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HTTP DATA INTERFACES PROGRAMMER'S MANUAL

VERSION 1.3

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Document History

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1.0	11-Jun-12	Initial Draft	Khurram Hameed	
1.1	12-Jun-12		Khurram Hameed	Modified REQDAY, REQMONTH, REQYEAR to be not mandatory fields in Request
1.2	19-Mar-19	Revised	Shehzad Ahmad	INDEX CONSTITUENTS Data Product Enhancements
1.3	30-July-21 / 04-Oct-21	Revised / Released	Shehzad Ahmad	Following new data products are added: <ul style="list-style-type: none"> • Daily Trading Data • Actual Ownership Data • Shareholder Activity Data • Market Share Statistics of Members • Participant Trading Data • Rebuild Order book

Distribution List

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1 Overview

Qatar Stock Exchange provides a set of services to Data Vendors for retrieving information pertaining to the activities of the exchange. This document covers the products, which use the HTTP protocol to provide the information.

Current version of the HTTP interfaces provides the following functionality:

- Tick Data for Trades
- Tick Data for BBO
- Index Constituents
- Daily Trading Data
- Actual Ownership Data
- Shareholder Activity Data (at Market and Stock level)
- Market Share Statistics of Members (at Market and Stock level)
- Participant Trading Data
- Rebuild Order book

1.1 Document Purpose

This document seeks to provide the essential information to enable Data Vendor developers to consume the Interfaces successfully.

1.2 Scope of this Release

Scope of this document is limited to Data Interfaces Release 1.0.

1.3 Definitions, Acronyms and Abbreviations

Terms	Description
QE	Qatar Stock Exchange
HTTP	Hypertext Transfer Protocol
XML	Extensible Markup Language

1.4 Document Conventions

Terms	Description

1.5 References

2 Developer’s Guide

2.1 General Guidelines

In general, the usage semantics for all these services are much similar. However based upon the required input there may be slightly variations, which developers need to understand. The services described in this manual all work on a secure HTTPS requests and responses. All the services are supposed to return a data file when the user’s request has processed successfully.

Each request to any service comprises of the following common set of inputs:

1. Logon Credentials (UserID / Password)
2. List of parameters to be provided with the request

Request parameters are case sensitive and should always be submitted using secure HTTPS POST method. The service will not accept the parameters using other methods e.g. GET.

In order to process the response from the service, the client application should monitor the Response HTTP headers. Commonly all responses from the service will include:

1. Status field. It’s a mandatory field through which developers can check whether the requested operation to the service is successful or not. It includes either ‘**PASS**’ or ‘**FAIL**’ string.
2. Description field. This field contains output of the service in a form of XML string. The structure of XML is based on the operation.
3. Additionally if the request is accepted successfully, the service will return the corresponding Data File using Content-Disposition and Content-Type HTTP headers, along with some custom headers added by QE.

2.2 Brokers List

Broker Code	Broker Name
001	National
002	Doha
003	Commercial
004	The Group Securities
005	Gulf Investments Group
006	Qatar Securities
007	International Securities
008	Al-Ahli
010	Wasata Financial Securities
011	Dlala Brokerage
012	Dlala-Islamic Brokerage
015	QNB Financial Services
016	CBQ Financial Services
017	Al-Ahli Brokerage
018	Al Rayan Financial Brokerage

2.3 Operation Codes & Request Types

This section describes the operation codes offered through the Data Interfaces, there are two services/operations offered as listed below:

2.3.1 Tick Data (OpTickData)

Tick data service provides event-by-event data to the requesters, there are two types of request supported by the Tick Data Service, and both these request types return files with the appropriate data.

The “Tick Data” service returns a single CSV file, which is consolidated for the entire month & year and for all the instruments listed on the exchange. If the user requires data for a single day or a single instrument, the user can retrieve the entire file and process it to achieve this.

2.3.1.1 Trades Data (Request Type: Trades)

This request types returns the file with all the trades for all the instruments listed on the Qatar Stock Exchange. Files are returned in compressed (zip) CSV files.

2.3.1.2 BBO Data(Request Type: BBO)

This request returns the file with each Best Bid and Offer for all the instruments listed on the Qatar Stock Exchange. Files are returned in compressed (zip) CSV files.

2.3.2 Index Constituents (OpIndexConstituents)

This service provides only a single file, containing index constituent information for all the Indices of Qatar Stock Exchange. Two tabs exist for each Index to reflect "Closing" and "Next Day Opening" compositions. The product file is generated/revised on a working day at following times:

1. 13:25 (to get Indices Closing composition)
2. 18:35 (to get Indices Next Day Opening composition)
3. 09:06 (to get an amended file only in case if there is any change to Index Divisor)

The daily index constituent file is for those benchmarking to or replicating any of QSE’s indices.. The product file is essential for firms that have issued index-linked funds, ETFs and other structured products.

2.3.3 Daily Trading Data (OpDTData)

Daily Trading data service provides the machine-readable closing price data for all QSE securities as a single product file in an MS Excel format. The product file generates on a working day at following times:

- 19:30 Qatar Standard Time (GMT+3)

2.3.4 Actual Ownership Data (OpAOData)

Actual Ownership data service provides the machine-readable data at the end of each business day as a single product file in an MS Excel format. Actual Ownership gives a breakdown of ownership in terms of demographics. It also provides actual foreign ownership limits. The product file generates on a working day at following times:

- 19:35 Qatar Standard Time (GMT+3)

2.3.5 Shareholder Activity Data (OpSAData)

Shareholder Activity data service provides the machine-readable data at the end of each business day as a single product file in an MS Excel format. It breaks down buy and sell information according to nationality and type (retail/institutional). The file is available at both Market and individual stock level. The product file generates on a working day at following times

- 19:40 Qatar Standard Time (GMT+3)

2.3.5.1 Market Data (Request Type: Market)

This request type returns the data at Market level.

2.3.5.2 Stock Data (Request Type: Stock)

This request type returns the data at Stock level.

2.3.6 Market Share Statistics of Members (OpMSMData)

Market Share Statistics of Members data service provides the machine-readable data at the end of each business day as a single product file in an MS Excel format. The data shows the share of each member in the day’s activity along with cumulative share since Jan 1st of the year. The file is available at both Market and Stock levels. The product files generate on a working day at following times:

- 19:45 Qatar Standard Time (GMT+3)

2.3.6.1 Market Data (Request Type: Market)

This request type returns the data at Market level.

2.3.6.2 Stock Data (Request Type: Stock)

This request type returns the data at Stock level.

2.3.7 Participant Trading Data (OpPTData)

Participant trading data service provides the machine-readable data at the end of each business day as a single product file in an MS Excel format. The data shows the tick-by-tick trading data filtered specifically for individual member firms. The product file generates on a working day at following times:

- 19:50 Qatar Standard Time (GMT+3)

2.3.8 Rebuild Orderbook (OpROData)

Rebuild Orderbook data service provides the machine-readable data at the end of each business day as a single product file in CSV format. The data shows all trades, orders and deletions in the order book. The product file generates on a working day at following times:

- 19:55 Qatar Standard Time (GMT+3)

3 API Reference

3.1 Tick Data (OpTickData)

3.1.1 Trades Information (Request Type: Trades)

Request:

Field Name	Mandatory	Type	Description
USERID	Yes	POST Method	User ID as provided by the exchange
PASSWORD	Yes	POST Method	Password as provided by the exchange
OPCODE	Yes	POST Method	Should always be "OpTickData"
REQTYPE	Yes	POST Method	Should always be "Trades"
REQDAY	Not Required	-	Not required, Ignored if provided
REQMONTH	No*	POST Method	*Note: REQMONTH and REQYEAR are related fields. If one field is provided the other field should also be provided.
REQYEAR	No*	POST Method	

			<p>If both or any of the fields are not provided then the service will return the file of current month & year.</p> <p>If both fields are provided the service will return historical file for the request month and year.</p>
--	--	--	--

Response:

Field Name	Mandatory	Type	Description
QE-DIS-STATUS	Always Provided	HTTP Header	Status of the request. Valid Values: <ul style="list-style-type: none"> • PASS • FAIL
QE-DIS-DESC	Always Provided	HTTP Header	If request fails then this field contains the xml structure with error description. If request passes then this field contains the name of the zip file.
Content-Disposition	No	HTTP Header	Not provided when QE-DIS-STATUS=FAIL
Content-Type	No	HTTP Header	Not provided when QE-DIS-STATUS=FAIL-DIS-STATUS=FAIL Valid values: <ul style="list-style-type: none"> • application/vnd.ms-excel • application/zip • application/octet-stream

The response from the service will vary in case of successful or failed execution, as below:

Successful execution

When the request has been processed successfully, the service returns a ZIP file containing a single CSV file. This CSV file will contain the records for the entire month and for all the instruments listed on the exchange.

Naming convention of the file is TRADES_MMYYYY.zip, which will contain TRADES_MMYYYY.CSV. Here MM=Two digit month as provided in the request, and YYYY=Four digit year as provided in the request.

Following are the list of fields contained in the CSV file.

Field Name	Description
Date	Date of the event, Formatted as “DDMMYYYY”
Time	Time at which the event occurred, Formatted as “HH:MI:SS.SSS”
MarketType	Type of Market for this trade, Valid Values:

	“510” – Regular Market “512” – Special Market
SymbolCode	Symbol code of the instrument for which the trade occurred
TradePrice	Price of this trade
TradeVolume	Volume of this trade
TradeAction	Indicates whether the event is a new trade or cancelled trade. “I” – New Trade “C” – Cancelled Trade

Failed Execution

In case of a failed execution, the operation returns “FAIL” in “QE-DIS-STATUS” HTTP header and the following structure of XML string in the “QE-DIS-DESC” HTTP header:

```
<?xml version="1.0" encoding="UTF-8" ?>
<ns0:ERROR xmlns:ns0="http://www.qe.com.qa/schemas/error/ERROR.xsd">
  <ns0:ERRCODE> </ns0:ERRCODE>
  <ns0:ERRDESC> </ns0:ERRDESC>
</ns0:ERROR>
```

3.1.2 BBO Information (Request Type: BBO)

Request:

Field Name	Mandatory	Type	Description
USERID	Yes	POST Method	User ID as provided by the exchange
PASSWORD	Yes	POST Method	Password as provided by the exchange
OPCODE	Yes	POST Method	Should always be “OpTickData”
REQTYPE	Yes	POST Method	Should always be “BBO”
REQDAY	Not Required	-	Not required, Ignored if provided
REQMONTH	No*	POST Method	<p>*Note:</p> <p>REQMONTH and REQYEAR are related fields. If one field is provided the other field should also be provided.</p> <p>If both or any of the fields are not provided then the service will return the file of current month & year.</p> <p>If both fields are provided the service will return historical file for the request month and year.</p>
REQYEAR	No*	POST Method	

Response:

Field Name	Mandatory	Type	Description
QE-DIS-STATUS	Always Provided	HTTP Header	Status of the request. Valid Values: <ul style="list-style-type: none"> • PASS • FAIL
QE-DIS-DESC	Always Provided	HTTP Header	If request fails then this field contains the xml structure with error description. If request passes then this field contains the name of the zip file.
Content-Disposition	No	HTTP Header	Not provided when QE-DIS-STATUS=FAIL
Content-Type	No	HTTP Header	Not provided when QE-DIS-STATUS=FAIL Valid values: <ul style="list-style-type: none"> • application/vnd.ms-excel • application/zip • application/octet-stream

The response from the service will vary in case of successful or failed execution, as below:

Successful execution

When the request has been processed successfully, the service returns a ZIP file containing a single CSV file. This CSV file will contain the records for the entire month and for all the instruments listed on the exchange.

Naming convention of the file is BBO_MMYYYY.zip, which will contain BBO_MMYYYY.CSV. Here MM=Two digit month as provided in the request, and YYYY=Four digit year as provided in the request.

Following are the list of fields contained in the CSV file.

Field Name	Description
Date	Date of the event, Formatted as “DDMMYYYY”
Time	Time at which the event occurred, Formatted as “HH:MI:SS.SSS”
SymbolCode	Symbol code of the instrument for which the trade occurred
BidPrice	Price of Best Bid
BidVolume	Total Volume at this Price on buy side
BidNumber	Total number of orders at this price on buy side
OfferPrice	Price of Best Offer
OfferVolume	Total volume at this price on sell side
OfferNumber	Total number of orders at this price on sell side

Failed Execution

In case of a failed execution, the operation returns “FAIL” in “QE-DIS-STATUS” HTTP header and the following structure of XML string in the “QE-DIS-DESC” HTTP header:

```
<?xml version="1.0" encoding="UTF-8" ?>
<ns0:ERROR xmlns:ns0="http://www.qe.com.qa/schemas/error/ERROR.xsd">
  <ns0:ERRCODE> </ns0:ERRCODE>
  <ns0:ERRDESC> </ns0:ERRDESC>
</ns0:ERROR>
```

3.2 Index Constituents (OpIndexConstituents)

Request:

Field Name	Mandatory	Type	Description
USERID	Yes	POST Method	User ID as provided by the exchange
PASSWORD	Yes	POST Method	Password as provided by the exchange
OPCODE	Yes	POST Method	Should always be “OpIndexConstituents”
REQTYPE	Yes	POST Method	Should be either: "N" -> to request a new file effective next session "A" -> to request an amended file (if available)
REQDAY	Yes	POST Method	REQDAY format is <DD> e.g. 01, 02 etc. Valid values are from 01 to 31. REQMONTH format is <MMM> e.g. Jan, Feb etc. Valid values are from Jan to Dec. REQYEAR format is <YYYY> e.g. 2018, 2019 etc. If all parameters are valid; the service will return IC product file for the requested date (if available).
REQMONTH	Yes	POST Method	
REQYEAR	Yes	POST Method	

Response:

Field Name	Mandatory	Type	Description
QE-DIS-STATUS	Always Provided	HTTP Header	Status of the request. Valid Values: <ul style="list-style-type: none"> PASS FAIL
QE-DIS-DESC	Always Provided	HTTP Header	If request fails then this field contains the xml structure with error description. If request passes then this field contains the name of the zip file.
Content-Disposition	No	HTTP Header	Not provided when QE-DIS-STATUS=FAIL
Content-Type	No	HTTP Header	Not provided when QE-DIS-STATUS=FAIL

			Valid values: <ul style="list-style-type: none"> • application/vnd.ms-excel • application/zip • application/octet-stream
--	--	--	---

The response from the service will vary in case of successful or failed execution, as below:

Successful execution

When the request has been processed successfully, the service returns a single xls (Excel 97-2003) format file which contains individual sheets for each of the indices.

The file name format is like:

- "QEIndices_dd-mmm-yyyy.xls" (e.g. QEIndices_14-Mar-2019.xls) i.e. effective next working day
- "QEIndices_dd-mmm-yyyy.xls_1.xls" (e.g. QEIndices_14-Mar-2019.xls_1.xls) i.e. amended file

Naming convention of the file is **QEIndices_DD-MMM-YYYY.xls**, here **DD**=Two digits date as provided in the request, **MMM**=Short form of month as provided in the request, and **YYYY**=Four digit year as provided in the request.

In the workbook, each index will have a separate worksheet with their Closing and Next Day Effective positions; the name of the worksheet will always be the Index symbol with "Closing" or "Next Day Opening" tag e.g. "GNRI (Closing)", "GNRI (Next Day Opening)".

Additionally, Following are the list of fields contained in each of the worksheets.

Field Name	Description
Index ISIN	ISIN code for the particular Index
Index Code	Mnemonic for the index
Index Name	Name of the index
Currency	Currency used in QSE
Number of Constituents	Number of Constituent in an index
Effective Date	Date for which the data is valid for, Date will be in the format DD-MMM-YYYY
Universe	State "Close" or "Next Day"
Following fields are a repeating group, which will be repeated for each of the constituents of the index.	
ISIN Code	ISIN code of the particular constituents of the Index
Symbol Code	Symbol Code of the particular constituents of the Index
Company Name	Name of the company
Sector Name	Sector Name of the company
Closing/Opening Price	Close Price of the particular constituent on the day (under Closing tab) Open Price of the particular constituent for the Next effective day (under Next Day Opening tab)

Free Float	Number of free float for the particular constituents
Adjustment Factor	Adjustment factor of the company for the particular constituents
Market Cap	Market Capitalization for the particular constituent adjusted to the capping factor
Weight	Weight of the particular constituent in the index
Dividend per share	Net Dividend for Sharia compliant indices Gross Dividend for rest of the indices
Total	Total of Market Cap for all instruments of the index
Index Divisor	Divisor to re-calculate the index value
Closing Index Level	Closing value of the index

Failed Execution

In case of a failed execution, the operation returns “FAIL” in “QE-DIS-STATUS” HTTP header and the following structure of XML string in the “QE-DIS-DESC” HTTP header:

```
<?xml version="1.0" encoding="UTF-8" ?>
<ns0:ERROR xmlns:ns0="http://www.qe.com.qa/schemas/error/ERROR.xsd">
  <ns0:ERRCODE> </ns0:ERRCODE>
  <ns0:ERRDESC> </ns0:ERRDESC>
</ns0:ERROR>
```

3.3 Daily Trading Data (OpDTData)

Request:

Field Name	Mandatory	Type	Description
USERID	Yes	POST Method	User ID as provided by the exchange
PASSWORD	Yes	POST Method	Password as provided by the exchange
OPCODE	Yes	POST Method	Should always be “OpDailyTrading”
REQDAY	Yes	POST Method	<p>*Note:</p> <p>REQDAY, REQMONTH and REQYEAR are related fields. If one field is provided the other field should also be provided.</p> <p>If all or any of the fields are not provided then the service will return error.</p> <p>If all fields are provided the service will return xlsx file for the request day, month and year.</p>
REQMONTH	Yes	POST Method	
REQYEAR	Yes	POST Method	

Response:

Field Name	Mandatory	Type	Description
------------	-----------	------	-------------

QE-DIS-STATUS	Always Provided	HTTP Header	Status of the request. Valid Values: <ul style="list-style-type: none"> • PASS • FAIL
QE-DIS-DESC	Always Provided	HTTP Header	If request fails then this field contains the xml structure with error description. If request passes then this field contains the name of the zip file.
Content-Disposition	No	HTTP Header	Not provided when QE-DIS-STATUS=FAIL
Content-Type	No	HTTP Header	Not provided when QE-DIS-STATUS=FAIL-DIS-STATUS=FAIL Valid values: <ul style="list-style-type: none"> • application/vnd.ms-excel • application/zip • application/octet-stream

The response from the service will vary in case of successful or failed execution, as below:

Successful execution

When the request has been processed successfully, the service returns a single xlsx file. This xlsx file will contain the data for provided day, month and year.

Naming convention of the file is Daily_Trading_DDMMYYYY.xlsx.

Here DD = two digit day provided in request, MM=Two digit month as provided in the request, and YYYY=Four digit year as provided in the request.

Following are the list of fields contained in the xlsx file.

For Equity:

Field Name	Description
Code	
Name	
Sector	
Volume	
Traded Value(QR)	
Trades	
Value	
Open Price	
High Price	
Low Price	
Closing Price	
Previous Closing Price	

Change Value	
Change %	
High 52 Weeks	
Low 52 Weeks	

For Fixed Income:

Field Name	Description
Symbol Code	
Name	
Type	
Volume	
Traded Value(QR)	
Trades	
Closing Price	
Previous Closing price	
Value	
Change %	
Next Coupon Date	
Previous Coupon Date	
Accrued Interest	

For ETF:

Field Name	Description
Symbol Code	
Name	
Volume	
Traded Value(QR)	
Trades	
Closing Price	
Previous Closing price	
Change Value	
Change %	
High 52 weeks	
Low 52 weeks	
NAV	
Market Cap	

For Indices:

Field Name	Description
Index Code	

Index Name	
Open Price	
High Price	
Low Price	
Closing Price	
Previous Closing Price	
Change Value	
Change %	
High 52 weeks	
Low 52 weeks	

Failed Execution

In case of a failed execution, the operation returns “FAIL” in “QE-DIS-STATUS” HTTP header and the following structure of XML string in the “QE-DIS-DESC” HTTP header:

```
<?xml version="1.0" encoding="UTF-8" ?>
<ns0:ERROR xmlns:ns0="http://www.qe.com.qa/schemas/error/ERROR.xsd">
  <ns0:ERRCODE> </ns0:ERRCODE>
  <ns0:ERRDESC> </ns0:ERRDESC>
</ns0:ERROR>
```

3.4 Actual Ownership Data (OpAOData)

Request:

Field Name	Mandatory	Type	Description
USERID	Yes	POST Method	User ID as provided by the exchange
PASSWORD	Yes	POST Method	Password as provided by the exchange
OPCODE	Yes	POST Method	Should always be “OpActualOwnership”
REQDAY	Yes	POST Method	<p>*Note:</p> <p>REQDAY, REQMONTH and REQYEAR are related fields. If one field is provided the other field should also be provided.</p> <p>If all or any of the fields are not provided then the service will return error.</p> <p>If all fields are provided the service will return xlsx file for the request day, month and year.</p>
REQMONTH	Yes	POST Method	
REQYEAR	Yes	POST Method	

Response:

Field Name	Mandatory	Type	Description
QE-DIS-STATUS	Always Provided	HTTP Header	Status of the request. Valid Values: <ul style="list-style-type: none"> • PASS • FAIL
QE-DIS-DESC	Always Provided	HTTP Header	If request fails then this field contains the xml structure with error description. If request passes then this field contains the name of the zip file.
Content-Disposition	No	HTTP Header	Not provided when QE-DIS-STATUS=FAIL
Content-Type	No	HTTP Header	Not provided when QE-DIS-STATUS=FAIL-DIS-STATUS=FAIL Valid values: <ul style="list-style-type: none"> • application/vnd.ms-excel • application/zip • application/octet-stream

The response from the service will vary in case of successful or failed execution, as below:

Successful execution

When the request has been processed successfully, the service returns a single xlsx file. This xlsx file will contain the data for the provided day, month and year.

Naming convention of the file is ActualOwnership_DDMMYYYY.xlsx.

Here DD = two digit day provided in request, MM=Two digit month as provided in the request, and YYYY=Four digit year as provided in the request.

Following are the list of fields contained in the xlsx file.

Field Name	Description
Symbol	
Company Name	
Company Name (Arabic)	
Total # of Subscribed Shares	
Foreign Ownership Limit (as % of total capital)	
Foreign Ownership Limit (shares)	
Actual Qatari Ownership	

GCC Individual Ownership	
Actual Foreign Ownership	
Sector	

Failed Execution

In case of a failed execution, the operation returns “FAIL” in “QE-DIS-STATUS” HTTP header and the following structure of XML string in the “QE-DIS-DESC” HTTP header:

```
<?xml version="1.0" encoding="UTF-8" ?>
<ns0:ERROR xmlns:ns0="http://www.qe.com.qa/schemas/error/ERROR.xsd">
  <ns0:ERRCODE> </ns0:ERRCODE>
  <ns0:ERRDESC> </ns0:ERRDESC>
</ns0:ERROR>
```

3.5 Shareholder Activity Data (OpAOData)

Request:

Field Name	Mandatory	Type	Description
USERID	Yes	POST Method	User ID as provided by the exchange
PASSWORD	Yes	POST Method	Password as provided by the exchange
OPCODE	Yes	POST Method	Should always be “OpShareholderActivity”
REQTYPE	Yes	POST Method	“Market” will return data Market wide, “Stock” will return data stock wide
REQDAY	Yes	POST Method	<p>*Note:</p> <p>REQDAY, REQMONTH and REQYEAR are related fields. If one field is provided the other field should also be provided.</p> <p>If all or any of the fields are not provided, then the service will return error.</p> <p>If all fields are provided the service will return excel (xlsx format) file for the request day, month and year.</p>
REQMONTH	Yes	POST Method	
REQYEAR	Yes	POST Method	

Response:

Field Name	Mandatory	Type	Description
QE-DIS-STATUS	Always Provided	HTTP Header	Status of the request. Valid Values: <ul style="list-style-type: none"> • PASS • FAIL

QE-DIS-DESC	Always Provided	HTTP Header	If request fails, then this field contains the xml structure with error description. If request passes then this field contains the name of the zip file.
Content-Disposition	No	HTTP Header	Not provided when QE-DIS-STATUS=FAIL
Content-Type	No	HTTP Header	Not provided when QE-DIS-STATUS=FAIL-DIS-STATUS=FAIL Valid values: <ul style="list-style-type: none"> • application/vnd.ms-excel • application/zip • application/octet-stream

The response from the service will vary in case of successful or failed execution, as below:

Successful execution

When the request has been processed successfully, the service returns a single excel (xlsx format) file. This xlsx file will contain the data for provided day, month and year.

Naming convention for the files

at Market Level is: Shareholder_Activity_Market_DDMMYYYY.xlsx

at Stock Level is: Shareholder_Activity_Stock_DDMMYYYY.xlsx.

Here DD=Two digit day as provided in the request, MM=Two digit month as provided in the request, and YYYY=Four digit year as provided in the request.

Following are the list of fields contained in the xlsx file market wide.

Field Name	Description
Nationality	
Type	
Transaction Type	
No. of Traded Companies	
Traded Volume	
Traded Value	
Traded Value (%)	

Failed Execution

In case of a failed execution, the operation returns “FAIL” in “QE-DIS-STATUS” HTTP header and the following structure of XML string in the “QE-DIS-DESC” HTTP header:

```
<?xml version="1.0" encoding="UTF-8" ?>
<ns0:ERROR xmlns:ns0="http://www.qe.com.qa/schemas/error/ERROR.xsd">
  <ns0:ERRCODE> </ns0:ERRCODE>
  <ns0:ERRDESC> </ns0:ERRDESC>
</ns0:ERROR>
```

3.6 Market Share Statistics of Members (OpMSMData)

Request:

Field Name	Mandatory	Type	Description
USERID	Yes	POST Method	User ID as provided by the exchange
PASSWORD	Yes	POST Method	Password as provided by the exchange
OPCODE	Yes	POST Method	Should always be "OpMarketShareMembers"
REQTYPE	Yes	POST Method	"Market" will return data at Market level "Stock" will return data at Company level
REQDAY	Yes	POST Method	<p>*Note:</p> <p>REQDAY, REQMONTH and REQYEAR are related fields. If one field is provided the other field should also be provided.</p> <p>If all or any of the fields are not provided, then the service will return error.</p> <p>If all fields are provided the service will return excel (xlsx format) file for the request day, month and year.</p>
REQMONTH	Yes	POST Method	
REQYEAR	Yes	POST Method	

Response:

Field Name	Mandatory	Type	Description
QE-DIS-STATUS	Always Provided	HTTP Header	Status of the request. Valid Values: <ul style="list-style-type: none"> PASS FAIL
QE-DIS-DESC	Always Provided	HTTP Header	If request fails, then this field contains the xml structure with error description. If request passes then this field contains the name of the zip file.
Content-Disposition	No	HTTP Header	Not provided when QE-DIS-STATUS=FAIL
Content-Type	No	HTTP Header	Not provided when QE-DIS-STATUS=FAIL-DIS-STATUS=FAIL Valid values:

			<ul style="list-style-type: none"> • application/vnd.ms-excel • application/zip • application/octet-stream
--	--	--	---

The response from the service will vary in case of successful or failed execution, as below:

Successful execution

When the request has been processed successfully, the service returns a single excel (xlsx format) file. This xlsx file will contain the data for provided day, month and year.

Naming convention for the files

at Market Level is: Market_Share_Members_Market_DDMMYYYYY.xlsx

at Stock Level is: Market_Share_Members_Stock_DDMMYYYYY.xlsx.

Here DD=Two digit day as provided in the request, MM=Two digit month as provided in the request, and YYYY=Four digit year as provided in the request.

Following are the list of fields contained in the xlsx file.

Field Name	Description
Broker Name	
Code	
No of Trans (Day)	
% (Day)	
Traded Volume (Day)	
% (Day)	
Traded Value (Day)	
% (Day)	
No of Trans (MTD)	
% (MTD)	
Traded Volume (MTD)	
% (MTD)	
Traded Value (MTD)	
% (MTD)	
No of Trans (YTD)	
% (YTD)	
Traded Volume (YTD)	
% (YTD)	
Traded Value (YTD)	
% (YTD)	

Failed Execution

In case of a failed execution, the operation returns “FAIL” in “QE-DIS-STATUS” HTTP header and the following structure of XML string in the “QE-DIS-DESC” HTTP header:

```
<?xml version="1.0" encoding="UTF-8" ?>
<ns0:ERROR xmlns:ns0="http://www.qe.com.qa/schemas/error/ERROR.xsd">
  <ns0:ERRCODE> </ns0:ERRCODE>
  <ns0:ERRDESC> </ns0:ERRDESC>
</ns0:ERROR>
```

3.7 Participant Trading (OpPTData)

Request:

Field Name	Mandatory	Type	Description
USERID	Yes	POST Method	User ID as provided by the exchange
PASSWORD	Yes	POST Method	Password as provided by the exchange
OPCODE	Yes	POST Method	Should always be "OpParticipantTrading"
BRCODE	Yes	POST Method	Broker code will return data for specific broker.
REQDAY	Yes	POST Method	<p>*Note:</p> <p>REQDAY, REQMONTH and REQYEAR are related fields. If one field is provided the other field should also be provided.</p> <p>If all or any of the fields are not provided, then the service will return error.</p> <p>If all fields are provided the service will return excel (xlsx format) file for the request day, month and year.</p>
REQMONTH	Yes	POST Method	
REQYEAR	Yes	POST Method	

Response:

Field Name	Mandatory	Type	Description
QE-DIS-STATUS	Always Provided	HTTP Header	Status of the request. Valid Values: <ul style="list-style-type: none"> PASS FAIL
QE-DIS-DESC	Always Provided	HTTP Header	If request fails, then this field contains the xml structure with error description. If request passes then this field contains the name of the zip file.
Content-Disposition	No	HTTP Header	Not provided when QE-DIS-STATUS=FAIL
Content-Type	No	HTTP Header	Not provided when QE-DIS-STATUS=FAIL-DIS-STATUS=FAIL Valid values: <ul style="list-style-type: none"> application/vnd.ms-excel application/zip

			<ul style="list-style-type: none"> • application/octet-stream
--	--	--	--

The response from the service will vary in case of successful or failed execution, as below:

Successful execution

When the request has been processed successfully, the service returns a single excel (xlsx format) file. This xlsx file will contain the data for provided day, month, year and broker code.

Naming convention of the file is Participant_Trading_Data_BRCODE_DDMMYYYY.xlsx. Here BRCODE is broker code, DD = two-digit day provided in request, MM=Two-digit month as provided in the request, and YYYY=Four-digit year as provided in the request.

Following are the list of fields contained in the xlsx file.

Field Name	Description
Broker Name	
Trade date	
Symbol	
Execution Time	
Type	
Volume	
Price	
Market	
Trade Action	
Order Type	
Time in Force	

Failed Execution

In case of a failed execution, the operation returns “FAIL” in “QE-DIS-STATUS” HTTP header and the following structure of XML string in the “QE-DIS-DESC” HTTP header:

```

<?xml version="1.0" encoding="UTF-8" ?>
<ns0:ERROR xmlns:ns0="http://www.qe.com.qa/schemas/error/ERROR.xsd">
  <ns0:ERRCODE> </ns0:ERRCODE>
  <ns0:ERRDESC> </ns0:ERRDESC>
</ns0:ERROR>
```

3.8 Rebuild Orderbook Data (OpROData)

Request:

Field Name	Mandatory	Type	Description
USERID	Yes	POST Method	User ID as provided by the exchange
PASSWORD	Yes	POST Method	Password as provided by the exchange
OPCODE	Yes	POST Method	Should always be "OpRebuildOrderbook"
REQDAY	Yes	POST Method	<p>*Note:</p> <p>REQDAY, REQMONTH and REQYEAR are related fields. If one field is provided the other field should also be provided.</p> <p>If all or any of the fields are not provided, then the service will return error.</p> <p>If all fields are provided the service will return xlsx file for the request day, month and year.</p>
REQMONTH	Yes	POST Method	
REQYEAR	Yes	POST Method	

Response:

Field Name	Mandatory	Type	Description
QE-DIS-STATUS	Always Provided	HTTP Header	Status of the request. Valid Values: <ul style="list-style-type: none"> • PASS • FAIL
QE-DIS-DESC	Always Provided	HTTP Header	If request fails, then this field contains the xml structure with error description. If request passes then this field contains the name of the zip file.
Content-Disposition	No	HTTP Header	Not provided when QE-DIS-STATUS=FAIL
Content-Type	No	HTTP Header	Not provided when QE-DIS-STATUS=FAIL-DIS-STATUS=FAIL Valid values: <ul style="list-style-type: none"> • application/vnd.ms-excel • application/zip • application/octet-stream

The response from the service will vary in case of successful or failed execution, as below:

Successful execution

When the request processed successfully, the service returns a single CSV file. This file will contain the data for provided day, month and year.

Naming convention of the file is Rebuild_Orderbook_DDMMYYYY.csv.
 Here DD = two-digit day provided in request, MM=Two-digit month as provided in the request, and YYYY=Four-digit year as provided in the request.

Following are the list of fields contained in the xlsx file.

Field Name	Description
Order Date	
Order Time	
Symbol Code	
Market Code	
Transaction Type	
Order Price	
Order Action Volume	
Order Remaining Volume	
Order Action	
Order Type	
Time in Force	
Order Number	

Failed Execution

In case of a failed execution, the operation returns “FAIL” in “QE-DIS-STATUS” HTTP header and the following structure of XML string in the “QE-DIS-DESC” HTTP header:

```

<?xml version="1.0" encoding="UTF-8" ?>
<ns0:ERROR xmlns:ns0="http://www.qe.com.qa/schemas/error/ERROR.xsd">
  <ns0:ERRCODE> </ns0:ERRCODE>
  <ns0:ERRDESC> </ns0:ERRDESC>
</ns0:ERROR>
```