

API Structure for Collateral and Margin Details



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Introduction

The API is a JSON based API Request which facilitating Collateral Management for the Members.

Technology

The APIs are HTTPS based APIs available over Internet and Leased Line and shall be IP restricted for access.

The Request Response communication will be using JSON as Format (JavaScript Object Notation)

The document contains:

1. Member registration for API access through the Web Application
2. Authorization for API Structure - Request and Response
3. Collateral and Margin API Structure - Request and Response

The aforesaid API shall provide the following facilities to the Market participants:

1. Authentication / Session Creation APIs
2. Collateral and Margin details of the Member and their respective client/CP codes
3. Data validation error codes

Authentication

The Members will have to register in the ICCL system for API access.

The following Fields entered by the member using valid credentials, shall be utilised for providing access.
API ID Creation Fields in Website are as follows:

S.NO	Field Name	Details
1	IP Address	Static IP Address to be whitelisted by ICCL to access the API

On successful registration “Secret Key” will be shared to the member which shall be used in Authentication process as given below

API Structure

1. Authorization for API Structure Details

Request Field Parameters: (Header Details)

S. No	Field Name	Type	Length	Description	Sample
1	UserID	Varchar	25		
2	Password	Varchar	25		
3	SecretKey	Varchar	25		

User ID, Password and Secret Key are Headers, and the request is sent with a blank body

Response Field Parameters: (Field Details)

S.No	Parameters	Type	Length	Description	Sample
1	Token	Varchar	64	Token for Usage in other APIs	

In response the member gets Token on failure shall get error code and error message

Note :- All request calls must follow the following standard for sending different level of information requests

Format: Input fields for each client/proprietary type

Sr. No.	Description	Member	TM Code	UCC	Applicable Segment for each level
1	CM Proprietary account	CM Code	0	0	- Equity Cash, - Equity Derivative, - Currency Derivative, - Commodity Derivative
2	CM's own TM Pro account	CM Code	CM Code	OWN	- Equity Cash, - Equity Derivative, - Currency Derivative, - Commodity Derivative, - Securities Lending and Borrowing (SLB)
3	Client account	CM Code	CM Code	Client N	- Equity Cash, - Equity Derivative, - Currency Derivative, - Commodity Derivative,

Sr. No.	Description	Member	TM Code	UCC	Applicable Segment for each level
					- Securities Lending and Borrowing (SLB)
4	TM's Pro account	CM Code	TM Code	OWN	- Equity Cash, - Equity Derivative, - Currency Derivative, - Commodity Derivative
5	Client account	CM Code	TM Code	Client N	- Equity Cash, - Equity Derivative, - Currency Derivative, - Commodity Derivative
6	CM's aggregated CP Prop account	CM Code	(-) CM Code	0	- Equity Derivative, - Currency Derivative, - Commodity Derivative
7	CP account	CM Code	(-) CM Code	CP N	- Equity Derivative, - Currency Derivative, - Commodity Derivative

2. Collateral and Margin API Structure Details

Request Field Parameters: (Header Details)

S. No	Field Name	Type	Length	Description	Sample
1	MemberID	Varchar	4		
2	Token	Varchar	64		

Member ID and Token are in Headers

Request Field Parameters: (Field Details)

S. No	Field Name	Type	Length	Description
1	ver	Varchar	5	
2	uniqueRefId	Char	18	Unique Reference no YYYYMMDDMEMBERCODEXXXXXX Where X is incremental for each request
	data			List of records
3	data. segment	Char	3	Values shall be CM, FO, CD, CO, SLB, OFS, TPR, ITP, DT and NCB
4	data. tmCode	Char	5	TM Code(As per the Table 1)
5	data. cliCode	Char	12	UCC Code (As per the Table 1), OR "ALL"

Data contains a List of records from Item number 3 to 5 as comma separated string. Each record will be separated by character ^, without any padding.

Full Response Field Parameters: (Field Details)

S.No	Parameters	Type	Length	Description	Sample
1	uniqueRefId	Char	18	Unique Reference no Received in request	
2	errCode	Varchar	8		
3	errMsg	Varchar	50		
	data			List of records	
4	data. curDate	Char	11	DDMMYYYY. Current Date	
5	data. segment	Char	3	Values shall be CM, FO, CD, CO, SLB, OFS, TPR, ITP, DT and NCB	
6	data. cmCode	Char	5	ICCL CM Code	
7	data. tmCode	Char	5	TM Code	

S.No	Parameters	Type	Length	Description	Sample
8	data.cliCode	Char	12	UCC Code	
9	data.CPCode	Char	12	CP Code	
10	data.NonCashCollAftHairCut	Double	15,2	Non-Cash Equivalent Collateral after haircut	
11	data.CashEqCollAftHaircut	Double	15,2	Cash Equivalent Collateral After Haircut	
12	data.TotalComCollateral	Double	15,2	Total Commodity Collateral	
13	data.AllocatedCash	Double	15,2	Allocated Cash	
14	data.TotalCollateral	Double	15,2	Total Collateral	
15	data.Margin	Double	15,2	Margin	

Data contains a List of records from Item number 4 to 15 as comma separated string. Each record will be separated by character ^, without any padding.

3. Unallocated Collateral API Structure Details

Request Field Parameters: (Header Details)

S. No	Field Name	Type	Length	Description	Sample
1	MemberID	Varchar	4		
2	Token	Varchar	64		

Member ID and Token are in Headers

Request Field Parameters: (Field Details)

S. No	Field Name	Type	Length	Description
1	ver	Varchar	5	
2	uniqueRefId	Char	18	Unique Reference no YYYYMMDDMEMBERCODEXXXXXX Where X is incremental for each request
	data			List of records
3	data. curDate	Char	11	DD-MMM-YYYY. Date shall be the trade date.
4	data. intRefNo	Varchar	10	Custom Field for Member Non-Unique

Full Response Field Parameters: (Field Details)

S.No	Parameters	Type	Length	Description	Sample
1	uniqueRefId	Char	18	Unique Reference no Received in request	
2	errCode	Varchar	8		
3	errMsg	Varchar	50		
	data			List of records	
4	data. curDate	Char	11	DDMMYYYY. Current Date	
5	data. cmCode	Char	5	ICCL CM Code	
6	data. segment	Char	3	Values shall be CM, FO, CD, CO, SLB, OFS, TPR, ITP, DT and NCB	
7	data.fungiblebalance	Double	15,2	Fungible balance	
8	data.nonfungiblebalance	Double	15,2	Non-Fungible balance	

4. Collateral Authentication API

Tentative POST URL:

<https://demortrms.bseindia.com/NewEcolReportWebAPI/api/Authorization/Authorize>

Headers:

UserID :	7575
Password:	abcd
SecretKey:	abcdef

Authorization Request

Request (JSON Format)

```
{  
}
```

Response (JSON Format) – Success

```
{  
  "Token": "fjghyurhfgdjkgjv"  
}
```

Response (JSON Format) – Failure

```
{  
  "errCode": "1002",  
  "errMsg": "Invalid Password. "  
}
```

5. Collateral and Margin API Request

Tentative POST URL:

<https://demortrms.bseindia.com/NewEcolReportWebAPI/api/CollateralInfo/ClientAllocationAndMargin>

Headers:

MemberID:	7575
Token:	fjghyurhfgdjkgjv

Request (JSON Format)

```
{
  "ver": "1.0",
  "uniqueRefId": "2023011975750000001",
  "data": "CM,7575,OWN^CM,7575,Client1^CM,7576,OWN^CM,7576,Client2^CM,-7575,0^CM,-7575,CpCode"
}
```

Full Response (JSON Format)

```
{
  "uniqueRefId": "2023011975750000001",
  "errCode": "",
  "errMsg": "",
  "data": "19012023,CM,7575,OWN,,5000.00,10000.00,4000.00,10000.00,20000.00,2000.00^19012023,CM,7575,Client1,,5000.00,10000.00,4000.00,10000.00,20000.00,3000.00^19012023,CM,7576,OWN,,5000.00,10000.00,4000.00,10000.00,20000.00,4000.00^19012023,CM,7576,Client2,,5000.00,10000.00,4000.00,10000.00,20000.00,5000.00^19012023,CM,-7575,0,,5000.00,10000.00,4000.00,10000.00,20000.00,6000.00^19012023,CM,-7575,,CpCode,5000.00,10000.00,4000.00,10000.00,20000.00,7000.00"
}
```

6. Unallocated Collateral API Request

Tentative POST URL:

<https://demortrms.bseindia.com/NewEcolReportWebAPI/api/CollateralUnallocatedInfo/UnallocatedCollateral>

Headers:

MemberID:	7575
Token:	fjghyurhfgdjkgjv

Request (JSON Format)

```
{
  "ver": "1.0",
  "uniqueRefId": "2023011975750000001",
  "data": "19-JAN-2023,INTREF1"
}
```

Full Response (JSON Format)

```
{
  "uniqueRefId": "2023011975750000001",
  "errCode": "",
  "errMsg": "",
  "data": "19012023,7575,CM,200.00,300.00"
}
```