NYSE Trades Quick Reference Card

NYSE Trades –Real-Time NYSE Trades Datafeed

The Real-Time NYSE Trades feed provides the NYSE Last Sale for all NYSE-traded securities. Like the NYSE Quotes product, customers can now choose to receive the NYSE Trades directly from NYSE rather than through the Consolidated Quotation System (CTS). Aside from having a lower latency than CTS, each NYSE Trade message is an enhanced with a transaction LinkID that will allow customers of NYSE InfoTools to match each execution message with the tape print.

Message Statistics

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

NYSE Trades	Average (projected)	Maximum (projected)
Message Rate	526 MPS	906 MPS
Message Size	64 bytes	1400 bytes
Total Number of Messages in a Day	12,325,554	21,200,400
Bandwidth recommendations (Mbps)	0.26	0.48
Retransmission Bandwidth Recommendation (Mbps)	0.027	0.053

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 header per packet.There maybe more than 1 Trade message per packet but no greater than 20. The number of quote messages in a packet is identified by the NumBodyEntries field in the message header.

Source IPs:

Source	IP	NetMask
Primary (2MT)	198.140.59.106	FF FF FF F8
Secondary (55W):	198.140.58.106	FF FF FF F8

Multicast Groups:

Feed Name	Description
TRD_AZ	Multicast Groups assigned to deliver trades of symbols starting with letters A through Z.

Multicast IPs:

NYSE Trades	IP	Port
Primary data Feed – Symbols A to Z	233.75.215.40	8040
Secondary data Feed – Symbols A to Z	233.75.215.168	8168
Primary Retransmission Request for Symbols A to Z	198.140.59.88	10800
Secondary Retransmission Request for Symbols A to Z	198.140.58.88	10800
Primary Retransmission Feed for Symbols A to Z	233.75.215.41	8041
Secondary Retransmission Feed for Symbols A to Z	233.75.215.169	8169

Retransmission Requests

The table below summarizes the Retransmission limitations for the Real-Time NYSE Trades feed. For more information please refer to section 3.7on page 11 in the NYSE Trades 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

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 A	224.0.5.224	8224
Test Secondary data Feed– Symbols A to Z	224.0.5.225	11225
Test Primary Retransmission Request for Symbols A to Z	198.140.59.88	20200
Test Secondary Retransmission Request for Symbols A to Z	198.140.58.88	22200
Test Primary Retransmission Feed for Symbols A to Z	224.0.5.226	8226
Test Secondary Retransmission Feed for Symbols A to Z	224.0.5.227	11227

Message Types:

All messages are preceded by the PDP standard header format. For more information on processing please refer to section 5.7 on page 17 of the [NYSE Trades 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: 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’ **NYSE Trades Message.- ’64 Bytes’** **NYSE Trade Cancel or Error Message – ’45 Bytes’** **NYSE Trade Correction 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 **‘220’ – NYSE Trades Message** **‘221’ – NYSE Trade Cancel or Error Message** **‘222’ – NYSE Trade Correction 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	**‘113’** is the product value used in the PDP header to identify the NYSE Trades 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.

1. Trade Message (MsgType = '220')

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

Field Name	Offset	Size	Format	Description
SourceTime	16	4	Binary Integer	This field specifies the trade generation time. The number represents the number of milliseconds since midnight of the same day.
LinkID	20	4	Binary Integer	The LinkID identifies a unique transaction in the matching and allows you to correlate execution reports and quotes to the last sale.
Filler	24	4	Binary Integer	This is a filler, reserved for future use
PriceNumerator	28	4	Binary Integer	This field specifies the price at which this trade was executed.
Volume	32	4	Binary Integer	This field contains the number of round lots transacted in this trade
SourceSeqNum	36	4	Binary Integer	This field contains the sequence number assigned by the source system to this message. The sequence number is unique only to a given stock. Hence trades for two different stocks may share the same source sequence number. Please note that the sequence number while it increases serially, it does not increase monotonically.
SourceSessionID	40	1	Binary Integer	This field contains the source session identifier. This number is incremented with every new source session during the day.
PriceScaleCode	41	1	Binary Integer	See Section 5.5
ExchangeID	42	1	ASCII Character	The id of the originating exchange of the Trade. Valid values: 'N' – NYSE
SecurityType	43	1	ASCII Character	This field specifies the security type for this message. Valid values: 'E' – equity
TradeCond1	44	1	ASCII Character	This field contains a settlement related conditions Valid values: @ - Regular Sale A – Cash N – Next Day Trade R – Seller
TradeCond2	45	1	ASCII Character	This field contains a sequencing related conditions Valid values: L – Sold Last O – Opened Z – Sold 0x0 – N/A
TradeCond3	46	1	ASCII Character	This field contains other trade related conditions Valid values: B – Average Price Trade E –AutoExecution J – Rule 127 0x0 – N/A
TradeCond4	47	1	ASCII Character	This field contains a settlement related condition Valid values: @ - Regular Sale 0x0 – N/A
Symbol	48	16	ASCII String	See Section 5.4 of the customer interface specification

2. Trade Cancel or Error Message (MsgType = '221')

Field Name	Offset	Size	Format	Description
SourceTime	16	4	Binary Integer	This field records/indicates update generation time. The number represents the number of milliseconds since midnight of the same day.
SourceSeqNum	20	4	Binary Integer	This field contains the sequence number assigned by the source system to this message. The sequence number is unique only to a given stock. Hence trades for two different stocks may share the same source sequence number. Please note that the sequence number while it increases serially, it does not increase monotonically.
OriginalTradeRefNum	24	4	Binary Integer	This field is the source sequence number of the original trade marked as a cancel or error by this message.
SourceSessionID	28	1	Binary Integer	This field contains the source session identifier. This number is incremented with every new source session during the day.
ExchangeID	29	1	ASCII Character	This field is the id of the originating exchange of the Trade. Valid values: 'N' – NYSE
Security Type	30	1	ASCII Character	This field specifies the security type for this message. Valid values: 'E' – equity
Symbol	31	16	ASCII String	See Section 5.4 of the customer interface specification

3. Trade Correction Message (MsgType = ‘222’)

Field Name	Offset	Size	Format	Description
SourceTime	16	4	Binary Integer	This field records/indicates update generation time. The number represents the number of milliseconds since midnight of the same day.
PriceNumerator	20	4	Binary Integer	This field specifies the price at which this trade was executed represented as the numerator
Volume	24	4	Binary Integer	This field represents the number of round lots transacted in the trade. (Either the original volume or the corrected volume)
SourceSeqNum	28	4	Binary Integer	This field contains the sequence number assigned by the source system to this message. The sequence number is unique only to a given stock. Hence trades for two different stocks may share the same source sequence number. Please note that the sequence number while it increases serially, it does not increase monotonically.
OriginalTradeRefNum	32	4	Binary Integer	This field is the source sequence number of the original trade marked as a correction by this message.
SourceSessionID	36	1	Binary Integer	This field contains the source session identifier. This number is incremented with every new source session during the day.
PriceScaleCode	37	1	Binary Integer	This is the denominator code for the price. This field represents the digits after the decimal place in the price.
ExchangeID	38	1	ASCII Character	This field is the id of the originating exchange of the Trade. Valid values: ‘N’ – NYSE
Security Type	39	1	ASCII Character	This field specifies the security type for this message. Valid values: ‘E’ – equity
CorrectedTradeCond1	40	1	ASCII Character	This field contains a settlement related conditions Valid values: @ - Regular Sale A – Cash N – Next Day Trade R – Seller
CorrectedTradeCond2	41	1	ASCII Character	This field contains a sequencing related conditions Valid values: L – Sold Last O – Opened Z – Sold 0x0 – N/A
CorrectedTradeCond3	42	1	ASCII Character	This field contains other trade related conditions Valid values: B – Average Price Trade E –AutoExecution J – Rule 127 0x0 – N/A
CorrectedTradeCond4	43	1	ASCII Character	This field contains a settlement related condition Valid values: @ - Regular Sale 0x0 – N/A
Symbol	44	16	ASCII String	See Section 5.4 of the customer interface specification

NYSE Trades Discussion Board

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

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