Merchant aggregator APIs

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The Transformative Power Of Electronic Payments

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Abbreviations

RS	RS Software

1. Overview

IDBI will provide APIs to merchant aggregators, who will acquire collect transactions from merchants and route to the IDBI UPI Manager. Each aggregator will have different handles for VPA and these will be registered in NPCI UPI in the set of handles registered for IDBI. Different aggregators will use different channel ids. They can be assigned different or same handles by IDBI. Following table provides example of merchant-aggregator relationship:

Aggregator name	Merchant name	Aggregator handle	Merchant VPA	Aggregator Org Id(provided by UPI Manager)	Merchant Org Id(provided by UPI Manager)	MCC for merchant
Aggregator 1	Merchant 1	aggr1	mrch1@aggr1	456750	675430	5411
	Merchant 2		mrch2@aggr1		675431	3020
	Merchant 3		mrch3@aggr1		675432	5172
Aggregator 2	Merchant 4	Aggr2	mrch4@aggr2	456751	675433	5169
	Merchant 5		mrch5@aggr2		675434	5172
	Merchant 6		mrch6@aggr2		675435	5192

2. On-boarding

Merchant on-boarding will be done from UPI Manager portal. Aggregators will be created from UPI Portal. Portal will have feature to assign a handle to an aggregator and assign merchants to an aggregator. Before assigning a handle to an aggregator, IDBI has to register the handle with NPCI in UPI.

Channel ID assignment to aggregators: Channel IDs are maintained from the UPI manager portal. Where a channel id can be created, activated or deactivated. **On registration with IDBI, the aggregators will get an API key from UPI manager portal, which will be an AES-256 bit random key in hex encoded format.** Channel ids can be assigned to API keys and hence to the

aggregator+ merchant combination) from UPI manager portal, with one-to-one mapping. The API Gateway, while doing the hmac validation(for session token, explained in section 4), will retrieve the channel id using the API key for the aggregator and create the appropriate JSON message for UPI manager with correct channel id in device tag. Administrators in IDBI can block a channel id. This channel ID is to be passed by the aggregators in all APIs in the device tag. Following diagram explains the use of API Key, session token and channel id.
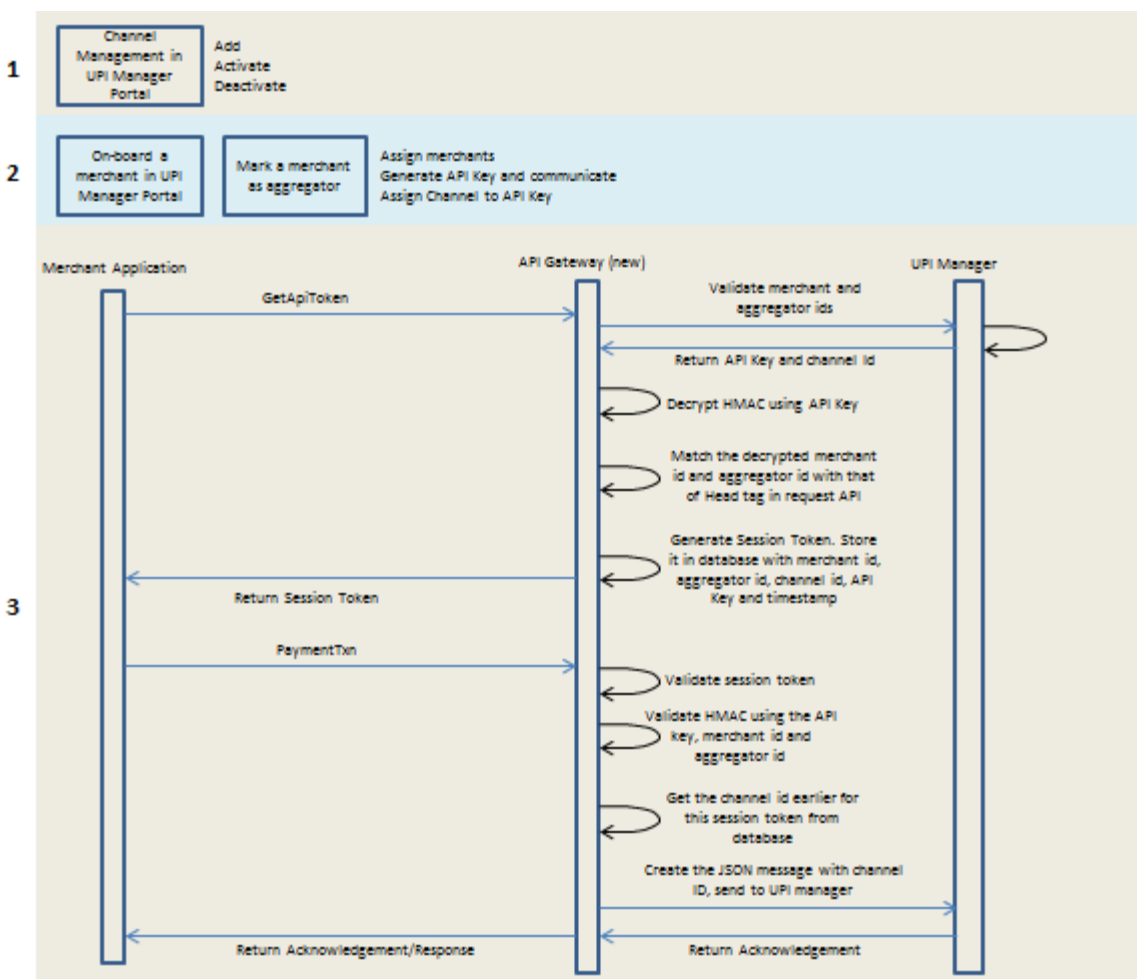
Channel ID for mobile APP/SDK: All apps from partners are to be whitelisted with IDBI. UPI Manager portal will have a screen to whitelist partner apps, where app id, contact email, contact phone, app description, app provider organization name can be entered. On a successful whitelisting an API key will be assigned to the appid and will be communicated to the partner. Channel ids can be assigned to the API keys with one-to-one mapping. SDK will accept an hmac (appid encrypted by API key) and appid as initialization parameter. Based on the appid, it will retrieve the channel id and API key. This api key will be returned to the SDK with the result of fetchConfigParam API from UPI Manager. The hmac will be decrypted using the API Key and

matched with the appid to continue the flow. On successful validation, SDK will create the JSON message and pass to UPI Manager.

The channel management screen in portal need to have some feature where one or more handles can be associated with a channel. During transaction, the handle will get validated.

3. Security

The IDBI aggregator-gateway will expose XML APIs for aggregators that will internally communicate with IDBI UPI Manager and bypass the channel based security by adding the request header bypasssecurity=true.

On registration with IDBI, the aggregators will get an API key from UPI manager portal, which will be an AES-256 bit random key in hex encoded format. During each session (set of API calls) the aggregator will pass an authorization token in the XML. To get the auth token, the aggregator will invoke an API getToken with the aggregator id encrypted with the API key. The auth token will also be a random hex string provided by the aggregator-gateway. The auth-token will be stored for the aggregator id, merchant id and client IP; and will be de-activated on 10 minutes inactive session.

The API communication between the aggregator and IDBI gateway will be over SSL using 2048 bit RSA encryption. This will require the SSL public keys to be exchanged between IDBI and an aggregator during the aggregator on-boarding.

In future the API communication between the aggregator and IDBI gateway will also be protected using digital signature using 2048 bit RSA encryption. This will require the Signing public keys to be exchanged between IDBI and an aggregator during the aggregator on-boarding.

4. APIs supported

The following rest APIs will be supported by the IDBI aggregator gateway. All will be asynchronous in nature and will provide an acknowledgement as receipt of a request.

Sl. No	API Name	Description
1	GetApiToken	Returns the auth token for an aggregator, merchant and client ip combination. This auth token is a hex string, needs to be passed in all subsequent requests, in encrypted format, encrypted by the API key(provided during aggregator registration) using AES 256 bit encryption. In the getApiToken request, the hmac will contain the aggregator id|merchant id encrypted by the API key. In all subsequent requests, the hmac will contain the auth token, encrypted by the API key using AES 256 bit encryption. The requests will have tags for aggregator id, merchant id, client ip. The auth token will be retrieved from gateway database for the aggregator id, merchant id, client ip combination. The auth token will then be decrypted and validated before processing the transaction. For ease of integration, the HMAC has been kept in a simplified format at present. The GetApiToken API returns the auth token for an aggregator, merchant and client ip combination. This auth token is a hex string, needs to be passed in all subsequent requests, as HMAC. In the getApiToken request, the hmac will contain the aggregator id|merchant id encrypted by the API key. In all subsequent requests, the hmac will contain the auth token. The requests will have tags for aggregator id, merchant id, client ip. The auth token will be retrieved from gateway database for the aggregator id, merchant id, client ip combination. The auth token will be validated before processing the transaction.
2	Validate Vpa	This will show status of a VPA for a merchant and will internally invoke the vaildateVPA service of UPI Manager (new API that has been developed in UPI manager).If the

		vpa is already in the record it will show its owner name, otherwise it will give failure
3	Payment(Collect)	This will facilitate a collect request with unique refId& txnID,payee VPA as that of a merchant on-boarded with the aggregator in IDBI UPI Manager and will internally invoke the createPaymentRequest service of UPI Manager.If refId & txn is not valid one or not unique it will not allow the process .
4	Search by UPI ref	This will return the status of a Collect transaction using UpiReference number (TxnID)
5	Search by merchant ref	This will return the status of a Collect transaction using merchant reference number (e.g. order number/RefId)
6	AddMerchantVpa	This will add a VPA for a Merchant and will internally invoke the uploadBulkVpaList service of UPI Manager. These can be VPAs with the handle registered for the aggregator in IDBI UPI manager.In this service valid MCC,Id type & Id number is required
7	Get Txn ID	This will generate a unique transaction id required for a payment/collect process
8	Is Vpa Available	This will check whether there is any vpa with same name or not. This can be used for availability of that vpa while adding a new one
9	Activate/Deactivate VPA	Using this api user can activate/deactivate VPA. If the VPA is default VPA then it will not deactivated.
10	Change VPA status	This API is used to change the status of the VPA

		onboarded for NETC MERCHANT, valid status are ACTIVE,DEACTIVE,BLACKLIST

5. API XML samples

5.1 Get a Authentication Token

UAT URL-http://localhost:9999/merchaggr/authToken/1.0

```xml
<?xml version="1.0" encoding="UTF-8"?>

<ReqGetApiToken xmlns="http://rssoftware.com/mrchaggr/schema/">

  <head ver="1.0" ts="" mrchOrgId="tstmrch" aggrOrgId="tstaggr" />

  <txn note="" refId="sfsf" refUrl="" ts="" type="GetApiToken" />

  <device>

    <mobile>9434387212</mobile>

    <geocode />

    <location />

    <ip />

    <type />

    <id />

    <os />

    <app />

    <capability />

    <hmac>OIx1nbJrOO+GVf1QPBST9w==</hmac>
```

</device>

</ReqGetApiToken>

5.2 Acknowledgement for GetApiToken

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<RespGetApiToken xmlns="http://rssoftware.com/mrchaggr/schema/">

 <token>98b1b02d-e3eb-44b3-9249-76d23c9e67fd</token>

</RespGetApiToken>

5.3   Validate a VPA

Case 1: IF vpa is not valid one

<ServiceRequest xmlns="http://rssoftware.com/mrchaggr/schema/">

   <head ver="1.0" ts="" mrchOrgId="tstmrch" aggrOrgId="tstaggr" />

   <txn note="test collect" refId="test98300" refUrl="" ts="" type="VALIDVPA" orgTxnId=""
orgRespCode="" />

   <device>

     <mobile>9434387212</mobile>

     <geocode />

     <location />

     <ip>192.168.0.1</ip>

     <type />

     <id />

     <os />

     <app />

     <capability />

     <hmac>98b1b02d-e3eb-44b3-9249-76d23c9e67fd</hmac>

   </device>

```
  <ReqValidateAVpa>

    <addr>

      <addr>ben15a@IDBI</addr>

    </addr>

  </ReqValidateAVpa>

</ServiceRequest>
```

Case 2: <mark>If vpa is valid one</mark>

```
<ServiceRequest xmlns="http://rssoftware.com/mrchaggr/schema/">

  <head ver="1.0" ts="" mrchOrgId="tstmrch" aggrOrgId="tstaggr" />

  <txn note="test collect" refId="test98300" refUrl="" ts="" type="VALIDVPA" orgTxnId=""
orgRespCode="" />

  <device>

    <mobile>9434387212</mobile>

    <geocode />

    <location />

    <ip>192.168.0.1</ip>

    <type />

    <id />

    <os />

    <app />

    <capability />

    <hmac>ad450876-6e26-4f43-bb93-3b1bfcbacf36</hmac>

  </device>

  <ReqValidateAVpa>

    <addr>

      <addr>iphone@IDBI</addr>

    </addr>
```

```
    </ReqValidateAVpa>
</ServiceRequest>
```

5.4   Acknowledgement for ValidateVpa

Case 1: IF vpa is not valid one

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
   <ValidateVpaResponse xmlns="http://rssoftware.com/mrchaggr/schema/">
    <vpaResponse>
     <status>FAILURE</status>
     <name>NA</name>
    </vpaResponse>
   </ValidateVpaResponse>
```

Case 2: If vpa is valid one

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
   <ValidateVpaResponse xmlns="http://rssoftware.com/mrchaggr/schema/">
    <vpaResponse>
     <status>SUCCESS</status>
     <name>PREM2914 UMA CHOPRA</name>
    </vpaResponse>
   </ValidateVpaResponse>
```

Note: The id in ref tag contains the VPA in request

5.5   Collect Transaction

UAT URL-http://localhost:9999/merchaggr/payment/1.0

Case 1: When all ref id and txn id is correct.

```
<ServiceRequest xmlns="http://rssoftware.com/mrchaggr/schema/">
<head ver="1.0" ts="" mrchOrgId="tstmrch" aggrOrgId="tstaggr" />
```

```
<txn note="test123" refId="test107" refUrl="http://www.IDBI.com" ts=""
type="COLLECT" orgTxnId=""  txnId="RNB99a4fa6f374b4059a3b65a84c2f79eb7"
orgRespCode=""  validupto = "2017-03-25 14:41:00" minAmount = "5.00" />
      <device>
                <mobile>9434387212 </mobile>
                <geocode>1,2 </geocode>
                <location></location>
                <ip>192.168.0.1 </ip>
                <type> </type>
                <id> </id>
                <os> </os>
                <app></app>   **Either pass valid app id or else remove the tag (<app> </app>)
                <capability></capability>
                <hmac>109e9672-be9f-4e1c-809c-daee42a94230</hmac>
      </device>
<ReqPaymentTxn>
<payer addr="test722468@IDBI" name="Martin" seqNum="1" type="PERSON" code="">
                <amount value="1.54" curr="INR" />
</payer>
<payee addr="swapan@IDBI" name="Robert" seqNum="1" type="PERSON" code="">
                   <amount value="1.54" curr="INR" />
                </payee>
      </ReqPaymentTxn>
</ServiceRequest>
```

Case 2: When Ref id is not unique.

```
<ServiceRequest xmlns="http://rssoftware.com/mrchaggr/schema/">
      <head ver="1.0" ts="" mrchOrgId="tstmrch" aggrOrgId="tstaggr" />
```

```xml
        <txn note="test123" refId="test074" refUrl="http://www.IDBI.com" ts=""
type="COLLECT" orgTxnId=""  txnId="RNB99a4fa6f374b4059a3b65a84c2f79eb7"
orgRespCode=""  validupto = "2017-03-25 14:41:00" minAmount = "5.00" />
        <device>
                <mobile>9434387212 </mobile>
                <geocode>1,2 </geocode>
                <location></location>
                <ip>192.168.0.1 </ip>
                <type> </type>
                <id> </id>
                <os> </os>
                <app></app> **Either pass valid app id or else remove the tag (<app> </app>)
                <capability></capability>
                <hmac>98b1b02d-e3eb-44b3-9249-76d23c9e67fd</hmac>
        </device>
        <ReqPaymentTxn>
        <payer addr="test722468@IDBI" name="Martin" seqNum="1" type="PERSON"
code="">                      <amount value="1.54" curr="INR" />
        </payer>


        <payee addr="swapan@IDBI" name="Robert" seqNum="1" type="PERSON" code="">
                <amount value="1.54" curr="INR" />
                </payee>
</ReqPaymentTxn>
</ServiceRequest>
```

Case 3: When Txn id is not correct (Do not start with RNB or not 35 characters)

```xml
<ServiceRequest xmlns="http://rssoftware.com/mrchaggr/schema/">
```

```
<head ver="1.0" ts="" mrchOrgId="tstmrch" aggrOrgId="tstaggr" />

<txn note="test123" refId="test1078" refUrl="http://www.IDBI.com" ts=""
type="COLLECT" orgTxnId=""  txnId="99a4fa6f374b4059a3b65a84c2f79eb7" orgRespCode=""
validupto = "2017-03-25 14:41:00" minAmount = "5.00" />

<device>

        <mobile>9434387212 </mobile>

        <geocode>1,2 </geocode>

        <location></location>

        <ip>192.168.0.1 </ip>

        <type> </type>

        <id> </id>

        <os> </os>

        <app></app> **Either pass valid app id or else remove the tag (<app> </app>)

        <capability></capability>

        <hmac>109e9672-be9f-4e1c-809c-daee42a94230</hmac>

</device>

<ReqPaymentTxn>

<payer addr="test722468@IDBI" name="Martin" seqNum="1" type="PERSON"
code="">            <amount value="1.54" curr="INR" />

</payer>


<payee addr="swapan@IDBI" name="Robert" seqNum="1" type="PERSON" code="">

<amount value="1.54" curr="INR" />

</payee>

</ReqPaymentTxn>

</ServiceRequest>
```

Case 4: When txnId is Duplicate

```
<ServiceRequest xmlns="http://rssoftware.com/mrchaggr/schema/">

        <head ver="1.0" ts="" mrchOrgId="tstmrch" aggrOrgId="tstaggr" />

        <txn note="test123" refId="test1078" refUrl="http://www.IDBI.com" ts=""
type="COLLECT" orgTxnId=""  txnId="RNB99a4fa6f374b4059a3b65a84c2f79eb7"
orgRespCode=""  validupto = "2017-03-25 14:41:00" minAmount = "5.00" />

        <device>

                <mobile>9434387212 </mobile>

                <geocode>1,2 </geocode>

                <location></location>

                <ip>192.168.0.1 </ip>

                <type> </type>

                <id> </id>

                <os> </os>

                <app></app> **Either pass valid app id or else remove the tag (<app> </app>)

                <capability></capability>

                <hmac>109e9672-be9f-4e1c-809c-daee42a94230</hmac>

        </device>

        <ReqPaymentTxn>

        <payer addr="test722468@IDBI" name="Martin" seqNum="1" type="PERSON"
code="">

                <amount value="1.54" curr="INR" />

        </payer>


        <payee addr="swapan@IDBI" name="Robert" seqNum="1" type="PERSON" code="">

                <amount value="1.54" curr="INR" />

        </payee>

        </ReqPaymentTxn>

</ServiceRequest>
```

5.6 Acknowledgement for Collect

Case 1: When all ref id and txn id is correct.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
    <ServiceResponse xmlns="http://rssoftware.com/mrchaggr/schema/">
     <resp status="SUCCESS">
       <ref id="RNB99a4fa6f374b4059a3b65a84c2f79eb7" errCode="SUCCESS"/>
     </resp>
    </ServiceResponse>
```

Case 2: When Ref id is not unique.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
    <ServiceResponse xmlns="http://rssoftware.com/mrchaggr/schema/">
     <errors>
       <code>ERR010</code>
       <message>Duplicate Ref Id</message>
     </errors>
    </ServiceResponse>
```

Case 3: When Txn id is not correct(Do not start with RNB or not 35 characters)

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
    <ServiceResponse xmlns="http://rssoftware.com/mrchaggr/schema/">
     <resp status="FAILURE">
       <ref id="99a4fa6f374b4059a3b65a84c2f79eb7" errCode="ERR00094"/>
     </resp>
    </ServiceResponse>
```

Case 4: When txnId is Duplicate

```
    <?xml version="1.0" encoding="UTF-8" standalone="yes"?>
    <ServiceResponse xmlns="http://rssoftware.com/mrchaggr/schema/">
     <resp status="FAILURE">
```

```
    <ref id="RNB99a4fa6f374b4059a3b65a84c2f79eb7" errCode="ERR00000"/>

  </resp>

 </ServiceResponse>
```

Note: The success or failure in this response indicates whether the transaction was successfully posted to the UPI Manager.

5.7 Transaction search by UPI refrence number

Merchants can search a transaction using the 35 Character (TXN Id starts with RNB) UPI reference number, that was returned in acknowledgement of the Collect request.

UPI URL:

Case 1: Valid Txn ID

```
<SearchRequest xmlns="http://rssoftware.com/mrchaggr/schema/">

     <head ver="1.0" ts="" mrchOrgId="tstmrch" aggrOrgId="tstaggr" />

     <txn orgTxnId="RNBb761b1595f604d2492483f47ab174950" />

     <device>

          <mobile>9434387212 </mobile>

          <geocode> </geocode>

          <location></location>

          <ip> </ip>

          <type> </type>

          <id> </id>

          <os> </os>

          <app></app>

          <capability></capability>

          <hmac>2ab58af6-332a-421d-922f-c7dfb61c93b2</hmac>

     </device>

</SearchRequest>
```

Case 2: <mark>Invalid txn id</mark>

```xml
<SearchRequest xmlns="http://rssoftware.com/mrchaggr/schema/">
      <head ver="1.0" ts="" mrchOrgId="tstmrch" aggrOrgId="tstaggr" />
      <txn orgTxnId="RNBb761b1595f604d22483f47ab174950" />
      <device>
            <mobile>9434387212 </mobile>
            <geocode> </geocode>
            <location></location>
            <ip> </ip>
            <type> </type>
            <id> </id>
            <os> </os>
            <app></app>
            <capability></capability>
            <hmac>2ab58af6-332a-421d-922f-c7dfb61c93b2</hmac>
      </device>
</SearchRequest>
```

5.8   Acknowledgement for transaction search by UPI reference

Case 1: <mark>Valid Txn ID</mark>

```xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
   <SearchResponse xmlns="http://rssoftware.com/mrchaggr/schema/">
    <resp status="SUCCESS"/>
    <result txnStatus="SUCCESS">
     <ref type="PAYEE" seqNum="1" addr="merchant103@IDBI"
mobileNumber="7841364896" orgAmount="1.00" settCurrency="INR" acNum="309001013546"
ifsc="RATN1234567" mcc="8675" approvalNum=" M2032" respCode="00"
custref="630718100007"/>
```

```xml
    <ref type="PAYER" seqNum="1" addr="test722468@IDBI"
mobileNumber="919674722468" orgAmount="1.00" settCurrency="INR"
acNum="309001013546" ifsc="RATN0000000" approvalNum="    M2031" respCode="00"/>

    </result>

  </SearchResponse>
```

Case 2: <mark>Invalid txn id</mark>

```xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

  <SearchResponse xmlns="http://rssoftware.com/mrchaggr/schema/">

   <resp status="SUCCESS"/>

   <result/>

  </SearchResponse>
```

5.9   Transaction search by merchant reference number

Merchant can search by reference number, e.g order number, that was passed in the refId field of the collect request

 UPI URL: <mark>http://localhost:9999/merchaggr/searchByMerchantRef/1.0</mark>

Case 1: <mark>Valid Ref Id</mark>

```xml
<SearchRequest xmlns="http://rssoftware.com/mrchaggr/schema/">

    <head ver="1.0" ts="" mrchOrgId="tstmrch" aggrOrgId="tstaggr" />

    <txn  refId="test7700"  />

    <device>

        <mobile>9434387215 </mobile>

        <geocode> </geocode>

        <location></location>

        <ip></ip>

        <type> </type>

        <id> </id>

        <os> Android</os>
```

```
        <app></app>

        <capability></capability>

        <hmac>97c80797-ac5a-4ff2-991f-b86e457a250d</hmac>

    </device>

</SearchRequest>
```

Case 2: <mark>Invalid ref id</mark>

```
<SearchRequest xmlns="http://rssoftware.com/mrchaggr/schema/">

    <head ver="1.0" ts="" mrchOrgId="tstmrch" aggrOrgId="tstaggr" />

    <txn  refId="test07455"  />

    <device>

        <mobile>9434387215 </mobile>

        <geocode> </geocode>

        <location></location>

        <ip></ip>

        <type> </type>

        <id> </id>

        <os> Android</os>

        <app></app>

        <capability></capability>

        <hmac>0eed5751-d5da-43e4-8ada-eb5324fd2438</hmac>

    </device>

</SearchRequest>
```

5.10 Acknowledgement for transaction search by Merchant reference

Case 1: <mark>Valid Ref Id</mark>

```
    <?xml version="1.0" encoding="UTF-8" standalone="yes"?>

    <SearchResponse xmlns="http://rssoftware.com/mrchaggr/schema/">

     <resp status="SUCCESS"/>
```

```
    <result txnStatus="SUCCESS">

        <ref type="PAYER" seqNum="1" addr="iphone@IDBI" mobileNumber="919890430478"
orgAmount="3.00" settCurrency="INR" acNum="309002010827" ifsc="RATN0000000"
approvalNum="    M7033" respCode="00" custref="632610104314"/>

        <ref type="PAYEE" seqNum="1" addr="swapan@IDBI" mobileNumber="919593030203"
orgAmount="3.00" settCurrency="INR" acNum="309000978680" ifsc="RATN0000000"
approvalNum=" M7034" respCode="00" custref="632610104314"/>

    </result>

  </SearchResponse>
```

Case 2: <mark>Invalid ref id</mark>

```
  <?xml version="1.0" encoding="UTF-8" standalone="yes"?>

  <SearchResponse xmlns="http://rssoftware.com/mrchaggr/schema/">

   <resp status="SUCCESS"/>

   <result/>

  </SearchResponse>
```

5.11 Add Merchant Vpa

UPI URL: http://localhost:9999/merchaggr/addMerchantVpa/1.0

Case 1: <mark>With correct mcc and id type & new merchant vpa.</mark>

```
<?xml version="1.0" encoding="UTF-8"?>

<ServiceRequest xmlns="http://rssoftware.com/mrchaggr/schema/">

  <head ver="1.0" ts="" mrchOrgId="tstmrch" aggrOrgId="tstaggr" />

  <txn note="hgfhgf" refId="gfhgf" refUrl="www.test.com" ts="" type="AddMerchantVpa" />

  <device>

    <mobile>9434387212</mobile>

    <geocode />

    <location />

    <ip />
```

```
    <type />
    <id />
    <os />
    <app />
    <capability />
    <hmac>cca3ada6-8214-4fc1-a04a-0567e6149e5a</hmac>
  </device>
  <ReqAddMerchantVpa>
    <merchantVpa>
      <addr>m9rrdfvd25@IDBI</addr>
      <defDrAc>1234567890123</defDrAc>
      <defDrIfsc>RATN1234567</defDrIfsc>
      <defCrAc>1234567890789</defCrAc>
      <defCrIfsc>RATN1234789</defCrIfsc>
      <expDt>10-20</expDt>
      <oneTime>TRUE</oneTime>
      <merchantCode>123</merchantCode>
      <merchantName>testMerch</merchantName>
      <merchantAddress1>fsdfkolkata</merchantAddress1>
      <merchantAddress2>india</merchantAddress2>
      <merchantState>wb</merchantState>
      <merchantPostalCode>700079</merchantPostalCode>
      <merchantPhone>917278052249</merchantPhone>
      <merchantContactName>testContact</merchantContactName>
      <merchantContactAddress1>dsfsdfsdfsd,shimla</merchantContactAddress1>
      <merchantContactAddress2>india</merchantContactAddress2>
      <merchantContactState>hp</merchantContactState>
      <merchantContactPostalCode>748446</merchantContactPostalCode>
```

```xml
        <merchantContactPhone>917879745620</merchantContactPhone>
        <mcc>5970</mcc>
        <idType>ACCOUNT</idType>
        <idNumber>1234111</idNumber>
        <merchantType>SMALL</merchantType>
        <merchant ownership="PUBLIC">
          <Identifier subcode="7211" mid="IDM001" sid="IDS001" tid="IDT001"
merchantType="SMALL" />
          <Name brand="BrandName" legal="NameLegal" franchise="FranchisName" />
        </merchant>
      </merchantVpa>
   </ReqAddMerchantVpa>
</ServiceRequest>
```

Case 2: Duplicate/existing merchant vpa

```xml
<?xml version="1.0" encoding="UTF-8"?>
<ServiceRequest xmlns="http://rssoftware.com/mrchaggr/schema/">
   <head ver="1.0" ts="" mrchOrgId="tstmrch" aggrOrgId="tstaggr" />
   <txn note="AddMrch" refId="" refUrl="www.IDBI.com" ts="" type="AddMerchantVpa" />
   <device>
     <mobile>7894564852</mobile>
     <geocode />
     <location />
     <ip />
     <type />
     <id />
     <os />
```

```xml
    <app />
    <capability />
    <hmac>0eed5751-d5da-43e4-8ada-eb5324fd2438</hmac>
  </device>
  <ReqAddMerchantVpa>
    <merchantVpa>
      <addr>merchant102@IDBI</addr>
      <defDrAc>309001013546</defDrAc>
      <defDrIfsc>RATN1234567</defDrIfsc>
      <defCrAc>309001013546</defCrAc>
      <defCrIfsc>RATN1234789</defCrIfsc>
      <expDt>30/18</expDt>
      <oneTime>TRUE</oneTime>
      <merchantCode>MERCHANT102</merchantCode>
      <merchantName>merchant102</merchantName>
      <merchantAddress1>KOLKATA</merchantAddress1>
      <merchantAddress2>INDIA</merchantAddress2>
      <merchantState>WB</merchantState>
      <merchantPostalCode>700079</merchantPostalCode>
      <merchantPhone>9863215428</merchantPhone>
      <merchantContactName>MERCHContact</merchantContactName>
      <merchantContactAddress1>MUMBAI</merchantContactAddress1>
      <merchantContactAddress2>INDIA</merchantContactAddress2>
      <merchantContactState>MH</merchantContactState>
      <merchantContactPostalCode>748446</merchantContactPostalCode>
      <merchantContactPhone>8452613573</merchantContactPhone>
      <mcc>8651</mcc>
        <idType>ACCOUNT</idType>
```

```
        <idNumber>789456123357</idNumber>

    </merchantVpa>

  </ReqAddMerchantVpa>

</ServiceRequest>
```

Case 3: <mark>With Invalid mcc</mark>

```xml
<?xml version="1.0" encoding="UTF-8"?>

<ServiceRequest xmlns="http://rssoftware.com/mrchaggr/schema/">

  <head ver="1.0" ts="" mrchOrgId="tstmrch" aggrOrgId="tstaggr" />

  <txn note="AddMrch" refId="" refUrl="www.IDBI.com" ts="" type="AddMerchantVpa" />

  <device>

    <mobile>7894564852</mobile>

    <geocode />

    <location />

    <ip />

    <type />

    <id />

    <os />

    <app />

    <capability />

    <hmac>0eed5751-d5da-43e4-8ada-eb5324fd2438</hmac>

  </device>

  <ReqAddMerchantVpa>

    <merchantVpa>

      <addr>merchant102@IDBI</addr>

      <defDrAc>309001013546</defDrAc>

      <defDrIfsc>RATN1234567</defDrIfsc>

      <defCrAc>309001013546</defCrAc>

      <defCrIfsc>RATN1234789</defCrIfsc>
```

```
        <expDt>30/18</expDt>

        <oneTime>TRUE</oneTime>

        <merchantCode>MERCHANT102</merchantCode>

        <merchantName>merchant102</merchantName>

        <merchantAddress1>KOLKATA</merchantAddress1>

        <merchantAddress2>INDIA</merchantAddress2>

        <merchantState>WB</merchantState>

        <merchantPostalCode>700079</merchantPostalCode>

        <merchantPhone>9863215428</merchantPhone>

        <merchantContactName>MERCHContact</merchantContactName>

        <merchantContactAddress1>MUMBAI</merchantContactAddress1>

        <merchantContactAddress2>INDIA</merchantContactAddress2>

        <merchantContactState>MH</merchantContactState>

        <merchantContactPostalCode>748446</merchantContactPostalCode>

        <merchantContactPhone>8452613573</merchantContactPhone>

        <mcc>865122</mcc>

          <idType>ACCOUNT</idType>

          <idNumber>789456123357</idNumber>

      </merchantVpa>

    </ReqAddMerchantVpa>

  </ServiceRequest>
```

Case 4: If PAN/AADHAAR/ACCOUNT not the id type

```
?xml version="1.0" encoding="UTF-8"?>

<ServiceRequest xmlns="http://rssoftware.com/mrchaggr/schema/">

  <head ver="1.0" ts="" mrchOrgId="tstmrch" aggrOrgId="tstaggr" />

  <txn note="AddMrch" refId="" refUrl="www.IDBI.com" ts="" type="AddMerchantVpa" />

  <device>

    <mobile>7894564852</mobile>
```

```xml
      <geocode />
      <location />
      <ip />
      <type />
      <id />
      <os />
      <app />
      <capability />
      <hmac>0eed5751-d5da-43e4-8ada-eb5324fd2438</hmac>
   </device>
   <ReqAddMerchantVpa>
     <merchantVpa>
       <addr>merchant102@IDBI</addr>
       <defDrAc>309001013546</defDrAc>
       <defDrIfsc>RATN1234567</defDrIfsc>
       <defCrAc>309001013546</defCrAc>
       <defCrIfsc>RATN1234789</defCrIfsc>
       <expDt>30/18</expDt>
       <oneTime>TRUE</oneTime>
       <merchantCode>MERCHANT102</merchantCode>
       <merchantName>merchant102</merchantName>
       <merchantAddress1>KOLKATA</merchantAddress1>
       <merchantAddress2>INDIA</merchantAddress2>
       <merchantState>WB</merchantState>
       <merchantPostalCode>700079</merchantPostalCode>
       <merchantPhone>9863215428</merchantPhone>
       <merchantContactName>MERCHContact</merchantContactName>
       <merchantContactAddress1>MUMBAI</merchantContactAddress1>
```

```
        <merchantContactAddress2>INDIA</merchantContactAddress2>

        <merchantContactState>MH</merchantContactState>

        <merchantContactPostalCode>748446</merchantContactPostalCode>

        <merchantContactPhone>8452613573</merchantContactPhone>

        <mcc>8651</mcc>

            <idType>ACCOUNTaaa</idType>

            <idNumber>789456123357</idNumber>

        </merchantVpa>

    </ReqAddMerchantVpa>

</ServiceRequest>
```

5.12 Acknowledgement for Add Merchant Vpa

Case 1: With correct mcc and id type & new vpa.

```
?xml version="1.0" encoding="UTF-8" standalone="yes"?>

    <ServiceResponse xmlns="http://rssoftware.com/mrchaggr/schema/">

      <resp status="SUCCESS">

        <ref id="merchant102@IDBI" errCode="SUCCESS"/>

      </resp>

    </ServiceResponse>
```

Case 2: Duplicate/existing merchant vpa

```
    <?xml version="1.0" encoding="UTF-8" standalone="yes"?>

    <ServiceResponse xmlns="http://rssoftware.com/mrchaggr/schema/">

      <resp status="FAILURE">

        <ref id="merchant102@IDBI" errCode="FAILURE"/>

      </resp>

    </ServiceResponse>
```

Case 3: With Invalid mcc

```
    <?xml version="1.0" encoding="UTF-8" standalone="yes"?>
```

```
<ServiceResponse xmlns="http://rssoftware.com/mrchaggr/schema/">

  <errors>

    <code>E003</code>

    <message>Invalid MCC</message>

  </errors>

</ServiceResponse>
```

Case 4: <mark>If PAN/AADHAAR/ACCOUNT not the id type</mark>

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<ServiceResponse xmlns="http://rssoftware.com/mrchaggr/schema/">

  <errors>

    <code>E009</code>

    <message>Invalid ID Type</message>

  </errors>

</ServiceResponse>
```

5.13 Get Txn Id

<mark>UAT</mark>

Case 1: <mark>Correct AuthToken</mark>

```
<?xml version="1.0" encoding="UTF-8"?>

< ReqGetTxnId xmlns:="http://rssoftware.com/mrchaggr/schema/">

        < head ver="1.0" ts="" mrchOrgId="tstmrch" aggrOrgId="tstaggr" />

        < txn />

        < device>

                <mobile>9434387212 </mobile>

                <geocode> </geocode>

                <location></location>

                <ip> </ip>
```

```
            <type> </type>
            <id> </id>
            <os> </os>
            <app></app>
            <capability></capability>
            <hmac>2ab58af6-332a-421d-922f-c7dfb61c93b2</hmac>
        </device>
</ ReqGetTxnId>
```

Case 2: <mark>Incorrect Authtoken</mark>

http://localhost:9999/merchaggr/getTxnId/1.0

```
<?xml version="1.0" encoding="UTF-8"?>
< ReqGetTxnId xmlns:IDBI="http://rssoftware.com/mrchaggr/schema/">
        < head ver="1.0" ts="" mrchOrgId="tstmrch" aggrOrgId="tstaggr" />
        < txn />
        < device>
                <mobile>9434387212 </mobile>
                <geocode> </geocode>
                <location></location>
                <ip> </ip>
                <type> </type>
                <id> </id>
                <os> </os>
                <app></app>
                <capability></capability>
                <hmac>2ab58af6-332a-421d-922f-c7dfb61c93</hmac>
        </ device>
</ ReqGetTxnId>
```

5.14 Acknowledgement for Get Txn Id

Case 1: Correct AuthToken

```xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
    <RespGetTxnId xmlns="http://rssoftware.com/mrchaggr/schema/">
      <txnId>RNBb761b1595f604d2492483f47ab174950</txnId>
    </RespGetTxnId>
```

Case 2: Incorrect Authtoken

```xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
    <ServiceResponse xmlns="http://rssoftware.com/mrchaggr/schema/">
      <resp status="FAILURE"/>
      <errors>
        <code>E001</code>
        <message>Invalid Auth token</message>
      </errors>
    </ServiceResponse>
```

5.15 Is Vpa Available

UPI URL: http://localhost:9999/merchaggr/isVpaAvailable/1.0

Case 1: If vpa not in record

```xml
<ServiceRequest xmlns="http://rssoftware.com/mrchaggr/schema/">
  <head ver="1.0" ts="" mrchOrgId="tstmrch" aggrOrgId="tstaggr" />
  <txn note="test collect" refId="test98300" refUrl="" ts="" type="GET TOKEN" orgTxnId=""
orgRespCode="" />
  <device>
    <mobile>9434387212</mobile>
    <geocode />
    <location />
    <ip>192.168.0.1</ip>
```

```xml
        <type />
        <id />
        <os />
        <app />
        <capability />
        <hmac>2afa1345-bfb1-49ff-a388-dddde1d57038</hmac>
    </device>
    <ReqIsVpaAvailable>
        <addr>
            <addr>iphonea@IDBI</addr>
        </addr>
    </ReqIsVpaAvailable>
</ServiceRequest>
```

Case 2: <mark>If vpa exist in the record</mark>

```xml
<ServiceRequest xmlns="http://rssoftware.com/mrchaggr/schema/">
    <head ver="1.0" ts="" mrchOrgId="tstmrch" aggrOrgId="tstaggr" />
    <txn note="test collect" refId="test98300" refUrl="" ts="" type="GET TOKEN" orgTxnId=""
orgRespCode="" />
    <device>
        <mobile>9434387212</mobile>
        <geocode />
        <location />
        <ip>192.168.0.1</ip>
        <type />
        <id />
        <os />
        <app />
```

```
    <capability />

    <hmac>0eed5751-d5da-43e4-8ada-eb5324fd2438</hmac>

  </device>

  <ReqIsVpaAvailable>

    <addr>

      <addr>iphone@IDBI</addr>

    </addr>

  </ReqIsVpaAvailable>

</ServiceRequest>
```

5.16 Acknowledgement/Response Is Vpa Available

Case 1: <mark>If vpa not in record</mark>

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

  <ServiceResponse xmlns="http://rssoftware.com/mrchaggr/schema/">

    <resp status="AVAILABLE">

      <ref id="iphonea@IDBI" errCode="SUCCESS"/>

    </resp>

  </ServiceResponse>
```

Case 2: <mark>If vpa exist in the record</mark>

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

  <ServiceResponse xmlns="http://rssoftware.com/mrchaggr/schema/">

    <resp status="UNAVAILABLE">

      <ref id="iphone@IDBI" errCode="SUCCESS"/>

    </resp>

  </ServiceResponse>
```

5.17 Activate Vpa

Request:

```
<ServiceRequest xmlns="http://rssoftware.com/mrchaggr/schema/">
        <head ver="1.0" ts="" mrchOrgId="tstmrch" aggrOrgId="tstaggr" />
        <txn note="ActivateVpa"  />
        <device>
                <mobile>9434387212 </mobile>
                <geocode>1,2 </geocode>
                <location></location>
                <ip>192.168.0.1 </ip>
                <type> </type>
                <id> </id>
                <os> </os>
                <app></app>
                <capability></capability>
                <hmac>1dd3a3f0-7623-4efc-bde4-9c1d1b1e4d9d</hmac>
        </device>
        <ReqActivateVpa>
        <vpa>neeloyghosh@IDBI</vpa>
        <ownerId>neeloyghosh</ownerId>
        <vpaId>21</vpaId>
   </ReqActivateVpa>
</ServiceRequest>
```

5.18 Acknowledgement/Response Activate Vpa

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
```

```
<ServiceResponse xmlns="http://rssoftware.com/mrchaggr/schema/">

  <resp status="SUCCESS">

    <ref id="RNBdfacdad3325340ee9f741650723b3c3b" errCode="SUCCESS"/>

  </resp>

</ServiceResponse>
```

5.19 Deactivate Vpa

Request:

Case 1: If the Vpa is not default vpa.

```
<ServiceRequest xmlns="http://rssoftware.com/mrchaggr/schema/">

        <head ver="1.0" ts="" mrchOrgId="tstmrch" aggrOrgId="tstaggr" />

        <txn note="ActivateVpa"  />

        <device>

                <mobile>9434387212 </mobile>

                <geocode>1,2 </geocode>

                <location></location>

                <ip>192.168.0.1 </ip>

                <type> </type>

                <id> </id>

                <os> </os>

                <app></app>

                <capability></capability>

                <hmac>1dd3a3f0-7623-4efc-bde4-9c1d1b1e4d9d</hmac>

        </device>

        <ReqActivateVpa>

        <vpa>ben15@IDBI</vpa>
```

```
        <ownerId>rssoft</ownerId>

        <vpaId>59</vpaId>

    </ReqActivateVpa>

</ServiceRequest>
```

Case 2: If the Vpa is default vpa.

```
<ServiceRequest xmlns="http://rssoftware.com/mrchaggr/schema/">

        <head ver="1.0" ts="" mrchOrgId="tstmrch" aggrOrgId="tstaggr" />

        <txn note="ActivateVpa"  />

        <device>

                <mobile>9434387212 </mobile>

                <geocode>1,2 </geocode>

                <location></location>

                <ip>192.168.0.1 </ip>

                <type> </type>

                <id> </id>

                <os> </os>

                <app></app>

                <capability></capability>

                <hmac>1dd3a3f0-7623-4efc-bde4-9c1d1b1e4d9d</hmac>

        </device>

        <ReqActivateVpa>

        <vpa>neeloyghosh@IDBI</vpa>

        <ownerId>neeloyghosh</ownerId>

        <vpaId>21</vpaId>

    </ReqActivateVpa>

</ServiceRequest>
```

5.20 Acknowledgement/Response Deactivate Vpa

Case 1: Success

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

    <ServiceResponse xmlns="http://rssoftware.com/mrchaggr/schema/">

    <resp status="SUCCESS">

      <ref id="RNB4e6dc13c6ed446bc96f4b0f82af66860" errCode="SUCCESS"/>

    </resp>

    </ServiceResponse>

Case 2: Failure

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

 <ServiceResponse xmlns="http://rssoftware.com/mrchaggr/schema/">

      <resp status="FAILURE">

      <ref id="RNB547fd137ec6b466abf85ecf6c019e59b" errCode="ERR00080"/>

      </resp>

    </ServiceResponse>

5.21 Change VPA Status for Merchant XML

Description: Using this api we will change the VPA status to ACTIVE/DEACTIVE/BLACKLIST.

Method: POST

Header:
Content-Type: application/xml
bypassSecurity: true

URL::http://10.143.136.143:9999/merchaggr/changeVpaStatus/1.0

<?xml version="1.0" encoding="UTF-8"?>

```
<ServiceRequest xmlns="http://rssoftware.com/mrchaggr/schema/">
<head ver="1.0" ts="" mrchOrgId="WLNETCFASTAG" aggrOrgId="WLNETCFASTAG" />
<txn note="hgfhgf" refId="gfhgf" refUrl="www.test.com" ts="" type="changeVpaStatus" />
<device>
<mobile>911258754463</mobile>
<geocode />
<location />
<ip />
<type />
<id />
<os />
<app>com.idbi.merchant.solution</app>
<capability />
<hmac>613e7be4-bfdd-49df-a747-1053a93f94db</hmac>
</device>
<ReqChangeVpaStatus>
<ownerId>WLQR200519181300022</ownerId>
<vpa>9483540449.qrpos@idbi</vpa>
<status>DEACTIVE</status>
</ReqChangeVpaStatus>
</ServiceRequest>
```

Response ::

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ServiceResponse xmlns="http://rssoftware.com/mrchaggr/schema/">
   <resp status="SUCCESS">
      <ref id="IDB8625feeaa8564d9b9664c4ef58af1599" errCode="SUCCESS"/>
```

</resp>

</ServiceResponse>

6.Data Description for API

API NAME	Data For Request	Data for Response
GetApiToken		
Validate Vpa		
Payment(Collect)		
Search by UPI ref		
Search by merchant ref		
AddMerchantVpa		
Get Txn ID		
Is Vpa Available		

ReqGetApiToken		

ServiceRequest	

ReqAddVpa	

ReqPaymentTxn			

ReqAddMerchantVpa	

ReqGetTxnId		

ServiceResponse


```
ValidateVpaResponse
```

```
      Result
              txnStatus
```

```
SearchResponse
```

Head

DATA NAME	DATA TYPE	DATA LENGTH
ver	String	Default
ts	Timestamp	Time Stamp Without Time Zone
mrchOrgId	String	Default
aggrOrgId	String	Default

TXN

DATA NAME	DATA TYPE	DATA LENGTH
note	String	50
refId	String	50
refUrl	String	100
ts	Timestamp	Time Stamp Without Time Zone
type	String	15
orgTxnId	String	50

txnId	String	35
orgRespCode	String	30
Validupto	NUMBER	DEFAULT
minAmount	NUMBER	18,2

Device

DATA NAME	DATA TYPE	DATA LENGTH
mobile	String	15
geocode	String	Default
location	String	Default
ip	String	Default
type	String	Default
id	String	Default
os	String	Default
app	String	Default
capability	String	Default
hmac	String	Default

VPA

DATA NAME	DATA TYPE	DATA LENGTH
addr	String	50

userBankCustId	String	20
username	String	30
userAddress	String	200
userEmail	String	30
userMobile	String	15
defDrAc	String	20
defDrIfsc	String	11
defCrAc	String	20
defCrIfsc	String	11
expDt	String	Default
onetime	Boolean	Default
idType	String	20
idNumber	String	30

MerchantVpa

DATA NAME	DATA TYPE	DATA LENGTH
addr	String	50
defDrAc	String	20
defDrIfsc	String	11
defCrAc	String	20
defCrIfsc	String	11
expDt	String	Default
oneTime	Boolean	Default
merchantCode	String	Default
merchantName	String	100

merchantAddress1	String	100
merchantAddress2	String	100
merchantState	String	50
merchantPostalCode	String	10
merchantPhone	String	12
merchantContactName	String	100
merchantContactAddress1	String	100
merchantContactAddress2	String	100
merchantContactState	String	50
merchantContactPostalCode	String	10
merchantContactPhone	String	12
mcc	String	6
idType	String	30
idNumber	String	20

Payer

DATA NAME	DATA TYPE	DATA LENGTH
addr	String	50
name	String	100
seqNum	String	Default
type	String	30
code	String	Default

Payee

DATA NAME	DATA TYPE	DATA LENGTH
addr	String	50
name	String	100

seqNum	String	Default
type	String	30
code	String	Default

Amount

DATA NAME	DATA TYPE	DATA LENGTH
value	Double	Default
curr	String	10

ReqValidateAVpa

DATA NAME	DATA TYPE	DATA LENGTH
addr	String	50

RespGetApiToken

DATA NAME	DATA TYPE	DATA LENGTH
token	String	200

Resp

DATA NAME	DATA TYPE	DATA LENGTH
Status	String	Default

Ref

DATA NAME	DATA TYPE	DATA LENGTH
id	String	Default
errCode	String	20

VpaResponse

DATA NAME	DATA TYPE	DATA LENGTH
status	String	20
name	String	50

Errors

DATA NAME	DATA TYPE	DATA LENGTH
code	String	50
message	String	20000

ref

DATA NAME	DATA TYPE	DATA LENGTH
type	String	30
seqNum	String	Default
addr	String	50
mobileNumber	String	12
orgAmount	String	Default
settCurrency	String	10
acNum	String	20
ifsc	String	11
mcc	String	6
approvalNum	String	50
respCode	String	Default

custref	String	12

RespGetTxnId

DATA NAME	DATA TYPE	DATA LENGTH
txnId	String	35

7.Error Code Description

SL #	Error Message	Error Code
1.	Invalid Auth token	E001
2.	Invalid MCC	E003
3.	No channel found or channel is not active	E004
4.	System Error	E005
5.	Aggregator Id, Merchant Id and hmac are Required	E006
6.	Invalid Search Request!	E007
7.	Invalid Payment Request!	E008
8.	Invalid Id Type!	E009
9.	Invalid TxnId!	ERR00094
10.	Invalid RefId!	ERR010
11.	SYSTEM_ERROR	MRER000
12.	NULL_VALUE	MRER002
13.	EMPTY_STRING	MRER003
14.	INVALID_FORMAT	MRER004
15.	MIN_LENGTH_REQUIRED	MRER005
16.	MAX_LENGTH_EXCEED	MRER006
17.	MIN_VALUE_REQUIRED	MRER007

18.	MAX_VALUE_EXCEED	MRER008
19.	NOT_NUMERIC	MRER009
20.	INVALID_ID_NUMBER	MRER010

8.VALIDATION DESCRIPTION:

API url	validation	Remarks
http://localhost:9999/merchaggr/authToken/1.0	In TXN -(type,refId)	Min 1 and max-35 for refID.Min 1 and max-20 for type
http://localhost:9999/merchaggr/searchByUpiRef/1.0	In TXN -(orgTxnId)	Min 1 and max-35 for orgTxnId.
http://localhost:9999/merchaggr/searchByMerchantRef/1.0	In TXN -(refId)	Min 1 and max-35 for refIID.
http://localhost:9999/merchaggr/validateVpa/1.0	In TXN –(orgTxnId,type,refId)	Min 1 and max-35 for refID.Min 1 and max-20 for type,Min 1 and max-35 for orgTxnId.
http://localhost:9999/merchaggr/isVpaAvailable/1.0	In TXN -(orgTxnId,type,refId)	Min 1 and max-35 for refID.Min 1 and max-20 for type,Min 1 and max-35 for orgTxnId.
http://localhost:9999/merchaggr/payment/1.0	In TXN -(orgTxnId,type,refId). In Payer-(name) In Payee -(Name)	Min 1 and max-35 for refID.Min 1 and max-20 for type,Min 1 and max-35 for orgTxnId. (Name) in Payer and Payee -Min 1 and max 99.
http://localhost:9999/merchaggr/addUserVpa/1.0	In TXN -(type,refId) In request-(defDrAc,defCrAc,expDt,useremail,userMobile,username)	Min 1 and max-35 for refID.Min 1 and max-20 for type.Min 10 and max 20,only numeric for defDrAc & defCrAc. Mm-yy fromat for

|		expDt.Max-50 characters with (asd@asd.com)format for email.Fixed 10 digits for Usermobile.Min-4 and Max – 40 for Username.
http://localhost:9999/merchaggr/addMerchantVpa/1.0	In TXN -(type,refId) In request-(addr,defDrAc,defCrAc,expDt,MerchantAddress,MerchantPhone,MerchantcontactPhone,Idtype,Id no.)	Min 1 and max-35 for refID.Min 1 and max-20 for type.Min 8 and max 255 for addr.Min 10 and max 20,only numeric for defDrAc & defCrAc. Mm/yy fromat for expDt.Min 8 and max 255 for MerchantAddress,Fixed 10 digits for MerchantPhone & MerchantContactPhone .(ACCOUNT/PAN/AADHAAR) format only for IdType.IdNo. For Type ACCOUNT-min 10 and max 20 digit ,Type PAN fixed format (ASDFG1234Q) ,Type AADHAAR fixed 12 Digits.

9.DEVICE VALIDATION DESCRIPTION:

API url	validation	Remarks
http://localhost:9999/merchaggr/payment/1.0	In device- (GEOCODE)	*Have to provide valid geocode.
	In device- (LOCATION)	*Alphanumeric, Min length-1, Max length- 100
	In device- (IP)	*Have to provide valid ip address.
	In device- (TYPE)	*6 VALID TYPES ARE-'MOB' , 'ATM', 'MATM','INET','USDB',USDC.

	In device- (ID)	Alphanumeric, Min length-0,Max length- 100
	In device- (OS)	*Alphanumeric, Min length-1, Max length- 20
	In device- (APP)	*Alphanumeric, Min length-1, Max length- 255

#Remarks contains * are MANDATORY.

Appendix A: Overall Architecture
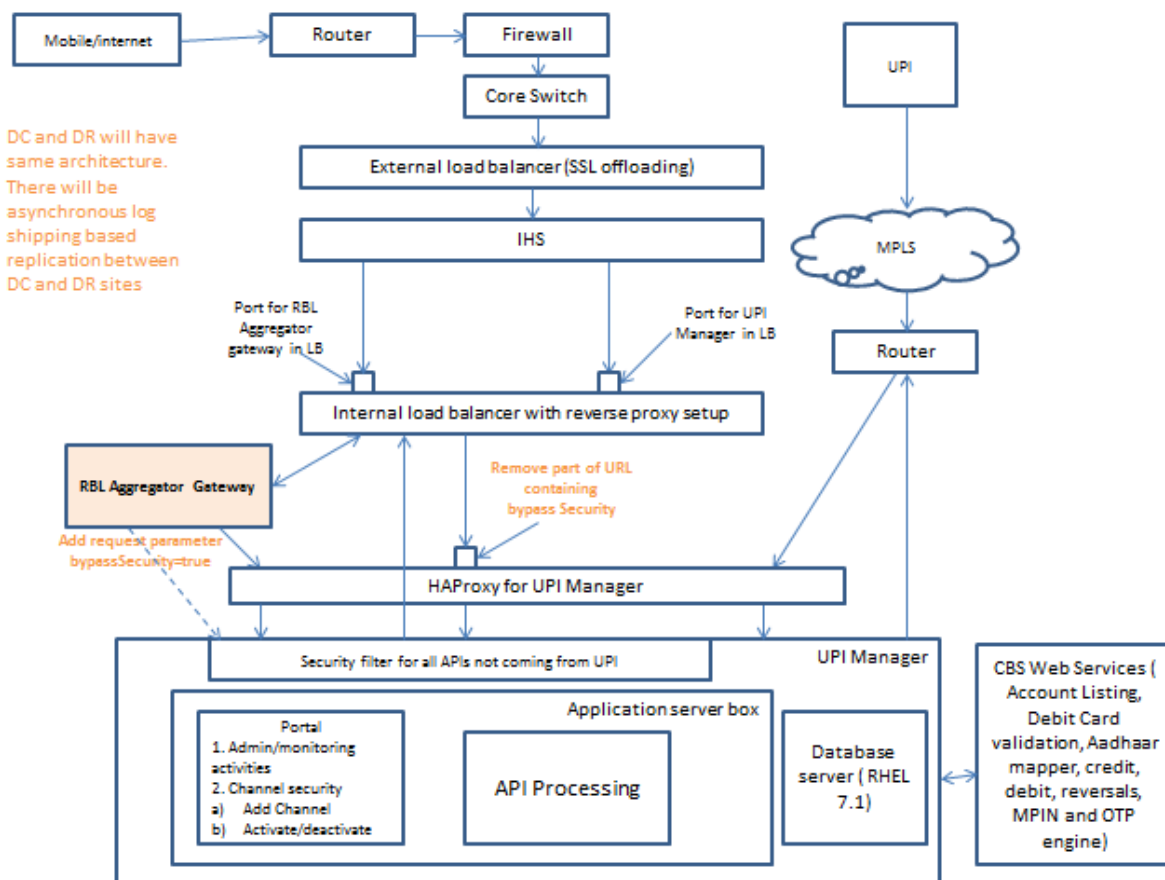
Appendix B: HMAC Generation

1. Create both the aggregator and merchant from portal, such that the API Key is correctly generated.
2. At present we do not display the API key of the merchant in Portal. We are updating the portal to display that.
3. For now please select the mrch_corp_api_key_prod field from the mrch_corp_details table for the merchant and pass it to the developer of partner.
4. The developer needs to do the following:
    a. For authToken API they need to create the HMAC as below

```
public static void main(String[] args) throws Exception {
        String KEY = "b2507c228ac12965cb534d3547c1ba513e046a23f303de5dea726a3921e2f82c";
        String hmacForAuthToken = new String(encryptUsingAes256Key("AGGREGATOR101|MC234", KEY));//Here AGGREGATOR101 is the aggregator code and MC234 is the merchant code as registered in UPI Manager
        System.out.println(e);
}

private static String encryptUsingAes256Key(String message, String key) throws Exception {
        byte[] messageBytes = message.getBytes();
        byte[] keyBytes = Hex.decode(key);
        SecretKey secretKey = new SecretKeySpec(keyBytes, "AES");
        Cipher cipher = Cipher.getInstance("AES");
        cipher.init(Cipher.ENCRYPT_MODE, secretKey);
        byte[] encryptedByte = cipher.doFinal(messageBytes);
        String encryptedText = Base64.encodeBase64String(encryptedByte);
        Log.debug("in security encrypted byte is"+encryptedByte.toString());
        Log.debug("in security encrypted text is"+encryptedText.toString());
        return encryptedText;
}
```

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For all the API, the token in the response of authToken API is to be used as HMAC.

Contact Information

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