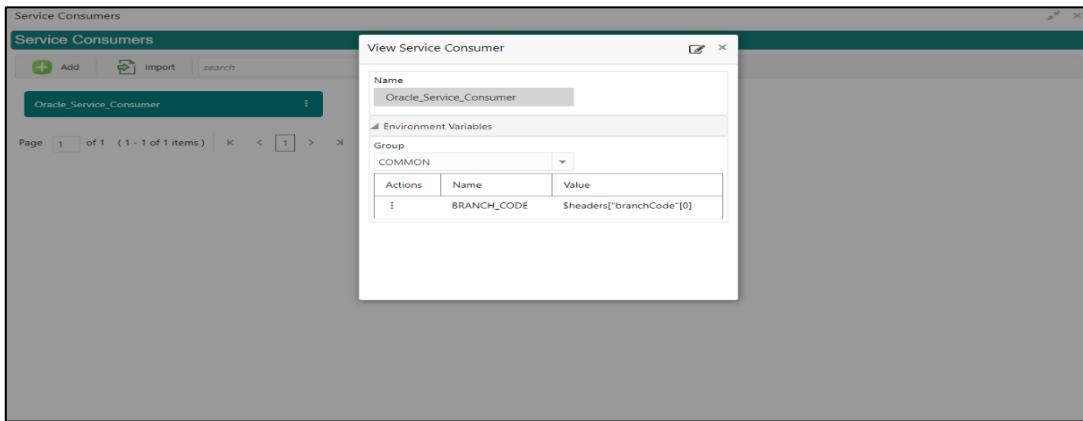
**Note:** Below data needs to be changed after importing consumer configuration file:

- Implementation Host and Port
- Implementation Authentication Password

#### 2.34.1.4 View

You can view consumer details and can also switch to edit form by clicking on edit icon. On **Service Consumers** screen, click **Operation Menu (3 dot icon)**, and select **View**.

**Figure 73: View**

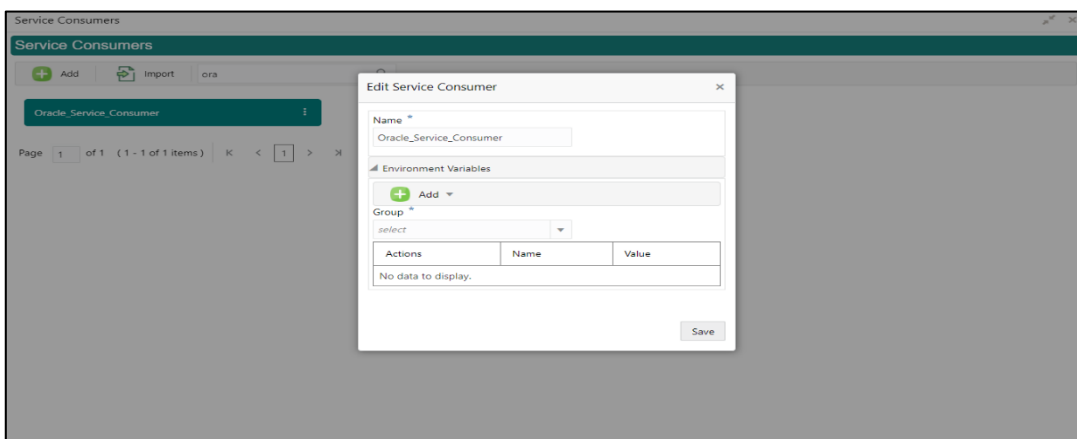


### 2.34.1.5 Edit

You can modify the consumer details.

On **Service Consumers** screen, click **Operation Menu (3 dot icon)**, and select **Edit**.

**Figure 74: Edit**



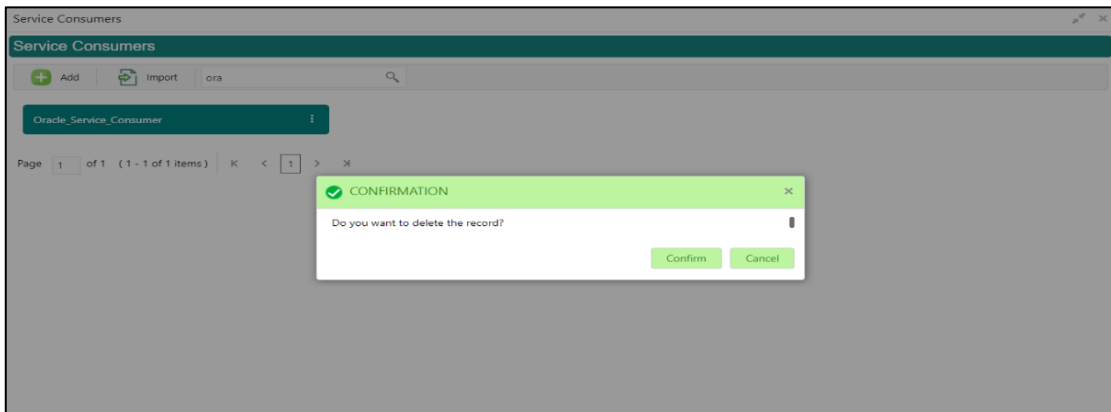
### 2.34.1.6 Delete

You can delete the consumer.

On **Service Consumers** screen, click **Operation Menu (3 dot icon)**, and select **Delete**.

**Figure 75: Delete**





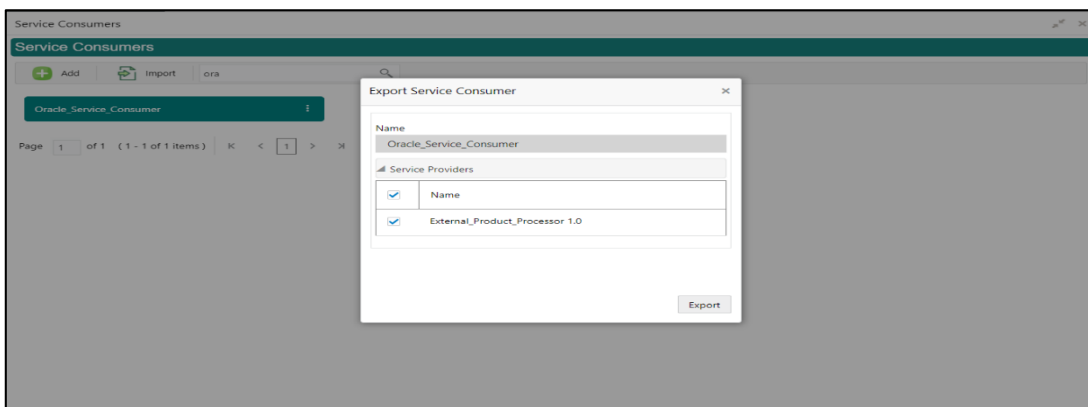
### 2.34.1.7 JSON Export

You can export the consumer configuration as JSON file.

On **Service Consumers** screen, click **Operation Menu (3 dot icon)**, and select **Export**

Then, Click **JSON**.

**Figure 76: JSON Export**




---

Note: You have an option to select service providers from the list that needs to be exported or can click on Select All option for all service providers.  
JSON Export feature will export below data:

---

- Selected service consumer
- All consumer services
- Selected service providers with services
- Default implementation of selected service providers with services (without Host, Port, and Authentication Password)
- Default transformations
- All default implementation routes

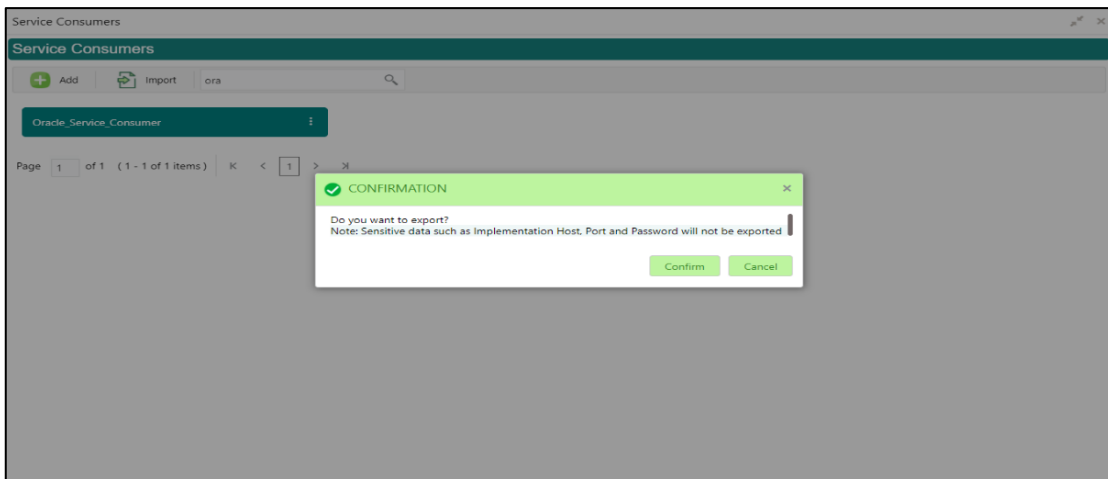
### 2.34.1.8 SQL Export

You can export the consumer configuration as SQL file.

On **Service Consumers** screen, click **Operation Menu (3 dot icon)**, and select **Export**

Then, Click **SQL**.

**Figure 77: SQL Export**




---

Note: SQL Export feature will export entire configuration without Host, Port and Authentication Password details.

---

### 2.34.2 Service Providers

Service Providers are the product processors configure to process request send by oracle banking routing hub on behalf of service consumers.

The Service Provider comprises of destination integration details.

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Routing Hub**.
2. Under **Routing Hub**, click **Service Consumers**. Under **Service Consumers**, click **<Specific Service Consumer>**.

→ The **Service Providers** screen is displayed.

**Figure 78: Service Providers**

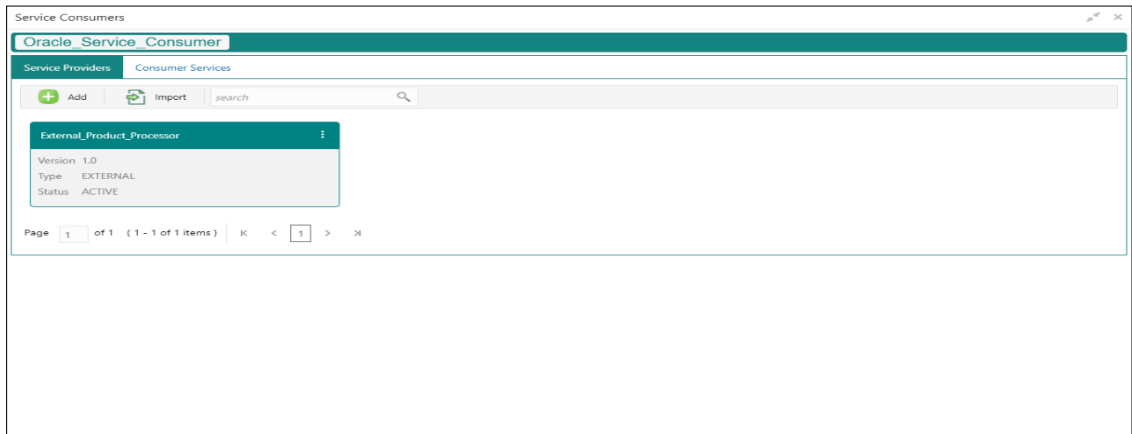


Figure 79: Service Providers

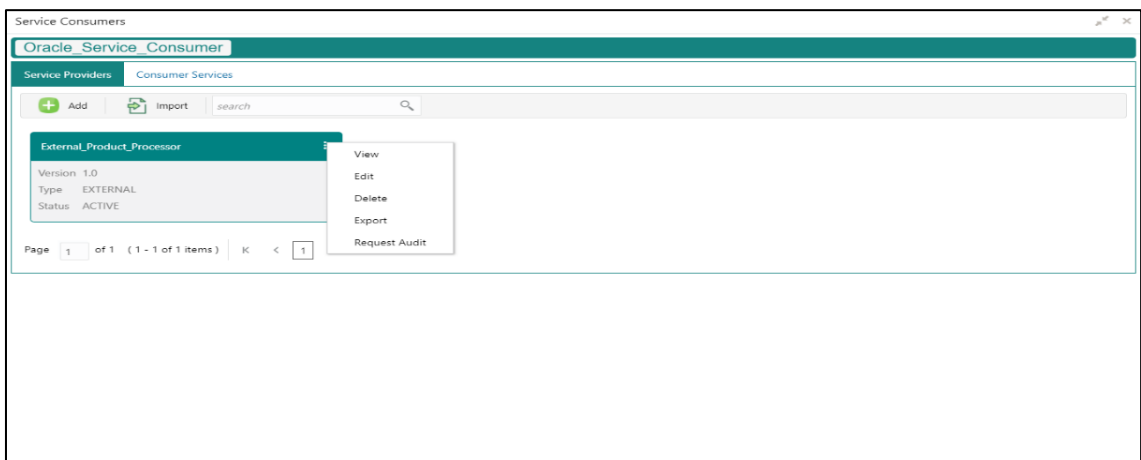


Table 77: Service Providers

Component Name	Component Type	Is Mandatory	Data type	Validation	Condition	Comments
<Service Consumer>	Button					Navigates back to Service Consumers
Add	Button					Pops up add dialog
Import	Button					Pops up import dialog
Search	Combo Box One					Provides search functionality with case insensitive (Service Provider Name)

Navigation: <b>Service Providers -&gt; 3 dot icon (operation menu)</b>						
<b>View</b>	menu option				Non-editable	Pops up view dialog
<b>Edit</b>	menu option					Pops up edit dialog
<b>Delete</b>	menu option					
<b>Export</b>	menu option					Exports in JSON
<b>Request Audit</b>	menu option					Pops up request audit log

This section contains the following subsections:

- [2.34.2.1 Add](#)
- 2.34.2.2 Headers
- 2.34.2.3 Service
- 2.34.2.4 WSDL
- 2.34.2.5 SWAGGER
- 2.34.2.6 Import
- 2.34.2.7 View
- 2.34.2.8 Edit
- 2.34.2.9 Delete
- 2.34.2.10 Export

### 2.34.2.1 **Add**

You can create service provider manually.  
On **Service Providers** screen, click **Add** to create service providers.

**Figure 80: Add**

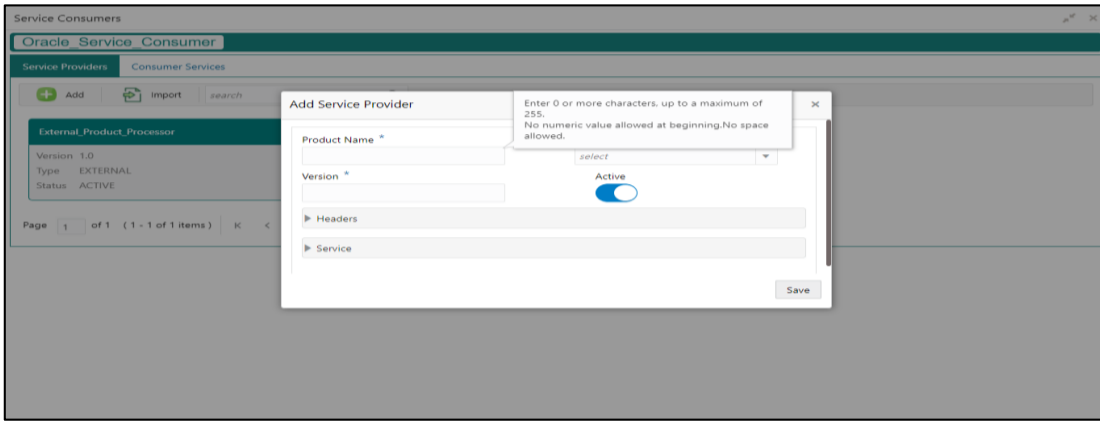


Table 78: Add

Component Name	Component Type	Is Mandatory	Data type	Validation	Comments
Product Name	Text Box	Yes	Alphanumeric with special characters	<ul style="list-style-type: none"> <li>Name cannot be blank</li> <li>Specify 0 or more characters, up to a maximum of 255.</li> <li>No numeric value at beginning and no space allowed.</li> </ul>	Unique provider name
Type	Combo Box One	Yes			Predefined Values: INTERNAL / EXTERNAL
Version	Text Box	Yes	Number	<ul style="list-style-type: none"> <li>Version cannot be blank</li> <li>Specify 0 or more characters, up to a maximum of 255.</li> </ul>	Unique provider version

Component Name	Component Type	Is Mandatory	Data type	Validation	Comments
				<ul style="list-style-type: none"> <li>Specify only numeric or decimal values.</li> </ul>	
<b>Active</b>	Switch				Predefined Values: ACTIVE / INACTIVE If provider is marked as inactive, then all related routes will be stopped.
<b>Headers</b>	Collapsible Header & Content				Provider specific headers
<b>Service</b>	Collapsible Header & Content				Provider specific service details
<b>Save</b>	Button				Saves the Service Provider

### 2.34.2.2 Headers

External product processor might require some standard headers to be passed along with the request. You can specify the headers which are required by service endpoints for its all implementations but not present in swagger file.

These headers can be configured in oracle banking routing hub using the steps given below.

Figure 81: Headers

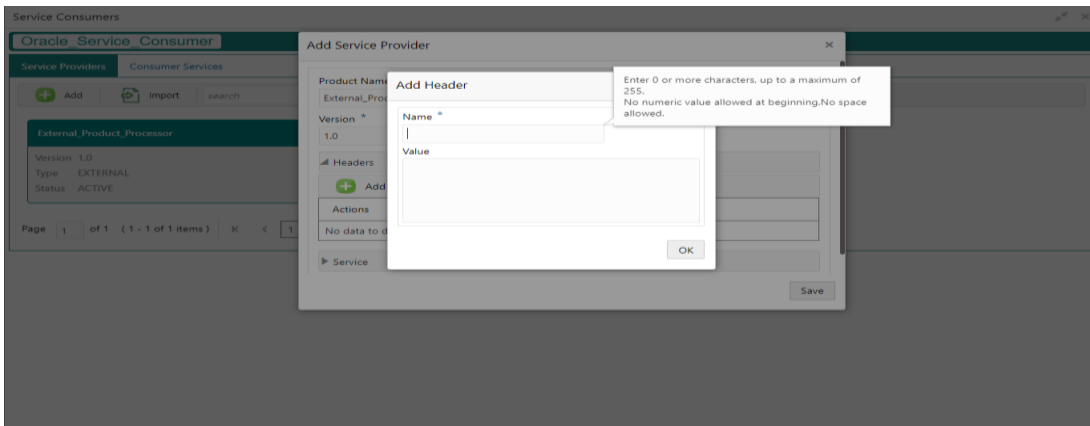


Figure 82: Headers

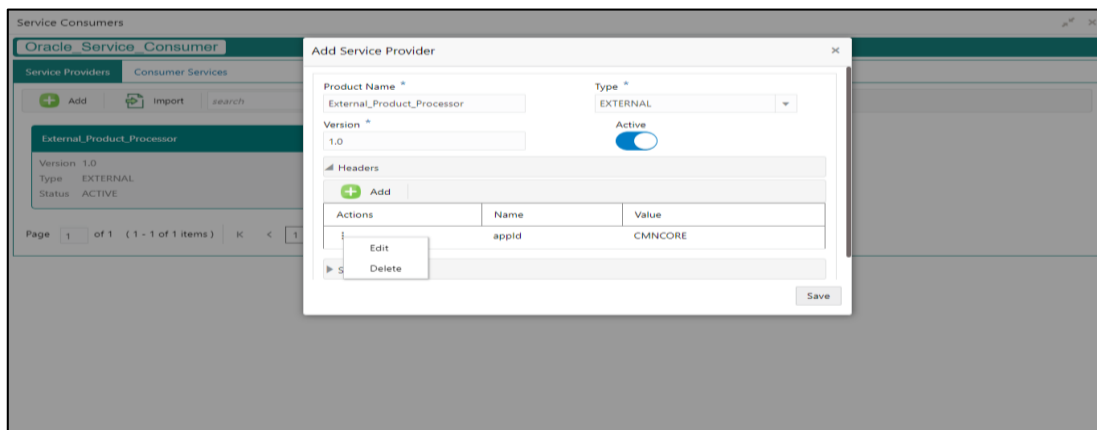


Table 79: Headers

Component Name	Component Type	Is Mandatory	Data type	Validation	Condition	Comments
<b>Add</b>	Button					Pops up add dialog
Navigation: <b>Service Providers -&gt; Headers -&gt; 3 dot icon (operation menu)</b>						
<b>Edit</b>	menu option					Pops up edit dialog
<b>Delete</b>	menu option					Deletes header
Navigation: <b>Service Providers -&gt; Headers -&gt; Add</b>						

Component Name	Component Type	Is Mandatory	Data type	Validation	Condition	Comments
<b>Name</b>	Text Box	Yes	Alphanumeric with special characters	<ul style="list-style-type: none"> <li>Name cannot be blank</li> <li>Specify 0 or more characters, up to a maximum of 255.</li> <li>No numeric value at beginning and no space allowed.</li> </ul>		
<b>Value</b>	Text Area	Yes	Alphanumeric with special characters	<ul style="list-style-type: none"> <li>Value cannot be blank</li> <li>Specify 0 or more characters, up to a maximum of 255.</li> <li>No space allowed.</li> </ul>		Value can either be hardcoded or can be Velocity mapping.
<b>OK</b>	Button					Saves the header details and displays it in the list

### 2.34.2.3 Service

Figure 83: Service



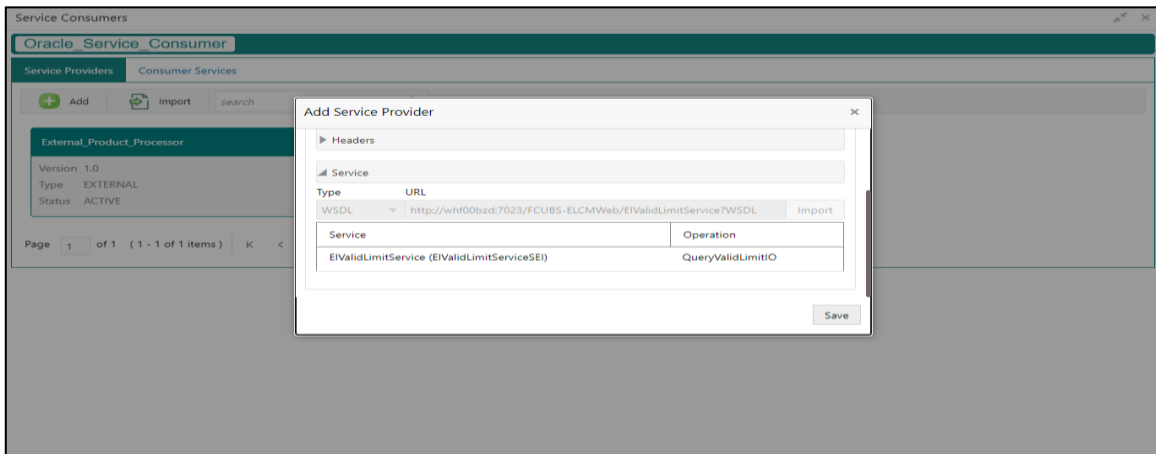


Table 80: Service

Component Name	Component Type	Is Mandatory	Comments
Type	Combo Box One	Yes	Predefined Values: WSDL / SWAGGER
URL	Text Box	Yes	Service URL of the file location
Gateway Prefix	Text Box		Gateway Prefix is context path of below formatted URL http://host:port/gateway-prefix/endpoint
Import	Button		Extracts the service information from URL and displays it in the Service list

#### 2.34.2.4 WSDL

The Web Services Description Language (WSDL) is an XML-based interface description language that is used for describing the functionality offered by a web service. Currently, non-SSL WSDL URL is only supported.

---

Note: In case there is a change in wsdl file, then same wsdl file need to be imported again in order to update the provided service information in routing hub.

---

#### 2.34.2.5 SWAGGER

Swagger is an Interface Description Language for describing RESTful APIs expressed using JSON. Currently, Swagger 2.0 & OpenAPI 3.0 both are supported.

---

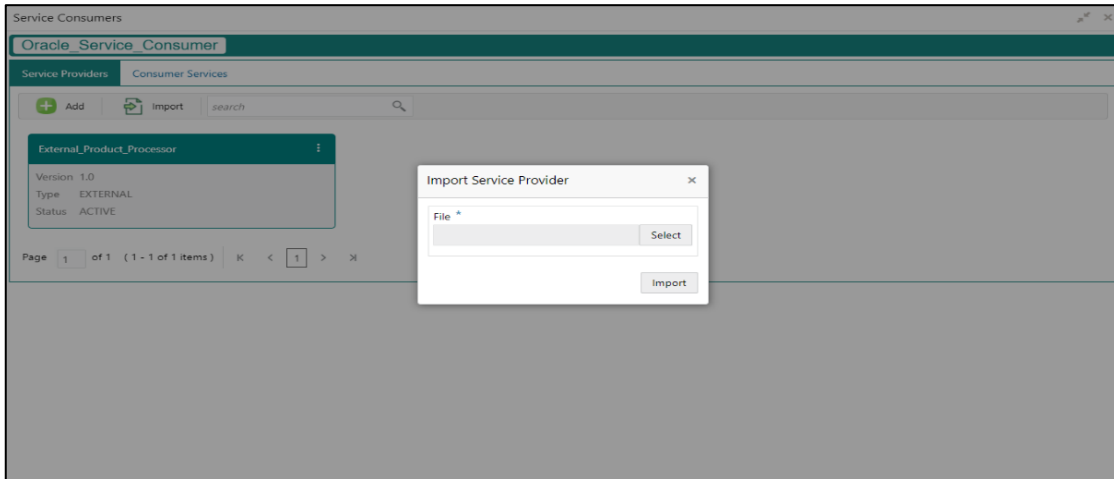
Note : In case there is a change in swagger file, then same swagger file need to be imported again in order to update the provided service information in routing hub.

---

### 2.34.2.6 Import

You can create a service provider by importing the JSON file. On **Service Providers** screen, click **Import**.

**Figure 84: Import**



**Table 81: Import**

Component Name	Component Type	Is Mandatory	Validation	Condition	Comments
<b>File</b>	File picker	Yes	Allows only to select one file	Accepts only JSON file	Pops up file selection dialog box
<b>Import</b>	Button				Imports Service Provider

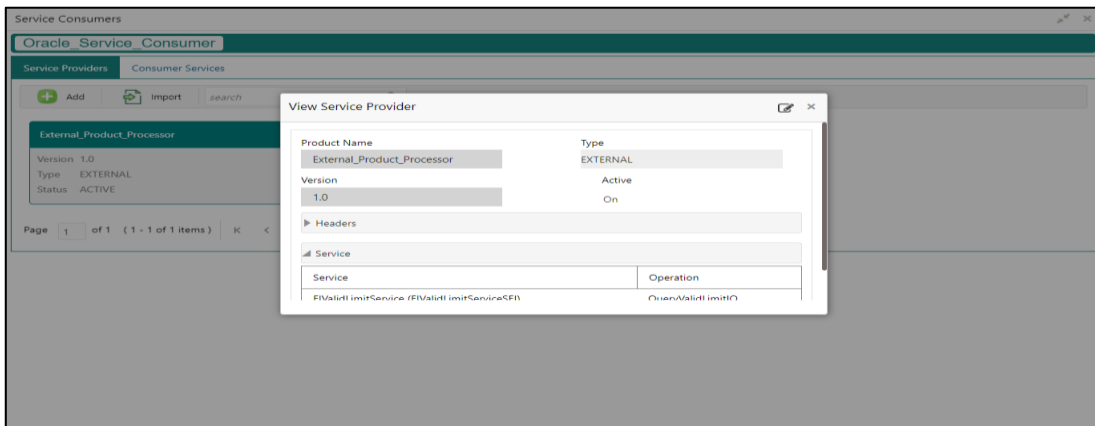
Note: Below data needs to be changed after importing provider configuration file:

- Implementation Host and Port
- Implementation Authentication Password

### 2.34.2.7 View

You can view provider details and can also switch to edit form by clicking on edit icon. On **Service Providers** screen, click **Operation Menu (3 dot icon)**, and click **View**.

Figure 85: View Service Provider

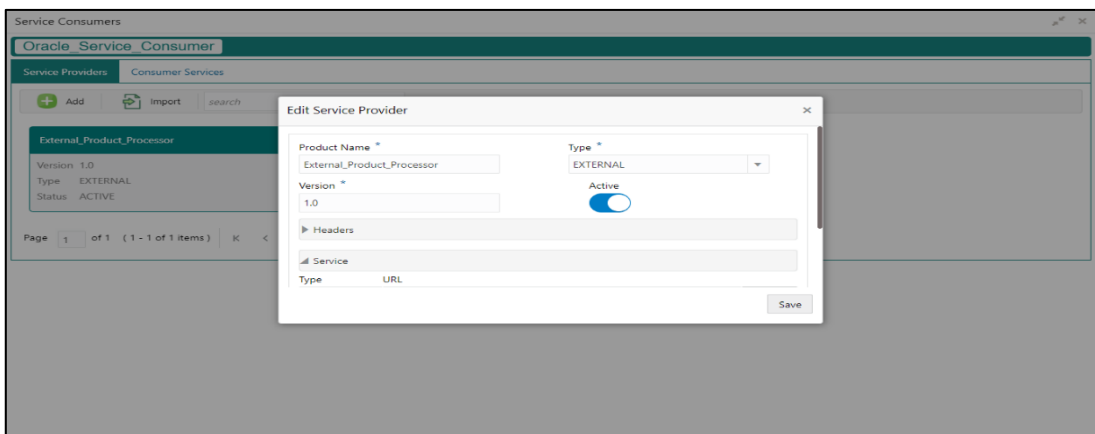


### 2.34.2.8 Edit

You can modify the provider details.

On **Service Providers** screen, click **Operation Menu (3 dot icon)**, and click **Edit**.

Figure 86: Edit

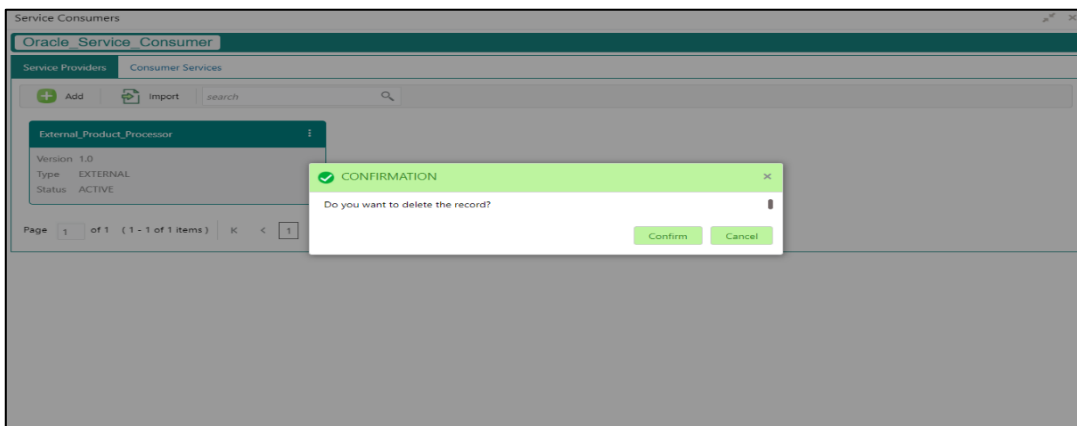


### 2.34.2.9 Delete

You can delete the provider.

On **Service Providers** screen, click **Operation Menu (3 dot icon)**, and click **Delete**.

Figure 87: Delete

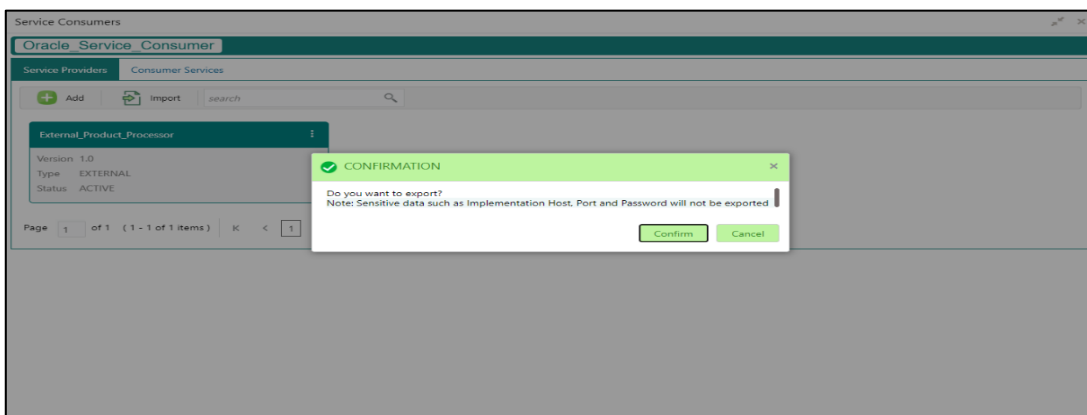


### 2.34.2.10 Export

You can export the provider configuration as JSON file.

On **Service Providers** screen, click **Operation Menu (3 dot icon)**, and click **Export**.

Figure 88: Export




---

Note: Below data is not be exported:

- Implementation Host
- Implementation Port
- Implementation Authentication Password

The above data needs to be configured manually after importing the configuration file. Same has been mentioned in Import section

---

### 2.34.3 Experian Configuration

#### 2.34.3.1 Experian Fetch Credit Report

Figure 89: Experian Fetch Credit Report

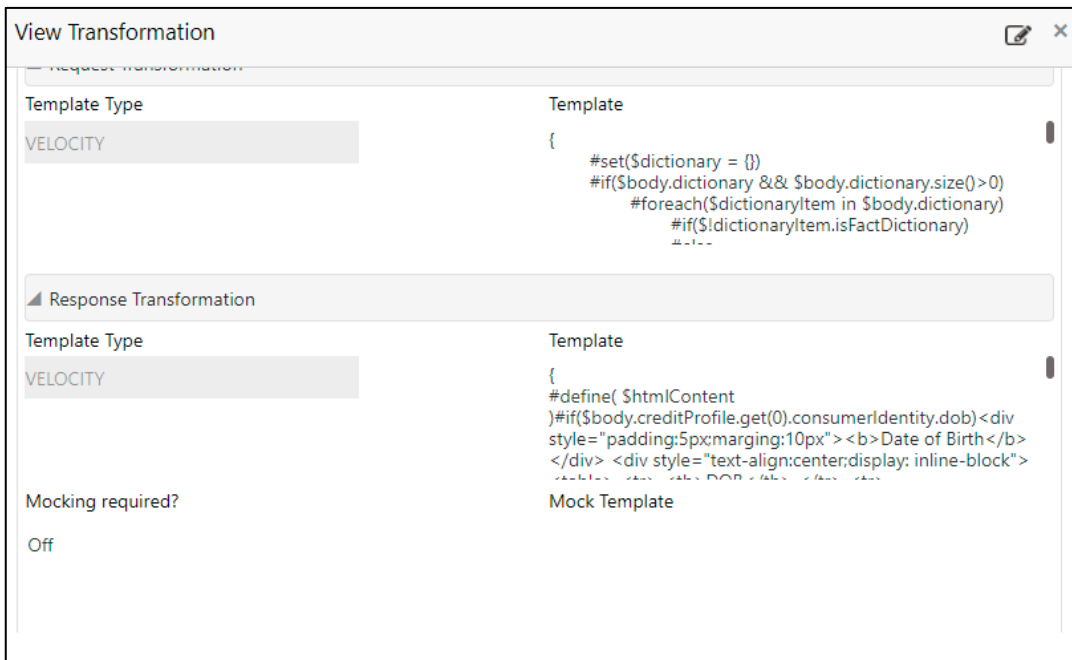
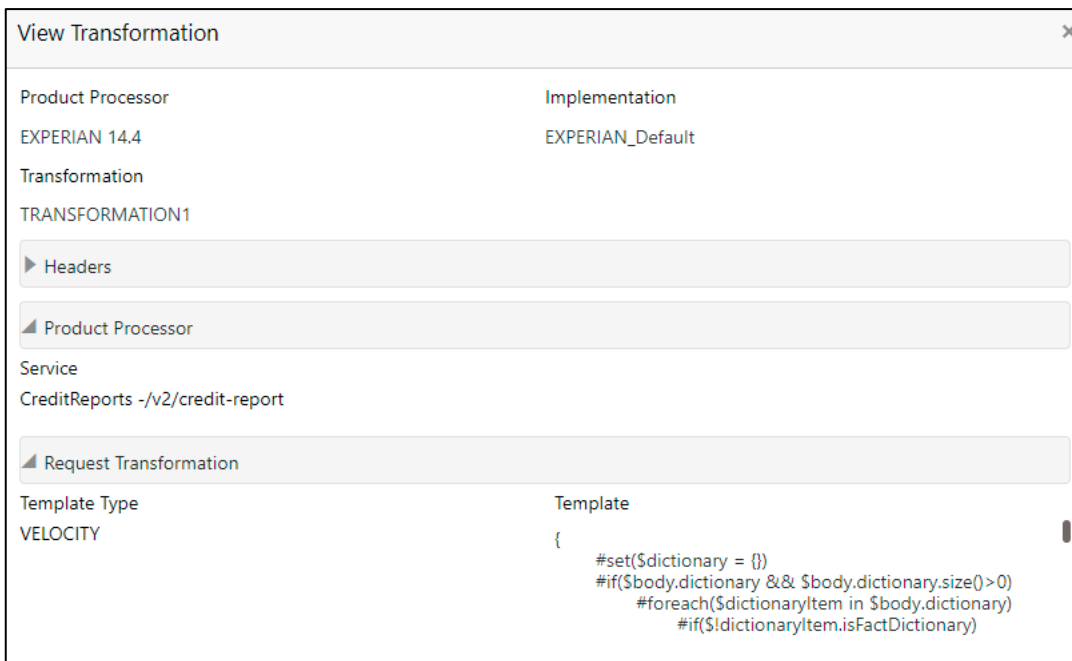


Figure 90: Experian Fetch Credit Report



#### 2.34.3.2 Experian Sandbox

Service Consumer is used to export details of fetch credit report from sandbox environment

Figure 91: Experian Sandbox

Service Consumers		
CBSToBureau		
Service Providers Consumer Services		
Actions	Name	Description
:	Fetch_Credit_Report	To fetch credit report
:	fetchCreditReportDev	This service is used to fetch the credit report of a person
:	fetchCreditReport	Fetch Credit Report Response DTO changes
:	fetchCreditReportBackup1	This service is used to fetch the credit report of a person
:	authorize	Fetch the jwt authorization taken from the Credit Bureau

Page 1 of 1 (1 - 5 of 5 items) < 1 >

### 2.34.4 Equifax Configuration

Equifax is configured in lookup as a bureau and rule services to configure in oracle banking routing hub as consumer service to fetch details from Equifax sand.

#### 2.34.4.1 Equifax Fetch Credit Report

Figure 92: Equifax Fetch Credit Report

View Transformation

QueryParams

Request Transformation

Template Type: VELOCITY

```

Template
{
  #set($body = $snapshot.get(0).body)
  "consumers": [
    "name": [
      ...
    ]
  ]
}
        
```

Response Transformation

Template Type: VELOCITY

```

Template
#set ($obj = "") ## dummy object
#set ($int_class = $obj.class.forName("java.lang.Number"))
#set ($bool_class = $obj.class.forName("java.lang.Boolean"))
#set ($string_class = $obj.class.forName("java.lang.String"))
#set ($map_class = $obj.class.forName("java.util.Map"))
...
        
```

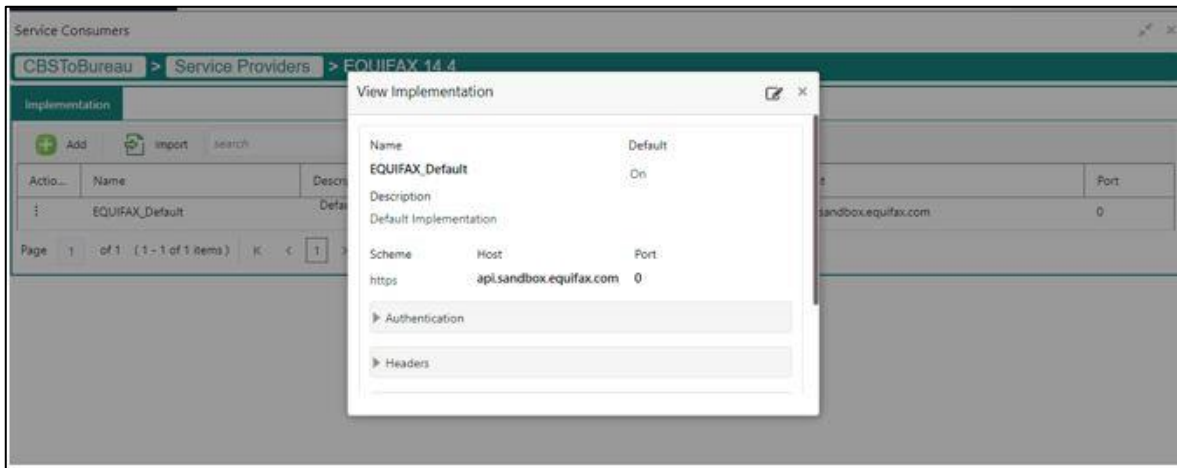
Actio...	Name	Status	Product Processor	Implementation	Service
:	EXP_AUTH_TRANS	ACTIVE	EXPERIAN 14.4	EXPERIAN_Default	experianAuth - /oauth2/v1/token
:	EXP_TRANSFORMATION	ACTIVE	EXPERIAN 14.4	EXPERIAN_Default	CreditReports - /v2/credit-report
:	EXP_Extended_View_Attributes_and_Score_Doc	ACTIVE	EXPERIAN 14.4	EXPERIAN_Default	ExtendedViewAttributesAndScore - /v1/extended-view-attributes-and-score
:	EXP_DOCUMENT	ACTIVE	EXPERIAN 14.4	EXPERIAN_DOC	premierprofilespdf - /v1/reports/premierprofiles.pdf
:	EQUIFAX_AUTH_TRANS	ACTIVE	EQUIFAX 14.4	EQUIFAX_Default	equifaxAuth - /v2/oauth/token
:	<b>EQUIFAX_TRANS</b>	ACTIVE	EQUIFAX 14.4	EQUIFAX_Default	requestConsumerCreditReport - /reports/credit-report
:	EXP_Extended_View_Attributes_and_Score	ACTIVE	EXPERIAN 14.4	EXPERIAN_Default	ExtendedViewAttributesAndScore - /v1/extended-view-attributes-and-score

Page 1 of 1 (1 - 7 of 7 items) < 1 >

### 2.34.4.2 Equifax Sandbox

Service consumer exports details of fetch credit report from sandbox environment.

**Figure 93: Equifax Sandbox**



### 2.34.5 Document Configuration

Bureaus usually send applicants credit reports in PDF or encrypted format. The product processors prefers the PDF reports for easy readability and usability. In addition, product processors want to display PDF reports in their system and share these reports with the applicants. In such cases, the PDF credit reports are stored in the document server, which can be accessed by the bureau integration service and the product processor.

#### 2.34.5.1 Content Management Server

The Oracle content management server is used to store and manage documents. It can accept encoded strings of data and stores them in the provided extension format like (pdf, jpeg, png). The content management server allows to view the document online.

The latest available version is 12.2.1.4.

The cmc-document-service is a gateway to access the oracle content management server. Using this service, other applications can store, manage and process the document with ease.

#### 2.34.5.2 Environment Configuration

To install cmc-document-services, additional configuration is added. This includes the moc domain.

```
Dflyway.domain.locations=db/migration/domain/plato,db/migration/domain/sms,db/migration/domain/moc,db/migration/domain/cmc
```

```
-Dflyway.domain.placeHolders.moc.cmc-comments-services.server.port=<MOC_PORT>
```

```
-Dflyway.domain.placeHolders.moc.cmc-document-services.server.port=<MOC_PORT>
```

```

-Dflyway.domain.placeHolders.dmsServiceUrl=<CONTENT_SERVER_URL>

-Dflyway.domain.placeHolders.dmsServiceUsrname=<CONTENT_SERVER_USERNAME>

-Dflyway.domain.placeHolders.dmsServicePwd=<CONTENT_SERVER_PASSWORD>

-Dflyway.domain.placeHolders.cmc-document-services.schema=<SCHEMA_NAME>

-Dflyway.domain.placeHolders.cmc-document-services.server.port=<SCHEMA_PORT>

-Dflyway.domain.placeHolders.cmc-document-services.username=<SCHEMA_USERNAME>

-Dflyway.domain.placeHolders.cmc-document-services.password=<SCHEMA_PASSWORD>

-Dflyway.domain.placeHolders.cmc-document-services.domain.jndi=jdbc/CMNCORE

-Dflyway.domain.placeHolders.cmc-document-services.jndi=jdbc/CMNCORE

-Dflyway.domain.placeHolders.cmc-document-services.db.jndi=jdbc/CMNCORE

-Dflyway.domain.placeHolders.cmc-document-services.jdbcUrl=jdbc:oracle:thin:@//<SCHEMA_IP>:<SCHEMA_PORT>/<SERVICE_NAME>

-Dflyway.domain.placeHolders.cmc-document-services.db.jdbcUrl=jdbc:oracle:thin:@//<SCHEMA_IP>:<SCHEMA_PORT>/<SERVICE_NAME>

```

## 2.34.6 Troubleshooting

### 2.34.6.1 Oracle FLEXCUBE Onboarding issues faced during cmc-obcbs-service and cmc-obrh-services integration

Experian password expired  
 The password for the Experian account had expired  
 The solution is to login to the Experian website and reset the password. The new password is generated via mail and you can configure in oracle banking routing hub for token generation.

### 2.34.6.2 Unable to connect to external server

The oracle banking routing hub server is unable to connect to the experian server. The proxy is not configured

The VM arguments were added for oracle banking routing hub's managed server.

```
-Dhttps.proxyHost=www-proxy-idc.in.oracle.com
```

```
-Dhttps.proxyPort=80
```

```
https://confluence.oraclecorp.com/confluence/pages/viewpage.action?pageId=2863487960
```

### 2.34.6.3 Oracle Banking Routing Hub environment variable value not found

The environment variable for the Bureau Integration Service product processor is improper. (\$.headers["bureauType"][0])

The correct path was provided(\$.headers["bureauType"])[0]



## **2.35 Bureau Integration Service**

### **2.35.1 Overview**

Bureau integration service facilitates financial institutions to send requests to the credit bureau agencies for credit scores and reports. It also facilitates viewing reports received from the bureaus.

The credit report presents the credit information of an individual or a company, which is fetched by credit bureaus from various financial institutions. It is a detailed report, which contains the history of borrowings, repayment routine, defaults, and delays. This report contains vital information about a customer's credit score, personal information, employment details, contact information, and details of accounts in various banks of a given geographical region. The objective of this report is to present the financial history of an individual or a company, which further helps a bank to take a decision on granting a loan based on the credit score of a company or an individual.

For requesting and receiving the credit reports, bureau integration service is integrated with the financial institution or the product processor.

The oracle banking routing hub facilitates routing and transforming the information between the product processor, the underlying integration service and the bureau. The flow is as follows:

1. The product processor requests bureau integration service for credit reports. It provides the required customer information for whom the report is requested.
2. The routing hub transforms the data and forwards the request to the bureau integration service.
3. Once the integration service receives the request, the data is processed based on various criteria. The criteria contain the rules and facts of the product processor that are maintained in the rules engine.
4. Bureaus to be called are identified based on evaluation of the rules.
5. The integration service then sends the request to the routing hub, which transforms the data and sends the request to the respective credit bureaus.
6. The bureau processes the request and sends the credit report back.
7. The routing hub receives the report and transforms the report as per the defined template and sends it back to bureau integration service.
8. Bureau integration service then saves the data, displays the credit report, and sends the same to the product processor through the routing hub.

One or more bureaus can be called based on evaluation of the rules. The bureaus can be either called simultaneously or based on the response from the previous bureau call.

Bureau integration service maintains aging for credit report of an applicant. History service allows to store and pull existing credit report of an individual customer. The integration service retrieves report from history for those applicants if subsequent call to same bureau is made within defined period, beyond which a new credit report is called from the bureau. Existing credit reports from history are sent back to the product processor.

In case of multiple applicants being received by bureau integration service as a part of a lending application, based on the evaluation of criteria, the integration service consolidates all the multiple bureau responses into one and sends it to the product processor.

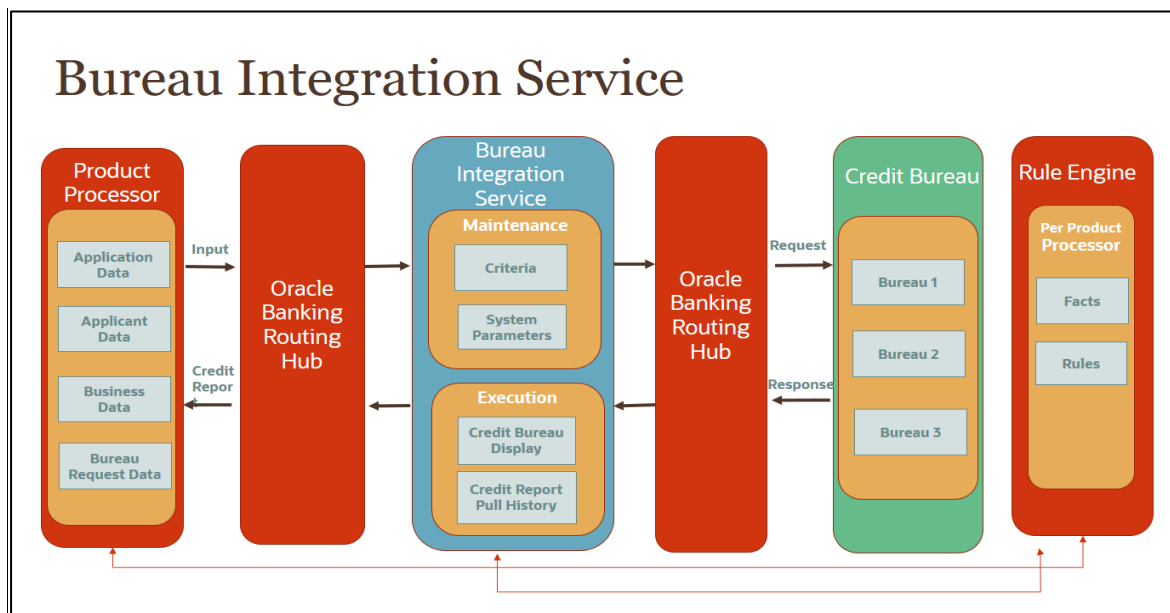
A new bureau can be added with only a configuration and without any change in the code. Two lookup types are required to be created in the bureau integration service. One for bureau and another for bureau product type. The additional maintenance required is configuration of the new bureau in the routing hub.

Bureau integration service supports override of criteria rules if the product processor wants to call a specific bureau or bureau product, for an applicant. In such cases, bureau service will not check criteria for rules evaluation. Instead, bureau service will call the bureau as intimated by the product processor in the request. Here, product processor can list one or more bureau's to be called.

Bureau Integration service supports decoding of encoded pdf string from a bureau response to a pdf report using web content document server. The document server generates a unique document ID for each record stored. Bureau service can access the pdf reports using this document ID.

The below flow diagram depicts how bureau integration service works with the integrated product processor and interfaces with the routing hub for fetching and displaying the credit bureau reports:

**Figure 94: Bureau Integration Service**



### Authorization process

To authorize and approve record, you need to perform the following actions:

1. Navigate to the required screen.
2. Click **Authorize**. The record pending for authorization are displayed.
3. Select the required record and click **Approve**.
4. The records are displayed in a widget. If you have modified the lookup, criteria twice, system displays two widgets with respective modification number along with the modified details.
5. Specify remarks for approving the record in the **Remarks** field.
6. Click **Confirm** and authorize the record.  
The record is authorized successfully.

## **2.36 Credit Bureau Display**

The credit bureau display screen facilitates to view the reports received from the various bureaus. The report includes credit history details of the customer and the credit score of the customer based on these details.

This section contains the following subsection:

- [2.36.1 View Credit Bureau Report](#)

### **2.36.1 View Credit Bureau Report**

The **Credit Bureau Display** screen allows the user to view the credit bureau report based on the various filter options provided.

**To view a credit bureau report:**

1. From **Home screen**, click **Credit Bureau**. Under **Credit Bureau**, click **Operations**.
2. Under **Operations**, click **Credit Bureau Display**.  
→ The **Credit Bureau Display** screen is displayed.

**Figure 95 : Credit Bureau Display**

3. Specify the fields on **Credit Bureau Display** screen. The fields, which are marked with asterisk, are mandatory. For more information on fields, refer to the field description table below.

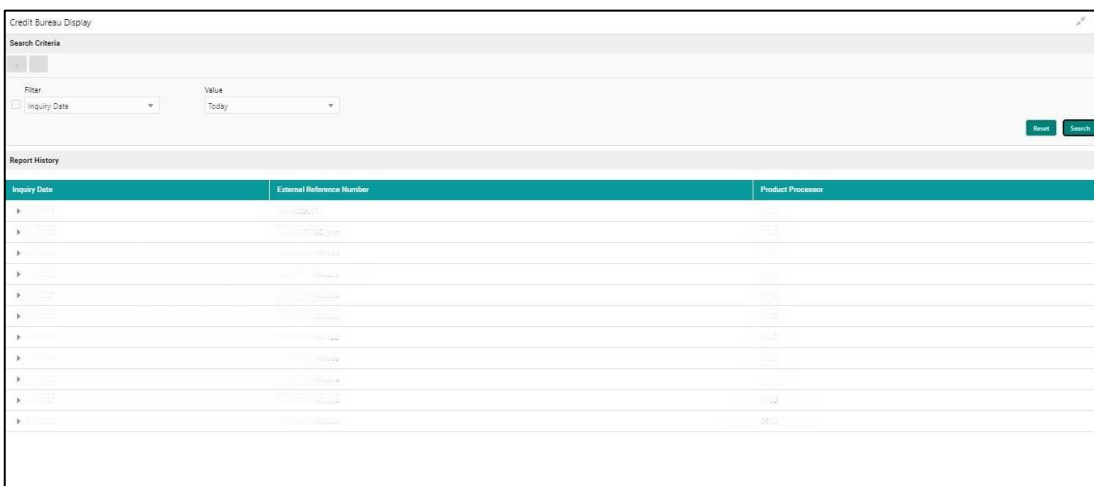
**Table 82: Credit Bureau Display- Field Description**

Field	Description
<b>Filter</b>	<p>Select the required option based on which you can search for the credit bureau reports from the drop-down list.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• External Reference Number</li> <li>• Inquiry ID</li> <li>• Inquiry Date</li> <li>• Bureau Name</li> <li>• Product Processor</li> <li>• Application Number</li> <li>• Bureau Report ID</li> </ul>
<b>Value</b>	<p>Specify the required details or select the appropriate option for the selected filter option.</p> <p>This field appears once you select an option from the <b>Filter</b> list.</p>
<b>From Date</b>	<p>Select the start of the period during which the report was generated.</p> <p>This field appears once the user select the filter option as <b>Inquiry Date</b> and value as <b>Date Range</b>.</p>
<b>To Date</b>	<p>Select the end date of the period during which the report was generated.</p>

Field	Description
	This field appears if you have selected the filter option as <b>Inquiry Date</b> and value as <b>Date Range</b> .

- In the **Search Criteria** section, specify the details and click **Search**.
  - The **Credit Bureau Display – Report History** screen displays showing a list of records based on the specified search criteria.

**Figure 96 : Credit Bureau Display – Report History**



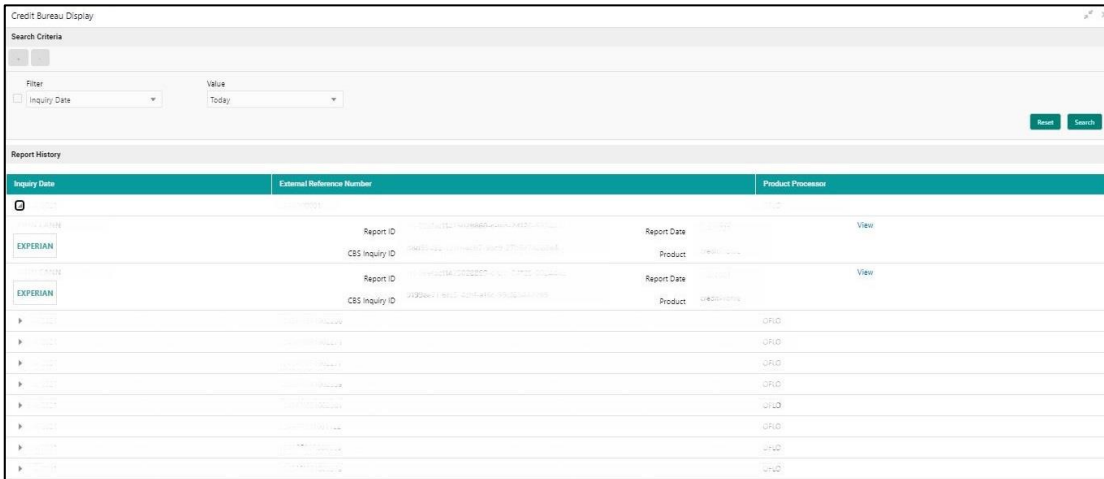
For more information on fields, refer to the field description table below.

**Table 83: Credit Bureau Display – Field Description**

Field	Description
<b>Inquiry Date</b>	Displays the inquiry date of the request from product processor to bureau integration service.
<b>External Reference Number</b>	Displays the external reference number provided by the product processor.
<b>Product Processor</b>	Displays the name of the product processor that sent the request.


- Click the arrow icon to view the corresponding list of reports.
  - The **Credit Bureau Display – View List of Report** screen displays.

**Figure 97 : Credit Bureau Display - View List of Report**



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

**Table 84: Create Bureau Display View List of Report – Field Description**

Field	Description
The Following fields appear if you click 	
<b>&lt;Applicant Name&gt;</b>	Displays the name of the applicant.
<b>&lt;Bureau Name&gt;</b>	Displays the name of the credit bureau agency.
<b>Inquiry ID</b>	Displays the inquiry ID generated by bureau integration service.
<b>Report ID</b>	Displays the report ID provided by the credit bureau agency.
<b>Report Date</b>	Displays the date on which the credit bureau report is generated by the bureau.
<b>Product</b>	Displays the product of the credit bureau agency.
<b>View</b>	Click <b>View</b> to view the credit bureau report.

6. Click the **View** link to view the credit bureau report.

→ The **Credit Bureau Report** displays.

**Figure 98 : Credit Bureau Report**

Credit Bureau Display

**Bureau Report**

Bureau Name: EXPERIAN      Report ID: 000000000000  
Product Name: CREDIT\_PROFILE      Report Date: 12/16/2021

Date of Birth  
**DOB**

Name  
**firstName middleName surname type**

firstName	middleName	lastName	type
JOHN	DAVID	CARROLL	INDIVIDUAL
JOHN	MARY		

Social Security Number  
**Number SSN Indicator**

Risk Model  
**Evaluation Model Indicator Score Score Factors**

Evaluation	Model Indicator	Score	Score Factors
11	11	11	Importance of score : 11
12	12	12	Importance of score : 12
13	13	13	Importance of score : 13

Close

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

**Table 85: Create Bureau Report – Field Description**

Field	Description
<b>Bureau Name</b>	Displays the name of the credit bureau agency.
<b>Product Name</b>	Displays the product name of the credit bureau agency.
<b>Report ID</b>	Displays the report ID provided by the credit bureau agency.
<b>Report Date</b>	Displays the date on which the credit bureau report is generated by the bureau.

## 2.37 Lookup

Lookup is the service for mapping of keys and values that is used to enrich the description of the data displayed to the user. The lookup screen facilitates to define the contents for drop-down or list of value fields. Lookup fields are used throughout the system. The identified fields will only accept entries stored in this screen. Below are some examples of the lookup fields.

- Static/Enumeration values
  - Credit Bureau: For example, credit bureau1, credit bureau 2, and credit bureau 3.
  - Comparison Operator: Equals, Greater than.
- Dependent lookups based on another selection
  - Based on Country, State should have different values in the lookup.
  - Based on Country, Currency should have different values in the lookup.

This section contains the following subsections:

- [2.37.1 Create Lookup](#)
- [2.37.2 View Lookup](#)

### 2.37.1 Create Lookup

The **Create Lookup** screen allows the user to create lookup definitions by updating various details.

**To create lookup:**

1. From **Home** screen, click **Core maintenance**. Under **Core Maintenance**, click **Credit Bureau**.
2. Under **Credit Bureau**, click **Maintenance**. Under **Maintenance**, click **Lookup**.
3. Under **Lookup**, click **Create Lookup**.

→ The **Create Lookup** screen is displayed.

**Figure 99 : Create Lookup**

4. Specify the fields on **Create Lookup** screen.

The fields which are marked with asterisk, are mandatory. For more information on fields, refer the field description table.

**Table 86: Create Lookup – Field Description**

Field	Description
<b>Lookup Type</b>	Specify the unique lookup type name.
<b>Description</b>	Specify the short description for lookup.
<b>+ button</b>	Click to add a new row.
<b>- button</b>	Click to delete an existing row.



Field	Description
<b>Lookup Code</b>	Specify the unique lookup code.
<b>Description</b>	Specify the short description for lookup.
<b>Sort Order</b>	Specify the sort Order.
<b>Dependent Identifier</b>	Specify the dependent Identifier.
<b>Enable</b>	Click the toggle status to enable the parameter.

- Click **Save** to save the details.

The lookup is successfully created and can be viewed using the **View Lookup** screen.

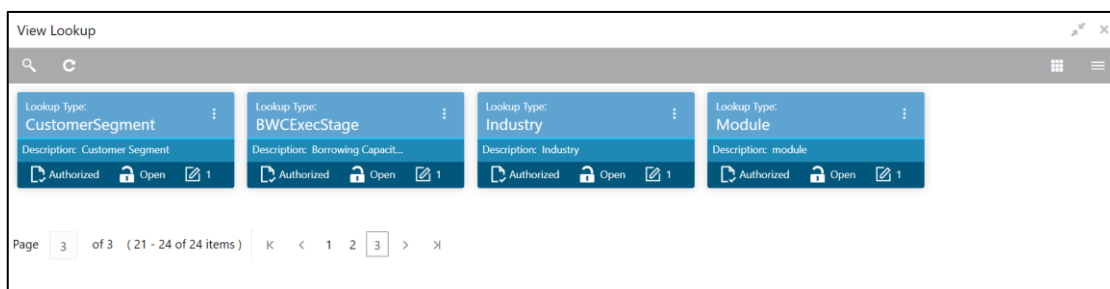
### 2.37.2 View Lookup

The **View Lookup** screen allows user to view the lookup created using the **Create Lookup** screen. The status of the created lookup is displayed as **Unauthorized** and **Open**. Once the checker authorizes the lookup, the status is updated to **Authorized** and **Open**.

To view created lookup:

- From the **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Credit Bureau**.
- Under **Credit Bureau**, click **Maintenance**. Under **Maintenance**, click **Lookup**.
- Under **Lookup**, click **View Lookup**.  
→ The **View Lookup** screen is displayed.

**Figure 100 : View Lookup**



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

**Table 87 View Lookup – Field Description**

Field	Description
<b>Lookup Type</b>	Displays the lookup type.
<b>Description</b>	Displays the description of the lookup.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

4. Click **Search**.
5. Specify the search criteria to fetch the required lookup.
  - The **View Lookup Search** screen displays.

**Figure 101 : View Lookup - Search**

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

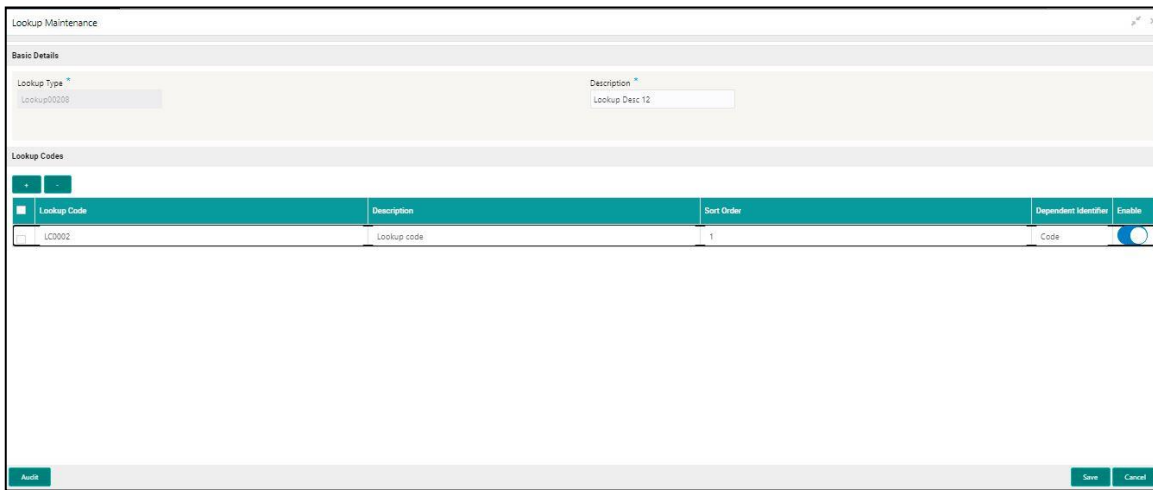
**Table 88: View Lookup – Search Option – Field Description**

Field	Description
<b>Lookup Type</b>	Displays the lookup type.
<b>Authorization Status</b>	Select the authorization status of the lookup.  The options are: <ul style="list-style-type: none"> <li>• Authorized</li> <li>• Rejected</li> <li>• Unauthorized</li> </ul>
<b>Record Status</b>	Select the record status of the lookup.  The options are: <ul style="list-style-type: none"> <li>• Open</li> <li>• Closed</li> </ul>

9. Click **Search**.
10. Click **three-dots** icon to unlock, delete, authorize or view the created criteria code

6. Click Unlock icon to modify the following fields. The fields are displayed in the **Lookup Maintenance** screen.
  - Lookup Code
  - Description
  - Sort Order
  - Dependent Identifier
  - Enable

**Figure 102 : Lookup Maintenance – Modify**



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

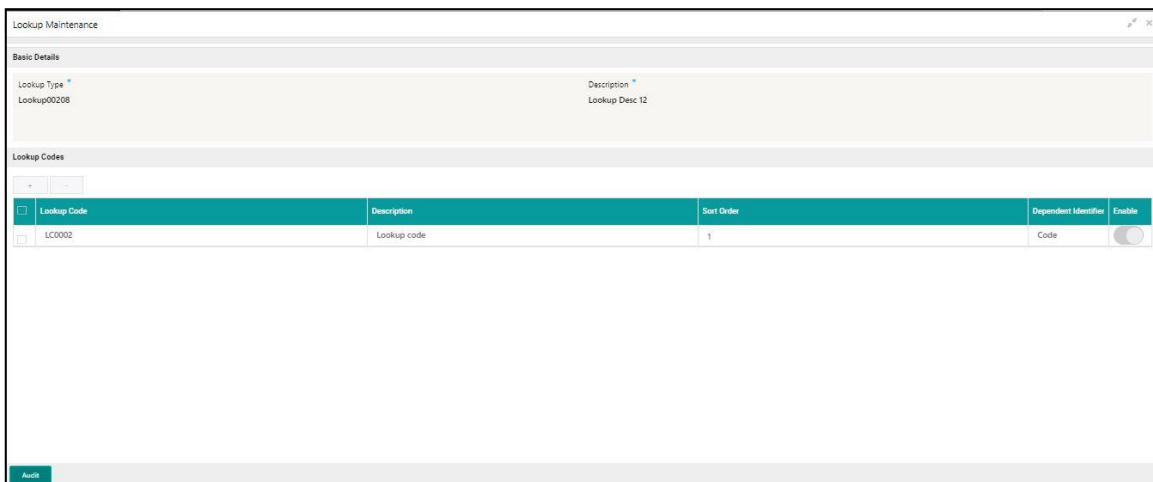
**Table 89: Lookup Maintenance – Modify- Field Description.**

Field	Description
<b>Basic Details</b>	
<b>Lookup Type</b>	Displays the lookup type.
<b>Description</b>	Displays the description of the lookup.
<b>Lookup Codes</b>	
<b>+ button</b>	Click to add a new row.
<b>- button</b>	Click to delete an existing row.
<b>Lookup Code</b>	Displays the lookup code for the created lookup. You can modify the same.

Field	Description
<b>Basic Details</b>	
<b>Description</b>	Displays the description for the created lookup.
<b>Sort Order</b>	Displays the sort order for the created lookup.
<b>Dependent Identifier</b>	Displays the dependent Identifier for the created lookup. You can modify the same.
<b>Enable</b>	Indicates if the lookup is enabled or not. You can modify the same.

- Click **Save** to update the modified fields.
- Click **View** icon to view the created lookup code. The fields are displayed in **Lookup Maintenance** screen.

**Figure 103 : Lookup Maintenance – View**



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

**Table 90: Lookup Maintenance – View- Field Description.**

Field	Description
<b>Basic Details</b>	
<b>Lookup Type</b>	Displays the created lookup type.
<b>Description</b>	Displays the description for the created lookup.
<b>Lookup Codes</b>	

Field	Description
<b>Basic Details</b>	
<b>Lookup Code</b>	Displays the lookup code for the created lookup.
<b>Description</b>	Displays the description for the created lookup.
<b>Sort Order</b>	Displays the sort order for the created lookup.
<b>Dependent Identifier</b>	Displays the dependent identifier for the created lookup.
<b>Enable</b>	Displays the lookup code if enabled for the created lookup.

## 2.38 Criteria

The Criteria screen facilitates to setup criteria definition, which are used in evaluating request and response criteria (business rules) to identify which bureau is to be called for the request.

### Examples:

- Call credit bureau 1, for personal loan product, and call credit bureau 1 and 2 for home loan products.
- Call credit bureau 1, if zip code of the applicant is between 70000 – 80000 and call credit bureau 2, if zip code of the applicant is between 30000 – 40000.
- Call credit bureau 3, if score from credit bureau 1 is less than 600.

This section contains the following subsections:

- [2.38.1 Create Bureau Criteria](#)
- 2.38.2 View Bureau Criteria

### 2.38.1 Create Bureau Criteria

The **Create Bureau Criteria** screen allows the user to create bureau criteria by updating various details.

#### To create bureau criteria:

1. From **Home screen**, click **Core Maintenance**. Under **Core Maintenance**, click **Credit Bureau**.
2. Under **Credit Bureau**, click **Maintenance**. Under **Maintenance**, click **Criteria**.
3. Under **Criteria**, click **Create Bureau Criteria**.  
→ The **Create Bureau Criteria** screen is displayed.

**Figure 104 : Create Bureau Criteria**

Criteria Code \*

Description \*

Product Processor \*



Rule ID	Description	Priority	Call All Bureau	Enable	
No data to display:					

Save Cancel

- Specify the fields on **Create Bureau Criteria** screen. The fields, which are marked with asterisk, are mandatory.

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

Table 91: Create Bureau Criteria – Field Description.

Field	Description
<b>Basic Details</b>	
<b>Criteria Code</b>	Specify the unique criteria code.
<b>Description</b>	Specify a short description for the criteria code.
<b>Product Processor</b>	Specify the product processor for which the criteria is being created.
<b>+ button</b>	Click to add a new row.
<b>- button</b>	Click to delete an existing row.
<b>Rule ID</b>	Specify the rule ID.
	Click to get the information about the rule.
<b>Description</b>	Displays the description of the rule ID selected.
<b>Priority</b>	Specify the priority of the criteria.
<b>Call All Bureau</b>	Click the toggle status to call all bureaus.
<b>Enable</b>	Click the toggle status to enable the rule criteria.
<b>Actions</b>	This field is enabled if <b>Call All Bureau</b> field is selected as <b>No</b>
<b>+ button</b>	Click this icon to add a new row.
The below fields appear if <b>Call All Bureau</b> toggle status is not clicked. To add the child rule to the parent rule.	
<b>Rule ID</b>	Select the rule ID from the drop-down list.
	Click to get the information about the rule.
<b>Description</b>	Displays the description of the rule ID selected it is auto populated.
<b>Priority</b>	Specify the priority of the criteria.
<b>Enable</b>	Click the toggle status to enable the rule criteria.

- Click **Save** to save the details.

The criteria are successfully created and can be viewed using the **View Criteria** screen.

### 2.38.2 View Bureau Criteria

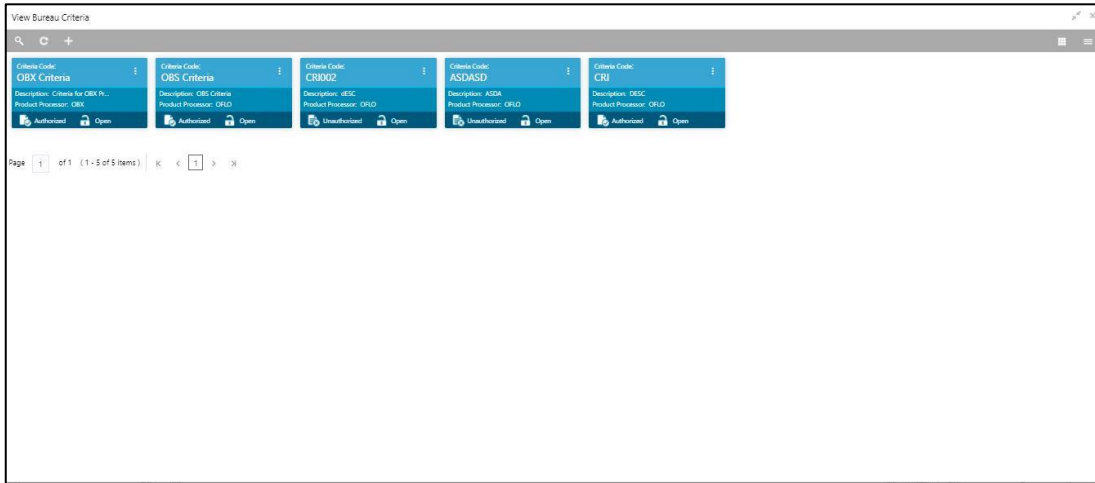
The **View Bureau Criteria** screen allows the user to view the criteria created using the **Create Bureau Criteria** screen. The status of the created criteria is displayed as **Unauthorized** and **Open**. Once the checker authorizes the criteria, the status is updated to **Authorized** and **Open**.

**To view created criteria:**

1. From **Home screen**, click **Core Maintenance**. Under **Core Maintenance**, click **Credit Bureau**.
2. Under **Credit Bureau**, click **Maintenance**. Under **Maintenance**, click **Criteria**.
3. Under **Criteria**, click **View Bureau Criteria**.

→ The **View Bureau Criteria** screen is displayed.

**Figure 105 : View Bureau Criteria**



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

**Table 92: View Bureau Criteria – Field Description.**

Field	Description
<b>Criteria Code</b>	Displays the criteria code.
<b>Description</b>	Displays the description of the criteria code.
<b>Product Processor</b>	Displays the product processor of the criteria.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

4. Click **Search** icon.
5. Specify the search criteria to fetch the required criteria.
6. Click **Search**.

The **View Criteria - Search** screen displays.

**Figure 106 : View Criteria –Search Option**





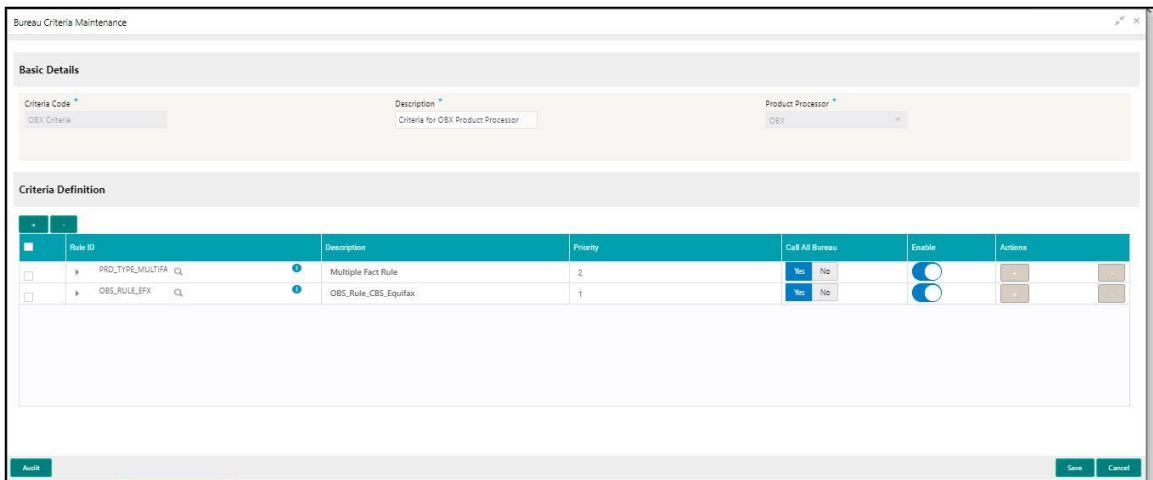
For more information on fields, refer to the field description table below.

**Table 93: View Criteria – Field Description.**

Field	Description
<b>Criteria Code</b>	Specify the criteria code.
<b>Description</b>	Specify the criteria description.
<b>Product Processor</b>	Select the product processor from the drop-down list.
<b>Authorization Status</b>	Select the authorization status of the criteria.  The available options are: <ul style="list-style-type: none"> <li>• Authorized</li> <li>• Rejected</li> <li>• Unauthorized</li> </ul>
<b>Record Status</b>	Select the record status from the drop-down list.  The available options are: <ul style="list-style-type: none"> <li>• Open</li> <li>• Closed</li> </ul>

7. Click **three-dots** icon to unlock, delete, authorize or view the created criteria code.
8. Click **Unlock** icon to modify the following fields. The fields are displayed in the **Bureau Criteria Maintenance** screen.
  - Rule ID
  - Description
  - Priority
  - Call All Bureau Status
  - Enable

**Figure 107 : Bureau Criteria Maintenance- Modify**



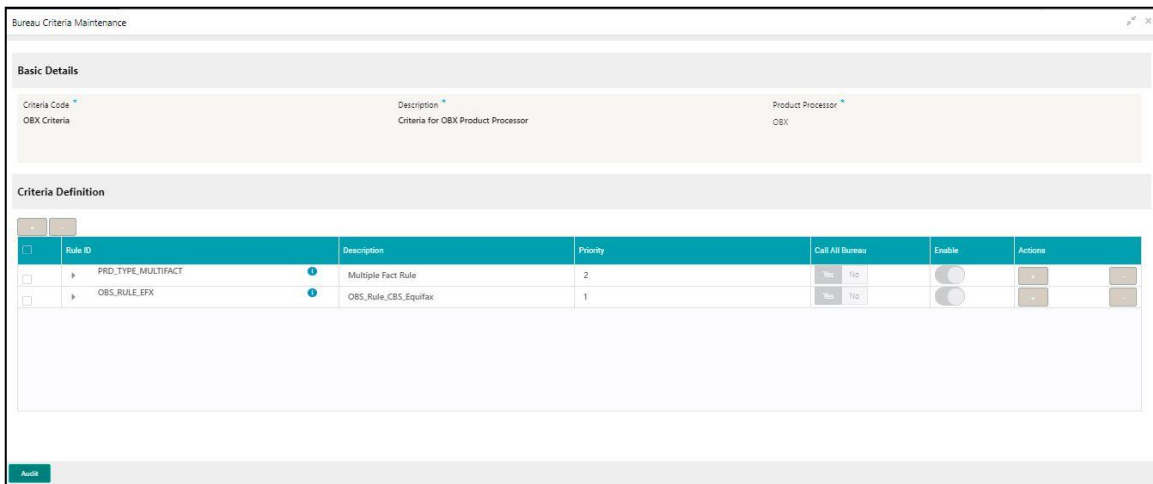
For more information on fields, refer to the field description table below.

**Table 94: Bureau Criteria Maintenance – Modify - Field Description.**

Field	Description
<b>Basic Details</b>	
<b>Criteria Code</b>	Displays the created criteria code.
<b>Description</b>	Displays the description for the created criteria code.
<b>Product Processor</b>	Displays the product processor for which the criteria being created.
<b>Criteria Definition</b>	
<b>Rule ID</b>	Displays the rule ID for the created criteria.
<b>Description</b>	Displays the description for the created criteria.
<b>Priority</b>	Displays the priority for the created criteria.
<b>Call All Bureau</b>	Displays if call all bureau has been enabled for the created criteria.
<b>Enable</b>	Displays the criteria code if enabled for the created criteria.
<b>Actions</b>	Displays the actions of the created criteria.

10. Click **Save** to update the modified fields.
11. Click **View** icon to view the created criteria code. The fields are displayed in **Bureau Criteria Maintenance** screen.

**Figure 108 : Bureau Criteria Maintenance - View**



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

**Table 95: Bureau Criteria Maintenance- View – Field Description.**

Field	Description
<b>Basic Details</b>	
<b>Criteria Code</b>	Displays the created criteria code.
<b>Description</b>	Displays the created criteria description.
<b>Product Processor</b>	Displays the product processor of the created criteria.
<b>Criteria Definition</b>	
<b>Rule ID</b>	Displays the rule ID for the created criteria.
<b>Description</b>	Displays the description for the created criteria.
<b>Priority</b>	Displays the priority for the created criteria.
<b>Call All Bureau</b>	Displays if call all bureau has been enabled for the created criteria.
<b>Enable</b>	Displays the criteria code if enabled for the created criteria.
<b>Actions</b>	Displays the actions of the created criteria.

## 2.39 System Parameter

System parameters define the information or values used throughout the system and drives the behavior of the features. They control the way task is executed, or whether the system performs a particular task. Some of the parameters are set when the system is installed, but the values associated with the parameter needs to be reviewed and is to be maintained.

**Example:**

Set minimum days to pull credit bureau report from same bureau from initial pull.

Credit bureau report purge days.

This section contains the following subsections:

- [2.39.1 Create System Parameter](#)
- [2.39.2 View System Parameter](#)

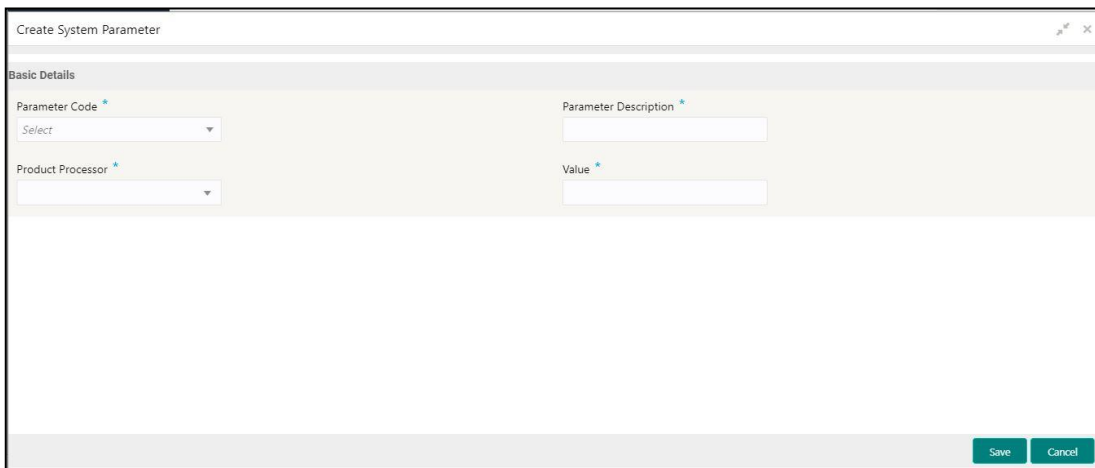
### 2.39.1 Create System Parameter

The **Create System Parameter** screen allows the user to create system parameter by updating various details.

**To create system parameter:**

1. From **Home screen**, click **Core Maintenance**. Under **Core Maintenance**, click **Credit Bureau**.
2. Under **Credit Bureau**, click **Maintenance**. Under **Maintenance**, click **System Parameter**.
3. Under **System Parameter**, click **Create System Parameter**  
 → The **Create System Parameter** screen is displayed.

**Figure 109 : Create System Parameter**



4. Specify the fields on **Create System Parameter** screen. The fields, which are marked with asterisk, are mandatory.

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

**Table 96: System Parameter – Field Description.**

Field	Description
<b>Basic Details</b>	
<b>Parameter Code</b>	Select the parameter code from the drop-down list.

Field	Description
<b>Parameter Description</b>	Specify a short description for the parameter code.
<b>Product Processor</b>	Select the product processor from the drop-down list for which the parameter is being created.
<b>Value</b>	Specify the value for the parameter code.

6. Click **Save** to save the details.

The parameter is successfully created and can be viewed using the **View System Parameter** screen.

### 2.39.2 View System Parameter

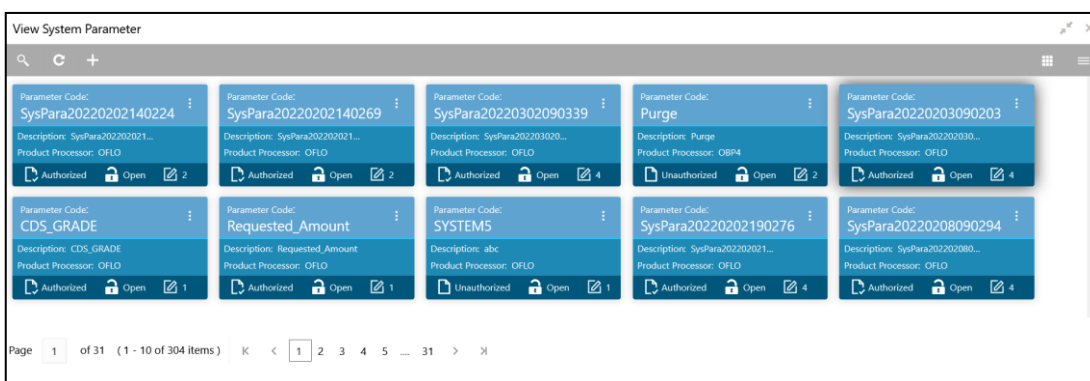
The **View System Parameter** screen allows the user to view the system parameter created using the **Create System Parameter** screen. The status of the created system parameter is displayed as **Unauthorized** and **Open**. Once the checker authorizes the parameter, the status is updated to **Authorized** and **Open**.

To view created parameter:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Credit Bureau**.
2. Under **Credit Bureau**, click **Maintenance**. Under **Maintenance**, click **System Parameter**.
3. Under **System Parameter**, click **View System Parameter**.

→ The **View System Parameter** screen is displayed.

**Figure 110 : View System Parameter**



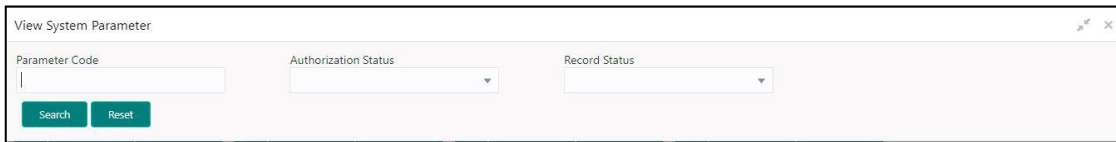
For more information on fields, refer to the field description table.

**Table 97: View System Parameter – Field Description.**

Field	Description
<b>Parameter Code</b>	Displays the parameter code.
<b>Description</b>	Displays the description of the parameter code.
<b>Product Processor</b>	Displays the product processor of the parameter.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

4. Click **Search** icon.
5. Specify the search criteria to fetch the required parameter.
6. Click **Search**.

**Figure 111 : View System Parameter –Search Option**



For

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

**Table 98: View System Parameter – Field Description.**

Field	Description
<b>Parameter Code</b>	Specify the parameter code.
<b>Authorization Status</b>	Select the authorization status of the criteria.  The options are: <ul style="list-style-type: none"> <li>• Authorized</li> <li>• Rejected</li> <li>• Unauthorized</li> </ul>
<b>Record Status</b>	Select the record status of the criteria.  The options are: <ul style="list-style-type: none"> <li>• Open</li> <li>• Closed</li> </ul>

7. Click **three-dots** icon to unlock, delete, authorize or view the created parameter code.
8. Click **Unlock** icon to modify the following fields. The fields are displayed in the **System Parameter Maintenance** screen.

- Product Processor
- Value

**Figure 112 : System Parameter Maintenance - Modify**

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

**Table 99: System Parameter Maintenance – Modify – Field Description.**

Field	Description
<b>Basic Details</b>	
<b>Parameter Code</b>	Displays the created parameter code.
<b>Parameter Description</b>	Displays the description for the created parameter.
<b>Product Processor</b>	Displays the product processor of the created parameter.
<b>Value</b>	Displays the value of the created parameter.

10. Click **Save** to update the modified fields.

11. Click **View** icon to view the created parameter code. The fields are displayed in **System Parameter Maintenance** screen.

**Figure 113 : System Parameter Maintenance - View**

Parameter Code *	Parameter Description *
Maximum_Report_Age_For_New_Call_...	Maximum Report Age to call Experian
Product Processor *	Value *
OFLO	4

Audit

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

**Table 100: System Parameter Maintenance- View – Field Description.**

Field	Description
<b>Basic Details</b>	
<b>Parameter Code</b>	Displays the created parameter code.
<b>Parameter Description</b>	Displays the created parameter description.
<b>Product Processor</b>	Displays the product processor of the created parameter.
<b>Value</b>	Displays the value for the created parameter.

## **2.40 Integrating Decision Service with Oracle Banking Routing Hub**

### **2.40.1 Oracle Banking Routing Hub Configuration**

Need to import existing service consumer and providers in the system. Service Consumer is oracle product, which invokes oracle banking routing hub API, oracle banking routing hub analyses evaluates destination product processor and transform data into format of the same. Service Consumer comprises of the source and destination integration details.

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Routing Hub**.
2. Under **Routing Hub**, click **Service Consumers**.

→ The **Service Consumers** screen is displayed.

**Figure 114: Service Consumers**



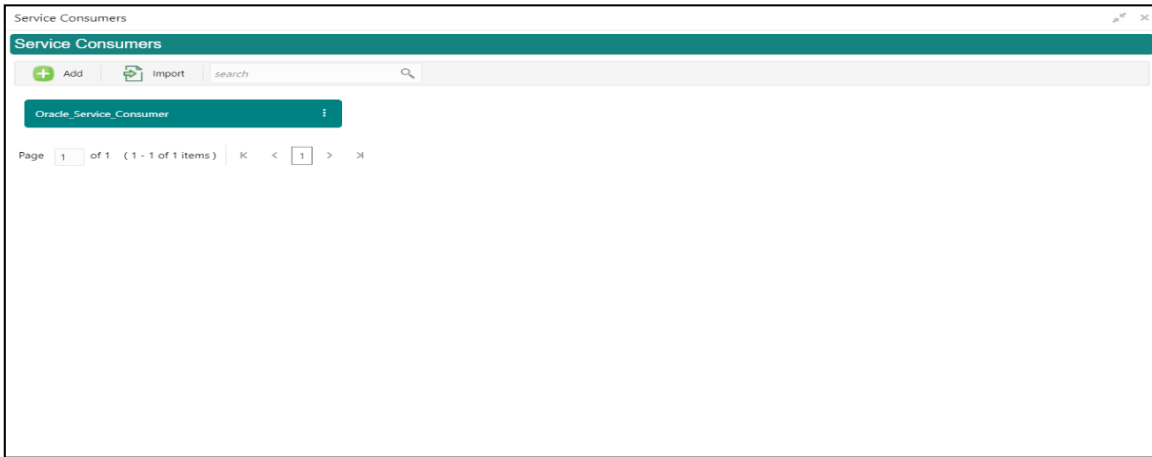


Figure 115: Oracle Banking Routing Hub Configuration

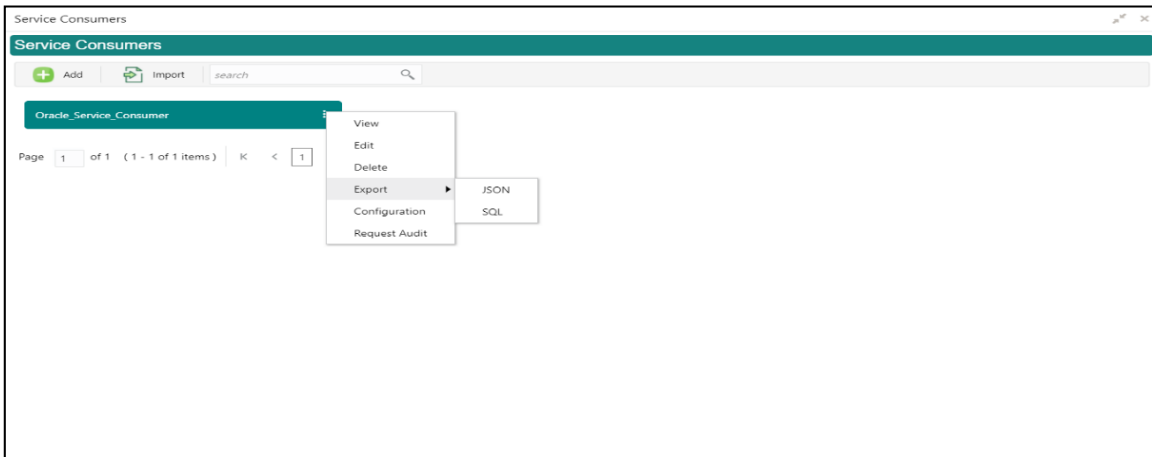


Table 101: Oracle Banking Routing Hub Configuration

Component Name	Component Type	Condition	Comments
<b>Add</b>	Button		Pops up add dialog
<b>Import</b>	Button		Pops up import dialog
<b>Search</b>	Combo Box One		Provides search functionality with case insensitive (Service Consumer Name)
<b>View</b>	menu option	Non-editable	Pops up view dialog
<b>Edit</b>	menu option		Pops up edit dialog
<b>Delete</b>	menu option		
<b>Export</b>	Sub menu item		
<b>JSON</b>	menu option		Exports in JSON

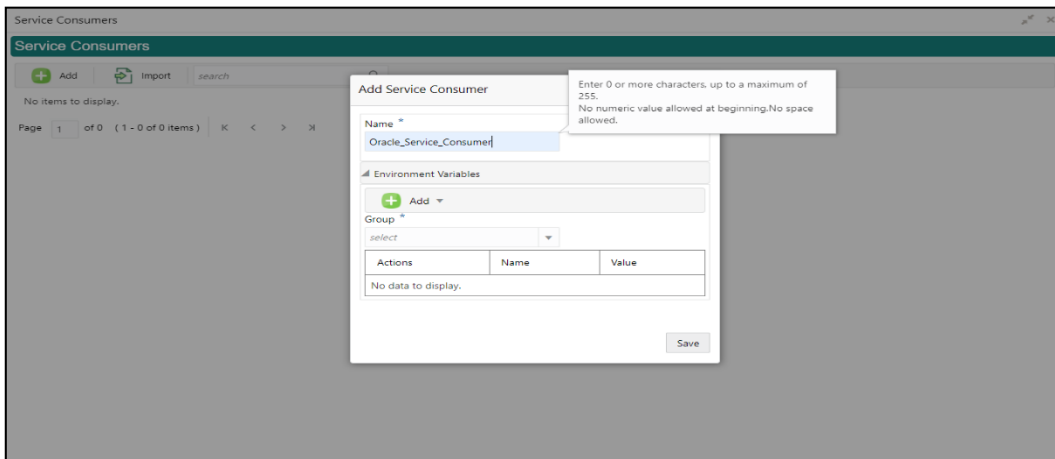
<b>SQL</b>	menu option		Exports in SQL
<b>Configuration</b>	menu option		Pops up configuration dialog
<b>Request Audit</b>	menu option		Pops up request audit log

2.40.1.1 **Add**

You can create Service Consumer manually.

On **Service Providers** screen, click **Add** to create service providers.

**Figure 116: Add**



**Table 102: Add**

Component Name	Component Type	Is Mandatory	Data type	Validation	Comments
<b>Name</b>	Text Box	Yes	Alphanumeric with special characters	<ul style="list-style-type: none"> <li>Name cannot be blank</li> <li>Specify 0 or more characters, up to a maximum of 255</li> <li>No numeric value at beginning and no space allowed</li> </ul>	Unique Service Consumer name
<b>Environment Variables</b>	Table Content				

Save	Button				Saves the Service Consumer
------	--------	--	--	--	----------------------------

### 2.40.1.2 Environment Variables

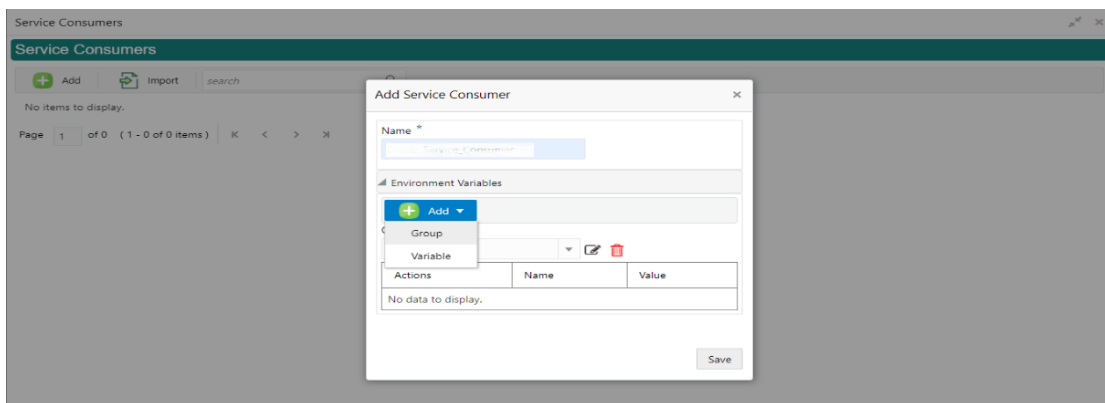
You can define the group of variables that can be accessed throughout the specific consumer's configuration.

**Below is the syntax for accessing environment variables:**

`$env.Environment_Group_Name.Environment_Variable_Name`

such as : `$env.COMMON.BRANCH_CODE`

**Figure 117: Environment Variables**



**Figure 118: Environment Variables**

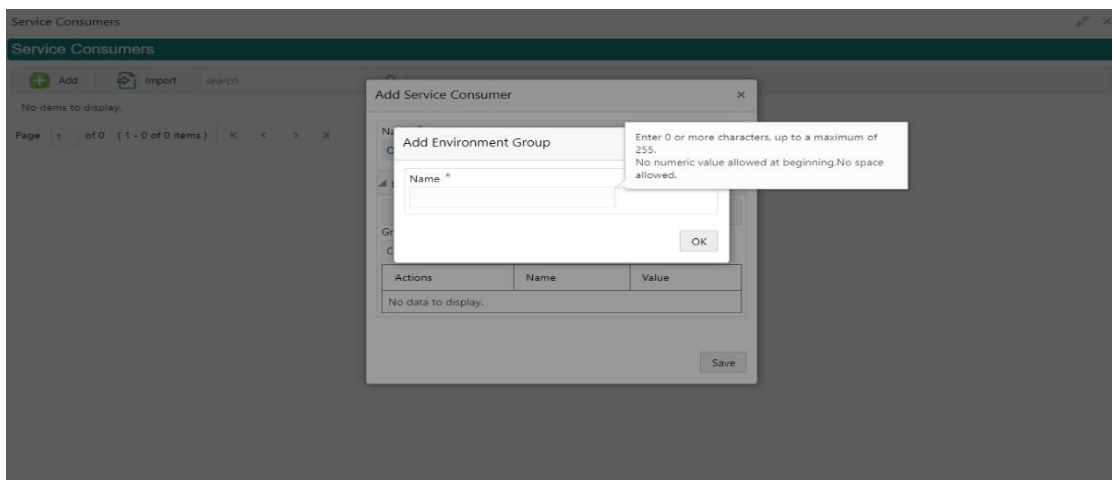


Figure 119: Environment Variables

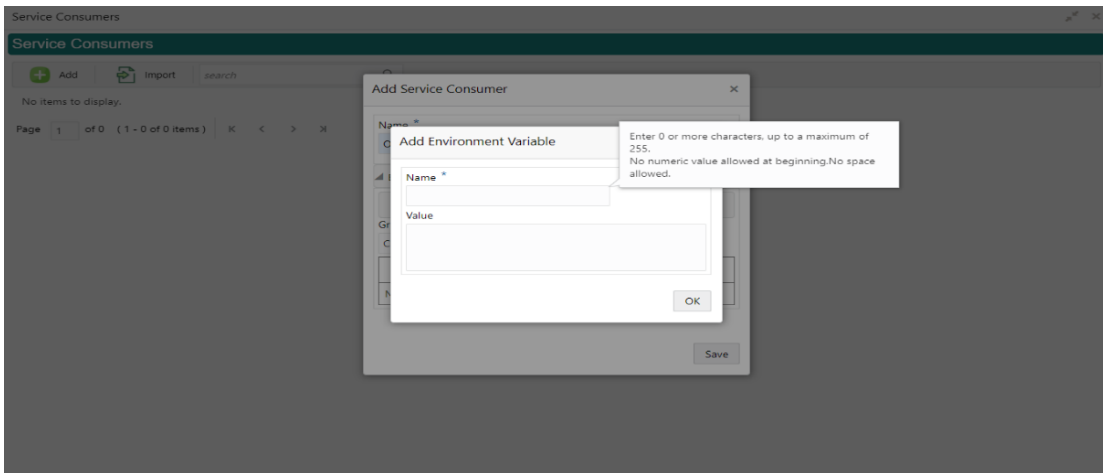


Table 103: Environment Variables

Component Name	Component Type	Is Mandatory	Data type	Validation	Comments
<b>Add</b>	Menu Item				
<b>Group</b>	Menu option				Pops up add group dialog
<b>Variable</b>	Menu option				Pops up add variable dialog
<b>Navigation: Service Consumer -&gt; Environment Variables -&gt; 3 dot icon (operation menu)</b>					
<b>Edit</b>	menu option / icon				Pops up edit dialog
<b>Delete</b>	menu option / icon				Deletes group / variable
<b>Environment Group / Variable</b>					
Name	Text Box	Yes	Alphanumeric with special characters	<ul style="list-style-type: none"> <li>Name cannot be blank</li> </ul>	

				<ul style="list-style-type: none"> <li>Specify 0 or more characters, up to a maximum of 255</li> <li>No numeric value at beginning and no space allowed</li> </ul>	
Value	Text Area				Value can either be hardcoded or Velocity mapping.
OK	Button				Saves the group / variable and displays it in the list

### 2.40.1.3 Import

You can create a service consumer by importing the JSON file and manually selecting the service Providers or select all providers that needs to be imported. On **Service Providers** screen, click **Import**.

**Figure 120: Import**

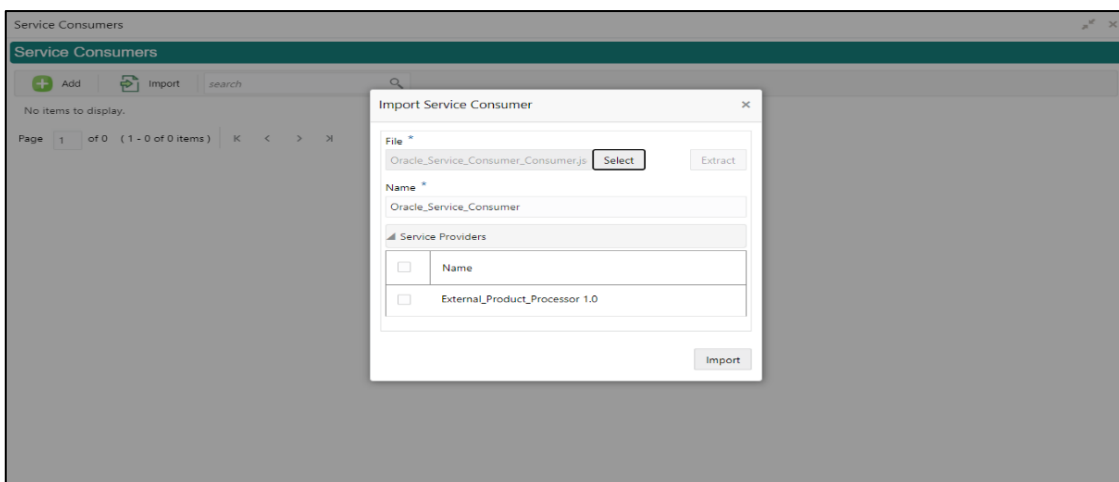


Table 104: Import

Component Name	Component Type	Is Mandatory	Data type	Validation	Condition	Comments
<b>File</b>	File picker	Yes		Allows only to select one file	Accepts only JSON file	Pops up file selection dialog box
<b>Extract</b>	Button	Yes				Extracts Consumer Name and Service Provider list from JSON file and displays it in the respective elements.
<b>Name</b>	Text Box	Yes	Alphanumeric with special characters	<ul style="list-style-type: none"> <li>Name cannot be blank</li> <li>Specify 0 or more characters, up to a maximum of 255</li> <li>No numeric value at beginning and no space allowed</li> </ul>	Editable	Unique
<b>Service Provider</b>	Collapsible Header & Content					Displays the list of service providers that are present in JSON file
<b>Import</b>	Button					Imports Service Consumer

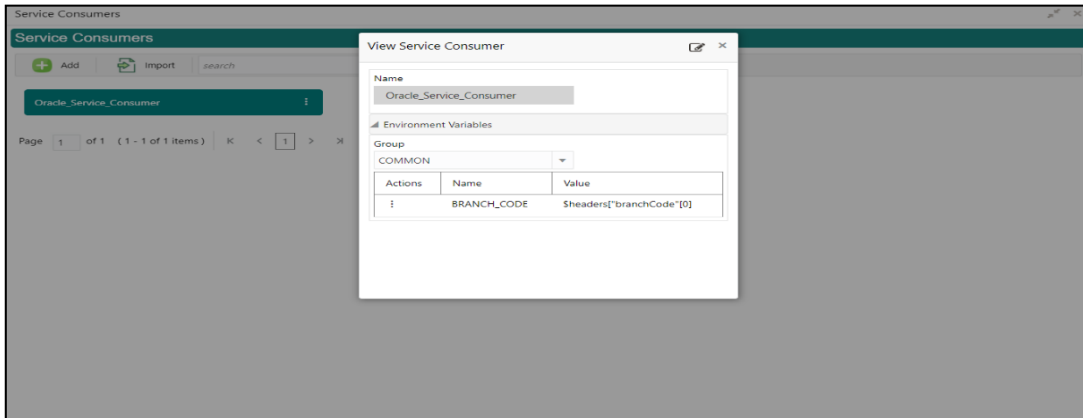
**Note:** Below data needs to be changed after importing consumer configuration file:

- Implementation Host and Port
- Implementation Authentication Password

### 2.40.1.4 View

You can view consumer details and can switch to edit form by clicking on edit icon. On **Service Providers** screen, click **Operation Menu (3-dot icon)**, and click **View**.

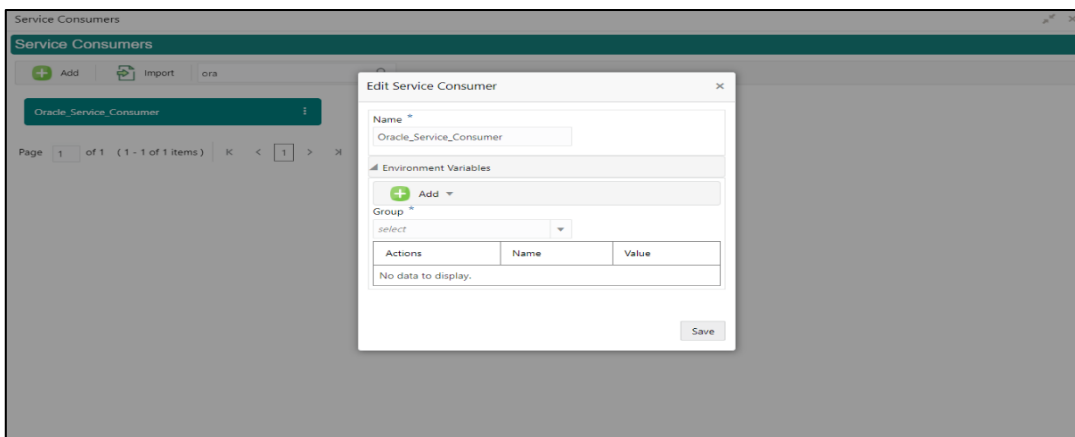
**Figure 121: View**



### 2.40.1.5 Edit

You can modify the consumer details. On **Service Providers** screen, click **Operation Menu (3-dot icon)**, and click **Edit**.

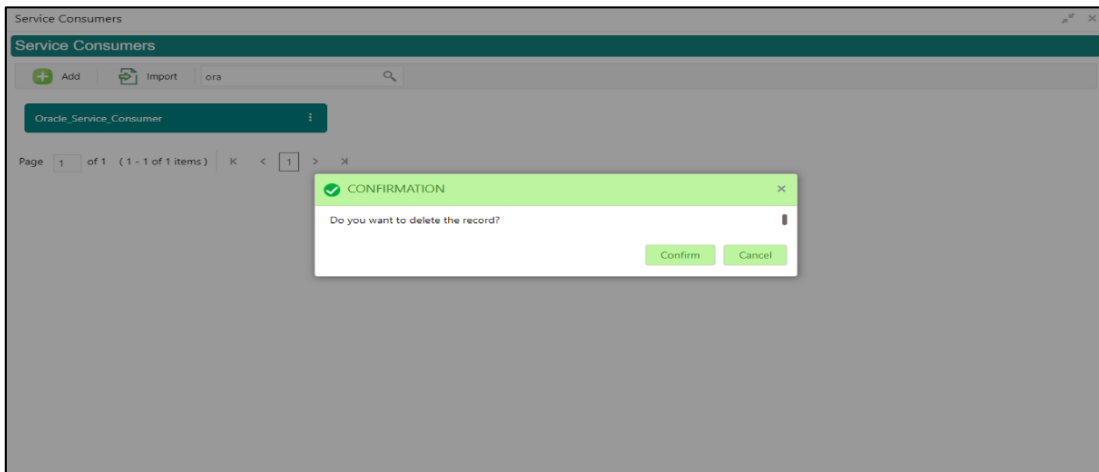
**Figure 122: Edit**



### 2.40.1.6 Delete

You can delete the consumer. On **Service Providers** screen, click **Operation Menu (3-dot icon)**, and click **Delete**.

**Figure 123: Delete**



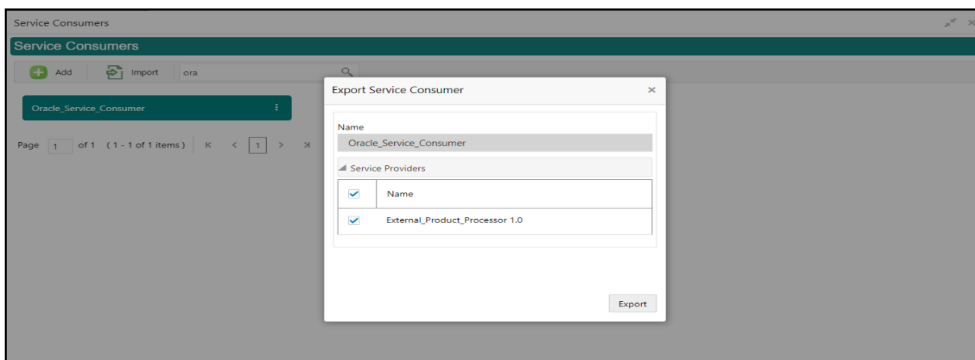
### 2.40.1.7 JSON Export

You can export the consumer configuration as JSON file.

On **Service Providers** screen, click **Operation Menu (3-dot icon)**, and click **Export**.

and then, Click **JSON**.

**Figure 124: JSON Export**



Note: You have an option to select service providers from the list that needs to be exported or can click on Select All option for all service providers.  
JSON Export feature will export below data:

- Selected service consumer
- All consumer services
- Selected service providers with services
- Default implementation of selected service providers with services (without Host, Port and Authentication Password)
- Default transformations
- All default implementation routes



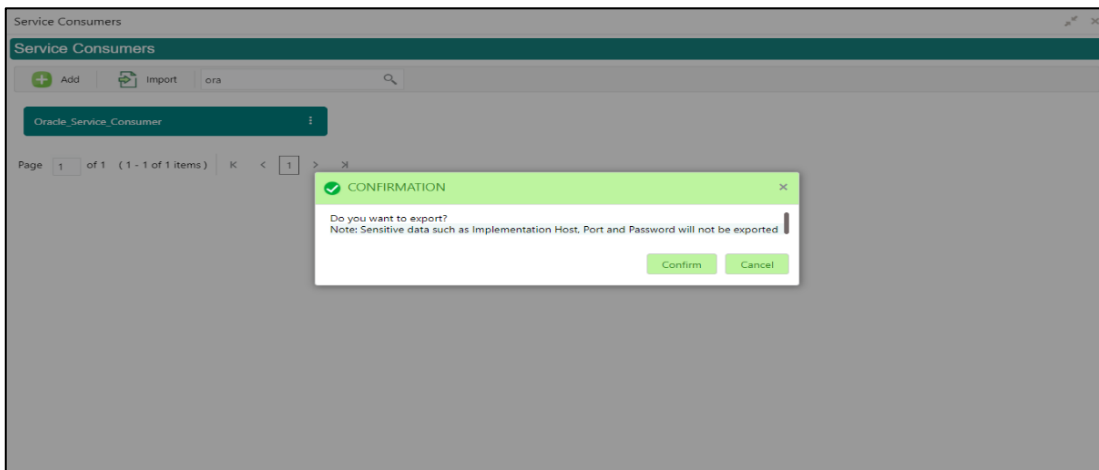
### 2.40.1.8 SQL Export

You can export the consumer configuration as SQL file.

On **Service Providers** screen, click **Operation Menu (3-dot icon)**, and click **Export**.

and then, click SQL.

**Figure 125: SQL Export**




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Note: SQL Export feature will export entire configuration without Host, Port and Authentication Password details.

---

### 2.40.2 Service Providers

Service Providers are the product processors configure to process request send by oracle banking routing hub on behalf of service consumers. Service Provider comprises of destination integration details.

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Routing Hub**.
2. Under **Routing Hub**, click **Service Consumers**. Under **Service Consumers**, click **<Specific Service Consumer>**.

→ The **Service Providers** screen is displayed.

**Figure 126: Service Providers**

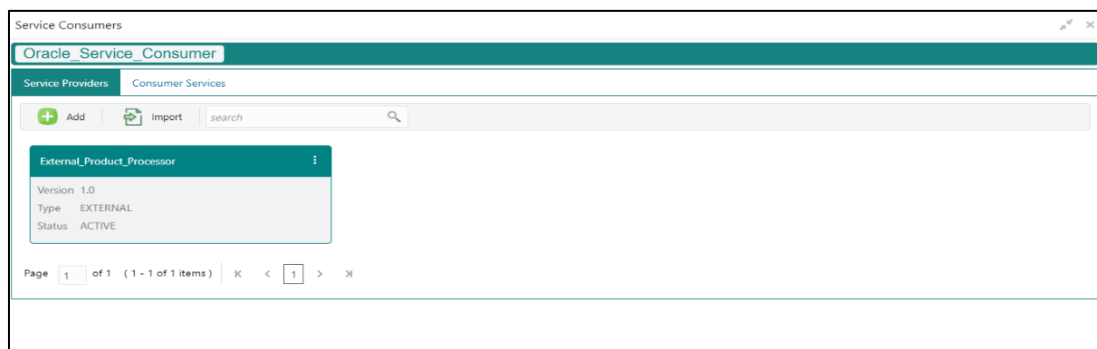


Figure 127: Service Providers

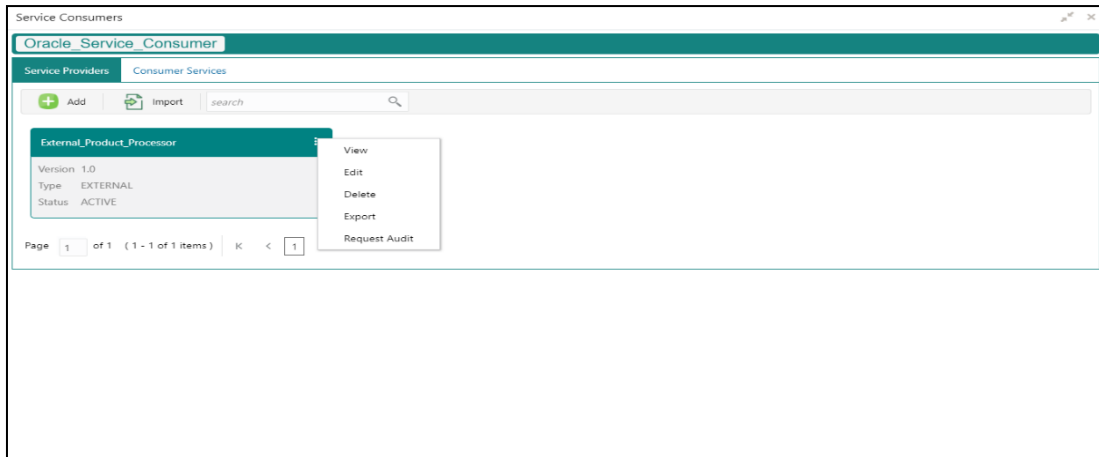


Table 105: Service Providers

Component Name	Component Type	Condition	Comments
<Service Consumer>	Button		Navigates back to Service Consumers
<b>Add</b>	Button		Pops up add dialog
<b>Import</b>	Button		Pops up import dialog
<b>Search</b>	Combo Box One		Provides search functionality with case insensitive (Service Provider Name)
Navigation: <b>Service Providers -&gt; 3 dot icon (operation menu)</b>			
<b>View</b>	menu option	Non-editable	Pops up view dialog
<b>Edit</b>	menu option		Pops up edit dialog
<b>Delete</b>	menu option		
<b>Export</b>	menu option		Exports in JSON
<b>Request Audit</b>	menu option		Pops up request audit log

### 2.40.2.1 Add

You can create service provider manually.  
On **Service Providers** screen, click **Add** to create service providers.

Figure 128: Add

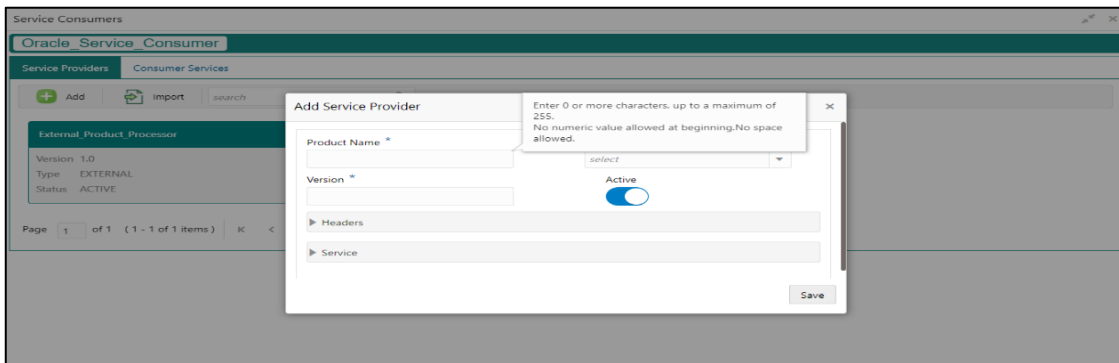


Table 106: Add

Component Name	Component Type	Is Mandatory	Data type	Validation	Comments
Product Name	Text Box	Yes	Alphanumeric with special characters	<ul style="list-style-type: none"> <li>Name cannot be blank</li> <li>Specify 0 or more characters, up to a maximum of 255.</li> <li>No numeric value at beginning and no space allowed.</li> </ul>	Unique provider name
Type	Combo Box One	Yes			Predefined Values: INTERNAL / EXTERNAL

Component Name	Component Type	Is Mandatory	Data type	Validation	Comments
<b>Version</b>	Text Box	Yes	Number	<ul style="list-style-type: none"> <li>Version cannot be blank</li> <li>Specify 0 or more characters, up to a maximum of 255.</li> <li>Specify only numeric or decimal values.</li> </ul>	Unique provider version
<b>Active</b>	Switch				Predefined Values: ACTIVE / INACTIVE If provider is marked as inactive, then all related routes will be stopped.
<b>Headers</b>	Collapsible Header & Content				Provider specific headers
<b>Service</b>	Collapsible Header & Content				Provider specific service details
<b>Save</b>	Button				Saves the Service Provider

### 2.40.2.2 Headers

External product processor might require some standard headers to be passed along with the request. You can specify the headers which are required by service endpoints for its all implementations but not present in swagger file.

These headers can be configured in oracle banking routing hub using the steps given below.

Figure 129: Headers

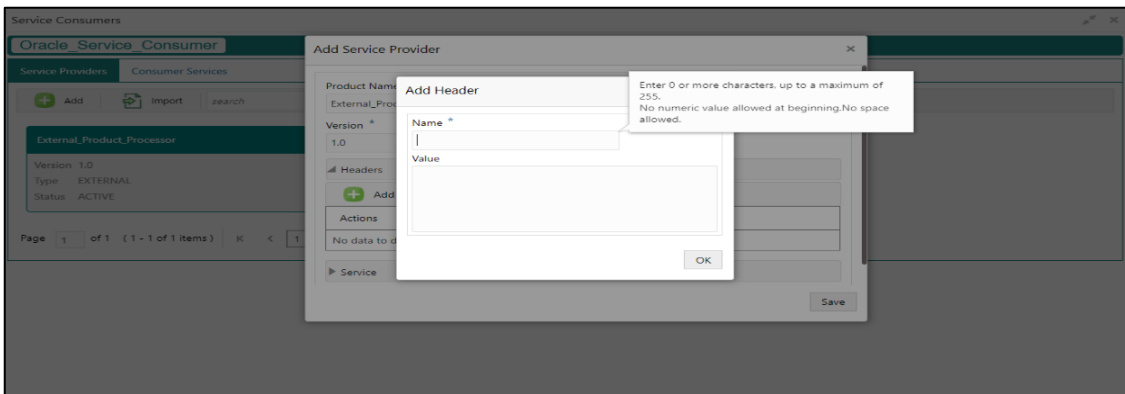


Figure 130: Headers

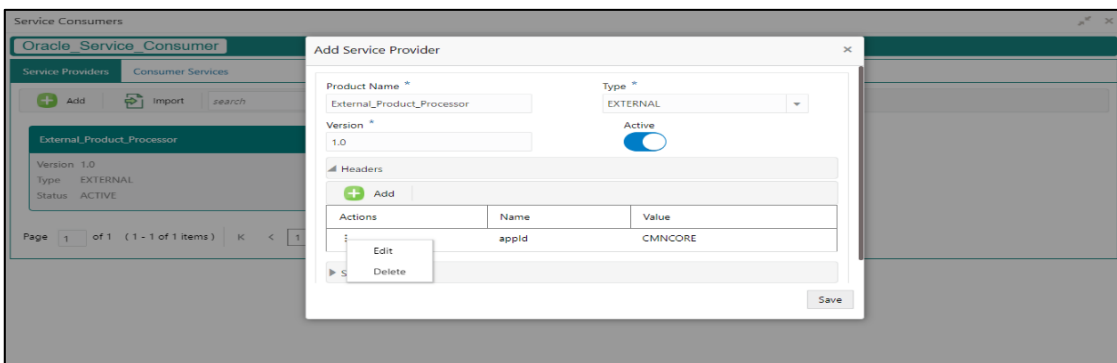


Table 107: Headers

Component Name	Component Type	Is Mandatory	Data type	Validation	Comments
Add	Button				Pops up add dialog
Edit	menu option				Pops up edit dialog
Delete	menu option				Deletes header

Component Name	Component Type	Is Mandatory	Data type	Validation	Comments
Navigation: <b>Service Providers -&gt; Headers -&gt; Add</b>					
<b>Name</b>	Text Box	Yes	Alphanumeric with special characters	<ul style="list-style-type: none"> <li>Name cannot be blank</li> <li>Specify 0 or more characters, up to a maximum of 255.</li> <li>No numeric value at beginning and no space allowed.</li> </ul>	
<b>Value</b>	Text Area	Yes	Alphanumeric with special characters	<ul style="list-style-type: none"> <li>Value cannot be blank</li> <li>Specify 0 or more characters, up to a maximum of 255.</li> <li>No space allowed.</li> </ul>	Value either can be hardcoded or can be Velocity mapping.
<b>OK</b>	Button				Saves the header details and displays it in the list

2.40.2.3 **Service**

Figure 131: Service

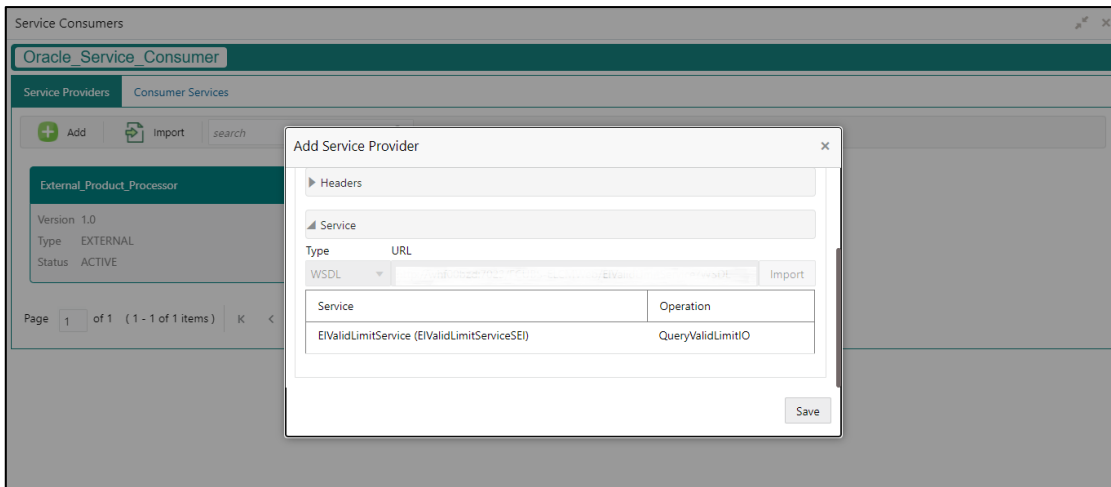


Table 108: Service

Component Name	Component Type	Is Mandatory	Comments
Type	Combo Box One	Yes	Predefined Values: WSDL / SWAGGER
URL	Text Box	Yes	Service URL of the file location
Gateway Prefix	Text Box		Gateway Prefix is context path of below formatted URL http://host:port/gateway-prefix/endpoint
Import	Button		Extracts the service information from URL and displays it in the Service list

2.40.2.4 **WSDL**

The Web Services Description Language (WSDL) is an XML-based interface description language that is used for describing the functionality offered by a web service. Currently, non-SSL WSDL URL is only supported.

Note: In case there is a change in wsdl file, then same wsdl file need to be imported again in order to update the provided service information in routing hub.

2.40.2.5 **SWAGGER**

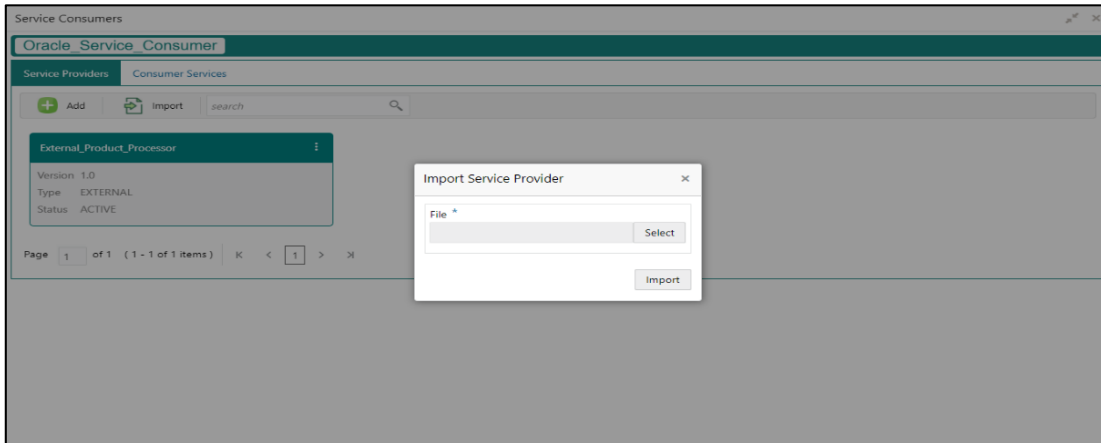
Swagger is an Interface Description Language for describing RESTful APIs expressed using JSON. Currently, Swagger 2.0 & Open API 3.0 both are supported.

Note: In case there is a change in swagger file, then same swagger file need to be imported again in order to update the provided service information in routing hub.

### 2.40.2.6 Import

You can create a service provider by importing the JSON file. On **Service Providers** screen, click **Import**.

**Figure 132: Import**



**Table 109: Import**

Component Name	Component Type	Is Mandatory	Validation	Condition	Comments
<b>File</b>	File picker	Yes	Allows only to select one file	Accepts only JSON file	Pops up file selection dialog box
<b>Import</b>	Button				Imports Service Provider

Note: Below data needs to be changed after importing provider configuration file:

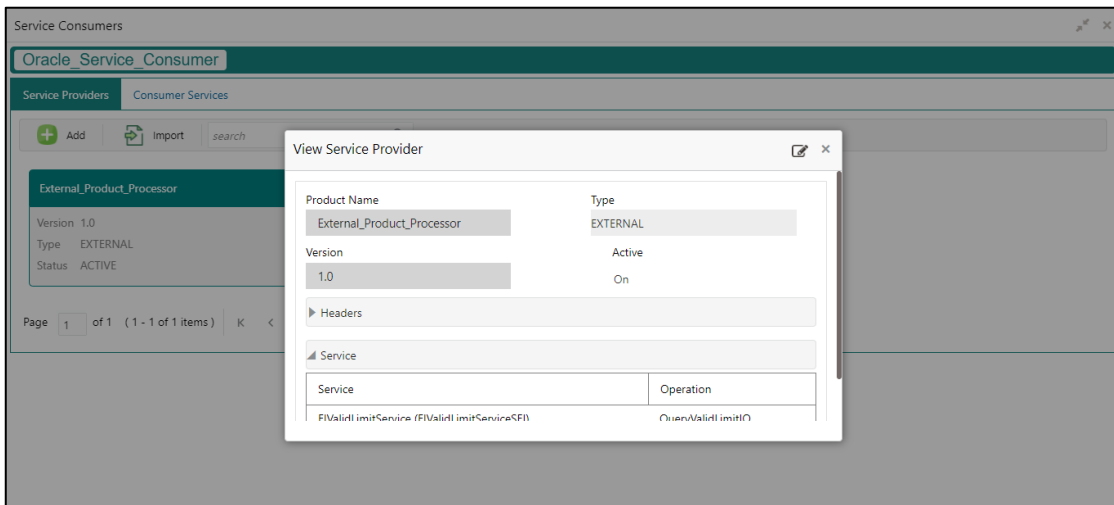
- Implementation Host and Port
- Implementation Authentication Password

### 2.40.2.7 View

You can view provider details and can switch to edit form by clicking on edit icon. On **Service Providers** screen, click **Operation Menu (3-dot icon)**, and click **View**.



Figure 133: Oracle Banking Routing Hub Configuration

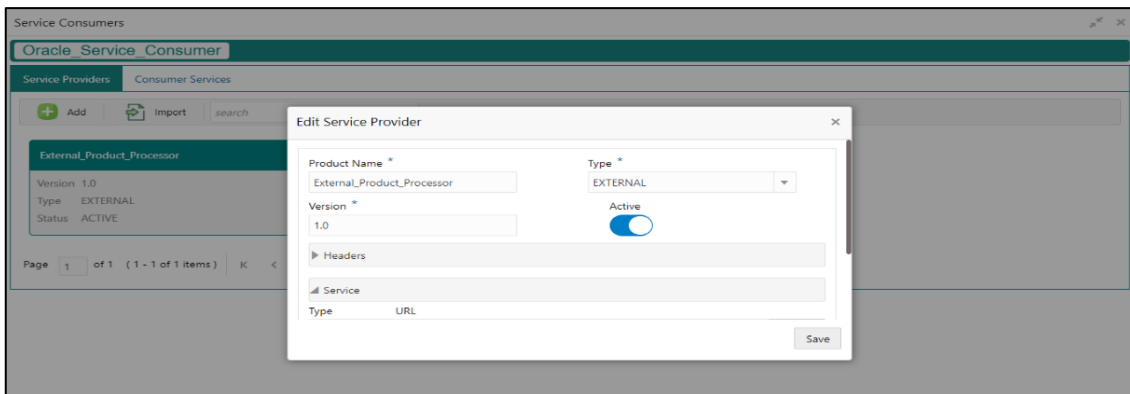


### 2.40.2.8 Edit

You can modify the provider details.

On **Service Providers** screen, click **Operation Menu (3-dot icon)**, and click **Edit**.

Figure 134: Edit

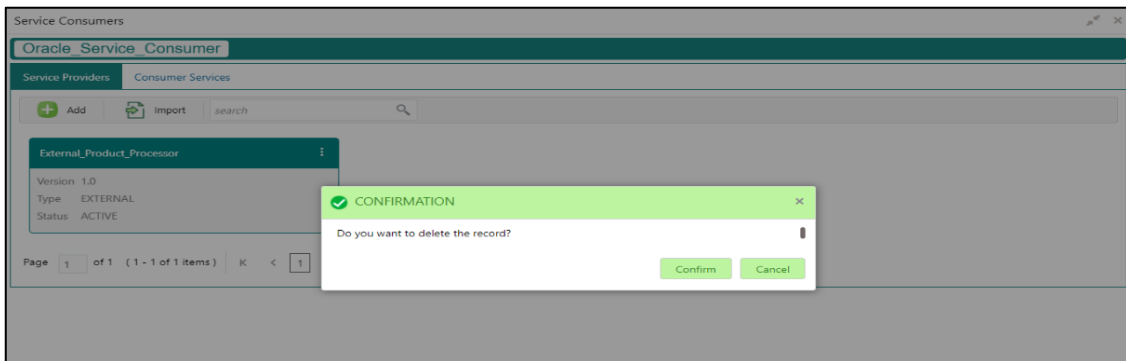


### 2.40.2.9 Delete

You can delete the provider.

On **Service Providers** screen, click **Operation Menu (3-dot icon)**, and click **Delete**.

Figure 135: Delete

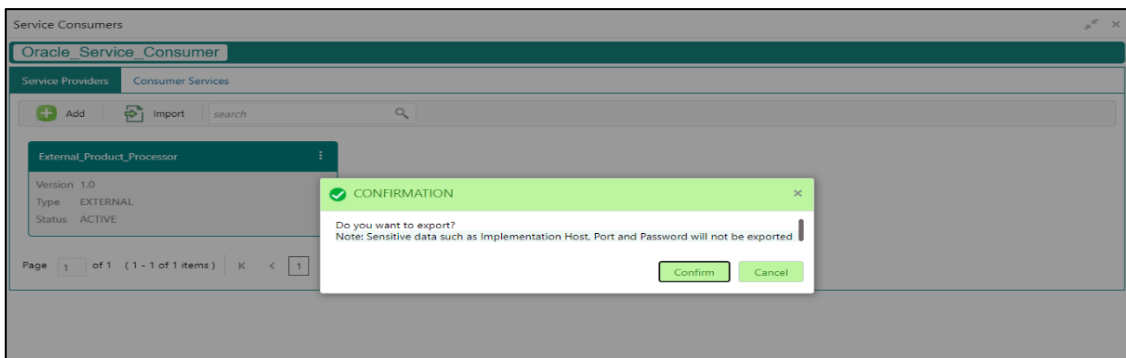


### 2.40.2.10 Export

You can export the provider configuration as JSON file.

On **Service Providers** screen, click **Operation Menu (3-dot icon)**, and click **Export**.

Figure 136: Export



Note: Below data is not be exported:

- Implementation Host
- Implementation Port
- Implementation Authentication Password

The above data needs to be configured manually after importing the configuration file.

Same has been mentioned in Import section

## 2.40.3 Oracle FLEXCUBE Onboarding to Decision Service Configuration

### 2.40.3.1 Fetch Credit Decision

Figure 137: Fetch credit decision – Header

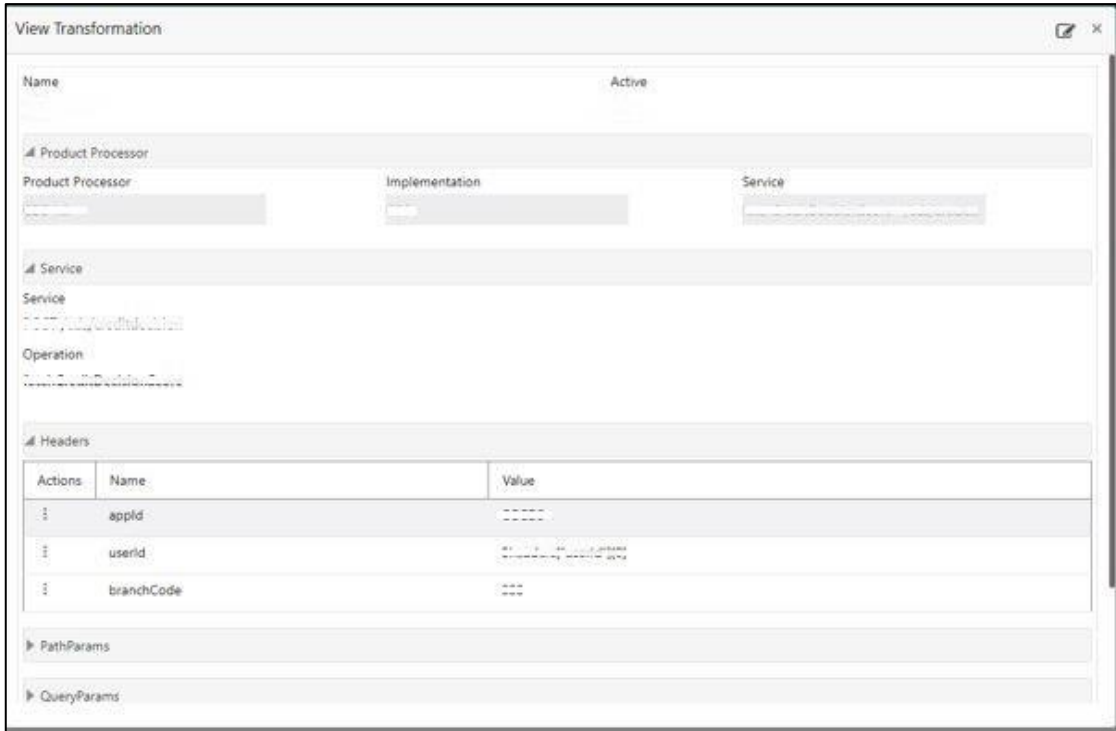


Figure 138: Fetch credit decision - Transformation:

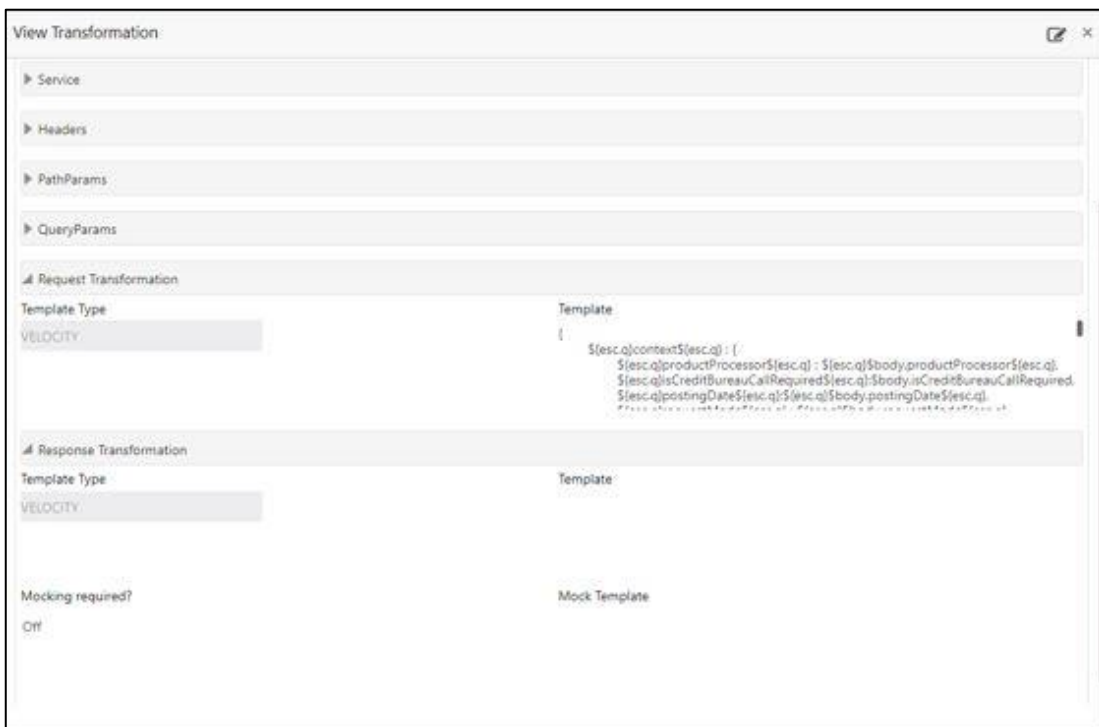
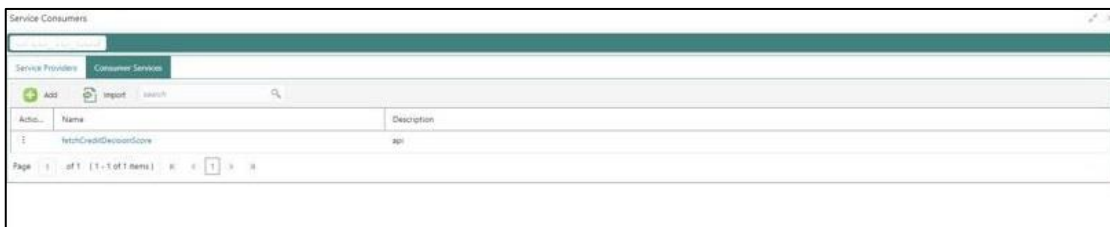


Figure 139: Consumer Services



## 2.41 Decision Service

### 2.41.1 Overview

The decision service provides automatic decision making capabilities that can allow lenders to develop simple business processes and strengthen the decision-making process.

It gives flexibility to adjust the credit scoring model according to the lending policy.

When an organization calls the decision service to make a decision based on data attributes shared, system solves the best fit scoring model and provide scores and decisions.

Decision Service is a robust and scalable system that can be easily integrated with any product processor providing auto decision capability and risk based pricing.

Figure 140 : Decision Service Overview

# Overview

A robust and scalable system that integrates easily with any product processor providing auto decision capabilities and risk based pricing.



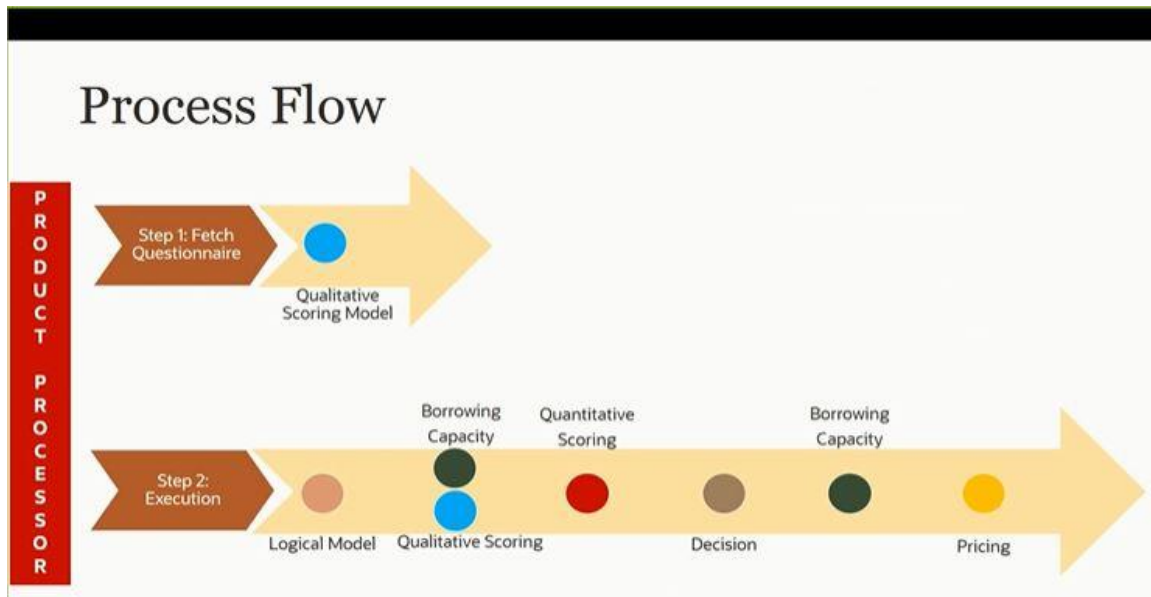
Decision service can be called from various product processor such as Collections, Deposits, Loans, Insurance, Trade Finance or Payment etc. This product processor calls the decision service and the decision service intern uses the rule engine to configure various complex rules.

The decision service can calculate behavioral scores and suggest the best recommended collection strategy accordingly. For lending products, it can offer a credit score, a decision based on the score, the recommended rate of interest and the ability to calculate which is the maximum amount that can be borrowed by the applicant.

## 2.41.2 Process Flow

The below diagram depicts the entire process flow of how decision service works.

**Figure 141 : Decision Service Process Flow**



### 2.41.2.1 Questionnaire

The first step is to get the questionnaire. The product processor sends the data of all the applicants in the application. A qualitative scoring model is resolved for each applicant and this information along with the details of the questionnaire is sent back to the product processor. The product processor captures the response to the questions and sends back as part of the second step which is the execution of the credit decision.

### 2.41.2.2 Validation Model

First step in execution of the credit decision is validation screening. In this application prescreening is done to check the basic eligibility of the application as per the bank's policy. For example, if the bank's policy is not to fund to property in flood prone area, then as a part of this step, if the property is in flood prone area, then the application will be rejected and the application will not be processed further. Or the applicants minimum age should be more than 18 and the applicant applying is of less than 18, in that case the application is rejected, and it will not be processed further.

### 2.41.2.3 Borrowing Capacity

Once eligibility is checked, the next step is borrowing capacity. This is the maximum loan amount the applicant is eligible for. The stage at which it is to be calculated depends on the configuration made. It can be calculated before the scoring after the decision. The loan amount considered for decision is minimum of requested loan amount or the amount calculated for scoring, decision and pricing.

### 2.41.2.4 Qualitative Score

After borrowing capacity, the next step is qualitative scoring done using the feedback from the applicants for questionnaire.

### 2.41.2.5 Quantitative Score

After qualitative scoring next step is quantitative scoring where scoring is done using application and bureau attributes such as salary, number of credit lines, bureau score etc.

### 2.41.2.6 Decision and Grade

The decision on the application is done based on the quantitative and qualitative scores. The decision can be approve, manual or decline.

The borrowing capacity can also be calculated after the decision, in this case, the amount calculated will be used only for pricing.

### 2.41.2.7 Pricing

The last step is to determine the recommended interest rate. This is a risk-based price that refers to offering different interest rates to different customers depending on their risk exposure.

## 2.41.3 Strategy Configuration

Decision service is used for multiple purposes such as borrowing capacity, borrowing capacity plus pricing, only pricing, only decision, logical plus decision etc. System should have an ability to configure the strategy like when the decision service is being called for borrowing capacity, should the request pass through the logical check. In addition, the product processor can configure different strategies for different product types or customer types. Strategy configuration allows the product processor to configure the strategy as per its requirements for all the modes for which decision service can be called. Separate strategy can be defined for origination, servicing or collection. In addition, multiple strategy can be defined for the same module like for origination i.e. multiple strategy can be defined. This maintenance allows the product processor to configure the strategy according to its need for all the modes for which the decision service can be called for.

The various request types using which the product processor can call the decision service are mentioned below:

Score, Decsion and Pricing

Score and Decision

Scores

Pricing and Borrowing Capacity

Pricing

Borrowing Capacity

Decision

Qualitative Score

Quantitative Score

## 2.42 Product Processor

The source system calling the decision system for decisioning the credit application is defined as product processor. There are multiple data segments like account information, customer details, collateral details, credit bureau information or any additional notes if any is received from the product processor for credit decisioning and pricing in decision service.

This section contains the following subsections:

- [2.42.1 Create Product Processor](#)
- [2.42.2 View Product Processor](#)

### 2.42.1 Create Product Processor

The **Create Product Processor** screen allows the user to create product processor by updating various details.

#### To Create Product Processor:

1. From **Home screen**, click **Core Maintenance**. Under **Core Maintenance**, click **Credit Decision**.
2. Under **Credit Decision**, click **Maintenance**. Under **Maintenance**, click **Product Processor**.
3. Under **Product Processor**, click **Create Product Processor**.  
→ The **Create Product Processor** screen is displayed.

**Figure 142 : Create Product Processor**

4. Specify the fields on **Create Product Processor** screen.

The fields, which are marked with asterisk, are mandatory.

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

**Table 110 : Create Product Processor - Field Description**



Field	Description
<b>Basic Details</b>	
<b>Product Processor Code</b>	Specify the unique product processor code.
<b>Product Processor Description</b>	Specify the short description for the product processor.
<b>Effective Date</b>	Specify the effective date.
<b>Expiry Date</b>	Specify the expiry date.

5. Click **Save** to save the details.

The product processor is created successfully and can be viewed using the **View Product Processor** screen.

### 2.42.2 View Product Processor

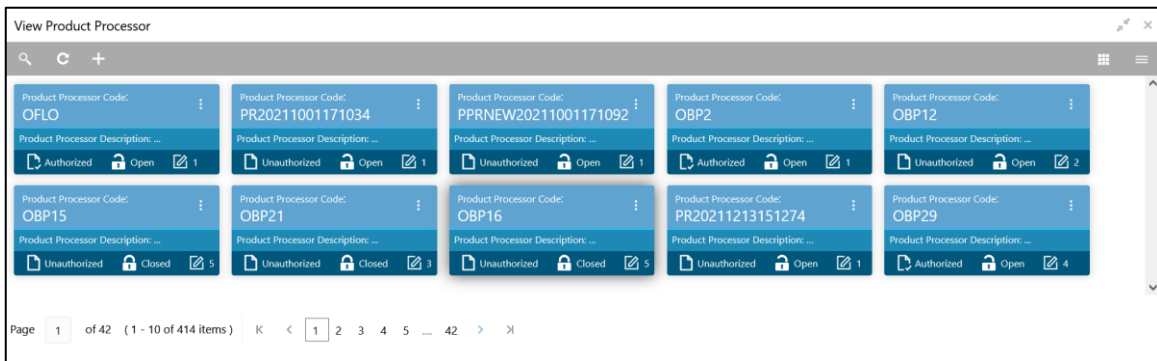
The **View Product Processor** screen allows the user to view the product processor created using the **Create Product Processor** screen. The status of the created product processor is displayed as **Unauthorized** and **Open**. Once the checker authorizes the product processor, the status is updated to **Authorized** and **Open**.

**To view created product processor:**

1. From **Home screen**, click **Core Maintenance**. Under **Core Maintenance**, click **Credit Decision**.
2. Under **Credit Decision**, click **Maintenance**. Under **Maintenance**, click **Product Processor**.
  1. Under **Product Processor**, click **View Product Processor**.

→ The **View Product Processor** screen is displayed.

**Figure 143 : View Product Processor**

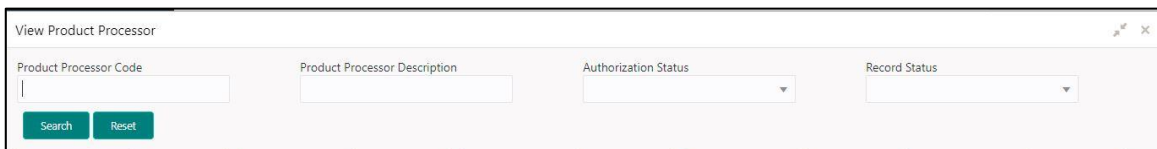


**Table 111 : View Product Processor - Field Description**

Field	Description
<b>Product Processor Code</b>	Displays the product processor code.
<b>Product Processor Description</b>	Displays the product processor description.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

4. Click **Search** icon.
5. Specify the search criteria to fetch the required product processor.

**Figure 144 : View Product Processor - Search Option**



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

**Table 112 : View Product Processor- Search Option - Field Description**

Field	Description
<b>Product Processor Code</b>	Specify the product processor code.
<b>Product Processor Description</b>	Specify the product processor description.

Field	Description
<b>Authorization Status</b>	Select the authorization status of the product processor.  The options are: <ul style="list-style-type: none"> <li>• Authorized</li> <li>• Rejected</li> <li>• Unauthorized</li> </ul>
<b>Record Status</b>	Select the record status of the product processor.  The options are: <ul style="list-style-type: none"> <li>• Open</li> <li>• Closed</li> </ul>

6. Click **Search**.
7. Click **three-dots** icon to modify, delete, authorise or view the created product processor.
8. To authorise the product processor, see the **Error! Reference source not found.**
9. Click **Unlock** icon to modify the following fields. The fields are displayed in the **Product Processor Maintenance** screen.
  - Product Processor Description
  - Effective Date, before authorization
  - Expiry Date

**Figure 145 : Product Processor Maintenance – Modify**

Product Processor Maintenance

Basic Details

Product Processor Code \*  
OFLO

Product Processor Description \*  
OFLO

Effective Date \*  
Sep 1, 2020

Expiry Date \*  
May 6, 2025

Audit Save Cancel

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

**Table 113 : Product Processor Maintenance - Modify - Field Description**

Field	Description
<b>Basic Details</b>	
<b>Product Processor Code</b>	Displays the product processor code.
<b>Product Processor Description</b>	Displays the product processor description. User can modify the same.
<b>Effective Date</b>	Displays the effective date of created product processor. User can modify the same before authorization if it is future dated.
<b>Expiry Date</b>	Displays the expiry date of created product processor. User can modify the same.

10. Click **Save** to update the modified fields.

11. Click **View** icon to view the created product processor.

The fields are displayed in **Product Processor Maintenance** screen.

**Figure 146 : Product Processor Maintenance – View**

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

**Table 114 : Product Processor Maintenance - View - Field Description**

Field	Description
<b>Basic Details</b>	
<b>Product Processor Code</b>	Displays the product processor code.
<b>Product Processor Description</b>	Displays the product processor description.

Field	Description
Effective Date	Displays the effective date of the created product processor.
Expiry Date	Displays the expiry date of the created product processor.

## 2.43 Lookup

Lookup are the service for mapping of keys and values that is used to enrich the description of the data displayed to the user. The lookup screen facilitates to define the contents for drop-down or list of value fields. Lookup fields are used throughout the system. The identified fields will only accept entries stored in this screen. Below are some examples of the lookup fields.

- Static/Enumeration values
  - Decision: Like Approve, Decline, Manual.
  - Colour – like red, green etc. Colour is used to highlight the decision i.e. Approve to be highlighted in Green, Reject can be highlighted in Red. The colour and decision combination is configurable
  - Grade like A, B, C etc
  - Strategy Configuration Code
  - ScoringModelType,
  - ExecutionSteps,
  - ExecutionModes,
  - BWCExecStage,
  - QuestionType,
  - QuestionSubType
- Dependent lookups based on another selection
  - Pricing lookup - Based on decision, Pricing should have different behaviour based on decision.

This section contains the following subsections:

- [2.43.1 Create Lookup](#)
- [2.43.2 View Lookup](#)

### 2.43.1 Create Lookup

The **Create Lookup** screen allows the user to create lookup definitions by updating various details.

**To create lookups:**

1. From **Home screen**, click **Core Maintenance**. Under **Core Maintenance** click, **Credit Decision**.
2. Under **Credit Decision** click, **Maintenance**. Under **Maintenance**, click **Lookup**.

- Under **Lookup**, click **Create Lookup**.

→ The **Create Lookup** screen is displayed.

**Figure 147 : Create Lookup Screen**

- Specify the fields on **Create Lookups** screen.

The fields, which are marked with asterisk, are mandatory.

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

**Table 115 : Create Lookups - Field Description**

Field	Description
<b>Basic Details</b>	
<b>Lookup Type</b>	Specify the unique lookup type name.
<b>Description</b>	Specify the short description for lookup.
<b>+ button</b>	Click to add a new row.
<b>- button</b>	Click to delete an existing row.
<b>Lookup Code</b>	Specify the unique lookup code.
<b>Description</b>	Specify the short description for lookup.
<b>Sort Order</b>	Specify the sort order.
<b>Dependent Identifier</b>	Specify the dependent Identifier.
<b>Enable</b>	By default, this option is enabled. Indicates if the lookup is enabled or not.

- Click **Save** to save the details.

The lookup is successfully created and can be viewed using the **View Lookup** screen.

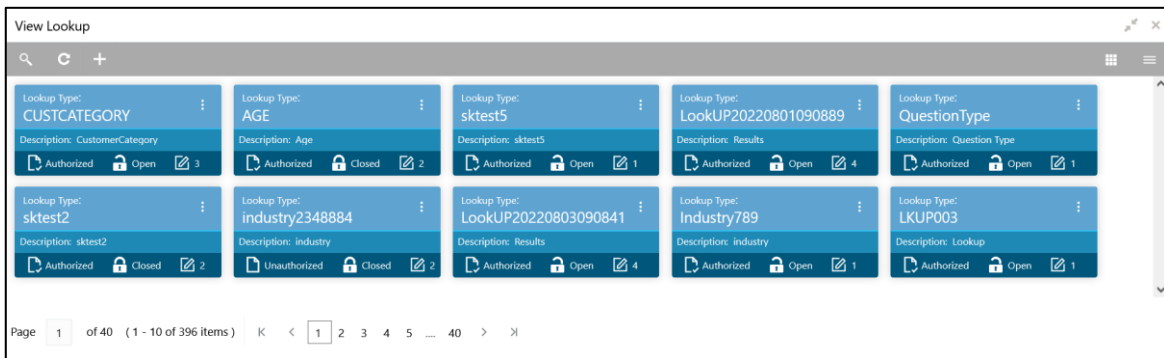
### 2.43.2 View Lookup

The **View Lookup** screen allows the user to view the lookup created using the **Create Lookup** screen. The status of the created lookup is displayed as **Unauthorized** and **Open**. Once the checker authorizes the lookup, the status is updated to **Authorized** and **Open**.

To view created lookups:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance** click, **Credit Decision**.
2. Under **Credit Decision** click, **Maintenance**. Under **Maintenance**, click **Lookup**.
3. Under **Lookup**, click **View Lookup**.  
 → The **View Lookup** screen is displayed.

Figure 148 : View Lookup



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

Table 116 : View Product Processor - Field Description

Field	Description
<b>Lookup Type</b>	Displays the lookup type.
<b>Description</b>	Displays the description of the lookup.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

4. Click **Search** icon.
5. Specify the search criteria to fetch the required lookups.

Figure 149 : View Lookups- Search Option

6. Click **Search**.

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

**Table 117 : View Lookups - Search Option - Field Description**

Field	Description
<b>Lookup Type</b>	Displays the lookup type.
<b>Authorization Status</b>	Select the authorization status of the lookups. The options are: <ul style="list-style-type: none"> <li>• Authorized</li> <li>• Rejected</li> <li>• Unauthorized</li> </ul>
<b>Record Status</b>	Select the record status of the lookups. The options are: <ul style="list-style-type: none"> <li>• Open</li> <li>• Closed</li> </ul>

7. Click **three-dot** icon to unlock, delete, authorize or view the created lookups.

8. Click **Unlock icon** to modify the following fields.

The fields are displayed in the **Lookup Maintenance** screen.

- Description
- Lookup Code
- Sort Order
- Dependent Identifier
- Enable

**Figure 150 : Lookup Maintenance - Modify**



Lookup Code	Description	Sort Order	Dependent Identifier	Enable
SILVER	Silver	1		<input checked="" type="checkbox"/>
GOLD	Gold	2		<input checked="" type="checkbox"/>
HNI	HighNetworthind	3		<input checked="" type="checkbox"/>
REGULAR	Regular	4		<input checked="" type="checkbox"/>
PLATINUM	Platinum	5		<input checked="" type="checkbox"/>
ULTRAHNI	Ultra-HighNetworthind	6		<input checked="" type="checkbox"/>

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

**Table 118 : Lookup Maintenance - Modify - Field Description**

Field	Description
<b>Basic Details</b>	
<b>Lookup Type</b>	Displays the created lookup type.
<b>Description</b>	Displays the description of the created lookup. User can modify the same.
<b>Lookup Codes</b>	
<b>+ button</b>	Click to add a new row.
<b>- button</b>	Click to delete an existing row.
<b>Lookup Code</b>	Displays the lookup code for the created lookups. User can modify the same.
<b>Description</b>	Displays the description for the created lookups. User can modify the same.
<b>Sort Order</b>	Displays the sort order for the created lookups. User can modify the same.
<b>Dependent Identifier</b>	Displays the dependent identifier for the created lookups. User can modify the same.
<b>Enable</b>	Displays the lookup code if enabled for the created lookup. User can modify the same.

9. Click **Save** to update the modified fields.
10. Click **View** icon to view the created lookup code.

The fields are displayed in **Lookup Maintenance** screen.

**Figure 151 : Lookup Maintenance – View**

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

**Table 119 : Lookup Maintenance - View - Field Description**

Field	Description
<b>Basic Details</b>	
<b>Lookup Type</b>	Displays the created lookup type.
<b>Description</b>	Displays the created lookup type description.
<b>Lookup Codes</b>	
<b>Lookup Code</b>	Displays the lookup code for the created lookup.
<b>Description</b>	Displays the description for the created lookup.
<b>Sort Order</b>	Displays the sort order for the created lookup.
<b>Dependent Identifier</b>	Displays the dependent identifier for the created lookup.
<b>Enable</b>	Displays the lookup code if enabled for the created lookup.

## **2.44 System Parameter**

System Parameter define the information or values used throughout the system and drives the behavior of the features. They control the way task is executed, or whether the system performs a particular task. Some of the parameters are set when the system is installed, but the values associated with the parameter needs to be reviewed and is to be maintained.

### **Example:**

qualitativeScore

quantitativeScore

applicant\_score

Requested Amount

CDS GRADE

The fact associated to these system parameters are used programmatically and added in the pool of facts. To define the system parameters, the keys of the system parameters have to be defined in a lookup called SYSPARAM.

This section contains the following subsections:

- [2.44.1 Create System Parameter](#)
- [2.44.2 View System Parameter](#)

### 2.44.1 Create System Parameter

The **Create System Parameter** screen allows the user to create parameters by updating various details.

#### To Create System Parameter:

1. From **Home screen**, click **Core Maintenance**. Under **Core Maintenance** click, **Credit Decision**.
2. Under **Credit Decision** click, **Maintenance**. Under **Maintenance**, click **System Parameters**.
3. Under **System Parameter**, click **Create System Parameter**.
  - The **Create System Parameter** screen is displayed.

**Figure 152 : Create System Parameter**

4. Specify the fields on **Create System Parameter** screen.

The fields, which are marked with asterisk, are mandatory.

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

**Table 120 : Create System Parameter - Field Description**

Field	Description
<b>Basic Details</b>	
<b>Parameter Code</b>	Select the parameter code from the drop-down list.
<b>Parameter Description</b>	Specify a short description for the parameter code.
<b>Parameter Description</b>	Specify a short description for the parameter code.
<b>Value</b>	Specify the value for the parameter code.

5. Click **Save** to save the details.

The system parameters is successfully created and can be viewed using the **View System Parameter** screen.

#### 2.44.2 View System Parameter

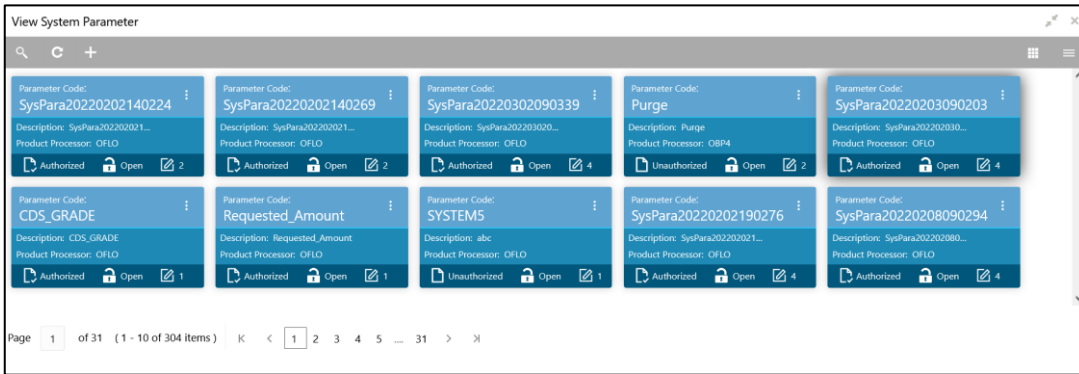
The View System Parameter screen allows user to view the parameters created using the **Create System Parameter** screen. The status of the created system parameter is displayed as **Unauthorized** and **Open**. Once the checker authorizes the parameter, the status is updated to **Authorized** and **Open**.

**To view created system parameter:**

1. From **Home screen**, click **Core Maintenance**. Under **Core Maintenance** click, **Credit Decision**.
2. Under **Credit Decision** click, **Maintenance**. Under **Maintenance**, click **System Parameter**.
3. Under **System Parameter**, click **View System Parameter**.

→ The **View System Parameter** screen is displayed.

**Figure 153 : View System Parameter**



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

**Table 121 : View System Parameter - Field Description**

Field	Description
<b>Parameter Code</b>	Displays the parameter code.
<b>Description</b>	Displays the description of the parameter code.
<b>Product Processor</b>	Displays the product processor of the parameter.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

4. Click **Search** icon.
5. Specify the search criteria to fetch the required system parameter.
6. Click **Search**.

**Figure 154 : View System Parameters- Search Option**



**Table 122 : View System Parameters - Field Description**

Field	Description
<b>Parameter Code</b>	Specify the parameter code.
<b>Authorization Status</b>	Select the authorisation status of the parameters.  The options are: <ul style="list-style-type: none"> <li>• Authorised</li> <li>• Rejected</li> <li>• Unauthorised</li> </ul>
<b>Record Status</b>	Select the record status of the parameters.  The options are: <ul style="list-style-type: none"> <li>• Open</li> <li>• Closed</li> </ul>

7. Click **three-dots** icon to unlock, delete, authorize or view the created system parameter.
8. Click **Unlock** icon to modify the following fields.

The fields are displayed in the **System Parameter Maintenance** screen.

- Product Processor
- Value

**Figure 155 : System Parameter Maintenance – Modify**

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

**Table 123 : System Parameter Maintenance - Modify - Field Description**

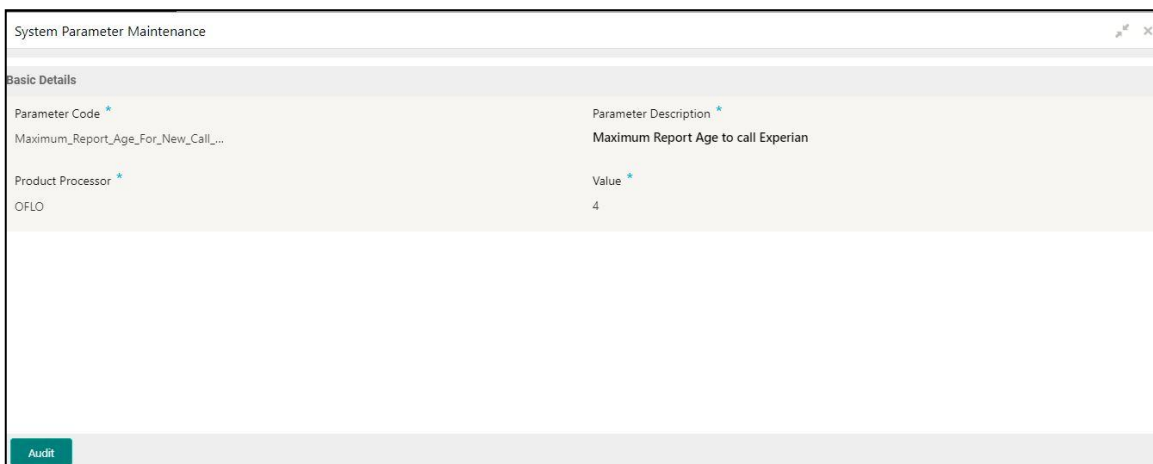
Field	Description
<b>Basic Details</b>	
<b>Parameter Code</b>	Displays the created system parameter code.
<b>Parameter Description</b>	Displays the description for the created system parameter code.
<b>Product Processor</b>	Displays the product processor of the created system parameter code.  User can modify the same.
<b>Value</b>	Displays the value of the system parameter.  User can modify the same.

9. Click **Save** to update the modified fields.

10. Click View icon to view the created system parameter code.

The fields are displayed in **System Parameter Maintenance** screen.

**Figure 156 : System Parameter Maintenance – View**



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

**Table 124 : System Parameter Maintenance - View - Field Description**

Field	Description
<b>Basic Details</b>	
<b>Parameter Code</b>	Displays the created system parameter code.
<b>Parameter Description</b>	Displays the created system parameter description.

Field	Description
Product Processor	Displays the product processor of the created system parameter.
Value	Displays the value for the created system parameter.

## **2.45 Strategy Configuration**

Decision service is used for multiple purposes such as borrowing capacity, borrowing capacity plus pricing, only pricing, only decision, logical plus decision etc. System should have an ability to configure the strategy like when the decision service is being called for borrowing capacity, should the request pass through the logical check. In addition, the product processor can configure different strategies for different product types or customer types. Strategy configuration allows the product processor to configure the strategy as per its requirements for all the modes for which decision service can be called. Separate strategy can be defined for origination, servicing or collection. In addition, multiple strategy can be defined for the same module like for origination i.e. multiple strategy can be defined. This maintenance allows the product processor to configure the strategy according to its need for all the modes for which the decision service can be called for.

This section contains the following subsections:

- [2.45.1 Create Strategy Configuration](#)
- [2.45.2 View Strategy Configuration](#)

### **2.45.1 Create Strategy Configuration**

The **Create Strategy Configuration** screen allows user to configure the strategy as per the requirement.

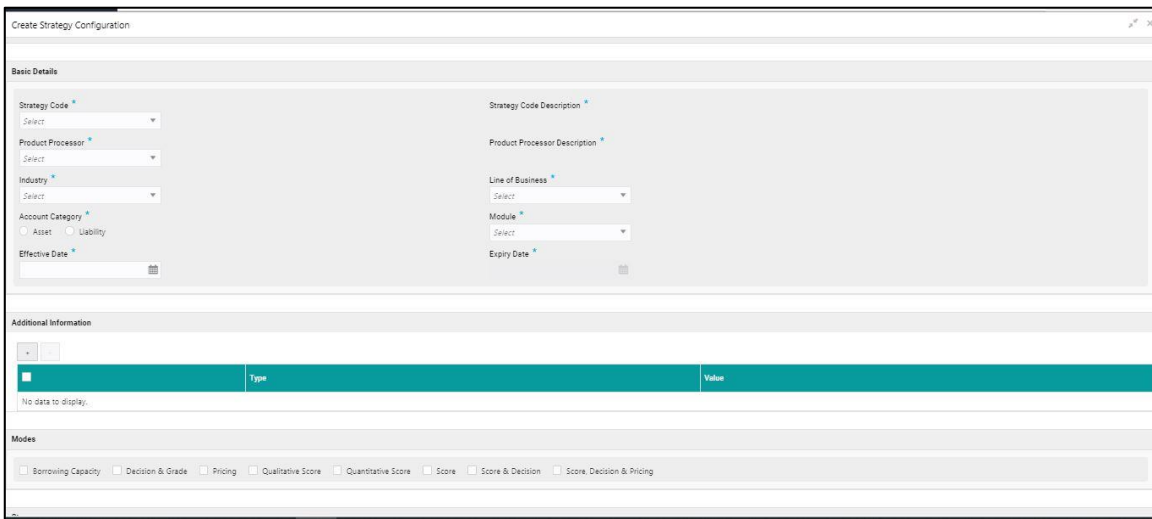
**To Create Strategy Configuration:**

1. From **Home screen**, click **Core Maintenance**. Under **Core Maintenance** click, **Credit Decision**.
2. Under **Credit Decision** click, **Maintenance**. Under **Maintenance**, click **Strategy Configuration**.
3. Under **Strategy Configuration**, click **Create Strategy Configuration**.

→ The **Create Strategy Configuration** screen is displayed.



**Figure 157 : Create Strategy Configuration**



4. Specify the fields on **Create Strategy Configuration** screen.

The fields, which are marked with asterisk, are mandatory.

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

**Table 125 : Create Strategy Configuration - Field Description**

Field	Description
<b>Basic Details</b>	
<b>Strategy Code</b>	Specify the unique strategy code.
<b>Strategy Code Description</b>	Specify a short description for the strategy code.
<b>Product Processor</b>	Specify the product processor for which the strategy is being configured.
<b>Product Processor Description</b>	Displays the product processor description.
<b>Industry</b>	<p>Select the industry type from the drop down list.</p> <p>The values are configurable based on the lookup values maintained.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• Banking Industry</li> <li>• Insurance</li> <li>• Trade Finance</li> </ul>

Field	Description
<b>Line of Business</b>	<p>Select the line of business type from the drop down list. The values are configurable based on the lookup values maintained.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• Corporate</li> <li>• Retail</li> <li>• SMEnt</li> </ul>
<b>Account Category</b>	<p>Select the category from the drop-down list.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• Asset</li> <li>• Liability</li> </ul>
<b>Module</b>	<p>Select the module from the drop down list. The values are configurable based on the lookup values maintained.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• Collection</li> <li>• Origination</li> <li>• Servicing</li> </ul>
<b>Effective Date</b>	Specify the effective date.
<b>Expiry Date</b>	Specify the expiry date.
<b>Additional Information</b>	
<b>+ button</b>	Click to add a new facts.
<b>- button</b>	Click to delete an existing row.
<b>Type</b>	Select the fact type from the drop down list.
<b>Value</b>	<p>Select the value configured for the fact type from the drop down list. The values are configurable based on the lookup values maintained.</p>

Field	Description
<b>Modes</b>	<p>Select the modes from the list.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• Borrowing Capacity</li> <li>• Decision &amp; Grade</li> <li>• Pricing</li> <li>• Qualitative Score</li> <li>• Quantitative Score</li> <li>• Score</li> <li>• Score &amp; Decision</li> <li>• Score, Decision &amp; Pricing</li> </ul> <p>If the <b>Module</b> is selected as <b>Collection</b>, then below options are available.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• Decision and Grade</li> <li>• Qualitative Score</li> <li>• Quantitative Score</li> <li>• Score</li> <li>• Score and Decision</li> </ul>
<b>Steps</b>	<p>Steps are defined based on the modes selected.</p> <p>For example:</p> <p>If <b>Borrowing Capacity</b> mode is selected, the check box for borrowing capacity is by default selected and disabled, you can select the other steps.</p>

5. Click **Save** to save the details.

The strategy configuration is successfully created and can be viewed using the **View strategy Configuration** screen.

## 2.45.2 View Strategy Configuration

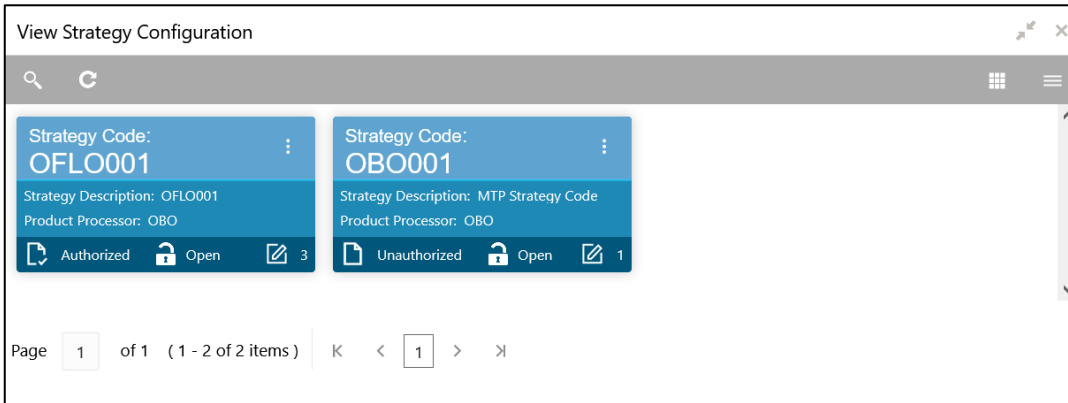
The **View Strategy Configuration** screen allows the user to view the strategy configuration created using the **Create Strategy Configuration** screen. The status of the created strategy configuration is displayed as **Unauthorized** and **Open**. Once the checker authorizes the parameter, the status is updated to **Authorized** and **Open**.

**To view Created Strategy Configuration:**

1. From **Home screen**, click **Core Maintenance**. Under **Core Maintenance** click, **Credit Decision**.
2. Under **Credit Decision** click, **Maintenance**. Under **Maintenance**, click **Strategy Configuration**.

- Under **Strategy Configuration**, click **View Strategy Configuration**.  
 → The **View Strategy Configuration** screen is displayed.

**Figure 158 : View Strategy Configuration**



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

**Table 126 : View Strategy Configuration - Field Description**

Field	Description
<b>Strategy Code</b>	Displays the strategy code.
<b>Strategy Description</b>	Displays the strategy description.
<b>Product Processor</b>	Displays the product processor.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

- Click **Search** icon.
- Specify the search criteria to fetch the required strategy configuration.

**Figure 159 : View Strategy Configuration- Search Option**



- Click **Search**.

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

**Table 127 : View Strategy Configuration – Search Option - Field Description**

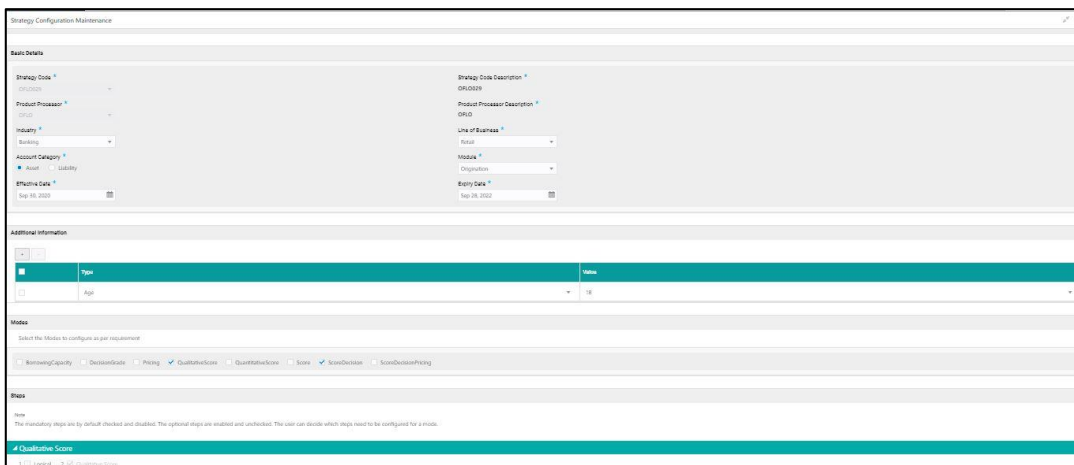
Field	Description
<b>Strategy Code</b>	Specify the strategy code.
<b>Strategy Description</b>	Specify the strategy description.
<b>Authorization Status</b>	Select the authorization status of the parameters.  The options are: <ul style="list-style-type: none"> <li>• Authorized</li> <li>• Rejected</li> <li>• Unauthorized</li> </ul>
<b>Record Status</b>	Select the record status of the parameters.  The options are: <ul style="list-style-type: none"> <li>• Open</li> <li>• Closed</li> </ul>

7. Click **three-dots** icon to unlock, delete, authorize or view the created strategy configuration.
8. To authorize the strategy configuration, see the Authorization process.
9. Click **Unlock** icon to modify the following fields.

The fields are displayed in the **Strategy Configuration Maintenance** screen.

- Expiry Date
- Fact Type and Value
- Modes
- Steps

**Figure 160 : Strategy Configuration Maintenance – Modify**



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

Table 128 : Strategy Configuration Maintenance - Modify - Field Description

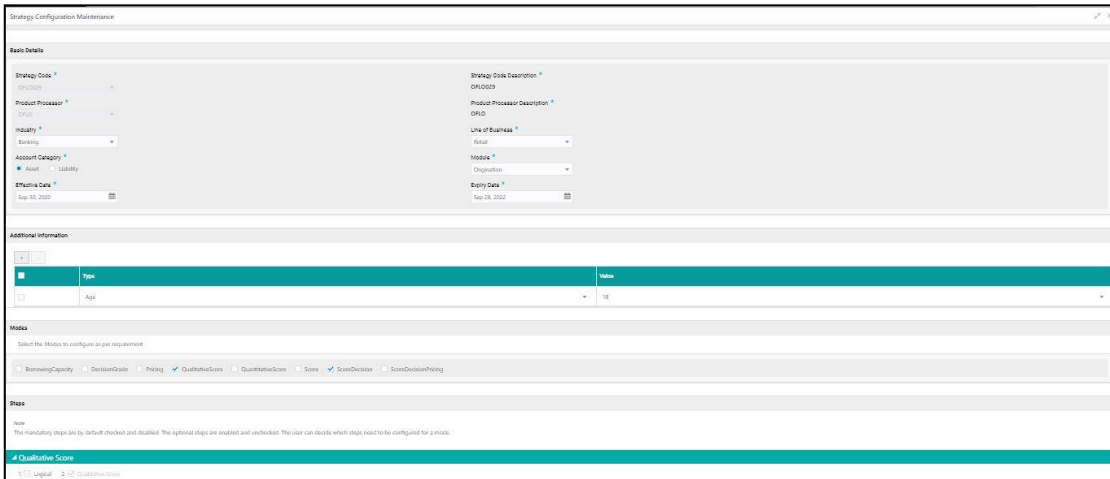
Field	Description
<b>Basic Details</b>	
<b>Strategy Code</b>	Displays the strategy code.
<b>Strategy Code Description</b>	Displays the strategy code description.
<b>Product Processor</b>	Displays the product processor for the created strategy configuration.
<b>Product Processor Description</b>	Displays the product processor description for the created strategy configuration.
<b>Industry</b>	Displays the industry for the created strategy configuration.
<b>Line of Business</b>	Displays the line of business for the created strategy configuration.
<b>Account Category</b>	Displays the account category for the created strategy configuration.
<b>Module</b>	Displays the module for the created strategy configuration.
<b>Effective Date</b>	Displays the effective date for the created strategy configuration.
<b>Expiry Date</b>	Displays the expiry date for the created strategy configuration. User can modify the same.
<b>Additional Information</b>	
<b>Type</b>	Displays the fact type for the created strategy configuration. User can modify the same.
<b>Value</b>	Displays the fact value for the created strategy configuration. User can modify the same.
<b>Modes</b>	Displays the modes defined for the created strategy configuration. User can modify the same.
<b>Steps</b>	Displays the steps defined for the created strategy configuration. User can modify the same.

10. Click **Save** to update the modified fields.

11. Click **View** icon to view the created strategy configuration.

The fields are displayed in **Strategy Configuration Maintenance** screen.

Figure 161 : Strategy Configuration Maintenance – View



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

**Table 129 : Strategy Configuration Maintenance - View - Field Description**

Field	Description
<b>Basic Details</b>	
<b>Strategy Code</b>	Displays the strategy code.
<b>Strategy Code Description</b>	Displays the strategy code description.
<b>Product Processor</b>	Displays the product processor for the created strategy configuration.
<b>Product Processor Description</b>	Displays the product processor description for the created strategy configuration.
<b>Industry</b>	Displays the industry for the created strategy configuration.
<b>Line of Business</b>	Displays the line of business for the created strategy configuration.
<b>Account Category</b>	Displays the account category for the created strategy configuration.
<b>Module</b>	Displays the module for the created strategy configuration.
<b>Effective Date</b>	Displays the effective date for the created strategy configuration.
<b>Expiry Date</b>	Displays the expiry date for the created strategy configuration.
<b>Additional Information</b>	
<b>Type</b>	Displays the fact type for the created strategy configuration.
<b>Value</b>	Displays the fact value for the created strategy configuration.
<b>Steps</b>	Displays the steps defined for the created strategy configuration.

## 2.46 Validation Model

During credit decision, the system evaluates a credit score that represents the creditworthiness of an individual. Banks also do an initial evaluation by using some rules to decide whether to proceed with credit decisioning process or not. A bank can perform this evaluation by maintaining a validation model. Multiple levels of rule can be setup in validation model. The system will process the next step of credit decisioning only if all the rules are satisfied. Based on the configuration, the system will run all the rules configured or stop execution of the further rules, if any rule fails and decline the request.

This section contains the following subsections:

- [2.46.1 Create Validation Model](#)
- [2.46.2 View Validation Model](#)

### 2.46.1 Create Validation Model

The **Create Validation Model** screen allows user to create validation model based on the various input. User can configure the strategy as per the requirement.

**To create Validation Model:**

1. From **Home screen**, click **Core Maintenance**. Under **Core Maintenance**, click **Credit Decision**.
2. Under **Credit Decision**, click **Maintenance**. Under **Maintenance**, click **Validation Model**.
3. Under **Validation Model**, click **Create Validation Model**.  
→ The **Create Validation Model** screen is displayed.

**Figure 162 : Create Validation Model**

4. Specify the fields on **Create Validation Model screen**. The fields, which are marked with asterisk, are mandatory. For more information on fields, refer to the field description table below.

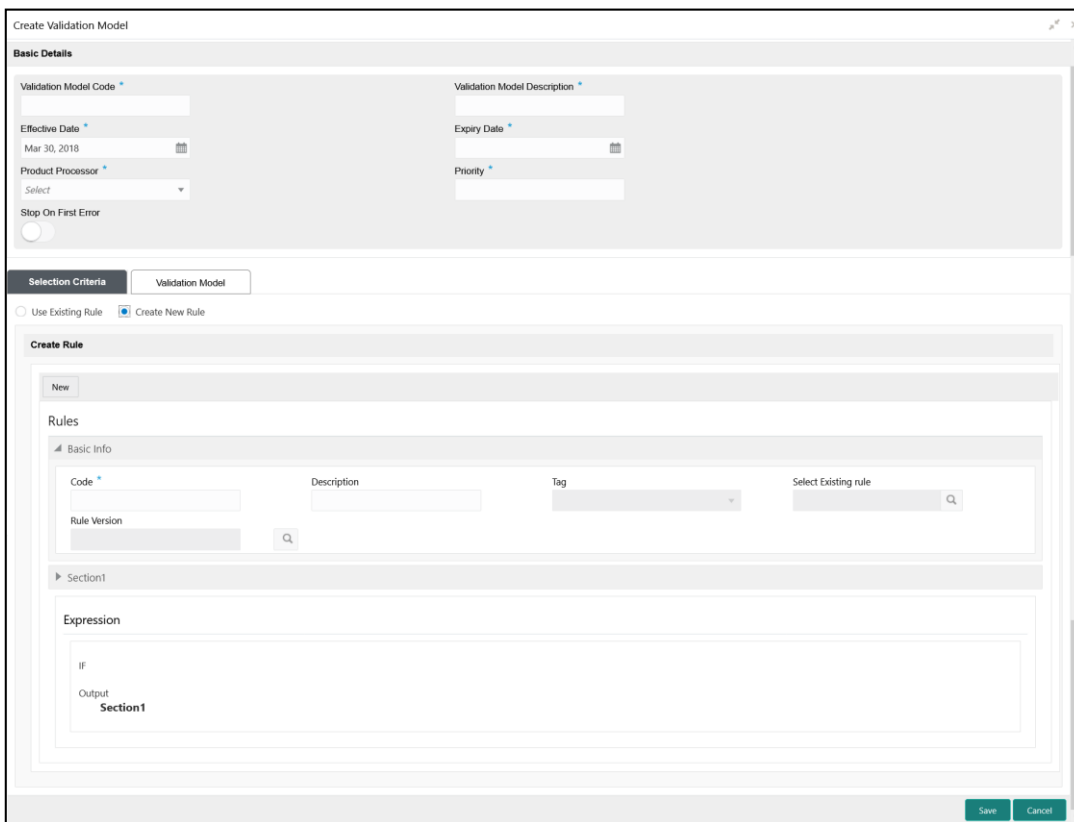
**Table 130 : Create Validation Scoring Model - Field Description**



Field	Description
<b>Basic Details</b>	
<b>Validation Model Code</b>	Specify the unique validation model code.
<b>Validation Model Description</b>	Specify a short description for the validation model.
<b>Effective Date</b>	Specify the effective date.
<b>Expiry Date</b>	Specify the expiry date.
<b>Product Processor</b>	Specify the product processor for which the validation model is being defined.
<b>Priority</b>	Specify the priority for the validation model.
<b>Stop on Failure</b>	By default, this option is disabled. Indicates whether system should stop execution of rules if any rules fails or continue ahead with the remaining rules as per the sequence.






5. Click the **Selection Criteria** tab to define selection criteria rules for validation model.

**Figure 163 : Create Validation Model - Selection Criteria**



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

**Table 131 : Create Validation Model – Selection Criteria - Field Description**

Field	Description
The following fields appear if you click the <b>Selection Criteria</b> Tab	
<b>Use Existing Rule</b>	By default, this option is enabled. Indicates if the existing rule is linked.
<b>Rules</b>	
<b>Rule Code</b>	Select the rule code from the drop-down list.
	Click to get the information about the rule.
<b>Rule Name</b>	View the rule name.
<b>Create New Rule</b>	Select this option to create new rule.
<b>Rules</b>	
<b>Code</b>	Specify the rule code.
<b>Description</b>	Specify the rule description.
<b>Select Existing Rule</b>	Select the existing rule from the drop-down list.
	Click to view the existing rule.
Below field appears once you click the  icon.	
<b>Rule ID</b>	Displays the rule ID.
<b>Rule Name</b>	Displays the rule name.
<b>Description</b>	Displays the rule description.
<b>Rule Version</b>	Displays the rule version.
	Click to view the list of rule versions.  Note: This is used when existing rule is to be used for some modification like copy of existing rule.
The below field appears once you click the  icon.	
<b>List of Versions</b>	
<b>Version</b>	Displays the rule version.
<b>Description</b>	Displays the rule description.

Field	Description
<b>Creation Date</b>	<p>Displays the rule creation date.</p> <p>Note: This is used when existing rule is to be used for some modification like copy of existing rule.</p>
<b>Expression Builder</b>	
<b>+ button</b>	Click to add new expression.
<b>Fact / Rules</b>	<p>Select the fact or rule from the drop-down list.</p> <p>Once you select the fact/rules one more field opens adjacent to it, update the same based on the selected option.</p>
<b>Operator</b>	<p>Select the comparison operator from the drop-down list.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• &lt;</li> <li>• &gt;</li> <li>• +</li> <li>• =</li> <li>• %</li> <li>• !=</li> <li>• -</li> <li>• &gt;=</li> <li>• &lt;=</li> <li>• *</li> <li>• /</li> <li>• Contains</li> <li>• In</li> <li>• Matches</li> <li>• Notmatches</li> <li>• Notcontains</li> <li>• Notin</li> </ul>


Field	Description
<b>Data Type</b>	<p>Select the data type for the fact or rule. Once you select the data type one more field opens adjacent to the output, update the same based on the selected output option.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• Text</li> <li>• Number</li> <li>• Boolean</li> <li>• Date</li> <li>• Fact</li> <li>• Rules</li> </ul> <p>The below option appears if the <b>Data Type</b> is selected as <b>Boolean</b>.</p> <ul style="list-style-type: none"> <li>• True</li> <li>• False</li> </ul>
<b>Output</b>	<p>Select the output from the drop-down list. Once you select the output one more field opens adjacent to the output, update the same based on the selected output option.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• Text</li> <li>• Number</li> <li>• Boolean</li> <li>• Date</li> <li>• Fact</li> </ul> <p>The below option appears if the <b>Data Type</b> is selected as <b>Boolean</b>.</p> <ul style="list-style-type: none"> <li>• True</li> <li>• False</li> </ul>
<b>Expression</b>	View the expression updated in the expression builder.

6. Click the **Validation Model** tab to define various validation modelling rules.

**Figure 164 : Create Validation Model – Validation Model**

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

**Table 132 : Create Validation Model – Validation Model - Field Description**

Field	Description
The following fields appear if you click the <b>Validation Model</b> Tab	
<b>+ button</b>	Click to add a new row.
<b>- button</b>	Click to delete an existing row.
<b>Rule ID</b>	Select the rule ID from the drop-down list.  All rules configured in the rule engine for the selected product processor are obtained.
	Click to get the information about the rule.
<b>Sequence</b>	Specify the sequence of execution of rules.
<b>Reason</b>	Select the reason from the drop-down list.
<b>Severity</b>	Select the severity from the drop-down list.
<b>Comments</b>	Specify the comments.

7. Click **Save** to save the details.

The validation model is successfully created and can be viewed using the **View Validation Model** screen.

### 2.46.2 View Validation Model

The **View Validation Model** screen allows the user to view the validation model created using the **Create Validation Model** screen. The status of the created validation model is displayed as **Unauthorized** and **Open**. Once the checker authorizes the model, the status is updated to **Authorized** and **Open**.

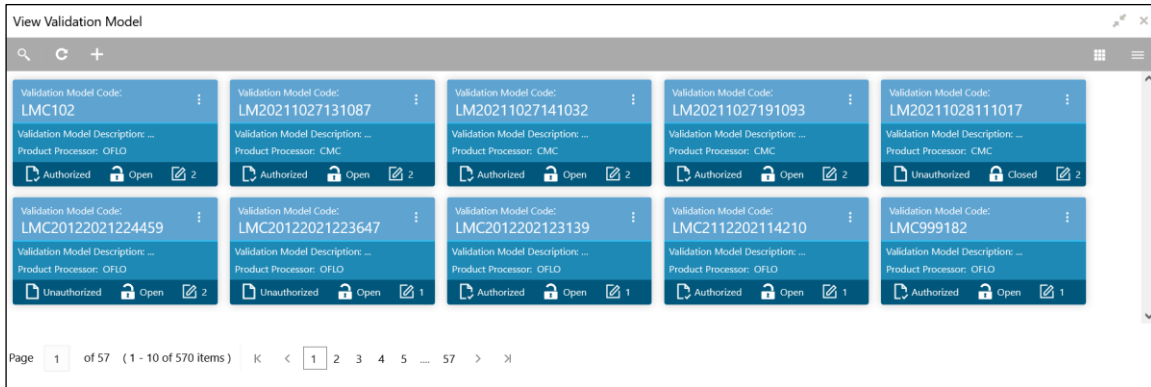
**To View Validation Model:**

1. From **Home screen**, click **Core Maintenance**, Under **Core Maintenance**, click **Credit Decision**.

2. Under **Credit Decision**, click **Maintenance**. Under **Maintenance**, click **Validation Model**.
3. Under **Validation Model**, click **View Validation Model**.

→ The **View Validation Model** screen is displayed.

**Figure 165 : View Validation Model**



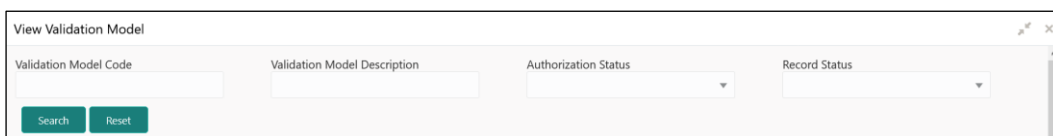
For more information on fields, refer to the field description table below.

**Table 133: View Validation Model – Field Description.**

Field	Description
<b>Validation Model Code</b>	Displays the validation model code.
<b>Validation Model Description</b>	Displays the validation model description.
<b>Product Processor Code</b>	Displays the product processor code.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

4. Click **Search** icon.
5. Specify the search criteria to fetch the required validation model.

**Figure 166 : Validation Model - Search Option**



6. Click **Search**.

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

**Table 134 : View Validation Model - Search Option - Field Description**

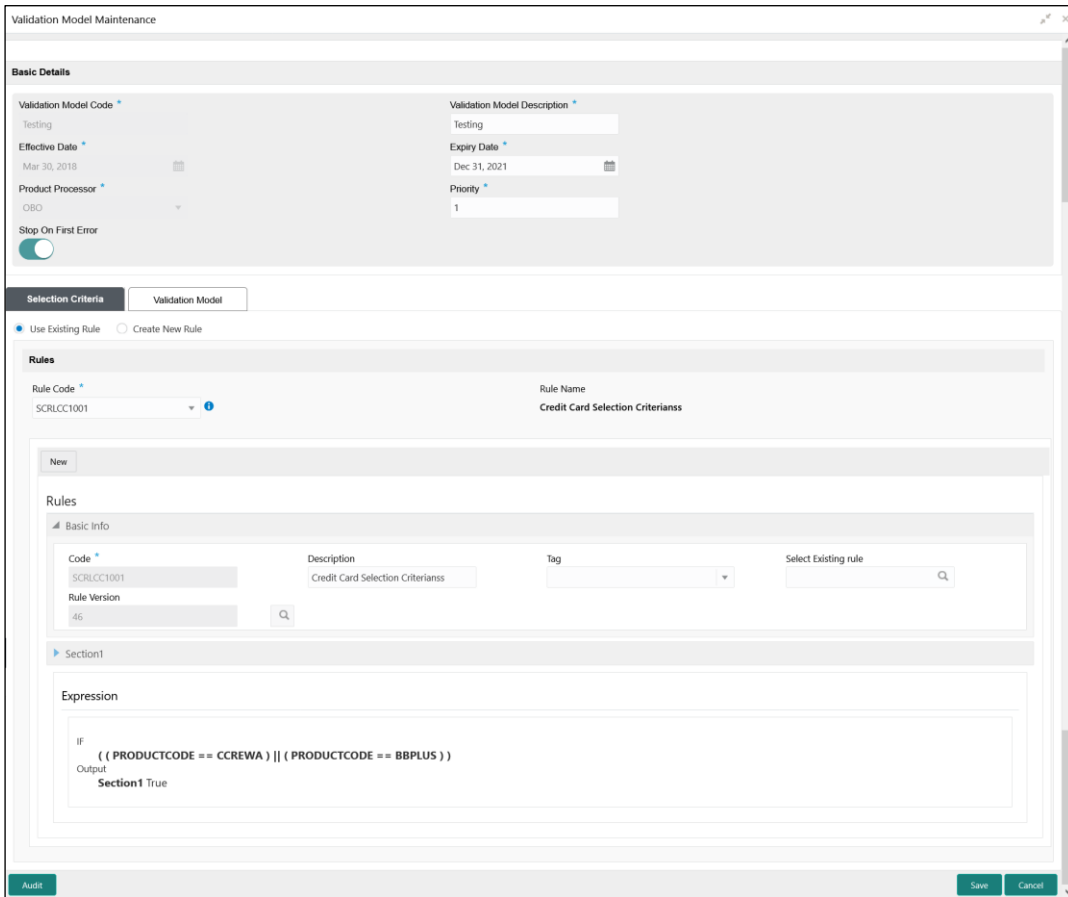
<b>Field</b>	<b>Description</b>
<b>Validation Model Code</b>	Specify the validation model code.
<b>Validation Model Description</b>	Specify the description of the validation model.
<b>Authorization Status</b>	Select the authorization status of the validation model.  The options are: <ul style="list-style-type: none"> <li>• <b>Authorized</b></li> <li>• <b>Rejected</b></li> <li>• <b>Unauthorized</b></li> </ul>
<b>Record Status</b>	Select the record status of the validation model.  The options are: <ul style="list-style-type: none"> <li>• <b>Open</b></li> <li>• <b>Closed</b></li> </ul>

6. Click **three dots** icon to unlock, delete, authorize, or view the created validation model.
7. Click **Unlock** icon to modify the following fields.

The fields are displayed in the **Validation Model Maintenance** screen. The following fields are editable during unlock.

- Validation Model Description
- Effective date before authorization
- Expiry date
- Add new fact or rule to the selection criteria
- Modify the rule in validation model tab
- Modify the sequence, reason, or comments in validation model tab

**Figure 167 : Validation Model Maintenance - Modify**





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

**Table 135: Validation Model Maintenance – Modify – Field Description.**

Field	Description
<b>Basic Details</b>	
<b>Validation Model Code</b>	Displays the created validation model code.
<b>Validation Model Description</b>	Displays the description for the created validation model. User can modify the same.
<b>Effective Date</b>	Displays the effective date for the created validation model. User can modify the same if the date is future dated.
<b>Expiry Date</b>	Displays the expiry date for the created validation model. User can modify the same.
<b>Product Processor</b>	Displays the product processor of the created validation model.
<b>Priority</b>	Displays the priority of the validation model. User can modify the same.



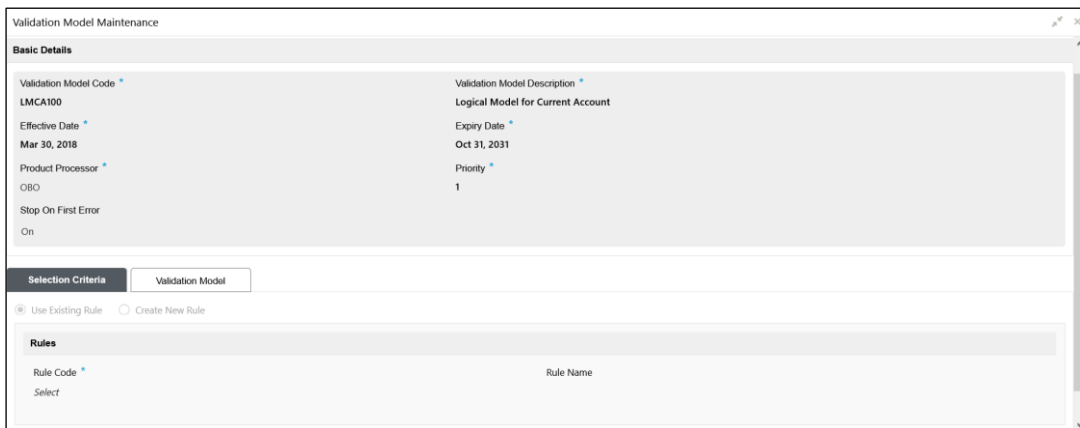
Field	Description
<b>Stop On Failure</b>	Indicates whether system should stop execution of rules if any rules fails or continue ahead with the remaining rules as per the sequence.
<b>Selection Criteria</b>	
<b>Use Existing Rule</b>	By default, this option is enabled. Indicates if the existing rule is linked.
<b>Rules</b>	
<b>Rule Code</b>	Displays the rule code.
	Click to get the information about the rule.
<b>Rule Name</b>	Displays the rule name.
<b>Create New Rule</b>	Indicates if the new rule is created.
<b>Rules</b>	
<b>Code</b>	Displays the rule code.
<b>Description</b>	Displays the rule description
<b>Select Existing Rule</b>	Displays the existing rule.
<b>Rule Version</b>	Displays the rule version.
<b>Expression Builder</b>	
<b>Fact / Rules</b>	Displays the fact/rules of the created validation model.
<b>Operator</b>	Displays the comparison operator of the created validation model.
<b>Data Type</b>	Displays the data type for the fact or rule of the created validation model.
<b>Output</b>	Displays the output of the created validation model.
<b>Expression</b>	Displays the expression updated in the expression builder of the crated validation model.
<b>Validation Model</b>	
<b>Rule ID</b>	Displays the rule ID of the created validation model. You can modify the same.
	Click to get the information about the rule.
<b>Sequence</b>	Displays the sequence of the created validation model. User can modify the same.

Field	Description
<b>Reason</b>	Displays the reason of the created validation model. User can modify the same.
<b>Severity</b>	Displays the severity of the created validation model. User can modify the same.
<b>Comments</b>	Displays the comments of the created validation model. User can modify the same.

8. Click **Save** to update the modified fields.
9. Click **View** icon to view the created validation model.

The fields are displayed in **Validation Model Maintenance** screen.

**Figure 168 : Validation Model Maintenance - View**



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

**Table 136 : Validation Model Maintenance - View – Field Description.**

Field	Description
<b>Basic Details</b>	
<b>Validation Model Code</b>	Displays the created validation model code.
<b>Validation Model Description</b>	Displays the created validation model description.
<b>Effective Date</b>	Displays the effective date.
<b>Expiry Date</b>	Displays the expiry date.
<b>Product Processor</b>	Displays the product processor of the created validation model.

<b>Field</b>	<b>Description</b>
<b>Priority</b>	Displays the priority of the validation model.
<b>Selection Criteria</b>	
<b>Rules</b>	
<b>Use Existing Rule</b>	Displays if the existing rule is linked to validation model.
<b>Rule Code</b>	Displays the rule code of the created validation model.
<b>Rule Name</b>	Displays the rule name of the created validation model.
<b>Create New Rule</b>	Displays if new rule is linked to the validation model.
<b>Rules</b>	
<b>Code</b>	Displays the rule code of the created validation model.
<b>Description</b>	Displays the rule description of the created validation model.
<b>Select Existing Rule</b>	Displays the existing rule.
<b>Rule Version</b>	Displays the rule version.
<b>Expression Builder</b>	
<b>Fact / Rules</b>	Displays the fact/rules of the created validation model.
<b>Operator</b>	Displays the comparison operator of the created validation model.
<b>Data Type</b>	Displays the data type for the fact or rule of the created validation model.
<b>Output</b>	Displays the output of the created validation model.
<b>Expression</b>	Displays the expression updated in the expression builder of the created validation model.
<b>Validation Model</b>	
<b>Rule ID</b>	Displays the rule ID of the created validation model.
<b>Sequence</b>	Displays the sequence of the created validation model.
<b>Reason</b>	Displays the reason of the created validation model.
<b>Severity</b>	Displays the severity of the created validation model.
<b>Comments</b>	Displays the comments of the created validation model.

## 2.47 Borrowing Capacity

Borrowing capacity describes the total amount the applicant is eligible to borrow. Maximum loan amount is used for loans, credit cards, and line of credit accounts. The maximum credit amount depends on a number of factors including the borrower's credit worthiness i.e., financial profile and debt to income, loan term, loan purpose, whether the loan is supported by a collateral etc.

Using this screen, we can link a rule for calculating borrowing capacity. We can calculate the maximum lendable amount based on the various criteria of the lender such as debt to income ratio, credit score, credit history etc.

A sample rule to calculate borrowing capacity is given below:

Scenario: Based on Income and FICO score

### Rule 1:

```
IF MIN(FICO_SCORE) >= 500 AND MIN(EMPLOYMENT_PERIOD) < 1 YEAR
THEN MULTIPLIER = 5
ELSEIF MIN(FICO_SCORE) < 500 AND MIN(EMPLOYMENT_PERIOD) > 1 YEAR
THEN MULTIPLIER = 4
```

**Rule2:** Max Lendable Amount

MIN(Income) \* Rule1

This section contains the following subsections:

- [2.47.1 Create Borrowing Capacity](#)
- [2.47.2 View Borrowing Capacity](#)

### 2.47.1 Create Borrowing Capacity

The **Create Borrowing Capacity** screen allows the user to define the borrowing capacity based on the various input.

#### To Create a Borrowing Capacity:

1. From **Home screen**, click **Core Maintenance**, Under **Core Maintenance**, click **Credit Decision**.
2. Under **Credit Decision**, click **Maintenance**. Under **Maintenance**, click **Borrowing Capacity**.
3. Under **Borrowing Capacity**, click **Create Borrowing Capacity**.

→ The **Create Borrowing Capacity** screen is displayed.

**Figure 169 : Create Borrowing Capacity**

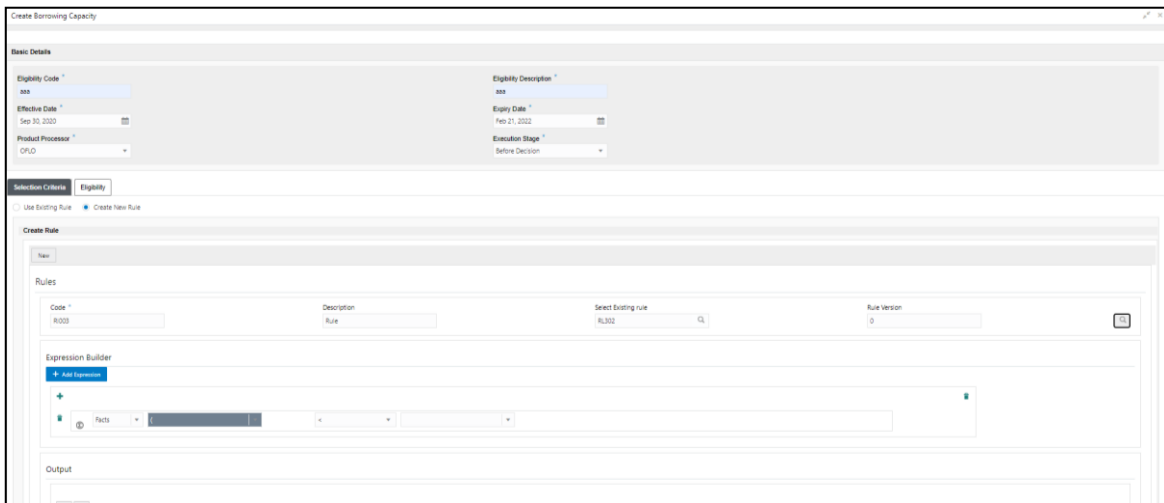
- Specify the fields on **Create Borrowing Capacity** screen. The fields, which are marked with asterisk, are mandatory. For more information on fields, refer to the field description table below.

**Table 137 : Create Borrowing Capacity - Field Description**

Field	Description
<b>Basic Details</b>	
<b>Eligibility Code</b>	Specify the unique eligibility code.
<b>Eligibility Description</b>	Specify a short description for the eligibility.
<b>Effective Date</b>	Specify the effective date.
<b>Expiry Date</b>	Specify the expiry date.
<b>Product Processor</b>	Specify the product processor for which the borrowing capacity is being defined.
<b>Execution Stage</b>	<p>Select the required option for execution stage.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li><b>Before Decision:</b> If this option is selected, amount is calculated before scoring model resolution. Loan amount is replaced with the minimum of requested loan amount and maximum lendable amount for scoring and pricing.</li> <li><b>After Decision:</b> If this option is selected, Amount is calculated after decision and before pricing. Loan amount is replaced with the minimum of requested loan amount and maximum lendable amount for pricing.</li> </ul>




- Click the **Selection Criteria** tab to define selection criteria rules.



**Figure 170 : Create Borrowing Capacity - Selection Criteria**



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

**Table 138 : Create Borrowing Capacity – Selection Criteria - Field Description**

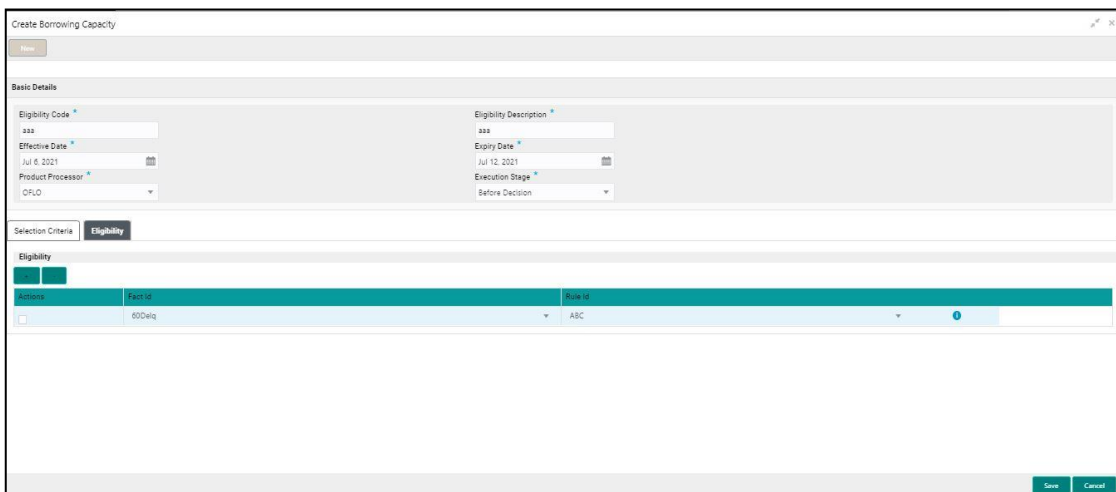
Field	Description
The following fields appear if you click the <b>Selection Criteria</b> Tab	
<b>Use Existing Rule</b>	By default, this option is enabled. Indicates if the existing rule is linked.
<b>Rules</b>	
<b>Rule Code</b>	Select the rule code from the drop-down list.
	Click this icon to get the information about the rule.
<b>Rule Name</b>	View the rule name.
<b>Create New Rule</b>	Select this option to create new rule.
<b>Rules</b>	
<b>Code</b>	Specify the rule code.
<b>Description</b>	Specify the rule description.
<b>Select Existing Rule</b>	Select existing rule from the drop-down list.
	Click to view the existing rule.  Note: This is used when existing rule is to be used for some modification like copy of existing rule.
Below fields appears once you click  icon.	

Field	Description
<b>Rule ID</b>	Displays the rule ID.
<b>Rule Name</b>	Displays the rule name.
<b>Description</b>	Displays the rule description.
<b>Rule Version</b>	Displays the rule version.
	Click to view the rule version.  Note: This is used when existing rule is to be used for some modification like copy of existing rule.
Below fields appears once you click  icon.	
<b>Version</b>	Displays the rule version.
<b>Description</b>	Displays the rule description.
<b>Creation Date</b>	Displays the rule creation date.
<b>Expression Builder</b>	
<b>+ button</b>	Click to add new expression.
<b>Fact / Rules</b>	Select the fact or rule from the drop-down list.  Once you select the fact/rules one more field opens adjacent to the output, update the same based on the selected output option.
<b>Operator</b>	Select the comparison operator from the drop-down list.  The options are: <ul style="list-style-type: none"> <li>• &lt;</li> <li>• &gt;</li> <li>• +</li> <li>• =</li> <li>• %</li> <li>• !=</li> <li>• -</li> <li>• &gt;=</li> <li>• &lt;=</li> <li>• *</li> <li>• /</li> <li>• Contains</li> <li>• In</li> <li>• Matches</li> <li>• Notmatches</li> <li>• Notcontains</li> <li>• Notin</li> </ul>

Field	Description
<b>Data Type</b>	<p>Select the data type for the fact or rule. Once you select the data type one more field opens adjacent to it, update the same based on the selected option.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• Text</li> <li>• Number</li> <li>• Boolean</li> <li>• Fact</li> <li>• Date</li> </ul> <p>The below option appears if the <b>Data Type</b> is selected as <b>Boolean</b>.</p> <ul style="list-style-type: none"> <li>• True</li> <li>• False</li> </ul>
<b>Output</b>	<p>Select the output from the drop-down list. Once you select the output one more field opens adjacent to it, update the same based on the selected option.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• Text</li> <li>• Number</li> <li>• Boolean</li> <li>• Date</li> <li>• Fact</li> </ul> <p>The below option appears if the <b>Data Type</b> is selected as <b>Boolean</b>.</p> <ul style="list-style-type: none"> <li>• True</li> <li>• False</li> </ul>
<b>Expression</b>	View the expression updated in the expression builder.

6. Click the **Eligibility** tab to define eligibility.


**Figure 171 : Create Borrowing Capacity – Eligibility Tab**



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



**Table 139 : Create Borrowing Capacity – Eligibility Tab - Field Description**

Field	Description
The following fields appear if you click the <b>Eligibility</b> Tab	
<b>+ button</b>	Click to add a new row.
<b>- button</b>	Click to delete an existing row.
<b>Actions</b>	Select this checkbox corresponding to the row to be deleted.
<b>Fact ID</b>	Select the fact ID from the drop down list.
<b>Rule ID</b>	Select the rule ID from the drop down list.
	Click to get the information about the rule.

7. Click **Save** to save the details.

The **Borrowing Capacity** is successfully created and can be viewed using the **View Borrowing Capacity** screen.

### 2.47.2 View Borrowing Capacity

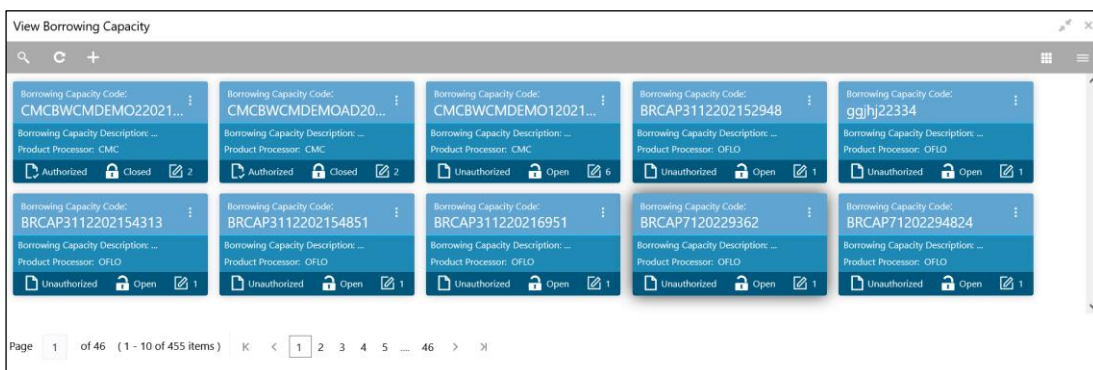
The **View Borrowing Capacity** screen allows user to view the borrowing capacity created using the **Create Borrowing Capacity** screen. The status of the created capacity is displayed as **Unauthorized** and **Open**. Once the checker authorizes the capacity, the status is updated to **Authorized** and **Open**.

To view the created **Borrowing Capacity**:

1. From **Home** screen, click **Core Maintenance**, Under **Core Maintenance**, click **Credit Decision**.
2. Under **Credit Decision**, click **Maintenance**. Under **Maintenance**, click **Borrowing Capacity**.
3. Under **Borrowing Capacity**, click **View Borrowing Capacity**.

→ The **View Borrowing Capacity** screen is displayed.

**Figure 172 : View Borrowing Capacity**



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

**Table 140: View Borrowing Capacity – Field Description.**

Field	Description
<b>Borrowing Capacity Code</b>	Displays the borrowing capacity code.
<b>Borrowing Capacity Model Description</b>	Displays the borrowing capacity description.
<b>Product Processor</b>	Displays the product processor.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

- Click **Search** icon.
- Specify the search criteria to fetch the required borrowing capacity.

**Figure 173 : View Borrowing Capacity- Search Option**

- Click **Search**.

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

**Table 141 : View Borrowing Capacity -Search Option- Field Description**

Field	Description
<b>Borrowing Capacity Code</b>	Specify the borrowing capacity code.
<b>Borrowing Capacity Description</b>	Specify the description of the borrowing capacity.
<b>Authorization Status</b>	<p>Select the authorization status of the borrowing capacity.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• Authorized</li> <li>• Rejected</li> <li>• Unauthorized</li> </ul>

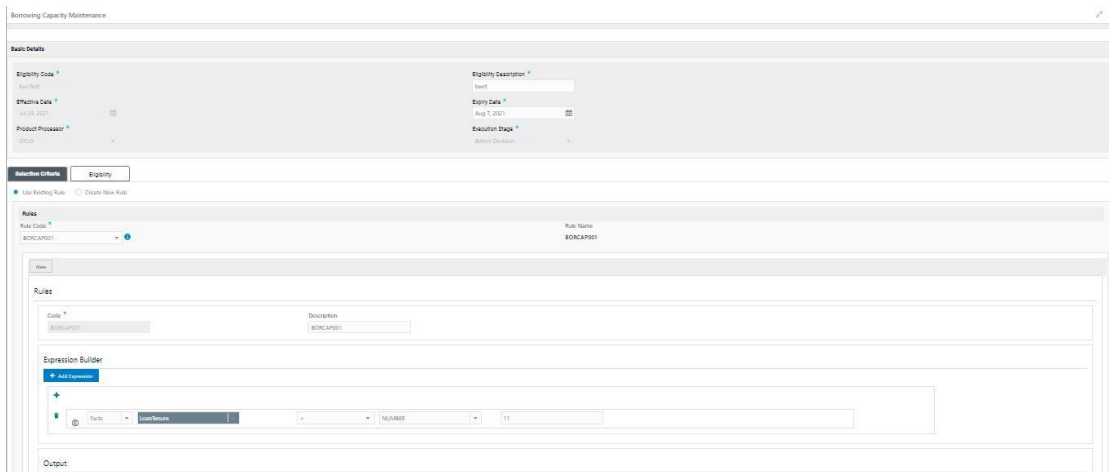
Field	Description
<b>Record Status</b>	Select the record status of the borrowing capacity.  The options are: <ul style="list-style-type: none"> <li>• Open</li> <li>• Closed</li> </ul>

7. Click **three-dots** icon to unlock, delete, authorize or view the created borrowing capacity.
8. Click **Unlock** icon to modify the following fields.

The fields are displayed in the **Borrowing Capacity Maintenance** screen. The following fields are editable during unlock.

- Eligibility Description
- Effective date before authorization
- Expiry date
- Add new fact or rule to the selection criteria
- Fact or Rule in eligibility tab


**Figure 174 : Borrowing Capacity Maintenance – Modify**




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

**Table 142: Borrowing Capacity Maintenance – Modify – Field Description.**

Field	Description
<b>Basic Details</b>	
<b>Eligibility Code</b>	Displays the eligibility code for the created borrowing capacity.

Field	Description
<b>Eligibility Description</b>	Displays the description for the created borrowing capacity. User can modify the same.
<b>Effective Date</b>	Displays the effective date for the created borrowing capacity. User can modify the same, if the date is future dated.
<b>Expiry Date</b>	Displays the expiry date for the created borrowing capacity. User can modify the same.
<b>Product Processor</b>	Displays the product processor of the created borrowing capacity.
<b>Execution Stage</b>	Displays the execution stage for the created borrowing capacity.
<b>Selection Criteria</b>	
<b>Use Existing Rule</b>	By default, this option is enabled. Indicates if the existing rule is linked.
<b>Rules</b>	
<b>Rule Code</b>	Displays the rule code.
	Click to get the information about the rule.
<b>Rule Name</b>	Displays the rule name.
<b>Create New Rule</b>	Indicates if the new rule is created.
<b>Rules</b>	
<b>Code</b>	Displays the rule code.
<b>Description</b>	Displays the rule description
<b>Select Existing Rule</b>	Displays the existing rule. User can modify the same.
<b>Version</b>	Displays the rule version.
<b>Expression Builder</b>	
<b>Fact / Rules</b>	Displays the fact/rules of the created borrowing capacity.
<b>Operator</b>	Displays the comparison operator of the created borrowing capacity.
<b>Data Type</b>	Displays the data type for the fact or rule of the created borrowing capacity.
<b>Output</b>	Displays the output of the created borrowing capacity.

Field	Description
<b>Expression</b>	Displays the expression updated in the expression builder of the created borrowing capacity.
<b>Eligibility</b>	
<b>Fact ID</b>	Displays the fact ID of the created borrowing capacity. User can modify the same.
<b>Rule ID</b>	Displays the rule ID of the created borrowing capacity. User can modify the same.
	Click to get the information about the rule.

9. Click **Save** to update the modified fields.
10. Click **View** icon to view the created borrowing capacity.


The fields are displayed in **Borrowing Capacity Maintenance** screen.

Figure 175 : Borrowing Capacity Maintenance – View

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

Table 143 : Borrowing Capacity Maintenance- View – Field Description.

Field	Description
<b>Basic Details</b>	
<b>Eligibility Code</b>	Displays the eligibility code for the created borrowing capacity.
<b>Eligibility Description</b>	Displays the description for the created borrowing capacity.
<b>Effective Date</b>	Displays the effective date for the created borrowing capacity.
<b>Expiry Date</b>	Displays the expiry date for the created borrowing capacity.
<b>Product Processor</b>	Displays the product processor for the created borrowing capacity.
<b>Execution Stage</b>	Displays the execution stage for the created borrowing capacity.
<b>Selection Criteria</b>	
<b>Rules</b>	
<b>Use Existing Rule</b>	Displays if the existing rule is linked to borrowing capacity.
<b>Rule Code</b>	Displays the rule code of the created borrowing capacity.
<b>Rule Name</b>	Displays the rule name of the created borrowing capacity.

Field	Description
<b>Create New Rule</b>	Displays if new rule is linked to the created borrowing capacity.
<b>Rules</b>	
<b>Rule Code</b>	Displays the rule code of the created borrowing capacity.
<b>Description</b>	Displays the rule description of the created borrowing capacity.
<b>Select Existing Rule</b>	Displays the existing rule.
<b>Rule Version</b>	Displays the rule version.
<b>Expression Builder</b>	
<b>Fact / Rules</b>	Displays the fact/rules of the created borrowing capacity.
<b>Operator</b>	Displays the comparison operator of the created borrowing capacity.
<b>Data Type</b>	Displays the data type for the fact or rule of the created borrowing capacity.
<b>Output</b>	Displays the output of the created borrowing capacity.
<b>Expression</b>	Displays the expression updated in the expression builder of the created borrowing capacity.
<b>Eligibility</b>	
<b>Fact ID</b>	Displays the fact ID of the created borrowing capacity.
<b>Rule ID</b>	Displays the rule ID of the created borrowing capacity.
	Click to get the information about the rule.

## 2.48 Questionnaire

Credit analysis includes analysis of more information and data. Considering that, some of them have quantitative character and others qualitative, credit analysis are viewed from two aspects such as:

Quantitative analysis involves, an assessment of the financial position based on the customer's income and monthly expenses. It may also include a cash flow analysis of the customer's accounts and credit history.

While qualitative assessment, among others takes into account marital status, education or employment form.

Banks usually grant loan based on a credit scoring model that combines quantitative and qualitative analysis.

This section contains the following subsections:

- [2.48.1 Create Questionnaire](#)
- [2.48.2 View Questionnaire](#)

## 2.48.1 Create Questionnaire

The **Create Questionnaire** screen allows the user to define qualitative questionnaire based on the various parameters. This questionnaire can be further linked to define qualitative scoring model.

### To Create Questionnaire:

1. From **Home screen**, click **Core Maintenance**. Under **Core Maintenance** click, **Credit Decision**.
2. Under **Credit Decision** click, **Maintenance**. Under **Maintenance**, click **Questionnaire**.
3. Under **Questionnaire**, click **Create Questionnaire**.

→ The **Create Questionnaire** screen is displayed.

**Figure 176 : Create Questionnaire**

The screenshot shows a web application window titled "Create Questionnaire". The form contains the following elements:

- Questionnaire Code \***: A text input field.
- Questionnaire Description \***: A text input field.
- Product Processor \***: A dropdown menu with "select" as the current value.
- Category**: A text input field.
- Create**: A green button with a dropdown arrow.
- Preview**: A green button.
- No items to display.**: A message below the main form area.
- Add Question**: A grey button.
- Save** and **Cancel**: Green buttons at the bottom right of the window.




4. Specify the field's on **Create Questionnaire screen**.



The fields, which are marked with asterisk, are mandatory.

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



Table 144 : Create Questionnaire – Field Description

Field	Description
<b>Basic Details</b>	
<b>Questionnaire Code</b>	Specify the unique questionnaire code.
<b>Questionnaire Description</b>	Specify a short description for the questionnaire.
<b>Product Processor</b>	Specify the product processor for which the questionnaire is being created.
<b>Category</b>	Specify the category for the questionnaire.
<b>Create</b>	Click <b>Create</b> to configure the questions.
<b>Question Code</b>	Specify the unique question code.
<b>Question Description</b>	Specify the description for the question.
<b>Select-Type</b>	Select the type of response option from the drop-down list.  The option are: <ul style="list-style-type: none"> <li>• Select-Single-Choice</li> </ul>
<b>Short Name</b>	Specify the short name of the question. This will be displayed in the execution summary.
<b>Answer Code</b>	Displays the answer code.
<b>Answer Option</b>	Specify all the expected response for the question configured.
<b>Add</b>	Click to add the expected response to the question.
<b>Update</b>	Click Update to edit the response.
<b>Remove</b>	Click to remove the response.
<b>Required</b>	By default, this option is enabled. Indicates whether the question is mandatory or optional.
<b>Done</b>	Click to save the data.
<b>Preview</b>	Click <b>Preview</b> to view the questions configured for the questionnaire along with the response choice.
	Click to view the responses configured for the questionnaire.
	Click to move the position of the questions.
	Click to expand, copy or remove question.

Field	Description
 Copy	Click to copy the question.
 Remove Question	Click to remove the question.
<b>Add Question</b>	Click to add another question.

- Click **Save** to save the details.

The Questionnaire is successfully created and can be viewed using **View Questionnaire** screen.

## 2.48.2 View Questionnaire

The **View Questionnaire** screen allows user to view the questionnaire created using the **Create Questionnaire** screen. The status of the created questionnaire is displayed as **Unauthorized** and **Open**. Once the checker authorizes the questionnaire, the status is updated to **Authorized** and **Open**.

**To view created questionnaire:**

- From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Credit Decision**.
- Under **Credit Decision**, click **Maintenance**. Under **Maintenance**, click **Questionnaire**.
- Under **Questionnaire**, click **View Questionnaire**.

→ The **View Questionnaire** screen is displayed.

**Figure 177 : View Questionnaire**



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

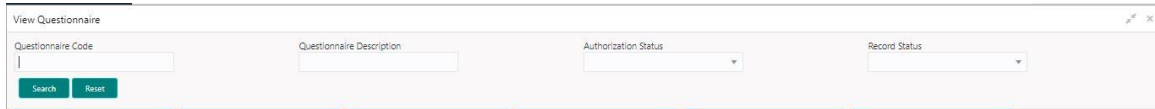
**Table 145: View Borrowing Capacity – Field Description.**

Field	Description
<b>Questionnaire Code</b>	Displays the questionnaire code.
<b>Questionnaire Description</b>	Displays the questionnaire description.
<b>Product Processor Code</b>	Displays the product processor code for which the questionnaire is created.

Field	Description
<b>Modification Number</b>	Displays the number of modifications performed on the record.

- Click **Search** icon.
- Specify the search criteria to fetch the required questionnaire.

**Figure 178 : View Questionnaire - Search Option**



- Click **Search**.

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

**Table 146 : View Questionnaire -Search Option- Field Description**

Field	Description
<b>Questionnaire Code</b>	Specify the questionnaire code.
<b>Questionnaire Description</b>	Specify the questionnaire description.
<b>Authorization Status</b>	Select the authorization status of the questionnaire. The options are: <ul style="list-style-type: none"> <li>• Authorized</li> <li>• Rejected</li> <li>• Unauthorized</li> </ul>
<b>Record Status</b>	Select the record status of the questionnaire. The options are: <ul style="list-style-type: none"> <li>• Open</li> <li>• Closed</li> </ul>

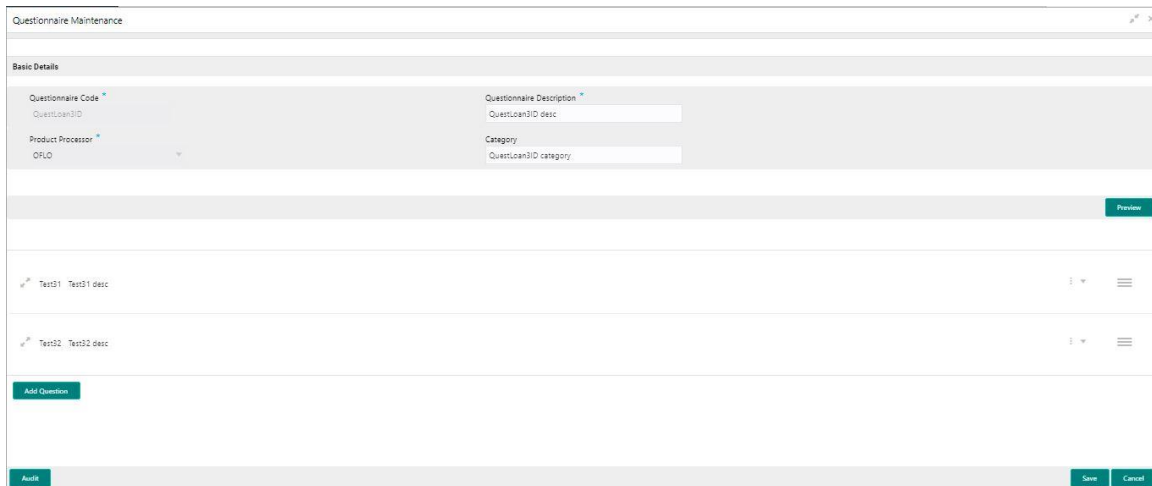
- Click **three-dots** icon to unlock, delete, authorize or view the created questionnaire.
- To authorise the questionnaire, see the **Authorization Process**.
- Click **Unlock** icon to modify the following fields.

The fields are displayed in the **Questionnaire Maintenance** screen. The following fields are editable during unlock.

- Questionnaire Description


- Category
- Add Question
- Remove Question
- Required (Enable/Disable)
- User can add new, update existing, or remove existing response
- Copy the existing question




**Figure 179 : Questionnaire Maintenance - Modify**



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

**Table 147: Questionnaire Maintenance – Modify – Field Description.**

Field	Description
<b>Basic Details</b>	
<b>Questionnaire Code</b>	Displays the questionnaire code.
<b>Questionnaire Description</b>	Displays the questionnaire description. User can modify the description.
<b>Product Processor</b>	Displays the product processor for the created questionnaire.
<b>Category</b>	Displays the category of the created questionnaire. User can modify the category.
<b>Preview</b>	Click to view the questions configured for the questionnaire along with the response choice.
	Click to expand, copy or remove question.

Field	Description
	Click to move the position of the questions.
	Click to see the question details.
The following fields are displayed once you click this  icon.	
<b>Question Code</b>	Displays the question code for the created questionnaire.
<b>Question Description</b>	Displays the question code for the created questionnaire. User can modify the same.
<b>Select-Type</b>	Displays the type of questionnaire.
<b>Short Name</b>	Displays the short name of the created questionnaire. User can modify the same
<b>Answer Code</b>	Displays the answer code.
<b>Answer Option</b>	Displays all the expected response for the question configured. User can modify or delete the same.
<b>Required</b>	Displays if the question is mandatory or optional. User can modify the same.

10. Click **Save** to update the modified fields.

11. Click **View** icon to view the created questionnaire.


The fields are displayed in **Questionnaire** Maintenance screen.

Figure 180 : Questionnaire Maintenance - View

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

Table 148 : Questionnaire Maintenance- View – Field Description.

Field	Description
<b>Basic Details</b>	
<b>Eligibility Code</b>	Displays the eligibility code for the created questionnaire.
<b>Eligibility Description</b>	Displays the description for the created questionnaire.
<b>Effective Date</b>	Displays the effective date for the created questionnaire.
<b>Expiry Date</b>	Displays expiry date for the created questionnaire.
<b>Product Processor</b>	Displays product processor for the created questionnaire.
<b>Execution Stage</b>	Displays the execution stage for the created questionnaire.
<b>Selection Criteria</b>	
<b>Rules</b>	
<b>Use Existing Rule</b>	Displays if the existing rule is linked to questionnaire.
<b>Rule Code</b>	Displays the rule code of the created questionnaire.
<b>Rule Name</b>	Displays the rule name of the created questionnaire.
<b>Create New Rule</b>	Displays if new rule is linked to the questionnaire.
<b>Rules</b>	
<b>Rule Code</b>	Displays the rule code of the created questionnaire.
<b>Description</b>	Displays rule description of the created questionnaire.

Field	Description
<b>Expression Builder</b>	
<b>Fact / Rules</b>	Displays the fact/rules of the created questionnaire.
<b>Operator</b>	Displays the comparison operator of the created Questionnaire.
<b>Data Type</b>	Displays the data type for the fact or rule of the created Questionnaire.
<b>Output</b>	Displays the output of the created questionnaire.
<b>Expression</b>	Displays the expression updated in the expression builder of the crated questionnaire.
<b>Eligibility</b>	
<b>Fact ID</b>	Displays the fact ID of the created questionnaire.
<b>Rule ID</b>	Displays the rule ID of the created questionnaire.
	Click this to get the information about the rule.

## 2.49 Qualitative Scoring Model

Financial institution use different models for different product or use case. The qualitative scoring model used for home loan would be different then the personal loan. Banks usually grant loan based on a credit scoring model that combines quantitative and qualitative analysis.

This section contains the following subsections:

- [2.49.1 Create Qualitative Scoring Model](#)
- [2.49.2 View Qualitative Scoring Model](#)

### 2.49.1 Create Qualitative Scoring Model

The **Create Qualitative Scoring Model** screen allows user to define qualitative scoring model based on the various scoring parameters.

**To create a qualitative scoring Model:**

1. From **Home screen**, click **Core Maintenance**. Under **Core Maintenance** click, **Credit Decision**.
2. Under **Credit Decision** click, **Maintenance**. Under **Maintenance**, click **Qualitative Scoring Model**.
3. Under **Qualitative Scoring model**, click **Create Qualitative Scoring Model**  
→ The **Create Qualitative Scoring Model** screen is displayed.

**Figure 181 : Create Qualitative Scoring Model**

The screenshot shows the 'Create Qualitative Scoring Model' interface. The 'Basic Details' section includes the following fields:

- Scoring Model \***: A dropdown menu with 'Application Scoring Model' selected.
- Qualitative Scoring Model Code \***: A text input field containing 'DML02'.
- Effective Date \***: A date picker showing 'Oct 13, 2021'.
- Expiry Date \***: A date picker showing 'Oct 28, 2021'.
- Product Processor \***: A dropdown menu with 'ORLO' selected.
- Priority \***: A text input field containing '1'.

The 'Selection Criteria' section has two radio buttons: 'Use Existing Rule' (selected) and 'Create New Rule'. Below this is a table with the following structure:

Rule Code *	Rule Name
Select	

At the bottom right, there are 'Save' and 'Cancel' buttons.

- Specify fields on **Create Qualitative Scoring Model** screen.

The fields, which are marked with asterisk, are mandatory.

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

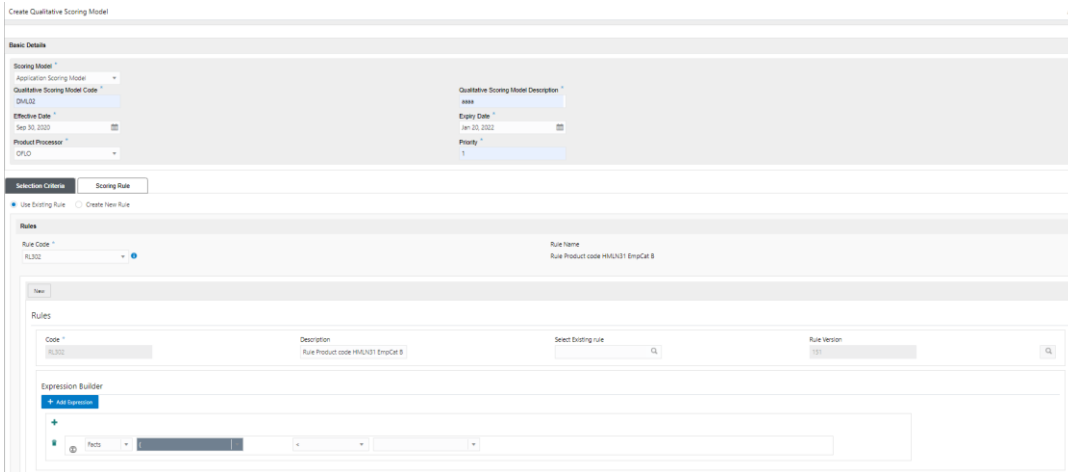
**Table 149 : Create Qualitative Scoring Model - Field Description**

Field	Description
<b>Basic Details</b>	
<b>Scoring Model</b>	Select the scoring model from the drop-down list.  The options are: <ul style="list-style-type: none"> <li>Application Scoring Model</li> <li>Applicant Scoring Model</li> </ul>
<b>Scoring Model code</b>	Specify the unique scoring model code.
<b>Scoring Model Description</b>	Specify a short description for the scoring model.
<b>Effective Date</b>	Specify the effective date.
<b>Expiry Date</b>	Specify the expiry date.
<b>Product Processor</b>	Specify the product processor for which the model is being created.
<b>Priority</b>	Specify the priority of the model.

- Click the **Selection Criteria** tab to define qualitative scoring model.




**Figure 182 : Create Qualitative Scoring Model – Selection Criteria Tab**







For more information on fields refer field description table.

**Table 150 : Create Qualitative Scoring Model – Selection Criteria Tab Field Description**

Field	Description
<b>Use Existing Rule</b>	By default, this option is enabled. Indicates if the existing rule is linked.
<b>Rules</b>	
<b>Rule Code</b>	Select the rule code from the drop down list.
	Click to get the information about the rule.
<b>Rule Name</b>	Displays the rule name of the rule code.
<b>Create New Rule</b>	Select this option to create new rule.
<b>Rules</b>	
<b>Code</b>	Specify the rule code.
<b>Description</b>	Specify the rule description.
<b>Select Existing Rule</b>	Select the existing rule from the drop-down list.
	Click to view the existing rule.  Note: This is used when existing rule is to be used for some modification like copy of existing rule.
Below fields appears once you click  icon.	
<b>Rule ID</b>	Displays the rule ID.

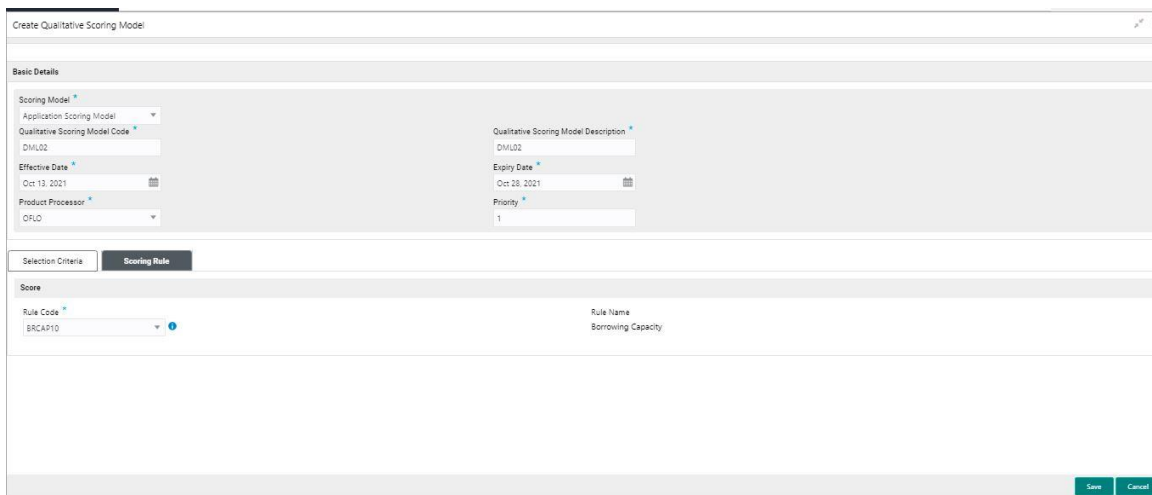
Field	Description
<b>Rule Name</b>	Displays the rule name.
<b>Description</b>	Displays the rule description.
<b>Rule Version</b>	Displays the rule version.
	Click to view the existing rule version.  Note: This is used when existing rule is to be used for some modification like copy of existing rule.
Below fields appears once you click  icon.	
<b>Version</b>	Displays the rule version.
<b>Description</b>	Displays the rule description.
<b>Creation Date</b>	Displays the rule creation date.
<b>Expression Builder</b>	
<b>+ button</b>	Click to add new expression.
<b>Fact / Rules</b>	Select the fact or rule from the drop-down list.  Once you select the fact/rules one more field opens adjacent to it, update the same based on the selected option.

Field	Description
<b>Operator</b>	<p>Select the comparison operator from the drop-down list.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• &lt;</li> <li>• &gt;</li> <li>• +</li> <li>• =</li> <li>• %</li> <li>• !=</li> <li>• -</li> <li>• &gt;=</li> <li>• &lt;=</li> <li>• *</li> <li>• /</li> <li>• Contains</li> <li>• In</li> <li>• Matches</li> <li>• Notmatches</li> <li>• Notcontains</li> <li>• Notin</li> </ul>
<b>Data Type</b>	<p>Select the data type for the fact or rule. Once you select the data type one more field opens adjacent to it, update the same based on the selected option.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• Text</li> <li>• Number</li> <li>• Boolean</li> <li>• Fact</li> <li>• Date</li> </ul> <p>The below option appears if the <b>Data Type</b> is selected as <b>Boolean</b>.</p> <ul style="list-style-type: none"> <li>• True</li> <li>• False</li> </ul>

Field	Description
<b>Output</b>	<p>Select the output from the drop-down list. Once you select the output one more field opens adjacent to it, update the same based on the selected option.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• Text</li> <li>• Number</li> <li>• Boolean</li> <li>• Date</li> <li>• Fact</li> </ul> <p>The below option appears if the <b>Data Type</b> is selected as <b>Boolean</b>.</p> <ul style="list-style-type: none"> <li>• True</li> <li>• False</li> </ul>
<b>Expression</b>	Displays the expression updated in the expression builder.

7. Click the **Scoring Rule** tab to define the rules. This tab is enabled if **Application Scoring Model** is selected.


**Figure 183 : Create Qualitative Scoring Model- Scoring Rule Tab**



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

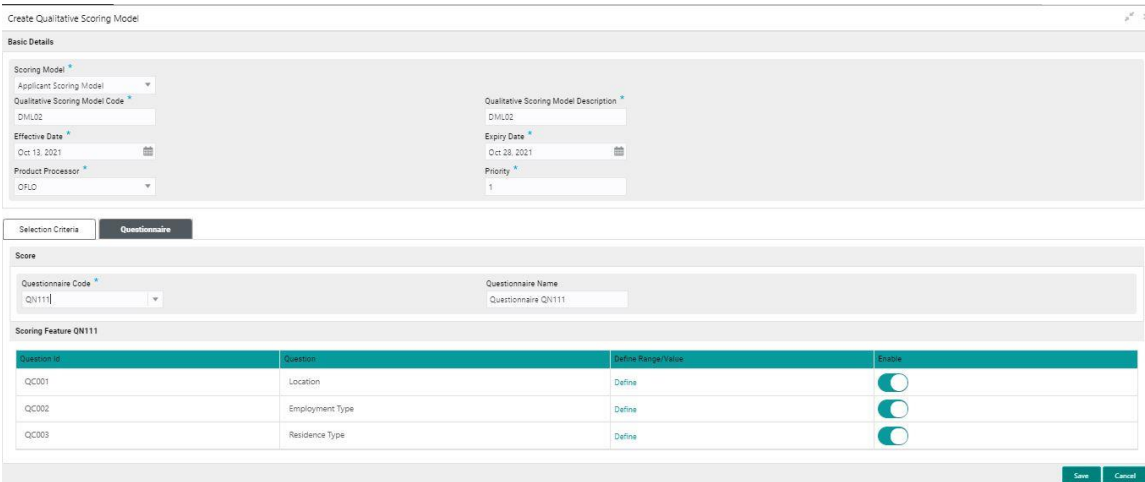
**Table 151 : Create Qualitative Scoring Model- Scoring Rule Tab Field Description**

Field	Description
<b>Score</b>	

Field	Description
<b>Rule Code</b>	Select the rule code from the drop down list.
	Click to get the information about the rule.
<b>Rule Name</b>	Displays the rule name of the rule code.

- Click the **Questionnaire** tab to define the scoring model based on the various questionnaires. This tab is enabled if **Applicant Scoring Model** is selected.

**Figure 184 : Create Qualitative Scoring Model- Questionnaire Tab**



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

**Table 152 : Create Qualitative Scoring Model – Questionnaire Tab - Field Description**

Field	Description
<b>Score</b>	
<b>Questionnaire Code</b>	Select the questionnaire code from the drop-down list. It will list down all the questionnaire created as a part of create questionnaire.
<b>Questionnaire Name</b>	Displays the questionnaire name of the selected questionnaire code.
<b>Question ID</b>	Displays the question ID in the questionnaire.
<b>Question</b>	Displays the question description linked to the question ID.
<b>Define Range/Value</b>	Click to define the score for the expected response.
<b>Enable</b>	By default, this option is enabled. Indicates if the question ID is enabled or not.

- Click the **Define** link to define a range or absolute values for questions.

**Figure 185 : Create Qualitative Scoring Model - Define Link**

The screenshot shows the 'Create Qualitative Scoring Model' interface. At the top, there are fields for 'Effective Date' (Aug 19, 2021), 'Empty Date' (Aug 31, 2021), 'Product Processor' (CPUD), and 'Priority' (1). Below this, the 'Questionnaire' tab is selected, showing 'Questionnaire Code' (QCcode20210809160889) and 'Questionnaire Name' (description#1628506826). A table lists questions with 'Define Range/Value' links and 'Enable' toggle switches. Below the table is a 'Range/Value Definition' section with a table for defining values, scores, and categories.

Question Id	Question	Define Range/Value	Enable
Q1#1628506826	description1	Define	<input checked="" type="checkbox"/>
Q2#1628506826	description2	Define	<input type="checkbox"/>

Range/Value Definition - Q1#1628506826			
Value	Score	Category	
description01	10	Strong	
description02	50	Medium	

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

**Table 153: Create Qualitative Scoring Model- Define Link – Numeric Feature- Field Description**

Field	Description
<b>Range/Value Definition</b>	
<b>Value</b>	Displays the options available for a questionnaire.
<b>Score</b>	Specify the score to be assigned to each value.
<b>Category</b>	Specify the category for each range or value from the drop-down list. The values are configurable based on the lookup values maintained.  The options are: <ul style="list-style-type: none"> <li>• Strong</li> <li>• Medium</li> <li>• Weak</li> </ul>

- Click **Done**, to save the data and close the range panel.

- Click **Save** to save the details.

The qualitative scoring model is successfully created and can be viewed using the **View Qualitative Scoring Model** screen.

## 2.49.2 View Qualitative Scoring Model

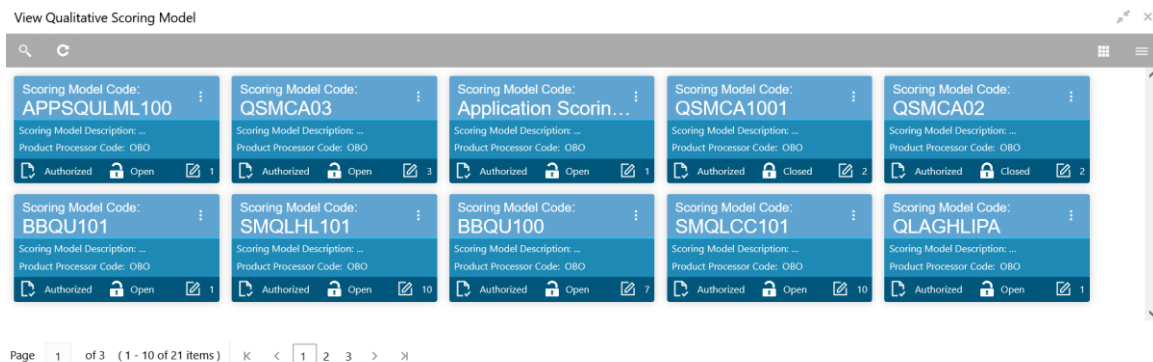
The **View Qualitative Scoring Model** screen allows user to view the qualitative scoring model created using the **Create Qualitative Scoring Model** screen. The status of the created model is displayed as **Unauthorized** and **Open**. Once the checker authorizes the model, the status is updated to **Authorized** and **Open**.

To view created qualitative scoring Model:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Credit Decision**.
2. Under **Credit Decision**, click **Maintenance**. Under **Maintenance**, click **Qualitative Scoring Model**.
3. Under **Qualitative Scoring Model**, click **View Qualitative Scoring Model**

→ The **View Qualitative Scoring Model** screen is displayed.

**Figure 186 : View Qualitative Scoring Model**



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

**Table 154: View Qualitative Scoring Model – Field Description.**

Field	Description
<b>Scoring Model Code</b>	Displays the scoring model code.
<b>Scoring Model Description</b>	Displays the scoring model description.
<b>Product Processor Code</b>	Displays the product processor code.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

4. Click **Search** icon.
5. Specify the search criteria to fetch the required qualitative scoring model.

**Figure 187 : View Qualitative Scoring Model - Search Option**

6. Click **Search**.

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

**Table 155 : View Qualitative Scoring Model -Search Option- Field Description**

Field	Description
<b>Scoring Model Code</b>	Specify the scoring model code.
<b>Scoring Model Description</b>	Specify the scoring model description.
<b>Authorization Status</b>	Select the authorization status of the scoring model.  The options are: <ul style="list-style-type: none"> <li>• Authorized</li> <li>• Rejected</li> <li>• Unauthorized</li> </ul>
<b>Record Status</b>	Select the record status of the scoring model.  The options are: <ul style="list-style-type: none"> <li>• Open</li> <li>• Closed</li> </ul>

7. Click **three-dots** icon to unlock, delete, authorize or view the created qualitative scoring model.
8. To authorize the qualitative scoring model, see the Authorization process.
9. Click **Unlock** icon to modify the following fields.

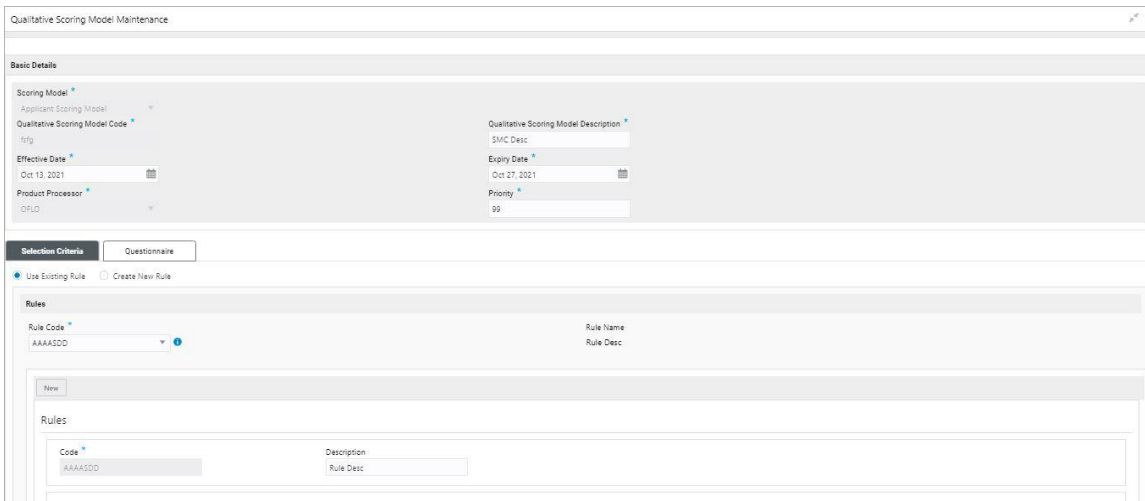
The fields are displayed in the **Qualitative Scoring Model Maintenance** screen. The following fields are editable during unlock.

- Qualitative Scoring Model Description
- Effective Date before Authorization
- Expiry Date
- Priority
- Add new fact or rule to the selection criteria
- Enable, if you want to disable any question ID from the model
- Modify the score for existing response
- Define score or update score a range when new questions are added or modified in a questionnaire



- Scoring model before authorization


**Figure 188 : Qualitative Scoring Model Maintenance - Modify**



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

**Table 156: Qualitative Scoring Model Maintenance – Modify – Field Description.**

Field	Description
<b>Basic Details</b>	
<b>Scoring Model</b>	Displays the scoring model for the created qualitative scoring model.
<b>Qualitative Scoring Model Code</b>	Displays the qualitative scoring model code for the created qualitative scoring model.
<b>Qualitative Scoring Model Description</b>	Displays the qualitative scoring model description for the created qualitative scoring model. User can modify the same.
<b>Effective Date</b>	Displays the effective date of the created qualitative scoring model. User can modify the same before authorization.
<b>Expiry Date</b>	Displays the expiry date of the created qualitative scoring model. User can modify the same.
<b>Product Processor</b>	Displays the product processor for the created qualitative scoring model.
<b>Priority</b>	Displays the priority of the created qualitative scoring model. User can modify the same.

Field	Description
<b>Selection Criteria</b>	
<b>Use Existing Rule</b>	Indicates if the existing rule is linked. User can modify the same.
<b>Rules</b>	
<b>Rule Code</b>	Displays the rule code for the created qualitative scoring model. User can modify the same.
	Click to get the information about the rule.
<b>Rule Name</b>	Displays the rule name of the rule code for the created qualitative scoring model.
<b>Rules</b>	
<b>Code</b>	Displays the rule code.
<b>Description</b>	Displays the rule description.
<b>Select Existing Rule</b>	Displays the existing rule.
<b>Rule Version</b>	Displays the rule version.
<b>Expression Builder</b>	
<b>+ button</b>	Click to add new expression.
<b>Fact / Rules</b>	Displays the fact or rule for the created qualitative scoring model.
<b>Operator</b>	Displays the comparison operator for the created qualitative scoring model.
<b>Data Type</b>	Displays the data type for the fact or rule for the created qualitative scoring model.
<b>Output</b>	Displays the output for the created qualitative scoring model.
<b>Expression</b>	Displays the expression updated in the expression builder.
<b>Scoring Rule</b>	
Applicable for the <b>Application scoring Model</b> .	
<b>Score</b>	
<b>Rule Code</b>	Displays the rule code for the created qualitative scoring model. User can modify the same.
<b>Rule Name</b>	Displays the rule name for the created qualitative scoring model.

Field	Description
<b>Questionnaire</b>	
<ul style="list-style-type: none"> <li>Applicable for <b>Applicant Scoring Model</b>.</li> </ul>	
<b>Score</b>	
<b>Questionnaire Code</b>	Displays the questionnaire code for the created qualitative scoring model.  User can modify the same.
<b>Questionnaire Name</b>	Displays the questionnaire name for the created qualitative scoring model.
<b>Question ID</b>	Displays the question ID for the created qualitative scoring model.
<b>Question</b>	Displays the question for the created qualitative scoring model.
<b>Define Range/Value</b>	Displays the defined range or value.  User can modify the same.
<b>Value</b>	Displays the defined value for the created qualitative scoring model.
<b>Score</b>	Displays the score for the created qualitative scoring model.  User can modify the same.
<b>Category</b>	Displays the category for the created qualitative scoring model.  User can modify the same.
<b>Enable</b>	Displays if the question ID is enabled or not.


1. Click **Save** to update the modified fields.
2. Click **View** icon to view the created qualitative scoring model.

The fields are displayed in **Qualitative Scoring Model Maintenance** screen.

**Figure 189 : Qualitative Scoring Model Maintenance - View**

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

**Table 157 : Qualitative Scoring Model Maintenance- View – Field Description.**

Field	Description
<b>Basic Details</b>	
<b>Scoring Model</b>	Displays the scoring model for the created qualitative scoring model.
<b>Qualitative Scoring Model Code</b>	Displays the qualitative scoring model code for the created qualitative scoring model.
<b>Qualitative Scoring Model Description</b>	Displays the qualitative scoring model description for the created qualitative scoring model.
<b>Effective Date</b>	Displays the effective date of the created qualitative scoring model.
<b>Expiry Date</b>	Displays the expiry date of the created qualitative scoring model.
<b>Product Processor</b>	Displays the product processor for the created qualitative scoring model.
<b>Priority</b>	Displays the priority of the created qualitative scoring model.
<b>Selection Criteria</b>	
<b>Rules</b>	
<b>Use Existing Rule</b>	Indicates if the existing rule is linked.
<b>Rules</b>	
<b>Rule Code</b>	Displays the rule code for the created qualitative scoring model.
	Click to get the information about the rule.
<b>Rule Name</b>	Displays the rule name of the rule code for the created qualitative scoring model.
<b>Create New Rule</b>	Indicates if the new rule is created.

Field	Description
<b>Rules</b>	
<b>Rule Code</b>	Displays the rule code of the created qualitative scoring model.
<b>Description</b>	Displays the rule description of the created qualitative scoring model.
<b>Select Existing Rule</b>	Displays the existing rule.
<b>Rule Version</b>	Displays the rule version.
<b>Expression Builder</b>	
<b>+ button</b>	Click this icon to add new expression.
<b>Fact / Rules</b>	Displays the fact/rules of the created qualitative scoring model.
<b>Operator</b>	Displays the comparison operator of the created qualitative scoring model.
<b>Data Type</b>	Displays the data type for the fact or rule of the created qualitative scoring model.
<b>Output</b>	Displays the output of the created qualitative scoring model.
<b>Expression</b>	Displays the expression updated in the expression builder of the crated qualitative scoring model.
<b>Scoring Rule</b>	
Applicable for the <b>Application scoring Model</b> .	
<b>Score</b>	
<b>Rule Code</b>	Displays the rule code for the created qualitative scoring model.
<b>Rule Name</b>	Displays the rule name for the created qualitative scoring model.
<b>Questionnaire</b>	
Applicable for <b>Applicant Scoring Model</b> .	
<b>Score</b>	
<b>Questionnaire Code</b>	Displays the questionnaire code for the created qualitative scoring model.
<b>Questionnaire Name</b>	Displays the questionnaire name for the created qualitative scoring model.
<b>Question ID</b>	Displays the question ID for the created qualitative scoring model.
<b>Question</b>	Displays the question for the created qualitative scoring model.
<b>Define Range/Value</b>	Displays the defined range or value.

Field	Description
Value	Displays the defined value for the created qualitative scoring model.
Score	Displays the score for the created qualitative scoring model.
Category	Displays the category for the created qualitative scoring model.
Enable	Displays if the question ID is enabled or not.

## **2.50 Scoring Feature**

Lending institutions have complex credit scoring models. The model uses the information contained in an application such as salary, credit commitments, and past loan performances to determine a credit score of an application or an existing customer. The model generates a score and based on that score, the system takes the decision like approve, referred or to reject the application. To achieve these, in the decision service, you need to define maintenances of scoring feature. A feature can be either fact based or rule based. The features created in this maintenance can be linked in quantitative score model and decision grade matrix screen.

This section contains the following subsections:

- [2.50.1 Create Scoring Feature](#)
- [2.50.2 View Scoring Feature](#)

### **2.50.1 Create Scoring Feature**

The **Create Scoring Feature** screen allows user to define scoring feature for determining the credit score. This score applies to applications during origination and based on the information received from the product processor.

**To create a Scoring Feature:**

1. From **Home screen**, click **Core Maintenance**, Under **Core Maintenance**, click **SCredit Decision**.
2. Under **Credit Decision** click, **Maintenance**. Under **Maintenance** click, **Scoring Feature**.
3. Under **Scoring Feature**, click **Create Scoring Feature**.
  - The **Create Scoring Feature** screen is displayed.

**Figure 190 : Create Scoring Feature**


4. Specify the fields on **Create Scoring Feature** screen.

The fields, which are marked with asterisk, are mandatory.

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

**Table 158 : Create Scoring Feature - Field Description**

Field	Description
<b>Basic Details</b>	
<b>Feature Code</b>	Specify the unique feature code.
<b>Feature Description</b>	Specify a short description for the feature.
<b>Product Processor</b>	Specify the product processor for which the feature is being created.
<b>Rule</b>	<p>Select the rule, if it is required to define the feature.</p> <p>This option is used to decide whether the feature is rule based or fact based.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> </ul>
<b>Fact Code</b>	<p>Select the fact code to be mapped to the feature from the drop-down list.</p> <p>This field is enabled if the <b>Rule</b> is selected as <b>No</b>.</p>
<b>Fact Name</b>	<p>Displays the fact name for the selected fact.</p> <p>This field is enabled if the <b>Rule</b> is selected as <b>No</b>.</p>

Field	Description
<b>Rule Code</b>	Select the rule code to be mapped to the feature from the drop-down list.  This field is enabled, if the <b>Rule</b> is selected as <b>Yes</b> .
	Click this icon to get the information about the rule.
<b>Rule Name</b>	Displays the rule name for the selected rule.  This field is enabled if the <b>Rule</b> is selected as <b>Yes</b> .

- Click **Save** to save the details.
- The scoring feature is successfully created and can be viewed using the **View Scoring Feature** screen.

### 2.50.2 View Scoring Feature

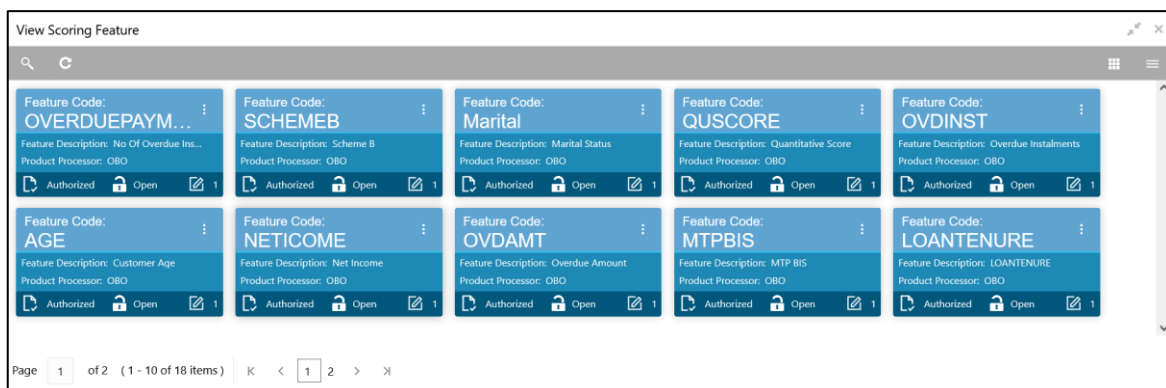
The **View Scoring Feature** screen allows user to view the scoring feature created using the **Create Scoring Feature** screen. The status of the uploaded feature is displayed as **Unauthorized** and **Open**. Once the checker authorizes the model, the status is updated to **Authorized** and **Open**.

**To view an uploaded scoring feature:**

- From **Home screen**, click **Core Maintenance**. Under **Core Maintenance**, click **Credit Decision**.
- Under **Credit Decision** click, **Maintenance**. Under **Maintenance** click, **Scoring Feature**.
- Under **Scoring Feature**, click **View Scoring Feature**.

→ The **View Scoring Feature** screen is displayed.

**Figure 191 : View Scoring Feature**



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

**Table 159 : View Scoring Feature - Field Description**



Field	Description
<b>Feature Code</b>	Displays the feature code.
<b>Feature Description</b>	Displays the feature description.
<b>Product Processor</b>	Displays the product processor.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

- Click **Search** icon.
- Specify the search criteria to fetch the required scoring feature.

**Figure 192 : View Scoring Feature - Search Option**

- Click **Search**.

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

**Table 160 : View Scoring Feature- Search Option- Field Description**

Field	Description
<b>Feature Code</b>	Displays the feature code.
<b>Feature Description</b>	Displays the feature description.
<b>Authorization Status</b>	Select the authorization status of the feature.  The options are: <ul style="list-style-type: none"> <li>Authorized</li> <li>Rejected</li> <li>Unauthorized</li> </ul>
<b>Record Status</b>	Select the record status of the feature.  The options are: <ul style="list-style-type: none"> <li>Open</li> <li>Closed</li> </ul>

- Click **three-dots** icon to unlock, delete, authorize or view the created scoring feature.
- To authorise the feature, see the Error! Reference source not found..
- Click **Unlock** icon to modify the following fields.

The fields are displayed in the **Scoring Feature Maintenance** screen. The following fields are editable.

- Feature Description
- Modification of rule linkage
- Modification of fact mapped to the feature in case no rule is linked to the feature.


**Figure 193 : Scoring Feature Maintenance - Modify**

The screenshot shows the 'Scoring Feature Maintenance' window with the following details:

- Feature Code:** TEST202100411092
- Feature Description:** Scoring Feature Rule for Testing
- Product Processor:** CPLO
- Rule:** Yes (selected), No
- Rule Code:** Select
- Rule Name:**
- NetIncome:**

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

**Table 161 : Scoring Feature Maintenance – Modify - Field Description**

Field	Description
<b>Basic Details</b>	
<b>Feature Code</b>	Displays the feature code.
<b>Feature Description</b>	Displays the feature description. User can modify the same.
<b>Product Processor</b>	Displays the product processor for the created scoring feature.
<b>Rule</b>	Displays the rule defined to the feature. User can modify the same.
<b>Rule Code</b>	Displays the rule code of the feature. User can modify the same.  This field is displayed, if the <b>Rule</b> is selected as <b>Yes</b> .
	Click to get the information about the rule.

Field	Description
<b>Rule Name</b>	Displays the rule name of the feature. This field is displayed, if the <b>Rule</b> is selected as <b>Yes</b> .
<b>Fact Code</b>	Displays the fact code of the feature. User can modify the same. This field is displayed, if the <b>Rule</b> is selected as <b>No</b> .
<b>Fact Name</b>	Displays the fact name of the feature. This field is displayed if the <b>Rule</b> is selected as <b>No</b> .

## 2.51 Quantitative Scoring Model

Quantitative analysis involves, an assessment of the financial position based on the customer's income and monthly expenses. It may also include a cash flow analysis of the customer's accounts and credit history.

Banks usually grant loan based on a credit scoring model that combines quantitative and qualitative analysis.

This section contains the following subsections:

- [2.51.1 Create Quantitative Scoring Model](#)
- [2.51.2 View Quantitative Scoring Model](#)

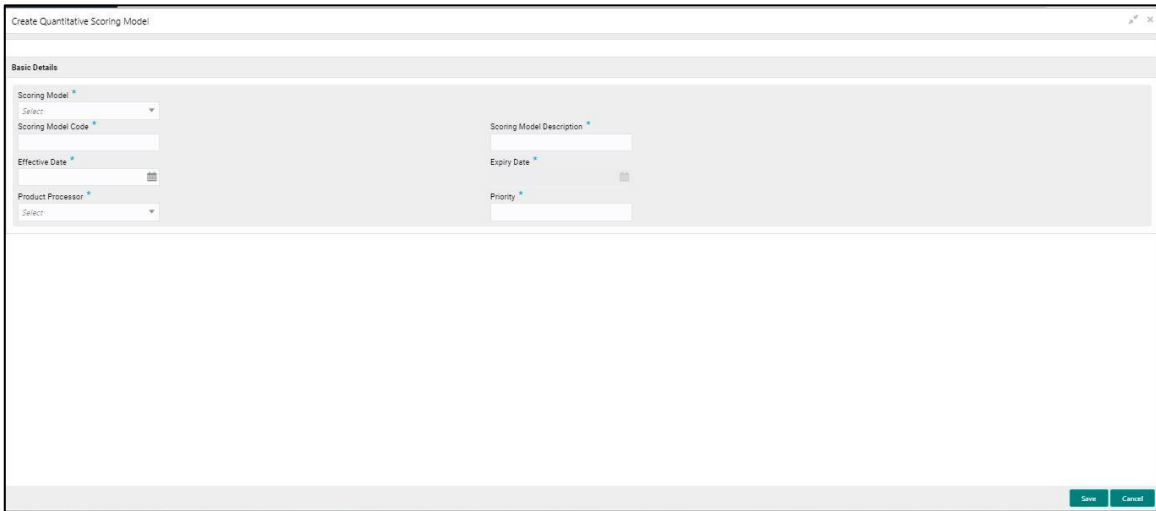
### 2.51.1 Create Quantitative Scoring Model

The **Create Quantitative Scoring Model** screen allows user to define quantitative scoring model based on the various scoring parameters. The parameters driving the scoring models are configurable. You can create quantitative scoring model by updating various details.

**To create a Quantitative Scoring Model:**

1. From **Home screen**, click **Core Maintenance**. Under **Core Maintenance**, click **Credit Decision**.
2. Under **Credit Decision**, click **Maintenance**. Under **Maintenance**, click **Quantitative Scoring Model**.
3. Under **Quantitative Scoring Model**, click **Create Quantitative Scoring Model**.  
→ The **Create Quantitative Scoring Model** screen is displayed.

**Figure 194 : Create Quantitative Scoring Model**



4. Specify the fields on **Create Quantitative Scoring Model** screen.

The fields, which are marked with asterisk, are mandatory.

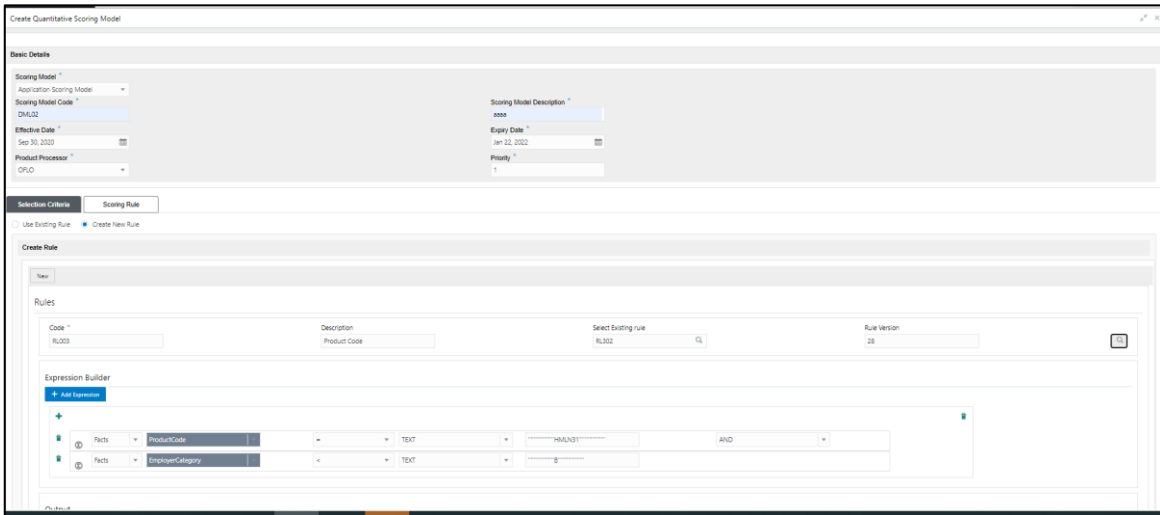
For more information on fields, refer to the field description table below.

**Table 162 : Create Quantitative Scoring Model - Field Description**




Field	Description
<b>Basic Details</b>	
<b>Scoring Model</b>	Select the scoring model from the drop-down list. The options are: <ul style="list-style-type: none"> <li>• Application Scoring Model</li> <li>• Applicant Scoring Model</li> <li>• Multi-Applicant Scoring Model</li> </ul>
<b>Scoring Model code</b>	Specify the unique scoring model code.
<b>Scoring Model Description</b>	Specify a short description for the scoring model.
<b>Effective Date</b>	Specify the effective date.
<b>Expiry Date</b>	Specify the expiry date.
<b>Product Processor</b>	Specify the product processor for which the model is being created.
<b>Priority</b>	Specify the priority of the model.



5. Click the **Selection Criteria** tab to define scoring model.

**Figure 195 : Create Quantitative Scoring Model – Selection Criteria Tab**



For more information on fields, refer to the field description table below. Table 163 : Create Quantitative Scoring Model – Selection Criteria Tab - Field Description

Field	Description
<b>Use Existing Rule</b>	By default, this option is enabled. Indicates if the existing rule is linked.
<b>Rules</b>	
<b>Rule Code</b>	Select the rule code from the drop down list.
	Click to get the information about the rule.
<b>Rule Name</b>	Displays the rule name of the rule code.
<b>Create New Rule</b>	Select this option to create new rule.
<b>Rules</b>	
<b>Code</b>	Specify the new rule code.
<b>Description</b>	Specify the rule description.
<b>Select Existing Rule</b>	Select the existing rule from the drop down list.
	Click to view the existing rule.  Note: This is used when existing rule is to be used for some modification like copy of existing rule.
Below field appears once you click  icon.	
<b>Rule ID</b>	Displays the rule ID.
<b>Rule Name</b>	Displays the rule name.
<b>Description</b>	Displays the rule description.

Field	Description
<b>Rule Version</b>	Displays the rule version
	Click to view the existing rule version.  Note: This is used when existing rule is to be used for some modification like copy of existing rule.
Below fields appears once you click  icon.	
<b>Version</b>	Displays the rule version.
<b>Description</b>	Displays the rule description.
<b>Creation Date</b>	Displays the rule creation date.
<b>Expression Builder</b>	
<b>+ button</b>	Click to add new expression.
<b>Fact / Rules</b>	Select the fact or rule from the drop-down list.  Once you select the fact/rules one more field opens adjacent to it, update the same based on the selected option.
<b>Operator</b>	Select the comparison operator from the drop-down list.  The options are: <ul style="list-style-type: none"> <li>• &lt;</li> <li>• &gt;</li> <li>• +</li> <li>• =</li> <li>• %</li> <li>• !=</li> <li>• -</li> <li>• &gt;=</li> <li>• &lt;=</li> <li>• *</li> <li>• /</li> <li>• Contains</li> <li>• In</li> <li>• Matches</li> <li>• Notmatches</li> <li>• Notcontains</li> <li>• Notin</li> </ul>


Field	Description
<b>Data Type</b>	<p>Select the data type for the fact or rule. Once you select the data type one more field opens adjacent to it, update the same based on the selected option.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• Text</li> <li>• Number</li> <li>• Boolean</li> <li>• Fact</li> <li>• Date</li> </ul> <p>The below option appears if the <b>Data Type</b> is selected as <b>Boolean</b>.</p> <ul style="list-style-type: none"> <li>• True</li> <li>• False</li> </ul>
<b>Output</b>	<p>Select the output from the drop-down list. Once you select the output one more field opens adjacent to it, update the same based on the selected option.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• Text</li> <li>• Number</li> <li>• Boolean</li> <li>• Date</li> <li>• Fact</li> </ul> <p>The below option appears if the <b>Data Type</b> is selected as <b>Boolean</b>.</p> <ul style="list-style-type: none"> <li>• True</li> <li>• False</li> </ul>
<b>Expression</b>	Displays the expression updated in the expression builder.

6. Click the **Scoring Rule** tab to define the rule. This tab is enabled if **Application Scoring Model** is selected.

**Figure 196 : Create Quantitative Scoring Model – Scoring Rule Tab**

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

**Table 164 : Create Quantitative Scoring Model – Scoring Rule Tab - Field Description**

Field	Description
<b>Score</b>	
<b>Rule Code</b>	Select the rule code from the drop down list.
	Click to get the information about the rule.
<b>Rule Name</b>	Displays the rule name of the rule code.

7. Click the **Feature** tab to define the feature. This tab is enabled if **Applicant Scoring Model** and **Multiple Applicant Scoring Model** is selected.

**Figure 197 : Create Quantitative Scoring Model – Feature Tab**

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

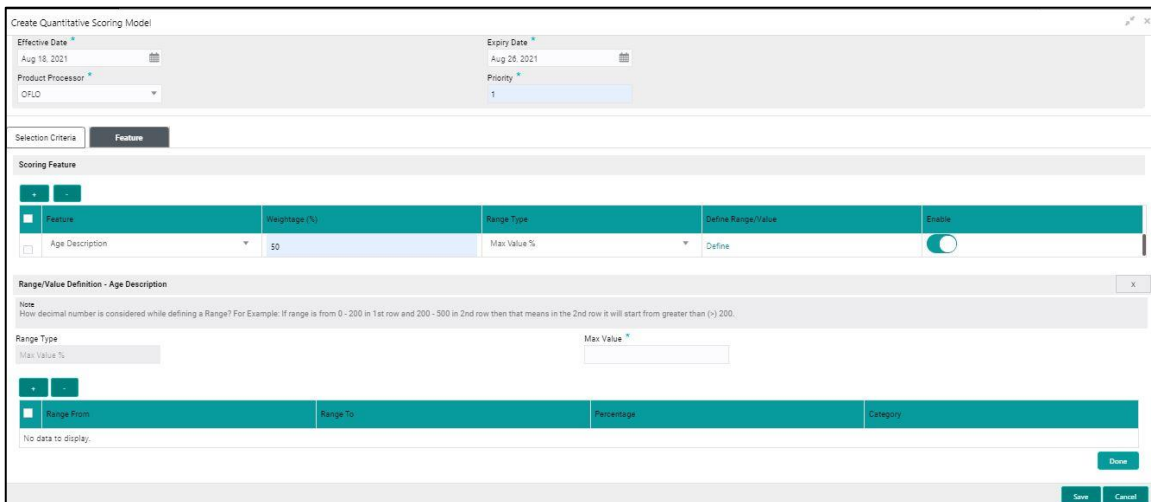


**Table 165 : Create Quantitative Scoring Model – Feature Tab - Field Description**

Field	Description
<b>Scoring Feature</b>	
<b>+ button</b>	Click to add a new row.
<b>- button</b>	Click to delete an existing row.
<b>Feature</b>	Select the feature from the drop-down list.
<b>Weightage (%)</b>	Specify the weightage to be assigned to each feature code.
<b>Range Type</b>	Select the range type from the drop down list.  The options are: <ul style="list-style-type: none"> <li>• Max Value</li> <li>• Param Percent%</li> <li>• Value</li> </ul> For <b>Applicant Scoring Model</b> this field is editable.
<b>Define Range/Value</b>	Click to define the feature.
<b>Enable</b>	By default, this option is enabled. Indicates if the scoring parameter is enabled or not.

8. Click the **Define** link to define a range or absolute values for each scoring feature to be considered for scoring model and score for that range or value. In case the data type of feature is numeric such as Bureau score the below screen appears.

**Figure 198 : Create Quantitative Scoring Model – Define Link – Numeric Feature**



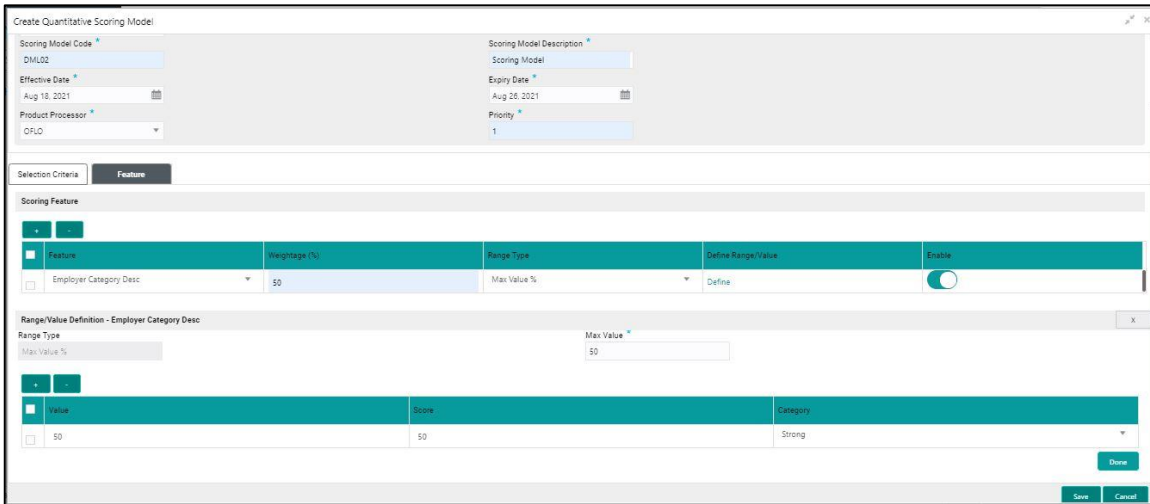
For more information on fields, refer to the field description table below.

**Table 166: Create Quantitative Scoring Model – Define Link – Numeric Feature- Field Description**

Field	Description
<b>Range/Value Definition</b>	
<b>Range Type</b>	Displays the range type selected.
<b>Max Value</b>	Specify the maximum value on which scoring has to be done, if range type ID is Max Value % or Param %.
<b>+ button</b>	Click to add a new row.
<b>- button</b>	Click to delete an existing row.
<b>Range From</b>	Specify the minimum range of value based on which scoring is to be done.
<b>Range To</b>	Specify the maximum range of value based on which scoring is to be done.
<b>Score/Percentage</b>	Specify the percentage to be assigned for each range or value, if range type is Max value % or Param %.  Specify the score to be assigned for each range or value, if range type is Value.
<b>Category</b>	Specify the category for each range or value from the drop-down list. The values are configurable based on the lookup values maintained.  The options are: <ul style="list-style-type: none"> <li>• Strong</li> <li>• Medium</li> <li>• Weak</li> </ul>

9. In case the data type of feature is alphanumeric such as Employment Category the below screen appears.

**Figure 199: Create Quantitative Scoring Model- Define Link –Alphanumeric Feature**



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

**Table 167: Create Quantitative Scoring Model – Define Link – Alphanumeric Feature - Field Description**

Field	Description
<b>Range/Value Definition</b>	
<b>Range Type</b>	Displays the range type selected. The default value for the same is <b>Value</b> .
<b>Max Value</b>	Specify the maximum value for the range type.
<b>+ button</b>	Click to add a new row.
<b>- button</b>	Click to delete an existing row.
<b>Value</b>	Specify the value of the feature.
<b>Score</b>	Specify the score assigned for each range value.
<b>Category</b>	Specify the category for each range or value from the drop-down list.  The options are: <ul style="list-style-type: none"> <li>• Strong</li> <li>• Medium</li> <li>• Weak</li> </ul>

10. Click **Done**, to save the data and close the range panel.

11. Click **Save** to save the details.

The quantitative scoring model is successfully created and can be viewed using the **View Quantitative Scoring Model** screen.

## 2.51.2 View Quantitative Scoring Model

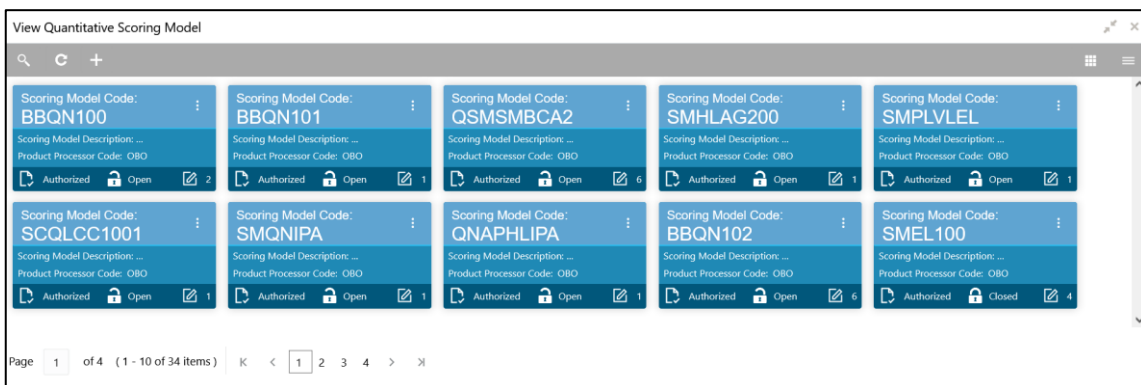
The View Quantitative Scoring Model screen allows the user to view the quantitative scoring Model created using the **Create Quantitative Scoring Model** screen. The status of the uploaded model is displayed as **Unauthorized** and **Open**. Once the checker authorizes the model, the status is updated to **Authorized** and **Open**.

To view created quantitative scoring model:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Credit Decision**.
2. Under **Credit Decision** click, **Maintenance**. Under **Maintenance** click, **Quantitative Scoring Model**.
3. Under **Quantitative Scoring Model**, click **View Quantitative Scoring Model**.

→ The **View Quantitative Scoring Model** screen is displayed.

**Figure 200 : View Quantitative Scoring Model**



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

**Table 168 : View Quantitative Scoring Model- Field Description**

Field	Description
<b>Scoring Model Code</b>	Displays the scoring model code.
<b>Scoring Model Description</b>	Displays the scoring model description.
<b>Product Processor Code</b>	Displays the product processor code.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

4. Click **Search** icon.
5. Specify the search criteria to fetch the required quantitative scoring model.

**Figure 201 : View Quantitative Scoring Model- Search Option**

6. Click **Search**.

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

**Table 169 : View Quantitative Scoring Model- Search Option- Field Description**

Field	Description
<b>Scoring Model Code</b>	Specify the scoring model code.
<b>Scoring Model Description</b>	Specify the scoring model description.
<b>Authorization Status</b>	Select the authorization status of the model.  The options are: <ul style="list-style-type: none"> <li>• Authorized</li> <li>• Rejected</li> <li>• Unauthorized</li> </ul>
<b>Record Status</b>	Select the record status of the model.  The options are: <ul style="list-style-type: none"> <li>• Open</li> <li>• Closed</li> </ul>

7. Click **three-dots** icon to unlock, delete, authorize or view the created quantitative scoring model.

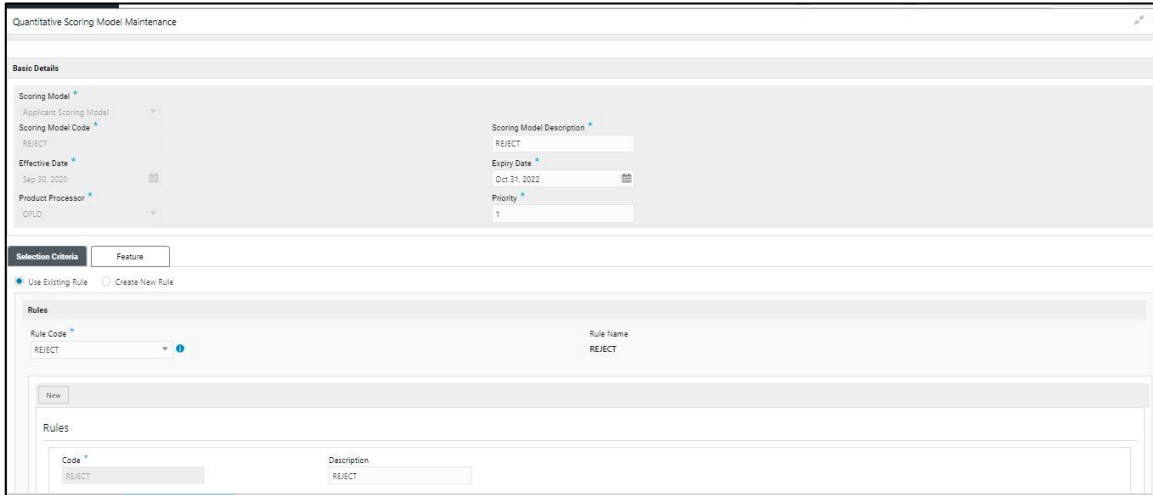
8. To authorize the quantitative scoring model, see the Error! Reference source not found..

9. Click **Unlock** icon to modify the following fields. The fields are displayed in the **Quantitative Scoring Model Maintenance** screen. The following fields are editable.

- Scoring Model Description
- Effective date, before authorization
- Expiry Date
- Priority
- Add/Delete new scoring feature to the quantitative scoring model
- Change the weightage of the scoring feature code
- Range Type
- Facts and Rules in Selection Criteria
- Range/Value

- Score
- Category
- Enable if you want to remove any scoring feature from the model instead of removing, you can disable the feature. Thus, the weightage assigned to that particular feature is auto removed and is shown as blank.


**Figure 202 : Quantitative Scoring Model Maintenance - Modify**



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


**Table 170 : Quantitative Scoring Model Maintenance – Modify - Field Description**

Field	Description
<b>Basic Details</b>	
<b>Application Scoring Model</b>	Displays the application scoring model.
<b>Scoring Model Code</b>	Displays the scoring model code for the created quantitative scoring model.
<b>Scoring Model Description</b>	Displays the scoring model description for the created quantitative scoring model.  User can modify the same
<b>Effective Date</b>	Displays the effective date for the created quantitative scoring model.  User can modify the same before authorization.
<b>Expiry Date</b>	Displays the expiry date of the created quantitative scoring model.  User can modify the same.
<b>Product Processor</b>	Displays the product processor for the created quantitative scoring model.

Field	Description
<b>Priority</b>	Displays the priority of the created quantitative scoring model. User can modify the same.
<b>Selection Criteria</b>	
<b>Use Existing Rule</b>	Indicates if the existing rule is linked. User can modify the same
<b>Rules</b>	
<b>Rule Code</b>	Displays the rule code for the created quantitative scoring model. User can modify the same.
	Click to get the information about the rule.
<b>Rule Name</b>	Displays the rule name of the rule code for the created quantitative scoring model.
<b>Create New Rule</b>	Displays the rule code for the created quantitative scoring model. User can modify the same.
<b>Rules</b>	
<b>Code</b>	Specify the new rule code for quantitative scoring model.
<b>Description</b>	Specify the rule description for the quantitative scoring model.
<b>Select existing Rule</b>	Displays the existing rule.
<b>Rule Version</b>	Displays the rule version.
<b>Expression Builder</b>	
<b>+ button</b>	Click to add new expression.
<b>Fact / Rules</b>	Displays the fact or rule for the created quantitative scoring model.
<b>Operator</b>	Displays the comparison operator for the created quantitative scoring model.
<b>Data Type</b>	Displays the data type for the fact or rule for the created quantitative scoring model.
<b>Output</b>	Displays the output for the created quantitative scoring model.
<b>Expression</b>	Displays the expression updated in the expression builder for the created quantitative scoring model.

Field	Description
<b>Feature</b>	This tab is enabled for the <b>Applicant Scoring Model</b> .
<b>Scoring Feature</b>	
<b>+ button</b>	Click to add new row.
<b>- icon</b>	Click to delete an existing row.
<b>Feature</b>	Displays the feature for the created quantitative scoring model.
<b>Weightage (%)</b>	Displays the weightage assigned to each feature for the created quantitative scoring model.  User can modify the same.
<b>Range Type</b>	Displays the range type for the created quantitative scoring model.  The options are: <ul style="list-style-type: none"> <li>• Max Value</li> <li>• Param Percent%</li> <li>• Value</li> </ul>
<b>Define Range/Value</b>	Displays the range/value defined for the created quantitative scoring model.
<b>Range From</b>	Displays the minimum range of value based on which scoring is done.  User can modify the same.
<b>Range To</b>	Displays the maximum range of value based on which scoring is done.  User can modify the same.
<b>Score</b>	Displays the score assigned for each range or value.  User can modify the same.
<b>Category</b>	Displays the category for each range or value for the created quantitative scoring model.  The options are: <ul style="list-style-type: none"> <li>• Strong</li> <li>• Medium</li> <li>• Weak</li> </ul> User can modify the same.

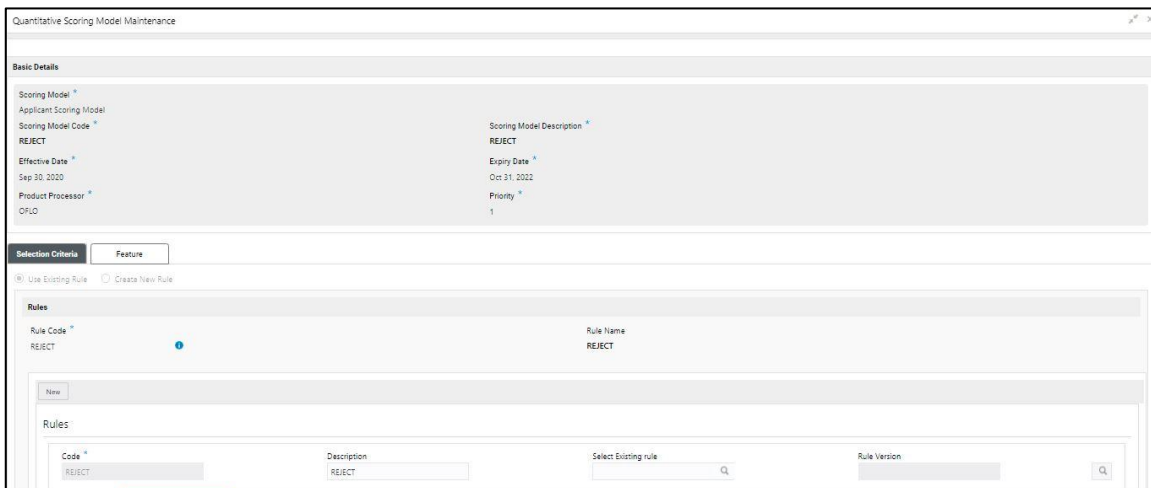


Field	Description
<b>Enable</b>	Displays the parameter for the created quantitative scoring model. User can modify the same.
<b>Scoring Rule</b> This tab is enabled for the <b>Application Scoring Model</b> .	
<b>Score</b>	
<b>Rule Code</b>	Displays the rule code for the created quantitative scoring model.
	Click to get the information about the rule.
<b>Rule Name</b>	Displays the rule name of the rule code for the created quantitative scoring model.

10. Click **Save**, to update the modified fields.
11. Click **View** icon to view the created quantitative scoring model.

The fields are displayed in Quantitative Scoring Model Maintenance screen


**Figure 203 : Quantitative Scoring Model Maintenance – View**




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

**Table 171 : Quantitative Scoring Model Maintenance – View - Field Description**

Field	Description
<b>Basic Details</b>	
<b>Scoring Model</b>	Displays the scoring Model for the created quantitative scoring model.

Field	Description
<b>Scoring Model Code</b>	Displays the scoring model code for the created quantitative scoring model.
<b>Scoring Model Description</b>	Displays the scoring model description for the created quantitative scoring model.
<b>Effective Date</b>	Displays the effective date for the created quantitative scoring model.
<b>Expiry Date</b>	Displays the expiry date of the created quantitative scoring model.
<b>Product Processor</b>	Displays the product processor for the created quantitative scoring model.
<b>Priority</b>	Displays the priority of the created quantitative scoring model.
<b>Selection Criteria</b>	
<b>Use Existing Rule</b>	Indicates if the existing rule is linked.
<b>Rules</b>	
<b>Rule Code</b>	Displays the rule code for the created quantitative scoring model.
	Click to get the information about the rule.
<b>Rule Name</b>	Displays the rule name of the rule code for the created quantitative scoring model.
<b>Create New Rule</b>	Displays the rule code for the created quantitative scoring model.
<b>Rules</b>	
<b>Code</b>	Specify the new rule code for quantitative scoring model.
<b>Description</b>	Specify the rule description for the quantitative scoring model.
<b>Select Existing Rule</b>	Displays the existing rule.
<b>Rule Version</b>	Displays the rule version.
<b>Expression Builder</b>	
<b>+ button</b>	Click to add new expression.
<b>Fact / Rules</b>	Displays the fact or rule for the created quantitative scoring model.
<b>Operator</b>	Displays the comparison operator for the created quantitative scoring model.
<b>Data Type</b>	Displays the data type for the fact or rule for the created quantitative scoring model.

Field	Description
<b>Output</b>	Displays the output for the created quantitative scoring model.
<b>Expression</b>	Displays the expression updated in the expression builder for the created quantitative scoring model.
<b>Feature</b>	
This tab is enabled for the <b>Applicant Scoring Model</b> .	
<b>Scoring Feature</b>	
<b>+ button</b>	Click to add new row.
<b>- button</b>	Click to delete an existing row.
<b>Feature</b>	Displays the feature for the created quantitative scoring model.
<b>Weightage (%)</b>	Displays the weightage assigned to each feature for the created quantitative scoring model.
<b>Range Type</b>	<p>Displays the range type for the created quantitative scoring model.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• Max Value</li> <li>• Param Percent%</li> <li>• Value</li> </ul>
<b>Define Range/Value</b>	Displays the range/value defined for the created quantitative scoring model.
<b>Range From</b>	Displays the minimum range of value based on which scoring is done.
<b>Range To</b>	Displays the maximum range of value based on which scoring is done.
<b>Score</b>	Displays the score assigned for each range or value.
<b>Category</b>	<p>Displays the category for each range or value for the created quantitative scoring model.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• Strong</li> <li>• Medium</li> <li>• Weak</li> </ul>
<b>Enable</b>	Displays the parameter for the created quantitative scoring model.

Field	Description
<b>Scoring Rule</b>	
This tab is enabled for the <b>Application Scoring Model</b> .	
<b>Score</b>	
<b>Rule Code</b>	Displays the rule code for the created quantitative scoring model.
	Click to get the information about the rule.
<b>Rule Name</b>	Displays the rule name of the rule code for the created quantitative scoring model.

## 2.52 Decision Grade Matrix

The **Decision Grade Matrix** screen allows the user to define the decision and grade based on the score calculated by the scoring model.

This section contains following subsections:

- [2.52.1 Create Decision Grade Matrix](#)
- 2.52.2 View Decision Grade Matrix

### 2.52.1 Create Decision Grade Matrix

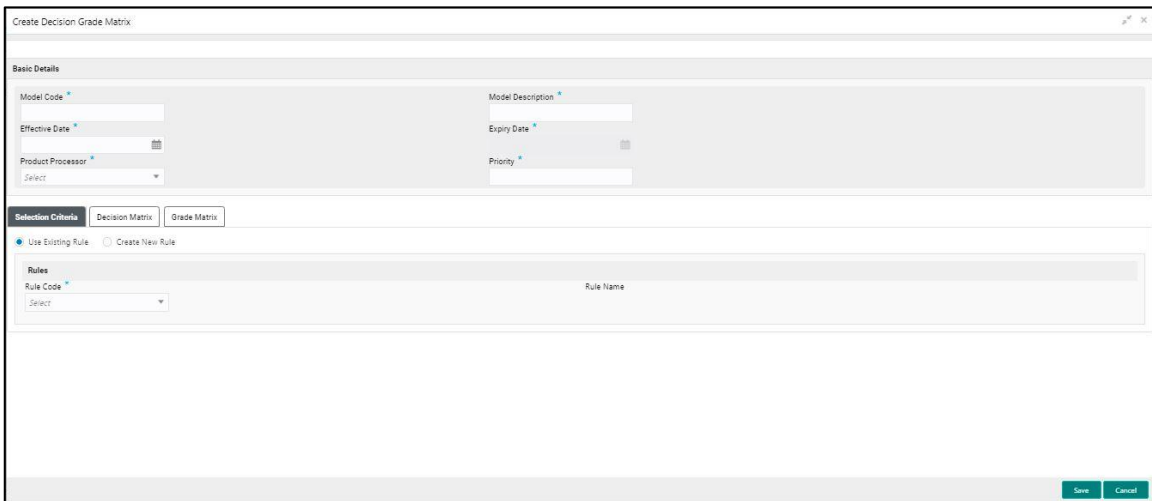
The **Create Decision Grade Matrix** screen allows user to create decision and grade matrix by updating various details.

**To create decision and grade matrix:**

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance** click, **Credit Decision**.
2. Under **Credit Decision** click, **Maintenance**. Under **Maintenance**, click **Decision Grade Matrix**.
3. Under **Decision Grade Matrix**, click **Create Decision Grade Matrix**.

→ The **Create Decision Grade Matrix** screen is displayed.

**Figure 204 : Create Decision Grade Matrix**



4. Specify the fields on **Create Decision Grade Matrix** screen.

The fields, which are marked with asterisk, are mandatory.

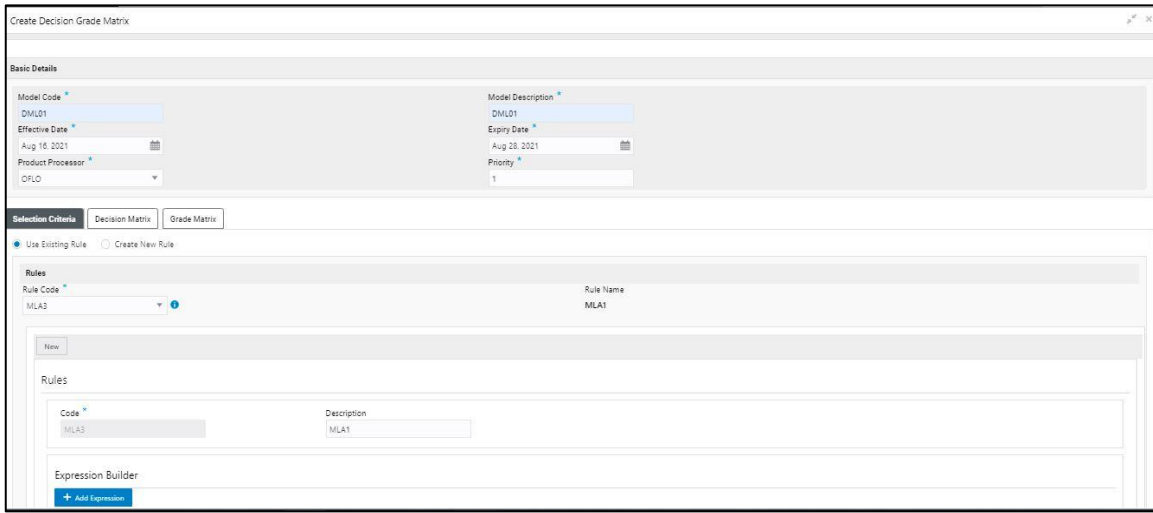
For more information on fields, refer to the field description table below.

**Table 172: Create Decision and Grade Matrix - Field Description**

Field	Description
<b>Basic Details</b>	
<b>Model code</b>	Specify the unique model code.
<b>Model Description</b>	Specify a short description for the model.
<b>Effective Date</b>	Select the effective date.
<b>Expiry Date</b>	Select the expiry date.
<b>Product Processor</b>	Specify the product processor for which the decision and grade matrix is being created.
<b>Priority</b>	Specify the priority of the model.




5. Click the **Selection Criteria** tab to configure the parameters based on which decision model is to be resolved.



**Figure 205 : Create Decision Grade Matrix – Selection Criteria Tab**



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

**Table 173 : Decision and Grade Matrix - Selection Criteria Field Description**

Field	Description
<b>Use Existing Rule</b>	By default, this option is enabled. Indicates if the existing rule is linked.
<b>Rules</b>	
<b>Rule Code</b>	Select the rule code from the drop-down list.
	Click to get the information about the rule.
<b>Rule Name</b>	Displays the rule name.
<b>Create New Rule</b>	Select this option to create new rule.
<b>Rules</b>	
<b>Code</b>	Specify the new rule code.
<b>Description</b>	Specify the rule description.
<b>Select Existing Rule</b>	Select the existing rule from the drop-down list.
	Click to view the existing rule.  Note: This is used when existing rule is to be used for some modification like copy of existing rule.
Below field appears once you click  icon.	
<b>Rule ID</b>	Displays the rule ID.
<b>Rule Name</b>	Displays the rule name.

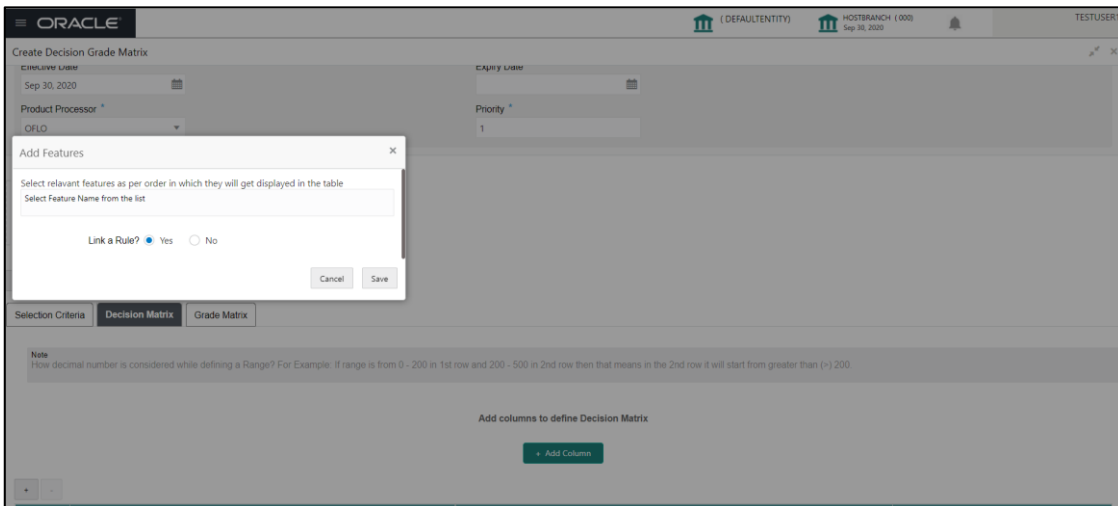
Field	Description
<b>Description</b>	Displays the rule description.
<b>Rule Version</b>	Displays the rule version.
	Click icon to view the list of rule versions.  Note: This is used when existing rule is to be used for some modification like copy of existing rule.
Below field appears once you click  icon.	
<b>Version</b>	Displays the rule version.
<b>Description</b>	Displays the rule description.
<b>Creation Date</b>	Displays the rule creation date.
<b>Expression Builder</b>	
<b>+ button</b>	Click to add new expression.
<b>Fact / Rules</b>	Select the fact or rule from the drop-down list.  Once you select the fact/rules one more field opens adjacent to it, update the same based on the selected option.
<b>Operator</b>	Select the comparison operator from the drop-down list.  The options are: <ul style="list-style-type: none"> <li>• &lt;</li> <li>• &gt;</li> <li>• +</li> <li>• =</li> <li>• %</li> <li>• !=</li> <li>• -</li> <li>• &gt;=</li> <li>• &lt;=</li> <li>• *</li> <li>• /</li> <li>• Contains</li> <li>• In</li> <li>• Matches</li> <li>• Notmatches</li> <li>• Notcontains</li> <li>• Notin</li> </ul>

Field	Description
<b>Data Type</b>	<p>Select the data type for the fact or rule. Once you select the data type one more field opens adjacent to it, update the same based on the selected option.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• Text</li> <li>• Number</li> <li>• Boolean</li> <li>• Date</li> <li>• Fact</li> </ul> <p>The below option appears if the <b>Data Type</b> is selected as <b>Boolean</b>.</p> <ul style="list-style-type: none"> <li>• True</li> <li>• False</li> </ul>
<b>Output</b>	<p>Select the output from the drop-down list. Once you select the output one more field opens adjacent to it, update the same based on the selected option.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• Text</li> <li>• Number</li> <li>• Boolean</li> <li>• Date</li> <li>• Fact</li> </ul> <p>The below option appears if the <b>Data Type</b> is selected as <b>Boolean</b>.</p> <ul style="list-style-type: none"> <li>• True</li> <li>• False</li> </ul>
<b>Expression</b>	Displays the expression updated in the expression builder.

6. Click the **Decision Matrix** tab to define decision on the application. You can select the feature for which the decision needs to be maintained like Quantitative/Qualitative.


**Figure 206 : Create Decision Grade Matrix- Decision Matrix Tab**





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

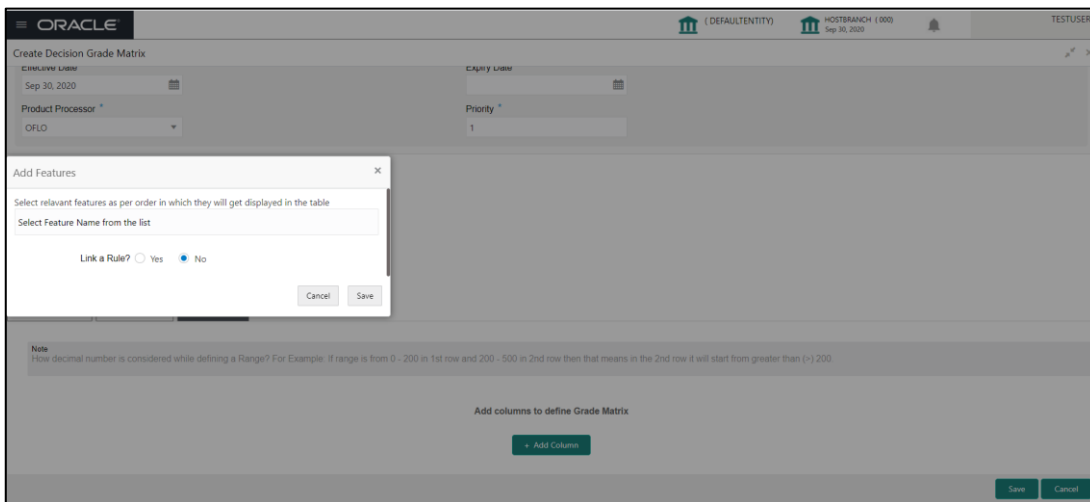
**Table 174 : Create Decision Grade Matrix – Decision Matrix Tab - Field Description**

Field	Description
The following fields appear if you click <b>Decision Matrix</b> Tab.	
<b>Add Column</b>	<p>Click for addition of features for which decision has to be maintained.</p> <p>On click of <b>Add Column</b>, all the features are shown in the drop down list. Select the feature to be added. Click save to add the feature.</p> <p>If the feature is numeric type, two columns gets added in the table From and To. If the feature is character/alphanumeric type one column Value gets added.</p> <p>System should not save, if no feature have been added. User can click Cancel to close the window.</p>
<b>Link a Rule?</b>	<p>User can link a rule to the features.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li><b>Yes:</b> If this option is selected, system displays the list of rules and based on rule mapped the decision is provided.</li> <li><b>No:</b> If this option is selected, system displays the list of decision lookup values.</li> </ul>
	Click to delete a column.
<b>+ button</b>	Click to add a new row.
<b>- button</b>	Click to delete an existing row.
<b>Score From</b>	Specify the minimum range of score for the decision.

Field	Description
<b>Score To</b>	Specify the maximum range of score for the decision.
<b>Decision</b>	Specify the decision of an application from the drop-down list. The values are configurable based on the look up values maintained  The options are: <ul style="list-style-type: none"> <li>• Approved</li> <li>• Manual</li> <li>• Rejected</li> </ul>
<b>Rule</b>	Displays the rules based on which decision is to be made.  This field is enabled if <b>Link a Rule?</b> Option is update as <b>Yes</b> .

7. Click the **Grade Matrix** tab to assign the grade to the application that is used during the pricing of the application. You can select the feature for which the grade needs to be maintained like Quantitative/Qualitative.


**Figure 207 : Create Decision Grade Matrix – Grade Matrix Tab**



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

**Table 175 : Create Decision Grade Matrix – Grade Matrix Tab - Field Description**

Field	Description
The following fields appear if you click <b>Grade Matrix</b> tab.	

Field	Description
<b>Add Column</b>	<p>Click for addition of features for which decision has to be maintained.</p> <p>On click of <b>Add Column</b>, all the features are shown in the drop down list. Select the feature to be added. Click save to add the feature.</p> <p>If the feature is numeric type, two columns gets added in the table From and To. If the feature is character/alphanumeric type one column Value gets added.</p> <p>System should not save, if no feature have been added. User can click Cancel to close the window.</p>
<b>Link a Rule?</b>	<p>User can link a rule to the features.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• <b>Yes:</b> If this option is selected, system displays the list of rules and based on rule mapped the decision is provided.</li> <li>• <b>No:</b> If this option is selected, system displays the list of decision lookup values.</li> </ul>
	Click to delete a column.
<b>+ button</b>	Click to add a new row.
<b>- button</b>	Click to delete an existing row.
<b>Score From</b>	Specify the minimum range of the score for the grade.
<b>Score To</b>	Specify the maximum range of the score for the grade.
<b>Grade</b>	<p>Specify the grade of the application based on the score scored. The values are configurable based on the look up values maintained.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• A</li> <li>• B</li> <li>• C</li> </ul>
<b>Value</b>	In case the data type of feature is numeric such as Age, FICO score the below field appears. , specify the value for which the grade has to be maintained.
<b>Rule</b>	<p>Displays the rules based on which decision is to be made.</p> <p>This field is enabled if <b>Link a Rule?</b> Option is updated as <b>Yes</b>.</p>

8. Click **Save** to save the details.

The decision grade matrix is successfully created and can be viewed using the **View Decision and Grade Matrix** screen.

## 2.52.2 View Decision Grade Matrix

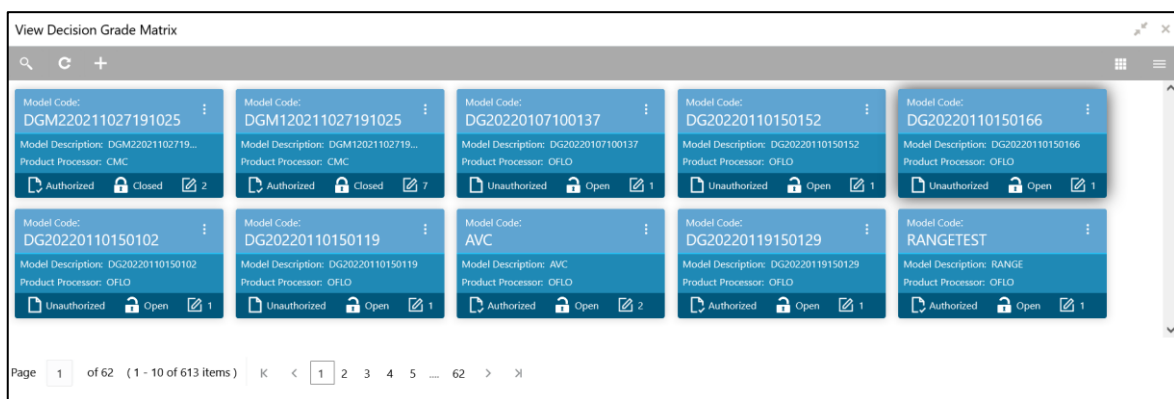
The **View Decision Grade Matrix** screen allows the user to view the decision grade matrix created using the **Create Decision Grade Matrix** screen. The status of the uploaded model is displayed as **Unauthorized** and **Open**. Once the checker authorizes the matrix, the status is updated to **Authorized** and **Open**.

**To view an uploaded decision grade matrix:**

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance** click, **Credit Decision**.
2. Under **Credit Decision**, click **Maintenance**. Under **Maintenance**, click **Decision Grade Matrix**.
3. Under **Decision Grade Matrix**, click **View Decision Grade Matrix**.

→ The **View Decision Grade Matrix** screen is displayed.

**Figure 208 : View Decision Grade Matrix**



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

**Table 176 : View Decision Grade Matrix - Field Description**

Field	Description
<b>Model Code</b>	Displays the model code.
<b>Model Description</b>	Displays the description of the model.
<b>Product Processor</b>	Displays the product processor for which the model is created.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

4. Click **Search** icon.
5. Specify the search criteria to fetch the required decision grade matrix.

**Figure 209 : View Decision Grade Matrix- Search Option**

6. Click **Search**.

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

**Table 177 : View Decision Grade Matrix Field Description**

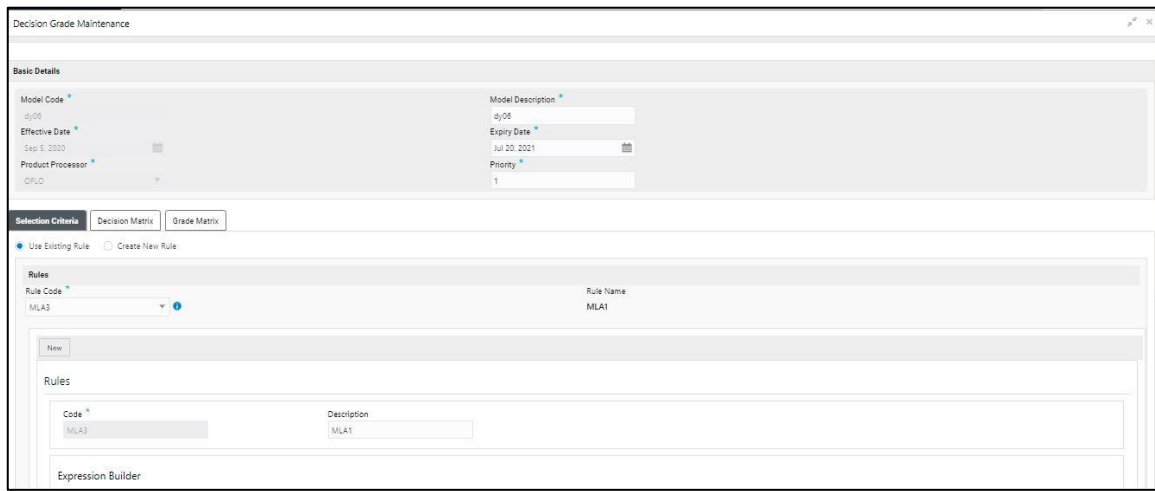
Field	Description
<b>Model Code</b>	Displays the model code.
<b>Model Description</b>	Displays the model description.
<b>Authorization Status</b>	Select the authorization status of the model.  The options are: <ul style="list-style-type: none"> <li>• Authorized</li> <li>• Rejected</li> <li>• Unauthorized</li> </ul>
<b>Record Status</b>	Select the record status of the model.  The options are: <ul style="list-style-type: none"> <li>• Open</li> <li>• Closed</li> </ul>

7. Click **three-dots** icon to unlock, delete, authorize or view the created decision grade matrix.8. Click **Unlock** icon to modify the following fields.

The fields are displayed in the **Decision Grade Maintenance screen**. The following fields are editable.

- Model Description
- Effective Date, before authorization
- Expiry Date
- Priority
- Rule Code
- Add New fact or rule to the selection criteria
- Score from
- Score to
- Decision
- Grade


**Figure 210 : Decision Grade Maintenance - Modify**





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

**Table 178 : View Decision Grade Matrix- Modify- Field Description**

Field	Description
<b>Basic Details</b>	
<b>Model Code</b>	Displays the model code for created decision grade matrix.
<b>Model Description</b>	Displays the description of the model for the created decision grade matrix.  User can modify the same.
<b>Effective Date</b>	Displays the effective date of the model for the created decision grade matrix.
<b>Expiry Date</b>	Displays the expiry date of the model for the created decision grade matrix.  User can modify the same.
<b>Product Processor</b>	Displays the product processor for the created decision grade matrix.
<b>Priority</b>	Displays the priority of the model for the created decision grade matrix.  User can modify the same.
<b>Selection Criteria</b>	
<b>Use Existing Rule</b>	Indicates if the existing rule is linked.
<b>Rules</b>	

Field	Description
<b>Rule Code</b>	Displays the rule code of the created decision grade matrix. User can modify the same.
	Click to get the information about the rule.
<b>Rule Name</b>	Displays the rule name.
<b>Create New Rule</b>	Displays the rule code for the created decision grade matrix. User can modify the same.
<b>Rules</b>	
<b>Code</b>	Specify the new rule code for decision grade matrix.
<b>Description</b>	Specify the rule description for the decision grade matrix.
<b>Select Existing Rule</b>	Displays the existing rule. User can modify the same.
<b>Rule Version</b>	Displays the rule version.
<b>Expression Builder</b>	
<b>+ button</b>	Click to add new expression.
<b>Fact / Rules</b>	Displays the fact or rule for the created decision grade matrix.
<b>Operator</b>	Displays the comparison operator for the created decision grade matrix.
<b>Data Type</b>	Displays the data type for the fact or rule for the created decision grade matrix.
<b>Output</b>	Displays the output for the created decision grade matrix.
<b>Expression</b>	Displays the expression updated in the expression builder for the created quantitative scoring model.
<b>Decision Matrix</b>	
<b>Add Column</b>	Click to add addition of features for which decision has to be maintained.
<b>Link a Rule?</b>	User can link a rule to the features.  The options are: <ul style="list-style-type: none"> <li>• <b>Yes:</b> This option displays the list of rules and based on rule mapped the decision is provided.</li> <li>• <b>No:</b> This option displays the list of decision lookup values.</li> </ul>

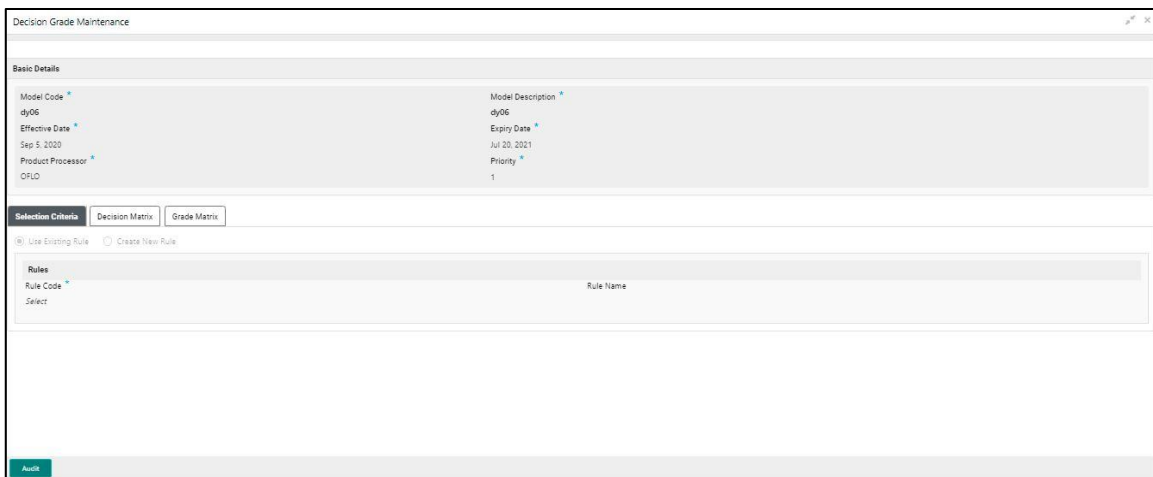
Field	Description
	Click to delete a column.
<b>+ button</b>	Click to add new row.
<b>- button</b>	Click to delete row.
<b>Score From</b>	Displays the minimum range of score for the decision. User can modify the same.
<b>Score To</b>	Displays the maximum range of score for the decision. User can modify the same.
<b>Decision</b>	Displays the decision of an application. The values are configurable based on the look up values maintained  The options are: <ul style="list-style-type: none"> <li>• Approved</li> <li>• Manual</li> <li>• Rejected</li> </ul> User can modify the same.
<b>Rule</b>	Displays the rule based on which decision is to be made.  This field is enabled if <b>Link a Rule?</b> Option is updated as <b>Yes</b> .
<b>Grade Matrix</b>	
<b>Add Column</b>	Click to add addition of features for which decision has to be maintained.
<b>Link a Rule?</b>	User can link a rule to the features.  The option are: <ul style="list-style-type: none"> <li>• <b>Yes:</b> This option displays the list of rules and based on the rules mapped decision is provided.</li> <li>• <b>No:</b> this option displays the list of decision lookup values.</li> </ul>
	Click to delete a column.
<b>+ button</b>	Click to add new row.
<b>- button</b>	Click to delete row.
<b>Score From</b>	Displays the minimum range of score for the grade. User can modify the same.



Field	Description
Score To	Displays the maximum range of score for the grade. User can modify the same.
Grade	Displays the grade of the application based on the score scored. The values are configurable based on the look up values maintained.  The options are: <ul style="list-style-type: none"> <li>• A</li> <li>• B</li> <li>• C</li> </ul> User can modify the same.
Rule	Displays the rule based on which decision is to made.  This field is enabled if <b>Link a Rule?</b> Option is updated as <b>Yes</b> .

9. Click **Save**, to update the modified field.
10. Click **View** icon to view the created decision grade matrix. The fields are displayed in **Decision Grade Maintenance** screen.


**Figure 211 : Decision Grade Maintenance – View**





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

**Table 179 : Decision Grade Maintenance- View- Field Description**

Field	Description
<b>Basic Details</b>	

Field	Description
<b>Model Code</b>	Displays the model code for the created decision grade matrix.
<b>Model Description</b>	Displays the description for the created decision grade matrix.
<b>Effective Date</b>	Displays the effective date for the created decision grade matrix.
<b>Expiry Date</b>	Displays the expiry date for the created decision grade matrix.
<b>Product Processor</b>	Displays the product processor for the created decision grade matrix.
<b>Priority</b>	Displays the priority for the created decision grade matrix.
<b>Selection Criteria</b>	
<b>Use Existing Rule</b>	Indicates if the existing rule is linked.
<b>Rules</b>	
<b>Rule Code</b>	Displays the rule code of the created decision grade matrix.
	Click to get the information about the rule.
<b>Rule Name</b>	Displays the rule name.
<b>Create New Rule</b>	Displays if new rule is linked to the created decision grade matrix.
<b>Rules</b>	
<b>Code</b>	Specify the new rule code for decision grade matrix.
<b>Description</b>	Specify the rule description for the decision grade matrix.
<b>Select Existing Rule</b>	Displays the existing rule.
<b>Rule Version</b>	Displays the rule version.
<b>Expression Builder</b>	
<b>+ button</b>	Click to add new expression.
<b>Fact / Rules</b>	Displays the fact or rule for the created decision grade matrix.
<b>Operator</b>	Displays the comparison operator for the created decision grade matrix.
<b>Data Type</b>	Displays the data type for the fact or rule for the created decision grade matrix.
<b>Output</b>	Displays the output for the created decision grade matrix.
<b>Expression</b>	Displays the expression updated in the expression builder for the created quantitative scoring model.
<b>Decision Matrix</b>	

Field	Description
<b>Add Column</b>	Click to add addition of features for which decision has to be maintained.
<b>Link a Rule?</b>	Displays if the rule is linked to the feature or not.
	Click to delete a column.
<b>+ button</b>	Click to add a new row.
<b>- button</b>	Click to delete a row.
<b>Score From</b>	Displays the minimum range of score for the decision.
<b>Score To</b>	Displays the maximum range of score for the decision.
<b>Decision</b>	<p>Displays the decision of an application. The values are configurable based on the look up values maintained</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• Approved</li> <li>• Manual</li> <li>• Rejected</li> </ul>
<b>Rule</b>	<p>Displays the rule based on which decision is made.</p> <p>This field is enabled if <b>Link a Rule?</b> Option is updated as <b>Yes</b>.</p>
<b>Grade Matrix</b>	
<b>Add Column</b>	Click to add addition of features for which decision has to be maintained.
	Click to delete a column.
<b>+ button</b>	Click to add a new row.
<b>- button</b>	Click to delete a row.
<b>Score From</b>	Displays the minimum range of score for the grade.
<b>Score To</b>	Displays the maximum range of score for the grade.
<b>Grade</b>	<p>Displays the grade of the application based on the score scored. The values are configurable based on the look up values maintained.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• A</li> <li>• B</li> <li>• C</li> </ul>

Field	Description
Rule	Displays the rule based on which decision is made.  This field is enabled if <b>Link a Rule?</b> Option is updated as <b>Yes</b> .

## 2.53 Pricing

Risk-based pricing refers to the offering of different interest rates to different customers depending on their credit worthiness. Thus, not all borrowers for the same product receives the same interest rate and credit terms. This means that high-risk borrowers who are less likely to repay their loans in full and on time will be charged higher rate of interest. While the low-risk borrowers, having greater capacity to make payments will be charged lower rate of interest.

This section contains the following subsections:

- [2.53.1 Create Pricing Model](#)
- [2.53.2 View Pricing Model](#)

### 2.53.1 Create Pricing Model

The **Create Pricing Model** screen allows user to create pricing model based on various pricing parameter by updating various details.

**To create a pricing set up:**

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance**, click **Credit Decision**.
2. Under **Credit Decision**, click **Maintenance**. Under **Maintenance**, click **Pricing**.
3. Under **Pricing**, click **Create Pricing Model**.

→ The **Create Pricing Model** screen is displayed.

**Figure 212 : Create Pricing Model**

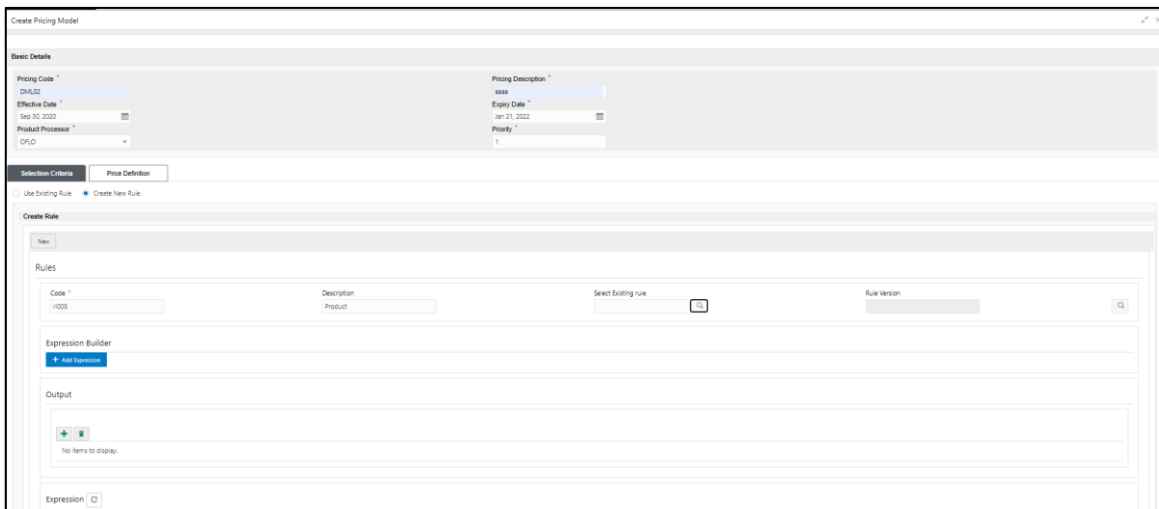
- Specify the fields on **Create Pricing Model** screen. The fields, which are marked with asterisk, are mandatory. For more information on fields, refer to the field description table below.

**Table 180 : Create Pricing Model – Field Description**

Field	Description
<b>Basic Details</b>	
<b>Pricing Code</b>	Specify the unique pricing code.
<b>Pricing Description</b>	Specify a short description for the pricing.
<b>Effective Date</b>	Select the effective date.
<b>Expiry Date</b>	Select the expiry date.
<b>Product Processor</b>	Specify the product processor for which the pricing is being defined.
<b>Priority</b>	Specify the priority of the pricing.

- Click the **Selection Criteria** tab to define pricing.






**Figure 213 : Create Pricing Model - Selection Criteria Tab**



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

**Table 181 : Create Pricing Model – Selection Criteria - Field Description**

Field	Description
<b>Use Existing Rule</b>	By default, this option is enabled. Indicates if the existing rule is linked.
<b>Rules</b>	
<b>Rule Code</b>	Select the rule code from the drop-down list.

Field	Description
	Click to get the information about the rule.
<b>Rule Name</b>	Displays the rule name.
<b>Create New Rule</b>	Select this option to create new rule.
<b>Rules</b>	
<b>Code</b>	Displays the rule code.
<b>Description</b>	Displays the rule description.
<b>Select existing Rule</b>	Select the existing rule from the drop-down list.
<b>Rule Version</b>	Displays the rule version.
	Click to view the existing rule.  <b>Note:</b> This is used when existing rule is to be used for some modification like copy of existing rule.
The below field appears once you click  icon.	
<b>Rule ID</b>	Displays the rule ID.
<b>Rule Name</b>	Displays the rule name.
<b>Description</b>	Displays the rule description.
<b>Rule version</b>	Displays the rule version.
	Click to view the existing rule version.  <b>Note:</b> This is used when existing rule is to be used for some modification like copy of existing rule.
The below field appears once you click  icon.	
<b>Version</b>	Displays the rule version.
<b>Description</b>	Displays the rule description.
<b>Creation Date</b>	Displays the rule creation date.
<b>Expression Builder</b>	
<b>+ button</b>	Click icon to add new expression.
<b>Fact / Rules</b>	Select the fact or rule from the drop-down list.  Once you select the fact/rules one more field opens adjacent to it, update the same based on the selected option.

Field	Description
<b>Operator</b>	<p>Select the comparison operator from the drop-down list.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• &lt;</li> <li>• &gt;</li> <li>• +</li> <li>• =</li> <li>• %</li> <li>• !=</li> <li>• -</li> <li>• &gt;=</li> <li>• &lt;=</li> <li>• *</li> <li>• /</li> <li>• Contains</li> <li>• In</li> <li>• Matches</li> <li>• Notmatches</li> <li>• Notcontains</li> <li>• Notin</li> </ul>
<b>Data Type</b>	<p>Select the data type for the fact or rule. Once you select the data type one more field opens adjacent to it, update the same based on the selected option.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• Text</li> <li>• Number</li> <li>• Boolean</li> <li>• Fact</li> <li>• Date</li> </ul> <p>The below option appears if the <b>Data Type</b> is selected as <b>Boolean</b>.</p> <ul style="list-style-type: none"> <li>• True</li> <li>• False</li> </ul>

Field	Description
<b>Output</b>	<p>Select the output from the drop-down list. Once you select the output one more field opens adjacent it, update the same based on the selected option.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• Text</li> <li>• Number</li> <li>• Boolean</li> <li>• Date</li> <li>• Fact</li> </ul> <p>The below option appears if the <b>Data Type</b> is selected as <b>Boolean</b>.</p> <ul style="list-style-type: none"> <li>• True</li> <li>• False</li> </ul>
<b>Expression</b>	Displays the expression updated in the expression builder.

6. Click the **Price Definition** tab to define pricing.

**Figure 214 : Create Pricing Model – Price Definition Tab (Flat)**

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

**Table 182 : Create Pricing Model – Price Definition (Flat) – Field Description**

Field	Description
<b>Minimum Rate</b>	Specify the minimum rate applicable for the defined pricing code.
<b>Maximum Rate</b>	Specify the maximum rate applicable for the defined pricing code.



Field	Description
<b>Rate Type</b>	Specify the rate type from the drop-down list.  The options are: <ul style="list-style-type: none"> <li>• Flat</li> <li>• Tiered</li> </ul>
<b>Link a Rule?</b>	Select the option whether to link a rule to derive the price.  The options are: <ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> </ul>
<b>Rate %</b>	Specify the interest rate application for the defined pricing.  This field appears once you select the <b>Rate Type</b> option as <b>Flat</b> and <b>Link a Rule?</b> option as <b>No</b> .
<b>Rule</b>	Select the rule for the defined pricing from the drop-down list.  This field appears once you select the <b>Rate Type</b> option as <b>Flat</b> and <b>Link a Rule?</b> option as <b>Yes</b> .

If the **Rate Type** option is selected as **Tiered**, the user can link the list of features

7. Click **Add Columns** button.

→ The **Add Features** popup screen displays.

**Figure 215 : Add Features**

Add Features

Select relevant features as per order in which they will get displayed in the table

Select Feature Name from the list

Link a Rule?  Yes  No

Cancel Save

8. Select the feature names from the list. ('n' number of features can be selected)

9. Select the option whether to link a rule for defining the interest rate.

10. Click **Save** to link the list of features for defining the tiered interest rate.

The **Price Definition (Tiered)** tab displays.

**Figure 216 : Create Pricing Model – Price Definition (Tiered)**

The screenshot shows the 'Create Pricing Model' window with the 'Price Definition' tab selected. The 'Basic Details' section contains the following fields: Pricing Code (fg), Pricing Description (hf), Effective Date (Mar 30, 2018), Expiry Date (Aug 14, 2031), Product Processor (OBO), and Priority (1). The 'Price Definition' section includes Minimum Rate (0) and Maximum Rate (100) fields, and Rate Type (Flat/Tiered) radio buttons. Below this is a table for defining rates with columns for From, To, Value, and Rate %.

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

**Table 183 : Create Pricing Model – Price Definition (Tiered) – Field Description**

Field	Description
<b>Minimum Rate</b>	Specify the minimum rate applicable for the defined pricing code.
<b>Maximum Rate</b>	Specify the maximum rate applicable for the defined pricing code.
<b>Rate Type</b>	Specify the rate type from the drop-down list.  The options are: <ul style="list-style-type: none"> <li>• Flat</li> <li>• Tiered</li> </ul>
The below field appears if you select the <b>Rate Type</b> option as <b>Tiered</b> . The below columns are available as Facts in a drop down and you need to select the same.	
<b>&lt;Numeric Feature&gt; From</b>	Specify the minimum numeric value of feature to which the interest rate is applicable.

Field	Description
<Numeric Feature> To	Specify the maximum numeric value of feature to which the interest rate is applicable.
<Character Feature> Value	Specify the alphabetic value for which the interest rate is applicable.
Rate %	Specify the interest rate applicable for the defined tier.  This field appears once you select the <b>Rate Type</b> option as <b>Tiered</b> and <b>Link a Rule?</b> option as <b>No</b> .
Rule	Select the rule for the defined tier from the drop-down list.  This field appears once you select the <b>Rate Type</b> option as <b>Tiered</b> and <b>Link a Rule?</b> option as <b>Yes</b> .

11. Click **Save** to save the details.

The Pricing model is successfully created and can be viewed using **View Pricing Model** Screen.

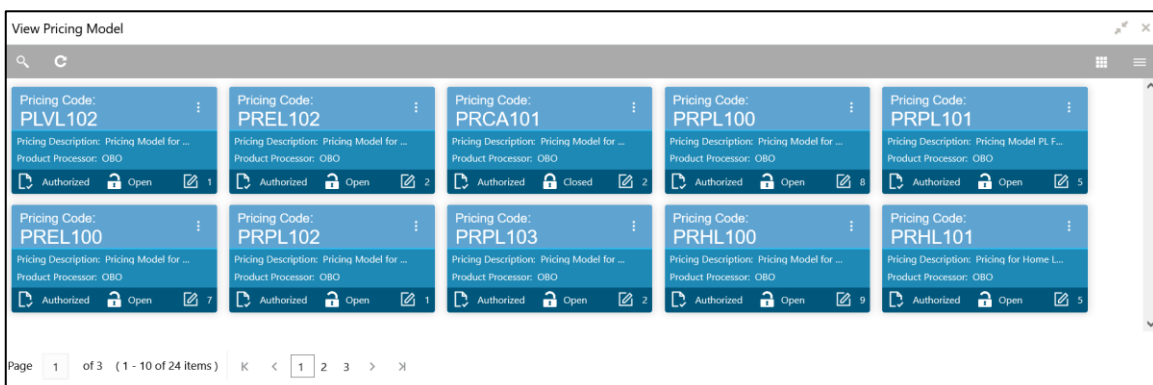
### 2.53.2 View Pricing Model

The **View Pricing Model** screen allows the user to view the pricing model created using the **Create Pricing Model** screen. The status of the uploaded model is displayed as **Unauthorized** and **Open**. Once the checker authorizes the model, the status is updated to **Authorized** and **Open**.

To view created Pricing Model:

1. From **Home** screen, click **Core Maintenance**. Under **Core Maintenance** click, **Credit Decision**.
2. Under **Credit Decision**, click **Maintenance**. Under **Maintenance**, click **Pricing**.
3. Under **Pricing**, click **View Pricing Model**.  
→ The **View Pricing Model** screen appears.

Figure 217 : View Pricing Model



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

**Table 184 : View Pricing Model - Field Description**

Field	Description
<b>Pricing Code</b>	Displays the pricing code.
<b>Pricing Description</b>	Displays the description of the pricing model.
<b>Product Processor</b>	Displays the product processor for which the pricing model is created.
<b>Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modifications performed on the record.

4. Click **Search** icon.
5. Specify the search criteria to fetch the required pricing model.

**Figure 218 : View Pricing Model- Search Option**

6. Click **Search**.

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

**Table 185 : View Pricing Model - Search Option - Field Description**

Field	Description
<b>Pricing Code</b>	Displays the pricing code.
<b>Pricing Description</b>	Displays the description of the pricing model.
<b>Authorization Status</b>	Select the authorization status of the model.  The options are: <ul style="list-style-type: none"> <li>• Authorized</li> <li>• Rejected</li> <li>• Unauthorized</li> </ul>
<b>Record Status</b>	Select the record status of the model.  The options are: <ul style="list-style-type: none"> <li>• Open</li> <li>• Closed</li> </ul>

7. Click **three-dots** icon to unlock, delete, authorize or view the created pricing model.
8. Click **Unlock** to modify the following fields.

The fields are displayed in the **Pricing Model Maintenance** screen.

The following fields are editable.


- Pricing Description
- Effective Date, before authorization
- Expiry Date
- Priority
- Rule Code
- Add new fact or rule to the selection criteria
- <Numeric Feature> From
- <Numeric Feature> To
- <Character Feature> Value
- Rate Type
- Rate %

**Figure 219 : Pricing Model Maintenance – Modify**

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

**Table 186 : Pricing Model Maintenance - Modify- Field Description**

Field	Description
<b>Basic Details</b>	
<b>Pricing Code</b>	Displays the pricing code for created pricing model.

Field	Description
<b>Pricing Description</b>	Displays the description of the pricing for the created pricing model. User can modify the same.
<b>Effective Date</b>	Displays the effective date of the pricing for the created pricing model.
<b>Expiry Date</b>	Displays the expiry date of the pricing for the created pricing model. User can modify the same.
<b>Product Processor</b>	Displays the product processor for the created pricing model.
<b>Priority</b>	Displays the priority of the pricing for the created pricing model. User can modify the same.
<b>Selection Criteria</b>	
<b>Use Existing Rule</b>	Indicates if the existing rule is linked.
<b>Rules</b>	
<b>Rule Code</b>	Displays the rule code of the created pricing model. User can modify the same.
	Click to get the information about the rule.
<b>Rule Name</b>	Displays the rule name.
<b>Create New Rule</b>	Displays if new rule is linked to the pricing model. User can modify the same.
<b>Rules</b>	
<b>Code</b>	Specify the new rule code for the created pricing model.
<b>Description</b>	Specify the rule description for the created pricing model.
<b>Select Existing Rule</b>	Displays the existing rule. User can modify the same.
<b>Rule Version</b>	Displays the rule version.
<b>Expression Builder</b>	
<b>+ button</b>	Click to add new expression.
<b>Fact / Rules</b>	Displays the fact/rules of the created pricing model.
<b>Operator</b>	Displays the comparison operator of the created pricing model.

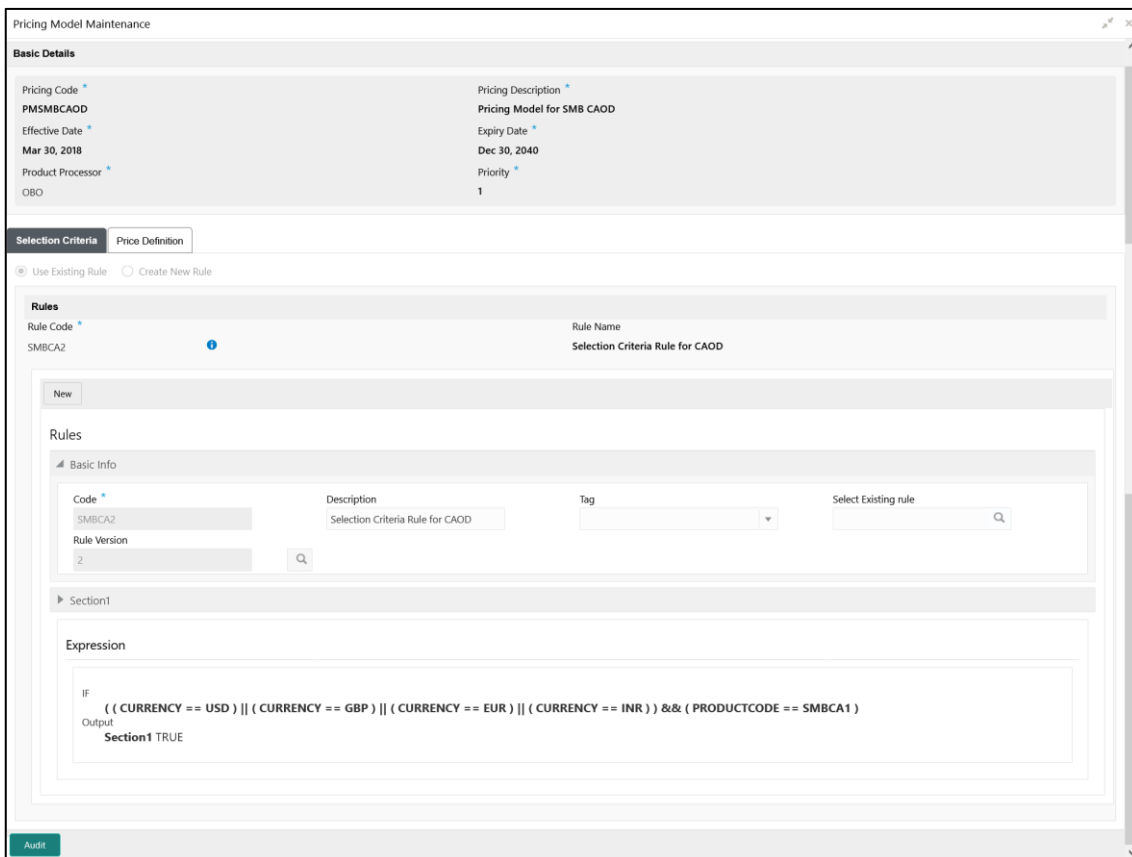
Field	Description
<b>Data Type</b>	Displays the data type for the fact or rule of the created pricing model.
<b>Output</b>	Displays the output of the created pricing model.
<b>Expression</b>	Displays the expression updated in the expression builder of the created pricing model.
<b>Pricing Definition</b>	
<b>Minimum Rate</b>	Displays the minimum rate applicable for the defined pricing model. User can modify the same.
<b>Maximum Rate</b>	Displays the maximum rate applicable for the defined pricing model. User can modify the same.
<b>Rate Type</b>	Displays the rate type from the drop-down list.  The options are: <ul style="list-style-type: none"> <li>• Flat</li> <li>• Tiered</li> </ul> User can modify the same.
<b>Rate %</b>	Displays the interest rate application for the defined pricing. User can modify the same.  This field appears once you select the <b>Rate Type</b> option as <b>Flat</b> and <b>Link a Rule?</b> option as <b>Yes</b> .
<b>Rule</b>	Displays the rule for the defined pricing. User can modify the same.  This field appears once you select the <b>Rate Type</b> option as <b>Flat</b> and <b>Link a Rule?</b> option as <b>Yes</b> .
The below field appears if the rate type is updated as <b>Tiered</b> . The below columns are available as "Facts" in a drop down.  User can modify the same.	
<b>&lt;Numeric Feature&gt; From</b>	Displays the minimum numeric value of feature to which the interest rate is applicable. User can modify the same.
<b>&lt;Numeric Feature&gt; To</b>	Displays the maximum numeric value of feature to which the interest rate is applicable. User can modify the same.

Field	Description
<Character Feature> Value	Displays the alphabetic value for which the interest rate is applicable. User can modify the same.
Rate %	Displays the interest rate applicable for the defined tier. User can modify the same. This field appears once you select the <b>Rate Type</b> option as <b>Tiered</b> and <b>Link a Rule?</b> option as <b>No</b> .
Rule	Displays the rule for the defined tier. User can modify the same. This field appears once you select the <b>Rate Type</b> option as <b>Tiered</b> and <b>Link a Rule?</b> option as <b>Yes</b> .

9. Click **Save**, to update the modified fields.
10. Click **View** icon to view the created pricing model.

The fields are displayed in **Pricing Model Maintenance** screen.


**Figure 220 : Pricing Model Maintenance – View**



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



Table 187 : Pricing Model Maintenance – View - Field Description

Field	Description
<b>Basic Details</b>	
<b>Pricing Code</b>	Displays the pricing code for created pricing model.
<b>Pricing Description</b>	Displays the description of the pricing for the created pricing model.
<b>Effective Date</b>	Displays the effective date of the pricing for the created pricing model.
<b>Expiry Date</b>	Displays the expiry date of the pricing for the created pricing model.
<b>Product Processor</b>	Displays the product processor for the created pricing model.
<b>Priority</b>	Displays the priority of the pricing for the created pricing model.
<b>Selection Criteria</b>	
<b>Use Existing Rule</b>	Indicates if the existing rule is linked.
<b>Rules</b>	
<b>Rule Code</b>	Displays the rule code of the created pricing model.
	Click to get the information about the rule.
<b>Rule Name</b>	Displays the rule name for the created pricing model.
<b>Create New Rule</b>	Displays if new rule is linked to the pricing model.
<b>Rules</b>	
<b>Code</b>	Displays the new rule code for created pricing model.
<b>Description</b>	Displays the rule description for the created pricing model.
<b>Select Existing Rule</b>	Displays the existing rule.
<b>Rule Version</b>	Displays the rule version.
<b>Expression Builder</b>	
<b>+ button</b>	Click to add a new expression.
<b>Fact / Rules</b>	Displays the fact/rules of the created pricing model.
<b>Operator</b>	Displays the comparison operator of the created pricing model.
<b>Data Type</b>	Displays the data type for the fact or rule of the created pricing model.
<b>Output</b>	Displays the output of the created pricing model.
<b>Expression</b>	Displays the expression updated in the expression builder of the created pricing model.

Field	Description
<b>Pricing Definition</b>	
<b>Minimum Rate</b>	Displays the minimum rate applicable for the defined pricing model.
<b>Maximum Rate</b>	Displays the maximum rate applicable for the defined pricing model.
<b>Rate Type</b>	Displays the rate type from the drop-down list.  The options are: <ul style="list-style-type: none"> <li>• Flat</li> <li>• Tiered</li> </ul>
<b>Rate %</b>	Displays the interest rate application for the defined pricing.  This field appears once you select the <b>Rate Type</b> option as <b>Flat</b> and <b>Link a Rule?</b> option as <b>Yes</b> .
<b>Rule</b>	Displays the rule for the defined pricing.  This field appears once you select the <b>Rate Type</b> option as <b>Flat</b> and <b>Link a Rule?</b> option as <b>Yes</b> .
The below field appears if the rate type is updated as <b>Tiered</b> . The below columns are available as "Facts" in a drop down.	
<b>&lt;Numeric Feature&gt; From</b>	Displays the minimum numeric value of feature to which the interest rate is applicable.
<b>&lt;Numeric Feature&gt; To</b>	Displays the maximum numeric value of feature to which the interest rate is applicable.
<b>&lt;Character Feature&gt; Value</b>	Displays the alphabetic value for which the interest rate is applicable.
<b>Rate %</b>	Displays the interest rate applicable for the defined tier.  This field appears once you select the <b>Rate Type</b> option as <b>Tiered</b> and <b>Link a Rule?</b> option as <b>No</b> .
<b>Rule</b>	Displays the rule for the defined tier.  This field appears once you select the <b>Rate Type</b> option as <b>Tiered</b> and <b>Link a Rule?</b> option as <b>Yes</b> .

## 2.54 View Execution Summary

**Execution Summary** screen enables the user to view the details of the processed application. Based on the request mode it displays details related to validation model, borrowing capacity, quantitative score, qualitative score, decision and grade details and pricing details. It also provides different type of filters to perform search for a specific record.

This section contains following subsection:

- [2.54.1 View Execution Summary](#)

### 2.54.1 View Execution Summary

The **View Execution Summary** screen allows user to view the execution summary based on the various filter options provided.

**To view execution summary:**

1. From **Home** screen, click **Core Maintenance**. Under Core Maintenance click, **Credit Decision**.
2. Under **Credit Decision** click, **Operations**. Under **Operations**, click **Execution Summary**.  
 → The **Execution Summary** screen displays.

**Figure 221 : View Execution Summary**

The screenshot shows the 'View Execution Summary' interface. At the top, there is a 'Search Criteria' section with a filter dropdown menu and 'Reset' and 'Search' buttons. Below this is a table titled 'Scoring Decision Summary' with the following columns: Product Processor, Request Type, Contract ID, Request Reference Number, Internal Reference Number, Execution Date, Mode, and Status. The table contains five rows of data. At the bottom, there is a pagination control showing 'Page 1 of 2282 (1 - 5 of 11409 items)' and navigation buttons.

Product Processor	Request Type	Contract ID	Request Reference Number	Internal Reference Number	Execution Date	Mode	Status
▶ OFLO	Score, Decision & Pricing	123	09yN6ghMD41P9yN6ghMD41Q8yN6ghMD41R8yN6ghMD41S...	CDS20211025152426597	Oct 25, 2021	ONLINE	FAILURE
▶ OFLO			WhoXmqcMD41XhoXmqcMD41YhoXmqcMD41ZhoXmqcMD4...	CDS20211025152321123	Oct 25, 2021	ONLINE	ERROR
▶ OFLO	Decision & Grade	123	OfNbcgWFD41PNbcgWFD41QfNbcgWFD41RfNbcgWFD41Sf...	CDS20211025135544519	Oct 25, 2021	ONLINE	SUCCESS
▶ OFLO	Decision & Grade	123	iSivHyDD41JSivHyDD41KSivHyDD41LSivHyDD41MSivHyDD...	CDS20211025132220815	Oct 25, 2021	ONLINE	FAILURE
▶ OFLO	Decision & Grade	123	oOXQ8uRzD41pOXQ8uRzD41qOXQ8uRzD41rOXQ8uRzD41sO...	CDS20211025123042142	Oct 25, 2021	ONLINE	FAILURE

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

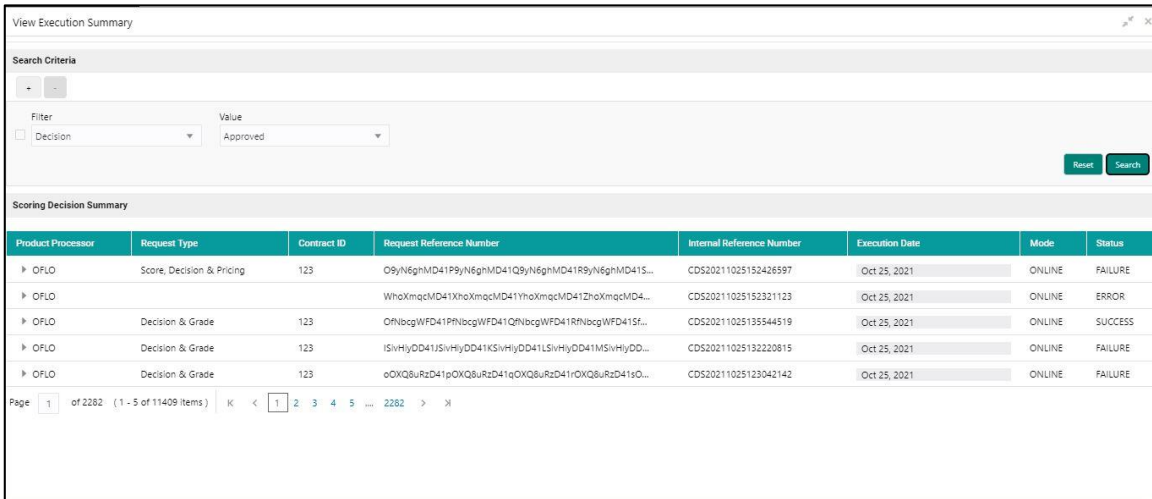
**Table 188 : Execution Summary - Field Description**

Field	Description
<b>Search Criteria</b>	
<b>+ button</b>	Click to add a new row.
<b>- button</b>	Click to delete an existing row.

Field	Description
<b>Filter</b>	<p>Select the required option based on which you can search for the execution summary.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• Request Reference Number</li> <li>• Internal Reference Number</li> <li>• Decision</li> <li>• Batch/Online</li> <li>• Product Processor</li> <li>• Status</li> <li>• Request Type</li> <li>• Execution Date</li> <li>• Contract ID</li> </ul>
<b>Value</b>	<p>Specify the required details or select an appropriate option for the selected filter option.</p> <p>This field appears once you select an option from the <b>Filter</b> list.</p>
<b>From Date</b>	<p>Select the start date of the period during which the execution summary is generated.</p> <p>This field appears if you select the filter option as <b>Execution Date</b> and value as <b>Date Range</b>.</p>
<b>To Date</b>	<p>Select the end date of the period during which the execution summary is generated.</p> <p>This field appears if you select the filter option as <b>Execution Date</b> and value as <b>Date Range</b>.</p>

3. In the **Search Criteria** section, specify the details and click **Search**.  
The search results appear showing a list of records based on the specified search criteria.
4. Click **Reset**, to reset the search criteria.

**Figure 222 : Execution Summary - Search Option**



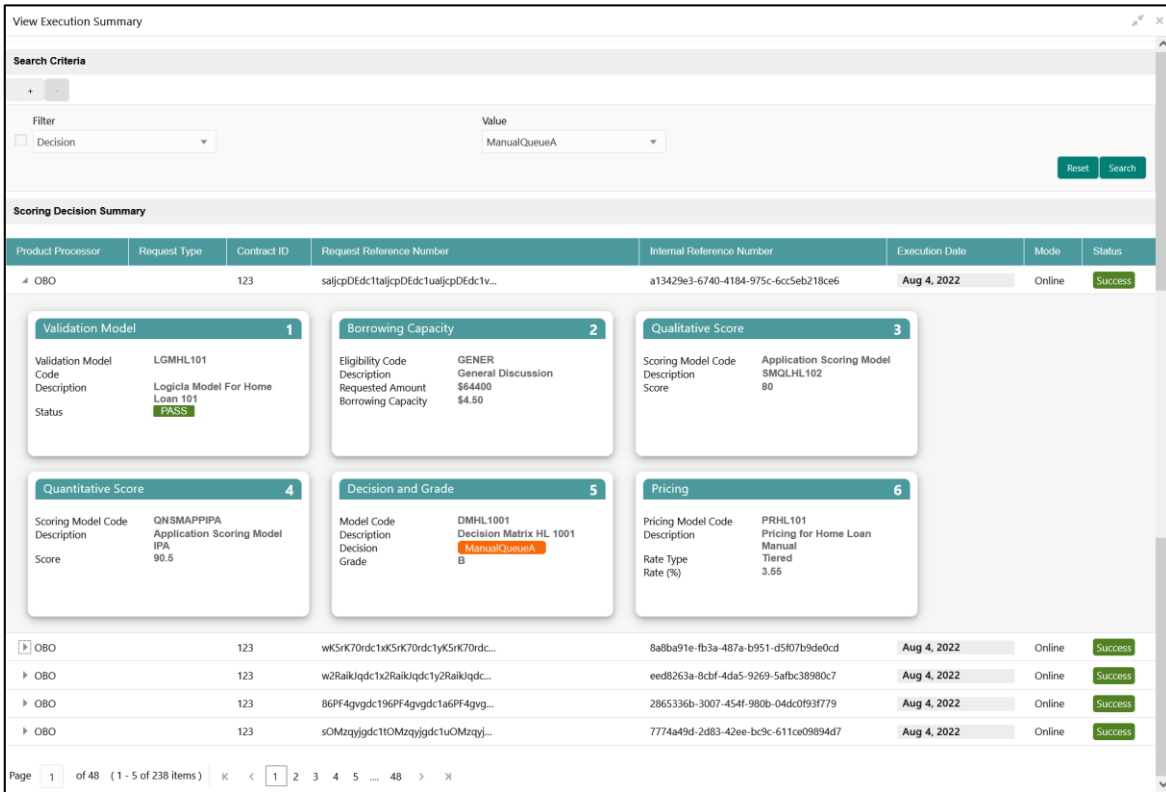
For more information on fields, refer to the field description table below.

**Table 189 : Execution Summary - Search option- Field Description**

Field	Description
<b>Scoring Decision Summary</b>	
<b>Product Processor</b>	Displays the name of the product processor that sent the request.
<b>Request Type</b>	Displays the request type sent by product processor.
<b>Contract ID</b>	Displays the contract ID sent by the product processor.
<b>Request Reference Number</b>	Displays the request reference number sent by product processor.
<b>Internal Reference Number</b>	Displays the internal reference number of the application.
<b>Execution Date</b>	Displays the execution date of the processing application.
<b>Mode</b>	Displays the mode of execution of the application.
<b>Status</b>	Displays the status of the processed application.

- Click the ▶ icon corresponding to the required record to view the decision related details on each widget. Only one record is viewed at a time. If you need to view another record, you have to click on ▶ to close the already open record and then the next record can be viewed. The widgets are arranged in the flow in which the execution is done and is indicated by showing the sequence 1, 2, 3 numbers in the top right corner. The widgets are clickable on hover the color of the widget changes to indicate the widget is clickable.
- When the status of processed application is **Failure**, on click of the ▶ failure message is displayed in the step that is failed. For example, in case of **Qualitative Score Model** is not resolved, then the error message is displayed in the **Qualitative Score Model** widget and the previous widget will show the data which was processed. Where in if the validation processing fails, then the status **Fail** is shown in the **Validation Model** widget and reason for failure is displayed on click of the widget.

**Figure 223 View Execution Summary**



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

**Table 190 : View Execution Summary Field Description**

Field	Description
<b>Validation Model Widget</b>	Displays the status of the validation model processed.
<b>Validation Model Code</b>	Displays the validation model code, resolved for credit decision.  The following fields appear in <b>Validation Model</b> widget.
<b>Description</b>	Displays the validation model description, resolved for the credit decision.
<b>Status</b>	Displays the status of the validation model processed. <ul style="list-style-type: none"> <li>For status <b>Pass</b>, the color is shown as <b>Green</b>.</li> <li>For status, <b>Fail</b> the color is shown as <b>Red</b>.</li> </ul>
<b>Borrowing Capacity Widget</b>	Displays the maximum lendable amount that can be given for an application.  The following fields appear in <b>Borrowing Capacity</b> widget.
<b>Eligibility Code</b>	Displays the eligibility model code, resolved for calculating the borrowing capacity.

Field	Description
<b>Description</b>	Displays the eligibility model description, resolved for calculating the borrowing capacity.
<b>Requested Amount</b>	Displays the requested amount for the lending application.
<b>Borrowing Capacity</b>	Displays the maximum lendable amount that can be given for the application.
<p><b>Qualitative Score Widget</b></p> <p>Displays the qualitative credit score, post credit decision of the application. The following fields appear in <b>Qualitative Score</b> widget.</p>	
<b>Scoring Model Code</b>	<p>Displays the scoring model code, resolved for credit decision.</p> <ul style="list-style-type: none"> <li>• When <b>Is Application Decision Required</b> is <b>Yes</b>, the application level decision scoring code is displayed.</li> <li>• When <b>Is Application Decision Required</b> is <b>No</b>, the applicant level decision scoring code is displayed.</li> <li>• When <b>Is Application Decision Required</b> is <b>No</b>, and <b>Is Primary Applicant</b> is <b>No</b>, the application level decision scoring code is displayed.</li> </ul>
<b>Description</b>	Displays the scoring model description, resolved for credit decision.
<b>Score</b>	<p>Displays the qualitative credit score post credit decision of the application.</p> <ul style="list-style-type: none"> <li>• When <b>Is Application Decision Required</b> is <b>Yes</b>, the system performs the aggregation, which can be minimum, maximum or average of all applicant's score. The aggregation performed is defined as rules and linked at the application level scoring model and this aggregated score is displayed.</li> <li>• When <b>Is Application Decision Required</b> is <b>No</b>, the score is displayed by resolving the applicant level scoring model.</li> <li>• When <b>Is Application Decision Required</b> is <b>No</b>, and <b>Is Primary Applicant</b> is <b>No</b>, the system performs the aggregation, which can be minimum, maximum or average of all applicant's score. The aggregation performed is defined as rule and linked at the application level scoring model and this aggregated score is displayed.</li> </ul>
<p><b>Quantitative Score Widget</b></p> <p>Displays the quantitative credit score post credit decision of the application. The following fields appear in <b>Quantitative Score</b> widget.</p>	

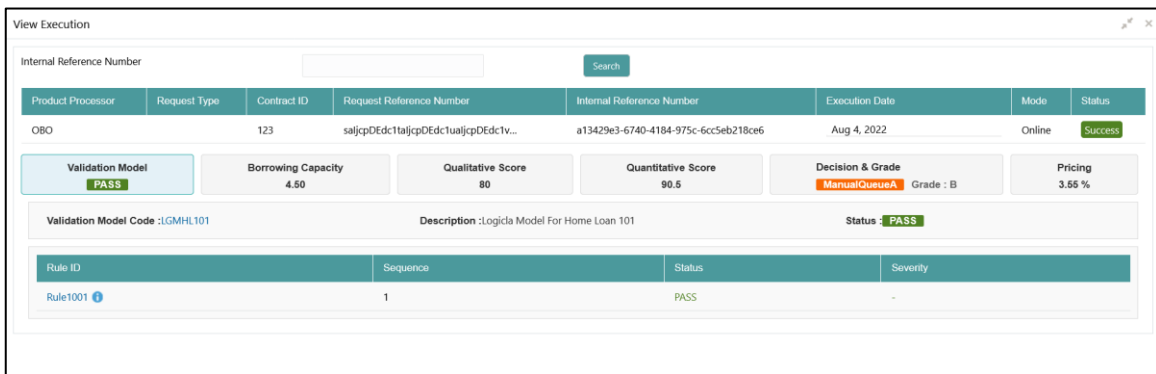
Field	Description
<b>Scoring Model Code</b>	<p>Displays scoring model code, resolved for credit decision.</p> <ul style="list-style-type: none"> <li>• When <b>Is Application Decision Required</b> is <b>Yes</b>, the application level decision scoring code is displayed.</li> <li>• When <b>Is Application Decision Required</b> is <b>No</b>, the applicant level decision scoring code is displayed.</li> <li>• When <b>Is Application Decision Required</b> is <b>No</b>, and <b>Is Primary Applicant</b> is <b>No</b>, the multi applicant level scoring code is displayed.</li> </ul>
<b>Description</b>	Displays the scoring model description, resolved for credit decision.
<b>Score</b>	<p>Displays the quantitative credit score, post credit decision of the application.</p> <ul style="list-style-type: none"> <li>• When <b>Is Application Decision Required</b> is <b>Yes</b>, the system performs the aggregation, which can be minimum, maximum or average of all applicant's score. The aggregation performed is defined as rules and linked at the application level scoring model and this aggregated score is displayed.</li> <li>• When <b>Is Application Decision Required</b> is <b>No</b>, the score is displayed by resolving the applicant level scoring model.</li> <li>• When <b>Is Application Decision Required</b> is <b>No</b>, and <b>Is Primary Applicant</b> is <b>No</b>, score is displayed by resolving the multi applicant level scoring model.</li> </ul>
<p><b>Decision and Grade Widget</b></p> <p>Displays the credit decision and scoring grade, taken for the application. The following fields appear in <b>Quantitative Score</b> widget.</p>	
<b>Model Code</b>	Displays the model code, resolved for credit decision and grade.
<b>Description</b>	Displays the model description, resolved for credit decision and grade.
<b>Decision</b>	Displays the credit decision, taken for the application.
<b>Grade</b>	Displays the scoring grade, post credit decision of the application.
<p><b>Pricing Widget</b></p> <p>Displays the rate applicable post credit decision. The following fields appear in <b>Quantitative Score</b> widget.</p>	



Field	Description
<b>Pricing Model Code</b>	Displays the pricing model code, resolved for credit decision.
<b>Description</b>	Displays the pricing model description, resolved for credit decision.
<b>Rate Type</b>	Displays the rate type applicable post credit decision.
<b>Rate %</b>	Displays the rate applicable post credit decision.

The following fields are displayed once you click the **Validation Model** widget. The details for the request which was clicked on the landing page is displayed.



**Figure 224 : Validation Model Widget**



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

**Table 191 : Validation Model Widget - Field Description**

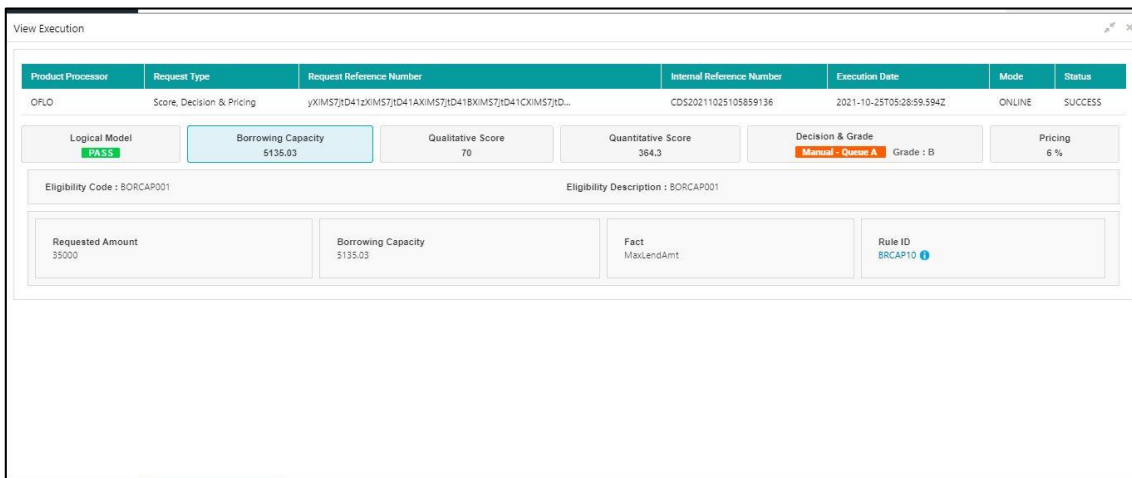
Field	Description
<b>Internal Reference Number</b>	Specify the internal reference number.
<b>Product Processor</b>	Displays the name of the product processor that sent the request.  This field will be shown on click of each widget.
<b>Request Type</b>	Displays the request type sent by the product processor.  This field will be shown on click of each widget.
<b>Contract ID</b>	Displays the contract ID sent by the product processor.  This field will be shown on click of each widget.

Field	Description
<b>Request Reference Number</b>	Displays the request reference number sent by product processor.  This field will be shown on click of each widget.
<b>Internal Reference Number</b>	Displays the internal reference number of the application.  This field will be shown on click of each widget.
<b>Execution Date</b>	Displays the execution date of the processing application.  This field will be shown on click of each widget.
<b>Mode</b>	Displays the mode of execution of the application.  This field will be shown on click of each widget.
<b>Status</b>	Displays the status of the application.  This field is shown on click of each widget.
The following fields appear once you click the <b>Validation Model</b> widget.	
<b>&lt;Validation Model Code&gt;</b>	Displays the validation model code that is resolved for credit decision.  Click the hyper link to view the rule executed to resolve the model.
<b>Show Rule Log</b>	Click to see the rule log.
	Click to expand the rule.
<b>Expression</b>	Displays the expression of the rule.
<b>Input</b>	Displays the input of the rule.
<b>Value</b>	Displays the value of the rule.
<b>Description</b>	Displays the description of the validation model.
<b>Status</b>	Displays the status of validation model.
<b>Rule ID</b>	Displays the rule ID executed for validation model processing.  Click the hyperlink to view the rule executed.
<b>Show Rule Log</b>	Click to see the rule log.
	Click to expand the rule.
<b>Expression</b>	Displays the expression of the rule.

Field	Description
Input	Displays the input of the rule.
Value	Displays the value of the rule.
Sequence	Displays the sequence in which the rules are executed for validation model processing.
Status	<p>Displays the status of the rule execution. In case the status is failed, the reason for failure is displayed as <b>Reason &lt;&gt;</b>.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• Pass</li> <li>• Not Executed: This status is displayed against a rule if the <b>Stop on Failure</b> is set as <b>ON</b> and previous rule the sequence has failed.</li> </ul>

The following fields are displayed once you click the **Borrowing Capacity** widget.



**Figure 225 : Borrowing Capacity Widget**



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

**Table 192 : Borrowing Capacity Widget - Field Description**

Field	Description
The following fields appears in <b>Borrowing Capacity</b> widget.	

Field	Description
<Eligibility Code>	Displays the eligibility code resolved for calculating the borrowing capacity.  Click the hyperlink to view the rule executed to resolve the borrowing capacity.
Show Rule Log	Click to see the rule log.
	Click to expand the rule.
Expression	Displays the expression of the rule.
Input	Displays the input of the rule.
Value	Displays the value of the rule.
Eligibility Description	Displays the eligibility description resolved for calculating the borrowing capacity.
Requested Amount	Displays the requested amount for the lending application.
Borrowing Capacity	Displays the maximum lendable amount that can be given for an application.
Fact	Displays the fact using which the maximum lendable amount was calculated.
Rule ID	Displays the rule ID executed for calculating the maximum lendable amount.  Click the hyper link to view the rule executed.
Show Rule Log	Click to see the rule log.
	Click to expand the rule.
Expression	Displays the expression of the rule.
Input	Displays the input of the rule.
Value	Displays the value of the rule.

The following fields are displayed once you click the **Qualitative Score** widget.

**Figure 226 : Qualitative Score Widget – Bar Graph View**

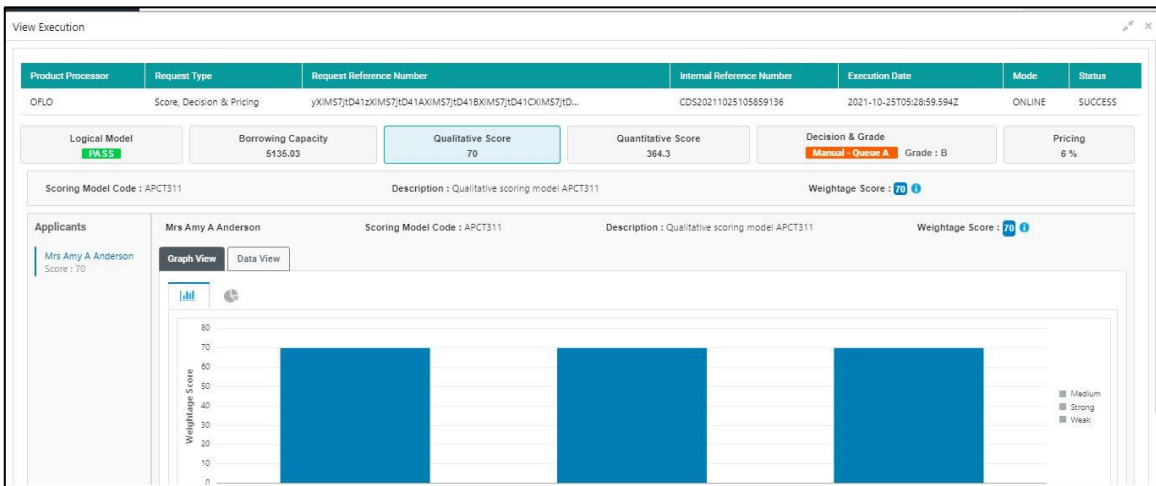
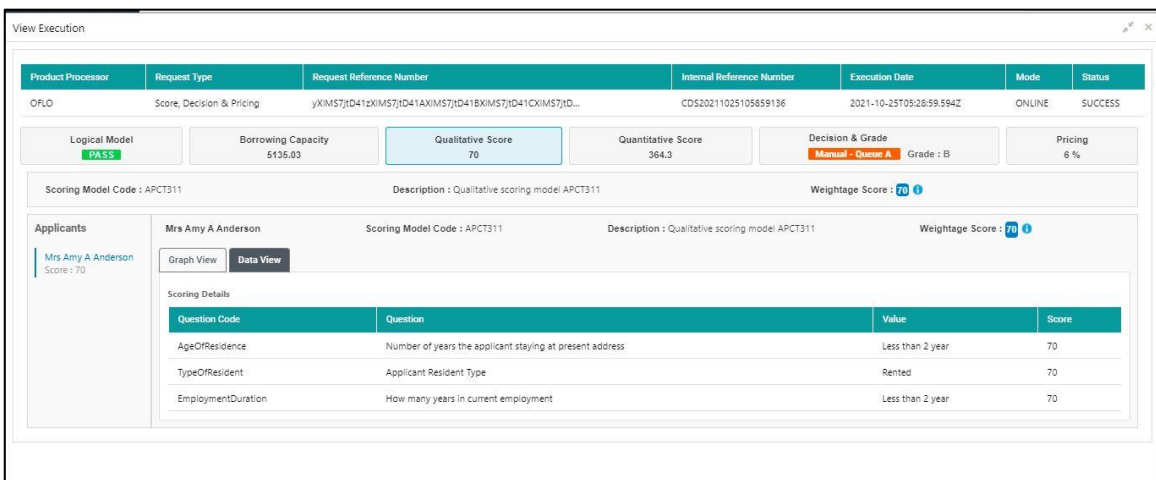


Figure 227 : Qualitative Score Widget – Pie Graph View





Figure 228 : Qualitative Score Widget – Data View



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

Table 193 : Qualitative Score Widget - Field Description

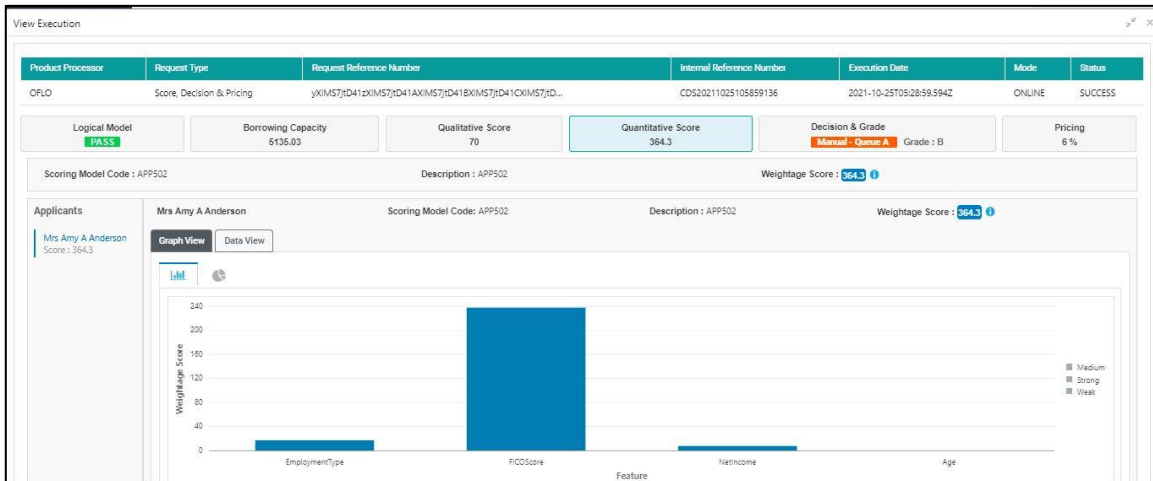
Field	Description
The following fields appears in <b>Qualitative Score</b> widget.	
<Scoring Model Code>	<p>Displays the scoring model code resolved for credit decision.</p> <ul style="list-style-type: none"> <li>• When <b>Is Application Decision Required</b> is <b>Yes</b>, the application level decision scoring code is displayed.</li> <li>• When <b>Is Application Decision Required</b> is <b>No</b>, the applicant level decision scoring code is displayed.</li> <li>• When <b>Is Application Decision Required</b> is <b>No</b>, and <b>Is Primary Applicant</b> is <b>No</b>, the application level scoring code is displayed.</li> </ul>
Description	Displays the scoring model description resolved for credit decision.
Weightage Score/Application Score	<p>Displays the qualitative credit score post credit decision of the application.</p> <ul style="list-style-type: none"> <li>• When <b>Is Application Decision Required</b> is <b>Yes</b>, the field name is displayed as <b>Application Score</b>. The system performs the aggregation, which can be minimum, maximum or average of all applicant's score. The aggregation performed is defined as rules and linked at the application-level scoring model and this aggregated score is displayed.</li> <li>• When <b>Is Application Decision Required</b> is <b>No</b>, the field name is displayed as <b>Weightage Score</b>. The score is displayed by resolving the applicant level scoring model.</li> <li>• When <b>Is Application Decision Required</b> is <b>No</b>, and <b>Is Primary Applicant</b> is <b>No</b>, the field name is displayed as <b>Application Score</b>. The system performs the aggregation, which can be minimum, maximum or average of all applicant's score. The aggregation performed is defined as rules and linked at the application-level scoring model and this aggregated score is displayed</li> </ul>
	Click to get the information about the formula for calculation of score.
Applicant details are shown at the left panel.	
<Applicant Name>	Displays the applicant names present in the application.

Field	Description
<Score>	<p>Displays the weighted credit score post credit decision of the application.</p> <p>The score is calculated for each applicant by resolving the applicant level scoring model.</p>
Below details are shown at the right panel.	
<Applicant Name>	Displays the applicant names present in the application.
Scoring Model Code	Displays the applicant level scoring model code resolved for credit decision.
Description	Displays the applicant scoring model description.
Weightage Score	Displays the weighted credit score post credit decision of the application.
	Click to get the information about the formula for calculation of score.
Graph View	<p>Two graphical views are available.</p> <ul style="list-style-type: none"> <li>• <b>Bar Graphs</b></li> </ul> <p>The details are shown as a graphical representation as bar charts.</p> <ul style="list-style-type: none"> <li>○ List of question ID on the <b>X</b>-axis</li> <li>○ Score on the <b>Y</b>-axis.</li> </ul> <p>Based on the evaluation of the category, the questions are shown in a particular color based on the maintenance done in the lookups screen.</p> <ul style="list-style-type: none"> <li>• <b>Pie Charts</b></li> </ul> <p>The details are shown as a graphical representation as pie charts.</p> <p>The calculation logic for the question is (Score of the question/ Weightage score of the applicant)*100. The pie is shown from a pool of colors available/defined in the code.</p>
Data View	The scoring details are shown as mentioned below in data view.
<b>Scoring Details</b>	

Field	Description
<b>Question Code</b>	Displays the question code resolved for the applicant in the scoring model.
<b>Question</b>	Displays the question description resolved for the applicant in the scoring model.
<b>Value</b>	Displays the response received for the question in the payload.
<b>Score</b>	Displays the score calculated for the question based on the range and the response.  In case any question was optional for which the response was not received, <b>NA</b> will be displayed.

The following fields are displayed once you click the **Quantitative Score** widget.

**Figure 229 : Quantitative Score Widget – Bar Graph View**



**Figure 230 : Quantitative Score Widget – Pie Graph View**

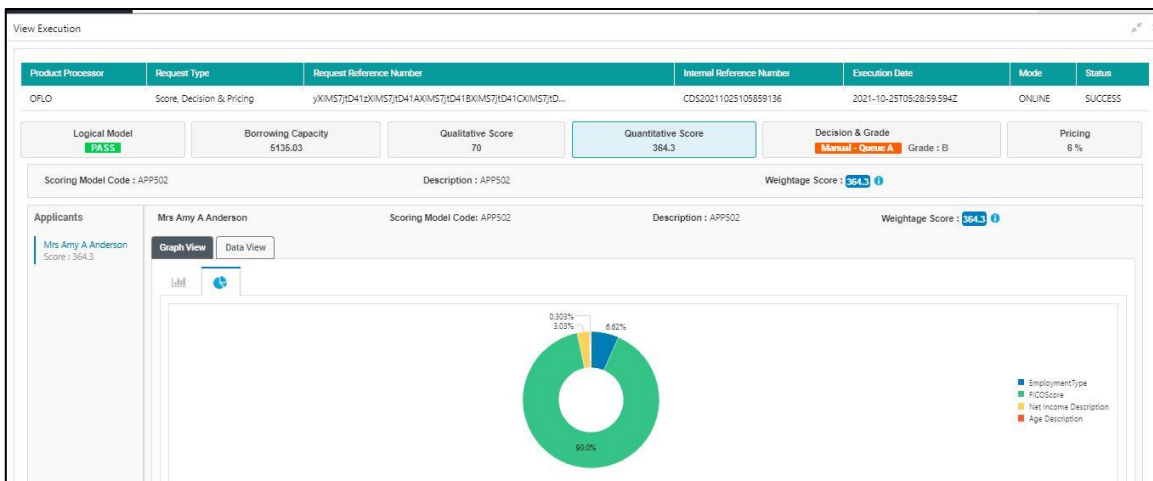
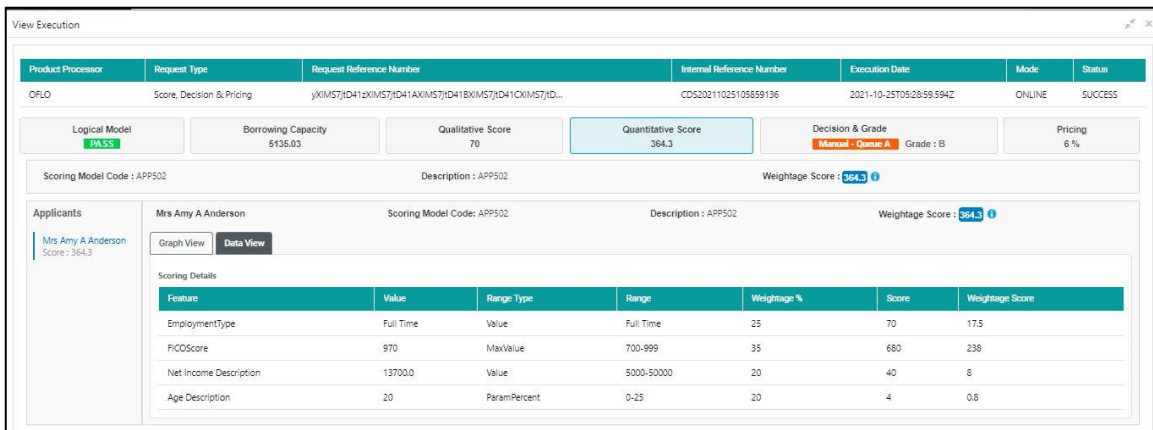




Figure 231 : Quantitative Score Widget – Data View






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

Table 194 : Quantitative Score Widget - Field Description

Field	Description
The following fields appears in <b>Quantitative Score</b> widget.	
<Scoring Model Code>	<p>Displays the scoring model code resolved for credit decision.</p> <ul style="list-style-type: none"> <li>When <b>Is Application Decision Required</b> is <b>Yes</b>, the application level decision scoring code is displayed.</li> <li>When <b>Is Application Decision Required</b> is <b>No</b>, the applicant level decision scoring code is displayed.</li> <li>When <b>Is Application Decision Required</b> is <b>No</b>, and <b>Is Primary Applicant</b> is <b>No</b>, the multi applicant level scoring code is displayed.</li> </ul> <p>Click the hyperlink to view the rule executed to resolve the quantitative score.</p>
Show Rule Log	Click to see the rule log.
	Click to expand the rule.
Expression	Displays the expression of the rule.
Input	Displays the input of the rule.
Value	Displays the value of the rule.
Description	Displays the scoring model description resolved for credit decision.

Field	Description
<b>Weightage Score</b>	<p>Displays the weightage score post credit decision of the application.</p> <ul style="list-style-type: none"> <li>• When <b>Is Application Decision Required</b> is <b>Yes</b>, the system performs the aggregation, which can be minimum, maximum or average of all applicant's score. The aggregation performed is defined as rules and linked at the application level scoring model and this aggregated score is displayed.</li> <li>• When <b>Is Application Decision Required</b> is <b>No</b>, the score is displayed by resolving the applicant level scoring model.</li> <li>• When <b>Is Application Decision Required</b> is <b>No</b>, and <b>Is Primary Applicant</b> is <b>No</b>, the score is displayed by resolving multi applicant level scoring model.</li> </ul> <p>In case of <b>Is Application Decision Required</b> is <b>Yes</b>, system displays the hyperlink on the weightage score value. It shows the aggregate rule details.</p>
Applicant details are shown at the left panel.	
<Applicant Name>	Displays the applicant names present in the application.
<Score>	<p>Displays the weighted credit score post credit decision of the application.</p> <p>The score is calculated for each applicant by resolving the applicant level scoring model.</p> <p>In case of multi applicant scenario, weightage score per applicant is not shown.</p>
Below details are shown at the right panel.	
<Applicant Name>	Displays the applicant names present in the application.

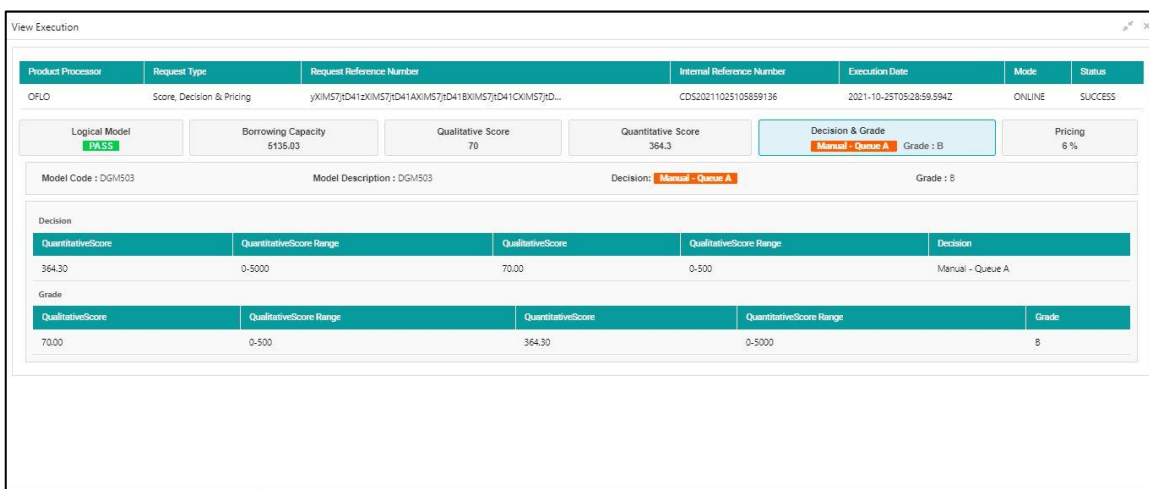
Field	Description
<b>Scoring Model Code</b>	<p>Displays the applicant level scoring model code resolved for credit decision.</p> <p>Applicant level scoring model is applicable for below case.</p> <ul style="list-style-type: none"> <li>• <b>If Is Application Decision required is Yes</b></li> <li>• <b>If Is Application Decision Required is No, and Is Primary Applicant is Yes</b></li> </ul> <p>Multi applicant level scoring model is applicable in the below case.</p> <ul style="list-style-type: none"> <li>• <b>If Is Application Decision Required is No, and Is Primary Applicant is No</b></li> </ul> <p>Click the hyperlink to view the rule executed to resolve the quantitative score.</p>
<b>Show Rule Log</b>	Click to see the rule log.
	Click to expand the rule.
<b>Expression</b>	Displays the expression of the rule.
<b>Input</b>	Displays the input of the rule.
<b>Value</b>	Displays the value of the rule.
<b>Description</b>	Displays the applicant scoring model description.
<b>Weightage Score</b>	<p>Displays the weighted credit score post credit decision of the application.</p> <p>The weightage score is calculated for each applicant by resolving the applicant scoring model.</p> <p>In case of multi applicant scoring model, for both the applicant the same score is shown since the score is not calculated per applicant.</p>
	Click to get the information about the formula for calculation of score.

Field	Description
<b>Graph View</b>	<p>Two graphical views are available.</p> <ul style="list-style-type: none"> <li>• <b>Bar Graphs</b></li> </ul> <p>The details are shown as a graphical representation as bar charts.</p> <ul style="list-style-type: none"> <li>○ List of features on the <b>X</b>-axis</li> <li>○ Weightage Score on the <b>Y</b>-axis.</li> </ul> <p>Based on the evaluation of the category, the feature are shown in a particular color based on the maintenance done in the lookups screen.</p> <p>Note: For Multi Applicant scoring model all graphs is shown in the same color, as category evaluation is not applicable.</p> <ul style="list-style-type: none"> <li>• <b>Pie Charts</b></li> </ul> <p>The details are shown as a graphical representation as pie charts.</p> <p>The calculation logic for the feature is (Weighted score of the feature/ Weightage score of the applicant)*100. The pie is shown from a pool of colors available/defined in the code.</p>
<b>Data View</b>	The scoring details are shown as mentioned below in data view.
<b>Scoring Details</b>	
<b>Feature</b>	<p>Displays the features resolved for the applicant in the scoring model.</p> <p>Click the hyperlink to view the rule executed to resolve the quantitative score.</p>
<b>Show Rule Log</b>	Click to see the rule log.
	Click to expand the rule.
<b>Expression</b>	Displays the expression of the rule.
<b>Input</b>	Displays the input of the rule.
<b>Value</b>	Displays the value of the rule.
<b>Value</b>	Displays the value of the feature.
<b>Range Type</b>	Displays the range type for the feature.
<b>Range</b>	Displays the range resolved for the feature value for score resolution.

Field	Description
<b>Weightage %</b>	Displays the weightage defined for the feature in the scoring model.
<b>Score</b>	Displays the score calculated for the feature based on the range and feature value.
<b>Weightage Score</b>	Displays the weighed credit score post credit decision of the application.


The following fields are displayed once you click the **Decision and Grade** widget.



**Figure 232 : Decision and Grade Widget**




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

**Table 195 : Decision and Grade Widget - Field Description**

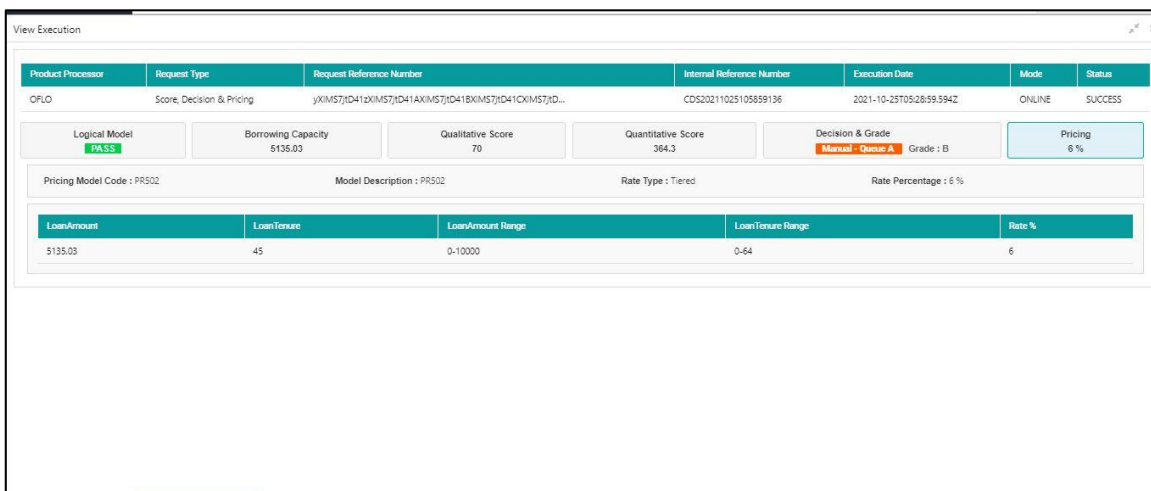
Field	Description
The following fields appears in <b>Decision and Grade</b> widget.	
<b>&lt;Model Code&gt;</b>	Displays the model code resolved for credit decision and grade.  Click the hyper link to view the rule executed to resolve the decision and grade.
<b>Show Rule Log</b>	Click to see the rule log.
	Click to expand the rule.
<b>Expression</b>	Displays the expression of the rule.
<b>Input</b>	Displays the input of the rule.
<b>Value</b>	Displays the value of the rule.

Field	Description
<b>Model Description</b>	Displays the model description resolved for credit decision and grade.
<b>Decision</b>	Displays the credit decision taken for the application.
<b>Grade</b>	Displays the scoring grade post credit decision of the application.
<b>Decision</b>	
<b>&lt;Feature Name&gt; Score</b>	<p>Displays the score calculated for the application based on the feature selected.</p> <p>If the feature is rule based, system displays the hyper link.</p>
<b>Show Rule Log</b>	Click to see the rule log.
	Click to expand the rule.
<b>Expression</b>	Displays the expression of the rule.
<b>Input</b>	Displays the input of the rule.
<b>Value</b>	Displays the value of the rule.
<b>&lt;Feature Name&gt; Range</b>	Displays the score resolved for the application based on the feature selected.
<b>Color Feature</b>	Displays the color feature.
<b>Color Feature Range</b>	Displays the color feature range.
<b>Decision</b>	Displays the decision taken for the application.
<b>Rule ID</b>	<p>Displays the rule ID of the feature.</p> <p>Click the hyperlink to view the rule executed.</p>
<b>Show Rule Log</b>	Click to see the rule log.
	Click to expand the rule.
<b>Expression</b>	Displays the expression of the rule.
<b>Input</b>	Displays the input of the rule.

Field	Description
Value	Displays the value of the rule.
<b>Grade</b>	
<Feature Name> Score	Displays the score calculated for the application based on the feature selected.  If the feature is rule based, system displays the hyperlink.
Show Rule Log	Click to see the rule log.
	Click to expand the rule.
Expression	Displays the expression of the rule.
Input	Displays the input of the rule.
Value	Displays the value of the rule.
<Feature Name> Range	Displays the score resolved for the application based on the feature selected.
Grade	Displays the scoring grade taken for the application.


The following fields are displayed once you click the **Pricing** widget.

**Figure 233 : Pricing Widget**



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

**Table 196 : Pricing Widget - Field Description**

Field	Description
The following fields appears in <b>Pricing</b> widget.	
<Pricing Model Code>	Displays the pricing model code resolved for credit decision. Click the hyperlink to view the rule executed to resolve the pricing model.
Show Rule Log	Click to see the rule log.
	Click to expand the rule.
Expression	Displays the expression of the rule.
Input	Displays the input of the rule.
Value	Displays the value of the rule.
Model Description	Displays the pricing model description resolved for credit decision.
Rate Type	Displays the rate type applicable post credit decision.
Rate Percentage	Displays the rate applicable post credit decision.
Loan Amount	Displays the eligible loan amount for the application.
Loan Tenure	Displays the loan tenure for the application.
Loan Amount Range	Displays the range resolved for the loan amount value.
Loan Tenure Range	Displays the range resolved for the loan tenure value.
Rate %	Displays the rate applicable post credit decision.



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## 3. NLP Framework

This section of the user guide is designed to help you quickly get acquainted with the Machine Learning, Natural Language Processing (NLP) framework.

### Pre-requisites

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

This section contains the following topics:

- [4.1 Toolkit](#)
- 4.2 Operation
- 4.3 3P Service Integration

### 3.1 Toolkit

The Toolkit is used to design and train NLP/Named Entity Recognition (NER) Model(s).

This section contains following subsections:

- [3.1.1 Use Case Definition](#)
  - 3.1.1.1 Use Case Definition Summary
  - 3.1.1.2 Use Case Definition Maintenance
- 3.1.2 Annotator
- 3.1.3 Model Training
- 3.1.4 Model Management
  - 3.1.4.1 Model Management Summary
  - 3.1.4.2 Model Management Maintenance

#### 3.1.1 Use Case Definition

Use cases are defined by the business domain. The information that is required to be extracted from documents are driven by business consideration against the context of the use case being defined.

Tags/entities are required for annotating or tagging of information in the source document in order to create training files for a use case model training. These tags or entities will always be driven by business considerations for a particular use case.

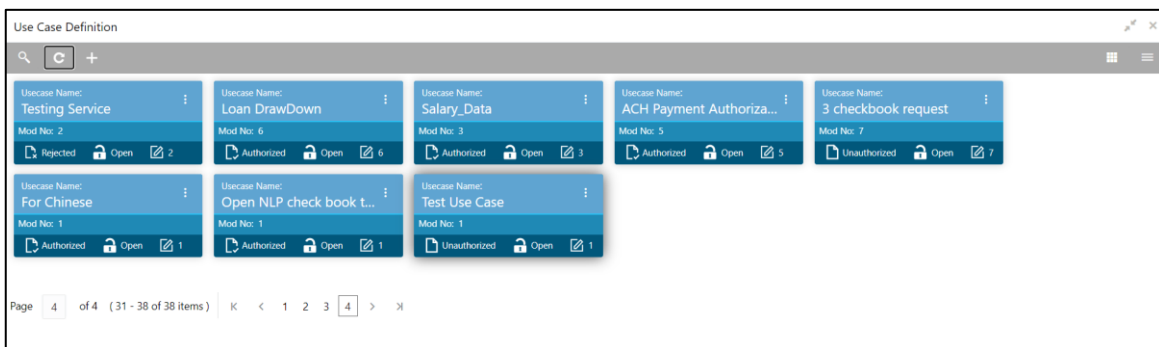
The use case definition maintenance screen allows the user to define use case(s) and maintain specific list of tags for the use case.

### 3.1.1.1 Use Case Definition Summary

The summary screen displays the list of defined use cases. To process this screen, perform the following steps:

1. From **Home** screen, click **Machine Learning**. Under **Machine Learning**, click **NLP Toolkit**.
2. Under **NLP Toolkit**, click **Use Case Definition**.
  - The **Use Case Definition** screen is displayed.

**Figure 234: Use Case Definition**



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

**Table 197: Use Case Definition – Field Description**

Field	Description
<b>Usecase Name</b>	Displays the name of the use case
<b>Mod No</b>	Displays the modification number
<b>Authorized Status</b>	Displays the Authorized or Unauthorized or Rejected status
<b>Record Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modification performed on the record.

### 3.1.1.2 Use Case Definition Maintenance

The maintenance screen allows you to define use cases and maintain entities/tags for the use case.

**Figure 235: Use Case Definition Maintenance**

The screenshot shows the 'Tag Maintenance' window. At the top, there are buttons for 'New', 'Unlock', 'Delete', and 'Authorize'. Below this is the 'Business Tag Maintenance' section with input fields for 'Use Case Name', 'Description', 'Mod No', and 'Straight Through Processing' (with radio buttons for 'Yes' and 'No'). A table lists existing tags with columns for 'Tag Display Sequence', 'Tag Screen Display', 'Tag Name', 'Annotation Tag', and 'Default Value'. The table contains five rows of data. At the bottom, there is a pagination control showing 'Page 1 (1-5 of at least 30 items)' and an 'Audit' button.

<input type="checkbox"/>	Tag Display Sequence	Tag Screen Display	Tag Name	Annotation Tag	Default Value
<input type="checkbox"/>	3	Invoice Due Date	invoiceDueDate	Y	
<input type="checkbox"/>	15	*Buyer Division Code	buyerDivisionCode	*	Y
<input type="checkbox"/>	8	Currency	currency	Y	
<input type="checkbox"/>	20	*External Branch BIC	externalBranchBIC	*	Y
<input type="checkbox"/>	10	Tax Amount	taxAmount	Y	

On **Tag Maintenance** screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

**Table 198: Tag Maintenance – Field Description**

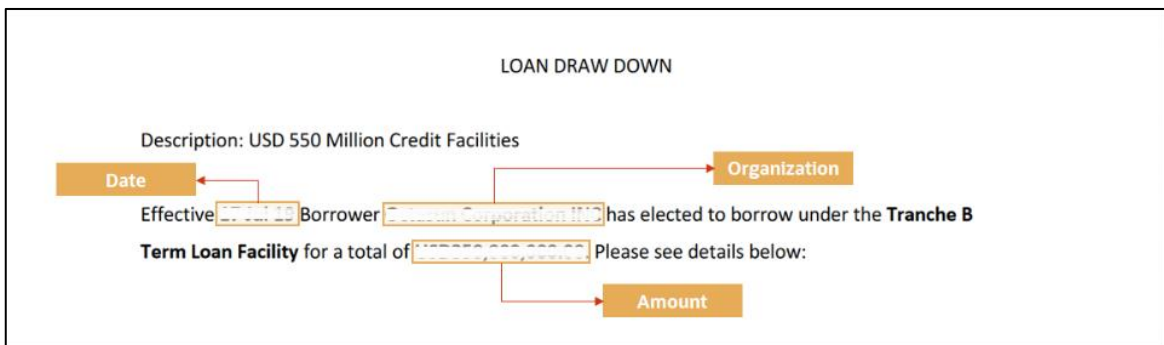
Field	Description
<b>Use Case Name</b>	Unique use case name. It gets populated on Save, from the last folder name from the "Training Corpus Path (DOC)"
<b>Description</b>	Use Case Description
<b>Mod No</b>	Automatic Modification Number
<b>Straight Through Processing</b>	yes = Unattended / No = Attended
<b>Use Case Tags/Entities</b>	Specifies the use case tags entities.
<b>Tag Display Sequence</b>	The sequence in which the tags get displayed.
<b>Tag Screen Display</b>	Business Name of the Tag
<b>Tag Name</b>	Technical Name of the Tag
<b>Annotation Tag</b>	To identify tags to be used in Training

Field	Description
Default Value	Default value for tags not used for training

### 3.1.2 Annotator

Annotation is the process of identifying information within a document content and tagging them as a specific type of information. Of course, each use case defined, will have their own relevant maintained list of tags/entities, which will be used to annotate source documents for a use case.

Figure 236: Annotator

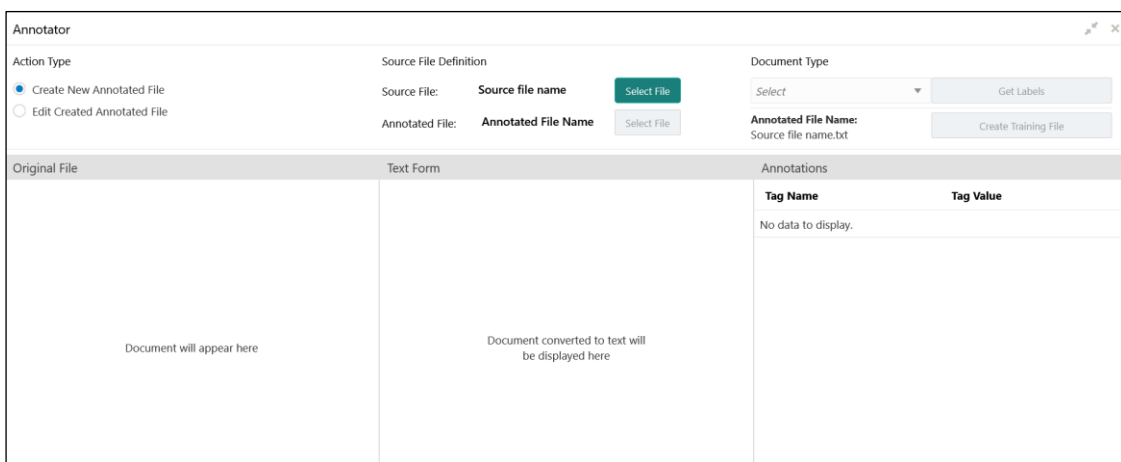


Annotator helps you to perform the annotations on a source document for a use case. To process this screen, perform the following steps:

1. From **Home** screen, click **Machine Learning**. Under **Machine Learning**, click **NLP Toolkit**.
2. Under **NLP Toolkit**, click **Annotator**.

→ The **Annotator** screen is displayed.

Figure 237: Annotator



3. On **Annotator** screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

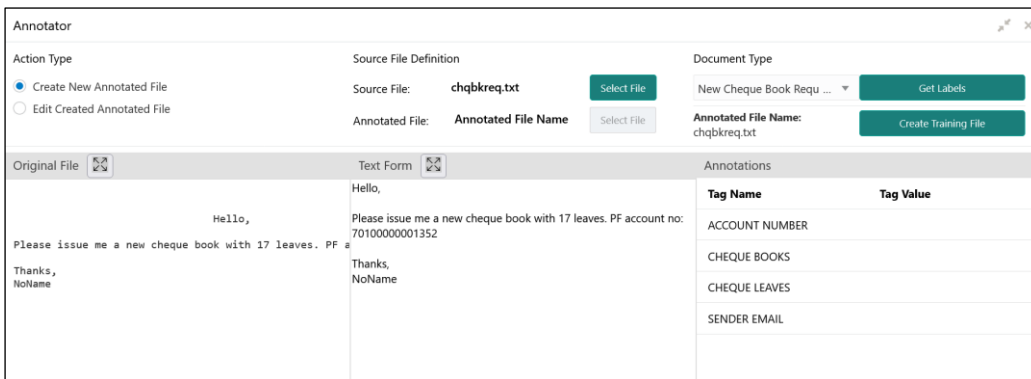
**Table 199: Annotator – Field Description**

Field	Description
<b>Action Type</b>	Select the action type. Available options are: <ul style="list-style-type: none"> <li>• <b>Create New Annotated File</b></li> <li>• <b>Edit Created Annotated File</b></li> </ul>
<b>Source File Definition</b>	Select the source document from local windows explorer based on the <b>Action Type</b> .
<b>Document Type</b>	Displays the list of all the use cases defined under the use case definition.
<b>Get Labels</b>	For the selected Document Type, the maintained Tags/entities are displayed in the Annotations section.
<b>Create Annotated File</b>	Once annotations of all the Tags are completed, this will perform two outcomes, <ul style="list-style-type: none"> <li>• Create annotated text file in the defined NER train path as maintained under use case definition</li> <li>• Create text file in the defined DOC train path as maintained under use case definition</li> </ul>

Follow the below mentioned steps to annotate the source files:

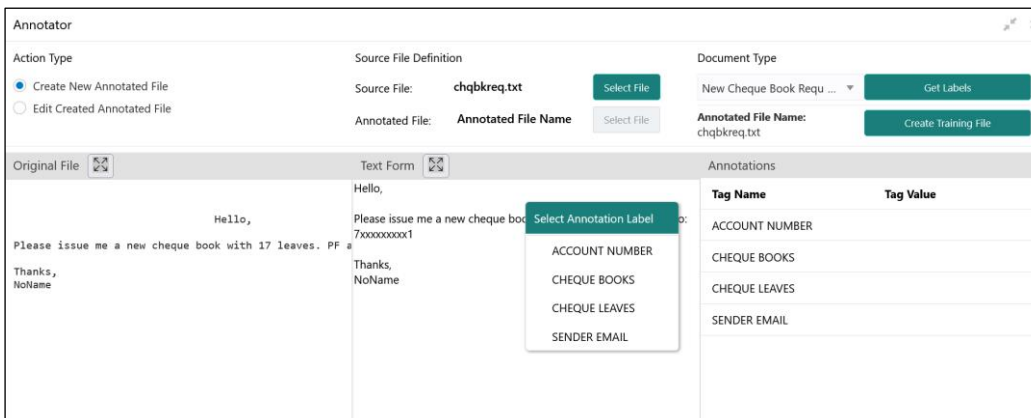
1. Select the Action Type as **Create New Annotated File**.
2. Select the **Document Type** from the dropdown list.
3. Click **Select File** button next to **Source File** field.  
The **Windows Explorer** popup screen displays.
4. Navigate and select the source document to be annotated.  
The **Original File** section displays the source document and the **Text Form** section displays the text version of the document.
5. Click **Get Labels**.  
The **Annotations** section displays all the maintained tags for the selected Document Type.

**Figure 238: List of Tags**



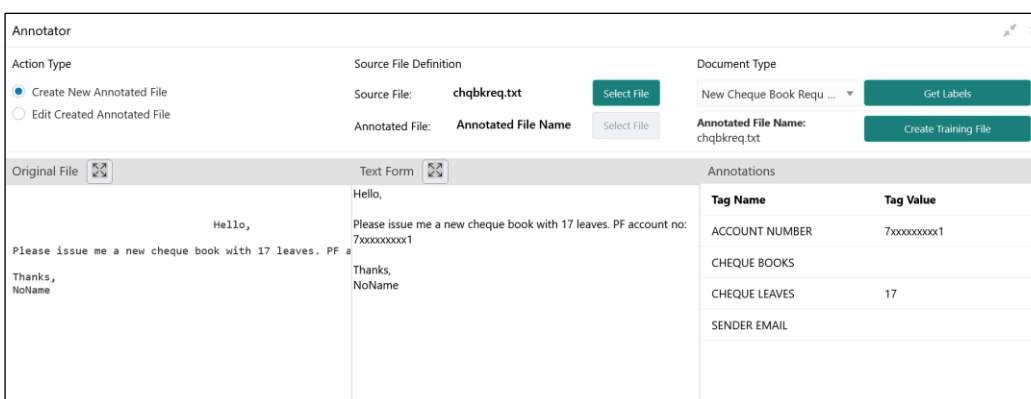
6. Identify and select the information within the **Text Form** section.
7. Right-click to display the list of tags.

**Figure 239: Select Annotation Label**



8. Select the relevant tag.  
The **Annotations** section displays the information under Tag Name and Tag Value.

**Figure 240: Annotations**



9. Repeat steps (9) to (11) for all the displayed tags as per availability of information in the source document.

10. Select a Tag Name from the **Annotations** section and Right-click to delete the Tag Value.
11. Once all the tags are assigned with the relevant information, click **Create Training File** to create the annotated file and end the process.

### 3.1.3 Model Training

Model training is done on the annotated training corpus. The annotated training corpus is a collection of annotated training files created using the annotator.

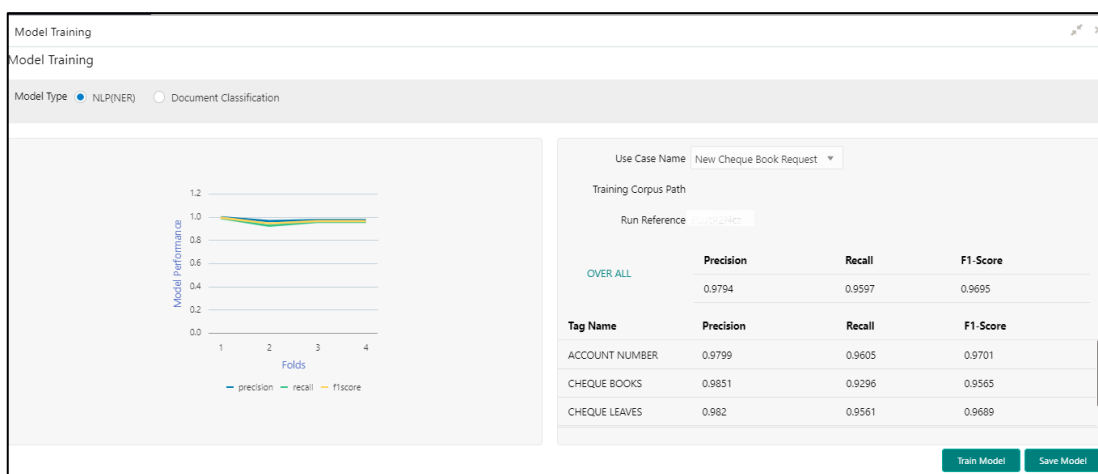
Model training is iterative and is carried out over increasing corpus size depending on the model parameters.

Each defined use case will have its own training corpus available in the path set up in the use case definition. To process this screen, perform the following steps:

1. From **Home** screen, click **Machine Learning**. Under **Machine Learning**, click **NLP Toolkit**.
2. Under **NLP Toolkit**, click **Model Training**.

→ The **Model Training** screen is displayed.

**Figure 241: Model Training**



#### Training NER Models:

3. Select the Model Type as NLP(NER).
4. Choose the use case name.
5. Click **Train Model**.

Each model for a use case is identified by a unique run reference.

#### Training Document Classifier Model:

1. Select the Model Type as Document Classification.
2. Click **Train Model**.

If you find the model parameters acceptable, you may want to save the model by clicking **Model Save**.

The alternative is to add more annotated training files for the use case and repeat model training, till satisfactory parameters are achieved.



### 3.1.4 Model Management

All the run reference of models saved from model training for a use case can be seen here. For each model run reference, you can view the parameters for the model as well as individual tag/entities

You may choose the active model run reference to be used as part of business processing.

This section contains following subsections:

- [3.1.4.1 Model Management Summary](#)
- [3.1.4.2 Model Management Maintenance](#)

#### 3.1.4.1 Model Management Summary

The summary screen displays the list of use case models. To process this screen, perform the following steps:

1. From **Home** screen, click **Machine Learning**. Under **Machine Learning**, click **NLP Toolkit**.
2. Under **NLP Toolkit**, click **Model Management**.

→ The **Model Management** screen is displayed.

**Figure 242: Model Management Summary**

Usecase Name	Mod No	Status	Record Status
ChequeBkRq	15	Rejected	Open
updateAddress	2	Authorized	Open
chqr	9	Authorized	Open
Bank_Statement	4	Authorized	Open
corpinv	18	Unauthorized	Open
PAYSLIP_ORIGINATION	23	Authorized	Open
OBPESign	14	Authorized	Open
cheqBookOpen	2	Authorized	Open
feeAgreementFlat	1	Authorized	Open
payslipnew	10	Unauthorized	Open

Page 1 of 3 (1 - 10 of 21 items)

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

**Table 200: Model Management Summary – Field Description**

Field	Description
<b>Use Case Name</b>	Displays the name of the Use Case.
<b>Mod No</b>	Displays the number of modifications.
<b>Authorized Status</b>	Displays the status as Authorized or Unauthorized or Rejected.
<b>Record Status</b>	Displays the record status as Open or Closed.

<b>Modification Number</b>	Displays the number of modification performed on the record.
----------------------------	--

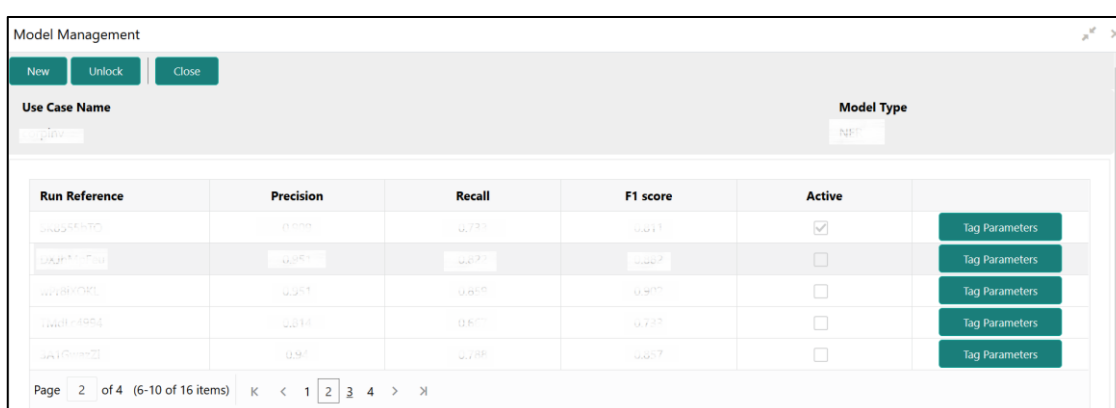
### 3.1.4.2 Model Management Maintenance

This is where you may unlock and choose the active model run reference to be used as part of business processing. To process this screen, perform the following steps:

1. From **Home** screen, click **Machine Learning**. Under **Machine Learning**, click **NLP Toolkit**.
2. Under **NLP Toolkit**, click **Model Management**.

→ The **Model Management** screen is displayed.

**Figure 243: Model Management Maintenance**



Run Reference	Precision	Recall	F1 score	Active	Tag Parameters
UNLOCKED	0.888	0.755	0.811	<input checked="" type="checkbox"/>	Tag Parameters
UNLOCKED	0.855	0.822	0.839	<input type="checkbox"/>	Tag Parameters
UNLOCKED	0.811	0.855	0.833	<input type="checkbox"/>	Tag Parameters
UNLOCKED	0.811	0.811	0.777	<input type="checkbox"/>	Tag Parameters
UNLOCKED	0.911	0.788	0.857	<input type="checkbox"/>	Tag Parameters

3. On **Model Management** screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

**Table 201: Model Management Maintenance – Field Description**

Field	Description
<b>Use Case Name</b>	Displays the name of the Use Case.
<b>Model Type</b>	Displays the NER or Classification type of Model.
<b>Run Reference</b>	Unique Model Version Identifier.
<b>Precision</b>	Value between 0 to 1. Closer to 1 is better.
<b>Recall</b>	Value between 0 to 1. Closer to 1 is better.
<b>F1 Score</b>	Value between 0 to 1. Closer to 1 is better.
<b>Active</b>	The model run reference that is currently active.

For each model run reference you could view the individual tag parameters.

**Figure 244: Tag Parameters**

The screenshot shows the 'Model Management' interface. A 'Tag Parameters Detail' dialog box is open, displaying a table with the following data:

Model Name	Model Type	Run Reference
corpinv	NLP	JHA77118

Tag Name	Precision	Recall	F1 Score
supplierName	0.954	0.932	0.943
buyerCode	0.975	0.886	0.929
Invoice Due Date	1	0	0
Invoice Number	0.973	0.918	0.945

The dialog box also includes a 'Close' button at the bottom right. The background interface shows a list of 'Run Reference' items and a 'Page 1 of 4 (1-5 of 16 items)' indicator.

At this stage you have defined a new use case with the tags/entities to be recognized by the model and trained and exported the use case model to be used by business.

## 3.2 Operation

This is where the trained models are consumed for business processing.

This section contains following subsections:

- [3.2.1 Document Upload](#)
- [3.2.2 Transaction Log](#)

### 3.2.1 Document Upload

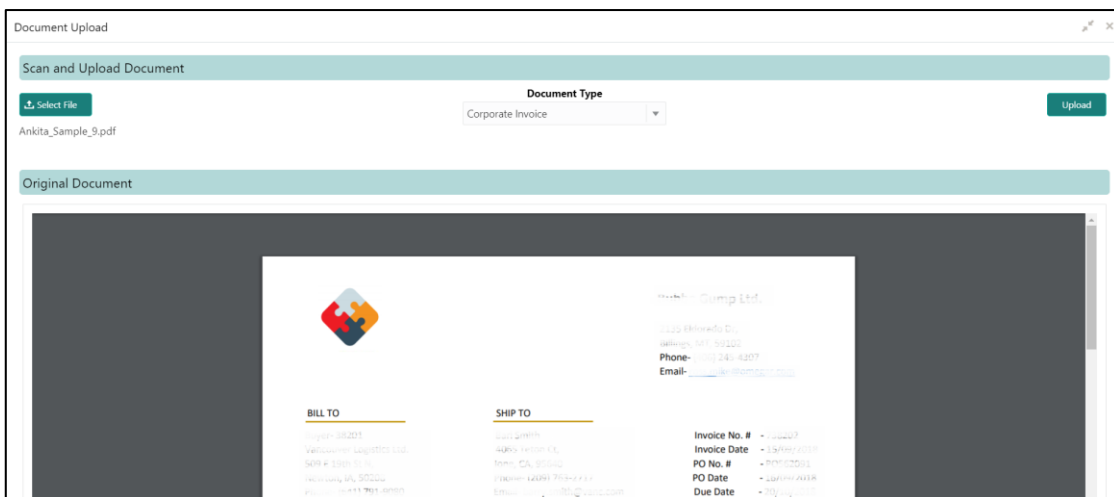
This is the screen where you upload the source document which is consumed by the NLP model and defined tags/entities are recognized.

The information that is extracted by the model is seamlessly used in further business processing. To process this screen, perform the following steps:

1. From **Home** screen, click **Machine Learning**. Under **Machine Learning**, click **Operation**.
2. Under **Operation**, click **Document Upload**.

→ The **Document Upload** screen is displayed.

**Figure 245: Document Upload**



3. Click **Select File** to select the source document.
4. Chose the Document Type from the pick list.
5. Click **Upload** to initiate business process.

### 3.2.2 Transaction Log

This is the screen where you can see all the uploaded transactions that has been interpreted by the NLP models.

You can filter the displayed transactions based on the following:

- Document Type
- Status

To process this screen, perform the following steps:

1. From **Home** screen, click **Machine Learning**. Under **Machine Learning**, click **Operation**.
2. Under **Operation**, click **Transaction Log**.

→ The **Transaction Log** screen is displayed.

**Figure 246: Transaction Log**

Document Id	Document Type	Model Ref	Processing Date	Status	Failure Reason	Train. Req'd	Tag Value(s)
92	chqr-New Cheque Book Request	...	...	PROCESSED		N	...
91			...	ERROR	Unable to complete Intent Processing	Y	...
90	chqr-New Cheque Book Request	...	...	PROCESSED		N	...
89	chqr-New Cheque Book Request	...	...	PROCESSED		N	...
88	chqr-New Cheque Book Request	...	...	PROCESSED		N	...
87	chqr-New Cheque Book Request	...	...	PROCESSED		N	...

3. On **Transaction Log** screen, specify the fields. For more information on fields, refer to the field description table below.

**Table 202: Transaction Log – Field Description**

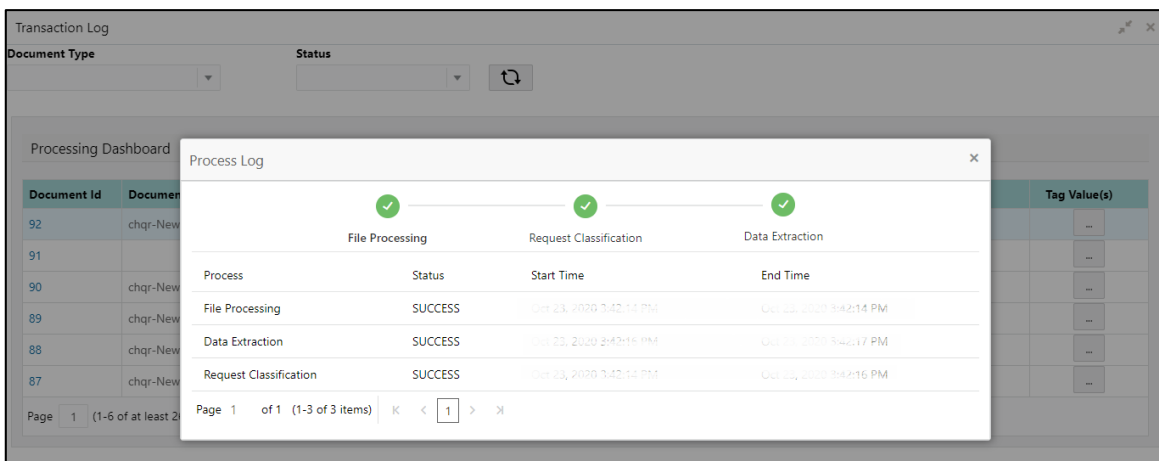
Field	Description
<b>Document Type</b>	Select the document type.
<b>Status</b>	Select the status.
<b>Document Id</b>	Displays the Document Management System Unique Identifier.
<b>Document Type</b>	Displays the document type - Use Case Definition.
<b>Model Ref</b>	Displays the Unique Model Version Identifier.

Field	Description
Processing Date	Displays the document processed date.
Status	Displays the status of the transaction.
Failure Reason	Displays the reason for failed status.
Train. Req'd	Displays train required status.
Tag Values	Displays the tag values for the processed transactions and allow the correction for transactions with errors.

### Execution Flow

Click on document reference ID to view details and execution flow.

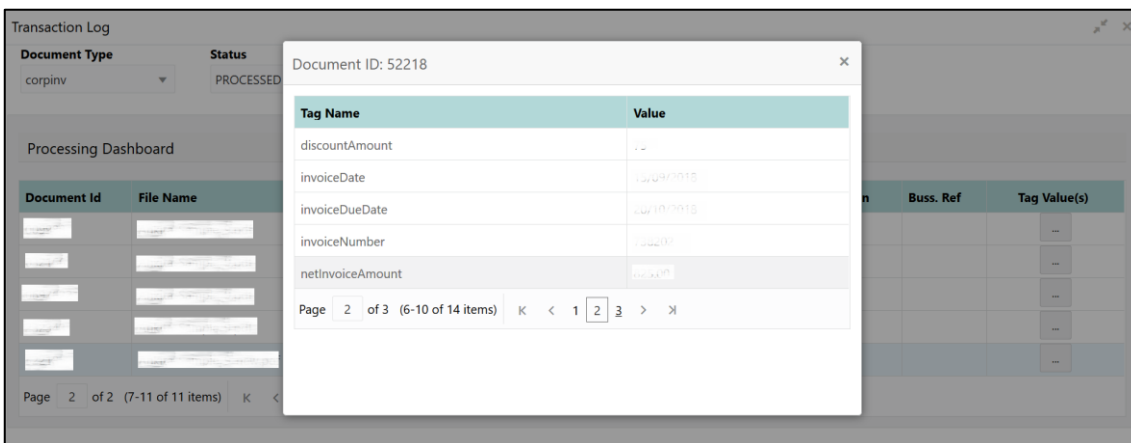
**Figure 247: Execution Flow**



### Processed Status

For any Document Type, you can filter on the 'Processed' status and view the model tag values used to process the transactions. The displayed information reflects both the original retrieved values by the model from the document and also the values which have been corrected by human intervention.

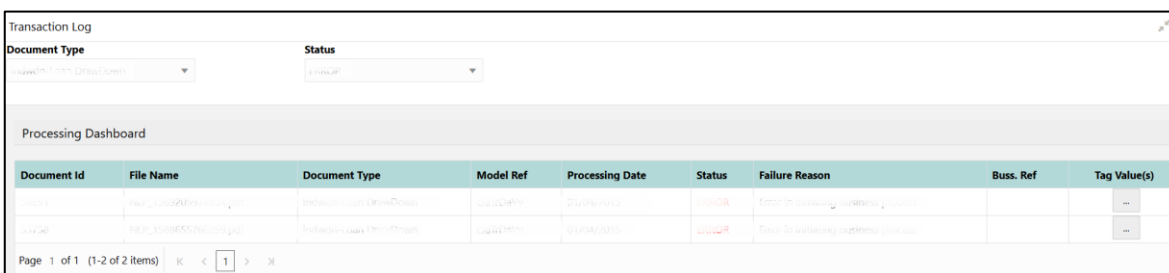
Figure 248: Processed Status



**Error Status**

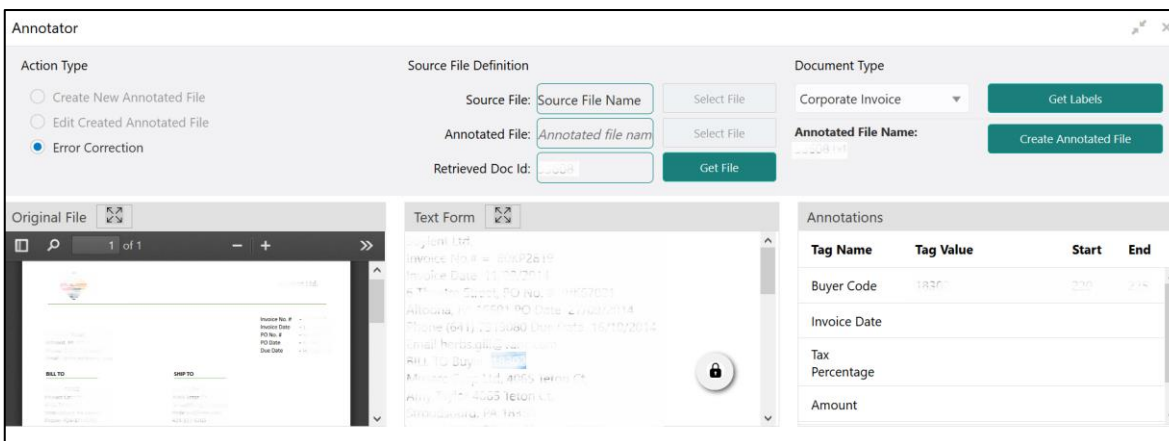
For any Document Type, you can filter on the 'Error' status and view all the failed transactions.

Figure 249: Error Status



For the failed transactions, you can click on the Tag Value(s) to invoke the toolkit annotator in the error correction mode to create a new annotated training file for future model training.

Figure 250: Annotator



### 3.3 3P Service Integration

Any model execution or training service(s) built using any 3P NLP library can be integrated in the NLP framework.

The only requirement being the REST services must confirm to the payload definition detailed in the following section.

Building model training and execution services using other 3P NLP libraries would involve consulting effort.

This section contains the following topics:

- [3.3.1 Classification Training Service](#)
- 3.3.2 NER Training Service
- 3.3.3 Classification Processing Service
- 3.3.4 NER Processing Service
- 3.3.5 Service Mapping
- 3.3.6 Business Service Mapping

#### 3.3.1 Classification Training Service

This section elaborates the payload details for document classification model training service.

##### Input Payload

**Table 203: Input Payload**

name	in	type	required	Remarks
trainCorpusPath	formData	string	true	Training Corpus path
modelType	formData	File	true	Type of model being trained
runRef	formData	string	true	Unique running reference number

- name: " **trainCorpusPath**"

in: "formData"

type: string

required: true

- name: " **modelType**"

in: "formData"

type: string

value for document classification training: "docClassification"



```

    required: true
- name: " runRef "
  in: "formData"
  type: string
  required: true

```

**Output Payload:**

```

{
  "data": {
    "timeTaken": 0,
    "corpusSize": 0,
    "precision": 0,
    "recall": 0,
    "f1score": 0,
    "model_fold_performances": null,
    "tag_performances": null
  }
}

```

**Output payload data model definition:**

```

ModelTrainParamsDTO:
  type: object
  properties:
    data:
      type: object
      properties:
        timeTaken:
          type: number
        corpusSize:
          type: number
        precision:
          type: number
        recall:
          type: number
        f1score:
          type: number
        model_fold_performances:
          type: array
          items:
            $ref: "#/definitions/ModelFoldPerfromancesDTO"
        tag_performances:

```

```
type: array
items:
  $ref: "#/definitions/MltbTagPerfomancesDTO"
```

### 3.3.2 NER Training Service

This section elaborates the payload details for NER model training service.

#### Input Payload

**Table 204: Input Payload**

name	in	type	required	Remarks
trainCorpusPath	formData	string	true	Training Corpus path
modelType	formData	File	true	Type of model being trained
runRef	formData	string	true	Unique running reference number

- name: " **trainCorpusPath** "

in: "formData"

type: string

required: true

- name: " **modelType** "

in: "formData"

type: string

value for NER model training: "nlpNer "

required: true

- name: " **runRef** "

in: "formData"

type: string

required: true

#### Output Payload

```
{
  "data": {
    "timeTaken": 0,
    "corpusSize": 0,
    "precision": 0,
    "recall": 0,
```

```

"f1score": 0,
"model_fold_performances": [
  {
    "fold_no": 0,
    "eval_metric": "string",
    "value": 0
  }
],
"tag_performances": [
  {
    "name": "string",
    "precision": 0,
    "recall": 0,
    "f1score": 0
  }
]
}
}

```

### Output Payload data model definition

ModelTrainParamsDTO:

type: object

properties:

data:

type: object

properties:

timeTaken:

type: number

corpusSize:

type: number

precision:

```
type: number
recall:
  type: number
f1score:
  type: number
model_fold_performances:
  type: array
  items:
    $ref: "#/definitions/ModelFoldPerfromancesDTO"
tag_performances:
  type: array
  items:
    $ref: "#/definitions/MltbTagPerfromancesDTO"
```

**ModelFoldPerfromancesDTO:**

```
type: object
properties:
  fold_no:
    type: number
  eval_metric:
    type: string
  value:
    type: number
```

**MltbTagPerfromancesDTO:**

```
type: object
properties:
  name:
    type: string
  precision:
```

type: number

recall:

type: number

f1score:

type: number

### 3.3.3 Classification Processing Service

This section elaborates the payload details for document classification model processing service.

#### Input Payload:

**Table 205: Input Payload**

name	in	type	required	Remarks
modelPath	formData	string	true	The path to the classification model
file	formData	File	true	The text file which must be classified

- name: "**modelPath**"

in: "formData"

type: string

required: true

- name: "**file**"

in: "formData"

type: file

required: true

#### Output Payload

```
{
  "data": {
    "docType": "string"
  }
}
```

#### Output Payload data model definition

MltbNlpDTO:

type: object

properties:

data:

properties:

docType:

type: string

### 3.3.4 NER Processing Service

This section elaborates the payload details for NER model processing service

#### Input Payload:

**Table 206: Input Payload**

name	in	type	required	Remarks
modelPath	formData	string	true	The path to the NER model
file	formData	File	true	The text file which must be classified

- name: "modelPath"

in: "formData"

type: string

required: true

- name: "file"

in: "formData"

type: file

required: true

#### Output Payload

```
{
  "data": {
    "keyvals": [
      {
        "tagName": "string",
        "value": "string",
        "start_index": 0,
        "end_index": 0
      }
    ]
  }
}
```



**Output Payload data model definition:**

MltbNerKeyValsDTO:

type: object

properties:

data:

properties:

keyvals:

type: array

items:

\$ref: '#/definitions/MltbNerKeyValExtractedObjDTO'

MltbNerKeyValExtractedObjDTO:

type: object

properties:

tagName:

type: string

value:

type: string

start\_index:

type: number

end\_index:

type: number

### 3.3.5 Service Mapping

After creation of the model services, entries must be made into the table CMC\_TM\_ML\_SERVICE\_DEFN to enable the NLP framework to use these services.

#### Existing use case:

Update the highlighted column in table CMC\_TM\_ML\_SERVICE\_DEFN with the new service API.

**Table 207: Existing Use Case**

Column name	Remarks	Model Training	Model Processing
ID	Unique ID		
USECASE_NAME	Use Case Name	<existing use case>	<existing use case>
DESCRIPTION	Use Case Description		
SERVICE_TYPE	Service Type	Training	Processing
SERVICE_DEFN	Mapped Service API	<New Service API>	<New Service API>
METHOD_TYPE	Method Type	POST	POST
APP_ID	Sub Domain ID		
RECORD_STAT	Record Status	O	O
AUTH_STAT	Authorized Status	A	A
MOD_NO	Modification Number	1	1
ONCE_AUTH	Once Authorized	Y	Y
MAKER_ID	Maker Name	SYSTEM	SYSTEM

Column name	Remarks	Model Training	Model Processing
MAKER_DT_STAMP	Maker Date stamp	<Application Date>	<Application Date>
CHECKER_ID	Authorizer Name	SYSTEM	SYSTEM
CHECKER_DT_STAM	Authorizer Date stamp	<Application Date>	<Application Date>

### New use case

Insert a new record into the table CMC\_TM\_ML\_SERVICE\_DEFN.

**Table 208: New Use Case**

Column name	Description	Remarks for Data	
ID	Unique ID	Ensure a Unique ID	
USECASE_NAME	Use Case Name	Must be one of the usecase_name from the table CMC_TM_ML_NER_TAG_MAS	
DESCRIPTION	Use Case Description		
SERVICE_TYPE	Service Type	'Training'	Use this value for model Training Service
		'Processing'	Use this value for model execution Service
		'Business'	Use this value for business Service
SERVICE_DEFN	Mapped Service API	<The newly created 3P NLP service API>	
METHOD_TYPE	Method Type	POST	
APP_ID	Sub Domain ID	NULL	
RECORD_STAT	Record Status	O	
AUTH_STAT	Authorized Status	A	
MOD_NO	Modification Number	1	
ONCE_AUTH	Once Authorized	Y	
MAKER_ID	Maker Name	SYSTEM	

<b>Column name</b>	<b>Description</b>	<b>Remarks for Data</b>
MAKER_DT_STAMP	Maker Date stamp	<Application Date>
CHECKER_ID	Authorizer Name	SYSTEM
CHECKER_DT_STAMP	Authorizer Date stamp	<Application Date>

### 3.3.6 Business Service Mapping

If straight through processing is enabled in use case definition, then entries must be made into the table CMC\_TM\_ML\_BUS\_SERVICE\_DEFN to enable the NLP framework to call the Business Service.

Insert a new record into the table CMC\_TM\_ML\_BUS\_SERVICE\_DEFN for each use-case with straight through processing enabled.

**Table 209: For Each Use Case**

Column name	Description	Remarks for Data	
ID	Unique ID	Ensure a Unique ID	
USECASE_NAME	Use Case Name	Must be one of the usecase_name from the table CMC_TM_ML_NER_TAG_MAS	
DESCRIPTION	Use Case Description		
SERVICE_TYPE	Service Type	'Business'	Use this value for business Service
ADAPTER_CLASS	Fully qualified name of the adapter class	Use oracle.fsgbu.cmc.nlp.pipeline.services.adaptor.GenericAdaptor for all the business service calls  Use oracle.fsgbu.cmc.nlp.pipeline.services.adaptor.OBRHAdaptor if you want to call business service via Oracle Banking Routing Hub	
SERVICE_DEFN	Mapped Service API	API, which will be called for Business service execution	
HEADERS	Comma separated headers key value separated by colon (:)	Eg : docId:123 , branchCode : 000	
METHOD_TYPE	Method Type	POST	
APP_ID	Sub Domain ID	NULL	

Column name	Description	Remarks for Data
RECORD_STAT	Record Status	O
AUTH_STAT	Authorized Status	A
MOD_NO	Modification Number	1
ONCE_AUTH	Once Authorized	Y
MAKER_ID	Maker Name	SYSTEM
MAKER_DT_STAMP	Maker Date stamp	<Application Date>
CHECKER_ID	Authorizer Name	SYSTEM
CHECKER_DT_STAMP	Authorizer Date stamp	<Application Date>

If you are Integrating Business Service via Oracle Banking Routing Hub then in service definition column, you need to provide URL of Oracle Banking Routing Hub dispatch API and the additional headers in headers column.

Since there are some common headers, which are required for calling Oracle Banking Routing Hub as well (like appld, branchCode, uderId) and to avoid the conflict for these headers, the ML\_ prefix is appended in header keys by Oracle Banking Routing Hub adaptor. You need to configure transformation logic of these headers in Oracle Banking Routing Hub.

## 4. Machine Learning Framework

This section is designed to help you quickly get acquainted with how to on-board business cases on the Machine Learning framework in Oracle Banking.

The assets used to build the Machine Learning framework is available by default with Oracle database.

Oracle Database 19c and above.

### Prerequisites

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

Make sure that Machine Learning framework is already deployed and available as part of the application menu. Refer to **Common Core Services Installation Guide** for more details.

### 4.1 Use Case On-Boarding

On-boarding a new business case onto the Machine Learning framework involves two broad stages as highlighted below.

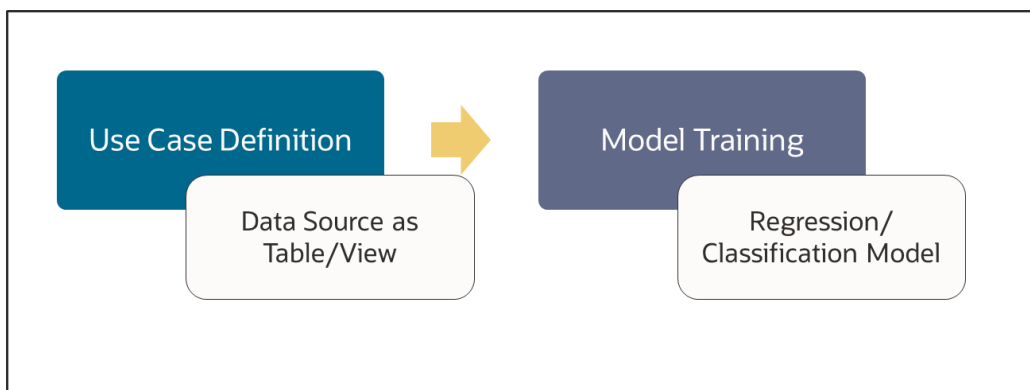
#### Model Definition

One-time setup of use case definition captures the data source, target columns and type of use case.

#### Model Training

Model training is use case specific and has the intelligence to evaluate multiple algorithms and discover the best fit algorithm to the data pattern.

The onset of these two stages assumes that you have already decided on the business use case that you would want to on-board.



## 4.2 Frameworks Supported

### 4.2.1 Timeseries

Timeseries are the use cases involving the date sequence data to forecast for future dates.

Example:

CASE ID	CCY	BALANCE
17-Aug	USD	6723.00
18-Aug	USD	250.00
19-Aug	USD	2654.00
20-Aug	USD	20.00
21-Aug	USD	?

**NOTE:** CASE ID can either be a DATE or a Sequence

### 4.2.2 Timeseries Algorithms Supported

By default, the framework uses Exponential Smoothing to forecast from timeseries data. It evaluates 14 different algorithmic combinations to best fit the patterns of

- Error type (additive or multiplicative),
- Trend (additive, multiplicative, or none), including damped trends
- and Seasonality (additive, multiplicative, or none)

**NOTE:** User is not required to select any algorithmic combinations. The framework evaluates and selects the best fit combination for you.

### 4.2.3 Regression

Regression is a statistical technique to discover relationships using independent variables to estimate/predict a target variable of NUMBER or INTEGER type.

Example: User needs to predict the value of LUXURY SPEND for a new CASE ID, given the data of branch, marital status, income and savings

CASE ID	BRANCH	MARITAL STATUS	INCOME	SAVING	LUXURY SPEND
12345	BRT	Y	15000	6723	1000
12346	BRT	N	17500	250	750



12347	CSR	D	25000	2654	1900
12348	CSR	N	16567	20	2500

**NOTE:** CASE ID MUST uniquely identify a row

#### 4.2.4 Regression Algorithms Supported

The following algorithm are available as part of the framework.

S No	ALGORITHM	REMARKS
1	GENERALIZED LINEAR REGRESSION	Also handles RIDGE regression depending on the underlying pattern of data
2	SUPPORT VECTOR MACHINES	Supports both linear and gaussian kernels
3	NEURAL NETWORK	Uses default 1 layer with number of nodes <= 50

**NOTE:** Users have the flexibility to select a specific algorithm or keep it as NULL for the framework to evaluate and best fit the algorithm to the underlying data.

#### 4.2.5 Classification

Classification is a statistical technique to discover relationships using independent variables to classify a target variable into a number of GROUPS or CLASSES. Mostly used for decision making.

Example: User needs to predict if a new CASE ID will churn(1) or not (0), given the data of branch, marital status, income and savings

CASE ID	BRANCH	MARITAL STATUS	INCOME	SAVING	CHURN
12345	BRT	Y	15000	6723	0
12346	BRT	N	17500	250	1
12347	CSR	D	25000	2654	1
12348	CSR	N	16567	20	0

**NOTE:** CASE ID MUST uniquely identify a row

#### 4.2.6 Classification Algorithms Supported

The following algorithms are available as part of the framework.

S No	ALGORITHM	REMARKS
1	DECISION TREE	
2	NAÏVE BAYES	
3	RANDOM FOREST	
4	GENERALIZED LINEAR REGRESSION	Also handles RIDGE regression depending on the underlying pattern of data
5	SUPPORT VECTOR MACHINES	Supports both linear and gaussian kernels
6	NEURAL NETWORK	Uses default 1 layer with number of nodes <= 50

**NOTE:** Users have the flexibility to select a specific algorithm or keep it as NULL for the framework to evaluate and best fit the algorithm to the underlying data.

### 4.3 Partitioned Model

Oracle in-Database machine learning allows the user to design partitioned models.

Partitioned model organizes and represents multiple models as partitions in a single model entity, enabling you to easily build and manage models tailored to independent slices of data.

Example:

CUSTOMER ID	BRANCH	MARITAL STATUS	INCOME	SAVING	LUXURY SPEND
12345	BRT	Y	15000	6723	1000
12346	BRT	N	17500	250	750
12347	CSR	D	25000	2654	1900
12348	GRF	N	16567	20	2500

In this above example of data, user could build a single partitioned model on independent slices of data based on branch code.

The user has the advantage of having a single partitioned model instead of having multiple models for each individual branch.

## 4.4 On-Boarding Use Case

### 4.4.1 Model Definition

Use cases are defined by the business domain of the product processor to which it is mapped. They are unique and machine learning models are named after the use case.

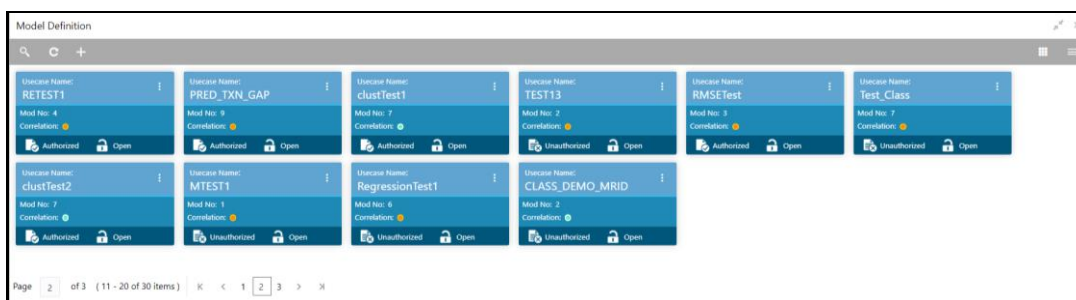
The model definition screen allows you to define the use case and configure the data source to be used for model training.

#### 4.4.1.1 Model Definition Summary

The summary screen displays the list of defined use cases. To access the screen, perform the following steps:

1. From **Home** screen, click **Machine Learning**. Under **Machine Learning**, click **Model Definition**.  
→ The **Model Definition Summary** screen is displayed.

**Figure 251: Model Definition Summary**





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

**Table 210: Model Definition Summary – Field Description**

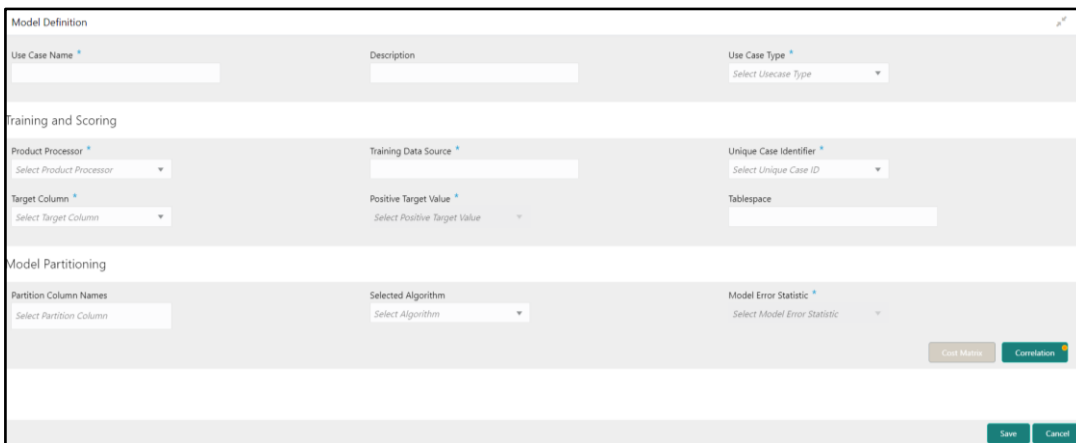
Field	Description
<b>Usecase Name</b>	Displays the name of the use case
<b>Mod No</b>	Displays the modification number
<b>Correlation</b>	Displays the default orange colour for New records. On correlation validation in Model definition screen, it will change to green colour.
<b>Authorized Status</b>	Displays the Authorized or Unauthorized or Rejected status.
<b>Record Status</b>	Displays the status of the record.
<b>Modification Number</b>	Displays the number of modification performed on the

#### 4.4.1.2 Model Definition Maintenance

**Model Definition Maintenance** screen enables the user to maintain the use case details and define the use case type and data source details.

- From **Model Definition Summary** screen, click  button on the Use case tile to **Unlock** or click  to create the new model definition.  
→ The **Model Definition Maintenance** screen is displayed.

**Figure 252: Model Definition Maintenance**



The screenshot shows the 'Model Definition' form with the following fields:

- Use Case Name \*** (text input)
- Description** (text input)
- Use Case Type \*** (dropdown menu)
- Product Processor \*** (dropdown menu)
- Training Data Source \*** (text input)
- Unique Case Identifier \*** (dropdown menu)
- Target Column \*** (dropdown menu)
- Positive Target Value \*** (dropdown menu)
- Tablespace** (text input)
- Partition Column Names** (text input)
- Selected Algorithm** (dropdown menu)
- Model Error Statistic \*** (dropdown menu)

Buttons at the bottom right: Cost Matrix, Correlation, Save, Cancel.

- On **Model Definition Maintenance** screen, specify the fields. The fields which are marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

**Table 211: Model Definition Maintenance – Field Description**

Field	Description
<b>Use Case Name</b>	Specify the name of the Use Case.
<b>Description</b>	Specify the description of the Use Case.
<b>Use Case Type</b>	Select the type of Use Case – Regression or classification from the drop down.
<b>Product Processor</b>	Select the product to which the use case belongs.
<b>Training Data Source</b>	Specify the Table or View name used as data source to train the model.
<b>Unique Case Identifier</b>	Select the column name to uniquely identify a record. <b>NOTE:</b> Column name is a function of table/view design and has to have unique constraint defined

Field	Description
<b>Target Column</b>	Select the value of the column which is to be predicted by training the model. It has to have unique constraint defined <b>NOTE:</b> Column name is a function of table/view design
<b>Positive Target Value</b>	If Use Case Type selected is CLASSIFICATION, then this field is enabled else disabled for REGRESSION. It will display distinct values from the target column
<b>Tablespace</b>	Specify the valid tablespace and all model related data will be persisted in this table space
<b>Partition Column Names</b>	Specify the column names to slice data. Refer Partitioned Model for details
<b>Selected Algorithm</b>	Select the algorithm from the list and build the model. This field should be null to allow the framework to select the best fit algorithm to build the model.
<b>Model Error Statistics</b>	Select the model error statistics. By Default, the value is selected as 'RMSE' for REGRESSION. The user can also select 'MAE'. It will be disabled for CLASSIFICATION

**Cost Matrix:**

This button is enabled ONLY for CLASSIFICATION type of use cases.

Any classification model can make two kinds of error

Actual Value	Predicted Value	Error Type
1	0	False Negative
0	1	False Positive

This screen is used to bias the model into minimizing one of the error types, by adding a penalty cost. All penalty cost has to be positive.

Actual Value	Predicted Value	Penalty Cost
1	0	6

0	1	2
---	---	---

The default is zero cost for all combinations.

Biasing the model is a trade-off with accuracy of prediction. Business determines if a classification model is required to be biased or not.

3. Click **Cost Matrix** button to launch the screen.

→ The **Cost Matrix** screen is displayed.

**Figure 253: Cost Matrix**

Cost Matrix

Cost value is used to penalize misclassification or incorrect prediction

Actual Value	Predicted Value	Cost
0	0	<input type="text" value="0"/>
0	1	<input type="text" value="0"/>
1	0	<input type="text" value="0"/>
1	1	<input type="text" value="0"/>

4. On **Cost Value** screen, specify the relevant penalty cost.
5. Click **Save** to save and close the **Cost Matrix** screen and back to the **Model Definition Maintenance** screen.

### Correlation:

Multicollinearity occurs when two or more independent variables are highly correlated with one another in a model.

Unique Case ID

Correlated

Dependent Variable

CUST ID	BRANCH	MARITAL STATUS	INCOME	SAVING	CHURN
12345	BRT	Single	1500	6723	1
12346	BRT	Married	17500	250	0
12347	CSR	Married	25000	2654	0
12348	GRF	Divorced	16567	20	1

Independent Variables

Multicollinearity may not affect the accuracy of the model as much, but we might lose reliability in model interpretation

Irrespective of CLASSIFICATION or REGRESSION, all use cases must be evaluated for Correlation.

This button will display Orange mark if evaluation is pending.

6. Click **Correlation** button to launch the screen.

→ The **Correlation Analysis** screen is displayed.

**Figure 254: Correlation Analysis**

Correlation Analysis

Note - You should aim to have empty pairwise correlation by adding to the Ignore columns list and iteratively refreshing. Start by refreshing to get the latest position

Threshold Value: 0.5

Type Of Correlation:  Pearson  Spearman  Kendall

#	Feature 1	Feature 2	Correlation
No data to display.			

Analysed Features: No items to display.


Ignore Features: No items to display.

Cancel OK

7. On **Correlation Analysis** screen, select the required fields. For more information on fields, refer to the field description table below.

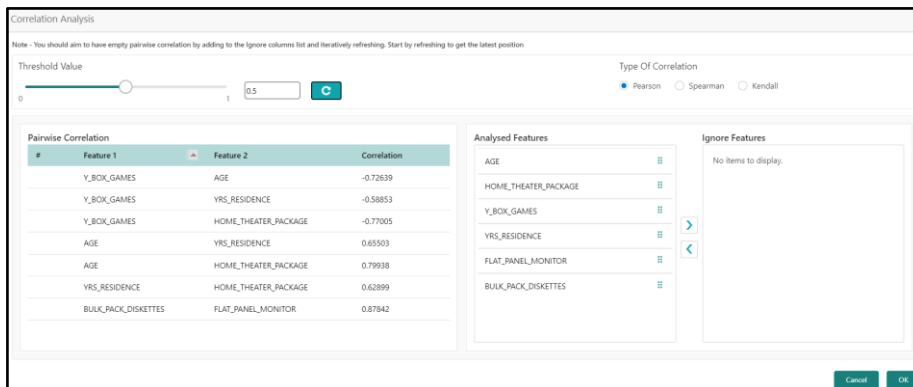
Table 212: Correlation Analysis – Field Description

Field	Description
<b>Threshold Value</b>	Select the threshold value. By default, the value is set as 0.5. The Value can be set between 0.1 to 0.9.
<b>Type of Correlation</b>	Select the type of correlation. By default, the option is selected as Pearson. The formula used for calculation is different for each type
<b>Pairwise Correlation</b>	Displays the output of the Correlation Validation.
<b>Analyzed Features</b>	Displays the distinct analysed Features from Pairwise Correlation.
<b>Ignore Features</b>	User defined list created from Analysed Features.

8. Click  to initiate the evaluation process.

→ The **Correlation Analysis - Pairwise Correlation** screen is populated.

Figure 255: Correlation Analysis - Pairwise Correlation



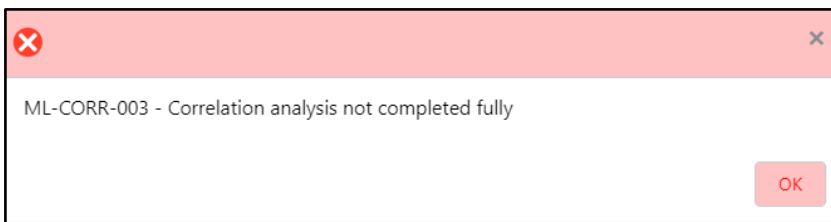
9. Move ONE of the Analyzed Features to Ignore Features List

10. Click  and re-evaluate Correlation as mentioned in Step 8.

11. Rinse & repeat Step 9 & 10 for each feature addition to the **Ignore feature** list, until **Pairwise Correlation** displays zero correlated pair.

12. Attempting to exit the screen midway without achieving zero Pairwise Correlation, will display the following error message.



**Figure 256: Error Message**

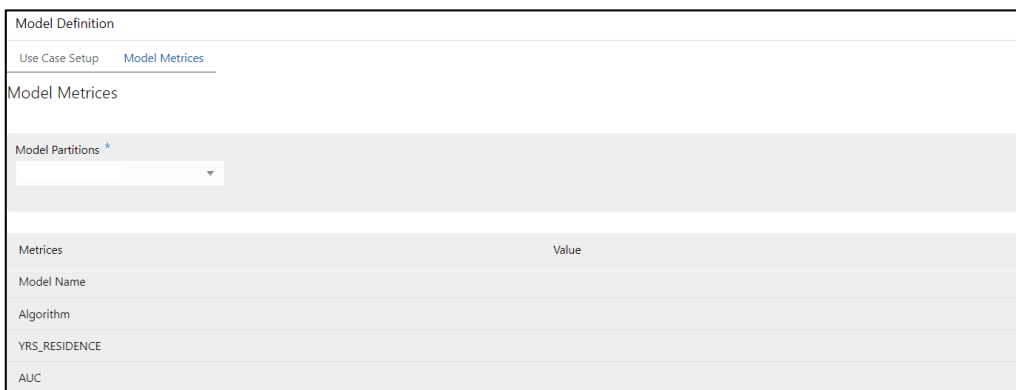
13. After successful **Correlation Evaluation**, the orange highlight on the **Correlation** button is removed.
14. After **Correlation Evaluation** and **Cost Matrix** definition (for CLASSIFICATION), click **Save** to create the new Model Definition. The user can view the configured details in the **Model Definition Summary**.

### Model Metrics

Once the user has successfully trained Machine Learning model, the user can score/predict the model outcomes as required by the use case. The user can view the Model Metrics tab only after training the model successfully. Refer to Model Training and Scoring section for training the model.

15. Click **Model Metrics** tab to view the Model Metrics details.

→ The **Model Metrics** screen is displayed.

**Figure 257: Model Metrics**

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

**Table 213: Model Metrics – Field Description**

Field	Description
<b>Model Partitions</b>	Select the model partitions from the dropdown.

	If the model has been designed to have partitions, it will display the partitioned values based on underlying data of the defined partition column else display FULL MODEL.
<b>Metrics</b>	<p>Displays the various model attributes, as per the best model identified and trained. The number of model attributes is a function of algorithm and underlying pattern of data</p> <p>Some attributes are common for all models,</p> <p>Model Name</p> <p>Algorithm</p> <p>INF_TIME (Inference Time)</p> <p>&lt;Model metric&gt;(Train)</p> <p>&lt;Model metric&gt;(Test)</p>
<b>Value</b>	Displays the value of the attribute.

#### 4.4.2 Model Training and Scoring

Model Training and Scoring screen enables the user to train the model for the selected use case and use the trained model to predict and score multiple records at a time. The predicted values persist in the database and are available in the prediction column maintained for the user case.

1. From **Home** screen, click **Machine Learning**. Under **Machine Learning**, click **Model Training and Scoring**.

→ The **Model Training and Scoring** screen is displayed.

**Figure 258: Model Training and Scoring**

The screenshot shows the 'Model Training And Scoring' interface. It features a header 'Model Training and Scoring' and a dropdown menu for 'Use Case Name' with the placeholder text 'Select Usecase Name'. Below this, there are three main sections: 'Model Training' with fields for 'Training Data Source', 'Partition Column(s)', 'Unique Case Identifier', and 'Target Column', and a 'Train Model' button; 'Model Batch Scoring' with a 'Model Name' field and a 'Batch Scoring' button.

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

**Table 214: Model Training and Scoring – Field Description**

Field	Description
<b>Use Case Name</b>	Select the Use Case name from the dropdown.
<b>Description</b>	Displays the description of the use case.
<b>Use Case Type</b>	Displays the type of use case.
<b>Model Training</b>	
<b>Training Data Source</b>	Displays the training data source.
<b>Unique Case Identifier</b>	Displays the unique case identifier.
<b>Target Column</b>	Displays the target column of the model.
<b>Partition Column(s)</b>	Displays the partition column of the model.
<b>Model Batch Scoring</b>	
<b>Model Name</b>	Displays the name of the model.

2. Select the use case name from the dropdown.
3. Click **Train Model** to train the model for the selected use case.
4. Click **Batch Scoring** to predict the score for the data source records.

The predictions of batch scoring are now available for business consumption.

## **4.5 Online Single Record Prediction**

This is made available as a REST API and allow you to predict for a single record. The predictions do not persist in the database.

These can be invoked directly from application user interface, to retrieve and display the results.

The explainability of the model outcome is also made available.

## **4.6 Use Case Modifications**

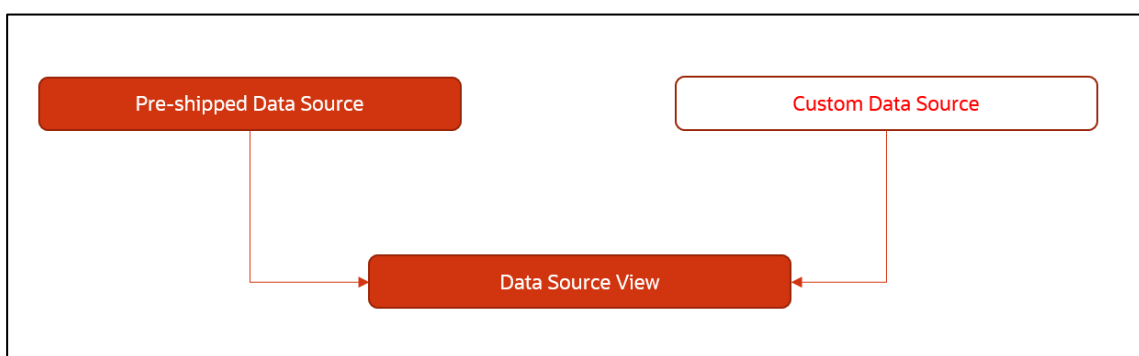
Use case definition may undergo the following modification and would require model re-training. After each re-training run, you should review the model details discussed under Model Explainability.

**Table 215: Use Case Modifications**

Use Case Modification	Model Re-training Required	Correlation Analysis Required
Data Source replaced by another data source	Yes	Yes
New column Added to existing data source	Yes	Yes
New columns Added to custom data source	Yes	Yes
Existing column removed from existing data source	Yes	Yes
Selected Algorithm Changed	Yes	No
Model Error statistic Changed	Yes	No
Partition Column Name list altered (added / removed)	Yes	Yes

## 4.7 Data Extensibility

To address the requirement of banks to add new data points to the factory shipped data source, we have provided the facility of data extensibility.

**Figure 259: Data Extensibility**

Banks can add any number of new data columns to the customer data source

The defined data source view is mapped to a use case in the Model definition.

Machine Learning will automatically consider all the available data points in the data source View.

## 4.8 Model Explainability

The details of the Regression models built using the framework is made available under the 'Model Metrics' tab in Use Case Definition for better understanding and transparency.

The available details are

- Model Name
- Algorithm Name
- Inference Time
- Training Error Metric
- Testing Error Metric
- List of data attributes that make up the model depending on the framework and algorithm used

## 4.9 Time Series Forecast

Timeseries forecast is unique as it consumes sequential data to forecast.

This uniqueness necessitates model training and forecast to be executed in a single processing routine. This is very unlike regression model approach where model training and model prediction are separate distinct actions.

### 4.9.1 Forecast REST Service

Timeseries framework is made available as an independent REST service to be consumed by products and use cases as required.

The following information is required to be provided.

**Table 216: Forecast REST Service – Field Description**

Field	Description
<b>Use Case Name</b>	Specify the Unique Use Case Name.
<b>Data Source</b>	Specify the Table or View name used as data source to train the model.
<b>Target Column</b>	Specify the model will train and forecast future values of this column.  <b>NOTE:</b> Column name is a function of table/view design
<b>Unique Identifier</b>	Specify the column name to uniquely identify a sequence

Field	Description
	<b>NOTE:</b> Column name is a function of table/view design. Must be Date or a sequence
<b>Model Partitioning</b>	Specify the column names to slice data. Refer Partitioned Model for details  <b>NOTE:</b> Column name is a function of table/view design
<b>Partitioned Value</b>	Specify the actual Value of the Model Partition
<b>Forecast Window</b>	Specify the number of forecasts required as an outcome
<b>Tablespace</b>	Specify the valid tablespace and all model related data will be persisted in this table space

---

## 5. Rules Framework

This Rules framework is used for creation and evaluation of business rules, creation of facts, which are the building blocks in business rules.

This section contains the following topics:

- [5.1 Facts](#)
- 5.2 Rule

### 5.1 Facts

Fact is the information-carrying block, used for creating the rules.

Fact can be of the following type:

- NUMBER
- TEXT
- BOOLEAN
- DATE
- ARRAY
- ENUM

This section contains the following topics:

- [5.1.1 Create Fact](#)
- 5.1.3 View Fact

#### 5.1.1 Create Fact

The **Create Fact** screen allows the user to create fact through single creation.

##### **Prerequisite**

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

1. From **Home** screen, Under **Fact**, click **Create Fact**.
2. Click **New** to create a single fact.
  - The Create Fact screen is displayed.

**Figure 260: Create Fact**

- Specify the details in the relevant data fields.

The fields marked with asterisk are mandatory. For more information on fields, refer to the field description table below

**Table 217: Create Fact – Field Description**

Field	Description
<b>Code</b>	Specify the alphanumeric code without space for the fact.
<b>Description</b>	Specify the description of the fact.
<b>Product Processor</b>	Select the product processor.
<b>Type</b>	<p>Select the type of the fact from the dropdown list.</p> <p>The available options are:</p> <ul style="list-style-type: none"> <li>• <b>Number</b></li> <li>• <b>Text</b></li> <li>• <b>Boolean</b></li> <li>• <b>Date</b></li> <li>• <b>Array</b></li> <li>• <b>ENUM</b></li> </ul>

- Click **Save** to save the details of fact.
- Click **Bulk Upload** to create a multiple fact.
  - The **Create Fact- Bulk Upload** screen is displayed.



**Figure 261: Create Fact – Bulk Upload**

The screenshot shows the 'Create Fact' interface. At the top, there are two tabs: 'New' and 'Bulk Upload', with 'Bulk Upload' being the active tab. Below the tabs is a 'Download Template' button. The main area contains a dashed box labeled 'Drag and Drop' with the text 'Select or drop files here.' and a plus sign. Below this is a 'Selected files:' label. At the bottom, there is an 'Upload' button.

6. Click on **Download Template** to get the sample file.



7. Fill all the Facts details to be created in the template file and save the file.
8. Click **Drag and Drop** and select the file from the browser.
9. Click **Upload**.

### 5.1.2 Create ENUM type Fact

The **Create Fact** screen allows the user to create ENUM type of fact.

#### **Prerequisite**

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

1. From **Home** screen, Under **Fact**, click **Create Fact**.
2. Click **New** to create a ENUM type fact.
  - The **Create Fact – ENUM Type Fact** screen is displayed.

**Figure 262: Create Fact – ENUM Type Fact**

The screenshot shows a 'Create Fact' window with the following details:

- Code \***: USSTATE
- Description \***: US State Enum
- Product Processor \***: OFLO
- Tag**: (empty)
- Type \***: ENUM

Below the form, there is a list of values with checkboxes and delete icons:

- California
- New York
- Texas

A **Save** button is located at the bottom left of the form.

- Specify the details in the relevant data fields. The fields marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

**Table 218: Create Fact - ENUM Type Fact – Field Description**

Field	Description
<b>Code</b>	Specify the alphanumeric code without space for the fact.
<b>Description</b>	Specify the description of the fact.
<b>Product Processor</b>	Select the product processor.
<b>Type</b>	Select the type of the fact as ENUM from the dropdown list.

- Click on the **+** icon to add the list of ENUM fact values.
- Click on the **🗑️** icon to delete any of the list of ENUM fact values.
- Click **Save** to save the details.

### 5.1.3 View Fact

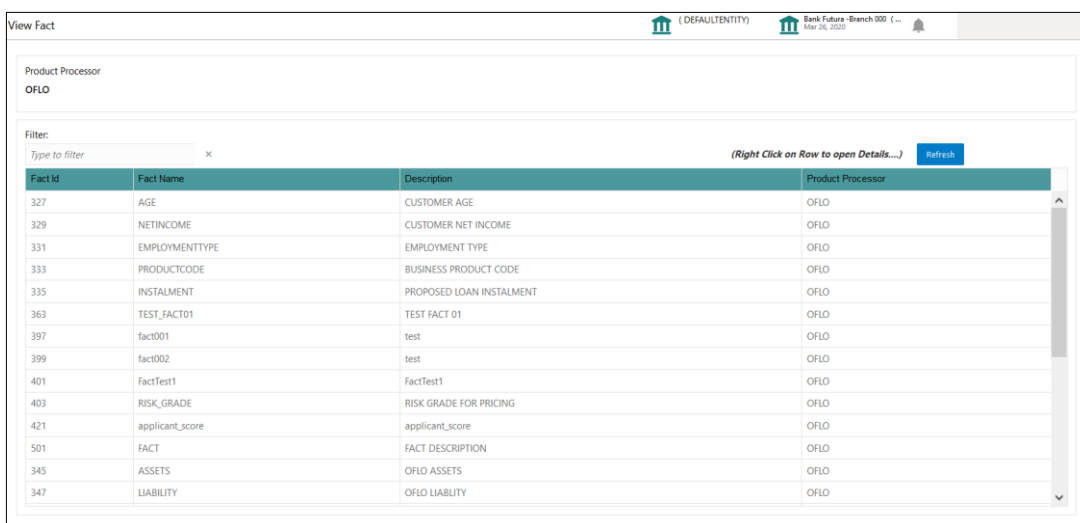
The **View Fact** screen allows the user to view and edit the facts.

#### Prerequisite

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

- From **Home** screen, click **Fact**.
- Under **Fact**, click **View Fact**.
  - The **View Fact** screen is displayed.

**Figure 263: View Fact**



3. Specify the details in the relevant data fields. The fields marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

**Table 219: View Fact – Field Description**

Field	Description
<b>Product Processor</b>	Displays the product processor.
<b>Fact ID</b>	Displays the Fact ID.
<b>Fact Name</b>	Displays the name of the fact.
<b>Description</b>	Displays the description of the fact.
<b>Product Processor</b>	Displays the product processor.

4. Specify the Fact details in **Filter** textbox to filter the data.
5. Click **Refresh** to refresh the screen.
6. Right-click on the fact from the list and Click **View Details**.  
 → The **Fact Creation** screen is displayed.

**Figure 264: Fact Creation**

7. Specify the details in the relevant data fields. The fields marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

**Table 220: Fact Creation – Field Description**

Field	Description
<b>Code</b>	Specify the alphanumeric code without space for the fact.
<b>Description</b>	Specify the description of the fact.
<b>Product Processor</b>	Select the product processor.
<b>Type</b>	<p>Select the type of the fact from the dropdown list.</p> <p>The available options are:</p> <ul style="list-style-type: none"> <li>• <b>Number</b></li> <li>• <b>Text</b></li> <li>• <b>Boolean</b></li> <li>• <b>Date</b></li> <li>• <b>Array</b></li> <li>• <b>ENUM</b></li> </ul>

## 5.2 Rule

Rule enables the user to build the expression to perform the calculation with the facts created.

The type of rules supported are:

- **Logical:** *Example:* ( ACCOUNT\_BAL > 124432 ) && ( VALID\_TILL < VALID\_DATE )
- **Arithmetic:** - *Example:* ( CREDIT\_BALANCE + TAX\_CREDIT – INTEREST\_AMOUNT)
- **Relational:** - *Example:* ( FACT5 == ACCOUNT && TAX >= 10)

- **Nested:** - *Example:*
- ( RULE\_ACCOUNT = TRUE ) && (ACCOUNT\_BAL > 21234)
- **Multiple-If else:** - *Example:* IF ( ACCOUNT\_BAL > 124432 ) then OUTPUT1  
     ELSE IF ( ACCOUNT\_BAL < 124432 ) then OUTPUT2
- **Multiple Nesting:** - *Example-* **INNERCHILDRULE :** ( ACC\_BAL > 30000 ) then OUTPUT = true  
     **CHILDRULE :** ( ( INNERCHILDRULE == true) && (CBLSCORE > 5 ) ) then OUTPUT = true  
     **PARENTRULE:** ( ( ACCTYPE == HOMELOAN ) && ( CHILDRULE == true ) )

**Steps to build a Nested Rule expression is explained with the below example.**

The Rule Expression for Loan to Value (LTV) is

Loan to Value (LTV) = (LOANAMOUNT /COLLATERAL\_VALUE) \*100

For now, the above expression is not supported directly, and LTV calculation is achieved by the below steps.

Step 1: Create a Rule1 - LOAN\_TO\_COLLATERAL

Expression - LOANAMOUNT/COLLATERAL\_VALUE

Step 2: Create a rule2 - Loan to Value (LTV)

Expression - LOAN\_TO\_COLLATERAL \*100

This section contains the following topics:

- [5.2.1 Create Rule](#)
- 5.2.2 View Rule
- 5.2.3 Evaluate Rule
- 5.2.4 Rule Group
- 5.2.5 Audit Rule

## **5.2.1 Create Rule**

The **Create Rule** screen allows the user to create the rule.

## Prerequisite

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

1. From **Home** screen, Under **Rule**, click **Create Rule**.

→ The **Create Rule** screen is displayed.

**Figure 265: Create Rule**

2. Specify the details in the relevant data fields. The fields marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

**Table 221: Create Rule – Field Description**

Field	Description
<b>Code</b>	Specify the alphanumeric code without space for the rule.
<b>Description</b>	Specify the description of the rule.
<b>Product Processor</b>	Displays the product processor.
<b>Tag</b>	Select the tag from the drop-down list.
<b>Select Existing Rule</b>	Click <b>search</b> and select the existing rule.
<b>Add Section</b>	Click <b>Add Section</b> to create the multiple rule condition
<b>Expression Builder</b>	Select the expressions to build the rule.
<b>Add Expression</b>	Click Add Expression to create the expression for the rule.

Field	Description
<b>+ icon</b>	Click this icon to add new expression.
<b>Fact / Rules</b>	Select the fact or rule from the drop-down list.
<b>Operator</b>	Select the comparison operator from the drop-down list.
<b>Data Type</b>	<p>Select the data type for the fact or rule. Once you select the data type, the new field appears adjacent to the data type.</p> <p>Update the same based on the selected data type.</p> <p>The available options are:</p> <ul style="list-style-type: none"> <li>• <b>Text</b></li> <li>• <b>Number</b></li> <li>• <b>Boolean</b></li> <li>• <b>Date</b></li> <li>• <b>Fact</b></li> </ul>
<b>Output</b>	<p>Select the output from the drop-down list. Once you select the output, the new field appears adjacent to the output.</p> <p>Update the same based on the selected output option.</p> <p>The available options are:</p> <ul style="list-style-type: none"> <li>• <b>Text</b></li> <li>• <b>Number</b></li> <li>• <b>Boolean</b></li> <li>• <b>Date</b></li> <li>• <b>Fact</b></li> </ul>
<b>Expression</b>	Displays the expression and output updated in the expression builder.

3. Click **Save**, to save the details.

### 5.2.1.1 Create Rule with multiple Output

Steps to build a Rule with multiple output is explained with the below example.

The Rule Expression for Multiple output rule is:

IF ( TotalIncome > 20000 ) && ( TotalExpense < 8000 )

then Eligible for loan, 10000, 2022-07-06

**Figure 266: Create Rule with Multiple Output**

## 5.2.2 View Rule

The View Rule screen allows the user to view and modify the existing rules.

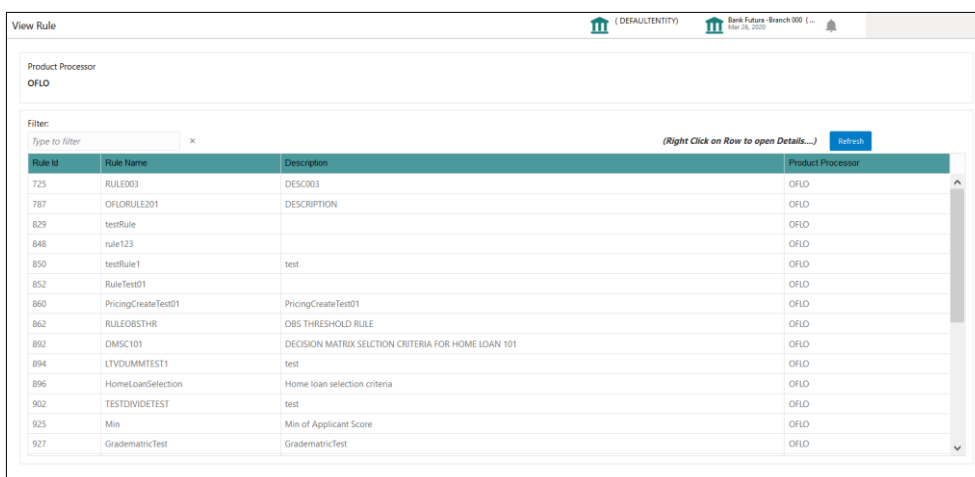
### Prerequisite

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

1. From **Home screen**, Under **Rule**, click **Rule**.
2. Under **Rule**, click **View Rule**.
  - The **View Rule** screen is displayed.



Figure 267: View Rule



- Specify the details in the relevant data fields. The fields marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

Table 222: View Rule – Field Description

Field	Description
<b>Product Processor</b>	Displays the product processor.
<b>Rule ID</b>	Displays the Rule ID.
<b>Rule Name</b>	Displays the name of the rule.
<b>Description</b>	Displays the description of the rule.
<b>Product Processor</b>	Displays the product processor.

- Specify the Rule details in **Filter** textbox to filter the data.
- Click **Refresh** to refresh the screen.
- Right-click on rules from the list and Click **View Details**.
- Click **Edit** to edit the rule.
  - The **Rule Creation** screen is displayed.

Figure 268: Rule Creation

The screenshot shows the 'Rule Creation' window with the following components:

- Basic Info:**
  - Code: createmod
  - Description: createmod
  - Product Processor: OFLO
  - Tag: (dropdown)
  - Select Existing rule: (search)
  - Rule Version: 1
- Section1:**
  - Expression Builder: Facts, OBP2NUMBER, =, NUMBER, 321
  - Output: TEXT, test, Enter Description
- Section2:**
  - Expression Builder: Facts, FICO\_SCORE, =, NUMBER, 321
  - Output: TEXT, nest, Enter Description
- Expression:**

```

IF
  ( OBP2NUMBER == 321 ) elseif ( FICO_SCORE == 321 )
Output
  Section1 test
  Section2 nest
            
```
- Buttons:** Edit, + Add Section, + Add Expression, Save

- Specify the details in the relevant data fields. The fields marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

Table 223: Rule Creation – Field Description

Field	Description
<b>Code</b>	Specify the alphanumeric code without space for the rule.
<b>Description</b>	Specify the description of the rule.
<b>Product Processor</b>	Displays the product processor.
<b>Add Section</b>	Click <b>Add Section</b> to create the multiple rule condition
<b>Expression Builder</b>	Select the expressions to build the rule.
<b>Add Expression</b>	Click <b>Add Expression</b> to create the expression for the rule.
<b>+ icon</b>	Click this icon to add new expression.
<b>Fact / Rules</b>	Select the fact or rule from the drop-down list.
<b>Operator</b>	Select the comparison operator from the drop-down list.
<b>Data Type</b>	<p>Select the data type for the fact or rule. Once you select the data type, the new field appears adjacent to the data type.</p> <p>Update the same based on the selected data type.</p> <p>The available options are:</p> <ul style="list-style-type: none"> <li>• <b>Text</b></li> <li>• <b>Number</b></li> <li>• <b>Boolean</b></li> <li>• <b>Date</b></li> <li>• <b>Fact</b></li> </ul>
<b>Output</b>	<p>Select the output from the drop-down list. Once you select the output, the new field appears adjacent to the output.</p> <p>Update the same based on the selected output option.</p> <p>The available options are:</p> <ul style="list-style-type: none"> <li>• <b>Text</b></li> <li>• <b>Number</b></li> </ul>

Field	Description
	<ul style="list-style-type: none"> <li>• <b>Boolean</b></li> <li>• <b>Date</b></li> <li>• <b>Fact</b></li> </ul>
<b>Expression</b>	Displays the expression and output updated in the expression builder.

9. Click **Save** to save the details.

### 5.2.3 Evaluate Rule

Once the rule has been created the **evaluate API** has to be invoked to evaluate the rule.

To evaluate a rule, **rule name & namespace** are the **mandatory** parameters passed to the API and **version** of the rule is an **optional** parameter. If the version of the rule is not passed to the API then by **default** the **latest version of the rule** is evaluated.

The evaluate API url to be invoked is:

**`/rule-service/rules/evaluate/{namespace}/{ruleName}`**

**`/rule-service/rules/evaluate/{namespace}/{ruleName}/{version}`**

**Method** → POST

**Headers Required** →

appId: PLATORULE

userId: ASHISH

Content-Type: application/json

**Request Body** →

```
{
  "LOAN_AMOUNT": "15001",
  "LOAN_TYPE": "Auto_loan",
}
```

**Response** →

```

{
  "ruleEvaluated": true,
  "result": "true",
  "ruleId": 8161,
  "ruleName": "DIVYARULE1",
  "outputDescription": "null",
  "responseType": null,
  "error": null,
  "req_id": "reqId_1652082090755"
}

```

## 5.2.4 Rule Group

Grouping individual rules by name and priority into a RuleGroup.

For the evaluating a RuleGroup, user will pass all the required Fact data to evaluate API & if the evaluate Group flag is set to false, the API will evaluate rule one by one based on priority and return for the rule which evaluates to true. If the evaluate Group flag is set to true then the API will evaluate rule one by one based on priority for all rules in the RuleGroup and return the response of all the rules.

Please find below an example for a Rule Group:

### **RULEGROUP1:**

RULE1: (ACC\_BAL > 400)

RULE2: (ACC\_BAL < 10000)

RULE3: MIN (FICOSCORE

### 5.2.4.1 Create Rule Group

The **Create Rule Group** screen allows the user to combine the rule.

## Prerequisite

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

1. From **Home** screen, Under **Rule**, click **Create Rule Group**.

→ The **Create Rule Group** screen is displayed.

**Figure 269: Create Rule Group**

2. Specify the details in the relevant data fields. The fields marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

**Table 224: Create Rule Group – Field Description**

Field	Description
<b>Group Name</b>	Specify the unique group name for the selected rules.
<b>Product Processor</b>	Click search and select the product processor.
<b>Tag</b>	Specify the tag for rule group.
<b>Evaluate Group</b>	Select the toggle to evaluate the expression in sequence.  <hr/> Note: If the toggle is disabled, the evaluation of the expression stops when the condition of expression is evaluated to <b>True</b> .
<b>+ icon</b>	Click this icon to add expression.

3. Click **Save** to save the details.

### 5.2.4.2 View Rule Group

The View Rule Group screen allows the user to view and modify the existing rules group.

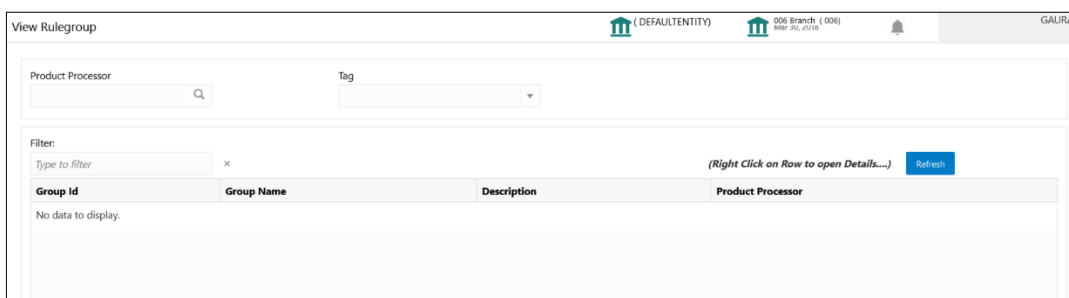
## Prerequisite

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

1. From **Home** screen, Under **Rule**, click **View Rule Group**.

→ The **View Rule Group** screen is displayed.

**Figure 270: View Rule Group**



2. Specify the details in the relevant data fields. The fields marked with asterisk are mandatory. For more information on fields, refer to the field description table below.

**Table 225: View Rule Group – Field Description**

Field	Description
<b>Product Processor</b>	Displays the product processor.
<b>Tag</b>	Displays the tag for rule group.
<b>Group ID</b>	Displays the Group ID.
<b>Group Name</b>	Displays the name of the group.
<b>Description</b>	Displays the description of the group.
<b>Product Processor</b>	Displays the product processor.

## 5.2.5 Audit Rule

The View Audit Rule screen allows the user to **View Rule log** after the evaluation of the expression through evaluate API.

### Prerequisite

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

1. From **Home** screen, Under **Rule**, click **View Audit Rule**.

→ The **View Audit Rule** screen is displayed.

**Figure 271: View Audit Rule**

2. Specify the details in the relevant data fields. For more information on fields, refer to the field description table below.

**Table 226: View Audit Rule – Field Description**

Field	Description
<b>Request ID</b>	Specify the request ID available from the output of evaluate API.

3. Click **Submit**, to view to details.
4. Click Show Rule log, to view the log rule for selected request ID.



## 6. Document Verification Framework

This section is designed to help the user quickly get acquainted with the Document verification framework.

### Introduction:

In this digital age, there is still a strong reliance on physical document verification, especially in large organizations such as government, enterprise companies, banks, and universities/colleges.

Manual Verification of documents for Identification is laborious. Not only do we have to organize and categorize the files, extracting meaningful information manually takes a lot of time and effort.

These business organizations employ data entry teams whose sole purpose is to take these physical documents, manually re-type the information, and then save it into the system which is cumbersome. This can annoy customers as well as employees ultimately resulting in decreased productivity.

So, there is a strong need to digitize the information on the documents and extract the required data. This document verification framework has a set of APIs that allows you to extract required fields from the Identification documents automatically, thus saving a lot of time and effort.

### Prerequisites:

Document Verification framework is designed to extract the detailed information from the uploaded documents like Passport, National ID card, driving license, etc.

This section contains the following topics:

- [6.1 Text Extraction](#)
- 6.2 Image Processing
- 6.3 Document Verification API Details
- 6.4 Validate Information API details
- 6.5 Recommendations for better performance

### 6.1 Text Extraction

Optical character recognition or optical character reader (OCR) is the process of digitizing documents and extracting text from them. Widely used as a form of data entry from scanned documents – Here the text is first scanned, analyzed, and is finally translated into character codes. This machine-encoded text can be easily searched and edited electronically.

OCR has greatly improved the process of data entry. The need for the documents to be scanned is on a constant rise as it enables these documents to be viewed conveniently when required. The most popular application of OCR is Data entry for business documents, e.g. ID card, driving license, passport, cheque, invoice and salary slip.

#### Benefits of OCR:

1. **100% Text-searchable Documents** - One of the huge advantages of OCR data processing is that it makes the digitized documents completely text searchable. This helps professionals to quickly lookup numbers, addresses, names, and various other parameters that differentiate the document being searched.
2. **Reduced Cost** - Besides helping an organization in cutting down the cost of hiring manpower for data extraction, it also helps in reducing several other costs like printing, copying, shipping charge, etc.
3. **Reduced Errors** - It resolves the problem of data loss and inaccuracy and helps in reducing errors.
4. **More Storage Space** -The lesser the documents, the larger space. Organizations have always wanted to take the 'Paperless' approach and OCR just makes it possible. Also, the expenses of file cabinets are saved with this approach.
5. **Ready Availability** - By scanning the information of documents through OCR, the data can be made available in several different places. One can carry it in a USB drive and retrieve the wanted information with just a few clicks.
6. **Superior Data Security** - Data security is of utmost importance for any organization. Paper documents are easily prone to loss or destruction. However, this is not the case with data that is scanned, analyzed, and stored in digital formats. Furthermore, access to these digital documents can also be minimized to prevent mishandling of the digitized data.
7. **Massively Improves Customer Service** - Several inbound contact centers often provide information that their customers seek. While some call centers provide customers with the information they need, others will have to quickly access certain personal or order-related information of the customers to process their requests. Quick data accessibility becomes extremely important in such cases. This helps in systematically storing and retrieving the documents digitally at blazing speeds. With this, the waiting time is drastically reduced for the customers, thereby improving their experience.

## 6.2 Image Processing

Text Recognition depends on a variety of factors to produce good quality output. The text output highly depends on the quality of the input image. These guidelines help document extraction engine to produce accurate results.

Image Preprocessing comes into play to improve the quality of input image so that the engine gives an accurate output. The main objective of the Preprocessing phase is to make it easy for the system to distinguish a character from the background.

The preprocessing can be controlled using the configuration files and are explained at the bottom. The configuration varies between documents and country.

The following image processing operations are used to improve the quality of input image:

- **Image Scaling** – OCR gives accurate output for images with 300 DPI which describes the resolution. Keeping DPI lower than 200 will give unclear and incomprehensible results while keeping the DPI above 600 will unnecessarily increase the size of the output file without improving the quality of the file. Thus, a DPI of 300 works best for this purpose.

- **Image Skew Correction** – A Skewed image is defined as a document image that is not straight. Skewed images directly impact the line segmentation of the OCR engine which reduces its accuracy. These kinds of images are to be processed to correct text skew.
- **Background Cropping** – Background is cropped from scanned images if it contains any. This is really important as we want to remove unwanted areas from the image that does not contain text at all.
- **Noise Removal** – Noise is removed from images as it decreases the readability of text. The main objective of the Noise removal stage is to smoothen the image by removing small dots/patches which have high intensity than the rest of the image. Noise removal can be performed for both Colored and Binary images.
- **Binarization** – This involves converting a colored image into black and white pixels which can be achieved by fixing a threshold value.

## 6.3 Document Verification API Details

Document Verification APIs are a function of image quality, image size, and Resolution. Each API has different requirements. The Framework is designed to extract details from documents like Passport, Driving License, National ID card, Salary slips etc.

This section contains the following topics:

- [6.3.1 Passport Extraction](#)
- 6.3.2 Driving License Extraction
- 6.3.3 National Identification Extraction
- 6.3.4 Voter Identity Card Extraction

### 6.3.1 Passport Extraction

This section describes the payload details for Passport Details extraction service.

Passport Extraction module extracts details in the passport like Country, Document Type, Name, First Name, Last Name, Gender, Date of Birth, Date of Issue and Date of expiry of the passport, Passport No and Issuing Authority if present in the passport along with Image metadata information like Image DPI, Resolution and Image Size. This module provides support for passports of various countries listed below:

USA passport and passport-card

UAE

INDIA

CANADA

AUSTRALIA

## BANGLADESH

All the details in the passport/ passport-card (Incase of USA) are extracted using "/extractInformation" API.

**Brief of Working:**

It takes "**country**", "document type" and "**Base64 encoded image**" of the passport as input. It internally generates processed text from the passport and extracts details like Name, First Name, Last Name, Gender, DOB, DOI and DOE, PP No. and Issuing Authority if present in the document. Along with the document details, it also gives image metadata information like **Image DPI**, **Resolution** and **Size**, etc. The output is represented in JSON format.

**Table 227: Passport Extraction API Format**

S No	Description	Comments
1	Format of input images it supports	jpg, jpeg, png, pdf
2	Output Format	JSON
3	Support multiple input files	Yes

**Input Request:**

"/extractInformation" API -

For a single image: Base64 encoded image, Country, Document Type ("passport" in this case).

For multiple images: Array of the Base64 encoded images, Country, Document Type ("passport" in this case).

Sample Input Request:

```
{
  "country": "UAE",
  "docType": "passport",
  "docBase64s": [
    "-----base64 encoded image string-----"
  ]
}
```

Note: In case of USA, there are 2 types of document: passport and passport-card. If the input document is of type passport-card, the docType should be mentioned as passport-card.

Output Response:

The output of "/extractInformation" API is the extracted details in the JSON format given below:

Sample Output Response:

```
{  
  
  "documentDetails": [  
  
    {  
  
      "ImageInfo": {  
  
        "file_size": "647.22 KB",  
  
        "image_dpi": "150",  
  
        "image_resolution": "704x541",  
  
        "information": "Minimum 300 DPI is required. File size is proper."  
  
      },  
  
      "dateOfBirth": "7/11/2001",  
  
      "dateOfExpiry": "11/6/2022",  
  
      "dateOfIssue": "12/6/2017",  
  
      "docType": "Passport",  
  
      "firstName": "SHAMA",  
  
      "gender": "F",  
  
      "identificationNumber": "F0Z615883",  
  
      "issuedCountry": "UNITED ARAB EMIRATES",  
  
      "issuingAuthority": "",  
  
      "lastName": "RASHED ABDULIALIL MOHAMED ALFAHIM",  
  
      "name": "SHAMA RASHED ABDULIALIL MOHAMED ALFAHIM"  
  
    }  
  
  ]  
}
```

```
]
}
```

Note: Even if Country and DocType not provided in the input request, the service tries to extract the Country Name and Document Type automatically. In case, if it is not able to extract it returns an exception/error. This means either the quality of the document is not enough to extract all the details or resolution is poor.

Things to be taken care of:

Make sure the base64 encoded image string of the input image is correct.

Document Type provided in the input should be "passport" only

Specify the country name correctly for accurate extraction of details

### 6.3.2 Driving License Extraction

This section describes the payload details for Driving License Details extraction service.

Driving License Details Extraction module extracts information present in the Driving License such as Name, First Name, Last Name, Gender, Address, License No, Date of Birth, Date of Issue and Date of expiry of the license along with the image metadata information like Image DPI, Resolution and Size. Currently, we provide support for licenses of various countries listed below:

UNITED STATES OF AMERICA

UNITED KINGDOM

CANADA

AUSTRALIA

BANGLADESH

All the details in the license are extracted using "/extractInformation" API.

#### **Brief of Working:**

The API accepts the "country", "document type" and "Base64 encoded image" of the license as input. It internally generates processed text from the license document and extracts details like Name, First Name, Last Name, Gender, DOB, DOI and DOE, License No. and Address, etc. Along with the document details, it also gives image metadata information like Image DPI, Resolution and Size. The output is represented in JSON format.

#### **Input Request:**

"/extractInformation" API -

**For a single image:** Base64 encoded image, Country, Document Type ("License" in this case).

**For multiple images:** Array of the Base64 encoded images, Country, Document Type ("License" in this case).

**Sample Input Request:**

```
{
  "country": "US",
  "docType": "license",
  "docBase64s": [
    "-----base64 encoded image-----"
  ]
}
```

**Output Response:**

The output for "/extractInformation" API is the extracted details in the JSON format given below:

**Sample Output Response:**

```
{
  "documentDetails":
  [
    {
      "ImageInfo": {
        "file_size": "579.26 KB",
        "image_dpi": "",
        "image_resolution": "736x419",
        "information": "dpi info not available. Average Image Resolution. File size is proper."
      },
      "address": "918 N ROXBURY BEVERLY HILLS CA 90210",
```

```

"dateOfBirth": "6/8/1911",

"dateOfExpiry": "6/8/2012",

"dateOfIssue": "2/7/2010",

"docType": "license",

"firstName": "LUCILLE",

"gender": "F",

"identificationNumber": "B2201793",

"issuedCountry": "UNITED STATES OF AMERICA",

"issuingAuthority": "CALIFORNIA",

"lastName": "BALL",

"name": "LUCILLE BALL"

}

]

}

```

---

**Note:** Even if Country and DocType not provided in the input request, the service tries to extract the Country Name and Document Type automatically. In case, if it is not able to extract it returns an exception/error. This means either the quality of the document is not enough to extract all the details or resolution is poor.

---

#### **Things to be taken care of:**

Make sure the base64 encoded image string of the input image is correct.

Document Type provided in the input should be "license" only

Specify the country name correctly for accurate extraction of details

### **6.3.3 National Identification Extraction**

This section elaborates the payload details for National ID Card Details extraction service.

National ID card Details Extraction module extracts details in the National Identity Card like Name, First Name, Last Name, Gender, Address (if present), Date of Birth, Date of Issue and Date of expiry of the NID, ID No, etc along with the image metadata information like Image DPI, Resolution and Size. This module provides support for NIDs of various countries listed below:



USA

South Africa

Brazil

Bangladesh

Canada

India

Kenya

Portugal

All the details in the ID are extracted using "/extractInformation" API.

#### **Brief of working:**

It takes "country", "document type" and "Base64 encoded image" of the NID as input. It internally generates processed text from the Identity document and extracts details like Name, First Name, Last Name, Gender, Address, DOB, DOI, DOE, and ID No. Along with the document details, it also gives image metadata information like Image DPI, Resolution and Size. The output is represented in JSON format.

#### **Input Request:**

"/extractInformation" API -

**For a single image:** Base64 encoded image, Country, Document Type ("nid" in this case).

**For multiple images:** Array of the Base64 encoded images, Country, Document Type ("nid" in this case).

#### **Sample Input Request:**

```
{
  "country": "BR",
  "docType": "nid",
  "docBase64s": [
    "-----base64 encoded image-----"
  ]
}
```

**Output Request:**

The output for "/extractInformation" API is the extracted details in the JSON format given below:

Sample output response:

```
{  
  
  "documentDetails": [  
  
    {  
  
      "ImageInfo": {  
  
        "file_size": "566.32 KB",  
  
        "image_dpi": "72",  
  
        "image_resolution": "680x453",  
  
        "information": "Minimum 300 DPI is required. Poor Image Resolution. File size is proper."  
  
      },  
  
      "dateOfBirth": "12/7/1960",  
  
      "dateOfExpiry": "20/8/2030",  
  
      "dateOfIssue": "",  
  
      "docType": "NID",  
  
      "firstName": "FERNANDA",  
  
      "gender": "F",  
  
      "identificationNumber": "000000005-9",  
  
      "issuedCountry": "BRAZIL",  
  
      "issuingAuthority": "",  
  
      "lastName": "DE CARVALHO DA SILVA",  
  
      "name": "FERNANDA DE CARVALHO DA SILVA"  
  
    }  
  
  ]  
}
```

]

}

---

**Note:** Even if Country and DocType not provided in the input request, the service tries to extract the Country Name and Document Type automatically. In case, if it is not able to extract it returns an exception/error. This means either the quality of the document is not enough to extract all the details or resolution is poor.

---

#### Things to be taken care of:

Make sure the base64 encoded image string of the input image is correct.

Document Type provided in the input should be "nid" only

Specify the country name correctly for accurate extraction of details

### 6.3.4 Voter Identity Card Extraction

This section elaborates the payload details for Voter ID Card Details extraction service.

Voter ID card Details Extraction module extracts details in the Voter ID Card like **Name, First Name, Last Name, Gender, Date of Birth** and, **ID No** along with the image metadata information like **Image DPI, Resolution** and **Size**. Currently, we provide support for Voter IDs of various countries listed below:

#### India

All the details in the ID are extracted using **"/extractInformation"** API.

It takes "country", "document type" and "Base64 encoded image" of the Voter ID as input. It internally generates processed text from the Identity document and extracts details like Name, First Name, Last Name, Gender, DOB, and ID No. Along with the document details, it also gives image metadata information like Image DPI, Resolution and Size. The output is represented in JSON format.

#### Input Request

"/extractInformation" API -

**For a single image:** Base64 encoded image, Country, Document Type ("voterid" in this case).

**For multiple images:** Array of the Base64 encoded images, Country, Document Type ("voterid" in this case).

#### Sample input request:

```
{
  "country": "IND",
  "docType": "voterid",
  "docBase64s": [
```

```

    "-----base64 encoded image -----"
  ]
}

```

### Output Request:

The output for **"/extractInformation"** API is the extracted details in the JSON format given below:

### Sample output response:

```

{
  "documentDetails": [
    {
      "ImageInfo": {
        "file_size": "236.93 KB",
        "image_dpi": "300",
        "image_resolution": "317x500",
        "information": "Image DPI is proper. File size is proper."
      },
      "dateOfBirth": "15/2/1985",
      "dateOfExpiry": "",
      "dateOfIssue": "",
      "docType": "VOTERID",
      "firstName": "PREM",
      "gender": "M",
      "identificationNumber": "GDN0225185",
      "issuedCountry": "INDIA",
      "issuingAuthority": ""
    }
  ]
}

```

```

    "lastName": "RAJ THAKUR",

    "name": "PREM RAJ THAKUR"

  }

]

}

```

---

**Note:** Even if Country and DocType are not provided in the input request, the service tries to extract the Country Name and Document Type automatically. In case, if it is not able to extract it returns an exception/error. This means either the quality of the document is not enough to extract all the details or resolution is poor.

---

#### Things to be taken care of:

Make sure the base64 encoded image string of the input image is correct.

Document Type provided in the input should be "voterid" only

Specify the country name correctly for accurate extraction of details

## 6.4 Validate Information API details

Validate Information APIs are a function of image quality, image size, and Resolution. Each API has different requirements. The Framework is designed to extract details from documents like Passport, Driving License, National ID card, Salary slips etc. and to calculate similarity score of the extracted details with input key value pairs. It uses fuzzy matching logic for calculating similarity of input value & extracted value based on given keys. For Date of Birth, Date of Issue and Date of expiry keys similarity score is calculated by exact matching logic.

This section contains the following topics:

[6.4.1 Passport Validation](#)

[6.4.2 Driving License Validation](#)

[6.4.3 National Identification Validation](#)

[6.4.4 Voter Identity Card Validation](#)

[6.4.5 Pointers about Request and Response](#)

[6.4.6 Things to be taken care of](#)

**Table 228: Validate Information API Input format**

Sl.no	Description	Comments
1	Format of input images it supports	jpg, jpeg, png, pdf
2	output format	JSON
3	Support multiple users' input key value pairs	Yes
4	Support multiple input files of different document types	Yes

### 6.4.1 Passport Validation

This section describes the payload details for Passport Details validation service.

Passport Validation module extracts details in the passport like Country, Document Type, Name, First Name, Last Name, Gender, Date of Birth, Date of Issue and Date of expiry of the passport, Passport No and Issuing Authority if present in the passport along with Image metadata information like Image DPI, Resolution and Image Size. Then it calculates similarity scores for each input key value pairs with the extracted details. This module provides support for passports of various countries listed below:

USA passport and passport-card

UAE

INDIA

CANADA

AUSTRALIA

BANGLADESH

All the details in the passport/ passport-card (in case of USA) are extracted and validated using **"/validateInformation"** API.

#### **Brief of Working:**

It takes "country", "key value pairs to be searched", "input documents" (including "document type" and "Base64 encoded image") of the passport as input. It internally generates processed text from the passport and extracts details like Name, First Name, Last Name, Gender, DOB, DOI and DOE, PP No. and Issuing Authority if present in the document. Along with the document details, it also gives image metadata information like Image DPI, Resolution and Size, etc. Then it calculates similarity scores for each input key value pairs with the extracted details. The output is represented in JSON format.

#### **Input Request:**

"/validateInformation" API –

Country, Array of key value pairs to be searched, Array of the documents (including Base64 encoded image and Document Type ("passport" in this case) for each document).

**Sample input request:**

```

{
  "country": "UAE",
  "search": [
    [
      {
        "key": "-----name of key-----"
        "value": "-----value of key-----"
      }
    ]
  ],
  "docs": [
    {
      "docType": "passport",
      "docBase64s": "-----base64 encoded image string-----"
    }
  ]
}

```

---

Note: In case of USA, there are 2 types of documents: passport and passport-card. If the input document is of type passport-card, the docType should be mentioned as passport-card.

---

**Output Response:**

The output of `/validateInformation` API is the extracted details in the JSON format given below:

**Sample output response:**

```

{
  "documentDetails": [

```

```
{  
  
  "country": "UAE",  
  
  "documents": {  
  
    "document_1": [  
  
      [  
  
        {  
  
          "extractedValue": "7/11/2001",  
  
          "key": "dateOfBirth",  
  
          "similarityScore": 100.0,  
  
          "value": "7 Nov 2001"  
  
        },  
  
        {  
  
          "extractedValue": "12/6/2017",  
  
          "key": "dateOfissue",  
  
          "similarityScore": 100.0,  
  
          "value": "12 06 2017"  
  
        },  
  
        {  
  
          "extractedValue": "11/6/2022",  
  
          "key": "dateOfexpiry",  
  
          "similarityScore": 100.0,  
  
          "value": "11/06/2022"  
  
        },  
  
        {  
  

```



```

    "extractedValue": "SHAMA RASHED ABDULJALIL MOHAMED ALFAHIM",
    "key": "nAME",
    "similarityScore": 56.41,
    "value": "SHAMA RASHED ABDULIALIL"
  },
  {
    "extractedValue": "UNITED ARAB EMIRATES",
    "key": "issuedCountry",
    "similarityScore": 100.0,
    "value": "UNITED ARAB EMIRATES"
  }
]
}
]
}
]
}

```

### 6.4.2 Driving License Validation

This section describes the payload details for Driving License Details validation service.

Driving License Details Validation module extracts information present in the Driving License such as Name, First Name, Last Name, Gender, Address, License No, Date of Birth, Date of Issue and Date of expiry of the license along with the image metadata information like Image DPI, Resolution and Size. Then it calculates similarity scores for each input key value pairs with the extracted details. This module provides support for licenses of various countries listed below:

UNITED STATES OF AMERICA

UNITED KINGDOM

CANADA

AUSTRALIA

BANGLADESH

All the details in the license are extracted and validated using **"/validateInformation"** API.

### **Brief of Working:**

It takes "country", "key value pairs to be searched", "input documents" (including "document type" and "Base64 encoded image") of the passport as input. It internally generates processed text from the passport and extracts details like Name, First Name, Last Name, Gender, DOB, DOI and DOE, PP No. and Issuing Authority if present in the document. Along with the document details, it also gives image metadata information like Image DPI, Resolution and Size, etc. Then it calculates similarity scores for each input key value pairs with the extracted details. The output is represented in JSON format.

### **Input Request:**

**"/validateInformation"** API -

Country, Array of key value pairs to be searched, Array of the documents (including Base64 encoded image and Document Type ("license" in this case) for each document).

### **Sample input request:**

```
{
  "country": "US",
  "search": [
    [
      {
        "key": "-----name of key-----"
        "value": "-----value of key-----"
      }
    ]
  ]
}
```

```

],
"docs": [
  {
    "docType": "license",
    "docBase64s": "-----base64 encoded image string-----"
  }
]
}

```

**Output Response:**

The output for **"/validateInformation"** API is the extracted details in the JSON format given below:

**Sample output response:**

```

{
  "documentDetails": [
    {
      "country": "US",
      "documents": {
        "document_1": [
          [
            {
              "extractedValue": "JELANI",
              "key": "firstNAME",

```

```
"similarityScore": 75.0,  
  
"value": "jelani s"  
  
},  
  
{  
  
"extractedValue": "123 MAIN ST PHOENIX, AZ 85007",  
  
"key": "ADDRESS",  
  
"similarityScore": 80.0,  
  
"value": "787 Main st, phoenix, AZ 85007"  
  
},  
  
{  
  
"extractedValue": "1/1/1974",  
  
"key": "dateOfBirth",  
  
"similarityScore": 100.0,  
  
"value": "1/1/1974"  
  
},  
  
{  
  
"extractedValue": "1/3/2016",  
  
"key": "dateOfIssue",  
  
"similarityScore": 100.0,  
  
"value": "03-01-16"  
  
},
```

```
{  
  
  "extractedValue": "M",  
  
  "key": "gender",  
  
  "similarityScore": 100.0,  
  
  "value": "M"  
  
},  
  
{  
  
  "extractedValue": "1/3/2024",  
  
  "key": "dateOfexpiry",  
  
  "similarityScore": 0.0,  
  
  "value": "03/03/24"  
  
}  
  
]  
  
]  
  
}  
  
}  
  
]  
  
}
```

### **6.4.3 National Identification Validation**

This section describes the payload details for National ID Card Details validation service.

National ID card Details Validation module extracts details in the National Identity Card like Name, First Name, Last Name, Gender, Address (if present), Date of Birth, Date of Issue and Date of expiry of the NID, ID No, etc along with the image metadata information like Image DPI, Resolution and Size. Then it calculates similarity scores for each input key value pairs with the extracted details. This module provides support for NIDs of various countries listed below:

USA

South Africa

Brazil

Bangladesh

Canada

India

Kenya

Portugal

All the details in the ID are extracted and validated using **"/validateInformation"** API.

#### **Brief of Working:**

It takes "country", "key value pairs to be searched", "input documents" (including "document type" and "Base64 encoded image") of the passport as input. It internally generates processed text from the passport and extracts details like Name, First Name, Last Name, Gender, DOB, DOI and DOE, PP No. and Issuing Authority if present in the document. Along with the document details, it also gives image metadata information like Image DPI, Resolution and Size, etc. Then it calculates similarity scores for each input key value pairs with the extracted details. The output is represented in JSON format.

#### **Input Request:**

**"/validateInformation"** API –

Country, Array of key value pairs to be searched, Array of the documents (including Base64 encoded image and Document Type ("nid" in this case) for each document).

#### **Sample input request:**

```
{
  "country": "BR",
  "search": [
    [
```

```

    {
        "key": "-----name of key-----"
        "value": "-----value of key-----"
    }
]
],
"docs": [
    {
        "docType": "nid",
        "docBase64s": "-----base64 encoded image string-----"
    }
]
}

```

**Output Request:**

The output for `"/validateInformation"` API is the extracted details in the JSON format given below:

**Sample output response:**

```

{
    "documentDetails": [
        {
            "country": "BR",
            "documents": {

```

```
{  
  
  "extractedValue": "FERNANDA DE CARVALHO DA SILVA",  
  
  "key": "name",  
  
  "similarityScore": 68.97,  
  
  "value": "FERNANDA DE CARVALHO"
```

```
},
```

```
{  
  
  "extractedValue": "000000005-9",  
  
  "key": "identificationNumber",  
  
  "similarityScore": 100.0,  
  
  "value": "000000005-9"
```

```
},
```

```
{  
  
  "extractedValue": "NA",  
  
  "key": "date",  
  
  "similarityScore": 0.0,  
  
  "value": "12/7/1960"
```

```
},
```

```
{  
  
  "extractedValue": "BRAZIL",  
  
  "key": "issuedCountry",
```



```

        "similarityScore": 100.0,

        "value": "BRAZIL"

    }

]

]

}

}

]

}

```

#### **6.4.4 Voter Identity Card Validation**

This section describes the payload details for Voter ID Card Details validation service.

Voter ID card Details Validation module extracts details in the Voter ID Card like Name, First Name, Last Name, Gender, Date of Birth and, ID No along with the image metadata information like Image DPI, Resolution and Size. Then it calculates similarity scores for each input key value pairs with the extracted details. This module provides support for Voter IDs of various countries listed below:

India

All the details in the ID are extracted and validated using **"/validateInformation"** API.

##### **Brief of Working:**

It takes "country", "key value pairs to be searched", "input documents" (including "document type" and "Base64 encoded image") of the passport as input. It internally generates processed text from the passport and extracts details like Name, First Name, Last Name, Gender, DOB, DOI and DOE, PP No. and Issuing Authority if present in the document. Along with the document details, it also gives image metadata information like Image DPI, Resolution and Size, etc. Then it calculates similarity scores for each input key value pairs with the extracted details. The output is represented in JSON format.

##### **Input Request:**

**"/validateInformation"** API –

Country, Array of key value pairs to be searched, Array of the documents (including Base64 encoded image and Document Type ("voterid" in this case) for each document).

**Sample input request:**

```
{  
  
  "country": "IND",  
  
  "search": [  
  
    [  
  
      {  
  
        "key": "-----name of key-----"  
  
        "value": "-----value of key-----"  
  
      }  
  
    ]  
  
  ],  
  
  "docs": [  
  
    {  
  
      "docType": "voterid",  
  
      "docBase64s": "-----base64 encoded image string-----"  
  
    }  
  
  ]  
  
}
```

**Output Request:**

The output for "/validateInformation" API is the extracted details in the JSON format given below:

Sample output response:

```
{  
  
  "documentDetails": [  
  
    {  
  
      "country": "IND",  
  
      "documents": {  
  
        "document_1": [  
  
          [  
  
            {  
  
              "extractedValue": "PREM",  
  
              "key": "firstName",  
  
              "similarityScore": 100.0,  
  
              "value": "PREM"  
  
            },  
  
            {  
  
              "extractedValue": "PREM RAJ THAKUR",  
  
              "key": "name",  
  
              "similarityScore": 100.0,  
  
              "value": "Prem RAJ Thakur"  
  
            },  
  
            {  
  
              "extractedValue": "NA",
```

```
"key": "aDDress",

"similarityScore": 0.0,

"value": "Kanpur, India"

},

{

"extractedValue": "M",

"key": "GENDER",

"similarityScore": 0.0,

"value": "F"

},

{

"extractedValue": "GDN0225185",

"key": "identificationNumber",

"similarityScore": 90.0,

"value": "GAN0225185"

}

]

]

}

}

]
```

}

### **6.4.5 Pointers about Request and Response**

If "Country" is provided as empty string in the input request, the service return a message "Country is not provided in the input". If key "Country" is not provided/ is missing in the request, the service returns an exception/ error.

If input documents "Docs" are provided as empty list, the service return a message "Input documents are not provided". If key "Docs" is not provided/ is missing in the request, the service returns an exception/ error.

If either "DocType" is provided as empty string or key "DocType" not provided in the input request, the service returns an exception/ error.

If either the quality of the document is not enough to extract all the details or resolution is poor, the service returns an exception/ error.

If input key value pairs list "Search" is provided as empty list, the service returns empty result along with input country. If key "Search" is not provided/ is missing in the request, the service returns an exception/ error.

### **6.4.6 Things to be taken care of**

- Make sure the base64 encoded image string of the input image is correct.
- Make sure the document type of the input image is correct.
- Specify the country name correctly for accurate extraction of details

## **6.5 Recommendations for better performance**

- The better the quality of the source image, the higher the accuracy of extraction will be.
- Keeping DPI lower than 200 will give unclear and incomprehensible results while keeping the DPI above 600 will unnecessarily increase the size of the output file without improving the quality of the file. Thus, a DPI of 300 works best for this purpose.

Following parameters determines the image quality

Min text-size 10 pts (below 8pts are removed by noise)

Min resolution (dpi) of 300 works best for Text Extraction.

Sharp and visible characters

Min image size of 200 kb

Less image noise e.g., the image with shadows

Image with background noise e.g., image containing background with text data in foreground.

## 7. File Upload

The following File Upload features are available in the respective common core maintenances

- Country Code File Upload
- Bank Core Parameters File Upload
- Branch Core Parameters File Upload
- Currency Definition File Upload
- BIC Directory File Upload
- Local Holiday File Upload
- Currency Holiday File Upload
- External Customer File Upload
- External Customer Account File Upload
- Exchange Rate File Upload

### 7.1 Country Code File Upload

Country Code File Upload is used to perform country code maintenance in common core.

**File Type Supported** - CSV

**File Naming Convention** - CmcCountryMaint\_<UniqueName>.csv

---

Note: Replace the <UniqueName> for each file upload.

---

**Table 229: Country Code File Upload – Records**

Sequence	Attribute Name	Type	Size	Description
<b>Master record</b>				
1	Action	String	10	Denotes file operation type. Allowed values are new/modify
2	Country Code	String	3	Country Code
3	Description	String	105	Name of the country
4	Alt Country Code	String	10	Alternate Country Code
5	Region Code	String	3	Region Code

Sequence	Attribute Name	Type	Size	Description
6	Blacklisted	String	1	Indicates the country is blacklisted
7	IBAN Check Reqd	String	1	Indicates check required for an IBAN is mandatory
8	Intra European	String	1	Denotes the country is an intra European country.
9	Clr Code Bic	String	1	BIC Clearing Code Indicates the National ID in the BIC plus file is the clearing code.
10	Clearing Network	String	6	Indicates the Clearing Network
11	ISO Num Country Code	String	3	Denotes the ISO Country Code
12	Gen Mt205	String	1	Indicates the cover message 205COV or 205
13	ISD Code	Number	10	Denotes the ISD Code
14	EU Country	String	1	Indicates the country is recognized by Swift as a part of the Intra European countries

Mandatory Fields are

- Action
- Country Code
- Description
- Alt Country Code
- Region Code
- Blacklisted
- IBAN Check Reqd
- Intra European
- Clr Code Bic
- ISO Num Country Code
- Gen Mt205



- ISD Code
- EU Country

## 7.2 Bank Core Parameters File Upload

Bank Core Parameters File Upload is used to perform bank core maintenance in common core.

**File Type Supported** - CSV

**File Naming Convention** - CmcBankMaint\_<UniqueName>.csv

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Note: Replace the <UniqueName> for each file upload.

---

**Table 230: Bank Core Parameters File Upload – Records**

Sequence	Attribute Name	Type	Size	Description
<b>Master record</b>				
1	Action	String	10	Denotes file operation type. Allowed values are new/modify
2	Days To Forget Customer	Number	4	Denotes Number of Days to inactive/Forget Customer
3	HO Branch	String	3	Head Office Branch
4	Bank Name	String	35	Name of the bank
5	Bank Code	String	4	Denotes code for the bank

Mandatory Fields are

- Action
- Days To Forget Customer
- HO Branch
- Bank Name
- Bank Code

## 7.3 Branch Core Parameters File Upload

Branch Code Parameters File Upload is used to perform branch code maintenance in common core.

**File Type Supported** - CSV

**File Naming Convention** - CmcBranchMaint\_<UniqueName>.csv

**NOTE:** Replace the <UniqueName> for each file upload.

**Table 231: Branch Core Parameters File Upload – Records**

Sequence	Attribute Name	Type	Size	Description
<b>Master record</b>				
1	Discriminator	String	1	Denotes master record type. Default value is always "P"
2	Action	String	10	Denotes file operation type. Allowed values are new/modify
3	Source Branch Code	String	20	Code of the Source Branch
4	Source System	String	35	Source System
5	Week Hol2	String	1	Denotes the weekly holiday 2
6	Week Hol1	String	1	Denotes the weekly holiday 1
7	Auto Auth	String	1	Auto Authorization
8	Walkin Customer	String	20	Denotes Walk-in customer
9	Branch Lcy	String	3	Branch Local Currency
10	Branch Addr3	String	105	Denotes the branch address details - Address Line 1
11	Branch Addr2	String	105	Denotes the branch address details - Address Line 2
12	Branch Addr1	String	105	Denotes the branch address details - Address Line 3
13	Branch Name	String	105	Name of the branch
14	Country Code	String	3	Country Code
15	Host Code	String	8	Host Code
16	Branch Code	String	3	Denotes the Code of Branch
<b>Child record 1</b>				

Sequence	Attribute Name	Type	Size	Description
1	Discriminator	String	10	Denotes the first child record type. Default value is always "BranchPref"
2	Report DSN	String	35	Denotes the details of the report DSN
3	DSN Name	String	35	Name of the DSN
4	Host Name	String	35	Host Name
5	Branch Code	String	3	Denotes the Branch Code
<b>Child record 2</b>				
1	Discriminator	String	12	Denotes the second child record type. Default value is always "SwiftAddress"
2	Default BIC	String	1	Denotes the Default BIC
3	Swift Address	String	12	Denotes the swift address details
4	Branch Code	String	3	Branch Code

Mandatory Fields are

- Discriminator
- Action
- Source Branch Code
- Source System
- Auto Auth
- Branch Lcy
- Branch Addr3
- Branch Addr2
- Branch Addr1
- Branch Name
- Country Code
- Host Code
- Branch Code
- Discriminator (Child record 1)

- Branch Code (Child record 1)
- Discriminator (Child record 2)
- Default BIC (Child record 2)
- Swift Address (Child record 2)
- Branch Code (Child record 2)

## 7.4 Currency Definition File Upload

Currency Definition Upload is used to perform currency definition maintenance in common core.

**File Type Supported** - CSV

**File Naming Convention** - CmcCurrencyMaint\_<UniqueName>.csv

**NOTE:** Replace the <UniqueName> for each file upload.

**Table 232: Currency Definition File Upload – Records**

Sequence	Attribute Name	Type	Size	Description
<b>Master record</b>				
1	Discriminator	String	1	Denotes master record type. Default value is always "P"
2	Action	String	10	Denotes file operation type. Allowed values are new/modify
3	Currency Code	String	3	Denotes Currency Code
4	Currency Name	String	105	Name of the currency
5	Country	String	3	Currency Country
6	Currency Decimals	Number	1	Currency Decimals
7	Currency Round Rule	String	1	Denotes Currency Round Rule
8	Currency Round Unit	Number	7	Denotes Currency Round Unit
9	Currency Format Mask	String	1	Denotes Currency Format Mask

Sequence	Attribute Name	Type	Size	Description
10	Currency Spot Days	Number	3	Number of spot working days applicable for the currency
11	Currency Int Method	Number	1	Currency Interest Method
12	Position GI	String	9	Position GL
13	Position Eqvgl	String	9	Position Equivalent GL
14	Currency Eur Type	String	1	Currency Euro Type
15	Currency Tol Limit	Number	7	Currency Tolerance Limit
16	Settlement Msg Days	Number	3	Settlement Message Days
17	Index Flag	String	1	Derives index rate of the currency
18	Index Base Currency	String	3	Index Base Currency
19	Cut Off Hr	Number	2	Hour of the day for the cut off
20	Cut Off Min	Number	2	Minute of the hour for the cut of
21	Alt Currency Code	String	10	Code of the alternate currency
22	Eur Conversion Reqd	String	1	Euro Conversion Required
23	Cut Off Days	Number	2	Cut Off Days for the payment transaction involving the currency
24	Cr Auto Ex Rate Lmt	Number	22	Credit Auto Exchange Rate Limit
25	Dr Auto Ex Rate Lmt	Number	22	Debit Auto Exchange Rate Limit
26	Currency Type	String	3	Denotes Currency Type

Sequence	Attribute Name	Type	Size	Description
27	Gen 103p	String	1	Generate outgoing MT 103 messages in the MT 103 + format
28	Cls Currency	String	1	CLS Currency
29	Fx Netting Days	Number	3	Foreign Exchange Netting Days
30	Iso Num Currency Code	String	3	International Standardization Organization numerical currency code
31	Gen Cust Cov	String	1	New Cover Message Format Required
32	Validate 50f	String	1	Validate Tag-50F
33	Maintenance Country	String	3	Maintenance Country
34	Commodity Code	String	1	Denotes Commodity Code
<b>Child record</b>				
1	Discriminator	String	1	Denotes child record type. Default value is always "C"
2	Maintenance Country	String	3	Maintenance Country
3	Country Code	String	3	Denotes Country Code
4	Country Desc	String	105	Name of the Country
5	Currency Code	String	3	Denotes Currency Code

Mandatory Fields are

- Discriminator
- Action
- Currency Code
- Currency Name
- Country
- Currency Decimals
- Currency Round Rule

- Currency Round Unit
- Currency Spot Days
- Currency Int Method
- Currency Eur Type
- Settlement Msg Days
- Index Flag
- Cut Off Hr
- Cut Off Min
- Alt Currency Code
- Eur Conversion Reqd
- Cut Off Days
- Gen 103p
- Cls Currency
- Fx Netting Days
- Gen Cust Cov
- Validate 50f
- Maintenance Country
- Commodity Code
- Discriminator (Child Record)
- Maintenance Country (Child Record)
- Country Code (Child Record)
- Country Desc (Child Record)
- Currency Code (Child Record)

## **7.5 BIC Directory File Upload**

BIC Directory File Upload is used to perform BIC directory maintenance in common core.

**File Type Supported** - CSV

**File Naming Convention** - CmcBICDirectory\_<UniqueName>.csv

**NOTE:** Replace the <UniqueName> for each file upload.

**Table 233: BIC Directory File Upload – Records**

Sequence	Attribute Name	Type	Size	Description
<b>Master record</b>				
1	Action	String	10	Denotes file operation type. Allowed values are new/modify
2	BIC Code	String	11	Indicates the unique BIC Code by which the bank is identified by SWIFT.
3	Bank Name	String	35	Name of the bank
4	Customer No	String	20	Customer Number
5	Sk Arrangement	String	1	Denotes the SWIFT key arrangement
6	Bank Address1	String	35	Indicates the bank address details of the customer - Address Line 1
7	Bank Address2	String	35	Indicates the bank address details of the customer - Address Line 2
8	Bank Address3	String	90	Indicates the bank address details of the customer - Address Line 3
9	Relationship	String	1	Relationship
10	Swift Key	String	50	Denotes the swift key details
11	Telex Key	String	50	Indicates the unique telex key for the BIC directory
12	Upload Flag	String	1	Upload Flag for the BIC directory
13	Upload Update	String	1	Updated the BIC directory during an upload
14	Gen Mt103	String	1	Indicates the counter party whose BIC code details you are capturing capacitate to receive payment messages in the MT 103 format



Sequence	Attribute Name	Type	Size	Description
15	Blacklisted	String	1	Indicates the BIC entity is blacklisted
16	CUG Member	String	1	Indicates the BIC entity is a closed user group member
17	Gen Mt103p	String	1	Indicates the counter party whose BIC code details you are capturing capacitate to receive payment messages in the MT 103 format
18	Multi Cust Transfer	String	1	Denotes the Multi-Customer Credit Transfer details
19	Max Size	Number	38	Indicates the maximum size
20	Remit Member	String	1	Indicates the customer is registered with MT 103 extended remittance information multiple user group
21	Sub Type Code	String	4	Denotes the Sub-Type Code
22	Gen Mt102p	String	1	Generates 102+ message
23	Gen Mt101	String	1	Indicates MT101 can be sent/received from this BIC
24	Transaction Per Msg	Number	40	Number of Transactions Per Page
25	ADB Member	String	1	Denotes the ADB member
26	BE Indicator	String	1	Denotes the BEI Indicator

Mandatory Fields are

- Action
- BIC Code
- Bank Name
- Sk Arrangement
- Bank Address1
- Bank Address2

- Bank Address3
- Relationship
- Swift Key
- Telex Key
- Upload Flag
- Upload Update
- Gen Mt103
- Blacklisted
- CUG Member
- Gen Mt103p
- Multi Cust Transfer
- Max Size
- Remit Member
- Gen Mt102p
- Gen Mt101
- Transaction Per Msg
- ADB Member
- BE Indicator

## 7.6 Local Holiday File Upload

Local Holiday File Upload is used to perform local holiday maintenance in common core.

**File Type Supported** - CSV

**File Naming Convention** - CmcBranchLocalHoliday\_<UniqueName>.csv

**NOTE:** Replace the <UniqueName> for each file upload.

**Table 234: Local Holiday File Upload – Records**

Sequence	Attribute Name	Type	Size	Description
<b>Master record</b>				
1	Discriminator	String	1	Denotes master record type. Default value is always "P"

Sequence	Attribute Name	Type	Size	Description
2	Action	String	10	Denotes file operation type. Allowed values are new/modify
3	Branch Code	String	3	Branch Code
4	Year	Number	4	Indicates the year details
5	Weekly Holidays	String	7	Defines weekly holidays
6	Unexp Hol	String	1	Define unexpected holidays
<b>Child record</b>				
1	Discriminator	String	1	Denotes child record type. Default value is always "C"
2	Branch Code	String	3	Branch Code
3	Year	Number	4	Indicates the year details
4	Month	Number	2	Indicates the month details
5	Holiday List	String	31	Denotes the Holiday List

Mandatory Fields are

- Discriminator
- Action
- Branch Code
- Year
- Weekly Holidays
- Unexp Hol
- Discriminator (Child record)
- Branch Code (Child record)
- Year (Child record)
- Month (Child record)
- Holiday List (Child record)

## 7.7 Currency Holiday File Upload

Country Code File Upload is used to perform country code maintenance in common core.

**File Type Supported** - CSV

**File Naming Convention** - CmcCurrencyHoliday\_<UniqueName>.csv

**NOTE:** Replace the <UniqueName> for each file upload.

**Table 235: Country Code File Upload – Records**

Sequence	Attribute Name	Type	Size	Description
<b>Master record</b>				
1	Discriminator	String	1	Denotes master record type. Default value is always "P"
2	Action	String	10	Denotes file operation type. Allowed values are new/modify
3	Currency	String	3	Currency
4	Year	Number	4	Indicates the year details
5	Weekly Holidays	String	7	Defines weekly holidays
<b>Child record</b>				
1	Discriminator	String	1	Denotes child record type. Default value is always "C"
2	Currency	String	3	Currency
3	Year	String	4	Indicates the year details
4	Month	Number	2	Indicates the month details
5	Holiday List	String	31	Denotes the Holiday List

Mandatory Fields are

- Discriminator
- Action
- Currency
- Year

- Weekly Holidays
- Discriminator (Child record)
- Currency (Child record)
- Year (Child record)
- Month (Child record)
- Holiday List (Child record)

## 7.8 External Customer File Upload

External Customer File Upload is used to perform external customer maintenance in common core.

**File Type Supported** - CSV

**File Naming Convention** - CmcCustomerMaint\_<UniqueName>.csv

**NOTE:** Replace the <UniqueName> for each file upload.

**Table 236: External Customer File Upload – Records**

Sequence	Attribute Name	Type	Size	Description
<b>Master record</b>				
1	Action	String	10	Denotes file operation type. Allowed values are new/modify
2	Country	String	3	Country of the customer
3	Language	String	3	Denotes the Language of the customer
4	Nationality	String	3	Denotes the Nationality of the customer
5	Locale	String	10	Indicates the Locale of the customer
6	Deceased	String	1	Indicates the customer is deceased
7	Frozen	String	1	Denotes the customer account is frozen
8	Whereabouts Unknown	String	1	Indicates the customer's whereabouts are unknown

Sequence	Attribute Name	Type	Size	Description
9	RmId	String	12	Relationship Manager ID
10	Sanctions Checks Required	String	1	Indicates the sanction check is required
11	Staff	String	1	Indicates a staff customer
12	Walkin Customer	String	1	Indicates a walk-in customer
13	Source System	String	35	Source System
14	Source System Cust No	String	35	Denotes the Source System Customer Number
15	Customer No	String	20	Number for the customer
16	Host Code	String	8	Denotes the Host Code
17	Customer Type	String	1	Type of Customer
18	Customer Category	String	10	Denotes the Customer Category
19	Customer Name1	String	105	Name of the customer
20	Short Name	String	20	Short name of the customer
21	Address Line1	String	105	Indicates the customer address details - Address Line 1
22	Address Line2	String	105	Indicates the customer address details - Address Line 2
23	Address Line3	String	105	Indicates the customer address details - Address Line 3
24	Address Line4	String	105	Indicates the customer address details - Address Line 4
25	Pincode	String	15	Denotes the postal code details of the customer

Mandatory Fields are

- Action

- Country
- Language
- Nationality
- Deceased
- Frozen
- Whereabouts Unknown
- Sanctions Checks Required
- Staff
- Walkin Customer
- Source System
- Source System Cust No
- Customer No
- Customer Type
- Customer Name1
- Short Name
- Address Line1
- Address Line2
- Address Line3
- Address Line4
- Pincode

## **7.9 External Customer Account File Upload**

External Customer Account File Upload is used to perform external customer account maintenance in common core.

**File Type Supported** - CSV

**File Naming Convention** - CmcAccountMaint\_<UniqueName>.csv

**NOTE:** Replace the <UniqueName> for each file upload.

**Table 237: External Customer Account File Upload – Records**

Sequence	Attribute Name	Type	Size	Description
<b>Master record</b>				
1	Action	String	10	Denotes file operation type. Allowed values are new/modify
2	Country Code	String	10	Country Code
3	Address4	String	105	Denotes the address details - Address Line 4
4	Address3	String	105	Denotes the address details - Address Line 3
5	Address2	String	105	Denotes the address details - Address Line 2
6	Address1	String	105	Denotes the address details - Address Line 1
7	Eca Check Req	String	1	Indicates External Credit Approval Required check is required for the external customer account
8	Account Class	String	6	Denotes the Account Class
9	Ac Stat Dormant	String	1	Indicates the account status is dormant
10	Ac Stat Frozen	String	1	Indicates the account status is frozen
11	GI Stat Blocked	String	1	Indicates the account status is blocked
12	Ac Stat No Dr	String	1	Indicates the account does not have any debit facility
13	Ac Stat No Cr	String	1	Indicates the account does not have any credit facility
14	Ac Open Date	String	35	Denotes the Account Open Date (Date format should be yyyy-MM-dd, i.e. 2018-03-30)



Sequence	Attribute Name	Type	Size	Description
15	Cust Ac Name	String	105	Account Name of the customer
16	Cust Ac Ccy	String	3	Account Currency of the customer
17	Customer No	String	20	Indicates the Customer Number
18	Source System Acc Brn	String	20	Denotes the Source Account Branch
19	Source System Acc No	String	35	Denotes the Source Customer Account Number
20	Source System	String	35	Source System
21	Cust Ac IBAN	String	35	Indicates the account IBAN details
22	Host Code	String	8	Denotes the host code details
23	Cust Account No	String	20	Indicates the Customer Account Number

Mandatory Fields are

- Action
- Country Code
- Address4
- Address3
- Address2
- Address1
- Eca Check Req
- Account Class
- Ac Stat Dormant
- Ac Stat Frozen
- GI Stat Blocked
- Ac Stat No Dr
- Ac Stat No Cr
- Ac Open Date

- Cust Ac Name
- Cust Ac Ccy
- Customer No
- Source System Acc Brn
- Source System Acc No
- Source System
- Host Code
- Cust Account No

## 7.10 Exchange Rate File Upload

Exchange Rate File Upload is used to perform exchange rate maintenance in common core.

**File Type Supported** - CSV

**File Naming Convention** - CmcCurrencyExchangeRate\_<UniqueName>.csv

**NOTE:** Replace the <UniqueName> for each file upload.

**Table 238: Exchange Rate File Upload – Records**

Sequence	Attribute Name	Type	Size	Description
<b>Master record</b>				
1	Discriminator	String	1	Denotes master record type. Default value is always "P"
2	Action	String	10	Denotes file operation type. Allowed values are new/modify
3	Branch Code	String	3	Branch for which exchange rate is applicable
4	Currency1	String	3	From currency pair
5	Currency2	String	3	To currency pair
<b>Child record</b>				
1	Discriminator	String	1	Denotes child record type. Default value is always "C"

Sequence	Attribute Name	Type	Size	Description
2	Branch Code	String	3	Branch for which exchange rate is applicable
3	Currency1	String	3	From currency pair
4	Currency2	String	3	To currency pair
5	Rate Type	Number	8	Denotes rate type defined in the system
6	Mid Rate	Number	25	Mid rate applicable for the current pair
7	Buy Spread	Number	40	Buy spread applicable for the currency
8	Sale Spread	Number	40	Sell spread applicable for the currency
9	Buy Rate	Number	25	Buy rate applicable for the currency
10	Sale Rate	Number	25	Sell rate applicable for the currency
11	Rate Date	String	35	Effective date applicable for the rate

Mandatory Fields are

- Discriminator
- Action
- Branch Code
- Currency1
- Currency2
- Discriminator
- Branch Code
- Currency1
- Currency2
- Rate Type
- Mid Rate
- Buy Spread
- Sale Spread

- Buy Rate
- Sale Rate
- Rate Date

## 8. Error Codes and Messages

This topic contains the error codes and messages:

**Table 239: Error Codes and Messages**

<b>Error Codes</b>	<b>Messages</b>
CC-01015	Default BIC Is Checked For More Than One BIC
CC-01016	Swift Address is Mandatory
CC-01017	Default BIC Is Not Checked For any BIC
CC-01018	Same Swift Address is present more than once
CC-01019	Mismatch in bank code
CC-ACC-002	Currency should be null for Multi-Currency Account
CC-ACC-102	Record already exist for Source Branch and Source Account No combination
CC-ACC-169	Reopen not allowed for a closed Customer No
CC-BIC-010	Bic code is being used in branch maintenance. Close not allowed.
CC-BIC02	The BIC code does not conform to SWIFT standards
CC-BIC05	Record already maintained for the customer no
CC-BNK-001	Branch code is in Open status. Close not allowed.
CC-BNK-002	Reopen not allowed for a closed Branch Code
CC-BNK-003	Only one Bank Code is allowed.
CC-BRN-101	Active account / accounts exist for the branch code. Close not allowed.
CC-BRN-102	This is HO branch. Close not allowed.
CC-BRN-103	Record for Source Branch Code already exists
CC-C00100	Relationship cannot be No for a Customer Linked BIC Code

<b>Error Codes</b>	<b>Messages</b>
CC-CUS-167	Record already exist for customer no and source_system_cust_no combination
CC-CUS-169	Active account/accounts exist for the customer no
CC-CUS-17	Kindly Enter a Valid Walkin Customer
CC-EC-002	Record already exist for Account IBAN
CC-ECA-001	Active \$1 exist for the Source System
CC-HST-001	Active \$1 exist for the Host Code
CC-MOD-001	\$1 cannot be modified
CC-MOD-INV	\$1 is invalid
CC-NUL-001	\$1 cannot be null
CC-TXN-001	\$1 is closed. Reopen not allowed.
CMC-ACC-FOR01	Cannot reopen forgotten account
CMC-ACC-PII01	User doesnt have access to PII data, cannot perform create or modify operations
CMC-ACC-SUBAC01	No SubAccounts available for Multi-Currency Account
CMC-ACC-SUBAC02	Exactly one account should be primary account
CMC-ACC-SUBAC03	Sub Accounts should have unique currency code
CMC-BRN-018	Exception occurred in ICFIIPDate
CMC-BRN-019	Unable to get branch date
CMC-BRN-020	Branch code is null
CMC-BRN-100	Branch Status retrieved Successfully
CMC-BRN-101	Branch doesnot exist
CMC-BRN-CD01	Date changed successfully
CMC-BRN-CD02	Failed to change date, holiday list not maintained properly

<b>Error Codes</b>	<b>Messages</b>
CMC-BRN-EOD01	Branch Status not in TI, cannot initiate EOD
CMC-BRN-EOD02	EOD invoked for the branch
CMC-BRN-EOD03	Invalid Branch Code
CMC-BRN-EOD04	Eod Requested on Date is not Branch's Today
CMC-BRN-EOD05	EOD cannot be invoked on a holiday
CMC-BRN-EOD06	Date changed successfully
CMC-BRN-EOD07	EOD not invoked, cannot initiate change date
CMC-BRN-EOD08	EOF1 job not completed, cannot initiate change date
CMC-BRN-EOD09	EOD not invoked, cannot initiate mark TI
CMC-BRN-EOD10	Date Change job not completed, cannot initiate TI for next day
CMC-BRN-EOD11	Mark TI successful
CMC-BRN-EOD12	Branch status not in TI, cannot initiate Mark EOF1
CMC-BRN-EOD13	Branch status not in EOF1, cannot change Date
CMC-BRN-EOD14	Branch status for next working date update to BOD
CMC-BRN-EOD15	Branch status not in BOD, cannot mark TI
CMC-BRN-EOD16	Branch status for next working date update to TI
CMC-BRN-EOD17	Branch Status Changed to EOF1
CMC-BRN-EOD18	Invoke Mark TI failed
CMC-BRN-EOD19	Date change completed cannot retrigger
CMC-BRN-EOD20	Mark TI completed cannot retrigger
CMC-BRN-EOD21	Date changed failed
CMC-BRN-EOD30	Invalid requested date, failed to parse
CMC-BRN-EOD31	Mark Eoti retry initiated

<b>Error Codes</b>	<b>Messages</b>
CMC-BRN-EOD32	Cannot retry Mark EOFI which has not failed
CMC-BRN-EOD33	Date Changed successfully. \$1
CMC-BRN-EOD34	BOD Batches completed successfully.
CMC-BRN-EOD35	BOD Batches retriggered successfully. \$1
CMC-BRN-EOD36	\$1. Hence EOFI Failed.
CMC-BRN-EOD37	Failed in getting current date
CMC-CCY-001	Duplicate records exists in Amount word currency Mapping
CMC-CCY-002	Duplicate records exists in Amount Text Mapping
CMC-CCY-003	Cannot change Currency Decimal for once authorized currencies
CMC-CCY-004	Cannot Change round unit if the round rule is Truncate (T)
CMC-CCY-005	Mandatory field Interest Method is not entered
CMC-CCY-006	Mandatory field Spot Days is not entered
CMC-CCY-007	Mandatory field Settlement Days is not entered
CMC-CCY-008	Mandatory field Country is not entered
CMC-CCY-009	Mandatory field Rule is not entered
CMC-CCY-010	Value should be in range of 0 and 999 for Settlement Days
CMC-CCY-011	Mandatory field Unit is not entered
CMC-CCY-012	Decimals/ Rounding Unit Mismatch
CMC-CCY-013	Numerator of Interest Method is not Actual
CMC-CCY-014	Duplicate Alternate Currency Code
CMC-CCY-015	Duplicate ISO Numeric Currency Code
CMC-CCY-016	Duplicate Euro currency



<b>Error Codes</b>	<b>Messages</b>
CMC-CCY-017	Euro Conversion required cannot be changed for the currency types out, Euro and Euro closed
CMC-CCY-018	Spot days is less than fx netting days
CMC-CCY-019	Currency Cut Off days cannot be greater than spot days for currency
CMC-CCY-020	Spot Days for currency cannot be lesser than cut off days for currency
CMC-CCY-021	Value should be in range of 1 and 99 for Cut Off Days
CMC-CCY-022	Value should be in range of 1 and 23 for Cut Off Hour
CMC-CCY-023	Value should be in range of 1 and 59 for Cut Off Min
CMC-CCY-024	Value cannot be less than .00000 for Currency Total limit
CMC-CCY-025	Value should be in range of 0 and 3 for Currency Decimal
CMC-CCY-026	Country Code is Mandatory
CMC-CCY-027	Duplicate records exists in Currency Country Mapping
CMC-CCY-028	Mandatory field Country is not entered in Currency Country Mapping
CMC-CCY-029	Currency Code is NULL
CMC-CCY-030	Date is NULL
CMC-CCY-031	Date is Invalid (should be in yyyy-mm-dd format)
CMC-CCY-032	No record found
CMC-CCY-033	Next/Previous indicator is NULL (should be either N or P)
CMC-CCY-034	Next/Previous indicator is Invalid (should be either N or P)
CMC-CCY-035	Lower Limit Date is Invalid (should be in yyyy-mm-dd format)
CMC-CCY-036	Upper Limit Date is Invalid (should be in yyyy-mm-dd format)
CMC-CCY-037	Offset is NULL
CMC-CCY-038	Offset is Invalid (should be > 0)

<b>Error Codes</b>	<b>Messages</b>
CMC-CCY-039	Input date should be between Upper limit date and Lower limit date
CMC-CCY-040	Duplicate records exists in CurrencyHolidays
CMC-CCY-041	Mandatory Through Currency Code is not entered
CMC-CCY-042	Cannot change spread definition option for through currency pair
CMC-CCY-043	Through currency should be blank if the through currency is unchecked
CMC-CCY-044	Through currency has to be of type Euro
CMC-CCY-045	Through Currency is not allowed for Euro In Currency Pair
CMC-CCY-046	Points multiplier should be in the range 0 - 1
CMC-CCY-047	MidRate is invalid
CMC-CCY-048	BuySpread is invalid
CMC-CCY-049	SaleSpread is invalid
CMC-CCY-050	Atleast one Currency Rate Should be Maintained
CMC-CCY-051	Duplicate records exists in Rate
CMC-CCY-052	Currency Code is NULL
CMC-CCY-053	Currency Code is Empty
CMC-CCY-054	Amount is NULL
CMC-CCY-055	Option is NULL
CMC-CCY-056	Option is Empty
CMC-CCY-057	Method is NULL
CMC-CCY-058	Method is Empty
CMC-CCY-059	Decimal is NULL
CMC-CCY-060	Units is NULL

<b>Error Codes</b>	<b>Messages</b>
CMC-CCY-061	Maintenance Country is NULL
CMC-CCY-062	Maintenance Country is Empty
CMC-CCY-063	Currency1/Currency2/branch Code is NULL
CMC-CCY-065	Error in conversion
CMC-CCY-066	Rate is not handled for currency1 and currency2
CMC-CCY-067	Rate is not handled for currency2 and currency1
CMC-CCY-068	Error in Amount rounding
CMC-CCY-069	Currency definition is not maintained for given currency and maintenance country
CMC-CCY-070	Error in getting branch currency and country
CMC-CCY-071	Error in getting currency pair for currency1 and currency2
CMC-CCY-072	Error in getting Premium points for currency1 and currency2
CMC-CCY-073	Error in getting rate with through currency
CMC-CCY-074	Error in getting Rate
CMC-CCY-075	Rate History is not handled for currency1 and currency2
CMC-CCY-076	Rate History is not handled for currency2 and currency1
CMC-CCY-077	Currency Pair is not maintained
CMC-CCY-078	Error in purging
CMC-CCY-079	Data inadequate in currency Pair Definition
CMC-CCY-080	Currency Pair already exists for the given Maintenance Country
CMC-CCY-081	MidRate is mandatory
CMC-CCY-082	Either buySpread/buyRate are mandatory
CMC-CCY-083	Either saleSpread/saleRate are mandatory

<b>Error Codes</b>	<b>Messages</b>
CMC-CUS-FOR01	Record successfully deleted
CMC-CUS-PII01	User doesnt have access to PII data, cannot perform create or modify operations
CMC-EOD-001	Invoked EOD successfully
CMC-EOD-002	Failed while resolving current date
CMC-EOD-003	EOD flow is not maintained for \$1 branch
CMC-EOD-004	EOD already invoked for today
CMC-EOD-005	Unable to invoke EOD
CMC-EOD-006	Retried EOD successfully
CMC-EOD-007	Failed to retry EOD
CMC-EOD-008	Pending maintenances exist. Failed to start EOD
CMC-EOD-009	Failed during pending maintenance check
CMC-EOD-010	Pending transactions exist. Failed to start EOD
CMC-EOD-011	Failed during pending transaction check
CMC-EOD-012	Marked cutoff for the branch successfully
CMC-EOD-013	Branch not in Transaction Input. Cannot mark cutoff
CMC-EOD-014	Branch not in BOD stage. Cannot release cutoff
CMC-EOD-015	Released cutoff for the branch successfully
CMC-EOD-016	Branch cutoff not released. Cannot mark Transaction Input
CMC-EOD-017	Branch cutoff not marked. Cannot mark End of Transaction Input
CMC-FORC-001	Request is null, not valid.
CMC-FORC-002	Forget customers request created successfully.
CMC-FORC-003	Failed to create forget entities request.

<b>Error Codes</b>	<b>Messages</b>
CMC-FORC-004	Invalid id sent, id null
CMC-FORC-005	Already authorized
CMC-FORC-006	Authorized successfully
CMC-FORC-007	Record not found, invalid id.
CMC-FORC-008	Cannot delete authorized record
CMC-FORC-009	Record successfully deleted
CMC-FORC-010	Invalid Customer \$1 added, customer should be valid and in closed and authorized state without pending maintenance
CMC-FORC-011	Invalid request. Duplicate requests for customer number \$1
CMC-INDBML-000	Failed with error - \$1
CMC-INDBML-001	Usecase already exists with a same name
CMC-INDBML-002	Target Column cannot be null
CMC-INDBML-003	Unique Case Identifier Column cannot be null
CMC-INDBML-004	Invalid Partition column value
CMC-INDBML-005	Duplicate Column Values
CMC-INDBML-006	Partition Columns cannot be same as either of target, usecase identifier or prediction column.
CMC-LOV-001	Invalid Source Code
CMC-LOV-002	Invalid Currency
CMC-LOV-003	Cannot Close the record for which rates are maintained
CMC-LOV-004	Invalid Language Code
CMC-LOV-005	Invalid Country
CMC-LOV-006	Invalid GLCode
CMC-LOV-007	Invalid Limit Currency

<b>Error Codes</b>	<b>Messages</b>
CMC-LOV-008	Invalid Year
CMC-LOV-009	Invalid Month
CMC-LOV-010	Amount Limit Exceeds
CMC-LOV-011	Invalid Version
CMC-LOV-012	Rate Type \$1 is invalid
CMC-NLP-000	System is unable to process the request
CMC-NLP-001	Training File created successfully
CMC-NLP-002	Training File creation failed
CMC-NLP-003	Service definition not found for \$1 for use case \$2
CMC-NLP-004	Unsupported file type uploaded please upload supported file type
CMC-NLP-005	You don't have sufficient number of training files for use case \$1 to train the model
CMC-NLP-006	Invalid training files are present in the training corpus
CMC-NLP-007	Error in processing step \$1
CMC-NLP-008	Successfully completed the processing of process \$1
CMC-OBRH-001	Record already exists.
CMC-OBRH-002	Record saved successfully.
CMC-OBRH-003	Record does not exist.
CMC-OBRH-004	Invalid Payload
CMC-OBRH-005	Record deleted successfully.
CMC-OBRH-006	Record modified successfully.
CMC-OBRH-007	Data fetched successfully.
CMC-OBRH-008	Data exported successfully.

<b>Error Codes</b>	<b>Messages</b>
CMC-OBRH-009	Failed to get data.
CMC-OBRH-010	Cannot start disabled route.
CMC-OBRH-011	Data imported successfully.
CMC-OBRH-012	Failed to import.
CMC-OBRH-013	Failed to parse [\$1]
CMC-OBRH-014	Data extracted successfully.
CMC-OBRH-015	Route state cannot be changed to Start as Consumer Service / Provider is inactive.
CMC-OBRH-016	Modified/Deleted attribute is already in use by route.
CMC-OBRH-017	Something went wrong!
CMC-OBRH-018	Imported WSDL successfully
CMC-OBRH-019	Imported Swagger successfully
CMC-OBRH-020	Failed to import [\$1]
CMC-OBRH-021	Failed to export [\$1]
CMC-OBRH-022	Request failed [\$1]
CMC-OBRH-023	Request is being processed
CMC-ORCH-001	Failed to initiate.
CMC-ORCH-002	Transaction is successfully initiated.
CMC-ORCH-003	Invalid action, failed to initiate.
CMC-ORCH-004	\$1 is not submitted, transaction remains the same.
CMC-ORCH-005	Cannot proceed with submit as the action is not initiated.
CMC-ORCH-006	Cannot proceed with submit as the information is incomplete.
CMC-ORCH-007	Failed to submit.

<b>Error Codes</b>	<b>Messages</b>
CMC-ORCH-008	Record successfully submitted.
CMC-ORCH-009	\$1 is in-progress, failed to initiate.
CMC-ORCH-010	Aw, snap! An unexpected exception occurred, try again.
CMC-ORCH-011	Invalid request.
CMC-ORCH-012	Cannot proceed with submit as the action is not initiated.
CMC-ORCH-013	Cannot find the provided information.
CMC-ORCH-014	Record is not yet submitted by \$1, cannot initiate the action.
CMC-ORCH-015	Record already unlocked by \$1.
CMC-ORCH-016	One record can be authorized at a time. Please close the screen and try again
CMC-ORCH-017	Current operation terminated
CMC-ORCH-018	Current operation could not be terminated
CMC-OV-001	Override Codes must not be empty
CMC-OV-002	Business Overrides Saved Successfully
CMC-OV-003	Business Overrides Updated Successfully
CMC-OV-004	Business Overrides Authorized Successfully
CMC-OV-005	Business Overrides Approval Pending
CMC-OV-006	Maker Cannot Authorize
CMC-OV-007	Multiple Authorizations not allowed for checker
CMC-OV-008	No Records found for approval
CMC-OV-009	Maker should approve the records
CMC-OV-010	Reference number is not valid
CMC-OV-011	Exception Occurred while converting string to number



<b>Error Codes</b>	<b>Messages</b>
CMC-OV-012	Server Error Occurred during API call
CMC-OV-013	Client Error Occurred during API call
CMC-OV-014	Illegal State Exception Occurred
CMC-OV-015	JTA Transaction unexpectedly rolled back
CMC-OV-016	Exception Occurred while creating Bean
CMC-OV-017	Unexpected Exception Occurred
CMC-OV-018	Exception Occurred while Executing Query
CMC-STR-001	mandatory fields are missing...
CMC-STR-002	invalid real account number
CMC-STR-003	Real Account No cannot be modified
CMC-STR-004	Structured Address is already created for this Real Account
CMC-STR-005	Structured Address is already created for this External Virtual Account
CMC-STR-006	invalid virtual account number
CMC-STR-007	Virtual Account No cannot be modified
CMC-VAM-001	Rolled Back Due to Exception
ERR_DEF_CODE	System is unable to process the request
GCS-AUTH-01	Record Successfully Authorized
GCS-AUTH-02	Valid modifications for approval were not sent. Failed to match
GCS-AUTH-03	Maker cannot authorize
GCS-AUTH-04	No Valid unauthroized modifications found for approval.
GCS-CLOS-002	Record Successfully Closed
GCS-CLOS-01	Record Already Closed
GCS-CLOS-02	Record Successfully Closed

<b>Error Codes</b>	<b>Messages</b>
GCS-CLOS-03	Unauthorized record cannot be closed, it can be deleted before first authorization
GCS-COM-001	Record does not exist
GCS-COM-002	Invalid version sent, operation can be performed only on latest version
GCS-COM-003	Please Send Proper ModNo
GCS-COM-004	Please send makerId in the request
GCS-COM-005	Request is Null. Please Resend with Proper SELECT
GCS-COM-006	Unable to parse JSON
GCS-COM-007	Request Successfully Processed
GCS-COM-008	Modifications should be consecutive.
GCS-COM-009	Resource ID cannot be blank or "null".
GCS-COM-010	Successfully cancelled \$1.
GCS-COM-011	\$1 failed to update.
GCS-DEL-001	Record deleted successfully
GCS-DEL-002	Record(s) deleted successfully
GCS-DEL-003	Modifications didnt match valid unauthorized modifications that can be deleted for this record
GCS-DEL-004	Send all unauthorized modifications to be deleted for record that is not authorized even once.
GCS-DEL-005	Only Maker of first version of record can delete modifications of record that is not once authorized.
GCS-DEL-006	No valid unauthroized modifications found for deleting
GCS-DEL-007	Failed to delete. Only maker of the modification(s) can delete.
GCS-MOD-001	Closed Record cannot be modified

<b>Error Codes</b>	<b>Messages</b>
GCS-MOD-002	Record Successfully Modified
GCS-MOD-003	Record marked for close, cannot modify.
GCS-MOD-004	Only maker of the record can modify before once auth
GCS-MOD-005	Not amendable field, cannot modify
GCS-MOD-006	Natural Key cannot be modified
GCS-MOD-007	Only the maker can modify the pending records.
GCS-REOP-003	Successfully Reopened
GCS-REOP-01	Unauthorized Record cannot be Reopened
GCS-REOP-02	Failed to Reopen the Record, cannot reopen Open records
GCS-REOP-03	Successfully Reopened
GCS-REOP-04	Unauthorized record cannot be reopened, record should be closed and authorized
GCS-SAV-001	Record already exists
GCS-SAV-002	Record Saved Successfully.
GCS-SAV-003	The record is saved and validated successfully.
GCS-VAL-001	The record is successfully validated.
ML-TS-001	Invalid Data Source
ML-TS-002	Invalid datatype for case ID
ML-TS-003	Timeseries Model Training Failed
ML-TS-004	Use Case Name cannot have dash
ML-RG-001	Regression Model Build Failed
ML-RG-002	Regression Model Statistics Calculation Failed
ML-RG-003	Cross Validation Failed

<b>Error Codes</b>	<b>Messages</b>
ML-RG-004	Model Selection Failed
ML-RG-005	Model Successfully Trained
ML-RG-006	Invalid Use Case Selected
ML-RG-007	No Trained Model found
ML-RG-008	Batch Scoring Failed
ML-RG-009	Successfully completed Batch scoring
ML-CLS-001	Mandatory IN Parameters are NULL
ML-CLS-002	Stratified Sampling Failed
ML-CLS-003	Stratified dataset Split Failed
ML-CLS-004	Correlation Check Failed
ML-CLS-005	Model Metrics Computation Failed
ML-CLS-006	Only Binary Target Class Supported for Generalized Linear Model
ML-CLS-007	Failed to Select Final Algorithm
ML-CLS-008	Dynamic Execute Statement Failed
ML-CLS-009	Classification Model Build Failed
ML-CLS-010	Classification Model Successfully Built
ML-CLS-011	No Trained Classification Model Found
ML-CLS-012	Failed to Predict
ML-CLS-013	Classification Batch Scoring Failed
ML-CLS-014	Successfully completed Batch scoring. Result are available at \$1
ML-CORR-001	Correlation completed successfully
ML-CORR-002	Correlation Failed
ML-CORR-003	Correlation analysis not completed fully

<b>Error Codes</b>	<b>Messages</b>
ML-UTIL-001	Invalid Table Name
ML-UTIL-002	Invalid column Name(s)
ML-UTIL-003	Failed in Random Sampling
ML-UTIL-004	Too less data for model building
ML-UTIL-005	Failed in Splitting Data
ML-UTIL-006	Failed in Selecting Feature
ML-UTIL-007	Failed to Drop Model(s)
ST-CUS-167	Record already exist for customer no and source_system_cust_no combination
ST-SAVE-027	Request Successfully Processed
CBS-CRITERIA-001	Criteria Code cannot be blank
CBS-CRITERIA-002	Criteria Description cannot be blank
CBS-CRITERIA-003	Select valid Product Processor
CBS-CRITERIA-004	Atleast one Rule should be selected in Criteria Definition
CBS-CRITERIA-005	Rule Description cannot be blank
CBS-CRITERIA-006	Select a Rule ID from the list
CBS-CRITERIA-007	Enter a valid number for Priority
CBS-CRITERIA-008	Enter a valid number for Priority
CBS-CRITERIA-009	Duplicate entries found for Rule ID
CBS-CRITERIA-010	Duplicate entries found for Priority
CBS-CRITERIA-011	Enter valid Parent Rule ID for
CBS-CRITERIA-012	Duplicate entries found for Rule ID
CBS-CRITERIA-013	Cannot add child Rule when Call All Bureau is enabled

Error Codes	Messages
CBS-CRITERIA-014	Duplicate entries found for Priority
CBS_ERR_004	Parameter description cannot be modified
CBS_LKUP_01	Duplicate entries found for Lookup Code
CBS_500	Error occurred at Bureau Call Response structure from Bureau is different
CBS_SYSPAR_001	System parameter not maintained for the bureau for history call
CBS_400	Facts not found for Bureau identification Rule Empty response from criteria for given PPcode Empty response from Oracle Banking Routing Hub from bureau call Bureau identification Rule not found for given facts
CBS-CRTR-015	Criteria Code has exceeded the max length specified
CBS-CRTR-016	Description has exceeded the max length specified
CBS-CRTR-017	Rule Id has exceeded the max length specified
CBS-CRTR-018	Rule Description has exceeded the max length specified
CBS_BR_DTLS_NOT_FOUND	Bureau Details are not provided
CBS_BR_DTLS_NOT_MNT	Bureau Details are not maintained for +{reqBureauProductType} (variable, value will be replaced at runtime from payload)
CDS-DML-006	Invalid range definition. Either range or value is allowed
CDS-DML-007	Duplicate \$1 values are not allowed
CDS-DML-010	From value should not be greater than To value
CDS-RUL-001	Error occurred while evaluating the rule
CDS-DML-003	Effective date should be less than Expiry Date
CDS-PRC-006	Effective date should be less than the Expiry Date

Error Codes	Messages
CDS-DML-002	Maintain at least one record in \$1
CDS-DML-014	Effective date cannot be less than the Product Processor Effective date.
CDS-PRC-014	Effective date cannot be less than the Product Processor Effective Date.
CDS-DML-017	if dmlAppEnabledInd is selected as N then dmlFeature can not be null
CDS-DML-018	if dmlAppEnabledInd is selected as y then dmlScoreRuleId can not be null
CDS-DML-022	Input parameter is missing or incorrect. Unable to resolve any scoring model
CDS-DML-023	Input parameter is missing or incorrect. Unable to calculate the score
CDS-DML-013	Invalid product processor
CDS-PRC-011	Incorrect Range Definition. Range definition should be continuous in \$1
CDS-PRC-012	Duplicate \$1 values are not allowed
CDS-DML-015	Product Processor is not authorized
CDS-DML-011	Incorrect Range Definition. Range definition should be continuous
CDS-DML-012	Input parameter is missing or incorrect. Unable to resolve any pricing setup
CDS-QFT-001	if qftRuleApplicableInd is selected as y then qftRuleName and qftRuleId cannot be null
CDS-QFT-002	if qftRuleApplicableInd is selected as N then qftFactName and qftFactId cannot be null
CDS-QFT-005	qftCode cannot be other than alphanumeric
CDS-QFT-004	Fact or rule not found
CDS-DML-008	Invalid rule name

<b>Error Codes</b>	<b>Messages</b>
CDS-PRC-0010	Fact or rule not found
CDS-PRC-007	Pricing Rate definition should be greater than or equal to minimum rate and less than or equal to maximum rate
CDS-PRC-009	rate percentage of range cannot be equal to zero or less than the previous one
CDS-PRC-005	\$1 should be equal to or greater than the System date
CDS-PRC-010	Invalid product processor
CDS-PRC-004	Maintain at least one record \$1
CDS-PRC-001	Min Rate cannot be less than zero or not be more than max rate
CDS-PRC-003	Overlapping price range definition not allowed \$1
CDS-PRC-002	Rate Type cannot any other keyword
CDS-PRC-008	\$1 cannot be less than or equal to zero
CDS-DML-009	Unable to resolve any scoring model
CDS-PPR-001	\$1 should be equal to or greater than the System date
CDS-DML-005	Overlapping range definition not allowed in \$1
CDS-QFT-003	Invalid product processor
CDS-DML-001	\$1 should be equal to or greater than the Posting date
CDS-DML-019	Unable to resolve the best fit scoring model. Multiple scoring model resolved
CDS-DML-016	Unable to resolve the best fit pricing model. Multiple pricing model resolved
CDS-DML-004	The sum of weightage assigned to the feature code should be 100
CDS-PPR-002	Effective date should be less than Expiry Date
CDS-PRC-013	Rate definition should be greater than or equal to minimum rate and less than or equal to maximum rate



<b>Error Codes</b>	<b>Messages</b>
CDS-DML-020	Unable to resolve the best fit application scoring model Multiple application scoring model resolved
CDS-DML-021	Unable to resolve the best fit decision and grade matrix. Multiple decision and grade matrix resolved
CDS-BWC-001	\$1 should be equal to or greater than the System date
CDS-BWC-002	Maintain at least one record in \$1
CDS-BWC-003	Effective date should be less than the Expiry Date
CDS-BWC-014	Effective date cannot be less than the Product Processor Effective date
CDS-STG-006	Effective Date cannot be null or blank
CDS-STG-007	Expiry Date cannot be null or blank
CDS-STG-008	Industry cannot be null or blank
CDS-STG-009	Module cannot be null or blank
CDS-STG-010	Line of Business cannot be null or blank
CDS-STG-011	Effective date should be less than the Expiry Date
CDS-STG-012	Expiry Date should be equal to or greater then the System date
CDS-STG-013	Invalid Strategy Code
CDS-STG-014	Invalid Industry
CDS-STG-015	Invalid Module
CDS-STG-016	Invalid Line of Business
CDS-STG-017	Invalid product processor
CDS-STG-018	Invalid Account Category
CDS-STG-019	Invalid modes for the selected module
CDS-STG-020	Invalid combination of steps for selected modes

Error Codes	Messages
CDS-STG-021	Record already exists
CDS-STG-022	Effective date cannot be less than the Product Processor Effective Date
CDS-RUL-002	Fact already exists
CDS-STG-023	Invalid combination of modes and steps
CDS-DML-043	Invalid \$1 sent
CDS-DML-040	FeatureDTO missing. Kindly enter the details
CDS-LML-029	Logical Model Reason Code is Invalid
CDS-DML-024	Negative values not allowed
CDS-DML-025	Category not allowed in case of multi applicant scoring model
CDS-DML-026	Percentage cannot be greater than 100
CDS-DML-027	For multi-applicant max value not allowed
CDS-DML-028	Max value not required for range type Value
CDS-DML-029	Range type cannot be null
CDS-DML-030	Max value cannot be null
CDS-DML-031	Please enter a valid scoring model type
CDS-DML-032	Please enter a valid range type
CDS-DML-033	Feature list not required for application model
CDS-DML-034	Scoring rule id not required for the scoring model type
CDS-DML-035	Please enter a valid feature type
CDS-DML-036	Only range Type Value is allowed, for fact type feature
CDS-DML-037	Only range Type ParamPercent is allowed, for rule based feature
CDS-DML-038	Only range Type Value is allowed, for Text type fact

<b>Error Codes</b>	<b>Messages</b>
CDS-DML-039	Category code missing
CDS-LML-015	Logical Model Code size must be between 1 and 30
CDS-LML-016	Logical Model Description size must be between 1 and 240
CDS-LML-017	Logical Model Effective Date cannot be null
CDS-LML-018	Logical Model Expiry Date cannot be null
CDS-LML-019	Logical Model Rule Id size must be between 1 and 80
CDS-LML-020	Logical Model Details Rule Id cannot be null
CDS-LML-021	Reason Code cannot be null
CDS-LML-022	Logical Model comments size must be between 1 and 80
CDS-LML-023	Logical Model Sequence must be in the range of 1 to 999
CDS-LML-024	Logical Model Sequence is Incorrect
CDS-LML-025	Logical Model Priority must be in the range of 1 to 100
CDS-LML-026	Logical Model Details cannot be null or empty
CDS-LML-027	Rule Id cannot be duplicate
CDS-LML-028	Invalid Rule Id
CDS-QUR-001	Invalid Input for QuestionnaireId, can not be null or blank
CDS-QUR-002	Invalid Input for QuestionnaireId, null or blank required
CDS-QUR-003	Invalid Input for QuestionId, null or blank required
CDS-QUR-004	Invalid Input for QuestionId, can not be null or blank
CDS-QUR-005	Questionnaire Code cannot be null or empty
CDS-QUR-006	Questionnaire Description cannot be null or empty
CDS-QUR-007	Product Processor cannot be null or empty
CDS-QUR-008	Question Code cannot be null or empty

Error Codes	Messages
CDS-QUR-009	Question Short Name cannot be null or empty
CDS-QUR-010	Question Description cannot be null or empty
CDS-QUR-011	Question Type cannot be null or empty
CDS-QUR-012	Answer Description cannot be null or empty
CDS-QUR-013	Questionnaire Code size must be between 1 and 30
CDS-QUR-014	Questionnaire Description size must be between 1 and 240
CDS-QUR-015	Question Code cannot be duplicate for a product processor
CDS-QUR-016	Question Sequence Number cannot be null, empty or zero, negative
CDS-QUR-017	Answer Option Sequence Number cannot be null, empty or zero, negative
CDS-QUR-018	Question Sequence Number cannot be duplicate for a questionnaire
CDS-QUR-019	Answer Option Sequence Number cannot be duplicate for a Question
CDS-QUR-020	Answer OptionId cannot be null or empty
CDS-QUR-021	Answer OptionId cannot be duplicate for a question
CDS-BWC-004	Incorrect execution stage
CDS-BWC-005	\$1 fact or rule not found
CDS-QUR-022	Input for whether Question Mandatory cannot be null or empty
CDS-QUR-023	System will not allow to add questions where response choice has not been captured,At least 2 record should be available
CDS-QUR-024	System will not allow to save the questionnaire without any question configured, Atleast 1 question should be configured in the questionnaire
CDS-QUR-025	Question Code cannot be duplicate for a questionnaire.
CDS-STG-024	Invalid type and value for additional info

<b>Error Codes</b>	<b>Messages</b>
CDS-STG-025	Selection of atleast 1 mode is mandatory
CDS-STG-026	Effective date cannot be updated after authorisation
CDS-STG-027	Multiple values of same type are not allowed under Additional Information
CDS-LOOKUP-001	Lookup Type must be alphanumeric
CDS-LOOKUP-002	Lookup Type must be between 1 and 30
CDS-LOOKUP-003	Lookup Description must be between 1 and 240
CDS-LOOKUP-004	Duplicate lookup codes not allowed
CDS-STG-001	Strategy Code cannot be null or blank
CDS-STG-002	Strategy Code Description cannot be null or blank
CDS-STG-003	Product Processor cannot be null or blank.
CDS-STG-004	Product Processor Description cannot be null or blank.
CDS-STG-005	Account Category cannot be null or blank.
CDS-DML-041	Multiple Range definitions not allowed in case of MultiApplicant Scoring Model
CDS-DML-042	Incorrect Range Definition. \$1

## 9. Functional Activity Codes

This topic contains the functional activity codes:

**Table 240: Functional Activity Codes**

Screen Name	Functional Activity Code
<b>External Chart Account</b>	CMC_FA_EXT_CHART_ACC_AMEND
	CMC_FA_EXT_CHART_ACC_AUTHORIZE
	CMC_FA_EXT_CHART_ACC_CLOSE
	CMC_FA_EXT_CHART_ACC_DELETE
	CMC_FA_EXT_CHART_ACC_NEW
	CMC_FA_EXT_CHART_ACC_REOPEN
	CMC_FA_EXT_CHART_ACC_VIEW
<b>Upload Source Preference</b>	CMC_FA_UPLOAD_SOURCE_AMEND
	CMC_FA_UPLOAD_SOURCE_AUTHORIZE
	CMC_FA_UPLOAD_SOURCE_CLOSE
	CMC_FA_UPLOAD_SOURCE_DELETE
	CMC_FA_UPLOAD_SOURCE_NEW
	CMC_FA_UPLOAD_SOURCE_PREF_AMEND
	CMC_FA_UPLOAD_SOURCE_PREF_AUTHORIZE
	CMC_FA_UPLOAD_SOURCE_PREF_CLOSE
	CMC_FA_UPLOAD_SOURCE_PREF_DELETE
	CMC_FA_UPLOAD_SOURCE_PREF_NEW
	CMC_FA_UPLOAD_SOURCE_PREF_REOPEN
	CMC_FA_UPLOAD_SOURCE_PREF_VIEW
	CMC_FA_UPLOAD_SOURCE_REOPEN

Screen Name	Functional Activity Code
	CMC_FA_UPLOAD_SOURCE_VIEW
<b>BIC Directory</b>	CMC_FA_BIC_DIRECTORY_AUTHORIZE
	CMC_FA_BIC_DIRECTORY_CLOSE
	CMC_FA_BIC_DIRECTORY_CREATE
	CMC_FA_BIC_DIRECTORY_DELETE
	CMC_FA_BIC_DIRECTORY_LOV
	CMC_FA_BIC_DIRECTORY_MODIFY
	CMC_FA_BIC_DIRECTORY_REOPEN
	CMC_FA_BIC_DIRECTORY_VIEW
<b>Country Code</b>	CMC_FA_COUNTRY_CODE_AMEND
	CMC_FA_COUNTRY_CODE_AUTHORIZE
	CMC_FA_COUNTRY_CODE_CLOSE
	CMC_FA_COUNTRY_CODE_DELETE
	CMC_FA_COUNTRY_CODE_NEW
	CMC_FA_COUNTRY_CODE_REOPEN
	CMC_FA_COUNTRY_CODE_VIEW
<b>Currency Definition</b>	CMC_FA_CURRENCY_DEFN_AMEND
	CMC_FA_CURRENCY_DEFN_AUTHORIZE
	CMC_FA_CURRENCY_DEFN_CLOSE
	CMC_FA_CURRENCY_DEFN_DELETE
	CMC_FA_CURRENCY_DEFN_LOV
	CMC_FA_CURRENCY_DEFN_NEW
	CMC_FA_CURRENCY_DEFN_REOPEN

Screen Name	Functional Activity Code
	CMC_FA_CURRENCY_DEFN_VIEW
<b>Currency Holiday Master</b>	CMC_FA_CURRENCY_HOLIDAY_AMEND
	CMC_FA_CURRENCY_HOLIDAY_AUTHORIZE
	CMC_FA_CURRENCY_HOLIDAY_CLOSE
	CMC_FA_CURRENCY_HOLIDAY_DELETE
	CMC_FA_CURRENCY_HOLIDAY_NEW
	CMC_FA_CURRENCY_HOLIDAY_REOPEN
	CMC_FA_CURRENCY_HOLIDAY_VIEW
<b>Currency Pair Definition</b>	CMC_FA_CURRENCY_PAIR_DEFN_AMEND
	CMC_FA_CURRENCY_PAIR_DEFN_AUTHORIZE
	CMC_FA_CURRENCY_PAIR_DEFN_CLOSE
	CMC_FA_CURRENCY_PAIR_DEFN_DELETE
	CMC_FA_CURRENCY_PAIR_DEFN_NEW
	CMC_FA_CURRENCY_PAIR_DEFN_REOPEN
	CMC_FA_CURRENCY_PAIR_DEFN_VIEW
<b>Currency Rate Type</b>	CMC_FA_CURRENCY_RATE_TYPE_AMEND
	CMC_FA_CURRENCY_RATE_TYPE_AUTHORIZE
	CMC_FA_CURRENCY_RATE_TYPE_CLOSE
	CMC_FA_CURRENCY_RATE_TYPE_DELETE
	CMC_FA_CURRENCY_RATE_TYPE_NEW
	CMC_FA_CURRENCY_RATE_TYPE_REOPEN
	CMC_FA_CURRENCY_RATE_TYPE_VIEW
<b>Customer Category</b>	CMC_FA_CUSTOMER_CATEGORY_AMEND



Screen Name	Functional Activity Code
	CMC_FA_CUSTOMER_CATEGORY_AUTHORIZE
	CMC_FA_CUSTOMER_CATEGORY_CLOSE
	CMC_FA_CUSTOMER_CATEGORY_DELETE
	CMC_FA_CUSTOMER_CATEGORY_NEW
	CMC_FA_CUSTOMER_CATEGORY_REOPEN
	CMC_FA_CUSTOMER_CATEGORY_VIEW
<b>Customer Access Group</b>	CMC_FA_CUST_ACCESS_GET
	CMC_FA_CUST_ACCESS_VIEW
	CMC_FA_CUST_ACCESS_CREATE
	CMC_FA_CUST_ACCESS_UPDATE
	CMC_FA_CUST_ACCESS_AUTHORIZE
	CMC_FA_CUST_ACCESS_CLOSE
	CMC_FA_CUST_ACCESS_DELETE
	CMC_FA_CUST_ACCESS_ACTIONS
	CMC_FA_CUST_ACCESS_AGGREGATE
	CMC_FA_CUST_ACCESS_HISTORY
	CMC_FA_CUST_ACCESS_UNAUTH
	CMC_FA_CUST_ACCESS_UNLOCK
	CMC_FA_CUST_ACCESS_REOPEN
	CMC_FA_CUST_ACCESS_SUBMIT
	CMC_FA_CUST_ACCESS_VALIDATE
	CMC_FA_CUST_ACCESS_GROUP_GETBYDESCP

Screen Name	Functional Activity Code
<b>ECA System</b>	CMC_FA_ECA_SYSTEM_AUTHORIZE
	CMC_FA_ECA_SYSTEM_CLOSE
	CMC_FA_ECA_SYSTEM_CREATE
	CMC_FA_ECA_SYSTEM_DELETE
	CMC_FA_ECA_SYSTEM_LOV
	CMC_FA_ECA_SYSTEM_MODIFY
	CMC_FA_ECA_SYSTEM_REOPEN
	CMC_FA_ECA_SYSTEM_VIEW
<b>External Bank Parameters</b>	CMC_FA_EXT_BANK_PARAMETERS_AUTHORIZE
	CMC_FA_EXT_BANK_PARAMETERS_CLOSE
	CMC_FA_EXT_BANK_PARAMETERS_CREATE
	CMC_FA_EXT_BANK_PARAMETERS_DELETE
	CMC_FA_EXT_BANK_PARAMETERS_LOV
	CMC_FA_EXT_BANK_PARAMETERS_MODIFY
	CMC_FA_EXT_BANK_PARAMETERS_REOPEN
	CMC_FA_EXT_BANK_PARAMETERS_VIEW
<b>External Branch Parameters</b>	CMC_FA_EXT_BRANCH_GETSTATUS
	CMC_FA_EXT_BRANCH_PARAMETERS_AUTHORIZE
	CMC_FA_EXT_BRANCH_PARAMETERS_CLOSE
	CMC_FA_EXT_BRANCH_PARAMETERS_CREATE
	CMC_FA_EXT_BRANCH_PARAMETERS_DELETE
	CMC_FA_EXT_BRANCH_PARAMETERS_LOV
	CMC_FA_EXT_BRANCH_PARAMETERS_MODIFY

Screen Name	Functional Activity Code
	CMC_FA_EXT_BRANCH_PARAMETERS_REOPEN
	CMC_FA_EXT_BRANCH_PARAMETERS_VIEW
<b>External Customer</b>	CMC_FA_EXT_CUSTOMER_AUTHORIZE
	CMC_FA_EXT_CUSTOMER_CLOSE
	CMC_FA_EXT_CUSTOMER_CREATE
	CMC_FA_EXT_CUSTOMER_DELETE
	CMC_FA_EXT_CUSTOMER_LOV
	CMC_FA_EXT_CUSTOMER_MODIFY
	CMC_FA_EXT_CUSTOMER_REOPEN
	CMC_FA_EXT_CUSTOMER_VIEW
<b>Host Code</b>	CMC_FA_HOST_CODE_AUTHORIZE
	CMC_FA_HOST_CODE_CLOSE
	CMC_FA_HOST_CODE_CREATE
	CMC_FA_HOST_CODE_DELETE
	CMC_FA_HOST_CODE_LOV
	CMC_FA_HOST_CODE_MODIFY
	CMC_FA_HOST_CODE_REOPEN
	CMC_FA_HOST_CODE_VIEW
<b>Language Code</b>	CMC_FA_LANGUAGE_CODE_AMEND
	CMC_FA_LANGUAGE_CODE_AUTHORIZE
	CMC_FA_LANGUAGE_CODE_CLOSE
	CMC_FA_LANGUAGE_CODE_DELETE
	CMC_FA_LANGUAGE_CODE_NEW

Screen Name	Functional Activity Code
	CMC_FA_LANGUAGE_CODE_REOPEN
	CMC_FA_LANGUAGE_CODE_VIEW
<b>Local Holiday</b>	CMC_FA_LOCAL_HOLIDAY_AMEND
	CMC_FA_LOCAL_HOLIDAY_AUTHORIZE
	CMC_FA_LOCAL_HOLIDAY_CLOSE
	CMC_FA_LOCAL_HOLIDAY_DELETE
	CMC_FA_LOCAL_HOLIDAY_NEW
	CMC_FA_LOCAL_HOLIDAY_REOPEN
	CMC_FA_LOCAL_HOLIDAY_VIEW
<b>System Dates</b>	CMC_FA_SYSTEM_DATES_AMEND
	CMC_FA_SYSTEM_DATES_AUTHORIZE
	CMC_FA_SYSTEM_DATES_CLOSE
	CMC_FA_SYSTEM_DATES_DELETE
	CMC_FA_SYSTEM_DATES_NEW
	CMC_FA_SYSTEM_DATES_REOPEN
	CMC_FA_SYSTEM_DATES_TODAY
	CMC_FA_SYSTEM_DATES_VIEW
<b>Amount Text Language</b>	CMC_FA_AMTXTLANG_AMEND
	CMC_FA_AMTXTLANG_AUTHORIZE
	CMC_FA_AMTXTLANG_CLOSE
	CMC_FA_AMTXTLANG_DELETE
	CMC_FA_AMTXTLANG_NEW
	CMC_FA_AMTXTLANG_REOPEN

Screen Name	Functional Activity Code
	CMC_FA_AMTXTLANG_VIEW
<b>Branch EOD</b>	CMC_FA_CORE_BRANCH_EOD_AMEND
	CMC_FA_CORE_BRANCH_EOD_CURRENT_DATE
	CMC_FA_CORE_BRANCH_EOD_FLIPDATE
	CMC_FA_CORE_BRANCH_EOD_MAP
	CMC_FA_CORE_BRANCH_EOD_MAP_AMEND
	CMC_FA_CORE_BRANCH_EOD_MAP_AUTHORIZE
	CMC_FA_CORE_BRANCH_EOD_MAP_CLOSE
	CMC_FA_CORE_BRANCH_EOD_MAP_COPY
	CMC_FA_CORE_BRANCH_EOD_MAP_DELETE
	CMC_FA_CORE_BRANCH_EOD_MAP_NEW
	CMC_FA_CORE_BRANCH_EOD_MAP_VIEW
	CMC_FA_CORE_BRANCH_EOD_MAP_VIEWALL
	CMC_FA_CORE_BRANCH_EOD_MARKEOTI
	CMC_FA_CORE_BRANCH_EOD_MARKTI
	CMC_FA_CORE_BRANCH_EOD_RETRY
	CMC_FA_CORE_BRANCH_EOD_VIEWBYBRANCHDATE
	CMC_FA_CORE_BRANCH_EOD_VIEWBYID
	CMC_FA_BATCH_INVOKEEOD
	CMC_FA_BATCH_FLIPDATE
	CMC_FA_BRANCH_EOD_PROCESS
	CMC_FA_BRANCH_EOD_SERVICE_START
CMC_FA_BRANCH_EOD_SERVICE_STATUS	

Screen Name	Functional Activity Code
	CMC_FA_BRANCH_EOD_SERVICE_RETRY
<b>Forget Process</b>	CMC_FA_CORE_FORGET_CUSTOMER_AUTHORIZE
	CMC_FA_CORE_FORGET_CUSTOMER_CREATE
	CMC_FA_CORE_FORGET_CUSTOMER_DELETE
	CMC_FA_CORE_FORGET_CUSTOMER_MODIFY
	CMC_FA_CORE_FORGET_CUSTOMER_VIEW
	CMC_FA_EXT_CUSTOMER_INVOKEFORGETACCBATCH
	CMC_FA_FORGET_CORECUSTOMERS
	CMC_FA_GET_FORGET_CORECUSTOMERS
	CMC_FA_EXT_ACCOUNT_FORGETACCOUNT
	CMC_FA_EXT_ACCOUNT_INVOKEBATCH
	CMC_FA_FORGET_COREACCOUNTS
	CMC_FA_GET_FORGET_COREACCOUNTS
	<b>Multi-Currency Account Linkage</b>
CMC_FA_MCA_LINKAGE_CLOSE	
CMC_FA_MCA_LINKAGE_CREATE	
CMC_FA_MCA_LINKAGE_DELETE	
CMC_FA_MCA_LINKAGE_MODIFY	
CMC_FA_MCA_LINKAGE_REOPEN	
CMC_FA_MCA_LINKAGE_VIEW	
<b>Transaction Code</b>	CMC_FA_TRN_CODE_AUTHORIZE
	CMC_FA_TRN_CODE_CLOSE
	CMC_FA_TRN_CODE_CREATE

Screen Name	Functional Activity Code
	CMC_FA_TRN_CODE_DELETE
	CMC_FA_TRN_CODE_LOV
	CMC_FA_TRN_CODE_MODIFY
	CMC_FA_TRN_CODE_REOPEN
	CMC_FA_TRN_CODE_VIEW
<b>Routing Hub</b>	CMC_FA_RH_DASHBOARD_HEALTH_INDICATOR
	CMC_FA_RH_CONFIG
	CMC_FA_RH_APPLICATION
	CMC_FA_RH_DISPATCH_AUDIT_LOG
	CMC_FA_RH_AUDIT_LOG
	CMC_FA_RH_CONFIG_CREATE
	CMC_FA_RH_CONFIG_DELETE
	CMC_FA_RH_CONFIG_MODIFY
	CMC_FA_RH_CONFIG_GET
	CMC_FA_RH_DISPATCH_AUDIT_GETALL
	CMC_FA_RH_METRICS_GET
	CMC_FA_RH_SERVICECONSUMER_CREATE
	CMC_FA_RH_SERVICECONSUMER_DELETE
	CMC_FA_RH_SERVICECONSUMER_GETALL
	CMC_FA_RH_SERVICECONSUMER_GETBYID
	CMC_FA_RH_SERVICECONSUMER_MODIFY
	CMC_FA_RH_SERVICECONSUMER_EXPORT
	CMC_FA_RH_SERVICECONSUMER_IMPORT

Screen Name	Functional Activity Code
	CMC_FA_RH_SERVICECONSUMER_PROCESSJSON
	CMC_FA_RH_SERVICECONSUMER_SERVICE_MODIFY
	CMC_FA_RH_SERVICECONSUMER_SERVICE_IMPORT
	CMC_FA_RH_SERVICECONSUMER_SERVICE_CREATE
	CMC_FA_RH_SERVICECONSUMER_SERVICE_EXPORT
	CMC_FA_RH_SERVICECONSUMER_SERVICE_GETBYID
	CMC_FA_RH_SERVICECONSUMER_SERVICE_GETALL
	CMC_FA_RH_SERVICECONSUMER_SERVICE_DELETE
	CMC_FA_RH_SERVICECONSUMER_SERVICEROUTING_CREATE
	CMC_FA_RH_SERVICECONSUMER_SERVICEROUTING_MODIFY
	CMC_FA_RH_SERVICECONSUMER_SERVICEROUTING_GETALL
	CMC_FA_RH_SERVICECONSUMER_SERVICEROUTING_GETBYID
	CMC_FA_RH_SERVICECONSUMER_SERVICEROUTING_DELETE
	CMC_FA_RH_SERVICECONSUMER_SERVICETRANSFORMATION_GETALL
	CMC_FA_RH_SERVICECONSUMER_SERVICETRANSFORMATION_IMPORT
	CMC_FA_RH_SERVICECONSUMER_SERVICETRANSFORMATION_DELETE
	CMC_FA_RH_SERVICECONSUMER_SERVICETRANSFORMATION_EXPORT
	CMC_FA_RH_SERVICECONSUMER_SERVICETRANSFORMATION_GETBYID
	CMC_FA_RH_SERVICECONSUMER_SERVICETRANSFORMATION_MODIFY



Screen Name	Functional Activity Code
	CMC_FA_RH_SERVICECONSUMER_SERVICETRANSFORMATION_CREATE
	CMC_FA_RH_PROVIDEDSERVICE_IMPORT
	CMC_FA_RH_SERVICEPROVIDER_GENERATEREQUEST
	CMC_FA_RH_SERVICEPROVIDER_CREATE
	CMC_FA_RH_SERVICEPROVIDER_MODIFY
	CMC_FA_RH_SERVICEPROVIDER_GETBYID
	CMC_FA_RH_SERVICEPROVIDER_GETALL
	CMC_FA_RH_SERVICEPROVIDER_DELETE
	CMC_FA_RH_SERVICEPROVIDER_EXPORT
	CMC_FA_RH_SERVICEPROVIDER_IMPORT
	CMC_FA_RH_SERVICEPROVIDER_IMPL_CREATE
	CMC_FA_RH_SERVICEPROVIDER_IMPL_MODIFY
	CMC_FA_RH_SERVICEPROVIDER_IMPL_GETBYID
	CMC_FA_RH_SERVICEPROVIDER_IMPL_GETALL
	CMC_FA_RH_SERVICEPROVIDER_IMPL_DELETE
	CMC_FA_RH_SERVICEPROVIDER_IMPL_IMPORT
	CMC_FA_RH_SERVICEPROVIDER_IMPL_EXPORT
	CMC_FA_RH_SERVICEPROVIDER_IMPL_GENERATEREQUEST
<b>Borrowing Capacity</b>	CMC_OBCDS_FA_BWC_ACTIONS
	CMC_OBCDS_FA_BWC_AMEND
	CMC_OBCDS_FA_BWC_AUTHORIZE
	CMC_OBCDS_FA_BWC_AUTHORIZE

Screen Name	Functional Activity Code
	CMC_OBCDS_FA_BWC_AUTHQUERY
	CMC_OBCDS_FA_BWC_CLOSE
	CMC_OBCDS_FA_BWC_DELETE
	CMC_OBCDS_FA_BWC_HISTORY
	CMC_OBCDS_FA_BWC_NEW
	CMC_OBCDS_FA_BWC_REOPEN
	CMC_OBCDS_FA_BWC_VALIDATE_LOV
	CMC_OBCDS_FA_BWC_VIEW
	CMC_OBCDS_FA_BWC_VIEWALL
	CMC_OBCDS_FA_BWC_VIEWCHANGES
<b>Decision Matrix</b>	CMC_OBCDS_FA_DGM_ACTIONS
	CMC_OBCDS_FA_DGM_AMEND
	CMC_OBCDS_FA_DGM_AUTHORIZE
	CMC_OBCDS_FA_DGM_AUTHORIZE
	CMC_OBCDS_FA_DGM_AUTHQUERY
	CMC_OBCDS_FA_DGM_CLOSE
	CMC_OBCDS_FA_DGM_DELETE
	CMC_OBCDS_FA_DGM_GETALLDGMDATA
	CMC_OBCDS_FA_DGM_GETDGXCODES
	CMC_OBCDS_FA_DGM_HISTORY
	CMC_OBCDS_FA_DGM_NEW
	CMC_OBCDS_FA_DGM_REOPEN
	CMC_OBCDS_FA_DGM_VALIDATE_LOV

Screen Name	Functional Activity Code
	CMC_OBCDS_FA_DGM_VIEW
	CMC_OBCDS_FA_DGM_VIEWALL
	CMC_OBCDS_FA_DGM_VIEWCHANGES
<b>Quantitative Scoring Model</b>	CMC_OBCDS_FA_DML_ACTIONS
	CMC_OBCDS_FA_DML_AMEND
	CMC_OBCDS_FA_DML_AUTHORIZE
	CMC_OBCDS_FA_DML_AUTHORIZE
	CMC_OBCDS_FA_DML_AUTHQUERY
	CMC_OBCDS_FA_DML_CLOSE
	CMC_OBCDS_FA_DML_DELETE
	CMC_OBCDS_FA_DML_HISTORY
	CMC_OBCDS_FA_DML_NEW
	CMC_OBCDS_FA_DML_REOPEN
	CMC_OBCDS_FA_DML_VALIDATE_LOV
	CMC_OBCDS_FA_DML_VIEW
	CMC_OBCDS_FA_DML_VIEWALL
	CMC_OBCDS_FA_DML_VIEWCHANGES
<b>Fetch Credit Decision Service</b>	CMC_OBCDS_FA_FETCH_CREDIT_DECISION
<b>Validation Model</b>	CMC_OBCDS_FA_LML_ACTIONS
	CMC_OBCDS_FA_LML_AMEND
	CMC_OBCDS_FA_LML_AUTHORIZE
	CMC_OBCDS_FA_LML_AUTHORIZE

Screen Name	Functional Activity Code
	CMC_OBCDS_FA_LML_AUTHQUERY
	CMC_OBCDS_FA_LML_CLOSE
	CMC_OBCDS_FA_LML_DELETE
	CMC_OBCDS_FA_LML_HISTORY
	CMC_OBCDS_FA_LML_NEW
	CMC_OBCDS_FA_LML_REOPEN
	CMC_OBCDS_FA_LML_VALIDATE_LOV
	CMC_OBCDS_FA_LML_VIEW
	CMC_OBCDS_FA_LML_VIEWALL
	CMC_OBCDS_FA_LML_VIEWCHANGES
<b>Lookup</b>	CMC_OBCDS_FA_LOOKUPS_ACTIONS
	CMC_OBCDS_FA_LOOKUPS_AMEND
	CMC_OBCDS_FA_LOOKUPS_AUTHORIZE
	CMC_OBCDS_FA_LOOKUPS_AUTHORIZE
	CMC_OBCDS_FA_LOOKUPS_AUTHQUERY
	CMC_OBCDS_FA_LOOKUPS_CLOSE
	CMC_OBCDS_FA_LOOKUPS_CODE_VIEW
	CMC_OBCDS_FA_LOOKUPS_DELETE
	CMC_OBCDS_FA_LOOKUPS_HISTORY
	CMC_OBCDS_FA_LOOKUPS_NEW
	CMC_OBCDS_FA_LOOKUPS_REOPEN
	CMC_OBCDS_FA_LOOKUPS_VALIDATE_LOV
	CMC_OBCDS_FA_LOOKUPS_VIEW

Screen Name	Functional Activity Code
	CMC_OBCDS_FA_LOOKUPS_VIEWALL
	CMC_OBCDS_FA_LOOKUPS_VIEWCHANGES
<b>System Parameter</b>	CMC_OBCDS_FA_PMT_ACTIONS
	CMC_OBCDS_FA_PMT_AMEND
	CMC_OBCDS_FA_PMT_AUTHORIZE
	CMC_OBCDS_FA_PMT_AUTHORIZE
	CMC_OBCDS_FA_PMT_AUTHQUERY
	CMC_OBCDS_FA_PMT_CLOSE
	CMC_OBCDS_FA_PMT_DELETE
	CMC_OBCDS_FA_PMT_HISTORY
	CMC_OBCDS_FA_PMT_NEW
	CMC_OBCDS_FA_PMT_REOPEN
	CMC_OBCDS_FA_PMT_VALIDATE_LOV
	CMC_OBCDS_FA_PMT_VIEW
	CMC_OBCDS_FA_PMT_VIEWALL
	CMC_OBCDS_FA_PMT_VIEWCHANGES
<b>Product Processor</b>	CMC_OBCDS_FA_PPR_ACTIONS
	CMC_OBCDS_FA_PPR_AMEND
	CMC_OBCDS_FA_PPR_AUTHORIZE
	CMC_OBCDS_FA_PPR_AUTHORIZE
	CMC_OBCDS_FA_PPR_AUTHQUERY
	CMC_OBCDS_FA_PPR_CLOSE
	CMC_OBCDS_FA_PPR_DELETE

Screen Name	Functional Activity Code
	CMC_OBCDS_FA_PPR_HISTORY
	CMC_OBCDS_FA_PPR_NEW
	CMC_OBCDS_FA_PPR_REOPEN
	CMC_OBCDS_FA_PPR_VALIDATE_LOV
	CMC_OBCDS_FA_PPR_VIEW
	CMC_OBCDS_FA_PPR_VIEWALL
	CMC_OBCDS_FA_PPR_VIEWCHANGES
<b>Pricing Model</b>	CMC_OBCDS_FA_PRC_ACTIONS
	CMC_OBCDS_FA_PRC_AMEND
	CMC_OBCDS_FA_PRC_AUTHORIZE
	CMC_OBCDS_FA_PRC_AUTHORIZE
	CMC_OBCDS_FA_PRC_AUTHQUERY
	CMC_OBCDS_FA_PRC_CLOSE
	CMC_OBCDS_FA_PRC_DELETE
	CMC_OBCDS_FA_PRC_HISTORY
	CMC_OBCDS_FA_PRC_NEW
	CMC_OBCDS_FA_PRC_REOPEN
	CMC_OBCDS_FA_PRC_VALIDATE_LOV
	CMC_OBCDS_FA_PRC_VIEW
	CMC_OBCDS_FA_PRC_VIEWALL
	CMC_OBCDS_FA_PRC_VIEWCHANGES
<b>Scoring Feature</b>	CMC_OBCDS_FA_QFT_ACTIONS
	CMC_OBCDS_FA_QFT_AMEND

Screen Name	Functional Activity Code
	CMC_OBCDS_FA_QFT_AUTHORIZE
	CMC_OBCDS_FA_QFT_AUTHORIZE
	CMC_OBCDS_FA_QFT_AUTHQUERY
	CMC_OBCDS_FA_QFT_CLOSE
	CMC_OBCDS_FA_QFT_DELETE
	CMC_OBCDS_FA_QFT_HISTORY
	CMC_OBCDS_FA_QFT_NEW
	CMC_OBCDS_FA_QFT_REOPEN
	CMC_OBCDS_FA_QFT_VALIDATE_LOV
	CMC_OBCDS_FA_QFT_VIEW
	CMC_OBCDS_FA_QFT_VIEWALL
	CMC_OBCDS_FA_QFT_VIEWCHANGES
<b>Qualitative Scoring Model</b>	CMC_OBCDS_FA_QUAL_ACTIONS
	CMC_OBCDS_FA_QUAL_AMEND
	CMC_OBCDS_FA_QUAL_AUTHORIZE
	CMC_OBCDS_FA_QUAL_AUTHORIZE
	CMC_OBCDS_FA_QUAL_AUTHQUERY
	CMC_OBCDS_FA_QUAL_CLOSE
	CMC_OBCDS_FA_QUAL_DELETE
	CMC_OBCDS_FA_QUAL_HISTORY
	CMC_OBCDS_FA_QUAL_NEW
	CMC_OBCDS_FA_QUAL_REOPEN
	CMC_OBCDS_FA_QUAL_VALIDATE_LOV

Screen Name	Functional Activity Code
	CMC_OBCDS_FA_QUAL_VIEW
	CMC_OBCDS_FA_QUAL_VIEWALL
	CMC_OBCDS_FA_QUAL_VIEWCHANGES
<b>Questionnaire</b>	CMC_OBCDS_FA_QUES_ACTIONS
	CMC_OBCDS_FA_QUES_AMEND
	CMC_OBCDS_FA_QUES_AUTHORIZE
	CMC_OBCDS_FA_QUES_AUTHORIZE
	CMC_OBCDS_FA_QUES_AUTHQUERY
	CMC_OBCDS_FA_QUES_CLOSE
	CMC_OBCDS_FA_QUES_DELETE
	CMC_OBCDS_FA_QUES_HISTORY
	CMC_OBCDS_FA_QUES_NEW
	CMC_OBCDS_FA_QUES_REOPEN
	CMC_OBCDS_FA_QUES_VALIDATEQUSCODE
	CMC_OBCDS_FA_QUES_VALIDATE_LOV
	CMC_OBCDS_FA_QUES_VIEW
	CMC_OBCDS_FA_QUES_VIEWALL
	CMC_OBCDS_FA_QUES_VIEWCHANGES
	CMC_OBCDS_FA_QUES_VIEWPPR
	CMC_OBCDS_FA_QUES_VIEWQURCODE
<b>Strategy Configuration</b>	CMC_OBCDS_FA_STRATEGYCONFIG_AMEND
	CMC_OBCDS_FA_STRATEGYCONFIG_AUTHORIZE
	CMC_OBCDS_FA_STRATEGYCONFIG_AUTHQUERY



Screen Name	Functional Activity Code
	CMC_OBCDS_FA_STRATEGYCONFIG_VIEWCHANGES
	CMC_OBCDS_FA_STRATEGYCONFIG_CLOSE
	CMC_OBCDS_FA_STRATEGYCONFIG_DELETE
	CMC_OBCDS_FA_STRATEGYCONFIG_NEW
	CMC_OBCDS_FA_STRATEGYCONFIG_REOPEN
	CMC_OBCDS_FA_STRATEGYCONFIG_VIEW
	CMC_OBCDS_FA_STRATEGYCONFIG_VIEWALL
	CMC_OBCDS_FA_STRATEGYCONFIG_VALIDATE_LOV
	CMC_OBCDS_FA_STRATEGYCONFIG_HISTORY
	CMC_OBCDS_FA_STRATEGYCONFIG_ACTIONS
	CMC_OBCDS_FA_STRATEGYCONFIG_AUTHORIZE
<b>Credit Bureau Display</b>	CMC_CBR_FA_CBD_ACTIONS
	CMC_CBR_FA_CBD_AMEND
	CMC_CBR_FA_CBD_AUTHORIZE
	CMC_CBR_FA_CBD_AUTHQUERY
	CMC_CBR_FA_CBD_CLOSE
	CMC_CBR_FA_CBD_DELETE
	CMC_CBR_FA_CBD_HISTORY
	CMC_CBR_FA_CBD_NEW
	CMC_CBR_FA_CBD_REOPEN
	CMC_CBR_FA_CBD_VALIDATE_LOV
	CMC_CBR_FA_CBD_VIEW
	CMC_CBR_FA_CBD_VIEWALL

Screen Name	Functional Activity Code
	CMC_CBR_FA_CBD_VIEWCHANGES
<b>Criteria</b>	CMC_CBR_FA_CRITERIA_ACTIONS
	CMC_CBR_FA_CRITERIA_AMEND
	CMC_CBR_FA_CRITERIA_AUTHORIZE
	CMC_CBR_FA_CRITERIA_AUTHQUERY
	CMC_CBR_FA_CRITERIA_CLOSE
	CMC_CBR_FA_CRITERIA_DELETE
	CMC_CBR_FA_CRITERIA_HISTORY
	CMC_CBR_FA_CRITERIA_NEW
	CMC_CBR_FA_CRITERIA_REOPEN
	CMC_CBR_FA_CRITERIA_VALIDATE_LOV
	CMC_CBR_FA_CRITERIA_VIEW
	CMC_CBR_FA_CRITERIA_VIEWALL
	CMC_CBR_FA_CRITERIA_VIEWCHANGES
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	CMC_CBR_FA_LOOKUP_AUTHORIZE
	CMC_CBR_FA_LOOKUP_AUTHQUERY
	CMC_CBR_FA_LOOKUP_CLOSE
	CMC_CBR_FA_LOOKUP_DELETE
	CMC_CBR_FA_LOOKUP_HISTORY
	CMC_CBR_FA_LOOKUP_NEW
	CMC_CBR_FA_LOOKUP_REOPEN

Screen Name	Functional Activity Code
	CMC_CBR_FA_LOOKUP_VALIDATE_LOV
	CMC_CBR_FA_LOOKUP_VIEW
	CMC_CBR_FA_LOOKUP_VIEWALL
	CMC_CBR_FA_LOOKUP_VIEWCHANGES
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	CMC_FA_SYSTEM_PARAM_AUTHORIZE
	CMC_FA_SYSTEM_PARAM_AUTHQUERY
	CMC_FA_SYSTEM_PARAM_CLOSE
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	CMC_FA_SYSTEM_PARAM_HISTORY
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	CMC_OBCBS_FA_PPR_CLOSE
	CMC_OBCBS_FA_PPR_DELETE

<b>Screen Name</b>	<b>Functional Activity Code</b>
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	CMC_OBCBS_FA_PPR_NEW
	CMC_OBCBS_FA_PPR_REOPEN
	CMC_OBCBS_FA_PPR_VALIDATE_LOV
	CMC_OBCBS_FA_PPR_VIEW
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## 10. Glossary

This section provides a glossary of all terms and abbreviations used in the user manual.

### **Accounts**

Continuing financial relationship between a bank and a customer, in which deposits and debts are held and processed within a framework of established rules and procedures.

### **Reports**

A page containing information organized in a narrative, graphic, or tabular format, prepared on ad-hoc, periodic, recurring, regular, or as required basis. Reports may refer to specific periods, events, occurrences, or subjects.

### **Pareto Chart**

It is a type of chart that consists of both bars and a line graph, where individual values are represented in descending order by bars, and the cumulative total is represented by the line.

### **Sunburst Chart**

It is a type of chart that is ideal for displaying hierarchical data. Each level of the hierarchy is represented by one ring or circle with the innermost circle as the top of the hierarchy. A sunburst chart without any hierarchical data (one level of categories), looks similar to a doughnut chart.

### **Virtual Account**

Virtual accounts are provided to a corporate by its banking partner. Each account is a subsidiary or sub-account of the client's own physical account with the bank; they cannot exist outside of the immediate relationship; hence they are virtual.

### **Virtual Identifier**

Virtual identifier serves to segregate any funds from any other funds in the same main account and yet is inextricably linked to the virtual account.

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## 12. Feedback and Support

Oracle welcomes customers' comments and suggestions on the quality and usefulness of the document. Your feedback is important to us. If you have a query that is not covered in this user guide or if you still need assistance, please contact documentation team.