Protocol for WEB API

CBRICS Application

Version 1.13

National Stock Exchange of India Ltd
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Revision History

Date	Change Description	Edited By	Version
19-June-18	Draft Version		1.0
29-June-18	New APIs added POST /rest/v1/order/status POST /rest/v1/marketwatch/activeissues POST /rest/v1/participant/find		1.1
	Cosmetic changes		1.2
14-Dec-20	Refined all APIs		1.3
04-Oct-21	Added filter field "panNo" in POST /rest/v1/participant/find		1.4
16-May-22	APIs URL changed		1.5
05-Aug-22	APIs for unregistered participants		1.6
25-Oct-22	Multiple mobile and email support in Unreg. Participants API		1.7
16-Nov-22	Change in Date format highlighted in yellow : Date format as dd-MM-yyyy Changes in General Instructions Changes in following APIs POST /rest/v1/order POST /rest/v1/order/update GET /rest/v1/order/sellreportings GET /rest/v1/order/buyinstructions POST /rest/v1/marketwatch/activeissues		1.8
18-Dec-22	• Added field "buyerYieldViolationReason" in order request structure and response structure • Added field "orderNumber" in order response structure • Added following APIs for unregistered participants • POST /rest/v1/unreg/bankacc/all • POST /rest/v1/unreg/dpacc/all • Added Settlement APIs • Added Callback APIs		1.9
15-Jan-2023	Introduction Chapter : Added API error handling details Added chapter "Payment Gateway API" detailing the payment page URL and other APIs for payment gateway Changes in authentication mechanism for the call back apis. Added notification for payment gateway transactions. Added Annexure 3 detailing the payment gateway redirect url mechanism.		1.10
05-Apr-2023	Added following APIs POST /rest/v1/order/sellreportings Changes in following APIs due to addition of new filters and new fields in response structures (unregistered participant, bank account and dp account) POST /rest/v1/unreg POST /rest/v1/unreg/update		1.11

	POST /rest/v1/unreg/all GET /rest/v1/unreg/{id} POST /rest/v1/unreg/bankacc POST /rest/v1/unreg/bankacc/all POST /rest/v1/unreg/dpacc POST /rest/v1/unreg/dpacc/all POST /rest/v1/settle/order/all POST /rest/v1/paytxn		
19-May-2023	Following new APIs to manage approved (final) unregistered participants and their bank/DP accounts POST /rest/v1/unreg/final/updatecontact POST /rest/v1/unreg/final/delete POST /rest/v1/unreg/bankacc/final/markdefault POST /rest/v1/unreg/bankacc/final/updatestatus POST /rest/v1/unreg/dpacc/final/markdefault POST /rest/v1/unreg/dpacc/final/updatestatus		1.12
06-Dec-2023	Changes in following APIs due to addition of new fields in response structures POST /rest/v1/order POST /rest/v1/order/update GET /rest/v1/order/sellreportings POST /rest/v1/order/sellreportings GET /rest/v1/order/buyinstructions		1.13

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Introduction

This document describes the Web API's to programmatically access and exchange data with CBRICS Platform(HOST system).

The document outlines the messaging protocols and structures for developing such interface.

General Instructions

1. Following headers need to be provided in all API calls
    -   **Content-Type**: Header value should be "application/json"
    -   **loginKey**: Header value should be the token value received in successful login response (see below). This header is not required in case of login API.
2. Path parameters and query parameters in the URL's must be encoded using percentage encoding. (Refer http://www.w3schools.com/tags/ref_urlencode.asp for details)
3. All request and response messages are in JSON (Javascript Object Notation) format. (Refer http://www.json.org/ for details).
4. Some of the key specifications related to JSON and standards followed for the API's are as follows
    -   JSON is built on 2 structures. Map containing key value pairs and an ordered list of values.
    -   A value could be boolean (true / false), number, decimal, String or a structure (List or Object).
    -   Object or key value pair structure consists of keys which are strings and values of any of the above types. E.g. {"name":"Amit", "age":25}
    -   List contains list of values. E.g. ["Amit", "Ajay", "Vikas"]
    -   A Boolean has only 2 values true or false.
    -   String values are enclosed in single quote or double quotes. e.g. "name", "Amit", "Pending"
    -   Numbers and decimals are represented without any thousand - separator character. Decimal indicator is dot (".")
    -   All dates, times and datetimes are represented as strings and in Indian standard time. Dates are formatted using format "dd-MM-yyyy" (E.g. 01-01-2018). Time are formatted as "hh24:mm:ss". Date times are formatted as "dd-MM-yyyy hh24:mm:ss" (E.g. 01-01-2016 15:30:00).
5. All URLs for API will be always in lower case.
6. All JSON field names will follow camel-hump style of naming. A field with multiple words would be concatenated without spaces. All characters will be in lower case. First characters of words other than the first word in the field name will be in upper case. For e.g. field for "Order Number" could be represented by field name "orderNumber". Other examples are "firstName", "lastName".
7. In case of JSONs representing an object or a key-value pair, keys with null values could be omitted from the JSON.

Common Error Response

All API's can throw errors in the form of a common error response JSON along with HTTP status code. HTTP Status codes are as follows

Status Code	Description
400	Indicates a validation / business logic error
401	Indicates that the login session is not established or has expired. In case 2 sessions are created using same login credentials, then the old session will be expired. Also if a session is inactive for a predefined amount of time then the session will be expired.
404	Resource does not exist
500	Any other application error. Such errors are to be reported to the support desk.

Common Error Response JSON

Field	Type	Description
code	Number	Http Status Code. See above
messages	Array	In case of errors pertaining to parsing of input JSONS, each element of the array will be a structure (see"Field Error Structure" below) In case of errors pertaining to rule validation failures, each element of the array will be a "String" (maximum length 100) depicting the error.

Field Error Structure

Field	Type	Description
field	String(100)	Input JSON field name.
msg	String(100)	Field validation error message.

In almost all APIs 2 levels of validations are performed. In first level the input JSON message is validated for structure. Every field is validated for datatype, length and any other constraints specified for that field. Typically all field level validation errors are accumulated and given in a single response containing field wise errors using the "Field Error Structure".

In the 2nd level of validation for the APIs various functional rules are verified and error is thrown immediately upon violation of the functional rule. Typically these errors are not progressive I.e. the API skips further validation and processing immediately after occurrence of first validation failure.

Sample Response

```
{
     "code":400,
     "messages":["Access Denied"]
}
{
"code": 400,
"messages": [
         {
"msg": "Participants: No of items in the list should be greater than or
```

```
equal to 1",
"field": "participantList"
        }
    ]
}
```

Environment Details

Base URL for all APIs will be as follows

Testing Environment: https://bricsonlinereguat.nseindia.com/bondsnew

Live Environment: https://bricsonline.nseindia.com/bondsnew

Enabling API

1. Create a user for accessing the APIs

    a) Login to CBRICS portal (URL : <baseurl>/rest/login) using your administrator credentials.

    b) Go to "User Management" and add a new user. (Type = Dealer, Status = Active)

2. Convert the user to an API user by sharing participant code and login id of the newly created user with exchange.

3. Participants may optionally implement call back APIs for receiving notifications. To enable notifications the call back base URL needs to be shared with exchange.

Common API

POST /rest/v1/login

This API authenticates the user and creates a session for the user in the Host System. The session is identified by an alphanumeric login key in the response.

Method	POST
Url	<baseurl>/rest/v1/login
Request	JSON
Response	JSON

Request JSON

Field	Type	Mandatory	Description
domain	String(10)	Yes	Participant Code
login	String(10)	Yes	Login Id
password	String(20)	Yes	Password.
newPassword1	String(20)	No	Optional new password. Should follow "Annexure 1 - Password Policy".

Sample Request

```
{
     "domain": "PART1",
     "login": "PART1",
     "password": "a#12G34h4r5t"
}
// request with new password
{
     "domain": "PART1",
     "login": "PART1",
     "password": "a#12G34h4r5t",
     "newPassword1": "3#Kj1i50u7t1"
}
```

Response JSON

Field	Type	Description
ownerCode	String(10)	Participant Code. Value same as in input field "domain"
login	String(10)	Login Id. Same as input
status	String(1)	S = Success F=Failed. Only reason field will be appended in the response P=Password expired. Only reason field will be appended in the response. Invoke the login API again with newPassword1
reason	String(100)	Login fail reason. FAIL Reasons : • Invalid Login Id/Password. • User has been disabled due to incorrect password attempts. • User has been disabled.
loginKey	String(30)	Login Key. This key is to be set in "loginKey" header for all subsequent requests.

firstName	String(50)	User first name
middleName	String(50)	User middle name
lastName	String(50)	User last name
lastLogin	Number	Last login date time (expressed as millis since epoch time i.e. 01-jan-1970)
serverTime	Number	Server time at the time of login. (expressed as millis since epoch time i.e. 01-jan-1970)

Sample Response – Login Success

```
{
      "status":"S",
      "reason":null,
      "loginKey":"122f2f48a91c94808a93",
      "ownerCode":"PART1",
      "login":"PART1",
      "firstName":"Amit"
      "middleName":null,
      "lastName":null,
      "lastLogin":1525773311206,
      "serverTime":1461918333567,
}
```

Sample Response – Login Failed

```
{
      "status":"F",
      "reason":"Invalid Login Id/Password"
}
```

Sample Response – Password Expired

```
{
      "status":"P",
      "reason":"Change Password"
}
```

GET /rest/v1/logout

This API closes the current session in the HOST system

Method	GET
Url	<baseurl>/rest/v1/logout
Request	NONE
Response	JSON

Response JSON

Field	Type	Description
status	String(1)	C = Closed

Sample Response

```
{
      "status": "C"
}
```

Order API

POST /rest/v1/order
This API adds a new deal reporting (from seller side) or a buyer standing instruction.

Reporting by Seller has to be confirmed by Buyer. Buyer Standing Instructions are standing instructions by buyer to confirm a deal reporting by seller immediately.

Method	POST
Url	<baseurl>/rest/v1/order
Request	JSON
Response	JSON

Request JSON
Map containing following fields

Field	Type	Mandatory	Description
standingInstFlag	String(1)	No	Indicates if deal is being reported by seller or it is a standing buyer instruction Y=Standing Buyer Instruction N=Reporting by Seller Default value = N
dealType	String(1)	Yes	Deal Type D=Direct B=Brokered I=Inter scheme transfer. Valid only for "Reporting by Seller"
symbol	String(30)	Yes	ISIN of the bond
buyParticipantLoginId	String(30)	Yes	Buy Participant Login Id. In case of "Reporting by Seller" it should be logged in participant id.
sellParticipantLoginId	String(30)	Yes	Sell Participant Login Id. In case of "Standing Buyer Instruction" it should be logged in participant id.
price	Decimal(15,4)	Yes	Price in Rupees. Up to 4 decimal places.
value	Decimal(17,2)	Yes	Value in Rupees. Up to 2 decimal places.
accrInt	Decimal(17,2)	Yes	Interest in Rupees. Up to 2 decimal places.
settle	Number	Yes	Settlement Type 0 = Same Day 1 = T + 1 2 = T + 2
sendFor	String(1)	Yes	Confirmation method. Valid only for "Reporting By Seller" C = Optional Buyer Confirmation (Auto confirmed after a fixed time of reporting) M = Mandatory Buyer Confirmation In case of standing instruction,

			value in this field will be validated but ignored
yieldType	String(1)	Yes	Yield Type P = YTP C = YTC M = YTM
yield	Decimal(15,4)	Yes	Yield. Up to 4 decimal places.
tradeDate	String(10)	Yes	Trade Date. Can be previous trading date till a particular cutoff time. Else it has to be current date. Format: dd-MM-yyyy E.g. : 01-06-2018
tradeTime	Time	Yes	Time at which trade was concluded. Format : HH:mm E.g. : 14:45
sellerRefNo	String(50)	No	Reference number valid for "Reporting by Seller"
buyerRefNo	String(50)	No	Reference number valid for "Standing Buyer Instruction"
putCallDate	String(10)	Yes/No	Put call date is mandatory if Yield Type is either YTP or YTC. For Yield Type YTM put call date is issue maturity date. Format: dd-MM-yyyy
sellerYieldViolationReason	String(2)	Yes/No	Applicable only if yield is not within system level bands. Valid values 1=Credit Related Reasons, 2=Liquidity Related Reasons In case of sell reporting (standingInstFlag="N") it is mandatory if yield band is violated. In case of buy standing instruction (standingInstFlag="Y") if seller is unregistered participant then it is optional. If seller is registered participant then it is ignored.
buyerYieldViolationReason	String(2)	Yes/No	Applicable only if yield is not within system level bands. Valid values 1=Credit Related Reasons, 2=Liquidity Related Reasons In case of buy standing instruction (standingInstFlag="Y") it is mandatory if yield band is violated. In case of sell reporting (standingInstFlag="N") if buyer is unregistered participant then it is optional. If buyer is registered

			participant then it is ignored.

Sample Request

```
{
     "standingInstFlag": "N",
     "dealType": "D",
     "symbol": "INE752E07FF5",
     "buyParticipantLoginId": "BUYER1",
     "sellParticipantLoginId": "SELLER1",
     "price": 100.512,
     "value": 12500000,
     "accrInt": 0,
     "settle": 1,
     "sendFor": "C",
     "yieldType": "M",
     "yield": 10.4512,
     "tradeDate": "28-06-2018",
     "tradeTime": "14:25",
     "sellerRefNo": "TXNREF0001",
     "buyerRefNo": null


}
```

Response JSON

Map containing following fields

Field	Type	Description
id	Number	Unique Order Id (for the day). Required for modification / cancellation of deal / standing instruction.
orderNumber	String(15)	Unique Transaction Number
standingInstFlag	String(1)	Same as input.
dealType	String(1)	Same as input.
buyerDealType	String(1)	Buyer Deal Type. D=Direct B=Brokered I=Inter scheme transfer
symbol	String(30)	Same as input.
buyParticipantLoginId	String(30)	Same as input.
sellParticipantLoginId	String(30)	Same as input.
price	Decimal(15,4)	Same as input.
value	Decimal(17,2)	Same as input.
accrInt	Decimal(17,2)	Same as input.
settle	Number	Same as input.
sendFor	String(1)	Same as input.
yieldType	String(1)	Same as input.
yield	Decimal(15,4)	Same as input.
tradeDate	String(10)	Same as input.
tradeTime	Time	Same as input.
sellerRefNo	String(50)	Same as input.
buyerRefNo	String(50)	Same as input.
putCallDate	String(10)	Same as input.
sellerYieldViolationReason	String(2)	Same as input.

buyerYieldViolationReason	String(2)	Same as input.
message	String(200)	Success message
quantity	Number	Number of Bonds. Value / Facevalue
consideration	Decimal(17,2)	Total Consideration in INR consideration = value * price / 100 + accrInt
buyBackofficeLoginId	String(30)	Buyer Custodian, if any
sellBackofficeLoginId	String(30)	Seller Custodian, if any
status	Number	Following values in case of "Reporting by Seller" 1= Order Entered 2 = Rejected by Buyer 7 = Trade Confirmed (Accepted by Buyer) 8 = Canceled due to non-acceptance by buyer Following values in case of "Standing Buyer Instruction" 1 = Pending 2 = Confirmed 3 = Canceled

Sample Success Response

```
{
     "id":343,
     "orderNumber":"221216000000343",
     "standingInstFlag": "N",
     "dealType": "D",
     "buyerDealType": "D",
     "symbol": "INE752E07FF5",
     "buyParticipantLoginId": "BUYER1",
     "sellParticipantLoginId": "SELLER1",
     "price": 100.512,
     "value": 12500000,
     "accrInt": 0,
     "settle": 1,
     "sendFor": "C",
     "yieldType": "M",
     "yield": 10.4512,
     "tradeDate": "28-06-2018",
     "tradeTime": "14:25",
     "sellerRefNo": "TXNREF0001",
     "message":"Sell Deal Reporting saved successfully. Buyer confirmation
is optional.",
     "quantity":10,
     "consideration":12564000,
     "buyBackofficeLoginId":null,
     "sellBackofficeLoginId":null,
      "status":1,
      "buyerRefNo": null
}
```

POST /rest/v1/order/update

This API updates an existing deal reporting (from seller side) or a buyer standing instruction.

Reporting by Seller can be updated only till the time it is not confirmed by the Buyer. Buyer Standing Instruction can be updated only till the time it is not matched by a similar Reporting by Seller or cancelled.

Note that in case of deal reporting upon modification the existing record is marked as 'Cancelled' (status = 8) and a new record is inserted for modified values with a new unique id.

Method	POST
Url	<baseurl>/rest/v1/order/update
Request	JSON
Response	JSON

Request JSON

Map containing all fields in Request JSON of API POST /rest/v1/order. Additionally following field is required

Field	Type	Mandatory	Description
id	Number	Yes	Unique Order Id (for the day)

Sample Request

```
{
     "id": 1000001,
     "standingInstFlag": "N",
     "dealType": "D",
     "symbol": "INE752E07FF5",
     "buyParticipantLoginId": "BUYER1",
     "sellParticipantLoginId": "SELLER1",
     "price": 100.512,
     "value": 12500000,
     "accrInt": 0,
     "settle": 1,
     "sendFor": "C",
     "yieldType": "P",
     "yield": 10.4512,
     "tradeDate": "28-06-2018",
     "tradeTime": "14:25",
     "sellerRefNo": "TXNREF0001",
     "buyerRefNo": null
}
```

Response JSON

Similar to response JSON for POST /rest/v1/order

Sample Success Response

Similar to response JSON for POST /rest/v1/order

GET /rest/v1/order/sellreportings

The API returns a list of all sell reportings for the day where the logged in user is either buyer or seller participant or broker.

Method	GET
Url	<baseurl>/rest/v1/order/sellreportings
Request	JSON
Response	JSON

Response JSON

Contains a list of Map. The Map consists of fields similar to Response Json of API POST /rest/v1/order

Sample Response

```
[
        {
                "standingInstFlag": "N",
                "dealType": "D",
                "buyerDealType": "D",
                "symbol": "INE752E07FF5",
                "buyParticipantLoginId": "BUYER1",
                "sellParticipantLoginId": "SELLER1",
                "price": 100.512,
                "value": 12500000,
                "accrInt": 0,
                "settle": 1,
                "sendFor": "C",
                "yieldType": "P",
                "yield": 10.4512,
                "tradeDate": "28-06-2018",
                "tradeTime": "14:25",
                "sellerRefNo": "TXNREF0001",
                "id":344,
                "orderNumber":"221216000000344",
                "quantity":10,
                "consideration":12564000,
                "buyBackofficeLoginId":null,
                "sellBackofficeLoginId":null,
                "status":1,
                "buyerRefNo": null,
                "putCallDate": "29-04-2032"
        },
        {
                "standingInstFlag": "N",
                "dealType": "D",
                "buyerDealType": "D",
                "symbol": "INE752E07FF5",
                "buyParticipantLoginId": "BUYER1",
                "sellParticipantLoginId": "SELLER1",
                "price": 100.512,
                "value": 1250000,
                "accrInt": 0,
                "settle": 2,
                "sendFor": "C",
                "yieldType": "P",
                "yield": 10.4512,
                "tradeDate": "28-06-2018",
                "tradeTime": "14:35",
                "sellerRefNo": "TXNREF0002",
                "id":343,
                "orderNumber":"221216000000343",
                "quantity":10,
                "consideration":1256400,
                "buyBackofficeLoginId":null,
                "sellBackofficeLoginId":null,
                "status":1,
                "buyerRefNo": null,
                "putCallDate": "29-04-2032"
```

```
        }
]
```

POST /rest/v1/order/sellreportings

The API returns a list of sell reporting's where the logged in user is either buyer or seller participant or broker

Method	POST
Url	<baseurl>/rest/v1/order/sellreportings
Request	JSON
Response	JSON

Request JSON

Map containing following fields

Field	Type	Mandatory	Description
orderNumber	String(15)	No	Unique Transaction Number
symbol	String(30)	No	ISIN
filtEntryDate	Date	No	Deal entry date. Default is current date.
buyParticipantLoginId	String(30)	No	Buyer participant code.
sellParticipantLoginId	String(30)	No	Seller participant code.

Response JSON

Contains a list of Map. The Map consists of fields similar to Response Json of API POST /rest/v1/order

GET /rest/v1/order/buyinstructions

The API returns a list of all buyer instructions entered by the participant as a buyer.

Method	POST
Url	<baseurl>/rest/v1/order/buyinstructions
Request	JSON
Response	JSON

Response JSON

Contains a list of Map. The Map consists of fields similar to Response Json of API POST /rest/v1/order

Sample Response

```
[
    {
        "standingInstFlag": "N",
        "dealType": "D",
        "buyerDealType": "D",
        "symbol": "INE752E07FF5",
        "buyParticipantLoginId": "BUYER1",
        "sellParticipantLoginId": "SELLER1",
        "price": 100.512,
        "value": 12500000,
        "accrInt": 0,
        "settle": 1,
        "sendFor": "C",
        "yieldType": "P",
        "yield": 10.4512,
```

```
        "tradeDate": "28-06-2018",
        "tradeTime": "14:25",
        "sellerRefNo": "TXNREF0001",
        "id":344,
        "orderNumber":"221216000000344",
        "quantity":10,
        "consideration":12564000,
        "buyBackofficeLoginId":null,
        "sellBackofficeLoginId":null,
        "status":1,
        "buyerRefNo": null,
        "putCallDate": "29-04-2032"
    },
    {

        "standingInstFlag": "N",
        "dealType": "D",
        "buyerDealType": "D",
        "symbol": "INE752E07FF5",
        "buyParticipantLoginId": "BUYER1",
        "sellParticipantLoginId": "SELLER1",
        "price": 100.512,
        "value": 1250000,
        "accrInt": 0,
        "settle": 2,
        "sendFor": "C",
        "yieldType": "P",
        "yield": 10.4512,
        "tradeDate": "28-06-2018",
        "tradeTime": "14:35",
        "sellerRefNo": "TXNREF0002",
        "id":343,
        "orderNumber":"221216000000343",
        "quantity":10,
        "consideration":1256400,
        "buyBackofficeLoginId":null,
        "sellBackofficeLoginId":null,
        "status":1,
        "buyerRefNo": null,
        "putCallDate": "29-04-2032"
    }
]
```

POST /rest/v1/order/status

The API updates status of sell order reporting. This API is to be used by buyer to accept or reject sell order reporting by seller.

Method	PUT
Url	<baseurl>/rest/v1/order/status
Request	JSON
Response	JSON

Request JSON
Map Containing following fields

Field	Type	Mandatory	Description
id	Number	YES	Unique
status	Number	YES	Contain following values

			2 = Rejected by Buyer 7 = Trade Confirmed (Accepted by Buyer)
buyerYieldViolationReason	String(2)	Yes/No	Mandatory if yield limit is violated. Contain following values 1=Credit Related Reasons, 2=Liquidity Related Reasons

Sample Request

```
{
     "id": 1000001,
     "status":7
}
```

Response JSON

Map Containing following fields

Field	Type	Description
id	Number	Same as input
status	Number	Same as input.
message	String(200)	Success message

Sample Response

```
{
     "id": 1000001,
     "status":7,
     "message": "Sell Order Reporting Approved"
}
```

```
{
     "id": 1000001,
     "status":2,
     "message": "Sell Order Reporting Rejected"
}
```

POST /rest/v1/marketwatch/activeissues

The API gives market-wide summary of trading data for issues that have traded today

Method	POST
Url	<baseurl>/rest/v1/marketwatch/activeissues
Request	JSON
Response	JSON

Request JSON

Map Containing following fields

Field	Type	Mandatory	Description
symbol	String(30)	No	ISIN

Response JSON

Map Containing following fields

Field	Type	Description
symbol	String(30)	ISIN of the bond
description	String(200)	Description
type	String(2)	Sec type
issuer	String(100)	Issuer
issueDate	Date	Issue date
maturityDate	Date	Maturity date
couponRate	Decimal(15,4)	Coupon Rate
creditRating	String(100)	Credit Rating
lastTradePrice	Decimal(15,4)	Last trade price
lastTradeValue	Decimal(15,4)	Last Trade Value
lastTradeTime	DateTime	Last Trade Time
totTradeValue	Decimal(15,4)	Total trade value
totNoOfTrades	Number	Total number of trade
avgYield	Decimal(15,4)	Average Yield
avgTradePrice	Decimal(15,4)	Average Trade Price

Sample Response

```
[
    {

        "symbol": "INE752E07FF5",
        "totTradeValue": 3013800.00,
        "description": "POWER GRID CORPORATION OF INDIA LIMITED 9.33 BD
15DC23 FVRS12.5LAC LOA UPTO 11MR09",
        "type": "CC",
        "issuer": "POWER GRID CORPORATION OF INDIA LIMITED",
        "avgYield": 8.1519,
        "avgTradePrice": 101.0034,
        "couponRate": 9.33,
        "lastTradePrice": 101,
        "maturityDate": "15-12-2023",
        "totNoOfTrades": 25,
        "issueDate": "15-12-2008",
        "lastTradeValue": 125000,
        "lastTradeTime": "15-06-2018 12:11:10",
        "creditRating": "CRISIL AAA"
    },
    {

        "symbol": "INE476A16BR4",
        "totTradeValue": 210000000.00,
        "description": "CANARA BANK CD 04JL11",
        "type": "CC",
        "issuer": "CANARA BANK",
        "avgYield": 7.1519,
        "avgTradePrice": 101.0034,
        "couponRate": 9.33,
        "lastTradePrice": 100.5,
        "maturityDate": "04-07-2021",
        "totNoOfTrades": 5,
        "issueDate": "02-02-2011",
        "lastTradeValue": 50000000,
        "lastTradeTime": "15-06-2018 14:11:10",
        "creditRating": "NA"
    }
]
```

POST /rest/v1/participant/find

The API returns a list of all participants and custodians registered in the system for given input filter conditions.

Method	PUT
Url	<baseurl>/rest/v1/participant/find
Request	JSON
Response	JSON

Request JSON

Map representing filter value, containing following fields

Field	Type	Mandatory	Description
loginId	String(30)	No	Unique
type	Number	No	Contain following values 2=Participant 13=Custodian
custodian	String(10)	No	Particpant's Custodian
panNo	String(10)	No	PAN of participant

Sample Request

```
{
      "loginId": "ICICI",
      "type": 2,
      "custodian": null,
      "panNo": null
}
```

Response JSON

List of Map with each map representing a Participant/Custodian record. Map containing all fields

Field	Type	Description
loginId	String(30)	Participant Code / Custodian Code
actualStatus	Number	1 = Active 2 = Inactive 3 = Suspended 4 = Unregistered
type	Number	2=Participant 13=Custodian
custodian	String(30)	Participant's Custodian, if any
firstName	String(250)	Participant / Custodian Name
panNo	String(10)	Participant / Custodian PAN

Sample Response

```
[
    {
"type": 2,
"firstName": "Participant One",
"loginId": "PART1",
"panNo": "PANNO0001A",
"actualStatus": 1
    },
```

```json
        {
"type": 2,
"firstName": "Participant Three",
"loginId": "PART3",
"panNo": "PANNO0002A",
"custodian": "CUST1",
"actualStatus": 1
        }
]
```

Unregistered Participants API

POST /rest/v1/unreg

This API submits request for addition of a new unregistered participant in the CBRICS system.

The request is subject to approval process.

Method	POST
Url	<baseurl>/rest/v1/unreg
Request	JSON
Response	JSON

Request JSON

Map containing following fields

Field	Type	Mandatory	Description
loginId	String(30)	Yes	Unique unregistered participant code
firstName	String(250)	Yes	Name
panNo	String(10)	Yes / No	PAN of unregistered participant. If exempt then put "PAN_EXEMPT"
custodian	String(10)	No	Custodian code if any
contactPerson	String(50)	Yes	Name of contact person
mobileList	Array of String(15)	Yes	Array of mobile numbers. Minimum 1 item in list. Maximum 3.
emailList	Array of String(50)	Yes	Array of email ids. Minimum 1 item in list. Maximum 3.
telephone	String(250)	Yes	Telephone
fax	String(62)	No	FAX
address	String(100)	No	Participant address
address2	String(100)	No	Participant address
address3	String(100)	No	Participant address
stateCode	String(2)	Yes	Registered Office / Domicile State Code See Annexure 2
regAddress	String(500)	Yes	Registered Office / Domicile address
leiCode	String(20)	No	LEI Code if applicable
expiryDate	Date	Yes / No	LEI Expiry date (if lei code is provided)
bankAccountList	List of Bank Account Structure	Yes	List of bank accounts
dpAccountList	List of DP Account Structure	Yes	List of DP Accounts

Bank Account Structure

Field	Type	Mandatory	Description
bankName	String(100)	Yes	Name of the bank
bankIFSC	String(11)	Yes	IFSC code
bankAccountNo	String(30)	No	Bank Account Number. If not provided then the account is treated as interbank account
isDefault	String(1)	Yes	Indicates if this bank account is default

			for payouts. Y = Yes N = No

DPAccount Structure

Field	Type	Mandatory	Description
dpType	String(4)	Yes	Depository NSDL / CDSL
dpId	String(8)	No	DP Id Applicable and mandatory only in case of NSDL
benId	String(16)	Yes	Beneficiary / Client Id. Should contain 8 digits in case of NSDL and 16 digits in case of CDSL.
isDefault	String(1)	Yes	Indicates if this bank account is default for payouts. Y = Yes N = No

Sample Request

```
{
     "loginId": "P0131B",
     "firstName": "PART 131",
     "panNo": "PANNO0131A",
     "custodian": null,
     "contactPerson": "Mr Test",
     "mobileList": ["1231231231"],
     "emailList": ["test@testcompany.com"],
     "telephone": "1231231231",
     "fax": null,
     "address": "Test line 1",
     "address2": "Test line 2",
     "address3": "Test line 3",
     "stateCode": "16",
     "regAddress": "Test registered address",
     "leiCode": null,
     "expiryDate": null,
     "bankAccountList": [
          {
               "bankName": "HDFC",
               "bankIFSC": "HDFC1231221",
               "bankAccountNo": "123412312",
               "isDefault": "Y"
          }
     ],
     "dpAccountList": [
          {
               "dpType": "NSDL",
               "dpId": "IN234234",
               "benId": "29347239",
               "isDefault": "Y"
          }
     ]
}
```

Response JSON

Map containing following fields

Field	Type	Description
id	Number	Unique system generated id for the unregistered participant
actualStatus	Number	Always 4 (Indicating unregistered participant)
workflowStatus	Number	Approval status of request 100 - Pending With Checker 16 - Returned by checker 15 - Rejected by checker 0 - Pending with exchange 10 - Pending with exchange 1 - Approved 5 - Rejected 6 - Returned
loginId	String(30)	Same as input
firstName	String(250)	Same as input
panNo	String(10)	Same as input
custodian	String(10)	Same as input
contactPerson	String(50)	Same as input
mobileList	Array of String(15)	Same as input
emailList	Array of String(50)	Same as input
telephone	String(250)	Same as input
fax	String(62)	Same as input
address	String(100)	Same as input
address2	String(100)	Same as input
address3	String(100)	Same as input
stateCode	String(2)	Same as input
regAddress	String(500)	Same as input
leiCode	String(20)	Same as input
expiryDate	Date	Same as input
remarks	String(100)	Remarks
panVerStatus	Number	Pan verification status 100 - Pending With Checker 16 - Returned by checker 15 - Rejected by checker 0 - Pending with exchange 10 - Pending with exchange 1 - Approved 5 - Rejected 6 - Returned
panVerRemarks	String(200)	PAN verification remarks
bankAccountList	List of Bank Account Structure	Same as input
dpAccountList	List of DP Account Structure	Same as input

Bank Account Structure

Non-Confidential

Field	Type	Description
bankName	String(100)	Same as input
bankIFSC	String(11)	Same as input
bankAccountNo	String(30)	Same as input
isDefault	String(1)	Same as input
status	String(1)	Account Status A = Active S = Suspended D = Deleted
workflowStatus	Number	Approval status of request 100 - Pending With Checker 16 - Returned by checker 15 - Rejected by checker 0 - Pending with exchange 10 - Pending with exchange 1 - Approved 5 - Rejected 6 - Returned
remarks	String(200)	Remarks

DPAccount Structure

Field	Type	Description
dpType	String(4)	Same as input
dpId	String(8)	Same as input
benId	String(16)	Same as input
isDefault	String(1)	Same as input
status	String(1)	Account Status A = Active S = Suspended D = Deleted
workflowStatus	Number	Approval status of request 100 - Pending With Checker 16 - Returned by checker 15 - Rejected by checker 0 - Pending with exchange 10 - Pending with exchange 1 - Approved 5 - Rejected 6 - Returned
remarks	String(200)	Remarks

Sample Success Response

```
{
      "loginId": "P0131B",
      "address": "Test line 1",
      "custodian": null,
      "address3": "Test line 3",
      "emailList": [
            "test@testcompany.com"
    ],
      "address2": "Test line 2",
      "panNo": "PANNO0131A",
      "workflowStatus": 0,
      "contactPerson": "Mr Test",
      "telephone": "1231231231",
```

```
        "expiryDate": null,
        "firstName": "PART 131",
        "mobileList": [
              "1231231231"
        ],
        "dpAccountList": [
                 {
                       "dpType": "NSDL",
                       "benId": "29347239",
                       "isDefault": "Y",
                       "workflowStatus": 0,
                       "dpId": "IN234234",
                       "status": "A"
             }
        ],
          "actualStatus": 4,
          "bankAccountList": [
                 {
                       "isDefault": "Y",
                       "bankIFSC": "HDFC1231221",
                       "workflowStatus": 0,
                       "bankAccountNo": "123412312",
                       "bankName": "HDFC",
                       "status": "A"
             }
        ],
          "stateCode": "16",
          "id": 65092,
          "fax": null,
          "regAddress": "Test registered address",
          "leiCode": null,
          "panVerStatus":0,
          "panVerRemarks":"test pan verification remark",
          "remarks":"test remark"
}
```

POST /rest/v1/unreg/update

This API allows modification of a previously submitted request for addition of unregistered participant in the CBRICS system.

Only requests that are returned by checker (workflowStatus = 16) or returned by exchange (workflowStatus = 6) can be updated.

Method	POST
Url	<baseurl>/rest/v1/unreg/update
Request	JSON
Response	JSON

Request JSON
Map containing following fields

Field	Type	Mandatory	Description
id	Number	Yes	Unique System id for unregistered participant
firstName	String(250)	Yes	Name
actualStatus	Number	Yes	Value should be 4.

panNo	String(10)	Yes	PAN of unregistered participant. If exempt then put "PAN_EXEMPT"
custodian	String(10)	No	Custodian code if any
contactPerson	String(50)	Yes	Name of contact person
mobileList	Array of String (15)	Yes	Array of mobile numbers. Minimum 1 item in list. Maximum 3.
emailList	Array of String (50)	Yes	Array of email ids. Minimum 1 item in list. Maximum 3.
telephone	String(250)	Yes	Telephone
fax	String(62)	No	FAX
address	String(100)	No	Participant address
address2	String(100)	No	Participant address
address3	String(100)	No	Participant address
stateCode	String(2)	Yes	Registered Office / Domicile State Code See Annexure 2
regAddress	String(500)	Yes	Registered Office / Domicile address
leiCode	String(20)	No	LEI Code if applicable
expiryDate	Date	Yes / No	LEI Expiry date (if lei code is provided)
bankAccountList	List of Bank Account Structure	Yes	List of bank accounts
dpAccountList	List of DP Account Structure	Yes	List of DP Accounts

Bank Account Structure

Field	Type	Mandatory	Description
bankName	String(100)	Yes	Name of the bank
bankIFSC	String(11)	Yes	IFSC code
bankAccountNo	String(30)	No	Bank Account Number. If not provided then the account is treated as interbank account
isDefault	String(1)	Yes	Indicates if this bank account is default for payouts. Y = Yes N = No
status	String(1)	Yes	Account Status A = Active S = Suspended D = Deleted

DPAccount Structure

Field	Type	Mandatory	Description
dpType	String(4)	Yes	Depository NSDL / CDSL
dpId	String(8)	No	DP Id Applicable and mandatory only in case of NSDL
benId	String(16)	Yes	Beneficiary / Client Id. Should contain 8 digits in case of NSDL and 16 digits in case of CDSL.

isDefault	String(1)	Yes	Indicates if this dp account is default for payouts. Y = Yes N = No
status	String(1)	Yes	Account Status A = Active S = Suspended D = Deleted

Sample Request

```json
{
    "id": 65092,
    "firstName": "PART NAME 131",
    "panNo": "PANNO0131B",
    "custodian": null,
    "contactPerson": "Mr TEST PART",
    "mobileList": ["1231231999"],
    "emailList": ["test999@testcompany.com"],
    "telephone": "1231231999",
    "fax": null,
    "address": "Test line 9991",
    "address2": "Test line 9992",
    "address3": "Test line 9993",
    "stateCode": "27",
    "regAddress": "Test registered address 999",
    "leiCode": null,
    "expiryDate": null,
    "actualStatus": 4,
    "bankAccountList": [
        {
            "bankName": "HDFC",
            "bankIFSC": "HDFC9999999",
            "bankAccountNo": "123412312",
            "isDefault": "Y",
            "status": "A"
        },
        {
            "bankName": "ICICI",
            "bankIFSC": "ICIC1231221",
            "bankAccountNo": "55555555",
            "isDefault": "N",
            "status": "A"
        }
    ],
    "dpAccountList": [
        {
            "dpType": "NSDL",
            "dpId": "IN999999",
            "benId": "29347239",
            "isDefault": "Y",
            "status": "A"
        },
        {
            "dpType": "CDSL",
            "dpId": null,
            "benId": "9999888829347239",
            "isDefault": "N",
            "status": "A"
        }
    ]
```

```
}
```

Response JSON

Same as response JSON for API POST /rest/v1/unreg

POST /rest/v1/unreg/all

The API returns details of one or more unregistered participants based input filters in request JSON.

Method	POST
Url	<baseurl>/rest/v1/unreg/all
Request	JSON
Response	JSON

Request JSON

Map containing following fields

Field	Type	Mandatory	Description
loginId	String(30)	No	Exact match with unique participant code
firstName	String(250)	No	Wildcard match with name
panNo	String(10)	No	Exact match with PAN of unregistered participant. If exempt then put "PAN_EXEMPT"
workflowStatus	Number	Yes	Approval status of request 100 - Pending With Checker 16 - Returned by checker 15 - Rejected by checker 0 - Pending with exchange 10 - Pending with exchange 1 - Approved 5 - Rejected 6 - Returned

Sample Request

```
{
      "loginId": null,
      "firstName": null,
      "panNo": null,
      "workflowStatus": 6
}
```

Response JSON

List of Map, where each map represents an unregistered participant record. The structure of the record is same as response JSON for API POST /rest/v1/unreg except for fields "bankAccountList" and "dpAccountList".

Sample Success Response

```
[
    {
          "loginId": "P0131B",
          "address": "Test line 1",
          "address3": "Test line 3",
          "emailList": [
                "test@testcompany.com"
```

```
        ],
        "address2": "Test line 2",
        "panNo": "PANNO0131A",
        "workflowStatus": 6,
        "contactPerson": "Mr Test",
        "telephone": "1231231231",
        "firstName": "PART 131",
        "mobileList": [
                "1231231231"
        ],
        "actualStatus": 4,
        "stateCode": "16",
        "id": 65092,
        "regAddress": "Test registered address",
        "panVerStatus":1,
        "panVerRemarks":"test pan verification remark",
        "remarks":"test remark"
    }
]
```

GET /rest/v1/unreg/{id}

The API returns details of unregistered participant identified by id specified as path parameter "{id}".

Method	POST
Url	<baseurl>/rest/v1/unreg/{id}
Response	JSON

Response JSON

Same as response JSON for API POST /rest/v1/unreg

POST /rest/v1/unreg/final/updatecontact

This API allows to update contact details of an already approved (final) unregistered participant

Method	POST
Url	<baseurl>/rest/v1/unreg/final/updatecontact
Request	JSON
Response	JSON

Request JSON

Map containing following fields

Field	Type	Mandatory	Description
id	Number	Yes	Unique system generated id for the unregistered participant
contactPerson	String(50)	Yes	Name of new contact person
mobileList	Array of String(15)	Yes	Array of new mobile numbers. Minimum 1 item in list. Maximum 3.
emailList	Array of String(50)	Yes	Array of new email ids. Minimum 1 item in list. Maximum 3.
telephone	String(250)	Yes	New Telephone
fax	String(62)	No	New FAX
address	String(100)	No	Participant new address line1
address2	String(100)	No	Participant new address line2
address3	String(100)	No	Participant new address line3

Sample Request

```
{
      "id": 65092,
      "contactPerson": "Mr Contact Person",
      "mobileList": ["9988776655","9998887776"],
      "emailList": ["contactpersion1@testcompany.com"],
      "telephone": "1231231231",
      "fax": null,
      "address": "Test line 1",
      "address2": "Test line 2",
      "address3": "Test line 3"
}
```

Response JSON

Same as response JSON for API POST /rest/v1/unreg.

POST /rest/v1/unreg/final/delete

This API allows to delete an already approved (final) unregistered participant. All active/suspended bank and DP accounts of the unregistered participant will also be deleted.

Method	POST
Url	<baseurl>/rest/v1/unreg/final/delete
Request	JSON
Response	JSON

Request JSON

Map containing following fields

Field	Type	Mandatory	Description
id	Number	Yes	Unique system generated id for the unregistered participant

Sample Request

```
{
      "id": 65092
}
```

Response JSON

Map containing following fields

Field	Type	Description
id	Number	Same as input
message	String(250)	Success message

Sample Response

```
{
      "id": 65092,
      "message": "Unregistered Participant deleted successfully."
}
```

POST /rest/v1/unreg/bankacc

This API submits request for addition of a new Bank Account for unregistered participant in the CBRICS system.

The request is subject to approval process.

Method	POST
Url	<baseurl>/rest/v1/unreg/bankacc
Request	JSON
Response	JSON

Request JSON

Map containing following fields

Field	Type	Mandatory	Description
bankName	String(100)	Yes	Name of the bank
bankIFSC	String(11)	Yes	IFSC code
bankAccountNo	String(30)	No	Bank Account Number. If not provided then the account is treated as interbank account
isDefault	String(1)	Yes	Indicates if this bank account is default for payouts. Y = Yes N = No
participantCode	String(30)	Yes	Login Id of unregistered participant

Sample Request

```
{
"bankName": "ABC BANK LTD",
"bankIFSC": "ABCD1111111",
"bankAccountNo": "123456789",
"isDefault": "N",
"participantCode": "UNPARTONE"
}
```

Response JSON

Map containing following fields

Field	Type	Description
bankName	String(100)	Same as input
bankIFSC	String(11)	Same as input
bankAccountNo	String(30)	Same as input
isDefault	String(1)	Same as input
participantCode	String(30)	Same as input
status	String(1)	Account Status A = Active S = Suspended D = Deleted
workflowStatus	Number	Approval status of request 100 - Pending With Checker 16 - Returned by checker 15 - Rejected by checker 0 - Pending with exchange 10 - Pending with exchange 1 - Approved 5 - Rejected

		6 - Returned
remarks	String(200)	Remarks

Sample Success Response

```
{
     "isDefault": "Y",
     "bankIFSC": "AXIS1231221",
     "workflowStatus": 0,
     "bankAccountNo": "5555555",
     "bankName": "AXIS",
     "participantCode": "P0131B",
     "status": "A"
}
```

POST /rest/v1/unreg/bankacc/all

The API returns details of one or more unregistered participant bank accounts based input filters in request JSON.

Method	POST
Url	<baseurl>/rest/v1/unreg/bankacc/all
Request	JSON
Response	JSON

Request JSON

Map containing following fields

Field	Type	Mandatory	Description
participantCode	String(30)	No	Exact match with unique participant code
workflowStatus	Number	Yes	Approval status of request 100 - Pending With Checker 16 - Returned by checker 15 - Rejected by checker 0 - Pending with exchange 10 - Pending with exchange 1 - Approved 5 - Rejected 6 - Returned

Sample Request

```
{
     "participantCode":"P0131B",
     "workflowStatus": 0
}
```

Response JSON

List of Map, where each map represents an unregistered participants bank account record. The structure of the record is same as response JSON for API POST /rest/v1/unreg/bankacc.

POST /rest/v1/unreg/bankacc/final/markdefault

This API allows setting an already approved bank account of an unregistered participant as default bank account for payout.

Method	POST

Url	<baseurl>/rest/v1/unreg/bankacc/final/markdefault
Request	JSON
Response	JSON

Request JSON

Map containing following fields

Field	Type	Mandatory	Description
participantCode	String(30)	Yes	Unregistered participant code
bankIFSC	String(11)	Yes	IFSC code
bankAccountNo	String(30)	No	Bank Account Number. If not provided then the account is treated as interbank account

Sample Request

```
{
      "participantCode": "UNPARTONE",
      "bankIFSC": "ABCD1111111",
      "bankAccountNo": "123456789"
}
```

Response JSON

Same as response JSON for API POST /rest/v1/unreg/bankacc

POST /rest/v1/unreg/bankacc/final/updatestatus

This API allows updating status of an already approved bank account of an unregistered participant.

Method	POST
Url	<baseurl>/rest/v1/unreg/bankacc/final/updatestatus
Request	JSON
Response	JSON

Request JSON

Map containing following fields

Field	Type	Mandatory	Description
participantCode	String(30)	Yes	Unregistered participant code
bankIFSC	String(11)	Yes	IFSC code
bankAccountNo	String(30)	No	Bank Account Number. If not provided then the account is treated as interbank account
status	String(1)	Yes	New Account Status A = Active S = Suspended D = Deleted

Sample Request

```
{
      "participantCode": "UNPARTONE",
      "bankIFSC": "ABCD1111111",
      "bankAccountNo": "123456789",
      "status": "D"
}
```

Response JSON

Same as response JSON for API POST /rest/v1/unreg/bankacc

POST /rest/v1/unreg/dpacc

This API submits request for addition of a new DP Account for unregistered participant in the CBRICS system.

The request is subject to approval process.

Method	POST
Url	<baseurl>/rest/v1/unreg/dpacc
Request	JSON
Response	JSON

Request JSON

Map containing following fields

Field	Type	Mandatory	Description
dpType	String(4)	Yes	Depository NSDL / CDSL
dpId	String(8)	No	DP Id Applicable and mandatory only in case of NSDL
benId	String(16)	Yes	Beneficiary / Client Id. Should contain 8 digits in case of NSDL and 16 digits in case of CDSL.
isDefault	String(1)	Yes	Indicates if this dp account is default for payouts. Y = Yes N = No
participantCode	String(30)	Yes	Login Id of unregistered participant

Sample Request

```
{
      "dpType": "CDSL",
      "dpId": null,
      "benId": "1234567891234567",
      "isDefault": "N",
      "participantCode": "UNPARTONE"
}
```

Response JSON

Map containing following fields

Field	Type	Description
dpType	String(4)	Same as input
dpId	String(8)	Same as input
benId	String(16)	Same as input
isDefault	String(1)	Same as input
participantCode	String(30)	Same as input
status	String(1)	Account Status A = Active S = Suspended D = Deleted

workflowStatus	Number	Approval status of request 100 - Pending With Checker 16 - Returned by checker 15 - Rejected by checker 0 - Pending with exchange 10 - Pending with exchange 1 - Approved 5 - Rejected 6 - Returned
remarks	String(200)	Remarks

Sample Success Response

```
{
      "dpType": "NSDL",
      "benId": "29347888",
      "isDefault": "Y",
      "workflowStatus": 0,
      "dpId": "IN234888",
      "participantCode": "P0131B",
      "status": "A"
}
```

POST /rest/v1/unreg/dpacc/all

The API returns details of one or more unregistered participant DP accounts based input filters in request JSON.

Method	POST
Url	<baseurl>/rest/v1/unreg/dpacc/all
Request	JSON
Response	JSON

Request JSON

Map containing following fields

Field	Type	Mandatory	Description
participantCode	String(30)	No	Exact match with unique participant code
workflowStatus	Number	Yes	Approval status of request 100 - Pending With Checker 16 - Returned by checker 15 - Rejected by checker 0 - Pending with exchange 10 - Pending with exchange 1 - Approved 5 - Rejected 6 - Returned

Sample Request

```
{
      "participantCode":"P0131B",
      "workflowStatus": 0
}
```

Response JSON

List of Map, where each map represents an unregistered participants DP account record. The structure of the record is same as response JSON for API POST /rest/v1/unreg/dpacc

POST /rest/v1/unreg/dpacc/final/markdefault

This API allows setting an already approved DP account of an unregistered participant as default DP account for payout.

Method	POST
Url	<baseurl>/rest/v1/unreg/dpacc/final/markdefault
Request	JSON
Response	JSON

Request JSON

Map containing following fields

Field	Type	Mandatory	Description
participantCode	String(30)	Yes	Unregistered participant code
dpType	String(4)	Yes	Depository NSDL / CDSL
dpId	String(8)	No	DP Id Applicable and mandatory only in case of NSDL
benId	String(16)	Yes	Beneficiary / Client Id. Should contain 8 digits in case of NSDL and 16 digits in case of CDSL.

Sample Request

```
{
      "participantCode": "UNPARTONE",
      "dpType": "CDSL",
      "dpId": null,
      "benId": "1234567891234567"
}
```

Response JSON

Same as response JSON for API POST /rest/v1/unreg/dpacc

POST /rest/v1/unreg/dpacc/final/updatestatus

This API allows updating status of an already approved DP account of an unregistered participant.

Method	POST
Url	<baseurl>/rest/v1/unreg/dpacc/final/updatestatus
Request	JSON
Response	JSON

Request JSON

Map containing following fields

Field	Type	Mandatory	Description
participantCode	String(30)	Yes	Unregistered participant code

dpType	String(4)	Yes	Depository NSDL / CDSL
dpId	String(8)	No	DP Id Applicable and mandatory only in case of NSDL
benId	String(16)	Yes	Beneficiary / Client Id. Should contain 8 digits in case of NSDL and 16 digits in case of CDSL.
status	String(1)	Yes	New Account Status A = Active S = Suspended D = Deleted

Sample Request

```
{
      "participantCode": "UNPARTONE",
      "dpType": "CDSL",
      "dpId": null,
      "benId": "1234567891234567",
      "status": "D"
}
```

Response JSON

Same as response JSON for API POST /rest/v1/unreg/dpacc

Settlement API

POST /rest/v1/settle/order/all

This API adds returns a list of all orders for settlement whose settlement date is in the input date range. The input date range cannot be more than 30 days.

Method	POST
Url	<baseurl>/rest/v1/settle/order/all
Request	JSON
Response	JSON

Request JSON

Map containing following fields

Field	Type	Mandatory	Description
id	Number	No	Unique Settle Order Id
orderNumber	String(15)	No	Unique Transaction Number
filtFromModSettleDate	Date	Yes	From Date filter
filtToModSettleDate	Date	Yes	To Date filter

Sample Request

```
{
     "filtFromModSettleDate": "17-12-2022",
     "filtToModSettleDate": "17-12-2022"
}
```

Response JSON

List of Map, where each map represents an order for settlement and contains following fields

Field	Type	Description
id	Number	Unique Settle Order Id. Required for modification.
orderNumber	String(15)	Unique Transaction Number
symbol	String(30)	ISIN
buyParticipantLoginId	String(30)	Buy Participant code
sellParticipantLoginId	String(30)	Sell Participant code
price	Decimal(15,4)	Price in Rupees. Up to 4 decimal places.
yieldType	String(1)	Yield Type P = YTP C = YTC M = YTM
yield	Decimal(15,4)	Yield. Up to 4 decimal places.
value	Decimal(17,2)	Value in Rupees. Up to 2 decimal places.
buyerRefNo	String(50)	Reference number
sellerRefNo	String(50)	Reference number
buyBackofficeLoginId	String(30)	Buyer Custodian, if any
sellBackofficeLoginId	String(30)	Seller Custodian, if any
buyBrokerLoginId	String(30)	Buyer Broker, if any
sellBrokerLoginId	String(30)	Seller Broker, if any
source	Number	Source of order 1 = NSE CBRICS 4 = FTRAC 5 = NSE RFQ

modSettleDate	Date	Settlement Date
modQuantity	Number	Number of Bonds. Value / Facevalue
modAccrInt	Decimal(17,2)	Interest in Rupees. Up to 2 decimal places.
modConsideration	Decimal(17,2)	Total Consideration in INR consideration = value * price / 100 + accrInt
settlementNo	String(7)	Settlement Number.
stampDutyAmount	Decimal(17,2)	Stamp duty amount. Up to 2 decimal places.
stampDutyBearer	String(30)	Participant bearing the stamp duty.
buyerFundPayinObligation	Decimal(17,2)	Buyer payin amount (after applying stamp duty, if any)
sellerFundPayoutObligation	Decimal(17,2)	Seller payout amount (after applying stamp duty, if any)
fundPayinRefId	String(50)	Unique reference id for making fund payin thru payment gateway or UPI.
settleStatus	Number	Settlement status 0 = Settlement Pending 1 = Securities Payin Done 2 = Funds Payin Done 3 = Payin Completed 4 = Payout Done Successfully 5 = Payin reversed 6 = Settle order expired 7 = Order not settleable 8 = Settlement of order cancelled 9 = Document not received for unregistered participant
secPayinQuantity	Number	Actual securities payin quantity
secPayinRemarks	String(50)	Security payin remarks
secPayinTime	DateTime	Security payin time
fundsPayinAmount	Decimal(17,2)	Actual funds payin amount
fundsPayinRemarks	String(50)	Fund payin remarks
fundsPayinTime	DateTime	Fund payin time
payoutRemarks	String(50)	Payout remarks
payoutTime	DateTime	Payout generation time
ifscCode	String(11)	IFSC of seller's bank account for payout
accountNo	String(62)	Account no. of seller's bank account for payout
utrNumber	String(16)	
dpId	String(8)	DP Id of buyers DP account for payout. Valid only for NSDL
benId	String(16)	Client/Ben Id of buyers DP account for payout.

Sample Success Response

```
[
    {
            "symbol": "INE020B08BH6",
            "orderNumber": "221217000000366",
            "buyParticipantLoginId": "INDBANK",
            "settleStatus": 0,
            "source": 1,
            "modAccrInt": 1234.00,
            "sellBackofficeLoginId": "DBS",
            "buyerFundPayinObligation": 10101244.00,
```

```
            "benId": "00000000",
            "price": 101.0000,
            "yield": 7.0000,
            "accountNo": "811LIABICSTSUINR",
            "stampDutyAmount": 10.00,
            "yieldType": "M",
            "id": 1,
            "modQuantity": 10,
            "value": 10000000.00,
            "modConsideration": 10101234.00,
            "stampDutyBearer": "INDBANK",
            "sellerFundPayoutObligation": 10101234.00,
            "ifscCode": "DBSS0IN0811",
            "settlementNo": "2212017",
            "dpId": "IN500089",
            "buyBackofficeLoginId": "ILFSSEC",
            "modSettleDate": "17-12-2022",
            "sellParticipantLoginId": "DFHI"
    }
]
```

POST /rest/v1/settle/order/update

This API allows updating quantity and consideration before settlement process is initiated.

Method	POST
Url	<baseurl>/rest/v1/settle/order/update
Request	JSON
Response	JSON

Request JSON

Map containing following fields

Field	Type	Mandatory	Description
id	Number	Yes	Unique Settle Order Id
buyBackofficeLoginId	String(30)	No	Buyer Custodian, if any. Value should be kept unchanged if API is being called by seller.
sellBackofficeLoginId	String(30)	No	Seller Custodian, if any. Value should be kept unchanged if API is being called by buyer.
modSettleDate	Date		Number of Bonds. Value / Facevalue
modQuantity	Number		Interest in Rupees. Up to 2 decimal places.
modAccrInt	Decimal(17,2)		Total Consideration in INR consideration = value * price / 100 + accrInt

Sample Request

```
{
      "id":1,
      "buyBackofficeLoginId":"ILFSSEC",
      "sellBackofficeLoginId": "DBS",
      "modSettleDate":"19-12-2022",
      "modQuantity":10,
      "modAccrInt":1235.00
}
```

Response JSON

Map containing fields similar to Response JSON for API POST /rest/v1/settle/order/all

Sample Success Response

```
{
      "symbol": "INE020B08BH6",
      "settlementNo": "2212019",
      "orderNumber": "221218000000367",
      "buyParticipantLoginId": "INDBANK",
      "settleStatus": 0,
      "dpId": "IN500089",
      "source": 1,
      "modAccrInt": 1235.00,
      "buyerFundPayinObligation": 10101245.00,
      "benId": "00000000",
      "buyBackofficeLoginId": "ILFSSEC",
      "price": 101.0000,
      "yield": 7.0000,
      "modSettleDate": "19-12-2022",
      "stampDutyAmount": 10,
      "sellParticipantLoginId": "DFHI",
      "yieldType": "M",
      "id": 1,
      "modQuantity": 10,
      "value": 10000000.00,
      "modConsideration": 10101235.00,
      "stampDutyBearer": "INDBANK",
      "sellerFundPayoutObligation": 10101235.00,
      "ifscCode": "SBDF0000001"
}
```

POST /rest/v1/settle/order/updatebank

This API allows updating sellers payout bank account before settlement process is initiated. API can be invoked by seller. It can be invoked by buyer on behalf of seller if seller is unregistered participant.

Method	POST
Url	<baseurl>/rest/v1/settle/order/updatebank
Request	JSON
Response	JSON

Request JSON

Map containing following fields

Field	Type	Mandatory	Description
id	Number	Yes	Unique Settle Order Id
ifscCode	String(11)	Yes	IFSC Code of the new bank account for payout
accountNo	String(62)	No	Account no of the new bank account for payout.

Sample Request

```
{
      "id":1,
      "ifscCode":"HDFC1111111",
      "accountNo": "1004"
```

```
}
```

Response JSON

Map containing fields similar to Response JSON for API POST /rest/v1/settle/order/all

Sample Success Response

```
{
     "symbol": "INE020B08BH6",
     "settlementNo": "2212019",
     "orderNumber": "221218000000367",
     "buyParticipantLoginId": "INDBANK",
     "settleStatus": 0,
     "dpId": "IN500089",
     "source": 1,
     "modAccrInt": 1235.00,
     "buyerFundPayinObligation": 10101245.00,
     "benId": "00000000",
     "buyBackofficeLoginId": "ILFSSEC",
     "price": 101.0000,
     "yield": 7.0000,
     "modSettleDate": "19-12-2022",
     "stampDutyAmount": 10,
     "sellParticipantLoginId": "DFHI",
     "yieldType": "M",
     "id": 1,
     "modQuantity": 10,
     "value": 10000000.00,
     "modConsideration": 10101235.00,
     "stampDutyBearer": "INDBANK",
     "sellerFundPayoutObligation": 10101235.00,
     "ifscCode": "HDFC1111111",
     "accountNo": "1004"
}
```

POST /rest/v1/settle/order/updatedp

This API allows updating buyers DP details before settlement process is initiated. API can be invoked by buyer. It can be invoked by seller on behalf of buyer if buyer is unregistered participant.

Method	POST
Url	<baseurl>/rest/v1/settle/order/updatedp
Request	JSON
Response	JSON

Request JSON

Map containing following fields

Field	Type	Mandatory	Description
id	Number	Yes	Unique Settle Order Id
dpId	String(8)	No	NSDL DP id of the new DP account for payout
benId	String(16)	Yes	Client / Ben id of the new DP account for payout.

Sample Request

```
{
     "id":1,
```

```
      "dpId":"IN303786",
      "benId": "10000375"
}
```

Response JSON

Map containing fields similar to Response JSON for API POST /rest/v1/settle/order/all

Sample Success Response

```
{
      "symbol": "INE020B08BH6",
      "settlementNo": "2212018",
      "orderNumber": "221218000000368",
      "buyParticipantLoginId": "DFHI",
      "settleStatus": 0,
      "dpId": "IN303786",
      "source": 1,
      "modAccrInt": 123.00,
      "buyerFundPayinObligation": 10100133.00,
      "benId": "10000375",
      "price": 101.0000,
      "yield": 5.0000,
      "modSettleDate": "18-12-2022",
      "accountNo": "777798957",
      "stampDutyAmount": 10.00,
      "sellParticipantLoginId": "INDBANK",
      "yieldType": "M",
      "id": 1,
      "modQuantity": 10,
      "value": 10000000.00,
      "modConsideration": 10100123.00,
      "stampDutyBearer": "DFHI",
      "sellerFundPayoutObligation": 10100123.00,
      "ifscCode": "IDIB000C101"
}
```

Payment Gateway API

GET /rest/pg

This API opens the payment page URL. It should be accessed on the browser by the client.

Method	POST
Url	<baseurl>/rest/pg
Request	Query Parameters
Response	HTML

Request Query Parameters

Query Parameter	Type	Mandatory	Description
fundPayinRefId	String(50)	Yes	Fund payin reference id pertaining to the settlement order for with payment transaction was initiated

Response

HTML Page for making payments.

POST /rest/v1/paytxn

This API allows querying status of one or more payment transactions initiated by clients using payment gateway. The filter date range cannot be more than 30 days.

Method	POST
Url	<baseurl>/rest/v1/paytxn
Request	JSON
Response	JSON

Request JSON

Map containing following fields. Minimum 1 field is required.

Field	Type	Mandatory	Description
id	String(30)	No	Unique id for the payment transaction
fundPayinRefId	String(50)	No	Fund payin reference id pertaining to the settlement order for with payment transaction was initiated
orderNumber	String(20)	No	Settlement Order number for which payment transaction was initiated
filtFromDate	Date	No	From Date filter
filtToDate	Date	No	To Date filter

Sample Request

```
{
     "id":"YrsE8KzQPaV9guWKpptGA",
     "fundPayinRefId":null,
     "orderNumber": null,
     "filtFromDate":"04-01-2023"
     "filtToDate":"10-01-2023"
}
```

Response JSON

List of Map containing following fields. Each Map represents a payment transaction record.

Field	Type	Mandatory	Description

id	String(30)	Yes	Unique id for the payment transaction
fundPayinRefId	String(50)	Yes	Fund payin reference id pertaining to the settlement order for with payment transaction was initiated
orderNumber	String(20)	Yes	Settlement Order number for which payment transaction was initiated
partCode	String(30)	Yes	Participant code of the client that initiated the payment transaction
method	String(15)	Yes	Method of payment netbanking = Net Banking upi = UPI
amount	Decimal(12,2)	Yes	Fund payin obligation amount for the settlement order.
upiId	String(63)	No	UPI provided. Applicable only for method=upi
bankIFSC	String(11)	Yes	IFSC of the bank account selected by client for payment. Applicable for all methods of payment.
bankAcccountNo	String(30)	Yes	Account number of the bank account selected by client. Applicable for all methods of payment.
status	String(2)	Yes	Status of transaction P=Pending XS=ProvisionalSuccess XF=ProvisionalFailed S=Success F=Failed
statusRemarks	String(200)	No	Reason/remarks if any
debitAmount	Decimal(12,2)	No	Actual amount received. Valid in case of status ProvisionalSuccess And Success transaction
debitBankIFSC	String(11)	No	IFSC of the account from which the amount was received.
debitBankAccountNo	String(30)	No	Account number of the bank account from which the amount was received.
bankRefNo	String(35)	No	Bank reference number
customerReferenceNo	String(30)	No	Customer reference number received from bank
initiateTime	DateTime	Yes	Payment initiation date time
lastResponseTime	DateTime	Yes	Last action date time

Sample Success Response

```
[
    {
        "id": "YrsE8KzQPaV9guWKpptGA",
        "fundPayinRefId":"b4b8a676-cdda-48c8-89f2-776b354364d8",
        "orderNumber": "221230000000061",
        "partCode": "DFHI",
        "method": "UPI",
        "amount": 125567.10,
```

```
            "upiId": "999999999@xxxx",
            "bankIFSC": "ABCD0000001",
            "bankAcccountNo": "12312312312",
            "status": "XS",
            "statusRemarks": null,
            "debitAmount": 125567.10,
            "debitBankIFSC": "ABCD0000001",
            "debitBankAcccountNo": "12312312312",
            "bankRefNo": "7216557",
            "customerReferenceNo": "312009070323",
            "initiateTime": "11-01-2023 17:53:29",
            "lastResponseTime": "11-01-2023 18:40:35"
        }
]
```

POST /rest/v1/paytxn/upi

This API allows initiating a UPI transaction directly without accessing the payment page.

Method	POST
Url	<baseurl>/rest/v1/paytxn/upi
Request	JSON
Response	JSON

Request JSON

Map containing following fields.

Field	Type	Mandatory	Description
fundPayinRefId	String(50)	Yes	Fund payin reference id pertaining to the settlement order for with payment transaction was initiated
amount	Decimal(12,2)	Yes	Fund payin obligation amount for the settlement order.
upiId	String(63)	No	UPI provided. Applicable only for method=upi
bankIFSC	String(11)	Yes	IFSC of the bank account selected by client for payment. Applicable for all methods of payment.
bankAcccountNo	String(30)	Yes	Account number of the bank account selected by client. Applicable for all methods of payment.
customerReferenceNo	String(30)	No	Customer reference number received from bank

Sample Request

```
{
    "fundPayinRefId":"b4b8a676-cdda-48c8-89f2-776b354364d8",
    "amount": 125567.10,
    "upiId": "999999999@xxxx",
    "bankIFSC": "ABCD0000001",
    "bankAcccountNo": "12312312312",
    "customerReferenceNo": "312009070323"
}
```

Response JSON

Map containing fields similar to Response JSON for API POST /rest/v1/paytxn

Sample Success Response

```
{
      "id": "YrsE8KzQPaV9guWKpptGA",
      "fundPayinRefId":"b4b8a676-cdda-48c8-89f2-776b354364d8",
      "orderNumber": "221230000000061",
      "partCode": "DFHI",
      "method": "UPI",
      "amount": 125567.10,
      "upiId": "999999999@xxxx",
      "bankIFSC": "ABCD0000001",
      "bankAcccountNo": "12312312312",
      "status": "P",
      "statusRemarks": null,
      "debitAmount": null,
      "debitBankIFSC": null,
      "debitBankAcccountNo": null,
      "bankRefNo": null,
      "customerReferenceNo": "312009070323",
      "initiateTime": "11-01-2023 17:53:29",
      "lastResponseTime": "11-01-2023 18:40:35"
}
```

Callback API

POST /v1/notification

3rd party applications can optionally implement the notification callback API. Exchange system will notify various events by invoking POST method on the URL. The URL should be accessible over internet and should be on HTTPS. The notifications will be sent to buyer and seller clients and brokers. Following events would be notified.

1. Order reporting status change such as approve/reject by counter party

2. Settle order creation for order upon manual or auto approval by counter party

3. Settle order amendments by buyer or seller

4. Any change in settlement status related to payin and payout

5. New unregistered participant approval status

6. Any change in payment transaction status including initiation of payment transaction by client.

7. Approval status of additional bank and DP accounts for unregistered participant

Method	POST
Url	<clientbaseurl>/v1/notification
Request	JSON
Response	JSON

Authentication

3rd party applications wanting notifications using callback APIs should provide an https base url for the call back api. A signature would be computed by computing HmacSHA256 of the Request JSON payload and then encoding using HEX . This signature will be added in the header with key as "token".

Request JSON

Map containing following fields

Field	Type	Mandatory	Description
orderList	List of Order Structure	No	Structure same as Response JSON for POST /rest/v1/order
settleOrderList	List of Settle order structure	No	Structure same as Response JSON for POST /rest/v1/settle/order/all
unregList	List of unregistered particpants structure	No	Structure same as Response JSON for POST /rest/v1/unreg
bankList	List of bank account structure	No	Structure same as Response JSON for POST /rest/v1/unreg/bankacc
dpList	List of DP account	No	Structure same as Response JSON for POST /rest/v1/unreg/dpacc

	structure		
payTxnList	List of Payment Transaction structure	No	Structure same as Response JSON for API POST /rest/v1/paytxn

Sample Request

```
{
     "orderList": [
          {
               "standingInstFlag": "N",
               "dealType": "D",
               "buyerDealType": "D",
               "symbol": "INE752E07FF5",
               "buyParticipantLoginId": "BUYER1",
               "sellParticipantLoginId": "SELLER1",
               "price": 100.512,
               "value": 12500000,
               "accrInt": 0,
               "settle": 1,
               "sendFor": "C",
               "yieldType": "P",
               "yield": 10.4512,
               "tradeDate": "28-06-2018",
               "tradeTime": "14:25",
               "sellerRefNo": "TXNREF0001",
               "id":344,
               "id":"221216000000344",
               "quantity":10,
               "consideration":12564000,
               "buyBackofficeLoginId":null,
               "sellBackofficeLoginId":null,
               "status":1,
               "buyerRefNo": null
          }
     ]
}
```

```
{
     "settleOrderList": [
          {
               "symbol": "INE020B08BH6",
               "settlementNo": "2212019",
               "orderNumber": "221218000000367",
               "buyParticipantLoginId": "INDBANK",
               "settleStatus": 0,
               "dpId": "IN500089",
               "source": 1,
               "modAccrInt": 1235.00,
               "buyerFundPayinObligation": 10101245.00,
               "benId": "00000000",
               "buyBackofficeLoginId": "ILFSSEC",
               "price": 101.0000,
               "yield": 7.0000,
               "modSettleDate": "19-12-2022",
               "stampDutyAmount": 10,
               "sellParticipantLoginId": "DFHI",
               "yieldType": "M",
               "id": 1,
```

```
                "modQuantity": 10,
                "value": 10000000.00,
                "modConsideration": 10101235.00,
                "stampDutyBearer": "INDBANK",
                "sellerFundPayoutObligation": 10101235.00,
                "ifscCode": "SBDF0000001"
            }
        ]
}
```

```
{
      "unregList": [
            {
            "loginId": "P0131B",
            "address": "Test line 1",
            "custodian": null,
            "address3": "Test line 3",
            "emailList": [
                    "test@testcompany.com"
                ],
            "address2": "Test line 2",
            "panNo": "PANNO0131A",
            "workflowStatus": 0,
            "contactPerson": "Mr Test",
            "telephone": "1231231231",
            "expiryDate": null,
            "firstName": "PART 131",
            "mobileList": [
                    "1231231231"
                ],
            "dpAccountList": [
                    {
                    "dpType": "NSDL",
                    "benId": "29347239",
                    "isDefault": "Y",
                    "workflowStatus": 0,
                    "dpId": "IN234234",
                    "status": "A"
                    }
                ],
            "actualStatus": 4,
            "bankAccountList": [
                    {
                    "isDefault": "Y",
                    "bankIFSC": "HDFC1231221",
                    "workflowStatus": 0,
                    "bankAccountNo": "123412312",
                    "bankName": "HDFC",
                    "status": "A"
                    }
                ],
            "stateCode": "16",
            "id": 65092,
            "fax": null,
            "regAddress": "Test registered address",
            "leiCode": null
            }
        ]
}
```

```
{
      "bankList": [
            {
                  "isDefault": "Y",
                  "bankIFSC": "AXIS1231221",
                  "workflowStatus": 0,
                  "bankAccountNo": "5555555",
                  "bankName": "AXIS",
                  "participantCode": "P0131B",
                  "status": "A"
            }
      ]
}
```

```
{
      "dpList": [
            {
                  "dpType": "NSDL",
                  "benId": "29347888",
                  "isDefault": "Y",
                  "workflowStatus": 0,
                  "dpId": "IN234888",
                  "participantCode": "P0131B",
                  "status": "A"
            }
      ]
}
```

```
{
      "payTxnList" : [
            {
                  "id": "YrsE8KzQPaV9guWKpptGA",
                  "fundPayinRefId":"b4b8a676-cdda-48c8-89f2-776b354364d8",
                  "orderNumber": "221230000000061",
                  "partCode": "DFHI",
                  "method": "UPI",
                  "amount": 125567.10,
                  "upiId": "999999999@xxxx",
                  "bankIFSC": "ABCD0000001",
                  "bankAcccountNo": "12312312312",
                  "status": "XS",
                  "statusRemarks": null,
                  "debitAmount": 125567.10,
                  "debitBankIFSC": "ABCD0000001",
                  "debitBankAcccountNo": "12312312312",
                  "bankRefNo": "7216557",
                  "customerReferenceNo": "312009070323",
                  "initiateTime": "11-01-2023 17:53:29",
                  "lastResponseTime": "11-01-2023 18:40:35"
            }
      ]
}
```

ResponseSuccess JSON
Map containing following fields.

Field	Type	Mandatory	Description

code	Number	Yes	Always 200 Indicating success

Sample Response

```
{
    "code": 200
}
```

Annexure 1 - Password Policy

The password should adhere to the following rules.

- Password should be minimum 12 characters.
- Password should be maximum 15 characters.
- Password should contain at least one character from each set
  [a-z] [A-Z] [0-9] [~!@#$*()_+-:;]
- New Password should be different from Old Password.
- New Password should not be same as last 5 passwords.
- Password expires after 365 days.

Annexure 2 - State Codes

State Code	State Name
01	Jammu and Kashmir
02	Himachal Pradesh
03	Punjab
04	Chandigarh
05	Uttarakhand
06	Haryana
07	Delhi
08	Rajasthan
09	Uttar Pradesh
10	Bihar
11	Sikkim
12	Arunachal Pradesh
13	Nagaland
14	Manipur
15	Mizoram
16	Tripura
17	Meghalaya
18	Assam
19	West Bengal
20	Jharkhand
21	Odisha
22	Chhattisgarh
23	Madhya Pradesh
24	Gujarat
25	Daman & Diu
26	Dadra and Nagar Haveli
27	Maharashtra
29	Karnataka
30	Goa
31	Lakshdweep
32	Kerala
33	Tamil Nadu
34	Pondicherry
35	Andaman & Nicobar Islands
36	Telangana
37	Andhra Pradesh
38	Ladakh
98	IMPORT (NOT REGISTER IN INDIA)

Annexure 3 - Payment gateway redirect URL

Participants can optionally provide a redirect URL. Upon completion of the payment gateway workflow process the client will be redirected to the URL provided by participant. This will be applicable for netbanking and upi methods of payment.

The redirect URL should be on HTTPS and should be accessible over internet and should follow the following specifications

POST <participant redirect URL>

This API allows initiating a UPI transaction directly without accessing the payment page.

Method	POST
Url	<participant redirect url>
Request	application/x-www-form-urlencoded
Response	HTML

Request Form Parameters

Field	Type	Mandatory	Description
brokerPayData	Payment Transaction Structure	Yes	Structure same as Response JSON for API POST /rest/v1/paytxn
brokerPaySignature	String(64)	Yes	Signature by computing HmacSHA256 of brokerPayData and then encoding as HEX. A secret key will be shared by exchange