

Routing Hub Configuration User Guide

Oracle Banking Virtual Account Management

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Routing Hub Configuration User Guide

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1 Preface

1.1 Purpose

This document enables the user to integrate Oracle Products with External Product Processor through Oracle Banking Routing Hub Platform.

1.2 Audience

This document is intended for the following audience:

- Customers
- Partners

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 Screenshot Disclaimer

Personal information used in the interface or documents are dummy and does not exist in the real world. It is only for reference purposes.

1.5 Acronyms and Abbreviations

| Abbreviation | Description |
|--------------|----------------------------|
| OIC | Oracle Integration Cloud |
| OBRH | Oracle Banking Routing Hub |
| UAT | User Acceptance Testing |

1.6 Basic Actions








Most of the screens contain buttons to perform all or few of the basic actions. The actions which are called here are generic, it varies based on the usage and the applicability. The table below gives a snapshot of them:







| Action | Description |
|--------|--|
| Submit | Click to complete the transaction after you specify all the input parameters for a particular transaction. |

| Action | Description |
|---------------|---|
| Cancel | Click to cancel the transaction input midway without saving any data. |
| Clear | Click to clear the transaction input data. The system displays a pop-up screen with confirmation to clear data. You can click OK to confirm or click x icon to retain the data. |
| Query | On completion of input of necessary parameters, click this button to fetch and display the details. |
| Save | Click to save the details specified in the screen. |
| Exit | Click to close the screen and go to Home screen. |
| OK | Click to confirm the details in the pop-up screen. |

1.7 Symbols and Icons

The following are the symbols/icons you are likely to find in this guide:

| Symbol/Icon | Function |
|---|----------------|
|  | Minimize |
|  | Maximize |
|  | Close |
|  | Perform search |
|  | Add a file |
|  | Edit a file |
|  | Delete a row |

| Symbol/Icon | Function |
|---|-------------------------------|
|  | Import a file |
|  | To perform the actions |
|  | Navigate to the first page |
|  | Navigate to the last page |
|  | Navigate to the previous page |
|  | Navigate to the next page |

1.8 Related Resources

The related documents are as follows:

1. Oracle Banking Getting Started User Guide
2. Oracle Banking Common Core User Guide

2 Introduction

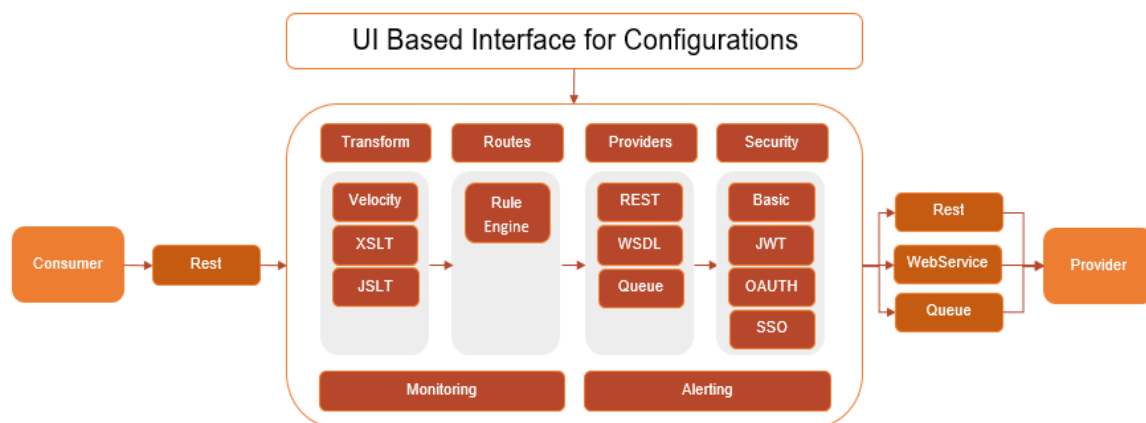
'Oracle Banking Routing Hub' enables seamless & standardized integrations between FSGBU Banking Products using configurations. This component is available as part of the product Infrastructure solution. A loose couple integration between banking products is possible with Oracle Banking Routing Hub.

Consumer Application (An application/product that needs to integrate with another product to retrieve information or post transactions) need not know following details while coding the integration.

- Servicing Providers or Product Processors - Products which provides data to the Consumer Application when required or posts the transaction when initiated from a consumer application.
- Name of the Service - Logical name of the service e.g. Funds Transfer, Letter of Credit Initiation to fetch the details from Service Provider product or post a transaction.
- Messaging structure of Service - Structure of the message e.g JSON, XML, multipart request.
- Communication Protocol – Web services, Rest API, Queue, OIC.

Integration can be achieved and modified anytime later through 'Oracle Banking Routing Hub' configurations. A consumer can also be integrated with different versions of a single Product processors if required.

In this document we have shown the maintenance of two product i.e., "Oracle Service Consumer" as Service Consumer and "External Product Processor" as Service Provider.



2.1 Acronyms & Definitions

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

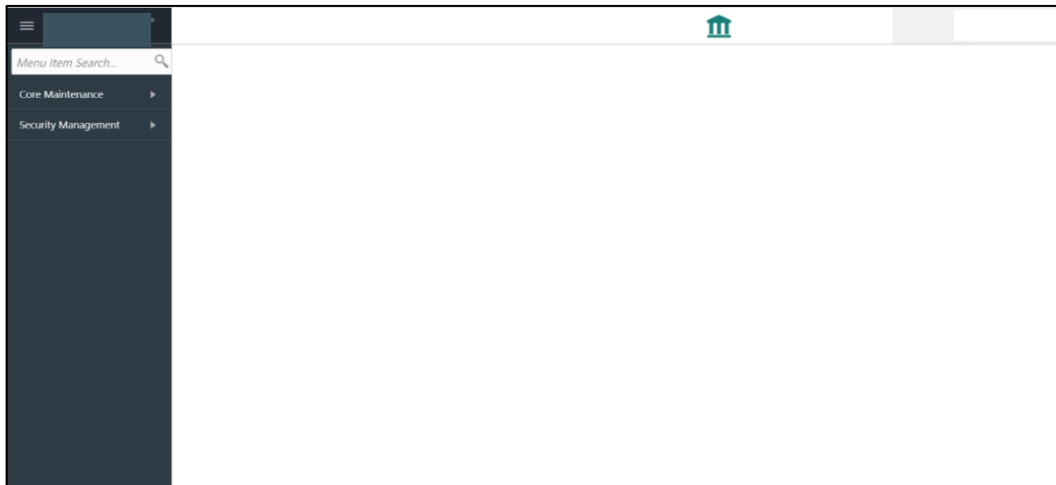
| Abbreviation & Definitions | Description |
|----------------------------|--|
| Service Consumers | Applications that need to integrate with multiple product processors to fetch the information or post a transaction. Service Consumer integrates with Oracle Banking Routing Hub |
| Service Providers | The product processors available to serve the request send by Oracle Banking Routing Hub on behalf of Service Consumer |
| Service | Soap or Rest Web Services. Soap Services can be imported through WSDL while Rest Services can be imported through Swagger |
| Headers | headers require by product processor while sending request |

3 Start Maintenance - Login Screen

Open Browser, Hit URL and Launch **Oracle Banking Routing Hub**.

| Component briefing | | | | |
|--------------------|----------------|--------------|--------------------------------------|--------------------------------------|
| Component Name | Component Type | Is Mandatory | Data type | Comments |
| User Name | Text Box | Yes | Alphanumeric | |
| Password | Text Box | Yes | Alphanumeric with special characters | |
| Sign In | Button | | | Navigates to Dashboard / menu screen |
| Cancel | Button | | | |

4 Main Menu Screen



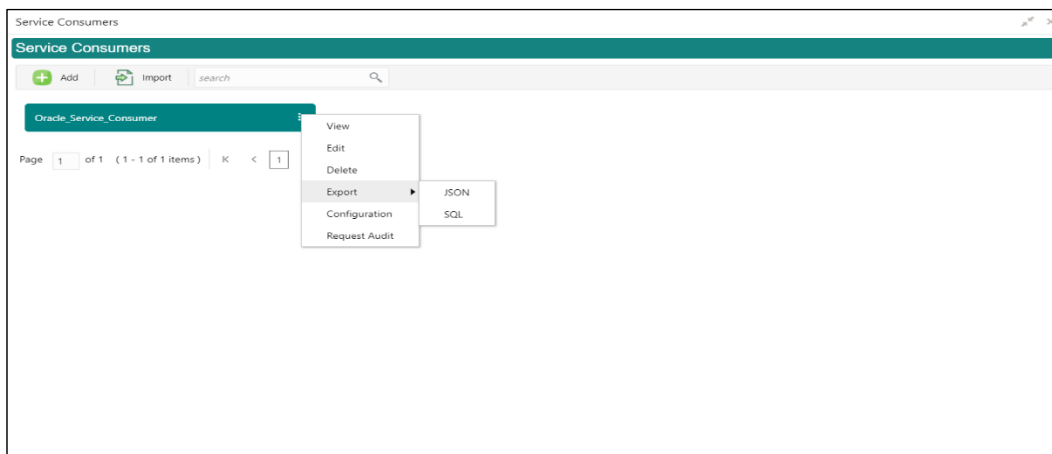
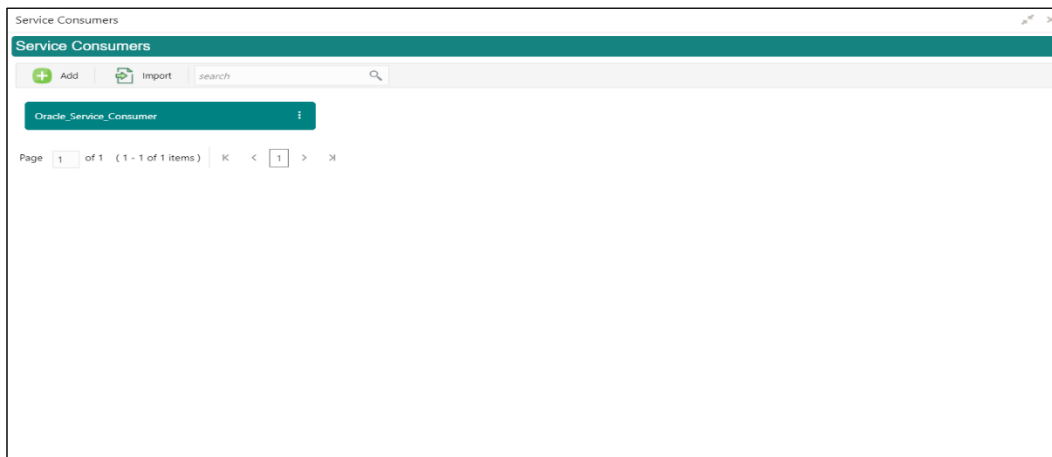
| Component briefing | | |
|--------------------|-----------------|--------------------------------------|
| Component Name | Component Type | Comments |
| Core Maintenance | Main menu item | |
| Routing Hub | Sub menu item | |
| Configuration | Sub menu option | Navigates to Configuration screen |
| Service Consumer | Sub menu option | Navigates to Service Consumer screen |
| Request Audit | Sub menu option | Navigates to Request Audit screen |

5 Service Consumer

This option enables set up of Service Consumer. Service Consumer is an Oracle banking product which invokes Oracle Banking Routing Hub API for integration. Oracle Banking Routing Hub analyses, evaluate destination product processor and transform data into format as required by the destination product processor for service a request type.

Service Consumer comprises of the source and destination integration details.

Navigation: **Core Maintenance -> Routing Hub -> Service Consumers**



| Component briefing | | | |
|--------------------|----------------|-----------|--------------------|
| Component Name | Component Type | Condition | Comments |
| Add | Button | | Pops up add dialog |

| | | | |
|--|---------------|--------------|---|
| Import | Button | | Pops up import dialog |
| Search | Combo Box One | | Provides search functionality with case insensitive (Service Consumer Name) NOTE: Use wildcard character (*) for pattern matching |
| Navigation: Service Consumers -> 3 dot icon (operation menu) | | | |
| View | menu option | Non-editable | Pops up view dialog |
| Edit | menu option | | Pops up edit dialog |
| Delete | menu option | | |
| Export | Sub menu item | | |
| JSON | menu option | | Exports in JSON |
| SQL | menu option | | Exports in SQL |
| Configuration | menu option | | Pops up configuration dialog |
| Request Audit | menu option | | Pops up request audit log |

5.1 Add

In addition to importing Service Consumers, users can create Service Consumers manually using Add option.

Navigation: **Service Consumers -> Add**

The screenshot shows the 'Add Service Consumer' dialog box. The 'Name' field contains 'Oracle_Service_Consumer'. A tooltip above the field states: 'Enter 0 or more characters, up to a maximum of 255. No numeric value allowed at beginning.No space allowed.' Below the name field is the 'Environment Variables' section, which includes an 'Add' button and a table with columns 'Actions', 'Name', and 'Value'. The table currently has no data. A 'Save' button is located at the bottom right of the dialog.

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

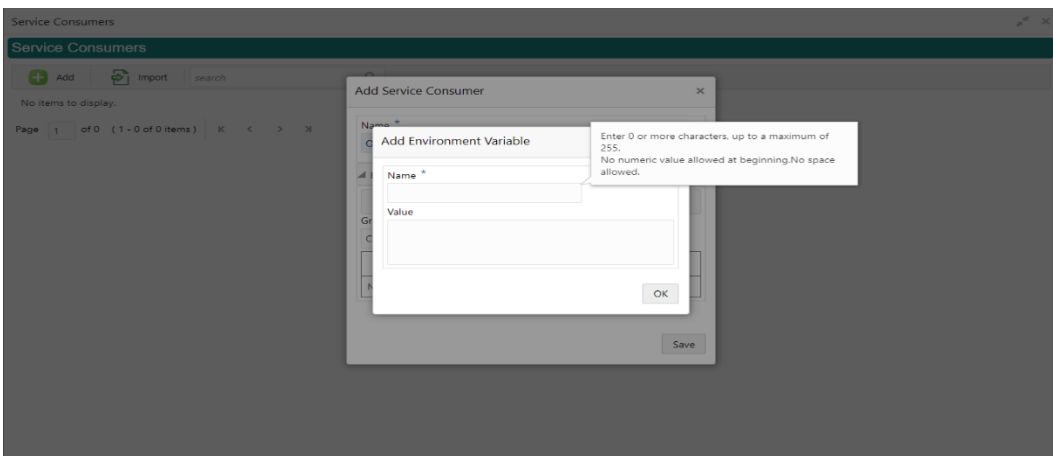
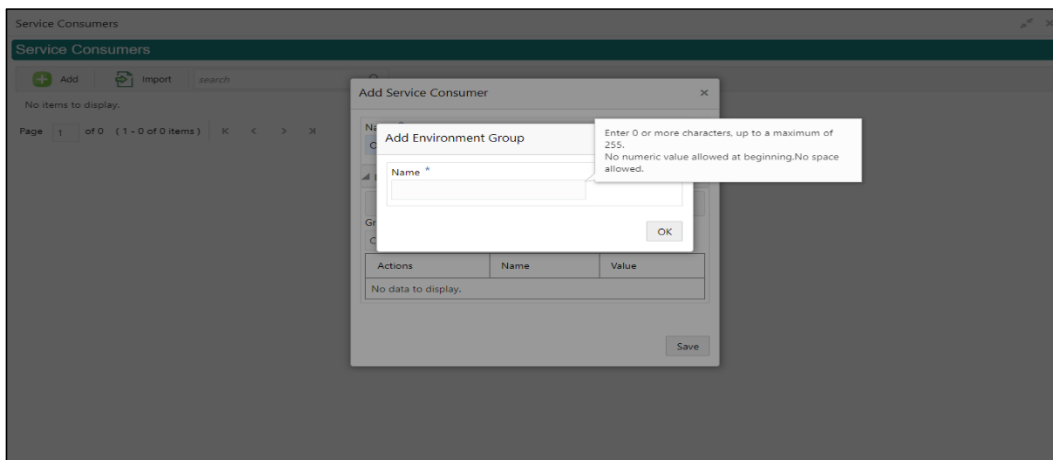
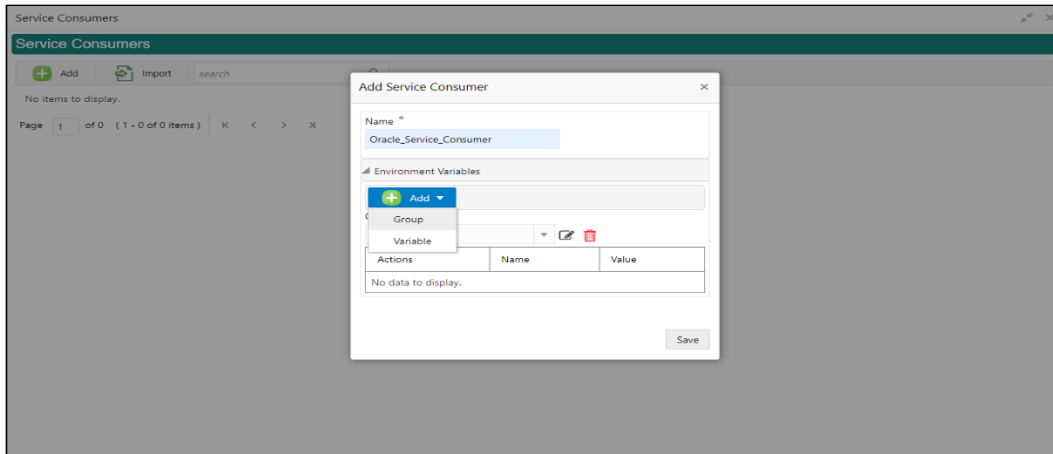
5.1.1 Environment Variables

User will be able to define the group of variables which can be accessed throughout the specific consumer's configuration.

Below is the syntax for accessing environment variables:

`$env.Environment_Group_Name.Environment_Variable_Name`

eg: `$env.COMMON.BRANCH_CODE`



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

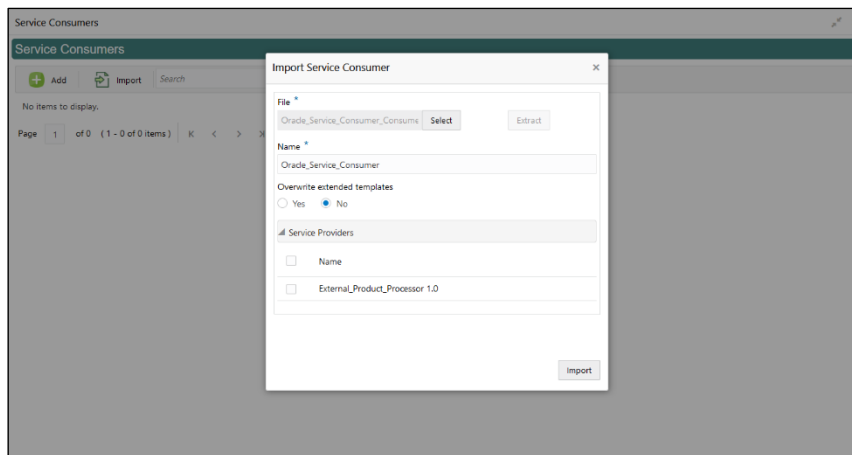
| | | | | | |
|--|--|--|--|--|-------------------------|
| | | | | | displays it in the list |
|--|--|--|--|--|-------------------------|

5.2 Import

User 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.

User can also import zip file in order to import all the configuration JSON files together.

Navigation: **Service Consumers -> Import**



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

| | | | | | | |
|-------------------------------------|------------------------------|-----|--------------------------------------|--|----------|--|
| Name | Text Box | Yes | Alphanumeric with special characters | <ul style="list-style-type: none"> • Name cannot be blank • Enter 0 or more characters, up to a maximum of 255 • No numeric value at beginning and no space allowed | Editable | Name is required only for JSON file |
| Overwrite extended templates | Radio Button | Yes | | | | Predefined Values: Yes / No Yes: This option is for overwriting the extended templates in configuration and No: This option is for retaining the existing extended templates in configuration. |
| Service Provider | Collapsible Header & Content | | | | | Displays the list of service providers that are present in JSON file only |
| Import | Button | | | | | Imports Service Consumer |

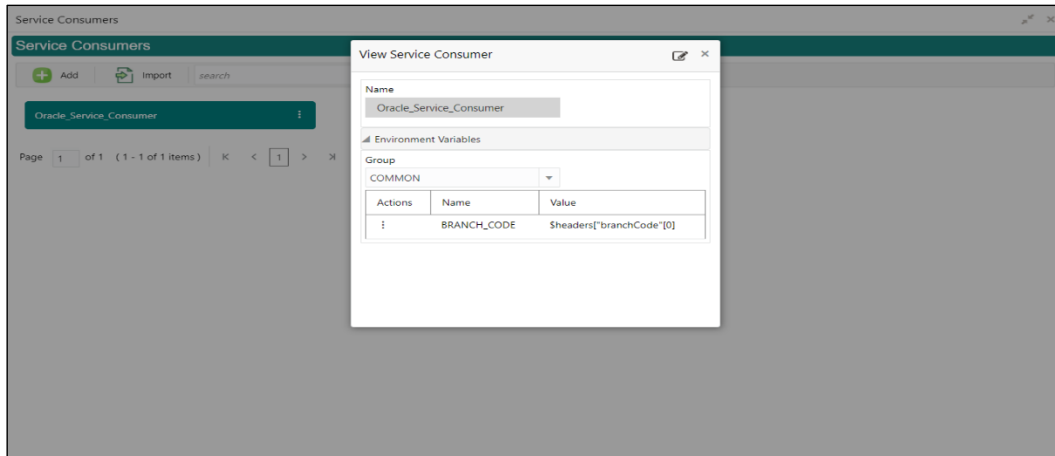
NOTE: Below data needs to be changed after importing consumer configuration file:

- Implementation Host and Port
- Implementation Authentication Password

5.3 View

User can view consumer details and can also switch to edit form by clicking on edit icon.

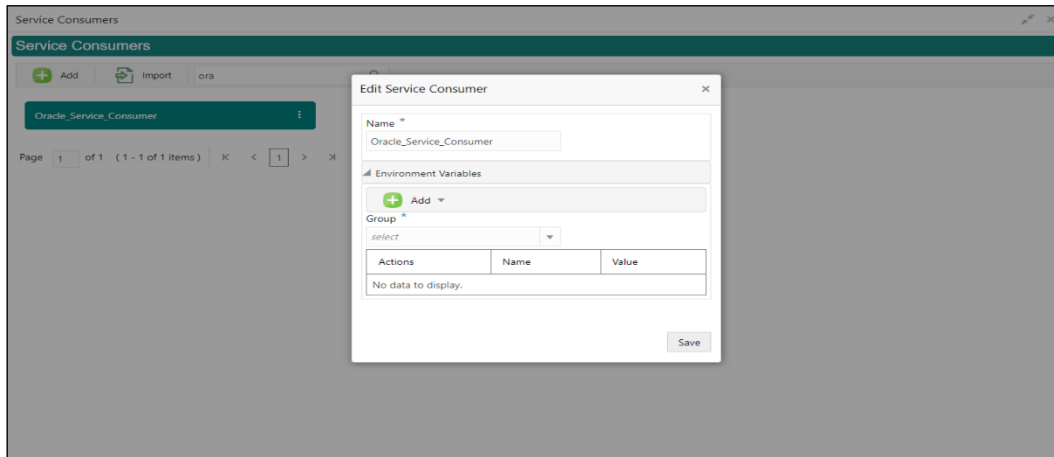
Navigation: **Service Consumers -> Operation Menu (3 dot icon) -> View**



5.4 Edit

User can modify the consumer details.

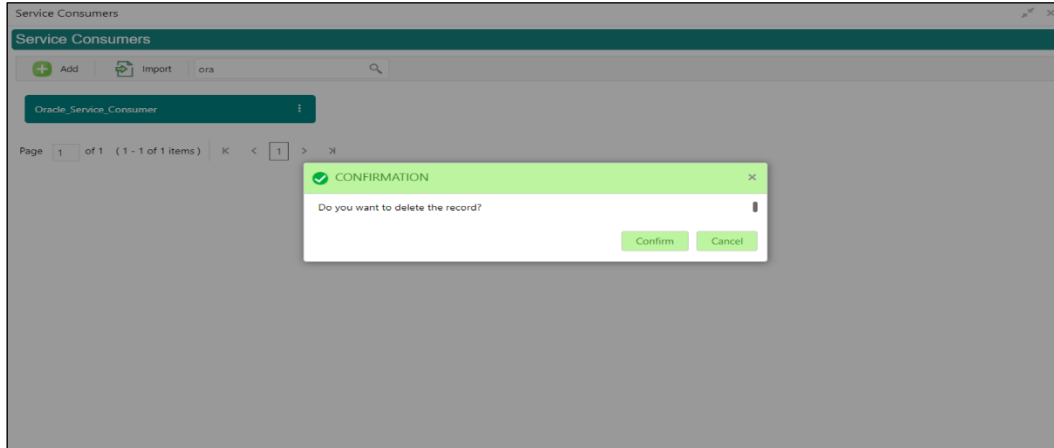
Navigation: **Service Consumers** -> **Operation Menu** (3 dot icon) -> **Edit**



5.5 Delete

User can delete the consumer.

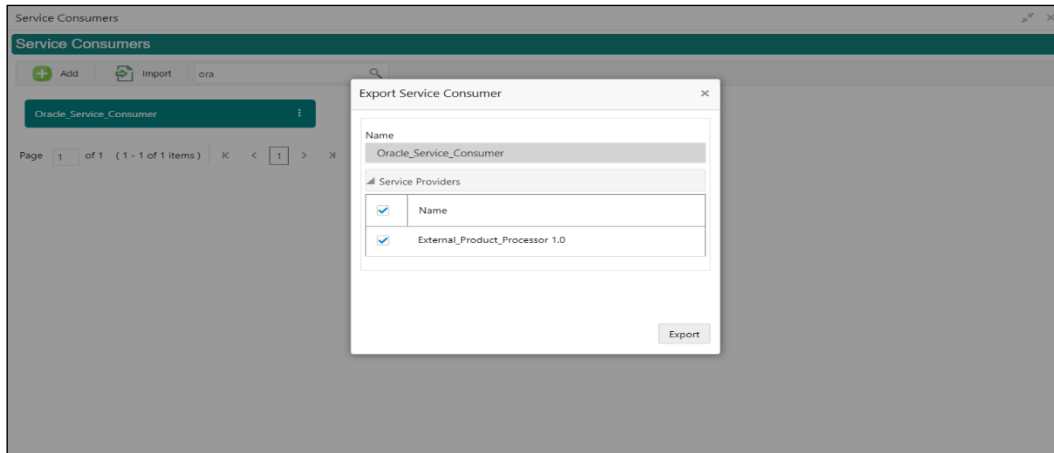
Navigation: **Service Consumers** -> **Operation Menu** (3 dot icon) -> **Delete**



5.6 JSON Export

User can export the consumer configuration as JSON file. The option for Export is provided to move the configurations from one environment to another.

Navigation: **Service Consumers -> Operation Menu (3 dot icon) -> Export -> JSON**



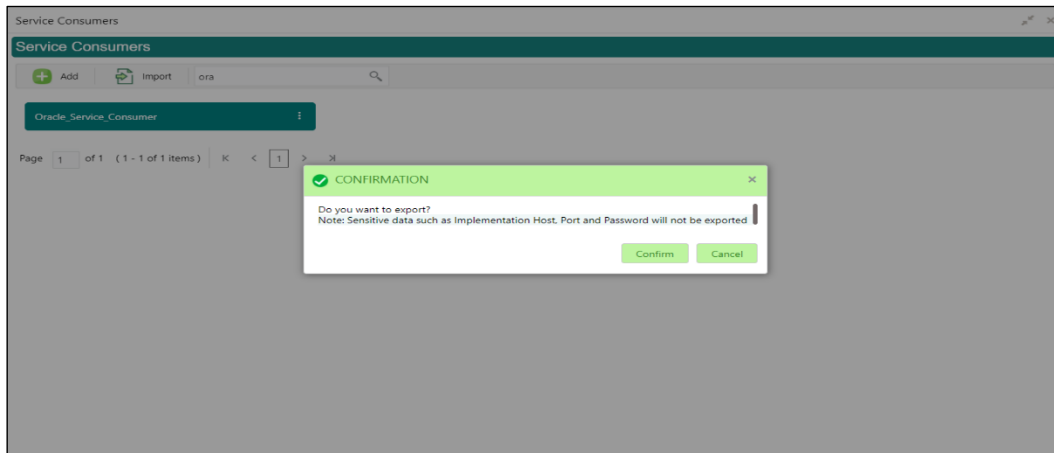
Note:

- User has an option to select service providers from the list which 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
 - All implementations of selected service providers with services (without Host, Port and Authentication Password)
 - All transformations
 - All routes

5.7 SQL Export

User can export the consumer configuration as SQL file.

Navigation: **Service Consumers -> Operation Menu (3 dot icon) -> Export -> SQL**



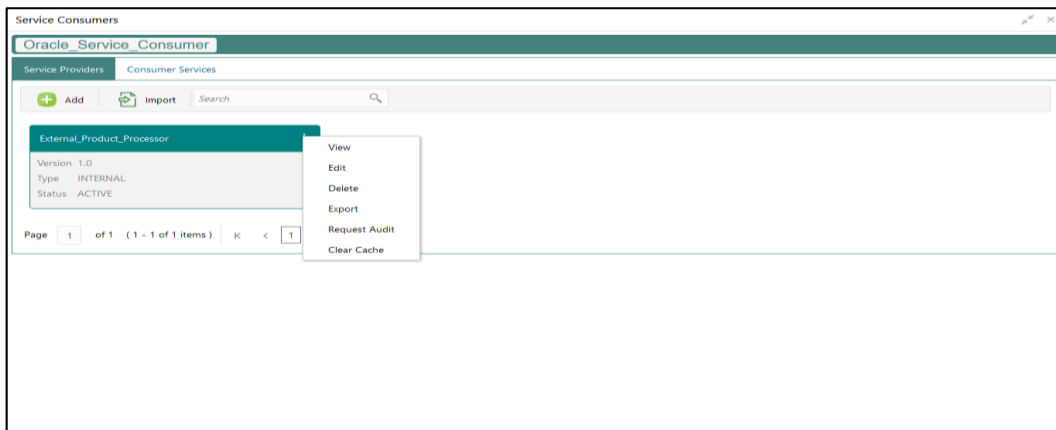
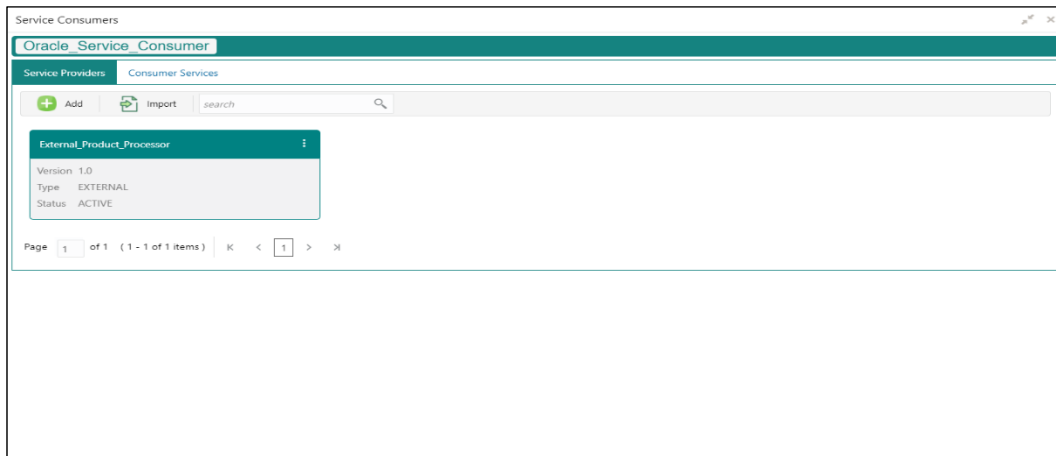
NOTE: SQL Export feature will export entire configuration without Host, Port and Authentication Password details.

6 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.

Navigation: **Core Maintenance -> Routing Hub -> Service Consumers -> <Specific Service Consumer> -> Service Providers**



| Component briefing | | | |
|--------------------|----------------|-----------|-------------------------------------|
| Component Name | Component Type | 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) NOTE: Use wildcard character (*) for pattern matching |
| Navigation: Service Providers -> 3 dot icon (operation menu) | | | |
| View | menu option | Non-editable | Pops up view dialog |
| Edit | menu option | | Pops up edit dialog |
| Delete | menu option | | |
| Export | menu option | | Exports in JSON |
| Request Audit | menu option | | Pops up request audit log |
| Clear Cache | menu option | | Clears SOAP client cache |

6.1 Add

User can create Service Provider manually.

Navigation: **Service Providers-> Add**

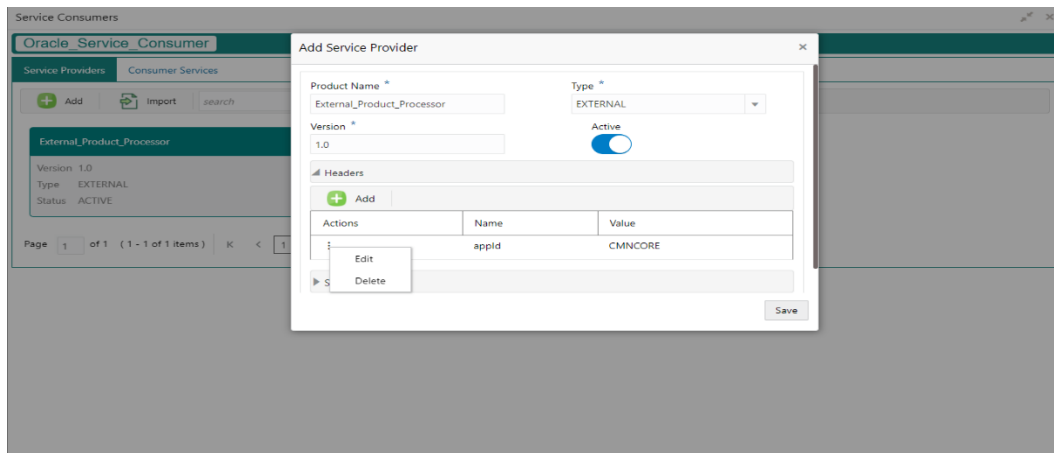
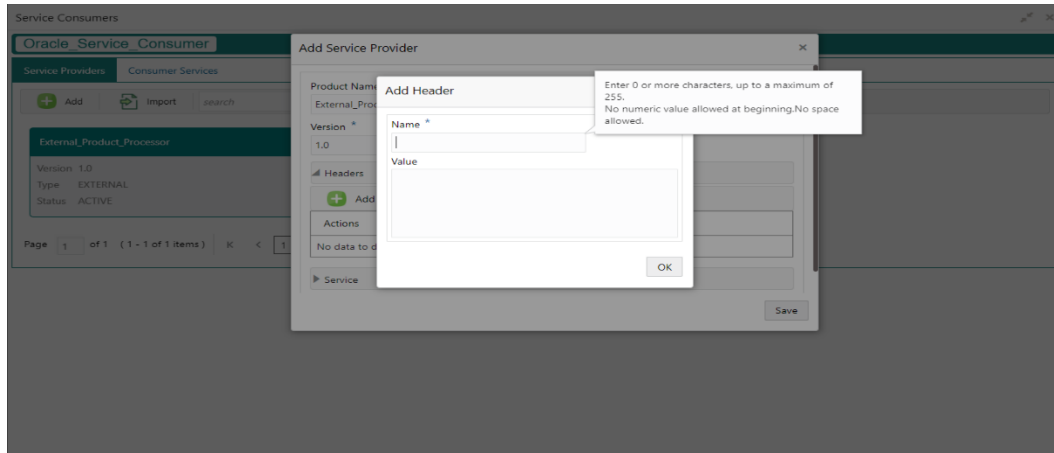
| Component briefing | | | | | |
|--------------------|----------------|--------------|--------------------------------------|--|--|
| Component Name | Component Type | Is Mandatory | Data type | Validation | Comments |
| Product Name | Text Box | Yes | Alphanumeric with special characters | <ul style="list-style-type: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

| | | | | | |
|---------|------------------------------|-----|--------|---|--|
| | | | | | EXTERNAL type should be used for non-oracle products |
| Version | Text Box | Yes | Number | <ul style="list-style-type: none"> • Version cannot be blank • Enter 0 or more characters, up to a maximum of 255. • Enter only numeric or decimal values. | Unique provider version |
| Active | Switch | | | | Predefined Values: ACTIVE / INACTIVE If provider is marked as inactive, then all related routes will be stopped. |
| Headers | Collapsible Header & Content | | | | Provider specific headers |
| Service | Collapsible Header & Content | | | | Provider specific service details |
| Save | Button | | | | Saves the Service Provider |

6.1.1 Headers

A 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.

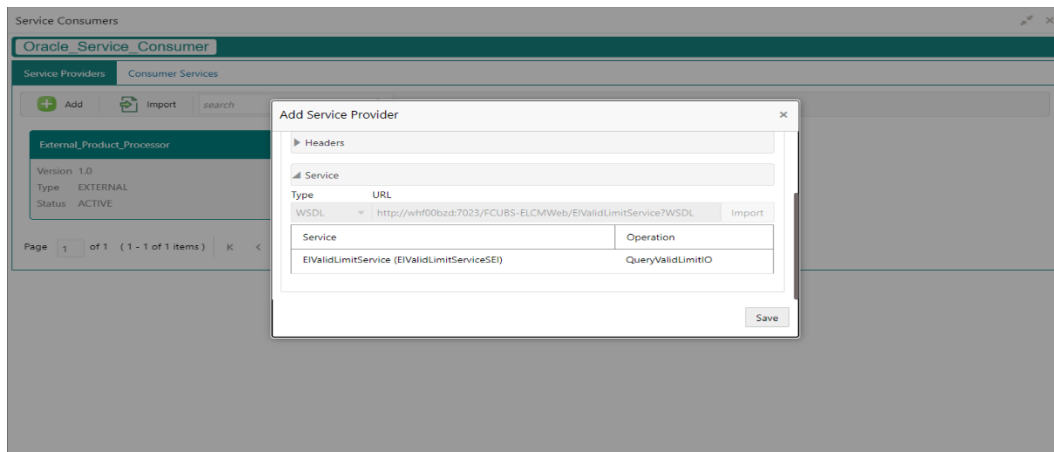
These headers can be configured in Oracle Banking Routing Hub using the steps given below



| Component briefing | | | | | |
|---|----------------|--------------|-----------|------------|--------------------|
| Component Name | Component Type | Is Mandatory | Data type | Validation | Comments |
| Add | Button | | | | Pops up add dialog |
| Navigation: Service Providers -> Headers -> 3 dot icon (operation menu) | | | | | |

| | | | | | |
|--|-------------|-----|--------------------------------------|--|---|
| Edit | menu option | | | | Pops up edit dialog |
| Delete | menu option | | | | Deletes header |
| Navigation: Service Providers -> Headers -> Add | | | | | |
| Name | Text Box | Yes | Alphanumeric with special characters | <ul style="list-style-type: none"> Name cannot be blank Enter 0 or more characters, up to a maximum of 255. No numeric value at beginning and no space allowed. | |
| Value | Text Area | Yes | Alphanumeric with special characters | <ul style="list-style-type: none"> Enter 0 or more characters, up to a maximum of 255. | Value can either be hardcoded or can be Velocity mapping. |
| OK | Button | | | | Saves the header details and displays it in the list |

6.1.2 Service



| Component briefing | | | |
|--------------------|----------------|--------------|---|
| Component Name | Component Type | Is Mandatory | Comments |
| Type | Combo Box One | Yes | Predefined Values: WSDL / SWAGGER / OTHERS |
| 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 |

6.1.2.1 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.

Both SSL and non-SSL WSDL URL are 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.

6.1.2.2 SWAGGER

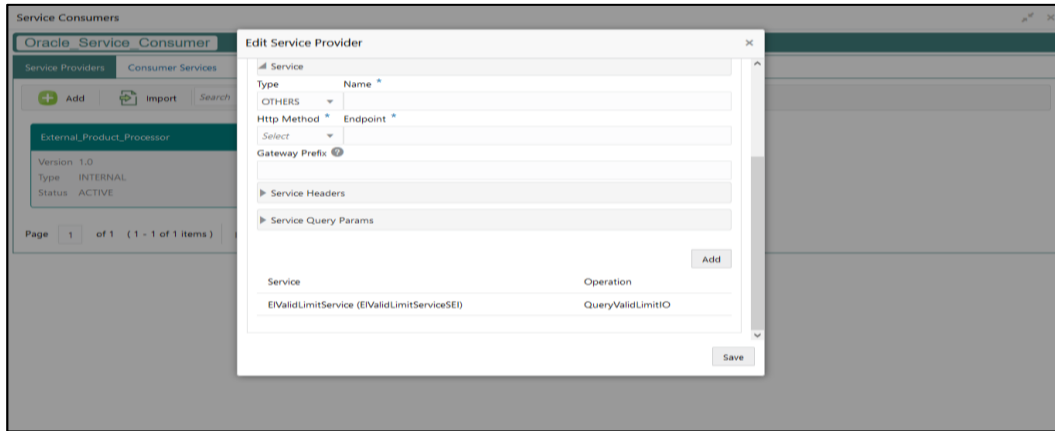
Swagger is an Interface Description Language for describing RESTful APIs expressed using JSON.

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.

6.1.2.3 OTHERS

"OTHERS" option is for adding REST API details manually when provider does not have swagger file.



| Component briefing | | | | |
|--------------------|----------------|--------------|--|---|
| Component Name | Component Type | Is Mandatory | Validation | Comments |
| Name | Text Box | Yes | <ul style="list-style-type: none"> Name cannot be blank No space allowed at beginning. | Name of operation |
| Http Method | Combo Box One | Yes | | Predefined Values: GET / POST / PUT / PATCH / DELETE |
| Endpoint | Text Box | Yes | <ul style="list-style-type: none"> Endpoint cannot be blank No space allowed at beginning. | Endpoint URL of operation |
| Gateway Prefix | Text Box | | | Gateway Prefix is context path of below formatted URL http://host:port/gateway-prefix/endpoint |

| | | | | |
|----------------------|------------------------------|--|--|---|
| Service Headers | Collapsible Header & Content | | | Endpoint specific headers Value can either be hardcoded or can be Velocity mapping. |
| Service Query Params | Collapsible Header & Content | | | Endpoint specific query parameters Value can either be hardcoded or can be Velocity mapping. |
| Add | Button | | | Adds the endpoint details in the Service list |

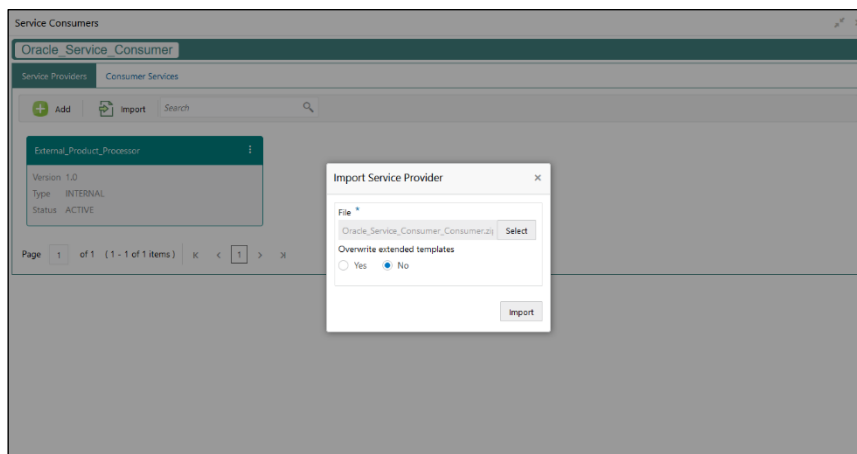
NOTE: In case there is a change in existing endpoint, then same endpoint details need to be entered again with the new changes in order to update the existing provided service information in routing hub.

6.2 Import

User can create a service provider by importing the JSON file.

User can also import zip file in order to import all the configuration JSON files together (except parent level configuration JSON files).

Navigation: **Service Providers -> Import**



| Component briefing | | | | | |
|-------------------------------------|----------------|--------------|--------------------------------|---------------------------|---|
| Component Name | Component Type | Is Mandatory | Validation | Condition | Comments |
| File | File picker | Yes | Allows only to select one file | Accepts JSON and ZIP file | Pops up file selection dialog box |
| Overwrite extended templates | Radio Button | No | | | <p>Predefined Values: Yes / No</p> <p>Yes: This option is for overwriting the extended templates in configuration</p> <p>No: This option is for retaining the existing extended templates in configuration.</p> <p>Note: This option is only visible if ZIP file is selected</p> |
| Import | Button | | | | Imports Service Provider |

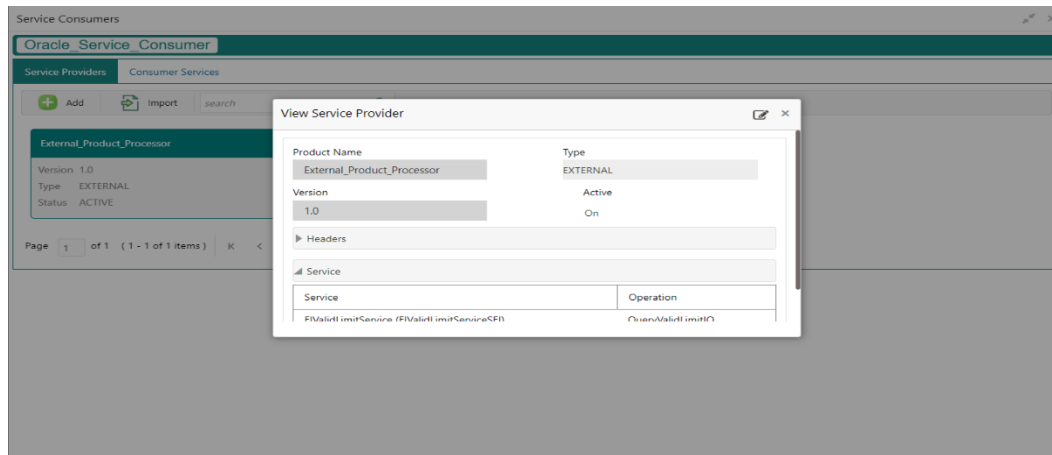
NOTE: Below data needs to be changed after importing provider configuration file:

- Implementation Host and Port
- Implementation Authentication Password

6.3 View

User can view provider details and can also switch to edit form by clicking on edit icon.

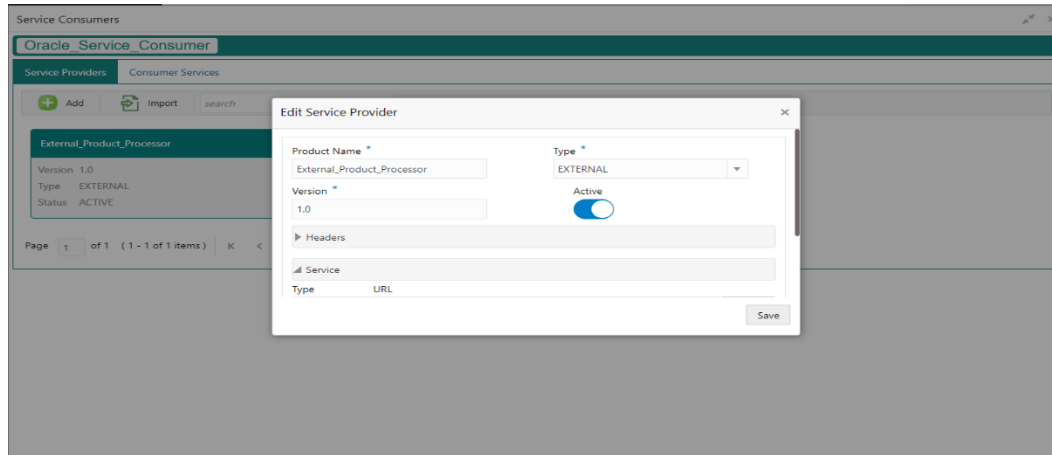
Navigation: **Service Providers -> Operation Menu (3 dot icon) -> View**



6.4 Edit

User can modify the provider details.

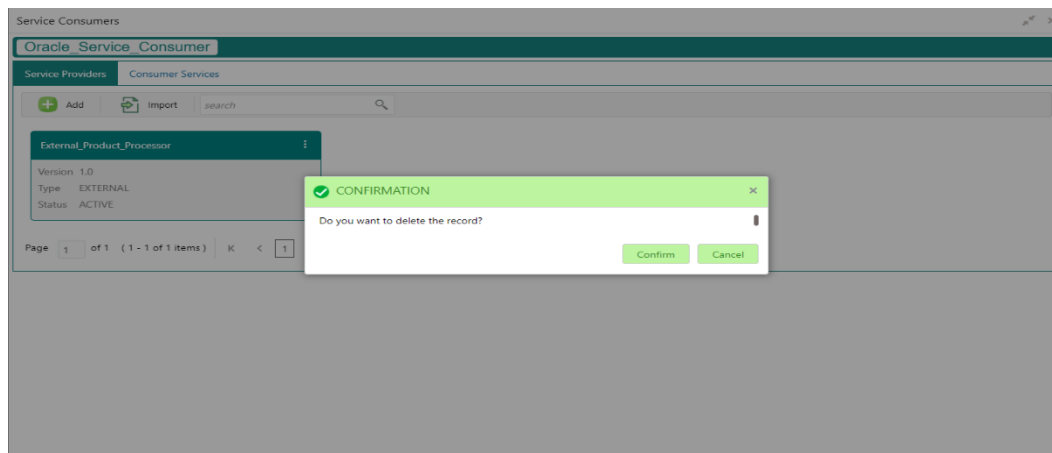
Navigation: **Service Providers** -> Operation Menu (3 dot icon) -> **Edit**



6.5 Delete

User can delete the provider.

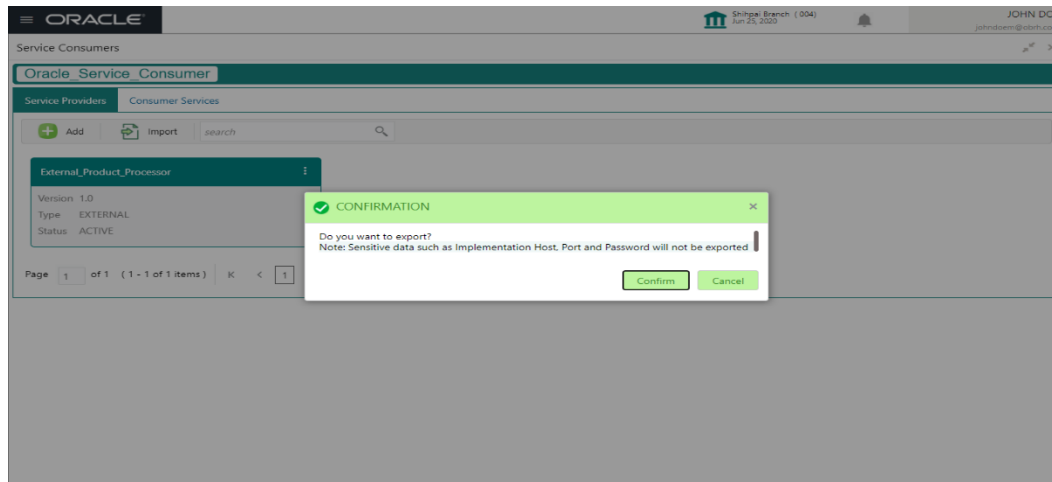
Navigation: **Service Providers** -> Operation Menu (3 dot icon) -> **Delete**



6.6 Export

User can export the provider configuration as JSON file.

Navigation: **Service Providers -> Operation Menu (3 dot icon) -> Export**



NOTE: Below data will not be exported:

- Implementation Host
- Implementation Port
- Implementation Authentication Password

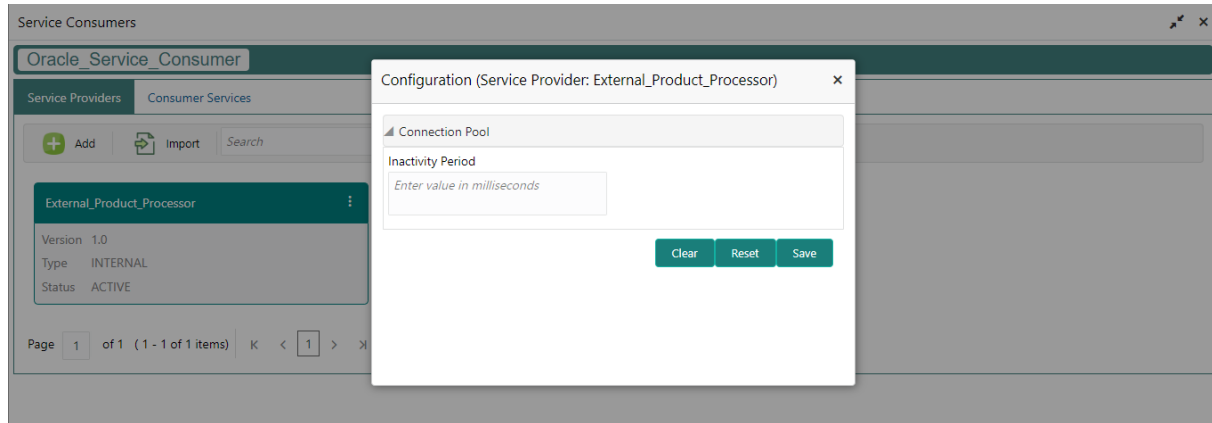
The above data needs to be configured manually after importing the configuration file.

Same has been mentioned in Import section

6.7 Configuration

End-user can configure the property to re-validate connection in connection pool.

Navigation: **Service Providers -> Operation Menu (3 dot icon) -> Configuration**



| Component briefing | | | | |
|--------------------|----------------|--------------|------------|--|
| Component Name | Component Type | Is Mandatory | Validation | Comments |
| Inactivity Period | Text Box | | | This property is used to specify connection inactivity time for revalidating connections in connection pool. |

7 Implementation

Implementation comprises of Eureka client instance, Queue, Host, Port, authentication and implementation specific service details. Oracle Banking Routing Hub supports webservice and Rest API.

NOTE: Default implementation is created whenever a new service provider is added.

Navigation: **Core Maintenance -> Routing Hub -> Service Consumers -> <Specific Service Consumer> -> Service Providers -> <Specific Service Provider> -> Implementation**

Service Consumers

Oracle_Service_Consumer > Service Providers > External_Product_Processor 1.0

Implementation

+ Add Import Search

| Actions | Name | Description | Service Name | Host | Port | Queue |
|---------|------------------------------------|------------------------|--------------|------|------|-------|
| | External_Product_Processor_Default | Default Implementation | | xxxx | 0 | |

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

Service Consumers

Oracle_Service_Consumer > Service Providers > External_Product_Processor 1.0

Implementation

+ Add Import Search

| Actions | Name | Description | Service Name | Host | Port | Queue |
|--|------------------------------------|------------------------|--------------|------|------|-------|
| View Edit Delete Export Request Audit Clear Cache | External_Product_Processor_Default | Default Implementation | | xxxx | 0 | |

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

| Component briefing | | | |
|---|----------------|--------------|---|
| Component Name | Component Type | Condition | Comments |
| <Service Consumer> | Button | | Navigates back to Service Consumers |
| <Service Provider> | Button | | Navigates back to Service Providers |
| Add | Button | | Pops up add dialog |
| Import | Button | | Pops up import dialog |
| Search | Combo Box One | | Provides search functionality with case insensitive (Implementation Name) NOTE: Use wildcard character (*) for pattern matching |
| Navigation: Implementation -> 3 dot icon (operation menu) | | | |
| View | menu option | Non-editable | Pops up view dialog |
| Edit | menu option | | Pops up edit dialog |
| Delete | menu option | | |
| Export | menu option | | Exports in JSON |
| Configuration | menu option | | Pops up configuration dialog |
| Request Audit | menu option | | Pops up request audit log |
| Clear Cache | Menu option | | Clears SOAP client cache |

7.1 Add

User can create Implementation manually.

Navigation: **Implementation-> Add**

The screenshot shows the 'Add Implementation' dialog box. The background window is 'Service Consumers' with the 'Implementation' tab selected. The dialog box contains the following fields and controls:

- Name ***: A text input field.
- Description ***: A text input field.
- Type ***: A dropdown menu currently showing 'DEFAULT'. To its right are two radio buttons: 'Default' (selected) and 'Eureka Instance'.
- Scheme ***: A dropdown menu showing 'Select'.
- Service Name ***: A text input field.
- Headers**: An expandable section.
- Cookies**: An expandable section.
- Save**: A button at the bottom right.

| Component briefing | | | | | |
|--------------------|----------------|--------------|--------------------------------------|--|----------------------------|
| Component Name | Component Type | Is Mandatory | Data type | Validation | Comments |
| Name | Text Box | Yes | Alphanumeric with special characters | <ul style="list-style-type: none"> Name cannot be blank Enter 0 or more characters, up to a maximum of 255. No numeric value at beginning and no space allowed. | Unique implementation name |

| | | | | | |
|------------------------|---------------|-----|--------------------------------------|--|--|
| Description | Text Area | Yes | Alphanumeric with special characters | <ul style="list-style-type: none"> • Description cannot be blank • Enter 0 or more characters, up to a maximum of 1000. • No space allowed at beginning or ending of the value. | |
| Type | Combo Box One | Yes | | | Predefined Values: DEFAULT / QUEUE Note: DEFAULT type is for REST and SOAP API calls. |
| Default | Switch | | | | Each type can have one default implementation. |
| Eureka Instance | Switch | | | | Eureka Instance option is available only for internal providers and default type. By default, Eureka Instance will be toggled ON for internal providers and OFF for external providers. |

| | | | | | |
|---------------------|---------------|-----|--------------------------------------|--|---|
| Scheme | Combo Box One | Yes | | | <p>Scheme option is available only for default type.</p> <p>Predefined Values:</p> <p>HTTPS / HTTP</p> |
| Service Name | Text Box | Yes | | <ul style="list-style-type: none"> • Service Name cannot be blank • Enter 0 or more characters, up to a maximum of 255. • No space allowed. | <p>If Eureka Instance is toggled ON and type is default, then only service name is required.</p> |
| Host | Text Box | Yes | Alphanumeric with special characters | <ul style="list-style-type: none"> • Host cannot be blank • Enter 0 or more characters, up to a maximum of 255. • No space allowed. | <p>If Eureka Instance is toggled OFF and type is default, then only host and port is required.</p> |
| Port | Text Box | No | Number | <ul style="list-style-type: none"> • Enter 0 or more characters, up to a maximum of 6. • Only numeric value allowed. | <p>If Eureka Instance is toggled off and type is default, then only host and port is required.</p> |

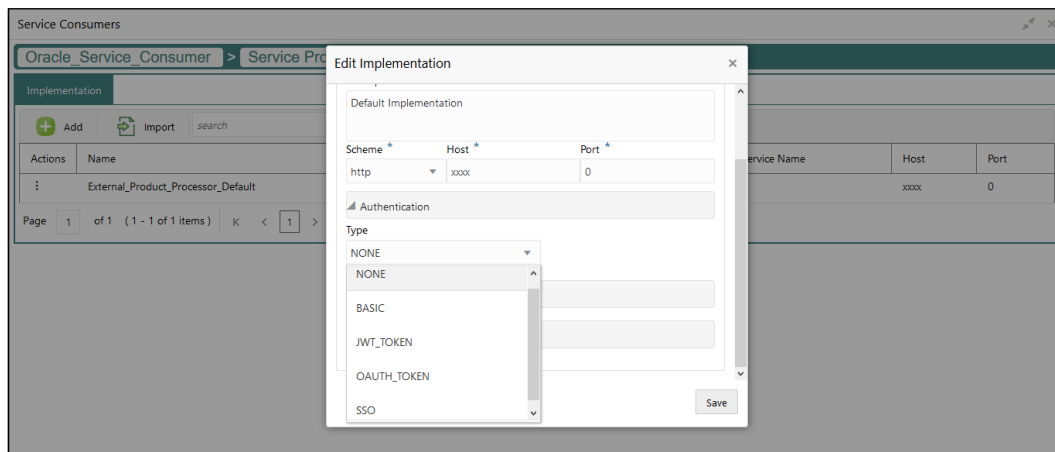
| | | | | | |
|-----------------------|------------------------------|--|--|--|---|
| Authentication | Collapsible Header & Content | | | | Authentication option is available only when Eureka Instance is toggled OFF and type is default. |
| Headers | Collapsible Header & Content | | | | Header option is available only when type is default. |
| Service | Collapsible Header & Content | | | | Service option is available only when type is default. |
| Queue | Content | | | | Queue content is available only when type is queue. |
| Save | Button | | | | Saves the Implementation |

7.1.1 Authentication

If External Product processor require authentication to connect to it, Oracle Banking Routing Hub provides standard authentication mechanism schemes like BASIC, JWT, OAUTH_TOKEN, SSO, OAUTH_TOKEN_OIC

NOTE: In case of no authentication, NONE needs to be set as Authentication Type.
 In case of identity propagation, SSO needs to be set as Authentication Type.
 In case of OIC integration, OAUTH_TOKEN_OIC needs to be set as Authentication Type.
 In case of JWT and OAUTH_TOKEN, token will be cached by default.

Process of configuration of these is described below.



| Component briefing | | | | | |
|--------------------|----------------|--------------|-----------|------------|---|
| Component Name | Component Type | Is Mandatory | Data type | Validation | Comments |
| Type | Combo Box One | Yes | | | Predefined Values: NONE / BASIC / JWT_TOKEN / OAUTH_TOKEN / SSO / OAUTH_TOKEN_OIC NOTE: OAUTH_T OKEN_OIC option is only |

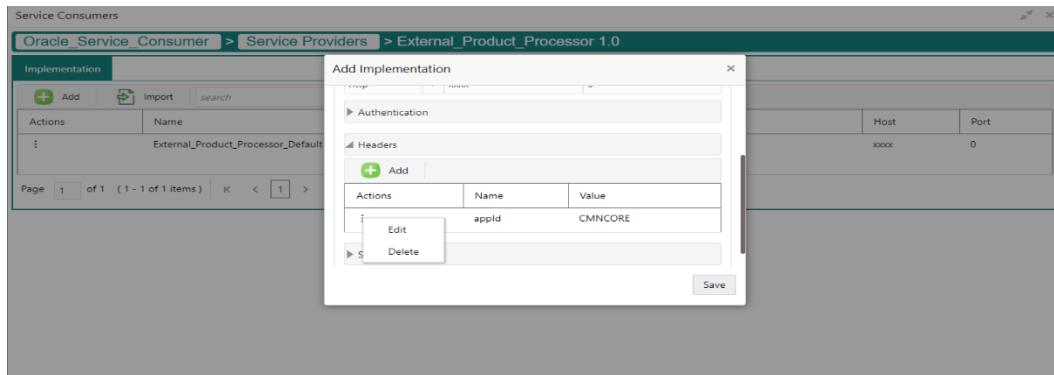
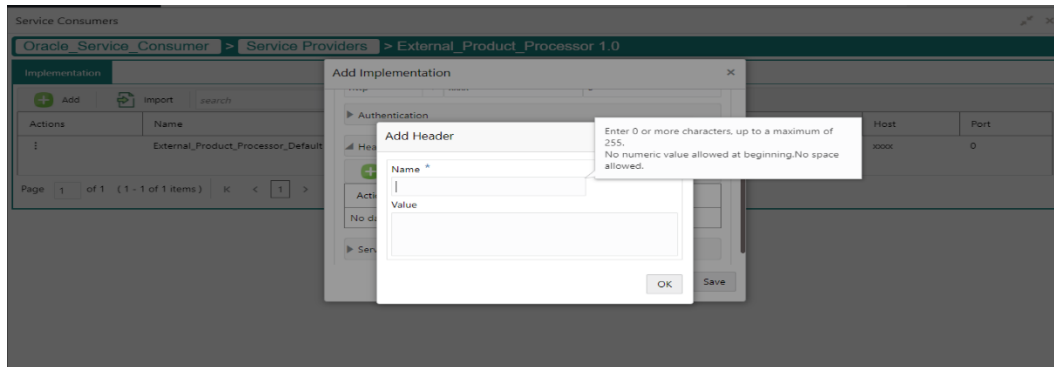
| | | | | | |
|-------------------|----------|--|--------------------------------------|--|---|
| | | | | | applicable for cloud |
| Encryption | Switch | | | | <p>Select the toggle to encrypt user credentials.</p> <p>This field is applicable only for JWT_TOKEN and OAUTH_TOKEN types</p> <p>This field depends on the value of api-gateway's property "EncryptionFlag" at provider end. For more information on property value, please refer to the Oracle Banking Microservices Architecture Deployments section in Oracle Banking Microservices Platform Foundation Installation Guide.</p> |
| Username | Text Box | | Alphanumeric with special characters | <ul style="list-style-type: none"> • Username cannot be blank • Enter 0 or more characters, up to a maximum of 255. • No numeric value at beginning and no space allowed. | Username is mandatory if authentication type is BASIC / JWT_TOKEN / OAUTH_TOKEN |
| Password | Text Box | | Alphanumeric with special characters | Password cannot be blank | Password is mandatory if authentication type is BASIC / JWT_TOKEN / OAUTH_TOKEN |

7.1.2 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 specific implementation but not present in swagger file.

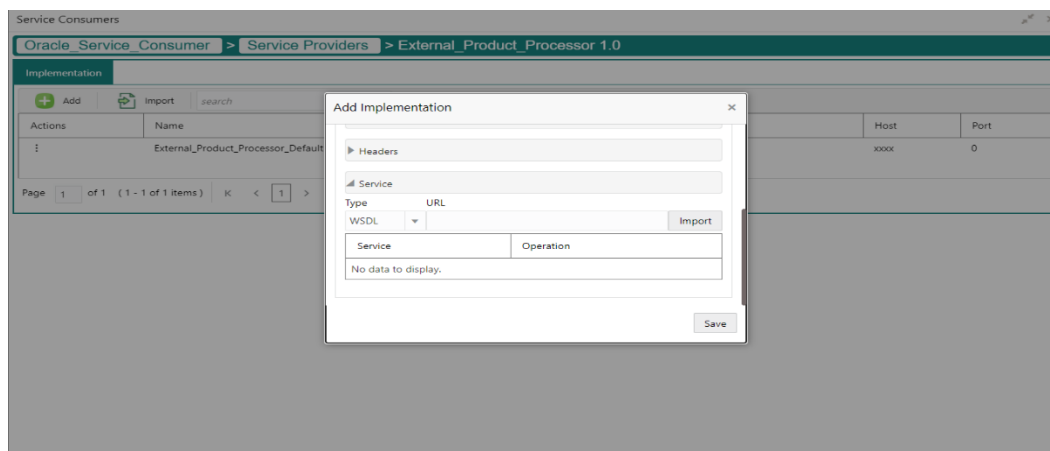
These headers can be configured in Oracle Banking Routing Hub using the steps given below



| Component briefing | | | | | |
|--|----------------|--------------|-----------|------------|---------------------|
| Component Name | Component Type | Is Mandatory | Data type | Validation | Comments |
| Add | Button | | | | Pops up add dialog |
| Navigation: Implementation -> Headers -> 3 dot icon (operation menu) | | | | | |
| Edit | menu option | | | | Pops up edit dialog |

| | | | | | |
|---|-------------|-----|--------------------------------------|--|---|
| Delete | menu option | | | | Deletes header |
| Navigation: Implementation -> Headers -> Add | | | | | |
| Name | Text Box | Yes | Alphanumeric with special characters | <ul style="list-style-type: none"> Name cannot be blank Enter 0 or more characters, up to a maximum of 255. No numeric value at beginning and no space allowed. | |
| Value | Text Area | Yes | Alphanumeric with special characters | <ul style="list-style-type: none"> Enter 0 or more characters, up to a maximum of 255. | Value can either be hardcoded or can be Velocity mapping. |
| OK | Button | | | | Saves the header details and displays it in the list |

7.1.3 Service



| Component briefing | | | |
|--------------------|----------------|--------------|--|
| Component Name | Component Type | Is Mandatory | Comments |
| Type | Combo Box One | Yes | Predefined Values: WSDL / SWAGGER / OTHERS |
| 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 |

7.1.3.1 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.

Both SSL and non-SSL WSDL URL are 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.

7.1.3.2 SWAGGER

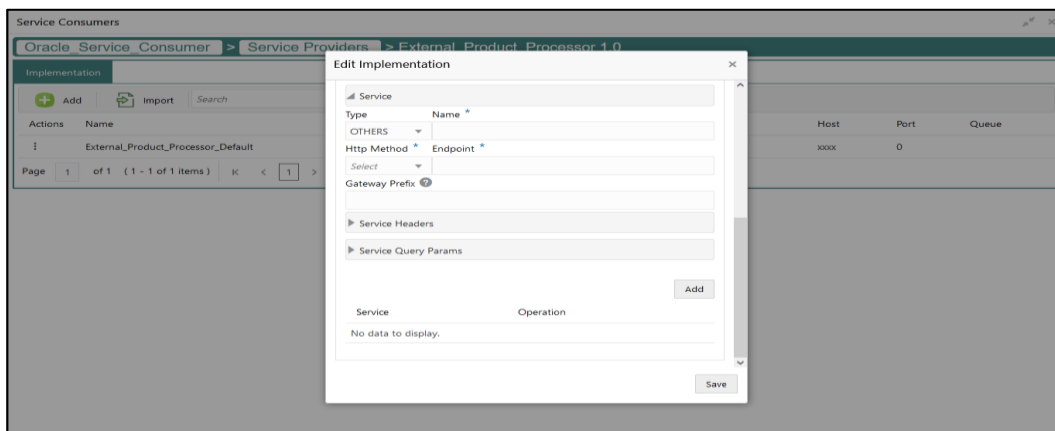
Swagger is an Interface Description Language for describing RESTful APIs expressed using JSON.

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.

7.1.3.3 OTHERS

"OTHERS" option is for adding REST API details manually when provider does not have swagger file.

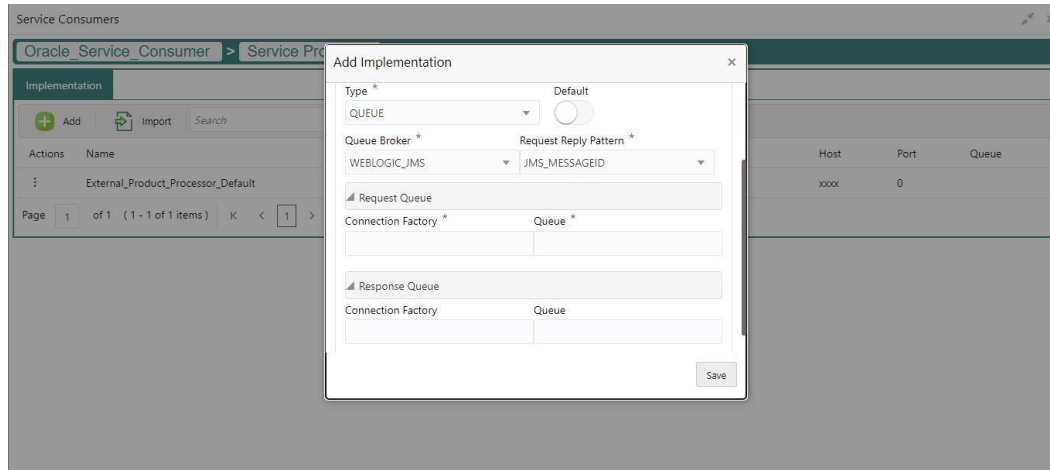


| Component briefing | | | | |
|--------------------|----------------|--------------|--|-------------------|
| Component Name | Component Type | Is Mandatory | Validation | Comments |
| Name | Text Box | Yes | <ul style="list-style-type: none"> Name cannot be blank No space allowed at beginning. | Name of operation |

| | | | | |
|----------------------|------------------------------|-----|--|---|
| Http Method | Combo Box One | Yes | | Predefined Values: GET / POST / PUT / PATCH / DELETE |
| Endpoint | Text Box | Yes | <ul style="list-style-type: none"> Endpoint cannot be blank No space allowed at beginning. | Endpoint URL of operation |
| Gateway Prefix | Text Box | | | Gateway Prefix is context path of below formatted URL http://host:port/gateway-prefix/endpoint |
| Service Headers | Collapsible Header & Content | | | Endpoint specific headers Value can either be hardcoded or can be Velocity mapping. |
| Service Query Params | Collapsible Header & Content | | | Endpoint specific query parameters Value can either be hardcoded or can be Velocity mapping. |
| Add | Button | | | Adds the endpoint details in the Service list |

NOTE: In case there is a change in existing endpoint, then same endpoint details need to be entered again with the new changes in order to update the existing provided service information in routing hub.

7.1.4 Queue



| Component briefing | | | |
|-----------------------|----------------|--------------|---|
| Component Name | Component Type | Is Mandatory | Comments |
| Queue Broker | Combo Box One | Yes | Predefined Values: WEBLOGIC_JMS |
| Request Reply Pattern | Combo Box One | Yes | Predefined Values: JMS_MESSAGEID / JMS_CORRELATIONID JMS_MESSAGEID is default request-reply pattern. |

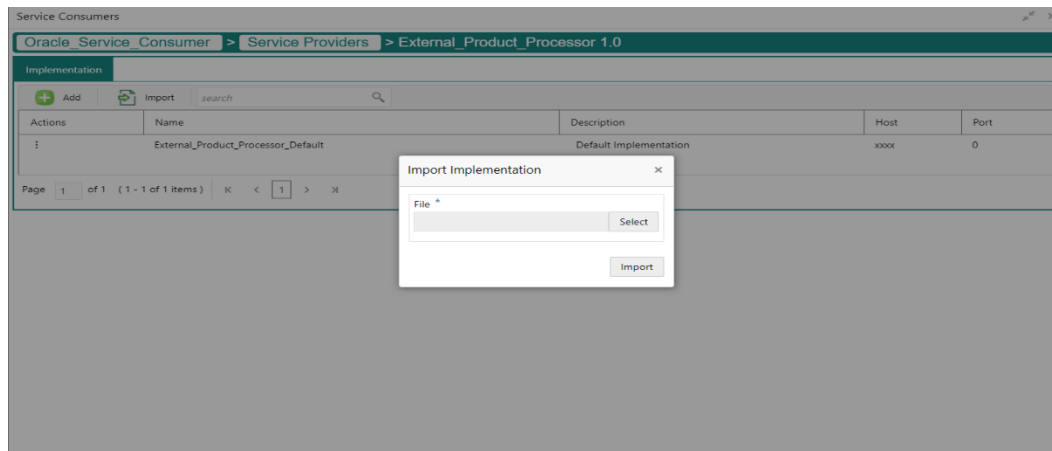
| | | | |
|--------------------|----------|--|--|
| Connection Factory | Text Box | | <p>Connection Factory is JNDI based connection factory name which is used to create connection for JMS client.</p> <p>Request Connection Factory is mandatory, and Response Connection Factory is optional.</p> <p>Response Connection Factory is needed when destination is going to respond back after processing the request.</p> |
| Queue | Text Box | | <p>Queue Name is JNDI based destination name.</p> <p>Request Queue Name is mandatory, and Response Queue Name is optional.</p> <p>Response Queue Name is needed when destination is going to respond back after processing the request.</p> |

7.2 Import

User can create an implementation by importing the JSON file.

User can also import zip file in order to import all the configuration JSON files together (except parent level configuration JSON files).

Navigation: **Implementation -> Import**



| Component briefing | | | | | | |
|--------------------|----------------|--------------|-----------|--------------------------------|---------------------------|-----------------------------------|
| Component Name | Component Type | Is Mandatory | Data type | Validation | Condition | Comments |
| File | File picker | Yes | | Allows only to select one file | Accepts JSON and ZIP file | Pops up file selection dialog box |
| Import | Button | | | | | Imports Implementation |

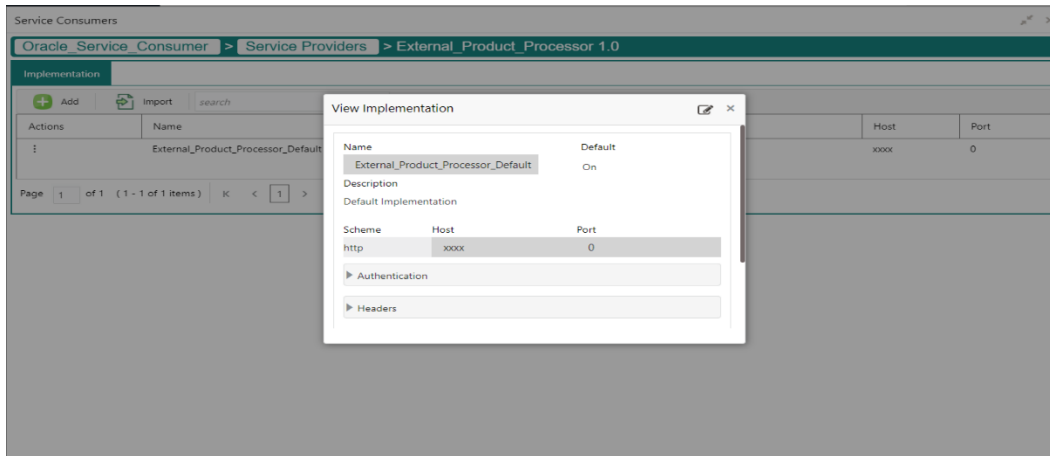
NOTE: Below data needs to be changed after importing implementation configuration file:

- Implementation Host and Port
- Implementation Authentication Password

7.3 View

User can view implementation details and can also switch to edit form by clicking on edit icon.

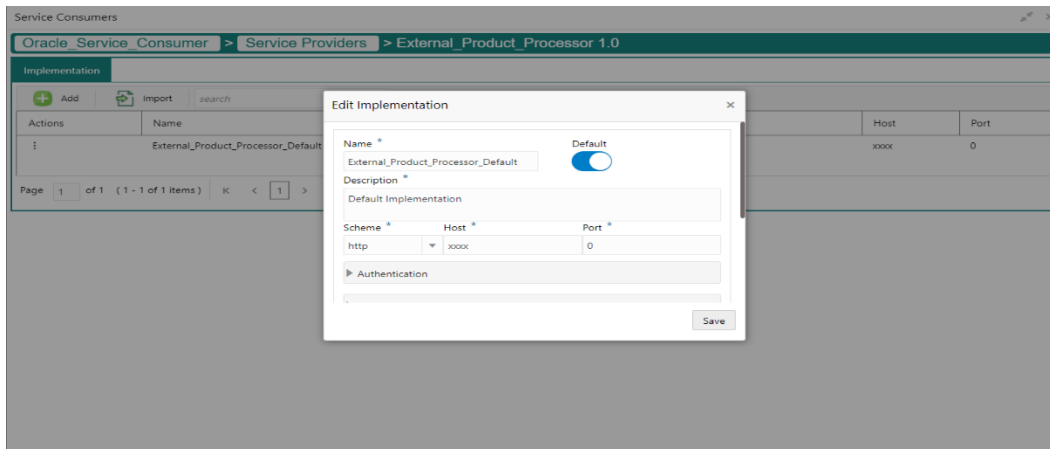
Navigation: **Implementation -> Operation Menu (3 dot icon) -> View**



7.4 Edit

User can modify the implementation details.

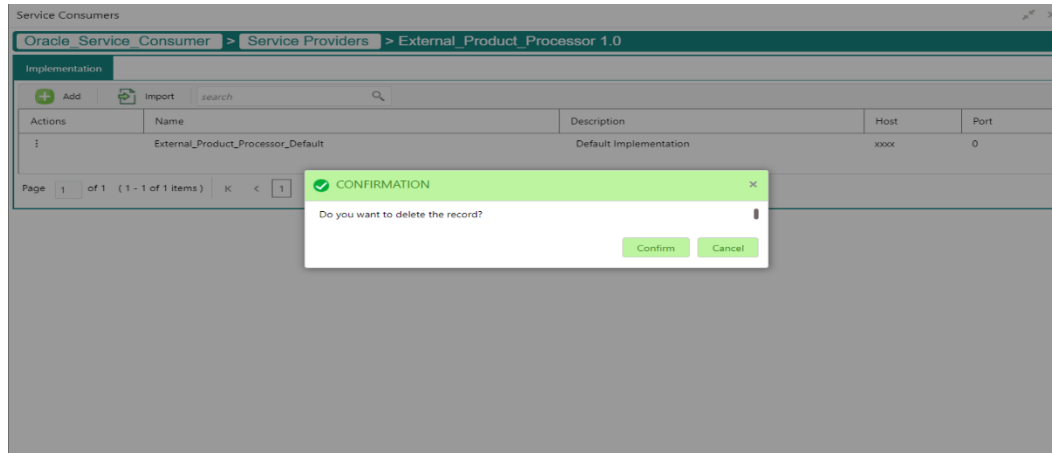
Navigation: **Implementation -> Operation Menu (3 dot icon) -> Edit**



7.5 Delete

User can delete the implementation.

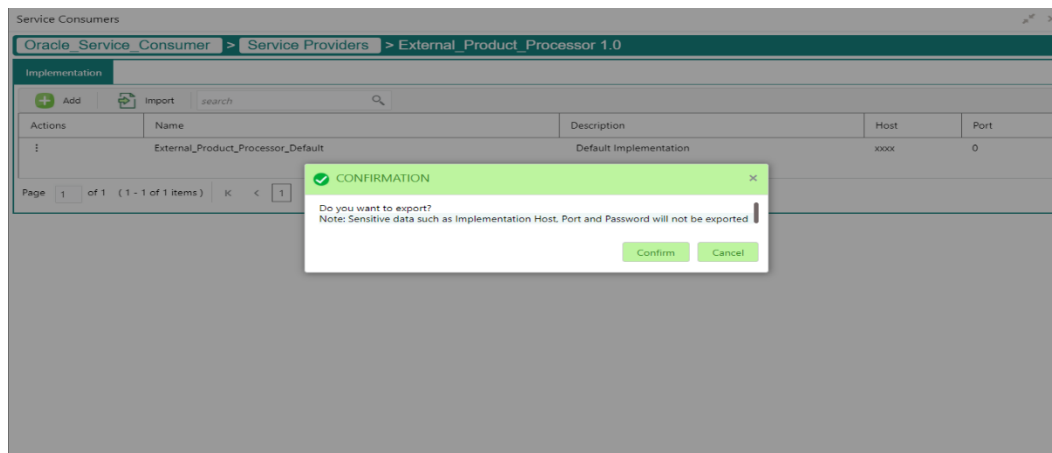
Navigation: **Implementation -> Operation Menu (3 dot icon) -> Delete**



7.6 Export

User can export the implementation configuration as JSON file.

Navigation: **Implementation -> Operation Menu (3 dot icon) -> Export**



NOTE: Below data will not be exported:

- Implementation Host
- Implementation Port
- Implementation Authentication Password

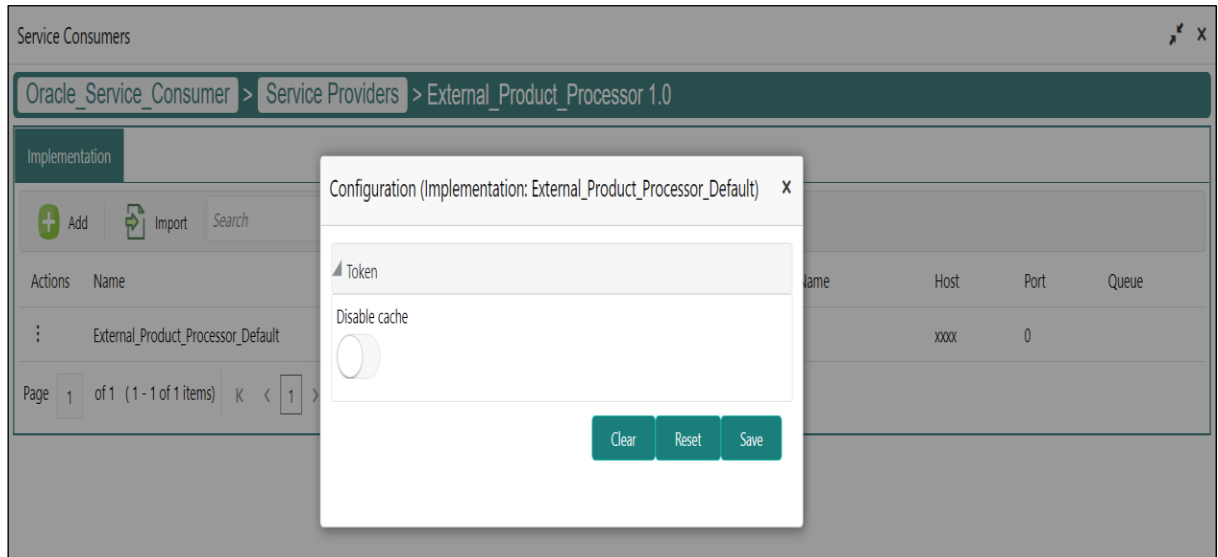
The above data needs to be configured manually after importing the configuration file.

Same has been mentioned in Import section

7.7 Configuration

End-user can configure the property to disable the token caching.

Navigation: **Implementation -> Operation Menu (3 dot icon) -> Configuration**



Component briefing

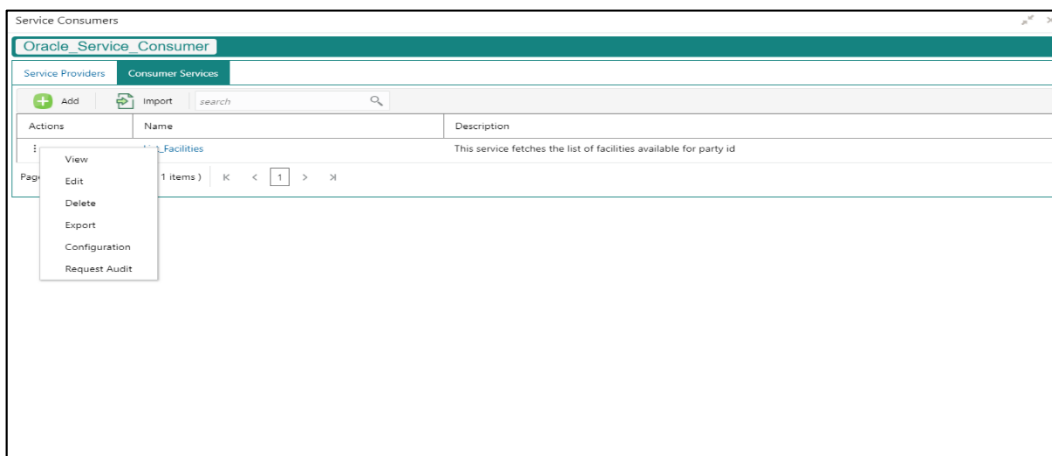
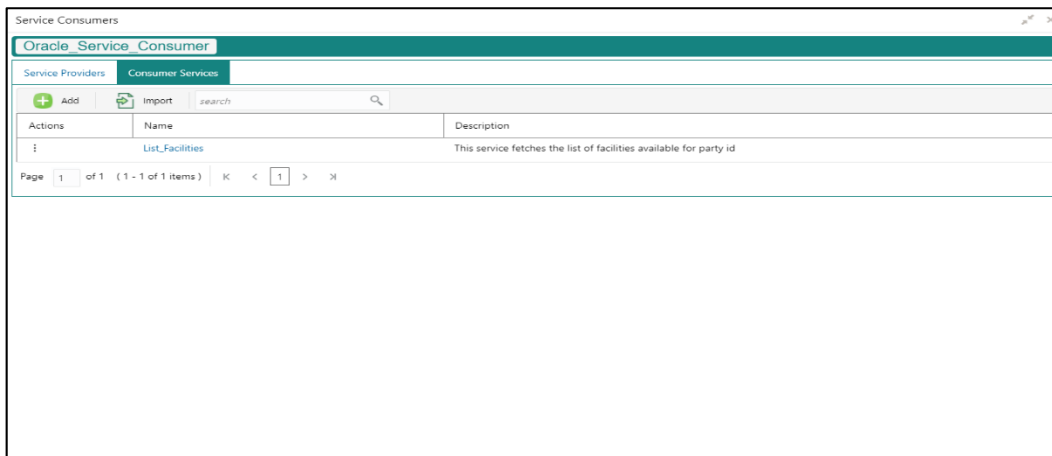
| Component Name | Component Type | Is Mandatory | Validation | Comments |
|----------------|----------------|--------------|------------|---|
| Disable cache | Switch | | | <p>This property is used to disable the token caching.</p> <p>Default value is false.</p> |

8 Consumer Services

Consumer Services defines the service ID which is going to be send from service consumer. This will also cater transformation and route definition as well.

Consumer Services comprises of source integration details.

Navigation: **Core Maintenance -> Routing Hub -> Service Consumers -> <Specific Service Consumer> -> Consumer Services**



| Component briefing | | | |
|--------------------|----------------|-----------|-------------------------------------|
| Component Name | Component Type | 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 (Consumer Service Name) NOTE: Use wildcard character (*) for pattern matching |
| Navigation: Consumer Services -> 3 dot icon (operation menu) | | | |
| View | menu option | Non-editable | Pops up view dialog |
| Edit | menu option | | Pops up edit dialog |
| Delete | menu option | | |
| Export | menu option | | Exports in JSON |
| Configuration | menu option | | Pops up configuration dialog |
| Request Audit | menu option | | Pops up request audit log |

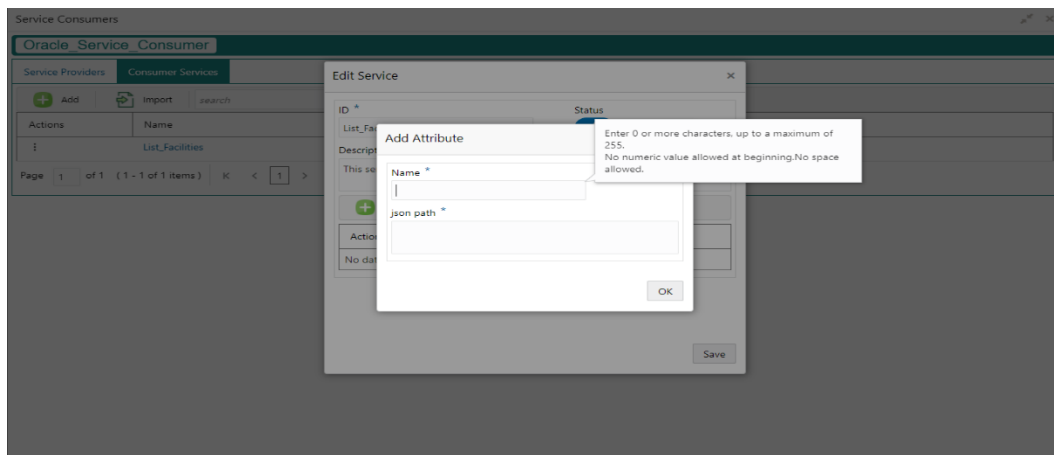
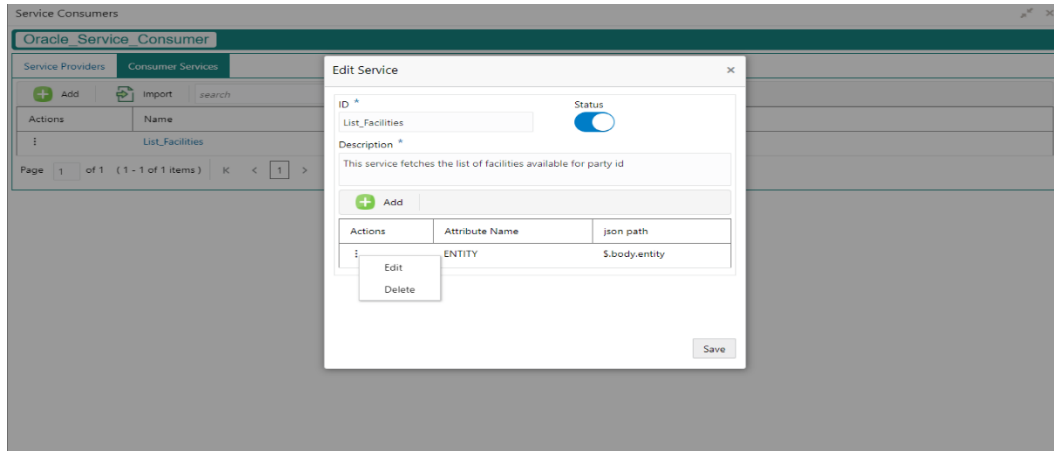
8.1 Add

User can create Consumer Service manually.

Navigation: **Consumer Services-> Add**

| Component briefing | | | | | |
|--------------------|----------------|--------------|--------------------------------------|--|--|
| Component Name | Component Type | Is Mandatory | Data type | Validation | Comments |
| Id | Text Box | Yes | Alphanumeric with special characters | Name cannot be blank Enter 0 or more characters, up to a maximum of 255. No numeric value at beginning and no space allowed. | Unique Service Id |
| Status | Switch | Yes | | | Predefined Values: ACTIVE / INACTIVE If consumer service is marked as inactive, then all related routes will be stopped. |
| Description | Text Area | Yes | Alphanumeric with special characters | Description cannot be blank Enter 0 or more characters, up to a maximum of 1000. No space allowed at beginning or ending of the value. | |
| Attributes | Table Content | | | | |
| Save | Button | | | | Saves the Consumer Service |

8.1.1 Attributes



| Component briefing | | | | | | |
|---|----------------|--------------|-----------|------------|-----------|---------------------|
| Component Name | Component Type | Is Mandatory | Data type | Validation | Condition | Comments |
| | | | | | | |
| Add | Button | | | | | Pops up add dialog |
| Navigation: Consumer Services -> Headers -> 3 dot icon (operation menu) | | | | | | |
| Edit | menu option | | | | | Pops up edit dialog |
| Delete | menu option | | | | | Deletes attribute |

| Navigation: Consumer Services -> Headers -> Add | | | | | | |
|---|-----------|-----|--------------------------------------|--|--|--|
| Name | Text Box | Yes | Alphanumeric with special characters | Name cannot be blank Enter 0 or more characters, up to a maximum of 255. No numeric value at beginning and no space allowed. | | |
| JSON Path | Text Area | Yes | Alphanumeric with special characters | Value cannot be blank Enter 0 or more characters, up to a maximum of 255. No space allowed. | | Value will be JSON path. |
| OK | Button | | | | | Saves the header details and displays it in the list |

NOTE:

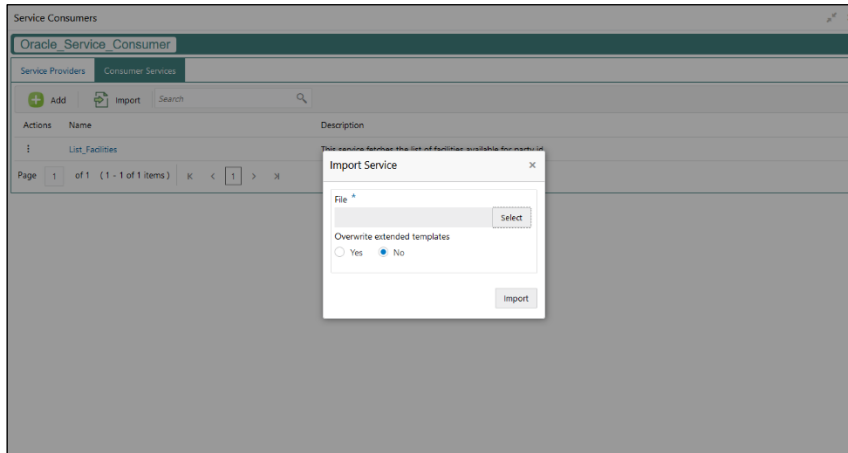
- Using \$.body, user can access request body.
Syntax: \$.body.fieldName
Example: \$.body.branchCode
- Using \$.headers, user can access request headers.
Syntax: \$.headers["fieldName"][0]
Example: \$.headers["branchCode"][0]
- Using \$.env, user can access environment variables.
Syntax: \$.env.group.variable

8.2 Import

User can create a consumer service by importing the JSON file.

User can also import zip file in order to import all the configuration JSON files together (except parent level configuration JSON files).

Navigation: **Consumer Services -> Import**



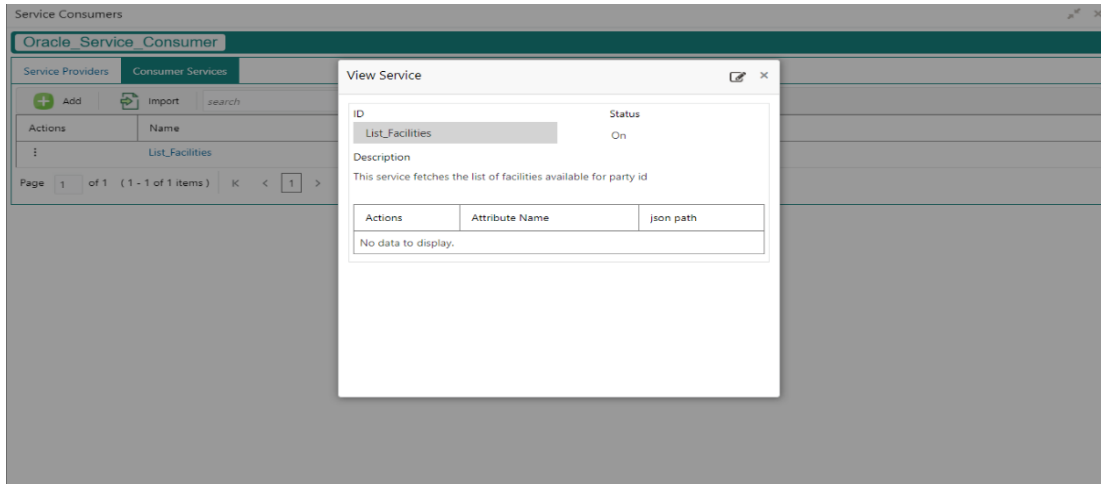
| Component briefing | | | | | | |
|-------------------------------------|----------------|--------------|-----------|--------------------------------|---------------------------|--|
| Component Name | Component Type | Is Mandatory | Data type | Validation | Condition | Comments |
| File | File picker | Yes | | Allows only to select one file | Accepts JSON and ZIP file | Pops up file selection dialog box |
| Overwrite extended templates | Radio Button | Yes | | | | Predefined Values: Yes / No Yes: This option is for overwriting the extended templates in configuration and No: This option is for retaining the existing extended templates in configuration. |

| | | | | | | |
|---------------|--------|--|--|--|--|--------------------------------|
| Import | Button | | | | | Imports Consumer Service |
|---------------|--------|--|--|--|--|--------------------------------|

8.3 View

User can view consumer service details and can also switch to edit form by clicking on edit icon.

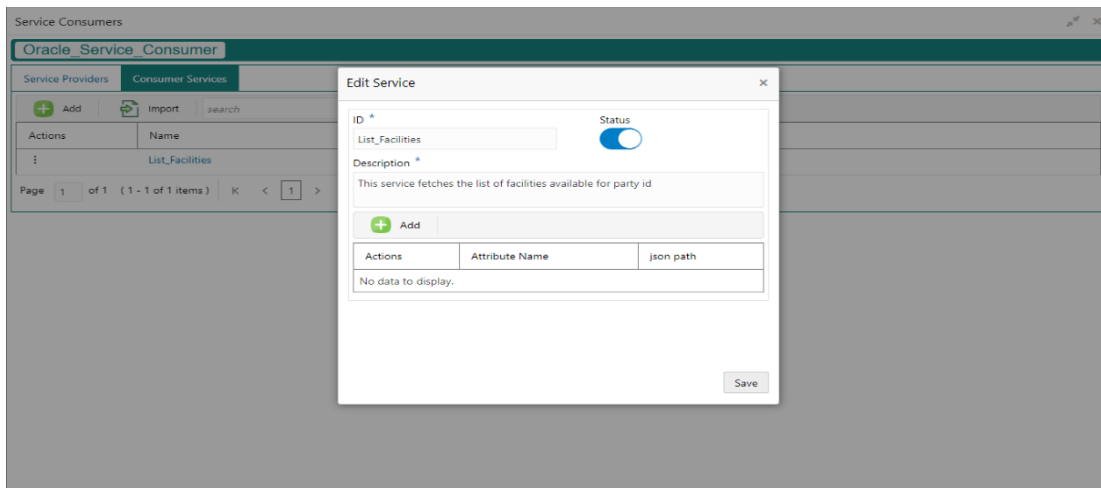
Navigation: **Consumer Services -> Operation Menu (3 dot icon) -> View**



8.4 Edit

User can modify the consumer service details.

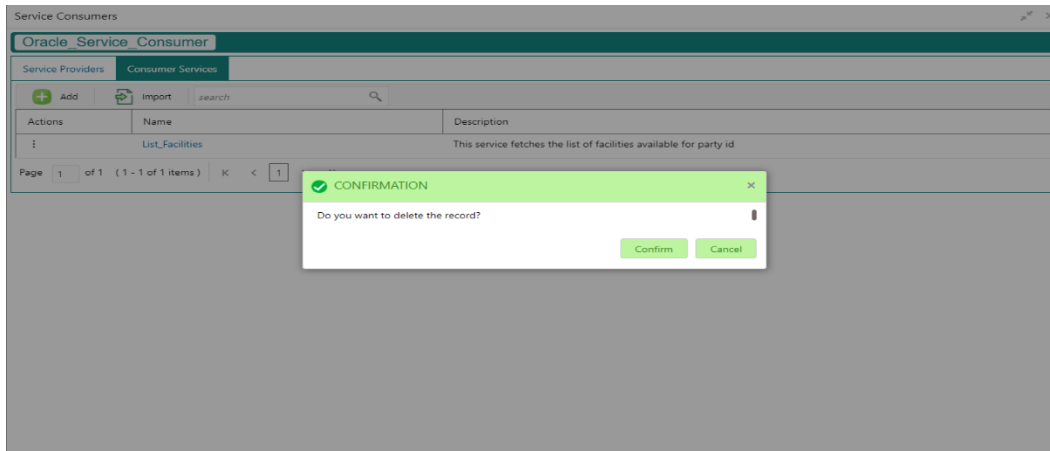
Navigation: **Consumer Services -> Operation Menu (3 dot icon) -> Edit**



8.5 Delete

User can delete the consumer service.

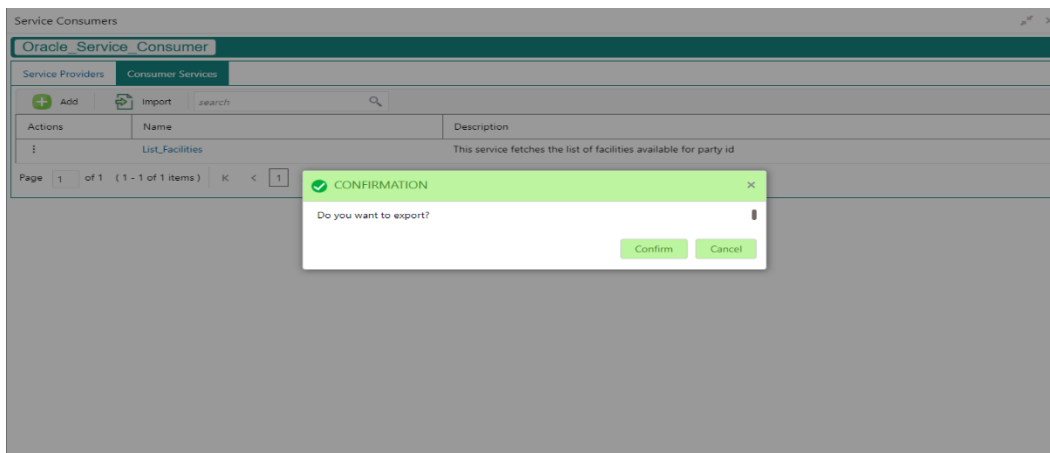
Navigation: **Consumer Services -> Operation Menu (3 dot icon) -> Delete**



8.6 Export

User can export the consumer service configuration as JSON file.

Navigation: **Consumer Services -> Operation Menu (3 dot icon) -> Export**



9 Transformation

Transformation acts as an assembling and transforming data from source to destination and vice-versa. This will take place under consumer service. This converts data of service consumer into service provider

Navigation: Core Maintenance -> Routing Hub -> Service Consumers -> <Specific Service Consumer> -> Consumer Services -> <Specific Consumer Service> -> Transformation

| Actions | Name | Status | Product Processor | Implementation | Service |
|---------|------------------------|--------|--------------------------------|----------------|--|
| | List_Facilities_Trf_01 | ACTIVE | External_Product_Processor 1.0 | | EValidLimitService (EValidLimitServiceSEI) - QueryValidLimitIO |

Page 1 of 1 (1 - 1 of 1 items)

| Actions | Name | Status | Product Processor | Implementation | Service |
|---------|------------------------|--------|--------------------------------|----------------|--|
| | List_Facilities_Trf_01 | ACTIVE | External_Product_Processor 1.0 | | EValidLimitService (EValidLimitServiceSEI) - QueryValidLimitIO |

Page 1 of 1 (1 - 1 of 1 items)

- View
- Edit
- Delete
- Export
- Request Audit

Component briefing

| Component Name | Component Type | Condition | Comments |
|--------------------|----------------|-----------|-------------------------------------|
| <Service Consumer> | Button | | Navigates back to Service Consumers |

| | | | |
|---|---------------|--------------|---|
| <Consumer Service> | Button | | Navigates back to Consumer Services |
| Add | Button | | Pops up add dialog |
| Import | Button | | Pops up import dialog |
| Search | Combo Box One | | Provides search functionality with case insensitive (Transformation Name) NOTE: Use wildcard character (*) for pattern matching |
| Navigation: Transformation -> 3 dot icon (operation menu) | | | |
| View | menu option | Non-editable | Pops up view dialog |
| Edit | menu option | | Pops up edit dialog |
| Delete | menu option | | |
| Export | menu option | | Exports in JSON |
| Request Audit | menu option | | Pops up request audit log |

9.1 Add

User can create Transformation manually.

Navigation: **Transformation-> Add**

Component briefing

| Component Name | Component Type | Is Mandatory | Data type | Validation | Comments |
|----------------|----------------|--------------|--------------------------------------|--|---|
| Name | Text Box | Yes | Alphanumeric with special characters | <ul style="list-style-type: none"> Name cannot be blank Enter 0 or more characters, up to a maximum of 255. No numeric value at beginning and no space allowed. | Unique Transformation Name |
| Active | Switch | | | | Predefined Values: ACTIVE/INACTIVE If transformation is marked as inactive, then user will not be able to select transformation in routing. |

| | | | | | |
|--------------------------|------------------------------|-----|--|--|---|
| Product Processor | Collapsible Header | | | | |
| Product Processor | Combo Box One | Yes | | | Displays provider list relevant to consumer |
| Implementation | Combo Box One | | | | Displays implementation list relevant to selected provider |
| Service | Combo Box One | Yes | | | Displays service list relevant to selected provider and implementation |
| Service | Collapsible Header & Content | | | | Displays service details of selected service |
| Headers | Collapsible Header & Content | | | | Displays header list relevant to selected provider, implementation and service User can change the header values. Value can either be hardcoded or can be Velocity mapping. |
| Path Params | Collapsible Header & Content | | | | Displays path param list relevant to selected service User can change the param values. Value can either be hardcoded or can be Velocity mapping. |
| Query Params | Collapsible Header & Content | | | | Displays query param list relevant to selected service User can change the param values. Value can either be hardcoded or can be Velocity mapping. |

| | | | | | |
|-------------------------------|------------------------------|--|--|--|---|
| Request Transformation | Collapsible Header | | | | |
| Body Type | Combo Box One | | | | <p>Predefined Values: RAW / FORM_DATA</p> <p>Note: This option is only visible if selected service is REST service.</p> |
| Type | Combo Box One | | | | <p>Predefined Values: VELOCITY / JSLT / XSLT</p> |
| Template | Text Area | | | | <p>User has to define the kernel template in which provider accepts.</p> <p>Refer Transformation Type for syntax and Multipart Request for sample request if body type is FORM_DATA</p> |
| Extended Template | Text Area | | | | <p>User has to define the custom template in order to extend the kernel template.</p> <p>Please refer Extensibility and Transformation Type for syntax</p> <p>Note: This option is not visible if body type is FORM_DATA.</p> |
| Response Headers | Collapsible Header & Content | | | | <p>Response Headers is used for specifying additional headers required to be part of routing hub response headers.</p> <p>Value can either be hardcoded or can be Velocity mapping.</p> |
| Type | Combo Box One | | | | <p>Predefined Values: VELOCITY / JSLT / XSLT</p> |
| Template | Text Area | | | | <p>User has to define the kernel template in which consumer accepts.</p> |

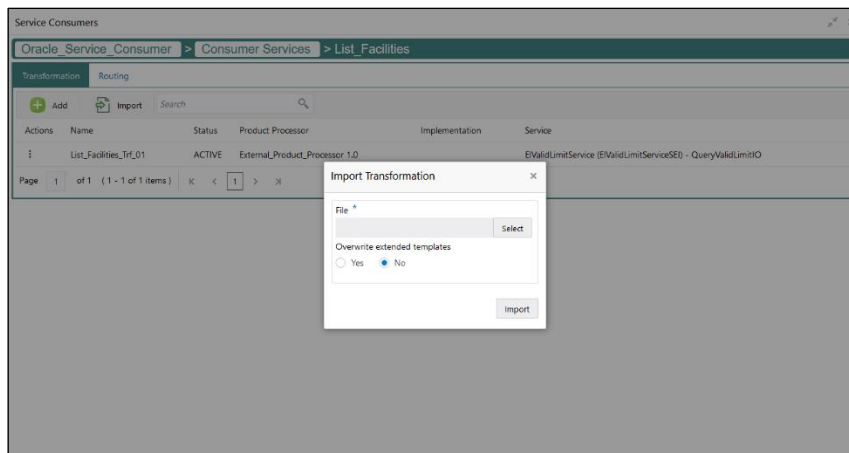
| | | | | | |
|--------------------------|-----------|--|--|--|---|
| | | | | | Refer Transformation Type for syntax |
| Mocking required? | Switch | | | | Predefined Values: YES / NO If flag is marked as yes, then routing hub will return the mocked template output (with extended template output if mentioned) to consumer without invoking provider API. |
| Mock Template | Text Area | | | | User has to define the kernel mocked template in which consumer accepts. Refer Transformation Type for syntax |
| Extended Template | Text Area | | | | User has to define the custom template in order to extend the kernel template. Refer Extensibility and Transformation Type for syntax |
| Save | Button | | | | Saves transformation details |

9.2 Import

User can create a transformation by importing the JSON file.

User can also import zip file in order to import all the configuration JSON files together (except parent level configuration JSON files).

Navigation: **Transformation -> Import**

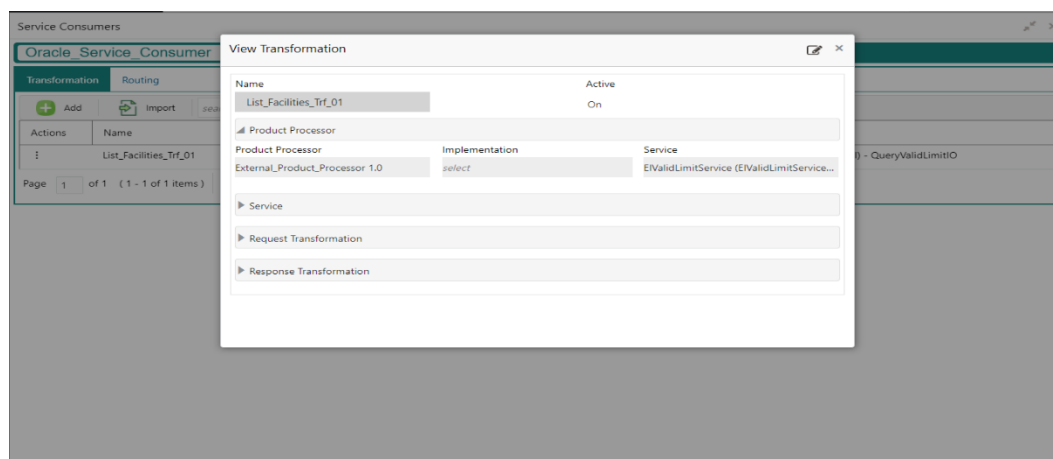


| Component briefing | | | | | |
|-------------------------------------|----------------|--------------|--|---------------------------|--|
| Component Name | Component Type | Is Mandatory | Validation | Condition | Comments |
| File | File picker | Yes | <ul style="list-style-type: none"> Allows only to select one file | Accepts JSON and ZIP file | Pops up file selection dialog box |
| Overwrite extended templates | Radio Button | Yes | | | Predefined Values: Yes / No Yes: This option is for overwriting the extended templates in configuration No: This option is for retaining the existing extended templates in configuration. |
| Import | Button | | | | Imports Transformation |

9.3 View

User can view transformation details and can also switch to edit form by clicking on edit icon.

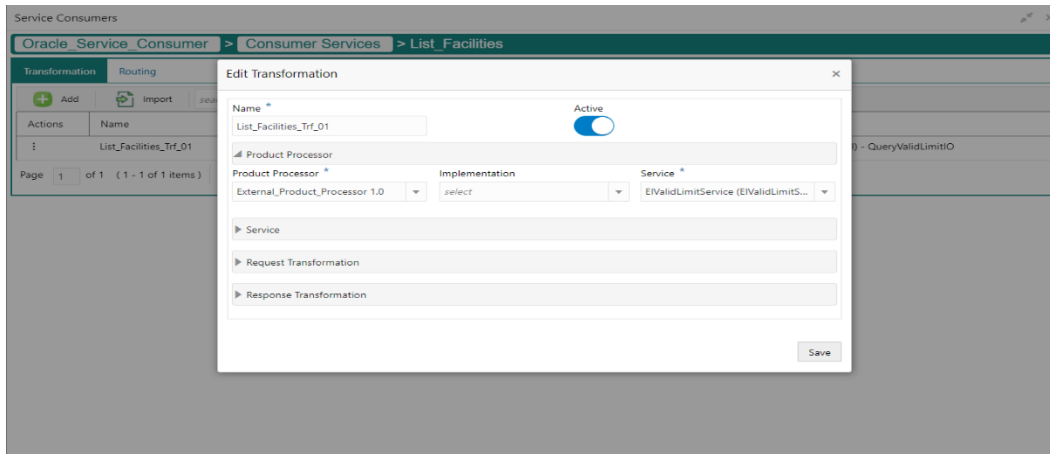
Navigation: **Transformation -> Operation Menu (3 dot icon) -> View**



9.4 Edit

User can modify the transformation details.

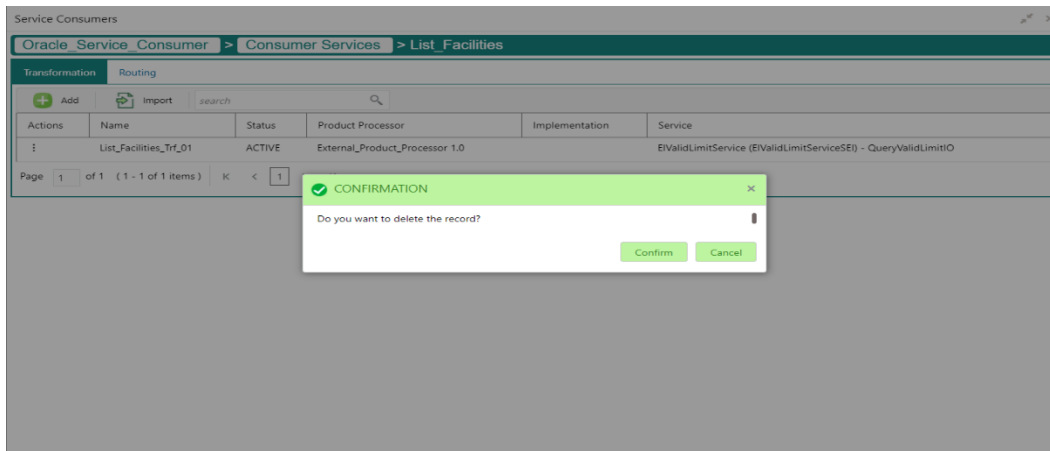
Navigation: **Transformation -> Operation Menu (3 dot icon) -> Edit**



9.5 Delete

User can delete the transformation.

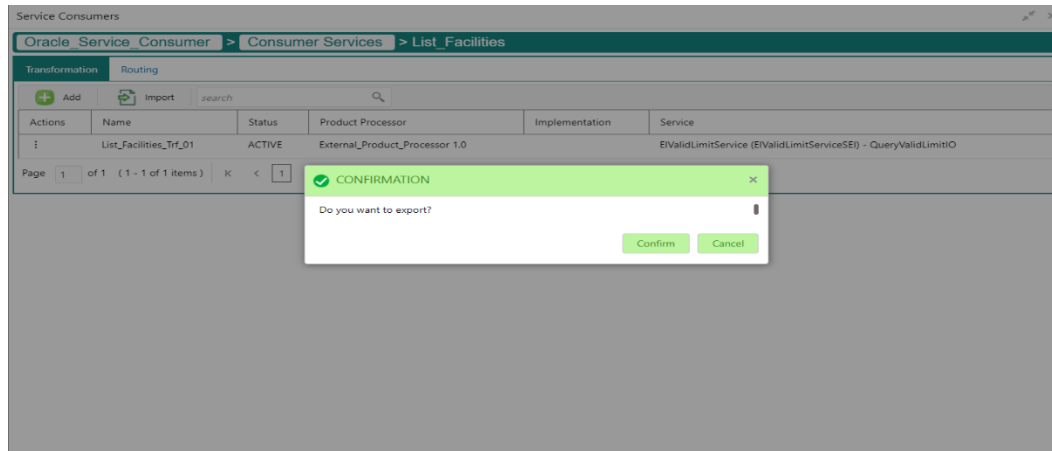
Navigation: **Transformation -> Operation Menu (3 dot icon) -> Delete**



9.6 Export

User can export the transformation configuration as JSON file.

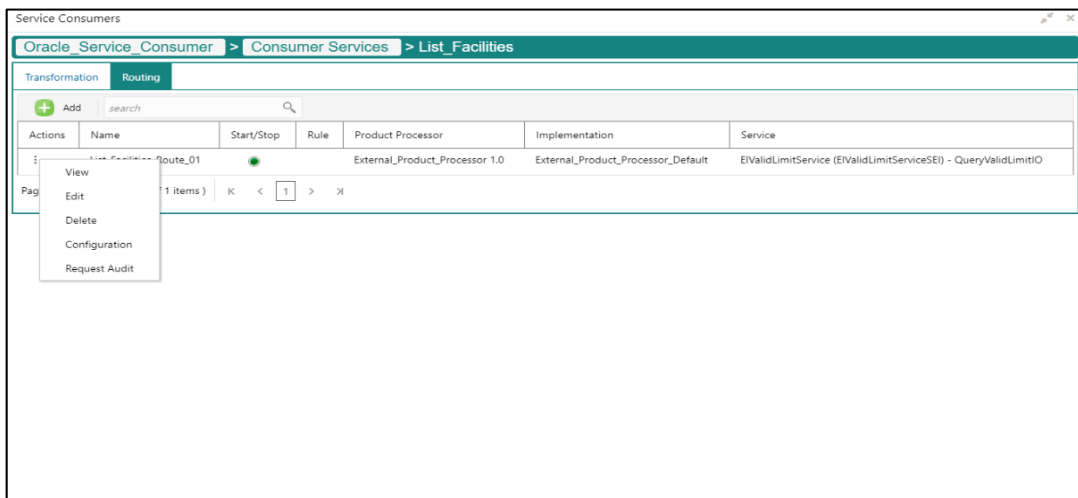
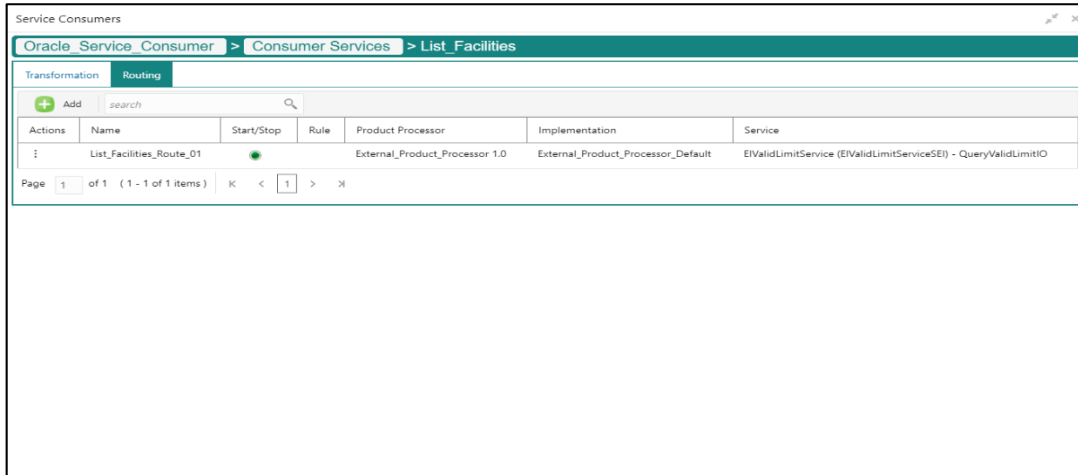
Navigation: **Transformation -> Operation Menu (3 dot icon) -> Export**



10 Routing

Routing defines no rule or rule-based route configuration. Route decide the actual request to be send to which service provider based on maintenance and evaluation.

Navigation: **Core Maintenance -> Routing Hub -> Service Consumers -> <Specific Service Consumer> -> Consumer Services -> <Specific Consumer Service> -> Routing**



Component briefing

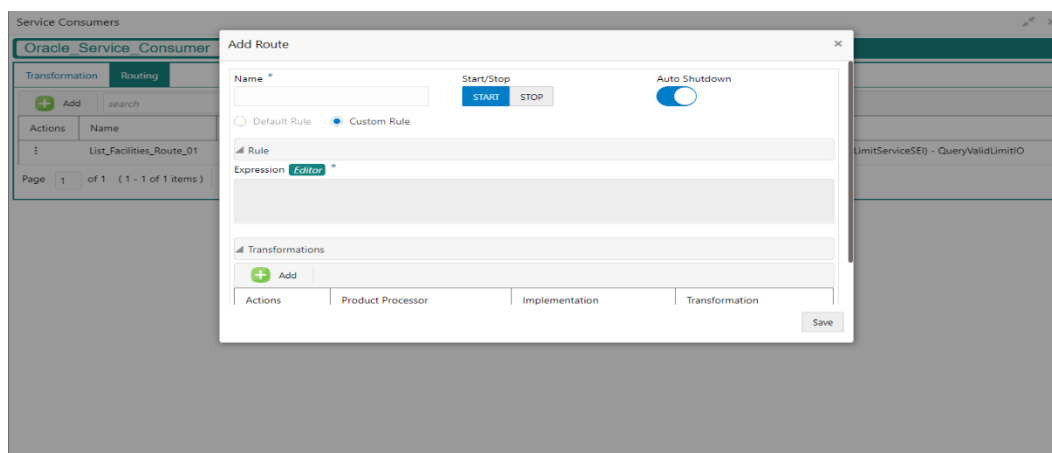
| Component Name | Component Type | Condition | Comments |
|--------------------|----------------|-----------|-------------------------------------|
| <Service Consumer> | Button | | Navigates back to Service Consumers |

| | | | |
|--|---------------|--------------|--|
| <Consumer Service> | Button | | Navigates back to Consumer Services |
| Add | Button | | Pops up add dialog |
| Search | Combo Box One | | Provides search functionality with case insensitive (Routing Name) NOTE: Use wildcard character (*) for pattern matching |
| Navigation: Routing -> 3 dot icon (operation menu) | | | |
| View | menu option | Non-editable | Pops up view dialog |
| Edit | menu option | | Pops up edit dialog |
| Delete | menu option | | |
| Configuration | menu option | | Pops up configuration dialog |
| Request Audit | menu option | | Pops up request audit log |

10.1 Add

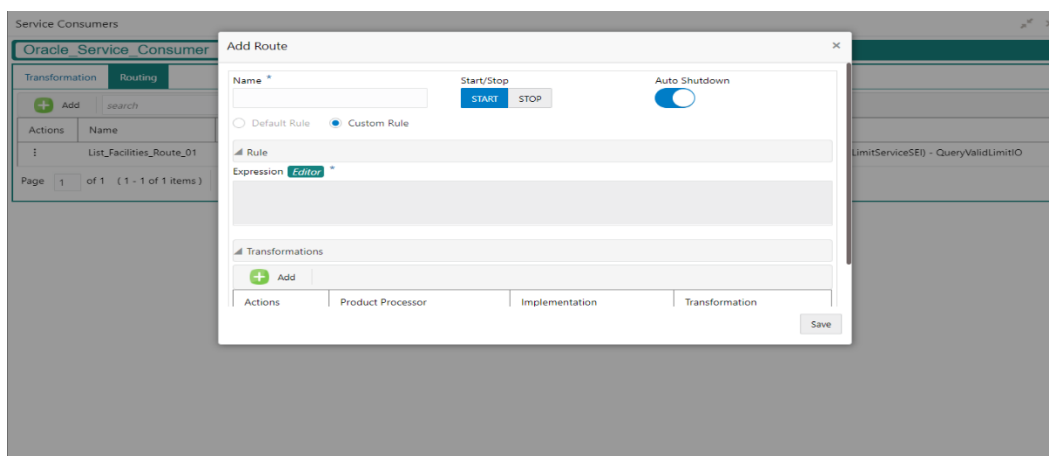
User can create Routing manually.

Navigation: **Routing -> Add**



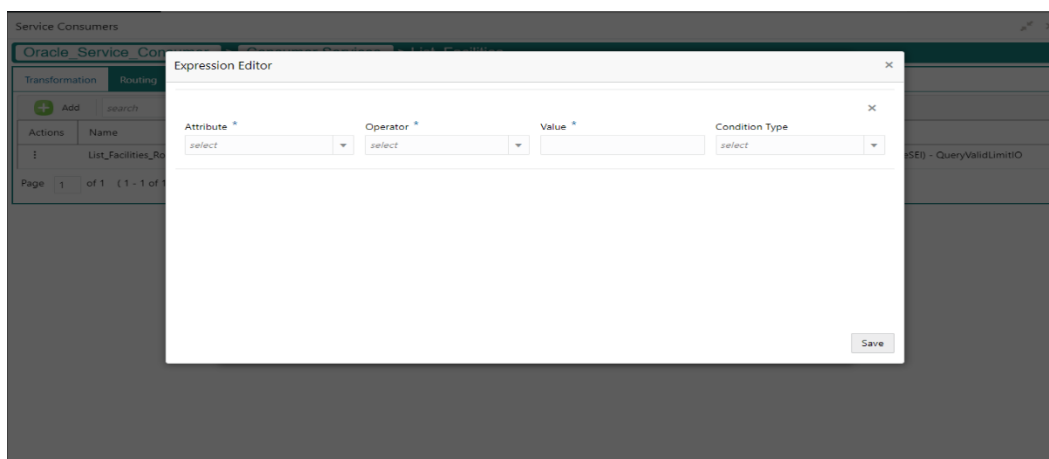
| Component briefing | | | |
|--------------------|------------------------------|--------------|--|
| Component Name | Component Type | Is Mandatory | Comments |
| Name | Text Box | Yes | Unique routing name |
| Start / Stop | Switch | Yes | Predefined Values: START / STOP If routing is marked as STOP, then consumer request will fail at routing hub level only. |
| Auto Shutdown | Switch | Yes | Predefined Values: ON / OFF If AutoShutdown flag is ON, then route state will be changed to STOP if route failure goes beyond the threshold failure limit based on the monitoring and alert configuration. |
| Rule Type | Radio Button | Yes | Predefined Values: Default Rule / Custom Rule |
| Transformations | Collapsible Header & Content | | |
| Save | Button | | Saves the routing details |

10.1.1 Add Routing with Custom Rule



| Component briefing | | | | |
|--------------------|----------------|--------------|-----------|--|
| Component Name | Component Type | Is Mandatory | Data type | Comments |
| Expression | Text Area | Yes | | User can view expression that is formed through expression editor. |
| Editor | Button | | | Pops up expression editor dialog |

10.1.2 Add Custom Rule using Expression Editor



| Component briefing | | | |
|--------------------|----------------|--------------|--|
| Component Name | Component Type | Is Mandatory | Comments |
| Attribute | Combo Box One | Yes | Displays list of attributes relevant to consumer service |
| Operator | Combo Box One | Yes | Logical operators to form an expression |
| Value | Text Box | Yes | |

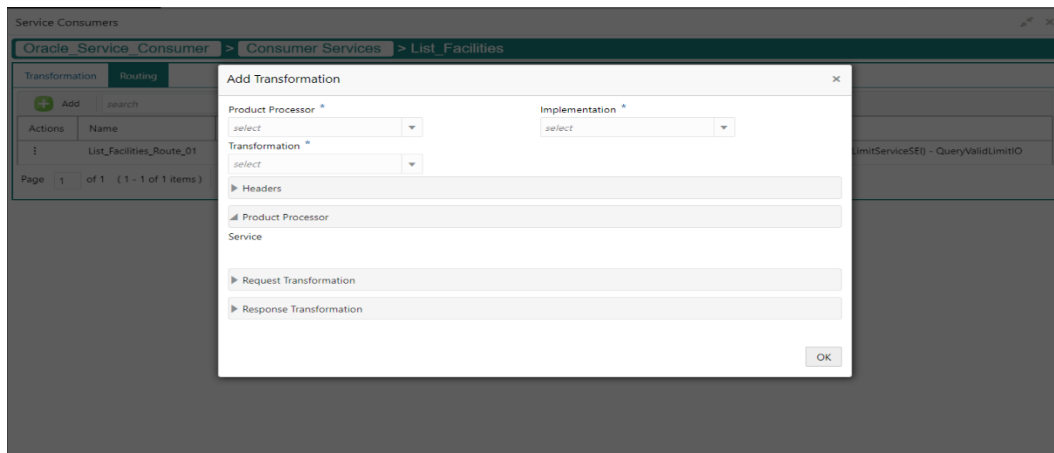
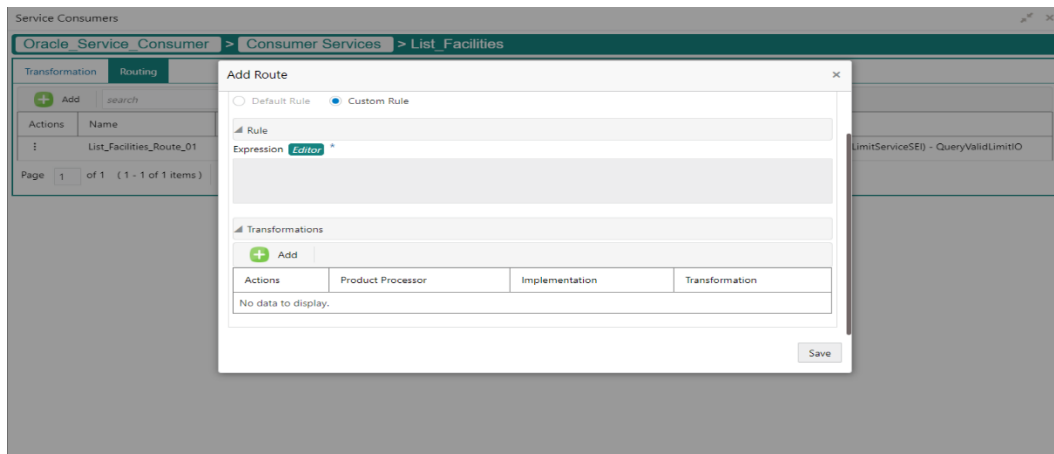
| | | | |
|----------------|---------------|--|-----------------------|
| Condition type | Combo Box One | | Conditional Operators |
| Save | Button | | Saves the expression |

NOTE: String value should be quoted using single quotes (')
eg: 'abc'
List value should be comma separated values and quoted using single quotes (')
eg: 'abc,xyz,1.23,true'

10.1.3 Transformations

User can define the sequence of transformations for each routing in which request should be processed.

Sequence of transformations in list can be changed by using drag-n-drop feature.

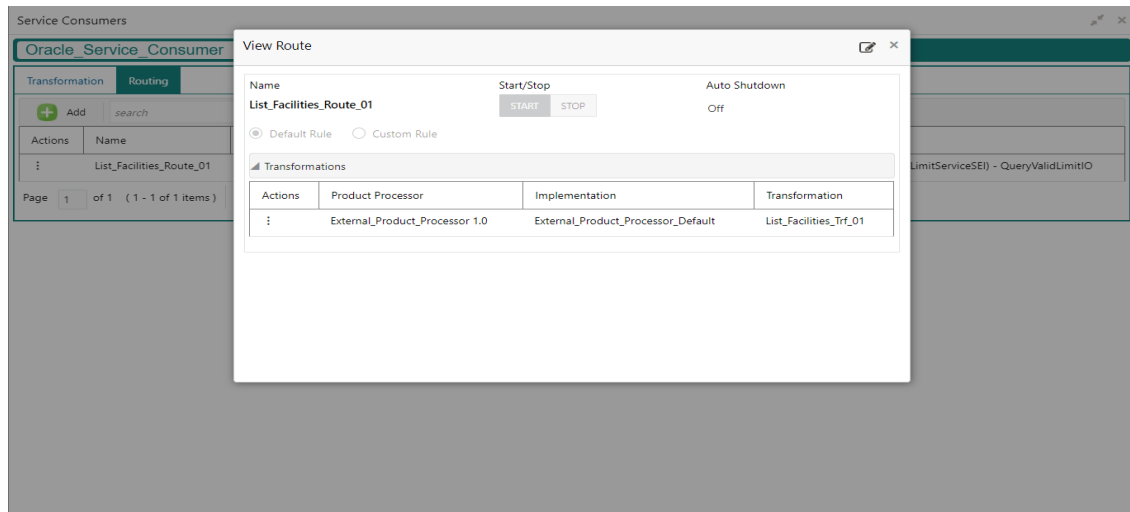


| Component briefing | | | |
|---------------------------|------------------------------|---------------------|--|
| Component Name | Component Type | Is Mandatory | Comments |
| Product Processor | Combo Box One | Yes | Displays provider list relevant to consumer |
| Implementation | Combo Box One | Yes | Displays implementation list relevant to selected provider |
| Transformation | Combo Box One | Yes | Displays transformation list relevant to select provider & implementation |
| Headers | Collapsible Header & Content | | Displays header list relevant to selected implementation and transformation User can change the header values. Value can either be hardcoded or can be Velocity mapping. |
| Product Processor | Collapsible Header & Content | | Displays service details relevant to selected transformation |
| Request Transformation | Collapsible Header & Content | | Displays request transformation template |
| Response Transformation | Collapsible Header & Content | | Displays response transformation template |
| OK | Button | | Saves the transformation details in list |

10.2 View

User can view routing details and can also switch to edit form by clicking on edit icon.

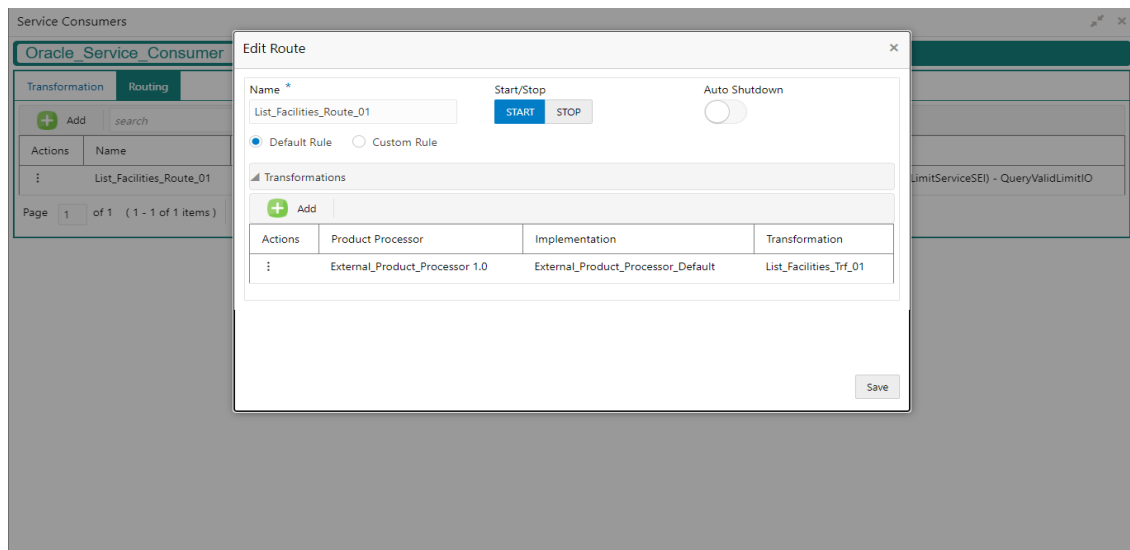
Navigation: **Routing -> Operation Menu (3 dot icon) -> View**



10.3 Edit

User can modify the routing details.

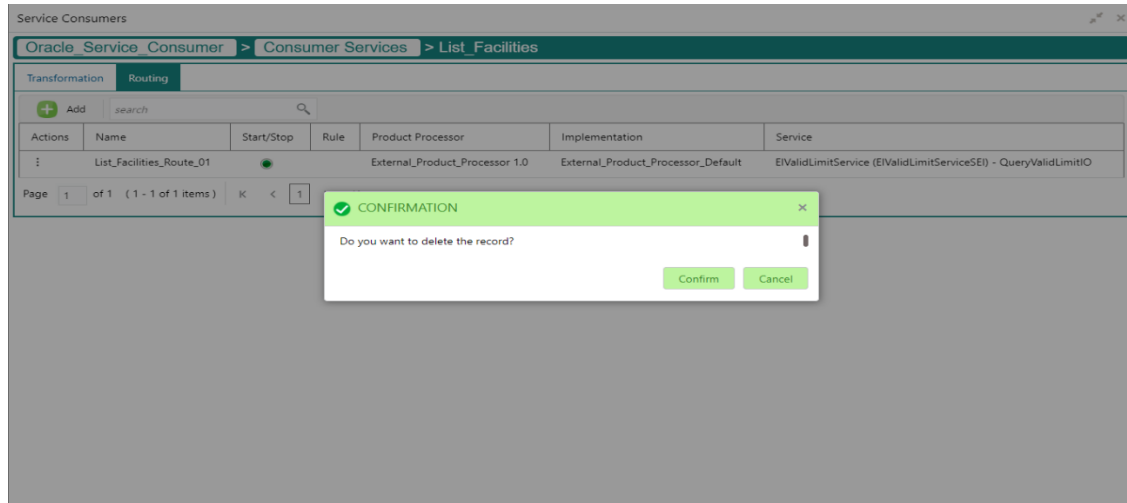
Navigation: **Routing -> Operation Menu (3 dot icon) -> Edit**



10.4 Delete

User can delete the routing.

Navigation: **Routing -> Operation Menu (3 dot icon) -> Delete**



11 Chaining

End-user will be able to define the sequence of transformations for each routing in which request should be processed.

Chaining can be achieved by using snapshot list.

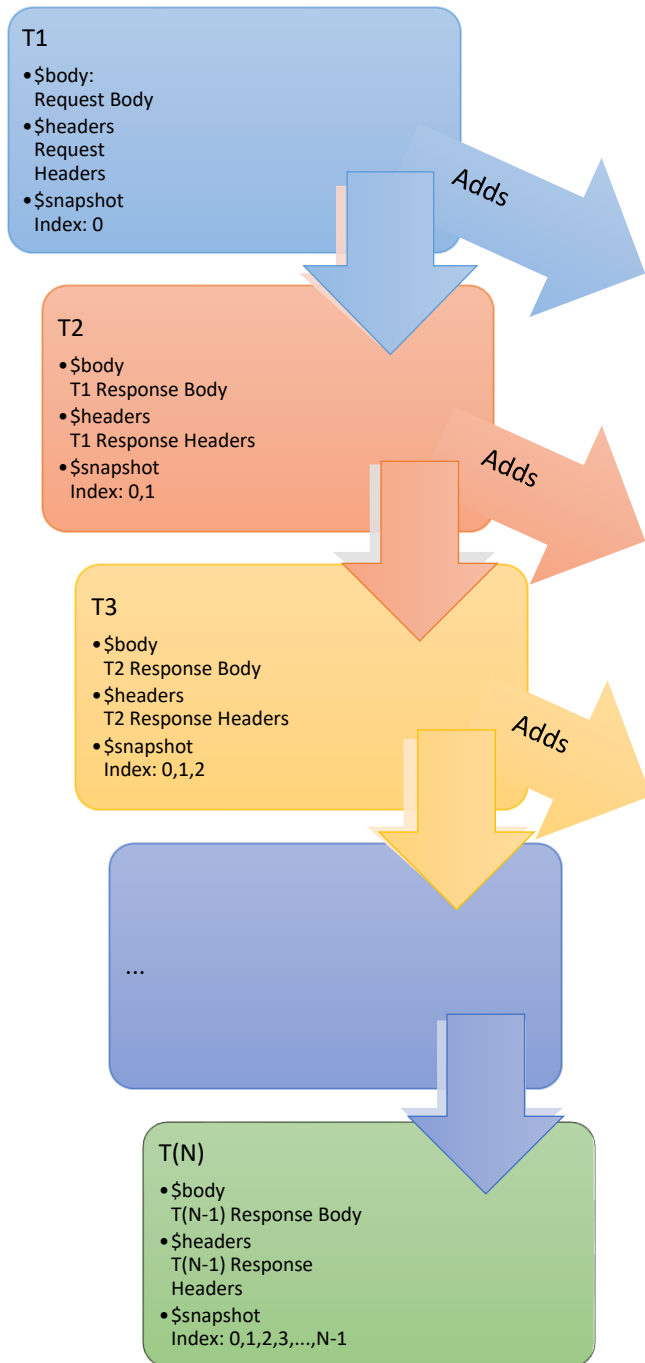
Snapshot list stores the response body and response headers whenever the transformation is processed.

So, end-user can access response body or headers of all processed transformations at any given step.

Syntax:

`$snapshot.get(index).body` or `$snapshot.get(index).headers`

NOTE: `$body` and `$headers` will refer the response body and headers of previous step.



| Snapshot List | | |
|---------------|------------------|---------------------|
| Index | body | headers |
| 0 | Request Body | Request Headers |
| 1 | T1 Response Body | T1 Response Headers |
| 2 | T2 Response Body | T2 Response Headers |
| 3 | T3 Response Body | T3 Response Headers |
| ... | | |
| | | |

12 Extensibility

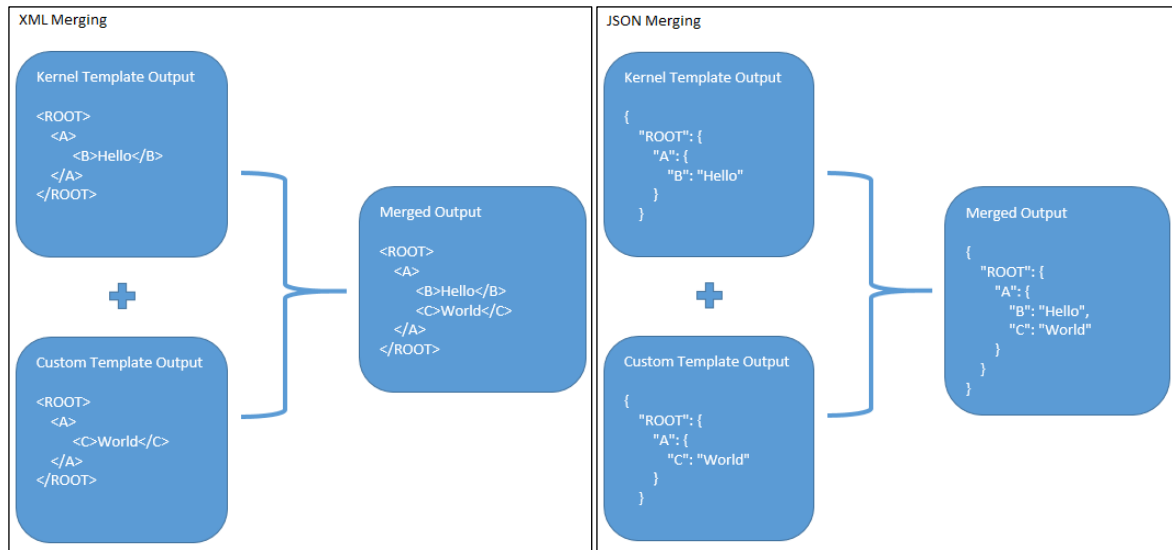
Extensibility in Routing Hub refers to template extensibility and is achieved by specifying the extended templates for request and response kernel transformation templates.

And as part of extensibility, Routing Hub merges the output of kernel template and custom template in terms of JSON / XML merging.

In case of request, Routing Hub will send the merged output as request payload to provider.

In case of response, Routing Hub will return the merged output as response back to consumer

Example:



NOTE: Order of existing elements in custom template should be same as kernel template.

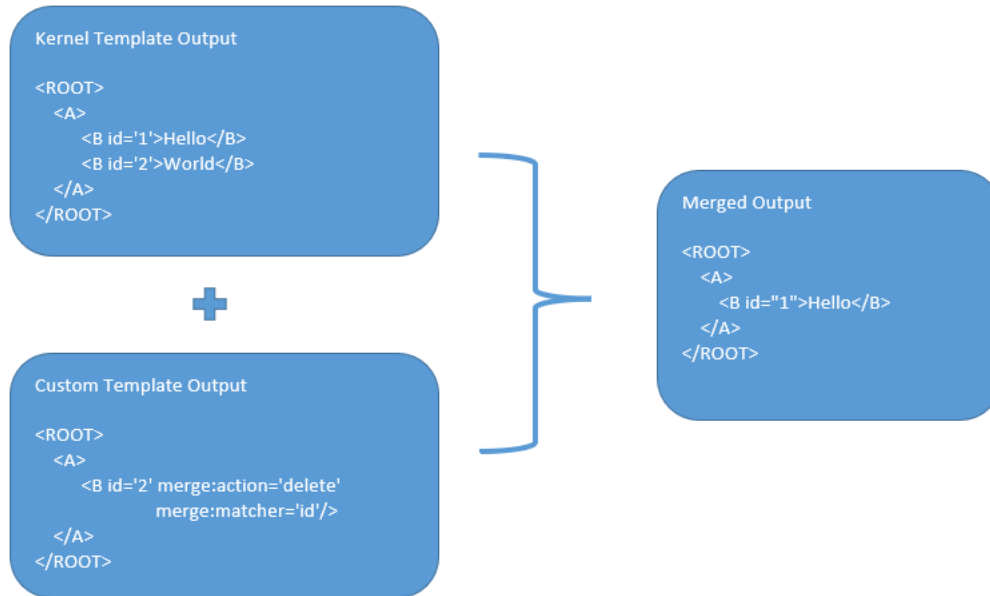
12.1 XML merging attributes

12.1.1 Identity Matcher

Matcher attribute must be used when merge action has to be performed for specific element.

Syntax: `merge:matcher='<ATTRIBUTE_NAME>'`

Example:

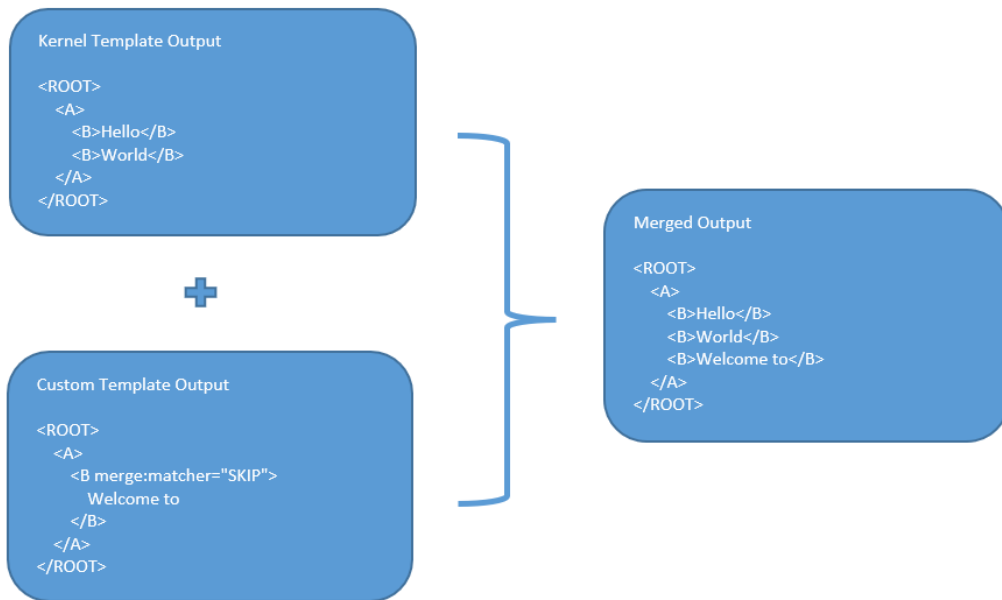


12.1.2 Skip Matcher

Skip matcher strategy is used to insert the elements forcefully without matching the original element and patch element.

Syntax: `merge:matcher='SKIP'`

Example:

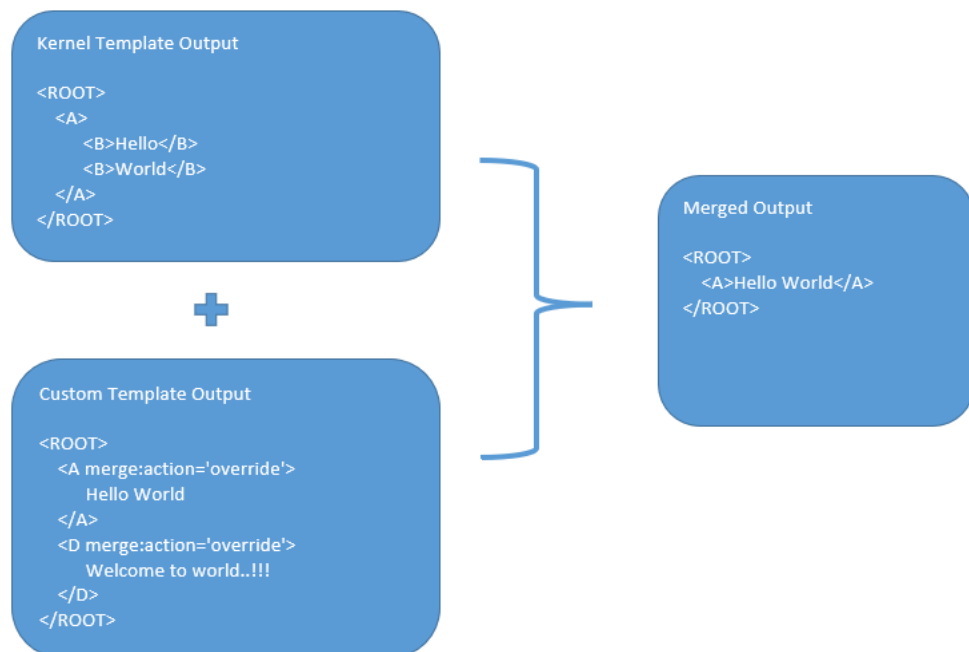


12.1.3 Override Action

Replaces the original element with the patch element only if it exists in kernel/mock template.

Syntax: `merge:action='override'`

Example:

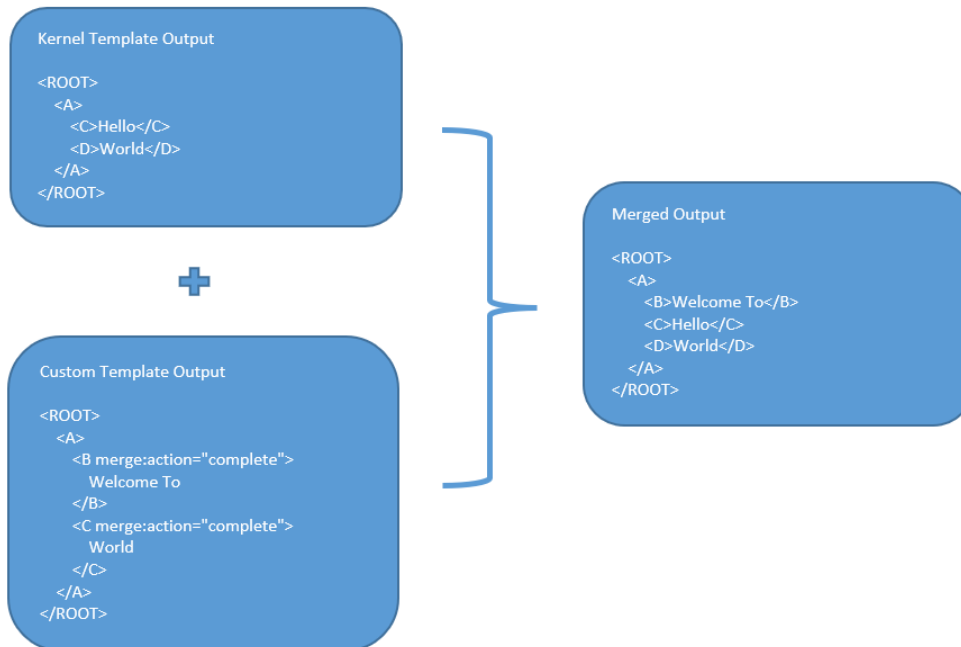


12.1.4 Complete Action

Copies the patch element only if it does not exist in kernel/mock template.

Syntax: `merge:action='complete'`

Example:

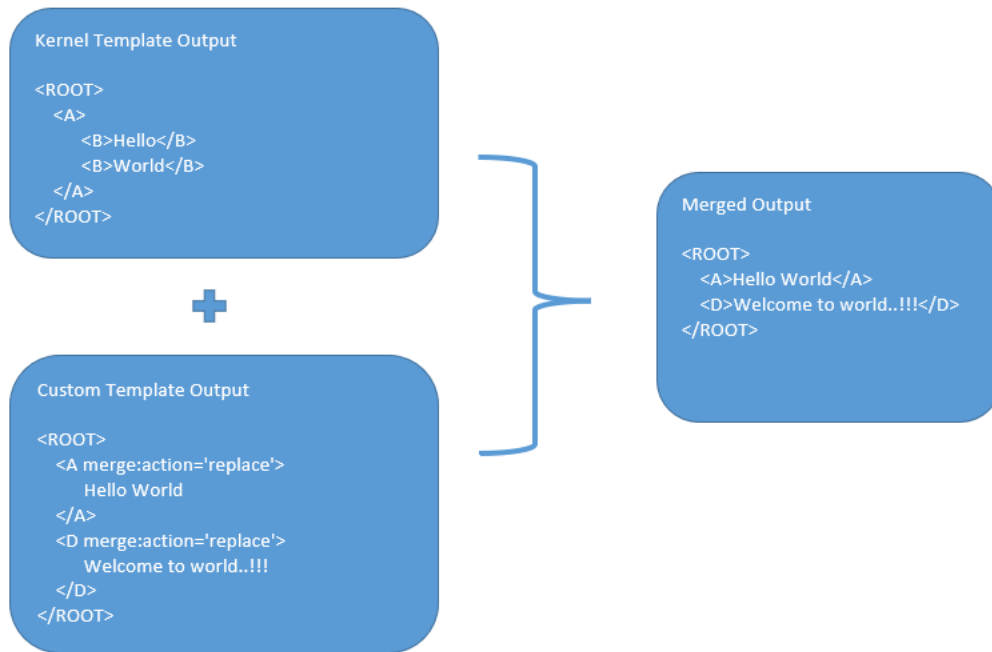


12.1.5 Replace Action

Replaces the original element with the patch element or creates the element if it does not exist in kernel/mock template.

Syntax: `merge:action='replace'`

Example:

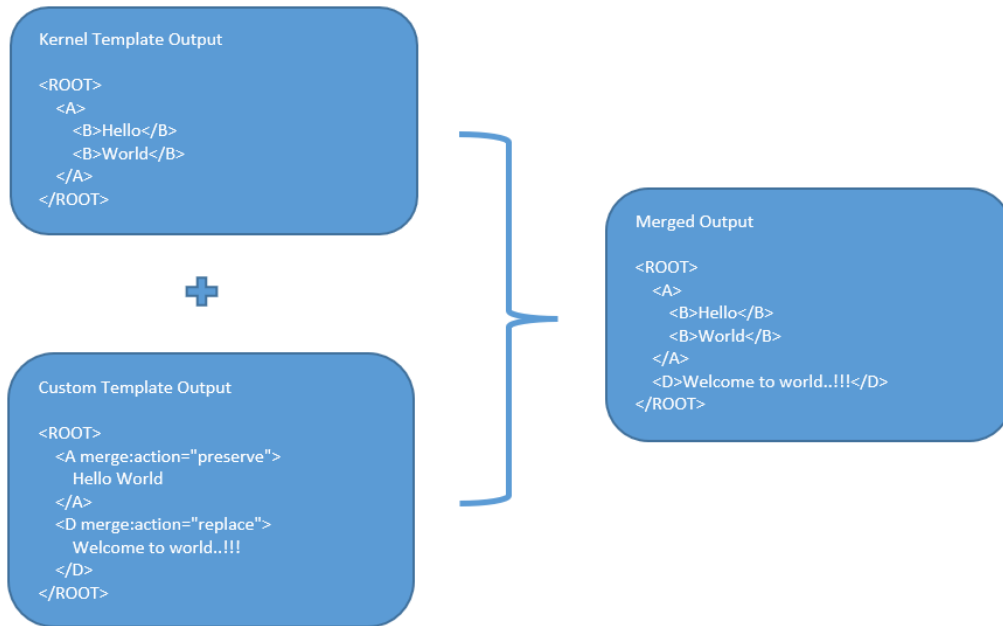


12.1.6 Preserve Action

No replace action is performed on the original element.

Syntax: `merge:action='preserve'`

Example:

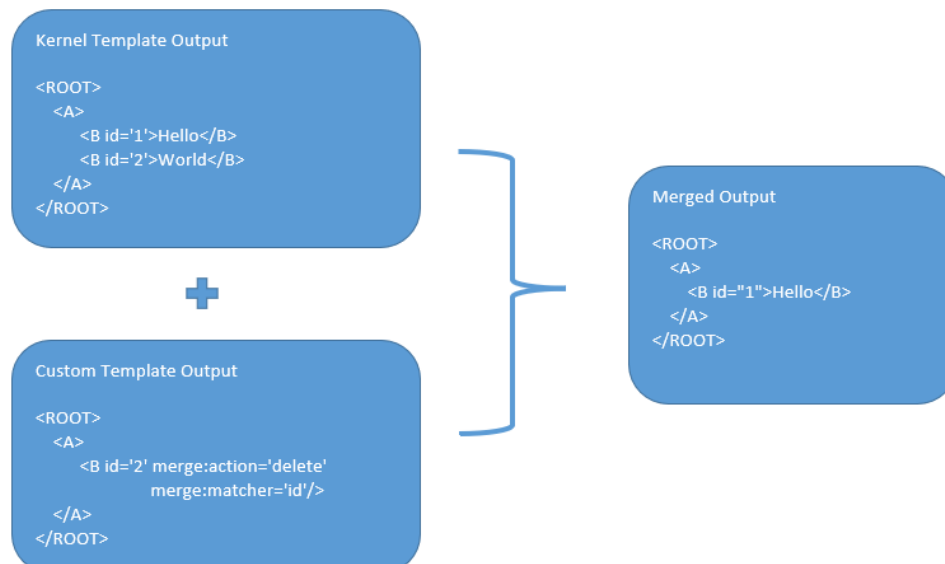


12.1.7 Delete Action

Deletes the original element.

Syntax: `merge:action='delete'`

Example:



13 Audit purging / archiving

Purging/Archiving of audit data is done on the basis of retention policy.

This process uses plato-batch-server for Job execution.

Below steps are required to schedule purging/archiving job (routingHubAuditRetentionJob) once cmc-obrh-services and plato-batch-server is UP and RUNNING:

1. Open "Configure Tasks" screen (Task Management -> Configure Tasks)
2. Select "Schedule" option
3. Select "Task Name" as routingHubAuditRetentionJob and "Task Trigger Name" will be generated automatically
4. Specify the CRON expression to daily EOD

In order to resolve table space issue of Audit table (CMC_RH_AUDIT_EVENT_LOG), Database Management Team has to configure database job which should be triggered after routingHubAuditRetentionJob.

This database job can be redefining the table (DBMS_REDEFINITION) after purging/archiving is done or other approach.

So, unused LOB segment space can be released.

And in order to resolve table space issue of Audit history table (CMC_RH_AUDIT_EVENT_LOG_HISTORY), Database Management Team has to configure database job to truncate table periodically basis.

14 Multipart request

Below is the sample template for multipart request:

```
[  
  {  
    "key": "file",  
    "type": "FILE",  
    "value": "$body.files.get(0).file"  
  },  
  {  
    "key": "name",  
    "type": "TEXT",  
    "value": "$body.name"  
  }  
]
```

15 Configuration

End-user can configure the properties w.r.t. monitoring, alert, and export.

End-user can configure the same at System level and granular levels such as Consumer, Consumer Service and Routing.

Navigation: **Core Maintenance -> Routing Hub -> Configuration**

The screenshot shows a 'Configuration' window with the following sections:

- Monitoring:** Includes 'Window Type' with radio buttons for 'Count' (selected) and 'Time', and 'Window Size' with a numeric input set to 100 and up/down arrows.
- Alert:** Includes 'Minimum number of calls' with a numeric input set to 100 and up/down arrows, and 'Failure rate threshold' with a percentage input set to 50% and up/down arrows.
- Email Alert:** Includes a text input field for 'Email Addresses'.
- Export:** Includes a toggle switch for 'Mark data as factory shipped', which is currently turned off.

At the bottom right of the window are three buttons: 'Clear', 'Reset', and 'Save'.

| Component briefing | | | | |
|--------------------|------------------------------|--------------|---|--|
| Component Name | Component Type | Is Mandatory | Validation | Comments |
| Monitoring | Collapsible Header & Content | | Monitoring properties are mandatory if alert properties have been configured. | This section has properties that are required by Breaker for storing and aggregating the outcome of calls using WindowType and WindowSize. |

| | | | | |
|-------------------------|------------------------------|----|---|---|
| Window Type | Radio Button | No | | <p>Predefined Values:</p> <p>COUNT / TIME</p> <p>The count-based sliding window aggregates the outcome of the last N calls (Window Size).</p> <p>The time-based sliding window aggregates the outcome of the calls of the last N seconds (Window Size).</p> |
| Window Size | Number Box | No | | <p>This property is used to record the outcome of calls when the CircuitBreaker is closed.</p> <p>In case of count-based sliding window, window size will be N calls.</p> <p>In case of time-based sliding window, window size will be N seconds.</p> |
| Alert | Collapsible Header & Content | | Alert properties are mandatory if monitoring properties have been configured. | This section has properties that are required for transitioning CircuitBreaker. |
| Minimum number of calls | Number Box | No | | <p>If minimumNumberOfCalls is 10, then at least 10 calls must be recorded, before the failure rate can be calculated.</p> <p>If only 9 calls have been recorded the CircuitBreaker will not transition to open even if all 9 calls have failed.</p> |

| | | | | |
|------------------------------|------------------------------|-----|--|---|
| Failure rate threshold | Number Box | No | | <p>Configures the failure rate threshold in percentage.</p> <p>When the failure rate is equal or greater than the threshold the CircuitBreaker transitions to open and starts short-circuiting calls.</p> |
| Email Alert | Collapsible Header & Content | | | <p>This section has properties that are required for mail notification.</p> |
| Email Addresses | Text Box | No | | <p>Once the failure rate crosses the failureRateThreshold, then end-user will be notified about the event via mail.</p> <p>This property will be semi-colon separated email addresses</p> |
| Export | Collapsible Header & Content | | | <p>This section has properties that are required for exporting configuration JSON.</p> <p>This section will be visible at system level only.</p> |
| Mark data as factory shipped | Switch | Yes | | <p>This property is used to mark the exported configuration JSON as factory shipped JSON.</p> <p>So, end-user will not be able to modify or delete the certain data once imported.</p> <p>Default value is false.</p> |

Example

Let say

WindowType is Count

WindowSize is 20

Minimum number of calls is 10

Failure rate threshold is 50%

Configured properties will behave as below:

After 10 (min number of calls) calls, routing would get shutdown if 50% (failure rate) of atmost last 20 (window size) calls have failed.

And if email address property is configured, then end-user will be notified as well.

16 Audit Log

Check audit log on the below navigation path for Oracle Banking Routing Hub

Navigation: **Core Maintenance -> Routing Hub -> Request Audit**

Request Audit

Request Id

Provider

Transformation

Consumer

Provider Implementation

Route

Consumer Service

Provider Service

User Id

Search

| Request Id | Consumer | Consumer Service | Provider | Provider Implementation | Provider Service | Transformation | Route | Status | User Id |
|---------------------|----------|------------------|----------|-------------------------|------------------|----------------|-------|--------|---------|
| No data to display. | | | | | | | | | |

Page

1

of 0 (1 - 0 of 0 items)

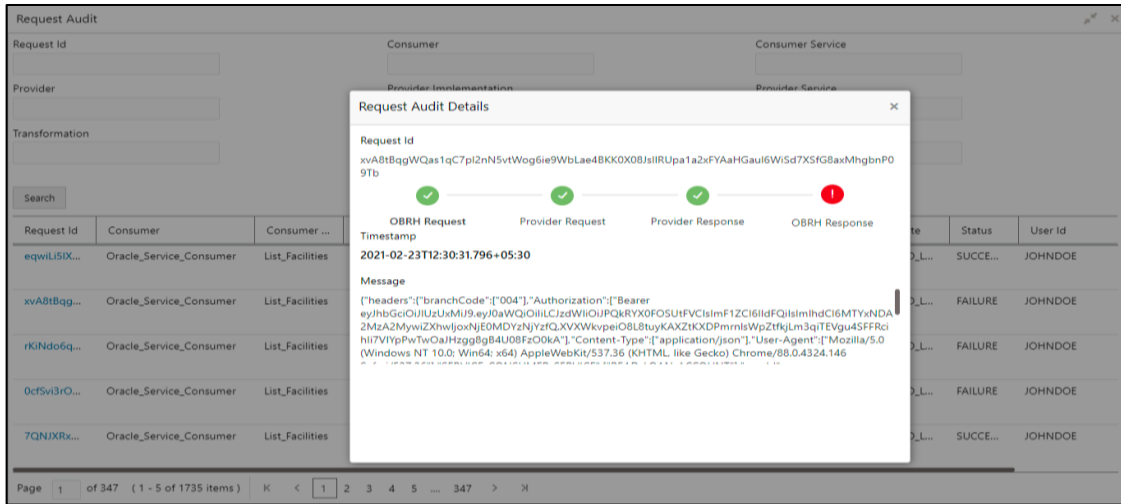
K

<

>

X

[illegible]



| Component briefing | | | |
|-------------------------|----------------|-----------|------------------------------|
| Component Name | Component Type | Condition | Comments |
| Consumer | Text Box | | Consume Name |
| Consumer Service | Text Box | | Service Consumer Name |
| Provider | Text Box | | Provider Name |
| Provider Implementation | Text Box | | Provider Implementation Name |
| Provider Service | Text Box | | Provider Service Name |
| Transformation | Text Box | | Transformation Name |
| Route | Text Box | | Route Name |
| Request Id | Text Box | | Correlation Id |
| User Id | Text Box | | User Id |

| | | | |
|--------|--------|--|---|
| Search | Button | Search is done based on below things: <ul style="list-style-type: none"> • Case insensitive • Pattern matching • Single / Multi Column search | Performs search operation with specified values |
|--------|--------|--|---|

NOTE: End-user has to use wildcard character (*) to match an arbitrary number of characters as search pattern for all fields except Request Id.

Clicking on “RequestId” value will display step by step execution of request with data such as Routing Hub Request & Timestamp, Provider Request & Timestamp, Provider Response & Timestamp, Routing Hub Response & Timestamp.

17 Dashboard

17.1 Routing Health Indicator Widget

User can view the metric information Successful calls vs Failed calls ratio of each routing.

NOTE: Failed calls here refer to the calls that are failed due to timeout issue.



18 Transformation Type

18.1 Velocity

Velocity is a Java-based template engine.

Velocity can be used to generate XML files, SQL, PostScript and most other text-based formats.

NOTE: In routing hub, Velocity will be used to generate JSON and XML.

- Using **\$body**, user can access request/response body.
Syntax: `$body.fieldName`
Example: `$body.branchCode`
- Using **\$headers**, user can access request/response headers.
Syntax: `$headers["fieldName"][0]`
Example: `$headers["branchCode"][0]`
- Using **\$bodyAsString**, user can access response body as string.
Syntax: `$bodyAsString`
- Below are some available extension methods:
 - Date Conversion
Syntax: `$dateUtil.convert(inputDate, fromPattern, toPattern)`
Parameters:
 - `inputDate` - String
 - `fromPattern` - String
 - `toPattern` - String**Returns:** String
Please refer <https://docs.oracle.com/javase/8/docs/api/java/text/SimpleDateFormat.html> for different patterns
 - Default Value
Syntax: `$custom.defaultValue(inputValue, defaultValue)`
Parameters:
 - `inputValue` - Object
 - `defaultValue` - String**Returns:** Object

- Null Check

Syntax: \$custom.isNull(inputValue)

Parameters:

 - inputValue - Object

Returns: Boolean
- Random Number

Syntax: \$mathUtil.getRandom()

Returns: Object of Random class (java.util.Random)
- Xml Tool

Syntax: \$xml.methodName()

Please refer

<https://velocity.apache.org/tools/3.1/apidocs/org/apache/velocity/tools/generic/XmlTool.html>
- Date Tool

Syntax: \$date.methodName()

Please refer

<https://velocity.apache.org/tools/3.1/apidocs/org/apache/velocity/tools/generic/DateTool.html>
- Json Tool

Syntax: \$json.methodName()

Please refer

<https://velocity.apache.org/tools/3.1/apidocs/org/apache/velocity/tools/generic/JsonTool.html>
- Math Tool

Syntax: \$math.methodName()

Please refer

<https://velocity.apache.org/tools/3.1/apidocs/org/apache/velocity/tools/generic/MathTool.html>
- Number Tool

Syntax: \$number.methodName()

Please refer

<https://velocity.apache.org/tools/3.1/apidocs/org/apache/velocity/tools/generic/NumberTool.html>

➤ Escape Tool

Syntax: \$esc.methodName()**Please refer**

<https://velocity.apache.org/tools/3.1/apidocs/org/apache/velocity/tools/generic/EscapeTool.html>

➤ Serialization of object into its equivalent Json representation

Syntax: \$custom.toJson(src)**Parameters:**

- src - Object

Returns: String

➤ Get additional field's value based on fieldname

Syntax: \$custom.getFieldValueById(jsonString, fieldname)**Parameters:**

- jsonString – String
- fieldname - String

Returns: String

➤ Get list of additional fields based on fieldname prefix

Syntax: \$custom.getAdditionalFieldSetByType(jsonString,prefixval)**Parameters:**

- jsonString – String
- prefixval - String

Returns: List

➤ This method is for parsing XML string

Syntax: \$custom.parseXml(xmlString)**Parameters:**

- xmlString – String

Returns: Object

- If issue occurred with hyphen in velocity template of Request or Response Transformation, then use get method.

Example:

```
<FCUBS_BODY>
  <Customer-IO>
    <CUSTNO>003942</CUSTNO>
  </Customer-IO>
</FCUBS_BODY>
```

If "\$in.FCUBS_BODY.Customer-IO.CUSTNO" does not work ,
Use "\$in.FCUBS_BODY.get("Customer-IO").CUSTNO" to get customer number.

18.2 XSLT

XSLT is a language for transforming XML documents into other XML documents, or other formats such as HTML for web pages, plain text or XSL Formatting Objects, which may subsequently be converted to other formats, such as PDF, PostScript and PNG.

NOTE: In routing hub, XSLT will be used to transform arbitrary XML to JSON.

18.3 JSLT

JSLT is a complete query and transformation language for JSON.

19 Oracle Banking Routing Hub Integration Specification

19.1 Token Generation

PlatoJWTAuth endpoint signature -

- Path : /platojwtauth
- Headers:
 - appld : SECSRV001
 - Content-Type : application/json
- Request Body:

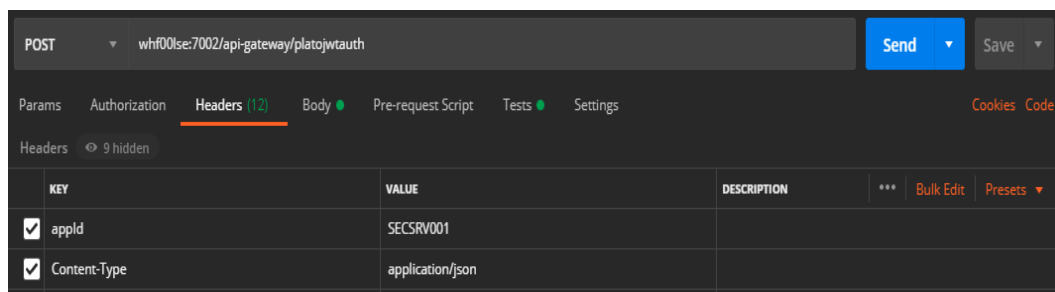

```
{
  "username": "",
  "password": ""
}
```

 - Username and password will be base64 encoding of plaintext.
- Response Body:


```
{
  "token": "",
  "userAlreadyLoggedIn": "Y",
  "expires_in": 3180,
  "home_entity_id": "DEFAULTENTITY",
  "multi_entity_admin": "N",
  "multi_entity_admin_locale": ""
}
```

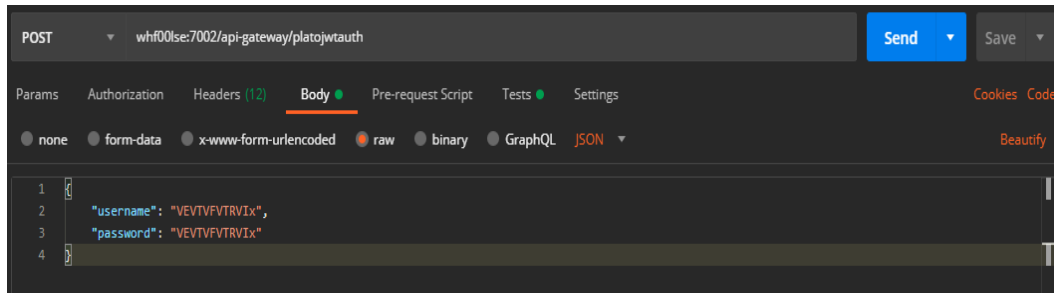
Example - Below are the screenshots

Headers



| KEY | VALUE | DESCRIPTION | *** | Bulk Edit | Presets ▼ |
|--|------------------|-------------|-----|-----------|-----------|
| <input checked="" type="checkbox"/> appld | SECSRV001 | | | | |
| <input checked="" type="checkbox"/> Content-Type | application/json | | | | |

Request Payload



Response Payload



19.2 Synchronous Dispatch API Specification

Dispatch endpoint is the **single** entry-point for invoking the routes configured in Oracle Banking Routing Hub for services of a Service Consumer.

Dispatch endpoint signature -

- Method: POST / GET
- Path : /route/dispatch
- Headers:
 - appld : CMNCORE
 - entityld : DEFAULTENTITY
 - userId : <user id>
 - branchCode : <branch code>
 - Authorization : Bearer <Token>
 - SERVICE-CONSUMER : <name of service consumer>
 - SERVICE-CONSUMER-SERVICE : <name of service consumer service>

- Request Body:

- Any valid JSON payload or multipart request which shall act as input to the transformation template in request transformer.

- Response Body:

```
{
  "data": {}
  "messages": {}
}
```

- If the route invocation succeeds, data JSON member would contain the transformed (optional) response of the provided service. If it's a provided web service and no response transformation template is supplied, XML Soap Body of response would be converted into JSON object and sent in data JSON member.
- If the route invocation fails due to misconfigured route or connection time out to ServiceProviderImpl or some other reason, relevant error messages would be sent in messages JSON member. In that case, data JSON member would be null or empty.

Example - Below are the screenshots of route dispatch for ServiceConsumer **Oracle_Service_Consumer** and ServiceConsumerService **List_Facilities**

Headers

| KEY | VALUE | DESCRIPTION |
|--|-------------------------|-------------|
| <input checked="" type="checkbox"/> Content-Type | application/json | |
| <input checked="" type="checkbox"/> appid | CMNCORE | |
| <input checked="" type="checkbox"/> entityid | DEFAULTENTITY | |
| <input checked="" type="checkbox"/> userid | TESTUSER1 | |
| <input checked="" type="checkbox"/> branchCode | 004 | |
| <input checked="" type="checkbox"/> Authorization | Bearer (token) | |
| <input checked="" type="checkbox"/> SERVICE-CONSUMER | Oracle_Service_Consumer | |
| <input checked="" type="checkbox"/> SERVICE-CONSUMER-SERVICE | List_Facilities | |

Request Payload

```
1 {
2   "partyId": "000409"
3 }
```

Response Payload on Successful Dispatch

```

1  {
2    "data": {
3      "FacilityId": "..."
4    }
5  },
6  "messages": [
7    {
8      "keyId": null,
9      "status": "SUCCESS",
10     "codes": [],
11     "requestId": null,
12     "httpStatusCode": "OK",
13     "overrideAuthLevelsReqd": null
14   }
15 ]

```

Response Payload on Failed Dispatch

```

1  {
2    "data": null,
3    "messages": [
4      {
5        "keyId": null,
6        "status": "FAILURE",
7        "codes": [
8          {
9            "args": null,
10           "arg": null,
11           "information": false,
12           "override": false,
13           "error": false,
14           "overrideAuthLevelsReqd": null,
15           "desc": "Unknown ServiceConsumerService[list_Facilities ] for ServiceConsumer[Oracle_Service_Consumer]",
16           "language": null,
17           "code": null,
18           "type": null
19         }
20       ]
21     ],
22     "requestId": null,
23     "httpStatusCode": "BAD_REQUEST",
24     "overrideAuthLevelsReqd": null
25   }
26 }

```

19.3 Asynchronous Dispatch API Specification

Dispatch endpoint is the **single** entry-point for invoking the routes configured in Oracle Banking Routing Hub for services of a Service Consumer.

Dispatch endpoint signature -

- Path : /route/dispatch
- Query Params:
 - isAsync : true
- Headers:
 - appId : CMNCORE
 - entityId : DEFAULTENTITY
 - userId : <user id>
 - branchCode : <branch code>
 - Authorization : Bearer <Token>
 - SERVICE-CONSUMER : <name of service consumer>

- SERVICE-CONSUMER-SERVICE : <name of service consumer service>
- Request Body:
 - Any valid JSON payload or multipart request which shall act as input to the transformation template in request transformer.
- Response Body:


```
{
  "data": { "correlationId" : "" },
  "messages": {}
}
```

Example - Below are the screenshots of route dispatch for
ServiceConsumer **Oracle_Service_Consumer** and ServiceConsumerService **List_Facilities**

Query Params

| KEY | VALUE | DESCRIPTION |
|---|-------|-------------|
| <input checked="" type="checkbox"/> isAsync | true | |
| Key | Value | Description |

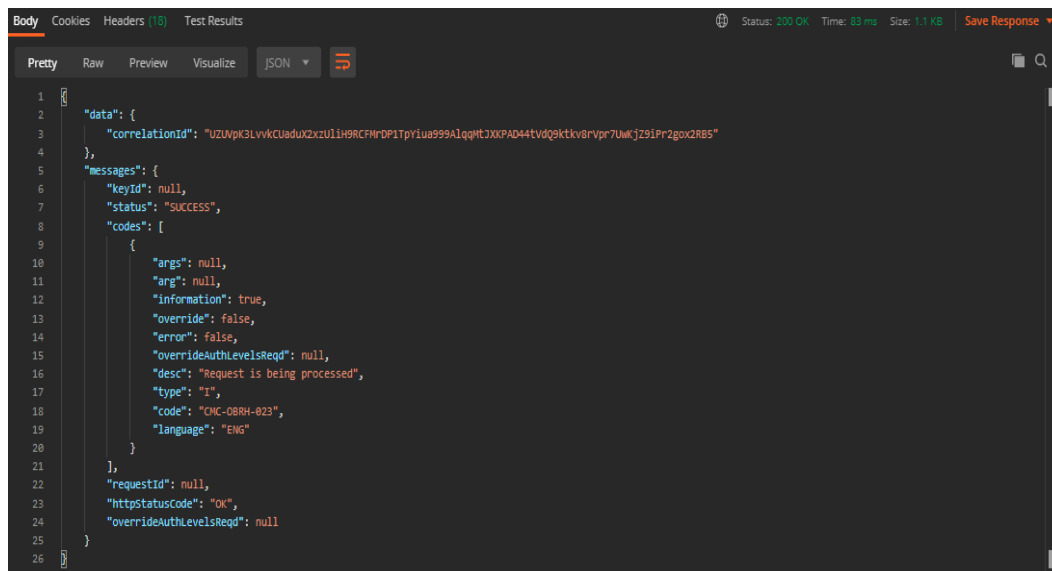
Headers

| KEY | VALUE | DESCRIPTION |
|--|-------------------------|-------------|
| <input checked="" type="checkbox"/> Content-Type | application/json | |
| <input checked="" type="checkbox"/> appId | CMNCORE | |
| <input checked="" type="checkbox"/> entityId | DEFAULTENTITY | |
| <input checked="" type="checkbox"/> userId | TESTUSER1 | |
| <input checked="" type="checkbox"/> branchCode | 004 | |
| <input checked="" type="checkbox"/> Authorization | Bearer (token) | |
| <input checked="" type="checkbox"/> SERVICE-CONSUMER | Oracle_Service_Consumer | |
| <input checked="" type="checkbox"/> SERVICE-CONSUMER-SERVICE | List_Facilities | |

Request Payload

```
{
  "partyId": "000409"
}
```

Response Payload



19.4 Asynchronous Dispatch Response API Specification

Response endpoint signature -

- Path : /route/dispatchResponse/{Correlation-Id}
 - Correlation-Id will be coming from the response of dispatch endpoint.
- Headers:
 - appId : CMNCORE
 - entityId : DEFAULTENTITY
 - userId : <user id>
 - branchCode : <branch code>
 - Authorization : Bearer <Token>
- Response Body:


```

{
  "data": {}
  "messages": {}
}

```

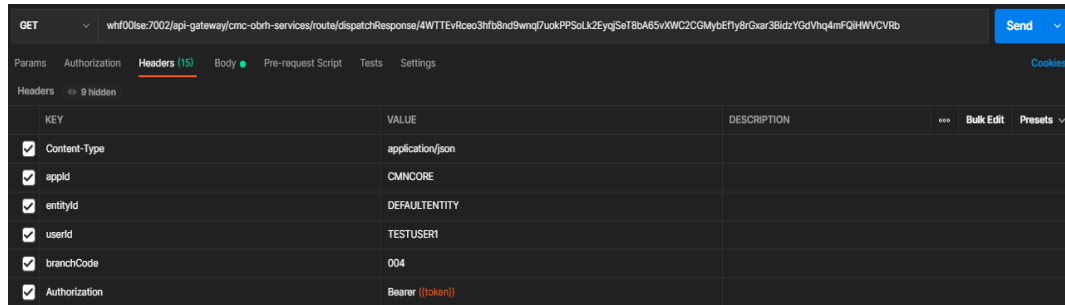
 - If the route invocation succeeds, data JSON member would contain the transformed (optional) response of the provided service. If it's a provided web service and no response transformation template is supplied, XML Soap Body of response would be converted into JSON object and sent in data JSON member.

- If the route invocation fails due to misconfigured route or connection time out to ServiceProviderImpl or some other reason, relevant error messages would be sent in messages JSON member. In that case, data JSON member would be null or empty.

Example - Below are the screenshots of route dispatch for

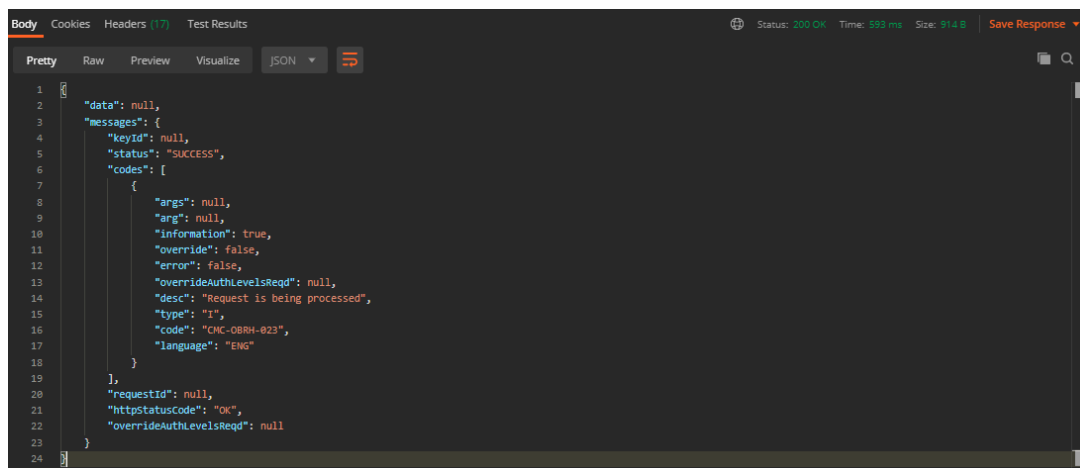
ServiceConsumer **Oracle_Service_Consumer** and ServiceConsumerService **List_Facilities**

Headers



| KEY | VALUE | DESCRIPTION |
|---------------|------------------|-------------|
| Content-Type | application/json | |
| appld | CMNCORE | |
| entityid | DEFAULTENTITY | |
| userid | TESTUSER1 | |
| branchCode | 004 | |
| Authorization | Bearer (token) | |

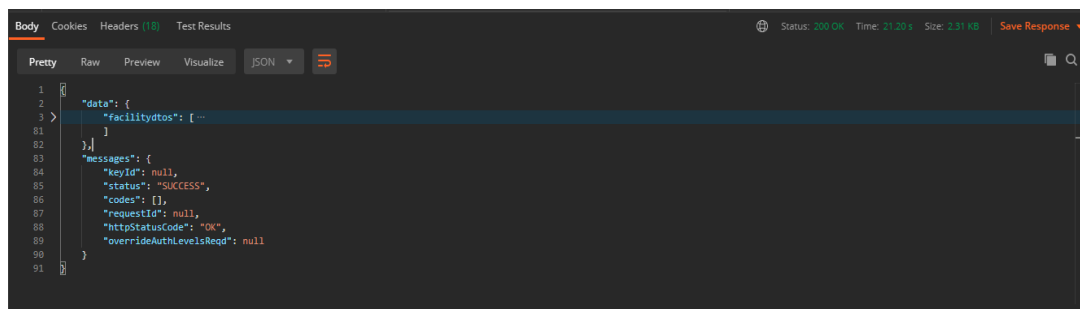
Response Payload when request is still processing



```

1  {
2    "data": null,
3    "messages": {
4      "keyId": null,
5      "status": "SUCCESS",
6      "codes": [
7        {
8          "args": null,
9          "arg": null,
10         "information": true,
11         "override": false,
12         "error": false,
13         "overrideAuthLevelReqd": null,
14         "desc": "Request is being processed",
15         "type": "I",
16         "code": "CMC-0004-023",
17         "language": "ENG"
18       }
19     ],
20     "requestId": null,
21     "httpStatusCode": "OK",
22     "overrideAuthLevelReqd": null
23   }
24 }
```

Response Payload when request is processed (on Successful Dispatch)



```

1  {
2    "data": {
3      "facilitydtos": [ ... ]
4    },
5    "messages": {
6      "keyId": null,
7      "status": "SUCCESS",
8      "codes": [],
9      "requestId": null,
10     "httpStatusCode": "OK",
11     "overrideAuthLevelReqd": null
12   }
13 }
```

Response Payload when request is processed (on Failed Dispatch)

```

1  {
2    "data": null,
3    "messages": [
4      {
5        "keyid": null,
6        "status": "FAILURE",
7        "codes": [
8          {
9            "args": null,
10           "arg": null,
11           "information": false,
12           "override": false,
13           "error": false,
14           "overrideAuthLevelReqd": null,
15           "desc": "Unknown ServiceConsumerService[list_Facilities ] for ServiceConsumer[Oracle_Service_Consumer]",
16           "language": null,
17           "code": null,
18           "type": null
19         }
20       ]
21     },
22     "requestId": null,
23     "httpStatusCode": "BAD_REQUEST",
24     "overrideAuthLevelReqd": null
25   }
26 }

```

19.5 Template Evaluation API Specification

Template evaluation endpoint will return the evaluated output of transformation template. End-user can validate the template based on the returned output.

Template evaluation endpoint signature -

- Method: POST
- Path : /template/evaluate
- Headers:
 - appld : CMNCORE
 - entityld : DEFAULTENTITY
 - userld : <user id>
 - branchCode : <branch code>
 - Authorization : Bearer <Token>
 - SERVICE-CONSUMER : <name of service consumer>
 - SERVICE-CONSUMER-SERVICE : <name of service consumer service>
 - SERVICE-TRANSFORMATION : <name of service transformation>
- Query Parameters:
 - transformationType : REQUEST / RESPONSE / MOCK_RESPONSE

Note: Default value is REQUEST if not specified
- Request Body:
 - Any valid JSON / XML payload which shall act as input to the transformation template in request transformer.

- Response Body:

```
{  
  "data": {}  
  "messages": {}  
}
```

20 Oracle Banking Routing Hub VM Arguments

Common Core Managed Server

| Parameter | Default | Values |
|---|---------|---|
| CMC-OB RH-SERVICE | | |
| cmc-obrh-services.server.port | | <SERVER_PORT> |
| obrh.db.jndi | | <CMNCORE_JNDI> |
| cmc-obrh-services.oic.secretStore.url | | <OIC_SECRET_STORE_URL> NOTE: This property is only applicable for cloud |
| cmc-obrh-services.oic.oauth.scope | | <OIC_OAUTH_SCOPE> NOTE: This property is only applicable for cloud |
| cmc-obrh-services.oic.idcs.url | | <OIC_IDCS_URL> NOTE: This property is only applicable for cloud |
| cmc-obrh-services.audit.retention.days | | <AUDIT_RETENTION_POLICY_DAYS> |
| cmc-obrh-services.audit.retention.archival | | Y / N (Y for archiving and N for purging) |
| Enable and configure connection pooling for REST calls | | |
| obrh.rest.connectionpool.enabled | false | true / false |
| obrh.rest.connectionpool.totalConnectionCount | 20 | <POOL_TOTAL_CONN_COUNT> |
| obrh.rest.connectionpool.maxConnectionCountPerRoute | 2 | <POOL_MAX_CONN_PER_ROUTE> |

| | | |
|--|-------|---|
| obrh.rest.connectionpool.timeToLive.ms | -1 | <POOL_TTL> |
| Receive routing failure mail notification via plato-alerts-management-service | | |
| obrh.alerts.enabled | false | true / false |
| Fail routing hub request if provider requests fails with specific error status code | | |
| obrh.provider.exception.statuscodes | | <ERROR_STATUS_CODES> |
| Change approach for auditing | | |
| obrh.audit.type | KAFKA | DEFAULT / KAFKA / JMS / LOG / OFF For KAFKA option, cmc-obrh-kafka-consumer service needs to be deployed. For JMS option, cmc-obrh-jms-consumer service needs to be deployed. |
| Overwrite the customization that is not part of configuration json | | |
| obrh.import.overwrite | false | true / false |
| Use Custom Keystore and Truststore for HTTPS scheme | | |
| obrh.keystore.password.encoded | | true / false (true, if password is base 64 encoded) |
| obrh.truststore.path | | <TRUSTSTORE_PATH> |
| obrh.truststore.password | | <TRUSTSTORE_PASSWORD> |
| obrh.usekeystore | | true / false (true, if keystore is required along with truststore) |

| | | |
|---|------|------------------------------------|
| obrh.keystore.path | | <KEYSTORE_PATH> |
| obrh.keystore.password | | <KEYSTORE_PASSWORD> |
| obrh.keystore.alias | | <KEYSTORE_ALIAS_LIST> |
| obrh.keystore.aliaspassword | | <KEYSTORE_ALIAS_PASSWORD_LIST> |
| obrh.ssl.protocol | TLS | TLS / TLSv1 / TLSv1.1 / TLSv1.2 |
| For tomcat deployment | | |
| obrh.server.isJavaEE | true | true / false (false for tomcat) |
| obrh.taskexecutor.corepoolsize | 50 | <CORE_POOLSIZE> |
| obrh.taskexecutor.maxpoolsize | 50 | <MAX_POOLSIZE> |
| obrh.taskexecutor.queuecapacity | 100 | <QUEUE_CAPACITY> |
| Set Proxy settings for HTTPS As per the Java Networking documentation, HTTPS protocol handler will use the same as the http handler (i.e. http.nonProxyHosts). But in case of Weblogic, http.nonProxyHosts will not work for some reason. So, use https non proxy host argument (i.e. https.nonProxyHosts). | | |
| https.proxyHost | | <PROXY_HOST_NAME> |
| https.proxyPort | | <PROXY_PORT> |
| https.nonProxyHosts | | <NON_PROXY_HOST_LIST> |
| http.nonProxyHosts | | <NON_PROXY_HOST_LIST> |
| Set logger level | | |
| plato.service.logging.level | | <LOG_LEVEL> |

| | | |
|--|------|-------------------------|
| Support SSL based SOAP provider calls in weblogic environment | | |
| This property will enforce WebLogic Server to use SUN SSL implementation (javax package) rather than the WebLogic one. | | |
| UseSunHttpHandler | | true |
| CMC-OB RH-KAFKA-CONSUMER | | |
| cmc-obrh-kafka-consumer.server.port | | <SERVER_PORT> |
| Change ID generator | | |
| obrh.audit.id-generator | UUID | UUID / SNOWFLAKE |
| CMC-OB RH-JMS-CONSUMER | | |
| cmc-obrh-jms-consumer.server.port | | <SERVER_PORT> |
| cmc-obrh-jms-consumer.connectionFactory | | <JMS_CONN_FACTORY_JNDI> |
| cmc-obrh-jms-consumer.queue | | <JMS_CONN_QUEUE_JNDI> |
| Change ID generator | | |
| obrh.audit.id-generator | UUID | UUID / SNOWFLAKE |

Plato Core Managed Server

Oracle Banking Routing Hub is using Multipart for Import feature.

By default, spring supports max 1MB file size and 10MB request size for Multipart.

In order to import bigger files,

plato-api-gateway.multipart.max-file-size=<MAX_FILE_SIZE> (default is 1MB)

plato-api-gateway.multipart.max-request-size=<MAX_REQUEST_SIZE> (default is 10MB)

NOTE: -1 for no size constraint

Example:

plato-api-gateway.multipart.max-file-size=-1

plato-api-gateway.multipart.max-request-size=-1