

[INTERFACE SPECIFICATION]

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[OMNIMARKETTIDE]

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OMT-WebService User Manual

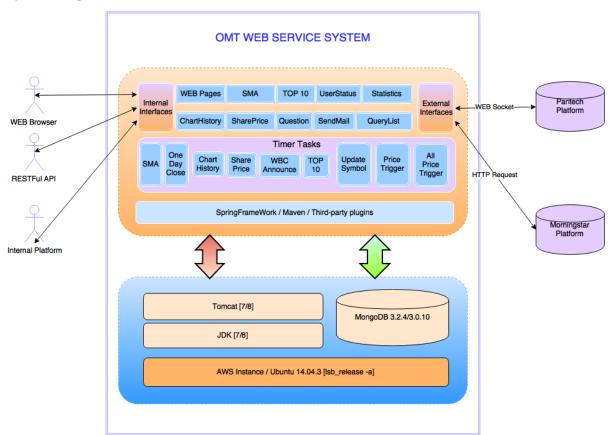
1. Summary

This document can be used for querying for interface abilities and Web-UI features.

Including:

- o System Diagram
- Web-UI Features
- External Interfaces (postman)
- Internal Interfaces
- o Testing load Balance method

2. System diagram

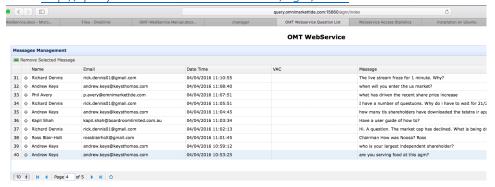


 Two Data Sources from third-party platforms: Paritech Via WebSocket Connection and Morningstar Via HttpRequest

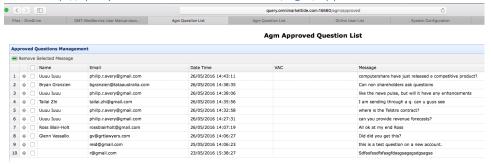
- Three Clients outside: WEB Browser, RESTful API for mobiles, HTTP External interfaces
 like trigger for Price Change
- WEB SERVICE running on AWS instance of UBUNTU 14.04.3
- System Running Environment including: Tomcat, JRE, MongoDB
- Based on Maven use a series of plugins like SpringFrameWork, JSON, WebSocket Client,
 Log4j
- Modules including: Chart History, Share Price, Question, Send Mail, Top 10, Set User status, SMA, Statistics.
- System including 8 timer tasks currently:
 - Share Price: running on a specific time interval (Configurable parameter) get data from MS
 - Chart History: every day morning clear cache and get new history data(5AM)
 - One Day close: every day morning get only last day close price for all (6AM)
 - WBC Announce: get WBC announcement running on a specific time interval(every 2 hours)
 - TOP 10: get top 5 gains and 5 declines running on a specific time interval (every 20 mins)
 - Update Symbol: every day night (8PM) update all symbol list from FTP server of MS
 - Price Trigger: send price trigger to another service url (configurable parameter)
 - All Price Trigger: send all price fields trigger to another endpoint (configurable parameter)

3. Web Pages

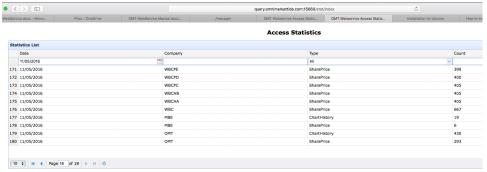
(1). Question List: http://query.omnimarkettide.com:15660/agm/index



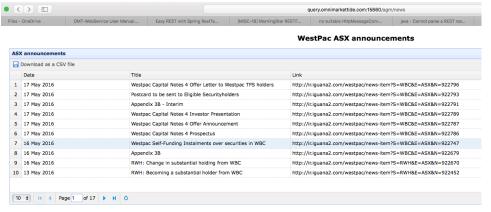
(2). Approved List: http://query.omnimarkettide.com:15660/agm/approved



(3). Statistics of SharePrice: http://query.omnimarkettide.com:15660/stat/index

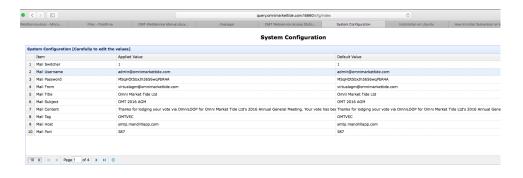


(4). Westpac announcements: http://query.omnimarkettide.com:15660/agm/news



(5). System Configuration: http://query.omnimarkettide.com:15660/cfg/index

If you want to login and have a look ask username/password from admin



(6). SMA history list: http://localhost:9090/omtwebservice/stat/smahistory

SMA History

SM.	A History List		
	Code	Туре	Value
		All ~	
1	AUC	1Y	$ \{ "open": 0.043909090909087, "low": 0.04314685314685311, "high": 0.044734265734265706, "close": 0.04404895104895103, "volum to the context of the context$
2	AUC	6M	{"open":0.04756989247311826,"low":0.04660215053763441,"high":0.04866666666666666;"close":0.04777419354838709,"volume
3	AUC	3M	{"open":0.05188888888888,"low":0.05044444444444445,"high":0.05324074074074,"close":0.051962962962962975,"volume
4	AUC	1M	$ \{ "open": 0.05400000000000000000, "low": 0.05311111111111114, "high": 0.05483333333336, "close": 0.054055555555555557, "volume to the content of the cont$
5	AUC	1W	{"open":0.05440000000000004,"low":0.0536,"high":0.0548,"close":0.0538,"volume":101173.8}
6	DDT	1Y	{"open":0.02113253012048188,"low":0.020542168674698727,"high":0.021618473895582285,"close":0.0209357429718875,"volum
7	DDT	6M	{"open":0.020790322580645164,"low":0.020298387096774194,"high":0.02116129032258063,"close":0.020588709677419346,"voli
8	DDT	3M	{"open":0.020131147540983607,"low":0.01970491803278689,"high":0.020459016393442615,"close":0.019983606557377052,"voli
9	DDT	1M	{"open":0.020157894736842107,"low":0.01978947368421053,"high":0.020657894736842108,"close":0.020157894736842107,"voli
10	DDT	4587	Flancation 0.100 Houston 0.105 Thinking 0.305 Holesoft 0.03 Housewall 205230 53

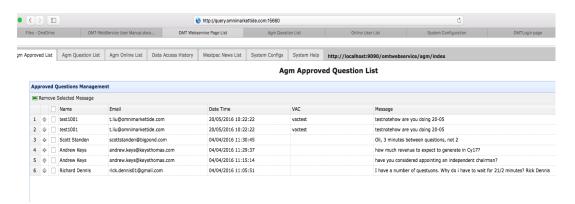
(7). SMA changing today: http://localhost:9090/omtwebservice/stat/smadiff

SMA Changing

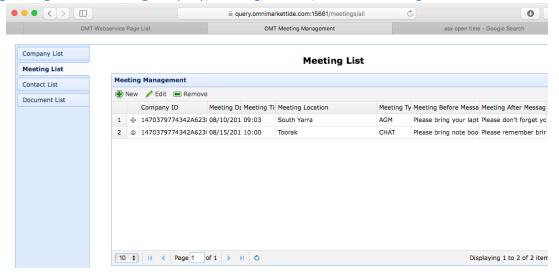
SM	SMA Changing List		
	Code	Туре	Value
		All V	
1	AUC	1Y	{"open":0.15926102882624626,"low":0.16207455429497572,"hlgh":0.1563232765358762,"close":0.15875535799333226,"volume":-0.06101510
2	AUC	6M	$ \{ "open" : 0.45207956600361676, "low" : 0.46146746654360854, "high" : 0.44189129474149363, "close" : 0.4501462975467027, "volume" : -0.0808103810381038103810381038103810381038$
3	AUC	3M	$ \{ "open" : 0.28551034975017836, "low" : 0.29368575624082227, "high" : 0.27826086956521734, "close" : 0.285103349964362, "volume" : -0.97461231440, "close" : -0.97461231440, "close" : -0.97461231440, "close" : -0.97461231440, "close" : -0.9746123140, "close" $
4	AUC	1M	$ \{ "open" : 0.10288065843621405, "low" : 0.10460251046025108, "hlgh" : -0.30395136778115517, "close" : -0.3083247687564236, "volume" : -6.9592684162, "low" : -0.3083247687564236, "volume" : -0.308324768756, "volume" : -0.30832476876, "volume" : -0.30832476, "volume" : -0.30832476, "volume" : -0.30832476876, "volume" : -0.30832476876, "volume" : -0.30832476876, "volume" : -0.30832476, "volume" : -0.30832476876, "volume" : -0.30832476876, "volume" : -0.30832476, "volume" : -0$
5	AUC	1W	{"open":0.0,"low":0.0,"high":0.0,"close":0.0,"volume":-0.19766935708651845}
6	ACL	1Y	$ \{ "open" : -0.2441085344099151, "low" : -0.24656235182551034, "high" : -0.24148980634375186, "close" : -0.24429202292586744, "volume" : -0.1304249202292586744, "volume" : -0.24148980634375186, "close" : -0.24429202292586744, "volume" : -0.1304249202292586744, "volume" : -0.24148980634375186, "close" : -0.24429202292586744, "volume" : -0.1304249202292586744, "volume" : -0.24148980634375186, "close" : -0.24429202292586744, "volume" : -0.1304249202292586744, "volume" : -0.24148980634375186, "close" : -0.24429202292586744, "volume" : -0.1304249202292586744, "volume" : -0.24148980634375186, "close" : -0.24148980634376, "close" : -0.241489806346, "close" : -0.241489806346, "close" : -0.241489806, "close" : -0.24$
7	ACL	6M	$ \begin{tabular}{lllllllllllllllllllllllllllllllllll$
8	ACL	3M	$ \{ "open" : -1.0256410256410249, "low" : -0.8771929824561401, "high" : -1.0126582278481007, "close" : -0.8665511265164643, "volume" : -0.2447858170000000000000000000000000000000000$
Q	ACI	1M	Fondan" - 0. 781 250000000000000 "low" - 0. 80645161 20032263 "blob" - 0. 76230762307607 "cloce" - 0. 800000000000000000 "volume" - 0. 101525025

(8). All pages in one: http://query.omnimarkettide.com:15660/

please ask administrator for access username/password.



(9). Meeting management: Including company, meeting, contact, document management:



4. Web Service Interfaces

For HTTP Access: http://query.omnimarkettide.com: 15660

For HTTPS Access: https://query.omnimarkettide.com:156601

(1). Post Get Share Price Query

```
http://query.omnimarkettide.com:15660/wssocket/wssrequestcode
REST URL
Method
Request body
                        [{"code":"OMT","timezone":"Australia/Victoria"}]
(Json Array)
Content-Type
                        application/json
Result
(Json Array)
                             "Timestamp": "12/04/2016 10:44:39",
                             "Currency": "AUD",
                             "Index": null,
"Code": "OMT",
                             "Market": "ASX"
                             "BestBid": 0.031,
                             "BestAsk": 0.035,
                             "BidCount": 1,
                             "BidQuantity": 50000,
                             "BidUndisclosed": false,
                             "AskCount": 1,
                             "AskQuantity": 39462,
                             "AskUndisclosed": false,
                             "High": 0.035,
"Low": 0.035,
```

```
"Open": 0.035,
    "Close": 0.035,
    "Settlement": null,
    "Last": 0.035,
    "NumberOfTrades": 2,
    "Volume": 13538, "Trend": "None",
    "Clazz": null,
    "TradingState": "Normal",
    "StrikePrice": null,
    "CallOrPut": null,
    "ContractSize": null,
    "SubscriptionData": "All",
    "AuctionPrice": 0.035,
    "AuctionQuantity": 45033,
    "AuctionRemainder": 13538,
    "VWAP": 0.035,
    "OpenInterest": null,
    "ShareIssue": null,
    "ValueChanged": 0,
    "PercentChange": 0,
    "Name": "OMNIMARKET FPO"
  }
]
```

(2). Post Get Chart History

REST URL	http://query.omnimarkettide.com:15660/wssocket/wssreqhistory
Method	Post
Request body (Json Object)	{"code":"sun","count":18}
Result (Json Array)	<pre>[</pre>

(3). Agm Post Create Question

Before starting create a question, you should follow the steps:

- Get a token via: POST http://query.omnimarkettide.com: 15660/rest/ with headers:
 - -H "X-Username: {device_id}" -H "X-Password: omt@mel123"
- On each following post request post together with the returned token like: 8LwW+4p57oLgIjjmWdOjIzZFUjy+ku5LA4jB+KdKbzA=
- Post to http://query.omnimarkettide.com:15660/rest/creatusermsg with
 - -H "X-Auth-Token: 8LwW+4p57oLgIjjmWd0jIzZFUjy+ku5LA4jB+KdKbzA="

• Any token error will result in an error in HTTPResponse Header: X-Token-Valid: true|false

```
REST URL
          http://query.omnimarkettide.com:15660/rest/creatusermsg
Method
          X-Auth-Token: lEdcPbsfvT4NkwxEgw8dM6gcCt3QVELX3Z/VjzrjKbU=
Request
          Content-Type:application/json
Header
          Accept-Code: OMT
Request
          {"name":"test1001","email":"t.liu@omnimarkettide.com","notes":"testnotehow
          are you doing22222.","datetime":"29/03/2016 10:22:22"}
body
Result
            "id": "570c4cb0e4b0af3f21d325d1",
            "name": "test1001",
            "email": "t.liu@omnimarkettide.com",
            "notes": "testnotehow are you doing22222.",
            "datetime": "29/03/2016 10:22:22",
            "status": 1
          }
```

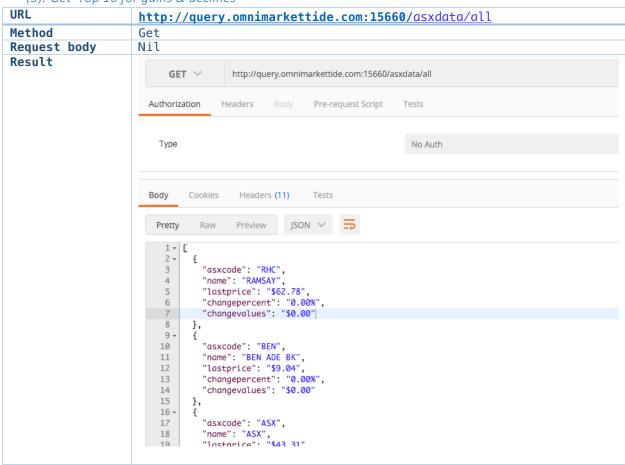
(4). Agm Get Question History

```
REST URL
                   http://query.omnimarkettide.com:15660/agm/getuserhistmsg
Method
                    Post
Request Header
                    Accept-Code: OMT
Request body
                    rick.dennis01@gmail.com,r@gmail.com
Content-type
                    text
Result
                    [
(Json Array)
                        "email": "r@gmail.com",
                        "messageList": [
                            "message": "This is long question that has lots of
                    characters and more banterius matter in the content. This should
                    show up in a single or multiple lines. Letssee how it goes. ",
                            "status": 1,
"datetime": "04/04/2016 10:45:00"
                          },
                            "message": "Robin's test message",
                            "status": 1,
"datetime": "11/04/2016 11:34:06"
                        ]
                      },
                        "email": "r@qmail.com",
                        "messageList": [
                            "message": "This is long question that has lots of
                    characters and more banterius matter in the content. This should
                    show up in a single or multiple lines. Letssee how it goes. ",
                            "status": 1,
"datetime": "04/04/2016 10:45:00"
```

```
{
    "message": "Sda",
    "status": 1,
    "datetime": "11/04/2016 11:16:50"
},
    {
    "message": "Robin's test message",
        "status": 1,
        "datetime": "11/04/2016 11:34:06"
}

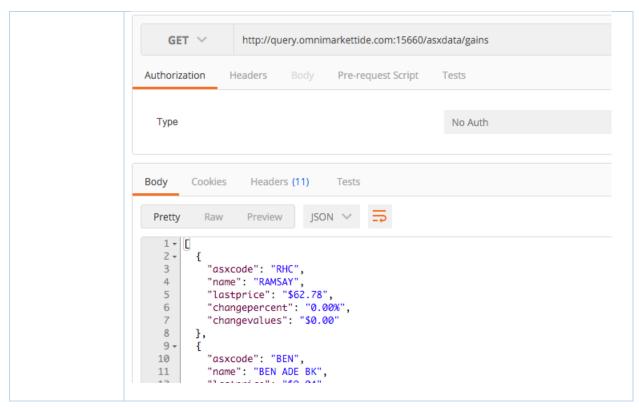
]
}
]
```

(5). Get Top 10 for gains & declines

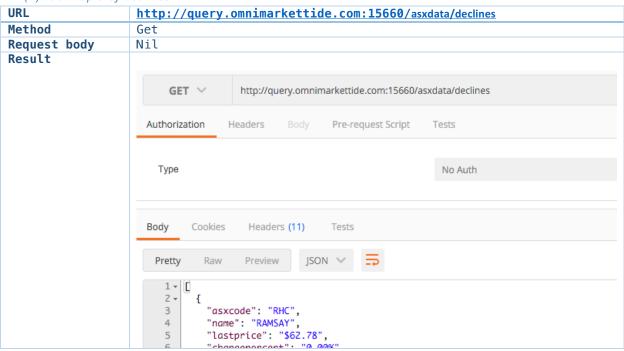


(6). Get Top 5 of gains

URL	http://query.omnimarkettide.com:15660/asxdata/gains
Method	Get
Request body	Nil
Result	



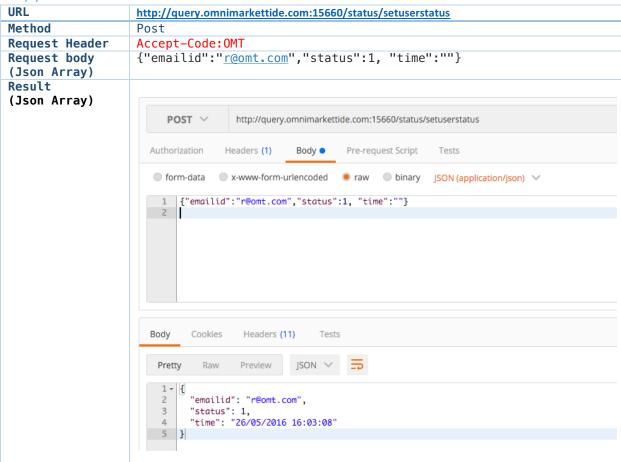
(7). Get Top 5 of declines



(8). Post Sending Emails

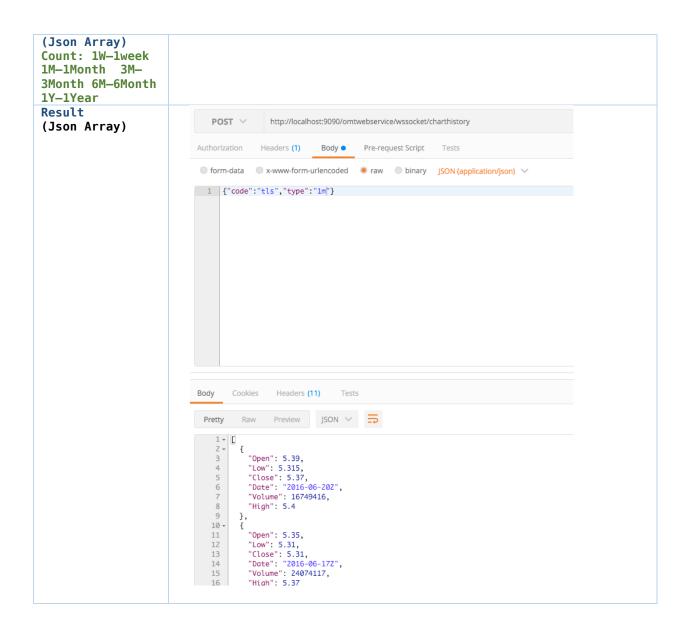
URL	http://query.omnimarkettide.com:15660/agm/sendmailcfm
Method	Post
Request body (Json Array)	[{"email":"t.liu@omnimarkettide.com","number":"TESTNUMBER123"}]

(9). Set User online status



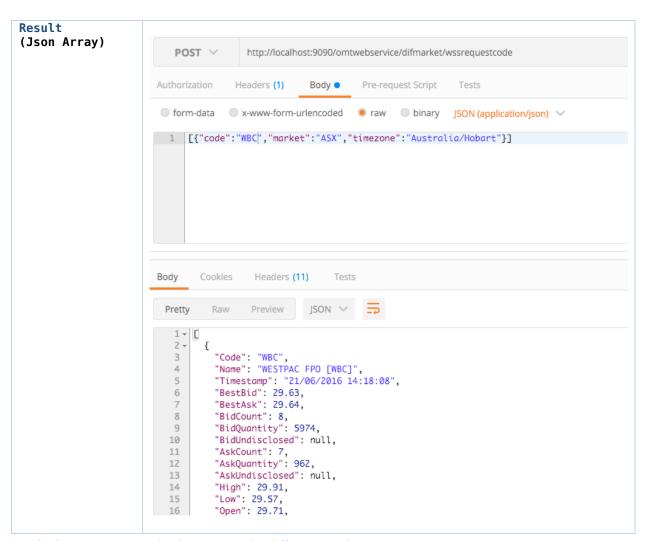
(10). Get Single Chart History by Type

(20).		
URL	http://query.omnimarkettide.com:15660/wssocket/charthistory	
Method	Post	
Request body	{"code":"TLS","type":"1M"}	



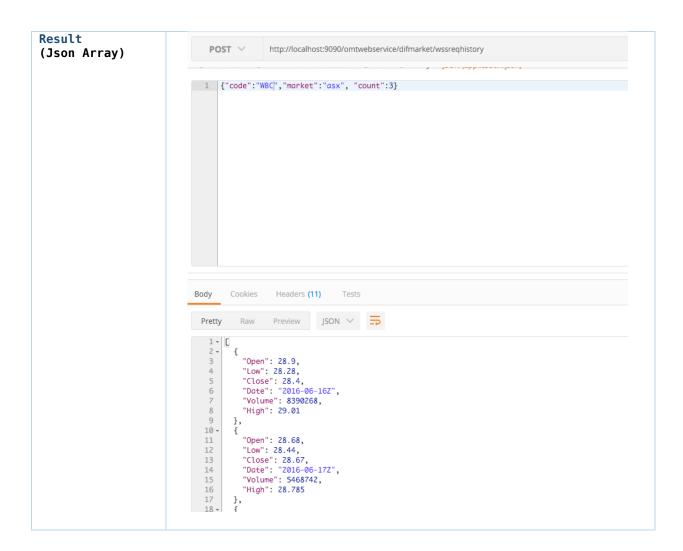
(11). Get Share Price by different markets

· · · · · · · · · · · · · · · · · · ·	7 33
URL	http://query.omnimarkettide.com:15660/difmarket/wssrequestcode
Method	Post
Request body (Json Array)	{"code":"OMT", "market":"ASX", "count":260}



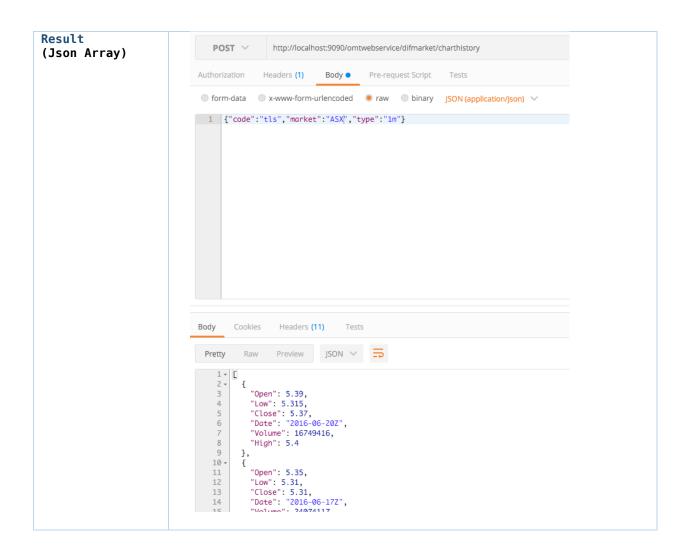
(12). Get Single Chart History by different markets

URL	http://query.omnimarkettide.com:15660/difmarket/wssreqhistory	
Method	Post	
Request body (Json Array)	{"code":"0MT", "market":"ASX", "count":260}	



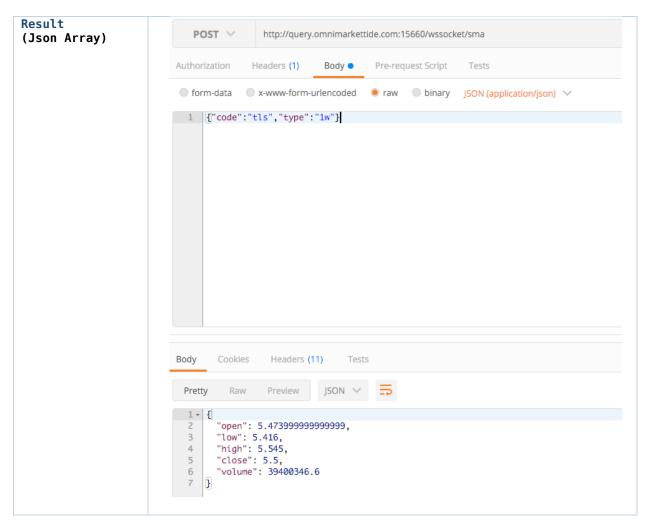
(13). Get Single Chart History by Market and Type

URL	http://query.omnimarkettide.com:15660/difmarket/charthistory
Method	Post
Request body (Json Array) Count: 1W-1week 1M-1Month 3M- 3Month 6M-6Month 1Y-1Year	{"code":"tls", "market":"ASX", "type":"1M"}



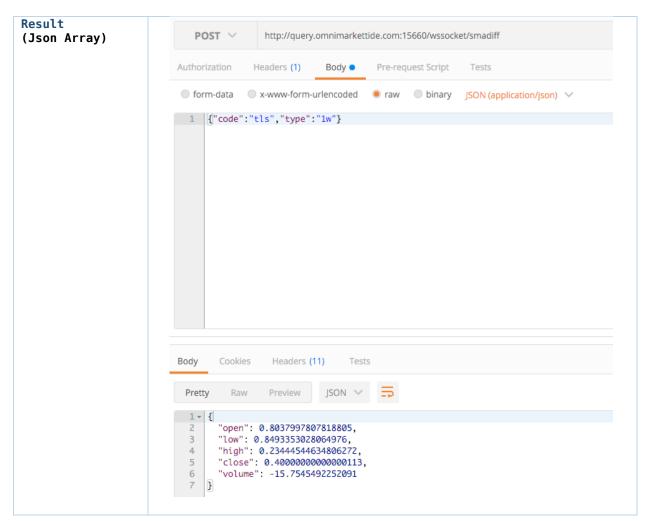
(14). Get SMA History by Type

· /	, , , , ,
URL	http://query.omnimarkettide.com:15660/wssocket/sma
	http://query.omnimarkettide.com:15660/wssocket/smalist
Method	Post
Request body	{"code":"TLS","type":"1W"}
(Json Array)	[{"code":"TLS","type":"1W"}]
Count: 1W-1week	
1M-1Month 3M-	
3Month 6M-6Month	
1Y-1Year	



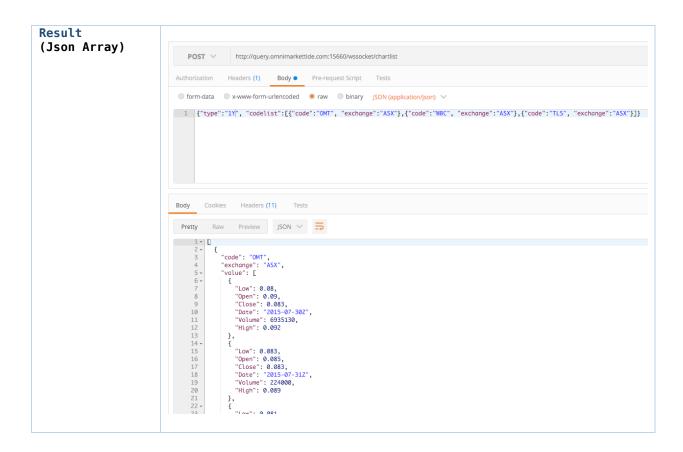
(15). Get SMA Changing by Type

URL	http://query.omnimarkettide.com:15660/wssocket/smadiff
	http://query.omnimarkettide.com:15660/wssocket/smadifflist
Method	Post
Request body (Json Array) Count: 1W-1week 1M-1Month 3M- 3Month 6M-6Month 1Y-1Year	{"code":"TLS","type":"1W"} [{"code":"TLS","type":"1W"}]



(16). Get Multiple Chart History List

```
URL<a href="http://query.omnimarkettide.com:15660/wssocket/chartlist">http://query.omnimarkettide.com:15660/wssocket/chartlist</a>MethodPostRequest body{"type":"1M", "codelist":[{"code":"0MT", "exchange":"ASX"},{"code":"TLS", "exchange":"ASX"}], {"code":"ASX"}]Type: 1W-1week1M-1week1M-1Month 3M-3Month 6M-6Month 1Y-1Year6Month 1Y-1Year
```



(17). Get All Meeting list

URL	http://query.omnimarkettide.com:15660/meeting/all
Method	GET
Request body	Nil

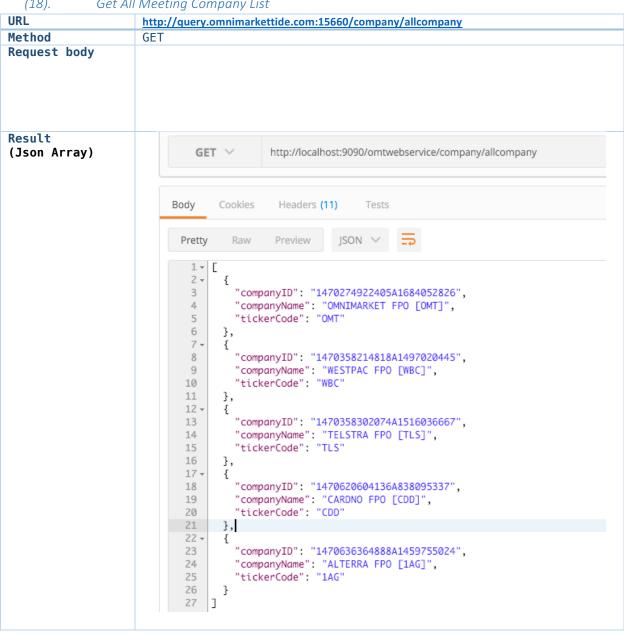
Result (Json Array)

```
GET V
                    http://query.omnimarkettide.com:15660/meeting/all
   Body
          Cookies Headers (11) Tests
            Raw Preview JSON V
    Pretty
              "companyID": "1470379774342A623851223",
"companyName": "Omni Market Tide Ltd.",
"tickerCode": "OMT",
"companylogo": "http://www.omnimarkettide.com",
"meetings": [
                10
11
12
13
14
15
16
7
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
34
                    "name": "Reid",
"email": "reid@omt.com.au",
"phone": "0432123321",
"weburl": "http://www.omt.com.au",
"contactID": "1470379927649A495319795"
                  },
"meetingDetails": {
                     "documents": [
                      {
    "documentID": "1470379855695A1382752245",
                        "documentType": "Doc",
"documentName": "OmtLight",
"documentLink": "http://www.google.com/",
"documentAttributes": [
                         {
    "attributeName": "length",
    "attributeValue": "1:30"
                            "attributeName": "size",
"attributeValue": "ZMB"
EntyResponseData Example:
   "companyID": "1470379774342A623851223",
   "companyName": "Omni Market Tide Ltd.",
   "tickerCode": "OMT",
   "companyLogo": "http://www.omnimarkettide.com",
   "meetings": [
      "meetingID": "1470380678114A1239966990",
      "meetingDate": "08/10/2016",
      "meetingTime": "09:03",
      "meetingLocation": "South Yarra",
      "meetingType": "AGM",
      "meetingBeforeMsg": "Please bring your laptop",
      "meetingAfterMsg": "Please don't forget your laptop",
      "meetingContacts": {
       "name": "Reid",
       "email": "reid@omt.com.au",
       "phone": "0432123321",
       "weburl": "http://www.omt.com.au",
       "contactID": "1470379927649A495319795"
      },
      "meetingDetails": {
       "documents": [
          "documentID": "1470379855695A1382752245",
          "documentType": "Doc",
```

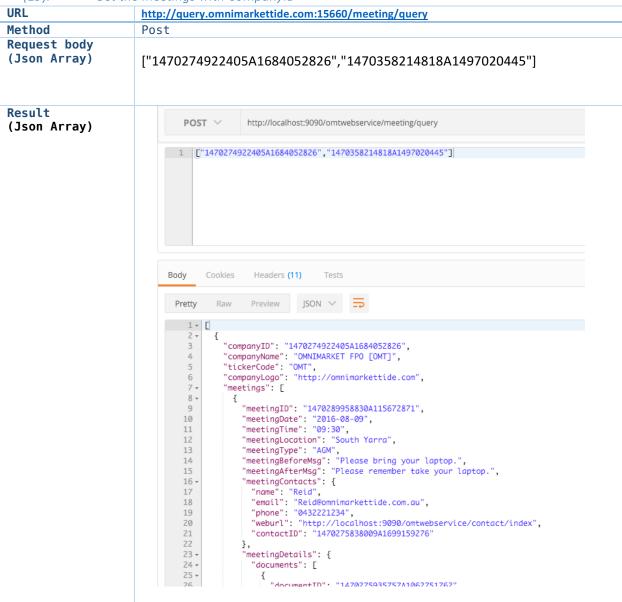
```
"documentName": "OmtLight",
   "documentLink": "http://www.google.com/",
   "documentAttributes": [
     "attributeName": "length",
     "attributeValue": "1:30"
     "attributeName": "size",
     "attributeValue": "2MB"
   "documentID": "1470379884368A856081389",
   "documentType": "Video",
   "documentName": "Reuqirement",
   "documentLink": "http://www.video.com.au",
   "documentAttributes": [
     "attributeName": "length",
     "attributeValue": "2:30"
    },
     "attributeName": "size",
     "attributeValue": "200MB"
"meetingID": "1470381526834A694560670",
"meetingDate": "08/15/2016",
"meetingTime": "10:00",
"meetingLocation": "Toorak",
"meetingType": "CHAT",
"meetingBeforeMsg": "Please bring note book",
"meetingAfterMsg": "Please remember bring your stuff",
"meetingContacts": {
"name": "Tony",
 "email": "tony@omt.com.au",
 "phone": "0455834439489",
 "weburl": "http://www.omt.com.au",
"contactID": "1470379948403A110078332"
"meetingDetails": {
 "documents": [
   "documentID": "1470379855695A1382752245",
   "documentType": "Doc",
   "documentName": "OmtLight",
   "documentLink": "http://www.google.com/",
   "documentAttributes": [
     "attributeName": "length",
     "attributeValue": "1:30"
```

```
"attributeName": "size",
          "attributeValue": "2MB"
     1
  ]
 }
]
```

(18).Get All Meeting Company List



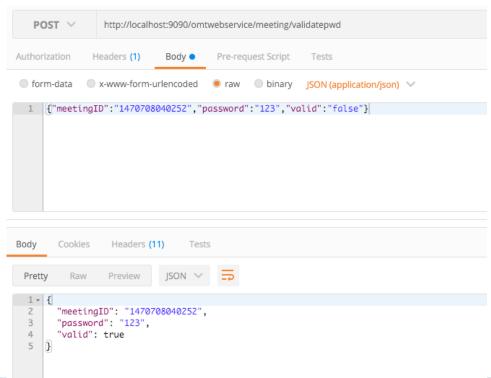
(19). Get the meetings with CompanyID



(20). Validate the password of the meetings

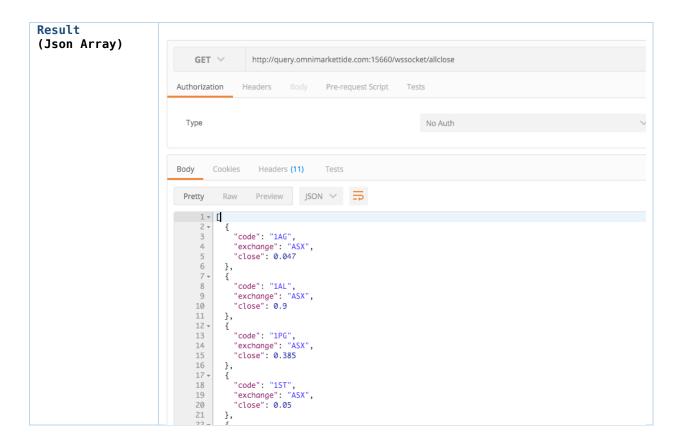
URL	http://query.omnimarkettide.com:15660/meeting/validatepwd
Method	Post
Request body (Json Array)	{"meetingID":"1470708040252","password":"123","valid":false}

Result (Json Array) POST Authorization form-data 1 {"meeting}



(21). Get one day close price

URL	http://query.omnimarkettide.com:15660/wssocket/allclose
Method	GET
Request body (Json Array)	



5. Running mongo in the security mode

(1). Add users first:

(2). Restart mongo

db.shutdownServer()

- -- [need close all connections to mongo, like web application , cmd lines, and robomongo client] , otherwise you cannot start mongo with the same port:27017
- (3). sudo mongod --auth

```
>use testdb
>db.auth("admin","admin")
```

The above is mongodb command lines after login

(4). Programmly connect to auth mongodb

```
Mongo client = new MongoClient("localhost");
        new MongoTemplate(client, "testdb", null);
        // mongod --auth [ for security reason ]
        UserCredentials credential=new UserCredentials("admin", "admin");
        MongoTemplate auth=new MongoTemplate(client, "testdb",
        credential);
6. Tomcat SSL configuration
     (1). Get file from
        :smb://omtsvr/Development/Misc/SSLCertificate/omnimarkettide.com/Tomcat
     (2). Reference to
        https://au.godaddy.com/help/tomcat-generate-csrs-and-install-certificates-5239
        $> openssl pkcs12 -export -in omt.crt -inkey
        certificate_key.key -out mycert.p12 -name tomcat -CAfile
         intermediate.crt -caname root -chain
        $> keytool -importkeystore -srckeystore mycert.p12 -
        destkeystore tomcat.keystore
        $> keytool -list -keystore tomcat.keystore
        Enter keystore password:
        Keystore type: JKS
        Keystore provider: SUN
        Your keystore contains 1 entry
        tomcat, 01/08/2016, PrivateKeyEntry,
  Certificate fingerprint (SHA1):
  C2:C6:07:30:6F:28:84:25:FF:CD:3C:98:41:0F:8D:7D:90:27:70:3C
  In tomcat configuration file server.xml:
  <Connector port="15661"
  protocol="org.apache.coyote.http11.Http11Protocol"
  maxThreads="150" SSLEnabled="true" scheme="https" secure="true"
```

keystoreFile="/Users/tonyliu/tomcat/tomcat.keystore"
keystorePass="omt@mel123" keyAlias="tomcat"
clientAuth="false" sslProtocol="TLS" />

7. Testing in Locust using Python

Ref: [https://docs.python.org/2.7/]

- (1). brew install python
- (2). pip install locustio
- (3). Mkdir testing; cd testing;
- (4). Touch locustioTest.py
- (5). Open locustioTest.py in Xcode or VIM

```
| Boundard of the Content of the Con
```

- (6). locust -f locustioTest.py -host="http://query.omnimarkettide.com:15660/"
- (7). localhost:8089

localhost:8089 LOCUST A MODERN LOAD TESTING TOOL 2.3 FAILURES 0% STOPPED Statistics Failures Exceptions Download Data 1418 1418 GET 1035 519 GET GET 517 GET 1418 22 GET 1418 42 1418 GET 1418 0.2 GET 1418 5357