

Oracle Banking Routing Hub Integration Guide

Oracle Banking Virtual Account Management

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Oracle Banking Routing Hub Integration Guide

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1. About this Manual

1.1 Purpose

This guide is to help with Integration of Oracle Banking Virtual Account Management with Oracle Banking Routing Hub Product.

1.2 Audience

This guide is primarily intended for the following user/user roles:

Role	Function
Implementation and IT Staff	Implementation and maintenance of the software

1.3 List of Chapters

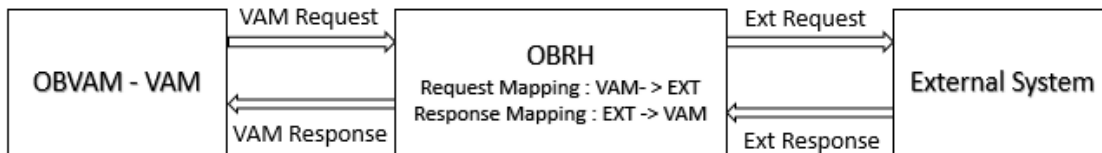
Chapters	Description
Chapter 1	Provides information on the intended audience. It also lists the various chapters covered in this manual.
Chapter 2	This chapter helps you to Integrate Oracle Banking Digital Experience with Oracle Banking Routing Hub product.

2. Integration Guide

2.1 Introduction

This guide briefs you about APIs that are configured in Oracle Banking Virtual Account Management through Oracle Banking Routing Hub. These APIs were earlier configured to use the jars directly for the endpoint for different APIs like amount block, transaction journaling etc.

Oracle Banking Routing Hub enables seamless & standardised integrations between FSGBU Banking Products using configurations provided as part of the product Infrastructure.



For more details on Oracle Banking Routing Hub configuration, refer to the Oracle Banking Routing Hub documentation.

2.2 APIs configured using Oracle Banking Routing Hub

2.2.1 DDA Implementation

Following are the APIs which are configured using Oracle Banking Routing Hub:

1. closeECA

Host: FCUBS

Version: 14.1 / 14.4

2. EAC

Host: FCUBS

Version: 14.1 / 14.4

3. createECA

Host: FCUBS

Version: 14.1 / 14.4

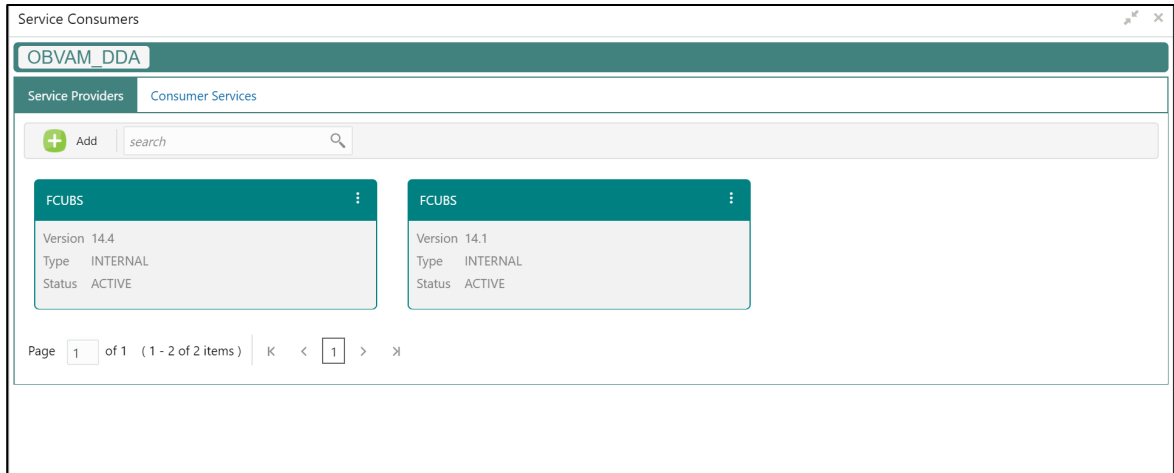
4. handofftoDDA

Host: FCUBS

Version: 14.1 / 14.4

2.2.1.1 Configured Service Providers in Oracle Banking Routing Hub

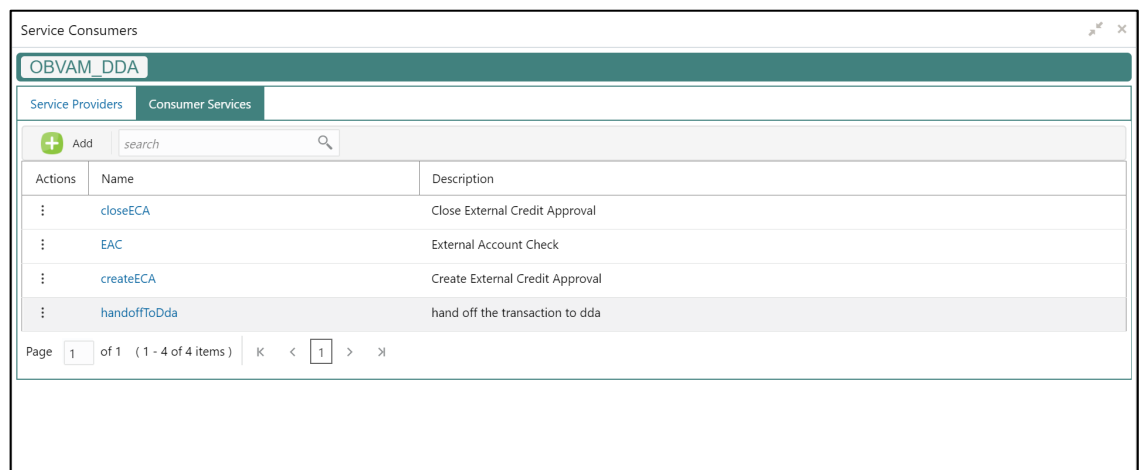
Multiple DDA providers are added to configure FCUBS 14.1 and FCUBS 14.4. They use SOAP APIs for request/response.



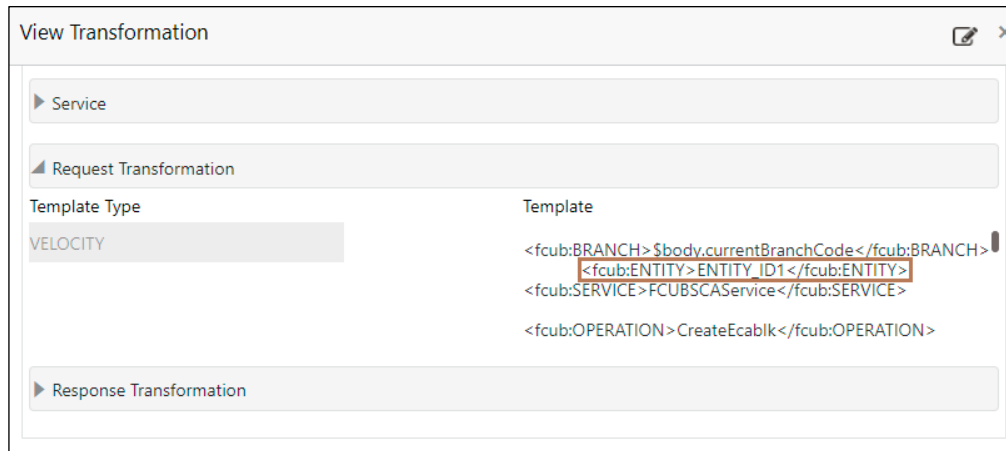
2.2.1.2 Consumer Services

Following 4 endpoints are required for 'Consumer Services' to be configured in Oracle Banking Routing Hub:

1. Create an amount block (createECA)
2. Close/release amount block (closeECA)
3. External account check (EAC)
4. Create a transection (handofftoDDA)



As part of Multi-Entity changes, add the EntityId of DDA System under <fcub:ENTITY> </fcub:ENTITY> tags in velocity template for each operation as shown below.



2.2.1.2.1 closeECA

14.1 Request / Response

SERVICE-CONSUMER = "OBVAM_DDA"
SERVICE-CONSUMER-SERVICE="closeECA"

Request:

```
{
  "userID": "",
  "currentBranchCode": "",
  "ddaSystem": "",
  "ecaReferenceNo": "",
  "ddaReferenceNo": "",
  "createextRefNo": "",
  "source": "",
  "ecaCloseDetailsDTO": [
    {
      "accountNo": "",
      "accCurreny": "",
      "accountbranch": "",
      "blockStatus": ""
    }
  ]
}
```

Response:

```
{
  "MSGSTAT":""
}
```

14.4 Request / Response

Same as above

2.2.1.2.2 EAC

14.1 Request / Response

SERVICE-CONSUMER = "OBVAM_DDA"
SERVICE-CONSUMER-SERVICE="EAC"

Request:

```
{  
  "userID": "",  
  "currentBranchCode": "",  
  "ddaSystem": "",  
  "realAccountNo": "",  
  "drCrIndicator": "",  
  "externalRefNo": "",  
  "mcyFlag": "",  
  "customerBranchCode": "",  
  "ccy": ""  
}
```

Response:

```
{  
  
  "isValidAccount": ""  
  
}
```

14.4 Request / Response

Same as above

2.2.1.2.3 CreateECA

14.1 Request / Response

SERVICE-CONSUMER = "OBVAM_DDA"
SERVICE-CONSUMER-SERVICE="handoffToDda"

Request:

```
{
  {
    "userID": "",
    "currentBranchCode": "",
    "ddaSystem": "",
    "transactionrefNo": "",
    "creatEextRefNo": "",
    "ecaReferenceNo": "",
    "source": "",
    "effectiveDate": "",
    "ecaBlockDetailsDTO": [
      {
        "accountNo": "",
        "accCurrency": "",
        "accountbranch": "",
        "blockStatus": "",
        "drCrIndicator": "",
        "sweepRequired": "",
        "partialBlkReqd": "",
        "remarks": "",
        "requestBlkAmount": "",
        "approvedBlkAmount": "",
        "outstandingBlkAmount": "",
        "partialReleaseAllowed": ""
      }
    ]
  }
}
```

Response:

```
{
  "MSGSTAT":"" ( SUCCESS/FAILUER)
  "{ERROR_CODE}":"{ERROR_DESC}" (if MSGSTAT = FAILUER)}
}
```

14.4 Request / Response

Same as above

2.2.1.2.4 handoffToDda

14.1 Request / Response

SERVICE-CONSUMER = "OBVAM_DDA"
SERVICE-CONSUMER-SERVICE="handoffToDda"

Request:

```
{
{
  "userID": "",
  "currentBranchCode": "",
  "ddaSystem": "",
  "externalReferenceNo": "",
  "sourceCode": "",
  "ecaEntriesDetailsDTO": [
    {
      "module": "",
      "transactionRefNo": "",
      "eventserialNo": "",
      "event": "",
      "accBranch": "",
      "accountNumber": "",
      "accCCY": "",
      "drCrIndicator": "",
      "amttag": "",
      "lcyAmt": 0,
      "trnDate": "",
      "valueDate": "",
      "ecaRefernceNo": "",
      "blockReleaseStatus": "",
      "chequeMandatory": "",
      "availBalReqd": "",
      "intraDayRelease": "",
      "availInfo": "",
      "salaryCredit": "",
      "sweepRequried": "",
      "escrow": "",
      "AMLMontoring": "",
      "considerForAccActivity": "",
      "balUpdThruPC": "",
      "txnNarrative": "",
      "txnCode": "",
      "relatedCustomer": "",
      "fcyAmount": 0,
      "exchrte": 0
    }
  ]
}
```

Response:

```
{  
  "MSGSTAT": ""  
}
```

14.4 Request / Response

Same as above

2.2.2 EXTERNAL ACCOUNT Implementation

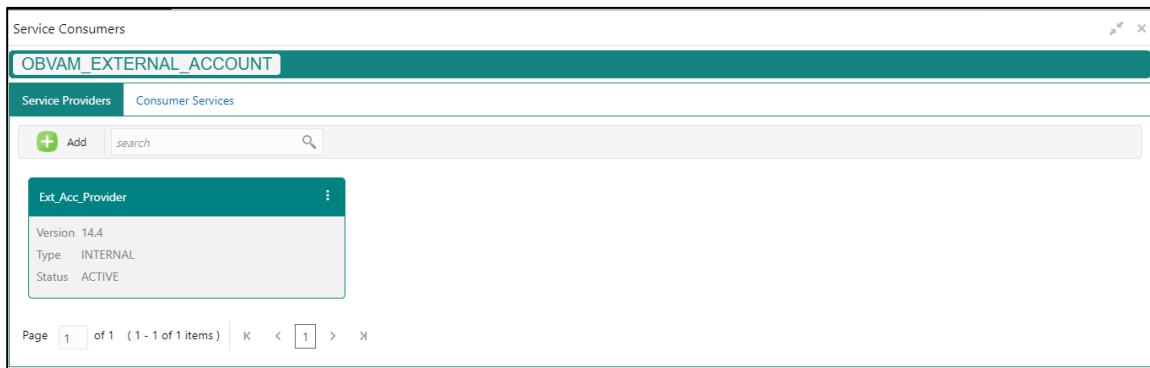
This is used when the account number needs to be generated externally. OBVAM's account number generation will be suppressed and externally generated account number will be assigned.

- OBVAM_EXTERNAL_ACCOUNT - ext_acc 14.4 (Consumer Service)
- API - /api-gateway/cmc-obrh-services/route/dispatch
- Headers –
 - SERVICE-CONSUMER - OBVAM_EXTERNAL_ACCOUNT
 - SERVICE-CONSUMER-SERVICE - ext_acc
 - REQUIRED_ACTION - VA / IBAN / VA_IBAN

NOTE: VA / IBAN / VA_IBAN – Choose of the option based on Branch Parameter configuration.

2.2.2.1 Configured Service Providers in Oracle Banking Routing Hub

To configure the external system in Oracle Banking Routing Hub, import WSDL / Swagger provided by external system.



Edit Service Provider

No data to display.

Service

Type

URL

WSDL

WSDL

SWAGGER

No data to display.

Operation

Import

Save

2.2.2.2 Consumer Services

2.2.2.2.1 ext_acc

Service Consumers		
OBVAM_EXTERNAL_ACCOUNT		
Service Providers Consumer Services		
+ Add search Q		
Actions	Name	Description
⋮	ext_acc	ext acc gen
Page 1 of 1 (1 - 1 of 1 items) K < 1 > X		

Request:

```
{
  "branchCode": "",
  "virtualEntityId": "",
  "virtualEntityName": "",
  "realCustomerNo": "",
  "defaultAccCcy": "",
  "virtualAccProduct": "",
  "virtualAccountNo": "",
  "ibanRequired": "",
  "ibanAccNo": "",
  "realAccountNo": "",
  "virtualAccountName": "",
  "addressLine1": "",
  "addressLine2": "",
  "addressLine3": "",
  "addressLine4": "",
  "pincode": "",
  "countryCode": "",
  "accountPurpose": "",
  "interestCalcReq": "",
  "accountFrozen": "",
  "balChkForDebits": ""
}
```

```
"balAvailabilityOptions": "",
"fixedAmtFromPool": "",
"overdraftAllowed": "",
"fixedAmount": "",
"creditTxnsAllowed": "",
"debitTxnsAllowed": "",
"status": "",
"realAccLinkage": "",
"realAccountCcy": "",
"realAccountBrn": "",
"accOpenDate": "",
"accClosureDate": "",
"lastActivityDate": "",
"odStartDate": "",
"odEndDate": "",
"additionalFields": "",
"StructuredAddressDTO": [],
"sanctionChkStatus": ""
}
```

Response:

```
{

"virtualAccountNo": "",
"ibanAccNo": ""

}
```

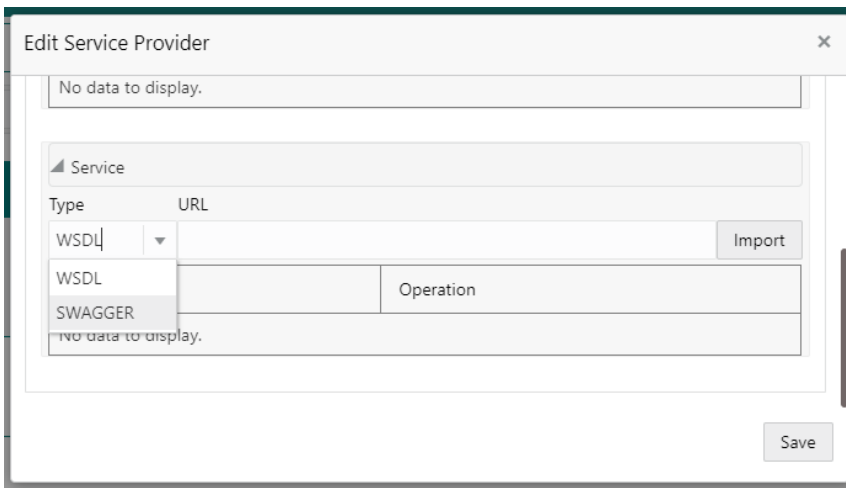
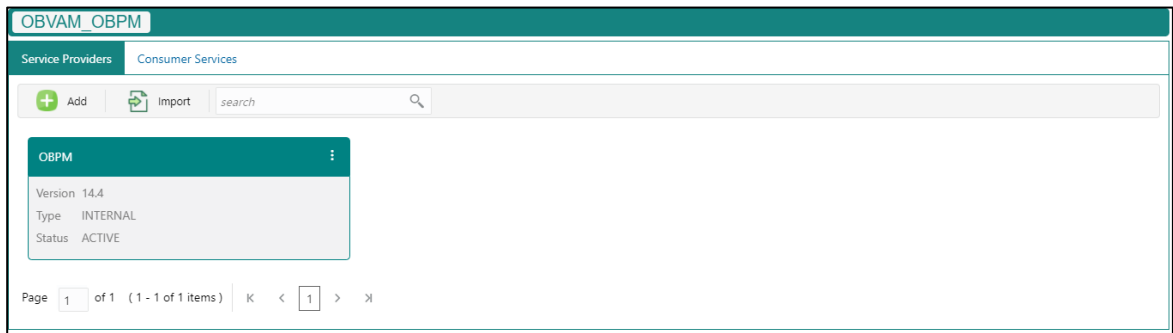
2.2.3 Oracle Banking Payments Implementation

This is used to query Oracle Banking Payments system for pending payments during account closure.

- OBVAM_OBPM - PendingPaymentQuery (Consumer Service)
- API - /api-gateway/cmc-obrh-services/route/dispatch
- Headers –
 - SERVICE-CONSUMER - OBVAM_OBPM
 - SERVICE-CONSUMER-SERVICE - PendingPaymentQuery

2.2.3.1 Configured Service Providers in Oracle Banking Routing Hub

To configure the external system in Oracle Banking Routing Hub, import WSDL / Swagger provided by external system.



2.2.3.2 Consumer Services

Service Consumers					
OBVAM_OBPM > Consumer Services > PendingPaymentQuery					
Transformation Routing					
Add Import search					
Actions	Name	Status	Product Processor	Implementation	Service
	obpm_PendingPaymentQuery	ACTIVE	OBPM 14.4	OBPM_Default	postPendingPaymentQuery - /payments/PendingPaymentQuery
Page 1 of 1 (1 - 1 of 1 items) K < 1 > X					

Request:

```
{
  "txnDet": {
    "customerAccount": ""
  },
  "header": {
    "functionId": "PMDPENDP",
    "action": "EXECUTEQUERY",
    "channel": "REST",
    "source": "MANL",
    "moduleId": "PM",
    "userId": "USER02", ** this user needs to be update as per OBPM user
    "userBranch": "HEL", ** this branch needs to be updated as per OBPM user's branch
    "transactionId": ""
  }
}
```

Response:

```
{
  "status": "",
  "errorDTOList": [{
    "errorCode": "",
    "errorMessage": "",
    "additionalInfo": ""
  }]
}
```

2.2.4 Interest and Charges Implementation

Following are the API's which are configured using Oracle Banking Routing Hub:

1. fetchgcSclcRate
2. closeIEAccount
3. CREATE_EXT_IC_GRP_PRD
4. fetchAccuredInt
5. CREATE_EXT_IC_GRP
6. liquidateInterest
7. fetchExtICGrps
8. fetchPrdMapForGrp
9. CREATE_IC_ACCOUNT

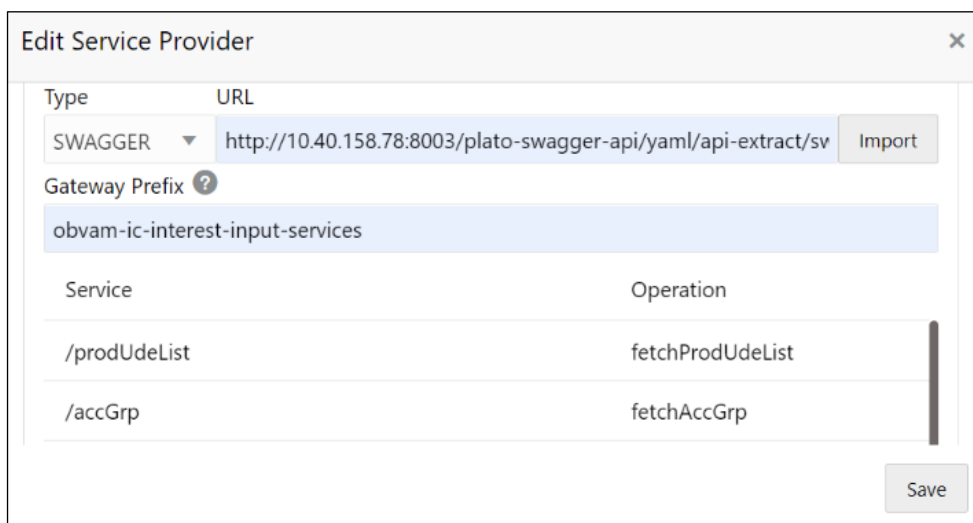
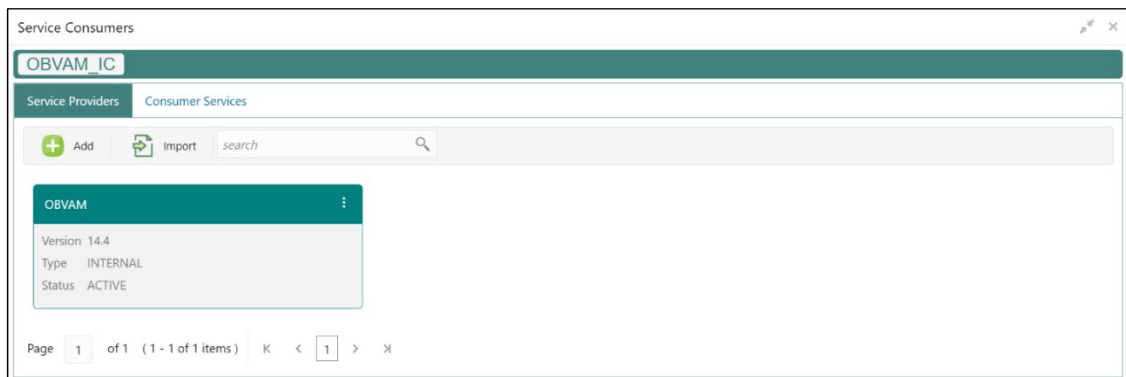
Host: OBVAM

Version: 14.4

SERVICE-CONSUMER = "OBVAM_IC"

2.2.4.1 Configured Service Providers in Oracle Banking Routing Hub

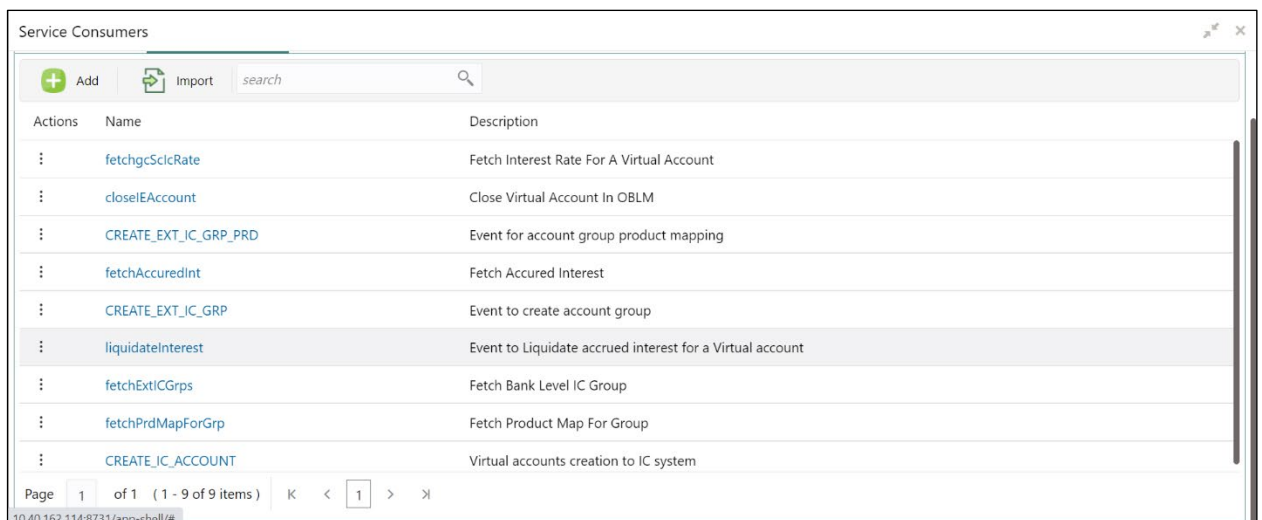
To configure the external system in Oracle Banking Routing Hub, import WSDL / Swagger provided by external system.



2.2.4.2 Consumer Services

Following 9 endpoints are required for 'Consumer Services' to be configured in Oracle Banking Routing Hub:

1. Fetch Interest Rate for A Virtual Account (fetchgcScIcRate)
2. Close Virtual Account (closeIEAccount)
3. Event for account group product mapping (CREATE_EXT_IC_GRP_PRD)
4. Fetch Accrued Interest (fetchAccuredInt)
5. Event to create account group (CREATE_EXT_IC_GRP)
6. Event to Liquidate accrued interest for a Virtual account (liquidateInterest)
7. Fetch Bank Level IC Group (fetchExtICGrps)
8. Fetch Product Map For Group (fetchPrdMapForGrp)
9. Virtual accounts creation to IC system (CREATE_IC_ACCOUNT)



The screenshot shows a web application titled 'Service Consumers'. It has a top bar with 'Add', 'Import', and a search field. Below is a table with columns 'Actions', 'Name', and 'Description'. The table lists 9 endpoints, with the 6th row highlighted. At the bottom, there is a pagination bar showing 'Page 1 of 1 (1 - 9 of 9 items)' and a status bar with the URL '10.40.162.114:8731/app-shell/#'.

Actions	Name	Description
:	fetchgcScIcRate	Fetch Interest Rate For A Virtual Account
:	closeIEAccount	Close Virtual Account In OBLM
:	CREATE_EXT_IC_GRP_PRD	Event for account group product mapping
:	fetchAccuredInt	Fetch Accured Interest
:	CREATE_EXT_IC_GRP	Event to create account group
:	liquidateInterest	Event to Liquidate accrued interest for a Virtual account
:	fetchExtICGrps	Fetch Bank Level IC Group
:	fetchPrdMapForGrp	Fetch Product Map For Group
:	CREATE_IC_ACCOUNT	Virtual accounts creation to IC system

2.2.4.2.1 fetchgcScIcRate

Request:

```
{
  "branch": "string",
  "account": "string",
  "extAccGrp": "string",
  "accGrp": "string",
  "dateFrom": "string",
  "dateTo": "string",
  "ccy": "string",
  "dateType": "string"
}
```

Response:

```
{
```

```

"data": [
  {
    "aclass": "string",
    "productCode": "string",
    "ccyCode": "string",
    "udeEffDt": "string",
    "branchCode": "string",
    "RateCategory": "string",
    "productdesc": "string",
    "GenUdeValList": [
      {
        "udeId": "string",
        "udeDesc": "string",
        "udeType": "string",
        "udeValue": 0,
        "rateCode": "string",
        "tdRateCode": "string"
      }
    ]
  }
],
"warnings": [
  {
    "warningCode": "string",
    "warningDesc": "string"
  }
],
"errors": [
  {
    "errorCode": "string",
    "errorDesc": "string"
  }
]
}

```

2.2.4.2.2 closeIEAccount

Request:

```

{
  "source": "string",
  "branch": "string",
  "acc": "string",
  "currency": "string"
}

```

Response:

```

{
  "warnings": [
    {
      "warningCode": "string",
      "warningDesc": "string"
    }
  ]
}

```

```

    }
  ],
  "errors": [
    {
      "errorCode": "string",
      "errorDesc": "string"
    }
  ]
}

```

2.2.4.2.3 CREATE_EXT_IC_GRP_PRD

Request:

```

{
  "accGrp": "string",
  "accGrpDesc": "string",
  "accProdList": [
    {
      "productCode": "string",
      "productDescription": "string",
      "ccy": "string",
      "open": "string"
    }
  ]
}

```

Response:

```

{
  "warnings": [
    {
      "warningCode": "string",
      "warningDesc": "string"
    }
  ],
  "errors": [
    {
      "errorCode": "string",
      "errorDesc": "string"
    }
  ]
}

```

2.2.4.2.4 fetchAccuredInt

Request:

```
{
  "brn": string,
  "acc": string,
  "source": string
}
```

Response:

```
{
  "data":
  {
    "brn": "string",
    "acc": "string",
    "source": "string",
    "totalAccrDr": 0,
    "totalAccrCr": 0,
    "accruedAmtList": [
      {
        "acc": "string",
        "brn": "string",
        "prod": "string",
        "frmNo": 0,
        "accruedAmt": 0,
        "drCr": "string"
      }
    ]
  },
  "warnings": [
    {
      "warningCode": "string",
      "warningDesc": "string"
    }
  ],
  "errors": [
    {
      "errorCode": "string",
      "errorDesc": "string"
    }
  ]
}
```

2.2.4.2.5 CREATE_EXT_IC_GRP

Request:

```
{
  "accGrp": "string"
  "accGrpDesc": "string"
  "extAccGrp": "string"
  "extAccGrpDesc": "string"
  "extAccGrpType": "string"
}
```

Response:

```
{
  "warnings": [
    {
      "warningCode": "string",
      "warningDesc": "string"
    }
  ],
  "errors": [
    {
      "errorCode": "string",
      "errorDesc": "string"
    }
  ]
}
```

2.2.4.2.6 liquidateInterest

Request:

```
{
  "onliq": [
    {
      "branchCode": "string",
      "accountNumber": "string",
      "productCode": "string",
      "liquidationDate": "string"
    }
  ]
}
```

Response:

```
{
  "onliq": [
    {
      "msgStat": "string",
      "onliq": {},
      "warnings": [
        {
```

```

        "warningCode": "string",
        "warningDesc": "string"
    },
    ],
    "errors": [
        {
            "errorCode": "string",
            "errorDesc": "string"
        }
    ]
}
]
}
}

```

2.2.4.2.7 fetchExtlCGrps

Request:

```

{
    "accGrp": "string",
    "extAccGrpType": "string"
}

```

Response:

```

{
    "data":
    {
        "AccGrpList": [
            {
                "accGrp": "string",
                "accGrpDesc": "string",
                "extAccGrpType": "string"
            }
        ]
    },
    "errors": [
        {
            "errorCode": "string",
            "errorDesc": "string"
        }
    ]
}

```

2.2.4.2.8 fetchPrdMapForGrp

Request:

```
{
  "accGrp": "string",
  "productCode": "string",
  "ccy": "string"
}
```

Response:

```
{
  "data":
  {
    "IcGrpPrdList": [
      {
        "accGrp": "string",
        "accGrpDesc": "string",
        "accProdList": [
          {
            "productCode": "string",
            "productDescription": "string",
            "ccy": "string",
            "open": "string"
          }
        ]
      }
    ]
  },
  "errors": [
    {
      "errorCode": "string",
      "errorDesc": "string"
    }
  ]
}
```

2.2.4.2.9 CREATE_IC_ACCOUNT

Request:

```
{
  "accMasterList": [
    {
      "acc": "string",
      "childAcc": "string",
      "accountClass": "string",
      "accType": "string",
      "acOpenDate": "string",
      "bookAcc": "string",
      "bookBrn": "string",

```

```

        "bookCcy": "string",
        "brn": "string",
        "calcAcc": "string",
        "ccy": "string",
        "custNo": "string",
        "consolChgAcc": "string",
        "intStartDate": "string",
        "sourceSystem": "string",
        "sourceSystemBrn": "string",
        "sourceSystemAcc": "string",
        "chargeBookAcc": "string",
        "chargeBookBrn": "string",
        "chargeBookCcy": "string",
        "chgStartDate": "string"
    }
]
}

```

Response:

```

{
  "warnings": [
    {
      "warningCode": "string",
      "warningDesc": "string"
    }
  ],
  "errors": [
    {
      "errorCode": "string",
      "errorDesc": "string"
    }
  ]
}

```