

To,

All NACH Member Banks,

Introduction of the Get Account Details API in Bharath Aadhaar Seeding Enabler (BASE)

Reference may be taken from NPCI Circular NPCI/2022-23/NACH/Circular No. 003 dated July 11, 2022, on Bharath Aadhaar Seeding Enabler (BASE) & NPCI/2023-24/NACH/Circular No. 009 dated October 09, 2023, on Bharath Aadhaar Seeding Enabler (BASE) with Full KYC. As part of the continued efforts to enhance customer experience and drive digitization, we are introducing an upgraded process flow for the Get Account Details API under the Bharat Aadhaar Seeding Enabler (BASE) application.

Get Account Details API: This API request will be initiated by BASE application to destination bank. With this service, customer can know whether his/her Aadhaar number is linked with the account number in their bank CBS and if it is linked, whether subsidy is enabled for that account from banks response along with other account details

Functional Process Flow:

- The customer will enter their Aadhaar number as an input to verify their account details under the "get account number" API option, which is available on the BASE web page.
- The customer must agree to the consent terms and complete the Captcha verification.
- Upon submitting the request, BASE will send the Aadhaar number to UIDAI for OTP validation.
- UIDAI will generate and send an OTP (One-Time Password) to the customer's registered mobile number.
- The customer will enter the received OTP on the BASE platform.
- BASE will send the entered OTP to UIDAI for verification. UIDAI will validate the OTP and respond to BASE.
- Upon successful OTP verification, BASE will use the NPCI mapper to find the bank linked to the provided Aadhaar number.
- BASE will perform necessary internal validations to ensure all criteria are met.
- Once validations are successful, BASE will send a request to the identified destination bank.
- The bank will provide the necessary account details back to BASE.
 - Aadhaar number last four digits (e.g. XXXX-XXXX-1234)
 - Account Number (e.g. XXXX-XXXX-1234)
 - Customer account type
 - Customer name as per bank CBS in masked format (e.g. RXJXSXEXKXR XK)
- Upon successful retrieval of account information, BASE will display the following details to the customer
 - Scenario 1: Aadhaar not in NPCI mapper.
 - The given Aadhaar number XXXX-XXXX-1234 is not seeded in NPCI mapper. You may proceed with seeding request.

- Scenario 2: Aadhaar is not enabled for receiving DBT at the bank or other reason
 - The given Aadhaar number XXXX-XXXX-1234 is not linked to an account as per the reject reason provided below by the bank:
- Scenario 3:
 - “The following are the details of account linked with the given Aadhaar number XXXX-XXXX-1234 linked for receiving subsidy”
 - Account Number (e.g. XXXX-XXXX-1234)
 - Customer account type
 - Customer name as per bank CBS in masked format (e.g. RXJSXEXKXRK)
 - Bank name Aadhaar linked with NPCI
 - Account status: “actual status provided by the bank”

Detailed technical specifications for Get Account Details API are provided in Annexure I. All the Member Banks are advised to take necessary steps for implementation on priority. The information herein may please be disseminated to all the concerned for necessary action.

With warm regards,

SD

Giridhar G.M.

Chief – Customer Success

BASE-GET BANK ACCOUNT DETAILS(TSD)

1.1

Document Revision History

Change No.	Revision Description	Revision / Version Number	Date of Change	Change By	Reviewed By	Approved By
I	Initial Document	1.0	18-12-24	Ramya R	Sankara Subramanian	Sampath Rangasamy
II	Changes to ACK message	1.1	19-12-24	Ramya R	Sankara Subramanian	Sampath Rangasamy

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Glossary

Term	Definition
BASE	Bharat Aadhaar Seeding Enabler
NPCI	National Payments Corporation of India.
API	Application Programming Interface
ACK	Acknowledgement
NACK	Negative Acknowledgement

1 Introduction

Customers will be able to get the details of their bank account linked to their Aadhaar both at NPCI mapper and bank .Customer can directly get these details from the BASE platform by doing Aadhaar based OTP authentication .

2 Overview of the existing process

Currently there is no such API to get the Account details of the customer by providing the Aadhaar number from the BASE application.

3 Proposed process flow

- Customer gives the Aadhaar number in BASE .
- BASE will internally validate and send the request to the bank.
- Bank will respond with the various account related details to BASE .
- BASE will display the details to the customer .

4 Functional flow of Get Bank Account Details API

- Customer will give only Aadhaar number as input in BASE web page.
- Customer has to agree for the consent and input Captcha .
- On submitting the request,BASE will send the request to UIDAI for the Aadhaar OTP validation .
- UIDAI sends the OTP to the customer and customer has to enter the OTP on BASE platform.
- BASE then sends the request to UIDAI for OTP verification and UIDAI will validate OTP and send the response to BASE .
- On succesful OTP verification,BASE will find the bank linked to the Aadhaar from NPCI mapper.
- Once the internal validations are succesful ,BASE sends the request to the destination bank.
- Bank will provide the necessary account details to BASE .
- BASE will display the details to customer.

5 Bank validations

Banks should validate the below details before sending response to BASE.

- If an Aadhaar is linked to single account,then bank has to check whether the subsidy flag is enabled in that account ,then respond with the account number ,account holder name and account type linked to the Aadhaar along with other details.
- If an Aadhaar is linked to multiple accounts ,then bank has to check the exact account number to which Aadhaar is linked and subsidy flag is enabled and send the appropriate response to BASE.
- Only for the cases where an account is linked to Aadhaar number provided in the request and subsidy flag is enabled,bank has to respond with result as 'SUCCESS' and provide the customer details to BASE.In all other cases ,it will provide the result as 'FAILURE' with the appropriate reason code given in the list below and bank will not provide the customer detail.
- If subsidy flag is not enabled to any account linked to the Aadhaar ,then bank has to consider it as failure and send the appropriate reason code response to BASE.No other account details will be given by bank.

6 Signing and Encryption:

- **BASE(Source) to Bank (Destination) - Request**
 - ❖ Encryption will be done using the public key certificate shared by Destination Bank.
 - ❖ Signing Using Private key certificate of the NPCI.
- **Bank(Destination) to BASE (Source) - Response**
 - ❖ Encryption will be done using the Public Key certificate shared by NPCI.
 - ❖ Signing Using Private key certificate of Destination Bank.

Attributes applicable for encryption are Aadhaar number, Account number, Account name, Account type and if any other personal information.

Algorithms to be used for signing and encryption:

XML Signing:

DigestMethod.SHA256, <http://www.w3.org/2001/04/xmldsig-more#rsa-sha256>

Encryption: RSA/ECB/PKCS1Padding

- SSL Handshake protocol will exchange public key certificates to authenticate server & client to each other and it is mandatory

7 Get Bank Account Details API with Aadhaar

Purpose :This API request will be initiated by BASE application to Destination bank. With this service customer can know whether his/her aadhaar number is linked with the account number in their bank CBS and if it is linked whether subsidy is enabled for that account from banks response along with other account details .

- All REST APIs are exposed as stateless service over HTTPS. All the APIs shall be initiated as an HTTPS call and acknowledged with an ACK/NACK message.

Following is the URL format for all APIs under the BASE interface:

<https://<host>/base/<api>/<ver>>

For example ,

<https://npci.org/base/GetBankAccDltsRqst/1.0>

host - API server address (Actual production server address will be provided to members at the time of rollout and all API clients should ensure that actual URL is configurable).

base - static value denoting the root of all API URL paths under the NACH API

api - name of the API URL endpoint.

ver - version of the API. Multiple versions of the same API may be available for supporting gradual migration. For this migration, default version will be "1.0".

7.1 Get Bank Account Details API Request

Privilege: Initiated by BASE

API type and format: Asynchronous API & XML format

```
<base:GetBankAccDltsRqst xmlns:base="http://npci.org/base/schema/" >
  <Head ver="1.0" ts="2021-10-16T10:02:00" />
  <Source type="CODE" value="BASE" name="" />
  <Destination type="CODE" value="XXXX" name="" />
  <Request id=" " type="GETBANKACC_DETAILS" refUrl=" "/>
  <ReqData custConsent="Y" filler1=" " filler2=" ">
    <Detail>
      data =Encrypted block of aadhaarNumber
    </Detail>
  </ReqData>
  <NpciRefId value="6afd4578-f021-4321-a908-04b355a758fa"/>
</base:GetBankAccDltsRqst>
```

7.1.1 Request Tag Specification

Index	Message Item	<XML Tag>	Occurrence
1	API Name	GetBankAccDltsRqst	1..1
2	API Schema namespace	xmlns	1..1
3	Header for the message	<Head>	1..1
4	Version of the API	ver	1..1
5	Time of request from the creator of the message (Transmission time)	ts	1..1
6	Source of the message	<Source>	1..1
7	Routing type of the Source banks - based on short code of the bank the corresponding URL will be identified	type	1..1
8	Actual value of the routing type shortcode of source	value	1..1
9	Name of the Source Bank	name	0..1
10	Destination of the message	<Destination>	1..1
11	Routing type of the Source banks - based on short code of the bank the corresponding URL will be identified	type	1..1
12	Actual value of the routing type short code of destination	value	1..1
13	Name of the Destination Bank	name	0..1
14	Request Message element	<Request>	1..1
15	Id of the Request generated by the originator	Id	1..1
16	Type of the request. Should be GETBANKACC_DETAILS	type	1..1

17	Reference URL for the transaction	refUrl	0..1
18	input data related to the request	<ReqData>	1..1
19	Details of the Input parameters of the request	<Details>	1..1
20	Customer Aadhaar number in encrypted	Data	1..1
21	Customer consent will always 'Y'	custConsent	1..1
22	Filler 1 - should be left blank	filler1	0..1
23	Filler 2 - should be left blank	filler2	0..1
24	Unique Identified assigned by NPCI for the request	<NpciRefId>	1..1
25	Actual unique value generated by NPCI	value	1..1

7.2 ACK/NACK from Bank

HTTP Response 202 should be initiated from bank end once the request is received by bank successfully. Else we consider it as request failed to post at bank endpoint as it is not reachable. So, http -202 resp is mandatory

7.3 Get Bank Account Details API Response

This API response will be initiated by Destination Bank for GET BankAccount Details to BASE application.

Privilege: Initiated by Bank

API type and format: Asynchronous & XML format

```
<base:GetBankAccDltsResp xmlns:base="http://npci.org/base/schema/" >
  <Head ver="1.0" ts="2017-10-16T10:02:00" />
  <Source type="CODE" value="XXXX" name="" />
  <Destination type="CODE" value="BASE" name="" />
  <Request id=" " type=" GETBANKACC_DETAILS" refUrl="" />
  <RespData subsidyFlag="Y" filler1=" " filler2=" ">
    <Detail>
      data =Encrypted block of accNo, accHolderName ,accType
    </Detail>
  <Resp ts="2021-10-16T10:02:00" result=" " reasonCode=" " />
</RespData>
  <NpciRefId value="6afd4578-f021-4321-a908-04b355a758fa" />
</base:GetBankAccDltsResp >
```

7.3.1 Response tag specification

Index	Message Item	<XML Tag>	Occurrence
1	API Name	<GetBankAccDltsResp>	1..1
2	API Schema namespace	xmlns	1..1
3	Header for the message	<Head>	1..1

4	Version of the API	ver	1..1
5	Time of request from the creator of the message (Transmission time)	ts	1..1
6	Source of the message	<Source>	1..1
7	Routing type of the Source banks - based on short code of the bank the corresponding URL will be identified	type	1..1
8	Actual value of the routing type shortcode of source	value	1..1
9	Name of the Source Bank	name	0..1
10	Destination of the message	<Destination>	1..1
11	Routing type of the Source banks - based on short code of the bank the corresponding URL will be identified	type	1..1
12	Actual value of the routing type short code of destination	value	1..1
13	Name of the Destination Bank	name	0..1
14	Request Message element	<Request>	1..1
15	Id of the Request generated by the originator	Id	1..1
16	Type of the request. ie GETACC_DETAILS	type	1..1
17	Reference URL for the transaction	refUrl	0..1
18	Response Data element	<RespData>	1..1
19	Response status element	<Resp>	1..1
20	time of response generation	ts	1..1
21	Result of the request(SUCCESS FAILURE)	result	1..1
22	Error reason codes for the failure message	reasonCode	1..1
23	Details of the Input parameters of the request	<Detail>	1..1
24	Encrypted block of accNo, accHolderName,accType	data	0..1
25	subsidy enabled flag for the account (Y N)	subsidyFlag	0..1
26	Filler 1 should be kept blank	filler1	0..1
27	filler 2 should be kept blank	filler2	0..1
28	Unique Identified assigned by NPCI for the request	<NpciRefId>	1..1
29	Actual unique value generated by NPCI	value	1..1

8 Elements and Attributes Definition

Element: Root

Definition: XML root element representing each API (base:GetBankAccDltsRqst, GetBankAccDltsResp)

Attribute: xmlns

Definition: API Schema Namespace.

Data Type: Alphanumeric

Format: Min Length: 1
Max Length: 255

Element: <Head>

Definition: Header of the Message

Attribute: ver

Definition: Version of the API

This is the API version. NPCI may host multiple versions for supporting gradual migration. As of this specification, default production version is "1.0".

Data Type: Float

Format: Min Length: 1 (*length is not checked as version should be "1.0"*)
Max Length: 6

Attribute: ts

Definition: Time of request from the creator of the message. API request time stamp. Since timestamp plays a critical role, it is highly recommended that devices are time synchronized with a time server.

Data Type: ISODateTime

Format: Min Length: 19

Max Length: 19

YYYY-MM-DDThh:mm:ss

(e.g., 1997-07-16T19:20:30)

Where,

YYYY = Four-digit year

MM = Two-digit month (01=January, etc.)

DD = Two-digit day of month (01 through 31)

hh = Two digits of hour (00 through 23) (am/pm NOT allowed)

mm = Two digits of minute (00 through 59)

ss = Two digits of second (00 through 59)

GMT in hours and minutes

Element: <Request>

Definition: This element contains the Request details and is visible to all parties involved in the transaction processing. This element is populated by the originator of the request and the same must be passed across all the entities.

Attribute: id

Definition: Unique Identifier for the request across all entities. This will be created by the originator. This field will be used to identify each request uniquely across all the entities.

Data Type: Alphanumeric

Format: Min Length: 1

Max Length: 22

Attribute: type

Definition: This attribute describes the type of the Request

Data Type: Enumeration or Code. Length check is not there as it should be in the list of prescribed types. The allowed values are **GETBANKACC_DETAILS** as per the request initiated by user. In response the type value should be same as received in the request.

Format: Min Length: NA

Max Length: NA

Attribute: refUrl

Definition: URL for the transaction

Data Type: Alphanumeric with special characters

Format: Min Length: 1

Max Length: 35

Element: <Source>

Definition: This element contains the details of the originator of the request and the same must be passed across all the entities.

Attribute: type

Definition: This indicates the routing type to be used. Currently allowed routing type is only Bank short code and it should be always 'CODE'. Length check will not be done as it should be always CODE

Data Type: Alpha

Format: Min Length: NA

Max Length: NA

Attribute: value

Definition: This attribute contains the actual value of the routing type and this value will be used to identify the endpoint URL of the participant which is used to initiate any communication from NPCI

Data Type: Alpha

Format: Min Length: 4

Max Length: 4

Attribute: name

Definition: This attribute carries the name of the Source.

Data Type: Alphabets with special characters like dot, space, hyphen & single quote

Format: Min Length: 0

Max Length: 100

Element: <Destination>

Definition: This element contains the details of the originator of the request and the same must be passed across all the entities.

Attribute: type

Definition: This indicates the routing type to be used. Currently allowed routing type is only Bank short code and it should be always 'CODE'. Length check will not be done as it should be always CODE

Data Type: Alpha

Format: Min Length: NA

Max Length: NA

Attribute: value

Definition: This attribute contains the actual value of the routing type and this value will be used to identify the endpoint URL of the participant which is used to initiate any communication from NPCI. Allowed value is bank shortcode

Data Type: Alphanumeric

Format: Min Length: 4

Max Length: 4

Attribute: name

Definition: This attribute carries the name of the destination.

Data Type: Alphabets with special characters like dot, space, hyphen & single quote

Format: Min Length: 0

Max Length: 100

Element: <Detail>

Definition: This element contains the parameters of the actual request and the same must be passed to Destination for processing.

Attribute: data

Definition: This attribute carries the encrypted block of Aadhaar number passed in the request.

Data Type: Numeric
Format: Min Length: 1
 Max Length: 35

On decryption actual data provided under this field will have the below clear format .

<aadhaarNumber>"123456789012"</aadhaarNumber>

Attribute: custConsent

Definition: To provide the customer consent on this parameter value.

Data Type: ENUM
Format: Min Length: 1
 Max Length: 1

Values may be Y/N

Attribute: filler1/ filler2

Definition: for the use of future purpose in both request and response. It should be left blank

Data Type: Alphanumeric
Format: Min Length: 1
 Max Length: 50

Element: <Resp>

Definition: This element contains the information about the Response.

Attribute: result

Definition: This attribute is used to indicate the result of the requested message. And it should have the any one of the values from the pre-defined list.

Data Type: Code
Format: Min Length: NA
 Max Length: NA

Values:

Code	Value
SUCCESS	If Aadhaar is linked to account and subsidy flag is enabled
FAILURE	All other cases it will be considered as Failure.

Attribute: reasonCode

Definition: This attribute is used to indicate the reasons for rejection in case of failure. Or the status code in case of success and it should have the one or many values from the pre-defined list. Multiple error codes will be separated by comma.

Data Type: Code
Format: Min Length: NA
 Max Length: NA

Values : For success response value should be '0000' .For failure, reason codes can be referred from Appendix1.

Element: <Detail> in Response

Definition: This element contains the parameters of the actual response and the same must be passed to BASE from destination bank.

Attribute: data

Definition: This attribute carries the Encrypted block of accNo, accHolderName ,accType passed in the response

Data Type: Alphanumeric

Format: Min Length: 1
Max Length: 500

On decryption actual data provided under this field will have the below clear format .

```
<accNo>"123456789034"</accNo>
<accHolderName>"GUPTA"</accHolderName>
<accType>"01"</accType>
```

Values : accType values can be referred from Appendix 1.

Attribute: subsidyFlag

Definition: This will provide if the subsidy flag is enabled for the account .

Data Type: Alphanum
Format: Min Length: 1
Max Length: 2

Values : Values will be Y or N.

Attribute: Npcirefld

Definition: This attribute is used to indicate the uniqueness for each request which will be generated by the NPCI only. In the request this attribute value should be given and in response destination bank should provide the exact value which they have received in the request file

Data Type: Code
Format: Min Length: 36
Max Length: 36

9 GET Bank Account Details -ACK/NACK (BASE to Destination Bank)

This ACK/NACK will be a HTTP Response by BASE to destination bank for GETBANKACC_DETAILS.

```
<base:GetBankAccDltsRespAck xmlns:base="http://npci.org/base/schema/">
  <NpciRefId value="6afd4578-f021-4321-a908-04b355a758fa"/>
  <Resp ts="2017-10-16T10:02:00" result="SUCCESS" errCode=" " rejectedBy=" " />
</base:GetBankAccDltsRespAck>
```

Index	Message Item	<XML Tag>	Occurrence
1	API Name	<GetAccDltsRespAck>	1..1
2	API Schema namespace	xmlns	1..1
3	Unique Identified assigned by NPCI for the request	<NpciRefId>	1..1
4	Actual unique value generated by NPCI	value	1..1
5	Response of the Message	<Resp>	1..1
6	Time of response from the sender of the message	ts	1..1
7	Result of the request	result	1..1
8	Error reason codes for the failure message	errCode	0..1

9	Actual rejecter of the message. NPCI or Destination who rejected the message	rejectedBy	0..1
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10 Sample Request Data

Below sample response contains the response without signature.

```
<base:GetBankAccDltsRqst xmlns:base="http://npci.org/base/schema/" >
  <Head ver="1.0" ts="2021-10-16T10:02:00" />
  <Source type="CODE" value="BASE" name=" " />
  <Destination type="CODE" value="SBIN" name="" />
  <Request id="1200001" type="GETBANKACC_DETAILS" refUrl="" />
  <ReqData custConsent="Y" filler1=" " filler2=" " >
    <Detail>
      data =Encrypted block of aadhaarNumber
    </Detail>
  </ReqData>
  <NpciRefId value="6afd4578-f021-4321-a908-04b355a758fa"/>
</base:GetBankAccDltsRqst>
```

10.1 Sample Response Data (Success)

Below sample response contains the response without signature.

```
<base:GetBankAccDltsResp xmlns:base="http://npci.org/base/schema/" >
  <Head ver="1.0" ts="2017-10-16T10:02:00" />
  <Source type="CODE" value="SBIN" name="" />
  <Destination type="CODE" value="BASE" name=" " />
  <Request id="1200001" type="GETBANKACC_DETAILS" refUrl="" />
  <RespData subsidyFlag="Y" filler1=" " filler2=" " >
    <Detail>
      data =Encrypted block of accNo,accHolderName,accType
    </Detail>
  </RespData>
  <Resp ts="2021-10-16T10:03:00" result="SUCCESS" reasonCode="0000"/>
  <NpciRefId value="6afd4578-f021-4321-a908-04b355a758fa"/>
</base:GetBankAccDltsResp>
```

10.2 Sample Response Data (Failure)

Below sample response contains the response without signature.

```
<base:GetBankAccDltsResp xmlns:base="http://npci.org/base/schema/" >
  <Head ver="1.0" ts="2017-10-16T10:02:00" />
  <Source type="CODE" value="SBIN" name="" />
  <Destination type="CODE" value="BASE" name=" " />
  <Request id="1200001" type=" GETBANKACC_DETAILS" refUrl="" />
  <RespData>
    <Resp ts="2021-10-16T10:03:00" result="FAILURE" reasonCode="B005"/>
  </RespData>
  <NpciRefId value="6afd4578-f021-4321-a908-04b355a758fa"/>
</base:GetBankAccDltsResp>
```


11 Appendix

11.1 List of values for accType

- 01 -Savings account
- 02-Current account
- 03-OD account
- 04-Others

11.2 Bank reasonCode

Code	Name
000	Account Active
G01	No data available in bank CBS for given Aadhaar number for DBT
G02	Account inoperative
G03	Dormant account
G04	A/c Blocked or Frozen
G05	Account requires KYC document

End of the Document