Oracle® Banking Microservices Architecture Routing Hub Configuration User Guide



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Oracle Banking Microservices Architecture Routing Hub Configuration User Guide, Release 14.7.0.0.0

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Preface

- Purpose
- Audience
- Acronyms and Abbreviations
- List of Topics
- Symbols and Icons

Purpose

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

Audience

This guide is intended for the customers and partners.

Acronyms and Abbreviations

The list of the acronyms and abbreviations used in this guide are as follows:

Abbreviation	Description
API	Application Programming Interface
JSON	Java Script Object Notation
XML	Extensible Markup Language
WSDL	Web Services Description Language

List of Topics

This guide is organized as follows:

Topics	Description
Introduction	This topic provides the general information about the guide.
Configuration	This topic provides the information about the Configuration.
Service Consumer	This topic provides the information about the Service Consumer.



Topics	Description
Service Providers	This topic provides the information about the Service Providers.
Implementation	This topic provides the information about the Implementation.
Consumer Services	This topic provides the information about the Consumer Services.
Transformation	This topic provides the information about the Transformation.
Routing	This topic provides the information about the Routing.
Request Audit - Log	This topic provides the information about the Request Audit logs.
Chaining	This topic provides the information about the chaining.
Extensibility	This topic provides the information about the extensibility in Routing Hub.
Audit Purging / Archiving	This topic provides the information about the process for audit purging and archiving.
Multipart Request	This topic provides the information about the multipart request template.
Dashboard	This topic provides the information about the dashboard.
Transformation Type	This topic provides the information about the transformation type.
Oracle Banking Routing Hub Integration Specification	This topic provides the information about the Oracle Banking Routing Hub Integration Specification.
Oracle Banking Routing Hub VM Arguments	This topic provides the information about the Oracle Banking Routing Hub VM Arguments.

Table 2 (Cont.) List of Topics

Symbols and Icons

This guide has the following list of symbols and icons.

Symbol/Icon	Function
14 14	Minimize
N N N N N N N N N N N N N N N N N N N	Maximize
×	Close
0	Perform Search
	Open a list

Table 3 Symbols and Icons - Common



Symbol/Icon	Function
+	Add a new record
K	Navigate to the first record
X	Navigate to the last record
<	Navigate to the previous record
>	Navigate to the next record
	Grid view
	List view
С	Refresh
+	Click this icon to add a new row.
-	Click this icon to delete a row, which is already added.
	Calendar
	Alerts

 Table 3 (Cont.) Symbols and Icons - Common

Table 4 Symbols and Icons – Audit Details

Symbol/Icon	Function
	A user



Table 4 (Cont.) Symbols and Icons – Audit Details

Symbol/Icon	Function
	Date and time
	Unauthorized or Closed status
	Authorized or Open status

Table 5 Symbols and Icons - Widget

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



1 Introduction

Oracle Banking Routing Hub is a routing hub that enables seamless & standardized integrations between FSGBU Banking Product using configurations provided as part of the product infrastructure.

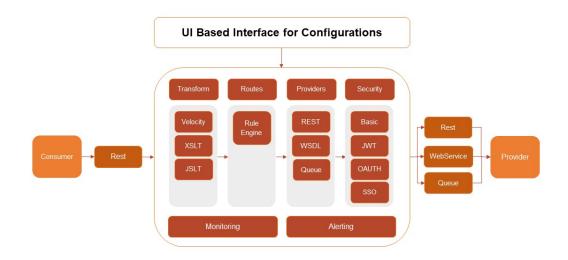
Consumer application does not need to know the points given below.

- Servicing Providers or Product Processors: Product processor to which the integration is required.
- Name of the Service: logical name of the service. For example, Funds Transfer and Letter of Credit Initiation.
- Messaging structure of Service: structure of the message. For example, JSON and XML files.
- Communication Protocol: Web services, Rest API and Queue.
- Can be integrated with different versions of a Product processors.

This guide shows the maintenance of two product as given below.

- Oracle Service Consumer as Service Consumer
- External Product Processor as Service Provider







2 Configuration

This topic describes the systematic instructions to perform the 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.

The **Configuration** screen contains the following sections.

- **Monitoring** It has the features required by the breaker to store and aggregate the result of calls.
- Alert It has the features required for transitioning circuit breaker.
- Email Alert It has the feature required for mail notification.
- **Export** It has the properties that are required for exporting the configuration JSON and will be visible at system level only.

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

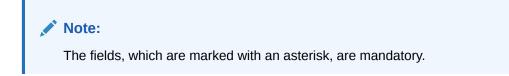
- 1. On Home screen, click Core Maintenance. Under Core Maintenance, click Routing Hub.
- 2. Under Routing Hub, click Configuration.

The **Configuration** screen displays.

Figure 2-1 Configuration

Configuration	μ^{t} ×
Monitoring	^
Window Type ● Count ◯ Time	Window Size
Alert	
Minimum number of calls	Failure rate threshold 50% V A
# Email Alert	
Email Addresses	
ddd	
Export	
Mark data as factory shipped	
	Clear Reset Save

3. Specify the fields on **Configuration** screen.





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

Field	Description
Window Type	 Select the type of the window. The available options are: Count: The count-based sliding window aggregates the outcome of the last N calls (Window Size). Time: The time-based sliding window aggregates the outcome of the calls of the last N seconds (Window Size).
Window Size	 Specify the window size to record the outcome of the calls when the circuit breaker is closed. For Count window type, The window size is N calls. For Time window type, The window size has N seconds.
Minimum number of calls	Specify the minimum number of calls. For example: If the minimum number of calls are 10, then at least 10 calls must be recorded before calculating the failure rate. If only nine calls are recorded, the circuit breaker is not transitioned to open even if all nine calls are failed.
Failure rate threshold	Specify the failure rate threshold in percentage. When the failure rate is equal or greater than the threshold, the circuit breaker transitions to open and starts short-circuiting calls.
Email Addresses	Specify the E-mail address. The user can use semi-colon to add more email addresses. Once the failure rate crosses the Failure rate threshold , a mail is sent to the end-user about the event.
Mark data as factory shipped	Select the toggle to mark the exported configuration JSON as factory shipped JSON. The end-user will not be able to modify or delete the certain data once imported. By default, the toggle is OFF.

 Table 2-1
 Configuration - Field Description

Example:

Table 2-2	Configuration -	- Field	Entry	Values
-----------	-----------------	---------	-------	--------

Field	Entry Values
Window Type	Count
Window Size	20
Minimum number of calls	10
Failure rate Threshold	50%

Configured properties will result as below:

After 10 (minimum number of calls) calls, routing would get shutdown if 50% (failure rate) of almost last 20 (window size) calls have failed. If the email address property is configured, then the end-user is notified as well.

4. Click **Clear** to clear all the specified details.



- 5. Click **Reset** to reset the details.
- 6. Click **Save** to save all the details.



3 Service Consumers

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

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

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

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

The Service Consumers screen displays.

Figure 3-1 Service Consumers

Service Consumers					× ³⁴ 6
Service Consumers					
Add 🔁 Import Search		٩			
DEMO_OBDX1	÷	OBDX_PAYMENTS	÷	VISHAL_TESTING_2	÷
Loan	:	ORGINATION	÷	OBPY	÷
OBDX_FCMM	:	ORIGINATION	:	OBDX_Sombit	÷
OBREMO_P	:				
Page 1 of 16 (1 - 10 of 159 items) K	< 1 2	: 3 4 5 16 > >l			

Add Service Consumer

The user can create new Service Consumer manually.

3. Click Add.

The Add Service Consumer screen displays.



Add Service Cons	umer		×
Name *			^
Environment Varia	bles		
Group *			
Select) (chur	
Actions No data to display.	Name	Value	
			Save

Figure 3-2 Add Service Consumer

4. Specify the fields on Add Service Consumer screen.



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

 Table 3-1
 Add Service Consumer - Field Description

Field	Description
Name	Specify the unique service consumer name. Note: Enter 0 to maximum of 255 characters.
	 No numeric value at beginning and no space allowed.

Field	Description
Add	To add, refer to step 5. Select the group from the drop-down list.
	The available options are: Group Variable
Group	Select the group from the drop-down list.
Action	Displays the action. The user can edit or delete the header.
Name	Displays the name of the header.
Value	Displays the value of the header.

Table 3-1 (Cont.) Add Service Consumer - Field Description

Environment Variables

The user must define the group of variables which can be accessed throughout the specific consumer's configuration. The syntax for accessing environment variables is below: \$env.Environment_Group_Name.Environment_Variable_Name

For example, \$env.COMMON.BRANCH_CODE

- 5. To add Environment Variables, follow the below steps.
 - a. Click Add on the Add Service Consumers screen, and select Group from dropdown list to add the group.

The Add Environment Group screen displays.

Figure 3-3 Add Environment Group

Add Environment Group	×
Name *	
	ОК

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

Note:

The fields, which are marked with an asterisk, are mandatory.

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



Table 3-2 A	Add Environment Group	- Field Description
-------------	-----------------------	---------------------

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

c. Click Add on Add Service Consumer screen and select Variable from dropdown list to add the variable.

The Add Environment Variable screen displays.



Add Environment Variable	×
Name *	
Value	
	ОК

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



The fields which are marked with asterisk are mandatory.

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

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

Table 3-3 Add Environment Variable - Field Description

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

The **Confirmation** screen displays.

Figure 3-5 Confirmation - Add Service Consumers

Confirmation		×
Do you want to save the record? ≪		>
	Confirm	Cancel

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

Import Service Consumer

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

8. Click Import.

The Import Service Consumer screen displays.



Import Service Consumer		×
File *	Select	Extract
Name *	ĮĮ	
Overwrite extended templates Ves No		
Service Providers		
	Name	
No data to display.		

Figure 3-6 Import Service Consumer

Import

9. Specify the fields on Import Service Consumer screen.



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

 Table 3-4
 Import Service Consumer - Field Description

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



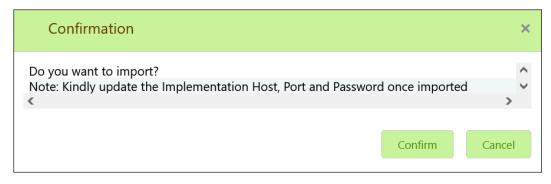
Field	Description
Name	Specify the name of the service provider.
	 Note: Name cannot be blank and required only for JSON file. Enter 0 to maximum of 255 characters. No numeric value at beginning and no space allowed.
Overwrite extended templates	 Select the respective radio button to overwrite the extended templates. The available options are: Yes - This option overwrites the extended templates. No - This option retains the existing extended templates.
Service Providers	Displays the service provider details.
Name	Displays the list of service providers names that are present in JSON file only.

Table 3-4 (Cont.) Import Service Consumer - Field Description

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

The **Confirmation** screen displays.

Figure 3-7 Confirmation - Import Service Consumer



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

Note:

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

- Implementation Host and Port
- Implementation Authentication Password

View Service Consumer

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



12. On the **Service Consumer** tile, click **Operation Menu** (3 dot icon), and select **View** from the dropdown list.

The View Service Consumer screen displays.

View Service Consu	mer		æ×
Name			
Environment Variabl	es		
Group			
	•		
Actions	Name	Value	
:			
•			

Figure 3-8 View Service Consumer

13. Click Edit button to edit the Service Consumer.

Edit Service Consumer

The user can modify the consumer details.

14. On the **Service Consumer** tile, click **Operation Menu** (3 dot icon), and select **Edit** from the dropdown list.

The Edit Service Consumer screen displays.

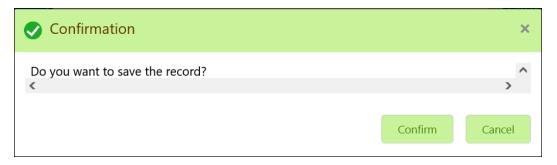
Edit Service Consun	her		×
Name *			^
Environment Variable	es		
Add 💌			
Group *			
Select	v		
Actions	Name	Value	
No data to display.			
			Save

Figure 3-9 Edit Service Consumer

15. Click Save to save the modified consumer details.

The **Confirmation** screen displays.

Figure 3-10 Confirmation - Edit Service Consumer



16. Click Confirm.

Delete Service Consumer

The user can delete the Service Consumer.

17. On the **Service Consumer** tile, click **Operation Menu** (3 dot icon), and select **Delete** from the dropdown list.

The Confirmation screen displays.



Figure 3-11 Confirmation - Delete

Confirmation		×
Do you want to delete the record? <		>
	Confirm	Cancel

18. Click **Confirm** to delete the service consumer.

JSON Export

The user can export the consumer configuration as JSON file.

- **19.** On Service Consumer tile, click Operation Menu (3 dot icon).
- 20. On Export option, select JSON from the list.

The Export Service Consumer screen displays.

Figure 3-12 Export Service Consumer

Export S	Service Consumer		×
Name			^
Servic	ce Providers		
	Name		
		^	
		Expor	√



Note:

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

The **Confirmation** screen displays.

Figure 3-13 Confirmation - JSON Export

Confirmation	×
Do you want to export? Note: Sensitive data such as Implementation Host, Port and Password will exported <	>

22. Click Confirm to export the service consumer in JSON file.

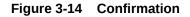
SQL Export

The user can export the consumer configuration as SQL file.

- 23. On Service Consumer tile, click Operation Menu (3 dot icon).
- 24. On Export option, select SQL from the list.

The **Confirmation** screen displays.





Confirmation	×
Do you want to export? Note: Sensitive data such as Implementation Host, Port and Password will no exported <	t be
Confirm	Cancel

Note:

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

25. Click **Confirm** to export the consumer configuration as SQL file.

Configuration

26. On Service Consumer tile, click Operation Menu (3 dot icon), and click Configuration.

The **Configuration** screen displays.

Note:

Refer to Configuration topic for the screen and field description.

Request Audit

27. On Service Consumer tile, click Operation Menu (3 dot icon), and click Request Audit.

The Request Audit screen displays.

Note:

Refer to Request Audit topic for the screen and field description.



4 Service Providers

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

The **Service Providers** are the product processors configure to process request send by Oracle Banking Routing Hub on behalf of service consumers. It comprises destination integration details.

1. On Service Consumers screen, click the required service consumer.

The Service Providers screen displays.

vice Consumers				2 ^d
EMO_OBDX1				
rvice Providers Consumer Services				
🕂 Add	٩,			
SP	: OBTFPM	÷	OBTF	÷
Version 1	Version 14.4		Version 14.4	
Type INTERNAL Status ACTIVE	Type INTERNAL Status ACTIVE		Type INTERNAL Status ACTIVE	
Junio Active	Suus Pene		Suus ACIVE	
ELCM	: ОВСЕРМ	:	ELCovenant Tracking	:
/ersion 14.4	Version 14.4		Version 14.4	
Type INTERNAL	Type INTERNAL		Type INTERNAL	
Status ACTIVE	Status ACTIVE		Status ACTIVE	

Figure 4-1 Service Providers

Add Service Provider

The user can create Service Provider manually.

2. Click Add.

The Add Service Provider screen displays.



Product Name *	Tj	/pe *		
		Select	•	
Version *		Active		
Headers				
🕂 Add				
Actions	Name	Value		
No data to display.				
Service				
Type URL				
WSDL -			Import	
Service	Operation			
No data to display.				

Figure 4-2 Add Service Provider

3. Specify the fields on Add Service Provider screen.



The fields, which are marked with an asterisk, are mandatory.

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



Field	Description	
Product Name	 Specify the product name of the service provider. Note: Enter 0 to maximum of 255 characters. No numeric value at beginning and no space allowed. 	
Туре	Select the type of service provider from drop-down list The available options are: INTERNAL: Used for Oracle products EXTERNAL: Used for non-Oracle products	
Version	 Specify the provider version. Note: Enter 0 to maximum of 255 characters. Only numeric or decimal values are allowed. 	
Active	Predefined values are Active / Inactive If provider is marked as inactive, then all related routes will be stopped.	
Add	To add, refer to the below steps.	
Actions	Displays the action. The user can edit or delete the header.	
Name	Displays the name of the header.	
Value	Displays the value of the header.	
Туре	Select the type of service from drop-down list. The available options are: • WSDL • SWAGGER • OTHERS	
Name	Specify the name of the operation. Note: This field appears only if the Type is selected as OTHERS.	

Table 4-1	Add Service Provider - Field Description



Field	Description
Http Method	Select the HTTP method. The available options are: GET POST PUT PATCH DELETE
	Note: This field appears only if the Type is selected as OTHERS.
Endpoint	Specify the endpoint URL for the operation.
	Note: This field appears only if the Type is selected as OTHERS .
URL	Specify the service URL of the file location.
	Note: This field appears only if the Type is selected as WSDL and SWAGGER.
Import	Click Import to extract the service information from URL.
	Note: This field appears only if the Type is selected as WSDL and SWAGGER.
Gateway Prefix	Gateway Prefix is context path of below formatted URL http://host:port/gateway-prefix/endpoint

 Table 4-1
 (Cont.) Add Service Provider - Field Description



Field	Description
Service Headers	Specify the Endpoint specific headers. Value can either be hardcoded or can be Velocity mapping.
	Note: This field appears only if the Type is selected as OTHERS.
Service Query Params	Specify the Endpoint specific query parameters.
	Value can either be hardcoded or can be Velocity mapping.
	Note: This field appears only if the Type is selected as OTHERS.
Service	Displays the extracted service from the selected URL.
Operation	Displays the extracted operation from the selected URL.

Table 4-1 (Cont.) Add Service Provider - Field Description

Headers

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

- 4. To add **Headers**, follow the below steps.
 - a. Under Headers section, click Add.

The Add Header screen displays.



Figure 4-3 Add Header

Add Header	>	<
		\land
Name *		
		~
0	K	

b. Specify the fields on Add Header screen.

Note:

The fields, which are marked with an asterisk, are mandatory.

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

Table 4-2 Add Header - Field Description

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

5. Click **OK** to save the details.

The **Confirmation** screen displays.

6. Click Confirm.

Service

• 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:

If there is a change in wsdl file, then same wsdl file need to be imported again to update the provided service information in Routing Hub.

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:

If 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.

OTHERS:

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

Note:

If there is a change in existing endpoint, then the same endpoint details need to be entered again with the new changes in order to update the existing provided service information in Routing Hub.

Import Service Provider

The user can create a service provider by importing the JSON file and also can import zip file in order to import all the configuration JSON files together (except parent level configuration JSON files).

7. Click Import.

The Import Service Provider screen displays.

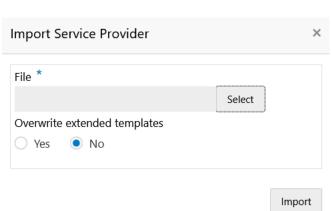


Figure 4-4 Import Service Provider



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

Field	Description
File	Select the file using Select button.
	Note: Allows only to select one file and accepts JSON and ZIP file.
Overwrite extended templates	 Select the respective radio button to overwrite extended templates. The options are: Yes - This option overwrites the extended templates in configuration. No - This option retains the existing extended templates in configuration.
	Note: This field appears only if the ZIP File is selected.

 Table 4-3
 Import Service Provider - Field Description

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

The **Confirmation** screen displays.

Note:

The following data needs to be changed after importing provider configuration file:

- Implementation Host and Port
- Implementation Authentication Password

View Service Provider

9. On Service Provider tile, click Operation menu (3 dots button), and click View.

The View Service Provider screen displays.



Figure 4-5 View Service Provi	vider
-------------------------------	-------

View Service Provider			æ×
Product Name SP		Type INTERNAL	
Version 1		Active On	
Headers			
Actions	Name	Value	
No data to display.			

10. Click **Edit** button to edit the Service Provider.

Edit Service Provider

The user can modify the provider details.

11. On Service Provider tile, click Operation menu (3 dots button), and click Edit.

The Edit Service Provider screen displays.

Edit Service Provider		×
		^
Product Name *	Type *	
SP	INTERNAL	-
Version *	Active	
1		
Headers		
Add		
		~
		Save

Figure 4-6 Edit Service Provider

12. Click Save once the edit is done.

The **Confirmation** screen displays.

Delete Service Provider

The user can delete the provider.



13. On Service Provider tile, click Operation menu (3 dots button), and click Delete. The Confirmation screen displays.

Figure 4-7 Confirmation - Delete

Confirmation		×
Do you want to delete the record? <		>
	Confirm	Cancel

14. Click **Confirm** to delete the selected Service Provider.

Export Service Provider

The user can export the provider configuration as JSON file.

15. On Service Provider tile, click Operation menu (3 dots button), and click Export.

The **Confirmation** screen displays.

Figure 4-8 Confirmation - Export

Confirmation	×
Do you want to export? Note: Sensitive data such as Implementation Host, Port and Password will not be exported <	∧
Confirm	Cancel

Note:

The below data cannot be exported:

- Implementation Host
- Implementation Port
- Implementation Authentication Password

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

16. Click **Confirm** to export the selected Service Provider.

Configuration

End-user can configure the properties for failing the routing hub requests.



17. On Service Provider tile, click Operation menu (3 dots button), and click Configuration.

The **Configuration** screen displays.

Service Consumers				,* ×
OBLM				
Service Providers Consumer Services	Configuration (Service Provider: FCUBS_	TermDeposit) ×		
Add Dimport Search	∡ Timeout			
FCUBS_TermDeposit : C	Provider Level Timeout?	Connection Timeout * Enter value in milliseconds	: TEST_PRODUCT :	
Version 14.5 W Type EXTERNAL II Status ACTIVE St	Read Timeout * Enter value in milliseconds		Version 123 Type INTERNAL Status ACTIVE	
FCUBS_IFSERVICE F	✓ Exception		FCUBS_IFSERVICE :	
Version 14.5 Version 14.5 Version 14.5 Version 14.5 Version 2015 Versi	Handle exception?	Status Codes	Version 14.4 Type EXTERNAL Status ACTIVE	
		Clear Reset Save		
FCUBS-CPGServicesBookTransfer :	Bi k_MoneyMarket			
Type EXTERNAL Ty	ersion 14.5 rpe EXTERNAL atus ACTIVE			

Figure 4-9 Configuration

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

Table 4-4	Configuration	Service Provider -	Field Description
-----------	---------------	--------------------	-------------------

Field	Description	
Provider level timeout	This property is used to override the global timeout values.	
	Note: Default value is false.	
Connection Timeout	This property is used to set the timeout in making the initial	
	connection i.e. connection handshake.	
	Note: Value should be in milliseconds.	
Read Timeout	This property is used to set the timeout on waiting to read data.	
	Note: Value should be in milliseconds.	



Field	Description
Handle exception	This property is used to fail the routing hub request for failed provider requests.
	Note: Default value is false.
Status Codes	This property is used to fail routing hub request for specific status codes of failed provider requests. If not specified, then routing hub request will fail for all 4xx and 5xx status codes of failed provider requests.

Table 4-4 (Cont.) Configuration Service Provider - Field Description

Request Audit

18. On **Service Provider** tile, click **Operation menu** (3 dots button), and click **Request Audit**.

The Request Audit screen displays.

Note:

Refer to **Request Audit** topic for the screen and field description.

Clear Cache

The user can clear the SOAP client cache for the service providers.

19. On **Service Provider** tile, click **Operation menu** (3 dots button), and click **Clear Cache**.



5 Implementation

This topic provides the systematic instructions to configure the implementation.

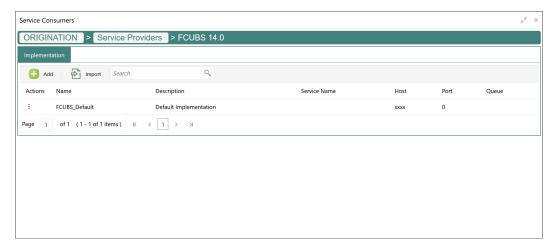
The implementation comprises of Eureka client instance, Host, Port, authentication, and implementation specific service details. Oracle Banking Routing Hub supports web services and Rest API.



1. On Service Provider screen, click on the required service provider tile.

The Implementation screen displays.

Figure 5-1 Implementation



Add Implementation

The user can create the implementation manually.

2. Click Add.

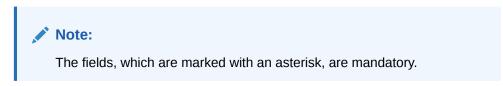
The Add Implementation screen displays.



Dracle_Service_Consumer > Service	Add Implementation ×			
mplementation Add Add Add Search	Name *			
Actions Name	Description *	Host	Port	Queue
External_Product_Processor_Default		xxxxx	0	
pe 1 of 1 (1-1of litems) K < 1	Type * Default Eureka Instance DEFAULT V Service Name * Select V Headers			
	ave Save			

Figure 5-2 Add Implementation

3. Specify the fields on Add Implementation screen.



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

 Table 5-1
 Add Implementation - Field Description

Field	Description	
Name	Specify the name of the implementation.	
	 Note: Enter 0 to maximum of 255 characters. No numeric value at beginning and no space allowed. 	
Description	Specify the description of the implementation.	
	 Note: Enter 0 to 1000 characters. No space allowed at beginning or ending of the characters. 	



Field	Description		
Туре	Select the type of implementation from drop-down list The available options are: • DEFAULT • QUEUE		
	DEFAULT type is for REST and SOAP API calls.		
Default	Toggle the button if user wants to default. Each type can have one default implementation.		
Eureka Instance	Eureka Instance 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	Select the scheme from drop-down list The available options are: http https		
	Scheme option is available only for default type.		
Service Name	If Eureka Instance is toggled ON and type is default, then only service name is required.		
Host	Specify the host.		
	 Note: Host cannot be blank. Enter 0 to 255 characters. Space is not allowed. 		
	If Eureka Instance is toggled OFF and type is default, then only host and port is required.		
Port	Specify the port number.		
	 Note: Enter 0 to 6 characters. Enter only numeric value. 		
	If Eureka Instance is toggled OFF and type is default, then only host and port is required.		
Authentication	The below fields appear only if Eureka Instance is toggled OFF and Implementation Type is selected as Default .		

 Table 5-1
 (Cont.) Add Implementation - Field Description



Field	Description		
Туре	Select the type of authentication from drop-down list. The available options are: BASIC JWT_TOKEN OAUTH_TOKEN SSO OAUTH_TOKEN_OIC		
Username	Specify the name of the user.		
	 Note: Enter 0 to maximum of 255 characters. No numeric value at beginning and no space allowed. 		
Password	Specify the password.		
Headers	The below fields appear only if the Implementation Type is selected as Default .		
Add	Click this button to add header.		
Actions	Displays the action. The user can edit or delete the header.		
Name	Displays the name of the header.		
Value	Displays the value of the header.		
Service	The below fields appear only if the Implementation Type is selected as Default .		
Туре	Select the type of service from drop-down list. The available options are: • WSDL • SWAGGER • OTHERS		
URL	Specify the service URL of the file location.		
	Note: This field appears only if the Type is selected as WSDL and SWAGGER.		
Name	Specify the name of the operation.		
	Note: This field appears only if the Type is selected as OTHERS.		

Table 5-1	(Cont.) Add	mplementation	- Field Descrip	tion
-----------	-------------	---------------	-----------------	------



Field	Description
Http Method	Select the HTTP method. The available options are: • GET • POST • PUT • PATCH • DELETE
	Note: This field appears only if the Type is selected as OTHERS.
Endpoint	Specify the endpoint URL for the operation.
	Note: This field appears only if the Type is selected as OTHERS.
Gateway Prefix	Gateway Prefix is context path of below formatted URL. http://host:port/gateway-prefix/endpoint
Import	Click Import to extract the service information from URL and displays it in the Service list.
	Note: This field appears only if the Type is selected as WSDL and SWAGGER.
Service Headers	Specify the Endpoint specific headers.
	Value can either be hardcoded or can be Velocity mapping.
	Note: This field appears only if the Type is selected as OTHERS.

 Table 5-1
 (Cont.) Add Implementation - Field Description



Field	Description
Service Query Params	Specify the Endpoint specific query parameters.
	Value can either be hardcoded or can be Velocity mapping.
	Note: This field appears only if the Type is selected as OTHERS.

Table 5-1 (Cont.) Add Implementation - Field Description

Authentication:

Service

Operation

Add

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.

Click this button to add the endpoint details in the Service list.

Displays the extracted service from the selected URL.

Displays the extracted operation from the selected URL.

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, OAUTH_TOKEN and OAUT_TOKEN_OIC, token will be cached by default.
Services

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:

If there is a change in wsdl file, then same wsdl file need to be imported again to update the provided service information in Routing Hub.

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:

If 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.

OTHERS:

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

Note:

If there is a change in existing endpoint, then the same endpoint details need to be entered again with the new changes in order to update the existing provided service information in Routing Hub.

Queue

If the Implementation Type is selected as Queue,

Figure 5-3 Add Implementation - Queue

Service Consumers						,, st ×
Oracle_Service_Consumer > Service Pro	Add Implementation		×			
Implementation	Type *	Default				
🕂 Add	QUEUE	• • •				
Actions Name	Queue Broker * WEBLOGIC_JMS	Request Reply Pattern *		Host	Port	Queue
External_Product_Processor_Default Page 1 of1 (1 - 1 of 1 items) K <	Request Queue Connection Factory *	Queue *		XXXXX	0	
	A Response Queue					
	Connection Factory	Queue				
			Save			

For **QUEUE** type, refer to the field description table below.

Table 5-2	Add Implementat	tion - Queue - Fie	eld Description
-----------	-----------------	--------------------	-----------------

Field	Description
Туре	 Select the type of implementation from drop-down list The available options are: DEFAULT QUEUE DEFAULT type is for REST and SOAP API calls.
Default	Select the toggle if the user wants to default.



Field	Description
Queue Broker	Select the queue broker from drop-down list. The available options are: • WEBLOGIC_JMS
Request Reply Platform	Select the queue broker from drop-down list. The available options are: • JMS_MESSAGEID • JMS_CORRELATIONID JMS_MESSAGEID is default request-reply pattern.
Connection Factory	Specify the connection factory. Connection Factory is JNDI based connection factory name which is used to create connection for JMS client.
Queue	Specify the queue. Queue Name is JNDI based destination name.
Connection Factory	Specify the connection factory. Response Connection Factory is needed when destination is going to respond back after processing the request.
Queue	Specify the queue. Response Queue Name is needed when destination is going to respond back after processing the request.

Table 5-2 (Cont.) Add Implementation - Queue - Field Description

Headers:

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

- 4. Follow the below steps to add **Headers**.
 - a. Click Add under Header section.

The Add Header screen displays.

Figure 5-4 Add Header

Add Header	>	<
		^
Name *		
Velue.		
Value		
		~
0	K	



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

```
Note:
```

The fields, which are marked with an asterisk, are mandatory.

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

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

5. Click **OK** to save the details.

The **Confirmation** screen displays.

Import Implementation

The user can create an implementation by importing the JSON file. The user can also import zip file in order to import all the configuration JSON files together (except parent level configuration JSON files).

6. On Implementation screen, click Import.

The Import Implementation screen displays.

Figure 5-5	Import Implementation
------------	-----------------------

Import Implementation	×
File *	
Select	
	Import

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



Field	Description
File	Click Select to select the file.
	Note: Allows only to select one file and accepts JSON and ZIP file.

 Table 5-4
 Import Implementation - Field Description

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

The **Confirmation** screen displays.

The below data needs to be changed after importing provider configuration file:

- Implementation Host and Port
- Implementation Authentication Password

View Implementation

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

8. On Implementation screen, click Operation menu (3 dots button) and click View.

The View Implementation screen displays.

View Implementation			ľ	×
Name				~
Description				
Туре		Default		
Scheme	Host			
Port				
				~

Figure 5-6 View Implementation



Edit Implementation

The user can modify the implementation details.

9. On Implementation screen, click Operation menu (3 dots button) and click Edit.

The Edit Implementation screen displays.

Edit Implementation		×
Name *		^
Description *		
Type *	Default	
Scheme *	Host *	
Port *		~
		Save

Figure 5-7 Edit Implementation

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

The **Confirmation** screen displays.

Figure 5-8 Confirmation

Confirmation		×
Do you want to save the record? <		>
	Confirm	Cancel

Delete Implementation

The user can delete the implementation details.



11. On **Implementation** screen, click **Operation menu** (3 dots button) and click **Delete**.

The **Confirmation** screen displays.

Figure 5-9 Confirmation - Delete

Confirmation		×
Do you want to delete the record? <		>
	Confirm	Cancel

Export Implementation

The user can export the implementation configuration as JSON file.

12. On **Implementation** screen, click **Operation menu** (3 dots button) and click **Export**.

The **Confirmation** screen displays.

Figure 5-10 Confirmation - Export Implementation

Confirmation	×
Do you want to export? Note: Sensitive data such as Implementation Host, Port and Password will not be exported <	*
Confirm	Cancel

Below data cannot be exported:

- Implementation Host
- Implementation Port
- Implementation Authentication Password

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

Configuration

End-user can configure the properties for failing the routing hub requests.

13. On **Implementation** tile, click **Operation menu** (3 dots button), and click **Configuration**.

The Configuration screen displays.



Figure 5-11 Configuration

Service Consumers				,,** ×
OBLM > Service Providers > FCUBS_TermDeposi	t 14.5			
Implementation				
🕒 Add 🛛 Emport Search 🔍				
Actions Name	Configuration (Implementation: Default_Implementation) ×		Port	Queue
E Default_Implementation		37.84	7001	
Page 1 of 1 (1 - 1 of 1 items) K <	✓ Token Disable cache			
	Disable cache			
	Citair Rezit Save			

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

Table 5-5 Configuration - Field Description

Field	Description
Disable cache	This property is used to disable the token caching. Note: Default value is false.

Request Audit

14. On Implementation screen, click Operation menu (3 dots button) and click Request Audit.

The Request Audit screen displays.

Note:

Refer to **Request Audit** topic for screen and field description.

Clear Cache

The user can clear the SOAP client cache.

15. On Implementation screen, click Operation menu (3 dots button) and click Clear Cache.



6 Consumer Services

This topic describes the systematic instructions to configure the consumer services.

The **Consumer Services** defines the service ID, which sends from the service consumer. It also caters the transition and route definition. It comprises of source integration details.

1. On Service Consumers screen, click Consumer Services.

The **Consumer Services** screen displays.

ervice Consumers		2 ¹²
ORIGINATION		
Service Providers Consumer Services		
Add Pimport Search	0	
Actions Name	Description	
: KYC_INITIATE	Initiates the Jumio ID Verification process. Returns the authorization token to start the verification.	
age 1 of 1 (1 - 1 of 1 items) K < 1	к <	

Figure 6-1 Consumer Services

Add Consumer Service

The user can create Consumer Service manually.

2. On Consumer Services screen, click Add.

The Add Service screen displays.



Add Service		×
ID *		Status
Description *		
🕂 Add		
Actions	Attribute Name	json path
No data to disp	lay.	
		Save

Figure 6-2 Add Service

3. Specify the fields on Add Service screen.



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

 Table 6-1
 Add Service - Field Description

Field	Description	
ID	Specify the ID of the consumer service.	
	 Note: Enter 0 to maximum of 255 characters. No numeric value at beginning and no space allowed. 	



Field	Description	
Status	Active / Inactive If consumer service is marked as inactive, then all related routes will be stopped.	
Description	 Specify the description of the consumer service. Note: Enter 0 to 1000 characters. No space allowed at beginning or ending of the characters. 	
Add	To add, refer to the below step.	
Actions	Displays the action. The user can edit or delete the header.	
Attribute Name	Displays the name of the attribute.	
json path	Displays the JSON path.	

Table 6-1 (Cont.) Add Service - Field Description

- 4. To add Attributes, follow the below steps.
 - a. Click Add.

The Add Attribute screen displays.

Figure 6-3 Add Attribute

Add Attribute	×
Name *	^
json path *	
	~
	ОК

b. Specify the fields on **Add Attribute** screen.



Note:

The fields, which are marked with an asterisk, are mandatory.

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

Table 6-2 Add Header - Field Description

Field	Description
Name	Specify the name of the attribute.
josn path	Specify the json path.

Note:

• Using \$.body, the user can access the request body. Syntax: \$.body.fieldName

Example: \$.body.branchCode

• Using \$.headers, the user can access the request headers. Syntax: \$.headers["fieldName"][0]

Example: \$.headers["branchCode"][0]

- Using \$.env, the user can access the environment variables. Syntax: \$.env.group.variable
- c. Click **OK** to save the attributes.
- 5. Click Save to save the details.

The **Confirmation** screen displays.

Figure 6-4 Confirmation

Confirmation		×
Do you want to save the record? ≪		>
	Confirm	Cancel

6. On Confirmation screen, click Confirm to add the service.

Import Consumer Service

The user can create a consumer service by importing the JSON file.

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

7. On Consumer Services screen, click Import.



The Import Service screen displays.

Figure 6-5 Import Service

Import Service	×
File *	Select
Overwrite extended templates Ves No	
	Import

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

Table 0-5 Import Service - Field Description	Table 6-3	Import Service	 Field Description
--	-----------	----------------	---------------------------------------

Field	Description
File	Select the file using Select button.
	Note: Allows only to select one file and accepts only JSON file.
Overwrite extended templates	 Select the respective radio button to overwrite the extended templates. The available options are: Yes - This option overwrites the extended templates. No - This option retains the existing extended templates.

8. Click Import to import the selected file.

The **Confirmation** screen displays.

View Consumer Service

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

9. On Consumer Service tile, click Operation menu (3 dots button), and click View.

The View Service screen displays.



Figure (6-6	View	Service
----------	-----	------	---------

View Service		ð ×
ID		Status
KYC_INITIATE		On
Description		
Initiates the Jumio start the verification		Returns the authorization token to
Actions	Attribute Name	json path
No data to display	Ι.	

Edit Consumer Service

The user can modify the consumer service details.

10. On Consumer Service tile, click Operation menu (3 dots button), and click Edit.

The Edit Service screen displays.



dit Service			×
ID *		Status	
Description *			
🕂 Add			
Actions	Attribute Name	json path	
No data to display			

Figure 6-7 Edit Service

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

The **Confirmation** screen displays.

Figure 6-8 Confirmation - Edit

Confirmation		×
Do you want to save the record? ≪		>
	Confirm	Cancel

Delete Consumer Service

The user can delete the consumer service.

12. On **Consumer Service** tile, click **Operation menu** (3 dots button), and click **Delete**.

The **Confirmation** screen displays.



Figure 6-9 Confirmation

Confirmation		×
Do you want to delete the record? <		>
	Confirm	Cancel

Export Consumer Service

The user can export the consumer service configuration as JSON file.

13. On **Consumer Service** tile, click **Operation menu** (3 dots button), and click **Export**.

The **Confirmation** screen displays.

Figure 6-10 Confirmation - Export

Confirmation	×
Do you want to export? Note: Sensitive data such as Implementation Host, Port and Password will not be exported <	∧
Confirm	Cancel

Consumer Service - Configuration

14. On **Consumer Service** tile, click **Operation menu** (3 dots button), and click **Configuration**.

The **Configuration** screen displays.

Note:

Refer to Configuration topic for the screen and field description.

Consumer Service - Request Audit

15. On **Consumer Service** tile, click **Operation menu** (3 dots button), and click **Request Audit**.

The Request Audit screen displays.

Note:

Refer to Request Audit topic for the screen and field description.



7 Transformation

This topic describes the systematic instructions to configure the transformation.

The **Transformation** acts as assembling and transforming data from source to destination and vice-versa. This takes place under consumer service. This converts the data of service consumer into service provider.

1. On Consumer Services screen, click the required consumer service tile.

The Transformation screen displays.

Service Consumers					$_{\mu}e \rightarrow$
DEMO_OBDX1 > Consumer Services	> Trad	e_document_lev	el_clauses		
Transformation Routing					
Add 🔂 Import Search		٩,			
Actions Name	Status	Product Processor	Implementation	Service	
: OBTF_OBTFBCService_QueryDocs	ACTIVE	OBTF 14.4	OBTF_Default	OBTFBCService (OBTFBCServiceSEI) - QueryDocsIO	
Page 1 of 1 (1 - 1 of 1 items) K < 1	к				

Figure 7-1 Transformation

Add Transformation

The user can create transformation manually.

2. On Transformation screen, click Add.

The Add Transformation screen displays.



Name *		Active	
Product Processor			
Product Processor *	Implementation	Service *	
Select 🔻	Select	▼ Select	•
Service			
Service			
Operation			
Headers			
Actions	Name	Value	
No data to display.			
Request Transformation			
Template Type *			
VELOCITY	•		
Femplate			
xtended Template			
 Response Headers Add 			
 Response Headers Add Actions 	Name	Value	
Response Headers Add Actions No data to display.	Name	Value	
Add Actions No data to display. Response Transformation			
 Add Actions No data to display. Aesponse Transformation Template Type * 	Name		
Response Headers Add Actions No data to display. Response Transformation Iemplate Type * VELOCITY	Templ		
Response Headers Add Actions No data to display. Response Transformation Iemplate Type * VELOCITY	Templ	ate	
Actions	Templ	ate	
Add Actions Add Actions No data to display. Response Transformation Femplate Type * VELOCITY	Templ	ate Template	

Figure 7-2 Add Transformation



3. Specify the fields on Add Transformation screen.



The fields, which are marked with an asterisk, are mandatory.

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

 Table 7-1
 Add Transformation - Field Description

Field	Description		
Name	Specify the name for the transformation.		
	 Note: Enter 0 to maximum of 255 characters. No numeric value at beginning and no space allowed. 		
Active	Active / Inactive If transformation is marked as inactive, then the user will not be able to select transformation in routing.		
Product Processor	Displays the Product Processor details.		
Product Processor	Select the product processor from the drop-down list.		
Implementation	Select the implementation from the drop-down list.		
Service	Select the service from the drop-down list.		
Service	Displays the service details of the selected service.		
Headers	Displays the header list relevant to the selected provider, implementation and service. User can change the header values. The value can either be hardcoded or can be Velocity mapping.		
Path Params	Displays the path param list relevant to the selected service. User can change the param values. Value can either be hardcoded or can be Velocity mapping.		
Query Params	Displays the query param list relevant to the selected service. User can change the param values. Value can either be hardcoded or can be Velocity mapping.		
Request Transformation	Displays the Request Transformation details.		



Field	Description
Body Type	Select the body type for the Request Transformation from the drop- down list. The available options are: • RAW • FORM DATA • FORM DATA This field appears only if the selected service is REST service.
Template Type	Select the template type for the Request Transformation from the drop-down list. The available options are: • VELOCITY • JSLT • XSLT
Template	Specify the template for the Request Transformation in which provider accepts. Refer to Transformation Type for syntax.
Extended Template	Specify the custom template in order to extend the kernel template. Refer to Extensibility and Transformation Type for syntax. Note: This field appears only if the Body Type is selected as FORM DATA.
Response Header	Specify the additional headers required to be part of Routing Hub response headers. Value can either be hardcoded or can be Velocity mapping.
Response Transformation	Displays the response transformaton details.
Template Type	Select the template type for the Response Transformation from drop-down list. The available options are: • VELOCITY • JSLT • XSLT
Template	Specify the kernel template in which consumer accepts. Refer to Transformation Type for syntax.
Mocking required?	Select the toggle if the mocking is required for the Response Transformation or not. If the toggle is ON , the Routing Hub will return the mocked template output (with extended template output if mentioned) to consumer without invoking provider API.

 Table 7-1
 (Cont.) Add Transformation - Field Description



Field	Description
Mock Template	Specify the kernel template for the Response Transformation in which the consumer accepts. Refer Transformation Type for syntax.

Table 7-1 (Cont.) Add Transformation - Field Description

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

The Confirmation screen displays.

5. Click **Confirm** to add the transformation.

Import Transformation

The user can create a transformation by importing the JSON file. The user can also import zip file in order to import all the configuration JSON files together (except parent level configuration JSON files).

6. On Transformation screen, click Import.

The Import Transformation screen displays.

Figure 7-3 Import Transformation

Import Transformation		×
File * Overwrite extended templates	Select	
🔾 Yes 💿 No		Import

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

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



Field	Description		
Overwrite extended templates	 Select the respective radio button to overwrite the extended templates. The available options are: Yes - This option overwrites the extended templates. No - This option retains the existing extended templates. 		

Table 7-2 (Cont.) Import Transformation - Field Description

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

The Confirmation screen displays.

View Transformation

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

8. On Transformation list, click Operation menu (3 dots button), and click View.

The View Transformation screen displays.

Name Active PostTransformation On Product Processor Implementation Product Processor Implementation Service Service Service Service Corration Service Actions Name Velocity Velocity Request fransformation Velocity Template Type Velocity Actions Name Velocity Template Actions Name Velocity Velocity Macking required? Macking required? Of Service Learning Part	N		A		
Product Processor Implementation Service Service Service Service Service Service Service Service Service Operation Service Actions Name Value Value No data to display. Service Request Transformation Service Template Type Service VeLOCITY Service Extended Template Service Response Headers Value Actions Name Value Value Response Transformation Service Template Type Service VeLOCITY Service Actions Name Value Service Modia to display. Service Modia to display. Service Modia to display. Service Service Service Service Service Modia to display. Service Modia required? Mode Template Off Service					
A Service Service Operation A floor Name Value No data to display. A Regark Transformation Template Type WEICHY Elemplate A Response Headers Ations Name Value Set of the service Serv	Product Processor				
A service Service Operation Contained Service Actions Name Value No data to display. A fequest Transformation Template Type VELOCITY Template A fequest Service A fequest Service Serv	Product Processor	Implementation		Service	
Service Operation Operation Notate to display. A Request Transformation Template Reporter Headers A Response Headers A Response Headers A Response Headers A Response Transformation Template Type A Response Transformation Template Type A Response Transformation Template Type A Response Transformation A Respon					
Service Operation Operation Notate to display. A Request Transformation Template Reporter Headers A Response Headers A Response Headers A Response Headers A Response Transformation Template Type A Response Transformation Template Type A Response Transformation Template Type A Response Transformation A Respon					
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No data to display. A Request Transformation Template Type VELOCITY Template Extended Template Actions Name Value Valu					
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Off	Template Extended Template Actions No data to display. Response Transformation Template Type	Name	Template	Value	
	Template Extended Template Actions No data to display. Response Transformation Template Type	Name	Template	Value	
Extended Template	Template Extended Template Extended Template Actions No data to display. Response Transformation Template Type VELOCITY	Name		Value	
	Template Extended Template Extended Template Actions Actions No data to display. Response Transformation Template Type VELOCITY Mocking required?	Name		Value	

Figure 7-4 View Transformation



Click Edit icon to edit the Transformation.

Edit Transformation

The user can modify the transformation details.

9. On Transformation list, click Operation menu (3 dots button), and click Edit.

The Edit Transformation screen displays.

Name *		Active	
Product Processor			
Product Processor *	Implementation	Service *	
• • • • • • • • • • • • • • • • • • •	Select	▼ Select	
	Select	Select	Ţ
Service			
ervice			
Operation			
Headers			
Actions	Name	Value	
No data to display.			
Request Transformation			
emplate Type *			
VELOCITY			
Template	•		
ixtended Template			
ixtended Template			
Response Headers	Name	Value	
Response Headers Add	Name	Value	
Add Actions No data to display. Response Transformation	Name	Value	
Add Actions No data to display.	Name		
Add Actions No data to display. Response Transformation			
Response Headers Add Actions No data to display. Response Transformation remplate Type * VELOCITY	Templa	te	
Add Actions No data to display. Response Transformation remplate Type *	Templa		
Response Headers Add Actions No data to display. Response Transformation remplate Type * VELOCITY	Templa Mock 1	te	

Figure 7-5 Edit Transformation



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

The **Confirmation** screen displays.

Figure 7-6 Confirmation

		×
Do you want to save the record? ≮		>
	Confirm	Cancel

Delete Transformation

The user can delete the transformation.

11. On **Transformation** list, click **Operation menu** (3 dots button), and click **Delete**.

The **Confirmation - Delete** screen displays.

Figure 7-7 Confirmation - Delete

Confirmation		×
Do you want to delete the record? ≪		>
	Confirm	Cancel

Export Transformation

The user can export the transformation configuration as JSON file.

12. On Transformation list, click Operation menu (3 dots button), and click Export.

The **Confirmation** screen displays.

Figure 7-8 Confirmation - Export

Confirmation	×
Do you want to export?	^
Note: Sensitive data such as Implementation Host, Port and Password will not be exported	~
<	>
Confirm	Cancel

Request Audit



13. On **Transformation** list, click **Operation menu** (3 dots button), and click **Request Audit**. The **Request Audit** screen displays.

Note:

Refer to Request Audit topic for screen and field description.

8 Routing

This topic describes the systematic instructions to configure the 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.

1. On Consumer Services screen, click Routing.

The **Routing** screen displays.

Service Cor	nsumers						a ^{it} ×
DEMO	OBDX1 > Consumer Services	> Trade_c	locume	ent_level_clauses			
Transforma	ation Routing						
Ado	d Search Q						
Actions	Name	Start/Stop	Rule	Product Processor	Implementation	Service	
:	OBTF_OBTFBCService_QueryDocs_R1	۲		OBTF 14.4	OBTF_Default	OBTFBCService (OBTFBCServiceSEI) - QueryDocsIO	
Page 1	of 1 (1 - 1 of 1 items) K < 1	к к					

Figure 8-1 Routing

Add Route

The user can create routing manually.

2. On Routing screen, click Add.

The Add Route screen displays.



		Start/Stop START STOP	Auto Shutdown	
) Default Ru	ule 💽 Custom	Rule		
Rule				
xpression E	ditor *			
Transforma	itions			
Transforma	itions			
•		or Implementation	Transformation	
🕂 Add	Product Processo	or Implementation	Transformation	

Figure 8-2 Add Route

3. Specify the fields on Add Route screen.



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



Table 8-1	Add Route - Field Description
-----------	-------------------------------

Field	Description
Name	Specify the name for the route.
	 Enter 0 to maximum of 255 characters. No numeric value at beginning and no space allowed.
START / STOP	START / STOP If routing is marked as STOP, then consumer request fails at routing hub level only.
Auto Shutdown	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	Select the rule type. The available options are: • Default Rule • Custom Rule
Expression Editor	Displays the expression that is formed through expression editor.
Add	To add, refer to the below steps.
Actions	Displays the action. The user can edit or delete the header.
Product Processor	Displays the product processor.
Implementation	Displays the implementation.
Transformation	Displays the transformation.

Add Custom Rule using Expression Editor

- 4. To add **Editor**, follow the below steps.
 - a. On Add Route screen, click Editor button.

The Expression Editor screen displays.



* Operator * Value * Condition Type
▼ Select ▼ Select

Figure 8-3 Expression Editor

b. Specify the fields on Expression Editor screen.



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

 Table 8-2
 Expression Editor - Field Description

Field	Description
Attribute	Select attribute relevant to consumer service from drop- down list.
Operator	Select the logical operators to form an expression from drop-down list.
Value	Specify the value. Note: Enter 0 to 255 characters.
Condition Type	Select the condition type from drop-down list.

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



Note:

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

Transformations

The 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.

- 5. To add **Transformations**, follow the below steps.
 - a. On Add Route screen, click Add.

The Add Transformation screen displays.



Product Processor *		Implementation	*	
Select	-	Select		
Transformation *				
Select	•			
Headers				
Actions	Name		Value	
No data to display.				
Product Processor				
Service				
Request Transformation				
Template Type		Template		
A Response Transformation				
Template Type		Template		
Mocking required?		Mock Template		

Figure 8-4 Add Transformation

b. Specify the fields on **Add Transformation** screen.

Note:

The fields, which are marked with an asterisk, are mandatory.

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

Field	Description
Product Processor	Select the product processor from the drop-down list.
Implementation	Select the implementation from the drop-down list.
Transformation	Select the transformation from the drop-down list.
Action	Displays the action. The user can edit or delete the header.
Name	Displays the name of the header.
Value	Displays the value of the header.
Service	Displays the service of the product processor.
Template Type	Displays the template type for the request transformation.
Template	Displays the template for the request transformation.
Template Type	Displays the template type for the response transformation.
Template	Displays the template for the response transformation.
Mocking required?	Displays whether the mocking required for the response transformation or not.
Mock Template	Displays the mock template for the response transformation.

Table 8-3 Add Transformation - Field Description

- c. Click OK.
- 6. Click Save to save the details.

The **Confirmation** screen displays.

7. Click **Confirm** to add the routing details.

View Route

The user can view the routing details and can also switch to edit form by clicking on edit icon.

8. On Routing screen, click Operation menu (3 dots button), and click View.

The View Route screen displays.



View Route		Ø×
Name Operation of the second seco	Start/Stop START STOP	Auto Shutdown
Transformations		
Actions Product Processor	Implementation	Transformation
:		

Edit Route

The user can modify the routing details.

9. On Routing screen, click Operation menu (3 dots button), and click Edit.

The Edit Route screen displays.

Figure	8-6	Edit	Route
--------	-----	------	-------

Edit Route			×
Name *	Start/Stop START STOP	Auto Shutdown	
● Default Rule ○ Custom Rule			
Transformations			
Add			
Actions Product Processor	Implementation	Transformation	
:			
		Sa	ve

Delete Route

The user can delete the routing details.

10. On Routing screen, click Operation menu (3 dots button), and click Delete.

The **Confirmation** screen displays.

Figure 8-7 Confirmation - Delete

Confirmation		×
Do you want to delete the record? ≪		>
	Confirm	Cancel

11. Click **Confirm** to delete the selected routing.

Routing - Configuration

12. On **Routing** screen, click **Operation menu** (3 dots button), and click **Configuration**. The **Configuration** screen displays.



Note: Refer to Configuration topic for screen and field description.

Routing - Request Audit

13. On **Routing** screen, click **Operation menu** (3 dots button), and click **Request Audit**.

The Request Audit screen displays.





9 Request Audit - Log

This topic describes the systematic instructions to check the audit log in Oracle Banking Routing Hub.

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

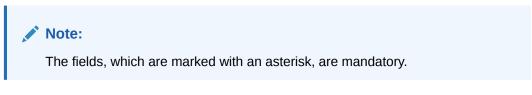
- 1. On Home screen, click Core Maintenance. Under Core Maintenance, click Routing Hub.
- 2. Under Routing Hub, click Request Audit.

The **Request Audit - Log** screen displays.

Figure 9-1 Request Audit - log

Request Audit						,* ×
Log Summary						
Request Id	Consumer		Consumer Service			
Provider	Provider Implementation		Provider Service			
Transformation	Route		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 < > <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						

3. Specify the fields on Request Audit - log screen.



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

Table 9-1 Request Audit - log - Field Description

Field	Description
Request ID	Specify the request ID.
Consumer	Specify the consumer.
Consumer Service	Specify the consumer service.
Provider	Specify the provider.



Field	Description
Provider Implementation	Specify the provider implementation.
Provider Service	Specify the provider service.
Transformation	Specify the transformation name.
Route	Specify the route.
User ID	Specify the user ID.

Table 9-1 (Cont.) Request Audit - log - Field Description

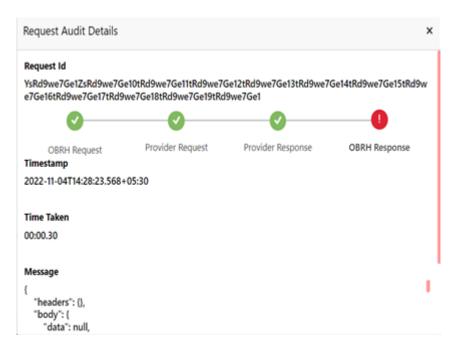
4. Click Search.

The list of request ID's displays with relevant details.

5. Click on the **Request ID** to view the step by step execution of request audit details.

The Request Audit Details screen displays.

Figure 9-2 Request Audit Details



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

 Table 9-2
 Request Audit Details - Field Description

Field Description		
Request ID Displays the selected request ID.		
OBRH Request	BRH Request Displays the status of Routing Hub request.	
Provider Request Displays the status of provider request.		
Provider Response Displays the status of provider response.		
OBRH Response Displays the status of Routing Hub response.		



Field	Description
Timestamp Displays the date and time.	
Message	Displays the message.

Table 9-2 (Cont.) Request Audit Details - Field Description

• Request Audit - Summary

This topic describes the systematic instructions to check the audit summary in Oracle Banking Routing Hub.

9.1 Request Audit - Summary

This topic describes the systematic instructions to check the audit summary in Oracle Banking Routing Hub.

Audit summary screen will show top 5 long running provider requests of each provider for specific date range.

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

- 1. On Home screen, click Core Maintenance. Under Core Maintenance, click Routing Hub.
- 2. Under Routing Hub, click Request Audit.

The Request Audit - Summary screen displays.

					1	X
	To date *					
	11/04/22		Search			
Consumer Service	Provider	Provider Version	Provider Service	Request Id	Time Taken	
List_Facilities	External_Product_Pr	1.0	{http://elvalidlimitservice	CPMyxgTAie1DPMy	46528	
List_Facilities	External_Product_Pr	1.0	{http://elvalidlimitservice	omBGfDjz7e1pmB	20309	
List_Facilities	External_Product_Pr	1.0	{http://elvalidlimitservice	aZmLBU0Aie1bZmL	5720	
List_Facilities	External_Product_Pr	1.0	{http://elvalidlimitservice	g2FGkd0Bie1h2FGk	5435	
List_Facilities	External_Product_Pr	1.0	{http://elvalidlimitservice	kcrLVUYzie1lcrLVUY	4176	
	Consumer Service List_Facilities List_Facilities List_Facilities List_Facilities	11/04/22 Consumer Service Provider List_Facilities External_Product_Pr List_Facilities External_Product_Pr List_Facilities External_Product_Pr List_Facilities External_Product_Pr	Introduction Introduction Consumer Service Provider Provider Version List, Facilities External_Product_Pr 1.0 List, Facilities External_Product_Pr 1.0 List, Facilities External_Product_Pr 1.0 List, Facilities External_Product_Pr 1.0	Int/04/22 Search Consumer Service Provider Provider Version Provider Service List, Facilities External_Product_Pr 1.0 (http://elvalidlimitservice List, Facilities External_Product_Pr 1.0 (http://elvalidlimitservice	Introduzio Introduzio Search Consumer Service Provider Provider Version Provider Service Request Id List, Facilities External_Product_Pr 1.0 (http://elvalidlimitservice) OPMSrgTAie1DPMy List, Facilities External_Product_Pr 1.0 (http://elvalidlimitservice) omBGfDjz7e1pmB List, Facilities External_Product_Pr 1.0 (http://elvalidlimitservice) aZmBU0Aie1bZmL List, Facilities External_Product_Pr 1.0 (http://elvalidlimitservice) gZfGkd0Bie1h2FGk	To date * Search 11/04/22 Search Consumer Service Provider Provider Service Provider Version List_Facilities External_Product_Pr 1.0 (http://elvalidlimitservice Jits_facilities External_Product_Pr 1.0 (http://elvalidlimitservice

Figure 9-3 Request Audit - Summary

This screen requires summary job to be executed using plato-batch-server periodically basis.

The below steps are required to schedule summary job (routingHubAuditSummaryJob). If the cmc-obrh-services and plato-batch-server is UP and RUNNING:

- 3. From Home screen, click Task Management.
- 4. Under Task Management, click Configure Task.
- 5. Under Configure Task, Select Schedule option.



- 6. Select the Task Name as routingHubAuditSummaryJob. The Task Trigger Name field is generated automatically.
- 7. Specify the CRON expression to daily EOD

In order to resolve table space issue of Audit summary table, (CMC_RH_AUDIT_SUMMARY), Database Management Team has to configure database job to truncate table periodically basis.

10 Chaining

This topic provides the information about chaining of the transformation.

The end-user can define the sequence of transformations for each routing in which the request needs to be processed.

Chaining can be achieved by using the snapshot list. The snapshot list stores the response body and response headers whenever the transformation is processed. Therefore, the enduser can access the response body or headers of all processed transformations at any stage.

Syntax: \$snapshot.get(index).body or \$snapshot.get(index).headers

Note:

\$body and \$headers refers to the response body and headers of previous step.



Figure 10-1 Chaining

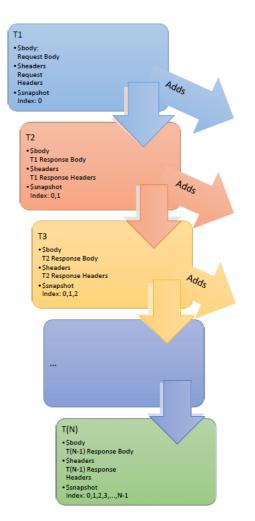


Table 10-1 Snapshot List

Index	Body	Headers
1	Request Body	Request Headers
2	T1 Response Body	T1 Response Headers
3	T2 Response Body	T2 Response Headers
4	T3 Response Body	T3 Response Headers
Ν	T(N-1) Response Body	T(N-1) Response Headers



11 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

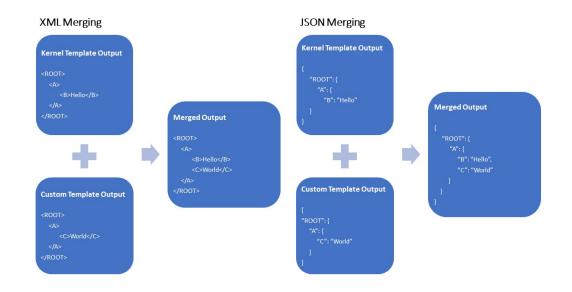


Figure 11-1 Extensibility - Example

XML merging attributes

11.1 XML merging attributes

This topic contains the following subtopics:

- Match strategy
- Override
- Replace
- Delete

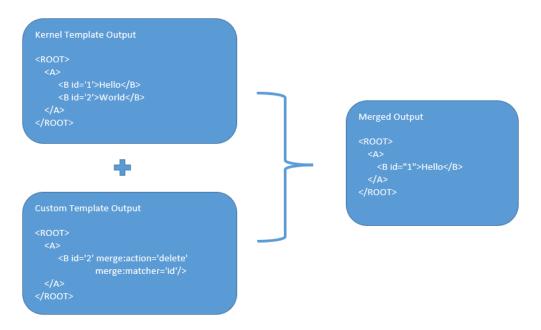


11.1.1 Match strategy

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

Syntax: merge:matcher='<ATTRIBUTE NAME>'

Figure 11-2 Match strategy



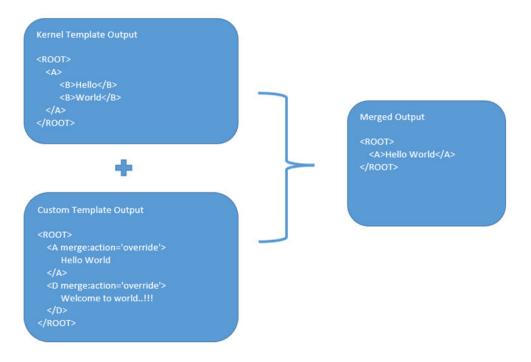
11.1.2 Override

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

Syntax: merge:action='override'



Figure 11-3 Override

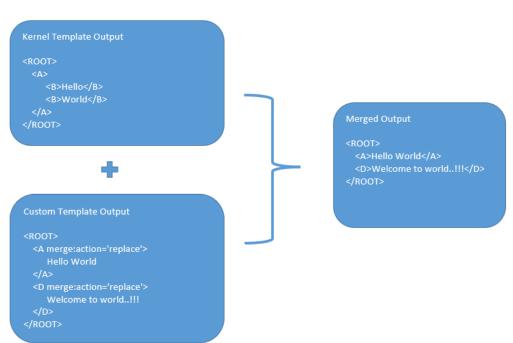


11.1.3 Replace

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'

Figure 11-4 Replace





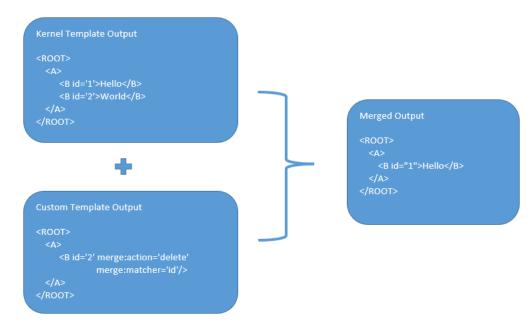


11.1.4 Delete

Deletes the original element.

Syntax: merge:action='delete'

Figure 11-5 Delete





12 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.

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

- 1. On Home screen, click Task Management. Under Task Management menu, click 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, the 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.



13 Multipart Request

This topic provides the sample template for the multipart request Example 13-1 Multipart Request

14 Dashboard

This topic provides information about dashboard widgets.

Routing Health Indicator Widget

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



Figure 14-1 Routing Health Indicator Widget





15 Transformation Type

This topic provides the information about the transformation types.

Velocity

Velocity is a Java-based template engine. It is used to generate XML files, SQL, PostScript, and most other text-based formats.

Note:

In Routing Hub, velocity is used to generate JSON and XML files.

• 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

Refer to 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()

Refer to https://velocity.apache.org/tools/3.1/apidocs/org/apache/velocity/tools/ generic/XmlTool.html

Date Tool
 Syntax: \$date.methodName()

Refer to https://velocity.apache.org/tools/3.1/apidocs/org/apache/velocity/tools/ generic/DateTool.html

Json Tool
 Syntax: \$json.methodName()

Refer to https://velocity.apache.org/tools/3.1/apidocs/org/apache/velocity/tools/ generic/JsonTool.html

Math Tool
 Syntax: \$math.methodName()

Refer to https://velocity.apache.org/tools/3.1/apidocs/org/apache/velocity/tools/ generic/MathTool.html

Number Tool
 Syntax: \$number.methodName()

Refer to https://velocity.apache.org/tools/3.1/apidocs/org/apache/velocity/tools/ generic/NumberTool.html

Escape Tool
 Syntax: \$esc.methodName()

Refer to 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:

- isonString 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: String

 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.

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.



JSLT

JSLT is a complete query and transformation language for JSON.



16 Oracle Banking Routing Hub Integration Specification

This topic provides information about Oracle Banking Routing Hub Integration Specification.

- Token Generation This topic provide information about the Token Generation.
- Synchronous Dispatch API Specification This topic provide information about the Synchronous Dispatch API Specification.
- Asynchronous Dispatch API Specification This topic provide information about the Asynchronous Dispatch API Specification.
- Asynchronous Dispatch Response API Specification This topic provide information about the Asynchronous Dispatch Response API Specification.
- Template evaluation API Specification This topic provide information about the Template evaluation API Specification.

16.1 Token Generation

This topic provide information about the Token Generation.

PlatoJWTAuth endpoint signature -

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

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

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

```
{
  "token": "",
  "userAlreadyLoggedIn": "Y",
  "expires_in": 3180,
  "home_entity_id": "DEFAULTENTITY",
  "multi entity admin": "N",
```



"multi_entity_admin_locale": ""
}

Refer the below sample screenshots:

Figure 16-1 Headers

POS	sT ▼ whf00lse:7002/api-gateway/platojwtauth			Send 🔻 Save 🔻
Para Hear	ms Authorization Headers (12) Body ders 👁 9 hidden	Pre-request Script Tests • Settings		
	KEY	VALUE	DESCRIPTION	
~	appld	SECSRV001		
	Content-Type	application/json		

Figure 16-2 Request Payload

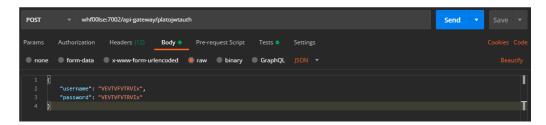


Figure 16-3 Response Payload



16.2 Synchronous Dispatch API Specification

This topic provide information about the 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
 - entityId : DEFAULTENTITY

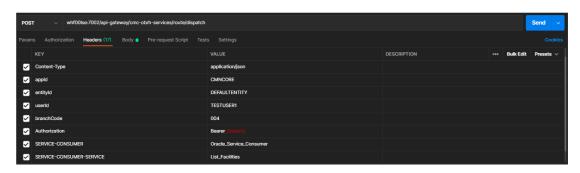


- userId : <user id>
- branchCode : <branch code>
- Authorization : Bearer <Token>
- SERVICE-CONSUMER : <name of service consumer>
- SERVICE-CONSUMER-SERVICE : <name of service consumer service>
- Request Body:
 - Any valid JSON/XML payload which shall act as input to the transformation template in request 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 is 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.

Examples: Refer the below screenshots of route dispatch for Service-Consumer **Oracle_Service_Consumer** and Service-Consumer Service **List_Facilities**.



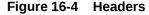




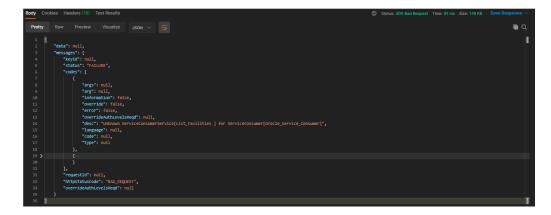




Figure 16-6 Response Payload on Successful Dispatch



Figure 16-7 Response Payload on Failed Dispatch



16.3 Asynchronous Dispatch API Specification

This topic provide information about the 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:
 - appld : 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/XML payload which shall act as input to the transformation template in request transformer.
- Response Body:

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

Example: Refer the below screenshots of route dispatch for Service-Consumer **Oracle_Service_Consumer** and Service-Consumer Service **List_Facilities**.

Figure 16-8 Query Params

POST v whf00lse:7002/api-gateway/cmc-obrh-ser	vices/route/dispatch?isAsync=true	Sênd 🔻 Save 🔻
Params Authorization Headers (17) Body Query Params	Pre-request Script Tests Settings	
KEY	VALUE	DESCRIPTION *** Bulk Édit
✓ isAsync	true	
Key		

Figure 16-9 Headers

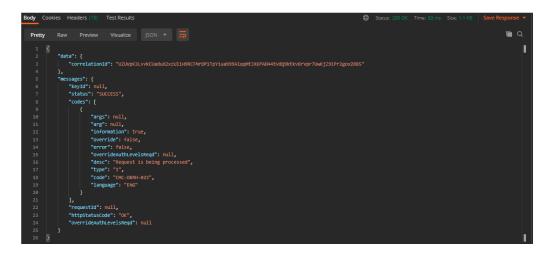
POST v whf00lse:7002/api-gateway/cmc-obrh-services/route/dispatch/	tisAsync≈true		s	Send ~
Params Authorization Headers (17) Body Pre-request Script Te				
Headers 💿 9 hidden				
KEY	VALUE	DESCRIPTION	••• Bulk Edit	Presets 🗸
Content-Type	application/json			
✓ appld	CMNCORE			
✓ entityld	DEFAULTENTITY			
✓ userid	TESTUSER1			
✓ branchCode	004			
Authorization	Bearer ((token))			
SERVICE-CONSUMER	Oracle_Service_Consumer			
SERVICE-CONSUMER-SERVICE	List_Facilities			







Figure 16-11 Response Payload



16.4 Asynchronous Dispatch Response API Specification

This topic provide information about the 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:
 - appld : CMNCORE
 - entityId : DEFAULTENTITY
 - userId : <user id>
 - branchCode : <branch code>
 - Authorization : Bearer < Token>
- Response Body:

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



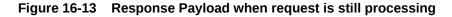
```
"messages": {}
}
```

- 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: Refer the below screenshots of route dispatch for Service-Consumer **Oracle_Service_Consumer** and Service-Consumer Service **List_Facilities**.



Figure 16-12 Header



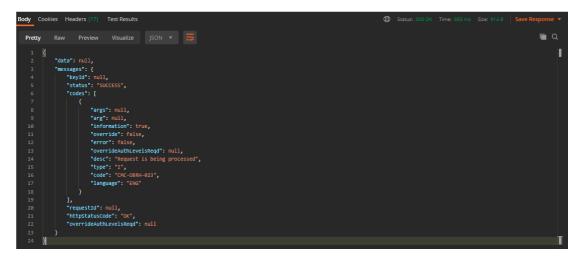




Figure 16-14 Response Payload when request is processed (on Successful Dispatch)



Figure 16-15 Response Payload when request is processed (on Failed Dispatch)

Body Cooki	es Headers (16) Test Results	Status: 400 Bad Request Time: 91 ms Size: 1.16 KB Save Response ~
Pretty		n Q
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	<pre>'data': wul, 'messages': { 'status': 'FALURE', code': { {</pre>	T
19 > 30 31 32 33 34 35 36	<pre>{ } }, "requestid": mull, "httpstatuscode": "NAQ_REQUEST", "verrideAuthievelskegd": null }</pre>	

16.5 Template evaluation API Specification

This topic provide information about the 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
 - 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>
- 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": {}
}
```



17 Oracle Banking Routing Hub VM Arguments

This topic provides information about Oracle Banking Routing Hub VM arguments.

Common Core Managed Server

- -Dcmc-obrh-services.server.port=<SERVER PORT>
- -Dobrh.db.jndi=<CMNCORE JNDI>
- -Dcmc-obrh-services.oic.oauth.scope=<OIC OAUTH SCOPE>
- -Dcmc-obrh-services.oic.secretStore.url=<OIC SECRET STORE URL>
- -Dcmc-obrh-services.oic.idcs.url=<OIC_IDCS_URL>
- -Dcmc-obrh-services.audit.retention.days=<AUDIT RETENTION POLICY DAYS>

```
-Dcmc-obrh-services.audit.retention.archival=<AUDIT_RETENTION_POLICY_APPROACH> (Y for archiving and N for purging)
```

To receive routing failure mail notification via plato-alerts-management-service, then set the following property to true, (Default value is false)

-Dobrh.alerts.enabled=<ALERTS ENABLED>

In order to change the behavior of auditing, then set the below property from predefined values (DEFAULT / KAFKA / LOG / OFF), (Default value is DEFAULT)

```
-Dobrh.audit.type=<AUDIT TYPE>
```

Note:

For KAFKA option, cmc-obrh-kafka-consumer service needs to be deployed.

In order to overwrite the customization that is not part of configuration JSON,

-Dobrh.import.overwrite=<IMPORT OVERWRITE> (Default value is false)

To use Custom Keystore and Truststore for HTTPS scheme,

-Dobrh.keystore.password.encoded=<IS_PASSWORD_ENCODED> (true, if password is base 64 encoded)

```
-Dobrh.truststore.path=<TRUSTSTORE_PATH>
-Dobrh.truststore.password=<TRUSTSTORE_PASSWORD>
-Dobrh.usekeystore=<USE_KEYSTORE> (true, if keystore is required along with truststore)
-Dobrh.keystore.path=<KEYSTORE_PATH> -
Dobrh.keystore.password=<KEYSTORE_PASSWORD>
-Dobrh.keystore.alias=<KEYSTORE_ALIAS>
-Dobrh.keystore.aliaspassword=<KEYSTORE_ALIAS PASSWORD>
```

```
-Dobrh.ssl.protocol=<SSL PROTOCOL> (Default value is TLS)
```

To perform the tomcat deployment,

```
-Dobrh.server.isJavaEE=false (mandatory)
-Dobrh.taskexecutor.corepoolsize=<CORE POOLSIZE> (default is 50) (optional)
```



-Dobrh.taskexecutor.maxpoolsize=<MAX_POOLSIZE> (default is 50) (optional) -Dobrh.taskexecutor.queuecapacity=<QUEUE CAPACITY> (default is 100) (optional)

To set Proxy settings for HTTPS,

```
-Dhttps.proxyHost=<PROXY_HOST_NAME>
-Dhttps.proxyPort=<PROXY_PORT>
-Dhttps.nonProxyHosts=<NON_PROXY_HOST_LIST>
-Dhttp.nonProxyHosts=<NON_PROXY_HOST_LIST>
```

Note:

As per the Java Networking documentation, HTTPS protocol handler uses the same as the http handler (http.nonProxyHosts). in case of Weblogic, http.nonProxyHosts do not work for some reason. So, use https non proxy host argument (https.nonProxyHosts).

To set logger level,

```
- Dplato.service.logging.level=
```

To do SSL based SOAP provider calls and if RoutingHub is deployed on weblogic environment,

-DUseSunHttpHandler=true

Note:

This property will enforce WebLogic Server to use SUN SSL implementation (javax package) rather than the WebLogic one.

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.

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



CMC-OBRH-KAFKA-CONSUMER

-Dcmc-obrh-kafka-consumer.server.port=<SERVER_PORT>



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