2 Bureau Integration Service

This topic provides the overview about the Bureau Integration Service.

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.

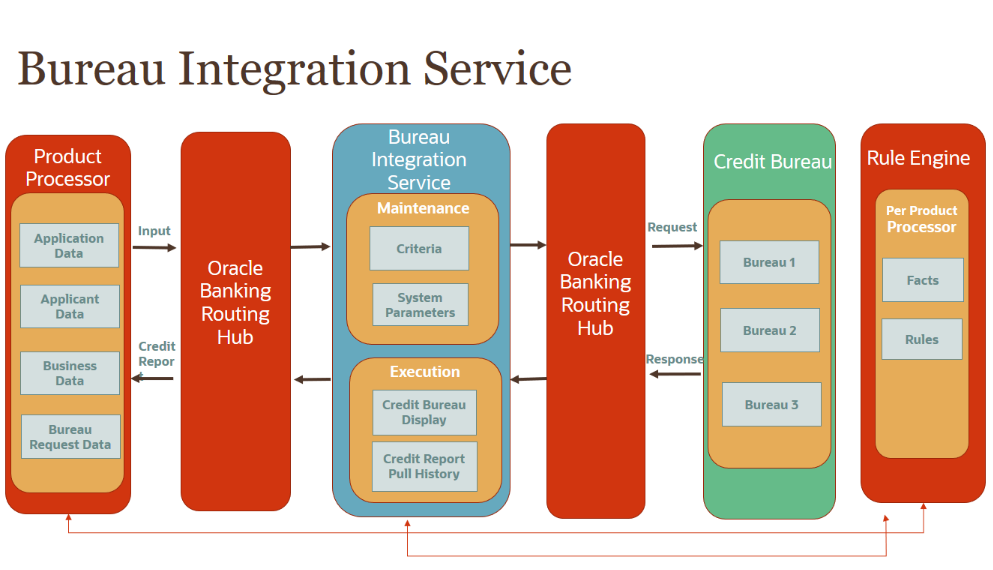
A new bureau can be added with only a configuration and without any change in the code. Two lookup types are required to be created in the bureau integration service. One for bureau and another for bureau product type. The additional maintenance required is configuration of the new bureau in the routing 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 2-1   Bureau Integration Service



- [Overview](#)
  This topic describes the overview about the Decision service.
- [System Parameter](#)
  This topic describes the information about the system parameter configured in Bureau Integration service.
- [Lookup](#)
  This topic describes the information about the lookup feature in Bureau Integration service.

- Product Processor
  This topic describes the information about the product processor.
- Criteria
  This topic describes the information about the criteria to identify the Credit Bureau.
- Credit Bureau Display
  This topic describes the information about Credit Bureau display.
- Integrating Bureau Integration Service with Oracle Banking Routing Hub
  This topic describes the information to integrate the Bureau Integration service with Oracle Banking Routing Hub.

2.1 Overview

This topic describes the overview about the Decision service.

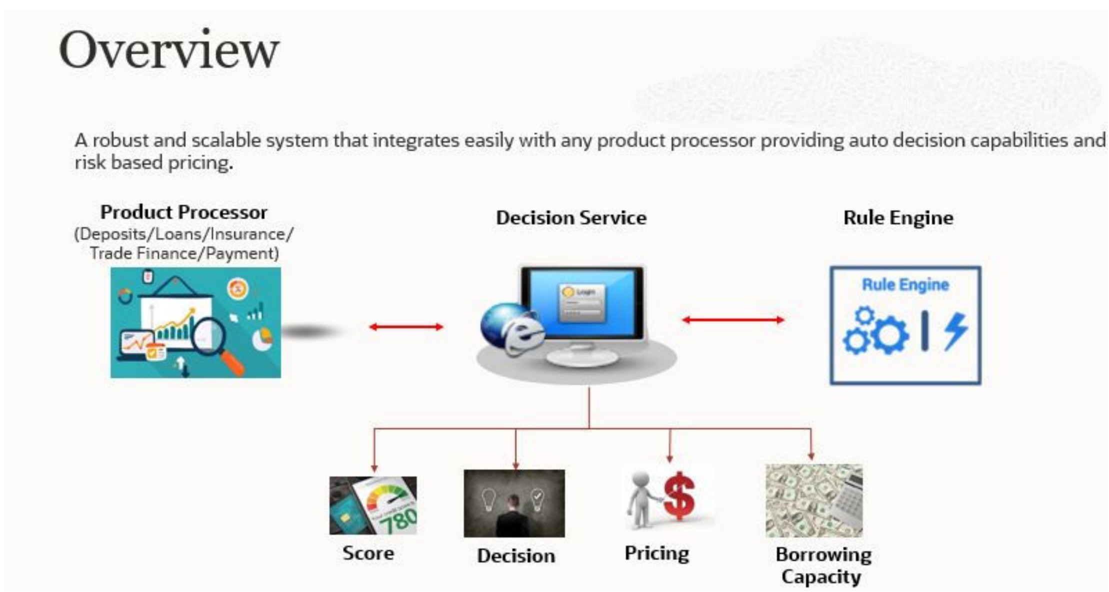
The Decision service provides automatic decision making capabilities that can allow lenders to develop simple business processes and strengthen the decision-making process.

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 2-2 Decision Service Overview



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.

2.2 System Parameter

This topic describes the information about the system parameter configured in Bureau Integration service.

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 topic contains the following subtopics:

- Create System Parameter
  This topic describes the systematic instructions to create system parameter by updating various details.
- View System Parameter
  This topic describes the systematic instructions to view the list of configured system parameter.

2.2.1 Create System Parameter

This topic describes the systematic instructions to create system parameter by updating various details.

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

1. On **Homescreen**, click **Core Maintenance**, under **Core Maintenance**, click **Credit Bureau**.
2. Under **Credit Bureau**, click **Maintenance**, under **Maintenance**, click **System Parameter**, under **System Parameter**, click **Create System Parameter**.

   The **Create System Parameter** screen displays.

   Figure 2-3 Create System Parameter

3. On **Create System Parameter** screen, specify the fields.

> **Note:**
>
> The fields marked as **Required** are mandatory.

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

Table 2-1 Create System Parameter - Field Description

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

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

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

2.2.2 View System Parameter

This topic describes the systematic instructions to view the list of configured system parameter.

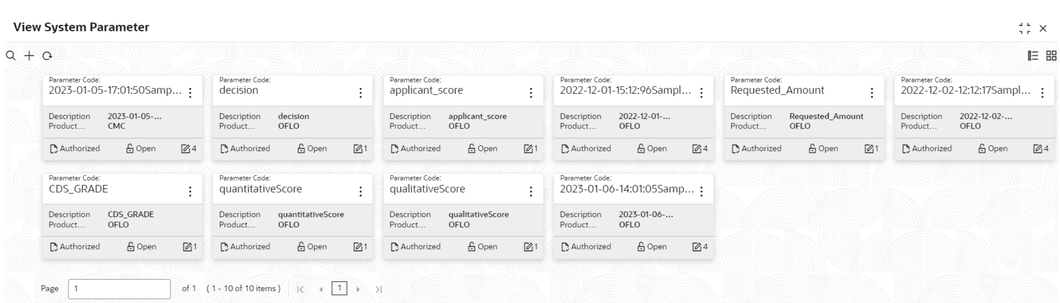
The user can configure the system parameter using the Create System Parameter screen. The status of the created system parameter is displayed as **Unauthorized** and **Open.**Once the checker authorizes the system parameter, the status is updated to **Authorized** and **Open**.

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

1. On **Homescreen**, click **Core Maintenance**, under **Core Maintenance**, click **Credit Bureau**.
2. Under **Credit Bureau**, click **Maintenance**, under **Maintenance**, click **System Parameter**, under **System Parameter**, click **View System Parameter**.

   The **View System Parameter** screen displays.

Figure 2-4 View System Parameter



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

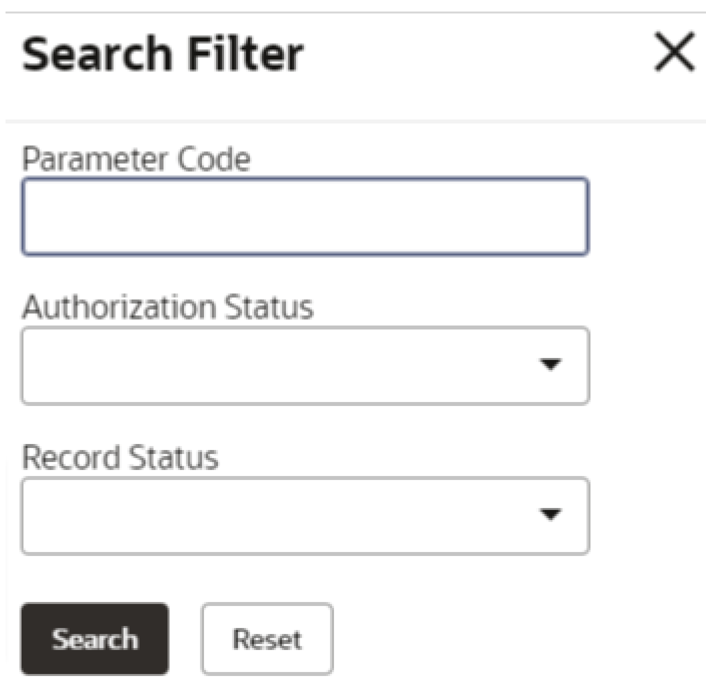
Table 2-2 View System Parameter - Field Description

Field	Description
Parameter Code	Displays the parameter code.
Description	Displays the description of the parameter code.
Product Processor	Displays the product processor of the parameter.
Authorization Status	Displays the authorization status of the record. The options are: • **Authorized** • **Rejected** • **Unauthorized**
Record Status	Displays the status of the record. The options are: • **Open** • **Closed**
Modification Number	Displays the number of modification performed on the record.

3. On **View System Parameter**, click  icon.

   The **View System Parameter - Search** screen displays.

Figure 2-5 View System Parameter - Search



4. On **View System Parameter - Search** screen, specify the **Search Filter** to fetch the required system parameter.

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

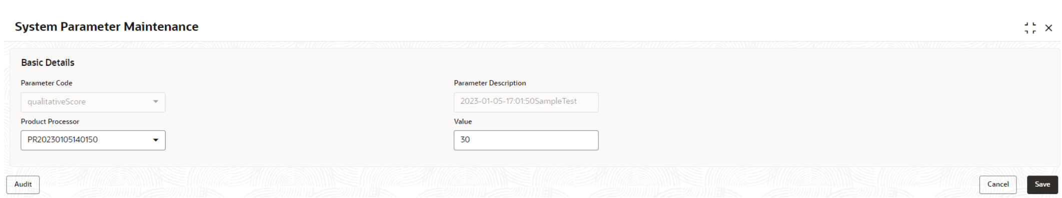
Table 2-3 View System Parameter - Search - Field Description

Field	Description
Parameter Code	Specify the parameter code.
Authorization Status	Select the authorization status from the drop-down list. The available options are: • **Authorized** • **Rejected** • **Unauthorized**
Record Status	Select the record status from the drop-down list. The available options are: • **Open** • **Closed**

5. Click **Search** to display the required system parameter.
6. On **View System Parameter** screen, click icon to **Unlock**, **Delete**, **Authorize** or **View** the created system parameter.
7. Click **Unlock** to modify the created system parameter.

   The **System Parameter Maintenance - Modify** screen displays.

   Figure 2-6 System Parameter Maintenance - Modify



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

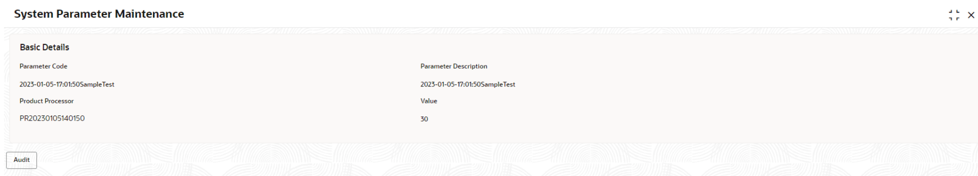
   Table 2-4 System Parameter Maintenance - Modify - Field Description

Field	Description
Parameter Code	Displays the created system parameter code.
Parameter Description	Displays the created system parameter description.
Product Processor	Displays the product processor of the created system parameter. User can modify the same.
Value	Displays the value for the created system parameter. User can modify the same.

8. Click **Save** to update the modified fields.
9. Click **View** to view the created system parameter code.

   The **System Parameter Maintenance - View** screen displays.

Figure 2-7 System Parameter Maintenance - View



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

Table 2-5 System Parameter Maintenance - View - Field Description

Field	Description
Parameter Code	Displays the created system parameter code.
Parameter Description	Displays the created system parameter description.
Product Processor	Displays the product processor of the created system parameter.
Value	Displays the value for the created system parameter.

2.3 Lookup

This topic describes the information about the lookup feature in Bureau Integration service.

The lookup are the service for mapping of keys and values used to enrich the description of the data displayed to the user. The lookup screen allows user to define contents for a list of drop-down or value fields. These are used throughout the system. The identified fields only accept the entries stored.

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 and Greater than.
- Dependent lookup 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 topic contains the following subtopics:

- Create Lookup
  This topic describes the systematic instructions to create lookup definitions by updating various details in Bureau Integration Service.
- View Lookup
  This topic describes the systematic instructions to view the list of configured lookup for Bureau Integration Service.

2.3.1 Create Lookup

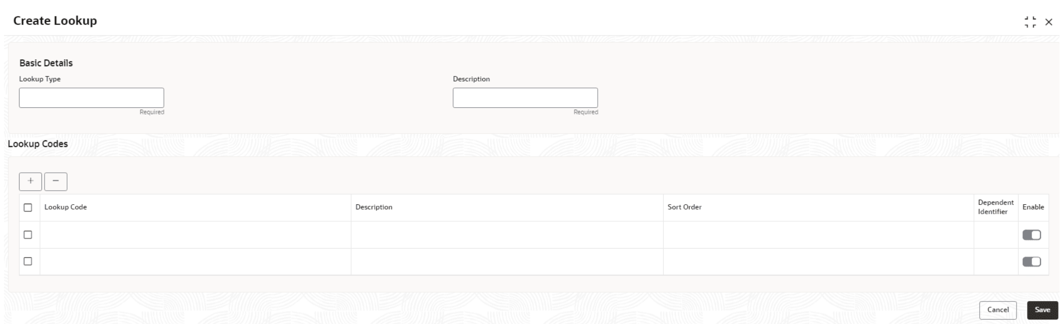
This topic describes the systematic instructions to create lookup definitions by updating various details in Bureau Integration Service.

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

1. On **Homescreen**, click **Core Maintenance**, under **Core Maintenance**, click **Credit Bureau**.
2. Under **Credit Bureau**, click **Maintenance**, under **Maintenance**, click **Lookup**, under **Lookup**, click **Create Lookup**.

   The **Create Lookup** screen displays.

   Figure 2-8 Create Lookup

3. On **Create Lookup** screen, specify the fields.

   > **Note:**
   >
   > The fields marked as **Required** are mandatory.

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

   Table 2-6 Create Lookup - Field Description

Field	Description
Lookup Type	Specify the unique lookup type name.
Description	Specify the short description for lookup.
+ button	Click to add a new row.
- button	Click to delete a row that is already added.
Lookup Code	Specify the unique lookup code.
Description	Specify the short description for lookup.
Sort Order	Specify the sort order.
Dependent Identifier	Specify the dependent Identifier.
Enable	Click the toggle status to enable the parameter.

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

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

2.3.2 View Lookup

This topic describes the systematic instructions to view the list of configured lookup for Bureau Integration Service.

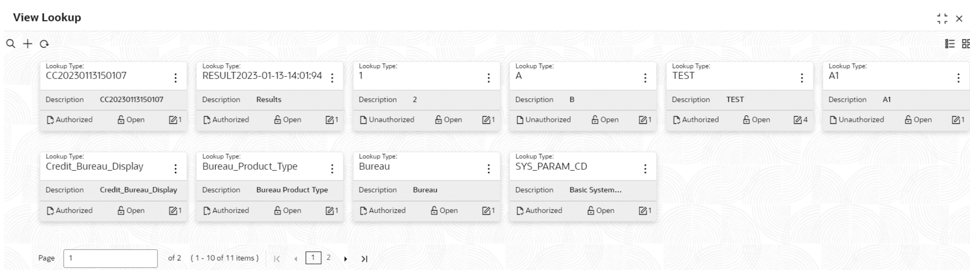
The user can configure the lookup using the Create Lookup screen. The status of the created lookup is displayed as **Unauthorized** and **Open**. Once the checker authorizes the lookup, the status is updated to **Authorized** and **Open**.

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

1. On **Homescreen**, click **Core Maintenance**, under **Core Maintenance**, click **Credit Bureau**.
2. Under **Credit Bureau**, click **Maintenance**, under **Maintenance**, click **Lookup**, under **Lookup**, click **View Lookup**.

   The **View Lookup** screen displays.

   Figure 2-9 View Lookup



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

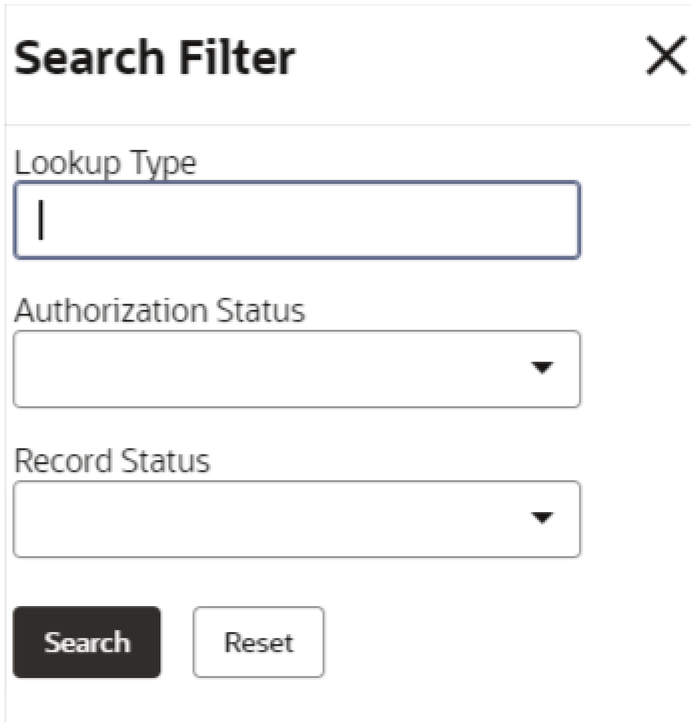
   Table 2-7 View Lookup – Field Description

Field	Description
Lookup Type	Displays the lookup type.
Description	Displays the description of the lookup.
Authorization Status	Displays the authorization status of the record. The options are: • **Authorized** • **Rejected** • **Unauthorized**
Record Status	Displays the status of the record. The options are: • **Open** • **Closed**
Modification Number	Displays the number of modification performed on the record.

3. On **View Lookup** screen, click  icon.

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

Figure 2-10 View Lookup - Search



4. On **View Lookup - Search** screen, specify the **Search Filter** to fetch the required lookup.

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

Table 2-8 View Lookup – Search – Field Description

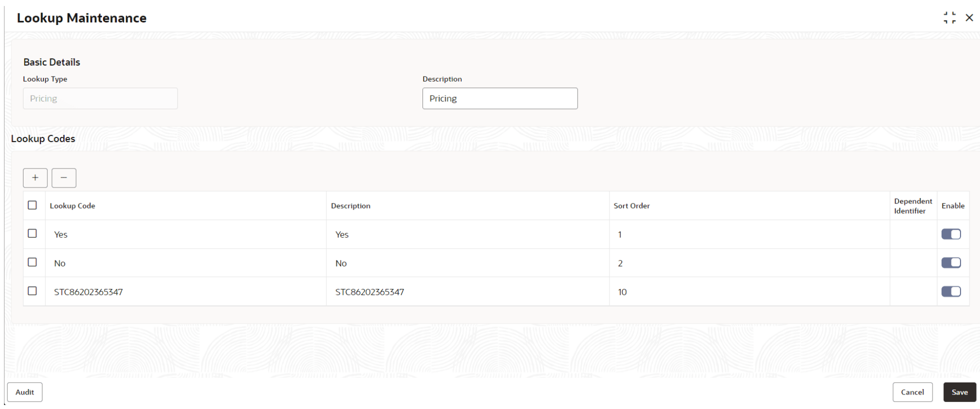
Field	Description
Lookup Type	Specify the lookup type name.
Authorization Status	Select the authorization status from the drop-down list. The available options are: • **Authorized** • **Rejected** • **Unauthorized**
Record Status	Select the record status from the drop-down list. The available options are: • **Open** • **Closed**

5. Click **Search** to display the required lookup.
6. On **View Lookup** screen, click  icon to **Unlock**, **Delete**, **Authorize** or **View** the created lookup.

7. Click **Unlock** to modify the created lookup.

   The **Lookup Maintenance - Modify** screen displays.

Figure 2-11 Lookup Maintenance - Modify



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

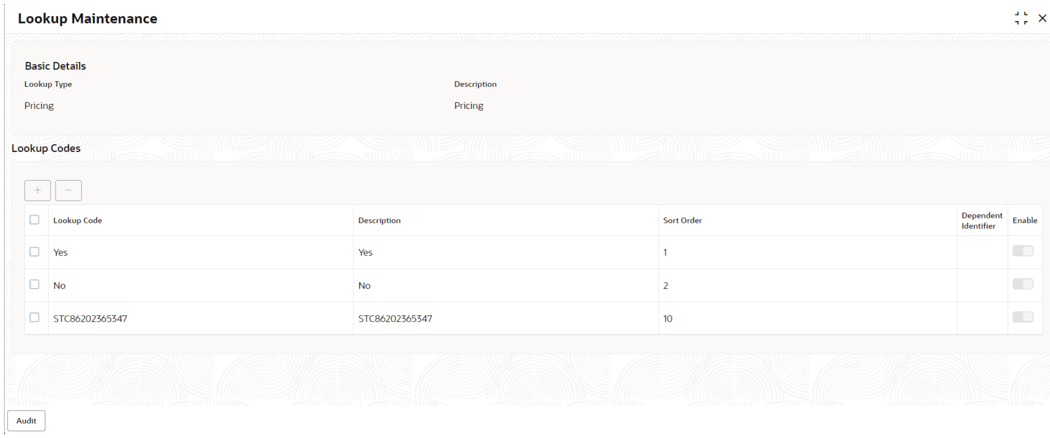
Table 2-9 Lookup Maintenance - Modify - Field Description

Field	Description
Lookup Type	Displays lookup type name.
Description	Displays the short description of the lookup. User can modify the same.
+ button	Click to add a new row.
- button	Click to delete a row that is already added.
Lookup Code	Displays the lookup code for the created lookup. User can modify the same.
Description	Displays the description for the created lookup.
Sort Order	Displays the sort order for the created lookup. User can modify the same.
Dependent Identifier	Displays the dependent Identifier for the created lookup. User can modify the same.
Enable	Indicates if the lookup is enabled or not. User can modify the same.

8. Click **Save** to update the modified fields.
9. Click **View** to view the created lookup code.

   The **Lookup Maintenance - View** screen displays.

Figure 2-12 Lookup Maintenance - View



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

Table 2-10 Lookup Maintenance - View - Field Description

Field	Description
Lookup Type	Displays the created lookup type.
Description	Displays the description for the created lookup.
Lookup Code	Displays the lookup code for the created lookup.
Description	Displays the description for the created lookup.
Sort Order	Displays the sort order for the created lookup.
Dependent Identifier	Displays the dependent identifier for the created lookup.
Enable	Displays the lookup code if enabled for the created lookup.

2.4 Product Processor

This topic describes the information about the 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 topic contains the following subtopics:

- Create Product Processor
  This topic describes the systematic instructions to create product processor by updating various details.
- View Product Processor
  This topic describes the systematic instructions to view the list of product processor.
- Create Product Processor
  This topic describes the systematic instructions to create product processor by updating various details.
- View Product Processor
  This topic describes the systematic instructions to view the list of product processor.

2.4.1 Create Product Processor

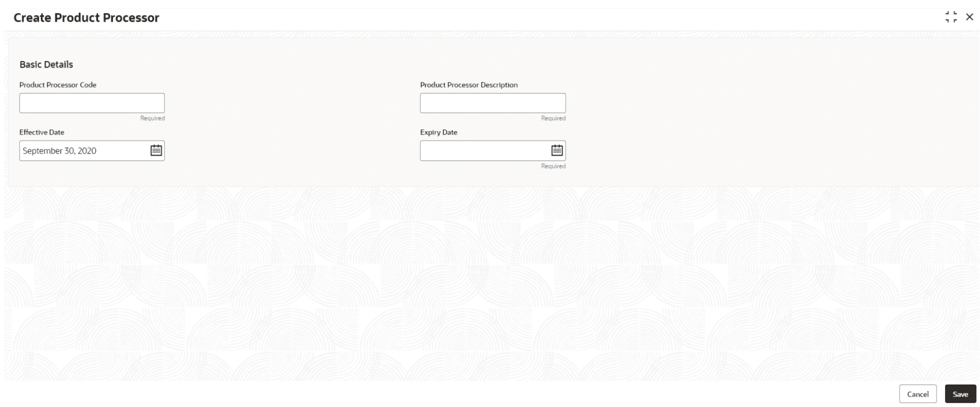
This topic describes the systematic instructions to create product processor by updating various details.

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

1. On **Homescreen**, click **Core Maintenance**, under **Core Maintenance**, click **Credit Bureau**.
2. Under **Credit Bureau**, click **Maintenance**, under **Maintenance**, click **Product Processor**, under **Product Processor**, click **Create Product Processor**.

   The **Create Product Processor** screen displays.

   Figure 2-13 Create Product Processor

3. On **Create Product Processor** screen, specify the fields.

   Note:

   The fields marked as **Required** are mandatory.

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

   Table 2-11 Create Product Processor - Field Description

Field	Description
Product Processor Code	Specify the unique product processor code.
Product Processor Description	Specify the short description for product processor.
Effective Date	Specify the effective date.
Expiry Date	Specify the expiry date.

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

The **Product Processor** is successfully created and can be viewed using the View Product Processor screen.

2.4.2 View Product Processor

This topic describes the systematic instructions to view the list of product processor.

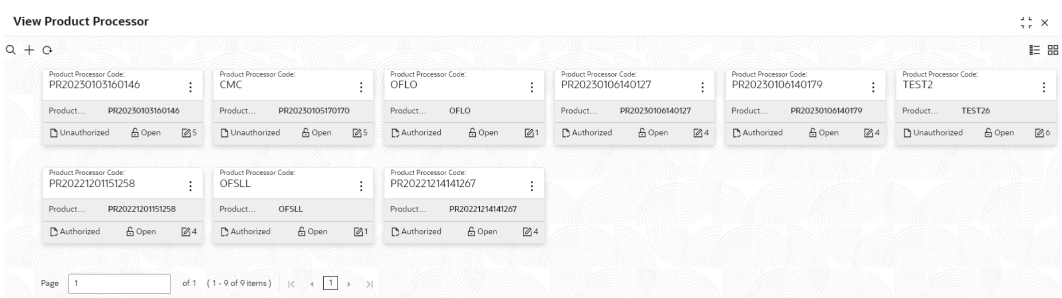
The user can create the product processor using the Create Product Processor screen. The status of the created system parameter is displayed as **Unauthorized** and **Open.** Once the checker authorizes the system parameter, the status is updated to **Authorized** and **Open**.

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

1. On **Homescreen**, click **Core Maintenance**, under **Core Maintenance**, click **Credit Bureau**.
2. Under **Credit Bureau**, click **Maintenance**, under **Maintenance**, click **Product Processor**, under **Product Processor**, click **View Product Processor**.

   The **View Product Processor** screen displays.

Figure 2-14 View Product Processor



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

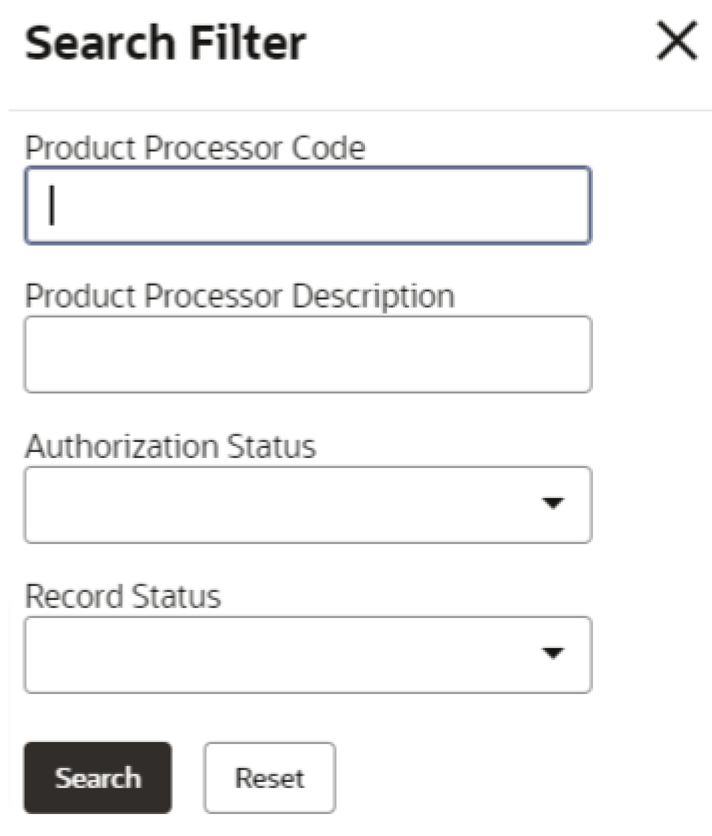
Table 2-12 View Product Processor - Field Description

Field	Description
Product Processor Code	Displays the product processor code.
Product Processor Description	Displays the description of the product processor.
Authorization Status	Displays the authorization status of the record. The options are: • **Authorized** • **Rejected** • **Unauthorized**
Record Status	Displays the status of the record. The options are: • **Open** • **Closed**
Modification Number	Displays the number of modification performed on the record.

3. On **View Product Processor** screen, click  icon.

   The **View Product Processor - Search** screen displays.

   Figure 2-15 View Product Processor - Search

4. On **View Product Processor - Screen** screen, specify the **Search Filter** to fetch the required product processor.

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

Table 2-13 View Product Processor - Search - Field Description

Field	Description
Product Processor Code	Specify the product processor code.
Product Processor Description	Specify the product processor description.
Authorization Status	Select the authorization status of the product processor. The available options are: • **Authorized** • **Rejected** • **Unauthorized**

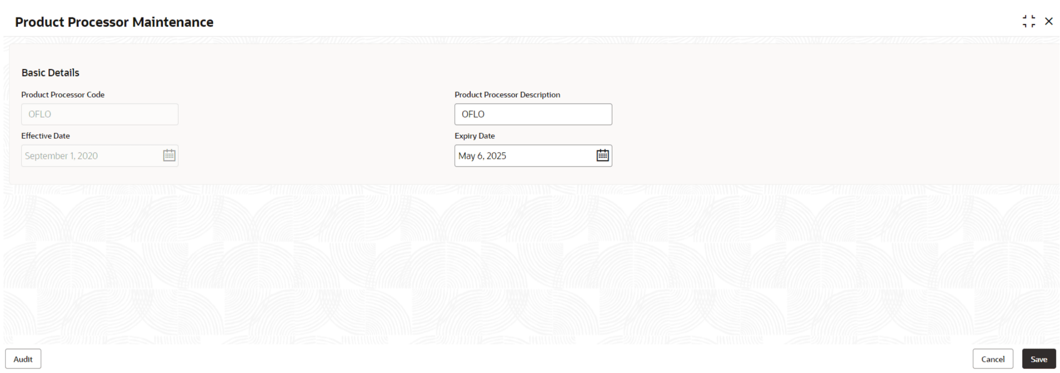
Table 2-13 (Cont.) View Product Processor - Search - Field Description

Field	Description
Record Status	Select the record status of the product processor. The available options are: • **Open** • **Closed**

5. Click **Search** to display the required product processor.
6. On **View Product Processor** screen, click ⋮ icon to **Unlock**, **Delete**, **Authorize** or **View** the created product processor.
7. Click **Unlock** to modify the created product processor.

   The **Product Processor Maintenance - Modify** screen displays.

Figure 2-16 Product Processor Maintenance - Modify



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

Table 2-14 Product Processor Maintenance - Modify - Field Description

Field	Description
Product Processor Code	Displays the product processor code.
Product Processor Description	Displays the product processor description. User can modify the same.
Effective Date	Displays the effective date of the created product processor. User can modify the same before authorization if it is future dated.
Expiry Date	Displays the expiry date of the created product processor. User can modify the same.

8. Click **Save** to update the modified fields.
9. Click **View** to view the created product processor.

   The **Product Processor Maintenance - View** screen displays.

Figure 2-17 Product Processor Maintenance - View

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

Table 2-15 Product Processor Maintenance - View - Field Description

Field	Description
Product Processor Code	Displays the product processor code.
Product Processor Description	Displays the product processor description.
Effective Date	Displays the effective date of the created product processor.
Expiry Date	Displays the expiry date of the created product processor.

2.5 Criteria

This topic describes the information about the criteria to identify the Credit Bureau.

The Criteria screen facilitates to setup criteria definition, which are used in evaluating the 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 topic contains the following subtopics:

- Create Bureau Criteria
  This topic describes the systematic instructions to create bureau criteria by updating various details.
- View Bureau Criteria
  This topic describes the systematic instructions to view the bureau criteria.

2.5.1 Create Bureau Criteria

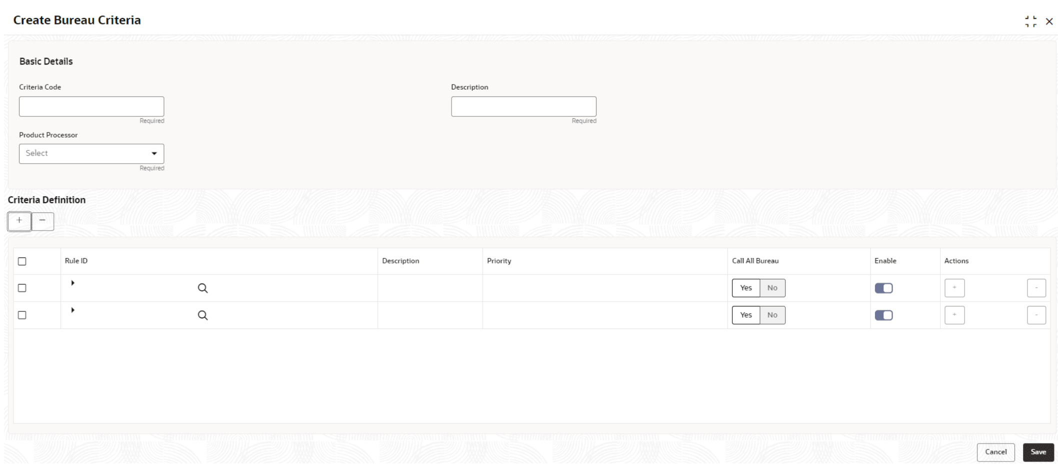
This topic describes the systematic instructions to create bureau criteria by updating various details.

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

1. On **Homescreen**, click **Core Maintenance**, under **Core Maintenance**, click **Credit Bureau**.
2. Under **Credit Bureau**, click **Maintenance**, under **Maintenance**, click **Criteria**, under **Criteria**, click **Create Bureau Criteria**.

   The **Create Bureau Criteria** screen displays.

Figure 2-18 Create Bureau Criteria



3. Specify the fields on **Create Bureau Criteria** screen.

> **Note:**
>
> The fields marked as **Required** are mandatory.

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

Table 2-16 Create Bureau Criteria – Field Description

Field	Description
Criteria Code	Specify the unique criteria code.
Description	Specify a short description for the criteria code.
Product Processor	Specify the product processor for which the criteria is being created.
+ button	Click to add a new row.
- button	Click to delete a row that is already added.

Table 2-16 (Cont.) Create Bureau Criteria – Field Description

Field	Description
	Click to get the information about the rule.
Rule ID	Specify the rule ID.
Description	Displays the description of the rule ID selected.
Priority	Specify the priority of the criteria.
Call All Bureau	Click the toggle status to call all bureaus.
Enable	Click the toggle status to enable the rule criteria.
Action	This field is enabled if the **Call All Bureau** toggle is **OFF**.
+ button	Click this icon to add the child rule to the parent rule.
Rule ID	Select the rule ID from the drop down list. **Note:** This field is enabled if the **Call All Bureau** toggle is **OFF**.
	Click to get the information about the rules. **Note:** This field is enabled if the **Call All Bureau** toggle is **OFF**.
Description	Displays the description of the rule ID selected it is auto populated. **Note:** This field is enabled if the **Call All Bureau** toggle is **OFF**.
Priority	Specify the priority of the criteria. **Note:** This field is enabled if the **Call All Bureau** toggle is **OFF**.

Table 2-16 (Cont.) Create Bureau Criteria – Field Description

Field	Description
Enable	Click the toggle status to enable the rule criteria. **Note:** This field is enabled if the **Call All Bureau** toggle is **OFF**.

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

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

2.5.2 View Bureau Criteria

This topic describes the systematic instructions to view the bureau criteria.

The user can configure the bureau criteria using the Create Bureau Criteria screen. The status of the created lookup is displayed as **Unauthorized** and **Open**. Once the checker authorizes the criteria, the status is updated to **Authorized** and **Open**.

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

1. On **Homescreen**, click **Core Maintenance**, under **Core Maintenance**, click **Credit Bureau**.
2. Under **Credit Bureau**, click **Maintenance**, under **Maintenance**, click **Criteria**, under **Criteria**, click **View Bureau Criteria**.

   The **View Bureau Criteria** screen displays.

Figure 2-19 View Bureau Criteria

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

Table 2-17 View Bureau Criteria – Field Description

Field	Description
Criteria Code	Displays the criteria code.
Description	Displays the description of the criteria code.
Product Processor	Displays the product processor of the criteria.

Table 2-17 (Cont.) View Bureau Criteria – Field Description

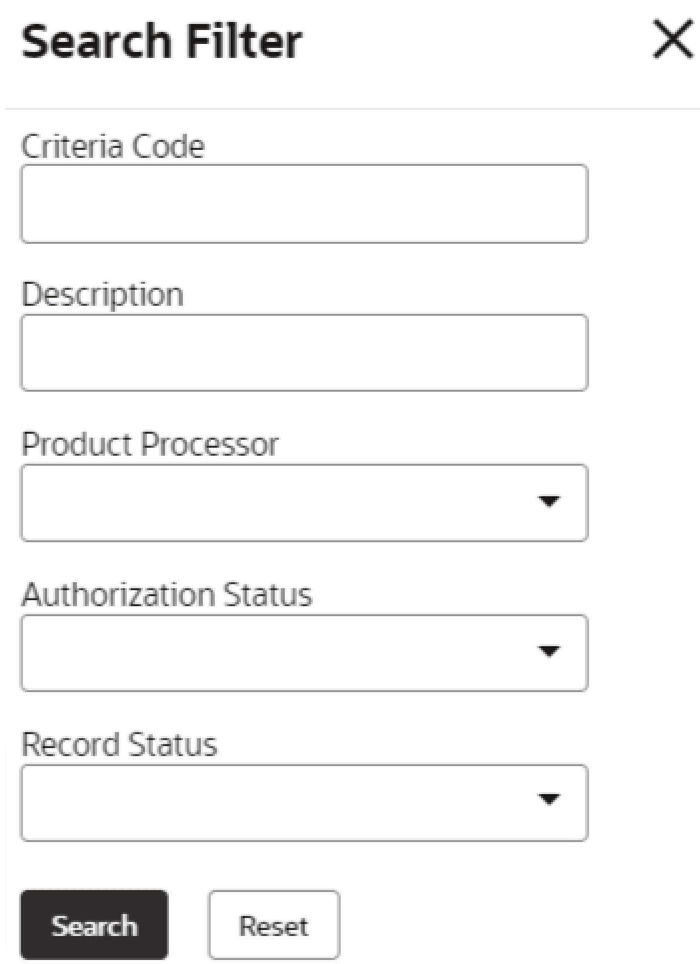
Field	Description
Authorization Status	Displays the authorization status of the record. The options are: • **Authorized** • **Rejected** • **Unauthorized**
Record Status	Displays the status of the record. The options are: • **Open** • **Closed**
Modification Number	Displays the number of modification performed on the record.

3. On **View Bureau Criteria** screen, click

icon.

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

Figure 2-20 View Criteria - Search



4. On **View Bureau Criteria** screen, specify the **Search Filter** to fetch the required criteria code.

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

Table 2-18 View Criteria - Search – Field Description

Field	Description
Criteria Code	Specify the criteria code.
Description	Specify the criteria description.
Product Processor	Select the product processor from the drop-down list.
Authorization Status	Select the authorization status from the drop-down list. The available options are: • **Authorized** • **Rejected** • **Unauthorized**
Record Status	Select the record status from the drop-down list. The available options are: • **Open** • **Closed**

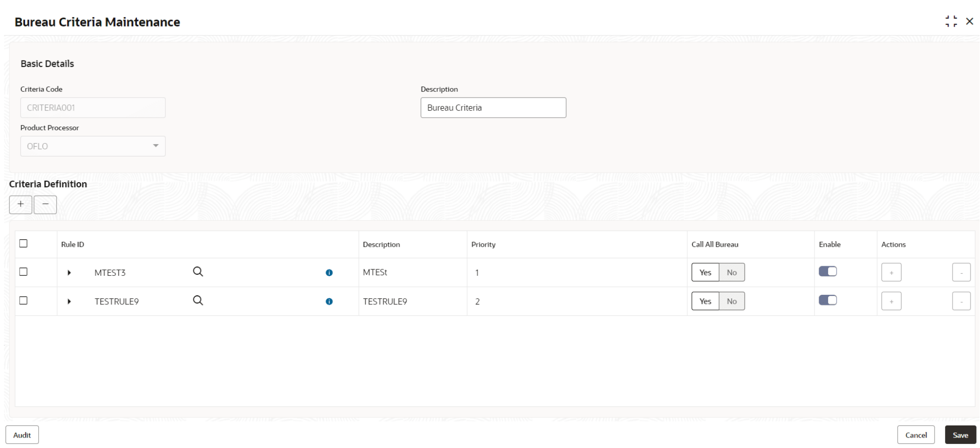
5. Click **Search** to display the required criteria code.
6. On **View Bureau Criteria** screen, click

   icon to **Unlock**, **Delete**, **Authorize** or **View** the created criteria code.
7. Click **Unlock** to modify the following fields.

   The **Bureau Criteria Maintenance - Modify** screen displays.

Figure 2-21 Bureau Criteria Maintenance - Modify



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

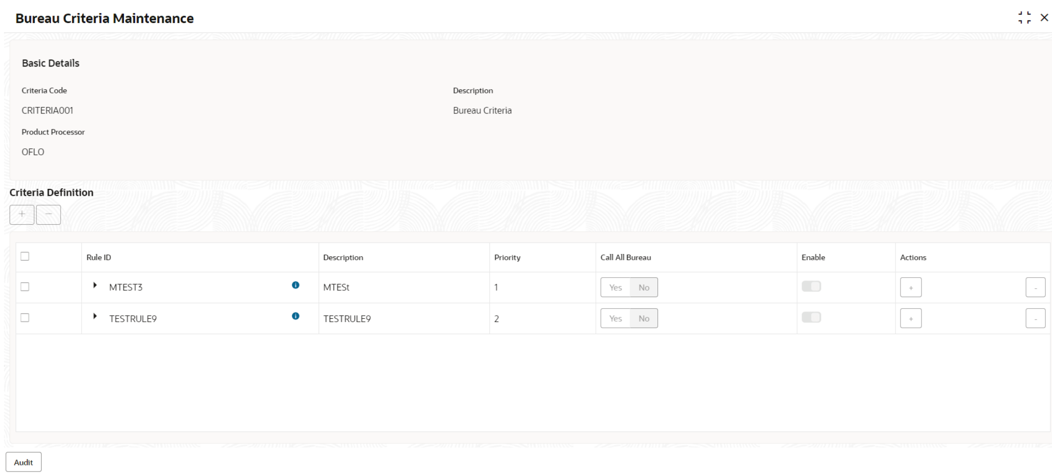
Table 2-19 Bureau Criteria Maintenance - Modify - Field Description

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

8. Click **Save** to update the modified fields.
9. Click **View** to view the created criteria code.

   The **Bureau Criteria Maintenance - View** screen displays.

Figure 2-22   Bureau Criteria Maintenance - View



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

Table 2-20   Bureau Criteria Maintenance - View - Field Description

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

2.6 Credit Bureau Display

This topic describes the information about Credit Bureau display.

The Credit Bureau Display screen facilitates to view the reports received from the various bureaus. The report has credit history details and credit score of the customer based on these details.

This topic contains the following subtopics:

- View Credit Bureau Report
  This topic describes the systematic instructions to view the credit bureau report based on the various filter options provided.

2.6.1 View Credit Bureau Report

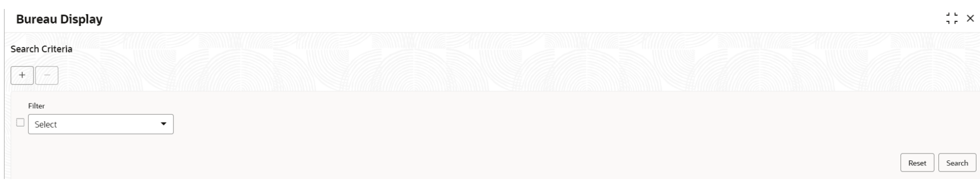
This topic describes the systematic instructions to view the credit bureau report based on the various filter options provided.

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

1. On **Home** screen, click **Credit Bureau**. Under **Credit Bureau**, click **Operations**.
2. Under **Operations**, click **Credit Bureau Display**.

   The **Credit Bureau Display** screen is displays.

   Figure 2-23 Credit Bureau Display

3. Specify the fields on **Credit Bureau Display** screen.

   > **Note:**
   >
   > The fields marked as **Required** are mandatory.

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

   Table 2-21 Credit Bureau Display- Field Description

Field	Description
Filter	Select the required option based on which you can search for the credit bureau reports from the drop-down list. The options are: • **External Reference Number** • **Inquiry ID** • **Inquiry Date** • **Bureau Name** • **Product Processor** • **Application Number** • **Bureau Report ID**

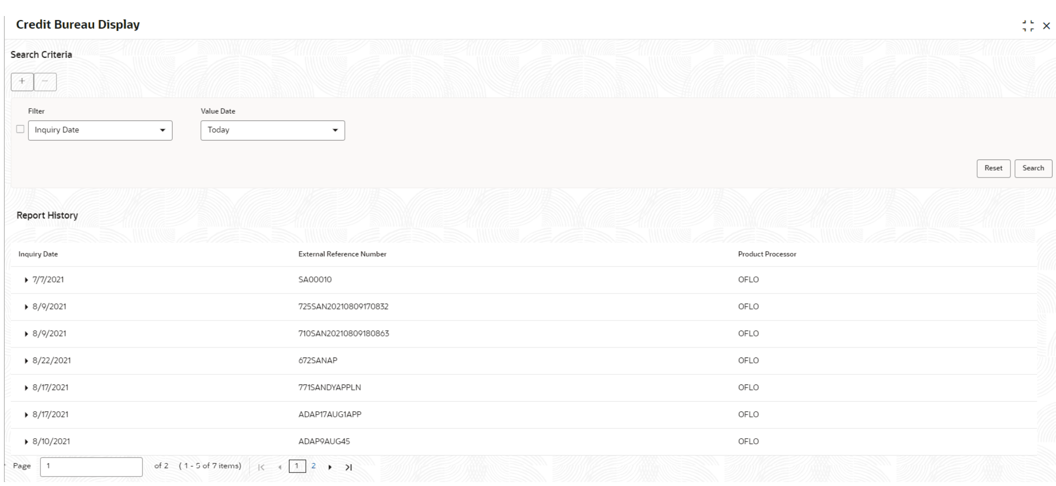
Table 2-21 (Cont.) Credit Bureau Display- Field Description

Field	Description
Value	Specify the required details or select the appropriate option for the selected filter option. **Note:** This field appears once the user select the filter option as **Inquiry Date** and value as Date Range.
From Date	Select the start date of the period during which the report was generated. **Note:** This field appears if the user select the filter option as **Inquiry Date** and value as **Date Range**.
To Date	Select the end date of the period during which the report was generated. **Note:** This field appears if the user select the filter option as **Inquiry Date** and value as **Date Range**.

4. On the **Search Criteria** screen, specify the details and click **Search**.

   The search results displays showing a list of records based on the specified search criteria.

Figure 2-24 Credit Bureau Display - Report History



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

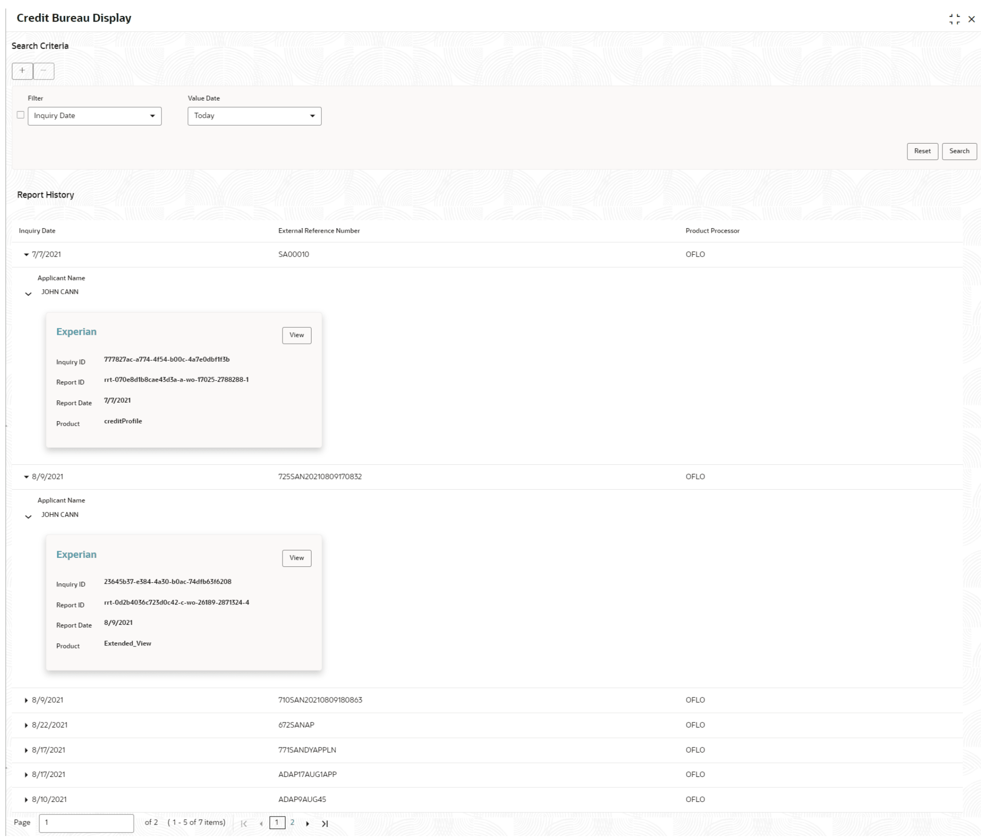
Table 2-22 Credit Bureau Display - Report History – Field Description

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

5. Click the arrow icon to view the corresponding list of reports.

   The list of reports displays on **Credit Bureau Display** screen.

Figure 2-25 Credit Bureau Display - List of Report



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

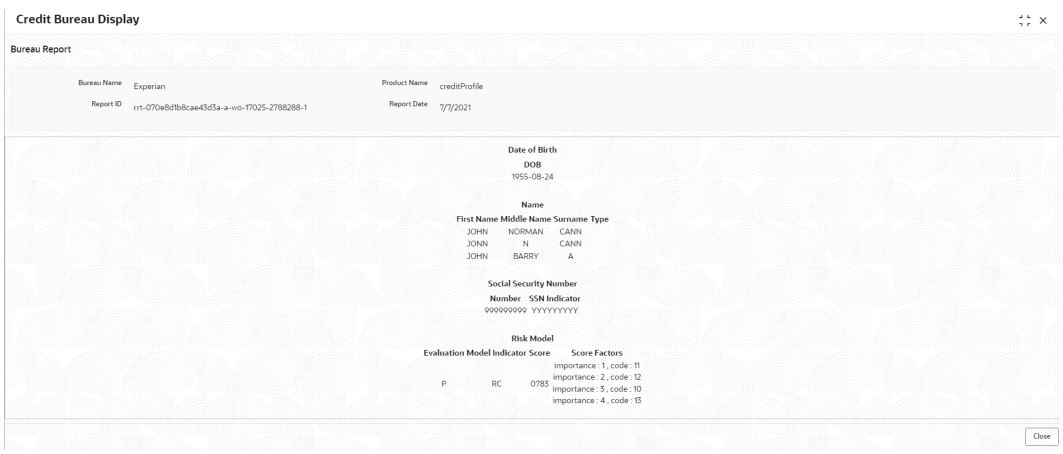
Table 2-23 Create Bureau Display - List of Report – Field Description

Field	Description
Applicant Name	Displays the name of the applicant.
Bureau Name	Displays the name of the credit bureau agency.
Inquiry ID	Displays the inquiry ID generated by bureau integration service.
Report ID	Displays the report ID provided by the credit bureau agency.
Report Date	Displays the date on which the credit bureau report is generated by the bureau.
Product	Displays the product of the credit bureau agency.
View	Click **View** to view the credit bureau report.

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

   The **Create Bureau Display - Bureau Report** displays.

Figure 2-26 Create Bureau Display - Bureau Report



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

Table 2-24 Create Bureau Display - Bureau Report – Field Description

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

2.7 Integrating Bureau Integration Service with Oracle Banking Routing Hub

This topic describes the information to integrate the Bureau Integration service with Oracle Banking Routing Hub.

This topic contains the following subtopics:

- Oracle Banking Routing Hub Configuration
  This topic describes the information about Oracle Banking Routing Hub Configuration for the Bureau Integration service.

2.7.1 Oracle Banking Routing Hub Configuration

This topic describes the information about Oracle Banking Routing Hub Configuration for the Bureau Integration service.

The user needs to import the existing service consumer and providers into the system.

- Service Consumers
  This topic describes systematic instructions to configure the service consumers.
- Service Providers
  This topic describes the systematic instructions to configure the service providers.
- Experian Configuration
  This topic provides the figures for the Experian configuration.
- Equifax Configuration
  This topic describes the information about Equifax configuration.
- Document Configuration
  This topic describes the information about document configuration.
- Troubleshooting
  This topic describes the information for troubleshooting the Oracle Banking Routing Hub.

2.7.1.1 Service Consumers

This topic describes systematic instructions to configure the service consumers.

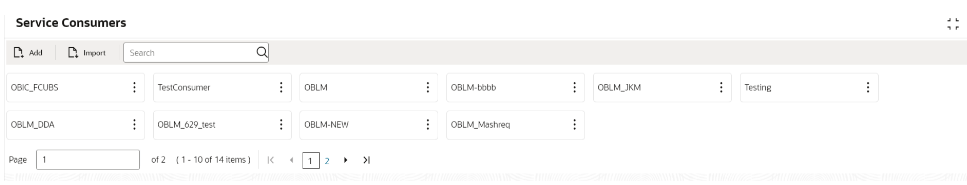
The **Service Consumer** is an Oracle product that invokes Oracle Banking Routing Hub API. Oracle Banking Routing Hub analyses, evaluates the destination product processor and, transforms the data into a format of the same.
The **Service Consumer** comprises the source and destination integration details.

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

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

   The **Service Consumers** screen displays.

Figure 2-27 Service Consumers

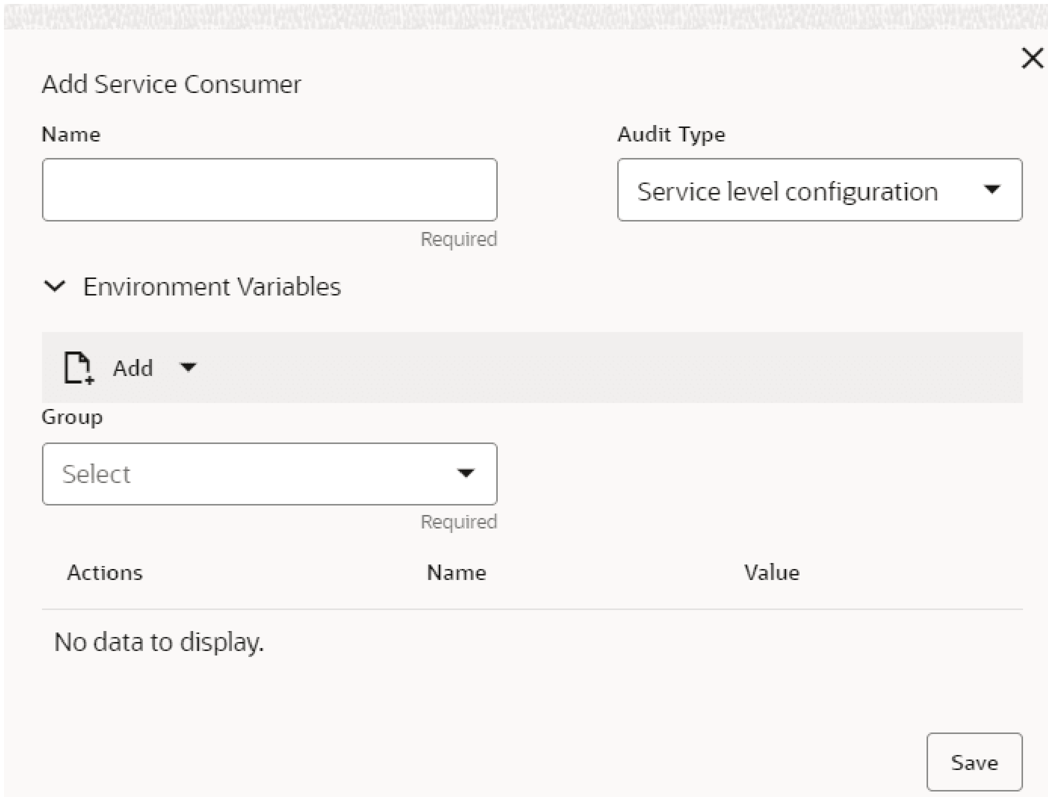


Add Service Consumer

3. Click **Add**.

   The **Add Service Consumer** screen displays.

Figure 2-28 Add Service Consumer



4. Specify the fields on **Add Service Consumer** screen.

   > **Note:**
   >
   > The fields marked as **Required** are mandatory.

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

Table 2-25 Add Service Consumer - Field Description

Field	Description
Name	Specify the name of the service consumer. **Note:** • Enter 0 to maximum of 255 characters. • No numeric value at beginning and no space allowed.
Add	To add, refer to step 5. Select the group from the drop-down list. The available options are: • **Group** • **Variable**
Group	Select the group from the drop-down list.
Action	Displays the action. The user can edit or delete the header.
Name	Displays the name of the header.
Value	Displays the value of the header.

Environment Variables:
The user must define the group of variables which can be accessed throughout the specific consumer's configuration.

The syntax for accessing environment variables is below: $env.Environment_Group_Name.Environment_Variable_Name

For example, $env.COMMON.BRANCH_CODE

5. To add **Environment Variables**, follow below steps.
   a. On **Add Service Consumers**, click **Add** and select **Group** from drop-down list to add the group.

      The **Add Environment Group** screen displays.

      Figure 2-29 Add Environment Group

   b. Specify the fields on **Add Environment Group** screen and click **OK**.

> **Note:**
>
> The fields marked as **Required** are mandatory.

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

Table 2-26 Add Environment Group - Field Description

Field	Description
Name	Specify the name of the environment group. **Note:** • Enter 0 to maximum of 255 characters. • No numeric value at beginning and no space allowed.

c. Click **Add** on **Add Service Consumer** screen and select **Variable** from drop-down list to add the variable.

The **Add Environment Variable** screen displays.

Figure 2-30 Add Environment Variable

d. Specify the fields on **Add Environment Variable** screen and click **OK**.

> **Note:**
>
> The fields marked as **Required** are mandatory.

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

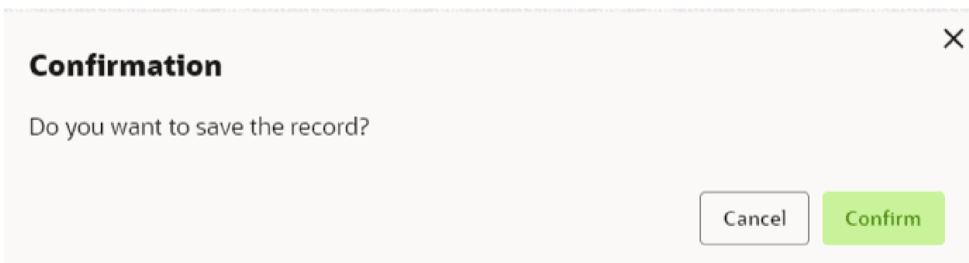
Table 2-27 Add Environment Variable - Field Description

Field	Description
Name	Specify the name of the environment variable. **Note:** • Enter 0 to maximum of 255 characters. • No numeric value at beginning and no space allowed.
Value	Specify the value of the environment variable. The value can either be hardcoded or Velocity mapping.

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

   The **Confirmation** screen displays.

Figure 2-31 Confirmation - Add Service Consumers



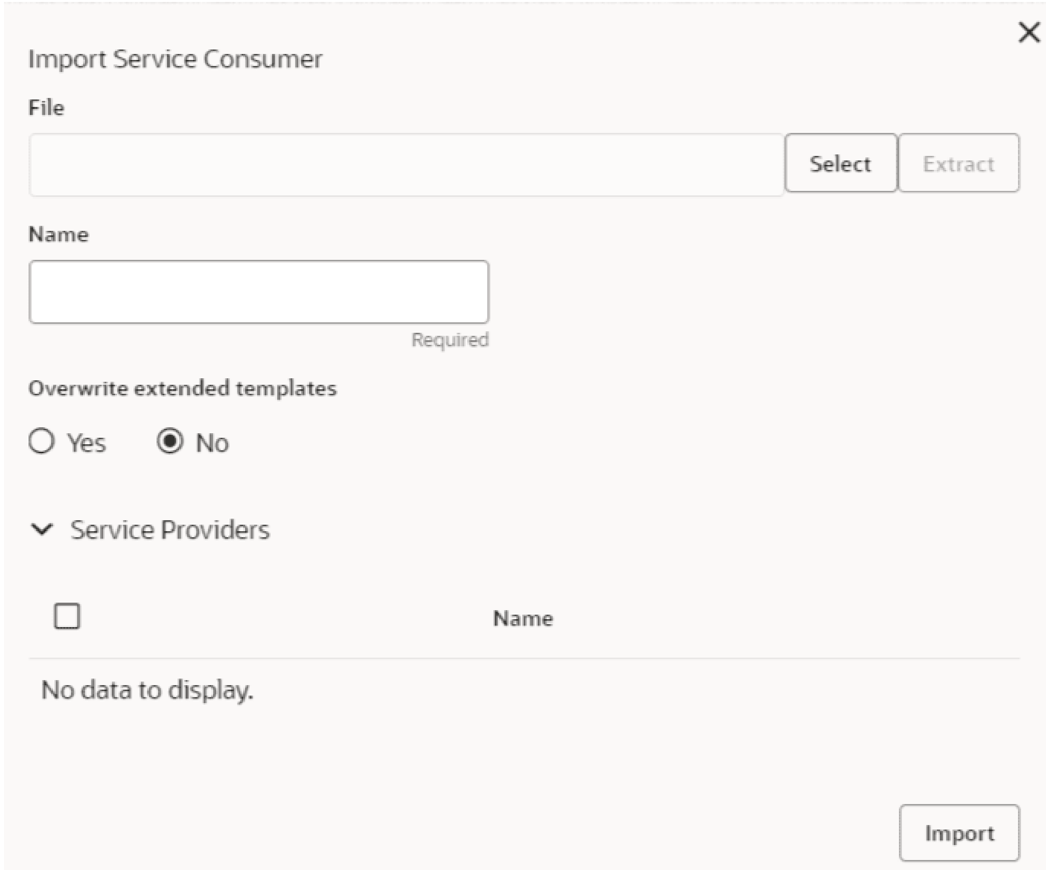
7. Click **Confirm** to save the record.

Import Service Consumer

8. Click **Import**.

   The **Import Service Consumer** screen displays.

Figure 2-32 Import Service Consumer



9. Specify the fields on **Import Service Consumer** screen and click **OK**.

> **Note:**
>
> The fields marked as **Required** are mandatory.

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

Table 2-28 Import Service Consumer - Field Description

Field	Description
File	Select the file using **Select**. **Note:** Allows only to select one file and accepts only JSON file.
Extract	Extracts the consumer name and service provider list from JSON file and displays it in the respective elements.

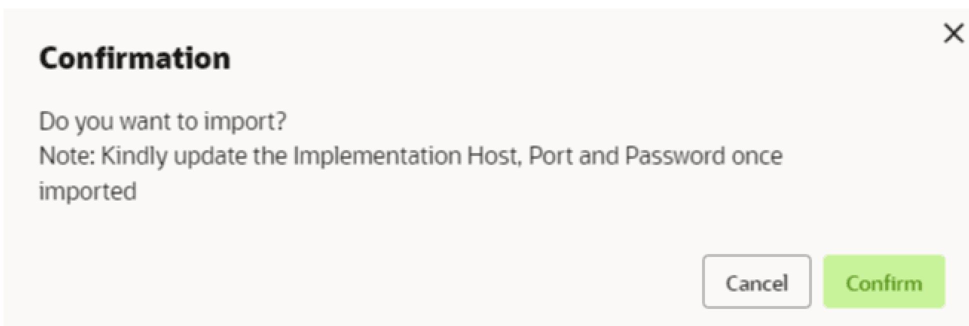
Table 2-28 (Cont.) Import Service Consumer - Field Description

Field	Description
Name	Specify the name of the service provider. **Note:** • Enter 0 to maximum of 255 characters. • No numeric value at beginning and no space allowed.
Name	Displays the list of service providers names that are present in JSON file.

10. Click **Import** to import the selected file.

    The **Confirmation** screen displays.

Figure 2-33 Confirmation - Import Service Consumer



11. Click **Confirm** to import the service consumer.

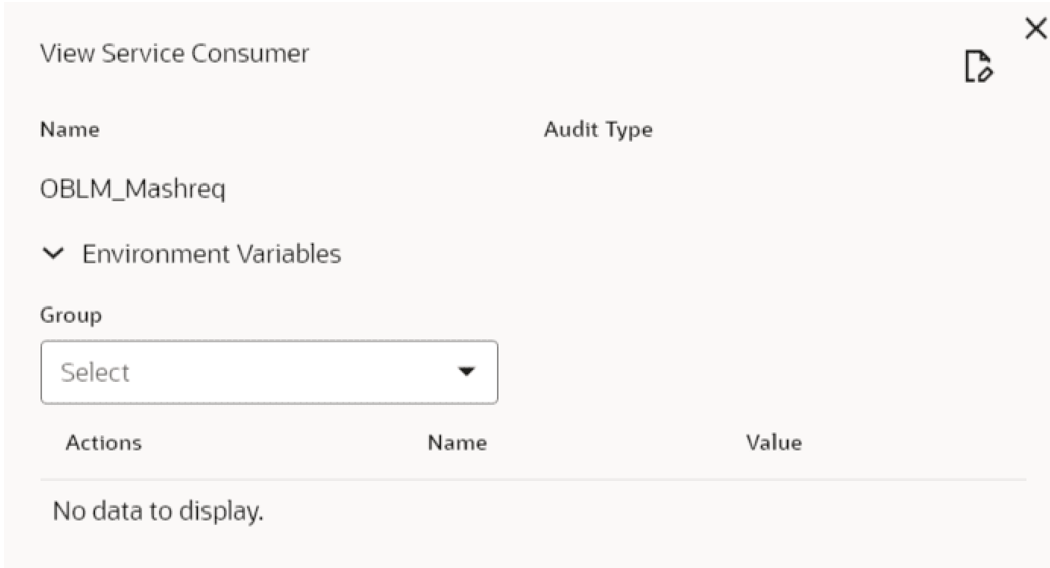
> **Note:**
>
> Below data needs to be changed after importing provider configuration file:
>
> - Implementation Host and Port
> - Implementation Authentication Password

View Service Consumer

12. Click 3 dots button (operation menu) and click **View**.

    The **View Service Consumer** screen displays.

Figure 2-34 View Service Consumer



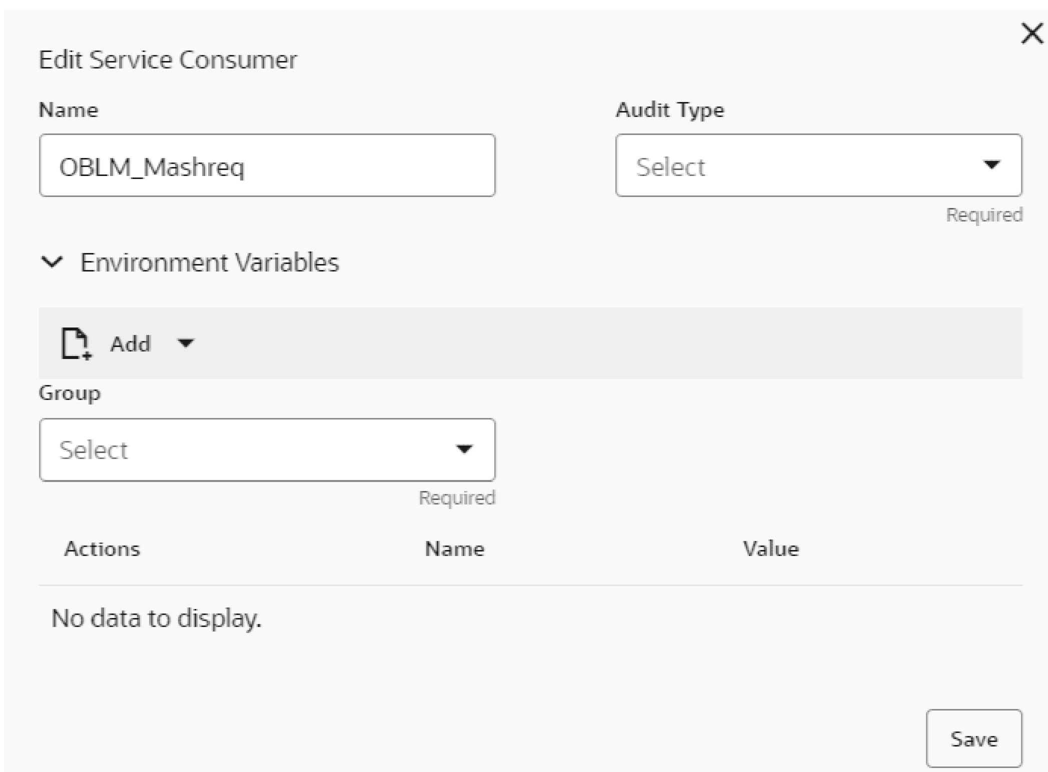
The user can click edit button to edit the **Service Consumer**.

Edit Service Consumer

13. Click 3 dots button (operation menu) and click **Edit**.

    The **Edit Service Consumer** screen displays.

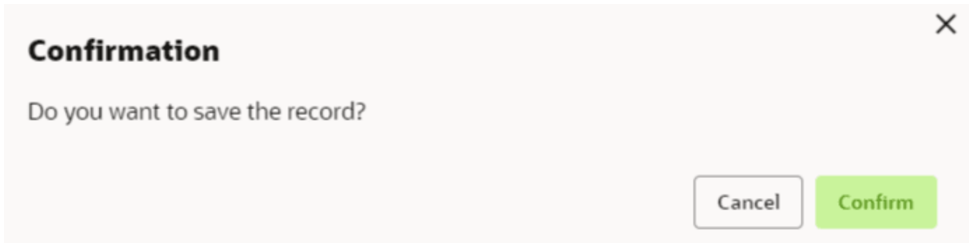
Figure 2-35 Edit Service Consumer



14. Click **Save** once the edit is done.

    The **Confirmation** screen displays.

Figure 2-36 Confirmation - Edit Service Consumer



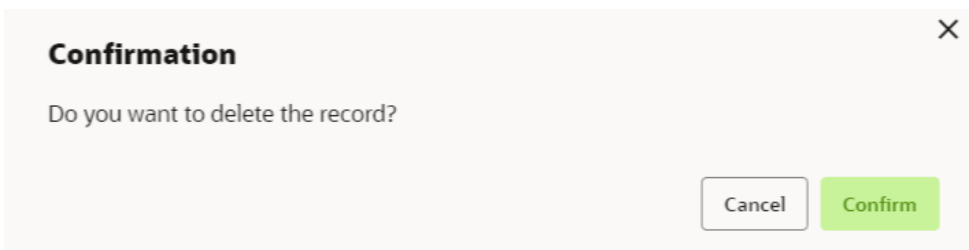
15. Click **Confirm** to save the record.

Delete Service Consumer

16. Click 3 dots button (operation menu) and click **Delete**.

    The **Confirmation** screen displays.

Figure 2-37 Confirmation - Delete Service Consumer



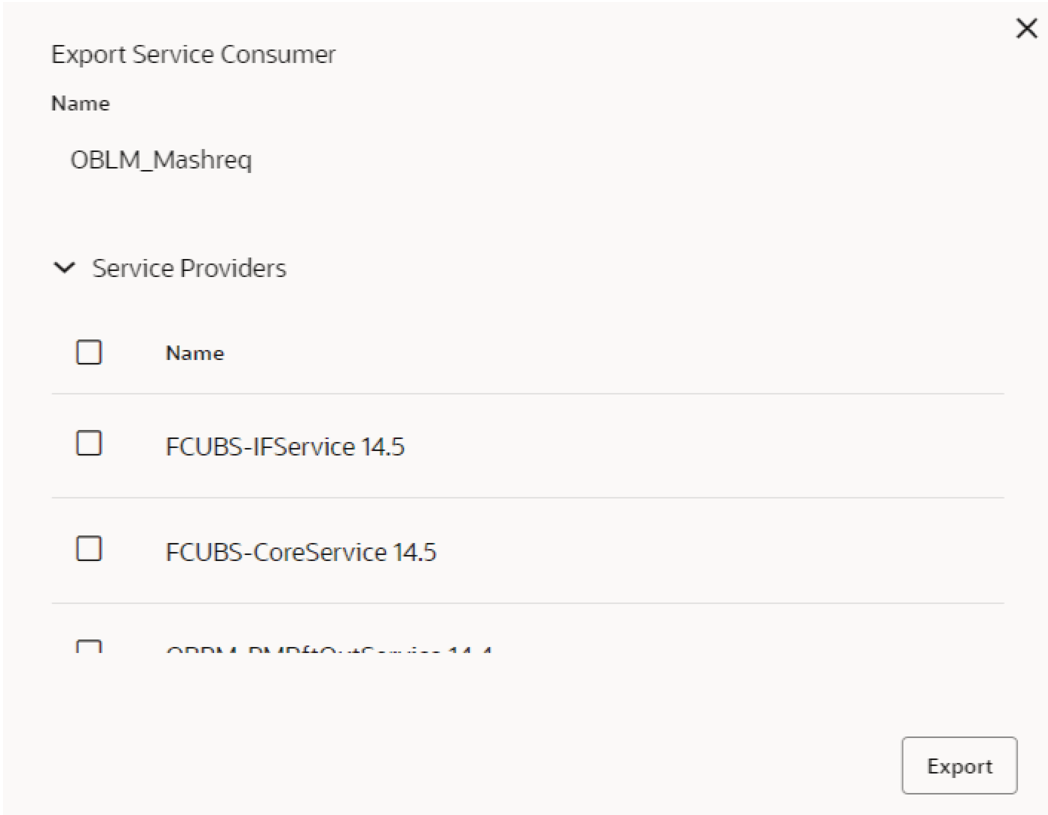
17. Click **Confirm** to delete the record.

Export Service Consumer in JSON

18. Click 3 dots button (operation menu) and click **Export**. Select **JSON**.

    The **Export Service Consumer** screen displays.

Figure 2-38 Export Service Consumer - JSON

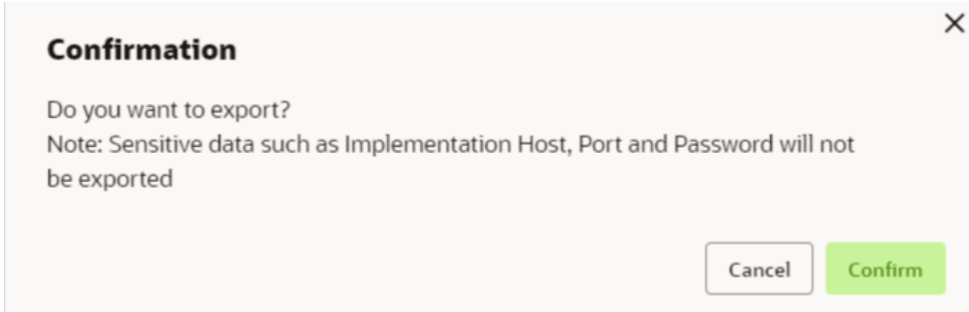


> **Note:**
>
> - The user has an option to select service providers from the list which needs to be exported or can click on select all for all service providers.
> - The JSON Export feature exports below data:
>   - Selected service consumer
>   - All consumer services
>   - Selected service providers with services
>   - Default implementation of selected service providers with services (without Host, Port and Authentication Password)
>   - Default transformations
>   - All default implementation routes

19. Select the required service providers and click **Export**.

    The **Confirmation** screen appears.

Figure 2-39 Confirmation - Export Service Consumer in JSON



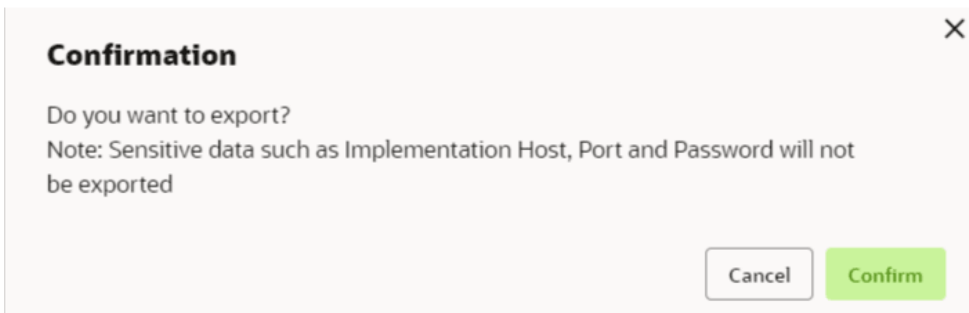
20. Click **Confirm** to export in JSON.

Export Service Consumer in SQL

21. Click **Export** and select **SQL**.

    The **Confirmation** screen appears.

Figure 2-40 Confirmation



> **Note:**
>
> The SQL Export feature exports entire configuration without Host, Port, and Authentication Password details.

22. Click **Confirm** to export the Service Consumer in SQL.

2.7.1.2 Service Providers

This topic describes the systematic instructions to configure the service providers.

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

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

1. On **Home** Screen, click **Core Maintenance**, Under **Core Maintenance**, click **Routing Hub**.
2. Under **Routing Hub**, click **Service Consumers**.

3. On **Service Consumers** screen, click the required service consumer.

   The **Service Providers** screen displays.

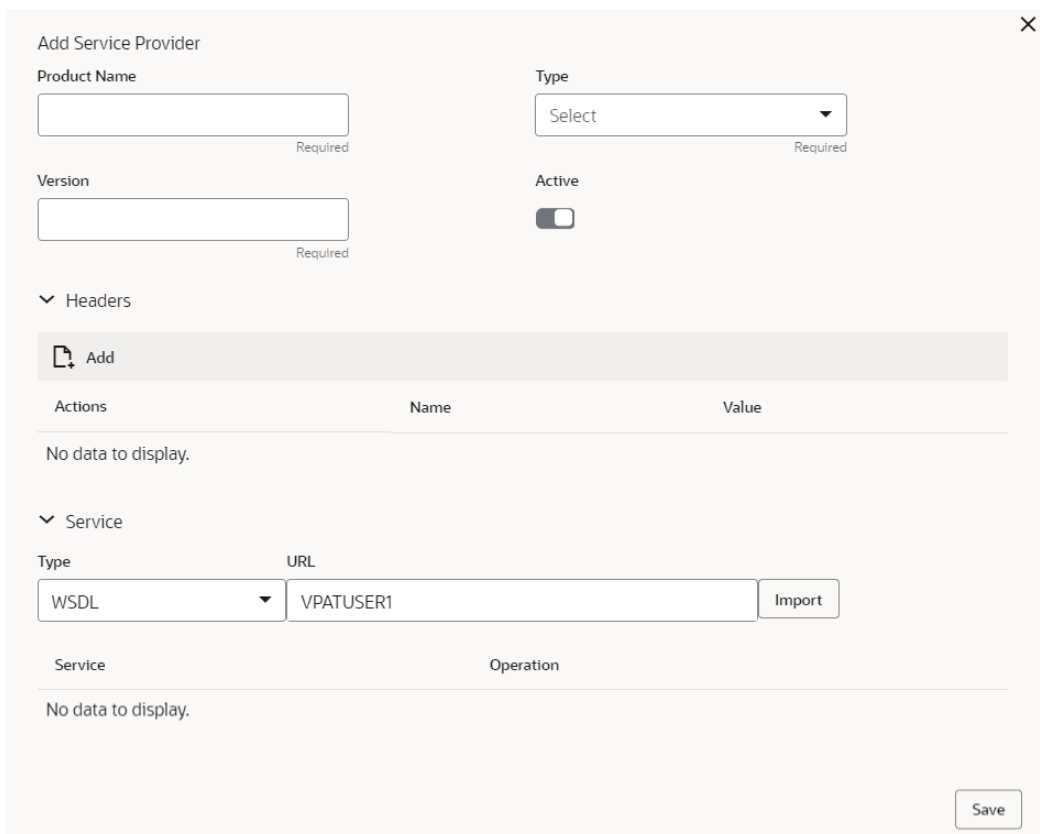
Figure 2-41 Service Providers

To Add Service Provider

4. Click **Add**.

   The **Add Service Provider** screen displays.

Figure 2-42 Add Service Provider



5. Specify the fields on **Add Service Provider** screen.

Note:

The fields marked as **Required** are mandatory.

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

Table 2-29 Add Service Provider - Field Description

Field	Description
Product Name	Specify the product name of the service provider. **Note:** • Enter 0 to maximum of 255 characters. • No numeric value at beginning and no space allowed.
Type	Select the type of service provider from drop-down list The available options are: • **INTERNAL** • **EXTERNAL**
Version	Specify the provider version. **Note:** • Enter 0 to maximum of 255 characters. • Only numeric or decimal values are allowed.
Active	Predefined values are Active / Inactive If provider is marked as inactive, then all related routes will be stopped.
Add	To add, refer to step 4.
Actions	Displays the action. The user can edit or delete the header.
Name	Displays the name of the header.
Value	Displays the value of the header.
Type	Select the type of service from drop-down list. The available options are: • **WSDL** • **SWAGGER**
URL	Specify the service URL of the file location.
Import	Click **Import** to extract the service information from URL.
Service	Displays the extracted service from the selected URL.
Operation	Displays the extracted operation from the selected URL.

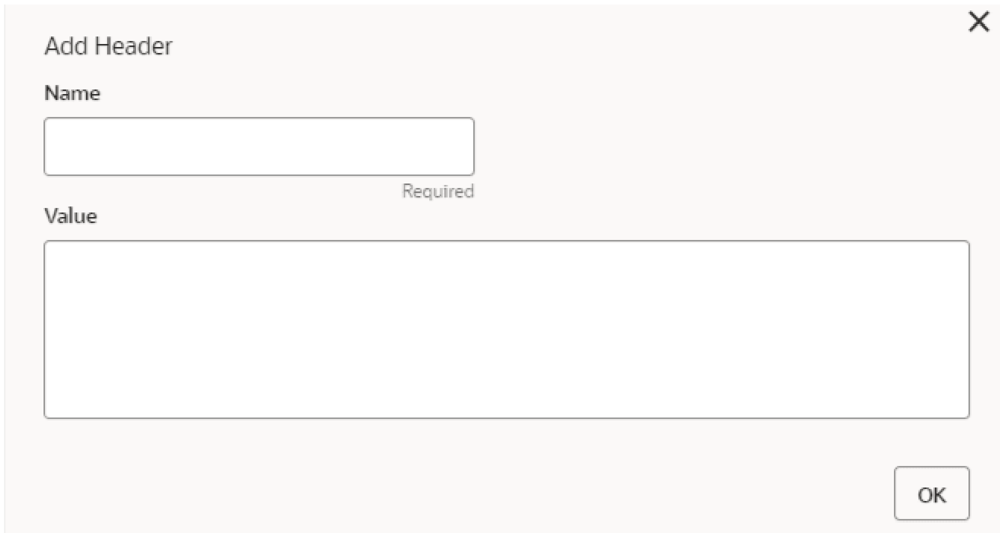
Headers

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

6. To add **Headers**, follow below steps.
   a. Click **Add**.

      The **Add Header** screen displays.

      Figure 2-43 Add Header



   b. Specify the fields on **Add Header** screen and click **OK**.

> **Note:**
>
> The fields marked as **Required** are mandatory.

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

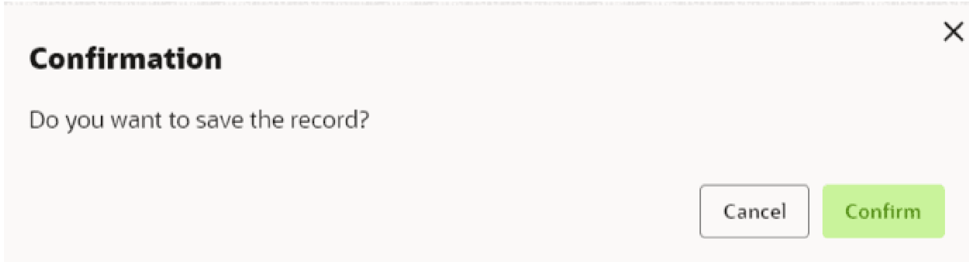
Table 2-30 Add Header - Field Description

Field	Description
Name	Specify the name of the header.
Value	Specify the value of the header.

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

   The **Confirmation** screen displays.

   Figure 2-44 Confirmation



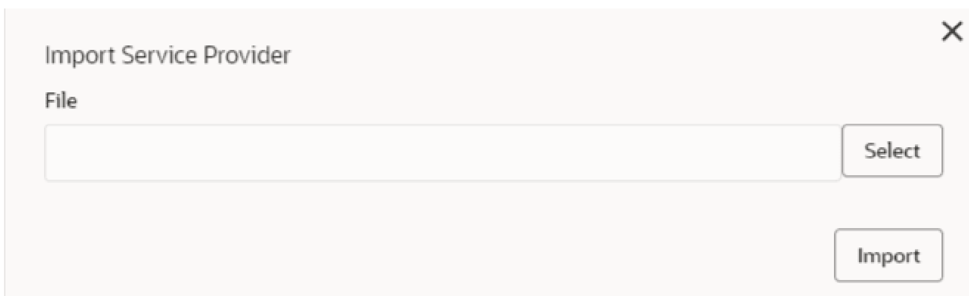
8. Click **Confirm** to save the record.

Import Service Provider

9. Click **Import**.

   The **Import Service Provider** screen displays.

Figure 2-45 Import Service Provider



> **Note:**
>
> The fields marked as **Required** are mandatory.

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

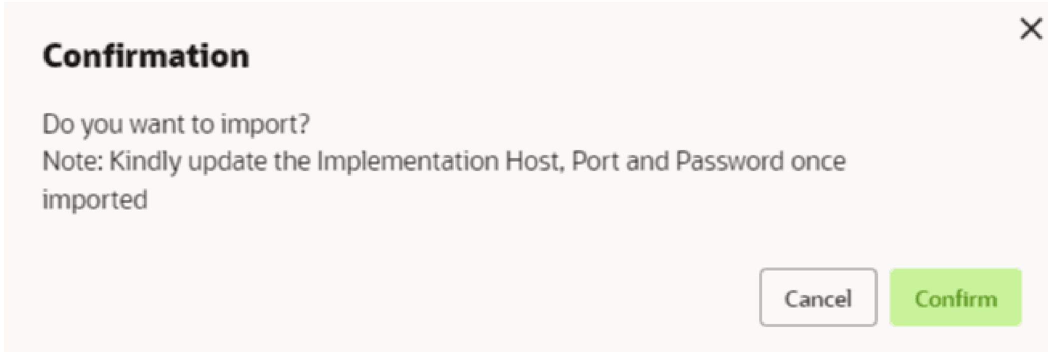
Table 2-31 Import Service Provider - Field Description

Field	Description
File	Select the file using **Select** button. **Note:** Allows only to select one file and accepts only JSON file.

10. Click **Import** to import the selected file.

    The **Confirmation** screen displays.

Figure 2-46 Confirmation - Import



> **Note:**
>
> Below data needs to be changed after importing provider configuration file:
>
> - Implementation Host and Port
> - Implementation Authentication Password

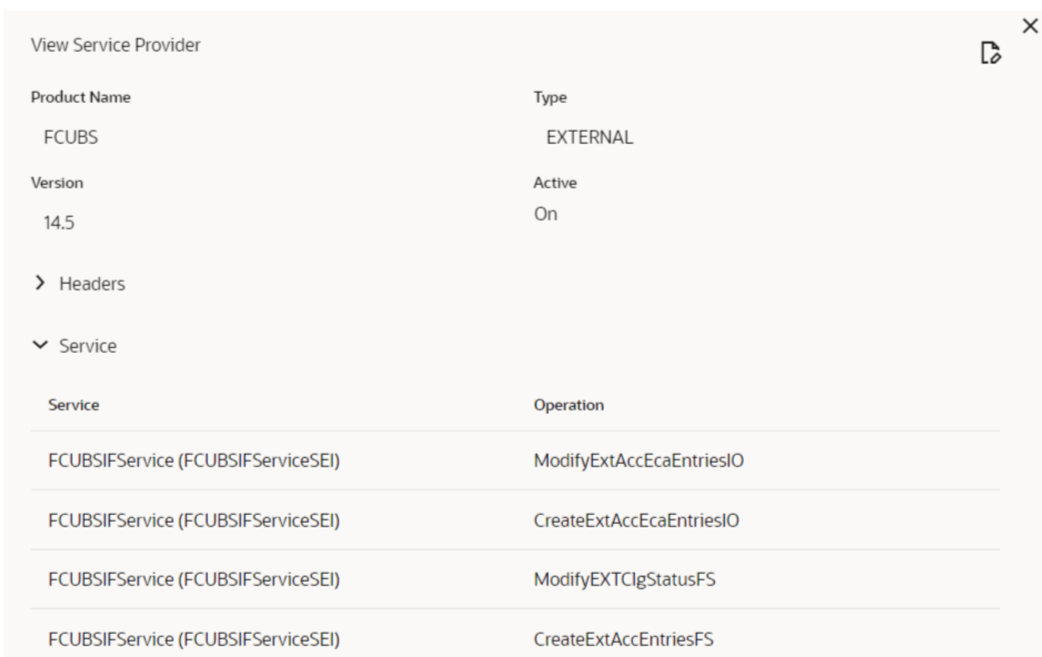
11. Click **Confirm** to import the record.

View Service Provider

12. Click 3 dots button (operation menu) and click **View**.

    The **View Service Provider** screen displays.

Figure 2-47 View Service Provider



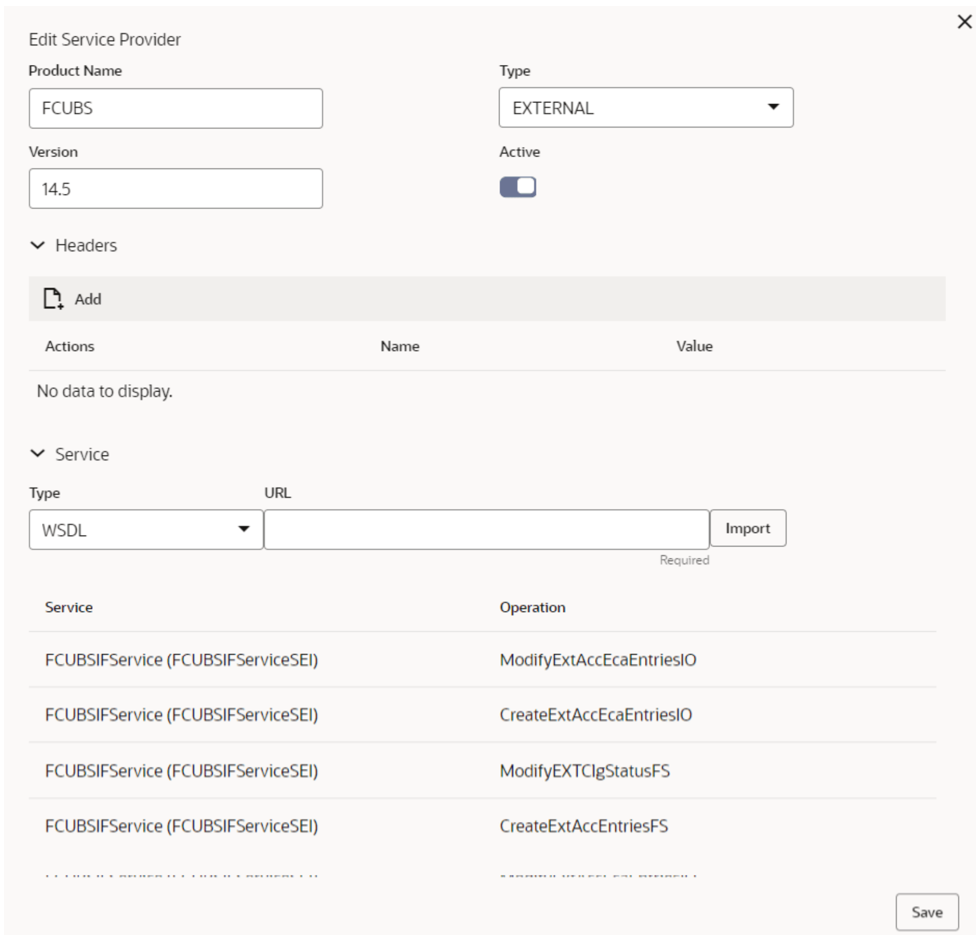
The user can click edit button to edit the **Service Provider**.

Edit Service Provider

13. Click 3 dots button (operation menu) and click **Edit**.

    The **Edit Service Provider** screen displays.

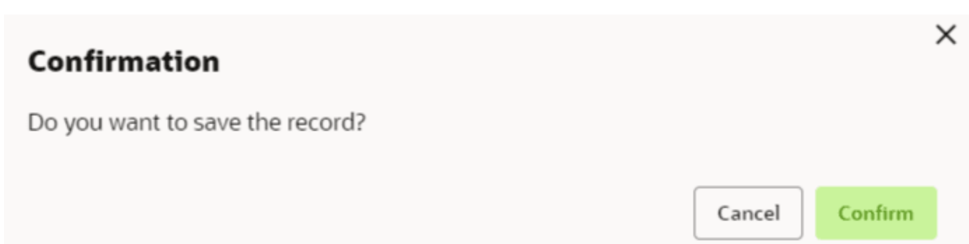
Figure 2-48 Edit Service Provider



14. Click **Save** once the edit is done.

    The **Confirmation** screen displays.

Figure 2-49 Confirmation - Edit Service Provider



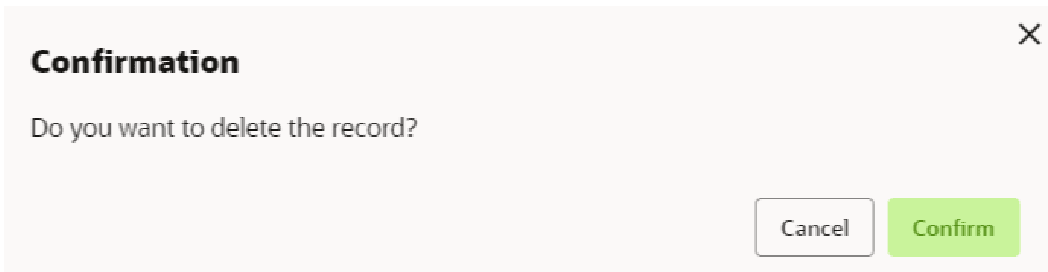
15. Click **Confirm** to save the record.

Delete Service Provider

16. Click 3 dots button (operation menu) and click **Delete**.

    The **Confirmation** screen displays.

Figure 2-50 Confirmation - Delete Service Provider



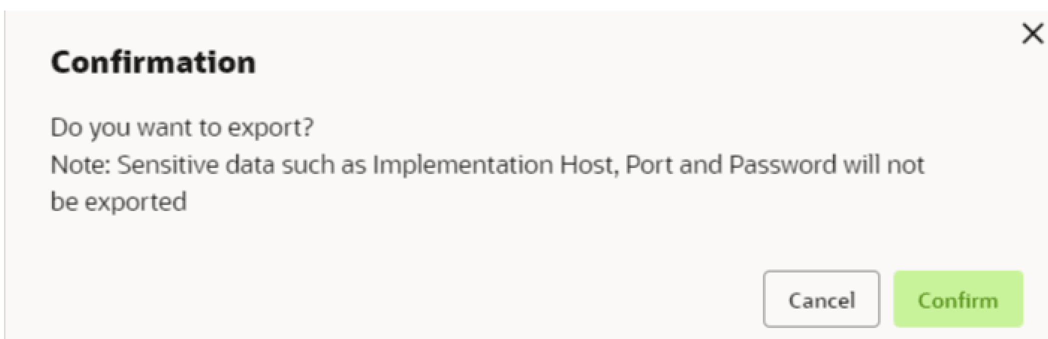
17. Click **Confirm** to delete the record.

Export Service Provider

18. Click 3 dots button (operation menu) and click **Export**.

    The **Confirmation** screen displays.

Figure 2-51 Confirmation - Export Service Provider



> **Note:**
>
> The following data cannot 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.

19. Click **Confirm** to export the record.

2.7.1.3 Experian Configuration

This topic provides the figures for the Experian configuration.

Experian Fetch Credit Report

Figure 2-52 Experian Fetch Credit Report

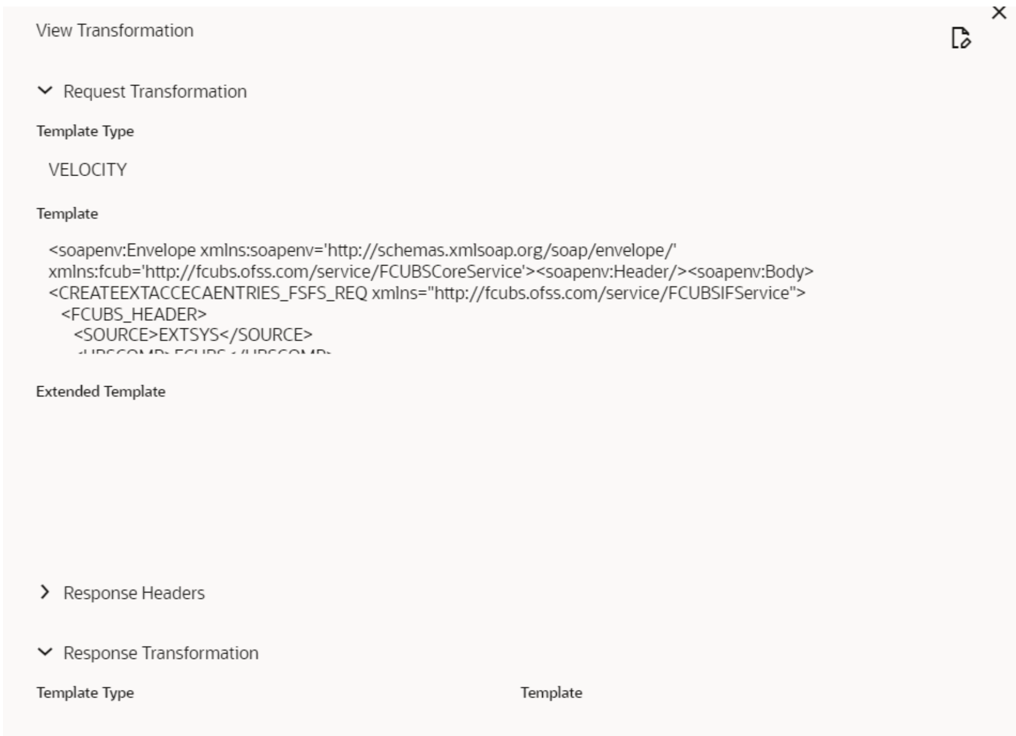
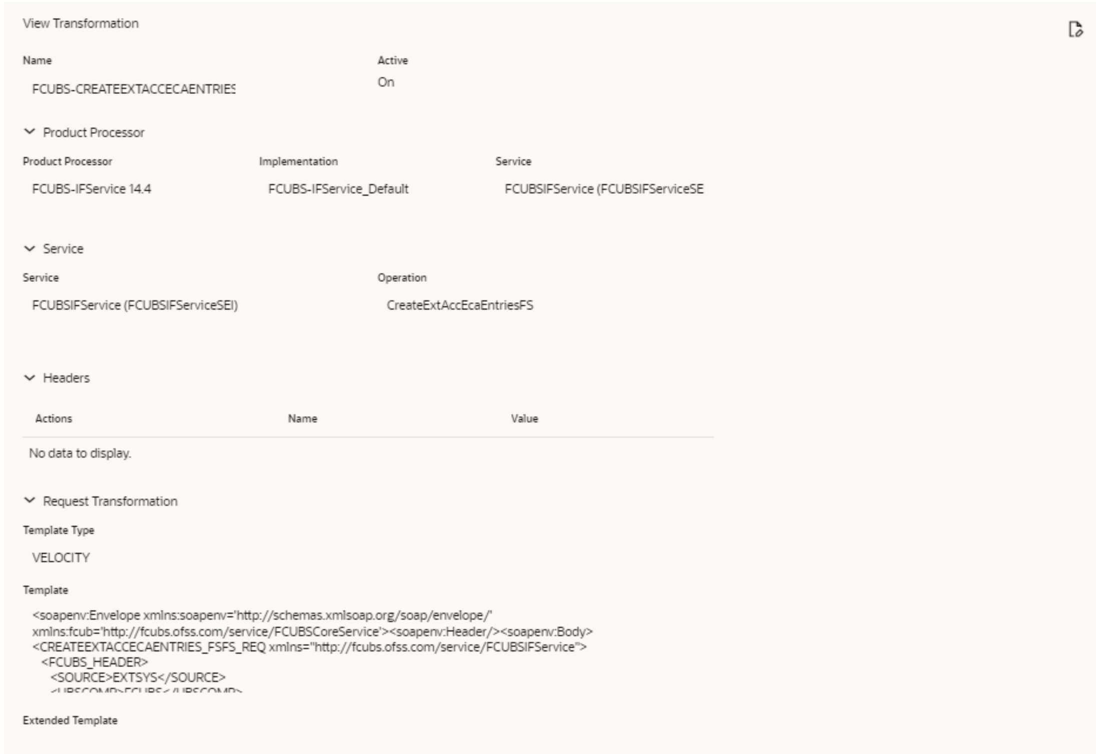


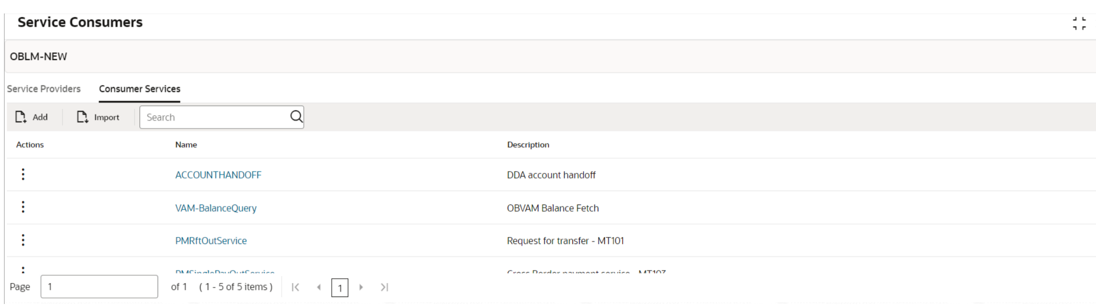
Figure 2-53 Experian Fetch Credit Report



Experian Sandbox

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

Figure 2-54 Experian Sandbox



2.7.1.4 Equifax Configuration

This topic describes the information about 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.

Equifax Fetch Credit Report

Figure 2-55 Equifax Fetch Credit Report

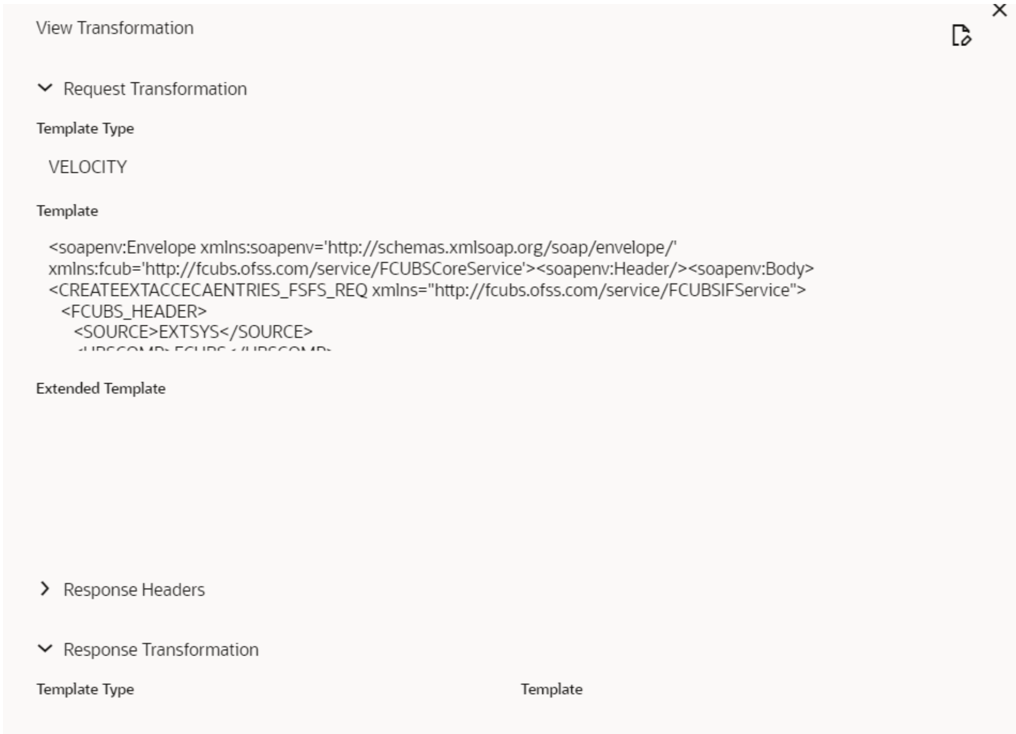
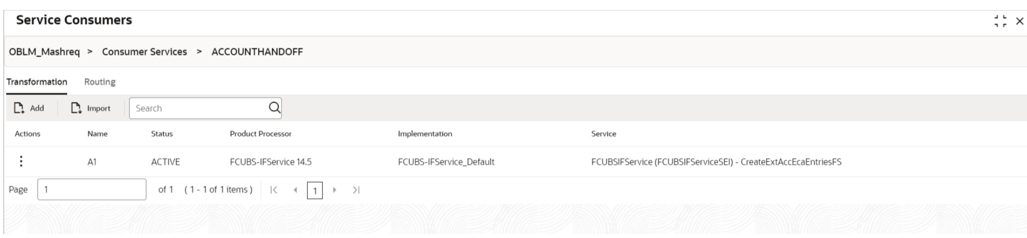


Figure 2-56 Equifax Fetch Credit Report



Equifax Sandbox

The **Service Consumer** exports details of fetch credit report from sandbox environment.

Figure 2-57 Equifax Sandbox

2.7.1.5 Document Configuration

This topic describes the information about 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.

2.7.1.6 Troubleshooting

This topic describes the information for troubleshooting the Oracle Banking Routing Hub.

Oracle Banking Origination issues faced during cmc-obcbs-service and cmc-obrh-services integration

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.

Unable to connect to external server

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.example.com`
- `Dhttps.proxyPort=80`

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]`