NYSE UTPDirect (CCG Binary) API Specification

NYSE Cash Equities Markets

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Revision History

Date	Revision	Synopsis of Change
4/23/2010	1.0	Initial Baseline Version.
5/7/2010	1.1	Updated information for Drop Copy support in sections 1.2 and 3.6.
7/21/2010	1.2	1. Changed TIF field from required to optional for order and cancel/replace messages. 2. Added New DOT Reserve Indicator Field in Order and Cancel/Replace messages. 3. Added Sell Short Exempt Side instruction value. 4. Removed TargetLocationID Field from D, F, and G Message Types. 5. Added OriginalOrderQty field in Cancel Message Type (F1). 6. Increased length of RejectReason in 8.1 Order, Cancel or Cancel/Replace Reject message Type. 7. Updated Appendix.
8/2/2010	1.3	Updated Heartbeat message type variant.
8/19/2010	1.4	1. Updated Appendix B with additional rejects and reject text. 2. Updated Message Version Profile.
10/8/2010	1.5	Updated Displayed Liquidity Values.
11/5/2010	1.6	Updated valid values in ExecAwayMktID field.
12/3/2010	1.7	1. Clarified descriptions of ExecID and fields. 2. Made OriginalOrderQty field on the Cancel (F.1) message Optional. 3. Updated Order and Cancel/Replace messages to reflect that Market and Stop orders are not valid for Nasdaq Securities. 4. Added overview of the Auto-Cancel on Disconnect Service. 5. Removed reference to requiring a terminator at the end of each message.
3/3/2011	1.7.1	Corrected text on pg 9 regarding receipt of cancels against MOC & LOC order.
10/5/2011	1.8	1. Added Section 3.9 for new order type: Retail Orders. 2. In Sections 6.1 and 6.3, added new MsgType ‘D.2’ and ‘G.2’ with fields OffsetPrice, StatusIndicators, MinimumTradeSize, and additional new values to field, RoutingInstruction. 3. In Appendix A, added new values for Retail Orders to field, RoutingInstruction. 4. In Appendix A, added new values to Liquidity / Billing Indicator. 5. In Appendix A, added new section, StatusIndicators. 6. In Section 6.9, removed the checkmark from the RejectReason field. It is not required on Order Cancel/Replace Reject Messages. 7. Removed references to NYSE Matchpoint. This trading system has been decommissioned on February 28, 2011. 8. Updated contact number for the Firm Testing Group throughout the document. 9. In Appendix B, added new reject codes, 4032 through 4037.

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Date	Revision	Synopsis of Change
1/26/2012	1.9	1. Section 3.7, updated description for 'Done For Day' service. 2. Section 3.9, updated the description for Retail Orders. 3. Section 6.12, updated the descriptions for 'ContraTradeTime' and 'AutoEx' indicator fields. 4. Sections 6.1.2 and 6.3.2, MsgType 'D.2' and 'G.2', modified the OffsetPrice "greater than or equal to" value from 0.0020 to 0.0010. Also modified the description for the Price field.
8/3/2012	1.10	1. The routing of NYSE Arca primary symbols through CCG was decommissioned on Feb 6, 2012. The document has been updated to reflect this change. 2. Section 2, added UTP to Figure 1 diagram and to the legend. 3. Section 3.7, updated the description for 'Done For Day' service. Took out reference to tags 39 and 150 and replaced with field, 'InformationCode'. 4. Added Section 3.10, Introduction of New Universal Trade Platform for NY Cash Equity MarketsAdded Section 3.11, Gateway Throttle Mechanism. 5. Section 5.3, a) Added Market on Open and Limit on Open as order types that will not be canceled as part of the CancelOnDisconnect service. b) In Message Version Profile, updated the Order Fill default (if not provided) to Short. 6. Sections 6.1.2 and 6.3.2, MsgType 'D.2' and 'G.2'. Updated descriptions for the following fields: MinimumTradeSize, and StatusIndicators. 7. Sections 6.10, 6.11, and 6.12. Updated field, ContraBroker. 8. Section 6.12, updated descriptions for the following fields: CumQty and AvgPx. 9. Section 7.1, updated UTP to Figures 2 & 3. 10. Added Section 8, NYSE Equities Order Types. Added "Minimum Trade Size Order" as a new order type. 11. Appendix A, a) Removed value of 'P' from field LastMarket. CCG no longer routes to Arca. b) Removed SecurityExchange description. UTP Direct does not support this field. c) Removed note with regard to Arca primary symbols at the bottom of the Liquidity/Billing Indicator section. d) Added Zero Minimum Trade Size to StatusIndicators table. 12. NYSE Amex LLC (NYSE Amex Equities) was renamed to NYSE MKT LLC on 5/10/2012. The name change has been updated throughout this document. 13. Corrected various typos and spacing issues throughout the document.

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Date	Revision	Synopsis of Change
9/19/12	1.11	▪ Corrected language regarding handling of MOC/LOC cancel requests after the 3:45 p.m. cutoff time.
10/5/12	1.12	▪ Revised Appendix C with updated Order Capacity account type descriptions.
2/1/13	1.13	▪ Incorporated changes in support of new Self-Trade Prevention and Client ID (MPID) designations for incoming orders and cancel replacement messages.
2/6/13	1.14	▪ Updated UROUT message type (4.1) to include new InformationCode in support of Self Trade Prevention Service.
5/3/13	1.15	Added changes in support of Self-Trade Prevention Phase 2 ▪ Accept STP designation on Market and Stop Orders ▪ Removed all references to SDBK now that UTP migration has been completed. ▪ Updated system diagrams to remove SDBK.
08/14/13	1.16	Added changes in support of Midpoint Passive Liquidity order (MPL), Add Liquidity Only order (ALO) and Passive Do Not Ship order (PDNS).
11/15/13	1.17	Updated drop copy description to include new service to support multiple drop copy distribution.
2/25/14	1.18	Draft Firm Bulk Cancel. - Support new F.2 Cancel Message Variant - Support new 6.2 Cancel Ack Message Variant - Add new Reject Message Type to 8.1 (Order & Cancel Replace Reject) message - Add new information code to 4.1 UROUT message. - Updated Reject Reason Codes in Appendix B.
10/13/14	1.19	Changes in support of expansion of ALO Modifier and Day time in force for ISOs.

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Date	Revision	Synopsis of Change
2/26/15	1.20	Updated version in support of: - Returning MEOrderID on Outbound Messages - Unsolictied Ack Subscription in Logon Message - Support new AckMsgType field in Order Acknowledgement. - Support new Billing Rate values 13 and 14.
1/27/16	1.21	- Removed support for Stop orders and Good Till Cancelled (GTC) orders. As previously communicated through Trader Update notifications, NYSE and NYSE MKT will no longer accept these orders beginning February 26, 2016 - Clarification to ClOrdID Tag - Clarification that a Minimum Trade Size Order must be designated with a Time in Force of "IOC"
7/15/16	1.22	- Added ExecInst = 'y' to designate Trade-at ISO order - Updated Appendix C: OrderCapacity values
3/23/17	1.23	- Removed support for Buy Minus and Sell Plus orders - Removed support for NYSE MKT trading of symbols on an Unlisted Trading Privilege basis
9/5/17	1.24	Removed support for NYSE MKT Equities (transitioned to NYSE American on Pillar trading platform with Pillar gateways).
9/14/17	1.25	Added new BillingIndicator/BillingRate value 4 (Market on Close and Market Orders Executed in Close); redefined BillingIndicator/BillingRate value 7 as Limit on Close; added new BillingRate value 15 (Closing Offset).
10/16/17	1.26	- Added Section 3, "Pillar Trading Platform for Tape B&C Symbols" - Added notes on field and value changes to be expected for symbols migrated to Pillar throughout the spec - Added Appendix E, "Pillar Reason Codes"
3/28/18	1.27	Added new sub-section, "NYSE Pillar Risk Mitigation" (Section 4.6; Cancel on Disconnect Service).
4/16/18	1.28	Added note regarding price scale value for symbols migrated to Pillar: - Bust or Correct Message (C.1) - PriceScale field - Order Fill Message Variant 1 - PriceScale field - Order Fill Message Verbose - LastPxPriceScale field

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Date	Revision	Synopsis of Change
11/19/18	2.0	Added support for migration of Tape A securities to NYSE Pillar. Updates to: - Max Order Quantity - Price Scale and Max Order Price - introduction of new Symbol/XDP Price Scale 3 in addition to existing Price Scales 4 and 6 - For BRK A, updated maximum Price Scale to 3 when migrated to Pillar (on UTP, max Price Scale remains 2) - MOC/LOC order entry cutoff time / Closing Auction Imbalance Freeze - Retail Liquidity Program - for all securities (Tapes A/B/C), RPI and Retail Only Limit orders available beginning on a date announced via Trader Update. Retail Only Market Order, Retail Non-Routable Order, and Retail Routable Order continue to be rejected in Pillar - Closing Offset Order - added support for Tape A securities on Pillar - New beginning on a date announced via Trader Update - Support for Minimum Fill order instructions (via MinimumTriggerVolume) on following order types - MPL, Limit IOC, Dark Reserve Order - New beginning on a date announced via Trader Update - Support for Minimum Trade Size (via MinQty) or Minimum Fill order instructions (via MinimumTriggerVolume) on following order type - Dark Reserve Order - Appendix "NYSE Pillar Reason Codes" - added new reason codes R169+ In section, "NYSE Equities Order Types" - added details regarding existing Pillar validations, copied from "functional differences" document (see link below): - Minimum Trade Size Order - Block Reserve Order and Dark Reserve Order - Intermarket Sweep Order (ISO) and Intermarket Sweep Order Add Liquidity Only (ISO ALO) - Midpoint Passive Liquidity Order (MPL) For functional changes to various order types that will take effect for symbols migrated to NYSE Pillar, please see: Functional Differences between NYSE Group Equities Platforms.
1/14/19	2.1	Appendix E, "NYSE Pillar Reason Codes" - updated text for R065 to "Invalid InterestType"; R070 to "Invalid DOrderAuctionPrice." Clarification for BRK A migration to Pillar - max order price for this Tape A symbol, which will have an XDP Price Scale of 3 once migrated, will continue to be limited to 2 decimals to the right of the digit instead of 3 - $999,999.99 (same as UTP).

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Date	Revision	Synopsis of Change
3/29/19	2.2	Appendix “Pillar Reason Codes” - updated text for codes 171, 200, 207, 211; added codes 900+. Billing Rate - added note that value 10 (RLP - Retail Taker MPL) not supported for symbols migrated to Pillar. Removed references to the old time for MOC/LOC order entry cutoff / Closing Auction Imbalance Freeze. Effective April 1, 2019 it will be 3:50 PM Eastern.
8/3/20	2.3	ExecAwayMktID and BillingRate - added new codes H = MIAX, L = LTSE, U = MEMX NYSE Pillar Reason Codes (Appendix) - added new codes 200, 223-226 in support of Pre-trade Risk Controls

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1. Overview

1.1 Binary Common Customer Gateway

NYSE Binary CCG is the Common Customer Gateway application that is designed to be the strategic entry point for any user planning to transact business with NYSE Equities using UTPDirect protocol.For Binary CCG production questions, please contact the Connectivity Team by e-mail or (212) 896-2830 Option 2, Sub-Option 1. For UAT test environment questions, please contact NYSE Member Services by e-mail or (212) 896-2830 Option 2, Sub-Option 2.

As new services or features are added to Binary CCG or the Matching Engine, the NYSE sends out Trader Update emails informing you of these upcoming changes. If you wish to receive these updates, also posted here on the NYSE website, please contact your NYSE Relationship Manager or subscribe directly.

1.2 UTP Direct

UTPDirect is a message-based interface to send order flow to NYSE. The protocol is designed to reduce bandwidth and latency with smaller messages that are easier to parse. The protocol uses fixed length messages over TCP/IP. The contents of fields are binary and fixed length ASCII values where binary values are in network Endian (Big Endian) format. UTPDirect Session behavior, Field names, and Field contents were designed to match the standard FIX behavior as closely as possible. The UTPDirect protocol uses many terms to match our existing FIX protocol. It is not FIX compliant, but to reduce confusion between FIX implementation and UTPDirect implementation we use many FIX terms. The message types are talked about as their FIX equivalents where possible. The field names are referred to with FIX names.

This API includes the concept of message variants to enable new messages with new fields to be added for use without requiring all clients to upgrade at the same time. As an example, the new order message will have several variants to support a variety of user's needs. Simple Limit orders can be handled in smaller messages that don't include all the fields required for full functionality such as special order types like Reserve orders. The full suite of NYSE order types is accessible with these different variants, some of which require more fields and are larger in size.

Customers may establish one or more new Binary CCG connections, separate from any existing CCG FIX connections. Firms who wish to receive drop copy for UTPDirect protocol messages will be provided with a new set of FIX drop copy connections. Drop copy messages will be sent out in existing FIX message format. Routing directly to a Booth or Broker Badge is not supported in the initial implementation of Binary CCG but will be supported in a future phase.

1.3 UTPDirect API Certification

Testing for UTPDirect is currently manual. Each firm must certify its applications with NYSE prior to implementation. To schedule a test, please contact NYSE Member Services by e-mail or (212) 896 - 2830 Option 2, Sub-Option 2.

Other Contacts

The NYSE Market Support teams have a centralized phone number: +1 212-896-2830. Through this number, clients are able to reach all support contacts for Trading, Technical, Market Data and Client Relationship Services. Below are the options to quickly get you to the most appropriate team.

+1 212-896-2830

Option 1 - Trading Support

- Sub-Option 1 - NYSE/NYSE American Equities
- Sub-Option 2 - NYSE ARCA Equities / NYSE Bonds
- Sub-Option 3 - NYSE Options

Option 2 - API Connectivity/Order Routing Support

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- Sub-Option 1 - Production support
- Sub-Option 2 - UAT support

Option 3 - SFTI Network Operations and Colocation Support

Option 4 - Market Data Support

Option 5 - Client Relationship Services

Option 6 - Other technical support inquiries

1.4 Future Enhancements

Future enhancements and/or modifications may require system changes for your firm. Please refer to the NYSE webpages at https://www.nyse.com/markets/nyse/notices and https://www.nyse.com/markets/nyse/market-info to obtain the latest Technology Member Firm Notifications and specification documents.

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2. System Architecture

Each client connects and sends messages to its assigned Binary CCG session using the configured IP and port. The Binary CCG gateway then routes the messages received to the appropriate Matching Engine. At present, Binary CCG supports only routing to the NYSE Matching Engine. Routing to the Broker systems and NYSE Arca will be supported in a future phase. The following diagram represents the high-level overview of the systems in support of the NYSE market.

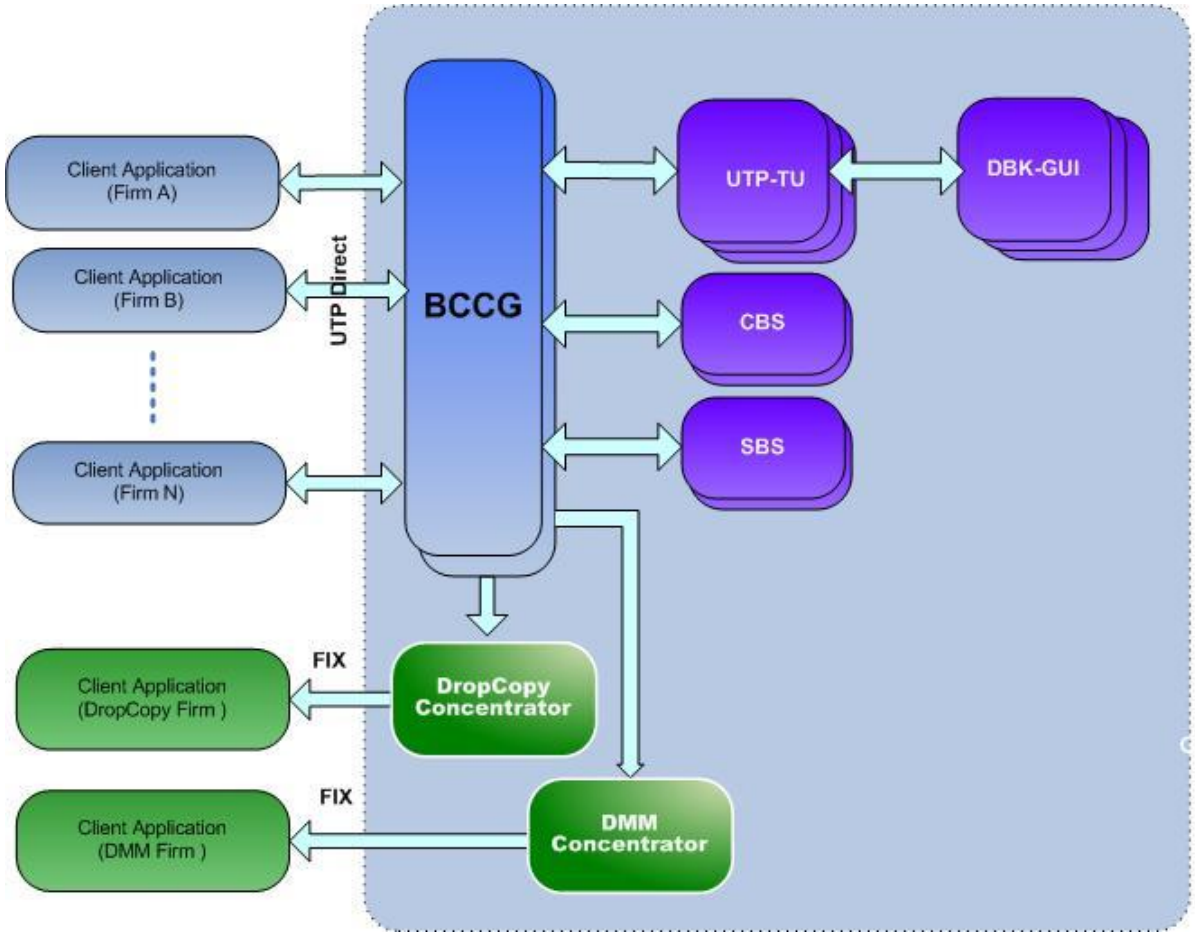

Figure 1: NYSE - Binary CCG Architecture

Legend	
Abbreviation	**Full Name**
Binary CCG	Binary Common Customer Gateway
DBK GUI	Display Book Graphical User Interface
UTP	Universal Trading Platform Trading

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3. NYSE Pillar Trading Platform for Tape B&C Symbols

As of April 2018, four NYSE Group equities markets are trading on NYSE Pillar, our new integrated trading technology platform - including Tape B&C securities on NYSE. Phase V of the rollout will consist of migrating Tape A securities to NYSE Pillar matching engines. During this phase, customers will continue to connect to the existing NYSE CCG/Binary CCG (UTP Direct) gateways and use existing messaging protocols.

However, there are changes to certain order types and messaging that will go into effect on a symbol-by-symbol basis, as the NYSE Pillar matching engines are deployed. With regard to gateway messaging, the associated changes to FIX tags and values are indicated with notes throughout this gateway specification where applicable.

Please note that NYSE Pillar will enforce stricter validation of FIX tags rather than ignore them. Therefore, orders for symbols migrated to NYSE Pillar may not contain any FIX tags which are not outlined in this gateway specification. Such orders carrying unsupported FIX tags will be rejected.

For information on the functional changes to various order types that will take effect for symbols migrated to NYSE Pillar, please visit: https://www.nyse.com/pillar.

4. NYSE Equities Specific Information

4.1 Hours of Operation

For all symbols Tape A/B/C, NYSE accepts and acknowledges orders starting at 6:30 AM Eastern Time.

For Tape A Symbols:

- Opening Auctions – beginning 9:30 AM ET
- Core Trading Session – 9:30 AM – 4:00 PM ET
- Closing Auctions – beginning 4:00 PM ET

For Tape B&C Symbols:

- Local auctions are not conducted
- Early Trading Session – 7:00 AM – 9:30 AM ET
- Core Trading Session – 9:30 AM – 4:00 PM ET
- **IMPORTANT- Trading Session Eligibility:** this gateway does not support designation of trading session eligibility on orders. Instead, Pillar defaults trading session designation based on order type. Orders go live and are eligible to execute based on these defaults. Firms are responsible for managing their execution risk around the defaults.

  For a list of order types with their default trading session designations, see the document Functional Differences between NYSE Group Equities Platforms.

4.2 NYSE Symbology

Orders for instruments with suffixes (different classes of stock, preferred stock, etc.) can be sent in the message in the Symbol field with symbol and suffix separated by a space (e.g., “BRK A”). For a detailed list of the suffixes, please refer to Appendix D.

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4.3 Opening and Closing Auction Orders

NYSE offers both opening and closing auctions for **NYSE-Listed Symbols only**. The schedule for these auctions is listed below.

- **Opening Auction - 9:30 AM EST**
- **Closing Auction - 4:00 PM EST**

Opening Orders

To place an order for the opening auction specify TimeInForce =2 (OPG - at the opening).

1. Market on Open:

   Orders must be submitted before the specified securities Opening Trade (typically, ***9:30am*** EST) and the new order message **MUST** contain the following fields populated in order to be included in the Opening Auction:

   OrdType = 1 (Market)

   TimeInForce = 2 (OPG)

2. Limit on Open:

   Orders must be submitted before the specified securities Opening Trade (typically, ***9:30am*** EST) and the new order message **MUST** contain the following fields populated in order to be included in the Opening Auction:

   OrdType = 2 (Limit)

   TimeInForce = 2 (OPG)

Closing Orders

The NYSE supports three Closing Auction order types.

1. **Market on Close (MOC)**
   To place a Market on Close order for the closing auction, orders must be received before 3:50pm EST (unless the order is taking the opposite side of a published Regulatory imbalance). Any cancel received after 3:58 p.m. on a MOC order will be rejected.

   Please note: NYSE systems will reject all cancel, partial cancel & cancel replace requests sent after 3:58pm for any MOC and LOC order, including orders that were entered to offset a published imbalance. Cancel requests (full, partial or cancel/replacements) sent between 3:50pm and 3:58pm will be accepted to correct a legitimate error.

   To designate a new order message as Market on Close (MOC), the order **MUST** contain the following fields:

   OrdType = 5 (Market on Close)

   TimeInForce = 0

2. **Limit on Close (LOC)**
   To place a Limit on Close order for the closing auction, orders must be received before 3:50pm EST (unless the order is taking the opposite side of a published Regulatory imbalance). Any cancel received after 3:58 p.m. on a LOC order will be rejected.

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Please note: NYSE systems will reject all cancel, partial cancel & cancel replace requests sent after 3:58pm for any MOC and LOC order, including orders that were entered to offset a published imbalance. Cancel requests (full, partial or cancel/replacements) sent between 3:50pm and 3:58pm will be accepted to correct a legitimate error.

To designate a new order message as LOC, the order **MUST** contain the following fields:

OrdType = B (Limit on Close)

TimeInForce = 0

3. **Closing Offset Orders (CO)** **For symbols migrated to Pillar – available for Tape A securities only

The Closing Offset order is a day limit order to buy or sell and will be accepted up until 4:00 p.m., regardless of any imbalance or side of imbalance. CO orders provide liquidity to offset imbalances at the Close and execute at the closing price. CO orders will trade if marketable to fill any remaining imbalance and will yield to ***all*** other interest, except at-price "G" interest. Within the CO allocation, CO orders will be filled in time priority. CO orders on the same side of the imbalance will not participate.

To designate a new order message as Closing Offset (CO), the order **MUST** contain the following fields:

RoutingInstruction = C (Closing Offset)

4.4 Drop Copy Application

NYSE provides a service whereby firms can receive copies of Orders, Reports, ERCs, Cancels, Cancel Replaces, UR OUTs and/or Replaced messages for a given firm mnemonic. Drop Copy processing allows for the distribution of multiple drop copies by an Entering Firm. Entering firm mnemonic owners must subscribe via the current process of contacting Broker Services. Once subscribed, additional drop copy connections can be established so that more than one copy can be generated. The maximum is currently four and the default set up for all additional drop copy connections is reports only. Each individual supplemental connection is given the ability to subscribe to the mix of messages they wish to receive. Filter criteria (orders, reports and/or admin messages) will remain and message acknowledgements will not be included for drop copy processing.

The number of connections per recipient is determined by the traffic the customer wishes to receive. For example, if CCG traffic only, the customer is required to establish a connection to each CCG Drop Copy Concentrator (currently 4). If BCCG traffic only, the customer is required to establish a connection to each BCCG Drop Copy Concentrator (currently 2). If a customer wishes to receive both CCG and BCCG message drop copies, the customer is required to connect into all 6 drop copy concentrators.

The drop copy messages will be sent out on this new connection in existing FIX message format. Please note there may be differences in the tags received for the drop copied messages in the UTP Direct path compared to the fields received for drop copied messages in the FIX message protocol path (e.g. decimal is truncated from order and cancel/replacement drop copies if non-significant digits). Additional drop copy sessions may be required depending on the number of firm connections requested and the volume of traffic in the UTP Direct connections.

To request Drop Copy sessions, please contact the Connectivity Team by e-mail or (212) 896-2830 Option 2, Sub-Option 1. To request that a mnemonic be enabled for drop copy service, the owner of the mnemonic should contact Broker Services by e-mail or 212-656-5438.

4.5 Done For Day Subscription Service

A subscription based service for NYSE that immediately returns an unsolicited "UROUT" message for all open "Day" orders as each individual security's closing trade is processed. For securities that do not have a closing transaction, an

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unsolicited "UROUT" message will be returned at the designated 4:45 p.m. cutoff time. InformationCode field will contain a value of '3'. Firms interested in testing this new service can contact NYSE Member Services by e-mail or (212) 896-2830 Option 2, Sub-Option 2.

**For symbols migrated to Pillar – Regardless of whether firms are subscribed to receive them or not, Done for Day messages are automatically sent for all open orders at the conclusion of the Core Trading Session.

4.6 Cancel on Disconnect Service

A session can be configured to automatically cancel all open day orders if the firm's session disconnects from BCCG. Firms can control this feature by way of the CancelOnDisconnect flag in the inbound logon message to BCCG. The optional auto cancel upon disconnect service will only cancel open market or limit orders with a time-in-force of "Day". Any Market "At the Close" or Limit "At the Close" (MOC/LOC) or Closing Offset (CO) orders will not be canceled as part of this service.

For the purposes of this optional service, the NYSE will use the following criteria to initiate the auto-cancel service:

a) Loss of the physical or network connection to CCG detected; or
b) Failure to receive heartbeats within the specified heartbeat interval on an inactive session.

However, the NYSE will not initiate the auto-cancel service due to an internal NYSE CCG server outage or failure.

Members and member organizations should note that NYSE is providing this optional service as an alternative to the present manual process. Executions may occur at or about the same time that a firm experiences a disconnect, and before the auto cancel feature completes cancelation of open day orders. If this should occur, all executions occurring prior to the activation of the auto cancel feature will be valid, and any resulting execution reports will be returned to the firm along with any "UR Outs" upon re-establishing the UTP Direct connection.

NYSE Pillar Risk Mitigation

In the event a matching engine enters an unexpected state, the Pillar Risk Mitigation process will be triggered. Gateway users will receive unsolicited cancels on all live orders on the impacted matching engine, including MOO, LOO, MOC, LOC, with a reason code '168 – Pillar Risk Mitigation'. The impacted matching engine will initiate an automatic recovery during which period new orders will be rejected with a reason code '76 – System not available'. Once the resumption is complete, users will need to resubmit MOO, LOO, MOC, and LOC orders.

4.7 Retail Orders

**For symbols migrated to Pillar – Retail Price Improvement and Retail Only Limit orders supported (available beginning on a date announced via Trader Update). Retail Only Market Order, Retail Non-Routable Order, and Retail Routable Order are rejected.

The NYSE has established a Retail Liquidity Program for customers. Binary customers wishing to take advantage of this order type must use the D.2 Order message, G.2 Order Cancel/Replace message variant or later versions, to route Retail Price Improvement (RPI) Orders or Retail Taker orders to the NYSE Matching engine using new designated values in the Routing Instruction field.

Retail Price Improvement Orders provide potential price improvement to incoming order flow in the form of non-displayed interest that is better than the protected best bid/offer. RPI orders designates a minimum amount of price improvement by populating a new 'Offset Price' field in the new order message, and are designed to only execute with Retail Taker orders. The limit price and offset price must be submitted in multiples of the minimum price improvement value, currently set at $0.0010. In addition, any RPI interest that would result in an execution below $1.00 will be prevented from trading.

Retail Taker orders, which are treated as IOC interest, are available in 3 varieties:

- Retail Only orders only interact with RPI Orders

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- Retail Non-Routable orders may interact with RPI interest and/or other interest on the Limit order book
- Retail Routable Orders may interact with RPI interest, other interest on the Limit order book and/or can be routed away to other markets for execution

When RPI orders execute with Retail Taker orders, a new billing indicator value will be returned. Depending on the type of Retail Taker order, Retail Taker orders that execute with non-RPI interest will receive an existing billing value.

4.8 Gateway Throttle Mechanism

In order to protect the Trading Engine from an overload of incoming messages, the BCCG Gateway employs a session-level throttle mechanism. This is a configurable value currently set to 1000 messages per second on a fixed 1 second basis. In the event this throttle mechanism is activated, the gateway will slow the sending of incoming messages down to the Trading Engine during the throttle period (i.e., messages will be queued) so as to not exceed the defined message threshold.

4.9 Self-Trade Prevention Service

The NYSE offers a Self-Trade Prevention (STP) service. This service is designed to allow firms to better manage their order flow and prevent unintended executions with themselves. STP is currently available for limit orders and Market orders. Orders sent to Floor brokers that have the STP modifiers will be supported in a later phase.

One of these two STP modifiers, along with matching ClientID's (MPIDs), must be present on each order to prevent two orders from the same firm from trading with each other.

STP Cancel Newest (STPN) – SelfTradeType = N

- An incoming order marked with the STPN designation will not execute against opposite side resting interest that is also marked with the STP designation for the same ClientID (MPID). Instead, the incoming order or re-priced order will be automatically cancelled back to the order originator. The resting order will remain on the order book.

STP Cancel Oldest (STPO) – SelfTradeType = O

- An incoming order marked with the STPO designation will not execute against opposite side resting interest that is also marked with the STP designation for the same ClientID or MPID. Instead, the resting order will be automatically cancelled back to the order originator. The incoming order will then continue to auto execute or be placed in the order book.

4.10 Mid-Point Passive Liquidity (MPL) Order

NYSE supports a Midpoint Passive Liquidity (MPL) order type. MPL Orders are un-displayed limit orders that are priced at the midpoint of the Protected Best Bid Best Offer (PBBO). Users of an MPL Order have the option of applying additional modifiers to the order type as well as interacting with all other order types. MPL orders do not participate at the Open, Close or in any manual trade. MPL orders are sent directly to the NYSE Matching Engine

4.11 Bulk Cancel Processing

The NYSE supports a bulk cancel message to allow customers to target multiple orders to cancel by firm mnemonic with a single cancel message. Customers are able to bulk cancel and block, bulk block or bulk unblock via a single message. In this phase, customers will have the ability to send a bulk action message to our Universal Trade Platform (UTP) that may include the cancellation of Broker System generated order messages for that firm mnemonic. In future phases, customers will be able to bulk cancel for an entire risk group and route bulk cancel messages directly to the NYSE Broker

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Systems. Member firms that currently utilize a Service Bureau for order submission will need to contact their service provider to determine when the technical changes outlined below will be supported.

Customers will be required to support new Cancel Message Variant F.2 or later in order to take advantage of this new bulk cancel functionality. In order to distinguish a bulk cancel message from an individual cancel message a new required field has been added to the F.2 variant. This field must be populated for all cancel messages, not just bulk cancel messages. Customers wishing to cancel any combination of orders types will be required to submit a bulk cancel message for each order type and mnemonic combination. UROUT messages for each of the orders that are canceled are sent through the connection in which the original order has been received.

4.12 MEOrderID and Unsolicited Order Ack Subscription

In support of the NYSE Integrated Feed (IF) product, NYSE returns a unique Exchange generated order id (MEOrderID) populated on order acknowledgements and execution reports that can be used to match activity on the Integrated Feed. The Integrated Feed provides a comprehensive order-by-order view of events in the NYSE equities markets. This single high-performance product integrates orders and trades in sequence, providing a more deterministic and transparent view of the order book and related activity.

There are times when a single order may have multiple MEOrderIDs assigned as size of the order changes. In these instances, the NYSE will return an additional, unsolicited order acknowledgement that contains the newly assigned MEOrderID. The return of these new unsolicited order acknowledgments is on a subscription basis by session at the time of login.

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UTPDirect Message Format

4.13 Common Identifiers

4.13.1 Connection Identifier

Each session is identified uniquely with a SenderCompID assigned by NYSE that identifies the connection of the brokerage firm that sends an order. SenderCompID is unique for every connection to Binary CCG and must be supplied in the logon message.

4.13.2 Firm Identifier

The OnBehalfOfCompID for the firms is assigned by NYSE and is used to uniquely identify the brokerage firm that sends an order. It is used to identify the customer and must be supplied on all incoming messages. NYSE will reject incoming messages with no OnBehalfOfCompID or with an invalid ID.

4.14 NYSE Specific Order Identification Notes

The order originators and/or entering entities must populate ClOrdID with an identification number that corresponds to the Branch Code and Sequence Number of the originator. The data type of ClOrdID is a character string, and its value is a unique identifier (branch, sequence number and session date). The order originator and/or entering entity must use a unique ClOrdID for subsequent orders, cancels, and cancel replace requests. The messages are chained together since each message refers to the previous message by including its ClOrdID in the field OrigClOrdID. **Binary CCG does not guarantee uniqueness of ClOrdID.**

Field Name	Description
ClOrdID	Unique identifier for an Order as assigned by the order originator. Uniqueness must be guaranteed by mnemonic within a single trading day (across multiple lines of a firm), the session date is required as part of the field. **The ClOrdID must be unique within a single trading day for a given firm mnemonic. CCG does NOT validate the uniqueness of ClOrdID, it will simply forward the order to the downstream systems.**
OrigClOrdID	ClOrdID of the previous order (NOT the initial order in a cancel replace chain) as assigned by the order originator, used to identify the previous order in cancel and cancel/replace requests.
MEOrderID	Represents the OrderID assigned by the Matching Engine. Currently supported on outbound messages only. May be supported in the future implementation on inbound messages.

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4.15 Binary Prices

Prices are represented as whole integers in binary. The decimal position can be determined by using the Price Scale code in the message. To determine the decimal price, divide the whole integer price by the value that the price scale code represents.

- **Example 1**: Whole integer price is 1350 and the price scale code is 2. To determine the decimal price, divide 1350 by 100 (10^2 or 10^2). The result is a decimal price of 13.50.
- **Example 2**: Whole integer price is 135 and the price scale code is 1. To determine the decimal price, divide 135 by 10 (10^1 or 10^1). The result is a decimal price of 13.5 (same as 13.50).
- **Example 3**: Whole integer price is 25 and the price scale code is 0. The price scale code is 0 so no division is necessary. The result is a price of 25 (same 25.00).

The Price Scale field is a single character.

Note: For order entry, the maximum price scale for BRK A is 2. **When migrated to Pillar, note that the XDP Price Scale for BRK A will become 3. However, in UTP Direct, the maximum order price scale for BRK A will remain as 2.

Price Scale Codes

Price Scale Code	Denominator Value	Denominator Value (factor of 10)
"0"	N/A	N/A
"1"	10	10^1 (10^1)
"2"	100	10^2 (10^2)
"3"	1,000	10^3 (10^3)
"4"	10,000	10^4 (10^4)
"6" **For symbols migrated to Pillar, on messages from Exchange to Firm (Acks, Fills, etc.) only	1,000,000	10^6 (10^6)

Note: Price Scale Code of **"0"** indicates that the whole integer price in the price field is the actual price and no conversion or division is necessary.

4.16 Message Formatting

The message tables provided later in the document indicate when a particular field is required **(✓)** for the particular type of message. When a field is not required, that field should be set to null (or zeroes in binary). Note that all message fields must be provided in the exact position indicated even if not used (then null filled to binary zeroes if unused). All of the messages are of a fixed size with positional fields at a preset location.

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4.17 Message Type Summary

The table below provides a summary of all UTP Direct messages and message variants. UTP Direct messages are identified using a short value that is mapped, for reference purposes, to its corresponding FIX message equivalent as much as possible. For example, a "New order' message that is identified as message type 'D' in FIX maps to "0x0041" in UTP Direct. Throughout this document, you will see that we reference the "New Order" message as message type "D.1" in order to correlate the two messages.

Future implementations may introduce other "New order" message variations. These variations will also be referred to as message type "D" but with a new qualifier in order to further distinguish the added message(s) (example, "D.2"). This design overcomes the limitation found with using a fixed length message protocol and allows the Exchange to create additional variants to support the introduction of future products and services.

Direction C = Client to Exchange X = Exchange to Client	Message	Message Type (ASCII)	Variant	Message Type (Binary)	Description
C X	Heartbeat Message (0)	0	1	0x0001	Heartbeat message
C X	Test Message (1)	1	1	0x0011	Test and heartbeat
C X	Logon (A)	A	1	0x0021	Initial Logon to UTPDirect server
C	New Order (D1)	D	1	0x0041	New Order Message
C	New Order (D2)	D	2	0x0042	New Order Message
C	New Order (D3)	D	3	0x0043	New Order Message
C	New Order (D4)	D	4	0x0044	New Order Message
C	Cancel Order (F)	F	1	0x0061	Cancel Message
C	Cancel Order (F.2)	F	2	0x0062	Cancel/Bulk Cancel Message
C	Cancel/Replace Order (G1)	G	1	0x0071	Cancel / Replace Message
C	Cancel/Replace Order (G2)	G	2	0x0072	Cancel / Replace Message
C	Cancel/Replace Order (G3)	G	3	0x0073	Cancel / Replace Message
C	Cancel/Replace Order (G4)	G	4	0x0074	Cancel / Replace Message
X	Order Filled (2)	2	1	0x0081	Order has filled
X	Order Ack (a)	a	1	0x0091	Order has been accepted and placed on the NYSE Order Book
X	Cancel Request Ack (6)	6	1	0x00A1	Individual Cancel Acknowledgement
X	Cancel Request Ack (6.2)	6	2	0x00A2	Individual and Bulk Cancel Acknowledgement
X	Cancel/Replace Ack (E)	E	1	0x00B1	Cancel/Replace message received at the Matching Engine
X	Order Filled (X)	X	1	0x00C1	Order has filled (verbose format)
X	UROUT (4)	4	1	0x00D1	Order Cancel confirmation

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Direction C = Client to Exchange X = Exchange to Client	Message	Message Type (ASCII)	Variant	Message Type (Binary)	Description
X	Replaced (5)	5	1	0x00E1	Cancel / Replace Order confirmation
X	Reject (8)	8	1	0x00F1	Rejects
X	Bust / Correct (C)	C	1	0x0101	Bust or Correction
X	Logon Reject (L)	L	1	0x0141	If Logon is rejected for some reason

5. Session Management

5.1 Overview

Clients initiate a TCP/IP session to the Binary CCG Server. Session logon is always initiated by the client connection. Application messages may be exchanged between the client and server after logon is successful. A client has five seconds after connection to send a logon request, or the server drops the connection.

Messages have a defined number of fixed-length fields, containing both binary and ASCII data. All binary data is sent in network Endian format (Big Endian). All ASCII data is left justified and null padded.

During periods of inactivity, the server and/or client use the Test Request and Heartbeat messages to ensure the connection is up and functioning properly. The client must be able to respond to Test Request messages from the server by sending a Heartbeat message.

5.2 Disconnects

TCP/IP connections can experience disconnections for many reasons. To ensure that no messages are lost when disconnections occur, each order message has a message sequence number. Clients assign sequence numbers to the messages they send the server and the server tracks these numbers. Similarly, the server assigns its own sequence numbers to the order responses that it sends to the client.

When clients log on after a disconnection, information in the Logon message allows the client and server to exchange the sequence number of the last message that they processed from the other party. Each side can then start sending the next message that has not been processed by the other side.

5.3 Logon Message (and Logon Accepted) (A.1)

Clients use the Logon message to establish a connection, identify the message version profile they will use for the client session and identify the last response message they have processed. The server may accept or reject the client logon. If logon is successful, Binary CCG sends a Logon message back to the client indicating the last request message the server has processed.

The Last Sequence Number field is used to recover order messages when disconnections happen. For the initial connection, clients should set the Last Sequence Number field to zero. The Logon response from the server will also show zero for the initial connection.

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If an inadvertent disconnect happens, clients should use the Last Sequence Number field to indicate the last order response message received from the server. The server will begin sending order responses from the next sequence number.

Similarly, the server sends back the sequence number for last client order request that the server processed in the Logon response message. Clients should use this to determine if order messages have been dropped and should be sent again.

Clients should not skip sequence numbers. A client can however pass '-1' as the Last Sequence Number to notify the server not to validate the next sequence number. The server will accept the next sequence from the client and then send what it thinks is the next outbound sequence.

Logon Message	Length	Type	Required	Notes and Values
MessageType	2	Binary	✓	0x0021
MsgLength	2	Binary	✓	Binary length of the message
MsgSeqNum	4	Binary	✓	Ignore (future use)
LastMsgSeqNumReceived	4	Binary	✓	Last message sequence number processed. **Values** / **Meaning** 0 – Replay every message previously sent by the Exchange. -1 – Do not replay any message but continue from the last known transmitted sequence plus one. N > 0 – User specifies the last Sequence successfully processed. The server will rewind to this number plus one and retransmit from that point up to the current sequence number.
SenderCompID	12	Alpha Numeric	✓	UTPDirect Login ID
MessageVersionProfile	32	Binary	✓	Provides the desired message versioning profile to use during the session. Lists the binary messages types. These consist of an array of up to 16 binary message types.
CancelOnDisconnect	1	Alpha Numeric	✓	'0' = Do not cancel orders If this field is set, then a bulk cancel is initiated on all orders upon disconnect from the gateway. The bulk cancel will not be initiated in case of a CCG gateway failure itself. '1' = Cancel all orders (except MOC/LOC, Market on Open, Limit on Open, and CO order Types)
UnsolicitedAckSubscription	1	Alpha		Subscription to Unsolicited Acknowledgements

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Logon Message	Length	Type	Required	Notes and Values
		Numeric		0 = Not Subscribed 1 = Activate Unsolicited Order Acknowledgments
Filler	2	Alpha	✓	
Total	60			

Message Version Profile

The system provides the following "default" profile if the user fails to supply one with the Logon message. The binary message type (2 bytes – binary value) of the expected message variant is provided by the customer. The message version profile will be useful for the customers when additional variants are introduced and offers the flexibility to the customer to handle the transition between the variants smoothly. The message version profile is the list of binary message types the customer is expecting from the gateway.

MsgType (ASCII)	Variant	MsgVersion (Binary)	Description
'A'	1	0x0021	Logon Ack
'L'	1	0x0141	Logon Reject
'a'	1	0x0091	New Order Ack
'4'	1	0x00D1	UROUT
'E'	1	0x00B1	Cancel/Replace Ack
'5'	1	0x00E1	Order Replaced Ack
'6'	1	0x00A1	Cancel Order Ack
'C'	1	0x0101	Bust/Correct
'2'	1	0x0081	Order Fill (Short) - defaults to Short if not provided
'X'	1	0x00C1	Order Fill (Verbose)
'8'	1	0x00F1	Order Reject

Any profile supplied by the user will override the default profile. If the user fails to supply a particular message type then the corresponding "default" profile will apply for that message.

5.4 Logon Accepted Message (A.1)

UTPDirect sends a Logon Accept message back to the client with the same structure as described for the Logon Message. Note that the returned Message Version Profile will indicate the actual profile that has been established for that session and the sessions cancel on disconnect status.

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5.5 Logon Reject Message (L.1)

UTPDirect sends a Logon Reject message only when logon validation fails and then closes the connection. If logon was successful, UTPDirect sends a Logon message back to the client.

The Client Logon Status field indicates the reason for the rejection.

Logon Reject Message	Length	Type	Required	Notes and Values
MessageType	2	Binary	✓	0x0141
MsgLength	2	Binary	✓	Binary length of the message
MsgSeqNum	4	Binary	✓	Ignore (future use)
LastMsgSeqNumReceived	4	Binary	✓	The sequence number for the last message received from the client to the UTPDirect gateway
LastMsgSeqNumSent	4	Binary	✓	The sequence number for the last message sent by the client to the UTPDirect gateway
Reject Type	2	Binary	✓	The rejection code (see reject section later in this document)
Text	40	Alpha	✓	The rejection reason description
Filler	2		✓	
Total	**60**			

5.6 Test Request Message (1.1)

The Test Request message is sent by either side of the connection to request the other side to respond with a Heartbeat message, when that side does not receive a message during periods of inactivity. If the other side does not respond to a Test Request message, the application should assume an abnormal situation and terminate the TCP/IP connection.

The server will send a Test Request message only during periods of inactivity after the first heartbeat period (60 seconds). At a minimum, the client must respond to this message with a Heartbeat message. The server will disconnect the client following a subsequent period with no activity.

Test Request Message	Length	Type	Required	Notes and Values
MessageType	2	Binary	✓	0x0011
MsgLength	2	Binary	✓	Binary length of the message
MsgSeqNum	4	Binary	✓	Ignore (future use)

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Test Request Message	Length	Type	Required	Notes and Values
Total	**8**			

5.7 Heartbeat Message (0.1)

The Heartbeat message is used to respond to Test Request messages. It lets the other side know the connection is still good during periods of inactivity. The server heartbeat interval is 60 seconds.

At a minimum a client must be able to receive Test Request messages and respond with Heartbeat messages. During periods of activity the server will not send Test Request or Heartbeat messages and there is no need for the client to send them.

Heartbeat Message	Length	Type	Required	Notes and Values
MessageType	2	Binary	✓	0x0001
MsgLength	2	Binary	✓	Binary length of the message
Sequence	4	Binary	✓	Ignore (future use)
Total	**8**			

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6. Application Messages

This section describes the Application Messages in the UTPDirect protocol. Binary data is in Network Endian format (Big Endian). All Filler and Padding fields must contain null characters. Non-binary fields should be left justified and null padded. Additional variants may be defined in the future as additional functionality is added.

6.1 New Order Message

6.1.1 Message Variant (D.1)

The firm can send an order using the New Order message (D), which will be either be a) acknowledged (Order Ack Message: a1) indicating the order has passed all the required order validation or b) rejected (Reject Message: 8) with the appropriate reject reason code.

New Order Message D.1	Length	Type	Required	Notes and Values
MessageType	2	Binary	✓	0x0041
MsgLength	2	Binary	✓	Binary length of the message
MsgSeqNum	4	Binary	✓	Client-assigned message sequence number
OrderQty	4	Binary	✓	number of shares **For symbols migrated to Pillar: • 1 – 25,000,000 for Auction only order types (Opening Only/MOO, LOO; MOC, LOC, Closing Offset) • 1 – 5,000,000 for all other order types
MaxFloorQty	4	Binary		Maximum number of shares within an order to be displayed at any given time. The minimum value for this field is zero. If specifying a quantity other than zero, the value must be equal to one (1) times the securities unit of trade (i.e., 100 shares).
Price	4	Binary		The price, as a long value. Price is scaled based on the Price Scale field. Described in section 4.3. Prices with values exceeding 10 characters inclusive of the decimal point will be rejected. Represents the Limit Price and required for Limit Orders. **For symbols migrated to Pillar – maximum price determined by XDP Price Scale for the symbol: - Max price for securities with a price scale of 6 is $4,294.672960 - Max price for securities with a price scale of 4 is $429,467.2960 - Max price for securities with a price scale of 3 is $999,999.99

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<table>
<tr><th>New Order Message
D.1</th><th>Length</th><th>Type</th><th>Required</th><th>Notes and Values</th></tr>
<tr><td>PriceScale</td><td>1</td><td>Alpha
Numeric</td><td></td><td>“0” through “4” – as defined in the Price Scale Codes</td></tr>
<tr><td>Symbol</td><td>11</td><td>Alpha</td><td>✓</td><td>Stock symbol, including the suffix, separated by a blank space, e.g., “BRK A”</td></tr>
<tr><td>ExecInst</td><td>1</td><td>Alpha
Numeric</td><td></td><td>Execution Instructions for order handling.
<u>Values</u>
y = Trade-at ISO</td></tr>
<tr><td>Side</td><td>1</td><td>Alpha
Numeric</td><td>✓</td><td>Side of the Order
1 = Buy
2 = Sell
5 = Sell Short
6 = Sell Short Exempt</td></tr>
<tr><td>OrderType</td><td>1</td><td>Alpha
Numeric</td><td>✓</td><td>1 = Market
2 = Limit
5 = Market on close
B = Limit On Close
Note: Only value 2 is valid for non-primary securities</td></tr>
<tr><td>TimeInForce</td><td>1</td><td>Alpha
Numeric</td><td></td><td>If a value is not present in this field, the default is Day.
0 = Day
2 = OPG (At the Opening)
3 = IOC (Immediate Or Cancel)</td></tr>
<tr><td>OrderCapacity</td><td>1</td><td>Alpha
Numeric</td><td>✓</td><td>Valid values: A through Z (see Appendix C for definitions)</td></tr>
<tr><td>RoutingInstruction</td><td>1</td><td>Alpha
Numeric</td><td></td><td><table><tr><th>Type</th><th>RoutingInstruction</th></tr><tr><td>NX</td><td>"7"</td></tr><tr><td>DNS</td><td>"D"</td></tr><tr><td>SOC</td><td>"S"</td></tr><tr><td>ISO</td><td>"I"</td></tr><tr><td>CO*</td><td>"C"</td></tr><tr><td>ALO</td><td>“A”</td></tr><tr><td>ISO ALO</td><td>“L”</td></tr></table>*For symbols migrated to Pillar – CO available for Tape A securities only
For details, please refer to the RoutingInstruction section in Appendix A.</td></tr>
<tr><td>DOTReserve</td><td>1</td><td>Alpha</td><td></td><td>DOT reserve indicator. Valid values “Y” / “N”. If not populated, default is assigned as “N”. If populated with “Y”, MaxFloorQuantity field is validated.</td></tr>
</table>

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New Order Message D.1	Length	Type	Required	Notes and Values
OnBehalfOfCompID	5	Alpha	✓	Firm mnemonic assigned by the NYSE
SenderSubID	5	Alpha Numeric		User-defined information that is not validated
ClearingFirm	5	Alpha		Names the clearing member designated by another clearing or non-clearing member for settlement of its Exchange transactions
Account	10	Alpha Numeric		User-defined information that is not validated. Common examples include user or account IDs and will be returned in the outbound messages. Control characters not allowed.
ClientOrderID	17	Alpha Numeric	✓	Format: BBB NNNN/MMDDYYYY. Branch code is 2 to 3 alphas; 1 space delimiter; sequence number is up to 4 numeric, which cannot be all zeroes, and must be padded with leading zeroes, e.g., 0001. **The value for this field must be in UPPERCASE (e.g. BBB NNNN/MMDDYYYY). Any deviation from this format will result in the message being rejected by CCG.** **HMQ, YYY, RRR, ZZZ, TTT, QQQ, ZYY, ZYZ or ZYX should not be used; NYSE rejects transmission with these branch codes since they are reserved.** **No leading or trailing blanks or special characters are allowed.**
Filler	3			
Total	**84**			

6.1.2 Message Variant (D.2)

The firm can send an order using the New Order message (D), which will be either be a) acknowledged (Order Ack Message: a1) indicating the order has passed all the required order validation or b) rejected (Reject Message: 8) with the appropriate reject reason code.

New Order Message D.2	Length	Type	Required	Notes and Values
MessageType	2	Binary	✓	0x0042
MsgLength	2	Binary	✓	Binary length of the message
MsgSeqNum	4	Binary	✓	Client-assigned message sequence number
OrderQty	4	Binary	✓	Number of shares **For symbols migrated to Pillar: • 1 – 25,000,000 for Auction only order types (Opening

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New Order Message D.2	Length	Type	Required	Notes and Values
				Only/MOO, LOO; MOC, LOC, Closing Offset) • 1 – 5,000,000 for all other order types
MaxFloorQty	4	Binary		Maximum number of shares within an order to be displayed at any given time. The minimum value for this field is zero. If specifying a quantity other than zero, the value must be equal to one (1) times the securities unit of trade (i.e., 100 shares).
Price	4	Binary		The price, as a long value. Price is scaled based on the Price Scale field. Described in section 4.3. Represents the Limit Price and required for Limit Orders. Prices with values exceeding 10 characters inclusive of the decimal point will be rejected. Note: For RPI orders, limit prices will be accepted in sub-pennies above and below $1.00, but must be in multiples of the minimum offset price (currently defined as $0.0010). **For symbols migrated to Pillar – maximum price determined by XDP Price Scale for the symbol: - Max price for securities with a price scale of 6 is $4,294.672960 - Max price for securities with a price scale of 4 is $429,467.2960 - Max price for securities with a price scale of 3 is $999,999.99
OffsetPrice	4	Binary	C	Offset or minimum price improvement value from the current Bid or Offer. Must be zero, greater than or equal to $0.0010 and must be in multiples of $0.0010. This field is required if sending Retail Price Improvement (RPI) orders.
MinimumTradeSize	4	Binary		A Minimum Trade Size Quantity for orders with a Time in Force of "IOC". Value may be Zero, also see "StatusIndicators" field. **For symbols migrated to Pillar - see section "NYSE Equities Order Types" for list of order types that support this attribute
StatusIndicators	4	Binary		Each bit position of the Status Indicator field will be used as a flag to indicate that zero is a valid value for an assigned field. Bits must be set equal to 1 when value = 0. Bit 0 = Zero Offset Price Flag

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<table>
<tr><th>New Order Message
D.2</th><th>Length</th><th>Type</th><th>Required</th><th>Notes and Values</th></tr>
<tr><td></td><td></td><td></td><td></td><td>Bit 1 = Zero Minimum Trade Size Flag
Bit 2 – 32 (Reserved for Future Use)</td></tr>
<tr><td>PriceScale</td><td>1</td><td>Alpha Numeric</td><td></td><td>“0” through “4” – as defined in the Price Scale Codes
Note: Price Scale value applicable to both Price and Offset Price fields.</td></tr>
<tr><td>Symbol</td><td>11</td><td>Alpha</td><td>✓</td><td>Stock symbol including the suffix separated by blank space
e.g., “BRK A”</td></tr>
<tr><td>ExecInst</td><td>1</td><td>Alpha Numeric</td><td></td><td>Execution Instructions for order handling.
<u>Values</u>
y = Trade-at ISO</td></tr>
<tr><td>Side</td><td>1</td><td>Alpha Numeric</td><td>✓</td><td>Side of the Order
1 = Buy
2 = Sell
5 = Sell Short
6 = Sell Short Exempt</td></tr>
<tr><td>OrderType</td><td>1</td><td>Alpha Numeric</td><td>✓</td><td>1 = Market
2 = Limit
5 = Market On Close
B = Limit On Close
Please note: Only value 2 is valid for non-primary securities.</td></tr>
<tr><td>TimeInForce</td><td>1</td><td>Alpha Numeric</td><td></td><td>If a value is not present in this field, the default is Day.
0 = Day
2 = OPG (At the Opening)
3 = IOC (Immediate Or Cancel)</td></tr>
<tr><td>OrderCapacity</td><td>1</td><td>Alpha Numeric</td><td>✓</td><td>Valid values: A through Z (see Appendix C for definitions).</td></tr>
<tr><td>RoutingInstruction</td><td>1</td><td>Alpha Numeric</td><td></td><td>
<table>
<tr><th>Type</th><th>RoutingInstruction</th></tr>
<tr><td>NX</td><td>"7"</td></tr>
<tr><td>DNS</td><td>"D"</td></tr>
<tr><td>SOC</td><td>"S"</td></tr>
<tr><td>ISO</td><td>"I"</td></tr>
<tr><td>CO*</td><td>"C"</td></tr>
<tr><td>RPI*</td><td>"R"</td></tr>
<tr><td>RTO*</td><td>"1"</td></tr>
<tr><td>RTNR*</td><td>"2"</td></tr>
<tr><td>RTR*</td><td>"3"</td></tr>
</table>
</td></tr>
</table>

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New Order Message D.2	Length	Type	Required	Notes and Values
				<table><tr><td>ALO</td><td>“A”</td></tr><tr><td>ISO ALO</td><td>“L”</td></tr></table> *For symbols migrated to Pillar – CO supported for Tape A securities only; RPI and RTO available for all securities (Tape A,B,C) beginning on a date announced via Trader Update; RTNR and RTR not supported. For details, please refer to the RoutingInstructions section in Appendix A.
DOTReserve	1	Alpha		DOT reserve indicator. Valid values “Y” / “N”. If not populated, default is assigned as “N”. If populated with “Y”, MaxFloorQuantity field is validated.
OnBehalfOfCompID	5	Alpha	✓	Firm mnemonic assigned by the NYSE
SenderSubID	5	Alpha Numeric		User-defined information that is not validated.
ClearingFirm	5	Alpha		Names the clearing member designated by another clearing or non-clearing member for settlement of its Exchange transactions.
Account	10	Alpha Numeric		User-defined information that is not validated. Common examples include user or account IDs and will be returned in the outbound messages. Control characters not allowed.
ClientOrderID	17	Alpha Numeric	✓	Format: BBB NNNN/MMDDYYYY. Branch code is 2 to 3 alphas, 1 space delimiter; sequence number is up to 4 numeric, which cannot be all zeroes and the sequence number must be padded with leading zeroes, e.g., 0001. **The value for this field must be in UPPERCASE (e.g. BBB NNNN/MMDDYYYY). Any deviation from this format will result in the message rejected by CCG.** **HMQ, YYY, RRR, ZZZ, TTT, QQQ, ZYY, ZYZ or ZYX should not be used; NYSE rejects transmission with these branch codes since they are reserved.** **No leading or trailing blanks or special characters are allowed.**
Filler	3			
Total	**96**			

6.1.3 Message Variant (D.3)

The firm can send an order using the New Order message (D), which will be either be a) acknowledged (Order Ack Message: a1) indicating the order has passed all the required order validation or b) rejected (Reject Message: 8) with the appropriate reject reason code.

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New Order Message D.3	Length	Type	Required	Notes and Values
MessageType	2	Binary	✓	0x0043
MsgLength	2	Binary	✓	Binary length of the message
MsgSeqNum	4	Binary	✓	Client-assigned message sequence number
OrderQty	4	Binary	✓	number of shares **For symbols migrated to Pillar: • 1 – 25,000,000 for Auction only order types (Opening Only/MOO, LOO; MOC, LOC, Closing Offset) • 1 – 5,000,000 for all other order types
MaxFloorQty	4	Binary	C	Maximum number of shares within an order to be shown on the exchange floor at any given time. The minimum value for this field is zero. If specifying a quantity other than zero, the value must be equal to one (1) times the securities unit of trade (i.e., 100 shares)
Price	4	Binary		The price, as a long value. Price is scaled based on the Price Scale field. Described in section 5.3 Prices with values exceeding 10 characters inclusive of the decimal point will be rejected. Represents the Limit Price and required for Limit Orders. **For symbols migrated to Pillar – maximum price determined by XDP Price Scale for the symbol: - Max price for securities with a price scale of 6 is $4,294.672960 - Max price for securities with a price scale of 4 is $429,467.2960 - Max price for securities with a price scale of 3 is $999,999.99
OffsetPrice	4	Binary	C	Offset or minimum price improvement value (allowed in sub-pennies) from the current Bid or Offer. Must be zero, or greater than or equal to 0.0010. This field is required if sending Retail Price Improvement (RPI) orders.
MinimumTradeSize	4	Binary		A Minimum Trade Size Quantity for orders with a Time in Force of "IOC". Value may be Zero, also see "StatusIndicators" field **For symbols migrated to Pillar - see section "NYSE Equities Order Types" for list of order types that support this attribute
StatusIndicators	4	Binary		Each bit position of the Status Indicator field will be used as a flag to indicate that zero is valid value for an assigned field Bits must be set equal to 1 when value = 0.

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<table>
<tr><th>New Order Message
D.3</th><th>Length</th><th>Type</th><th>Required</th><th>Notes and Values</th></tr>
<tr><td></td><td></td><td></td><td></td><td>Bit 0 = Zero Offset Price Flag.
Bit 1 = Zero Minimum Trade Size Flag
Bit 2 – 32 (Reserved for Future Use)</td></tr>
<tr><td>PriceScale</td><td>1</td><td>Alpha Numeric</td><td></td><td>“0” through “4” – as defined in the Price Scale Codes</td></tr>
<tr><td>Symbol</td><td>11</td><td>Alpha</td><td>✓</td><td>Stock symbol including the suffix separated by blank space
e.g., “BRK A”</td></tr>
<tr><td>ExecInst</td><td>1</td><td>Alpha Numeric</td><td></td><td>Execution Instructions for order handling.
<u>Values</u>
y = Trade-at ISO</td></tr>
<tr><td>Side</td><td>1</td><td>Alpha Numeric</td><td>✓</td><td>Side of the Order
1 = Buy
2 = Sell
5 = Sell Short
6 = Sell Short Exempt</td></tr>
<tr><td>OrderType</td><td>1</td><td>Alpha Numeric</td><td>✓</td><td>1 = Market
2 = Limit
5 = Market on close
B = Limit On Close</td></tr>
<tr><td>TimeInForce</td><td>1</td><td>Alpha Numeric</td><td></td><td>If a value is not present in this field, the default is Day.
0 = Day
2 = OPG (At the Opening)
3 = IOC (Immediate Or Cancel)</td></tr>
<tr><td>Rule80A (OrderCapacity)</td><td>1</td><td>Alpha Numeric</td><td>✓</td><td>Valid values: A through Z (see Appendix B for definitions).</td></tr>
<tr><td>RoutingInstruction</td><td>1</td><td>Alpha Numeric</td><td></td><td><table><tr><th>Type</th><th>RoutingInstruction</th></tr><tr><td>NX</td><td>"7"</td></tr><tr><td>DNS</td><td>"D"</td></tr><tr><td>SOC</td><td>"S"</td></tr><tr><td>ISO</td><td>"I"</td></tr><tr><td>CO*</td><td>"C"</td></tr><tr><td>RPI*</td><td>"R"</td></tr><tr><td>RTO*</td><td>"1"</td></tr><tr><td>RTNR*</td><td>"2"</td></tr><tr><td>RTR*</td><td>"3"</td></tr></table></td></tr>
</table>

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New Order Message D.3	Length	Type	Required	Notes and Values
				<table><tr><td>ALO</td><td>“A”</td></tr><tr><td>ISO ALO</td><td>“L”</td></tr></table> *For symbols migrated to Pillar – CO supported for Tape A securities only; RPI and RTO available for all securities (Tape A,B,C) beginning on a date announced via Trader Update; RTNR and RTR not supported. For details, please refer RoutingInstructions section in Appendix A.
DOTReserve	1	Alpha		DOT reserve indicator. Valid values “Y” / “N”. If not populated, default is assigned as “N”. If populated with “Y”, MaxFloorQuantity field is validated.
OnBehalfOfCompID	5	Alpha	✓	Firm mnemonic assigned by the NYSE
SenderSubID	5	Alpha Numeric		User-defined information that is not validated.
ClearingFirm	5	Alpha		Names the clearing member designated by another clearing or non-clearing member for settlement of its Exchange transactions.
Account	10	Alpha Numeric		User-defined information that is not validated. Common examples include user or account IDs and will be returned in the outbound messages. Control characters not allowed.
ClientOrderID	17	Alpha Numeric	✓	Format: BBB NNNN/MMDDYYYY. Branch code is 2 to 3 alphas, 1 space delimiter; sequence number is up to 4 numeric, which cannot be all zeroes and the sequence number must be padded with leading zeroes, ex. 0001. **The value for this field must be in UPPERCASE (e.g. BBB NNNN/MMDDYYYY). Any deviation from this format will result in the message rejected by CCG.** **HMQ, YYY, RRR, ZZZ, TTT, QQQ, ZYY, ZYZ or ZYX should not be used; NYSE rejects transmission with these branch codes since they are reserved.** **No leading or trailing blanks or special characters are allowed.**
ClientID	4	Alpha Numeric	C	Required if SelfTradeType is populated. Control characters not allowed.
SelfTradeType	1	Alpha		N – Cancel the arriving (new) STP interest (STPN) O – Cancel the resting (old) STP interest (STPO)
Filler	2			
Total	**100**			

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6.1.4 Message Variant (D.4)

The firm can send an order using the New Order message (D), which will be either be a) acknowledged (Order Ack Message: a1) indicating the order has passed all the required order validation or b) rejected (Reject Message: 8) with the appropriate reject reason code.

New Order Message D.4	Length	Type	Required	Notes and Values
MessageType	2	Binary	✓	0x0044
MsgLength	2	Binary	✓	Binary length of the message
MsgSeqNum	4	Binary	✓	Client-assigned message sequence number
OrderQty	4	Binary	✓	number of shares **For symbols migrated to Pillar: • 1 – 25,000,000 for Auction only order types (Opening Only/MOO, LOO; MOC, LOC, Closing Offset) • 1 – 5,000,000 for all other order types
MaxFloorQty	4	Binary	C	Maximum number of shares within an order to be shown on the exchange floor at any given time. The minimum value for this field is zero. If specifying a quantity other than zero, the value must be equal to one (1) times the securities unit of trade (i.e., 100 shares)
Price	4	Binary		The price, as a long value. Price is scaled based on the Price Scale field. Described in section 5.3 Prices with values exceeding 10 characters inclusive of the decimal point will be rejected. Represents the Limit Price and required for Limit Orders. **For symbols migrated to Pillar – maximum price determined by XDP Price Scale for the symbol: - Max price for securities with a price scale of 6 is $4,294.672960 - Max price for securities with a price scale of 4 is $429,467.2960 - Max price for securities with a price scale of 3 is $999,999.99
OffsetPrice	4	Binary	C	Offset or minimum price improvement value (allowed in sub-pennies) from the current Bid or Offer. Must be zero, or greater than or equal to 0.0010. This field is required if sending Retail Price Improvement (RPI) orders.
MinimumTradeSize (MTS)	4	Binary		A Minimum Trade Size Quantity for orders with a Time in Force of "IOC". Value may be Zero, also see "StatusIndicators" field

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New Order Message D.4	Length	Type	Required	Notes and Values
				Cannot be present if order is designated as STP. **For symbols migrated to Pillar - see section "NYSE Equities Order Types" for list of order types that support this attribute
StatusIndicators	4	Binary		Each bit position of the Status Indicator field will be used as a flag to indicate that zero is valid value for an assigned field Bits must be set equal to 1 when value = 0. Bit 0 = Zero Offset Price Flag. Bit 1 = Zero Minimum Trade Size Bit 2 = Zero Minimum Trigger Quantity Bit 3 – 31 (Reserved for Future Use)
MinimumTriggerVol (MTV)	4	Binary		Minimum trigger volume for MPL orders. Must be equal to or less than order quantity or zero (see "StatusIndicators" field) Cannot be present if MPL order is also designated as STP. **For symbols migrated to Pillar - see section "NYSE Equities Order Types" for list of order types that support this attribute
PriceScale	1	Alpha Numeric		"0" through "4" – as defined in the Price Scale Codes
Symbol	11	Alpha	✓	Stock symbol including the suffix separated by blank space e.g., "BRK A"
ExecInst	1	Alpha Numeric		Execution Instructions for order handling. Values M = Mid-price Peg y = Trade-at ISO
Side	1	Alpha Numeric	✓	Side of the Order 1 = Buy 2 = Sell 5 = Sell Short 6 = Sell Short Exempt
OrderType	1	Alpha Numeric	✓	1 = Market 2 = Limit 5 = Market on close B = Limit On Close
TimeInForce	1	Alpha		If a value is not present in this field, the default is Day.

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<table>
<tr><th>New Order Message
D.4</th><th>Length</th><th>Type</th><th>Required</th><th>Notes and Values</th></tr>
<tr><td></td><td></td><td>Numeric</td><td></td><td>0 = Day
2 = OPG (At the Opening)
3 = IOC (Immediate Or Cancel)</td></tr>
<tr><td>Rule80A (OrderCapacity)</td><td>1</td><td>Alpha Numeric</td><td>✓</td><td>Valid values: A through Z (see Appendix B for definitions).</td></tr>
<tr><td>RoutingInstruction</td><td>1</td><td>Alpha Numeric</td><td></td><td><table><tr><th>Type</th><th>RoutingInstruction</th></tr><tr><td>NX</td><td>"7"</td></tr><tr><td>DNS</td><td>"D"</td></tr><tr><td>SOC</td><td>"S"</td></tr><tr><td>ISO</td><td>"I"</td></tr><tr><td>CO*</td><td>"C"</td></tr><tr><td>RPI*</td><td>"R"</td></tr><tr><td>RTO*</td><td>"1"</td></tr><tr><td>RTNR*</td><td>"2"</td></tr><tr><td>RTR*</td><td>"3"</td></tr><tr><td>ALO</td><td>“A”</td></tr><tr><td>ISO ALO</td><td>“L”</td></tr></table>*For symbols migrated to Pillar – CO supported for Tape A securities only; RPI and RTO available for all securities (Tape A,B,C) beginning on a date announced via Trader Update; RTNR and RTR not supported.
For details, please refer RoutingInstructions section in Appendix A.</td></tr>
<tr><td>DOTReserve</td><td>1</td><td>Alpha</td><td></td><td>DOT reserve indicator. Valid values “Y” / “N”. If not populated, default is assigned as “N”. If populated with “Y”, MaxFloorQuantity field is validated.</td></tr>
<tr><td>OnBehalfOfCompID</td><td>5</td><td>Alpha</td><td>✓</td><td>Firm mnemonic assigned by the NYSE</td></tr>
<tr><td>SenderSubID</td><td>5</td><td>Alpha Numeric</td><td></td><td>User-defined information that is not validated.</td></tr>
<tr><td>ClearingFirm</td><td>5</td><td>Alpha</td><td></td><td>Names the clearing member designated by another clearing or non-clearing member for settlement of its Exchange transactions.</td></tr>
<tr><td>Account</td><td>10</td><td>Alpha Numeric</td><td></td><td>User-defined information that is not validated. Common examples include user or account IDs and will be returned in the outbound messages. Control characters not allowed.</td></tr>
<tr><td>ClientOrderID</td><td>17</td><td>Alpha Numeric</td><td>✓</td><td>Format: BBB NNNN/MMDDYYYY. Branch code is 2 to 3 alphas, 1 space delimiter; sequence number is up to 4 numeric, which cannot be all zeroes and the sequence number must be padded with leading zeroes, ex. 0001.
The value for this field must be in UPPERCASE (e.g. BBB</td></tr>
</table>

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New Order Message D.4	Length	Type	Required	Notes and Values
				NNNN/MMDDYYYY). Any deviation from this format will result in the message rejected by CCG. **HMQ, YYY, RRR, ZZZ, TTT, QQQ, ZYY, ZYZ or ZYX should not be used; NYSE rejects transmission with these branch codes since they are reserved.** **No leading or trailing blanks or special characters are allowed.**
ClientID	4	Alpha Numeric	C	Required if SelfTradeType is populated. Control characters not allowed.
SelfTradeType	1	Alpha		N – Cancel the arriving (new) STP interest (STPN) O – Cancel the resting (old) STP interest (STPO) Note: Opening (OPG) orders, Market on Close (MOC) and Limit on Close (LOC) orders will not be validated for Self-Trade Prevention.
Filler	2			
Total	**104**			

6.2 Order Cancel Message (F.1)

****For symbols migrated to Pillar** – Cancel to Reduce via Message Types F.1 and F.2 not supported; instead use Cancel/Replace to reduce quantity and maintain ranking on the book

A Cancel Request (Message Type F) can be used to reduce the quantity of an order (also known as a partial cancel), to cancel the full remaining order quantity, to perform a bulk cancel, a bulk block, a bulk cancel and block or a bulk unblock. Following are the possible responses: Cancel Ack, Reject or UROUT. When reducing the quantity of an order, the Cancel Quantity and Leaves Quantity fields must be present allowing the user to keep their position on the DMM's book.

6.2.1 Message Variant (F.1)

Single Order Cancel Message

Order Cancel Message F.1	Length	Type	Required	Notes and Values
MessageType	2	Binary	✓	0x0061
MsgLength	2	Binary	✓	Binary length of the message
MsgSeqNum	4	Binary	✓	Client-assigned sequence number
MEOrderID	4	Binary		Exchange assigned Order ID. (will be supported in a future phase)

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Order Cancel Message F.1	Length	Type	Required	Notes and Values
OriginalOrderQty	4	Binary		Original order quantity specified in the order **For symbols migrated to Pillar: • 1 – 25,000,000 for Auction only order types (Opening Only/MOO, LOO; MOC, LOC, Closing Offset) • 1 – 5,000,000 for all other order types
CancelQty **For symbols migrated to Pillar – not supported; instead use Cancel/Replace to reduce quantity and maintain ranking on the book	4	Binary		Used for Cancel Reduce Only. Required when Leaves Quantity is present.
LeavesQty **For symbols migrated to Pillar – not supported; instead use Cancel/Replace to reduce quantity and maintain ranking on the book	4	Binary		Used for Cancel Reduce Only. Required when Cancel Quantity is present.
Symbol	11	Alpha	✓	Stock symbol including the suffix separated by blank space e.g., "BRK A"
Side	1	Alpha Numeric	✓	Side of the Order 1 = Buy 2 = Sell 5 = Sell Short 6 = Sell Short Exempt
OnBehalfOfCompID	5	Alpha	✓	Firm mnemonic assigned by the NYSE
SenderSubID	5	Alpha Numeric		User-defined information that is not validated
Account	10	Alpha Numeric		User-defined information that is not validated. Common examples include user or account IDs and will be returned in the outbound messages. Control characters not allowed.
ClientOrderID	17	Alpha Numeric	✓	Format: *BBB NNNN/MMDDYYYY*. Branch code is 2 to 3 alphas, 1 space delimiter; sequence number is up to 4 numeric, which cannot be all zeroes and the sequence number must be padded with leading zeroes, e.g., 0001. **The value for this field must be in UPPERCASE (e.g. BBB NNNN/MMDDYYYY). Any deviation from this format will result in the message rejected by CCG.**

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Order Cancel Message F.1	Length	Type	Required	Notes and Values
				***HMQ, YYY, RRR, ZZZ, TTT, QQQ, ZYY, ZYZ* or *ZYX* should not be used; NYSE rejects transmission with these branch codes.**
OrigClientOrderID	17	Alpha Numeric	✓	Format: *BBB NNNN/MMDDYYYY*. Branch code is 2 to 3 alphas, 1 space delimiter; sequence number is up to 4 numeric, which cannot be all zeroes and the sequence number must be padded with leading zeroes, e.g., 0001. **The value for this field must be in UPPERCASE (e.g. BBB NNNN/MMDDYYYY). Any deviation from this format will result in the message rejected by CCG.** ***HMQ, YYY, RRR, ZZZ, TTT, QQQ, ZYY, ZYZ* or *ZYX* should not be used; NYSE rejects transmission with these branch codes.**
Filler	2			
Total	**92**			

6.2.2 Message Variant (F.2)

Firm bulk cancel function is supported in variant 2 in addition to regular order cancel. A Firm Bulk Cancel message allows customers to target multiple orders to cancel (with one cancel message rather than many individual cancel messages), cancel and block, block new orders, or unblock.

Order Cancel Message F.2	Length	Type	Required	Notes and Values
MessageType	2	Binary	✓	0x0062
MsgLength	2	Binary	✓	Binary length of the message
MsgSeqNum	4	Binary	✓	Client-assigned sequence number
MEOrderID	4	Binary		Exchange assigned Order ID. (will be supported in a future phase)
OriginalOrderQty	4	Binary		Original order quantity specified in the order **For symbols migrated to Pillar: • 1 – 25,000,000 for Auction only order types (Opening Only/MOO, LOO; MOC, LOC,

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Order Cancel Message F.2	Length	Type	Required	Notes and Values
				Closing Offset) • 1 – 5,000,000 for all other order types
CancelQty **For symbols migrated to Pillar – not supported; instead use Cancel/Replace to reduce quantity and maintain ranking on the book	4	Binary		Used for Cancel Reduce Only. Required when Leaves Quantity is present.
LeavesQty **For symbols migrated to Pillar – not supported; instead use Cancel/Replace to reduce quantity and maintain ranking on the book	4	Binary		Used for Cancel Reduce Only. Required when Cancel Quantity is present.
Symbol	11	Alpha	**C**	Stock symbol including the suffix separated by blank space. Required when used to cancel an individual order. Can be blank for Bulk Cancel request. If populated on a Bulk Cancel request value will be ignored.
Side	1	Alpha Numeric	**C**	Side of the Order 1 = Buy 2 = Sell 5 = Sell Short 6 = Sell Short Exempt Required when used to cancel an individual order. Can be blank for Bulk Cancel request. If populated on a Bulk Cancel request value will be ignored.
OnBehalfOfCompID	5	Alpha	✓	Firm mnemonic assigned by the NYSE
SenderSubID	5	Alpha Numeric		User-defined information that is not validated
Account	10	Alpha Numeric		User-defined information that is not validated. Common examples include user or account IDs and will be returned in the outbound messages. Control characters not allowed.
ClientOrderID	17	Alpha Numeric	✓	Format: *BBB NNNN/MMDDYYYY*. Branch code is 2 to 3 alphas, 1 space delimiter; sequence number is up to 4 numeric, which cannot be all zeroes and the sequence number must be padded with leading zeroes, e.g.,

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Order Cancel Message **F.2**	**Length**	**Type**	**Required**	**Notes and Values**
				0001. **The value for this field must be in UPPERCASE (e.g. BBB NNNN/MMDDYYYY). Any deviation from this format will result in the message rejected by CCG.** ***HMQ, YYY, RRR, ZZZ, TTT, QQQ, ZYY, ZYZ* or *ZYX* should not be used; NYSE rejects transmission with these branch codes.**
OrigClientOrderID	17	Alpha Numeric	**C**	Format: *BBB NNNN/MMDDYYYY*. Branch code is 2 to 3 alphas, 1 space delimiter; sequence number is up to 4 numeric, which cannot be all zeroes and the sequence number must be padded with leading zeroes, e.g., 0001. **The value for this field must be in UPPERCASE (e.g. BBB NNNN/MMDDYYYY). Any deviation from this format will result in the message rejected by CCG.** ***HMQ, YYY, RRR, ZZZ, TTT, QQQ, ZYY, ZYZ* or *ZYX* should not be used; NYSE rejects transmission with these branch codes.** Required when used to cancel an individual order. Can be blank for Bulk Cancel request. If populated on a Bulk Cancel request value will be ignored.
BulkCancelCode	1	Binary	✓	0 – Regular Individual cancel message. 1 – Cancel All Orders except Closing Orders (MOC, LOC, CO) for this connection only. 2 – Reserved for Future Use. 3 – Cancel All Orders except Opening and Closing orders for all connections. 5 – Cancel All Opening or Closing Orders (MOC, LOC or CO) only for all connections. 6 – Cancel All Day orders only for all connections. 7 – Cancel and Block All Orders excluding Opening or Closing Orders for all connections. 8 – Block all incoming orders for all connections. 9 – Unblock all incoming orders for all connections.
RiskGroup	5	Alpha	C	Reserved for future use
Total	**96**			

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6.3 Order Cancel/Replace

6.3.1 Message Variant (G.1)

This message requests that an order booked at the Exchange be modified. Clients can change the quantity, price, or type of order in the cancel replace message.

Order Cancel/Replace Message G.1	Length	Type	Required	Notes and Values
MessageType	2	Binary	✓	0x0071
MsgLength	2	Binary	✓	Binary length of the message
MsgSeqNum	4	Binary	✓	Client-assigned sequence number
MEOrderID	4	Binary		Exchange assigned Order ID. (will be supported in a future phase)
OrderQty	4	Binary	✓	Shares for this order **For symbols migrated to Pillar: • 1 – 25,000,000 for Auction only order types (Opening Only/MOO, LOO; MOC, LOC, Closing Offset) • 1 – 5,000,000 for all other order types
MaxFloorQty	4	Binary		Maximum number of shares within an order to be shown on the exchange floor at any given time. The minimum value for this field is zero. If specifying a quantity other than zero, the value must be equal to one (1) times the securities unit of trade (i.e., 100 shares).
Price	4	Binary	✓	The price, as a long value. Price is scaled based on the Price Scale field. Described in section 4.3. Prices with values exceeding 10 characters inclusive of the decimal point will be rejected. Represents the Limit Price for Limit Orders. **For symbols migrated to Pillar – maximum price determined by XDP Price Scale for the symbol: - Max price for securities with a price scale of 6 is $4,294.672960 - Max price for securities with a price scale of 4 is $429,467.2960 - Max price for securities with a price scale of 3 is $999,999.99
PriceScale	1	Alpha Numeric	✓	"0" through "4"
Symbol	11	Alpha		Stock symbol including the suffix separated by blank space e.g., "BRK A"

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<table>
<tr><th>Order Cancel/Replace Message
G.1</th><th>Length</th><th>Type</th><th>Required</th><th>Notes and Values</th></tr>
<tr><td>ExecInst</td><td>1</td><td>Alpha Numeric</td><td></td><td>Execution Instructions for order handling.
<u>Values</u>
y = Trade-at ISO</td></tr>
<tr><td>RoutingInstruction</td><td>1</td><td>Alpha Numeric</td><td></td><td><table><tr><th>Type</th><th>RoutingInstruction</th></tr><tr><td>NX</td><td>"7"</td></tr><tr><td>DNS</td><td>"D"</td></tr><tr><td>SOC</td><td>"S"</td></tr><tr><td>ISO</td><td>"I"</td></tr><tr><td>CO*</td><td>"C"</td></tr><tr><td>ALO</td><td>“A”</td></tr><tr><td>ISO ALO</td><td>“L”</td></tr></table>*For symbols migrated to Pillar – CO available for Tape A securities only
For details, please refer RoutingInstructions section in Appendix A.</td></tr>
<tr><td>Side</td><td>1</td><td>Alpha Numeric</td><td>✓</td><td>Side of the Order
1 = Buy
2 = Sell
5 = Sell Short
6 = Sell Short Exempt</td></tr>
<tr><td>OrderType</td><td>1</td><td>Alpha Numeric</td><td>✓</td><td>1 = Market
2 = Limit
5 = Market on close
B = Limit On Close
Please note: Only value 2 is valid for non-primary securities</td></tr>
<tr><td>TimeInForce</td><td>1</td><td>Alpha Numeric</td><td></td><td>If a value is not present in this field, the default is Day.
0 = Day
2 = OPG (At the Opening)
3 = IOC (Immediate Or Cancel)</td></tr>
<tr><td>OrderCapacity</td><td>1</td><td>Alpha Numeric</td><td>✓</td><td>Valid values: A through Z (see Appendix C for definitions)</td></tr>
<tr><td>DOTReserve</td><td>1</td><td>Alpha</td><td></td><td>DOT reserve indicator. Valid values “Y” / “N”. If not populated, default is assigned as “N”. If populated with “Y”, MaxFloorQuantity field is validated.</td></tr>
<tr><td>OnBehalfOfCompID</td><td>5</td><td>Alpha</td><td>✓</td><td>Firm mnemonic assigned by the NYSE</td></tr>
<tr><td>SenderSubID</td><td>5</td><td>Alpha Numeric</td><td></td><td>User-defined information that is not validated</td></tr>
<tr><td>ClearingFirm</td><td>5</td><td>Alpha</td><td></td><td>Names the clearing member designated by another clearing or</td></tr>
</table>

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Order Cancel/Replace Message G.1	Length	Type	Required	Notes and Values
				non-clearing member for settlement of its Exchange transactions.
Account	10	Alpha Numeric		User-defined information that is not validated. Common examples include user or account IDs and will be returned in the outbound messages.
ClientOrderID	17	Alpha Numeric	✓	Client order ID for the new order that is replacing an existing order. This must be a unique value. Format: *BBB NNNN/MMDDYYYY*. Branch code is 2 to 3 alphas, 1 space delimiter; sequence number is up to 4 numeric, which cannot be all zeroes and the sequence number must be padded with leading zeroes, e.g., 0001. **The value for this field must be in UPPERCASE (e.g. BBB NNNN/MMDDYYYY). Any deviation from this format will result in the message rejected by CCG.** ***HMQ, YYY, RRR, ZZZ, TTT, QQQ, ZYY, ZYZ* or *ZYX* should not be used; NYSE rejects transmission with these branch codes since they are reserved.** **No leading or trailing blanks or special characters are allowed.**
OrigClientOrderID	17	Alpha Numeric	✓	Client order ID of the order being replaced. Format: *BBB NNNN/MMDDYYYY*. Branch code is 2 to 3 alphas, 1 space delimiter; sequence number is up to 4 numeric, which cannot be all zeroes and the sequence number must be padded with leading zeroes, e.g., 0001. **The value for this field must be in UPPERCASE (e.g. BBB NNNN/MMDDYYYY). Any deviation from this format will result in the message rejected by CCG.** ***HMQ, YYY, RRR, ZZZ, TTT, QQQ, ZYY, ZYZ* or *ZYX* should not be used; NYSE rejects transmission with these branch codes since they are reserved.** **No leading or trailing blanks or special characters are allowed.**
Filler	2			
Total	**104**			

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6.3.2 Message Variant (G.2)

This message requests that an order booked at the Exchange be modified. Clients can change the quantity, price, or type of order in the cancel replace message.

Order Cancel/Replace Message **G.2**	**Length**	**Type**	**Required**	**Notes and Values**
MessageType	2	Binary	✓	0x0072
MsgLength	2	Binary	✓	Binary length of the message
MsgSeqNum	4	Binary	✓	Client-assigned sequence number
MEOrderID	4	Binary		Exchange assigned OrderID. (will be supported in a future phase)
OrderQty	4	Binary	✓	Shares for this order **For symbols migrated to Pillar: • 1 – 25,000,000 for Auction only order types (Opening Only/MOO, LOO; MOC, LOC, Closing Offset) • 1 – 5,000,000 for all other order types
MaxFloorQty	4	Binary		Maximum number of shares within an order to be shown on the exchange floor at any given time. The minimum value for this field is zero. If specifying a quantity other than zero, the value must be equal to one (1) times the securities unit of trade (i.e., 100 shares).
Price	4	Binary	✓	The price, as a long value. Price is scaled based on the Price Scale field. Described in section 4.3. Represents the Limit Price for Limit Orders. Prices with values exceeding 10 characters inclusive of the decimal point will be rejected. Note: For RPI orders, limit prices will be accepted in sub-pennies above and below $1.00, but must be in multiples of the minimum offset price (currently defined as 0.0010). **For symbols migrated to Pillar – maximum price determined by XDP Price Scale for the symbol: - Max price for securities with a price scale of 6 is $4,294.672960 - Max price for securities with a price scale of 4 is $429,467.2960 - Max price for securities with a price scale of 3 is $999,999.99
OffsetPrice	4	Binary	C	Offset or minimum price improvement value from the current Bid or Offer. Must be zero, greater than or equal to $0.0010 and must be in multiples of $0.0010. Note: This field is required if sending Retail Price Improvement (RPI) orders.

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<table>
<tr><th>Order Cancel/Replace Message
G.2</th><th>Length</th><th>Type</th><th>Required</th><th>Notes and Values</th></tr>
<tr><td>MinimumTradeSize</td><td>4</td><td>Binary</td><td></td><td>Minimum Trade Size Quantity for orders with a Time in Force of “IOC”.
Value may be Zero, also see “StatusIndicators” field.
**For symbols migrated to Pillar - see section “NYSE Equities Order Types” for list of order types that support this attribute</td></tr>
<tr><td>StatusIndicators</td><td>4</td><td>Binary</td><td></td><td>Each bit position of the Status Indicator field will be used as a flag to indicate that zero is valid value for an assigned field.
Bits must be set equal to 1 when value = 0.

Bit 0 = Zero Offset Price Flag
Bit 1 = Zero Minimum Trade Size Flag.
Bit 2 – 32 (Reserved for Future Use)</td></tr>
<tr><td>PriceScale</td><td>1</td><td>Alpha Numeric</td><td>✓</td><td>“0” through “4”</td></tr>
<tr><td>Symbol</td><td>11</td><td>Alpha</td><td></td><td>Stock symbol including the suffix separated by blank space
e.g., “BRK A”</td></tr>
<tr><td>ExecInst</td><td>1</td><td>Alpha Numeric</td><td></td><td>Execution Instructions for order handling.
<u>Values</u>
y = Trade-at ISO</td></tr>
<tr><td>RoutingInstruction</td><td>1</td><td>Alpha Numeric</td><td></td><td><table><tr><th>Type</th><th>RoutingInstruction</th></tr><tr><td>NX</td><td>"7"</td></tr><tr><td>DNS</td><td>"D"</td></tr><tr><td>SOC</td><td>"S"</td></tr><tr><td>ISO</td><td>"I"</td></tr><tr><td>CO*</td><td>"C"</td></tr><tr><td>RPI*</td><td>"R"</td></tr><tr><td>RTO*</td><td>"1"</td></tr><tr><td>RTNR*</td><td>"2"</td></tr><tr><td>RTR*</td><td>"3"</td></tr><tr><td>ALO</td><td>“A”</td></tr><tr><td>ISO ALO</td><td>“L”</td></tr></table>*For symbols migrated to Pillar – CO supported for Tape A securities only; RPI and RTO available for all securities (Tape A,B,C) beginning on a date announced via Trader Update; RTNR and RTR not supported.
For details, please refer RoutingInstructions section in Appendix A.</td></tr>
<tr><td>Side</td><td>1</td><td>Alpha Numeric</td><td>✓</td><td>Side of the Order
1 = Buy
2 = Sell</td></tr>
</table>

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Order Cancel/Replace Message G.2	Length	Type	Required	Notes and Values
				5 = Sell Short 6 = Sell Short Exempt
OrderType	1	Alpha Numeric	✓	1 = Market 2 = Limit 5 = Market on close B = Limit On Close **Please note: Only value 2 is valid for non-primary securities**
TimeInForce	1	Alpha Numeric		If a value is not present in this field, the default is Day. 0 = Day 2 = OPG (At the Opening) 3 = IOC (Immediate Or Cancel)
OrderCapacity	1	Alpha Numeric	✓	Valid values: A through Z (see Appendix C for definitions)
DOTReserve	1	Alpha		DOT reserve indicator. Valid values "Y" / "N". If not populated, default is assigned as "N". If populated with "Y", MaxFloorQuantity field is validated.
OnBehalfOfCompID	5	Alpha	✓	Firm mnemonic assigned by the NYSE
SenderSubID	5	Alpha Numeric		User-defined information that is not validated
ClearingFirm	5	Alpha		Names the clearing member designated by another clearing or non-clearing member for settlement of its Exchange transactions.
Account	10	Alpha Numeric		User-defined information that is not validated. Common examples include user or account IDs and will be returned in the outbound messages. Control characters not allowed.
ClientOrderID	17	Alpha Numeric	✓	Client order ID for the new order that is replacing an existing order. This must be a unique value. Format: *BBB NNNN/MMDDYYYY*. Branch code is 2 to 3 alphas, 1 space delimiter; sequence number is up to 4 numeric, which cannot be all zeroes and the sequence number must be padded with leading zeroes, e.g., 0001. **The value for this field must be in UPPERCASE (e.g. BBB NNNN/MMDDYYYY). Any deviation from this format will result in the message rejected by CCG.** ***HMQ, YYY, RRR, ZZZ, TTT, QQQ, ZYY, ZYZ* or *ZYX* should not be used; NYSE rejects transmission with these branch codes since they are reserved.**

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Order Cancel/Replace Message G.2	Length	Type	Required	Notes and Values
				No leading or trailing blanks or special characters are allowed.
OrigClientOrderID	17	Alpha Numeric	✓	Client order ID of the order being replaced. Format: *BBB NNNN/MMDDYYYY*. Branch code is 2 to 3 alphas, 1 space delimiter; sequence number is up to 4 numeric, which cannot be all zeroes and the sequence number must be padded with leading zeroes, e.g., 0001. **The value for this field must be in UPPERCASE (e.g. BBB NNNN/MMDDYYYY). Any deviation from this format will result in the message rejected by CCG.** ***HMQ, YYY, RRR, ZZZ, TTT, QQQ, ZYY, ZYZ* or *ZYX* should not be used; NYSE rejects transmission with these branch codes since they are reserved.** **No leading or trailing blanks or special characters are allowed.**
Filler	2			
Total	**116**			

6.3.3 Message Variant (G.3)

This message requests that an order booked at the Exchange be modified. Clients can change the quantity, price, or type of order in the cancel replace message.

Order Cancel/Replace Message G.3	Length	Type	Required	Notes and Values
MessageType	2	Binary	✓	0x0073
MsgLength	2	Binary	✓	Binary length of the message
MsgSeqNum	4	Binary	✓	Client-assigned sequence number
MEOrderID	4	Binary		Exchange assigned OrderID. (will be supported in a future phase)
OrderQty	4	Binary	✓	Shares for this order. **For symbols migrated to Pillar: • 1 – 25,000,000 for Auction only order types (Opening Only/MOO, LOO; MOC, LOC, Closing Offset) • 1 – 5,000,000 for all other order types
MaxFloorQty	4	Binary	C	Maximum number of shares within an order to be shown on the exchange floor at any given time. The minimum value for this field is zero. If specifying a quantity other than zero, the value

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Order Cancel/Replace Message G.3	Length	Type	Required	Notes and Values
				must be equal to one (1) times the securities unit of trade (i.e., 100 shares)
Price	4	Binary	✓	The price, as a long value. Price is scaled based on the Price Scale field. Described in section 5.3 Prices with values exceeding 10 characters inclusive of the decimal point will be rejected. Represents the Limit Price for Limit Orders. **For symbols migrated to Pillar – maximum price determined by XDP Price Scale for the symbol: - Max price for securities with a price scale of 6 is $4,294.672960 - Max price for securities with a price scale of 4 is $429,467.2960 - Max price for securities with a price scale of 3 is $999,999.99
OffsetPrice	4	Binary	C	Offset or minimum price improvement value (allowed in sub-pennies) from the current Bid or Offer. Must be zero, or greater than or equal to 0.0010. This field is required if sending Retail Price Improvement (RPI) orders.
MinimumTradeSize	4	Binary		Minimum Trade Size Quantity for orders with a Time in Force of "IOC". Value may be Zero, also see "StatusIndicators" field **For symbols migrated to Pillar - see section "NYSE Equities Order Types" for list of order types that support this attribute
StatusIndicators	4	Binary		Each bit position of the Status Indicator field will be used as a flag to indicate that zero is valid value for an assigned field Bits must be set equal to 1 when value = 0. Bit 0 = Zero Offset Price Flag. Bit 1 = Zero Minimum Trade Size Flag (Reserved for Future Use) Bit 2 – 32 (Reserved for Future Use)
PriceScale	1	Alpha Numeric	✓	"0" through "4"
Symbol	11	Alpha		Stock symbol including the suffix separated by blank space e.g., "BRK A"
ExecInst	1	Alpha Numeric		Execution Instructions for order handling. Values y = Trade-at ISO
RoutingInstruction	1	Alpha		

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<table>
<tr><th>Order Cancel/Replace Message
G.3</th><th>Length</th><th>Type</th><th>Required</th><th>Notes and Values</th></tr>
<tr><td></td><td></td><td>Numeric</td><td></td><td><table><tr><th>Type</th><th>RoutingInstruction</th></tr><tr><td>NX</td><td>"7"</td></tr><tr><td>DNS</td><td>"D"</td></tr><tr><td>SOC</td><td>"S"</td></tr><tr><td>ISO</td><td>"I"</td></tr><tr><td>CO*</td><td>"C"</td></tr><tr><td>RPI*</td><td>"R"</td></tr><tr><td>RTO*</td><td>"1"</td></tr><tr><td>RTNR*</td><td>"2"</td></tr><tr><td>RTR*</td><td>"3"</td></tr><tr><td>ALO</td><td>“A”</td></tr><tr><td>ISO ALO</td><td>“L”</td></tr></table>*For symbols migrated to Pillar – CO supported for Tape A securities only; RPI and RTO available for all securities (Tape A,B,C) beginning on a date announced via Trader Update; RTNR and RTR not supported.
For details, please refer RoutingInstructions section in Appendix A.</td></tr>
<tr><td>Side</td><td>1</td><td>Alpha Numeric</td><td>✓</td><td>Side of the Order
1 = Buy
2 = Sell
5 = Sell Short
6 = Sell Short Exempt</td></tr>
<tr><td>OrderType</td><td>1</td><td>Alpha Numeric</td><td>✓</td><td>1 = Market
2 = Limit
5 = Market on close
B = Limit On Close
Please note: Only value 2 is valid for non-primary securities.</td></tr>
<tr><td>TimeInForce</td><td>1</td><td>Alpha Numeric</td><td></td><td>If a value is not present in this field, the default is Day.
0 = Day
2 = OPG (At the Opening)
3 = IOC (Immediate Or Cancel)</td></tr>
<tr><td>Rule80A (OrderCapacity)</td><td>1</td><td>Alpha Numeric</td><td>✓</td><td>Valid values: A through Z (see Appendix B for definitions).</td></tr>
<tr><td>DOTReserve</td><td>1</td><td>Alpha</td><td></td><td>DOT reserve indicator. Valid values “Y” / “N”. If not populated, default is assigned as “N”. If populated with “Y”, MaxFloorQuantity field is validated.</td></tr>
<tr><td>OnBehalfOfCompID</td><td>5</td><td>Alpha</td><td>✓</td><td>Firm mnemonic assigned by the NYSE</td></tr>
<tr><td>SenderSubID</td><td>5</td><td>Alpha Numeric</td><td></td><td>User-defined information that is not validated.</td></tr>
</table>

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Order Cancel/Replace Message **G.3**	**Length**	**Type**	**Required**	**Notes and Values**
ClearingFirm	5	Alpha		Names the clearing member designated by another clearing or non-clearing member for settlement of its Exchange transactions.
Account	10	Alpha Numeric		User-defined information that is not validated. Common examples include user or account IDs and will be returned in the outbound messages. Control characters not allowed.
ClientOrderID	17	Alpha Numeric	✓	Client order ID for the new order that is replacing an existing order. This must be a unique value. Format: *BBB NNNN/MMDDYYYY*. Branch code is 2 to 3 alphas, 1 space delimiter; sequence number is up to 4 numeric, which cannot be all zeroes and the sequence number must be padded with leading zeroes, ex. 0001. **The value for this field must be in UPPERCASE (e.g. BBB NNNN/MMDDYYYY). Any deviation from this format will result in the message rejected by CCG.** ***HMQ, YYY, RRR, ZZZ, TTT, QQQ, ZYY, ZYZ* or *ZYX* should not be used; NYSE rejects transmission with these branch codes since they are reserved.** **No leading or trailing blanks or special characters are allowed.**
OrigClientOrderID	17	Alpha Numeric	✓	Client order ID of the order being replaced Format: *BBB NNNN/MMDDYYYY*. Branch code is 2 to 3 alphas, 1 space delimiter; sequence number is up to 4 numeric, which cannot be all zeroes and the sequence number must be padded with leading zeroes, ex. 0001. **The value for this field must be in UPPERCASE (e.g. BBB NNNN/MMDDYYYY). Any deviation from this format will result in the message rejected by CCG.** ***HMQ, YYY, RRR, ZZZ, TTT, QQQ, ZYY, ZYZ* or *ZYX* should not be used; NYSE rejects transmission with these branch codes since they are reserved.** **No leading or trailing blanks or special characters are allowed.**
ClientID	4	Alpha Numeric	C	Required if SelfTradeType is populated. Control characters not allowed.
SelfTradeType	1	Alpha		N – Cancel the arriving (new) STP interest (STPN) O – Cancel the resting (old) STP interest (STPO)
Filler	1			
Total	**120**			

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6.3.4 Message Variant (G.4)

This message requests that an order booked at the Exchange be modified. Clients can change the quantity, price, or type of order in the cancel replace message.

Order Cancel/Replace Message **G.4**	**Length**	**Type**	**Required**	**Notes and Values**
MessageType	2	Binary	✓	0x0074
MsgLength	2	Binary	✓	Binary length of the message
MsgSeqNum	4	Binary	✓	Client-assigned sequence number
MEOrderID	4	Binary		Exchange assigned OrderID. (will be supported in a future phase)
OrderQty	4	Binary	✓	Shares for this order. **For symbols migrated to Pillar: • 1 – 25,000,000 for Auction only order types (Opening Only/MOO, LOO; MOC, LOC, Closing Offset) • 1 – 5,000,000 for all other order types
MaxFloorQty	4	Binary	C	Maximum number of shares within an order to be shown on the exchange floor at any given time. The minimum value for this field is zero. If specifying a quantity other than zero, the value must be equal to one (1) times the securities unit of trade (i.e., 100 shares)
Price	4	Binary	✓	The price, as a long value. Price is scaled based on the Price Scale field. Described in section 5.3 Prices with values exceeding 10 characters inclusive of the decimal point will be rejected. Represents the Limit Price for Limit Orders. **For symbols migrated to Pillar – maximum price determined by XDP Price Scale for the symbol: - Max price for securities with a price scale of 6 is $4,294.672960 - Max price for securities with a price scale of 4 is $429,467.2960 - Max price for securities with a price scale of 3 is $999,999.99
OffsetPrice	4	Binary	C	Offset or minimum price improvement value (allowed in sub-pennies) from the current Bid or Offer. Must be zero, or greater than or equal to 0.0010. This field is required if sending Retail Price Improvement (RPI) orders.
MinimumTradeSize	4	Binary		Minimum Trade Size Quantity for orders with a Time in Force of

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<table>
<tr><th>Order Cancel/Replace Message
G.4</th><th>Length</th><th>Type</th><th>Required</th><th>Notes and Values</th></tr>
<tr><td>(MTS)</td><td></td><td></td><td></td><td>“IOC”.
Value may be Zero, also see “StatusIndicators” field
Cannot be present if order is designated at STP.
**For symbols migrated to Pillar - see section “NYSE Equities Order Types” for list of order types that support this attribute</td></tr>
<tr><td>StatusIndicators</td><td>4</td><td>Binary</td><td></td><td>Each bit position of the Status Indicator field will be used as a flag to indicate that zero is valid value for an assigned field
Bits must be set equal to 1 when value = 0.

Bit 0 = Zero Offset Price Flag.
Bit 1 = Zero Minimum Trade Size
Bit 2 = Zero Minimum Trigger Qty
Bit 3 – 31 (Reserved for Future Use)</td></tr>
<tr><td>MinimumTriggerVol (MTV)</td><td>4</td><td>Binary</td><td></td><td>Minimum trigger volume for MPL orders.
Must be equal to or less than order quantity or zero (see “StatusIndicators” field)
Cannot be present if MPL order is also designated as STP.
**For symbols migrated to Pillar - see section “NYSE Equities Order Types” for list of order types that support this attribute</td></tr>
<tr><td>PriceScale</td><td>1</td><td>Alpha Numeric</td><td>✓</td><td>“0” through “4”</td></tr>
<tr><td>Symbol</td><td>11</td><td>Alpha</td><td></td><td>Stock symbol including the suffix separated by blank space
e.g., “BRK A”</td></tr>
<tr><td>ExecInst</td><td>1</td><td>Alpha Numeric</td><td></td><td>Execution Instructions for order handling.
<u>Values</u>
M = Mid-price Peg
y = Trade-at ISO</td></tr>
<tr><td>RoutingInstruction</td><td>1</td><td>Alpha Numeric</td><td></td><td><table><tr><th>Type</th><th>RoutingInstruction</th></tr><tr><td>NX</td><td>"7"</td></tr><tr><td>DNS</td><td>"D"</td></tr><tr><td>SOC</td><td>"S"</td></tr><tr><td>ISO</td><td>"I"</td></tr><tr><td>CO*</td><td>"C"</td></tr><tr><td>RPI*</td><td>"R"</td></tr><tr><td>RTO*</td><td>"1"</td></tr><tr><td>RTNR*</td><td>"2"</td></tr><tr><td>RTR*</td><td>"3"</td></tr><tr><td>ALO</td><td>“A”</td></tr><tr><td>ISO ALO</td><td>“L”</td></tr></table></td></tr>
</table>

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Order Cancel/Replace Message G.4	Length	Type	Required	Notes and Values
				*For symbols migrated to Pillar – CO supported for Tape A securities only; RPI and RTO available for all securities (Tape A,B,C) beginning on a date announced via Trader Update; RTNR and RTR not supported. For details, please refer RoutingInstructions section in Appendix A.
Side	1	Alpha Numeric	✓	Side of the Order 1 = Buy 2 = Sell 5 = Sell Short 6 = Sell Short Exempt
OrderType	1	Alpha Numeric	✓	1 = Market 2 = Limit 5 = Market on close B = Limit On Close **Please note: Only value 2 is valid for non-primary securities.**
TimeInForce	1	Alpha Numeric		If a value is not present in this field, the default is Day. 0 = Day 2 = OPG (At the Opening) 3 = IOC (Immediate Or Cancel)
Rule80A (OrderCapacity)	1	Alpha Numeric	✓	Valid values: A through Z (see Appendix B for definitions).
DOTReserve	1	Alpha		DOT reserve indicator. Valid values “Y” / “N”. If not populated, default is assigned as “N”. If populated with “Y”, MaxFloorQuantity field is validated.
OnBehalfOfCompID	5	Alpha	✓	Firm mnemonic assigned by the NYSE
SenderSubID	5	Alpha Numeric		User-defined information that is not validated.
ClearingFirm	5	Alpha		Names the clearing member designated by another clearing or non-clearing member for settlement of its Exchange transactions.
Account	10	Alpha Numeric		User-defined information that is not validated. Common examples include user or account IDs and will be returned in the outbound messages. Control characters not allowed.
ClientOrderID	17	Alpha Numeric	✓	Client order ID for the new order that is replacing an existing order. This must be a unique value. Format: *BBB NNNN/MMDDYYYY*. Branch code is 2 to 3 alphas, 1 space delimiter; sequence number is up to 4 numeric, which

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Order Cancel/Replace Message G.4	Length	Type	Required	Notes and Values
				cannot be all zeroes and the sequence number must be padded with leading zeroes, ex. 0001. **The value for this field must be in UPPERCASE (e.g. BBB NNNN/MMDDYYYY). Any deviation from this format will result in the message rejected by CCG.** ***HMQ, YYY, RRR, ZZZ, TTT, QQQ, ZYY, ZYZ* or *ZYX* should not be used; NYSE rejects transmission with these branch codes since they are reserved.** **No leading or trailing blanks or special characters are allowed.**
OrigClientOrderID	17	Alpha Numeric	✓	Client order ID of the order being replaced Format: *BBB NNNN/MMDDYYYY*. Branch code is 2 to 3 alphas, 1 space delimiter; sequence number is up to 4 numeric, which cannot be all zeroes and the sequence number must be padded with leading zeroes, ex. 0001. **The value for this field must be in UPPERCASE (e.g. BBB NNNN/MMDDYYYY). Any deviation from this format will result in the message rejected by CCG.** ***HMQ, YYY, RRR, ZZZ, TTT, QQQ, ZYY, ZYZ* or *ZYX* should not be used; NYSE rejects transmission with these branch codes since they are reserved.** **No leading or trailing blanks or special characters are allowed.**
ClientID	4	Alpha Numeric	C	Required if SelfTradeType is populated. Control characters not allowed.
SelfTradeType	1	Alpha		N – Cancel the arriving (new) STP interest (STPN) O – Cancel the resting (old) STP interest (STPO) Note: Opening (OPG) orders, Market on Close (MOC) and Limit on Close (LOC) orders will not be validated for Self-Trade Prevention.
Filler	1			
Total	**124**			

6.4 Order Ack Message (a.1)

This message informs clients that an order has been received and and placed on the limit order book.

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Order Ack Message a.1	Length	Type	Required	Notes and Values
MessageType	2	Binary	✓	0x0091
MsgLength	2	Binary	✓	Binary length of the message
MsgSeqNum	4	Binary	✓	Exchange assigned sequence number
MEOrderID	4	Binary	✓	Exchange assigned Order ID Returned if subscribed. 10 digit numeric.
TransactTime	4	Binary	✓	The time the message was sent in milliseconds since Midnight
DeliverToCompID	5	Alpha	✓	OnBehalfOfCompID from the client is returned in this field
TargetSubID	5	Alpha	C	SenderSubID from the client is returned in this field. If provided on inbound order it will be returned.
Account	10	Alpha Numeric	C	User-defined information that is not validated. Common examples include user or account IDs and will be returned in the outbound messages. Will be returned if provided in the inbound message. Control characters not allowed.
ClientOrderID	17	Alpha Numeric	✓	Client Order ID
AckMsgType	1	Alpha	✓	"1" = New Interest Acknowledgement "5" = Unsolicitied (New MEOrderID)Acknowledgement
Filler	2	Alpha		
Total	**56**			

6.5 Cancel Request Ack Message

This message informs clients when a Cancel Order message has been received.

6.5.1 Message Variant 6.1

Cancel Request Ack Message 6.1	Length	Type	Required	Notes and Values
MessageType	2	Binary	✓	0x00A1
MsgLength	2	Binary	✓	Binary length of the message
MsgSeqNum	4	Binary	✓	Exchange-assigned sequence number
MEOrderID	4	Binary		Exchange assigned Order ID. If provided on inbound cancel request it will be returned.

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Cancel Request Ack Message 6.1	Length	Type	Required	Notes and Values
TransactTime	4	Binary	✓	Time the message was sent in milliseconds since Midnight
DeliverToCompID	5	Alpha	✓	OnBehalfOfCompID from the client is returned in this field
TargetSubID	5	Alpha	C	SenderSubID from the client is returned in this field. If provided on inbound cancel request, it will be returned.
Account	10	Alpha Numeric	C	User-defined information that is not validated. Common examples include user or account IDs and will be returned in the outbound messages. Will be returned if provided in the inbound message. Control characters not allowed.
ClientOrderID	17	Alpha Numeric	✓	The Client Order ID of the cancel message
Filler	3			
Total	**56**			

6.5.2 Message Variant 6.2

This message informs clients when a Cancel Individual Order or Bulk Cancel message has been received.

Cancel Request Ack Message 6.2	Length	Type	Required	Notes and Values
MessageType	2	Binary	✓	0x00A2
MsgLength	2	Binary	✓	Binary length of the message
MsgSeqNum	4	Binary	✓	Exchange-assigned sequence number
MEOrderID	4	Binary		Exchange assigned Order ID. If provided on inbound cancel request it will be returned.
TransactTime	4	Binary	✓	Time the message was sent in milliseconds since Midnight
DeliverToCompID	5	Alpha	✓	OnBehalfOfCompID from the client is returned in this field
TargetSubID	5	Alpha	C	SenderSubID from the client is returned in this field. If provided on inbound cancel request, it will be returned.
Account	10	Alpha Numeric	C	User-defined information that is not validated. Common examples include user or account IDs and will be returned in the outbound messages. Will be returned if provided in the inbound message. Control characters not allowed.
ClientOrderID	17	Alpha Numeric	✓	The Client Order ID of the cancel message

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Cancel Request Ack Message 6.2	Length	Type	Required	Notes and Values
AckMsgType	1	Alpha Numeric	✓	2 – Cancel Acknowledgement 4 – Firm Bulk Cancel Acknowledgement
Filler	2			
Total	**56**			

6.6 UROUT Message (4.1)

This message informs clients that an order has been canceled. It is sent in response to Order Cancel messages, cancellations at the end of sessions and administrative cancellations.

Order Killed Message	Length	Type	Required	Notes and Values
MessageType	2	Binary	✓	0x00D1
MsgLength	2	Binary	✓	Binary length of the message
MsgSeqNum	4	Binary	✓	Exchange-assigned sequence number
MEOrderID	4	Binary		Exchange assigned Order ID. If provided on inbound cancel request, it will be returned.
TransactTime	4	Binary	✓	Time the message is sent in milliseconds since midnight
InformationCode	1	Binary	✓	Indicates whether the cancel was initiated by the user or by Exchange rules. "0" = User-Initiated "1" = Exchange-Initiated – Unsolicited UROUT "2" = Exchange-Initiated – Cancel on Disconnect "3" = Exchange-Initiated – Done for Day "4" = Exchange-Initiated – Self Trade Prevented. "5" = Exchange-Initiated - Liquidity Removal Prevented "6" = User-Initiated – Firm Bulk Cancel
DeliverToCompID	5	Alpha	✓	OnBehalfOfCompID from the client is returned in this field
TargetSubID	5	Alpha	C	SenderSubID from the client is returned in this field. If provided on inbound cancel request, it will be returned.
Account	10	Alpha Numeric	C	User-defined information that is not validated. Common examples include user or account IDs and will be returned in the outbound messages. Will be returned if provided in the inbound message. Control characters not allowed.

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Order Killed Message	Length	Type	Required	Notes and Values
OrigClientOrderID	17	Alpha Numeric	✓	Client order ID of the canceled order
Filler	2	Alpha		
Total	**56**			

6.7 Cancel Replace Ack Message (E.1)

This message informs clients that a Cancel/Replace message has been received but is not yet applied because an order cannot be immediately replaced (for example, the order is linked to another exchange). See also the Replaced Message for other responses to Cancel/Replace messages.

Cancel Replace Ack Message E.1	Length	Type	Required	Notes and Values
MessageType	2	Binary	✓	0x00B1
MsgLength	2	Binary	✓	Binary length of the message
MsgSeqNum	4	Binary	✓	Exchange-assigned sequence number
MEOrderID	4	Binary		Exchange assigned Order ID. If provided on inbound cancel/replace request it will be returned.
TransactTime	4	Binary	✓	Time the message was sent in milliseconds since midnight
DeliverToCompID	5	Alpha	✓	OnBehalfOfCompID from the client is returned in this field
TargetSubID	5	Alpha	C	SenderSubID from the client is returned in this field. If provided on inbound cancel/replace request, it will be returned.
Account	10	Alpha Numeric	C	User-defined information that is not validated. Common examples include user or account IDs and will be returned in the outbound messages. Will be returned if provided in the inbound message. Control characters not allowed.
ClientOrderID	17	Alpha Numeric	✓	Client order ID of the cancel replace message
Filler	3	Alpha		
Total	**56**			

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6.8 Order Replaced Message (5.1)

This message indicates that an order has been successfully replaced. It is sent only when the replacement order is not immediately executable (it is booked). The ClientOrderID from the new order becomes the ClientOrderID in the replaced message.

Replaced Message 5.1	Length	Type	Required	Notes and Values
MessageType	2	Binary	✓	0x00E1
MsgLength	2	Binary	✓	Binary length of the message
MsgSeqNum	4	Binary	✓	Exchange-assigned sequence number
MEOrderID	4	Binary		Exchange assigned Order ID for replacement order.
TransactTime	4	Binary	✓	Time message is sent in milliseconds since midnight
LeavesQty	4	Binary	C	Remaining leaves quantity after a Cancel to Reduce request has been processed. Returned if Information Code = "1" (Reduced)
InformationCode	1	Binary	✓	Indicates the type of cancel "0" – Replaced "1" – Reduced
DeliverToCompID	5	Alpha	✓	OnBehalfOfCompID from the client is returned in this field
TargetSubID	5	Alpha	C	SenderSubID from the client is returned in this field. If provided on inbound cancel/replace request, it will be returned.
Account	10	Alpha Numeric	C	User-defined information that is not validated. Common examples include user or account IDs and will be returned in the outbound messages. Will be returned if provided in the inbound message. Control characters not allowed.
ClientOrderID	17	Alpha Numeric	✓	Client order ID of the new order
Filler	2	Alpha		
Total	**60**			

6.9 Order Cancel/Replace Reject Message (8.1)

This message informs clients that an order, cancel, or cancel/replace message has been rejected. The Text field contains an explanation of the problem.

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Order Cancel/Replace Reject Message 8.1	Length	Type	Required	Notes and Values
MessageType	2	Binary	✓	0x00F1
MsgLength	2	Binary	✓	Binary length of the message
MsgSeqNum	4	Binary	✓	Exchange-assigned sequence number
MEOrderID	4	Binary		Exchange assigned Order ID (will be supported in a future phase). If provided on inbound cancel or cancel/replace request it will be returned.
Transaction Time	4	Binary	✓	The time the message was sent in milliseconds since midnight
RejectReason	2	Binary		Reject reason code (Refer to Appendix B for supported reason codes)
RejectMsgType	1	Numeric	✓	"1"= Order Reject "2"= Cancel Reject "3"= Cancel Replace Reject "4"= Firm Bulk Cancel Reject
DeliverToCompID	5	Alpha	✓	OnBehalfOfCompID from the client is returned in this field
TargetSubID	5	Alpha	C	SenderSubID from the client is returned in this field. If provided on inbound cancel or cancel/replace request, it will be returned.
Account	10	Alpha Numeric		User-defined information that is not validated. Common examples include user or account IDs and will be returned in the outbound messages. Control characters not allowed.
ClientOrderID	17	Alpha Numeric	✓	Client Order ID of the order, cancel, or cancel replace that was sent
OrigClientOrderID	17	Alpha Numeric	✓	ID of original order
Text	40	Alpha	✓	Reason for the rejection
Filler	**3**	**Alpha**		
Total	**116**			

6.10 Bust or Correct Message (C.1)

This message is sent when an order execution has been busted or corrected to notify the busted trades or price corrections.

Bust or Correct Message C.1	Length	Type	Required	Notes and Values
MessageType	2	Binary	✓	0x0101
MsgLength	2	Binary	✓	Binary length of the message

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Bust or Correct Message C.1	Length	Type	Required	Notes and Values
MsgSeqNum	4	Binary	✓	Exchange-assigned sequence number
MEOrderID	4	Binary	✓	Exchange assigned Order ID.
TransactTime	4	Binary	✓	Time the message is sent in milliseconds since midnight
ReportQty	4	Binary	✓	Shares executed
Price	4	Binary	✓	Corrected price in a correct message **For symbols migrated to Pillar – working price of order. Follows the Price Scale (either 3, 4 or 6) of the symbol published in the XDP Symbol Index Mapping Message. The expected maximum number of significant digits to the right of the decimal is 5, with zeros placed as insignificant digits to fit the applicable price scale format.
PriceScale	1	Alpha Numeric	✓	"0" through "6" **For symbols migrated to Pillar - follows the Price Scale - either 3, 4 or 6 - of the symbol published in the XDP Symbol Index Mapping Message. The expected maximum number of significant digits to the right of the decimal is 5, with zeros placed as insignificant digits to fit the applicable price scale format.
Type	1	Numeric	✓	"1"=Bust "2"=Correction
DeliverToCompID	5	Alpha	✓	OnBehalfOfCompID from the client is returned in this field
TargetSubID	5	Alpha	C	SenderSubID from the client is returned in this field. If provided on inbound order message it will be returned.
ContraBroker	5	Alpha Numeric		Identifies the Contra side of the trade. Execution Reports for UTP-migrated symbols will contain 'ANON' in this field. Away Market executions will always contain 'AHX'. **For symbols migrated to Pillar – always set to 'ANON' regardless of whether the order executed on NYSE or was entered on NYSE, then routed and executed at an away market
ContraTrader	5	Alpha Numeric	✓	Identifies the trader of the Contra Broker
ExecID	10	Alpha Numeric	✓	Exchange assigned reference ID returned on the current transaction message. Format: RRRRRSSSSS **For symbols migrated to Pillar – numeric string

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Bust or Correct Message C.1	Length	Type	Required	Notes and Values
ExecRefID	10	Alpha Numeric	✓	Reference ID used with Trade Bust and Trade Correction transactions that point to the previous activity being changed. Format: RRRRRSSSSS **For symbols migrated to Pillar – numeric string
Account	10	Alpha Numeric	C	User-defined information that is not validated. Common examples include user or account IDs and will be returned in the outbound messages. Will be returned if provided in the inbound message. Control characters not allowed.
ClientOrderID	17	Alpha Numeric	✓	Client order ID of the order that is being busted or corrected.
Filler	3			
Total	**96**			

6.11 Order Fill Message – Variant 1 (2.1)

This message informs clients when an order has been partially or entirely filled.

Order Fill Message 2.1	Length	Type	Required	Notes and Values
MessageType	2	Binary	✓	0x0081
MsgLength	2	Binary	✓	Binary length of the message
MsgSeqNum	4	Binary	✓	Exchange-assigned sequence number
MEOrderID	4	Binary		Exchange assigned Order ID.
TransactTime	4	Binary	✓	Time the message was sent in milliseconds since midnight
LeavesQty	4	Binary	✓	Leaves remaining on order
LastShares	4	Binary	✓	Number of equity shares filled
LastPrice	4	Binary	✓	Price at which the shares or contracts were filled **For symbols migrated to Pillar - follows the Price Scale - either 3, 4 or 6 - of the symbol published in the XDP Symbol Index Mapping Message. The expected maximum number of significant digits to the right of the decimal is 5, with zeros placed as insignificant digits to fit the applicable price scale format.
PriceScale	1	Alpha Numeric	✓	"0" through "6" **For symbols migrated to Pillar - follows the Price Scale - either 3, 4 or 6 - of the symbol published in the XDP Symbol Index Mapping Message. The expected maximum number of significant

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Order Fill Message 2.1	Length	Type	Required	Notes and Values
				digits to the right of the decimal is 5, with zeros placed as insignificant digits to fit the applicable price scale format.
Side	1	Alpha Numeric	✓	Side of the Order 1 = Buy 2 = Sell 5 = Sell Short 6 = Sell Short Exempt
BillingIndicator	1	Alpha Numeric	C	The BillingIndicator indicates the effect of an order on the liquidity of the book. Client's rates are determined by whether an order adds or removes liquidity from the book. 1 = Taker 2 = Provider 3 = Blended 4 = Market on Close and Market Orders Executed in Close 5 = Opening/Provider 6 = Closing/Provider 7 = Limit on Close 8 = Retail Order Provider 9 = Retail Order Taker Note: Will not support new 2 byte billing indicator for MPL order or Retail Firm executions.
LastMarket	1	Alpha	✓	Handling Market Center of the Execution
DeliverToCompID	5	Alpha	✓	OnBehalfOfCompID (Firm Mnemonic) provided on the original order from the client is returned in this field
TargetSubID	5	Alpha	C	SenderSubID from the client is returned in this field. If provided on inbound order, it will be returned.
ExecBroker	5	Alpha Numeric		Indicates the Executing DMM's/Executing Broker's number. **For symbols migrated to Pillar – not supported (null)
ContraBroker	5	Alpha Numeric		Identifies the Contra side of the trade. Execution Reports will contain 'ANON' in this field for NYSE executions. Away Market executions will always contain 'AHX'. **For symbols migrated to Pillar – always set to 'ANON' regardless of whether the order executed on NYSE or was entered on NYSE, then routed and executed at an away market
ContraTrader	5	Alpha Numeric	✓	Identifies the trader of the Contra Broker. Will always contain the value of "0".

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Order Fill Message 2.1	Length	Type	Required	Notes and Values
ExecAwayMktID	6	Alpha	C	Away Market Identifier followed by optional Market Maker ID field. Returned if executed at an Away Market.
BillingRate	6	Alpha Numeric		Consolidated Billing information returned on all execution reports. May contain either the current Liquidity Indicator with optional Displayed liquidity indictor separated by a slash (“/”) or the Market Center ID (MCID) and optional Market Maker ID (MMID) separated by a (“/”). 1 = Taker 2 = Provider 3 = Blended 4 = Market on Close and Market Orders Executed in Close 5 = Opening/Provider 6 = Closing/Provider 7 = Limit on Close 8 = Retail Order Provider 9 = Retail Order Taker 10 = Retail Taker MPL **For symbols migrated to Pillar – not supported 11 = MPL Taker 12 = MPL Provider 13 = RET – Retail Firm Provider 14 = RET – Retail Firm MPL Taker 15 = Closing Offset Examples: 2/2 - represents a report for less than 2000 shares that provided liquidity. D/ABCD – represents a report routed to an away market that also contains an MMID. **For symbols migrated to Pillar – the billing indicator portion of the BillingRate field will continue to be populated. However, the second part, DisplayedLiquidityIndicator, will not be populated, except for non-displayed executions, which will receive "/0"
ExecID	10	Alpha Numeric	✓	Exchange assigned reference ID returned on the current transaction message. Format: RRRRRSSSSS Note: Activity ID’s for each trading day start at the value of 1. **For symbols migrated to Pillar – numeric string

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Order Fill Message 2.1	Length	Type	Required	Notes and Values
Account	10	Alpha Numeric	C	User-defined information that is not validated. Common examples include user or account IDs and will be returned in the outbound messages. Will be returned if provided in the inbound message. Control characters not allowed.
DBExecID	10	Alpha Numeric	✓	Associates all buy and sell execution reports and tape prints. **For symbols migrated to Pillar – populated with the Pillar TradeID (unbundled, unique identifier provided to both sides of the trade)
ClientOrderID	17	Alpha Numeric	✓	Client order ID
Total	**116**			

6.12 Order Fill Message – Verbose [X.1]

This message is the verbose format of the report and informs clients when an order has been partially or entirely filled. The client can choose to receive verbose variant by specifying the variant in the logon message.

Order Fill Message X.1	Length	Type	Required	Notes and Values
MessageType	2	Binary	✓	0x00C1
MsgLength	2	Binary	✓	Binary length of the message
MsgSeqNum	4	Binary	✓	Exchange-assigned sequence number
MEOrderID	4	Binary		Exchange assigned Order ID
TransactTime	4	Binary	✓	Time the message was sent in milliseconds since midnight
ContraTradeTime	4	Binary	✓	Time the message was sent in milliseconds since midnight
LastShares	4	Binary	✓	Number of equity shares filled
LastPrice	4	Binary	✓	Price at which the shares were filled **For symbols migrated to Pillar – follows the Price Scale (either 3, 4 or 6) of the symbol published in the XDP Symbol Index Mapping Message. The expected maximum number of significant digits to the right of the decimal is 5, with zeros placed as insignificant digits to fit the applicable price scale format.
OrderQty	4	Binary	✓	Contains the order quantity from the original order **For symbols migrated to Pillar:

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Order Fill Message X.1	Length	Type	Required	Notes and Values
				• 1 – 25,000,000 for Auction only order types (Opening Only/MOO, LOO; MOC, LOC, Closing Offset) • 1 – 5,000,000 for all other order types
LeavesQty	4	Binary	✓	Leaves remaining on order
CumQty	4	Binary		Total Quantity of shares executed. Value always 0, unless the mnemonic being used is subscribed to this service. Email the Mnemonics Group if you wish to subscribe. **Note: If subscribed to this service, AvgPx will also be enabled.**
AvgPx	4	Binary		Average Price of executions. Value always 0, unless the mnemonic being used is subscribed to this service. E-mail the Mnemonics Group if you wish to subscribe. **Note: If subscribed to this service, CumQty will also be enabled.**
LastPxPriceScale	1	Alpha Numeric	✓	"0" through "6" **For symbols migrated to Pillar - follows the Price Scale - either 3, 4 or 6 - of the symbol published in the XDP Symbol Index Mapping Message. The expected maximum number of significant digits to the right of the decimal is 5, with zeros placed as insignificant digits to fit the applicable price scale format.
AvgPxPriceScale	1	Alpha Numeric		"0" through "4"
ExecType	1	Alpha Numeric	✓	1 = Partially filled 2 = Filled
ExecTransType	1	Alpha Numeric	✓	0 = New
OrderType	1	Alpha Numeric	✓	1 = Market 2 = Limit 5 = Market On Close B = Limit On Close

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Order Fill Message X.1	Length	Type	Required	Notes and Values
				Note: Only value 2 is valid for non-primary securities.
TimeInForce	1	Alpha Numeric	✓	If a value is not present in this field, the default is Day. 0 = Day 2 = OPG (At the Opening) 3 = IOC (Immediate Or Cancel)
Side	1	Alpha Numeric	✓	Side of the Order 1 = Buy 2 = Sell 5 = Sell Short 6 = Sell Short Exempt
OrderStatus	1	Alpha Numeric	✓	1 = Partially filled (If Leaves Qty is not 0) 2 = Filled (If Leaves Qty is = 0)
LastMarket	1	Alpha	✓	Handling Market Center of the Execution
BillingIndicator	1	Alpha Numeric	C	The BillingIndicator indicates the effect of an order on the liquidity of the book. Client's rates are determined by whether an order adds or removes liquidity from the book. 1 = Taker 2 = Provider 3 = Blended 4 = Market on Close and Market Orders Executed in Close 5 = Opening/Provider 6 = Closing/Provider 7 = Limit on Close 8 = Retail Order Provider 9 = Retail Order Taker Note: Will not support new 2 by billing indicator for MPL order or Retail Firm executions.
OrderCapacity	1	Alpha	✓	Valid values: A through Z (see Appendix C for definitions).
AutoEx	1	Alpha	✓	If the trade was automatically executed, this field is set to Y, otherwise N. **For symbols migrated to Pillar – not supported (null)

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Order Fill Message X.1	Length	Type	Required	Notes and Values
PossResend	1	Alpha	✓	Indicates whether the message was already sent. “Y” or “N”
DeliverToCompID	5	Alpha	✓	OnBehalfOfCompID (Firm Mnemonic) provided on the original order from the client is returned in this field
TargetSubID	5	Alpha	C	SenderSubID from the client is returned in this field
ClearingFirm	5	Alpha	✓	Clearing Member Identifier. **For symbols migrated to Pillar – not supported (null)
ExecBroker	5	Alpha Numeric		Indicates the Executing DMM’s/Executing Broker’s number. **For symbols migrated to Pillar – not supported (null)
ContraBroker	5	Alpha Numeric		Identifies the Contra side of the trade. Execution Reports for UTP-migrated symbols will contain ‘ANON’ in this field. Away Market executions will always contain ‘AHX’. **For symbols migrated to Pillar – always set to 'ANON' regardless of whether the order executed on NYSE or was entered on NYSE, then routed and executed at an away market
ContraTrader	5	Alpha Numeric	✓	Identifies the trader of the Contra Broker. Will always contain the value of “0”.
ExecAwayMktID	6	Alpha	C	Away Market Identifier followed by optional Market Maker ID field. Returned if executed at an Away Market.
BillingRate	6	Alpha Numeric		Consolidated Billing information returned on execution reports. May contain either the current Billing Indicator with optional Billing Tier information separated by a slash (“/”) or the Market Center ID (MCID) and optional Market Maker ID (MMID) separated by a (“/”). 1 = Taker 2 = Provider 3 = Blended 4 = Market on Close and Market Orders Executed in Close 5 = Opening/Provider 6 = Closing/Provider 7 = Limit on Close 8 = Retail Order Provider 9 = Retail Order Taker 10 = Retail Taker MPL **For symbols migrated to Pillar –

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Order Fill Message X.1	Length	Type	Required	Notes and Values
				not supported 11 = MPL Taker 12 = MPL Provider 13 = RET – Retail Firm Provider 14 = RET – Retail Firm MPL Taker 15 = Closing Offset **For symbols migrated to Pillar – the billing indicator portion of the BillingRate field will continue to be populated. However, the second part, DisplayedLiquidityIndicator, will not be populated, except for non-displayed executions, which will receive "/0"
ExecID	10	Alpha Numeric	✓	Exchange assigned reference ID returned on the current transaction message. Format: RRRRRSSSSS Note: Activity IDs for each trading day start at the value of 1. **For symbols migrated to Pillar – numeric string
DBExecID	10	Alpha Numeric	✓	Associates all buy and sell execution reports and tape prints. **For symbols migrated to Pillar – populated with the Pillar TradeID (unbundled, unique identifier provided to both sides of the trade)
Account	10	Alpha Numeric		User-defined information that is not validated. Common examples include user or account IDs and will be returned in the outbound messages. Will be returned if provided in the inbound message. Control characters not allowed.
Symbol	11	Alpha	✓	Stock symbol, including the suffix, separated by a blank space. e.g., “BRK A”
ClientOrderID	17	Alpha Numeric	✓	Client order ID
OrigClientOrderID	17	Alpha Numeric	✓	Client order ID of the original order in case of replaced order
Text	40	Alpha		description
Filler	2			
Total	**216**			

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7. Failure Recovery Methods

7.1 Binary CCG Failure Recovery

In the event of the Binary CCG gateway failure or hardware failure resulting in a non-recoverable scenario of Binary CCG, the application rolls to the spare server. The spare server assumes the IP of the failed server and the data volume is mounted (shown in figure 2). This recovery process is completely transparent to the clients connected to that gateway.

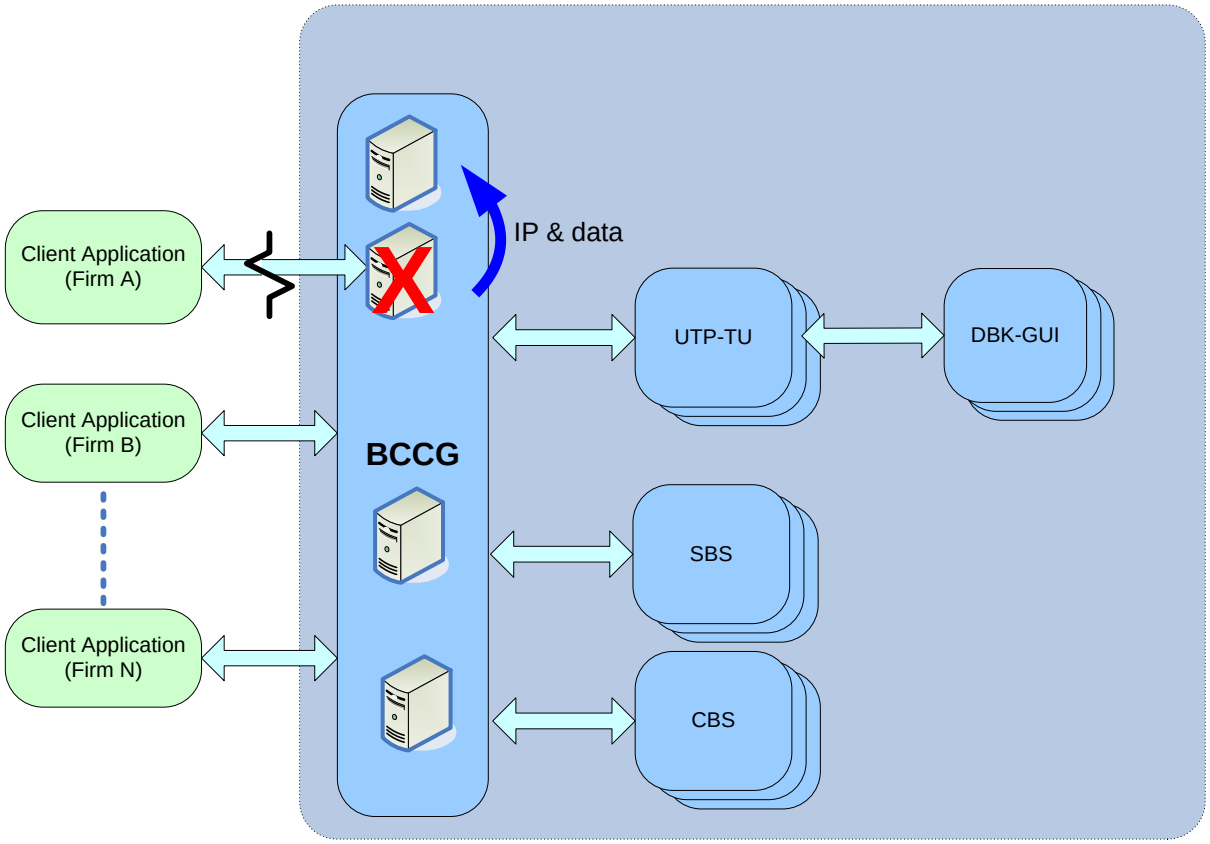

Figure 2: Binary CCG - Failure Recovery

The Binary CCG will start accepting incoming connections after the recovery has been completed. Subsequent attempts to connect to the server will be successful (shown in figure 3). The application level recovery will be handled by the gateway and the client based on the sequence number of the messages last received on either side and is detailed in the next section.

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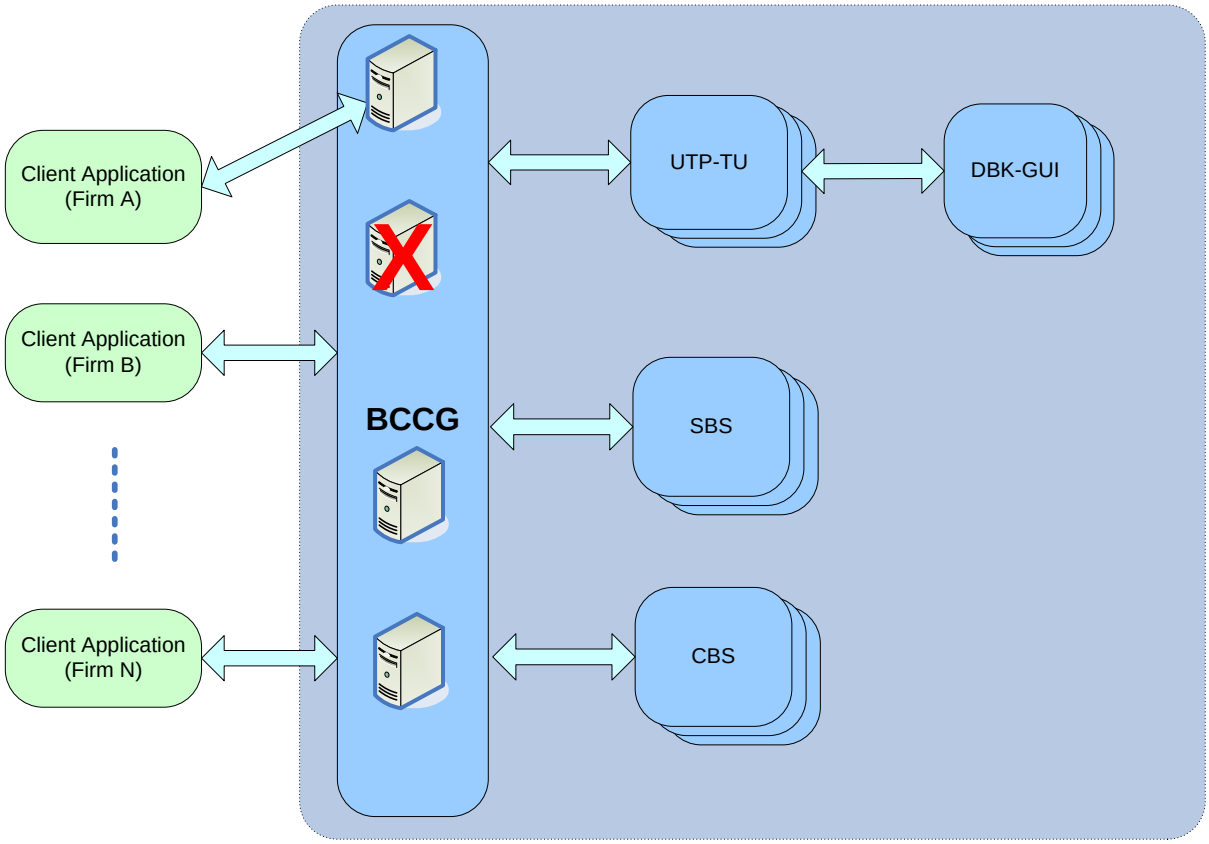

Figure 3: Binary CCG - After Recovery

7.2 Customer Application Failure Recovery

Following a failure recovery scenario, the application state may end in one of the following scenarios.

7.2.1 Synchronized State

Both the gateway and the client recovered without any issues and are in sync with respect to the sequence numbers. Client sends a logon message with the last received sequence number and the gateway sends the logon response back with the last sequence number sent by the client. The message flow resumes smoothly without any issues.

7.2.2 Out of sync State

Client End – Low Sequence Number: During the failure scenario, if the messages are lost in transit, the gateway and the client may end up in an out-of-sync state. During this scenario, the client sends a logon message with the last received sequence number and the gateway sends the logon response back with the last sequence number sent by the client. Since the client's received sequence is lower than what the gateway sent, the gateway will resume the outgoing traffic flow from the message of the client's received sequence.

Gateway end – Low Sequence Number: During the same failure scenario, it is possible that the gateway has a lower sequence number than the client's message which was sent. In this scenario, the gateway will send the logon response with the sequence number of the message it actually persisted. The client can now choose to send the missing data or ignore the sequence and proceed from their current state.

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High Sequence Number: High sequence number on either end of the connection, client or the gateway means there is error scenario in the traffic flow (may be due to error in application). In this scenario, if the error scenario is recognized at the gateway, it will terminate the connection and a manual resolution is needed. The client behavior is expected to be the same.

Non-recoverable scenario: In the event of a non-recoverable scenario from the client side, the client can choose to resume the message flow by sending in a logon message with -1 as the last received sequence number. In this scenario, the gateway will ignore the sequence number validation and will accept the sequence number provided by the client and proceed.

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8. NYSE Equities Order Types

**For symbols migrated to Pillar - for information on the functional changes to various order types that will take effect for symbols migrated to NYSE Pillar, please see: Functional Differences between NYSE Group Equities Platforms.

Order Type	Field(s)	Description
Market Order	OrdType = 1 (market) TimeInForce = 0 (Day)	An order to buy or sell that is to be executed at the best price obtainable. **For symbols migrated to Pillar - MininimumTradeSize and MinimumTriggerVolume not supported on market order
Limit Order	OrdType = 2 (limit)	An order to buy or sell at a specified price or better. A marketable limit order is a limit order to buy/sell at or above/below the consolidated best offer/bid for the security.
Sell Short Order	OrdType = 1 (market) or 2 (limit) Side = 5	A limit or market order to sell short a security not owned by the seller. The short sale rules apply to all traders using this function.
Sell Short Exempt Order	OrdType = 1 (market) or 2 (limit) Side = 6	A limit or market order to sell short a security that is exempt from current Sell Short restrictions.
Day Order	OrdType = 1 (market) or 2 (limit) TimeInForce = 0 (Day)	A market or limit order that, if not executed, expires at the end of the trading day on which it was entered.
IOC (Immediate Or Cancel)	OrdType = 2 (limit) TimeInForce = 3 (IOC)	A limit order that trades immediately and automatically cancels any unfilled portion. These orders will route to protected quotes, if the order cannot be executed at the NYSE.
Minimum Trade Size Order	OrdType = 2 (limit) TimeInForce = 3 (IOC) MinimumTradeSize >= 0 OR MinimumTriggerVolume = value equal to or less than order quantity, or zero **for symbols migrated to Pillar only; see note at right	A Minimum Trade Size Quantity for orders with a Time in Force of “IOC”. Value may be Zero, also see “StatusIndicators” field. **For symbols migrated to Pillar: - If specified on Limit IOC order, MinimumTriggerVol or MinQty must be at least one round lot, less than or equal to OrderQty (or zero), and sent with RoutingInstruction (9487) = SOC - Limit IOC entered with BOTH MinimumTriggerVolume and MinimumTradeSize is rejected Beginning on a date announced via Trader Update: - Limit IOC entered with MinimumTriggerVolume is handled as Minimum Fill order - Limit IOC entered with MinimumTradeSize is handled as Minimum Trade Size order

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Order Type	Field(s)	Description
		- For details, see Functional Differences between NYSE Group Equities Platforms
Block Reserve Order	OrdType = 2 (limit) DOTReserve = Y MaxFloorQty = (show size)** TimeInForce = 0 (Day)	A limit order with a minimum published amount of 100 shares that replenishes at the minimum or at a different amount set by the user after each execution. Both the displayed portion and hidden reserve portion will participate in all electronic executions. **For symbols migrated to Pillar - Reserve order may only be entered with MaxFloorQty = a multiple of the symbol's round lot parameter. Mixed lots are rejected
Dark Reserve Order	OrdType = 2 (limit) DOTReserve = Y MaxFloorQty = 0 (Zero) TimeInForce = 0 (Day) **Optional:** **For symbols migrated to Pillar only; see note at right MinimumTradeSize = value equal to or less than order quantity, or zero OR MinimumTriggerVolume = value equal to or less than order quantity, or zero **for symbols migrated to Pillar only; see note at right	A limit order with zero published quantity that will not be displayed to the DMM or in NYSE OpenBook®. Dark Reserve orders can be priced at, between or outside the displayed quote. This order type will not participate in manual, floor based trades, including the opening and closing trades, but will participate in all electronic executions. All dark reserve orders entered prior to the open will receive an unsolicited cancel, so as not to trigger "a cleanup trade" after the opening trade when the DMM is making an aftermarket. **For symbols migrated to Pillar: - Reserve order may only be entered with MaxFloorQty = a multiple of the symbol's round lot parameter. Mixed lots are rejected Beginning on a date announced via Trader Update: - If specified, MinimumTriggerVol or MinQty must be at least one round lot and less than or equal to OrderQty (or zero) - Non-Displayed Limit order entered with MinimumTriggerVolume is handled as Minimum Fill order - Non-Displayed Limit order entered with MinumumTradeSize is handled as Minimum Trade Size order - For details, see Functional Differences between NYSE Group Equities Platforms
Intermarket Sweep Order (ISO)	OrdType = 2 (limit) Side = 1, 2, 5, 6 TimeInForce = 0 (Day) or 3 (IOC) RoutingInstruction = I	A limit order that trades at the NYSE only and will trade through even when another market center is publishing a better quotation. When sending an Intermarket Sweep Order, the sender fulfills Reg NMS order-protection obligations and NYSE Rules by concurrently sending orders to market centers with better prices. **For symbols migrated to Pillar: - Reserve quantity (MaxFloorQty) not supported on ISO order - MinimumTradeSize and MinimumTriggerVolume

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Order Type	Field(s)	Description
		not supported on ISO order
Trade-at Intermarket Sweep Order (Trade-at ISO)	OrdType = 2 (limit) Side = 1, 2, 5, 6 (For IOC orders only) TimeInForce = 3 (IOC) ExecInst = y (Trade-at ISO)	An immediate or cancel limit order that trades at the NYSE only, and may trade against undisplayed liquidity at a price equal to the limit price of the inbound Trade-at ISO order. The Exchange may rely on the order sender to have satisfied all Protected Quotations better than or equal to the limit price of the Trade-at ISO order. **For symbols migrated to Pillar - MinimumTradeSize and MinimumTriggerVolume not supported on Trade-at ISO order
Intermarket Sweep Order Add Liquidity Only (ISO ALO)	OrdType = 2 (limit) Side = 1 (Buy), 2 (Sell), 5 (Sell Short) or 6 (Sell Short Exempt) TimeInForce = 0 (Day) RoutingInst = L	An limit day order that trades at the NYSE only and on arrival will trade through even when another market center is publishing a better quotation only if adding liquidty. Any remaining portion will then be placed on the Order book and will reprice when necessary in order to avoid taking liquidity. Note: When sending an Intermarket Sweep Order, the sender fulfills RegNMS order-protection obligations and NYSE Rules by concurrently sending orders to market centers with better prices upon arrival. **For symbols migrated to Pillar - Reserve quantity (MaxFloorQty) not supported on ISO ALO order
RegNMS Immediate or Cancel Order (SOC)	OrdType = 2 (limit) TimeInForce = 0 (day) or 3 (IOC) RoutingInstruction = S	A limit immediate or cancel order that is to be executed in whole or in part on the NYSE only. This type of IOC order will not trade through protected quotes.
Do Not Ship (DNS)	OrdType = 2 (limit) TimeInForce = 0 (day) RoutingInstruction = D	A limit Day order that is to be executed in whole or in part by the NYSE only. The portion not executed is quoted, and in the event the order would require routing to an away market center, it would be immediately cancelled. **For symbols migrated to Pillar - MinQty and MinimumTriggerVolume not supported on DNS order
Closing Offset (CO) **For symbols migrated to Pillar – available for Tape A securities only	OrdType = 2 (limit) TimeInForce = 0 (day) RoutingInstruction = C	A limit Day order that can only execute At the Close to offset a market imbalance.

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Order Type	Field(s)	Description
Opening Only Order	Market OrdType = 1 (Market) TimeInforce = 2 (OPG) Or Limit OrdType = 2 (Limit) TimeInForce = 2 (OPG)	A market or limit order that is to be routed as an on open order to participate in the market opening or reopening process. Any balance not executed following the opening trade is cancelled. OPG orders entered after the market open are automatically cancelled. **For symbols migrated to Pillar - MinimumTradeSize and MinimumTriggerVolume not supported on Opening Only orders
Market On Close (MOC)	OrdType = 5 (market on close)	A market order that is to be executed only during the closing auction.
Limit on Close (LOC)	OrdType = B (limit on close)	A limit DAY order that is entered for execution at the closing price, and if not so executed, is to be treated as cancelled.
Retail Price Improvement (RPI) **For symbols migrated to Pillar – available beginning on a date announced via Trader Update	OrdType = 2 (limit) Side = 1, 2, 5, or 6 TimeInForce = 0 (day) RoutingInstruction = R Note: OffsetPrice is required for this order type. Note: LMT Price is allowed in sub-pennies for values greater than $1.00 and less than $1.00, but must be in multiples of the minimum offset price (currently defined as $0.0010). Note: Not allowed for Z-mnemonics	Will only trade with Retail Taker orders. Incoming RPI interest in sub-pennies is accepted—however, any RPI interest that would result in an execution below $1.00 will be prevented from trading.
Retail Taker Type 1 Retail Only (RTO) **For symbols migrated to Pillar – available beginning on a date announced via Trader Update	OrdType = 1 (market) or 2 (limit) Side = 1, 2, 5, or 6 TimeInForce = 0 (day) or 3 (IOC) RoutingInstruction = 1 *Note: Not allowed for Z-mnemonics*	Retail Taker order that only trades against Retail Price Improvement (RPI) orders. All Retail Taker orders are treated as IOC.

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Order Type	Field(s)	Description
Retail Taker Type 2 Retail Non-Routable (RTNR) **For symbols migrated to Pillar – not supported	OrdType = 1 (market) or 2 (limit) Side = 1, 2, 5, or 6 TimeInForce = 0 (day) or 3 (IOC) RoutingInstruction = 2 *Note: Not allowed for Z-mnemonics*	A DNS Retail Taker order that interacts with Retail Providing interest and/or other interest that resides on the limit order book. All Retail Taker orders are treated as IOC.
Retail Taker Type 3 Retail Routable (RTR) **For symbols migrated to Pillar – not supported	OrdType = 1 (market) or 2 (limit) Side = 1, 2, 5, or 6 TimeInForce = 0 (day) or 3 (IOC) RoutingInstruction = 3 *Note: Not allowed for Z-mnemonics*	Retail Taker order that interacts with Retail Providing interest, other interest that resides on the limit order book and/or can be routed away to other markets for execution. All Retail Taker orders are treated as IOC.
SelfTrade Prevention Order (STP)	OrdType = 1 (market), 2 (limit), 5 (MOC) or B (LOC) Side = 1, 2, 5, or 6 TimeInForce = 0 , 2, or 3 SelfTradeType = N or O ClientID = must be present.	Customer order designation that prevents two orders with the same ClientID (MPID) from trading against each other on the NYSE Market. Note: Opening (OPG) orders, Market on Close (MOC) and Limit on Close (LOC) orders will not be validated for Self-Trade Prevention.
Mid-Point Passive Liquidity Order (MPL)	OrdType = 2 (limit) Side = 1, 2, 5, or 6 TimeInForce = 0 (Day) or 3 (IOC) Price = must be greater than $1.00 (sub-pennies are invalid) **Optional:** ExecInst = M (Mid-Point Peg) MinimumTriggerVol (MTV) = value equal to or less than the Order Quantity, or Zero(0) **See note at right OR MinimumTradeSize = value equal to or less than order	An undisplayed limit order that will provide price improvement by executing at the mid-point of the Protected BBO. May optionally contain the STP order designation. May optionally contain a Minimum Trigger Volume (MTV). If designated as ALO, OrderQty must be equal to or greater than one round lot. MPL with RoutingInstruction SOC must be entered with TimeInForce of IOC. **For symbols migrated to Pillar: - MPL IOC must be entered with OrderQty of at least one round lot - If specified, MinimumTriggerVol or MinQty must be at least one round lot, and less than or equal to order quantity (or zero)

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Order Type	Field(s)	Description
	quantity, or zero **for symbols migrated to Pillar only; see note at right RoutingInstruction = May contain one of the following: ALO, DNS, or SOC	- MPL entered with BOTH MinimumTriggerVolume and MinimumTradeSize is rejected Beginning on a date announced via Trader Update: - MPL entered with MinimumTriggerVolume is handled as Minimum Fill order - MPL entered with MinimumTradeSize is handled as Minimum Trade Size order - For details, see Functional Differences between NYSE Group Equities Platforms
Add Liquidity Only Order (ALO)	OrdType = 2 (limit) Side = 1, 2, 5, or 6 Quantity = one round lot or greater. TimeInForce = 0 (Day) ExecInst = M (Optional) RoutingInstruction = ALO	A limit or limit on close order that expresses intent to add liquidity only. Interest will automatically reprice to prevent taking liquidity. May optionally contain the STP order designation. May optionally contain a DOT Reserve Indicator and MaxFloorQty. If MaxFloorQty is entered, must be greater than 0. **For symbols migrated to Pillar – ALO with MaxFloorQty not supported
Intermarket Sweep Order Add Liquidity Only (ISO ALO)	OrdType = 2 (limit) Side = 1 (Buy), 2 (Sell), 5 (Sell Short) or 6 (Sell Short Exempt) TimeInForce = 0 (Day) RoutingInst = L	A limit day order that trades at the NYSE only and on arrival will trade through even when another market center is publishing a better quotation only if adding liquidity. Any remaining portion will then be placed on the Order book and will reprice when necessary in order to avoid taking liquidity. Note: When sending an Intermarket Sweep Order, the sender fulfills RegNMS order-protection obligations and NYSE Rules by concurrently sending orders to market centers with better prices upon arrival.

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Appendix A: Field Descriptions and Values

LastMarket

The LastMarket field will be specified on execution reports. Valid values for this field:

- N – NYSE

The client may need this field for back office clearing and reporting purposes. CCG will return the actual handling market center on execution reports regardless of the value designated on the incoming order message.

DBExecID

This field contains a value that associates all buy and sell execution reports to the tape print.

Value for this field: **10 numeric characters.**

**For symbols migrated to Pillar – populated with the Pillar TradeID (unbundled, unique identifier provided to both sides of the trade)

RoutingInstruction

The RoutingInstruction field is used to further differentiate incoming order types. Per Reg NMS, the use of certain values in this field will prevent certain orders from being routed to an away market center.

Type	RoutingInstruction
NX	"7"
DNS	"D"
SOC	"S"
ISO	"I"
CO	"C"
RPI	"R"
RTO	"1"
RTNR	"2"
RTR	"3"
ALO	"A"
ALO ISO	"L"

- NX : AutoExecution
- ISO : Inter-Market Sweep – An ISO order is a limit order that is designated to be executed exclusively at one Market Center even when other Market Centers are publishing better quotes.
- DNS : Do Not Ship – A DNS order is a limit order to buy or sell that is to be quoted and/or executed in whole or in part only by the NYSE and will be automatically cancelled if interest required to route to another market center.
- SOC : NMS IOC – A market or limited price order designated immediate or cancel that will be automatically executed against the displayed quotation up to its [the] full size and [will] sweep the Matching Engine, to the extent possible without being routed elsewhere for execution, and the portion not so executed will be immediately and automatically cancelled.

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- CO : Closing Offset Order – A limit Day order that can only execute At the Close to offset a market imbalance. **For symbols migrated to Pillar – not supportedavailable for Tape A securities only
- RPI : Retail Price Improvement Order – Trade with Retail Taker orders only. **For symbols migrated to Pillar – available beginning on a date announced via Trader Update
- RTO : Retail Order only – Interact with Retail Providing interest only. **For symbols migrated to Pillar – available beginning on a date announced via Trader Update; Market not supported
- RTNR : Retail Non-Routable Order – Interact with Retail Providing Interest and/or other interest that resides on the limit order book. **For symbols migrated to Pillar – not supported
- RTR : Retail Routable Order – Interact with Retail Providing interest, other interest that resides on the limit order book and/or can be routed away to other markets for execution. **For symbols migrated to Pillar – not supported
- ALO : Add Liquidity Only Order – modifier that expresses intent to add liquidity only. Interest will automatically reprice to prevent taking liquidity.
- ALO ISO: Add Liquidity Only Inter-Market Sweep Order– modifier that indicates on arrival the order may trade through another market center even if the market is publishing a better quotation. Any remaining portion will then be placed on the Order book and will reprice when necessary in order to avoid taking liquidity.

ExecAwayMktID

This field contains the Market Center ID and Values for this field are:

A = NYSE American
B = Nasdaq BX
C = NYSE National
D = FINRA ADF
H = MIAX
I = International Securities Exchange
J = Direct Edge A (EDGA)
K = Direct Edge X (EDGX)
L = LTSE
M = NYSE Chicago
N = New York Stock Exchange
P = NYSE Arca Exchange
T = Nasdaq
U = MEMX
V = Investors' Exchange (IEX)
W = Chicago Board Options Exchange
X = Nasdaq PSX
Y = BATS Y Exchange (BYX)
Z = BATS Z Exchange

Liquidity/Billing Indicator

The BillingIndicator indicates the effect of an order on the liquidity of the book. Client's rates are determined by whether an order adds or removes liquidity from the book.

The values that clients can expect to receive in this field are:

1 = Taker

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2 = Provider

3 = Blended

4 = Market on Close and Market Orders Executed in Close

5 = Opening/Provider

6 = Closing/Provider

7 = Limit on Close

8 = RLP - Retail Order Provider

9 = RLP - Retail Order Taker

BillingRate

BillingRate is sent on execution reports by NYSE that consolidates all billing information, including away market information, into a single field. This field combines current values of Billing Indicator and ExecAwayMktID into one field and supports additional NYSE Displayed Liquidity information. The billing values in support of the Midpoint Passive Liquidity order type (MPL) and Retail Firm program will only be returned in this field.

Examples:

a. Field may contain an Away Market Indicator with optional MMID separated by "/".

1.1.1. Example format = D/EDGA.

Or

b. Field may contain Billing Indicator with optional billing tier separated by a "/".:

1.1.2. Example format = 2/2 (represents a report for less than 2000 shares that provided liquidity)

1.1.3. Example format = 11/3 (represents an MPL report for less than 5000 shares but greater than 1999 shares that provided liquidity)

In addition to the Billing Indicators listed above, the following additional values may be returned in this Tag:

10 = RLP - Retail Taker MPL **For symbols migrated to Pillar – not supported

11 = Taker MPL

12 = Provider MPL

13 = RET – Retail Firm Provider

14 = RET – Retail Firm MPL Taker

15 = Closing Offset

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Displayed Liquidity Table:

Displayed Liquidity Categories	New Displayed Liquidity Indicator Values
0 Round Lots	"0"
Greater than 0 and less than 1 round lot (1-99 shares)	"1"
From 1 to less than 20 round lots (100-1,999 shares)	"2"
From 20 to less than 50 round lots (2,000-4,999 shares)	"3"
From 50 to less than 100 round lots (5,000-9,999 shares)	"4"
From 100 to less than 200 round lots (10,000-19,999 shares)	"5"
From 200 round lots and up (20,000 shares or more)	"6"
Reserved for future use.	"7" – "9"

**For symbols migrated to Pillar – the billing indicator portion of the BillingRate field will continue to be populated. However, the second part, DisplayedLiquidityIndicator, will not be populated, except for non-displayed executions, which will receive "/0"

StatusIndicators

Each bit position of the Status Indicator field will be used as a flag to indicate that zero is a valid value for an assigned field (supports 32 flag indicators).

Bit Position	Indicator Name	Description	Bit Value
0	Zero Offset Price	Represents Zero Offset Price Flag. When Offset Price equals zero, this Bit must equal 1.	1 = Zero Offset Price 0 = NULL
1	Zero Minimum Trade Size	Represents Zero Minimum Trade Size flag. When Minimum Trade Size equals zero, this Bit must equal 1.	1 = Zero Minimum Trade Size 0 = NULL
2	Zero Minimum Trigger Vol	Represents Zero Minimum Trigger Vol flag. When Minimum Trigger Qty equals zerio, this Bit must equal 1.	1 = Zero Minimum Trigger Vol 0 = NULL

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Appendix B: Reject Codes

Session Rejects

Reject Number	Name	Description
0	Success	No Reject
1	System unavailable	The Trading System is not available.
2	Invalid Sequence Number	The Last Sequence Number in a Logon message is larger than UTPDirect expected.
3	Client Session Already Exists	A user attempted to login more than once and the existing client session is still active. Only one client session is supported per user.
4	Client Session Disabled	The user attempted to reconnect to a client session that has been disabled.
5	Connection Type	The configured connection type of a session does not match the port the client connects to.

Application Rejects

Reject Reason Number	Name	Description
0000	Too Late to Cancel	For additional details, please refer to the Text field.
0001	Unknown Order / Invalid Data	For additional details, please refer to the Text field.
0003	Unknown Order / Invalid Data	For additional details, please refer to the Text field.
0097	Firm Mnemonic Blocked	For additional details, please refer to the Text field.
0098	Clearing Firm Mnemonic Blocked	For additional details, please refer to the Text field.
3000	REJ - Invalid value in "Field Name"	Invalid field in the incoming message
3001	REJ - Required field missing-"Field Name"	Required field is missing in the incoming message
3002	REJ - CancelQty and LeavesQty required	Both these field must be present in a cancel request.
3003	REJ - Target System Unavailable	NYSE Trading System(s) unavailable.
3004	REJ - Invalid Stock Symbol	Symbol is not a valid NYSE Symbol
4000	REJ - Target System Unavailable	Either the NYSE trading System is not available or the Stock has been is inhibited.

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Reject Reason Number	Name	Description
4001	REJ - Invalid Stock Symbol	Invalid stock symbol is provided in the incoming message
4002	REJ - Invalid Firm Mnemonic	Invalid firm mnemonic is provided in the incoming message.
4003	REJ-Invalid Firm Mnemonic for Connection	Firm validation failed. Invalid firm mnemonic is provided in the incoming message.
4004	REJ - Market Closed	Market is closed.
4005	REJ - Booth Routing Not Supported	Routing to the Broker Systems not currently available.
4006	REJ - Invalid value in "Field Name"	Client Order ID format error
4007	REJ - Invalid Branch Code	Invalid branch code is provided in the incoming message
4008	REJ - Reserved Branch Code used	Reserved branch code is used in the incoming message
4009	REJ - Invalid Order Quantity	Order quantity entered exceeds current maximum order quantity validation.
4010	REJ - Invalid MaxFloorQuantity	MaxFloor quantity must be one of the following: a. equal to zero (0), b. equal to the quantity of the order or c. in multiples of the symbols round lot parameter.
4011	REJ-MaxFloor NA with RoutingInstruction	DOT Reserve order must have RoutingInstruction designation of either NX (7) or DNS (D).
4012	REJ - Invalid Price	Incorrect price specified in the incoming message
4013	REJ – OPG TIF not valid for NASDAQ UTP	Opening orders not valid for Nasdaq symbols as there is no opening auction.
4014	REJ - Invalid OrderCapacity	Incorrect account type provided on an order.
4015	REJ - Missing Clearing Firm	Clearing Firm not provided.
4016	REJ - Clearing Firm Not Found	Clearing Firm not found in Firm database.
4017	REJ - Invalid Clearing Firm	Clearing Firm not valid for entering firm mnemonic.
4018	REJ – CO Order not valid for NASDAQ UTP	Closing orders not valid for Nasdaq symbols as there is no closing auction.
4019	REJ–Limit on Close must have TIF of Day	OPG and IOC values for Time in Force are not applicable with a Limit on Close order.
4020	REJ– Invalid ExecInst for Limit on Close	DNI and DNR instructions are not applicable with a Time in Force of Day.
4021	REJ–Market on Close must have TIF of Day	OPG and IOC values for Time in Force are not applicable with a Market on Close order.
4022	REJ – ISO not valid for eQuotes	Intermarket Sweep routing instruction not valid for eQuotes.

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Reject Reason Number	Name	Description
4023	REJ - Order Type not valid with SOC	SOC order must be either a Market or a Limit order.
4024	REJ – Time in force not valid with SOC	SOC order must have a Time in Force of Day or OC.
4025	REJ - Order Type not valid with ISO	ISO order must be a Limit order.
4026	REJ - Time in force not valid with ISO	ISO order must have a Time in Force of Day or OC.
4027	REJ - Order Type not valid with DNS	DNS order must be a Limit order.
4028	REJ - Time in force not valid with DNS	DNS order must have a Time in Force of Day.
4029	REJ - Order Type not valid for DOT Reserve	DOT Reserve order must be a Limit order.
4030	REJ - Time in force not valid for DOT Reserve	DOT Reserve order must have a Time in Force of Day or OC.
4031	REJ–Invalid DOT Reserve Indicator Value	Value must be either “Y” (Yes) or “N” (No) indicating a DOT Reserve order.
4032	REJ - Invalid Order type for NASDAQ UTP	Order type not valid for Nasdaq securities.
4033	REJ - Day orders only for Test Symbols	When using production test symbols, Time in Force on the order must be set as Day.
4034	REJ -Target Sys Unavailable for Test Symbols	Host systems are unavailable for test symbols.
4035	REJ - Feature Unavailable	This feature is currently unavailable.
4036	REJ–Invalid RT Mnemonic	The mnemonic must be registered as a valid Retail Taker.
4037	REJ - Invalid MinQty value	Invalid Minimum Trade Size Quantity Valid for UTP only.
4038	REJ – Invalid Symbol for Test Mnemonic	Only Test Symbols can be used when entering interest using a Test Mnemonic.

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Appendix C: OrderCapacity

Field	Values		
OrderCapacity	Represents the Account Type, which reflects the type of trade as well as the relationship between the beneficial owner of the account and the member organization clearing the trade. Valid Values:		
	A	=	Trading by a member or member organization acting as agent on behalf of an unaffiliated customer.
	P	=	Trading for the proprietary account of a member or member organization or an affiliate of a member or member organization.
	Q	=	Trading by a member on the Floor relating to the covering or liquidating a member's own error. All trades to establish or liquidate error positions in the member's error account must be identified with this account type.
	R	=	Trading by a member or member organization as principal that is intended to satisfy an originating customer order to buy or sell a security at the same price as the principal execution.

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Appendix D: Symbol and Suffix

Symbology Reference for NYSE Equities

Security Categorization	Values
Called	CL
Class A	A
Class B	B
Class A Called	ACL
Class B Called	BCL
Class A When Issued	AWI
Class B When Issued	BWI
Convertible	CV
Convertible Called	CVCL
Class A Convertible	ACV
Class B Convertible	BCV
Preferred	PR
Preferred Class A	PRA
Preferred Class B	PRB
Preferred Class A Called	PRACL
Preferred Class B Called	PRBCL
Preferred Class A Convertible	PRACV
Preferred Class B Convertible	PRBCV
Preferred Class A When Issued	PRAWI
Preferred Class B When Issued	PRBWI
Preferred When Issued	PRWI
Preferred Class A When Distributed	PRAWD
Preferred Class B When Distributed	PRBWD
Preferred When Distributed	PRWD
Partial Paid	PP
Rights	RT
Rights When Issued	RTWI
Units	U
Warrants	WS

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Security Categorization	Values
Warrants Class A	WSA
Warrants Class B	WSB
Warrant When Issued	WSWI
When Distributed	WD
When Issued	WI

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Appendix E: NYSE Pillar Reason Codes

New Reason Codes Returned as Text on Outgoing Messages

Pillar will return a new set of event reason codes and descriptions as text on Execution Reports and Cancel Reject messages. These codes qualify the event that produced the message.

Format: Text = '*Rxxx: Description*'

Reason Code	Description	Reason Code	Description
R000	OK	R022	Invalid TimeInForce
R001	Invalid SenderCompID	R023	Invalid Settlement Type
R002	Invalid SenderSubID	R024	Invalid FutSettDate
R003	Invalid SendingTime	R025	Invalid SymbolSfx
R004	Invalid TargetCompID	R026	Invalid Open/Close
R005	Invalid TargetSubId	R027	Invalid StopPx
R006	Invalid OnBehalfOfCompID	R028	Invalid Client ID
R007	Invalid OnBehalfOfSubID	R029	Invalid MinQty
R008	Invalid DeliverToCompID	R030	Invalid MaxFloor
R009	Invalid DeliverToSubID	R031	Invalid LocateReqd
R010	Invalid Account	R032	Invalid ExpireTime
R011	Invalid ClOrdID	R033	Invalid SecurityType
R012	Invalid ExecInst	R034	Invalid MaturityMonthYear
R013	Invalid IDSource	R035	Invalid PutOrCall
R014	Invalid OrderQty	R036	Invalid StrikePrice
R015	Invalid OrdType	R037	Invalid Covered/Uncovered
R016	Invalid Price	R038	Invalid Customer/Firm/Broker/MM
R017	Invalid Order Capacity	R039	Invalid MaturityDay
R018	Invalid Security ID	R040	Invalid PegDifference
R019	Invalid Side	R041	Invalid SellersDays
R020	Invalid Symbol	R042	Invalid TradingSessionID
R021	Invalid Text	R043	Invalid NoTradingSessions

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Reason Code	Description	Reason Code	Description
R044	Invalid DiscretionInst	R077	System full (MENG_RATE_EXCEEDED)
R045	Invalid DiscretionOffset	R078	Throttle Reject
R046	Invalid PriceType	R079	Symbol Halted
R047	Invalid ClearingFirm	R080	No symbol permission
R048	Invalid ClearingAccount	R081	Price Too Far Outside
R049	Invalid PartyID	R082	MWCB Halt
R050	Invalid Optional Data	R083	Market Closed
R051	Invalid CrossID	R084	Symbol Closed
R052	Invalid StrategyIndicator	R085	LULD Cancel Instruction
R053	Invalid TradeID	R086	No Price Slide Inst During SSR
R054	Invalid NoSelfTrade	R087	Invalid StockLegGiveUp
R055	Invalid CAPStrategy	R088	Invalid NoLegs
R056	Invalid SpecialOrdType	R089	Invalid LegPositionEffect
R057	Invalid RoutingInst	R090	Invalid LegSymbol
R058	Invalid OffsetPrice	R091	Invalid LegCFICode
R059	Invalid ExtendedExecInst	R092	Invalid LegMaturityDate
R060	Invalid IntroducingBadgeID	R093	Invalid LegStrikePrice
R061	Invalid BillTo	R094	Invalid LegContractMultiplier
R062	Invalid ParentFirmClOrdID	R095	Invalid LegRatioQty
R063	Invalid ParentFirmExchangeOrdID	R096	Invalid LegSide
R064	Invalid ParentFirm	R097	Invalid LegRefID
R065	Invalid InterestType	R098	Unsupported Order Type
R066	Invalid DisplayInd	R099	UROUT
R067	Invalid PegInd	R100	Primary Market Not Available
R068	Invalid CeilingFloorPrice	R101	No NBBO/PBBO for Peg
R069	Invalid MinPegQty	R102	No Market for Market Order
R070	Invalid DOrderAuctionPrice	R103	Marketable Price
R071	Invalid DiscMaxVol	R104	Done for Day
R072	Invalid DicsRouteInd	R105	Credit Limit Violation
R073	Invalid MinimumTriggerVol (MTV)	R106	Cancel Remaining IOC
R074	Invalid Attributed Quote	R107	Too Late to Cancel
R075	Invalid Proactive If Locked	R108	InvalidPossResend
R076	System not available	R109	Cancel Pending

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Reason Code	Description	Reason Code	Description
R110	Symbol already opened	R141	Invld Inst During Imbalance Freeze
R111	Firm Bulk Cancel	R142	Invld Inst After Cutoff Time
R112	OnBehalfOfCompID Blocked	R143	Cancelled by Primary Market
R113	ClearingFirm Blocked	R144	Pending - Imbalance Freeze
R114	Cancel/Replace Pending	R145	No RLP Permission
R115	Modify Pending	R146	Invalid Instruction for IOC's
R116	Cannot Flip Imbalance	R147	System full (CG_RATE_EXCEEDED)
R117	Cannot Increase Imbalance	R148	Pending Cancel - Auction Running
R118	Pending Cancel - Imbalance Freeze	R149	Pending Modify - Auction Running
R119	Pending Replace - Imbalance Freeze	R150	Pending Replace - Auction Running
R120	Pending Modify - Imbalance Freeze	R151	Invld Inst for Pending Order
R121	Pending Cancel - Routed Interest	R152	SSH Price below NBB on ISO
R122	Pending Replace - Routed Interest	R153	IOC Received while Auction Running
R123	Pending Modify - Routed Interest	R154	Pending - Symbol Transition
R124	Pending - Auction Running	R155	Pending Cancel - Symbol Transition
R125	Duplicative Order Check	R156	Pending Modify - Symbol Transition
R126	Cancelled by Exchange	R157	Pending Replace - Symbol Transition
R127	New Order	R158	Invalid For Tick Pilot
R128	Fill	*(R159 – R167 not applicable to this gateway)*	
R129	Partial Fill	R168	Pillar Risk Mitigation
R130	Reduced	R169	No Last Sale for Peg
R131	Replaced	R170	Symbol Pending Closing Auction
R132	No Market for Cross	R171	Extreme Closing Order Imbalance
R133	STP Cancel*	R172	Invalid Multi-Message
R134	Invalid PossDupe	R173	Invalid Request Targeting Manual SenderCompID
R135	TPID Blocked	R174	Invalid DMMRejectReason
R136	Invalid Bulk Cancel	R175	Pending - Pending Auction State
R137	Pending Bulk Cancel	R176	Pending Cancel – Pending Auction State
R138	Symbol Not Open	R177	Pending Modify – Pending Auction State
R139	Symbol Suspended	R178	Pending Replace – Pending Auction State
R140	Symbol IPO Halt	R179	Cancelled - DMM Manual Order Re-price

*Format for STP Cancel is 'Text' field = 'R133:STP...' where … = the ClOrdID of the contra-side order that caused the cancellation.

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Reason Code	Description	Reason Code	Description
R180	Too early to open	R208	Invalid ManualActionID
R181	Too early to close	R209	Invalid AuctionSellIndicator
R182	Symbol not frozen by Auction Request	R210	Invalid IntradaySellShortQty
R183	Symbol is frozen by DBK GUI	R211	Indication Template is Open
R184	Too Late - Auction Running	R212	Invalid Action
R185	Too Late - Symbol Transition	R213	Invalid SellIndicator
R186	No Eligible Crossing Interest	R214	Invalid IntradaySellShortQty
R187	Book is locked/crossed	R215	Invalid ManualResponseType
R188	No interest exists	R216	No NYSE last sale
R189	Imbalance too large	R217	Symbol Direct Listing State
R190	SSH price below SSR filing price	R218	DMM GUI Reduction in Manual Order Qty
R191	Symbol already closed	R219	Cross Eligible
R192	Opening template opened	*(R220 - R222 not applicable to this gateway)*	
R193	Closing template opened	R223	Risk - Single Ord Max Qty
R194	PRIN entered on auction template	R224	Risk - Single Ord Max Notional
R195	Mandatory Indication submitted	R225	Risk - Gross Credit Breach
R196	Pending Crowd exists	R226	Risk - Kill Switch
R197	No consolidated last sale	R900	Invalid ProactiveDiscretionInd
R198	Paired qty exceeds max trade parameter	R901	Invalid ExtendedPNP
R199	LULD or MWCB timer running	R902	Invalid ExecBroker
R200	Locking/Crossing Away Quote	R903	FastCancelRep Unsupported
R201	Cross Not Eligible	R904	Pending Cancel
R202	Too late to open	R905	Pending Replace
R203	Pending Acceptance (for Ack on order arrival)	R906	System full (CGA_RATE_EXCEEDED)
R204	Rejected Cancel by DMM"	R999	Unknown Issue Encountered
R205	Cancelled by DMM		
R206	Price is outside allowable range		
R207	Auction Validation In Progress		

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