
Polaris

FIX PROTOCOL SPECIFICATION – NYSE FLOOR BROKERS

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Introduction

This document describes the implementation of the FIX 4.2 protocol as supported by the FIX Gateway provided by Pragma for clients to send orders to the NYSE Floor Brokers using Polaris. In Phase 1 of the deployment on the NYSE Floor, this will support only One-touch Closing dOrders.

This document assumes the reader has a thorough understanding of the FIX 4.2 protocol available at <http://www.fixprotocol.org/>. As such, it is not intended as a guide to constructing a FIX client. Rather, it is a reference to ensure that a firm’s FIX client, constructed according to the FIX 4.2 specifications, will be compatible with the Polaris FIX Gateway.

DEFINITIONS

- **Polaris FIX Gateway** — For the purpose of this document, the FIX Gateway provided by Pragma for clients to send orders to the NYSE Floor Brokers using Polaris.
- **Firm** — Floor Broker Firm.
- **Client** — Client sending orders to Floor Broker Firm for execution. This may be a buy-side, a non-member broker, or a member-broker.
- **ClientGroup** — A specific trading desk at the Client. This is primarily used for Credit Risk checks by the Firm.
- **ClientTrader** — An individual trader at the Client. This is primarily used for Credit Risk checks by the Firm.

To help with backwards compatibility, the following fields are defined:

- **OnBehalfOfMPID** —The NYSE MPID of the NYSE member originating the order. In the NYSE Pillar Gateway FIX Protocol Specification, this was tag 115.
- **OnBehalfOfSubMPID** — A NYSE sub-MPID of the NYSE member originating the order. In the NYSE Pillar Gateway FIX Protocol Specification, this was tag 116. NYSE recently updated the term “mnemonic” to “sub-MPID”.
- **DeliverToID** — NYSE Floor Broker Agency ID. In the NYSE Pillar Gateway FIX Protocol Specification, this was tag 128.

IDENTIFIERS

Each session on the Floor Broker FIX Gateway is configured to allow access to the community of Firms on Polaris.

Orders must explicitly identify the Client sending the order, the targeted Firm, the OnBehalfOfMPID (MPID), and the Destination. The orders can also optionally identify the ClientGroup, the ClientTrader sending the order, OnBehalfOfSubMPID, and the DeliverToID (Agency ID).

MESSAGE TYPE	CLIENT*	FIRM*	DESTINATION*	ClientGroup	ClientTrader	OnBehalfOf MPID*	OnBehalfOf SubMPID	DeliverToID
D, G	Tag 115	Tag 128	Tag 57	Tag 116	Tag 50	Tag 9115	Tag 9116	Tag 9128
8	Tag 128	Tag 115	Tag 50	Tag 129	Tag 57	Tag 9128	Tag 9116	

* Required

NOTE: Orders will be rejected if they have an invalid or missing Tag 115, Tag 128, Tag 57 or Tag 9115.



FAILURE RECOVERY

Each session on the Polaris FIX Gateway is assigned two pairs of destination IP addresses, and one port number used by all four IPs. The IP/Port pairs correspond to the Primary and DR production environments.

- Primary Production Environment – Polaris FIX Gateway users may log in to the primary IP addresses.
 - ▶ In the event if the primary destination becomes unavailable, the user should attempt to log in on the secondary IP address.
 - Cancel on Disconnect will be triggered if the outage was caused by a gateway failure
 - The sequence number on the secondary IP address will always continue from the last FIX message transacted on the primary IP (and vice versa). Application layer messages will be recoverable. Session Layer messages will not be recoverable but are counted in determining the next sequence number expected from the client.
- DR Production Environment – In the event that the Pragma Primary Production environment becomes unavailable, Polaris FIX Gateway users may log in to the DR IP addresses configured for their sessions.
 - ▶ Pragma will attempt to cancel all open orders, regardless of whether the user attempts to log back in or not and regardless of the Cancel on Disconnect configuration for the session. Please note that this will be constrained by NYSE-imposed limitations such as the freeze period for On Close orders.
 - ▶ UROUTs will not be sent for the orders.
 - ▶ Messages transacted on the affected session prior to the outage will not be recoverable. Sequence numbers will start with 1.

CONTACT US

The Polaris support team can be reached at polarisfixsupport@pragmatrading.com

DATA TYPES

A data type and length are provided for each FIX tag in this specification. These length values represent systemic limits enforced by the Polaris FIX Gateway. All values entered by firms are subject to additional validations, as indicated in the “Values” column of the tables. Firms should not null pad a FIX tag to equal the systemic limit. Instead, each tag should be populated with the natural length of the intended value.

SELF-TRADE PREVENTION

The Polaris FIX Gateway does not provide Self-Trade Prevention functionality, it is simply passing the STP values to NYSE for consideration in NYSE STP processing. Please refer to NYSE specifications to understand the Self-Trade Prevention processing.



FIX Header & Trailer

HEADER

All FIX messages sent and received via the Polaris FIX Gateway must include a Header and Trailer as defined below.

TAG	FIELD NAME	DATA TYPE	REQ'D	VALUES	NOTES
8	BeginString	String (7)	Y	FIX.4.2	Always first field in message.
9	BodyLength	Int (6)	Y	Message length, in bytes, forward to the CheckSum field.	Always second field in message.
35	MsgType	String (1)	Y	A – Logon 0 – Heartbeat 1 – Test Request 2 – Resend Request 3 – Session Layer Reject 4 – Sequence Reset 5 – Logout D – New Order Single F – Order Cancel Request G – Order Cancel/Replace Request 8 – Execution Report 9 – Order Cancel Reject	Always third field in message.
34	MsgSeqNum	Int (20)	Y	First message sent has sequence of 1.	Last sequence number processed.
43	PossDupFlag	Boolean (1)	C	Y – Yes N – No	Conditionally required if the message is a retransmission.
49	SenderCompID	String (32)	Y		Values on incoming messages will identify Port owner, to be assigned by Pragma. Values will be echoed in Tag 56 in outgoing messages.
52	SendingTime	UTC Timestamp (27)	Y	YYYYMMDD-HH:MM:SS.mmm	Time of message transmission on Incoming Messages from Clients & Outgoing messages from Polaris.
56	TargetCompID	String (32)	Y		Values on incoming messages will be equal to "POLARIS." Values will be echoed in Tag 49 in outgoing messages.
97	PossResend	Boolean (1)	C	Y – Yes N – No	Conditionally required if the message is a resend.
122	OrigSendingTime	UTC Timestamp (27)	N	YYYYMMDD-HH:MM:SS.mmm	Original time of message transmission when transmitting orders as the result of a resend request.



TRAILER

TAG	FIELD NAME	DATA TYPE	REQ'D	VALUES	NOTES
10	Checksum	String (6)	Y	Three byte, simple checksum that serves, with the trailing <SOH>, as the end-of-message delimiter.	Always last field in message. Always unencrypted.

FIX Session Layer

This section describes the protocol for the initiation, operation, and termination of FIX sessions with the Polaris FIX Gateway. TCP/IP is the required transmission protocol, and FIX 4.2 is the required application protocol supplemented by certain custom tags and values as defined in this specification. The Polaris FIX Gateway will reject a message with any tags that are not defined for the given message type in this specification.

POLARIS FIX SESSION LAYER HANDLING

The Polaris FIX Gateway validates and handles inbound Session Layer messages according to the following rules:

- MsgSeqNum as expected – all messages with a sequence number equal to the expected value will be accepted and processed in full, provided they pass basic message type format validations. This includes both Session and Application Layer messages, regardless of the PossDup or GapFillFlag values indicated on the inbound message.
- MsgSeqNum greater than expected – in general, upon receipt of a message with a sequence number greater than the expected value, Polaris FIX Gateway will neither accept nor process the message and will not increment the expected client-side sequence number. The gateway will respond with a Resend Request with BeginSeqNo = the expected value, and EndSeqNo = 0 (infinity).

However, there are two cases with special handling:

- ▶ Login Request with MsgSeqNum greater than expected – Polaris FIX Gateway will send a Logon Response, immediately followed by the Resend Request.
- ▶ Sequence Reset with GapFillFlag set to N, or not set – Polaris FIX Gateway will accept and process the request, provided it passes basic message type format validations. The expected client-side sequence number will be adjusted according to the NewSeqNo specified in the Sequence Reset message, as long as the requested number is higher than the next expected value.
- MsgSeqNum less than expected – in general, upon receipt of a message with a sequence number less than the expected value, Polaris FIX Gateway will respond with a Logout message, then close the TCP connection. The expected client-side sequence number will not be incremented.

However, there are two cases with special handling:

- ▶ Any Message with PossDup set to Y – Polaris FIX Gateway will silently ignore the message.
- ▶ Sequence Reset with GapFillFlag set to N, or not set – Polaris FIX Gateway will accept and process the request, provided it passes basic message type format validations. The expected client-side sequence number will be adjusted according to the NewSeqNo specified in the Sequence Reset message, as long as the requested number is higher than the next expected value.



LOGON

This single message format is used as either a Logon Request or Logon Response depending on the message direction:

USAGE	DESCRIPTION	DIRECTION
Logon Request	Request to establish a FIX session.	Client to Gateway
Logon Response	Confirmation a FX session has been established successfully.	Gateway to Client

The Polaris FIX Gateway authenticates the Logon Request by checking the SenderCompID [49]. If the Logon Request is authenticated, the Polaris FIX Gateway will respond with a confirmation Logon Response. The format for the Logon Request message is below:

TAG	FIELD NAME	DATA TYPE	REQ'D	VALUES	NOTES
	<i>Standard Header</i>		Y		MsgType[35]=A
98	EncryptMethod	Int (1)	Y	0	Must be 0 (No encryption)
108	HeartBtInt	Int (2)	Y	1—60	The Heartbeat interval in seconds.
141	ResetSeqNumFlag	Boolean (1)	N	N	Indicates both sides of a FIX session should reset sequence numbers. If included, this tag must be set to N.
	<i>Standard Trailer</i>		Y		

The format for the successful Logon Response message is below:

TAG	FIELD NAME	DATA TYPE	REQ'D	VALUES	NOTES
	<i>Standard Header</i>		Y		MsgType[35]=A
98	EncryptMethod	Int (1)	Y	0	Must be 0 (No encryption)
108	HeartBtInt	Int (2)	Y	1—60	The Heartbeat interval in seconds.
	<i>Standard Trailer</i>		Y		

LOGOUT

The format for the Logout message is below:

TAG	FIELD NAME	DATA TYPE	REQ'D	NOTES
	<i>Standard Header</i>		Y	MsgType[35]=5
58	Text	String (40)	N	Logout description.
	<i>Standard Trailer</i>		Y	



HEARTBEAT AND TEST REQUEST

The client must send a Heartbeat message [35=0] if the interval specified in the Logon Message HeartBtInt [108] passes without the client sending any messages. If HeartBtInt seconds pass without the Polaris FIX Gateway receiving any messages from the client, the Polaris FIX Gateway will send a Test Request [35=1] to solicit a Heartbeat from the client. If an additional HeartBtInt seconds pass without receiving any messages, the Polaris FIX Gateway will send a logout and close the TCP connection.

It is recommended that the client implements similar monitoring for messages received from the Polaris FIX Gateway.

The Heartbeat message format is below:

TAG	FIELD NAME	DATA TYPE	REQ'D	NOTES
	<i>Standard Header</i>		Y	MsgType[35]=0
112	TestReqID	String (20)	C	Conditionally required when the Heartbeat is in response to a Test Request. Must be the same value as in the Test Request that solicited the Heartbeat.
	<i>Standard Trailer</i>		Y	

The Test Request message format is below:

TAG	FIELD NAME	DATA TYPE	REQ'D	NOTES
	<i>Standard Header</i>		Y	MsgType[35]=0
58	TestReqID	String (20)	Y	Identifier included in Test Request message to be returned in resulting Heartbeat.
	<i>Standard Trailer</i>		Y	



MESSAGE RETRANSMISSION

If Pragma receives a `MsgSeqNum` [34] higher than expected, Pragma will disregard the message, and issue a Resend Request, as described in the “Polaris FIX Session Layer Handling” section of this specification.

Clients may issue a Resend Request to Pragma. In response, Pragma will retransmit Application Layer messages only. Pragma will never retransmit any Session Layer messages (including Session-Level Rejects).

The format for the Resend Request message is below:

TAG	FIELD NAME	DATA TYPE	REQ'D	VALUES	NOTES
	<i>Standard Header</i>		Y		<code>MsgType[35]=2</code>
7	<code>BeginSeqNo</code>	Int (20)	Y	1—9223372036854775807	The message sequence number of the first message in the range of messages to be re-sent.
16	<code>EndSeqNo</code>	Int (20)	Y	0—9223372036854775807	The message sequence number of the last message in the range of messages to be re-sent. If the request is for all the messages since the <code>BeginSeqNo</code> , set <code>EndSeqNo</code> to 0.
	<i>Standard Trailer</i>		Y		

NOTE: Pragma will ignore the contents of `PossResend` [97] beyond basic message integrity validations and will treat all messages with `PossResend` = Y as new messages.

SEQUENCE RESET

TAG	FIELD NAME	DATA TYPE	REQ'D	VALUES	NOTES
	<i>Standard Header</i>		Y		<code>MsgType[35]=4</code>
123	<code>GapFillFlag</code>	Boolean (1)	Y	Y – Gap Fill Reset (<code>MsgSeqNum</code> [34] validated) N – Sequence Reset (<code>MsgSeqNum</code> [34] ignored)	Indicates the mode in which the message is to be interpreted.
36	<code>NewSeqNo</code>	Int (20)	Y	1—9223372036854775807	The new valid sequence number.
	<i>Standard Trailer</i>		Y		



SESSION-LEVEL REJECTS

Pragma generates a Session-Level Reject upon receipt of a message containing a session-level rule violation (e.g. a required FIX tag is missing). Error details are contained in SessionRejectReason [373] and 58 [Text], while the tag causing the error (if applicable) is identified in RefTagID [371].

The Session-Level Reject message format is below:

TAG	FIELD NAME	DATA TYPE	REQ'D	VALUES	NOTES
	<i>Standard Header</i>		Y		MsgType[35]=3
45	RefSeqNum	Int (20)	Y	1—9223372036854775807	The sequence number of the rejected message.
373	SessionRejectReason	Int (2)	N	0 – Invalid Tag Number 1 – Required Tag Missing 2 – Tag Not Defined for this Message Type 3 – Undefined Tag 4 – Tag specified without a value 5 – Value is incorrect (out of range) for this tag 6 – Incorrect data format for value 7 – Decryption problem 8 – Signature problem 9 – CompID problem (SenderCompID, TargetCompID, or both) 10 – SendingTime accuracy problem 11 – Invalid MsgType 13 – Tag Appears More than Once (non-repeating group tags only) 14 – Tag specified out of required order 15 – Repeating group fields out of order 99 – Other	A code, which identifies the reason for the session level reject.
371	RefTagID	Int (9)	N	1—999999999	The tag number of the FIX field being referenced.
372	RefMsgType	String (1)	N		The MsgType of the FIX message being referenced.
58	Text	String (40)	N		Reject text, which identifies the reason for the rejected message. Text is limited to 40 characters.

FIX Application Layer

This section describes the FIX Application messages currently supported by the Polaris FIX Gateway. Only the message types represented here will be accepted.

***NOTE:** The following applies to tags 1, 11, 41, 58
Only printable ASCII characters allowed, excluding comma, semicolon, pipe delimiter, "at" symbol, greater than/less than, ampersand (&) and single/double quotation mark.



NEW ORDER – SINGLE

This message is used to send a New Order.

TAG	FIELD NAME	DATA TYPE	REQ'D	VALUES	NOTES
	<i>Standard Header</i>		Y		MsgType[35]=D
1	Account	String (16)	N		See *NOTE on p. 10
11	ClOrdID	String (20)	Y		Unique ID of the new Order request as assigned by the firm. See *NOTE on p. 10
18	ExecInst	String (3)	Y	n – dOrder 1 – Not held 5 – Held	Contains multiple values separated by space. Must contain “n” and either “1” (18=n 1) or “5” (18=n 5).
21	HandlInst	Char (1)	Y	1 – Automated execution order, no intervention	
38	OrderQty	Qty (9)	Y	1–999999999	
40	OrdType	Char (1)	Y	1 – Market 2 – Limit	
44	Price	Price (16)	Y	0.000001–999999999.999999	
50	SenderSubID	String (20)	N		Values on incoming (35=D) messages will optionally identify ClientTrader, values to be confirmed with Pragma. Values will be echoed in Tag 57 in outgoing (35=8) messages.
54	Side	Char (1)	Y	1 – Buy 5 – Sell Short 2 – Sell 6 – Sell Short Exempt	
55	Symbol	String (16)	Y		Valid NYSE Equities Ticker Symbol.
57	TargetSubID	String (20)	Y	NYSEFB	
58	Text	String (40)	N		On Incoming Messages from Firm: Will not be passed back in Acknowledgments or any subsequent response messages. See *NOTE on p. 10
59	TimelnForce	Char (1)	Y	7 – On Close	
60	TransactTime	UTC Timestamp (27)	Y	YYYYMMDD-HH:MM:SS.mmm	Customer application time
65	SymbolSfx	String (10)	N		Valid NYSE Suffix value
100	ExDestination	String (4)	Y	XNYS – NYSE	
114	LocateReqd	Boolean (1)	C	N – No Y – Yes	Conditionally required for 54=5, 54=6
115	OnBehalfOfCompID	String (20)	Y		Values on incoming (35=D) messages will identify originating Client, to be assigned by Pragma. Values will be echoed in tag 128 in outgoing (35=8) messages.



TAG	FIELD NAME	DATA TYPE	REQ'D	VALUES	NOTES
116	OnBehalfOfSubID	String (20)	N		Values on incoming (35=D) messages will optionally identify originating specific entity/trading desk/ClientGroup, values to be confirmed with Pragma. Values will be echoed in Tag 129 in outgoing (35=8) messages.
128	DeliverToCompID	String (20)	Y		Values on incoming (35=D) messages will target the Firm, to be assigned by Pragma. Values will be echoed in Tag 115 in outgoing (35=8) messages.
336	TradingSessionID	Char (1)	Y	2 – Core Trading Session	
386	NoTradingSessions	Int (1)	Y	1	
528	OrderCapacity	Char (1)	Y	A – Agency P – Principal	
5700	LocateBroker	String (5)	N		Information only.
7928	SelfTradeType	Char (1)	Y	T – No Self Trade Protection N – Cancel Newest O – Cancel Oldest (The letter O, not zero) C – Cancel Both D – Cancel Decrement	
9115	OnBehalfOfMPID	String (4)	Y		Values on incoming (35=D) messages will identify the NYSE MPID executing the order. Values will be echoed in Tag 9128 in outgoing (35=8) messages.
9116	OnBehalfOfSubMPID	String (4)	N		Values on incoming (35=D) messages will optionally identify sub-MPID. Values will be echoed in Tag 9116 in outgoing (35=8) messages.
9128	DeliverToID	String (5)	N		Values on incoming (35=D) messages will optionally identify Broker Agency ID or Badge. Values will be used for display purposes only; will not be passed to NYSE.
	<i>Standard FIX Trailer</i>		Y		



ORDER CANCEL REQUEST

TAG	FIELD NAME	DATA TYPE	REQ'D	VALUES	NOTES
	<i>Standard Header</i>		Y		MsgType[35]=F
11	ClOrdID	String (20)	Y		Unique ID of the Cancel request as assigned by the Client. See *NOTE on p. 10
41	OrigClOrdID	String (20)	Y		Represents the ClOrdID of the previously entered order intended for cancellation (NOT necessarily the initial order of the day). See *NOTE on p. 10
54	Side	Char (1)	Y	1 – Buy 2 – Sell 5 – Sell Short 6 – Sell Short Exempt	
55	Symbol	String (16)	Y		Valid NYSE Equities Ticker Symbol
60	TransactTime	UTC Timestamp (27)	Y	YYYYMMDD-HH:MM:SS.mmm	Customer application time
65	SymbolSfx	String (10)	N		Valid NYSE Suffix value
	<i>Standard FIX Trailer</i>		Y		



ORDER CANCEL/REPLACE REQUEST

Only a limited number of fields can be changed via the cancel/replace request (35=G), All other fields should be retransmitted as sent in the original order (35=D), identified in table below. *Changeable tags.

TAG	FIELD NAME	DATA TYPE	REQ'D	VALUES	NOTES
	Standard Header		Y		MsgType[35]=G
1	Account	String (16)	N		See *NOTE on p. 10
11*	ClOrdID	String (20)	Y		Unique ID of the new Cancel/Replace request as assigned by the Client. See *NOTE on p. 10
18	ExecInst	String (3)	Y	n – dOrder 1 – Not held 5 – Held	Contains multiple values separated by space. Must contain “n” and either “1” (18=n 1) or “5” (18=n 5).
21	HandlInst	Char (1)	Y	1 – Automated execution order, no intervention	
38*	OrderQty	Qty (9)	Y	1 – 999999999	
40	OrdType	Char (1)	Y	1 – Market 2 – Limit	
41*	OrigClOrdID	String (20)	Y		ClOrdID of the previously entered order intended for cancellation or replacement (NOT necessarily the initial order of the day). See *NOTE on p. 10
44*	Price	Price (16)	Y	0.000001–999999999.999999	
50	SenderSubID	String (20)	N		Values on incoming (35=G) messages will optionally identify ClientTrader, values to be confirmed with Pragma. Values will be echoed in Tag 57 in outgoing (35=8) messages.
54	Side	Char (1)	Y	1 – Buy 5 – Sell Short 2 – Sell 6 – Sell Short Exempt	
55	Symbol	String (16)	Y		Valid NYSE Equities Ticker Symbol.
57	TargetSubID	String (20)	Y	NYSEFB	
58*	Text	String (40)	N		Will not be passed back in Acknowledgments or any subsequent response messages. See *NOTE on p. 10
59	TimInForce	Char (1)	Y	7 – On Close	
60	TransactTime	UTC Timestamp (27)	Y	YYYYMMDD-HH:MM:SS.mmm	Customer application time
65	SymbolSfx	String (10)	C		Valid NYSE Suffix value. Conditionally required if received in original order.
100	ExDestination	String (4)	Y	XNYS – NYSE	
114	LocateReqd	Boolean (1)	C	N – No Y – Yes	Conditionally required for 54=5, 54=6



TAG	FIELD NAME	DATA TYPE	REQ'D	VALUES	NOTES
115	OnBehalfOfCompID	String (20)	Y		Values on incoming (35=G) messages will identify originating Client, to be assigned by Pragma. Values will be echoed in Tag 128 in outgoing (35=8) messages.
116	OnBehalfOfSubID	String (20)	N		Values on incoming (35=G) messages will optionally identify originating specific entity/trading desk/ClientGroup, values to be confirmed with Pragma. Values will be echoed in Tag 129 in outgoing (35=8) messages.
128	DeliverToCompID	String (20)	Y		Values on incoming (35=G) messages will target the Firm, to be assigned by Pragma. Values will be echoed in Tag 115 in outgoing (35=8) messages.
336	TradingSessionID	Char (1)	Y	2 – Core Trading Session	
386	NoTradingSessions	Int (1)	Y	1	
528	OrderCapacity	Char (1)	Y	A – Agency P – Principal	
5700	LocateBroker	String (5)	N		
7928	SelfTradeType	Char (1)	Y	T – No Self Trade Protection N – Cancel Newest O – Cancel Oldest (The letter O, not zero) C – Cancel Both D – Cancel Decrement	
9115	OnBehalfOfMPID	String (4)	Y		Values on incoming (35=G) messages will identify the NYSE MPID executing the order. Values will be echoed in Tag 9128 in outgoing (35=8) messages.
9116	OnBehalfOfSubMPID	String (4)	N		Values on incoming (35=G) messages will optionally identify sub-MPID. Values will be echoed in Tag 9116 in outgoing (35=8) messages.
9128	DeliverToID	String (5)	N		Values on incoming (35=G) messages will optionally identify Broker Agency ID or Badge. Values will be used for display purposes only; will not be passed to NYSE.
	<i>Standard FIX Trailer</i>		Y		



ORDER CANCEL REJECT

This message is used to reject a Cancel or Cancel/Replace Request.

TAG	FIELD NAME	DATA TYPE	REQ'D	VALUES	NOTES
	<i>Standard Header</i>		Y		MsgType[35]=9
11	ClOrdID	String (20)	Y		Returned from the Cancel or Cancel/Replaced Request – the ClOrdID of the message that is rejected (Cancel or Cancel/Replace request).
37	OrderID	String (20)	Y		OrderID of the order intended for cancellation or replacement. Unique identifier of most recent order as assigned by Polaris.
39	OrdStatus	Char (1)	Y	0 – New 1 – Partially Filled 2 – Filled 3 – Done for Day 4 – Cancelled 5 – Replaced 6 – Pending Cancel 8 – Rejected A – Pending New E – Pending Replace	
41	OrigClOrdID	String (20)	Y		Returned from Order Cancel or Cancel/Replace Request. Represents the ClOrdID of the previously entered order intended for cancellation or replacement (NOT necessarily the initial order of the day). See *NOTE on p. 10
58	Text	String (40)	N		
60	TransactTime	UTC Timestamp (27)	Y	YYYYMMDD-HH:MM:SS.mmm	
434	CxlRejResponseTo	Char (1)	Y	1 – Order Cancel Request 2 – Order Cancel/Replace Request	
20009	Nanosecond SendingTime	String (27)	Y	YYYYMMDD-HH:MM:SS.ssssssss	Time of message transmission on outgoing message from Polaris. NOTE: this represents the same reference time as provided in the Standard FIX Header tag SendingTime (52), with more granular resolution.
20010	Nanosecond TransactTime	String (27)	Y	YYYYMMDD-HH:MM:SS.ssssssss	Polaris application time. NOTE: this represents the same reference time as provided in the standard FIX tag TransactTime (60), with more granular resolution.
	<i>Standard FIX Trailer</i>		Y		



EXECUTION REPORT

This message is used to confirm new orders, cancellations, replacements, fills, trade busts and order rejections.

TAG	FIELD NAME	DATA TYPE	REQ'D	VALUES	NOTES
	Standard Header		Y		MsgType[35]=8
1	Account	String (16)	N		
11	ClOrdID	String (20)	Y		Unique ID of the new Order, Cancel, or Cancel/Replace request as assigned by the Client.
14	CumQty	Qty (9)	Y	0—999999999	
17	ExecID	String (32)	Y		Unique identifier of the outgoing FIX message, assigned to all FIX MsgType 8.
18	ExecInst	String (3)	Y	n – dOrder 1 – Not held 5 – Held	Contains multiple values separated by space. Must contain “n” and either “1” (18=n 1) or “5” (18=n 5).
19	ExecRefID	String (32)	C		Conditionally sent if 20=1, Contains the ExecID (Tag 17) value of the Fill that is busted
20	ExecTransType	Char (1)	Y	0 – New (ack, pending cancel, pending replace, partial fill, fill, order reject) 1 – Cancel (Trade Break Only)	
30	LastMkt	String (4)	C	XYNY – NYSE	On fills and partial fills, Market Identifier Code (MIC) of the sending Exchange.
31	LastPx	Price (16)	C	0—999999.999999	Price of current partial fill or fill message (set to 0 on all non-fills).
32	LastQty	Qty (9)	C	0—999999999	Quantity of current partial fill or fill message (set to 0 on all non-fills).
37	OrderID	String (20)	C		Unique identifier of most recent order as assigned by Polaris.
38	OrderQty	Qty (9)	Y	1—999999999	
39	OrdStatus	Char (1)	Y	0 – New 1 – Partially Filled 2 – Filled 3 – Done for Day 4 – Cancelled 5 – Replaced 6 – Pending Cancel 8 – Rejected A – Pending New E – Pending Replace	Status of the order
40	OrdType	Char (1)	Y	1 – Market 2 – Limit	
41	OrigClOrdID	String (20)	C		Returned from Order Cancel or Cancel/Replace Request. Represents the ClOrdID of the previously entered order intended for cancellation or replacement (NOT necessarily the initial order of the day). See *NOTE on p. 10
44	Price	Price (16)	Y	0.000001—999999999.999999	



TAG	FIELD NAME	DATA TYPE	REQ'D	VALUES	NOTES
50	SenderSubID	String (20)	Y	NYSEFB	
54	Side	Char (1)	Y	1 – Buy 2 – Sell 5 – Sell Short 6 – Sell Short Exempt	
55	Symbol	String (16)	Y		Valid NYSE Equities Ticker Symbol.
57	TargetSubID	String (20)	C		Values will identify ClientTrader, conditional on Tag 50 in the incoming 35=D, G messages.
58	Text	String (40)	N		
59	TimeInForce	Char (1)	Y	7 – On Close	
60	TransactTime	UTC Timestamp (27)	Y	YYYYMMDD-HH:MM:SS.mmm	
65	SymbolSfx	String (10)	C		Valid NYSE Suffix value.
114	LocateReqd	Boolean (1)	N	N – No Y – Yes	
115	OnBehalfOfCompID	String (20)	Y		Values will identify the Firm, to be assigned by Pragma.
128	DeliverToCompID	String (20)	Y		Values target the originating Client, to be assigned by Pragma.
129	DeliverToSubID	String (20)	C		Values will identify originating specific entity/trading desk/ClientGroup, conditional on Tag 116 in the incoming 35=D, G messages.
150	ExecType	Char (1)	Y	0 – New 1 – Partially Filled 2 – Filled 3 – Done for Day 4 – Cancelled 5 – Replaced 6 – Pending Cancel 8 – Rejected A – Pending New E – Pending Cancel/Replace	
151	LeavesQty	Qty (9)	C	0–999999999	
336	TradingSessionID	Char (1)	Y	2 – Core Trading Session	
386	NoTradingSessions	Int (1)	Y	1	
528	OrderCapacity	Char (1)	Y	A – Agency P – Principal	
5700	LocateBroker	String (16)	N		
7928	SelfTradeType	Char (1)	Y	T – No Self Trade Protection N – Cancel Newest O – Cancel Oldest (The letter O, not zero) C – Cancel Both D – Cancel Decrement	
9116	OnBehalfOfSubMPID	String (4)	C		Values optionally identify sub-MPID, conditional on Tag 9116 in the incoming 35=D, G messages.
9128	DeliverToID	String (5)	Y		Values will target the MPID, echoing back Tag 9115 in the incoming 35=D, G messages.



TAG	FIELD NAME	DATA TYPE	REQ'D	VALUES	NOTES
9483	DealID	String (20)	C		Unique identifier of a transaction, assigned by the Exchange to both Execution reports representing the two sides of a single trade. Busts – original DealID of the transaction that is being busted.
9730	LiquidityIndicator	String (5)	C		Only provided on partial fill and fills.
20009	Nanosecond SendingTime	String (27)	Y	YYYYMMDD-HH:MM:SS.ssssssss	Time of message transmission on outgoing message from Polaris. NOTE: this represents the same reference time as provided in the Standard FIX Header tag SendingTime (52), with more granular resolution.
20010	Nanosecond TransactTime	String (27)	Y	YYYYMMDD-HH:MM:SS.ssssssss	Polaris application time. NOTE: this represents the same reference time as provided in the standard FIX tag TransactTime (60), with more granular resolution.
<i>Standard FIX Trailer</i>			Y		

Document Version History

Date	Version	Note
05/06/2022	1.0	Initial version