

NYSE Quotes –Real-Time NYSE Quote Datafeed

The Real-Time NYSE Quotes feed provides NYSE Quotes (best bid/ask quotations) for all NYSE-traded securities as part of the NYSE OpenBook product offering. For no additional fees, customers of NYSE OpenBook can choose to receive the NYSE Best Quote directly from NYSE rather than through the Consolidated Quotation System (CQS). This means that firms will be provided a complete liquidity picture containing both depth of book and best market quote interest directly and more efficiently than ever before. The NYSE best market quote differs from top of book information in that it contains not only limit orders on the book but specialist and Floor broker interest that is not on the book.

Message Statistics

With introduction of Real-Time NYSE Quotes, we suggest that the subscribers be able to handle the following message rates and sizes:

NYSE Best Quotes	Average (projected)	Maximum (projected)
Message Rate	800	4200 MPS
Packet Size	variable	1400 bytes
Total Number of Messages in a Day	21,600,000	113,400,000
Bandwidth recommendations (Mbps)	~1	2
Retransmission Bandwidth recommendations (Mbps)	0.1	0.2

Notes:

- The maximum message rate may be sustained for a couple of minutes.
- The numbers are based on all feeds added.
- The message size corresponds to the DataFeed message size, without the TCP and IP headers.
- There is only 1 message header per packet.
- There maybe more than 1 quote message per packet but no more than 20.

Source IPs:

Source	IP	NetMask
Primary (2MT)	198.140.59.108	FF FF FF F8
Secondary (55W):	198.140.58.108	FF FF FF F8

Multicast Groups:

Feed Name	Description
BQ_AC	Multicast Groups assigned to deliver quotes of symbols starting with letters A through C.
BQ_DJ	Multicast Groups assigned to deliver quotes of symbols starting with letters D through J.
BQ_KQ	Multicast Groups assigned to deliver quotes of symbols starting with letters K through Q.
BQ_RZ	Multicast Groups assigned to deliver quotes of symbols starting with letters R through Z.

Multicast IPs:

NYSE Quotes	IP	Port
Primary data Feed – Symbols A to C	224.0.5.220	8220
Primary data Feed– Symbols D to J	224.0.5.220	9220
Primary data Feed – Symbols K to Q	224.0.5.220	10220
Primary data Feed– Symbols R to Z	224.0.5.220	11220
Secondary data Feed – Symbols A to C	224.0.5.221	8221
Secondary data Feed– Symbols D to J	224.0.5.221	9221
Secondary data Feed – Symbols K to Q	224.0.5.221	10221
Secondary data Feed– Symbols R to Z	224.0.5.221	11221
Primary Retransmission Request for Symbols A to C	198.140.59.88	20100
Primary Retransmission Request for Symbols D to J	198.140.59.88	21100
Primary Retransmission Request for Symbols K to Q	198.140.59.88	22100
Primary Retransmission Request for Symbols R to Z	198.140.59.88	23100
Secondary Retransmission Request for Symbols A to C	198.140.58.88	20100
Secondary Retransmission Request for Symbols D to J	198.140.58.88	21100
Secondary Retransmission Request for Symbols K to Q	198.140.58.88	22100
Secondary Retransmission Request for Symbols R to Z	198.140.58.88	23100
Primary Retransmission Feed for Symbols A to C	224.0.5.222	8222
Primary Retransmission Feed for Symbols D to J	224.0.5.222	9222
Primary Retransmission Feed for Symbols K to Q	224.0.5.222	10222
Primary Retransmission Feed for Symbols R to Z	224.0.5.222	11222
Secondary Retransmission Feed for Symbols A to C	224.0.5.223	8223
Secondary Retransmission Feed for Symbols D to J	224.0.5.223	9223
Secondary Retransmission Feed for Symbols K to Q	224.0.5.223	10223
Secondary Retransmission Feed for Symbols R to Z	224.0.5.223	11223

Retransmission Requests

The table below summarizes the Retransmission limitations for the Real-Time NYSE Quotes feed. For more information please refer to section 3.7 on page 11 in the [NYSE Quotes Customer Interface Specification](#).

Capability	Threshold
Prevention of invalid subscribers	N/A
Limitation of Requests for a large number of packets	1000
Limitation of Generic Requests	500
Limitation of requests for refresh messages	5000

Testing

Replay tests are generally run at night and over *different multicast groups than the production environment* so that subscribers do not need to worry about incorrect data over the production lines. The data replayed over this network is from a previous trading session—all messages, or a range of messages, for a given service in their original sequence. For more information please contact Jim Wieman at 212.383.7106

Testing days	Hours
Tuesday	7pm to 9pm
Thursday	7pm to 9pm

Testing IPs:

Retail Executions	IP	Port
Test Primary data Feed – Symbols A to C	224.0.5.224	8224
Test Primary data Feed– Symbols D to J	224.0.5.224	9224
Test Primary data Feed – Symbols K to Q	224.0.5.224	10224
Test Primary data Feed– Symbols R to Z	224.0.5.224	11224
Test Secondary data Feed – Symbols A to C	224.0.5.225	8225
Test Secondary data Feed– Symbols D to J	224.0.5.225	9225
Test Secondary data Feed – Symbols K to Q	224.0.5.225	10225
Test Secondary data Feed– Symbols R to Z	224.0.5.225	11225
Test Primary Retransmission Request for Symbols A to C	198.140.59.88	20200
Test Primary Retransmission Request for Symbols D to J	198.140.59.88	21200
Test Primary Retransmission Request for Symbols K to Q	198.140.59.88	22200
Test Primary Retransmission Request for Symbols R to Z	198.140.59.88	23200
Test Secondary Retransmission Request for Symbols A to C	198.140.58.88	20200
Test Secondary Retransmission Request for Symbols D to J	198.140.58.88	21200
Test Secondary Retransmission Request for Symbols K to Q	198.140.58.88	22200
Test Primary Retransmission Feed for Symbols A to C	224.0.5.226	8226
Test Primary Retransmission Feed for Symbols D to J	224.0.5.226	9226
Test Primary Retransmission Feed for Symbols K to Q	224.0.5.226	10226
Test Primary Retransmission Feed for Symbols R to Z	224.0.5.226	11226
Test Secondary Retransmission Feed for Symbols A to C	224.0.5.227	8227
Test Secondary Retransmission Feed for Symbols D to J	224.0.5.227	9227
Test Secondary Retransmission Feed for Symbols K to Q	224.0.5.227	10227
Test Secondary Retransmission Feed for Symbols R to Z	224.0.5.227	11227

Message Types:

All messages are preceded by the PDP standard header format. For the Real-Time NYSE Quotes product, the PDP header has been modified to improve performance. For more information on processing please refer to section 5.7 on page 17 of the [NYSE Quotes Customer Interface Specification](#).

PDP Header Codes

Field	Offset	Size (Bytes)	Format	Description
MsgSize	0	2	Binary Integer	This field indicates the size of the message body in bytes. The value in this field does not account for the MsgSize field size. Sequence Number Reset – '18 Bytes' Heartbeat Message – '14 Bytes' Heartbeat Response Message – '34 Bytes' Message Unavailable – '22 Bytes' Retransmission Request Message – '42 Bytes' Retransmission Response Message – '46 Bytes' Refresh Request Message – '50 bytes' Quote Message - '58 Bytes'
MsgType	2	2	Binary Integer	This field identifies the type of message '1' – Sequence Number Reset '2' – Heartbeat Message '5' – Message Unavailable '10' – Retransmission Response message '20' – Retransmission Request Message '22' – Refresh Request Message '24' – Heartbeat Response Message '140' – Quote Message.
MsgSeqNum	4	4	Binary Integer	This field contains the message sequence number assigned by PDP for each product. It is used for gap detection. Also known as Line Sequence Number (LSN).
SendTime	8	4	Binary Integer	This field specifies the time message was created by PDP. The number represents the number of milliseconds since midnight of the same day.
ProductID	12	1	Binary Integer	'107' is the product value used in the PDP header to identify the Quotes feed
RetransFlag	13	1	Binary Integer	A flag that indicates whether this is an original, retransmitted, or 'replayed' message. Valid values include: '1' – Original message '2' – Retransmitted message '3' – Message Replay '4' – Retransmission of a 'replayed' message '5' – Refresh Retransmission
NumBodyEntries	14	1	Binary Integer	The number of times the message body repeats in the message. For example, if the body consists of a field (named Volume) and the "NumBodyEntries" field is 2, the number of bytes in the message body will be 8
FILLER	15	1	ASCII String	This is a filler, reserved for future use

Note:

The MsgSize field is not counted in the calculation of the msg size.

Note:

All messages are sequenced on a line level, so sequence numbers are independent across feed A to C, D to J and so on.

1. Best Quote Message

- This is the NYSE Quote message. A quote is generated based on events. Every quote will be transmitted based on that event. The transmission time for the BQ is between 9:30 am (EST) until market close (4 PM (EST) for most securities). Please check the NYSE website for any changes to trading hours.

Field Name	Offset	Size (Bytes)	Format	Description
SourceTime	16	4	Binary Integer	This field specifies the quote generation time. The number in this field represents the number of milliseconds since midnight of the same day.
FILLER	20	4	Binary Integer	This is filler, reserved for future use.
AskPriceNumerator	24	4	Binary Integer	Ask Price for Quote
AskSize	28	4	Binary Integer	Size of the Quote on Ask side in round lots
BidPriceNumerator	32	4	Binary Integer	Bid Price for Quote
BidSize	36	4	Binary Integer	Size of the Quote on Bid side in round lots
PriceScaleCode	40	1	Binary Integer	See Section 5.5 of the customer interface specification.
ExchangeID	41	1	ASCII Character	The id of the originating exchange of the quote. Valid values: 'N' – NYSE
SecurityType	42	1	ASCII Character	This field specifies the security type for this message. Valid values: 'E' – equity
QuoteCondition	43	1	ASCII Character	Valid values: 'A': Slow on Ask side 'B': Slow on Bid side 'C': Closing 'E': Slow on the Bid Due to an LRP or Gap Quote 'F': Slow on the Ask Due to an LRP or Gap Quote 'H': Slow on both Ask and Bid 'N': Non-firm quote 'O': Opening quote 'R': Regular quote 'U': Slow on the Bid and Ask Due to an LRP or Gap Quote 'W': Slow on the Bid and Ask due to a "Set Slow List"
Symbol	44	16	ASCII String	See Section 5.4 on page of the customer interface specification.

For additional information on processing please view our Real-Time NYSE Quotes Specification

http://www.nyse.com/nyse/data/Support/Documentation/Technical/tabid/247/DMXModule/1668/EntryId/2238/Command/Core_Download/Default.aspx

NYSE Quotes Discussion Board

<http://www.nysedata.com/nysedata/Support/DiscussionBoard/tabid/108/view/topics/forumid/14/Default.aspx>

For more information on the Real-Time NYSE Quotes feed please visit,

<http://www.nysedata.com/nysedata/InformationProducts/OpenBook/NYSEOpenBookDatafeed/NYSEQuotes/tabid/407/Default.aspx>

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