

# Consolidated Quotes and Trades (CQT)

## Product Overview

The **Consolidates Quotes and Trades** feed provides easy and flexible access to high quality and reliable real time streaming data for Nasdaq, New York Stock Exchange (NYSE), and other US regional exchange listed securities. CQT feed also includes OTC market-listed issues.

In order to match the entitlement structure, this feed will support three outbound channels. The data set will be channelized based on the listing market of a security.

| Channel | Securities Coverage  |
|---------|--|
| CTA-A   | NYSE-listed issues   |
| CTA-B   | NYSE American, NYSE Arca-, CBOE, and U.S. regional stock exchange- listed issues |
| UTP     | Nasdaq-listed issues   |
| OTCBB   | OTC market-listed issues   |

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## Publisher

Nasdaq Investment Intelligence is a leading source of market data, global indexes, and investment data and analytics. Powering price discovery and decisions around the globe, our data is distributed to millions of people daily, providing them with innovative real-time and historical information, as well as analytic solutions designed for investors of all sizes and at every stage of the investment lifecycle. To learn more about the company, technology solutions and career opportunities, visit us on [LinkedIn](#), on Twitter [@Nasdaq](#), or at [www.nasdaq.com](http://www.nasdaq.com).

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## Delivery

Nasdaq Data Link provides a modern and efficient method of delivery for real-time exchange data and other financial information. Data is made available through a suite of APIs, allowing for effortless integration of data from disparate sources, and a dramatic reduction in time to market for customer-designed applications. The API is highly scalable, and robust enough to support the delivery of real-time exchange data.

This repository provides an SDK for developing applications to access the Nasdaq Data Link API. While the SDK is open source, connecting to the API does require credentials, which are provided by Nasdaq during an on- boarding process.

For more information, please use the link- <https://github.com/Nasdaq/CloudDataService>

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## Message Formats

### System Event Message

System Event Messages is used to signal key market or data feed control events.

The Stream Event message is used to convey market events published on a specific upstream channel and (optionally) for a specific Market Center.

### Details

| Field                  | Name                               | Type   | Description  |      |       |      |                              |      |                              |      |                 |      |                    |   |                                    |   |                        |   |                              |
|------------------------|------------------------------------|--------|--|------|-------|------|------------------------------|------|------------------------------|------|-----------------|------|--------------------|---|------------------------------------|---|------------------------|---|------------------------------|
| Message Type           | msg_type                           | string | S = System Message   |      |       |      |                              |      |                              |      |                 |      |                    |   |                                    |   |                        |   |                              |
| Upstream Sequence ID   | upstream_seq                       | long   | Quote sequence number.   |      |       |      |                              |      |                              |      |                 |      |                    |   |                                    |   |                        |   |                              |
| Event Code             | event                              | string | Events for which the message is being generated. Possible values: <table><tr><th>Code</th><th>Value</th></tr><tr><td>*SOD</td><td>Start of Day</td></tr><tr><td>*MKO</td><td>Market Open</td></tr><tr><td>*MKC</td><td>Market Close</td></tr><tr><td>*EOD</td><td>End of Day</td></tr></table>   | Code | Value | *SOD | Start of Day                 | *MKO | Market Open                  | *MKC | Market Close    | *EOD | End of Day         |   |                                    |   |                        |   |                              |
| Code                   | Value                              |        |  |      |       |      |                              |      |                              |      |                 |      |                    |   |                                    |   |                        |   |                              |
| *SOD                   | Start of Day                       |        |  |      |       |      |                              |      |                              |      |                 |      |                    |   |                                    |   |                        |   |                              |
| *MKO                   | Market Open                        |        |  |      |       |      |                              |      |                              |      |                 |      |                    |   |                                    |   |                        |   |                              |
| *MKC                   | Market Close                       |        |  |      |       |      |                              |      |                              |      |                 |      |                    |   |                                    |   |                        |   |                              |
| *EOD                   | End of Day                         |        |  |      |       |      |                              |      |                              |      |                 |      |                    |   |                                    |   |                        |   |                              |
| Impacted Market Center | market_center                      | string | Populated if it affects a market center <table><tr><th>Code</th><th>Value</th></tr><tr><td>Q</td><td>The NASDAQ Stock Market, LLC</td></tr><tr><td>N</td><td>New York Stock Exchange, LLC</td></tr><tr><td>B</td><td>NASDAQ BX, Inc.</td></tr><tr><td>E</td><td>Market Independent</td></tr><tr><td>D</td><td>FINRA Alternative Display Facility</td></tr><tr><td>Z</td><td>Cboe BZX Exchange, Inc</td></tr><tr><td>T</td><td>The NASDAQ Stock Market, LLC</td></tr></table> | Code | Value | Q    | The NASDAQ Stock Market, LLC | N    | New York Stock Exchange, LLC | B    | NASDAQ BX, Inc. | E    | Market Independent | D | FINRA Alternative Display Facility | Z | Cboe BZX Exchange, Inc | T | The NASDAQ Stock Market, LLC |
| Code                   | Value                              |        |  |      |       |      |                              |      |                              |      |                 |      |                    |   |                                    |   |                        |   |                              |
| Q                      | The NASDAQ Stock Market, LLC       |        |  |      |       |      |                              |      |                              |      |                 |      |                    |   |                                    |   |                        |   |                              |
| N                      | New York Stock Exchange, LLC       |        |  |      |       |      |                              |      |                              |      |                 |      |                    |   |                                    |   |                        |   |                              |
| B                      | NASDAQ BX, Inc.                    |        |  |      |       |      |                              |      |                              |      |                 |      |                    |   |                                    |   |                        |   |                              |
| E                      | Market Independent                 |        |  |      |       |      |                              |      |                              |      |                 |      |                    |   |                                    |   |                        |   |                              |
| D                      | FINRA Alternative Display Facility |        |  |      |       |      |                              |      |                              |      |                 |      |                    |   |                                    |   |                        |   |                              |
| Z                      | Cboe BZX Exchange, Inc             |        |  |      |       |      |                              |      |                              |      |                 |      |                    |   |                                    |   |                        |   |                              |
| T                      | The NASDAQ Stock Market, LLC       |        |  |      |       |      |                              |      |                              |      |                 |      |                    |   |                                    |   |                        |   |                              |

|  |  |  |   |                                   |  |
|--|--|--|---|-----------------------------------|--|
|  |  |  | I | International Securities Exchange |  |
|  |  |  | U | Members Exchange                  |  |
|  |  |  | W | Cboe Stock Exchange               |  |
|  |  |  | u | Other OTC Markets                 |  |
|  |  |  | J | Cboe EDGA Exchange, Inc.          |  |
|  |  |  | M | Chicago Stock Exchange            |  |
|  |  |  | Y | Cboe BYX Exchange, Inc.           |  |
|  |  |  | C | NYSE National, Inc.               |  |
|  |  |  | X | NASDAQ PSX, Inc.                  |  |
|  |  |  | A | NYSE American, LLC                |  |
|  |  |  | K | Cboe EDGX Exchange, Inc.          |  |
|  |  |  | P | NYSE Arca, Inc                    |  |
|  |  |  | L | Long-term Stock Exchange          |  |
|  |  |  | H | MIAX Exchange                     |  |

## Schema

```
{
  "type": "record",
  "name": "SystemEvent",
  "namespace": "com.nasdaq.cqt",
  "fields": [
    {
      "name": "msg_type",
      "type": "string"
    },
    {
      "name": "event_code",
      "type": "string"
    },
    {
      "name": "market_center",
      "type": "string"
    },
    {
      "name": "upstream_seq",
      "type": "long"
    }
  ],
  "version": "1"
}
```

Sample

```
{
  "msg_type": "S",
  "event_code": "*SOD",
  "market_center": "",
  "upstream_seq": 1
}
```

Quotes

Details

| Field                | Name                               | Type   | Description   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |
|----------------------|------------------------------------|--------|---|------|-------|---|------------------------------|---|------------------------------|---|-----------------|---|--------------------|---|------------------------------------|---|------------------------|---|------------------------------|
| Message Type         | msg_type                           | string | Q = Market Center Quote   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |
| Symbol               | symbol                             | string | Denotes the issue symbol of the security for which the quote report is being generated.   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |
| SIP Feed             | sipfeed                            | string | SIP tape name.  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |
| Upstream Sequence ID | upstream_seq                       | long   | Quote sequence number.  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |
| Market Center        | market_center                      | string | <div>Indicates the market center code that originated the message.</div> <table><tr><th>Code</th><th>Value</th></tr><tr><td>Q</td><td>The NASDAQ Stock Market, LLC</td></tr><tr><td>N</td><td>New York Stock Exchange, LLC</td></tr><tr><td>B</td><td>NASDAQ BX, Inc.</td></tr><tr><td>E</td><td>Market Independent</td></tr><tr><td>D</td><td>FINRA Alternative Display Facility</td></tr><tr><td>Z</td><td>Cboe BZX Exchange, Inc</td></tr><tr><td>T</td><td>The NASDAQ Stock Market, LLC</td></tr></table> | Code | Value | Q | The NASDAQ Stock Market, LLC | N | New York Stock Exchange, LLC | B | NASDAQ BX, Inc. | E | Market Independent | D | FINRA Alternative Display Facility | Z | Cboe BZX Exchange, Inc | T | The NASDAQ Stock Market, LLC |
| Code                 | Value                              |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |
| Q                    | The NASDAQ Stock Market, LLC       |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |
| N                    | New York Stock Exchange, LLC       |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |
| B                    | NASDAQ BX, Inc.                    |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |
| E                    | Market Independent                 |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |
| D                    | FINRA Alternative Display Facility |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |
| Z                    | Cboe BZX Exchange, Inc             |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |
| T                    | The NASDAQ Stock Market, LLC       |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |

|                 |                                   |        | <table><tr><td>I</td><td>International Securities Exchange</td></tr><tr><td>U</td><td>Members Exchange</td></tr><tr><td>W</td><td>Cboe Stock Exchange</td></tr><tr><td>u</td><td>Other OTC Markets</td></tr><tr><td>J</td><td>Cboe EDGA Exchange, Inc.</td></tr><tr><td>M</td><td>Chicago Stock Exchange</td></tr><tr><td>Y</td><td>Cboe BYX Exchange, Inc.</td></tr><tr><td>C</td><td>NYSE National, Inc.</td></tr><tr><td>X</td><td>NASDAQ PSX, Inc.</td></tr><tr><td>A</td><td>NYSE American, LLC</td></tr><tr><td>K</td><td>Cboe EDGX Exchange, Inc.</td></tr><tr><td>P</td><td>NYSE Arca, Inc</td></tr><tr><td>L</td><td>Long-term Stock Exchange</td></tr><tr><td>H</td><td>MIAX Exchange</td></tr></table> | I    | International Securities Exchange | U    | Members Exchange | W | Cboe Stock Exchange | u | Other OTC Markets | J | Cboe EDGA Exchange, Inc. | M | Chicago Stock Exchange | Y | Cboe BYX Exchange, Inc. | C | NYSE National, Inc.            | X | NASDAQ PSX, Inc.    | A | NYSE American, LLC | K | Cboe EDGX Exchange, Inc. | P | NYSE Arca, Inc | L | Long-term Stock Exchange | H | MIAX Exchange |
|-----------------|-----------------------------------|--------|---|------|-----------------------------------|------|------------------|---|---------------------|---|-------------------|---|--------------------------|---|------------------------|---|-------------------------|---|--------------------------------|---|---------------------|---|--------------------|---|--------------------------|---|----------------|---|--------------------------|---|---------------|
| I               | International Securities Exchange |        |   |      |                                   |      |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                                |   |                     |   |                    |   |                          |   |                |   |                          |   |               |
| U               | Members Exchange                  |        |   |      |                                   |      |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                                |   |                     |   |                    |   |                          |   |                |   |                          |   |               |
| W               | Cboe Stock Exchange               |        |   |      |                                   |      |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                                |   |                     |   |                    |   |                          |   |                |   |                          |   |               |
| u               | Other OTC Markets                 |        |   |      |                                   |      |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                                |   |                     |   |                    |   |                          |   |                |   |                          |   |               |
| J               | Cboe EDGA Exchange, Inc.          |        |   |      |                                   |      |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                                |   |                     |   |                    |   |                          |   |                |   |                          |   |               |
| M               | Chicago Stock Exchange            |        |   |      |                                   |      |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                                |   |                     |   |                    |   |                          |   |                |   |                          |   |               |
| Y               | Cboe BYX Exchange, Inc.           |        |   |      |                                   |      |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                                |   |                     |   |                    |   |                          |   |                |   |                          |   |               |
| C               | NYSE National, Inc.               |        |   |      |                                   |      |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                                |   |                     |   |                    |   |                          |   |                |   |                          |   |               |
| X               | NASDAQ PSX, Inc.                  |        |   |      |                                   |      |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                                |   |                     |   |                    |   |                          |   |                |   |                          |   |               |
| A               | NYSE American, LLC                |        |   |      |                                   |      |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                                |   |                     |   |                    |   |                          |   |                |   |                          |   |               |
| K               | Cboe EDGX Exchange, Inc.          |        |   |      |                                   |      |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                                |   |                     |   |                    |   |                          |   |                |   |                          |   |               |
| P               | NYSE Arca, Inc                    |        |   |      |                                   |      |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                                |   |                     |   |                    |   |                          |   |                |   |                          |   |               |
| L               | Long-term Stock Exchange          |        |   |      |                                   |      |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                                |   |                     |   |                    |   |                          |   |                |   |                          |   |               |
| H               | MIAX Exchange                     |        |   |      |                                   |      |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                                |   |                     |   |                    |   |                          |   |                |   |                          |   |               |
| Bid Price       | bid_price                         | double | The highest price at the market center that someone is willing to buy a security at the given time.   |      |                                   |      |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                                |   |                     |   |                    |   |                          |   |                |   |                          |   |               |
| Bid Quantity    | bid_quantity                      | int    | Number of shares available at the Market Center's bid price in a given security.  |      |                                   |      |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                                |   |                     |   |                    |   |                          |   |                |   |                          |   |               |
| Ask Price       | ask_price                         | double | The lowest price at the market center that someone is willing to sell a security at a given time.   |      |                                   |      |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                                |   |                     |   |                    |   |                          |   |                |   |                          |   |               |
| Ask Quantity    | ask_quantity                      | int    | The lowest price at the market center that someone is willing to sell a security at a given time.   |      |                                   |      |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                                |   |                     |   |                    |   |                          |   |                |   |                          |   |               |
| Quote Condition | quote_conditions                  | string | <div>Indicates the quote conditions. Allowable values are:</div> <table><tr><th>Code</th><th>Value</th></tr><tr><td>None</td><td>None Provided</td></tr><tr><td>R</td><td>Regular</td></tr><tr><td>A</td><td>Slow on Ask</td></tr><tr><td>B</td><td>Slow on Bid</td></tr><tr><td>C</td><td>Closing</td></tr><tr><td>D</td><td>News Dissemination</td></tr><tr><td>F</td><td>Slow on Ask (LRP or Gap Quote)</td></tr><tr><td>E</td><td>Slow on Bid (LRP or</td></tr></table>   | Code | Value                             | None | None Provided    | R | Regular             | A | Slow on Ask       | B | Slow on Bid              | C | Closing                | D | News Dissemination      | F | Slow on Ask (LRP or Gap Quote) | E | Slow on Bid (LRP or |   |                    |   |                          |   |                |   |                          |   |               |
| Code            | Value                             |        |   |      |                                   |      |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                                |   |                     |   |                    |   |                          |   |                |   |                          |   |               |
| None            | None Provided                     |        |   |      |                                   |      |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                                |   |                     |   |                    |   |                          |   |                |   |                          |   |               |
| R               | Regular                           |        |   |      |                                   |      |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                                |   |                     |   |                    |   |                          |   |                |   |                          |   |               |
| A               | Slow on Ask                       |        |   |      |                                   |      |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                                |   |                     |   |                    |   |                          |   |                |   |                          |   |               |
| B               | Slow on Bid                       |        |   |      |                                   |      |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                                |   |                     |   |                    |   |                          |   |                |   |                          |   |               |
| C               | Closing                           |        |   |      |                                   |      |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                                |   |                     |   |                    |   |                          |   |                |   |                          |   |               |
| D               | News Dissemination                |        |   |      |                                   |      |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                                |   |                     |   |                    |   |                          |   |                |   |                          |   |               |
| F               | Slow on Ask (LRP or Gap Quote)    |        |   |      |                                   |      |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                                |   |                     |   |                    |   |                          |   |                |   |                          |   |               |
| E               | Slow on Bid (LRP or               |        |   |      |                                   |      |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                                |   |                     |   |                    |   |                          |   |                |   |                          |   |               |

|  |  |  |           |  |
|--|--|--|-----------|--|
|  |  |  |           | Gap Quote)                             |
|  |  |  | G         | Trading Range Indication               |
|  |  |  | H         | Slow on Bid and Ask                    |
|  |  |  | I         | Order Imbalance                        |
|  |  |  | J         | Due to Related – News Dissemination    |
|  |  |  | K         | Due to Related – News Pending          |
|  |  |  | O         | Open                                   |
|  |  |  | L         | Closed                                 |
|  |  |  | M         | Volatility Trading Pause               |
|  |  |  | N         | Non-Firm Quote                         |
|  |  |  | O         | Opening                                |
|  |  |  | P         | News Pending                           |
|  |  |  | S         | Due to Related                         |
|  |  |  | T         | Resume                                 |
|  |  |  | U         | Slow on Bid and Ask (LRP or Gap Quote) |
|  |  |  | V         | In View Of Common                      |
|  |  |  | W         | Slow on Bid and Ask (Set Slow List)    |
|  |  |  | X         | Equipment Changeover                   |
|  |  |  | Y         | Sub-Penny Trading                      |
|  |  |  | Z         | No Open / No Resume                    |
|  |  |  | F         | Fast Trading                           |
|  |  |  | U         | Slow on Bid and Ask (Non-Firm)         |
|  |  |  | One-Sided | One-Sided                              |
|  |  |  | X         | Order Influx                           |
|  |  |  | 0         | Special Opening Quote                  |



|  |  |  |                         |  |  |
|--|--|--|-------------------------|--|--|
|  |  |  | Halted                  | Halted                                   |  |
|  |  |  | Benchmark               | Benchmark                                |  |
|  |  |  | Implied                 | Implied                                  |  |
|  |  |  | Exchange Best           | Exchange Best                            |  |
|  |  |  | 1                       | Market Wide Circuit Breaker Level 1      |  |
|  |  |  | 2                       | Market Wide Circuit Breaker Level 2      |  |
|  |  |  | 3                       | Market Wide Circuit Breaker Level 3      |  |
|  |  |  | Rotation                | Rotation                                 |  |
|  |  |  | Auto Exec Eligible      | Auto Exec Eligible                       |  |
|  |  |  | Bid Side Firm           | Bid Side Firm                            |  |
|  |  |  | Ask Side Firm           | Ask Side Firm                            |  |
|  |  |  | 4                       | On Demand Intra-Day Auction              |  |
|  |  |  | Indicative Value (OPRA) | Indicative Value (OPRA)                  |  |
|  |  |  | 45                      | Additional Information Required (CTS)    |  |
|  |  |  | 46                      | Regulatory Concern (CTS)                 |  |
|  |  |  | 47                      | Merger Effective (CTS)                   |  |
|  |  |  | 48                      | ETF Component Prices Not Available (CTS) |  |
|  |  |  | 49                      | Corporate Action (CTS)                   |  |

|            |            |        |                                 |   |  |
|------------|------------|--------|---------------------------------|---|--|
|            |            |        | 50                              | New Security Offering (CTS)                 |  |
|            |            |        | 51                              | Intraday Indicative Value Unavailable (CTS) |  |
| Start Time | start_time | string | Actual start time of the Quote. |   |  |

## Schema

```
{
  "type": "record",
  "name": "QuoteMessage",
  "namespace": "com.nasdaq.cqt",
  "fields": [
    {
      "name": "msg_type",
      "type": "string"
    },
    {
      "name": "symbol",
      "type": "string"
    },
    {
      "name": "sipfeed",
      "type": "string"
    },
    {
      "name": "upstream_seq",
      "type": "long"
    },
    {
      "name": "market_center",
      "type": "string"
    },
    {
      "name": "bid_price",
      "type": "double"
    },
    {
      "name": "bid_quantity",
      "type": "int"
    },
    {
      "name": "ask_price",
      "type": "double"
    },
    {
      "name": "ask_quantity",
      "type": "int"
    },
    {
      "name": "quote_conditions",
      "type": "string"
    },
    {
      "name": "start_time",
      "type": "string"
    }
  ],
  "version": "1"
}
```

## Sample

```
{
  "msg_type": "Q",
  "symbol": "NDAQ",
  "sipfeed": "UQDF112",
  "upstream_seq": 1,
  "market_center": "N",
  "bid_price": 23.45,
  "bid_quantity": 100,
  "ask_price": 23.45,
  "ask_quantity": 1100,
  "quote_conditions": "",
  "start_time": "2021-06-02T00:00:00.000"
}
```

## Trades

### Details

| Field                | Name                 | Type    | Description  |
|----------------------|----------------------|---------|--|
| Message Type         | msg_type             | string  | T = Trade Report   |
| Symbol               | symbol               | string  | Denotes the issue symbol of the security for which the quote report is being generated.  |
| Upstream Sequence ID | upstream_seq         | long    | sequence number.   |
| Price                | price                | double  | Trade execution price.   |
| Quantity             | quantity             | long    | Trade execution quantity.  |
| Canceled Indicator   | canceled_indicator   | boolean | Indicates that the record was cancelled (null if not cancelled).   |
| Correction Indicator | correction_indicator | boolean | Indicates that the record was corrected.   |
| DOTT                 | dott                 | string  | Indicates whether trade occurred during pre-market, regular market or post market hours. Allowable values are: <ul style="list-style-type: none"><li>F = Regular Hours</li><li>T = Pre/Post Market Hours</li></ul> |

| Listing Venue | listing_venue                      | string | <div>Indicates the primary listing market for the issue.<br/>Allowable values are:</div> <table><tr><th>Code</th><th>Value</th></tr><tr><td>Q</td><td>Nasdaq</td></tr><tr><td>N</td><td>NYSE</td></tr><tr><td>A</td><td>NYSE American</td></tr><tr><td>P</td><td>NYSE Arca</td></tr><tr><td>u</td><td>Other OTC Markets</td></tr><tr><td>V</td><td>Investors’ Exchange LLC</td></tr></table>  | Code | Value | Q | Nasdaq                       | N | NYSE                         | A | NYSE American   | P | NYSE Arca          | u | Other OTC Markets                  | V | Investors’ Exchange LLC |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |
|---------------|------------------------------------|--------|---|------|-------|---|------------------------------|---|------------------------------|---|-----------------|---|--------------------|---|------------------------------------|---|-------------------------|---|------------------------------|---|-----------------------------------|---|------------------|---|---------------------|---|-------------------|---|--------------------------|---|------------------------|---|-------------------------|---|---------------------|---|------------------|---|--------------------|---|--------------------------|---|----------------|
| Code          | Value                              |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                         |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |
| Q             | Nasdaq                             |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                         |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |
| N             | NYSE                               |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                         |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |
| A             | NYSE American                      |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                         |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |
| P             | NYSE Arca                          |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                         |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |
| u             | Other OTC Markets                  |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                         |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |
| V             | Investors’ Exchange LLC            |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                         |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |
| Market Center | market_center                      | string | <div>Indicates the market where the execution occurred.<br/>Allowable values are:</div> <table><tr><th>Code</th><th>Value</th></tr><tr><td>Q</td><td>The NASDAQ Stock Market, LLC</td></tr><tr><td>N</td><td>New York Stock Exchange, LLC</td></tr><tr><td>B</td><td>NASDAQ BX, Inc.</td></tr><tr><td>E</td><td>Market Independent</td></tr><tr><td>D</td><td>FINRA Alternative Display Facility</td></tr><tr><td>Z</td><td>Cboe BZX Exchange, Inc</td></tr><tr><td>T</td><td>The NASDAQ Stock Market, LLC</td></tr><tr><td>I</td><td>International Securities Exchange</td></tr><tr><td>U</td><td>Members Exchange</td></tr><tr><td>W</td><td>Cboe Stock Exchange</td></tr><tr><td>u</td><td>Other OTC Markets</td></tr><tr><td>J</td><td>Cboe EDGA Exchange, Inc.</td></tr><tr><td>M</td><td>Chicago Stock Exchange</td></tr><tr><td>Y</td><td>Cboe BYX Exchange, Inc.</td></tr><tr><td>C</td><td>NYSE National, Inc.</td></tr><tr><td>X</td><td>NASDAQ PSX, Inc.</td></tr><tr><td>A</td><td>NYSE American, LLC</td></tr><tr><td>K</td><td>Cboe EDGX Exchange, Inc.</td></tr><tr><td>P</td><td>NYSE Arca, Inc</td></tr></table> | Code | Value | Q | The NASDAQ Stock Market, LLC | N | New York Stock Exchange, LLC | B | NASDAQ BX, Inc. | E | Market Independent | D | FINRA Alternative Display Facility | Z | Cboe BZX Exchange, Inc  | T | The NASDAQ Stock Market, LLC | I | International Securities Exchange | U | Members Exchange | W | Cboe Stock Exchange | u | Other OTC Markets | J | Cboe EDGA Exchange, Inc. | M | Chicago Stock Exchange | Y | Cboe BYX Exchange, Inc. | C | NYSE National, Inc. | X | NASDAQ PSX, Inc. | A | NYSE American, LLC | K | Cboe EDGX Exchange, Inc. | P | NYSE Arca, Inc |
| Code          | Value                              |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                         |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |
| Q             | The NASDAQ Stock Market, LLC       |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                         |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |
| N             | New York Stock Exchange, LLC       |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                         |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |
| B             | NASDAQ BX, Inc.                    |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                         |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |
| E             | Market Independent                 |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                         |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |
| D             | FINRA Alternative Display Facility |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                         |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |
| Z             | Cboe BZX Exchange, Inc             |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                         |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |
| T             | The NASDAQ Stock Market, LLC       |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                         |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |
| I             | International Securities Exchange  |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                         |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |
| U             | Members Exchange                   |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                         |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |
| W             | Cboe Stock Exchange                |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                         |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |
| u             | Other OTC Markets                  |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                         |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |
| J             | Cboe EDGA Exchange, Inc.           |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                         |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |
| M             | Chicago Stock Exchange             |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                         |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |
| Y             | Cboe BYX Exchange, Inc.            |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                         |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |
| C             | NYSE National, Inc.                |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                         |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |
| X             | NASDAQ PSX, Inc.                   |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                         |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |
| A             | NYSE American, LLC                 |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                         |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |
| K             | Cboe EDGX Exchange, Inc.           |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                         |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |
| P             | NYSE Arca, Inc                     |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                         |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |

|                   |  |        | <table><tr><td>L</td><td>Long-term Stock Exchange</td></tr><tr><td>H</td><td>MIAX Exchange</td></tr></table>   | L    | Long-term Stock Exchange | H | MIAX Exchange                         |   |  |   |                            |       |  |
|-------------------|--|--------|--|------|--------------------------|---|---------------------------------------|---|--|---|----------------------------|-------|--|
| L                 | Long-term Stock Exchange                                 |        |  |      |                          |   |                                       |   |  |   |                            |       |  |
| H                 | MIAX Exchange  |        |  |      |                          |   |                                       |   |  |   |                            |       |  |
| Sub Market Center | sub_market_center  | string | <div>Indicates the sub-market where the execution occurred. Allowable values are:</div> <table><tr><th>Code</th><th>Value</th></tr><tr><td>N</td><td>FINRA / NYSE Trade Reporting Facility</td></tr><tr><td>Q</td><td>FINRA / Nasdaq Trade Reporting Facility Carteret</td></tr><tr><td>B</td><td>FINRA / Nasdaq TRF Chicago</td></tr><tr><td>Space</td><td>Trade originates from FINRA Alternative Display Facility</td></tr></table> | Code | Value                    | N | FINRA / NYSE Trade Reporting Facility | Q | FINRA / Nasdaq Trade Reporting Facility Carteret | B | FINRA / Nasdaq TRF Chicago | Space | Trade originates from FINRA Alternative Display Facility |
| Code              | Value  |        |  |      |                          |   |                                       |   |  |   |                            |       |  |
| N                 | FINRA / NYSE Trade Reporting Facility                    |        |  |      |                          |   |                                       |   |  |   |                            |       |  |
| Q                 | FINRA / Nasdaq Trade Reporting Facility Carteret         |        |  |      |                          |   |                                       |   |  |   |                            |       |  |
| B                 | FINRA / Nasdaq TRF Chicago                               |        |  |      |                          |   |                                       |   |  |   |                            |       |  |
| Space             | Trade originates from FINRA Alternative Display Facility |        |  |      |                          |   |                                       |   |  |   |                            |       |  |
| MSN               | msn  | long   | Message Sequence Number from the UTDF level 1 data feed used as a trade identifier.  |      |                          |   |                                       |   |  |   |                            |       |  |
| OMSN              | omsn   | long   | Applicable to correction and cancel records and identifies the original trade to which the cancel/correction applies.  |      |                          |   |                                       |   |  |   |                            |       |  |
| Sales Condition   | sales_conditions   | string | <div>For more information on Sales Condition codes, please refer to:</div> <ul style="list-style-type: none"><li>Section 7.5.1 of the <a href="#">UTP Trade Data Feed Specification</a> for <i>NASDAQ-listed securities</i></li><li>Section 7.0 of the <a href="#">Consolidated Tape System Specification</a> for <i>NYSE and AMEX-listed securities</i></li></ul>   |      |                          |   |                                       |   |  |   |                            |       |  |
| Trade Date        | trade_date   | string | Timestamp of the trade.  |      |                          |   |                                       |   |  |   |                            |       |  |

## Schema

```
{
  "type": "record",
  "name": "TradeMessage",
  "namespace": "com.nasdaq.cqt",
  "fields": [
    {
      "name": "msg_type",
```

```
"type": "string"
},
{
  "name": "symbol",
  "type": "string"
},
{
  "name": "price",
  "type": "double"
},
{
  "name": "quantity",
  "type": "long"
},
{
  "name": "canceled_indicator",
  "type": "boolean"
},
{
  "name": "correction_indicator",
  "type": "boolean"
},
{
  "name": "dott",
  "type": "string"
},
{
  "name": "listing_venue",
  "type": "string"
},
{
  "name": "market_center",
  "type": "string"
},
{
  "name": "sub_market_center",
  "type": "string"
},
{
  "name": "msn",
  "type": "long"
},
{
  "name": "omsn",
  "type": "long"
},
{
  "name": "sales_conditions",
  "type": "string"
},
{
  "name": "trade_date",
  "type": "string"
},
{
```

```

    "name": "upstream_seq",
    "type": "long"
  }
],
"version": "1"
}

```

## Sample

```

{
  "msg_type": "T",
  "symbol": "AAPL",
  "price": 23.45,
  "quantity": 100,
  "canceled_indicator": false,
  "correction_indicator": false,
  "dott": "F",
  "listing_venue": "",
  "market_center": "N",
  "sub_market_center": "",
  "msn": 1,
  "omsn": 0,
  "sales_conditions": "@ ",
  "trade_date": "2021-06-02T00:00:00.000",
  "upstream_seq": 1
}

```

## Issue Symbol

### Details

| Field                | Name          | Type   | Description                   |
|----------------------|---------------|--------|-------------------------------|
| Message Type         | msg_type      | string | B (constant value)            |
| Symbol               | symbol        | string | Issue symbol of the security. |
| Upstream Sequence ID | upstream_seq  | long   | Quote sequence number.        |
| Name                 | security_name | string | Indicates security name.      |



| Market Tier                | market_tier                         | string  | <div>Indicates the market tiers. Allowable values are:</div> <table><tr><th>Code</th><th>Value</th></tr><tr><td>Space</td><td>Unknown or Not Available</td></tr><tr><td>Q</td><td>NASDAQ Global Select Market</td></tr><tr><td>G</td><td>Nasdaq Global Market</td></tr><tr><td>S</td><td>NASDAQ Capital Market</td></tr></table>  | Code | Value | Space | Unknown or Not Available | Q | NASDAQ Global Select Market | G | Nasdaq Global Market     | S | NASDAQ Capital Market   |   |                                     |   |                        |   |                          |   |                                     |   |                               |
|----------------------------|-------------------------------------|---------|---|------|-------|-------|--------------------------|---|-----------------------------|---|--------------------------|---|-------------------------|---|-------------------------------------|---|------------------------|---|--------------------------|---|-------------------------------------|---|-------------------------------|
| Code                       | Value                               |         |   |      |       |       |                          |   |                             |   |                          |   |                         |   |                                     |   |                        |   |                          |   |                                     |   |                               |
| Space                      | Unknown or Not Available            |         |   |      |       |       |                          |   |                             |   |                          |   |                         |   |                                     |   |                        |   |                          |   |                                     |   |                               |
| Q                          | NASDAQ Global Select Market         |         |   |      |       |       |                          |   |                             |   |                          |   |                         |   |                                     |   |                        |   |                          |   |                                     |   |                               |
| G                          | Nasdaq Global Market                |         |   |      |       |       |                          |   |                             |   |                          |   |                         |   |                                     |   |                        |   |                          |   |                                     |   |                               |
| S                          | NASDAQ Capital Market               |         |   |      |       |       |                          |   |                             |   |                          |   |                         |   |                                     |   |                        |   |                          |   |                                     |   |                               |
| Test symbol                | test_symbol                         | boolean | True/False. Whether an instrument is a test one or not.   |      |       |       |                          |   |                             |   |                          |   |                         |   |                                     |   |                        |   |                          |   |                                     |   |                               |
| Round Lot Size             | round_lot_size                      | int     | Value of round lot size.  |      |       |       |                          |   |                             |   |                          |   |                         |   |                                     |   |                        |   |                          |   |                                     |   |                               |
| Financial Status Indicator | financial_status_indicat<br>or      | string  | <div>Indicates the financial status, which is only available for Nasdaq stocks. Allowable values are:</div> <table><tr><th>Code</th><th>Value</th></tr><tr><td>N</td><td>Normal</td></tr><tr><td>Q</td><td>Bankrupt</td></tr><tr><td>E</td><td>Delinquent (Late Filing)</td></tr><tr><td>J</td><td>Delinquent and Bankrupt</td></tr><tr><td>D</td><td>Deficient (Below Listing Standards)</td></tr><tr><td>G</td><td>Deficient and Bankrupt</td></tr><tr><td>H</td><td>Deficient and Delinquent</td></tr><tr><td>K</td><td>Deficient, Delinquent, and Bankrupt</td></tr><tr><td>S</td><td>Suspended, Pending, Delisting</td></tr></table> | Code | Value | N     | Normal                   | Q | Bankrupt                    | E | Delinquent (Late Filing) | J | Delinquent and Bankrupt | D | Deficient (Below Listing Standards) | G | Deficient and Bankrupt | H | Deficient and Delinquent | K | Deficient, Delinquent, and Bankrupt | S | Suspended, Pending, Delisting |
| Code                       | Value                               |         |   |      |       |       |                          |   |                             |   |                          |   |                         |   |                                     |   |                        |   |                          |   |                                     |   |                               |
| N                          | Normal                              |         |   |      |       |       |                          |   |                             |   |                          |   |                         |   |                                     |   |                        |   |                          |   |                                     |   |                               |
| Q                          | Bankrupt                            |         |   |      |       |       |                          |   |                             |   |                          |   |                         |   |                                     |   |                        |   |                          |   |                                     |   |                               |
| E                          | Delinquent (Late Filing)            |         |   |      |       |       |                          |   |                             |   |                          |   |                         |   |                                     |   |                        |   |                          |   |                                     |   |                               |
| J                          | Delinquent and Bankrupt             |         |   |      |       |       |                          |   |                             |   |                          |   |                         |   |                                     |   |                        |   |                          |   |                                     |   |                               |
| D                          | Deficient (Below Listing Standards) |         |   |      |       |       |                          |   |                             |   |                          |   |                         |   |                                     |   |                        |   |                          |   |                                     |   |                               |
| G                          | Deficient and Bankrupt              |         |   |      |       |       |                          |   |                             |   |                          |   |                         |   |                                     |   |                        |   |                          |   |                                     |   |                               |
| H                          | Deficient and Delinquent            |         |   |      |       |       |                          |   |                             |   |                          |   |                         |   |                                     |   |                        |   |                          |   |                                     |   |                               |
| K                          | Deficient, Delinquent, and Bankrupt |         |   |      |       |       |                          |   |                             |   |                          |   |                         |   |                                     |   |                        |   |                          |   |                                     |   |                               |
| S                          | Suspended, Pending, Delisting       |         |   |      |       |       |                          |   |                             |   |                          |   |                         |   |                                     |   |                        |   |                          |   |                                     |   |                               |

Schema

{

```

"type": "record",
"name": "IssueSymbol",
"namespace": "com.nasdaq.cqt",
"fields": [
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    "name": "msg_type",
    "type": "string"
  },
  {
    "name": "symbol",
    "type": "string"
  },
  {
    "name": "security_name",
    "type": "string"
  },
  {
    "name": "market_tier",
    "type": "string"
  },
  {
    "name": "test_symbol",
    "type": "boolean"
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    "name": "round_lot_size",
    "type": "int"
  },
  {
    "name": "financial_status_indicator",
    "type": "string"
  },
  {
    "name": "upstream_seq",
    "type": "long"
  }
],
"version": "1"
}

```

## Sample

```

{
  "msg_type": "B",
  "symbol": "AAPL",
  "security_name": "Apple Inc. - Common Stock",
  "market_tier": "1",
  "test_symbol": false,
  "round_lot_size": 100,
  "financial_status_indicator": "1",
  "upstream_seq": 1
}

```

## Trading Action

### Details

| Field                | Name  | Type   | Description   |      |       |   |         |   |   |   |   |   |   |
|----------------------|---|--------|---|------|-------|---|---------|---|---|---|---|---|---|
| Message Type         | msg_type  | string | H (constant value)  |      |       |   |         |   |   |   |   |   |   |
| Symbol               | symbol  | string | Issue symbol of the security.   |      |       |   |         |   |   |   |   |   |   |
| SIP Feed             | sipfeed   | string | SIP feed identifier.  |      |       |   |         |   |   |   |   |   |   |
| Upstream Sequence ID | upstream_seq  | long   | sequence number.  |      |       |   |         |   |   |   |   |   |   |
| Source Market Center | source_market_center  | string | Originating market center.  |      |       |   |         |   |   |   |   |   |   |
| Timestamp            | action_time   | string | SIP timestamp - Date in format: yyyy-MM-dd'T'HH:mm:ss.SSS   |      |       |   |         |   |   |   |   |   |   |
| Action Code          | action  | int    | <div>Indicates the trading actions. Allowable values are:</div> <table><tr><th>Code</th><th>Value</th></tr><tr><td>1</td><td>Trading</td></tr><tr><td>2</td><td>Quoting (Orders are accepted, but not Executing – books may be crossed)</td></tr><tr><td>3</td><td>Halted (Orders are not accepted or executing)</td></tr><tr><td>4</td><td>Paused (Used for Volatility Trading Pauses in US Equities – denotes a symbol going into the Halted State followed Immediately by the Quoting State)</td></tr></table> | Code | Value | 1 | Trading | 2 | Quoting (Orders are accepted, but not Executing – books may be crossed) | 3 | Halted (Orders are not accepted or executing) | 4 | Paused (Used for Volatility Trading Pauses in US Equities – denotes a symbol going into the Halted State followed Immediately by the Quoting State) |
| Code                 | Value   |        |   |      |       |   |         |   |   |   |   |   |   |
| 1                    | Trading   |        |   |      |       |   |         |   |   |   |   |   |   |
| 2                    | Quoting (Orders are accepted, but not Executing – books may be crossed)   |        |   |      |       |   |         |   |   |   |   |   |   |
| 3                    | Halted (Orders are not accepted or executing)   |        |   |      |       |   |         |   |   |   |   |   |   |
| 4                    | Paused (Used for Volatility Trading Pauses in US Equities – denotes a symbol going into the Halted State followed Immediately by the Quoting State) |        |   |      |       |   |         |   |   |   |   |   |   |

| Reason Code | reason                                     | int | Indicates the trading actions. Allowable values are:  |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
|-------------|--|-----|---|------|-------|---|---------------|---|--------------------|---|--------------|---|--------------|---|-----------------|---|------------|---|----------------------|---|-------------------|---|--|---|-----|----|-----------------------|----|----------------|----|---------------------|----|------------------------|----|--------------------|----|------------|----|------------------|----|---------------------|----|-----------------------------|----|---------------------------|----|--------------------|----|------------------------------|----|-------------------------|----|------------------|----|-----------------------------|----|------------------|----|-------------|----|------------------------------|----|---------------------|----|-----------------|
|             |  |     | <table><tr><th>Code</th><th>Value</th></tr><tr><td>0</td><td>None Provided</td></tr><tr><td>1</td><td>News Dissemination</td></tr><tr><td>2</td><td>News Pending</td></tr><tr><td>3</td><td>Order Influx</td></tr><tr><td>4</td><td>Order Imbalance</td></tr><tr><td>5</td><td>Volatility</td></tr><tr><td>6</td><td>Equipment Changeover</td></tr><tr><td>7</td><td>Sub-Penny Trading</td></tr><tr><td>8</td><td>Regulatory – Extraordinary Market Activity</td></tr><tr><td>9</td><td>ETF</td></tr><tr><td>10</td><td>Information Requested</td></tr><tr><td>11</td><td>Non-Compliance</td></tr><tr><td>12</td><td>Filings Not Current</td></tr><tr><td>13</td><td>SEC Trading Suspension</td></tr><tr><td>14</td><td>Regulatory Concern</td></tr><tr><td>15</td><td>Operations</td></tr><tr><td>16</td><td>Corporate Action</td></tr><tr><td>17</td><td>Quote Not Available</td></tr><tr><td>18</td><td>Volatility – Straddle State</td></tr><tr><td>19</td><td>News and Resumption Times</td></tr><tr><td>20</td><td>Single Stock Pause</td></tr><tr><td>21</td><td>Single Stock Pause – Quoting</td></tr><tr><td>22</td><td>Qualifications Resolved</td></tr><tr><td>23</td><td>Filings Resolved</td></tr><tr><td>24</td><td>Issuer News Not Forthcoming</td></tr><tr><td>25</td><td>Requirements Met</td></tr><tr><td>26</td><td>Filings Met</td></tr><tr><td>27</td><td>Concluded by Other Authority</td></tr><tr><td>28</td><td>New Issue Available</td></tr><tr><td>29</td><td>Issue Available</td></tr></table> | Code | Value | 0 | None Provided | 1 | News Dissemination | 2 | News Pending | 3 | Order Influx | 4 | Order Imbalance | 5 | Volatility | 6 | Equipment Changeover | 7 | Sub-Penny Trading | 8 | Regulatory – Extraordinary Market Activity | 9 | ETF | 10 | Information Requested | 11 | Non-Compliance | 12 | Filings Not Current | 13 | SEC Trading Suspension | 14 | Regulatory Concern | 15 | Operations | 16 | Corporate Action | 17 | Quote Not Available | 18 | Volatility – Straddle State | 19 | News and Resumption Times | 20 | Single Stock Pause | 21 | Single Stock Pause – Quoting | 22 | Qualifications Resolved | 23 | Filings Resolved | 24 | Issuer News Not Forthcoming | 25 | Requirements Met | 26 | Filings Met | 27 | Concluded by Other Authority | 28 | New Issue Available | 29 | Issue Available |
| Code        | Value                                      |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
| 0           | None Provided                              |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
| 1           | News Dissemination                         |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
| 2           | News Pending                               |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
| 3           | Order Influx                               |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
| 4           | Order Imbalance                            |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
| 5           | Volatility                                 |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
| 6           | Equipment Changeover                       |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
| 7           | Sub-Penny Trading                          |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
| 8           | Regulatory – Extraordinary Market Activity |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
| 9           | ETF  |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
| 10          | Information Requested                      |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
| 11          | Non-Compliance                             |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
| 12          | Filings Not Current                        |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
| 13          | SEC Trading Suspension                     |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
| 14          | Regulatory Concern                         |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
| 15          | Operations                                 |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
| 16          | Corporate Action                           |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
| 17          | Quote Not Available                        |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
| 18          | Volatility – Straddle State                |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
| 19          | News and Resumption Times                  |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
| 20          | Single Stock Pause                         |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
| 21          | Single Stock Pause – Quoting               |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
| 22          | Qualifications Resolved                    |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
| 23          | Filings Resolved                           |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
| 24          | Issuer News Not Forthcoming                |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
| 25          | Requirements Met                           |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
| 26          | Filings Met                                |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
| 27          | Concluded by Other Authority               |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
| 28          | New Issue Available                        |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |
| 29          | Issue Available                            |     |   |      |       |   |               |   |                    |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                              |    |                         |    |                  |    |                             |    |                  |    |             |    |                              |    |                     |    |                 |

|  |  |  |    |  |  |
|--|--|--|----|--|--|
|  |  |  | 30 | IPO – Not Yet Trading                                  |  |
|  |  |  | 31 | IPO – Release for Quotation                            |  |
|  |  |  | 32 | IPO – Window Extension                                 |  |
|  |  |  | 33 | Market Wide Circuit Breaker Level 1                    |  |
|  |  |  | 34 | Market Wide Circuit Breaker Level 2                    |  |
|  |  |  | 35 | Market Wide Circuit Breaker Level 3                    |  |
|  |  |  | 36 | Market Wide Circuit Breaker – Carryover from Prior Day |  |
|  |  |  | 37 | Market Wide Circuit Breaker – Resumption               |  |
|  |  |  | 38 | Post-Close   |  |
|  |  |  | 39 | Pre-Cross  |  |
|  |  |  | 40 | Cross  |  |
|  |  |  | 41 | SEC Revocation   |  |
|  |  |  | 42 | Foreign Market Regulatory                              |  |
|  |  |  | 43 | Component Derivative Of Exchange Listed                |  |
|  |  |  | 44 | Extraordinary Events                                   |  |
|  |  |  | 45 | Security Deletion                                      |  |
|  |  |  | 46 | Internal Halt  |  |
|  |  |  | 47 | Was Frozen   |  |
|  |  |  | 48 | Was Delayed  |  |
|  |  |  | 49 | As-Of Update   |  |
|  |  |  | 50 | Related Security – News Dissemination                  |  |
|  |  |  | 51 | Related Security – News Pending                        |  |
|  |  |  | 52 | Related Security                                       |  |
|  |  |  | 53 | In View Of Common                                      |  |
|  |  |  | 54 | Exchange Specific                                      |  |
|  |  |  | 55 | Security Not Delayed Or Halted                         |  |
|  |  |  | 56 | LULD Trading Pause                                     |  |
|  |  |  | 57 | No Open No Resume                                      |  |
|  |  |  | 58 | Not Available For Trading                              |  |

|  |  |  |    |   |
|--|--|--|----|---|
|  |  |  | 59 | Unknown or Invalid                            |
|  |  |  | 60 | Merger Effective (CTS)                        |
|  |  |  | 61 | ETF Component Price Not Available (CTS)       |
|  |  |  | 62 | Intraday Indicative Price Not Available (CTS) |

## Schema

```
{
  "type": "record",
  "name": "TradingAction",
  "namespace": "com.nasdaq.cqt",
  "fields": [
    {
      "name": "msg_type",
      "type": "string"
    },
    {
      "name": "source_market_center",
      "type": "string"
    },
    {
      "name": "action_time",
      "type": "string"
    },
    {
      "name": "symbol",
      "type": "string"
    },
    {
      "name": "sipfeed",
      "type": "string"
    },
    {
      "name": "upstream_seq",
      "type": "long"
    },
    {
      "name": "action",
      "type": "int"
    },
    {
      "name": "reason",
      "type": "int"
    }
  ]
}
```

```

    },
    "version": "1"
}

```

## Sample

```

{
  "msg_type": "H",
  "source_market_center": "",
  "action_time": "2021-06-02T00:00:00.000",
  "symbol": "AAPL",
  "sipfeed": "UQDF112",
  "upstream_seq": 1,
  "action": 1,
  "reason": 0
}

```

## Market Center Trading Action

### Details

| Field                  | Name                 | Type   | Description   |      |       |   |         |
|------------------------|----------------------|--------|---|------|-------|---|---------|
| Message Type           | msg_type             | string | K (constant value)  |      |       |   |         |
| Symbol                 | symbol               | string | Issue symbol of the security.   |      |       |   |         |
| SIP Feed               | sipfeed              | string | SIP feed identifier.  |      |       |   |         |
| Upstream Sequence ID   | upstream_seq         | long   | sequence number.  |      |       |   |         |
| Source Market Center   | source_market_center | string | Originating market center   |      |       |   |         |
| Impacted Market Center | market_center        | string | Impacted market center  |      |       |   |         |
| Timestamp              | action_time          | string | SIP timestamp - Date in format: yyyy-MM-dd'T'HH:mm:ss.SSS   |      |       |   |         |
| Action Code            | action               | int    | Indicates the trading actions. Allowable values are: <table><tr><th>Code</th><th>Value</th></tr><tr><td>1</td><td>Trading</td></tr></table> | Code | Value | 1 | Trading |
| Code                   | Value                |        |   |      |       |   |         |
| 1                      | Trading              |        |   |      |       |   |         |

|             |   |     | <table><tr><td>2</td><td>Quoting (Orders are accepted, but not Executing – books may be crossed)</td></tr><tr><td>3</td><td>Halted (Orders are not accepted or executing)</td></tr><tr><td>4</td><td>Paused (Used for Volatility Trading Pauses in US Equities – denotes a symbol going into the Halted State followed Immediately by the Quoting State)</td></tr></table>   | 2    | Quoting (Orders are accepted, but not Executing – books may be crossed) | 3 | Halted (Orders are not accepted or executing) | 4 | Paused (Used for Volatility Trading Pauses in US Equities – denotes a symbol going into the Halted State followed Immediately by the Quoting State) |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                      |
|-------------|---|-----|--|------|---|---|---|---|---|---|--------------|---|--------------|---|-----------------|---|------------|---|----------------------|---|-------------------|---|--|---|-----|----|-----------------------|----|----------------|----|---------------------|----|------------------------|----|--------------------|----|------------|----|------------------|----|---------------------|----|-----------------------------|----|---------------------------|----|--------------------|----|----------------------|
| 2           | Quoting (Orders are accepted, but not Executing – books may be crossed)   |     |  |      |   |   |   |   |   |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                      |
| 3           | Halted (Orders are not accepted or executing)   |     |  |      |   |   |   |   |   |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                      |
| 4           | Paused (Used for Volatility Trading Pauses in US Equities – denotes a symbol going into the Halted State followed Immediately by the Quoting State) |     |  |      |   |   |   |   |   |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                      |
| Reason Code | reason  | int | <div>Indicates the trading actions. Allowable values are:</div> <table><tr><th>Code</th><th>Value</th></tr><tr><td>0</td><td>None Provided</td></tr><tr><td>1</td><td>News Dissemination</td></tr><tr><td>2</td><td>News Pending</td></tr><tr><td>3</td><td>Order Influx</td></tr><tr><td>4</td><td>Order Imbalance</td></tr><tr><td>5</td><td>Volatility</td></tr><tr><td>6</td><td>Equipment Changeover</td></tr><tr><td>7</td><td>Sub-Penny Trading</td></tr><tr><td>8</td><td>Regulatory – Extraordinary Market Activity</td></tr><tr><td>9</td><td>ETF</td></tr><tr><td>10</td><td>Information Requested</td></tr><tr><td>11</td><td>Non-Compliance</td></tr><tr><td>12</td><td>Filings Not Current</td></tr><tr><td>13</td><td>SEC Trading Suspension</td></tr><tr><td>14</td><td>Regulatory Concern</td></tr><tr><td>15</td><td>Operations</td></tr><tr><td>16</td><td>Corporate Action</td></tr><tr><td>17</td><td>Quote Not Available</td></tr><tr><td>18</td><td>Volatility – Straddle State</td></tr><tr><td>19</td><td>News and Resumption Times</td></tr><tr><td>20</td><td>Single Stock Pause</td></tr><tr><td>21</td><td>Single Stock Pause –</td></tr></table> | Code | Value   | 0 | None Provided                                 | 1 | News Dissemination  | 2 | News Pending | 3 | Order Influx | 4 | Order Imbalance | 5 | Volatility | 6 | Equipment Changeover | 7 | Sub-Penny Trading | 8 | Regulatory – Extraordinary Market Activity | 9 | ETF | 10 | Information Requested | 11 | Non-Compliance | 12 | Filings Not Current | 13 | SEC Trading Suspension | 14 | Regulatory Concern | 15 | Operations | 16 | Corporate Action | 17 | Quote Not Available | 18 | Volatility – Straddle State | 19 | News and Resumption Times | 20 | Single Stock Pause | 21 | Single Stock Pause – |
| Code        | Value   |     |  |      |   |   |   |   |   |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                      |
| 0           | None Provided   |     |  |      |   |   |   |   |   |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                      |
| 1           | News Dissemination  |     |  |      |   |   |   |   |   |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                      |
| 2           | News Pending  |     |  |      |   |   |   |   |   |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                      |
| 3           | Order Influx  |     |  |      |   |   |   |   |   |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                      |
| 4           | Order Imbalance   |     |  |      |   |   |   |   |   |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                      |
| 5           | Volatility  |     |  |      |   |   |   |   |   |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                      |
| 6           | Equipment Changeover  |     |  |      |   |   |   |   |   |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                      |
| 7           | Sub-Penny Trading   |     |  |      |   |   |   |   |   |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                      |
| 8           | Regulatory – Extraordinary Market Activity  |     |  |      |   |   |   |   |   |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                      |
| 9           | ETF   |     |  |      |   |   |   |   |   |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                      |
| 10          | Information Requested   |     |  |      |   |   |   |   |   |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                      |
| 11          | Non-Compliance  |     |  |      |   |   |   |   |   |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                      |
| 12          | Filings Not Current   |     |  |      |   |   |   |   |   |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                      |
| 13          | SEC Trading Suspension  |     |  |      |   |   |   |   |   |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                      |
| 14          | Regulatory Concern  |     |  |      |   |   |   |   |   |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                      |
| 15          | Operations  |     |  |      |   |   |   |   |   |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                      |
| 16          | Corporate Action  |     |  |      |   |   |   |   |   |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                      |
| 17          | Quote Not Available   |     |  |      |   |   |   |   |   |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                      |
| 18          | Volatility – Straddle State   |     |  |      |   |   |   |   |   |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                      |
| 19          | News and Resumption Times   |     |  |      |   |   |   |   |   |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                      |
| 20          | Single Stock Pause  |     |  |      |   |   |   |   |   |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                      |
| 21          | Single Stock Pause –  |     |  |      |   |   |   |   |   |   |              |   |              |   |                 |   |            |   |                      |   |                   |   |  |   |     |    |                       |    |                |    |                     |    |                        |    |                    |    |            |    |                  |    |                     |    |                             |    |                           |    |                    |    |                      |



|  |  |  |    |  |  |
|--|--|--|----|--|--|
|  |  |  |    | Quoting  |  |
|  |  |  | 22 | Qualifications Resolved                                      |  |
|  |  |  | 23 | Filings Resolved   |  |
|  |  |  | 24 | Issuer News Not<br>Forthcoming                               |  |
|  |  |  | 25 | Requirements Met   |  |
|  |  |  | 26 | Filings Met  |  |
|  |  |  | 27 | Concluded by Other<br>Authority                              |  |
|  |  |  | 28 | New Issue Available  |  |
|  |  |  | 29 | Issue Available  |  |
|  |  |  | 30 | IPO – Not Yet Trading  |  |
|  |  |  | 31 | IPO – Release for<br>Quotation                               |  |
|  |  |  | 32 | IPO – Window Extension                                       |  |
|  |  |  | 33 | Market Wide Circuit<br>Breaker Level 1                       |  |
|  |  |  | 34 | Market Wide Circuit<br>Breaker Level 2                       |  |
|  |  |  | 35 | Market Wide Circuit<br>Breaker Level 3                       |  |
|  |  |  | 36 | Market Wide Circuit<br>Breaker – Carryover from<br>Prior Day |  |
|  |  |  | 37 | Market Wide Circuit<br>Breaker – Resumption                  |  |
|  |  |  | 38 | Post-Close   |  |
|  |  |  | 39 | Pre-Cross  |  |
|  |  |  | 40 | Cross  |  |
|  |  |  | 41 | SEC Revocation   |  |
|  |  |  | 42 | Foreign Market Regulatory                                    |  |
|  |  |  | 43 | Component Derivative Of<br>Exchange Listed                   |  |
|  |  |  | 44 | Extraordinary Events   |  |
|  |  |  | 45 | Security Deletion  |  |
|  |  |  | 46 | Internal Halt  |  |
|  |  |  | 47 | Was Frozen   |  |
|  |  |  | 48 | Was Delayed  |  |
|  |  |  | 49 | As-Of Update   |  |

|  |  |  |    |   |  |
|--|--|--|----|---|--|
|  |  |  | 50 | Related Security – News Dissemination         |  |
|  |  |  | 51 | Related Security – News Pending               |  |
|  |  |  | 52 | Related Security                              |  |
|  |  |  | 53 | In View Of Common                             |  |
|  |  |  | 54 | Exchange Specific                             |  |
|  |  |  | 55 | Security Not Delayed Or Halted                |  |
|  |  |  | 56 | LULD Trading Pause                            |  |
|  |  |  | 57 | No Open No Resume                             |  |
|  |  |  | 58 | Not Available For Trading                     |  |
|  |  |  | 59 | Unknown or Invalid                            |  |
|  |  |  | 60 | Merger Effective (CTS)                        |  |
|  |  |  | 61 | ETF Component Price Not Available (CTS)       |  |
|  |  |  | 62 | Intraday Indicative Price Not Available (CTS) |  |

## Schema

```
{
  "type": "record",
  "name": "MarketCenterTradingAction",
  "namespace": "com.nasdaq.cqt",
  "fields": [
    {
      "name": "msg_type",
      "type": "string"
    },
    {
      "name": "source_market_center",
      "type": "string"
    },
    {
      "name": "market_center",
      "type": "string"
    },
    {
      "name": "action_time",
      "type": "string"
    },
    {
      "name": "symbol",
      "type": "string"
    }
  ],
}
```

```

{
  "name": "sipfeed",
  "type": "string"
},
{
  "name": "upstream_seq",
  "type": "long"
},
{
  "name": "action",
  "type": "int"
},
{
  "name": "reason",
  "type": "int"
}
},
"version": "1"
}

```

## Sample

```

{
  "msg_type": "K",
  "source_market_center": "N",
  "market_center": "N",
  "action_time": "2021-06-02T00:00:00.000",
  "symbol": "AAPL",
  "sipfeed": "UQDF112",
  "upstream_seq": 1,
  "action": 3,
  "reason": 54
}

```

## NBBO Quote Message

### Details

| Field        | Name     | Type   | Description                   |
|--------------|----------|--------|-------------------------------|
| Message Type | msg_type | string | N (constant value)            |
| Symbol       | symbol   | string | Issue symbol of the security. |

| SIP Feed             | sipfeed                            | string | Feed on which Quote was reported.   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
|----------------------|------------------------------------|--------|---|------|-------|---|------------------------------|---|------------------------------|---|-----------------|---|--------------------|---|------------------------------------|---|------------------------|---|------------------------------|---|-----------------------------------|---|------------------|---|---------------------|---|-------------------|---|--------------------------|---|------------------------|---|-------------------------|---|---------------------|---|------------------|---|--------------------|---|--------------------------|---|----------------|---|--------------------------|---|---------------|
| Upstream Sequence ID | upstream_seq                       | long   | sequence number.  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| Start Time           | start_time                         | string | format: yyyy-MM-dd'T'HH:mm:ss.SSS   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| Bid Market Center    | bid_market_center                  | string | <div>Allowable values are:</div> <table><tr><th>Code</th><th>Value</th></tr><tr><td>Q</td><td>The NASDAQ Stock Market, LLC</td></tr><tr><td>N</td><td>New York Stock Exchange, LLC</td></tr><tr><td>B</td><td>NASDAQ BX, Inc.</td></tr><tr><td>E</td><td>Market Independent</td></tr><tr><td>D</td><td>FINRA Alternative Display Facility</td></tr><tr><td>Z</td><td>Cboe BZX Exchange, Inc</td></tr><tr><td>T</td><td>The NASDAQ Stock Market, LLC</td></tr><tr><td>I</td><td>International Securities Exchange</td></tr><tr><td>U</td><td>Members Exchange</td></tr><tr><td>W</td><td>Cboe Stock Exchange</td></tr><tr><td>u</td><td>Other OTC Markets</td></tr><tr><td>J</td><td>Cboe EDGA Exchange, Inc.</td></tr><tr><td>M</td><td>Chicago Stock Exchange</td></tr><tr><td>Y</td><td>Cboe BYX Exchange, Inc.</td></tr><tr><td>C</td><td>NYSE National, Inc.</td></tr><tr><td>X</td><td>NASDAQ PSX, Inc.</td></tr><tr><td>A</td><td>NYSE American, LLC</td></tr><tr><td>K</td><td>Cboe EDGX Exchange, Inc.</td></tr><tr><td>P</td><td>NYSE Arca, Inc</td></tr><tr><td>L</td><td>Long-term Stock Exchange</td></tr><tr><td>H</td><td>MIAX Exchange</td></tr></table> | Code | Value | Q | The NASDAQ Stock Market, LLC | N | New York Stock Exchange, LLC | B | NASDAQ BX, Inc. | E | Market Independent | D | FINRA Alternative Display Facility | Z | Cboe BZX Exchange, Inc | T | The NASDAQ Stock Market, LLC | I | International Securities Exchange | U | Members Exchange | W | Cboe Stock Exchange | u | Other OTC Markets | J | Cboe EDGA Exchange, Inc. | M | Chicago Stock Exchange | Y | Cboe BYX Exchange, Inc. | C | NYSE National, Inc. | X | NASDAQ PSX, Inc. | A | NYSE American, LLC | K | Cboe EDGX Exchange, Inc. | P | NYSE Arca, Inc | L | Long-term Stock Exchange | H | MIAX Exchange |
| Code                 | Value                              |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| Q                    | The NASDAQ Stock Market, LLC       |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| N                    | New York Stock Exchange, LLC       |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| B                    | NASDAQ BX, Inc.                    |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| E                    | Market Independent                 |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| D                    | FINRA Alternative Display Facility |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| Z                    | Cboe BZX Exchange, Inc             |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| T                    | The NASDAQ Stock Market, LLC       |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| I                    | International Securities Exchange  |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| U                    | Members Exchange                   |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| W                    | Cboe Stock Exchange                |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| u                    | Other OTC Markets                  |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| J                    | Cboe EDGA Exchange, Inc.           |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| M                    | Chicago Stock Exchange             |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| Y                    | Cboe BYX Exchange, Inc.            |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| C                    | NYSE National, Inc.                |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| X                    | NASDAQ PSX, Inc.                   |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| A                    | NYSE American, LLC                 |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| K                    | Cboe EDGX Exchange, Inc.           |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| P                    | NYSE Arca, Inc                     |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| L                    | Long-term Stock Exchange           |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| H                    | MIAX Exchange                      |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| Bid Price            | bid_price                          | double | The price that a dealer or other prospective buyer is prepared to pay.  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |

| Bid Quantity      | bid_quantity                       | int    | The price that a dealer or other prospective buyer is prepared to pay, and the quantity to be purchased at that price.   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
|-------------------|------------------------------------|--------|--|------|-------|---|------------------------------|---|------------------------------|---|-----------------|---|--------------------|---|------------------------------------|---|------------------------|---|------------------------------|---|-----------------------------------|---|------------------|---|---------------------|---|-------------------|---|--------------------------|---|------------------------|---|-------------------------|---|---------------------|---|------------------|---|--------------------|---|--------------------------|---|----------------|---|--------------------------|---|---------------|
| Ask Market Center | ask_market_center                  | string | Allowable values are: <table><tr><th>Code</th><th>Value</th></tr><tr><td>Q</td><td>The NASDAQ Stock Market, LLC</td></tr><tr><td>N</td><td>New York Stock Exchange, LLC</td></tr><tr><td>B</td><td>NASDAQ BX, Inc.</td></tr><tr><td>E</td><td>Market Independent</td></tr><tr><td>D</td><td>FINRA Alternative Display Facility</td></tr><tr><td>Z</td><td>Cboe BZX Exchange, Inc</td></tr><tr><td>T</td><td>The NASDAQ Stock Market, LLC</td></tr><tr><td>I</td><td>International Securities Exchange</td></tr><tr><td>U</td><td>Members Exchange</td></tr><tr><td>W</td><td>Cboe Stock Exchange</td></tr><tr><td>u</td><td>Other OTC Markets</td></tr><tr><td>J</td><td>Cboe EDGA Exchange, Inc.</td></tr><tr><td>M</td><td>Chicago Stock Exchange</td></tr><tr><td>Y</td><td>Cboe BYX Exchange, Inc.</td></tr><tr><td>C</td><td>NYSE National, Inc.</td></tr><tr><td>X</td><td>NASDAQ PSX, Inc.</td></tr><tr><td>A</td><td>NYSE American, LLC</td></tr><tr><td>K</td><td>Cboe EDGX Exchange, Inc.</td></tr><tr><td>P</td><td>NYSE Arca, Inc</td></tr><tr><td>L</td><td>Long-term Stock Exchange</td></tr><tr><td>H</td><td>MIAX Exchange</td></tr></table> | Code | Value | Q | The NASDAQ Stock Market, LLC | N | New York Stock Exchange, LLC | B | NASDAQ BX, Inc. | E | Market Independent | D | FINRA Alternative Display Facility | Z | Cboe BZX Exchange, Inc | T | The NASDAQ Stock Market, LLC | I | International Securities Exchange | U | Members Exchange | W | Cboe Stock Exchange | u | Other OTC Markets | J | Cboe EDGA Exchange, Inc. | M | Chicago Stock Exchange | Y | Cboe BYX Exchange, Inc. | C | NYSE National, Inc. | X | NASDAQ PSX, Inc. | A | NYSE American, LLC | K | Cboe EDGX Exchange, Inc. | P | NYSE Arca, Inc | L | Long-term Stock Exchange | H | MIAX Exchange |
| Code              | Value                              |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| Q                 | The NASDAQ Stock Market, LLC       |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| N                 | New York Stock Exchange, LLC       |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| B                 | NASDAQ BX, Inc.                    |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| E                 | Market Independent                 |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| D                 | FINRA Alternative Display Facility |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| Z                 | Cboe BZX Exchange, Inc             |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| T                 | The NASDAQ Stock Market, LLC       |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| I                 | International Securities Exchange  |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| U                 | Members Exchange                   |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| W                 | Cboe Stock Exchange                |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| u                 | Other OTC Markets                  |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| J                 | Cboe EDGA Exchange, Inc.           |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| M                 | Chicago Stock Exchange             |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| Y                 | Cboe BYX Exchange, Inc.            |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| C                 | NYSE National, Inc.                |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| X                 | NASDAQ PSX, Inc.                   |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| A                 | NYSE American, LLC                 |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| K                 | Cboe EDGX Exchange, Inc.           |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| P                 | NYSE Arca, Inc                     |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| L                 | Long-term Stock Exchange           |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| H                 | MIAX Exchange                      |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| Ask Price         | ask_price                          | double | The price a seller states they will accept.  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| Ask Quantity      | ask_quantity                       | Int    | The quantity of a security that investors are willing to purchase at a specified bid price.  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |

| Quote Conditions | quote_conditions                             | string | Indicates the quote conditions. Allowable values are: <table><tr><th>Code</th><th>Value</th></tr><tr><td>0</td><td>None Provided</td></tr><tr><td>1</td><td>Open</td></tr><tr><td>2</td><td>Closed</td></tr><tr><td>3</td><td>One-Sided Open</td></tr><tr><td>4</td><td>Two-Sided Open</td></tr><tr><td>0x01</td><td>Quote Sizes are Provided in Shares, not Lots</td></tr></table> | Code | Value | 0 | None Provided | 1 | Open | 2 | Closed | 3 | One-Sided Open | 4 | Two-Sided Open | 0x01 | Quote Sizes are Provided in Shares, not Lots |
|------------------|--|--------|---|------|-------|---|---------------|---|------|---|--------|---|----------------|---|----------------|------|--|
| Code             | Value  |        |   |      |       |   |               |   |      |   |        |   |                |   |                |      |  |
| 0                | None Provided                                |        |   |      |       |   |               |   |      |   |        |   |                |   |                |      |  |
| 1                | Open   |        |   |      |       |   |               |   |      |   |        |   |                |   |                |      |  |
| 2                | Closed                                       |        |   |      |       |   |               |   |      |   |        |   |                |   |                |      |  |
| 3                | One-Sided Open                               |        |   |      |       |   |               |   |      |   |        |   |                |   |                |      |  |
| 4                | Two-Sided Open                               |        |   |      |       |   |               |   |      |   |        |   |                |   |                |      |  |
| 0x01             | Quote Sizes are Provided in Shares, not Lots |        |   |      |       |   |               |   |      |   |        |   |                |   |                |      |  |

## Schema

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```

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    "type": "int"
  },
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    "type": "string"
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  }
],
"version": "1"
}

```

## Sample

```

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  "bid_price": 23.45,
  "bid_quantity": 100,
  "ask_market_center": "N",
  "ask_price": 23.45,
  "ask_quantity": 1100,
  "quote_conditions": "",
  "start_time": "2021-06-02T00:00:00.000"
}

```

## Limit Up Limit Down (LULD)

### Details

| Field        | Name     | Type   | Description        |
|--------------|----------|--------|--------------------|
| Message Type | msg_type | string | P (constant value) |

| Symbol               | symbol                             | string | Issue symbol of the security.  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
|----------------------|------------------------------------|--------|--|------|-------|---|------------------------------|---|------------------------------|---|-----------------|---|--------------------|---|------------------------------------|---|------------------------|---|------------------------------|---|-----------------------------------|---|------------------|---|---------------------|---|-------------------|---|--------------------------|---|------------------------|---|-------------------------|---|---------------------|---|------------------|---|--------------------|---|--------------------------|---|----------------|---|--------------------------|---|---------------|
| Upstream Sequence ID | upstream_seq                       | long   | sequence number.   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| Timestamp            | timestamp                          | string | Date in format: yyyy-MM-dd'T'HH:mm:ss.SSS  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| Market Center        | market_center                      | string | <div>Indicates the market where the execution occurred. Allowable values are:</div> <table><tr><th>Code</th><th>Value</th></tr><tr><td>Q</td><td>The NASDAQ Stock Market, LLC</td></tr><tr><td>N</td><td>New York Stock Exchange, LLC</td></tr><tr><td>B</td><td>NASDAQ BX, Inc.</td></tr><tr><td>E</td><td>Market Independent</td></tr><tr><td>D</td><td>FINRA Alternative Display Facility</td></tr><tr><td>Z</td><td>Cboe BZX Exchange, Inc</td></tr><tr><td>T</td><td>The NASDAQ Stock Market, LLC</td></tr><tr><td>I</td><td>International Securities Exchange</td></tr><tr><td>U</td><td>Members Exchange</td></tr><tr><td>W</td><td>Cboe Stock Exchange</td></tr><tr><td>u</td><td>Other OTC Markets</td></tr><tr><td>J</td><td>Cboe EDGA Exchange, Inc.</td></tr><tr><td>M</td><td>Chicago Stock Exchange</td></tr><tr><td>Y</td><td>Cboe BYX Exchange, Inc.</td></tr><tr><td>C</td><td>NYSE National, Inc.</td></tr><tr><td>X</td><td>NASDAQ PSX, Inc.</td></tr><tr><td>A</td><td>NYSE American, LLC</td></tr><tr><td>K</td><td>Cboe EDGX Exchange, Inc.</td></tr><tr><td>P</td><td>NYSE Arca, Inc</td></tr><tr><td>L</td><td>Long-term Stock Exchange</td></tr><tr><td>H</td><td>MIAX Exchange</td></tr></table> | Code | Value | Q | The NASDAQ Stock Market, LLC | N | New York Stock Exchange, LLC | B | NASDAQ BX, Inc. | E | Market Independent | D | FINRA Alternative Display Facility | Z | Cboe BZX Exchange, Inc | T | The NASDAQ Stock Market, LLC | I | International Securities Exchange | U | Members Exchange | W | Cboe Stock Exchange | u | Other OTC Markets | J | Cboe EDGA Exchange, Inc. | M | Chicago Stock Exchange | Y | Cboe BYX Exchange, Inc. | C | NYSE National, Inc. | X | NASDAQ PSX, Inc. | A | NYSE American, LLC | K | Cboe EDGX Exchange, Inc. | P | NYSE Arca, Inc | L | Long-term Stock Exchange | H | MIAX Exchange |
| Code                 | Value                              |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| Q                    | The NASDAQ Stock Market, LLC       |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| N                    | New York Stock Exchange, LLC       |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| B                    | NASDAQ BX, Inc.                    |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| E                    | Market Independent                 |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| D                    | FINRA Alternative Display Facility |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| Z                    | Cboe BZX Exchange, Inc             |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| T                    | The NASDAQ Stock Market, LLC       |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| I                    | International Securities Exchange  |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| U                    | Members Exchange                   |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| W                    | Cboe Stock Exchange                |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| u                    | Other OTC Markets                  |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| J                    | Cboe EDGA Exchange, Inc.           |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| M                    | Chicago Stock Exchange             |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| Y                    | Cboe BYX Exchange, Inc.            |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| C                    | NYSE National, Inc.                |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| X                    | NASDAQ PSX, Inc.                   |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| A                    | NYSE American, LLC                 |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| K                    | Cboe EDGX Exchange, Inc.           |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| P                    | NYSE Arca, Inc                     |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| L                    | Long-term Stock Exchange           |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| H                    | MIAX Exchange                      |        |  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |



| LULD Price Band Indicator | luld_price_band_indicat<br>or                  | int    | Indicates the LULD price brand. Allowable values are: <table><tr><th>Code</th><th>Value</th></tr><tr><td>0</td><td>None / Not Applicable</td></tr><tr><td>1</td><td>Opening Update</td></tr><tr><td>2</td><td>Intraday Update</td></tr><tr><td>3</td><td>Re-Stated Value</td></tr><tr><td>4</td><td>Suspended During Trading Halt or Trading Pause</td></tr><tr><td>5</td><td>Re-Opening Update</td></tr><tr><td>6</td><td>Outside Price Band Rule Hours</td></tr></table> | Code | Value | 0 | None / Not Applicable | 1 | Opening Update | 2 | Intraday Update | 3 | Re-Stated Value | 4 | Suspended During Trading Halt or Trading Pause | 5 | Re-Opening Update | 6 | Outside Price Band Rule Hours |
|---------------------------|--|--------|--|------|-------|---|-----------------------|---|----------------|---|-----------------|---|-----------------|---|--|---|-------------------|---|-------------------------------|
| Code                      | Value  |        |  |      |       |   |                       |   |                |   |                 |   |                 |   |  |   |                   |   |                               |
| 0                         | None / Not Applicable                          |        |  |      |       |   |                       |   |                |   |                 |   |                 |   |  |   |                   |   |                               |
| 1                         | Opening Update                                 |        |  |      |       |   |                       |   |                |   |                 |   |                 |   |  |   |                   |   |                               |
| 2                         | Intraday Update                                |        |  |      |       |   |                       |   |                |   |                 |   |                 |   |  |   |                   |   |                               |
| 3                         | Re-Stated Value                                |        |  |      |       |   |                       |   |                |   |                 |   |                 |   |  |   |                   |   |                               |
| 4                         | Suspended During Trading Halt or Trading Pause |        |  |      |       |   |                       |   |                |   |                 |   |                 |   |  |   |                   |   |                               |
| 5                         | Re-Opening Update                              |        |  |      |       |   |                       |   |                |   |                 |   |                 |   |  |   |                   |   |                               |
| 6                         | Outside Price Band Rule Hours                  |        |  |      |       |   |                       |   |                |   |                 |   |                 |   |  |   |                   |   |                               |
| LULD Timestamp            | luld_time                                      | string | Date in format: yyyy-MM-dd'T'HH:mm:ss.SSS  |      |       |   |                       |   |                |   |                 |   |                 |   |  |   |                   |   |                               |
| Limit Down Price          | limit_down_price                               | double | Price for limit down.  |      |       |   |                       |   |                |   |                 |   |                 |   |  |   |                   |   |                               |
| Limit Up Price            | limit_up_price                                 | double | Price for limit up.  |      |       |   |                       |   |                |   |                 |   |                 |   |  |   |                   |   |                               |

## Schema

```
{
  "type": "record",
  "name": "LimitUpLimitDown",
  "namespace": "com.nasdaq.cqt",
  "fields": [
    {
      "name": "msg_type",
      "type": "string"
    },
    {
      "name": "market_center",
      "type": "string"
    },
    {
      "name": "timestamp",
      "type": "string"
    },
    {
      "name": "symbol",
      "type": "string"
    },
    {
      "name": "luld_price_band_indicator",
```

```

    "type": "int"
  },
  {
    "name": "luld_time",
    "type": "string"
  },
  {
    "name": "limit_down_price",
    "type": "double"
  },
  {
    "name": "limit_up_price",
    "type": "double"
  },
  {
    "name": "upstream_seq",
    "type": "long"
  }
],
"version": "1"
}

```

### Sample

```

{
  "msg_type": "P",
  "market_center": "N",
  "timestamp": "2021-06-02T00:00:00.000",
  "symbol": "AAPL",
  "luld_price_band_indicator": 1,
  "luld_time": "2021-06-02T09:30:00.000",
  "limit_down_price": 10.3,
  "limit_up_price": 11.3,
  "upstream_seq": 1
}

```

## Market Wide Circuit Breaker (MWCB)

## Details

| Field                | Name                               | Type   | Description   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |
|----------------------|------------------------------------|--------|---|------|-------|---|------------------------------|---|------------------------------|---|-----------------|---|--------------------|---|------------------------------------|---|------------------------|---|------------------------------|---|-----------------------------------|---|------------------|---|---------------------|---|-------------------|---|--------------------------|---|------------------------|---|-------------------------|---|---------------------|---|------------------|---|--------------------|---|--------------------------|---|----------------|---|--------------------------|
| Message Type         | msg_type                           | string | D (constant value)  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |
| Upstream Sequence ID | upstream_seq                       | long   | sequence number.  |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |
| Timestamp            | timestamp                          | string | Date in format: yyyy-MM-dd'T'HH:mm:ss.SSS   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |
| Market Center        | market_center                      | string | <div>Indicates the market where the execution occurred. Allowable values are:</div> <table><tr><th>Code</th><th>Value</th></tr><tr><td>Q</td><td>The NASDAQ Stock Market, LLC</td></tr><tr><td>N</td><td>New York Stock Exchange, LLC</td></tr><tr><td>B</td><td>NASDAQ BX, Inc.</td></tr><tr><td>E</td><td>Market Independent</td></tr><tr><td>D</td><td>FINRA Alternative Display Facility</td></tr><tr><td>Z</td><td>Cboe BZX Exchange, Inc</td></tr><tr><td>T</td><td>The NASDAQ Stock Market, LLC</td></tr><tr><td>I</td><td>International Securities Exchange</td></tr><tr><td>U</td><td>Members Exchange</td></tr><tr><td>W</td><td>Cboe Stock Exchange</td></tr><tr><td>u</td><td>Other OTC Markets</td></tr><tr><td>J</td><td>Cboe EDGA Exchange, Inc.</td></tr><tr><td>M</td><td>Chicago Stock Exchange</td></tr><tr><td>Y</td><td>Cboe BYX Exchange, Inc.</td></tr><tr><td>C</td><td>NYSE National, Inc.</td></tr><tr><td>X</td><td>NASDAQ PSX, Inc.</td></tr><tr><td>A</td><td>NYSE American, LLC</td></tr><tr><td>K</td><td>Cboe EDGX Exchange, Inc.</td></tr><tr><td>P</td><td>NYSE Arca, Inc</td></tr><tr><td>L</td><td>Long-term Stock Exchange</td></tr></table> | Code | Value | Q | The NASDAQ Stock Market, LLC | N | New York Stock Exchange, LLC | B | NASDAQ BX, Inc. | E | Market Independent | D | FINRA Alternative Display Facility | Z | Cboe BZX Exchange, Inc | T | The NASDAQ Stock Market, LLC | I | International Securities Exchange | U | Members Exchange | W | Cboe Stock Exchange | u | Other OTC Markets | J | Cboe EDGA Exchange, Inc. | M | Chicago Stock Exchange | Y | Cboe BYX Exchange, Inc. | C | NYSE National, Inc. | X | NASDAQ PSX, Inc. | A | NYSE American, LLC | K | Cboe EDGX Exchange, Inc. | P | NYSE Arca, Inc | L | Long-term Stock Exchange |
| Code                 | Value                              |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |
| Q                    | The NASDAQ Stock Market, LLC       |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |
| N                    | New York Stock Exchange, LLC       |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |
| B                    | NASDAQ BX, Inc.                    |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |
| E                    | Market Independent                 |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |
| D                    | FINRA Alternative Display Facility |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |
| Z                    | Cboe BZX Exchange, Inc             |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |
| T                    | The NASDAQ Stock Market, LLC       |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |
| I                    | International Securities Exchange  |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |
| U                    | Members Exchange                   |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |
| W                    | Cboe Stock Exchange                |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |
| u                    | Other OTC Markets                  |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |
| J                    | Cboe EDGA Exchange, Inc.           |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |
| M                    | Chicago Stock Exchange             |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |
| Y                    | Cboe BYX Exchange, Inc.            |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |
| C                    | NYSE National, Inc.                |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |
| X                    | NASDAQ PSX, Inc.                   |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |
| A                    | NYSE American, LLC                 |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |
| K                    | Cboe EDGX Exchange, Inc.           |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |
| P                    | NYSE Arca, Inc                     |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |
| L                    | Long-term Stock Exchange           |        |   |      |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |

|             |  |        | <table><tr><td>H</td><td>MIAX Exchange</td></tr></table>  | H    | MIAX Exchange |      |  |      |  |      |  |
|-------------|--|--------|---|------|---------------|------|--|------|--|------|--|
| H           | MIAX Exchange  |        |   |      |               |      |  |      |  |      |  |
| MWCB Status | mwcb_status  | string | <div>Indicates the market wide circuit breaker status. Allowable values are:</div> <table><tr><th>Code</th><th>Value</th></tr><tr><td>*MW1</td><td>Market Wide Circuit Breaker Level 1 Breach (US Equities)</td></tr><tr><td>*MW2</td><td>Market Wide Circuit Breaker Level 2 Breach (US Equities)</td></tr><tr><td>*MW3</td><td>Market Wide Circuit Breaker Level 3 Breach (US Equities)</td></tr></table> | Code | Value         | *MW1 | Market Wide Circuit Breaker Level 1 Breach (US Equities) | *MW2 | Market Wide Circuit Breaker Level 2 Breach (US Equities) | *MW3 | Market Wide Circuit Breaker Level 3 Breach (US Equities) |
| Code        | Value  |        |   |      |               |      |  |      |  |      |  |
| *MW1        | Market Wide Circuit Breaker Level 1 Breach (US Equities) |        |   |      |               |      |  |      |  |      |  |
| *MW2        | Market Wide Circuit Breaker Level 2 Breach (US Equities) |        |   |      |               |      |  |      |  |      |  |
| *MW3        | Market Wide Circuit Breaker Level 3 Breach (US Equities) |        |   |      |               |      |  |      |  |      |  |

## Schema

```
{
  "type": "record",
  "name": "MarketWideCircuitBreaker",
  "namespace": "com.nasdaq.cqt",
  "fields": [
    {
      "name": "msg_type",
      "type": "string"
    },
    {
      "name": "market_center",
      "type": "string"
    },
    {
      "name": "timestamp",
      "type": "string"
    },
    {
      "name": "mwcb_status",
      "type": "string"
    },
    {
      "name": "upstream_seq",
      "type": "long"
    }
  ],
  "version": "1"
}
```

## Sample

```
{
  "msg_type": "D",
  "market_center": "",
  "timestamp": "2021-06-02T00:00:00.000",
  "mwcb_status": "*MW1",
  "upstream_seq": 1
}
```

## MWCB Decline Level

### Details

| Field                | Name         | Type   | Description                               |
|----------------------|--------------|--------|---|
| Message Type         | msg_type     | string | C (constant value)                        |
| Upstream Sequence ID | upstream_seq | long   | sequence number.                          |
| Timestamp            | timestamp    | string | Date in format: yyyy-MM-dd'T'HH:mm:ss.SSS |

| Market Center | market_center            | string | Allowable values are:  |                                    |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
|---------------|--------------------------|--------|--|------------------------------------|-------|---|------------------------------|---|------------------------------|---|-----------------|---|--------------------|---|------------------------------------|---|------------------------|---|------------------------------|---|-----------------------------------|---|------------------|---|---------------------|---|-------------------|---|--------------------------|---|------------------------|---|-------------------------|---|---------------------|---|------------------|---|--------------------|---|--------------------------|---|----------------|---|--------------------------|---|---------------|
|               |                          |        | <table><tr><th>Code</th><th>Value</th></tr><tr><td>Q</td><td>The NASDAQ Stock Market, LLC</td></tr><tr><td>N</td><td>New York Stock Exchange, LLC</td></tr><tr><td>B</td><td>NASDAQ BX, Inc.</td></tr><tr><td>E</td><td>Market Independent</td></tr><tr><td>D</td><td>FINRA Alternative Display Facility</td></tr><tr><td>Z</td><td>Cboe BZX Exchange, Inc</td></tr><tr><td>T</td><td>The NASDAQ Stock Market, LLC</td></tr><tr><td>I</td><td>International Securities Exchange</td></tr><tr><td>U</td><td>Members Exchange</td></tr><tr><td>W</td><td>Cboe Stock Exchange</td></tr><tr><td>u</td><td>Other OTC Markets</td></tr><tr><td>J</td><td>Cboe EDGA Exchange, Inc.</td></tr><tr><td>M</td><td>Chicago Stock Exchange</td></tr><tr><td>Y</td><td>Cboe BYX Exchange, Inc.</td></tr><tr><td>C</td><td>NYSE National, Inc.</td></tr><tr><td>X</td><td>NASDAQ PSX, Inc.</td></tr><tr><td>A</td><td>NYSE American, LLC</td></tr><tr><td>K</td><td>Cboe EDGX Exchange, Inc.</td></tr><tr><td>P</td><td>NYSE Arca, Inc</td></tr><tr><td>L</td><td>Long-term Stock Exchange</td></tr><tr><td>H</td><td>MIAX Exchange</td></tr></table> | Code                               | Value | Q | The NASDAQ Stock Market, LLC | N | New York Stock Exchange, LLC | B | NASDAQ BX, Inc. | E | Market Independent | D | FINRA Alternative Display Facility | Z | Cboe BZX Exchange, Inc | T | The NASDAQ Stock Market, LLC | I | International Securities Exchange | U | Members Exchange | W | Cboe Stock Exchange | u | Other OTC Markets | J | Cboe EDGA Exchange, Inc. | M | Chicago Stock Exchange | Y | Cboe BYX Exchange, Inc. | C | NYSE National, Inc. | X | NASDAQ PSX, Inc. | A | NYSE American, LLC | K | Cboe EDGX Exchange, Inc. | P | NYSE Arca, Inc | L | Long-term Stock Exchange | H | MIAX Exchange |
|               |                          |        | Code   | Value                              |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
|               |                          |        | Q  | The NASDAQ Stock Market, LLC       |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
|               |                          |        | N  | New York Stock Exchange, LLC       |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
|               |                          |        | B  | NASDAQ BX, Inc.                    |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
|               |                          |        | E  | Market Independent                 |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
|               |                          |        | D  | FINRA Alternative Display Facility |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
|               |                          |        | Z  | Cboe BZX Exchange, Inc             |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
|               |                          |        | T  | The NASDAQ Stock Market, LLC       |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
|               |                          |        | I  | International Securities Exchange  |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
|               |                          |        | U  | Members Exchange                   |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
|               |                          |        | W  | Cboe Stock Exchange                |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
|               |                          |        | u  | Other OTC Markets                  |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
|               |                          |        | J  | Cboe EDGA Exchange, Inc.           |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
|               |                          |        | M  | Chicago Stock Exchange             |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
|               |                          |        | Y  | Cboe BYX Exchange, Inc.            |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
|               |                          |        | C  | NYSE National, Inc.                |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
|               |                          |        | X  | NASDAQ PSX, Inc.                   |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
|               |                          |        | A  | NYSE American, LLC                 |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
|               |                          |        | K  | Cboe EDGX Exchange, Inc.           |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| P             | NYSE Arca, Inc           |        |  |                                    |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| L             | Long-term Stock Exchange |        |  |                                    |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| H             | MIAX Exchange            |        |  |                                    |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| MWCB Level 1  | mwcb_level_1             | double | Value of MWCB level 1  |                                    |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| MWCB Level 2  | mwcb_level_2             | double | Value of MWCB level 2  |                                    |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |
| MWCB Level 3  | mwcb_level_3             | double | Value of MWCB level 3  |                                    |       |   |                              |   |                              |   |                 |   |                    |   |                                    |   |                        |   |                              |   |                                   |   |                  |   |                     |   |                   |   |                          |   |                        |   |                         |   |                     |   |                  |   |                    |   |                          |   |                |   |                          |   |               |

## Schema

```
{
  "type": "record",
  "name": "MarketWideCircuitBreakerDeclineLevel",
  "namespace": "com.nasdaq.cqt",
  "fields": [
    {
      "name": "msg_type",
      "type": "string"
    },
    {
      "name": "market_center",
      "type": "string"
    },
    {
      "name": "timestamp",
      "type": "string"
    },
    {
      "name": "mwcb_level_1",
      "type": "double"
    },
    {
      "name": "mwcb_level_2",
      "type": "double"
    },
    {
      "name": "mwcb_level_3",
      "type": "double"
    },
    {
      "name": "upstream_seq",
      "type": "long"
    }
  ],
  "version": "1"
}
```

## Sample

```
{
  "msg_type": "C",
  "market_center": "",
  "timestamp": "2021-06-02T00:00:00.000",
  "mwcb_level_1": 2000.0,
  "mwcb_level_2": 1900.0,
  "mwcb_level_3": 1800.0,
  "upstream_seq": 1
}
```

Regulation SHO Restriction Indicator

Details

| Field                | Name                                 | Type   | Description   |      |       |   |                                      |   |                                  |
|----------------------|--------------------------------------|--------|---|------|-------|---|--------------------------------------|---|----------------------------------|
| Message Type         | msg_type                             | string | V (constant value)  |      |       |   |                                      |   |                                  |
| Symbol               | symbol                               | string | Issue symbol of the security.   |      |       |   |                                      |   |                                  |
| SIP Feed             | sipfeed                              | string | SIP feed identifier.  |      |       |   |                                      |   |                                  |
| Upstream Sequence ID | upstream_seq                         | long   | sequence number.  |      |       |   |                                      |   |                                  |
| Source Market Center | source_market_center                 | string | Originating market center   |      |       |   |                                      |   |                                  |
| Timestamp            | action_time                          | string | SIP timestamp - Date in format: yyyy-MM-dd'T'HH:mm:ss.SSS   |      |       |   |                                      |   |                                  |
| Action Code          | action                               | int    | Indicates the regulation SHO actions. Allowable values are: <table><tr><th>Code</th><th>Value</th></tr><tr><td>0</td><td>Short Sale Restriction Not In Effect</td></tr><tr><td>1</td><td>Short Sale Restriction In Effect</td></tr></table> | Code | Value | 0 | Short Sale Restriction Not In Effect | 1 | Short Sale Restriction In Effect |
| Code                 | Value                                |        |   |      |       |   |                                      |   |                                  |
| 0                    | Short Sale Restriction Not In Effect |        |   |      |       |   |                                      |   |                                  |
| 1                    | Short Sale Restriction In Effect     |        |   |      |       |   |                                      |   |                                  |



| Reason Code | reason               | int | Indicates the regulation SHO reasons. Allowable values are: <table><tr><th>Code</th><th>Value</th></tr><tr><td>0</td><td>None / Not In Effect</td></tr><tr><td>1</td><td>Day 1 – Activated</td></tr><tr><td>2</td><td>Day 2 – Continued</td></tr></table> | Code | Value | 0 | None / Not In Effect | 1 | Day 1 – Activated | 2 | Day 2 – Continued |
|-------------|----------------------|-----|---|------|-------|---|----------------------|---|-------------------|---|-------------------|
| Code        | Value                |     |   |      |       |   |                      |   |                   |   |                   |
| 0           | None / Not In Effect |     |   |      |       |   |                      |   |                   |   |                   |
| 1           | Day 1 – Activated    |     |   |      |       |   |                      |   |                   |   |                   |
| 2           | Day 2 – Continued    |     |   |      |       |   |                      |   |                   |   |                   |

## Schema

```
{
  "type": "record",
  "name": "RegSHORestrictionIndicator",
  "namespace": "com.nasdaq.cqt",
  "fields": [
    {
      "name": "msg_type",
      "type": "string"
    },
    {
      "name": "source_market_center",
      "type": "string"
    },
    {
      "name": "action_time",
      "type": "string"
    },
    {
      "name": "symbol",
      "type": "string"
    },
    {
      "name": "sipfeed",
      "type": "string"
    },
    {
      "name": "upstream_seq",
      "type": "long"
    },
    {
      "name": "action",
      "type": "int"
    },
    {
      "name": "reason",
      "type": "int"
    }
  ],
  "version": "1"
}
```

## Sample

```
{
  "msg_type": "V",
  "source_market_center": "N",
  "action_time": "2021-06-02T00:00:00.000",
  "symbol": "AAPL",
  "sipfeed": "UQDF112",
  "upstream_seq": 1,
  "action": 0,
  "reason": 0
}
```

## Change control log

| Version | Change Date | Description   |
|---------|-------------|---|
| V2      | 04/14/2022  | <ul style="list-style-type: none"><li>Each message on CQT will have a new field `upstream_seq`, which is a unique identifier of the record for feed on given market day. This helps clients to remove duplicates if we have any and better align with other real time data feeds in Nasdaq Data Link.</li><li>Float fields have converted to double. These provide better precision and align with other Nasdaq Data Link streaming objects.</li><li>In trade messages, we converted msn and omsn fields from int to long. This provides the ability to determine the order of trades which are happening in the same millisecond.</li><li>In quote messages, we change sipfeed_seq (int) to upstream_seq (long).</li></ul> |
| V1      | 08/27/2021  | Added OTCBB in CQT  |
| V1      | 06/03/2021  | <p>The following fields have been added in <b>System Event Message</b>:</p> <ul style="list-style-type: none"><li>Impacted Market Center</li></ul> <p>The following fields have been removed in <b>System Event Message</b>:</p> <ul style="list-style-type: none"><li>Nanoseconds (Timestamp in nanoseconds from midnight)</li></ul> <p>The following fields have been removed from <b>Quotes</b>:</p> <ul style="list-style-type: none"><li>end_time</li><li>Removed suffix "Z" from timestamps</li></ul> <p>The following fields have been renamed in <b>Quotes</b>:</p> <ul style="list-style-type: none"><li>Renamed "marketCenter" to "market_center"</li></ul>   |

|  |  |   |
|--|--|---|
|  |  | <ul style="list-style-type: none"> <li>Renamed "AskPrice" to "ask_price"</li> <li>Renamed "AskQuantity" to "ask_quantity"</li> <li>Renamed "BidPrice" to "bid_price"</li> <li>Renamed "BidQuantity" to "bid_quantity"</li> <li>Renamed "QuoteConditions" to "quote_conditions"</li> <li>Renamed "SipFeed" to "sipfeed"</li> <li>Renamed "UFQuoteMessage" to "QuoteMessage"</li> </ul> <p>The following fields have been added from <b>Trades</b>:</p> <ul style="list-style-type: none"> <li>correction_indicator</li> </ul> <p>The following fields have been removed from <b>Trades</b>:</p> <ul style="list-style-type: none"> <li>Removed suffix "Z" from timestamps</li> </ul> <p>The following fields have been renamed in <b>Trades</b>:</p> <ul style="list-style-type: none"> <li>Renamed "UFTradeMessage" to "TradeMessage"</li> </ul> <p>Other changes:</p> <ul style="list-style-type: none"> <li>Renamed "namespace" in schema from "com.nasdaq.equities.island.applications.datafeed.uf.messaging.binary21" to "com.nasdaq.cqt"</li> </ul> <p>The following <b>new messages</b> have been added:</p> <ul style="list-style-type: none"> <li>Issue Symbol</li> <li>Trading Action</li> <li>Market Center Trading Action</li> <li>NBBO Quote Message</li> <li>Limit Up Limit Down</li> <li>Market Wide Circuit Breaker</li> <li>Market Wide Circuit Breaker Decline Level</li> <li>Regulation SHO Restriction Indicator</li> </ul> <p>The following <b>Codes</b> have been renamed:</p> <ul style="list-style-type: none"> <li>Using numbers to represent "Market Tier Value" Code instead of characters</li> <li>Using numbers to represent "Financial Status" Code instead of characters</li> </ul> |
|--|--|---|