

NPCI/2023-24/BBPS/006

31<sup>st</sup> August, 2023

To,  
All BBPOUs  
Bharat Bill Payment System,  
NPCI Bharat BillPay Ltd.

Respected Sir/Madam,

**Subject: Bharat Bill Payment System: Routing of On-US transactions via On-US API**

Bharat Bill Payment System is a Reserve Bank of India (RBI) conceptualized ecosystem which offers integrated, accessible, and interoperable payment and collection services across geographies with certainty, reliability and safety of transactions. Bharat Bill Payment System include all categories of payments and collections, both recurring and non-recurring in nature which helps both individuals and businesses alike who will benefit from the transparent and uniform payments experience, faster access to funds, improved efficiency and support from BBPS for customer query resolution.

It has been the endeavor to enhance customer experience through standardized and seamless process. In the benefit of the ecosystem, Bharat Bill Payment System has introduced On-US API.

The ON-US API would provide customers with a standard Transaction Reference ID for each ON-US transaction, which is currently not being generated for ON-US transactions. The standard transaction reference ID will enable customers to leverage the existing centralized redressal mechanism of BBPS for complaint resolution. Customers can raise complaints and disputes in centralized grievance redressal system (i.e. CANVAS), using the Transaction Reference ID. Customer can monitor the status of resolution of their queries in CANVAS using the Transaction Reference ID.

**Salient features of On-US API**

1. The On-US API is to be consumed by BBPOUs during the processing of an On-US transaction.
2. For transactions reported using this API, BBPS transaction reference ID will be generated on a real time basis and passed on to the BBPOU to be made available to the customer.
3. The BBPS transaction reference ID being generated is to be made available on the payment receipt being provided to the customer on a real time basis.
4. The On-US API will generate a positive response only for the transactions where Biller BBPOU and Customer BBPOU are the same.
5. The BBPS transaction reference ID will help handle customer grievances through the centralized customer grievance redressal, as per existing process.
6. There will be no switching fees and interchange fees for the transactions being routed through this API.

We advise the ecosystem partners to implement the API, thereby facilitating better customer experience.

The API specification for the same has been attached in annexure for your reference along with this circular.

Yours Sincerely,



Noopur Chaturvedi  
Bharat Bill Payment System,  
NPCI Bharat BillPay Ltd.

Enclosure:

Annexure: The API specification

**NPCI Bharat BillPay Limited**

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## Annexure

### Objective

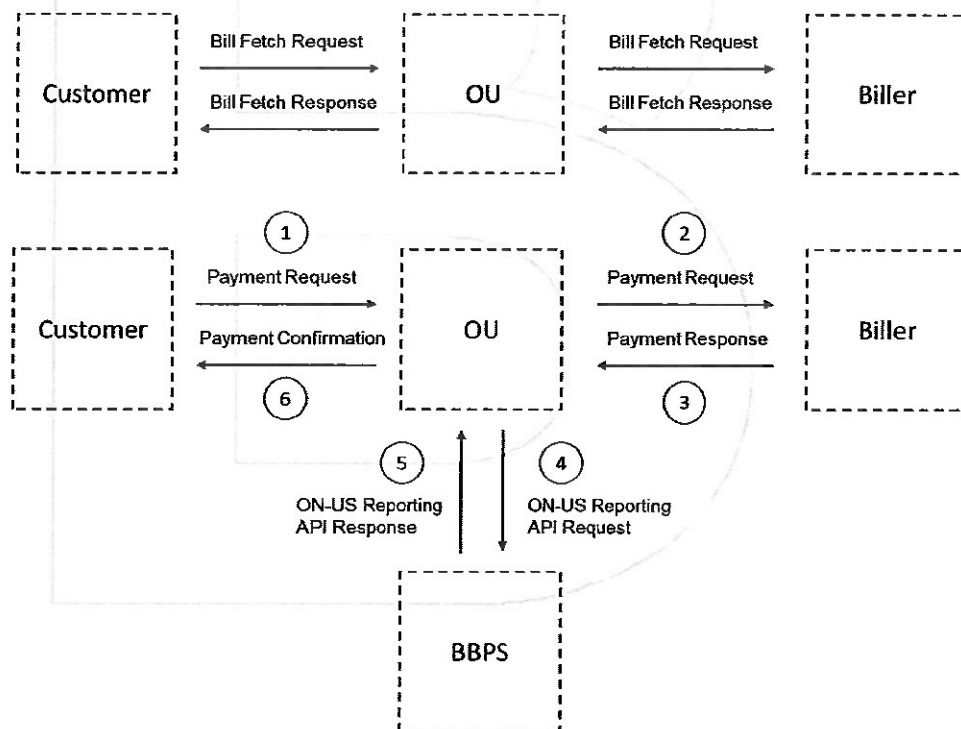
This document will layout the approach for the ON-US reporting API. BBPS has developed a new ON-US reporting API which will enable OUs to report ON-US transactions, which will be stored by BBPS. Response to the ON-US reporting API will have the ON-US ID generated by BBPS system.

### Problem Statement

Currently, there is no mechanism for OUs to report their ON-US transactions, resulting in disparity in data.

### Proposed Solution

With the new ON-US API, the OU will call this API to inform the BBPCU that it has made an ON-US transaction. On receiving the request, an ON-US reference ID will be generated from the BBPCU that will be sent to the OU in response. The ON-US reporting API will be "synchronous" API. This API will follow the structure of the payment request API.



### Endpoint URL

POST /bbps/SchemedOnUsReportingRequest/1.0/urn:referenceId:{referenceId}

### Sample Schemed ON-US Reporting XML Request

```

<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<ns2:SchemedOnUsReportingRequest
  xmlns:ns2="http://bbps.org/schema">
  <Head origInst="OU21" refId="YFASAPQYQATEBVWHJCFHYEMBDCE31321136" ts="2016-12-
  
```

```
21T11:43:10+05:30" ver="1.0"/>

<Analytics>
  <Tag name="SCHEMEDONUSREPORTINGSTART" value="2016-12-21T11:43:10+05:30"/>
  <Tag name="SCHEMEDONUSREPORTINGEND" value="2016-12-21T11:43:10+05:30"/>
</Analytics>

<Txn msgId="CHANHSWQYHF6542076JHCCDZAXXXXX0968" ts="2016-12-21T11:43:10+05:30"
txnReferenceId="OU2198734726" paymentRefId="NP04XXXX001" type="FORWARD TYPE REQUEST">
  <RiskScores>
    <Score provider="OU21" type="TXNRISK" value="030"/>
    <Score provider="BBPS" type="TXNRISK" value="030"/>
  </RiskScores>
</Txn>

<Customer mobile="9989899019">
  <Tag name="EMAIL" value="mk.chekuri@gmail.com"/>
  <Tag name="AADHAAR" value="499118665246"/>
  <Tag name="PAN" value="BXXCG7754K"/>
</Customer>

<Agent id="OU21AB21AGTA00000004">
  <Device>
    <Tag name="MOBILE" value="9034343434" />
    <Tag name="IP" value="25.54.34.161"/>
    <Tag name="INITIATING_CHANNEL" value="MOBB"/>
    <Tag name="IMEI" value="355332100883220"/>
    <Tag name="OS" value="29"/>
    <Tag name="APP" value="spay"/>
  </Device>
</Agent>

<BillDetails>
  <Biller id="PRIY00000NAT11"/>
  <CustomerParams>
    <Tag name="LAN Account Number" value="23124523562089"/>
  </CustomerParams>
</BillDetails>

<BillerResponse customerName="Manoj Chekuri" amount="200000" dueDate="2099-12-30"
billDate="2017-08-01" billNumber="LOAN001" billPeriod="August" >
  <Tag name="Advance Payment" minAmount="20000" maxAmount=" " />
  <Tag name="Part Payment" amountMultiple="200"/>
  <Tag name="Foreclosure" minAmount="" maxAmount="3000"/>
</BillerResponse>
<PaymentMethod OFFUSPay="No" paymentMode="UPIAutoPay" quickPay="Yes" splitPay="No"/>

<Amount>
<Amt COUcustConvFee="10" amount="60000" currency="356" custConvFee="0" />
```

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```

</Amount>

<PaymentInformation>
  <Tag name="UMN|VPA" value="4336620@0abc24963|abcte@stvpa"/>
</PaymentInformation>
</ns2:SchededOnUsReportingRequest>

<!-- In case of amount breakup: -->

<!-- <Amt amount="200" custConvFee="0" currency="356" COUcustConvFee="10"/>
  <AmountBreakUp>
    <BillAmt billNumber="1201" Amount="100"/>
    <BillAmt billNumber="1202" Amount="100"/>
  </AmountBreakUp>
</Amount> -->

```

### Scheded ON-US Reporting Request XML Tag Details

Index	XML Element	Description	Occurrence	Comments
1.1	<bbps:SchededOnUsPaymentRequest >	API Name	1..1	
1.1.1	xmlns	API schema namespace	1..1	
2.1	<Head>	Header of the message	1..1	
2.1.1	ver	Version of the API	1..1	
2.1.2	ts	Creation timestamp of the message which will be updated at each leg	1..1	
2.1.3	origInst	Code assigned to the BBPOU / BBPCU which forwards the transaction	1..1	This field should have the OU ID according to the BBPS format
2.1.4	refId	Unique identification assigned by the initiating BBPOU to unambiguously identify the transaction, which is passed on, unchanged, throughout the entire end-to-end chain, binding the Fetch and Payment messages	1..1	Should be according to the BBPS format
3.1	<Analytics>	Meta data primarily for analytics	0..1	
3.1.1	<Analytics.Tag>	Meta data primarily for analytics	1..n	
3.1.1.1	name	Name of the tag which is defined	1..n	
3.1.1.2	value	Value of the tag	1..n	
4.1	<Txn>	Transaction information, passed throughout the system, visible to all entities of the eco-system	1..1	
4.1.1	ts	Transaction initiation timestamp which will remain constant throughout all legs of the transaction	1..1	
4.1.2	msgId	Unique identification assigned by the initiating BBPOU for chaining a request and response message	1..1	Should be according to the BBPS format

4.1.3	type	Type of the message (Forward or Reversal Type)	1..1	
4.1.4	txnReferenceld	Transaction reference number provided by BBPS after which customer gets confirmation	1..1	Should be according to the BBPS format
4.1.7	paymentRefId	Unique ID generated at the time of Payment Confirmation, such as PG Reference Number, RRN, etc..	0..1	Should be according to the BBPS format
4.2	<Txn.RiskScores>	Risk evaluation associated with the transaction and the related parties in the transaction	0..1	
4.3	<Txn.RiskScores.Score>	Risk score related to the transaction and the entities	0..n	
4.3.1	provider	Entity providing the risk score	1..n	
4.3.2	type	Type of risk	1..n	
4.3.3	value	Value of risk evaluation ranging from "000" (No Risk) to "100" (Maximum Risk) with default score being "030"	1..n	
5.1	<Customer>	Details of the Customer viewing / paying the bill	1..1	
5.1.1	mobile	Customer mobile number	1..1	
5.2	<Customer.Tag>	Customer related details	0..n	
5.2.1	name	Name of the specific data requested from Customer	1..n	
5.2.2	value	Value of the specific data requested from Customer	1..n	
6.1	<Agent>	Agent related data	1..1	
6.1.1	id	Unique identification code allocated to the Agent	1..1	Should be the registered agent ID in BBPS ecosystem
6.2	<Agent.Device>	Details of Device from which the transaction was initiated	1..1	
6.3	<Agent.Device.Tag>	Device Tag	1..n	Initiating channel is mandatory
6.3.1	name	Name of the device which is used for transaction initiation	1..n	
6.3.2	value	Unique code or value assigned to the device	1..n	
7.1	<BillDetails>	Bill ID and bill related details to identify a Customer	1..1	
7.2	<BillDetails.Biller>	Bill related details	1..1	
7.2.1	id	Unique identification code allocated to the Biller	1..1	Should be the registered biller ID in BBPS ecosystem
7.3	<BillDetails.CustomerParams>	Customer bill fetch related details	1..1	Minimum one customer params is mandatory
7.4	<BillDetails.CustomerParams.Tag>	Customer bill fetch related reference field tag	1..n	
7.4.1	name	Name of the reference field as configured for the Biller	1..n	
7.4.2	value	Value of the reference field which uniquely identifies the customer for the Biller	1..n	
8.1	<BillerResponse>		0..1	

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8.1.1	customerName	Name of the customer	0..1*	
8.1.2	amount	Amount of the bill	1..1	This field is mandatory; value should be in Paisa
8.1.3	dueDate	Due date of the bill	0..1*	
8.1.4	billDate	Generation date of the bill	0..1*	
8.1.5	billNumber	Unique identifier of the bill	0..1*	
8.1.6	billPeriod	Billing period of the bill	0..1*	
8.2	<BillerResponse.Tag>	Biller response related tag indicating the various amount options provided by the Biller	0..n	
8.2.1	name	Name of the amount field assigned by the Biller	1..n	
8.2.2	value	Value of the amount field	1..n	
9.1	<AdditionalInfo>	Additional info	0..1	
9.2	<AdditionalInfo.Tag>	Tag indicating any additional information provided by the Biller	1..n	
9.2.1	name	Name of the field assigned by the Biller	1..n	
9.2.2	value	Value of the field	1..n	
10.1	<PaymentMethod>	Payment method opted by the Customer	1..1	
10.1.1	quickPay	Flag indicating if the payment is initiated without a fetch or not	1..1	
10.1.2	splitPay	Flag indicating if the bill is paid using two different payment modes	1..1	
10.1.3	OFFUSPay	Flag indicating if it is an electronic ON-US or OFF-US transaction	1..1	
10.1.4	paymentMode	The payment mode which is accepted from the Customer	1..1	
11.1	<Amount>	Amount related details for the payment	1..1	
11.2	<Amount.Amt>	Details of the bill payment amount made by the Customer	1..1	
11.2.1	amount	Actual amount paid by the Customer for the transaction	1..1	This field is mandatory
11.2.2	custConvFee	Customer convenience fee (CCF1) paid by the Customer BBPOU to Biller BBPOU	0..1	
11.2.3	COUcustConvFee	Customer BBPOU	0..1	
11.2.4	currency	Currency code of the transaction	1..1	
11.3	<Amount.SplitPayAmount>	Amount paid through the second payment mode	0..n	
11.4	<Amount.Tag>	Amount paid by the customer indicating different amount option combinations	1..n	
11.4.1	name	Name of the amount field assigned by the Biller	1..n	
11.4.2	value	Value of the amount field	1..1	
12.1	<PaymentInformation>	Payment information of the instrument which is used for making the bill	0..n	

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12.2	<PaymentInformation. Tag>	Payment information	1..n	
12.2.1	name	Name of the parameter for the chosen payment instrument	1..n	
12.2.2	value	Value of the parameter for the chosen payment instrument	1..n	

## Schemed ON-US Reporting Request XSD

```

<?xml version="1.0" encoding="UTF-8"?>
<xs:schema
xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:bbps="http://bbps.org/schema" targetNames
pace="http://bbps.org/schema"
elementFormDefault="unqualified" attributeFormDefault="unqualified">

  <xs:include schemaLocation="BBPS-Common.xsd" />

  <xs:element name="SchemedOnUsReportingRequest"
type="bbps:SchemedOnUsReportingRequestType">
    <xs:annotation>
      <xs:documentation>Schemed On Us Reporting Request</xs:documentation>
    </xs:annotation>
  </xs:element>
  <xs:complexType name="SchemedOnUsReportingRequestType">
    <xs:sequence>
      <xs:element type="bbps:headType" name="Head" minOccurs="1" maxOccurs="1" />
      <xs:element type="bbps:analyticsType" name="Analytics" minOccurs="0" maxOccurs="1" />
      <xs:element type="bbps:txnType" name="Txn" minOccurs="1" maxOccurs="1" />
      <xs:element type="bbps:customerDtlsType" name="Customer" minOccurs="1" maxOccurs="1" />
      <xs:element type="bbps:agentType" name="Agent" minOccurs="1" maxOccurs="1" />
      <xs:element type="bbps:billDetailsType" name="BillDetails" minOccurs="1" maxOccurs="1" />
      <xs:element type="bbps:planDetailsType" name="PlanDetails" minOccurs="0" maxOccurs="1" />
    <!-- Prepaid Recharge -->
      <xs:element type="bbps:billerResponseType" name="BillerResponse" minOccurs="0"
maxOccurs="unbounded" />
      <xs:element type="bbps:additionalInfoType" name="AdditionalInfo" minOccurs="0"
maxOccurs="1" />
      <xs:element type="bbps:pmtMtdType" name="PaymentMethod" minOccurs="1" maxOccurs="1"
/>
      <xs:element type="bbps:amountType" name="Amount" minOccurs="1" maxOccurs="1" />
      <xs:element type="bbps:pymntInfType" name="PaymentInformation" minOccurs="1"
maxOccurs="1" />
      <xs:element type="bbps:upmsType" name="Upms" minOccurs="0" maxOccurs="1" /> <!--
change for UPMS -->
    </xs:sequence>
  </xs:complexType>
</xs:schema>

```

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## Sample Schemed ON-US Reporting ACK

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>  
<ns2:SchemedOnUsReportingAck api="SCHEMED_ON_US_REPORTING_REQUEST"  
refId="UHKTULWSSNVHDPZZGNUUNORCLR31641225" onUsRefId="ONUSOU212460XYWDDVJZ"  
msgId="IZ1VHUAVVWPNVSWTBCIWOGAVZYH31641225" RspCd="Successful" ts="2023-06-  
14T12:25:49+05:30" xmlns:ns2="http://bbps.org/schema"/>
```

## Other validations

- Timestamp tolerance: Timestamp tolerance will be 299 Seconds (same as normal transaction).
- In case of Amount breakup – Sum should be equal to breakup sum.
- In case of a failure/ time-out – OUs will have to re-initiate the transaction.

