

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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# Table of Contents

<b>1. ABOUT THIS MANUAL.....</b>	<b>1-1</b>
1.1 PURPOSE.....	1-1
1.2 AUDIENCE .....	1-1
1.3 LIST OF CHAPTERS.....	1-1
<b>2. INTEGRATION GUIDE .....</b>	<b>2-1</b>
2.1 INTRODUCTION.....	2-1
2.2 APIS CONFIGURED USING ORACLE BANKING ROUTING HUB .....	2-1
2.2.1 DDA Implementation .....	2-1
2.2.1.1 Configured Service Providers in Oracle Banking Routing Hub .....	2-1
2.2.1.2 Consumer Services .....	2-2
2.2.2 EXTERNAL ACCOUNT Implementation.....	2-7
2.2.2.1 Configured Service Providers in Oracle Banking Routing Hub .....	2-7
2.2.2.2 Consumer Services .....	2-8
2.2.3 Oracle Banking Payments Implementation.....	2-10
2.2.3.1 Configured Service Providers in Oracle Banking Routing Hub .....	2-10
2.2.3.2 Consumer Services .....	2-11
2.2.4 Interest and Charges Implementation .....	2-12
2.2.4.1 Configured Service Providers in Oracle Banking Routing Hub .....	2-12
2.2.4.2 Consumer Services .....	2-13

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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.

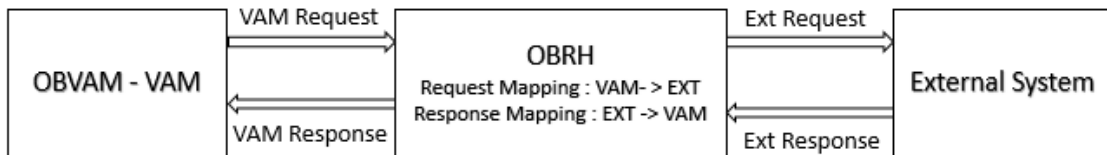
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## 2. Integration Guide

### 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

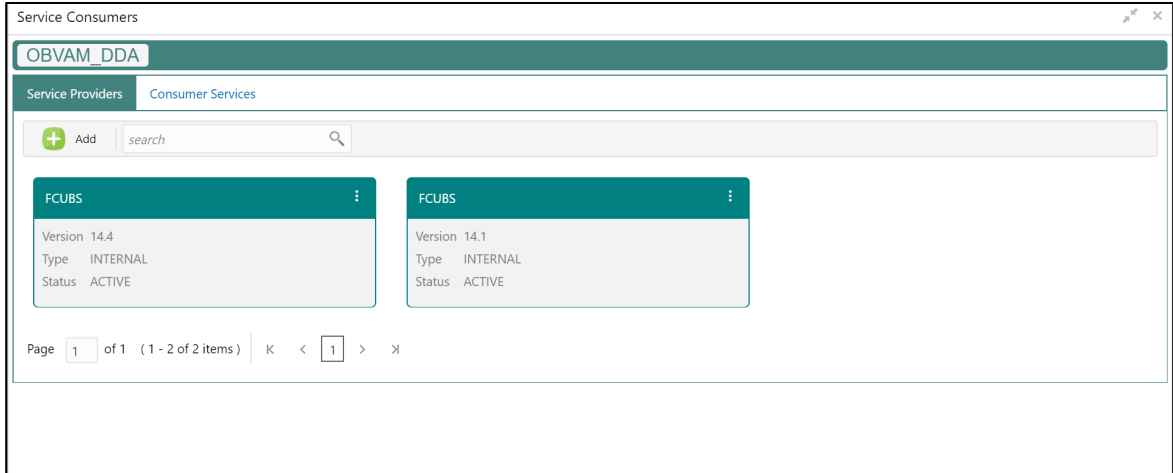
**4. handofftoDDA**

Host: FCUBS

Version: 14.1 / 14.4

#### 2.2.1.1 Configured Service Providers in Oracle Banking Routing Hub

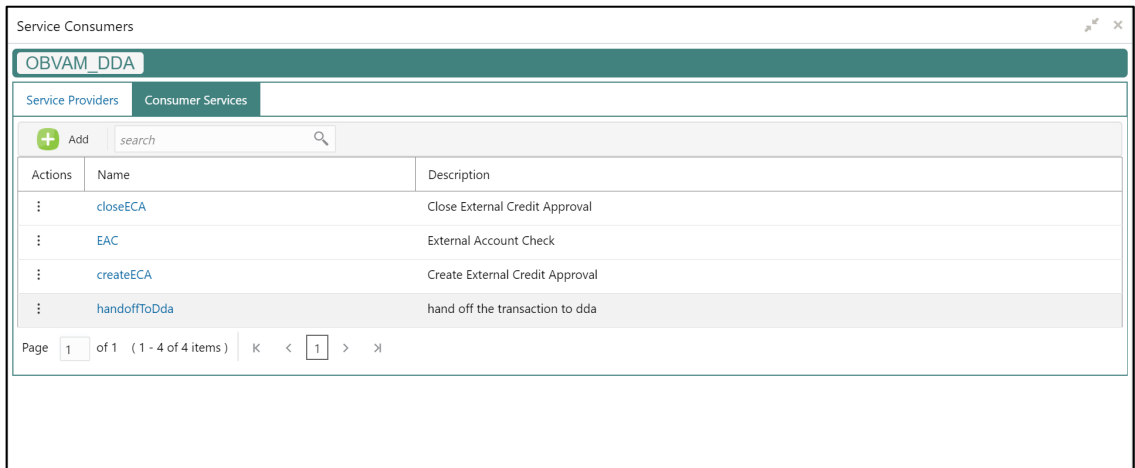
Multiple DDA providers are added to configure FCUBS 14.1 and FCUBS 14.4. They use SOAP APIs for request/response.



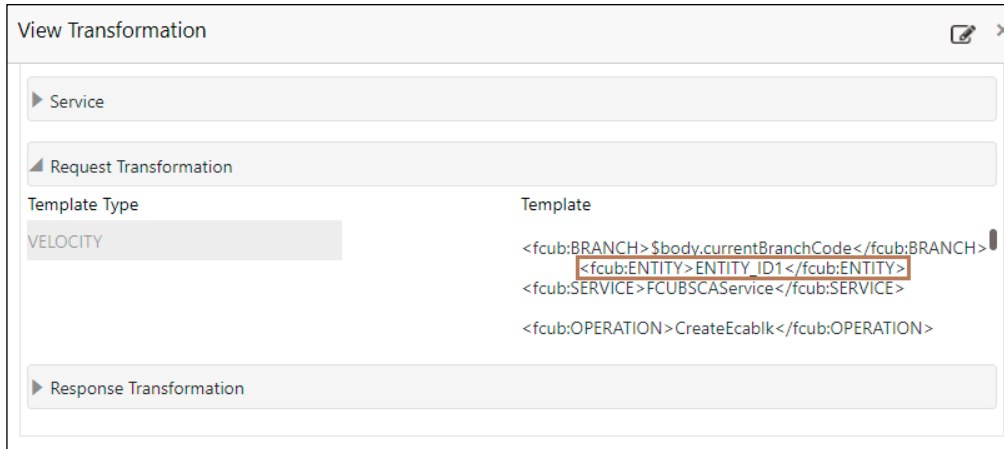
### 2.2.1.2 Consumer Services

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,
      "exchrates": 0
    }
  ]
}
```

**Response:**

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

**14.4 Request / Response**

Same as above

**2.2.2 EXTERNAL ACCOUNT Implementation**

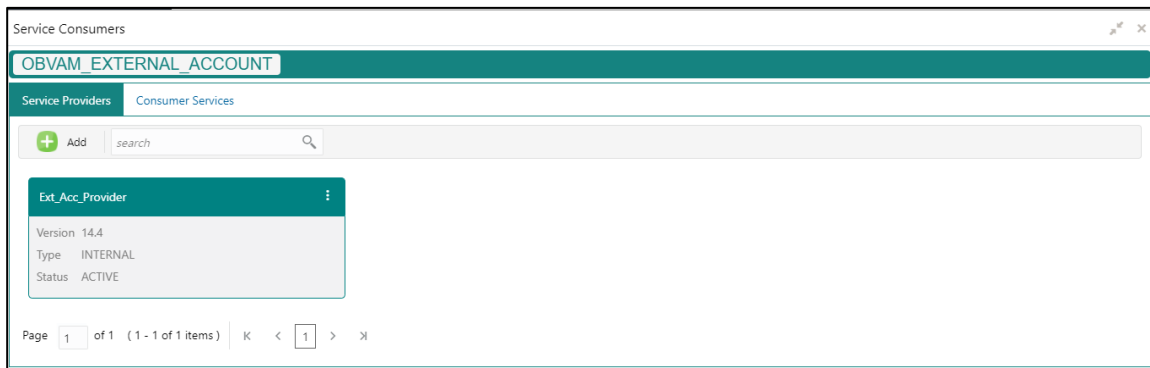
This is used when the account number needs to be generated externally. OBVAM's account number generation will be suppressed and externally generated account number will be assigned.

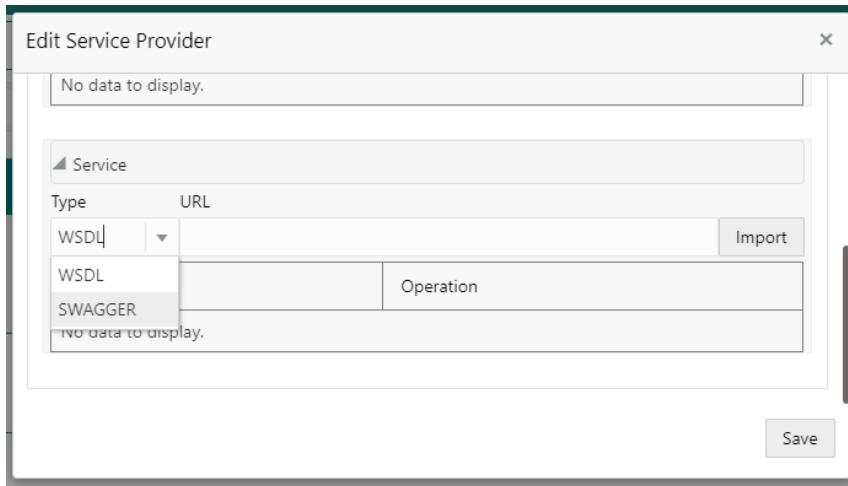
- OBVAM\_EXTERNAL\_ACCOUNT - ext\_acc 14.4 (Consumer Service)
- API - /api-gateway/cmcc-obr-h-services/route/dispatch
- Headers –
  - SERVICE-CONSUMER - OBVAM\_EXTERNAL\_ACCOUNT
  - SERVICE-CONSUMER-SERVICE - ext\_acc
  - REQUIRED\_ACTION - VA / IBAN / VA\_IBAN

**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.





## 2.2.2.2 Consumer Services

### 2.2.2.2.1 ext\_acc

Service Consumers		
OBVAM_EXTERNAL_ACCOUNT		
Service Providers Consumer Services		
+ Add search		
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": ""
}
```

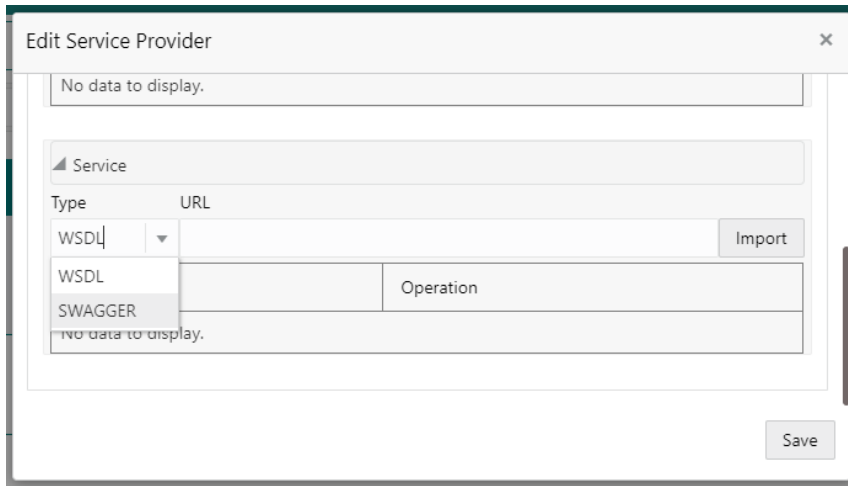
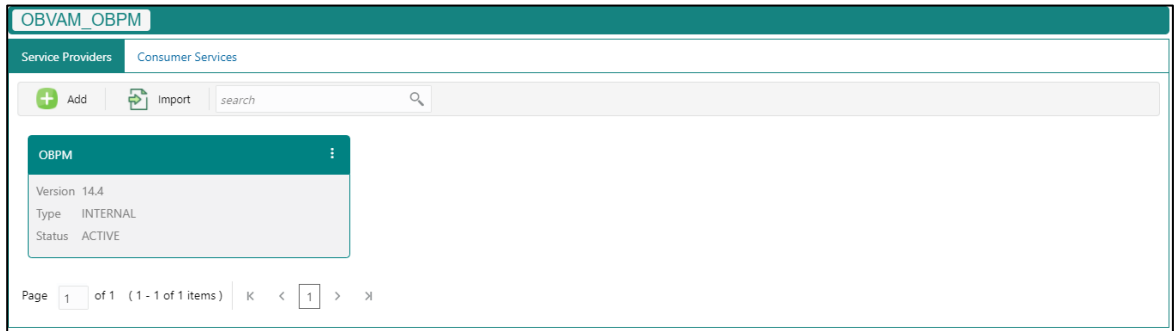
## 2.2.3 Oracle Banking Payments Implementation

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

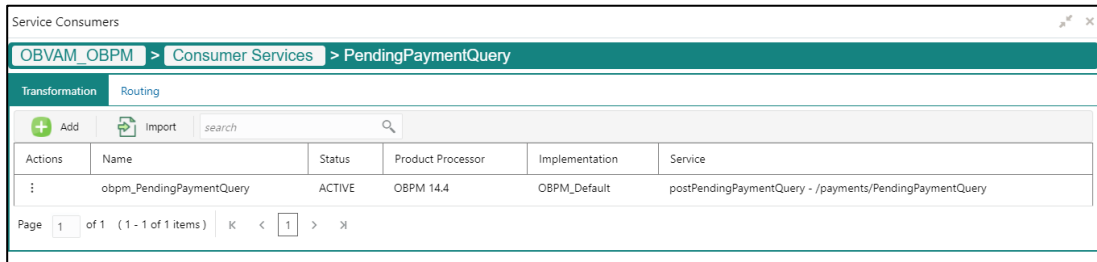
- OBVAM\_OBPM - PendingPaymentQuery (Consumer Service)
- API - /api-gateway/cmc-obrh-services/route/dispatch
- Headers –
  - SERVICE-CONSUMER - OBVAM\_OBPM
  - SERVICE-CONSUMER-SERVICE - PendingPaymentQuery

### 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



The screenshot shows a web application window titled 'Service Consumers'. The breadcrumb navigation is 'OBVAM\_OBPM > Consumer Services > PendingPaymentQuery'. There are tabs for 'Transformation' and 'Routing'. Below the tabs are buttons for '+ Add', 'Import', and a search field. A table displays the following data:

Actions	Name	Status	Product Processor	Implementation	Service
:	obpm_PendingPaymentQuery	ACTIVE	OBPM 14.4	OBPM_Default	postPendingPaymentQuery - /payments/PendingPaymentQuery

At the bottom, there is a pagination control showing 'Page 1 of 1 (1 - 1 of 1 items)' and navigation arrows.

### 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. fetchgcScIcRate
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

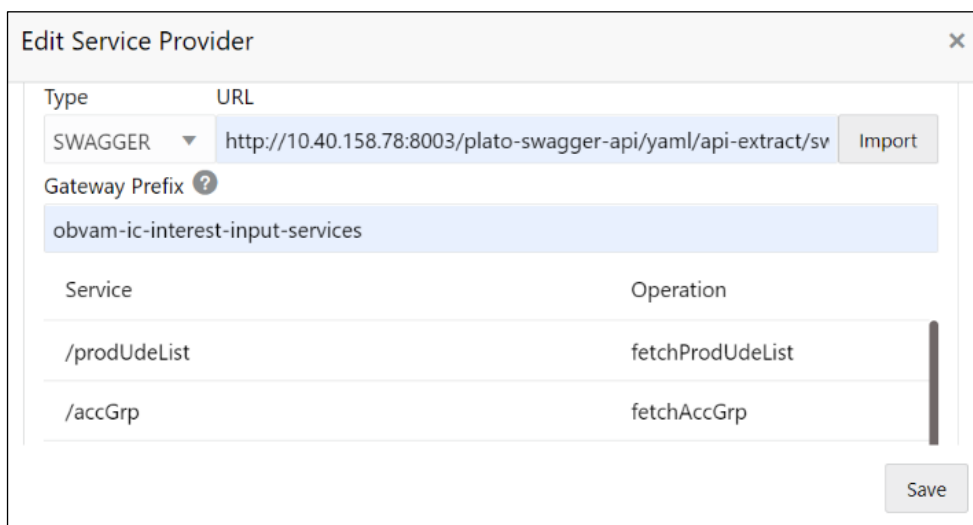
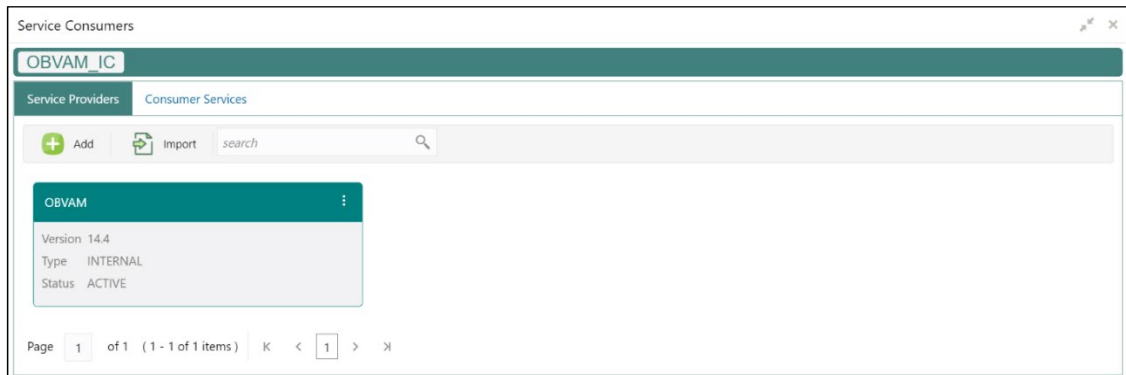
Host: OBVAM

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.

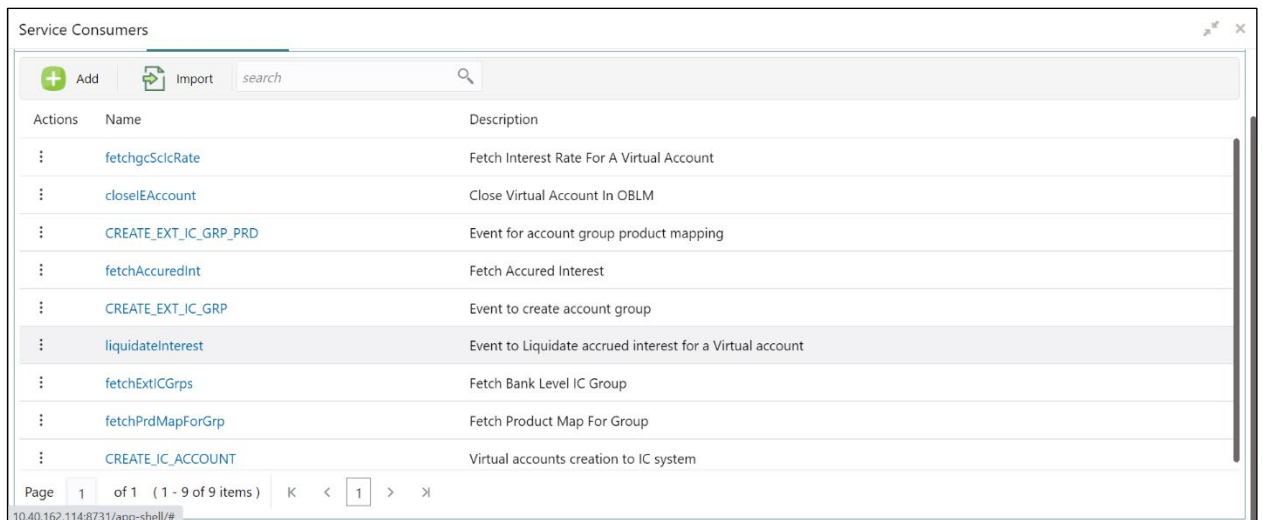




## 2.2.4.2 Consumer Services

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)



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,
        "drer": "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 fetchExtICGrps

##### 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"
    }
  ]
}
```