TMX AUSTRALIA EXCHANGE

CXA Equities FIX Specification

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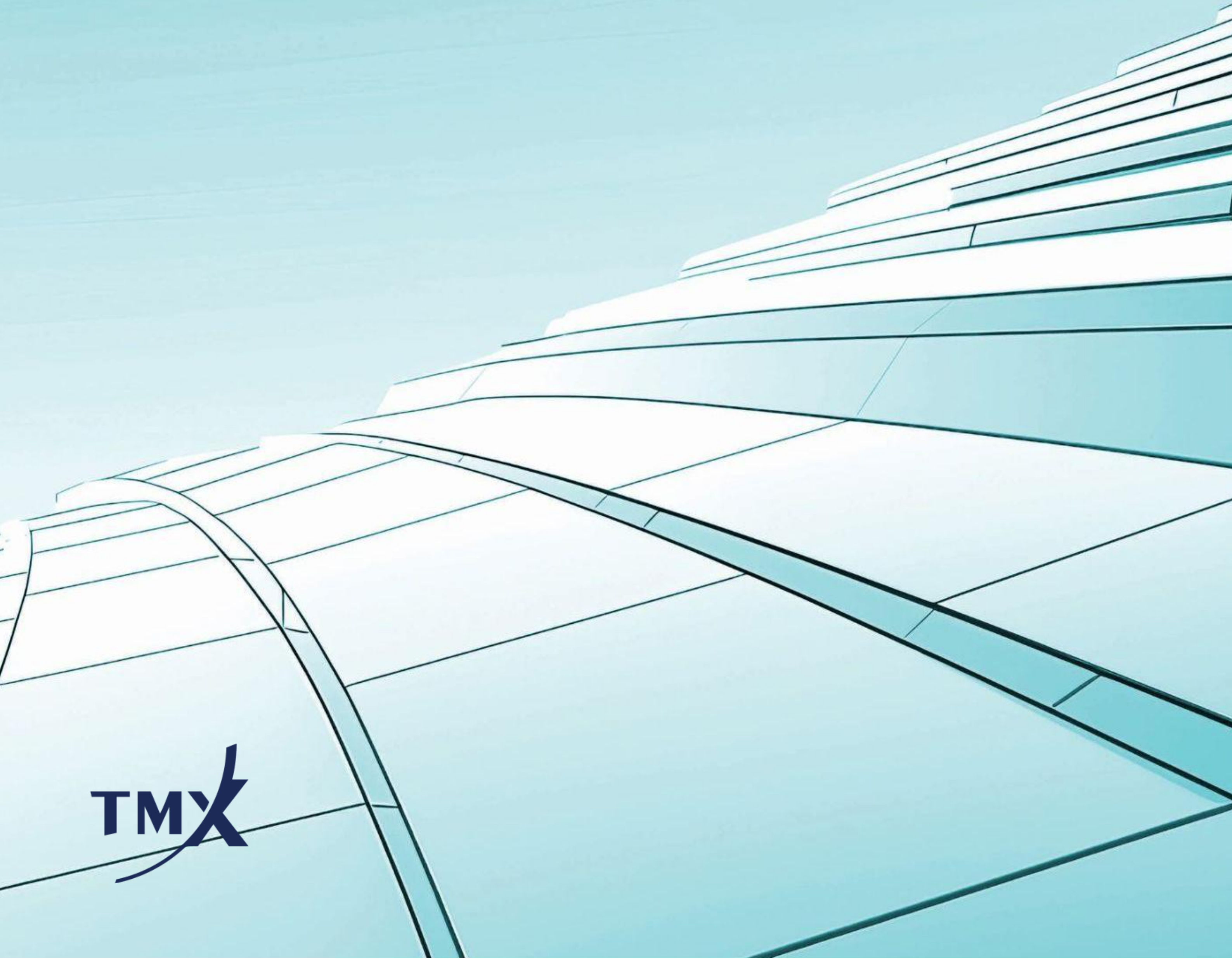

Contents

1. Introduction

1.1 Overview

CXA participants use a subset of the FIX 4.2 protocol for order entry and drop copies.

It is assumed the reader is familiar with the FIX 4.2 protocol as described at http://www.fixprotocol.org. This document describes the differences between the CXA implementation and the FIX 4.2 standard.

1.2 Data Types

1.2.1 Timestamps

All FIX timestamps are UTC as per the FIX standard. Participants are expected to synchronise their clocks with an external time source.

1.2.2 Prices

Participants should program their systems to allow execution prices to be returned with up to four decimals for orders and up to seven decimals for Trade Reports. Orders and Trade Reports having invalid tick sizes will be rejected. Refer to the website for the Guide to Reference Data Files.

Participants should parse and code to the Reference Data Files. The following tick sizes and breakpoints will be used for most securities, with the exception of some symbols which are always priced in 0.001 increments.

Price Range	Tick Size
Under 0.10	0.001
0.10 – 1.995	0.005
2.00 and above	0.01

1.3 Hours of Operation

All times noted are based on the Sydney, Australia time zone (AEST/AEDT).

Refer to the website for the CXA Holiday schedule. Note Christmas Eve and New Year's may provide for closing of trading two hours earlier than normal, i.e., 14:13 (and MOCs will trade at 14:20).

Although trade reports are accepted in the prescribed pre-market period, orders will be rejected prior to the start of the Regular Trading Session.

Orders are rejected if they are received outside the hours CXA is available for trading. All non-MOC orders remaining after the Regular Trading Session will be cancelled automatically (Execution Reports will be delivered). MOC orders are allowed to be entered and matched in the Regular Trading Session and MOC Trading Session. MOC orders with unmatched size will be cancelled after the MOC Trade Session ends at 16:20.

1.3.1 Trading Sessions

Refer to the website for the CXA Equities Trading Hours.

1.4 Protocol Features

The exchange does not guarantee messages sent by Members to the exchange, including through protocols such as TCP. Members are responsible to monitor the status of the messages they send to the exchange.

1.4.1 Architecture

Each FIX order handler process allows a single TCP connection from a participant. Connection attempts from unknown source IP ranges will be blocked to prevent unauthorised access to FIX ports. Please contact the CXA NOC to connect from a new source IP range.

Each FIX order handler connects to all matching units using a proprietary UDP protocol. Connections from order handlers to matching engines are latency equalised. Connections between order handlers and matching units are governed by an internal flow control mechanism to control burst rates.

1.4.2 Maximum Open Order Limits

The Exchange limits the maximum number of open orders allowed on a FIX port to 300,000 per port. New orders will be rejected once this limit is breached until the number of open orders drops back below the limit.

1.4.3 Stale NBBO

A stale ASX BBO will occur when the CXA trading system determines that one or more market data channels are impaired or down completely. If the trading system detects that an ASX BBO is stale, trading will continue using the CXA BBO quote for all pricing.

2 Protocol

2.1 Message Format

FIX messages are ASCII formatted. Participants are provided with a *SenderCompId* and *SenderSubId* that must be sent on every message. The *TargetCompId* for all messages the Participant sends is 'CXA'. All messages the participant receives will have the Sender and Target fields swapped.

2.2 Sequence Numbers

Sequence numbers, both inbound and outbound, are reset to 1 each night during the down time.

Messages are processed in sequence order. Behind sequence messages (other than Sequence Reset – Reset) cause immediate logout. Ahead of sequence messages (other than a Resend Request) trigger a message recovery via a Resend Request.

2.3 Version Compatibility

CXA uses the FIX 4.2 session protocol.

3 Sessions

The following session messages are supported in both directions:

Message	Type	Comment
Logon	A	Begin session (or resume a broken session).
Heartbeat	0	
Test Request	1	
Resend Request	2	
Reject	3	Malformed message or improper session level handling.
Sequence Reset	4	Both Gap Fill (*GapFillFlag*=Y) and Reset.
Logout	5	Used to gracefully close session.

3.1 Connectivity and Certification

IP Address	Address to connect to.	Supplied by CXA.
TCP Port	Port to connect to.	Supplied by CXA.
SenderCompID	Sent in every FIX message to CXA.	Supplied by CXA.
SenderSubID	Sent in every FIX message to CXA.	Supplied by CXA.
TargetCompID	Sent in every FIX message to CXA.	'CXA'
TargetSubID	Sent in every FIX message to CXA.	'TEST' for test/certification system. 'PROD' for production.

For information on connectivity options to CXA, refer to the CXA Connectivity Manual.

All new Members must pass certification before they will be permitted to enter orders in the production marketplace. Certain new order types and options will also require certification before they may be utilised. Contact the CXA Trade Desk for more information.

3.2 Logon

Tag	Field Name	Req'd	Description
35	*MsgType*	Y	A
108	*HeartbeatInterval*	Y	Client Heartbeat Interval (in seconds).

The Logon must be the first message sent by the participant after the TCP connection is established. EncryptMethod is ignored (FIX level encryption is not supported).

CXA will wait one second after a Logon is received to ensure that no Resend Request messages are in flight from the Participant. A Heartbeat will be sent to indicate that the one second wait period has ended. **Participants should not send any orders prior to receiving this first Heartbeat from CXA.**

The IP Address of the participant, the *SenderCompId*, *SenderSubId, TargetCompId*, and *TargetSubId* ('TEST'/'PROD') will be validated. If validation fails, the connection will be dropped without a Reject (to avoid corrupting the participant's sequence in the case that the participant merely mistakenly connected to the wrong port).

If connection is unexpectedly broken, upon reconnection the participant may receive a login reply with a sequence number greater than expected. This means that in-flight messages were missed (likely important Execution Reports). The participant should issue a Resend Request to retrieve the missed messages.

Similarly, CXA will issue a Resend Request to the participant for messages that it missed. The participant may wish to send gap fill messages in place of new orders to avoid re-submission of potentially stale orders.

HeartbeatInterval must be specified by the participant in the Logon message. This value will be clamped between 5 and 300 seconds and returned in the logon reply message. We recommend using as low a value as the reliability and latency of your connectivity will allow.

3.3 Heartbeat

Tag	Field Name	Req'd	Description
35	*MsgType*	Y	0
112	*TestReqID*	N	Required in response to a Test Request.

A Heartbeat message should be sent if the agreed upon *HeartbeatInterval* has elapsed since the last message sent. If any message has been sent during the preceding *HeartbeatInterval* a Heartbeat message need not be sent.

3.4 Test Request

Tag	Field Name	Req'd	Description
35	*MsgType*	Y	1
112	*TestReqID*	Y	Auto-generated request ID.

If a *HeartbeatInterval* + 1 seconds have elapsed since the last message received, a Test Request should be issued. If another *HeartbeatInterval* + 1 seconds elapse without receiving a message, the TCP connection should be dropped. This ensures a broken TCP connection will be detected even if the TCP stack does not notice (this has been observed to happen in WAN environments, particularly when a VPN is involved).

3.5 Resend Request

Tag	Field Name	Req'd	Description
35	*MsgType*	Y	2
7	*BeginSeqNo*	Y	Sequence number of first message in range to be resent.
16	*EndSeqNo*	Y	0 means + infinity

A Resend Request message should be processed even if it is received ahead of sequence. Only after resending the requested range (all marked *PossDup* = 'Y', including any gap fills) should Resend Request be issued in the opposite direction.

As discussed in the FIX 4.2 specification, it is possible to send an open or closed sequence range in a Resend Request (an open range uses sequence zero as the *EndSeqNo*). CXA will honor either request type but will always issue Resend Requests with a closed sequence range.

3.6 Reject

Tag	Field Name	Req'd	Description
35	*MsgType*	Y	3
45	*RefSeqNum*	Y	*MsgSeqNum* of rejected message.
371	*RefTagID*	N	
372	*RefMsgType*	N	
373	*SessionRejectReason*	N	
58	*Text*		

Session level rejects indicate violations of the session protocol or missing (or bogus) fields. These are to be expected during development and certification while the participant is being adapted for CXA but should be extremely rare in production. Application layer rejects (like Order Reject and Cancel Reject) are normal.

3.7 Sequence Reset

Tag	Field Name	Req'd	Description
35	*MsgType*	Y	4
36	*NewSeqNo*	Y	*Next expected sequence number.*
123	*GapFillFlag*	N	Sequence Reset – Gap Fill messages (*GapFillFlag*='Y') must be received in sequence.

			Any messages (including any Gap Fills) sent in response to a Resend Request should have PossDup='Y'. Sequence Reset – Reset (*GapFillFlag* not 'Y') is used only as a last resort, and always by human intervention, to allow an otherwise hopelessly confused session to be resumed. In these cases, all chance at automatic message recovery is lost.

3.8 Logout

Tag	Field Name	Req'd	Description
35	*MsgType*	Y	5
58	*Text*	N	*Indicates reason for Logout.*

Either side may issue a Logout to gracefully close the session. The side issuing the Logout should process messages normally until it sees the logout reply, and then break the TCP connection. CXA will typically only request logout after the scheduled end of FIX session.

4 FIX Messages

4.1 Standard Message Header

Tag	Field Name	Req'd	Description
8	*BeginString*	Y	FIX.4.2 Must be first field in message.
9	*BodyLength*	Y	Length of message following *BodyLength* field up to and including the delimiter preceding the *CheckSum* field. Must be second field in message.
35	*MsgType*	Y	Must be third field in message. 0 = Heartbeat 1 = TestRequest 2 = ResendRequest 3 = Reject 4 = SequenceReset 5 = Logout 8 = ExecutionReport 9 = OrderCancelReject A = Logon D = NewOrderSingle F = OrderCancelRequest G = OrderCancelReplaceRequest AE = TradeCaptureReport AR = TradeCaptureReportAck UCC = Trade Cancel/Correct
49	*SenderCompID*	Y	ID of sender: Assigned by CXA for messages sent to CXA. (*TargetCompID* for messages from CXA)
50	*SenderSubID*	Y	Sub ID of sender: Assigned by CXA for messages sent to CXA. (*TargetSubID* for messages from CXA)
56	*TargetCompID*	Y	ID of destination: 'CXA' for messages sent to CXA Exchange. (*SenderCompID* for messages from CXA)

57	*TargetSubID*	Y	Sub ID of destination: 'TEST' for messages sent to CXA test/certification system. 'PROD' for messages sent to CXA production system. (*SenderSubID* for messages from CXA)
34	*MsgSeqNum*	Y	Sequential sequence number for session.
43	*PossDupFlag*	N	N = (Default) Y = Indicates a message resend and should be used during FIX Replay. All inbound orders with a value of 'Y' will be rejected by CXA.
52	*SendingTime*	Y	UTC date-time that message was sent.
122	*OrigSendingTime*	N	For messages with *PossDupFlag*='Y', indicates time that message was first sent.
115	*OnBehalfOfCompId*	N	Identifies the trading participant (trading PID) responsible for the message on messages sent to CXA. Must be an allowed trading **Participant ID** (4 digits). If only one allowed trading PID is configured on the session, then *OnBehalfOfCompId* may be omitted as the session will always use the single allowed PID. Returned to Participants in *DeliverToCompId* (128).
128	*DeliverToCompId*	Y	Returns Trading PID copied from order.

4.2 Standard Message Trailer

A standard trailer terminates each message.

Tag	Field Name	Description
10	*CheckSum*	Modulo 256 *CheckSum* of all characters in message up to and including the delimiter preceding the *CheckSum* field. Three digits with leading zeroes if necessary.

4.3 CXA Specific Fields

The following FIX fields are specific to CXA:

Tag	Field Name	Description
4805	*ExecVenue*	Refer to definition in the Trade Capture Report Section 0 for more details.
6801	*Undisclosed*	Refer to definition in the New Order Single Section 4.4.1 for more details.
6802	*ClientCrossRef*	Refer to definition in New Order Single Section 4.4.1 and Trade Capture Report Section 0 for more details.
6803	*ShortSellNakedQty*	Refer to definition in the New Order Single Section 4.4.1 for more details.
6804	*ShortSellCoveredQty*	Refer to definition in the New Order Single Section 4.4.1 for more details.
6805	*ShortSellLongQty*	Refer to definition in the New Order Single Section 4.4.1 for more details.
6807	*TransactID*	Refer to definitions in the Execution Report Section 4.5.1 and Trade Cancel/Correct Section 4.5.3 for more details.
7695	*MassCancelID*	Refer to definition in the Purge Request Section 4.9.1, Purge Acknowledgement Section 4.10.1, and Purge Rejected Section 4.10.2for more details.
7696	*CancelledOrderCount*	Refer to definition in the Purge Acknowledgement Section 4.10.1for more details.
7698	*RiskGroupIDCnt*	Refer to definition in the Purge Request Section 4.9.1for more details.
7699	*RiskGroupID*	Refer to definition in the New Order Single Section 4.4.1, Purge Request Section 4.9.1, and Execution Report Section 4.5.1 for more details.
7700	*MassCancelInst*	Refer to definition in the Purge Request Section 4.9.1 for more details.
7713	*NoTradeFeat*	Refer to definition in the New Order Single Section 4.4.1 for more details.
7714	*NoTradeKey*	Refer to definition in the New Order Single Section 4.4.1 for more details.
7903	*PreventedTradePx*	Refer to definition in the Execution Report Section 4.5.1 for more details.
7904	*PreventedTradeQty*	Refer to definition in the Execution Report Section 4.5.1 for more details.

7905	*PreventedTradeLiquidityIndicator*	Refer to definition in the Execution Report Section 4.5.1 for more details.
8080	*T1Settlement*	Refer to definition in the New Order Single Section 4.4.1 for more details.
8081	*MEQSE*	Refer to definition in the New Order Single Section 4.4.1 for more details.
8138	*OriginOfTrans*	Refer to definition in the New Order Single Section 4.4.1 for more details.
8139	*IntermediaryID*	Refer to definition in the New Order Single Section 4.4.1 for more details.
8140	*DirectedWholesaleIndic*	Refer to definition in the New Order Single Section 4.4.1 for more details.
8177	*RemoveCrossingFromClearing*	Refer to definition in the New Order Single Section 4.4.1 for more details.
8181	*OffExchTradeReportType*	Refer to definition in the Trade Capture Report Section 0 for more details.
8182	*BrokerPreferencing*	Refer to definition in the New Order Single Section 4.4.1 for more details.
8183	*CrossType*	Refer to definition in the Execution Report Section 4.5.1 for more details.
8184	*BookingPurposeTrade*	Refer to definition in the Execution Report Section 4.5.1 for more details.
9303	*RoutingInst*	Refer to definition in the New Order Single Section 4.4.1 for more details.
9479	*DisplayIndicator*	Refer to definition in the New Order Single Section 4.4.1 for more details.
9617	*ModifySequence*	Refer to definition in the Execution Report Section 4.5.1 for more details.
9619	*CancelOrigOnReject*	Refer to definition in the Order Cancel/Replace Section 4.4.3 for more details.
9620	*CorrectedPrice*	Refer to definition in the Trade Cancel/Correct Section 4.5.3 for more details.
9688	*OrigCompID*	Refer to definition in the Execution Report Section 4.5.1 for more details.
9689	*OrigSubID*	Refer to definition in the Execution Report Section 4.5.1 for more details.
9690	*WorkingPrice*	Refer to definition in the Execution Report Section 4.5.1 for more details.
9730	*TradeLiquidityIndicator*	Refer to definitions in the Execution Report Section 4.5.1 and Trade Cancel/Correct Section 4.5.3 for more details.

		IMPORTANT: *TradeLiquidityIndicator* was Tag 9882 in the Chi-X Australia FIX specification. All CXA markets use Tag 9730 for *TradeLiquidityIndicator* and Tag 9882 for *FeeCode*.
9862	*ContraTradePA*	Refer to definition in the Execution Report Section 4.5.1 for more details.
9882	*FeeCode*	Refer to definition in the Execution Report Section 4.5.1 for more details. **IMPORTANT:** Tag 9882 was used for *TradeLiquidityIndicator* in the Chi-X Australia FIX specification. All CXA markets use Tag 9730 for *TradeLiquidityIndicator* and Tag 9882 for *FeeCode*.
25017	*MatchingUnit*	Refer to definition in the Purge Request Section 4.9.1 for more details.

4.4 Order Protocol – Participant to CXA

Participants use the messages in this section to enter, amend, and cancel orders.

4.4.1 New Order Single

Tag	Field Name	Req'd	Description
35	Standard Message Header	Y	*MsgType*='D'
97	*PossResend*	N	'N' (default) indicates a new order. 'Y' indicates an application level resend and is not supported. The message will be logged, but effectively ignored. For reasons of economy, CXA does not track (in primary storage) the *ClOrdID* values of orders that are no longer live. For reasons of performance, CXA does not access secondary storage to enforce unique *ClOrdID* values against orders that are no longer live. Without full duplicate *ClOrdID* value enforcement, it is not possible to safely implement the full behavior specified in the FIX 4.2 Protocol for *PossResend* (97) ='Y'.

1	*Account*	N	Used by a trading participant or a broker service provider to provide a broker cross reference. Reflected back on Execution Reports associated with this order. Up to 10 characters in ASCII range 32-126 are allowed. Available via Standard FIX Drop on an opt-in basis at the port level. Available by default on Order by Order FIX Drop.
11	*ClOrdId*	Y	Day-unique ID chosen by client. 20 characters or less. Characters in ASCII range 33-126 are allowed, except for comma, semicolon, and pipe. The 'at' symbol and double quotes are also not allowed. If the *ClOrdId* matches a live order it will be rejected as duplicate (unless *PossResend* (97) ='Y', see above). **Note: CXA only enforces the uniqueness of *ClOrdID* values among currently live orders. However, we *strongly* recommend that you keep your *ClOrdID* values day unique.**
18	*ExecInst*	N	Single value only (with no trailing space) For more details on each order type, see the following sections: Peg Orders, BestX Orders, and MarketX Orders. All values not defined below are ignored. P = Market Peg (peg Buy [Sell] to NBBO Offer [Bid], one tick within NBBO) R = Primary Peg (peg Buy [Sell] to NBBO Bid [Offer], one tick within NBBO) M = Midpoint (peg to NBBO Midpoint) *MaxFloor* (111) must be 0 if • *ExecInst* (18) is M, P, or R and • *TimeInForce* (59) is 0 or 6. j = BestX Order (insert the limit order at the best visible price on same side). Not supported if *TimeInForce* (59) is 3 or 4. k = MarketX Order (insert the limit order against the best visible price on opposite side).
38	*OrderQty*	Y	Number of shares for order, 1 to 999,999,999.

40	*OrdType*	Y	2 = Limit 5 = Market On Close (MOC) P = Pegged MOC requires *MaxFloor* = 0 if *TimeInForce*(59) is 0 or 6. Pegged requires: • *ExecInst* (18) = P, R, or M. • *MaxFloor* must be 0 if *TimeInForce*(59) is 0 or 6.
44	*Price*	Y	Limit Price. If *OrdType*(40) is • 2 (Limit) – Required Limit Price unless *ExecInst* (18) is j (BestX) or k (MarketX). Optional cap price for BestX and MarketX orders. Rejected if price is finer than the minimum trading increment for the stock. • P (Pegged) – Required Cap Price. Rejected if price is finer than ½ the minimum trading increment for the stock. • 5 (MOC) – Order will be rejected if Price is specified.
47	*OrderCapacity*	Y	The capacity for the order. A = Agency P = Principal X = Mixed
54	*Side*	Y	1 = Buy 2 = Sell 5 = Sell Short (client affirms ability to borrow)
55	*Symbol*	Y	Symbol (upper case alphanumeric).
59	*TimeInForce*	N	0 = DAY (default) 1 = GTC (Good Till Cancel) 3 = IOC (portion not filled immediately is cancelled). 4 = FOK (an IOC where the entire size must be filled, else the order will be cancelled back). 6 = GTD. Expires at the specified: • *ExpireTime* or end of day, or • *ExpireDate* for Multi-Day orders.

60	*TransactTime*	Y	Time order initiated/released. Required by FIX 4.2, but not used by CXA.
110	*MinQty*	N	Minimum fill quantity is accepted only on the following order types (otherwise the order will be rejected): • Orders having *TimeInForce*(59) = 3 (IOC), or • Orders having *OrdType*(40) = 5 or P (MOC or pegged) Multiple consecutive fills may be created such that their combined size satisfies the *MinQty* requirement. When the remaining size (*LeavesQty*) on an order is less than the defined *MinQty*, then LeavesQty is treated as the *MinQty*.
111	*MaxFloor*	N	Portion of *OrderQty* to display. Used for iceberg orders and hidden orders. Iceberg orders are Limit orders (40=2) and require *MaxFloor* > 0 if specified. For iceberg orders, this is the displayed quantity. The balance is reserve. The displayed quantity of each order at a price level is decremented first. Hidden orders are Pegged orders (40=P) and MOC orders (40=5). A hidden order must use *MaxFloor* =0, which hides the entire quantity. **Ignored** if order is IOC.
126	*ExpireTime*	N	Only applicable for *TimeInForce* (59) = '6' (GTD) orders, specifies the UTC Date/Time timestamp when the order expires. GTD orders with *ExpireTime* will expire at the earlier of the end of the current trading day and the *ExpireTime*. Required if *TimeInForce* is 6 (GTD) and *ExpireDate* is not specified.
432	*ExpireDate*	N	Only applicable for *TimeInForce* (59) = '6' (GTD) orders, specifies the date in "YYYYMMDD" format when the order expires. GTD orders with *ExpireDate* will expire at the earlier of the GTC Date Refresh and the end of *ExpireDate*. Required if *TimeInForce* is 6 (GTD) and *ExpireTime* is not specified.

			Ignored if *TimeInForce* is not 6 (GTD) or if *ExpireTime* is present.
439	*ClearingFirm*	Y	CHESS Clearing Participant ID. Must be a valid 5 digit CHESS PID.
440	*ClearingAccount*	N	Supplemental identifier. 10 character alphanumeric. Spaces, symbols, or special characters are not allowed. Recorded and returned in Execution Reports. Available via FIX Drop.
6801	*Undisclosed*	N	Indicates an undisclosed order. Possible values: 'Y' or 'N' (Default = 'N').
6802	*ClientCrossRef*	N	Can be used to provide additional client side cross reference information. Up to 15 printable characters (ASCII range 32-126).
6803	*ShortSellNakedQty*	N	Defines the portion of *OrderQty* (38) that is naked. It is assumed zero if it is not specified with a short sell order. Ignored unless *Side* (54) = 5.
6804	*ShortSellCoveredQty*	N	Defines the portion of *OrderQty* (38) that is covered. It is assumed zero if it is not specified with a short sell order. Ignored unless *Side* (54) = 5.
6805	*ShortSellLongQty*	N	Defines the portion of *OrderQty* (38) owned by the participant who placed the order. It is assumed zero if it is not specified with a short sell order. Ignored unless *Side* (54) = 5. Order having *Side* (54) = 5 (sell short) will be rejected unless *ShortSellNakedQty* + *ShortSellCoveredQty* + *ShortSellLongQty* is equal to the *OrderQty* (38) and *ShortSellLongQty* < *OrderQty* (38).
7699	*RiskGroupID*	N	Optional participant-specified ID for the order. Integer 1-65535.

7713	*NoTradeFeat*	N	Defines how to handle Match Trade Prevention (MTP) scenarios. If not specified, the port default is used. U = No Match Trade Protection, *NoTradeKey* (7714) will be ignored. N = Cancel Newest O = Cancel Oldest B = Cancel Both S = Cancel Smallest D = Decrement larger/Cancel Smaller d = Same as D above, but only decrement *LeavesQty*. Do not restate *OrderQty*. X = Booking Purpose Trade; the resultant trade is reported to CHESS as a booking purpose trade and as a cancel on public market data feeds. If the older and newer orders in a self-matching trade have conflicting instructions, the instruction of the newer order will be honored, except that if the inbound order specifies Decrement and the resting order does not, and the resting order is larger, then both orders will be cancelled. This exception is to protect the order entry software for the resting order from receiving an unexpected restatement message.
7714	*NoTradeKey*	N	Interactions of orders from the same participant (defined by reference to the first 3 digits of the trading PID) with the same *NoTradeKey* (7714) value will be managed by the newer order's *NoTradeFeat* (7713) instruction. Ignored if *NoTradeFeat* (7713)=U. Up to 10 printable ASCII characters (in the inclusive range 32..126).
8081	*MEQSE*	N	Possible values: Y = Minimum Execution Quantity Single Execution (MEQSE) N = Minimum Execution Quantity (MEQ) Default is 'N'.

			MEQSE is only supported on the following order types that have *MinQty*(110) specified (otherwise the order will be rejected): • MOC or Pegged Orders (*OrdType*(40) = 5 or P) with any *TimeInForce*(59). If after a partial fill the remaining size (*LeavesQty*) on an order is less than the defined *MinQty*, then *MinQty* is set to the *LeavesQty*. If traded, the MEQSE size will be satisfied by a single fill.
8138	*OriginOfTrans*	N	Market Integrity Rule defined field for Origin of Order (ex. ACN, ABN, CHESS HIN). Up to 20 printable ASCII characters (in the inclusive range 32..126).
8139	*IntermediaryID*	N	Market Integrity Rule defined field for Intermediary Identifier–may be populated with AFS license number. Up to 10 characters in ASCII range 32-126 are allowed.
8140	*DirectedWholesaleIndic*	N	Market Integrity Rule defined field to identify wholesale client. Possible values: 'Y' or 'N' (default 'N').
8177	*RemoveCrossingFromClearing*	N	Instructs CXA on how to process crossed trades with CHESS. Please contact CXA to confirm settings. Possible values: 'Y' or 'N' (default 'N').
8182	*BrokerPreferencing*	N	Y = Use broker preferencing N = No broker preferencing Defaults to port setting. Rejects if *BrokerPreferencing*=Y and *OrdType*(40)=2 (Limit) and *TimeInForce*(59)=0 or 6 (DAY or GTD).
9303	*RoutingInst*	N	P = Post Only (never take liquidity) where *OrdType*(40)=2 (Limit order) and

			TimeInForce(59)= 0 (DAY) or 1 (GTC) or 6 (GTD). F = Focused Nearpoint (only eligible to trade with opposing Farpoint) where *OrdType*(40)=P (Pegged order) and *ExecInst*(18)=R (Primary/Nearpoint). Defaults to port setting.
9479	*DisplayIndicator*	N	Treatment of Post Only orders on entry if creating a locked NBBO. All Post Only orders on entry which would create a crossed NBBO are cancelled back. V = Default. Post Only orders which would lock the NBBO on entry are allowed to do so. R = Cancel back the Post Only order on entry if it were to create a locked NBBO. Defaults to port setting.
	Standard Message Trailer	Y	

4.4.2 Order Cancel Request

Request to cancel an order.

Tag	Field Name	Req'd	Description
35	Standard Message Header	Y	*MsgType*='F'
97	*PossResend*	N	'N' (**default**) indicates a new cancel. 'Y' Indicates an application level unsolicited resend. If *ClOrdID* has not yet been seen, the cancel is treated as normal. If *ClOrdID* already exists, the resent cancel is ignored.
11	*ClOrdID*	Y	Day-unique ID chosen by client. 20 characters or less. Characters in ASCII range 33-126 are allowed, except for comma, semicolon, and pipe. The 'at' symbol and double quotes are also not allowed. Duplicate order *ClOrdID*s will be rejected (or ignored if *PossResend*='Y').

37	*OrderID*	N	*OrderID* supplied by CXA on the order acknowledgement. Optional but recommended for performance. *OrigClOrdID* must be sent if *OrderID* is not.
41	*OrigClOrdID*	N	*ClOrdID* of the order to cancel. *OrderID* must be sent if *OrigClOrdID* is not.
54	*Side*	N	**Ignored**
55	*Symbol*	N	**Ignored**
60	*TransactTime*	N	Time cancel initiated/released. Required by FIX 4.2 but not used by CXA.
	Standard Message Trailer	Y	

4.4.3 Order Cancel/Replace Request

Request to modify an order. Only *Price*, *OrderQty*, *MinQty*, *MaxFloor* (Iceberg orders only), and *ExpireDate* (GTD orders only) may be adjusted. Modifies will result in a loss of time priority unless the modification involves only one or more of the following:

- a decrease in *OrderQty*
- a change to *MaxFloor*
- a change to *ExpireDate (GTD orders only)*

Changes in *OrderQty* result in an adjustment of the current order's *OrderQty*. The new *OrderQty* does not directly replace the current order's *LeavesQty*. Rather, a delta is computed from the current *OrderQty* and the replacement *OrderQty*. This delta is then applied to the current *LeavesQty*. If the resulting *LeavesQty* is less than or equal to zero, the order is cancelled. This results in safer behavior when the modification request overlaps partial fills for the current order, leaving the Participant in total control of the share exposure of the order.

If *OrderQty* is changed for a Sell Short order (*Side*=5), then *ShortSellLongQuantity*, *ShortSellNakedQuantity*, and *ShortSellCoveredQuantity* are required to be populated based on the new *OrderQty*.

If *MinQty* is specified, the order will have the new *MinQty* applied. Note that a *MinQty* of 0 will effectively remove the *MinQty* restriction.

MaxFloor may only be changed for Iceberg orders. A change in *MaxFloor* takes effect on the next reserve reload (iceberg refresh). It may not be changed for Hidden order types (Pegged or MOC).

ExecInst may be specified as BestX (18=j) or MarketX (18=k) as a pricing option when modifying any visible limit order, irrespective of the *ExecInst* originally entered on the limit order. If *Price* is also specified, then the order's limit will be adjusted to the less aggressive of current BBO and the specified *Price*. Other values of *ExecInst*, if specified, must match the value from the original order or the Modify will be rejected.

Multi-day orders will have their expiration date updated when amended as follows:

- For GTC orders, the system-defined 'GTC Date Refresh' number of days from the current day resets the expiration date.
- For GTD orders, where *ExpireDate* was used in the original order and the *ExpireDate* is being amended, the order will have the new *ExpireDate* applied.
- For GTD orders, where *ExpireDate* was used in the original order and the *ExpireDate* is not specified in the amend request, the order's *ExpireDate* remains unchanged.

Other fields **will be ignored**, and the value from the original order will be re-used.

The Cancel/Replace message will only be accepted if the original order can be successfully removed. Requests which cannot be processed will be rejected using the Cancel Reject message. The Cancel Reject message will provide the *ClOrdID* and *OrigClOrdID* values which were specified on the Cancel/Replace message for identification.

A Cancel/Replace should not be issued until the ack for the previous Cancel/Replace has been received for that order (or the acknowledgement for the first Cancel/Replace Request). The FIX handler will reject a new Cancel/Replace if it has not seen the ack for the prior Cancel/Replace message from the Matching Engine.

The Purge-Amend Port is able to amend orders, via the Order Cancel/Replace Request message, which were originally entered by another FIX or BOE order entry port within the same firm. The CXA-generated *OrderID* (Tag 37) must match the order to be amended.

Note that *ClOrdId* (Tag 11) and *OrigClOrdID* (Tag 41) are not processed or required for Purge-Amend Port requests.

Tag	Field Name	Req'd	Description
35	Standard Message Header	Y	*MsgType*='G'
97	*PossResend*	N	'Y' Indicates an application level resend. If the *ClOrdID* does not indicate an already pending Cancel/Replace, the Cancel is treated as normal. If *ClOrdID* does indicate an already pending Cancel/Replace then the resent Cancel/Replace is ignored. 'N' (default) indicates a new Cancel/Replace.
1	*Account*	N	**Ignored** – Value preserved from original order.

11	*ClOrdId*	Y	Day-unique ID chosen by client. 20 characters or less. Characters in ASCII range 33-126 are allowed, except for comma, semicolon, and pipe. The 'at' symbol and double quotes are also not allowed. Duplicate order *ClOrdIDs* will be rejected[1] (or ignored if *PossResend*='Y').
18	*ExecInst*	N	The following values are available only when modifying a visible limit order (*OrdType*(40) = 2, *MaxFloor*(111) != 0): j = BestX Order (re-insert the limit order at the best visible price on same side). Not supported if *TimeInForce*(59) is 3 or 4. k = MarketX Order (re-insert the limit order against the best visible price on opposite side) The values otherwise must match the original order or the message will be **rejected**.
37	*OrderId*	N	*OrderId* supplied by CXA on the order acknowledgement. Optional but recommended for performance. *OrigClOrdID* must be sent if *OrderId* is not. In the case of multiple changes to a single order, this will be the *OrderId* from the most recent acknowledgement.
38	*OrderQty*	Y	Number of shares for order. This will modify the *OrderQty* of the current order; it does **not** directly set the remaining quantity.
40	*OrdType*	N	**Ignored** – Value preserved from original order.
41	*OrigClOrdID*	Y	*ClOrdID* of the order to replace. In the case of multiple changes to a single order, this will be the *ClOrdID* of the **most recent** accepted change.

44	*Price*	N	Limit price for limit order. Cap price for pegged orders.
47	*OrderCapacity*	N	**Ignored** – value preserved from original order
54	*Side*	N	**Ignored** – value preserved from original order
55	*Symbol*	N	**Ignored** – value preserved from original order
59	*TimeInForce*	N	**Ignored** – value preserved from original order
60	*TransactTime*	Y	Time Cancel/Replace initiated/released.
110	*MinQty*	N	Minimum fill quantity. See description in New Order Single. Modifying this value is a priority-losing event.
111	*MaxFloor*	N	Portion of *OrderQty* to display. The balance is reserve. See description in New Order Single. Invalid values for the order type will cause the Cancel/Replace to be rejected. Takes effect on the next reserve order reload or priority losing event. A value of zero will be ignored. If *MaxFloor* is to be removed completely, then the order should be cancelled and a new order sent.
126	*ExpireTime*	N	**Ignored** – value preserved from original order
432	*ExpireDate*	N	Only applicable for *TimeInForce* (59) = '6' (GTD) orders and where *ExpireDate* was accepted on the new order, specifies the date in "YYYYMMDD" format when the order expires. GTD orders with *ExpireDate* will expire at the earlier of the GTC Date Refresh and the *ExpireDate.*

			If not specified, when amending a multi-day GTD order which contains *ExpireDate*, the order's expiration date will remain unchanged.
439	*ClearingFirm*	N	**Ignored** – value preserved from original order
440	*ClearingAccount*	N	**Ignored** – value preserved from original order
6801	*Undisclosed*	N	**Ignored** – value preserved from original order
6802	*ClientCrossRef*	N	**Ignored** – value preserved from original order
6803	*ShortSellNakedQty*	N	Defines the portion of *OrderQty* (38) that is naked. **Required** if (and only if) the order has *Side*=5 (sell short) and *OrderQty* is specified on this message. Otherwise, **Ignored**.
6804	*ShortSellCoveredQty*	N	Defines the portion of *OrderQty* (38) that is covered. **Required** if (and only if) the order has *Side*=5 (sell short) and *OrderQty* is specified on this message. Otherwise, **Ignored**.
6805	*ShortSellLongQty*	N	Defines the portion of *OrderQty* (38) owned by the participant who placed the order. Order having *Side* (54) = 5 (sell short) will be rejected unless *ShortSellNakedQty* + *ShortSellCoveredQty* + *ShortSellLongQty* is equal to the *OrderQty* (38) and *ShortSellLongQty* < *OrderQty* (38). **Required** if (and only if) the order has *Side*=5 (sell short) and *OrderQty* is specified on this message. Otherwise, **Ignored**.

7713	*NoTradeFeat*	N	**Ignored** – value preserved from original order
7714	*NoTradeKey*	N	**Ignored** – value preserved from original order
8138	*OriginOfTrans*	N	**Ignored** – value preserved from original order
8139	*IntermediaryID*	N	**Ignored** – value preserved from original order
8140	*DirectedWholesaleIndic*	N	**Ignored** – value preserved from original order
8177	*RemoveCrossingFromClearing*	N	**Ignored** – value preserved from original order
8182	*BrokerPreferencing*	N	**Ignored** – value preserved from original order
9303	*RoutingInst*	N	**Ignored** – value preserved from original order
9479	*DisplayIndicator*	N	**Ignored** – value preserved from original order
9619	*CancelOrigOnReject*	N	N = Leave original order alone. Y = Cancel original order if replacement fails (an unsolicited Cancel report will be sent for original order in this case). Default is configurable per port (Y if not configured). Note that the port attribute setting of the port which is performing the amend is used to determine whether to leave or cancel. Hence, in the case of the Purge-Amend Port performing the amend, it is the port attribute of the Purge-Amend Port that determines whether to leave or cancel the order.
	Standard Message Trailer	Y	

[1] Cancel/Replace messages that merely reduce *OrderQty* may be overlapped if the existing *ClOrdID* is re-used.

4.5 Order Protocol – CXA to Participant

4.5.1 Execution Report

This section contains all possible fields that are sent in Execution Reports. Not all fields are sent on each Execution Report. Additional or unexpected FIX fields on all FIX messages should be ignored.

Tag	Field Name	Req'd	Description
35	Standard Message Header	Y	*MsgType*='8'
1	*Account*	N	Copied from order.
6	*AvgPx*	Y	Average price of executions for this order weighted by trade size. Zero if *CumQty* is zero.
11	*ClOrdID*	Y	*ClOrdID* of the order being accepted, executed or rejected. -or- *ClOrdID* of the cancel or replace request. -or- *ClOrdID* of the order subject to unsolicited cancel, or unsolicited replace by a Purge-Amend Port. (*OrigClOrdID* will not be present).
14	*CumQty*	Y	Cumulative quantity of shares executed for this order.
17	*ExecID*	Y	Day-unique id of execution message. Will be zero for *ExecTransType* of Status (3).
18	*ExecInst*	N	Copied from order.
20	*ExecTransType*	Y	0 = New 2 = Correction. Used to provide confirmed closing price for MOC trades. 3 = Status. Used to provide order restatements (150=D).
29	*LastCapacity*	N	Present on Fill and Partial Fill messages. 1 = Agent 2 = Cross as Agent 3 = Cross as Principal

			4 = Principal 5 = Mixed 6 = Cross as Mixed Values of 2, 3, or 6 indicate the client has executed against themselves. Crossing is determined by reference to the first 3 digits of the trading participant ID.
30	*LastMkt*	N	Present on Fill and Partial Fill messages. Supported MIC code values are as follows: CXAC = (Limit) CXAP = (Mid-Point) CXAN = (Near Point) CXAF = (Far Point) CXAM = (MOC) **Note:** This value is determined by the venue of the resting or "Maker" order in a trade pair. Both sides of the trade contain the same value.
31	*LastPx*	N	Price of this fill (zero for non-fills). For MOC Order Execution, this is the indicative price. For MOC Price Restatement, this is the final MOC price.
32	*LastShares*	N	Quantity of shares traded on this fill (zero for non-fills).
37	*OrderId*	Y	*OrderId* (supplied by CXA).
38	*OrderQty*	Y	Copied from order.

39	*OrdStatus*	Y	Status of order. 0 = New 1 = Partially Filled 2 = Filled 3 = DoneForDay 4 = Canceled 5 = Replaced 8 = Rejected B = Calculated (MOC restatement) For FIX Drop, only '1' or '2' will be sent and will always equal *ExecType* (150). For Order by Order FIX Drop, all execution information will be sent.
40	*OrdType*	N	Copied from order.
41	*OrigClOrdID*	N	ClOrdID of the order being cancelled or replaced (for a solicited Order Cancel, or Cancel/Replace, otherwise not present).
44	*Price*	N	Copied from order, except for BestX and MarketX orders, where this is the order price calculated by CXA.
47	*OrderCapacity*	N	Copied from order.
54	*Side*	Y	Copied from order.
55	*Symbol*	Y	Copied from order.
58	*Text*	N	If present, indicates reason for reject or cancel. Format is one letter reason code followed by colon and space followed by free form text message. (e.g., 'N: No Liquidity at price'). The specific text the system delivers may vary from the text listed below, to provide clarification of the reject reason. Reason codes listed below are still under review for CXA. **Reason codes are one of the following:** A = Admin C = Capacity undefined

			D = Duplicate identifier (e.g., *ClOrdID*) F = Failed to Quote H = Halted J = Too late to cancel K = Order rate threshold exceeded L = Order would lock or cross NBBO M = Order size exceeded N = Ran out of liquidity to execute against O = *ClOrdID* doesn't match a known order S = Short sale price violation T = Fill would trade through the NBBO U = User requested V = Would wash W = Add liquidity only order would remove X = Order expired Y = Symbol not supported Z = Unforeseen reason h = Multi-Day order persisted o = Max open orders count exceeded r = Reserve reload x = Crossed market y = Order received by CXA during replay
59	*TimeInForce*	N	Copied from order.
60	*TransactTime*	Y	UTC date-time that transaction occurred.
103	*OrdRejReason*	N	Only used when *ExecType* is Rejected (8). 0 = Exchange option 1 = Unknown symbol 2 = Exchange closed 3 = Order exceeds limit 5 = Unknown order 6 = Duplicate order 8 = Stale order

109	*ClientID*	N	Indicates client identifier (up to 16 characters). Not present if *ExecType* = 1 (partially fill) or 2 (fill).
110	*MinQty*	N	Copied from order.
111	*MaxFloor*	N	Copied from order.
126	*ExpireTime*	N	Copied from order if *TimeInForce* is GTD (6).
150	*ExecType*	Y	Reason for this Execution Report: 0 = New (acknowledgement of new order) 1 = Partial Fill 2 = Fill 3 = DoneForDay 4 = Canceled 5 = Replaced 8 = Rejected D = Restated For Standard FIX Drop, only '1' or '2' will be sent and will always equal *OrdStatus* (39). For Order by Order FIX Drop, all execution information will be sent. See Order by Order FIX Drop section. When a Purge-Amend Port amends an order that was entered by a FIX port, the FIX port that originally entered the order will receive a 'Restated' Execution Report with 150=D.
151	*LeavesQty*	Y	Quantity of shares still open for further execution. Will be zero if order is dead, otherwise will be *OrderQty* (38) – *CumQty* (14). **Note:** It is possible for *LeavesQty* to be zero when *ExecType* (150) = 5 indicating that the order is dead.

198	*SecondaryOrderID*	N	Present on a Match Trade Prevention (MTP) triggered cancel/restatement, on a reserve reload restatement, and on a Cancel/Replace acknowledgement that increases the size of a reserve order. Contra side CXA *OrderId* of prevented match (MTP), or CXA PITCH *OrderId* for displayed portion of reserve order after reload, or CXA PITCH *OrderId* for the displayed portion of a reserve order after a Cancel/Replace increased the size of the reserve order.
207	*SecurityExchange*	N	Market identifier of the primary exchange for the symbol traded.
378	*ExecRestatementReason*	N	Only present when 150=D. 1 = GTC/GTD renewal / restatement (no corporate action) 4 = Iceberg display size refreshed 5 = Partial Reduce due self-match trade prevention result based on *NoTradeFeat* (7713) C = Confirmed closing price for MOC trade R = Replaced by another port (i.e. Purge-Amend Port).
382	*NoContraBrokers*	N	Only present on trades on attributed orders. Always 1 if present.
432	*ExpireDate*	N	Date of order expiration (last day the order can trade) if *TimeInForce* is: • 1 (GTC) or • 6 (GTD) and *ExpireDate* specified.
439	*ClearingFirm*	Y	CHESS Clearing Participant ID copied from order.
440	*ClearingAccount*	N	Copied from order if present.
639	*PriceImprovement*	N	Amount of price improvement in basis points. It is calculated against the primary best bid/offer at the time of execution. It is not specified if the price improvement is not a positive value or

			there is no primary best bid/offer at the time of execution.
6801	*Undisclosed*	N	Copied from order if present.
6802	*ClientCrossRef*	N	Copied from order if present.
6803	*ShortSaleNakedQty*	N	Copied from order if *Side* (54) = 5.
6804	*ShortSaleCoveredQty*	N	Copied from order if *Side* (54) = 5.
6805	*ShortSaleLongQty*	N	Copied from order if *Side* (54) = 5.
6807	*TransactID*	Y	Transaction identifier as sent to CHESS for an order execution (150=1 or 150=2). 10 character alphanumeric.
7699	*RiskGroupID*	N	Copied from order if present.
7713	*NoTradeFeat*	N	Copied from order if present.
7714	*NoTradeKey*	N	Copied from order if present.
7903	*PreventedTradePx*	N	Provided if cancel or cancel/replace is the result of Match Trade Prevention (MTP). Indicates the trade price attempted when MTP was triggered.
7904	*PreventedTradeQty*	N	Provided if cancel or cancel/replace is the result of Match Trade Prevention (MTP). Indicates the trade quantity attempted when MTP was triggered.
7905	*PreventedTradeLiquidityIndicator*	N	Provided if cancel or cancel/replace is the result of Match Trade Prevention (MTP). Indicates the liquidity of the order attempted when MTP was triggered. A = Added liquidity R = Removed liquidity
8081	*MEQSE*	N	Copied from order if present.
8138	*OriginOfTrans*	N	Copied from order if present.
8139	*IntermediaryID*	N	Copied from order if present.
8140	*DirectedWholesaleIndic*	N	Copied from order if present.
8177	*RemoveCrossingFromClearing*	N	Copied from order if present.
8182	*BrokerPreferencing*	N	Copied from order if present.

8183	*CrossType*	N	Type of on-market crossing. Present if (and only if) *OrdStatus*(39) is 1 or 2 (partial fill or fill). 101 = Trade was the result of a broker preferenced crossing 102 = Other
8184	*BookingPurposeTrade*	N	If present, the fill or partial fill is a Booking Purpose Trade crossing. X = Booking Purpose trade.
9303	*RoutingInst*	N	Copied from order if present.
9479	*DisplayIndicator*	N	Copied from order if present.
9617	*ModifySequence*	N	Base 36 number of times order has been replaced.
9688	*OrigCompID*	Y	FIX Drop and ODROP only. *TargetCompID* of original FIX exec report.
9689	*OrigSubID*	Y	FIX Drop and ODROP only. *TargetSubID* of original FIX exec report.
9690	*WorkingPrice*	N	The price at which the order is effective on the book. Only present on Accepted, Replaced, or Restated and only when order is fully or partially booked.
9730	*TradeLiquidityIndicator*	Y	Present for acknowledgements and fills (150=0, 150=1 or 150=2). Recommended mapping to FIX Tag 851 provided: **1st Character** A = Trade Added Liquidity (851=1) R = Trade Removed Liquidity (851=2) C = Auction / Uncrossing (851=4) Added or Executed during an auction period. **2nd Character** I = Added Hidden Liquidity that was price improved J = Added Liquidity NBBO Joiner

			K = Added Liquidity from the hidden (reserve) portion of an iceberg order S = Added Liquidity NBBO Setter O = Opening Auction or intra-day auction C = Closing Auction A = Halt Auction (Re-Opening) **Match Trade Prevention (MTP)** For participants that opt-in to Report MTP Fields functionality (at firm or port level), the liquidity add and remove values may be presented on an MTP triggered cancel/restatement. **IMPORTANT:** *TradeLiquidityIndicator* was Tag 9882 in the Chi-X Australia FIX specification. All CXA markets use Tag 9730 for *TradeLiquidityIndicator* and Tag 9882 for *FeeCode*. For **Auction Trades** (1st character = C), the 2nd character will be populated as follows: • "O" Opening auction applies to standard 10:00 open, plus first day of trading auction for a new symbol • "C" Closing auction applies to standard 16:13 end of trading auction • "H" Halt auction applies to ETR (extreme trading range) events and corporate action related events.
9862	*ContraTradePA*	N	Participant ID of the contra side. Required for attributed symbols. Present on a new trade.
9882	*FeeCode*	N	Specific fee code associated with execution. See the Fee Schedule for the respective market for possible values. **IMPORTANT:** Tag 9882 was *TradeLiquidityIndicator* in the Chi-X Australia FIX specification. All CXA

			markets use Tag 9730 for *TradeLiquidityIndicator* and Tag 9882 for *FeeCode*.
	Standard Message Trailer	Y	

4.5.2 Cancel Reject

Rejects a Cancel, Cancel/Replace, or Trade Cancel request.

When a Cancel/Replace is rejected, by default the original order is left alive. A Cancel Reject should not be used as a sign that the original order has been cancelled. Even if the *CancelOrigOnReject = Y* option is being used a separate "unsolicited" cancel will be sent to close out the original order.

Tag	Field Name	Req'd	Description
35	Standard Message Header	Y	*MsgType*='9'
1	*Account*	N	Copied from Cancel or Cancel/Replace request.
11	*ClOrdID*	Y	*ClOrdID* from the Cancel or Cancel/Replace request.
37	*OrderId*	Y	*OrderId* of order that failed to be cancelled or replaced. Represents the originating/initial order in an order chain. 'NONE' if *CxlRejReason* is Unknown (1).
39	*OrdStatus*	Y	Cancel or Cancel/Replace request: Order Status of order that failed to be cancelled or replaced. Trade Cancel Report: 8 = Rejected
41	*OrigClOrdID*	Y	*ClOrdID* of the order that failed to be cancelled or replaced.
58	*Text*	N	Free form text message.
102	*CxlRejReason*	N	0 = Too late to cancel. 1 = Unknown order. 3 = Already pending cancel or pending replace.
434	*CxlRejResponseTo*	Y	This reject is in response to a: 1 = Cancel 2 = Cancel/Replace 3 = Trade Cancel Report
	Standard Message Trailer	Y	

4.5.3 Trade Cancel/Correct

Sends a Trade Cancel/Correct message from CXA for a trade break for an on-exchange trade. Breaks for off-exchange trades are reported by a Trade Capture Report.

Trade Cancel/Correct (UCC) is an optional message that is enabled by default at the port level. Trade cancels and corrections do not alter live order state.

Tag	Field Name	Req'd	Description
35	Standard Message Header	Y	*MsgType*='UCC'
11	*ClOrdID*	Y	*ClOrdID* of the original trade being cancelled/corrected.
17	*ExecID*	Y	Day-unique id of execution message.
19	*ExecRefID*	Y	Refers to the *ExecID* of the message being cancelled or corrected.
20	*ExecTransType*	Y	1 = Trade Cancel
31	*LastPx*	Y	Price on the original trade being cancelled/corrected.
32	*LastShares*	Y	Quantity of shares on the original trade being cancelled/corrected.
37	*OrderId*	Y	*OrderId* of the original trade being cancelled/corrected.
42	*OrigTime*	Y	UTC date-time of original trade.
54	*Side*	Y	Copied from original trade being cancelled/corrected.
55	*Symbol*	Y	Copied from original trade being cancelled/corrected (available in FIX Drop).
60	*TransactTime*	Y	UTC date-time of cancel/correct.
439	*ClearingFirm*	N	Copied from original trade being cancelled/corrected (if present).
440	*ClearingAccount*	N	Copied from original trade being cancelled/corrected (if present).
6807	*TransactID*	Y	Copied from original trade being cancelled/corrected.
9620	*CorrectedPrice*	N	New trade price.
9730	*TradeLiquidityIndicator*	Y	Copied from original trade being cancelled/corrected.

9882	*FeeCode*	N	Only for Trade Corrects. Corrected fee code.
	Standard Msg Trailer	Y	

4.6 Trade Capture Report Protocol – Participant to CXA

4.6.1 Trade Capture Report

A Trade Capture Report message is used for reporting off-exchange trades. This message can be used to report one side of a trade or both sides depending on the number of parties and the instrument being traded.

CXA Trade Reporting Facility supports two models as described in the FIX 5.0 (SP2) specification workflow diagrams of the Trade Capture Reporting section.

- One Sided Report for Matching models the workflow described in the section *Privately Negotiated Trade, One Party Report for Matching*.
- Two Sided Report models the workflow described in the section *Privately Negotiated Trade, Two Party Report.*

Whilst we make use of FIX 4.4 and FIX 5.0 messages/tags, these are handled as extensions and operate over a FIX 4.2 session. When a new trade report is accepted, a *TradeID* is returned in the corresponding Trade Capture Report confirmation messages. Where applicable, such trade reports may be cancelled or withdrawn by specifying the *TradeID*.

Note that the *TradeReportID* should be unique with respect to both other *TradeReportID* and ClOrdID entered by the same firm.

One Sided Report for Matching

A One Sided Report for Matching message is denoted by *TradeHandlingInstr*(1123)=2. Each Participant submits the details for their side of the trade and specifies the Contra Firm. These Trade Reports are matched according to the following criteria (in order of precedence):

Tag	Field Name	Description
31	*LastPx*	Must match to the number of decimal places supported by the trade type.
32	*LastShares*	Must be exact match.
54	*Side*	Must be on the opposite side of the matching order.
55	*Symbol*	Must be exact match.
75	*TradeDate*	Only the same trade dates will match.
448,452	*EnteringFirm (PartyID, PartyRole)*	Participant ID for Entering Firm. Values must match *ContraFirm* on opposite side.
448,452	*ContraFirm (PartyID, PartyRole)*	Participant ID for Contra Firm. Values must match *EnteringFirm* on opposite side.
8181	*OffExchTradeReportType*	Must be exact match.

		Valid Value(s): 'L'

The following fields are not part of the matching criteria, but they do have additional requirements:

Tag	Field Name	Description
4805	*ExecVenue*	Must match if present in either Trade Capture Report.
8080	*T1Settlement*	Warrants Trade Reporting Facility only. Both parties must specify 8080=Y for T+1 settlement to be indicated to CHESS.

Two Sided Report

A Two Sided Report message is denoted by *TradeHandlingInstr*(1123) = 1 and contains the details for both sides of an off-exchange trade report. The Two Sided Report consists of a number of required fields including the symbol, price, and quantity that were negotiated off-exchange as well as relevant clearing information for both the lodging and contra sides and a number of optional fields.

Cancelling Trade Reports

A Participant may cancel a Two Sided Report that has been accepted by sending a Trade Capture Report message with *TradeReportTransType*(487) = 1 and the *TradeID*(1003) from the Trade Capture Report that has been accepted.

One Sided Report for Matching messages may not be cancelled electronically. Please contact the CXA Trade Desk to cancel such a trade.

Trade Capture Report

Tag	Field Name	Req'd	Description
35	Standard Message Header	Y	*MsgType*='AE'
97	*PossResend*	N	N = (default) indicates a new order. Y = Indicates an application level resend and is NOT SUPPORTED. For reasons of economy, CXA does not track in primary storage the *ClOrdID* values of orders that are no longer live. For reasons of performance, CXA does not access secondary storage to enforce

			unique *ClOrdID* values against orders that are no longer live. Without full duplicate *ClOrdID* value enforcement, it is not possible to safely implement the full behavior specified in the FIX 4.2 Protocol for *PossResend*='Y'. To remain economical, fast *and* safe, all messages with *PossResend*='Y' will be simply ignored.
60	*TransactTime*	Y	For Trade With Price Improvement trade reports (Type 'S'), the time the Trade Capture Report was initiated by the trading participant. For all other Trade Report Categories, the date and time the trading participant agreed to the off-market trade.
31	*LastPx*	Y	Price of this fill. Ignored if: TradeReportTransType (487) = 1 (Cancel), and TradeHandlingInst (1123) = 1 (Two Sided Report).
32	*LastShares*	Y	Quantity of shares traded on this fill. Ignored if: TradeReportTransType (487) = 1 (Cancel), and TradeHandlingInst(1123) = 1 (Two Sided Report).
55	*Symbol*	Y	CXA Symbol.
75	*TradeDate*	N	AsAtDate: Indicates date of the off-market trade referenced in the message in YYYYMMDD format. Absence of this field

			indicates current day (expressed in local time at place of trade). **Please note this is a mandatory field for type E, p, and t trade reports** and should match the date specified in *TransactTime* (60), allowing for UTC to local conversion.
150	*ExecType*	Y	F = Trade H = Trade Cancel (Two Sided Reports only)
487	*TradeReportTransType*	N	Specifies whether this trade report is new or a cancellation. Unilateral trades reported under the service may not be amended by the participant. Defaults to 'new' if unspecified. 0 = New 1 = Cancel
552 *Repeating Group*	*NoSides*	Y	Always '2'.
→ 54	*Side*	Y	Required tag to start each repeated group. 1 = Buy 2 = Sell 5 = Sell Short
→ 11	*ClOrdId*	C	Day-unique ID chosen by client. 20 characters or less. Characters in ASCII range 33-126 are allowed, except for comma, semicolon, and pipe. A leading tilde (~) cannot be sent on any *ClOrdId* and will result in a reject. These are reserved for internal use by

				CXA and could be received as a result of a system-generated *ClOrdId*. Required unless on the Contra side of a one-sided report (*PartyRole*=17 and *TradeHandlingInstr*=2).
→	1	*Account*	N	Used by a trading participant or a broker service provider to provide a broker cross reference. Reflected back on Trade Capture Reports associated with this order. Up to 10 characters in ASCII range 32-126 are allowed. Available via Standard FIX Drop on an opt-in basis at the port level. Available by default on Order by Order FIX Drop.
→	47	*OrderCapacity*	C	The capacity for the order. A = Agency P = Principal X = Mixed Required unless on the Contra side of a one-sided report (*PartyRole*=17 and *TradeHandlingInstr*=2).
→	439	*ClearingFirm*	C	CHESS Clearing Participant ID. Must be a valid 5-digit CHESS PID. Required unless on the Contra side of a one-sided report (*PartyRole*=17 and *TradeHandlingInstr*=2).

→	440		*ClearingAccount*	N	Supplemental identifier. 10 character alphanumeric. Spaces, symbols, or special characters are not allowed. Recorded and returned in Execution Reports. Available via FIX Drop.
→	453		*NoPartyIDs*	Y	Number of Parties. Always '1' for each side.
→	→	448	*PartyID*	Y	Participant ID (required tag to start each repeated group).
→	→	447	*PartyIDSource*	Y	C = Generally accepted market participant identifier
→	→	452	*PartyRole*	Y	Required parties for each Trade Report type. One each of: 7 = EnteringFirm 17 = ContraFirm
→	6802		*ClientCrossRef*	N	Can be used to provide additional client side cross reference information. Maximum length is 15 characters.
→	6803		*ShortSellNakedQty*	N	Defines the portion of *OrderQty* (38) that is naked. Ignored unless *Side* (54) = 5.
→	6804		*ShortSellCoveredQty*	N	Defines the portion of *OrderQty* (38) that is covered. Ignored unless *Side* (54) = 5.
→	6805		*ShortSellLongQty*	N	Defines the portion of *OrderQty* (38) owned by the participant who placed the order. It is assumed zero if it is not specified with a short sell order. Ignored unless *Side* (54) = 5. Order having *Side* (54) = 5 (sell short) will be rejected unless

				ShortSellNakedQty + *ShortSellCoveredQty* + *ShortSellLongQty* is equal to the *OrderQty* (38) and *ShortSellLongQty* < *OrderQty* (38).
→	8138	*OriginOfTrans*	N	Market Integrity Rule defined field for Origin of Order (ex. ACN, ABN, CHESS HIN). Maximum of 20 characters.
→	8139	*IntermediaryID*	N	Market Integrity Rule defined field for Intermediary Identifier– may be populated with AFS license number. Up to 10 characters in ASCII range 32-126 are allowed.
→	8140	*DirectedWholesaleIndic*	N	Market Integrity Rule defined field to identify wholesale client. Possible values: 'Y' or 'N' (default 'N').
571		*TradeReportID*	C	Day-unique ID chosen by client. 20 characters or less. Characters in ASCII range 33-126 are allowed, except for comma, semicolon, and pipe. Ignored if *TradeReportTransType(487)* = 1 (Cancel) and TradeHandlingInst (1123) = 1 (Two Sided Report). In that case use TradeID*(1003)* instead. A leading tilde (~) cannot be sent on any *TradeReportID* and will result in a reject. These are reserved for internal use by CXA and could be received as a result of a system-generated *CrossId*.

820	*TradeLinkID*	N	A unique identifier used to link Trade Capture Reports. This field is mandatory if *OffExchTradeReportType*(8181) = 'P', 'p' or 'F' and is used to link Trade Capture Reports that together comprise a multi-legged trade. The reporting participant is responsible for allocating this unique identifier. For all other cases this field is ignored. Maximum length is 10 characters.
856	*TradeReportType*	Y	This field controls pending state of the trade report. 0 = (submit) for all new trade reports 6 = (Trade Report Cancel) to cancel any confirmed trade reports entered where *TradeHandlingInst* (1123) = 1 (Two Sided Report).
1003	*TradeID*	C	Used to specify a previously reported trade to be cancelled. This is the *TradeID*(1003) generated by CXA when the Trade Capture Report was accepted. Mandatory when *TradeReportTransType(487)* = 1 and TradeHandlingInst (1123) = 1 (Two Sided Report). Must be otherwise absent.
1123	*TradeHandlingInstr*	Y	Used to specify trade reporting model used. 0 = Confirmed Trade 1 = Two Sided Report

			2 = One Sided Report for Matching
4805	*ExecVenue*	N	Market Integrity Rule defined field for Execution Venue to identify participant crossing system or dark pool –may be populated with MIC or ASIC allocated code. Maximum of 4 characters (additional characters will be ignored).
8080	*T1Settlement*	N	The optional T+1 Settlement tag is only applicable to the Warrants Trade Report Facility. Both Participants must specify 8080=Y for T+1 Settlement to be report to CHESS. Possible values: 'Y' or 'N' (default 'N').
8177	*RemoveCrossingFromClearing*	N	Instructs CXA on how to process crossed trades with CHESS. Please contact CXA to confirm settings. Possible values: 'Y' or 'N' (default 'N').
8181	*OffExchTradeReportType*	Y	Category of the trade report. Must be one of the following: B = Block trade P,p = Large portfolio trade T,t = Large principal transaction S = Trade with Price Improvement L = Permitted trade during post trading hours period M = Permitted trade during pre trading hours period

			E = Out of hours trade X = Booking purpose trade F = ETF trade report – unit creation or redemption Using ‘p’ or ‘t’ for large portfolio trades and large principal transaction indicates that the trade subject of the report was done on the previous trading day and the participant has delayed the trade report as permitted in the Market Integrity Rules. One Sided Report for Matching Trade Reports may not use ‘S’, ‘P’,’p’, ‘E’, ‘F’, and ‘X’.

4.7 Trade Capture Report Protocol – CXA to Participant

4.7.1 Trade Capture Report Ack

The Trade Capture Report Ack message is sent by CXA to acknowledge the receipt of a Trade Capture Report. It is a technical-level ack and the Trade/Cancel is not considered to have fully succeeded until a Trade Capture Report is sent by CXA with *TradeReportType*(856) of 2 (Accept).

Tag	Field Name	Req’d	Description
35	Standard Message Header	Y	*MsgType*=‘AR’
97	*PossResend*	N	N = (Default) indicates a new order. Y = Indicates an application level resend and is NOT SUPPORTED. For reasons of economy, CXA does not track in primary storage the *ClOrdID* values of orders that are no longer live. For reasons of performance, CXA does not access secondary storage to enforce unique *ClOrdID*

			values against orders that are no longer live. Without full duplicate *ClOrdID* value enforcement, it is not possible to safely implement the full behavior specified in the FIX 4.2 Protocol for *PossResend*='Y'. To remain economical, fast *and* safe, all messages with *PossResend*='Y' will be simply ignored.
60	*TransactTime*	Y	For Trade With Price Improvement trade reports (Type 'S'), the time the Crossed Trade Report was initiated by the trading participant. For all other Trade Report Categories, the date and time the trading participant did the off-market trade.
31	*LastPx*	Y	Copied from incoming Trade Capture Report.
32	*LastShares*	Y	Copied from incoming Trade Capture Report.
55	*Symbol*	Y	Copied from incoming Trade Capture Report.
75	*TradeDate*	N	Copied from incoming Trade Capture Report.
150	*ExecType*	Y	Copied from incoming Trade Capture Report.
487	*TradeReportTransType*	N	Copied from incoming Trade Capture Report.
552 *Repeating Group*	*NoSides*	Y	Copied from the incoming Trade Capture Report.
→ 54	*Side*	Y	Copied from incoming Trade Capture Report.

→	11		*ClOrdId*	Y	*Required tag to start each repeated group.* Copied from incoming Trade Capture Report.
→	1		*Account*	N	Copied from incoming Trade Capture Report, if present.
→	47		*OrderCapacity*	Y	Copied from incoming Trade Capture Report.
→	439		*ClearingFirm*	Y	Copied from incoming Trade Capture Report.
→	440		*ClearingAccount*	N	Copied from incoming Trade Capture Report.
→	453		*NoPartyIDs*	Y	Copied from incoming Trade Capture Report.
→	→	448	*PartyID*	Y	Copied from incoming Trade Capture Report.
→	→	447	*PartyIDSource*	Y	Copied from incoming Trade Capture Report.
→	→	452	*PartyRole*	Y	Copied from incoming Trade Capture Report.
→	6802		*ClientCrossRef*	N	Copied from incoming Trade Capture Report.
→	6803		*ShortSellNakedQty*	N	Copied from incoming Trade Capture Report.
→	6804		*ShortSellCoveredQty*	N	Copied from incoming Trade Capture Report.
→	6805		*ShortSellLongQty*	N	Copied from incoming Trade Capture Report.
→	8138		*OriginOfTrans*	N	Copied from incoming Trade Capture Report.
→	8139		*IntermediaryID*	N	Copied from incoming Trade Capture Report.

→ 8140	*DirectedWholesaleInd ic*	N	Copied from incoming Trade Capture Report.
571	*TradeReportID*	Y	Copied from incoming Trade Capture Report, if present.
820	*TradeLinkID*	N	Copied from incoming Trade Capture Report, if present.
856	*TradeReportType*	Y	Copied from incoming Trade Capture Report.
939	*TrdRptStatus*	Y	Will be 0 (Accepted) or 1 (Rejected).
1003	*TradeID*	C	Copied from incoming Trade Capture Report, if present.
1123	*TradeHandlingInstr*	Y	Copied from incoming Trade Capture Report.
4805	*ExecVenue*	N	Copied from incoming Trade Capture Report, if present.
8080	*T1Settlement*	N	Copied from incoming Trade Capture Report, if present.
8177	*RemoveCrossingFrom Clearing*	N	Copied from incoming Trade Capture Report, if present.
8181	*OffExchTradeReportT ype*	Y	Copied from incoming Trade Capture Report.

4.7.2 Trade Capture Report

The Trade Capture Report message is sent by CXA to acknowledge whether a trade submitted by a Trade Capture Report has been accepted, declined, or broken. This is the business-level ack.

The Trade is considered to have fully succeeded if a Trade Capture Report is sent by CXA with *TradeReportTransType*(487) of 0 (New) and *TradeReportType*(856) of 2 (Accept).

The Trade is considered to have been cancelled if a Trade Capture Report is sent by CXA with *ExecType*(150) of H (Trade Cancel), *TradeReportTransType*(487) of 1 (Cancel) and *TradeReportType*(856) of 2 (Accept).

Tag	Field Name	Req'd	Description

35	Standard Message Header	Y	*MsgType*='AE'
97	*PossResend*	N	N = (Default) indicates a new order. Y = Indicates an application level resend and is NOT SUPPORTED. For reasons of economy, CXA does not track in primary storage the *ClOrdID* values of orders that are no longer live. For reasons of performance, CXA does not access secondary storage to enforce unique *ClOrdID* values against orders that are no longer live. Without full duplicate *ClOrdID* value enforcement, it is not possible to safely implement the full behavior specified in the FIX 4.2 Protocol for *PossResend*='Y'. To remain economical, fast and safe, all messages with *PossResend*='Y' will be simply ignored.
60	*TransactTime*	Y	Copied from the incoming Trade Capture Report.
31	*LastPx*	Y	Traded Price.
32	*LastShares*	Y	Copied from the incoming Trade Capture Report.
55	*Symbol*	Y	Copied from the incoming Trade Capture Report.
58	*Text*	N	If present, indicates reason for the message. Format is one letter reason code followed by colon and space followed by free form text message. Reason codes are:

			A = Admin D = Duplicate TradeReportID H = Halted U = User Requested Y = Symbol Not Supported X = Expired Z = Unforeseen Reason o = Max Open Trade Count Exceeded 7 = Cancelled from Another Port
63	*SettlmntTyp*	N	Current supported values: 2 = next day settlement Indicates a shortened settlement period. When this tag is populated then *FutSettDate* (64) is also provided. **Only provided where a shortened settlement date (from T+2 to T+1) has been requested by both sides.** Please refer to *T1Settlement* (8080).
64	*FutSettDate*	N	Settlement date (with format YYYYMMDD) will be returned **only** if the trade is reported for T+1 Settlement, in conjunction with *SettlmntTyp* (63). **Only provided where a shortened settlement date (from T+2 to T+1) has been requested by both sides.** Please refer to *T1Settlement* (8080).
75	*TradeDate*	N	Copied from the incoming Trade Capture Report.
150	*ExecType*	Y	F = Trade H = Trade Cancel

487			*TradeReportTransType*	N	Copied from the incoming Trade Capture Report.
552 *Repeating Group*			*NoSides*	Y	Copied from the incoming Trade Capture Report.
→	54		*Side*	Y	Required tag to start each repeated group. Copied from the incoming Trade Capture Report.
→	11		*ClOrdId*	Y	Required tag to start each repeated group. Copied from the incoming Trade Capture Report.
→	37		*OrderId*	Y	*OrderId* assigned to this side of the trade.
→	1		*Account*	N	Copied from the incoming Trade Capture Report. Available via Standard FIX Drop on an opt-in basis at the port level. Available by default on Order by Order FIX Drop.
→	47		*OrderCapacity*	Y	Copied from the incoming Trade Capture Report.
→	439		*ClearingFirm*	Y	Copied from the incoming Trade Capture Report.
→	440		*ClearingAccount*	N	Copied from the incoming Trade Capture Report.
→	453		*NoPartyIDs*	Y	Copied from the incoming Trade Capture Report.
→	→	448	*PartyID*	Y	Copied from the incoming Trade Capture Report.
→	→	447	*PartyIDSource*	Y	Copied from the incoming Trade Capture Report.

→	→ 452	*PartyRole*	Y	Copied from the incoming Trade Capture Report.
→	6802	*ClientCrossRef*	N	Copied from the incoming Trade Capture Report, if present.
→	6803	*ShortSellNakedQty*	N	Copied from the incoming Trade Capture Report, if present.
→	6804	*ShortSellCoveredQty*	N	Copied from the incoming Trade Capture Report, if present.
→	6805	*ShortSellLongQty*	N	Copied from the incoming Trade Capture Report, if present.
→	8138	*OriginOfTrans*	N	Copied from the incoming Trade Capture Report, if present.
→	8139	*IntermediaryID*	N	Copied from the incoming Trade Capture Report, if present.
→	8140	*DirectedWholesaleIndic*	N	Copied from the incoming Trade Capture Report, if present.
→	9882	*FeeCode*	N	Specific fee code associated with execution. See the Fee Schedule for the respective market for possible values. Populated less the contra side of a one-sided report (*PartyRole*=17 and *TradeHandlingInstr*=2).
571		*TradeReportID*	Y	Unique identifier for the trade report confirm as provided by CXA.
572		*TradeReportRefID*	Y	Contains the *TradeReportID*(571) of the original Trade Capture Report to which this message relates.
820		*TradeLinkID*	N	Copied from the incoming Trade Capture Report, if present.
856		*TradeReportType*	Y	Will be 2 (Accept) for a confirm, 3 (Decline) for a decline and 0 (Submit) for an unsolicited change.

1003	*TradeID*	C	ID representing the trade, as seen on outbound market data. Allocated by CXA. Required to cancel a report.
1123	*TradeHandlingInstr*	Y	Copied from the incoming Trade Capture Report.
4805	*ExecVenue*	N	*TradeHandlingInst* (1123) = 1 (Two Sided Report): Copied from the incoming Trade Capture Report, if present. *TradeHandlingInst* (1123) = 2 (One Sided Report for Matching): Set to MIC from CXA.
6807	*TransactID*	Y	Transaction identifier as sent to CHESS for trade. 10 character alphanumeric.
8080	*T1Settlement*	N	Copied from the incoming Trade Capture Report, if present.
8177	*RemoveCrossingFromClearing*	N	Copied from the incoming Trade Capture Report, if present.
8181	*OffExchTradeReportType*	Y	Copied from the incoming Trade Capture Report.
9688	*OrigCompID*	Y	FIX Drop and ODROP only. *TargetCompID* of original FIX Execution Report.
9689	*OrigSubID*	Y	FIX Drop and ODROP only. TargetSubID of original FIX exec report.

4.9 Purge-Amend Port Protocol – Participant to CXA

A Purge-Amend Port may be created using the **FIX** protocol and includes the functionality to:

- Purge orders across your participant, and
- Amend orders across your participant.

A Purge Port may be created using the **BOE** protocol and includes the functionality to:

- Purge orders across your participant.

4.9.1 Purge Request

Request to cancel a group of orders or a single order across **all** the participant's sessions. A Purge Request is accepted only on dedicated FIX Purge Ports.

A participant may choose to implement one or more filters:

1. Trading PID Filter – optionally cancel based on the trading PID. Set using first character of *MassCancelInst* (7700) and sending *OnBehalfOfCompId* (115).
2. *Symbol* Filter – optionally cancel based on symbol. Set by sending a valid symbol in the *Symbol* (55) field. Cannot be combined with *RiskGroupID* or *OrderId* filters.
3. *RiskGroupID* Filter – optionally cancel based on *RiskGroupID* (7699). A maximum of 10 *RiskGroupIDs* may be included on a single Purge Request message. Set by populating *RiskGroupIDCnt* (7698) to a non-zero value. Cannot be combined with *Symbol* or *OrderId* filters.
4. *OrderId* Filter – optionally cancel a single order across all sessions by sending the *OrderId* (37) supplied by CXA on the order acknowledgement. Cannot be combined with *Symbol, RiskGroupID* , or *MatchingUnit* filters.

A participant may use the second character of *MassCancelInst* (7700) to set the acknowledgement style. If a single Purge Acknowledgement is selected, then *MassCancelID* (7695) must be sent.

RiskGroupID (7699) or Trading PID (115) purges with no *Symbol* (55) may be directed to a specific matching unit using the *MatchingUnit* (25017) optional field. If *MatchingUnit* (25017) is zero or not specified, then these purge types will be sent to all matching units starting with unit 1.

The system limits the rate at which identical Purge Request messages can be submitted to the system. Requests are restricted to twenty (20) messages per second per port.

An identical purge message is defined as a message having all of the same *RiskGroupID* (7699), *Symbol* (55), and Trading PID (115) field values as a previously received message.

Tag	Field Name	Req'd	Description
35	Standard Message Header	Y	*MsgType*='F'
97	*PossResend*	N	Y = Indicates an application level unsolicited resend. If *ClOrdID* has not

			yet been seen, the cancel is treated as normal. If *ClOrdID* already exists, the resent cancel is ignored. N = (default) indicates a new cancel.
60	*TransactTime*	Y	Time cancel initiated/released. Required by FIX 4.2 but not used by CXA.
7700	*MassCancelInst*	Y	At least one character must be provided (PID Filter). Contiguous characters must be specified up to total length. Truncated (unspecified) characters will default to values indicated below. ***1st Character : PID Filter*** A = No filtering by PID is performed. F = All orders that were sent under the PID specified in *OnBehalfOfCompId (115)* will be cancelled. ***2nd Character : Acknowledgement Style*** M = (default) Individual Execution Reports are sent for each cancelled order. S = Single Purge Acknowledgement sent once all cancels have been processed. Single Purge Acknowledgement will contain *MassCancelId (7695)* and *CancelledOrderCount (7696)*. *MassCancelId* (7695) must be specified or the Purge Request will be rejected. B = Both individual Execution Reports and single Purge Acknowledgement. Also requires *MassCancelId* (7695) to be specified or the Purge Request will be rejected. ***3rd Character : Order Scope*** D = (default) Purge Day orders M = Purge GTC and GTD orders

7695	*MassCancelID*	N	*MassCancelID* – This field will be echoed back in the resulting Purge Acknowledgement when second character of *MassCancelInst* (7700) is set to 'S' or 'B'. Purge requests containing a *MassCancelID* that is currently outstanding will be rejected. *MassCancelID* cannot end with a space. Maximum length 20 (extra characters will be ignored).
55	*Symbol*	N	*Symbol* (upper case). Limits cancellations to only orders with the specified symbol.
7698 *Repeating Group*	*RiskGroupIDCnt*	N	Number of repeating *RiskGroupIDs* (7699) included in this message. Integer 0-10.
➔ 7699	*RiskGroupID*	N	*RiskGroupID* (7699) to cancel. Only present if *RiskGroupIDCnt* (7698) is non-zero. Number of repeating groups must match number specified in *RiskGroupIDCnt* (7698). Integer 1-65535.
25017	*MatchingUnit*	N	Matching unit number the Purge Request will be sent toward. If blank or 0, the Purge Request will be sent to all units. Incompatible with symbol-level purges, specifying both *Symbol* (55) and *MatchingUnit* (25017) will cause the Purge Request to be rejected.
37	*OrderId*	N	To cancel a single order, enter the *OrderID* supplied by CXA on the order acknowledgement. In the case of multiple changes to a single order, this will be the *OrderId* from the most recent acknowledgement.
	Standard Message Trailer	Y	

Amend Request

FIX Purge-Amend Ports may amend orders entered by other FIX or BOE order entry ports within the same participant.

- **Request** message, refer to the **Order Cancel/Replace Request** section
- **Response** acknowledgement message, refer to the Amend Acknowledgement section
- **Reject** message, refer to the **Amend Reject** section

Points to note:

- The port performing the amend receives an Execution Report with 'Replaced' 150=5.
- The FIX port that originally entered the order receives an Execution Report with 'Restated' 150=D.

4.10 Purge-Amend Port Protocol – CXA to Participant

4.10.1 Purge Acknowledgement

A response to a Purge Request will only be sent when the *MassCancelID* (7695) is populated on a Purge Request. This includes cases where the Acknowledgement Style of *MassCancelInst* is 'S' or 'B'.

Tag	Field Name	Description
35	Standard Message Header	*MsgType*='8'
20	*ExecTransType*	3 = Status
150	*ExecType*	Reason for this execution report: M = Mass Cancel Complete
7695	*MassCancelID*	Copied from original Purge Request.
7696	*CancelledOrderCount*	Number of orders cancelled from a Purge Request with the specified *MassCancelID*.

4.10.2 Purge Reject

Rejects a Purge Request.

Tag	Field Name	Description
35	Standard Message Header	*MsgType*='9'
39	*OrdStatus*	8 = Rejected
434	*CxlRejResponseTo*	1 = Cancel
102	*CxlRejReason*	2 = Broker Option
58	*Text*	Free form text message with additional reject information.
7695	*MassCancelID*	*MassCancelID* from the Purge Request

	Standard Message Trailer	

Amend Acknowledgement

A response to an Order Cancel/Replace Request from the Purge-Amend Port is sent.

Tag	Field Name	Description
35	Standard Message Header	*MsgType*='8'
6	*AvgPx*	Average price of executions for this order weighted by trade size. Zero if *CumQty* is zero.
11	*ClOrdID*	*ClOrdID* of the order being replaced.
14	*CumQty*	Cumulative quantity of shares executed for this order.
18	*ExecInst*	Copied from order.
20	*ExecTransType*	0 = New
37	*OrderId*	*OrderID* from the Cancel/Replace request.
39	*OrdStatus*	Status of order. 1 = Partially Filled 2 = Filled 5 = Replaced
38	*OrderQty*	Copied from order.
40	*OrdType*	Copied from order.
44	*Price*	Copied from order.
54	*Side*	Copied from order.
55	*Symbol*	Copied from order.
59	*TimeInForce*	Copied from order.
60	*TransactTime*	UTC date-time that transaction occurred.
110	*MinQty*	Copied from order.
111	*MaxFloor*	Copied from order.
150	*ExecType*	5 = Replaced
151	*LeavesQty*	Quantity of shares still open for further execution. Will be zero if order is dead, otherwise will be *OrderQty* (38) – *CumQty* (14).
198	*SecondaryOrderID*	Present on a Cancel/Replace acknowledgement that increases the size of a reserve order.
432	*ExpireDate*	Date of order expiration (last day the order can trade) if *TimeInForce* is: • 1 (GTC) or • 6 (GTD) and *ExpireDate* specified.
6803	*ShortSaleNakedQty*	Copied from order if *Side* (54) = 5.
6804	*ShortSaleCoveredQty*	Copied from order if *Side* (54) = 5.

6805	*ShortSaleLongQty*	Copied from order if *Side* (54) = 5.
9617	*ModifySequence*	Base 36 number of times order has been replaced.
9690	*WorkingPrice*	The price at which the order is effective on the book. Only present when order is fully or partially booked.
9730	*TradeLiquidityIndicator*	Please refer to definition in 'Execution Report'
	Standard Message Trailer	

4.10.3 Amend Reject

Rejects a Cancel/Replace Request from the Purge-Amend Port.

Tag	Field Name	Description
35	Standard Message Header	*MsgType*='9'
11	*ClOrdID*	*ClOrdID* of order that failed to be replaced, or copied from request if rejected at the order entry port. Not present if *CxlRejReason* = 1 (Unknown order).
37	*OrderId*	*OrderID* from the Cancel/Replace request. 'NONE' if *OrderId* was not present on the request.
39	*OrdStatus*	8 = Rejected
434	*CxlRejResponseTo*	2 = Cancel/Replace
102	*CxlRejReason*	If present, then: 1 = Unknown order 2 = Broker Option
58	*Text*	Free form text message with additional reject information.

5. Order Types and Features

The following provides clarifying information that will enable Participants to successfully enter orders on the CXA Exchange.

This is not meant to be an exhaustive list of all FIX tags that accompany that order type, but an effort to identify the key tags and provide more information regarding certain order types and features. Please refer to the New Order section above for field description details.

5.1 Iceberg Order

Iceberg orders (also referred to as Reserve Orders in CXA documentation) are orders having both a displayed quantity and a non-visible, reserve quantity that is replenished when the displayed quantity is fully executed.

5.1.1 New Iceberg Order

Users may specify the precise amount of the order to be replenished with *MaxFloor*(111) once the displayed size is fully executed.

Tag	Field Name	Req'd	Comments
54	*Side*	Y	-
38	*OrderQty*	Y	-
111	*MaxFloor*	Y	-
40	*OrdType*	Y	2 = Limit
44	*Price*	Y	-
59	*TimeInForce*	N	-
126	*ExpireTime*	N	-

5.1.2 Reloading Iceberg Order

When the displayed quantity of an Iceberg order is fully executed, it is reloaded with a new displayed quantity of *MaxFloor*(111) and re-inserted at the same price level but losing time priority. The reloaded order maintains the same *OrderId* at the order entry, DROP, and regulatory reporting but uses a new *OrderId* on the market data feeds to avoid leaking information about the Iceberg. This new *OrderId* is provided to the Participant with the *SecondaryOrderID*(198) tag.

5.2 Broker Preferencing

All displayed orders and non-Broker Preferenced hidden orders are executed in the following priority:

1. Price
2. Visibility (Displayed before Hidden)
3. Time

Broker Preferencing is an attribute of an aggressive order that allows a Participant to preference their own hidden orders where they have price but not time priority. If Broker Preferencing is enabled, a resting Price Improvement order of the Participant will be eligible for preferencing against aggressive orders from the same Participant (defined by reference to the first 3 digits of the trading PID).

Note that Limit Day orders (e.g., visible orders) cannot be preferenced when they are entered or traded.

In the case of a resting MOC order, a contra side order from the same participant will also seek to broker preference ahead of other resting MOC orders with time priority.

Broker Preferencing is a configurable option that can be set by contacting the CXA Trade Desk and nominating the order entry gateways on which the functionality is to be enabled. Participants may override the port default with the *BrokerPreferencing*(8182) tag.

5.3 Market on Close (MOC)

Market on Close orders are hidden orders are matched throughout the day but not executed until the MOC Reference price has been determined. When MOC orders are matched, each Participant receives an Execution Report containing the matched size and an indicative price that references the last traded price. Once the Closing Price for a security has been determined, each matched trade will receive an Execution Report (35=8) with a MOC Price Restatement confirming the trade and the price. Each matched MOC trade will have a separate Execution Report and Execution ID. MOC orders with unmatched quantity at the end of the MOC Trading Session are cancelled back to the Participant.

5.3.1 New MOC Order

The following fields are relevant to a new MOC order:

Tag	Field Name	Req'd	Comments
40	*OrdType*	Y	5 = Market on Close.
44	*Price*	N	Must be absent. Order will be rejected if Price is specified.
59	*TimeInForce*	Y	All values allowed.
110	*MinQty*	N	Supported.
111	*MaxFloor*	Y	MOC orders require 111=0.
6801	*Undisclosed*	N	Supported.
8081	*MEQSE*	N	Supported.
8182	*BrokerPreferencing*	N	Supported.

5.3.2 MOC Order Execution

All MOC orders that match will result in an Execution Report indicating an order has matched but final price is not yet confirmed. A typical Execution Report for a MOC Order Match will include the following tags:

Tag	Field Name	Req'd	Comments
14	*CumQty*	Y	Total quantity matched.
17	*ExecID*	Y	Execution ID of the MOC Order Match.
40	*OrdType*	Y	5 = Market on Close
30	*LastMkt*	Y	CXAM = MOC
31	*LastPx*	Y	Indicative Price of trade.
32	*LastShares*	Y	Number of shares matched in this transaction.
150	*ExecType*	Y	1 = Partial Fill 2 = Fill
151	*LeavesQty*	Y	Quantity open for further MOC matches.

5.3.3 MOC Price Restatement

Once the closing price has been confirmed all MOC orders that have been matched will receive an Execution Report (35=8) with the final price. Participants can identify these messages by looking at fields *ExecTransType*(20)=2, *ExecType*(150)=D (Restated), and *ExecRestatementReason*(378)=C (MOC Trade Price Confirmation). Any MOC order matched after the closing price has been determined will get an MOC Order Execution followed by a MOC Price Restatement. Participants can expect the same messaging regardless of the time a MOC order is matched and executed.

These Execution Reports will contain the following tags:

Tag	Field Name	Req'd	Comments
35	Standard Message Header	Y	*MsgType*='8'
17	*ExecID*	Y	Execution ID for the previously report MOC Order Execution. The Execution ID remains unchanged.
20	*ExecTransType*	Y	2 = Trade Correct. Used to provide confirmed closing price for MOC trades.
31	*LastPx*	Y	New trade price. Closing price from listing market.
32	*LastShares*	Y	Number of shares executed.

39	*OrdStatus*	Y	B = Calculated
40	*OrdType*	Y	5 = Market on Close
150	*ExecType*	Y	D = Restated

5.3.4 MOC Cancel

MOC orders with unmatched quantity at the end of the MOC Trading Session are cancelled back to the Participant.

5.3.5 MOC – No Closing Price

If a closing price cannot be determined, then MOC orders that have been matched will be cancelled back to the Participant with *MsgType*(35) = UCC, *ExecTransType*(20)=1 (Trade Cancel), a new *ExecID*(17) for the MOC Trade Cancel, and *ExecRefID*(19) pointing back to the MOC Order Execution that is to be cancelled.

Tag	Field Name	Req'd	Comments
35	Standard Message Header	Y	*MsgType*='UCC'
17	*ExecID*	Y	Execution ID for this MOC Trade Cancel.
19	*ExecRefID*	Y	Execution ID for the previously reported MOC Order Execution.
20	*ExecTransType*	Y	1 = Trade Cancel. Used to cancel a previously reported MOC trade.
31	*LastPx*	Y	Original Price of trade.
32	*LastShares*	Y	Number of shares cancelled.
40	*OrdType*	Y	5 = Market on Close

5.4 Peg Orders

CXA supports the following types of Peg Orders: Primary Pegs, Market Pegs, Midpoint Pegs. These orders are hidden orders that guarantee price improvement to all incoming aggressive orders by executing within the spread of the NBBO.

All Peg Orders have the following characteristics:

- A resting peg order may remove liquidity when re-priced by an NBBO movement.
- A Peg Order will not execute if the NBBO is crossed.
  - An aggressive Peg Order will be rejected.
  - A resting Peg Order will be suspended when the NBBO is crossed and will resume its prior state once the NBBO is no longer crossed.

- The minimum price improvement is one tick. For symbols with a spread or tick size below one tick the minimum price improvement will be half the standard tick size.
- All passive Peg Orders are hidden.
  - A Peg Order must specify *MaxFloor*(111)=0 if *TimeInForce*(59) is 0 (DAY) or 6 (GTD).
- Peg Orders may use *MinQty*(110) to specify a minimum executable quantity (MEQ) on Peg Orders.
  - Participants may use *MEQSE*(8081)=Y to specify the Minimum Execution Quantity applies to a Single Execution.

5.4.1 Midpoint Peg Order

A Midpoint Peg Order is a non-displayed order that maintains a price at the midpoint of the NBBO spread.

A Midpoint Peg Order is specified with *ExecInst*=M.

5.4.2 Primary Peg Order

A Primary Peg Order is a non-displayed order that maintains a price relative the same or passive side of the NBBO spread. A Primary Peg Buy Order maintains a price relative to the National Best Bid ("NBB") plus minimum price improvement. A Primary Peg Sell Order maintains a price relative to the National Best Offer ("NBO") minus minimum price improvement.

A Primary Peg Order is specified with *ExecInst*=R.

5.4.3 Market Peg Order

A Market Peg Order is a non-displayed order that maintains a price relative to the opposite or aggressive side of the NBBO spread. A Market Peg Buy Order maintains a price relative to the NBO minus minimum price improvement and a Market Peg Sell Order maintains a price relative to the NBB plus minimum price improvement.

A Primary Peg Order is specified with *ExecInst*=P.

5.4.4 Peg Order Fields

The following fields are relevant to Peg Orders.

Tag	Field Name	Req'd	Comments
18	*ExecInst*	Y	P = Market Peg (peg Buy [Sell] to NBBO Offer [Bid], one tick within NBBO) R = Primary Peg (peg Buy [Sell] to NBBO Bid [Offer], one tick within NBBO) M = Midpoint (peg to NBBO Midpoint)
54	*Side*	Y	-
38	*OrderQty*	Y	-
40	*OrdType*	Y	P = Peg
44	*Price*	Y	Cap Price

59	*TimeInForce*	N	-
110	*MinQty*	N	Minimum fill quantity. Multiple consecutive fills may be created such that their combined size satisfies the MinQty requirement unless *MEQSE*=Y.
111	*MaxFloor*	Y	0 (not displayed)
8081	*MEQSE*	N	Possible values: Y = Minimum Execution Quantity Single Execution (MEQSE) N = (Default) Minimum Execution Quantity (MEQ)

5.5 BestX Orders

BestX is a Limit Order pricing option which specifies the order will be priced upon entry as the current best visible price level on the same side of the order. If no current price exists on the same side then the BestX Order will be rejected.

The BestX *ExecInst* (18=j) is dropped at order entry once a limit price has been determined and the order becomes a visible limit order.

5.5.1 New BestX Order

The following fields have special requirements when entering a new BestX order.

Tag	Field Name	Req'd	Comments
18	*ExecInst*	Y	j = BestX Order
40	*OrdType*	Y	2 = Limit
44	*Price*	N	Optional cap price. BestX orders determine the price at order entry. The BestX price will be reflected in the *Price*(44) field on the Execution Report.
59	*TimeInForce*	N	Must be: 0 = DAY (Default) 1 = GTC 6 = GTD All other values will be rejected.
111	*MaxFloor*	N	Must be greater than 0, if specified.
8182	*BrokerPreferencing*	N	Broker Preferencing is supported for BestX Orders.

5.5.2 Modifying Visible Limit Orders with BestX

It is important to note that orders entered with BestX become standard visible limit orders at order entry. They are not limit peg orders and will not be repriced if the market moves.

If the inside price of the market moves away from a visible limit order's entry price, a Participant may reprice it with a Cancel/Replace message using BestX *ExecInst*(18)=j. This will cause the visible limit order to be repriced and it will lose priority, even if the new displayed price for the order is unchanged.

A participant may modify an order originally entered with BestX without specifying *ExecInst*(18) by using the *Price*(44) returned in the previous Execution Report.

5.6 MarketX Orders

MarketX is a Limit Order pricing option which specifies the order will be priced upon entry as the current best visible price level on the opposing side of the order. If no current price exists on the opposing side then the MarketX Order will be rejected.

The MarketX *ExecInst* (18=k) is dropped at order entry once a limit price has been determined and the order becomes a visible limit order.

5.6.1 New MarketX Order

The following fields have special requirements when entering a new MarketX order.

Tag	Field Name	Req'd	Comments
18	*ExecInst*	Y	k = MarketX Order
40	*OrdType*	Y	2 = Limit
44	*Price*	N	Optional cap price. MarketX orders determine the price at order entry. The MarketX price will be reflected in the *Price*(44) field on the Execution Report.
59	*TimeInForce*	N	All values supported.
111	*MaxFloor*	N	Must be greater than 0, if specified.
8182	*BrokerPreferencing*	N	Broker Preferencing is supported for MarketX Orders.

It is important to note that orders entered with MarketX are not sweep orders and will only be priced at the best visible price on the opposite side of the market.

If a MarketX Order is not fully filled and has a *TimeInForce*(59) of 0 (Day) or 6 (GTD) will rest the remainder as a Limit Order at the last price filled.

5.6.2 Modifying Visible Limit Orders with MarketX

It is important to note that orders entered with MarketX become standard visible limit orders at order entry. They are not limit peg orders and will not be repriced if the market moves.

If the inside price of the market moves away from a visible limit order's entry price, a Participant may reprice it with a Cancel/Replace message using MarketX *ExecInst*(18)=k. This will cause the visible limit order to be repriced and it will lose priority, even if the new displayed price for the order is unchanged.

A participant may modify an order originally entered with MarketX without specifying *ExecInst*(18) by using the *Price*(44) returned in the previous Execution Report.

5.7 Post-Only Orders

Post-Only orders are fully displayed orders which cannot aggress and trade against resting orders on the CXA order book on entry. This includes scenarios where there is a hidden Peg Order. Post-Only orders upon entry cannot create a crossed NBBO. Post only orders can avoid creating a locked NBBO with *DisplayIndicator* (9479).

5.7.1 New Post-Only Order

Tag	Field Name	Req'd	Comments
54	*Side*	Y	
38	*OrderQty*	Y	Number of shares for order, 1 to 999,999,999.
40	*OrdType*	Y	2 = Limit
44	*Price*	Y	
59	*TimeInForce*	N	Must be: 0 = DAY (Default) 1 = GTC 6 = GTD All other values will be rejected.
9303	*RoutingInst*	Y	P = Post Only (never take liquidity)
9479	*DisplayIndicator*	N	Treatment of Post Only orders on entry if creating a locked NBBO. All Post Only orders on entry which would create a crossed NBBO are rejected. V = Default. Post Only orders which would lock the NBBO on entry are allowed to do so. R = Cancel back a Post Only order on entry if it were to create a locked NBBO.

5.7.2 Modifying Post-Only Orders

When modified, post only orders retain their post only attributes. When a participant amends the post-only order, the same post only logic applies during the amendment.

- Amending the price of a Post-Only order will re-apply the Post-Only logic
- Amending the quantity up of a Post-Only order will lose time priority as standard amend practice plus the Post-Only logic will be re-applied
- Amending the quantity down of a Post-Only order will retain time priority and will not re-apply Post-Only logic.

The post only attribute cannot be modified.

5.8 Good Till Cancel (GTC) Orders

GTC orders are multi-day orders that may persist in the system over multiple days and retain their price/time priority until they either fully trade or their expiration date is met.

5.8.1 New GTC Orders

The following fields are relevant for GTC orders.

Tag	Field Name	Req'd	Comments
40	*OrdType*	Y	2 = Limit
59	*TimeInForce*	Y	1 = GTC

When a GTC order is entered, CXA will apply the default 'GTC Date Refresh' number of days to be the order's expiration date which is included in the Execution Report for order updates. Please confirm with the Trade Desk on the 'GTC Date Refresh' value.

5.8.2 Modifying GTC Orders

A GTC order may be amended and is subject to the standard factors listed in the section on Order Cancel / Replace Request.

CXA will refresh the expiration date of the amended GTC order by 'GTC Date Refresh' number of days from the current date. The refreshed *ExpireDate* value will be included in the Execution Report for order updates.

5.8.3 Cancelling GTC Orders

Participants may cancel Multi-Day orders in line with other order types.

CXA systems will purge Multi-Day orders each day when the following conditions are met:

- At start of day if an order's expiration date is prior to today. This handles expiration dates occurring on non-trading days, or
- At end of day if an order's expiration date is not a future date, or
- At end of day if an order's price is too far from the symbol's reference price. This will initially be set at 60% either side of the reference price.

Participants have the option to include or exclude GTC and GTD orders when performing Purge Port (mass cancel) operations.

Participants have the option to configure the following Port Attributes, per FIX and BOE port, to include or exclude GTC and GTD orders:

- Cancel on ME disconnect, in the event that of a matching unit failover,
- Cancel on disconnect, in the event the user's FIX or BOE port loses connection with the CXA trading platform,
- Cancel on Halt, in the event an individual symbol is placed into a Halt status.

Please refer to the table: FIX Tag Summary for GTC and GTD Unsolicited Updates.

5.8.4 Restated GTC Orders

At the beginning of each trading day, Multi-day orders that have persisted overnight will be disseminated to the original FIX enterer plus permissioned ODROPS in Execution Reports with: 20=3 (status), 150=D (Restated), 378=1 (GTC/GTD renewal / restatement).

5.8.5 FIX Tag Summary for GTC and GTD Unsolicited Updates.

Scenario	Tag 35 MsgType	Tag 39 OrdStatus	Tag 20 Exec Trans Type	Tag 150 ExecType	Tag 378 Exec Restatement Reason	Tag 58 Text
GTD with Expire Time is cancelled intra-day	35=8 Execution Report	39=4 Cancelled	20=0 New	150=4 Cancelled	n/a	X (expired)
GTC / GTD with Expire Date is cancelled at start of day if: • the Expire Date is a previous date i.e. non-trading day, or • the Symbol has been delisted, or • there has been a relevant corporate action	35=8 Execution Report	39=4 Cancelled	20=0 New	150=4 Cancelled	n/a	X (expired) Y (symbol) A (admin)
GTC / GTD with Expire Date is cancelled at end of day if: • the Expire Date is not a future date, or • the Price is too far from the reference price	35=8 Execution Report	39=3 Done for day	20=0 New	150=3 Done for day	n/a	X (expired or price too far)
GTC / GTD with Expire Date will persist overnight, however is cancelled temporarily for end of day processing.	35=8 Execution Report	39=3 Done for day	20=3 Status	150=3 Done for day	378=1 GTC/GTD renewal / restatement	h (persist)
GTC / GTD with Expire Date is restated at start of day: • confirmation for Multi-Day orders	35=8 Execution Report	39=0 New	20=3 Status	150=D Restated	378=1 GTC/GTD renewal / restatement	

which have persisted overnight						

5.9 Good Till Date (GTD) Orders

GTD orders may be entered as a day order to expire at a certain time on the day it is entered, or GTD orders may be entered as a multi-day order to expire on a future date.

5.9.1 New GTD Orders

The following fields are relevant to **GTD day orders with *ExpireTime***.

Tag	Field Name	Req'd	Comments
40	*OrdType*	Y	2 = Limit 5 = MOC P = Pegged
59	*TimeInForce*	Y	6 = GTD
126	*ExpireTime*	N	Specifies the time when the GTD order expires on the current trading day.
432	*ExpireDate*	N	(Do not specify)

The following fields are relevant to **GTD multi-day orders with *ExpireDate***.

Tag	Field Name	Req'd	Comments
40	*OrdType*	Y	2 = Limit
59	*TimeInForce*	Y	6 = GTD
126	*ExpireTime*	N	(Do not specify)
432	*ExpireDate*	N	Specifies the date in "YYYYMMDD" format the GTD order expires.

5.9.2 Modifying GTD Orders

A GTD order may be amended and is subject to the standard factors listed in the section on Order Cancel / Replace Request.

The ExpireDate may be updated. Amend requests that do not include the ExpireDate will not change the existing ExpireDate.

5.9.3 Cancelling GTD Orders

Participants may cancel Multi-Day orders in line with other order types.

CXA systems will purge Multi-Day orders each day when the following conditions are met:

- At start of day if an order's expiration date is prior to today. This handles expiration dates occurring on prior non-trading days, or
- At end of day if an order's expiration date is not a future date, or
- At end of day if an order's price is too far from the symbol's reference price. This will initially be set at 60% either side of the reference price.

Participants have the option to include or exclude GTC and GTD orders when performing Purge Port (mass cancel) operations.

Participants have the option to configure the following Port Attributes, per FIX and BOE port, to include or exclude GTC and GTD orders:

- Cancel on ME disconnect, in the event that of a matching unit failover,
- Cancel on disconnect, in the event the user's FIX or BOE port loses connection with the CXA trading platform,
- Cancel on Halt, in the event an individual symbol is placed into a Halt status.

Please refer to the table: FIX Tag Summary for GTC and GTD Unsolicited Updates.

5.9.4 Restated GTD Orders

At the beginning of each trading day, Multi-day orders that have persisted overnight will be disseminated to the original FIX enterer plus permissioned FIX Drops and ODROPS in Execution Reports with: 20=3 (status), 150=D (Restated), 378=1 (GTC/GTD renewal / restatement).

5.10 Off-Exchange Trade Reports

CXA has a number Off-Exchange Trade Reporting features. All trade reports are submitted by the Trade Capture Report message, either as a pair of Single-Side Trade Reports or with a Two-Side Trade Report from the Executing Broker. The method of trade reporting varies by product and broker relationship. This section contains sample Trade Reporting scenarios. This is not an exhaustive list of scenarios and not all fields are specified for each message. Refer to section 4.6 "Trade Capture Report Protocol – Participant to CXA" for details on the full set of tags required for these messages.

5.10.1 Two-Sided Report

Below illustrates an example of key elements of the message flow for a new trade capture report that contains information for both sides in the same message.

Trade Capture Report (Participant to CXA)

A Participant sends a permitted pre-market trade to CXA containing both sides of the trade. Note that both parties are of role "Lodger" since both sides are being entered via this report.

Tag	Field Name	Value *(example)*	Notes
35	Standard Message Header	AE	Trade Capture Report.
31	*LastPx*	*(5.25)*	

32	*LastShares*	*(50000)*	
55	*Symbol*	*(ABCD)*	
150	*ExecType*	F	Must be F = trade
487	*TradeReportTransType*	0	New
571	*TradeReportID*	*(CLI_0001)*	Day-unique ID chosen by the client.
856	*TradeReportType*	0	Submit
1123	*TradeHandlingInstr*	1	Two Sided Report
8181	*OffExchTradeReportType*	*(M)*	Permitted trade during pre-trading hours period.
552	*NoSides*	2	Both sides are reported. The first side reported is the Lodger.
→ 54	*Side*	*(2)*	Required tag to start first Side group. 1 = Buy 2 = Sell
→ 11	*ClOrdId*	*(CL_5554_000A)*	*ClOrdId* for order associated with Lodger.
→ 453	*NoPartyIDs*	1	Must be 1.
→ → 448	*PartyID*	*(5554)*	Lodger – PID.
→ → 447	*PartyIDSource*	C	Generally accepted (PID).
→ → 452	*PartyRole*	*(7)*	*EnteringFirm* (Lodger).
→ 439	*ClearingFirm*	*(55541)*	CHESS Clearing Firm for Lodger.
1, 47, 440, 6802, 6803, 6804, 8138, 8139, 8140	*Optional Tags*	Varies	

→ 54	*Side*	*(1)*	Required tag to start first Side group. Must be the opposite side of the first group. 1 = Buy 2 = Sell
→ 11	*ClOrdId*	*(CL_5557_1234)*	*ClOrdId* for contra order.
→ 453	*NoPartyIDs*	1	Must be 1.
→ → 448	*PartyID*	*(5554)*	Lodger – PID.
→ → 447	*PartyIDSource*	C	Generally accepted (PID).
→ → 452	*PartyRole*	*(7)*	*ContraFirm* (Contra).
→ 439	*ClearingFirm*	*(55573)*	CHESS Clearing Firm for contra.
→ 1, 47, 440, 6802, 6803, 6804, 8138, 8139, 8140	*Optional Tags*	Varies	

Technical Ack (CXA to Participant)

CXA always provides a Technical Ack for a Trade Capture Report. All fields are copied from the incoming Trade Capture Report unless otherwise noted. *TradeRptType*(856) is still 0, which means the trade has not yet been confirmed.

Tag	Field Name	Value *(example)*	Notes
35	Standard Message Header	AR	Trade Capture Report Ack
939	*TradeRptStatus*	0	Accepted (Received by CXA).
571	*TradeReportID*	*(CLI_0001)*	Day-unique ID chosen by the client.
487	*TradeReportTransType*	0	

856	*TradeReportType*	0	New – Trade is not yet confirmed.
1123	*TradeHandlingInstr*	1	
8181	*OffExchTradeReportType*	*(M)*	
55	*Symbol*	*(ABCD)*	
31	*LastPx*	*(5.25)*	
32	*LastShares*	*(50000)*	
150	*ExecType*	*(F)*	
→ 54	*Side*	*(2)*	
→ 11	*ClOrdId*	*(CL_5554_000A)*	
→ 453	*NoPartyIDs*	1	
→→ 448	*PartyID*	*(5554)*	
→→ 447	*PartyIDSource*	C	
→→ 452	*PartyRole*	*(7)*	
→ 439	*ClearingFirm*	*(55541)*	
→ 1, 47, 440, 6802, 6803, 6804, 8138, 8139, 8140	*Optional Tags*	*(Varies)*	
→ 54	*Side*	*(1)*	
→ 11	*ClOrdId*	*(CL_5557_1234)*	
→ 453	*NoPartyIDs*	1	
→→ 448	*PartyID*	*(5557)*	
→→ 447	*PartyIDSource*	C	
→→ 452	*PartyRole*	*(17)*	
→ 439	*ClearingFirm*	*(55573)*	

→ 1, 47, 440, 6802, 6803, 6804, 8138, 8139, 8140	*Optional Tags*	*(Varies)*	

Business Ack (CXA to Participant)

CXA sends the Business Ack to the Participant after the Technical Ack. Most fields are copied from the incoming Trade Capture Report unless otherwise noted. The Business Ack will set *TradeReportType*(856) = 2 indicated the trade has been accepted and contains the *TradeID* for the confirmed Trade as well as the *OrderId* assigned to each side of the trade.

Tag	Field Name	Value *(example)*	Notes
35	Standard Message Header	AE	Trade Capture Report
31	*LastPx*	*(5.25)*	
32	*LastShares*	*(50000)*	
55	*Symbol*	*(ABCD)*	
150	*ExecType*	F	
487	*TradeReportTransType*	0	
571	*TradeReportID*	*(173DIBEFG0ZN)*	Unique identifier for the Trade Capture Report generated by CXA for the Technical Ack.
572	*TradeReportRefID*	*(CLI_0001)*	Original *TradeReportID*(571) provided by the client.
856	*TradeReportType*	2	Accepted.
939	*TradeRptStatus*	0	Accepted.
1003	*TradeID*	*(173DIBEFG0ZQ)*	Represents the trade as seen on outbound market data. Required to cancel a Trade Capture Report.
1123	*TradeHandlingInstr*	1	

8181	*OffExchTradeReportType*	*(M)*	
552	*NoSides*	2	
→ 54	*Side*	*(2)*	
→ 11	*ClOrdId*	*(CL_5554_000A)*	
→ 37	*OrderId*	*(173DIBEFG0ZO)*	*OrderId* assigned to the order with side = 2 (Sell).
→ 453	*NoPartyIDs*	1	
→ → 448	*PartyID*	*(5554)*	
→ → 447	*PartyIDSource*	C	
→ → 452	*PartyRole*	*(7)*	
→ 439	*ClearingFirm*	*(55541)*	
→ 1, 47, 440, 6802, 6803, 6804, 8138, 8139, 8140	*Optional Tags*	*(Varies)*	
→ 54	*Side*	*(1)*	
→ 11	*ClOrdId*	*(CL_5557_1234)*	
→ 37	*OrderId*	*(173DIBEFG0ZP)*	*OrderId* assigned to the order with side = 1 (Buy).
→ 453	*NoPartyIDs*	1	
→ → 448	*PartyID*	*(5557)*	
→ → 447	*PartyIDSource*	C	
→ → 452	*PartyRole*	*(17)*	
→ 439	*ClearingFirm*	*(55573)*	
→ 1, 47, 440, 6802,	*Optional Tags*	*(Varies)*	

6803, 6804, 8138, 8139, 8140			

Technical Reject (CXA to Participant)

A Trade Capture Report can be rejected with a Technical Ack *MsgType*(35)=AR and *TradeRptStatus*(959) = 1 (Rejected). CXA will not send any other messages related to the Trade Capture Report.

5.10.2 One Sided Report for Matching

Below illustrates an example of key elements of the message flow where each party submits a One Party for Matching Trade Capture Report. For the purposes of this example, Participant A has a Participant ID of 3450 and is buying 75,000 shares of XYZ at 3.23 from Participant B, which has a Participant ID of 6780.

Trade Capture Report (Participant A to CXA)

Each Participant will send a Trade Capture Report to CXA when they are ready. In this example, Participant A sends the Trade Capture Report first with the details of their side of the trade with *PartyRole*(452)=7 (*EnteringFirm*) and the other side of the trade with *PartyRole*(452)=17 (*ContraFirm*).

Tag	Field Name	Value *(example)*	Notes
35	Standard Message Header	AE	Trade Capture Report
31	*LastPx*	*(3.23)*	
32	*LastShares*	*(75000)*	
55	*Symbol*	*(XYZ)*	
150	*ExecType*	F	Must be F = trade.
487	*TradeReportTransType*	0	New
571	*TradeReportID*	*(CLI_A001)*	Day-unique ID chosen by the client.
856	*TradeReportType*	0	Submit
1123	*TradeHandlingInstr*	2	One Sided Report for Matching.

8181	*OffExchTradeReportType*	*(M)*	Permitted trade during pre-trading hours period.
552	*NoSides*	2	Different information is reported for both sides.
→ 54	*Side*	*(1)*	Required tag to start first Side group. 1 = Buy 2 = Sell
→ 11	*ClOrdId*	*(CL_3450_0101)*	*ClOrdId* for order associated with this side. Required for Entering Firm.
→ 453	*NoPartyIDs*	*(1)*	Only one *PartyID* for this side.
→ → 448	*PartyID*	*(3450)*	EnteringFirm for this side. Must match the ContraFirm on the Trade Capture Report from the other side.
→ → 447	*PartyIDSource*	C	Generally accepted PID.
→ → 452	*PartyRole*	*(7)*	7 = *EnteringFirm*
→ 439	*ClearingFirm*	*(34502)*	CHESS Clearing Firm this side.
→ 1, 47, 440, 6802, 6803, 6804, 8138, 8139, 8140	*Optional Tags*	Varies	
→ 54	*Side*	*(2)*	Required tag to start second Side group. 1 = Buy 2 = Sell
→ 453	*NoPartyIDs*	*(1)*	Only one *PartyID* for this side.

→ → 448	*PartyID*	*(6780)*	*ContraFirm* for this side. Must match the *EnteringFirm* on the Trade Capture Report from the other side.
→ → 447	*PartyIDSource*	C	Generally accepted PID.
→ → 452	*PartyRole*	*(17)*	17 = *ContraFirm*

Technical Ack (CXA to Participant A)

Participant A will always receive a Technical Ack (or Reject) in response to the Trade Capture Report. A Technical Ack, however, does not mean the trade has been confirmed; it simply means that CXA has received the Trade Capture Report and will attempt to match it once both sides have submitted the trade.

Tag	Field Name	Value *(example)*	Notes
35	Standard Message Header	AR	Trade Capture Report Ack
939	*TradeRptStatus*	0	Accepted (Received by CXA).
571	*TradeReportID*	*(CLI_A001)*	Day-unique ID chosen by the client.
487	*TradeReportTransType*	0	
856	*TradeReportType*	0	New – Trade is not yet confirmed.
1123	*TradeHandlingInstr*	2	
8181	*OffExchTradeReportType*	*(M)*	
55	*Symbol*	*(XYZ)*	
31	*LastPx*	*(3.23)*	
32	*LastShares*	*(75000)*	
150	*ExecType*	F	
552	*NoSides*	2	

→ 54	*Side*	*(1)*	
→ 11	*ClOrdId*	*(CL_3450_0101)*	
→ 453	*NoPartyIDs*	1	
→ → 448	*PartyID*	*(3450)*	
→ → 447	*PartyIDSource*	C	
→ → 452	*PartyRole*	*(7)*	
→ 54	*Side*	*(2)*	
→ 1, 47, 440, 6802, 6803, 6804, 8138, 8139, 8140	*Optional Tags*	*(Varies)*	
→ 453	*NoPartyIDs*	1	
→ → 448	*PartyID*	*(6780)*	
→ → 447	*PartyIDSource*	C	
→ → 452	*PartyRole*	*(17)*	

Trade Capture Report (Participant B to CXA)

Here is an example of the message that Participant B might send to CXA to report their side of the trade.

Tag	Field Name	Value *(example)*	Notes
35	Standard Message Header	AE	Trade Capture Report
31	*LastPx*	*(3.23)*	
32	*LastShares*	*(75000)*	
55	*Symbol*	*(XYZ)*	
150	*ExecType*	F	Must be F = trade
487	*TradeReportTransType*	0	New

571	*TradeReportID*	*(CLI_B201)*	Day-unique ID chosen by the client
856	*TradeReportType*	0	Submit
1123	*TradeHandlingInstr*	2	One Sided Report for Matching
8181	*OffExchTradeReportType*	*(M)*	Permitted trade during pre-trading hours period.
552	*NoSides*	2	Only one side is reported.
→ 54	*Side*	*(2)*	Required tag to start first Side group. 1 = Buy 2 = Sell
→ 11	*ClOrdId*	*(CL_6780_B001)*	*ClOrdId* for order associated with this side.
→ 453	*NoPartyIDs*	*(1)*	Only one *PartyID* for this side.
→ → 448	*PartyID*	*(6780)*	*EnteringFirm* for this side. Must match the *ContraFirm* on the Trade Capture Report from the other side.
→ → 447	*PartyIDSource*	C	Generally accepted PID.
→ → 452	*PartyRole*	*(7)*	7 = *EnteringFirm*
→ 439	*ClearingFirm*	*(67809)*	CHESS Clearing Firm this side.
→ 1, 47, 440, 6802, 6803, 6804, 8138, 8139, 8140	*Optional Tags*	Varies	
→ 54	*Side*	*(1)*	Required tag to start second Side group. 1 = Buy

			2 = Sell
→ 453	*NoPartyIDs*	*(1)*	Only one *PartyID* for this side.
→ → 448	*PartyID*	*(3450)*	*ContraFirm* for this side. Must match the *EnteringFirm* on the Trade Capture Report from the other side.
→ → 447	*PartyIDSource*	C	Generally accepted PID.
→ → 452	*PartyRole*	*(17)*	17 = *ContraFirm*

Technical Ack (CXA to Participant B)

Participant B will also receive a Technical Ack (or Reject) in response to the Trade Capture Report. Once again, the Technical Ack only means that CXA has received the Trade Capture Report. The trade is not confirmed until each side has received a Business Ack.

Tag	Field Name	Value *(example)*	Notes
35	Standard Message Header	AR	Trade Capture Report Ack
939	*TradeRptStatus*	0	Accepted (Received by CXA).
571	*TradeReportID*	*(CLI_B201)*	Day-unique ID chosen by the client.
487	*TradeReportTransType*	0	
856	*TradeReportType*	0	New – Trade is not yet confirmed.
1123	*TradeHandlingInstr*	2	
8181	*OffExchTradeReportType*	*(M)*	
55	*Symbol*	*(XYZ)*	
31	*LastPx*	*(3.23)*	
32	*LastShares*	*(75000)*	

150	*ExecType*	F	
552	*NoSides*	2	
→ 54	*Side*	*(2)*	
→ 11	*ClOrdId*	*(CL_6780_B001)*	
→ 453	*NoPartyIDs*	1	
→ → 448	*PartyID*	*(6780)*	
→ → 447	*PartyIDSource*	C	
→ → 452	*PartyRole*	*(7)*	
→ 439	*ClearingFirm*	*(67809)*	
1, 47, 440, 6802, 6803, 6804, 8138, 8139, 8140	*Optional Tags*	Varies	
→ 54	*Side*	*(1)*	
→ 453	*NoPartyIDs*	*(1)*	
→ → 448	*PartyID*	*(3450)*	
→ → 447	*PartyIDSource*	C	
→ → 452	*PartyRole*	*(17)*	

Business Ack (CXA to Participant A)

Once CXA has received and matched Trade Capture Reports from both parties, CXA will send a Business Ack to each party. Most fields are copied from the incoming Trade Capture Report unless otherwise noted. The Business Ack will set *TradeReportType*(856) = 2 indicated the trade has been accepted and contains the *TradeID* for the confirmed Trade as well as the *OrderId* assigned to each side of the trade.

Each Participant will receive the same *TradeID*, as this is the value that will identify the trade as seen on outbound market data.

Tag	Field Name	Value *(example)*	Notes
35	Standard Message Header	AE	Trade Capture Report
31	*LastPx*	*(3.23)*	
32	*LastShares*	*(75000)*	
55	*Symbol*	*(XYZ)*	
150	*ExecType*	F	
487	*TradeReportTransType*	0	
571	*TradeReportID*	*(273DIBEFH001)*	Unique identifier for the Trade Capture Report generated by CXA.
572	*TradeReportRefID*	*(CLI_A001)*	Original *TradeReportID*(571) provided by the client.
856	*TradeReportType*	2	Accepted.
939	*TradeRptStatus*	0	Accepted.
1003	*TradeID*	*(273DIBEFH303)*	Represents the trade as seen on outbound market data. Required to cancel a Trade Capture Report.
1123	*TradeHandlingInstr*	2	
8181	*OffExchTradeReportType*	*(M)*	
552	*NoSides*	2	
→ 54	*Side*	*(1)*	
→ 11	*ClOrdId*	*(CL_3450_0101)*	
→ 37	*OrderId*	*(273DIBEFH301)*	*OrderId* assigned to this side.
→ 453	*NoPartyIDs*	1	
→ → 448	*PartyID*	*(3450)*	

→ → 447	*PartyIDSource*	C	
→ → 452	*PartyRole*	*(7)*	
→ 439	*ClearingFirm*	*(34502)*	
→ 1, 47, 440, 6802, 6803, 6804, 8138, 8139, 8140	*Optional Tags*	*(Varies)*	
→ 54	*Side*	*(2)*	
→ 37	*OrderId*	*(273DIBEFH302)*	*OrderId* assigned to the contra.
→ 453	*NoPartyIDs*	1	
→ → 448	*PartyID*	*(6780)*	
→ → 447	*PartyIDSource*	C	
→ → 452	*PartyRole*	*(17)*	

Business Ack (CXA to Participant B)

Once CXA has received and matched Trade Capture Reports from both parties, CXA will send a Business Ack to each party. Most fields are copied from the incoming Trade Capture Report unless otherwise noted. The Business Ack will set *TradeReportType*(856) = 2 indicated the trade has been accepted and contains the *TradeID* for the confirmed Trade as well as the *OrderId* assigned to each side of the trade.

Each Participant will receive the same *TradeID*, as this is the value that will identify the trade as seen on outbound market data.

Tag	Field Name	Value *(example)*	Notes
35	Standard Message Header	AE	Trade Capture Report
31	*LastPx*	*(3.23)*	
32	*LastShares*	*(75000)*	
55	*Symbol*	*(XYZ)*	

150	*ExecType*	F	
487	*TradeReportTransType*	0	
571	*TradeReportID*	*(273DIBEFH021)*	Unique identifier for the Trade Capture Report generated by CXA.
572	*TradeReportRefID*	*(CLI_B201)*	Original *TradeReportID*(571) provided by the client.
856	*TradeReportType*	2	Accepted.
939	*TradeRptStatus*	0	Accepted.
1003	*TradeID*	*(273DIBEFH303)*	Represents the trade as seen on outbound market data. Required to cancel a Trade Capture Report.
1123	*TradeHandlingInstr*	2	
8181	*OffExchTradeReportType*	*(M)*	
552	*NoSides*	2	
→ 54	*Side*	*(2)*	
→ 11	*ClOrdId*	*(CL_6780_B001)*	
→ 37	*OrderId*	*(273DIBEFH302)*	*OrderId* assigned to this side.
→ 453	*NoPartyIDs*	1	
→ → 448	*PartyID*	*(6780)*	
→ → 447	*PartyIDSource*	C	
→ → 452	*PartyRole*	*(7)*	
→ 439	*ClearingFirm*	*(67809)*	
1, 47, 440, 6802, 6803, 6804, 8138, 8139, 8140	*Optional Tags*	Varies	

→ 54	*Side*	*(1)*	
→ 37	*OrderId*	*(273DIBEFH301)*	*OrderId* assigned to the contra.
→ 453	*NoPartyIDs*	*(1)*	
→ → 448	*PartyID*	*(3450)*	
→ → 447	*PartyIDSource*	C	
→ → 452	*PartyRole*	*(17)*	

Technical Reject (CXA to Participant)

A Trade Capture Report can be rejected with a Technical Ack *MsgType*(35)=AR and *TradeRptStatus*(959) = 1 (Rejected). CXA will not send any other messages related to the Trade Capture Report.

Trade Matching

A trade will be matched as soon as both parties have received a Technical Ack. If neither party has received a Business Ack after both Participants have received a Technical Ack then the Participants have a mismatch between the information entered by each side. Trades that fail to match will not generate additional messages since a Participant may have several One Sided Report for Matching messages outstanding at a given time.

The criteria for matching Trade Capture Reports from two parties is detailed in section 0 "One Sided Report for Matching". Participants should review the details of the Technical Ack they received from CXA and, if necessary, compare their Technical Ack with the Participant that they intended to match against. If either Participant needs to change the details of their submission, they should Withdraw their original Trade Capture Report (see section 0) and submit a new Trade Capture Report with the correct details.

5.10.3 Trade Cancel Report

Participants must contact the CXA Trade Desk to cancel Off-Exchange trades reported through CXA. If an Off-Exchange trade is cancelled, both Participants will receive a Trade Capture Report with *ExecType*(150) of H (Trade Cancel), *TradeReportTransType*(487) of 1 (Cancel) and *TradeReportType*(856) of 2 (Accept).

For example, if the trade reported in the Trade Capture Report example was to be cancelled, the Participant would receive similar to this.

Tag	Field Name	Value *(example)*	Notes
35	Standard Message Header	AE	Trade Capture Report

31	*LastPx*	*(5.25)*	
32	*LastShares*	*(50000)*	
55	*Symbol*	*(ABCD)*	
150	*ExecType*	H	Trade Cancel.
487	*TradeReportTransType*	1	Cancel.
571	*TradeReportID*	*(173DIBEFG0ZN)*	Unique identifier for the Trade Capture Report generated by CXA.
572	*TradeReportRefID*	*(CLI_0001)*	Original *TradeReportID*(571) provided by the client.
856	*TradeReportType*	2	Accepted.
939	*TradeRptStatus*	0	Accepted.
1003	*TradeID*	*(173DIBEFG0ZQ)*	Represents the trade as seen on outbound market data. Required to cancel a Trade Capture Report.
1123	*TradeHandlingInstr*	2	
8181	*OffExchTradeReportType*	*(M)*	
552	*NoSides*	2	
→ 54	*Side*	*(2)*	
→ 11	*ClOrdId*	*(CL_5554_000A)*	
→ 37	*OrderId*	*(173DIBEFG0ZO)*	*OrderId* assigned to the order with side = 2 (Sell).
→ 453	*NoPartyIDs*	*(1)*	
→ → 448	*PartyID*	*(5554)*	
→ → 447	*PartyIDSource*	C	
→ → 452	*PartyRole*	*(7)*	

→ 439	*ClearingFirm*	*(55541)*	
→ 54	*Side*	*(1)*	
→ 11	*ClOrdId*	*(CL_5557_1234)*	
→ 37	*OrderId*	*(173DIBEFG0ZP)*	*OrderId* assigned to the order with side = 1 (Buy).
→ 453	*NoPartyIDs*	*(1)*	
→ → 448	*PartyID*	*(5557)*	
→ → 447	*PartyIDSource*	C	
→ → 452	*PartyRole*	*(17)*	
→ 439	*ClearingFirm*	*(55573)*	

6. Implementation Notes

6.1 Automatic Cancel on Disconnect or Malfunction

All open orders for a participant will be cancelled automatically if no messages have been received from the participant for two heartbeat intervals. This is done to prevent orders from being stuck in an unknown state in the event of telecommunications failure. Participants should choose their heartbeat interval carefully based on the latency and reliability of their telecommunications channel. The minimum supported interval is 5 seconds, and this is also the recommended interval if the latency and reliability of your telecommunications channel support it. Execution Reports for the automatically cancelled orders are available upon reconnection. Participants are responsible for rerouting orders to other market centres based on their business needs. This should be rare, but all open orders may also be cancelled in the event of a complete or partial system malfunction.

6.2 Trade Capture Report – Cancellation of Reports from FIX Port Other than Original Submitter

CXA supports the ability for participants to cancel a two-sided trade capture report from a FIX port other than the FIX port which originally submitted the trade capture report. In the event a participant cancels a two-sided trade capture report from a FIX port other than the original submitter, by default, CXA will only notify the FIX port which submitted the cancel of the resultant ack (*MsgType* = 'AR') and acceptance (*MsgType* = 'AE', *TradeReportTransType* = '1', *TradeReportType* = '2').

Participants may contact the CXA Trade Desk to optionally configure both the FIX port which originally submitted the trade capture report and the port which initiated the cancel to receive the cancel acceptance (*MsgType* = 'AE', *TradeReportTransType* = '1', *TradeReportType* = '2'). When configured, only that acceptance message is duplicated to both the port which originally submitted the trade capture report, and the port which initiated the cancel request.

7. FIX Drop

CXA offers two types of FIX Drop ports (Standard FIX Drop and Order by Order FIX Drop). Both port types do not accept orders. Their purpose is to provide real time information about order flow. They may be configured to send order flow based on various combinations of information relating to specific participant firms, clearing MPIDS and/or sessions. With proper authorisation (e.g., clearing or sponsored relationships), a single FIX Drop session can be used to obtain information about multiple participants.

7.1 Standard FIX Drop

Standard FIX Drop ports only send execution information (i.e., Execution Reports where *ExecType* (150) is Partially Filled (1) or Filled (2), Trade Cancel/Correct messages, and Trade Capture Reports. Refer to the Execution Report and Trade Capture Report sections above for details on standard execution reports.

7.2 Order by Order FIX Drop

Order by Order FIX Drop ports are designed to send more than execution information.

All order message types are supported including, but not limited to Acknowledgements (150=0), Partially Filled (150=1), Filled (150=2), Cancelled (150=4), Replaced (150=5), Rejected (150=8), Order Cancel Rejects (35=9), and optionally (if configured at the port level) Trade Breaks (35=UCC). If the Rejects/Cancels are due to incomplete clearing information, they may be unavailable on Order by Order FIX Drop ports.

All Trade Capture Reporting message types are supported, including Trade Capture Report Ack (35=AR), Trade Capture Report Ack Reject (35=AR, 939=1), and Trade Capture Report (35=AE).

Users of Order by Order FIX Drop must always be prepared to receive new/unknown FIX tag and FIX tag values for BOE/FIX ports being monitored. CXA reserves the right to add new FIX tags and to update values distributed on Order by Order FIX Drop with no notice.

7.3 FIX Drop Port Attributes

Unless specified, both types of FIX Drop ports can be configured with the following features:

Attribute	Default	Description
Unique Wash Execution Ids	No	Appends a '.B' or '.S' to *ExecID* (17) on all trades.

8. FIX Port Attributes

The table below lists FIX port attributes that are configurable on the port or firm level. Changes to these attributes can be made by sending a written request to TradeDeskAU@cboe.com.

Note that any changes made to any port attribute will not be enforced on carried GTC orders. Participants who wish to apply updated port attributes to resting GTC orders must cancel those orders, and then resubmit them following the effective time of the port attribute change.

Attribute	Default	Description
Allowed Trading PID(s)	Port Owner's PID	Trading PID(s) allowed for the port.
Enable MOCs	Yes	Allow or disallow Market-On-Close (MOC) order type.
Enable Pegs	Yes	Allow or disallow all pegged orders.
Enable Primary Pegs	Yes	Allow or disallow primary peg orders.
Enable Market Pegs	Yes	Allow or disallow market peg orders.
Enable Midpoint Pegs	Yes	Allow or disallow midpoint peg orders.
Enable Broker Preference	No	Specifies default value for BrokerPreferencing(8182).
Allow Test Symbols Only	No	Allow or disallow orders in non-test symbols.
Allow Trade Capture	Yes	Allow or disallow trade capture reports.
Maximum Notional Value Per Order	Unlimited	Configurable maximum notional dollar value allowed on any individual order.
Maximum Order Size*	999,999,999	Maximum number of shares allowed per order.
Cancel on ME Disconnect	No	When set to "No", this setting allows orders to remain open on a Matching Unit failover. When set to "Yes", all open orders associated with a session are immediately cancelled in the event of loss of connectivity to a Matching Unit. If a failover takes longer than five minutes, then all orders are cancelled unconditionally. When set to "Day", Cancel Day orders only and do not cancel GTC or GTD orders, in the event of a Matching Unit failover.
Cancel on Disconnect	*Option #1*	CXA will offer Participants two options for cancelling orders as a result of a session disconnect: 1. Cancel All Open Orders (includes Market-On-Close orders) (default) 2. Do Not Cancel Any Open Orders 3. Cancel Day orders only and do not cancel GTC or GTD orders.
Send Trade Breaks	Yes	Enables or disables Trade Break Messages (35=UCC).
Default *NoTradeFeat*	N (cancel newest)	Specifies default value for *NoTradeFeat* (7713).

Default *NoTradeKey*	Blank	Specifies default value for *NoTradeKey* (7714).
Default Post Only	Blank	Allows participants to default all eligible Lit orders to be Post Only. Eligible includes: • Limit (*OrdType* 40 = 2), and • *TimeInForce* 59 = 0 (Day) or 1 (GTC) or 6 (GTD).
Default Post Only Lock Instruction	V	When a different default Post Only locked NBBO behaviour is desired for Post Only orders, this port attribute may be used. See *DisplayIndicator* (9479).
Concatenate *CompId* and *SubId*	No	Requires all FIX traffic to contain concatenated (combined) *CompId* and *SubIds*.
Cancel on Reject	No	Cancels an order upon a cancel or modify reject for that order.
Cancel on Halt	No	Cancel open orders for a symbol upon a halt. When set to "Day", Cancel Day orders only and do not cancel GTC or GTD orders, in the event of a symbol halt.
Unique Wash Execution Ids	No	Appends a '.B' or '.S' to *ExecID* (17) on all trades.
Microsecond Timestamp Granularity	No	Display microsecond level timestamp granularity for *TransactTime* (60), *OrigTime* (42), and *SendingTime* (52). These tags default to millisecond or second granularity.
Reject Orders on Drop Port Disconnect*	No	Allows a participant to associate one or more drop port(s) to an order entry port(s). Once the association has been established, if no drop ports associated with an order entry port are connected, reject orders on the order entry port until at least one of the drop port session connections have been established.
Reject Orders on DROP Port Timeout (s)*	30	Only applicable for sessions where "Reject Orders on Drop Port Disconnect" has been enabled. When the last associated drop port for the order entry session has disconnected, the reject/cancel actions will be taken on the order entry session if an associated drop port has not reestablished its connection in the defined time. Minimum value allowed is 20.
Cancel Open Orders on Drop Port Disconnect*	No	Only applicable for sessions where "Reject Orders on Drop Port Disconnect" has been enabled. If all drop ports associated with an order entry port become disconnected,

		cancel all open orders on the order entry port.
Port Order Rate Threshold	Default = 4000 msgs/sec Maximum allowed = 4000 msgs/sec	The maximum allowed message rate on the session. When the first non-administrative message is received, a one second window begins. During the second no more than 3,999 additional non-administrative messages will be allowed within that window. If the rate is exceeded all new orders in the time window are rejected, modifies are treated as cancels, and cancels are processed.
Test Symbol Order Rate Threshold	Default = 10 msgs/sec	The maximum allowed test symbol message rate on the session. Behaves identically to Port Order Rate Threshold above.
Include Security Exchange	No	If set to Yes, then include FIX tag 207 (*SecurityExchange*) to Execution Reports for trades to indicate the primary exchange of the symbol traded.

9. Revision History

Document Version	Date	Description
1.0.0	08/04/22	Initial version supporting CXA/CXA integration.
1.0.1	13/04/22	Updated messaging for Market on Close (MOC) orders. Minor clarifications and formatting corrections.
1.0.2	05/05/22	Updated New Order Single: • OrdType referenced in New Order tag 8081 description (OrdType=2) • Price: reject MOC if Price is specified. • ExecInst: MarketX n/a if FOK or IOC. • NoTradeKey language to align with BOE. • MEQSE to remove restriction on NoTradeFeat. • MEQSE & MinQty: updated how MinQty is affected by partial fills. • OriginOfTrans to be printable ASCII (previously was non-specific) • IntermediaryID to be alphanumeric (aligns with BOE) Updated Cancel Request: • ClOrdID(17) description to include @ and " char restrictions. Updated Order Cancel/Replace Request: • MinQty to indicate that it will be applied to the order even if it is set to 0. • Verbiage re. ExecInst to align with BOE. • ShortSellLongQuantity, ShortSellNakedQuantity, and ShortSellCoveredQuantity required when updating OrderQty on a Sell Short order. • ClOrdID(17) description to include @ and " char restrictions. • ExecInst to reject if ExecInst isn't a valid j/k and doesn't match the ExecInst on the order. Updated Execution Report: • ExecTransType(20) - Added '3 = Status' to support order restatements. • Added WorkingPrice. Updated Trade Reports: • Removed NoAllocs tags from trade reports (35=AE). These are not needed and do not conform to the standard FIX message. Updated FIX Port Attributes: • "Allow Broker Preferencing" and "Cancel on ME Disconnect" default values set to "No". • "Cancel on Reject" default value set to "Yes".
1.0.3	19/05/22	Updated MinQty = 0 verbiage in Cancel/Replace. Removed reference to invalid port attribute for SecondaryOrderID (198) in 4.5.1. Replaced "GMT" references with "UTC" throughout. Updated/fixed trade reporting cross-references. Updated verbiage for RemoveCrossingFromClearing (8177). Replaced some references to "self-trade" and STP with "Match Trade Prevention" / MTP. Removed ExecBroker (76) OrigCompID and OrigSubID are standard fields on drop copy messages.
1.0.4	19/07/22	MassCancelID – added max length (20) & "no trailing spaces" restrictions. Cancel/Replace ExecInst will reject if it is not an acceptable value. Correction for MEQSE: it does not apply to IOC Limit orders (only MOC and pegs). Removed trade report matching 'transact time' within 1 second from 4.6.1. InitialDisplayPrice may vary from Price for BestX and MarketX orders with a limit price more aggressive than the price at which the order was entered.

		Removed duplicate SendingTime in Purge Acknowledgement. Moved PossResend tags to immediately follow the 'Standard Header'.
1.0.5	18/08/22	Added new 'Y' value for PossDupFlag (43), indicating a message resend and should be used during FIX Replay. OrigCompID and OrigSubID apply to FIX Drop and ODROP only on the Execution Report. Removed NoRootPartyIDs (1116), RootPartyID (1117), RootPartyIDSource (1118), and RootPartyRole (1119). Added OrderId (37) to Purge Request to optionally cancel a single order.
1.0.6	26/08/22	Updated 2nd character TradeLiquidityIndicator: removed code 'm', added codes I, J, K, S.
1.0.7	20/09/22	In New Order Single, removed "Not supported if TimeInForce (59) = 3 or 4" restriction for MarketX. Added "F = Failed to Quote" to reject Text (58). Updated OnBehalfOfCompID (115) description. Updated Execution Report Price (44) description. Marked WorkingPrice (9690) as not required. Marked Order Cancel/Replace OrdQty (38) as required.
1.0.8	28/10/22	In Execution Report, added "4 = Iceberg display size refreshed" to ExecRestatementReason; added "B = Calculated (MOC Restatement)" to OrdStatus; removed InitialDisplayPrice; updated description of Price and WorkingPrice. Updated description of PartyRole in 4..61 Trade Capture Report Updated section 4.6.1.3 to clarify that one-sided reports cannot be cancelled electronically. Updated Trade Capture Report TradeReportType and PartyRole descriptions. Updated MOC Price Restatement OrdStatus=B (Calculated). Removed section 5.3.7 ("MOC – Closing Price Retracted"), as MOC pricing will not be retracted. Updated DeliverToCompId (128) description. Added Allow Trade Capture port attribute which will 'allow or disallow trade capture reports'. Removed MOC Price Correction and MOC – Closing Price Retracted sections. Updated Trade Cancel/Correct ExecTransType description. Updated Execution Report PriceImprovement description.
1.0.9	07/11/22	Updated Trade Capture Report message to indicate that PartyID (448) is the first tag of the repeating group. Updated LastMkt (30) to include BIDS MIC codes. Updated BrokerPreferencing (8182) description. Added a note to section 4.6.1 indicating that TradeReportID should be unique with respect to ClOrdID.
1.0.10	21/11/22	In sections 5.7.1.2, 5.7.2.2 and 5.7.2.4, updated Value (example) and Notes fields for TradeReportID (571), and removed TradeReportRefID (572).
1.0.11	06/12/22	Updated New Order Single MinQty and RiskGroupID descriptions. Removed "TradeReportID will have a leading tilde (~)".
1.0.12	03/01/23	Clarified that ExecVenue (4805) has a max length of 4 in Trade Capture Report. Updated New MOC Order to indicate that Price (44) "must be absent. Order will be rejected if Price is specified."
1.0.13	10/01/23	Corrected MarketX and BestX orders to indicate that Broker Preferencing is supported. Clarified that New Order Single ClientCrossRef must be printable ASCII characters.
1.0.14	24/01/23	Corrected ClientCrossRef character range to include 'space' (ASCII 32). Removed references to service bureaus. Updated port attribute "Enable Broker Preferencing" in section 8 to align with description in section 5.2.
1.0.15	31/01/23	Updated OffExchTradeReportType (8181) description in section 4.6.1.1.
1.0.16	11/05/23	Corrected language on valid characters for Account, ClearingAccount, and IntermediaryID. No underlying code changes.

		Removed “Cancel Continuous Book Orders Only (default)” from “Cancel on Disconnect” port attribute and changed default option to “Cancel All Open Orders (includes Market-On-Close orders)”. Added new section 6.2. Added Text = ‘7’ to Trade Capture Report.
1.0.17	02/06/23	"Cancel on Reject” Port Attribute default is ‘no’.
1.0.18	19/10/23	Added ClientID (109) to Execution Report.
1.0.19	24/01/24	Clarified valid characters for ClearingAccount (440). No underlying code changes.
1.0.20	26/02/24	Updated section 1.4 to include latency expectations as well as Members' responsibility to monitor the status of the messages they send to the exchange.
1.0.21	24/05/24	Addition of Post Only Orders, including RoutingInst (9303) and DisplayIndicator (9479) to: • New Order Single • Execution Report • Port attributes. Effective Date: 24-June-2024 Addition of multi-day orders GTC and GTD with ExpireDate: • New Order Single • Order Cancel / Replace Request • Execution report • Purge Port • Port attributes Effective Date: 30-September-2024 Addition of Auction trade indicators in existing tags: • Execution report Effective Date: 17-March-2025
1.0.22	05/08/24	Further clarification for Multi-day orders: • Restated orders using FIX tag 378 in the Execution Report message. • Expired orders using FIX tag 150=4 in the Execution Report message. • ExpireDate may be amended. (removed the unrequired port attribute ‘GTD date refresh on amend’). • Further clarification provided in the table: “FIX Tag Summary for GTC and GTD Unsolicited updates”. • Text (FIX Tag 58) – include ‘h’ for order restatement scenarios. Addition of SecurityExchange (FIX Tag 207) to the Execution Report message to provide the primary exchange identifier for the symbol traded. Can be enabled using new FIX Port Attribute “Include Security Exchange”.
1.0.23	12/09/24	Further clarification for Multi-day orders in the table: “FIX Tag Summary for GTC and GTD Unsolicited updates” (Section 5.8.5), for multi-day orders that will persist overnight.
1.0.24	15/01/25	Expansion of the Purge Port functionality to include the ability to amend orders across a participant, thus renamed to the Purge-Amend Port. • Purge Port section renamed to Purge-Amend Port section and includes a sub-section on Amend requests • Reference in the ‘Order Cancel/Replace Request’ section • FIX tag 150 Purge-Port updates are temporarily displayed in purple font for clarity. Effective Date: 5-May-2025 Updated with CXA Titanium branding.
1.0.25	07/02/25	Further clarification for Purge-Amend Port in sections: • 4.9.3 (Acknowledgement), and • 4.9.4 (Reject) Updated PartyID value and notes in Trade Capture Report (Participant to CXA).

1.0.26	21/03/25	Removed references to BIDS Australia. Added clarity to FIX tag 9619 behaviour for the Purge-Amend Port.
1.0.27	13/05/25	Further clarification for Purge-Amend Port in the 'Amend Acknowledgement' section. Inclusion of tags 6, 40, 54, 59. Updates relating to Auctions are now live. References to Auctions have been reformatted from red font to black font.
1.0.28	17/11/25	Updated BeginSeqNo description from "auto-generated request ID" to "Sequence number of first message in range to be resent" in Resend Request messages. Added further clarification on the usage of LastPx (Tag 31) and LastShares (Tag 32) in Trade Capture Report – Cancel messages (see details in 4.6.1.4 Trade Capture Report) Ignored if TradeReportTransType(487) = 1 (Cancel) and TradeHandlingInst(1123) = 1 (Two Sided Report).
1.0.29	19/12/25	Purge-Amend Port 'Amend Reject' Section 4.9.4 – Further clarification for ClOrdID description.
1.0.30	17/03/26	Clarification on Trade Capture Report entry in TransactTime (60) and TradeDate (75). Clarification on Trade Capture Report for One-Sided Reports and which OffExchTradeReportType (8181) values are valid
1.0.31	22/05/26	Added Focused Nearpoint option: RoutingInst (9303)=F (Focused Nearpoint which is only eligible to trade with opposing Farpoint).
1.0.32	03/08/26	Rebrand

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