Authentication

OUATH2 authentication protocol is used for all API calls. An oauth2 client library in any programming language can be used.

```
Base url : <base_url>
OAuth2 CLIENT ID : SAS Online will Provide <ouathID>
OAuth2 CLIENT Secret: SASOnline will provide (please save it for future usage)
==========================
Grant type: Authorization Code
Authorization endpoint: /oauth2/auth
Access token endpoint: /oauth2/token
Redirect url : User's choice (or by default http://127.0.0.1)
Scope : orders holdings
Credentials : As Basic Auth Header (default)
```

```
Sample GET request

<base_url>/oauth2/auth?scope=orders%20hold-
ings&state=%7B%22param%22:%22value%22%7D&redi-
rect_uri=http://127.0.0.1&response_type=code&client_id=<oauthID>
```

After this is opened in Web Browser(once every trading Day) , Login ID ,password and 2FA of the Trading platform needs to be entered.

After this step user will get the **Access Token**

Access Token needs to be sent with every API request until unless mentioned.
Authorization: Bearer {access_token}
Replace {access_token} with the access token obtained for the user.

In case the access_token got expired, 401 HTTP status will be sent in response for any request in which case a new access token has to be obtained.

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Contents

1. Profile

Get user profile

Request

Method	URL
GET	/api/v1/user/profile?client_id=<clientID>

Response

Status	Sample Response
200	(see below)


```
{
   "data":{
      "account_type":"",
      "bank_account_number":"1234567890",
      "bank_branch_name":"",
      "bank_name":"EQ-ICICI BANK LTD",
      "branch":"EQ-ICICI BANK LTD",
      "broker_id":"ABC",
      "city":"",
      "client_id":"XYZ",
      "dob":"01/01/2000",
      "email_id":"abc@gmail.com",
      "exchange_nnf":{
         "BSE":0,
         "CDS":0,
         "MCX":0,
         "NFO":0,
         "NSE":0
      },
      "exchanges_subscribed":[
         "BSE",
         "MCX",
         "CDS",
         "NSE",
         "NFO"
      ],
      "ifsc_code":"",
      "name":"PRAVEEN KUMAR",
      "office_addr":"abc@gmail.com\r\n9876543210",
      "pan_number":"ABCDEFGHI",
      "permanent_addr":"STATE",
      "phone_number":"9876543210",
      "products_enabled":[
         "CNC",
         "CO",
         "MIS",
         "NRML"
      ],
      "role":{
         "id":1,
         "name":"CLIENT"
      },
      "sex":"",
      "state":"",
      "status":"Activated",
      "twofa_enabled":true,
      "user_type":"Non-Institutional"
   },
   "message":"",
   "status":"success"
}
```

2. Place Normal Order

Request

Method	URL
POST	/api/v1/orders

Sample Request Parameters (Possible values in comment)

```
{
   "exchange":"NSE",         //  NSE,NFO,CDS,BSE,MCX
   "order_type":"LIMIT",     //  LIMIT,MARKET,SL,SLM
   "instrument_token":4717,  //  GAIL-EQ
   "quantity":1,
   "disclosed_quantity":0,
   "price":89.7,
   "order_side":"BUY",      // BUY , SELL
   "trigger_price":0,
   "validity":"DAY",        // DAY , IOC
   "product":"MIS",         // MIS (INTRADAY) , NRML ,CNC (CARRYFORWARD)
   "client_id":"XYZ",
   "user_order_id":10002,
   "market_protection_percentage":0,
   "device":"WEB"
}
```

Response

Status	Sample Response
200	`{ "data":{ "oms_order_id":"200018000000003", "user_order_id":10002 }, "message":"Order place successfully", "status":"success" }`

3. Modify Orders

Request

Method	URL
PUT	/api/v1/orders

Sample Request Parameters (Possible values in comment)

```
{
   "oms_order_id":"200327000000027"// value as per order response
   "instrument_token":"11536",     // value of placeorder request
   "exchange":"NSE",               // value of placeorder request
   "product":"MIS",     //placeorder value- MIS/NRML/CNC/CO/BO
   "validity":"DAY",               // value of placeorder request
   "order_type":"LIMIT", // placeorder value- LIMIT ,MARKET ,SL ,SLM
   "order_side":"BUY",     // same value as in placeorder - BUY , SELL
   "price":2073,                   // can be changed
   "trigger_price":0,    // can be changed if order-type SL or SLM
   "quantity":1,         // can be changed other than BO or CO
   "disclosed_quantity":0, // can be changed
   "client_id":"XYZ"               // id used to login
}
```

Response

Status	Sample Response
200	`{ "data":{ "oms_order_id":[ "200327000000027" ] }, "message":"Order modification request submitted", "status":"success" }`

4. Cancel Normal Order

Request

Method	URL
DELETE	/api/v1/orders/<omsOrderNum>?client_id=<clientID>

example: /api/v1/orders/200327000000027?client_id=XYZ

Response

Status	Sample Response

200	{
	  "data":{
	    "oms_order_id":"200420000000023"
	  },
	  "message":"Order cancellation request submitted for OMS Order: 200420000000023",
	  "status":"success"
	}

5. Scripinfo.

Request

Method	URL
GET	/api/v1/contract/<exchange>?info=scrip&token=<instrumentToken>

example: /api/v1/contract/NSE?info=scrip&token=4717

Response

<table>
<tr><th>Status</th><th>Sample Response</th></tr>
<tr><td>200</td><td><pre>
{
   "error":{
      "code":0,
      "message":""
   },
   "result":{
      "board_lot_quantity":1,
      "change_in_oi":0,
      "exchange":1,
      "expiry":0,
      "higher_circuit_limit":88.95,
      "instrument_name":"EQ",
      "instrument_token":4717,
      "isin":"INE129A01019",
      "lower_circuit_limit":72.85,
      "multiplier":1,
      "open_interest":0,
      "option_type":"",
      "precision":2,
      "series":"EQ",
      "strike":0,
      "symbol":"GAIL",
      "tick_size":0.05,
      "trading_symbol":"GAIL-EQ",
      "underlying_token":4717,
      "raw_expiry":0,
      "freeze":274,
      "instrument_type":"0",
      "issue_rate":0,
      "issue_start_date":"544406400",
      "list_date":"544406400",
      "max_order_size":0,
      "price_numerator":0,
      "price_denominator":0,
      "comments":"",
      "circuit_rating":"",
      "company_name":"GAIL (INDIA) LTD",
      "display_name":"GAIL EQ",
      "raw_tick_size":5,
      "is_index":false, "tradable":true,
      "max_single_qty":0,
      "expiry_string":"",
      "local_update_time":"",
      "market_type":"",
      "price_units":"",
      "trading_units":"",
      "last_trading_date":"",
      "tender_period_end_date":"",
      "delivery_start_date":"",
      "price_quotation":0,
      "general_denominator":"",
      "tender_period_start_date":"",
      "delivery_units":"",
      "delivery_end_date":"",
      "trading_unit_factor":0,
      "delivery_unit_factor":0
   }
}
</pre></td></tr>
</table>

6. Search Script.

Request

Method	URL
GET	/api/v1/search?key=<keyword>

example: /api/v1/search?key=SPICE

Response

Status	Sample Response
200	{ "error":{ "code":0, "message":"" }, "result":[{ "company":"SPICEJET LIMITED", "display_name":"SPICEJET EQ", "exchange":"NSE", "symbol":"SPICEJET", "token":11446, "trading_symbol":"SPICEJET-EQ" }, { "company":"SPICEJET LTD.", "display_name":"SPICEJET A", "exchange":"BSE", "symbol":"SPICEJET LTD.", "token":500285, "trading_symbol":"SPICEJET-A" }, { "company":"SPICE ISLANDS APPARELS LTD.", "display_name":"SPICEISL XT", "exchange":"BSE", "symbol":"SPICE ISLANDS APPARELS LTD.", "token":526827, "trading_symbol":"SPICEISL-XT" }] }

7. Orderbook

Request

Type	Method	URL
Pending	GET	/api/v1/orders?type=pending&client_id=<clientID>
Completed	GET	/api/v1/orders?type=completed&client_id=<clientID>

Response

<table>
<tr><th>Status</th><th>Sample Response (Possible values in comment)</th></tr>
<tr><td>200</td><td><pre>
{
   "data":{
      "orders":[
         {
            "order_tag":"",
            "validity":"DAY",
            "square_off_value":null,
            "exchange_order_id":"1100000000314214",
            "exchange":"NSE",   // NSE,NFO,CDS,BSE,MCX
            "rejection_reason":"",
            "amo":false,
            "trade_price":0,
            "order_entry_time":1585308069,
            "mode":"NEW",
            "is_trailing":false,
            "trading_symbol":"TCS-EQ",
            "segment":"",
            "series":"",
            "order_side":"BUY",   // BUY , SELL
            "product":"MIS",   // MIS,CNC,NRML
            "stop_loss_value":null,
            "device":null,
            "contract_description":{

            },
            "leg_order_indicator":"",
            "client_id":"XYZ",
            "deposit":0,
            "remaining_quantity":1,
            "last_activity_reference":0,
            "order_status":"open",   // open ,trigger pending ,completed ,rejected, cancelled
            "square_off?":false,
            "login_id":"XYZ",
            "pro_cli":"CLIENT",
            "trailing_stop_loss":null,
            "market_protection_percentage":0,
            "order_status_info":"",
            "rejection_code":0,
            "target_price_type":"absolute",
            "user_order_id":"1",
            "lot_size":1,
            "price":"2074.00",
            "average_trade_price":"00.00",
            "disclosed_quantity":0,
            "oms_order_id":"200327000000027",
            "filled_quantity":0,
            "trigger_price":"00.00",
            "exchange_time":1585307852,
            "nnf_id":0,
            "instrument_token":"11536",
            "quantity":1,
            "order_type":"LIMIT",   // LIMT ,MARKET ,SL,SL-M
            "average_price":"00.00"
         }
      ]
   },
   "message":"",
   "status":"success"
}
</pre></td></tr>
</table>

8. TradeBook

Request

Method	URL
GET	/api/v1/trades?client_id=<clientID>

Response

Status	Sample Response

200	{
	"data":{
	"trades":[
	{
	"book_type":"",
	"broker_id":"",
	"client_id":"XYZ",
	"disclosed_vol":0,
	"disclosed_vol_remaining":0,
	"exchange":"NSE",
	"exchange_order_id":"1100000000503286",
	"exchange_time":1587037856,
	"fill_number":"50143479",
	"filled_quantity":1,
	"good_till_date":"",
	"instrument_token":2885,
	"login_id":"XYZ",
	"oms_order_id":"200416000000015",
	"order_entry_time":1587210656,
	"order_price":1425.0,
	"order_side":"BUY",
	"order_type":"MKT",
	"original_vol":0,
	"pan":"ABCDEFGH",
	"pro_cli":"--",
	"product":"MIS",
	"remaining_quantity":null,
	"trade_number":"50143479",
	"trade_price":1425.0,
	"trade_quantity":1,
	"trade_time":1587210656,
	"trading_symbol":"RELIANCE-EQ",
	"trigger_price":0,
	"vol_filled_today":"Filledqty"
	}
	]
	},
	"message":"",
	"status":"success"
	}

9. OrderHistory

Request

Method	URL
GET	/api/v1/order/<omsOrderNum>/history?client_id=<clientID>

example: /api/v1/order/200327000000020/history?client_id=XYZ

Response

Status	Sample Response
200	


```
{
  "data": [
    {
      "avg_price":  "0.0",
      "client_id":  "XYZ",
      "created_at": null,
      "disclosed_quantity": "0",
      "exchange": "NSE",
      "exchange_order_id": null,
      "exchange_time":  "--",
      "fill_quantity":  0,
      "instrument_token": null,
      "last_modified": null,
      "login_id": null,
      "modified_at": null,
      "order_id": "200723000150528",
      "order_mode":  null,
      "order_side":  "BUY",
      "order_type":  "LIMIT",
      "price": "1290.00",
      "product": "MIS",
      "quantity": 1,
      "reject_reason": "user privilege is view only",
      "remaining_quantity": null,
      "segment": null,
      "status": "rejected",
      "trading_symbol": "ACC-EQ",
      "trigger_price": "0.0",
      "underlying_token": null,
      "user_order_id": "87897349",
      "validity": "DAY"
    }
  ],
  "message": "",
  "status": "success"
}
```

10. PositionBook

Request

Type	Method	URL
`Live(only Day)`	`GET`	`/api/v1/positions?type=live&client_id=<ClientID>`
`All(Live+ Historical)`	`GET`	`/api/v1/positions?type=historical&client_id=<ClientID>`

Response

<table>
<tr><th>Status</th><th>Sample Response</th></tr>
<tr><td>200</td><td><pre>
{
    "data":[
        {
            "average_buy_price":1476.58,
            "average_price":0,
            "average_sell_price":0.0,
            "buy_amount":2953.15,
            "buy_quantity":2,
            "cf_buy_amount":0.0,
            "cf_buy_quantity":0,
            "cf_sell_amount":0.0,
            "cf_sell_quantity":0,
            "client_id":"XYZ",
            "close_price":0,
            "exchange":"NSE",
            "instrument_token":22,
            "ltp":1172.8,
            "multiplier":1,
            "net_amount":-2953.15,
            "net_quantity":2,
            "previous_close":1172.8,
            "prod_type":"NRML",
            "product":"NRML",
            "realized_mtm":0.0,
            "segment":null,
            "sell_amount":0.0,
            "sell_quantity":0,
            "symbol":"ACC",
            "token":22,
            "trading_symbol":"ACC-EQ"
        }
    ],
    "message":"",
    "status":"success"
}
</pre></td></tr>
</table>

11. Demat Holdings

Request

Method	URL
GET	/api/v1/holdings?client_id=<clientID>

Response

Status	Sample Response
200	(see below)


```json
{
   "data":{
      "holdings":[
         {
            "branch_code":"",
            "buy_avg":4.16,
            "buy_avg_mtm":-5.000000000000004,
            "client_id":"XYZ",
            "exchange":"BSE",
            "instrument_details":{
               "exchange":6,
               "instrument_name":"E",
               "instrument_token":538743,
               "trading_symbol":"MUDUNURU-XT"
            },
            "isin":"INE491C01027",
            "ltp":3.96,
            "previous_close":4.16,
            "quantity":25,
            "symbol":"MUDUNURU",
            "t0_price":0.0,
            "t0_quantity":0,
            "t1_price":0.0,
            "t1_quantity":0,
            "t2_price":0.0,
            "t2_quantity":0,
            "token":538743,
            "trading_symbol":"MUDUNURU",
            "used_quantity":0
         }
      ]
   },
   "message":"",
   "status":"success"
}
```

12. Cash Positions

Request

Method	URL
GET	/api/v1/funds/view?client_id=<clientID>&type=all

Response

Status	Sample Response
200	(see below)


```
{
   "data":{
      "client_id":"XYZ",
      "headers":[
         "Description",
         ""
      ],
      "values":[
         [
            "Available",
            "611773.30"
         ],
         [
            "Adhoc Deposit",
            "0.00"
         ],
         [
            "Cash Deposit",
            "1448713.90"
         ],
         [
            "Delivery",
            "0.00"
         ],
         [
            "DP Collateral Benefit",
            "179.37"
         ],
         [
            "DP Credit for Sale",
            "0.00"
         ],
         [
            "DP Pledge Collateral",
            "0.00"
         ],
         [
            "Manual Collateral",
            "0.00"
         ],
         [
            "Miscellaneous Deposit",
            "0.00"
         ],
         [
            "Net Margin",
            "836940.60"
         ],
         [
            "Notion Deposit",
            "0.00"
         ],
         [
            "Overdraft",
            "0.00"
         ],
         [
            "Pay out",
            "0.00"
         ],
         [
            "Pool Collateral Benefit",
            "0.00"
         ],
         [
            "Pool Pledge Collateral",
            "0.00"
         ],
         [
            "Premium",
            "0.00"
         ],
         [
            "Sar Collateral Benefit",
            "0.00"
         ],
         [
            "Sar Credit for Sale",
            "0.00"
         ],
         [
            "Span Margin",
            "587880.00"
         ],
         [
            "Var Margin",
            "0.00"
         ],
```

13. Place Cover Order

Note: May not be supported / enabled in all environments by default, please check with your Broker

Request

Method	URL
POST	/api/v1/orders

Sample Request Parameters (Possible values in comment)
see code below

```
{
   "exchange":"NSE",          // NSE,NFO,CDS,BSE,MCX
   "order_type":"LIMIT",      // LIMIT,MARKET
   "instrument_token":4717,  // GAIL-EQ
   "quantity":1,
   "disclosed_quantity":0,
   "price":89.7,
   "order_side":"BUY",       // BUY , SELL
   "trigger_price":89,
   "validity":"DAY",         // DAY , IOC
   "product":"CO",          // CO (Cover Order)
   "client_id":"XYZ",
   "user_order_id":10002,
   "market_protection_percentage":0,
   "device":"WEB"
}
```

Response

Status	Sample Response
200	see code below

```
{
   "data":{
      "client_order_id":"300018000000592",
      "user_order_id":10002
   },
   "message":"Order place successfully",
   "status":"success"
}
```

14. Place Bracket Order

Note: May not be supported / enabled in all environments by default, please check with your Broker

Request

Method	URL
POST	/api/v1/orders/bracket

Sample Request Parameters (Possible values in comment)

```
{
 "exchange": "NSE",    // NSE,NFO,CDS,BSE,MCX
"instrument_token": 22,
"quantity": 1,
"disclosed_quantity": 0,
"validity": "DAY",
"square_off_value": 1301, // Target Sell price (profit)
"stop_loss_value": 1290,  // Stop Loss price (cover loss)
"price": 1299,
"trigger_price":1299, //0 for LIMIT,non 0 value if order_type is SL
"source": "web",
"trailing_stop_loss": 1,
"order_type": "SL",       //LIMIT , SL
"product": "BO",
"order_side": "BUY",      //BUY ,SELL
"is_trailing":false,      //true ,false
"user_order_id": 10003,
"client_id":"XYZ"
}
```

Response

Status	Sample Response
200	`{ "data":{ "client_order_id":"300018000000593", "user_order_id":10002 }, "message":"Order place successfully", "status":"success" }`

15. Exit Bracket Order

Note: May not be supported / enabled in all environments by default, please check with your Broker

Request

Method	URL
DELETE	v1/orders/bracket

Sample Request Parameters (Possible values in comment)

```
{
 "oms_order_id":  "200602000000313",
"leg_order_indicator": "200602000000311", //oms_order_id for 1st leg BO
"status": "trigger pending",    // open or trigger pending
"client_id":"XYZ"
}
```

Response

Status	Sample Response
200	`{ "data": {}, "message": "Ok", "status": "success" }`

16. Exit Cover Order

Note: May not be supported / enabled in all environments by default, please check with your Broker

Request

Method	URL
`DELETE`	`v1/orders/cover`

Sample Request Parameters (Possible values in comment)
`{ "oms_order_id": "200602120000429", "leg_order_indicator": "209102000000526", //oms_order_id for 1st leg CO "client_id":"XYZ" }`

Response

Status	Sample Response
`200`	`{ "data": {}, "message": "Ok", "status": "success" }`

17. Glossary

Conventions

- All response are in JSON format.
- All request parameters are mandatory unless explicitly marked as `[optional]`

Status Codes

All status codes are standard HTTP status codes. The below ones are used in this API.

`2XX` - Success of some kind
`4XX` - Error occurred in client's part
`5XX` - Error occurred in server's part

Status Code	Description
200	OK
400	Bad request
401	Authentication failure
403	Forbidden
404	Resource not found
405	Method Not Allowed
500	Internal Server Error
503	Service Unavailable

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