HFT WSTGW API Description

Intro

It is to be understood that HFT WebSocket Trading GateWay (WSTGW) is working in asynchronous model. It means that GW takes a request (an order) from client and sends one to Core Trading System and does NOT wait the response from it (the System) but sends the response back to client.
Continuing the thread of thoughts it seems to be worth mentioning that failed/erroneous response from TGW does NOT mean that system cannot proceed the request, it means that TGW cannot place the request to Core Trading system

Terminology

- HFT - High Frequency Trading
- WSTGW - WebSocket Trading GateWay
- API - Application Programming Interface

Request-Response Workflow

Assumptions

- Every Request to WS TGW must have "`rqst`" field, supported actions
  - "`auth`"
  - "`onew`"
  - "`ocncl`"
- Every response from WS TGW has "`rspns`" field
  - In case of success: "`ok`"
  - if Failed: "`Error string`"
- In order to identify/correspond response to request every response from WS TGW has a key, that could be either:
  - `cliorderId`
  - `orderId`
  - `apikey`
- Practically, ws tgw is going to reply back original request from client injecting the response, either "`ok`" or "`error message`"

Create a handshake and join channel

Request

```
{"rqst":"auth","apikey":"XXXXXXXXXXXXXXXXXX"}
```

Response

Success

```
{"apikey":"XXXXXXXXXXXXXXXXXX","rspns":"ok"}
```

Fail

```
{"apikey":"XXXXXXXXXXXXXXXXXX","rspns":"Error Message"}
```

Send an order

Request

```
{
  "rqst": "onew",
  "cliOrderId": "cxc-155-test-01",
  "price": "200",
  "type": "lmt",
  "tradingPairId": 29,
  "amount": "0.00001",
  "side": "buy"
}
```

Response

Success

```
{
  "rqst": "onew",
  "cliOrderId": "cxc-155-test-01",
  "price": "200",
```

```
  "type": "lmt",
  "tradingPairId": 29,
  "amount": "0.00001",
  "side": "buy",
  "orderId": "1554808412.398163.wstg1@0029.1",
  "ug": 10,
  "action": 1,
  "userId": 93356,
  "rspns": "ok",
  "msgtp": "rspns"
}
```

Fail

```
{
  "rqst": "onew",
  "cliOrderId": "cxc-155-test-01",
  "price": "200",
  "type": "lmt",
  "tradingPairId": 29,
  "amount": "0.00001",
  "side": "buy",
  "orderId": "1554808412.398163.wstg1@0029.1",
  "ug": 10,
  "action": 1,
  "userId": 93356,
  "rspns":"Some error message",
  "msgtp": "rspns"
}
```

Cancel an order

Request

```
{"rqst":"ocncl","orderId":"1545925300.904075.tg1.062901@0029.1"}
```

Response

Success

`{"rspns":"ok","orderId":"1545925300.904075.tg1.062901@0029.1"}`

Fail

`{"rspns":"Some error message","orderId":"1545925300.904075.tg1.062901@0029.1"}`

Replace Order

Not supported at the moment

Cancel All Orders

Not supported at the moment

Place Multiple Orders

Not supported at the moment

Data Flow

- In order to distinguish between
    - response from tgw
    - trade from ME
    - bal update from BE
- new JSON field is to be implemented: `msgtp`, that could be either:
    - rspns
    - trd
    - bal

Trades

Sample Response

```
{
  "avgPrice": "0",
  "cliOrderId": "cxc-155-test-01",
  "execPrice": "200",
  "initPrice": "200",
  "message": "",
  "msgtp": "trd",
  "oqty": "0.00001",
  "orderId": "1554810944.468910.wstg1@0029.1",
  "qty": "0.00001",
  "side": "buy",
  "stat": "accepted",
  "tradingPairId": 29,
  "trdId": "1554810946.822295.3.tg14",
  "type": "lmt",
  "ug": 13,
  "userId": 51983,
  "userIdMaker": 0,
  "userIdTaker": 0
}
```

Balances

Sample Response

```
{
  "id": "1554810944.468910.wstg1@0029.1",
  "userId": 51983,
  "currencyId": 2,
  "amount": "11924.809",
  "lockedByOrder": "49.45952697216",
  "lockedByWithdrawal": "0",
  "fee": "0",
  "feetp": 1,
  "result": "1",
  "msgtp": "bal"
}
```