



**Functional Differences –
CCG/UTP Direct vs. NYSE Pillar Gateway**

Functional Differences

	CCG/UTP Direct Gateways	NYSE Pillar Gateway for NYSE Equity Platform	NYSE Pillar Gateway for NYSE Floor Broker Systems
Binary Protocol – Session Configuration	<ul style="list-style-type: none"> Certain session configuration settings may be specified by the firm via the “Logon Request” message. These may be changed intraday by logging off and logging back in with the new specified settings. 	<ul style="list-style-type: none"> The “Session Configuration Acknowledgment” message notifies the firm at start of day of their current session configuration settings. The settings may be changed intraday without logging off by sending the “Session Configuration Request” message. For details, refer to the NYSE Pillar Gateway Binary Protocol Specification 	<ul style="list-style-type: none"> NYSE Broker Systems is not supported by the Binary Protocol
FIX Protocol – Message Sequence Numbers	<ul style="list-style-type: none"> The firm may reset both the client and Exchange side sequence numbers to 0 upon login by sending “ResetSeqNumFlag” (141) = Y on the “Logon Request” message. 	<ul style="list-style-type: none"> The firm may not reset the client nor Exchange side sequence numbers on the “Logon Request” message. The next expected client side sequence number is provided by the Exchange in the tag NextExpectedMsgSeqNum (789) on both the “Logon Accept” and “Logout” messages. The firm may increase the client side sequence number by sending the “Sequence Reset” message, but may never reset it. For more information, see the “Pillar FIX Session Layer Handling” section of the NYSE Pillar Gateway FIX Protocol Specification 	<ul style="list-style-type: none"> Same support as NYSE Equity Platform

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FIX Protocol – Session Layer	<ul style="list-style-type: none"> A Heartbeat Interval of either 30 seconds or 60 seconds must be specified by the firm via the “Logon Request” message. The value provided by the firm in SendingTime (52) is not validated. 	<ul style="list-style-type: none"> A Heartbeat Interval with a value between 1 and 60 seconds must be specified by the firm via the “Logon Request.” One missed heartbeat will result in a test request from Pillar. Two missed heartbeats will result in an unsolicited logout and closure of the TCP connection by Pillar. SendingTime (52) is required on all incoming Session and Application Layer messages, represented in UTC with millisecond resolution. Pillar will convert the value provided by the firm to local time and validate that it matches the current business day. If not, the message will be rejected. The Exchange will provide the tag SessionStatus (1409) on the “Logon Accept” and “Logout” messages to indicate whether the session is active, logged out, or failed login due to invalid username/password. 	<ul style="list-style-type: none"> Same support as NYSE Equity Platform
Inbound Message Throttling	<ul style="list-style-type: none"> Inbound messages are throttled on a per-session basis at a rate of 1000 messages/1 rolling second. 	<ul style="list-style-type: none"> Inbound messages are throttled on a per-session basis at a rate of 500 messages/100 rolling milliseconds. Outbound Acknowledgments indicate when the corresponding inbound Order, Cancel/Replace Request, Modify Request, Cancel Request, or Bulk Cancel Request was throttled – binary BitfieldFlowIndicator field; FIX tag FlowIndicator (20005). NYSE Pillar Binary Gateway sessions have an option to specify in the “Login” request message to queue and reject 	<ul style="list-style-type: none"> Inbound messages are throttled on a per-session basis at a rate of 500 messages/100 rolling milliseconds. All other support for the NYSE Equities Platform is not available for NYSE Broker systems.

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		<p>new inbound Orders when throttled, instead of the default behavior to queue and process the messages as the throttle rate allows.</p> <p>*New order messages will be rejected <78 – Throttle Reject></p> <p>*Cancel, Modify and Bulk Cancel messages will be processed as if queued</p> <p>*Cancel portions of Cancel Replace messages will be processed as if queued. The Exchange will send the following response messages:</p> <ul style="list-style-type: none"> - UROUT for the cancelled order with BitfieldFlowIndicator, “Throttled” bit set to ‘1’ (Inbound Message was Throttled) - Cancel/Replace Reject with <78 – Throttle Reject> <p>For DMM multi-message - regardless of session configuration selected upon login, Pillar Gateway will always treat a multi-message as Queue and Process. TG Begin, TG End, and all messages in between will be queued and processed even if the session is configured for queue and reject.</p> <p>For more details, see the NYSE Pillar Stream Protocol Specification and the “Message Throttling” section of the NYSE Pillar Gateway Binary Protocol Specification</p>	

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Firm, Market Maker and Risk Entity Identifiers	<ul style="list-style-type: none"> Firms and Market Makers (DMM, SLP, SLMM) are identified by Mnemonic in OnBehalfOfCompID (in FIX, tag 115). A Mnemonic may be one to four characters in length. The following function is maintained at the Mnemonic level: <ul style="list-style-type: none"> *OATS Exchange Participant ID - Exchange Route Matching The following function is maintained at the Risk Group level, which may include one or more Mnemonics: <ul style="list-style-type: none"> *Credit limits on Non-NMS Routing - primary only orders; MOO/LOO/MOC/LOC orders for non-primary, non-auction eligible symbols routed to primary market; Market Day orders for non-primary, non-auction eligible symbols routed to primary market before open or during the halt. *Risk Management Tool (RMT) risk 	<ul style="list-style-type: none"> Firms are identified by a four character Market Participant Identifier (MPID) in OnBehalfOfCompID (FIX tag 115) or MPID field (Binary). Market Makers (DMM, SLP, SLMM) are identified by a Market Maker ID (MMID) in SenderSubID (FIX tag 50 - up to 10 characters) or MMID field (Binary - u32 integer). Member organizations must provide their MMID along with its associated MPID on all market making orders in order for their market making interest to receive credit for satisfying the “Two-Sided Obligation” within Exchange Rule 7.23. The following functions are maintained at the MPID level: <ul style="list-style-type: none"> * OATS Exchange Participant ID - Exchange Route Matching *Credit limits on Non-NMS Routing - primary only orders; MOO/LOO/MOC/LOC orders for non-primary, non-auction eligible symbols routed to primary market; Market Day orders for non-primary, non-auction eligible symbols routed to primary market before open or during the halt. *Risk Management Tool (RMT) risk limits - for aggregated trading activity across all symbols. 	<ul style="list-style-type: none"> Firms are identified by a four character Market Participant Identifier (MPID) in OnBehalfOfCompID (FIX tag 115). Firms routing to Floor Brokers have the option to provide an OnBehalfOfSubID (FIX tag 116) to further distinguish clients in the form of Mnemonics. Both the MPID and Mnemonic must be for the same Clearing Firm. The following functions are maintained at the MPID level: <ul style="list-style-type: none"> * OATS Exchange Participant ID - Exchange Route Matching

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	<p>limits - for aggregated trading activity across all symbols.</p>		
Trading Session Eligibility on Orders	<ul style="list-style-type: none"> Does not support designation of trading session eligibility on orders. For symbols trading on Pillar, the trading session eligibility is defaulted as follows: <ul style="list-style-type: none"> Tape A - all order types defaulted to Core Tape B&C - defaulted based on order type <ul style="list-style-type: none"> Market Day – Core Primary Peg (Same Side) – Core Primary Peg Reserve – Core Non-Displayed Primary Peg) – Core Market on Open (MOO) – Core* Limit on Open (LOO) – Core* Market on Close (MOC) – Core* Limit on Close (LOC) – Core* All D Orders - Core All Other Order Types – Early & Core <p>*will route to Primary market</p>	<ul style="list-style-type: none"> Trading session eligibility is designated on orders via TradingSessionID field (in FIX, tag 336) <p>For NYSE, all values that include Core designation (Core, Early/Core, Core/Late, and Early/Core/Late) will be allowed, if the order type supports the combination on other Pillar markets.</p> <p>However, for each of those values, Pillar will honor the applicable trading sessions included in the instruction based on Tape (B/C symbols - Early and Core; A symbols - Core only), and ignore the other trading sessions specified in the instruction (Tape B/C symbols - Late; Tape A symbols - Early and Late)</p>	<ul style="list-style-type: none"> Trading session eligibility is designated on orders via TradingSessionID field (in FIX, tag 336) <p>However child orders created by the brokers, for each of those values, Pillar will honor the applicable trading sessions included in the instruction based on Tape (B/C symbols - Early and Core; A symbols - Core only), and ignore the other trading sessions specified in the instruction (Tape B/C symbols - Late; Tape A symbols - Early and Late)</p>
Self-Trade Prevention (STP)	<ul style="list-style-type: none"> STP evaluation is performed at the level of ClientID (in FIX, tag 109) - a freeform field up to 4 alphanumeric characters. 	<ul style="list-style-type: none"> STP evaluation is performed at the level of MPID with an optional sub-identifier. <p>*Within an MPID a subID can be specified, to allow trades between the same MPID as long as the subIDs do not match.</p> <p>*In FIX, the subID must be specified in OnBehalfOfSubID (116).</p>	<p>STP evaluation is performed at the level of MPID unless ClientID (tag 109) was provided, in which case it will be performed at the level of ClientID</p>

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	<ul style="list-style-type: none"> SelfTradeTypes Cancel Newest and Cancel Oldest are supported. Session-level defaulting for STP type is not supported. SelfTradeType (7928) = T (No Self Trade Prevention) is not supported. To opt out of STP, omit the tag entirely from an order. 	<p>*In Binary, the subID must be specified in the MPSubID field.</p> <ul style="list-style-type: none"> SelfTradeTypes Cancel Newest, Cancel Oldest, Cancel Both, and Cancel Decrement are supported. Session-level defaulting for STP type is supported. <p>The firm can also override the session level default for STP type on an order-by-order basis by providing a different value in the SelfTradeType field (in FIX, tag 7928).</p> <ul style="list-style-type: none"> SelfTradeType (7928) = T (No Self Trade Prevention) is supported, and may be used to opt out of STP when there is a session-level default STP type of Cancel Newest or Cancel Oldest. Applying this instruction on an order-by-order overrides the default. For a firm using both CCG/UTP Direct and Pillar Gateway in parallel, STP across the two protocols from the same firm will not be evaluated, and will be 	<ul style="list-style-type: none"> SelfTradeTypes Cancel Newest and Cancel Oldest are supported. Session-level defaulting for STP type is supported. <p>The firm can also override the session level default for STP type on an order-by-order basis by providing a different value in the SelfTradeType field (in FIX, tag 7928) - with the exception of SelfTradeType = T (No Self Trade Prevention), as detailed below.</p> <p>If Cancel Both or Cancel Decrement is configured as the default, orders routed to NYSE Floor Broker Systems will be rejected unless overridden with Cancel Newest or Cancel Oldest.</p> <ul style="list-style-type: none"> SelfTradeType (7928) = T (No Self Trade Prevention) is not supported. To opt of STP on an order-by-order basis, do not configure a session-level default for STP type. Explicitly apply STP Cancel Newest or Cancel Oldest instructions on each order subject to STP, and omit the SelfTradeType tag entirely for orders not subject to STP. For a firm using both CCG and Pillar Gateway in parallel, STP across the two protocols from the same firm will not be evaluated, and will be allowed to trade

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		allowed to trade with each other.	with each other. All child orders from Floor Broker and Algo come from CCG protocol, regardless of whether the original parent order was entered via NYSE Pillar Gateway or CCG. Therefore, STP will not be evaluated between Broker child orders and NYSE Pillar Gateway orders sent directly to the matching engine even if the parent order was routed to NYSE Floor Broker Systems using NYSE Pillar Gateway. These orders will be allowed to trade with each other.
Routing to NYSE Floor Brokers & Order Entry by Third Party Algorithm Providers on Behalf of NYSE Floor Brokers	<ul style="list-style-type: none"> Routing to NYSE Floor Broker Systems requires TargetSubId (FIX tag 57) value 4 and a valid BBSS Agency ID or Broker Badge in TargetLocationId (FIX Tag 143). *badges are allowed to be zero padded Retail Clients specify "RET" in SenderSubId (FIX Tag 50). 	N/A	<ul style="list-style-type: none"> Routing to NYSE Floor Broker Systems requires RouteToBroker (FIX tag 20011) value Y and a valid BBSS Agency ID or Broker Badge in DeliverToCompId (FIX Tag 128). *badges must not be zero padded Retail Clients will specify "RET" in TargetSubId (FIX Tag 57). FIX tag 50 will be rejected by the NYSE Floor Broker systems. Third Party Algorithm providers that route child orders on behalf of NYSE Floor Brokers to the NYSE Pillar matching engine must continue to use CCG (mnemonic as firm identifier).
CIOrdID Handling	<ul style="list-style-type: none"> CIOrdID follows branch-sequence format. On Cancel Requests: 	<ul style="list-style-type: none"> CIOrdID is freeform text field in FIX, and an integer in Binary. On Cancel Requests: 	<ul style="list-style-type: none"> Same support as NYSE Equity Platform

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	<p>*The ClOrdID of the order intended for cancellation may be populated in either the OrderID field (in FIX, tag 37) or OrigClOrdID field (in FIX, tag 41). If both are provided, the OrigClOrdID is overwritten with the value provided in OrderID.</p> <p>*The ClOrdID field (in FIX, tag 11) of the Cancel Request must be populated, but may contain the same value as the ClOrdID of the order intended for cancellation (OrderID and/or OrigClOrdID).</p> <ul style="list-style-type: none"> On order activity messages from the Exchange to the firm - ClOrdID is populated in both the OrderID field (in FIX, tag 37) and ClOrdID field (in FIX, tag 11) 	<p>*The ClOrdID of the order intended for cancellation must always be populated in the OrigClOrdID field (in FIX, tag 41).</p> <p>* The ClOrdID field (in FIX, tag 11) of the Cancel Request must be populated, and the value must be unique compared to the order intended for cancellation (OrigClOrdID).</p> <ul style="list-style-type: none"> On order activity messages from the Exchange to the firm - ClOrdID is only populated in the ClOrdID field (in FIX, tag 11) 	
Order Type Fields & Values	<ul style="list-style-type: none"> The following fields and values are supported: <ul style="list-style-type: none"> *Account (FIX tag 1) = 32 characters *OrdType (FIX tag 40) = 1 (Market), 2 (Limit), 5 (MOC), B (LOC) *OrderCapacity (FIX tag 47) = A-Z *TimeInForce (FIX tag 59) = 0 (Day), 2 (OPG), 3 (IOC) *Text (FIX tag 58) = 25 characters *SecurityExchange (FIX tag 207) = N *Giveup (FIX tag 439) = Valid Clearing Mnemonic *MiscDataLine4 (FIX tag 9432) = 27 characters The following fields are ignored: <ul style="list-style-type: none"> *MinQty (FIX tag 110) *MaxFloor (FIX tag 111) *SpecialOrdType (FIX tag 9202) 	<ul style="list-style-type: none"> Refer to the Functional Differences between NYSE Group Equities Platforms 	<ul style="list-style-type: none"> The following fields and values are supported: <ul style="list-style-type: none"> *Account (FIX tag 1) = 16 characters *OrdType (FIX tag 40) = 1 (Market), 2 (Limit) *OrderCapacity (FIX tag 528) = A, P, Q, R *TimeInForce (FIX tag 59) = 0 (Day), 2 (OPG), 3 (IOC), 7 (CLO) *Text (FIX tag 58) = 40 characters Providing the following fields will result in a rejection: <ul style="list-style-type: none"> *MinQty (FIX tag 110) *MaxFloor (FIX tag 111)

	CCG/UTP Direct Gateways	NYSE Pillar Gateway for NYSE Equity Platform	NYSE Pillar Gateway for NYSE Floor Broker Systems
	<ul style="list-style-type: none"> *RoutingInst (FIX tag 9303) *ExtendedExecInst (FIX tag 9416) *InterestType (FIX tag 9478) 		<ul style="list-style-type: none"> *SpecialOrdType (FIX tag 9202) *RoutingInst (FIX tag 9303) *ExtendedExecInst (FIX tag 9416) *InterestType (FIX tag 9478)
Defaulting for TimeInForce	If TimeInForce (in FIX, tag 59) is not provided on an order, it is defaulted to "Day."	TimeInForce (in FIX, tag 59) must be present on all order messages, and no defaulting will occur.	Same support as NYSE Equity Platform
Max Order Quantity	<ul style="list-style-type: none"> To Matching Engine - 25,000,000 shares To Broker Systems - 99,000,000 shares 	<ul style="list-style-type: none"> Refer to the Functional Differences between NYSE Group Equities Platforms 	<ul style="list-style-type: none"> 5,000,000 shares with the option to increase to 99,000,000 shares via new/updated Session Request Form
Binary Protocol - Price Scale	A price scale must be specified on a message-by-message basis for both inbound and outbound messages.	A fixed price scale of 8 is used on all fields defined with a data type of "Price" (64-bit, unsigned Little Endian) in the NYSE Pillar Gateway Binary Protocol.	NYSE Broker Systems is not supported by the Binary Protocol
FIX Protocol - Price Scale	<ul style="list-style-type: none"> 9,999.9999 for orders eligible for auto-execution 999,999.99 for orders ineligible for auto-execution 	<ul style="list-style-type: none"> Refer to the Functional Differences between NYSE Group Equities Platforms 	<ul style="list-style-type: none"> Max price for securities with a price scale of 6 (Low Price Symbol) is \$4,294.6700 Max price for securities with a price scale of 4 (High Price Symbol) is \$99,999.9900 Max price for securities with a price scale of 3 (Super High Price Symbol) is \$999,999.990
Binary Protocol - Symbology	Symbol field must be populated with ticker symbol and suffix (if applicable; separated by a space).	<p>SymbolID field must be populated with the index number assigned by the Exchange and provided at Start of Day in the "Equities Symbol Reference Data" message.</p> <p>The SymbolIDs provided are the same as those used on the NYSE XDP market data feeds.</p>	NYSE Broker Systems is not supported by the Binary Protocol
Cancel and Cancel Replacement	<ul style="list-style-type: none"> To reduce the OrderQty on an open order, the Cancel Request message is used. The order maintains its ClOrdID and internal Broker OrderID. 	<ul style="list-style-type: none"> Refer to the Functional Differences between NYSE Group Equities Platforms 	<ul style="list-style-type: none"> Cancel Requests to reduce OrderQty are not supported. Any such request – Cancel Request with the fields CxlQty, NewOrdQty (FIX) populated – will be rejected. Instead, the Cancel/Replace Request can be used to reduce

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	<ul style="list-style-type: none"> • A Cancel-Replace order gets a new ClOrdID and new internal Broker OrderID, regardless of what is changed from the original order • A Cancel Request to reduce quantity of an order with open shares on the book when the request comes in, with a specified NewOrdQty less than the executed quantity of that order – will be rejected • A Cancel/Replace Request to change an order and is fully executed before the change can be applied – will receive a Pending Cancel Ack followed by a Replaced message with LeavesQty = 0. 		<p>OrderQty. The order will now be represented with a new ClOrdID, however it will maintain its existing internal Broker OrderID.</p> <ul style="list-style-type: none"> • For changes other than those listed above, Cancel-Replace gets a new internal Broker OrderID. • A Cancel/Replace Request to reduce quantity of an order with open shares when the request comes in, with a specified new OrderQty less than the executed quantity of that order – will get a “Replaced” response with LeavesQty = 0 • A Cancel/Replace Request to change an order in a pending state when the request comes in, and is fully executed before the quantity change can be applied – will receive a Pending Cancel Ack followed by a Replaced message with LeavesQty = 0
Cancel on Disconnect	If enabled on a given session, cancellation criteria includes all live and pending orders, excluding Market on Close (MOC), Limit on Close (LOC), and Closing Offset (CO).	<p>If enabled, the firm may choose cancellation criteria from the following options:</p> <p>*Value of 1 - All live and pending orders excluding auction orders (MOO/LOO/MOC/LOC/CO)</p> <p>*Value of 2 - All live and pending orders</p>	<p>Same support as NYSE Equity Platform.</p> <p>Cancel on Disconnect subscription with values 1 and 2 will cancel both orders in the matching engine and orders routed to NYSE Floor Broker Systems and Brokerplex.</p>
Drop Copy Configuration	<ul style="list-style-type: none"> • Message filters consist of Mnemonic and All Message Activity, All Except Done for Day/Rejects/Billable Cancels, or Fills/Partial Fills only. <ul style="list-style-type: none"> ○ Message Types D, F, G, 8 and 9 will receive drop copies 	<ul style="list-style-type: none"> • Message filters consist of SenderCompID(s) or MPID(s), and either All Message Activity or Fills/Partial Fills Only. <ul style="list-style-type: none"> ○ Only Message Types 8 and 9 will receive drop copies 	<ul style="list-style-type: none"> • Message filters consist of SenderCompID(s) or MPID(s), and either All Message Activity or Fills/Partial Fills Only. <ul style="list-style-type: none"> ○ Only Message Types 8 and 9 will receive drop copies

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	<ul style="list-style-type: none"> Multiple drop copy sessions are required to access message activity from all order entry gateways. 	<ul style="list-style-type: none"> One drop copy session provides access to message activity from all order entry gateways. For Binary order entry sessions with corresponding FIX drop copy sessions, the outgoing binary message can be mapped to the outgoing FIX drop copy message using order and message sequence number identifiers. For details, see the “FIX Drop Copies” section of the NYSE Pillar Gateway Binary Protocol Specification Drop copy gateways for order activity transacted on CCG/UTP Direct are separate from drop copy gateways for order activity transacted on Pillar Gateway. 	<ul style="list-style-type: none"> One drop copy session provides access to message activity from all order entry gateways. For orders entered on the Floor, Drop Copy is supported through a separate drop copy via the CCG Drop Copy Sessions.
Messages from Exchange to Firm	<ul style="list-style-type: none"> Some, but not all, order modifiers and attributes sent by the firm on inbound Order and Cancel/Replace Requests are sent back in Acknowledgements. A Cancel, Modify, or Cancel/Replace Request always receives a “pending” message, even if it can be applied right away. Pending Cancel/Replace and Pending Modify Acknowledgments are both represented with an OrdStatus (in FIX, tag 30) of “Pending Cancel/Replace.” 	<ul style="list-style-type: none"> All order modifiers and attributes sent by the firm on inbound Order and Cancel Replace Requests are sent back in Acknowledgments, including on FIX drop copies of the Acknowledgments. A Cancel, Modify, or Cancel/Replace Request will only receive a pending message if it cannot be applied right away due to market conditions (e.g. auction running or interest routed away). Pending Cancel/Replace and Pending Modify Acknowledgments are distinguished from each other with separate values. In the binary protocol, this is represented by the AckType field on the “Order Modify/Cancel Request Acknowledgment.” In the FIX protocol, a 	<ul style="list-style-type: none"> All order modifiers and attributes sent by the firm on inbound Order and Cancel Replace Requests are sent back in Acknowledgments, including on FIX drop copies of the Acknowledgments. A Cancel, Modify, or Cancel/Replace Request always receives a “pending” message, even if it can be applied right away. Pending Cancel/Replace and Pending Modify Acknowledgments are both represented with an OrdStatus (in FIX, tag 39) of “Pending Cancel/Replace.”

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	<ul style="list-style-type: none"> The LastMkt field (in FIX, tag 30) is provided on both FIX and Binary execution reports, and always populated with "N" to denote NYSE as the market center sending the message. <p>In addition, FIX execution reports also carry SecurityExchange (207) = N.</p> <ul style="list-style-type: none"> For executions conducted by Algo vendors at other venues, BillingRate (FIX Tag 9426) is provided with a "G". DealID (FIX tag 9483) allows up to 10 characters ExecBroker - FIX tag 76 provides the Broker badge responsible for the execution. Timestamp granularity: <p>*CCG FIX - SendingTime (52) and TransactTime (60) provide whole-second resolution.</p>	<p>value of "M" for "Pending Modify" has been added to OrdStatus (39) and ExecType (150).</p> <ul style="list-style-type: none"> The LastMkt field (in FIX, tag 30) is provided only on FIX execution reports, and not in Binary (instead, the binary Pillar Stream Protocol "Login" accept message indicates the MIC of the connected market). In FIX, this tag on executions is populated in accordance with standard FIX Protocol, with the Market Identification Code (MIC) of the NYSE Group market center sending the message. DealID (FIX tag 9483) allows up to 20 characters Timestamp granularity: <p>*FIX - SendingTime (52) and TransactTime (60) provide millisecond resolution. In addition, two custom tags - NanosecondSendingTime (20009) and NanosecondTransactTime (20010) provide nanosecond resolution. All four tags are sent on all messages from the Exchange to the firm.</p>	<ul style="list-style-type: none"> The LastMkt field (in FIX, tag 30) is provided only on FIX execution reports. In FIX, this tag on executions is populated in accordance with standard FIX Protocol, with the Market Identification Code (MIC) of the NYSE - XNYS. For executions conducted by Algo vendors at other venues, LastMkt (FIX Tag 30) is provided with "ALGO". DealID (FIX tag 9483) allows up to 20 characters IntroducingBrokerBadge - FIX tag 9448 provides the Broker badge responsible for the execution. Timestamp granularity: <p>*FIX - SendingTime (52) and TransactTime (60) provide millisecond resolution. In addition, two custom tags - NanosecondSendingTime (20009) and NanosecondTransactTime (20010) provide nanosecond resolution. All four tags are sent on all messages from the Exchange to the firm.</p>

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	<p>*UTPDirect - TransactTime provides millisecond resolution.</p> <ul style="list-style-type: none"> The following fields are provided on certain messages from the Exchange to the firm: <p>*AvgPx - both FIX (tag 6) and Binary *LastCapacity - FIX only (tag 29) *ExecBroker - both FIX (tag 76) and Binary *CxlRejReason - FIX only (tag 102) *OrdRejReason - FIX only (tag 103) *ContraTrader - both FIX (tag 337) and Binary *ContraBroker - both FIX (tag 375) and Binary *ContraTradeQty - both FIX (tag 437) and Binary *ContraTradeTime - both FIX (tag 438) and Binary *ClearingFirm - both FIX (tag 439) and Binary *ClearingAccount - FIX only (tag 440) *StatusResp - FIX only (tag 9425) *NYSEDirect/AutoExInD - both FIX (tag 9430) and Binary *MiscDataLine4 - FIX only (tag 9432) *ExecutionInformation - FIX only (tag 9433) *MemoAB - FIX only (tag 9436) *ERCReferenceNumber - FIX only (tag 9440) *EQuoteExecType - FIX only (tag 9560) *ExpERCReferenceNumber - FIX only (tag 9579) *PrevExpERCReferenceNumber - FIX only (tag 9704)</p>	<p>*Binary - TransactTime provides nanosecond resolution.</p> <ul style="list-style-type: none"> The fields at left are not supported in Pillar Gateway, and will not be sent on any messages. 	<ul style="list-style-type: none"> The fields at left are not supported in Pillar Gateway, and will not be sent on any messages.
Liquidity Indicators	<ul style="list-style-type: none"> All electronic executions are provided with a BillingRate (FIX tag 9426) that 	<ul style="list-style-type: none"> Refer to the Liquidity Indicator Mapping section of this document. 	<ul style="list-style-type: none"> All electronic executions are provided with a LiquidityIndicator (FIX tag 9730)

	CCG/UTP Direct Gateways	NYSE Pillar Gateway for NYSE Equity Platform	NYSE Pillar Gateway for NYSE Floor Broker Systems
	<p>includes one of the following:</p> <ul style="list-style-type: none"> *NYSE Legacy Billing codes 1 through 18 *Single Character Away Market code *Single Character Algo Billing code *Single Character Algo Away code 		<p>that includes one of the following:</p> <ul style="list-style-type: none"> *NYSE Legacy Billing Codes 1 through 18 *NYSE Pillar Away Market code *New Algo billing code ALGO <ul style="list-style-type: none"> Algo away code will be identified with LastMkt (FIX tag 30)
ExecID and ExecRefID	<ul style="list-style-type: none"> ExecID - this tag/field is populated on executions, busts, and corrections with the format "CLOrdID ActivityID" where ActivityID is represented as RRRRRSSSSS for gateway sessions subscribed to use the two-part ActivityID format. ActivityID uniqueness is maintained for all order activity that occurs per CLOrdID ExecRefID - this tag/field is populated only on trade busts/corrections, and refers to the ExecID of the specific execution report that is being busted/corrected The following FIX tags are provided on order entry and drop copy gateway execution reports, populated with the two-part ActivityID portion of ExecID/ExecRefID: ERReferenceNumber (9440), ExpERReferenceNumber (9579) and PrevExpERReferenceNumber (9704) 	<ul style="list-style-type: none"> Refer to the Functional Differences between NYSE Group Equities Platforms 	<ul style="list-style-type: none"> ExecID - this tag/field is populated on all MsgType = 8 messages, with a string of up to 32 characters (alphanumeric), which is unique for each order ExecRefID - this tag/field is populated only on trade busts and corrections, with the ID value of the original transaction which is being modified; format is a string up to 32 char numeric The following FIX tags are not supported, and are not sent on order entry nor drop copy gateway execution reports: ERReferenceNumber (9440), ExpERReferenceNumber (9579) and PrevExpERReferenceNumber (9704)
Floor Broker CAT Reporting	<p>The following fields are used for CAT Reporting Linkage for IM to Floor Broker:</p> <ul style="list-style-type: none"> ClientID - FIX Tag 109 = CAT SenderIMID TargetLocationID - FIX Tag 143 = CAT Destination/ReceiverIMID <p>If an MPID is not provided in FIX Tag 109 (ClientID), then SenderIMID is the Default</p>	N/A	<p>The following fields are used for CAT Reporting Linkage for IM to Floor Broker:</p> <ul style="list-style-type: none"> ClientID - FIX Tag 109 = CAT SenderIMID DeliverToCompID - FIX Tag 128 = CAT Destination/ReceiverIMID <p>If an MPID is not provided in FIX Tag 109 (ClientID), then SenderIMID is the Default</p>

	CCG/UTP Direct Gateways	NYSE Pillar Gateway for NYSE Equity Platform	NYSE Pillar Gateway for NYSE Floor Broker Systems
	<p>IMID specified in the FinraCAT Member IMID List for the Firm that represents the Entering Firm Mnemonic specified in FIX Tag 115 (OnBehalfOf)</p> <p>For Buy Side clients, Firm Designated ID (FDID) must be provided in Account - FIX Tag 1.</p>		<p>IMID specified in the FinraCAT Member IMID List for the Firm that represents the Entering Firm Mnemonic specified in FIX Tag 116 (OnBehalfOfSubID) or the MPID specified in FIX Tag 115 (OnBehalfOfCompID), if tag 116 is not provided.</p> <p>For Buy Side clients, Firm Designated ID (FDID) must be provided in Account - FIX Tag 1.</p>
Failure Recovery	<ul style="list-style-type: none"> Each session is configured with one IP address. In the event of CCG/UTP Direct gateway failure or hardware failure resulting in a non-recoverable gateway, the application rolls to a spare server. The spare server assumes the IP of the failed server, data is transferred, and application level recovery is handled via message sequence number negotiation and the gap fill process. 	<ul style="list-style-type: none"> Each session is configured with two pairs of destination Pillar IP addresses, all sharing the same port number. Two IPs correspond to the Pillar Primary Production environment and the other two IPs to the DR Production environment, which become active only if the Primary is unavailable. Within the active production environment, the pair of IP addresses is synchronized to the same session data at all times. <p>*In the event that one IP destination becomes unavailable, the firm may log in (FIX) or request write access to the streams (binary) on the second IP destination.</p> <p>*During the failover, cancel on disconnect will be triggered subject to the Cancel on Disconnect configuration for the session. Because the two IP destinations are synchronized at all times, message state and sequence numbers are preserved and gap fill can occur on the second IP destination.</p> <p>*For more details, see the "Failure Recovery" section of the NYSE Pillar</p>	<ul style="list-style-type: none"> Same as NYSE Equity Platform

	CCG/UTP Direct Gateways	NYSE Pillar Gateway for NYSE Equity Platform	NYSE Pillar Gateway for NYSE Floor Broker Systems
		Gateway FIX Protocol Specification or NYSE Pillar Gateway Binary Protocol Specification	
NYSE Equity Platform Order Types & Modifiers	<p>The FIX and Binary protocol representations of available order types and modifiers may be found in the appendix of the following specifications:</p> <ul style="list-style-type: none"> • NYSE CCG FIX Gateway Specification • NYSE UTPDirect Gateway Specification 	<p>The FIX and Binary protocol representations of available order types and modifiers may be found in the appendix of the following specifications:</p> <ul style="list-style-type: none"> • NYSE Pillar Gateway FIX Protocol Specification • NYSE Pillar Gateway Binary Protocol Specification 	

Pillar Equity Platform Functionality Differences

The following items are found in the document: [Functional Differences between NYSE Group Equities Platforms](#)

- Click the links below to navigate directly to the corresponding page for each item. Or, manually cross-reference the items using the row numbers provided
- Depending on the firm’s gateway migration path, you may choose to compare functionality across these columns in the document:
 - **Standard Pillar Feature/Behavior** - Pillar Gateway for the NYSE market will conform to the functionality specified in this column. Refer to protocol specs and order matrices for Tape A vs. B/C differences
 - **NYSE UTP** - CCG/UTP Direct functionality for Tape A symbols trading on UTP
 - **NYSE Pillar Tape B&C Symbols & NYSE Pillar Tape A Symbols** - CCG/UTP Direct functionality for symbols trading on Pillar, with order entry facilitated via a gateway adapter

	Row Number
FIX “Account” (Tag 1) Length Limitation on Inbound Orders & Cancel/Replace Requests	3
ExecID and ExecRefID	5
Firm Identifier	6
Order Identifiers	7
Trade Identifiers	8
Displayed Liquidity Indicator	9
Text on Execution Reports and Cancel/Cancel-Replace Rejects	10

	Row Number
Other Fields on Execution Reports	11
Done for Day Messages	12
Max Order Price	14
Working Price on Outgoing Messages	17
Retail Billing Designation (RET) on Orders from Retail Member Organizations	46
Cancel and Cancel-Replace Handling/ Elimination of Cancel Request to Reduce OrderQty	48
Pending Cancel Acknowledgements	49
Internal Cancel on Disconnect – Pillar to Gateway	51

Liquidity Indicator Mapping

The table below shows the codes firms will receive on executions from the Pillar Gateway in the LiquidityIndicator field (in FIX - tag 9730) from the Pillar Equity Platforms, mapped to corresponding codes from the CCG/UTP Direct gateways.

	CCG/UTP Direct			NYSE Pillar Gateway for NYSE Equity Platform
	ExecAway MktInd (9570)	Billing Indicator (9578)	Billing Rate (9426)	Liquidity Indicator (9730)
Executions Adding Liquidity (Non-Auction)				
Add Regular Limit Order	n/a	2	2	A

	CCG/UTP Direct			NYSE Pillar Gateway for NYSE Equity Platform
	ExecAway MktInd (9570)	Billing Indicator (9578)	Billing Rate (9426)	Liquidity Indicator (9730)
Add Sub Dollar Execution	n/a	2	2	AZ
Add MPL Order	n/a	2	12	AML
Add MPL Sub Dollar Execution	n/a	2	12	AMZ
Add Non-Displayed Order	n/a	2	2	AND
Add Non-Displayed Sub Dollar Execution	n/a	2	2	ANZ
Add Non-routable Limit Order – Working at different price than display price at time of execution	n/a	2	2	AB
Add Limit Order Setting New NBBO with Priority – Sub Dollar	n/a	2	2	ASPZ
Add Limit Order Joining NBBO with Priority – Subdollar	n/a	2	2	AJPZ
Add Limit Order Setting New NBBO with Priority	n/a	2	2	ASP
Add Limit Order Joining NBBO with Priority	n/a	2	2	AJP
Add Limit Order Setting New BBO	n/a	2	2	ASB
Add Retail Provider (Tag 50=RET)	n/a	n/a	13	ARE
Add Retail Provider Sub Dollar (Tag 50=RET)	n/a	n/a	13	AREZ
Add Retail Provider RPI Order	n/a	8	8	ARP
Add d-Order when Providing Discretion	n/a	2	2	ADR
Executions Removing Liquidity (Non-Auction)				
Remove Regular Limit or Market	n/a	1	1	R
Remove Regular Limit IOC	n/a	1	1	RI
Remove Sub Dollar	n/a	1	1	RZ
Remove Sub Dollar IOC	n/a	1	1	RIZ
Remove MPL Order	n/a	1	11	RML
Remove Sub Dollar MPL	n/a	1	11	RMZ
Remove Non-Displayed Order	n/a	1	1	RND
Remove Non-Displayed Sub Dollar Execution	n/a	1	1	RNZ

	CCG/UTP Direct			NYSE Pillar Gateway for NYSE Equity Platform
	ExecAway MktInd (9570)	Billing Indicator (9578)	Billing Rate (9426)	Liquidity Indicator (9730)
Remove Retail Taker Order (RT1)	n/a	9	9	RRT
Remove MPL Retail Taker (Tag 50=RET)	n/a	n/a	14	RRM
Remove d-Order on Arrival/Repricing or Providing Discretion as Aggressor	n/a	1	1	RDA
Executions in Opening/Re-Opening Auctions				
Market Day and MOO	n/a	5	5	OM
Market Day and MOO - Sub Dollar	n/a	5	5	OMZ
Limit Order	n/a	5	5	OL
Limit Order - Sub Dollar	n/a	5	5	OLZ
Limit on Open, Opening D-Order	n/a	5	5	O
Limit on Open, Opening D-Order - Sub Dollar	n/a	5	5	OZ
Executions in Closing Auctions				
Market Day and MOC	n/a	4	4	CM
Market Day and MOC - Sub Dollar	n/a	4	4	CMZ
Limit Order	n/a	6	6	CL
Limit Order - Sub Dollar	n/a	6	6	CLZ
Limit on Close	n/a	7	7	C
Limit on Close - Sub Dollar	n/a	7	7	CZ
Imbalance Offset on Close	n/a	n/a	15	CIO
Imbalance Offset on Close - Sub Dollar	n/a	n/a	15	CIOZ
D-Order Executed in Close when received prior to 25 minutes before the close	n/a	n/a	16	CED
D-Order Executed in Close when received prior to 25 minutes before the close - Sub Dollar	n/a	n/a	16	CEDZ
D-Order Executed in Close when received between 25 and three minutes before the close	n/a	6	6	CMD
D-Order Executed in Close when received between 25 and three minutes before the close - Sub Dollar	n/a	6	6	CMDZ

	CCG/UTP Direct			NYSE Pillar Gateway for NYSE Equity Platform
	ExecAway MktInd (9570)	Billing Indicator (9578)	Billing Rate (9426)	Liquidity Indicator (9730)
D-Order Executed in Close when received after 3 minutes before the close	n/a	n/a	17	CLD
D-Order Executed in Close when received after 3 minutes before the close - Sub Dollar	n/a	n/a	17	CLDZ
Executions on Routed Orders				
Routed - NYSE	N	n/a	N	XN
Routed - NYSE American Execution	A	n/a	A	XA
Routed - NYSE Arca Execution	P	n/a	P	XP
Routed - NYSE National Execution	C	n/a	C	XC
Routed to NYSE American Opening/Reopening Auction	A	n/a	A	XAO
Routed to NYSE Arca Opening/Reopening Auction	P	n/a	P	XPO
Routed - NASDAQ Execution	T	n/a	T	XQ
Routed - BATZ	Z	n/a	Z	XZ
Routed - NASDAQ BX	B	n/a	B	XB
Routed - FINRA ADF	D	n/a	D	XD
Routed - EDGA	J	n/a	J	XJ
Routed - EDGX	K	n/a	K	XK
Routed - Chicago Stock Exchange	M	n/a	M	XM
Routed - NASDAQ PSX	X	n/a	X	XX
Routed - BATY	Y	n/a	Y	XY
Routed - IEX	V	n/a	V	XV
Routed - LTSE	L	n/a	L	XL
Routed - MEMX	U	n/a	U	XU
Routed - MIAX	H	n/a	H	XH
Routed - NYSE Sub Dollar	N	n/a	N	XNZ
Routed - NYSE American Sub Dollar	A	n/a	A	XAZ

	CCG/UTP Direct			NYSE Pillar Gateway for NYSE Equity Platform
	ExecAway MktInd (9570)	Billing Indicator (9578)	Billing Rate (9426)	Liquidity Indicator (9730)
Routed - NYSE Arca Sub Dollar	P	n/a	P	XPZ
Routed - NYSE National Sub Dollar	C	n/a	C	XCZ
Routed - NASDAQ Sub Dollar	T	n/a	T	XQZ
Routed - BATZ Sub Dollar	Z	n/a	Z	XZZ
Routed - NASDAQ BX Sub Dollar	B	n/a	B	XBZ
Routed - FINRA ADF Sub Dollar	D	n/a	D	XDZ
Routed - EDGA Sub Dollar	J	n/a	J	XJZ
Routed - EDGX Sub Dollar	K	n/a	K	XKZ
Routed - Chicago Stock Exchange Sub Dollar	M	n/a	M	XMZ
Routed - NASDAQ PHLX Sub Dollar	X	n/a	X	XXZ
Routed - BATY Sub Dollar	Y	n/a	Y	XYZ
Routed - IEX Sub Dollar	V	n/a	V	XVZ
Routed - LTSE Sub Dollar	L	n/a	L	XLZ
Routed - MEMX Sub Dollar	U	n/a	U	XUZ
Routed - MIAX Sub Dollar	H	n/a	H	XHZ
Primary Only to NYSE American				
Primary Only Executed in Opening/Reopening	A	n/a	A	XAO
Primary Only Adding (Non Auction)	A	n/a	A	XAA
Primary Only Removing (Non Auction)	A	n/a	A	XA
Primary Only Routed from Primary	A	n/a	A	XAW
Primary Only MOC/LOC	A	n/a	A	XAC
Primary Only Sub Dollar	A	n/a	A	XAZ
Primary Only to NYSE Arca				
Primary Only Executed in Opening/Reopening	P	n/a	P	XPO
Primary Only Adding (Non Auction)	P	n/a	P	XPA

	CCG/UTP Direct			NYSE Pillar Gateway for NYSE Equity Platform
	ExecAway MktInd (9570)	Billing Indicator (9578)	Billing Rate (9426)	Liquidity Indicator (9730)
Primary Only Removing (Non Auction)	P	n/a	P	XP
Primary Only Routed from Primary	P	n/a	P	XPW
Primary Only MOC/LOC	P	n/a	P	XPC
Primary Only Sub Dollar	P	n/a	P	XPZ
Primary Only to NASDAQ				
Primary Only Adding/Removing Liquidity	T	n/a	T	XQA
Primary Only Sub Dollar	T	n/a	T	XQZD
Primary Only to BATZ				
Primary Only Adding/Removing Liquidity	Z	n/a	Z	XZA
Primary Only Sub Dollar	Z	n/a	Z	XZZD
Primary Only to IEX				
Primary Only Adding/Removing Liquidity	V	n/a	V	XVA
Primary Only Sub Dollar	V	n/a	V	XVZD
Primary Only to LTSE				
Primary Only Adding/Removing Liquidity	L	n/a	L	XLA
Primary Only Sub Dollar	L	n/a	L	XLZD
Executions on Cross Orders				
Floor Broker Cross (regular and 72D)	n/a	n/a	18	ZB
Floor Broker Cross (regular and 72D) - Subdollar	n/a	n/a	18	ZBZ

Document Version History

<u>Date</u>	<u>Document Version #</u>	<u>Change Summary</u>
December 15, 2020	2.2	Self-Trade Prevention (STP) - added details. Floor Broker CAT Reporting - added new row.
October 28, 2020	2.1	Max Order Quantity - added new row. Drop Copy Configuration - added details regarding message type support. Liquidity indicator mapping - added liquidity indicators for executions of orders routed to MEMX (XU, XUZ); MIAX (XH, XHZ); LTSE (XL, XLZ, XLA, XLZD).
August 3, 2020	2.0	Addition of the NYSE Floor Broker Systems
March 29, 2019	1.1	Liquidity Indicator Mapping - added codes for the following: <ul style="list-style-type: none">- Executions on Routed Orders- Primary Only to NASDAQ- Primary Only to BATZ- Primary Only to IEX
February 21, 2019	1.0	Initial version of document.