



**MEMO SBE for Crypto  
Version 2.0**

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# 1 Overview

MEMO SBE for Crypto is a binary protocol used by members to submit orders to the Cryptographic Token Exchange.

## 2 Architecture

The MEMO SBE for Crypto wire format uses an [SBE-encoded](#) subset of FIX 5.0 SP2 tags and messages.

More information about the FIX protocol and associated tag numbers can be found on the [Financial Information Exchange \(FIX\) Protocol version 5.0 Service Pack 2](#) page.

MEMO SBE for Crypto messages are transported using the session based MEMX-TCP protocol to provide reliable ordered transmission of messages between clients and servers. Connected clients should always use the streaming mode of MEMX-TCP.

MEMX-TCP requests for message replay will result in the client being disconnected, as per the MEMX-TCP specification. Heartbeat and heartbeat timeout intervals for a MEMO connection may be configured via the MEMO port support request process.

## 3 Encoding

The MEMO SBE for Crypto protocol uses the FIX Trading Community's [Simple Binary Encoding \(SBE\)](#) to specify message encoding. More information about SBE can be found at the [FIX SBE XML Primer](#).

MEMO is always encoded in [Big Endian](#) byte order.

### 3.1 SBE Data Types

All encoding and decoding for SBE is centered around a set of basic primitive types.

For more information on primitive type encoding, see the [SBE specification](#).

Type	Length (bytes)	Description	Value Range	Null Value	Null Value (Hex)
CHAR	1	ASCII Character	32 to 126 (printable ASCII)	0	0x00
INT8	1	Signed Integer	-127 to 127	-128	0x80
INT16	2	Signed Integer	-32767 to 32767	-32768	0x8000
INT32	4	Signed Integer	$-2^{31} + 1$ to $2^{31} - 1$	$-2^{31}$	0x80000000
INT64	8	Signed Integer	$-2^{63} + 1$ to $2^{63} - 1$	$-2^{63}$	0x8000000000000000
UINT8	1	Unsigned Integer	0 to 254	255	0xFF
UINT16	2	Unsigned Integer	0 to 65534	65535	0xFFFF
UINT32	4	Unsigned Integer	0 to $2^{32}-2$	$2^{32} - 1$	0xFFFFFFFF

The MEMO specification does not use the SBE floating point data types.

#### 3.1.1 UUIDType

Universally Unique Identifier (UUID). UUIDS are 128 bits. A UUID SBE type is defined as two INT64 values.

Type Name	Length	Type	Description
UpperBits	8	<a href="#">INT64</a>	UUID Most Significant Bits
LowerBits	8	<a href="#">INT64</a>	UUID Least Significant Bits

#### 3.1.2 FixedPointDecimal

Prices are encoded as a fixed-point scaled decimal, consisting of a signed long (INT64) mantissa and a constant exponent of -8.

Type Name	Length	Type	Description
Mantissa	8	<a href="#">INT64</a>	The fixed-point decimal representation of the price
Exponent	N/A	<a href="#">INT8</a>	MEMO uses a constant exponent of -8 for all prices.



For example, a mantissa of 123456789 (0x075BCD15) with the constant exponent of -8 represents the decimal number 1.23456789, and would appear encoded on the wire as the hex value 0000000075BCD15.

### 3.1.3 UTCTimestampNanos

Fields with the UTCTimestampNanos type represent a timestamp in Coordinated Universal Time (UTC), which began on the UNIX epoch (January 1, 1970 at 00:00:00 UTC). UTCTimestampNanos has the time unit of nanoseconds and is encoded as follows:

Type Name	Length	Type	Description
Time	8	<a href="#">INT64</a>	UTC timestamp since unix epoch with nanosecond precision.
Unit	N/A	<a href="#">UINT8</a>	Unit of time. UTCTimestampNanos are represented in nanoseconds. This field is constant (value=9) and as such will not be transferred on the wire.

## 3.2 Repeating Groups

### 3.2.1 RepeatingGroupDimensions

Some messages in this specification use repeating groups of fields. The RepeatingGroupDimensions block is inserted in front of each repeating group and contains:

1. The blockLength, which represents total space reserved for a single repeating group entry, not counting any nested repeating groups or variable-length fields. Block length only represents message body fields; it does not include the length of the group dimension itself, which is a fixed size.
2. A counter representing the number of entries in a repeating group. Value must be positive.

Type Name	Length	Type	Description
BlockLength	1	<a href="#">UINT8</a>	The total space reserved for a single repeating group entry.
NumInGroup	1	<a href="#">UINT8</a>	A counter representing the number of entries in a repeating group.

### 3.2.2 Quote

The Quote repeating group depicts the requested characteristics of a quote within the BulkQuote request and its corresponding response.

This group is always preceded by RepeatingGroupDimensions field denoting the length of this group and the number of them expected in the message.

Field	Length	Type	Req'd	Description
QuoteIndex	1	<a href="#">UINT8</a>	Y	Unique identifier for a single Quote within the collection
BidSize	8	<a href="#">INT64</a>	Y	Bid side quantity of the quote. Quantities are specified as whole numbers of token <a href="#">units</a> .
BidPrice	8	<a href="#">FixedPointDecimal</a>	Y	Bid side price of the quote. Price per unit of quantity.

Field	Length	Type	Req'd	Description
AskSize	8	<a href="#">INT64</a>	Y	Ask side quantity of the quote. Quantities are specified as whole numbers of token <a href="#">units</a> .
AskPrice	8	<a href="#">FixedPointDecimal</a>	Y	Ask side price of the quote. Price per unit of quantity.

### 3.3 SBE Header

SBE includes a header for each message. The SBE header is followed by the SBE body for the message.

The SBE message header contains the fields that allow the decoder to identify what codec should be used for a message.

The MEMO SBE header appears on the wire as:

Field	Offset	Length	Type	Description
BlockLength	0	2	<a href="#">UINT16</a>	The number of bytes in the message body (does not include the header bytes) not counting any repeating groups. Note that MEMO messages do not use variable-length fields.
TemplateID	2	1	<a href="#">UINT8</a>	Identifier of the message template (ie. the message type)
SchemaID	3	1	<a href="#">UINT8</a>	The identifier of a message schema. SchemaID=5 for MEMO (Crypto)
Version	4	2	<a href="#">UINT16</a>	The version number of the message schema that was used to encode a message. Two pieces of information are packed into the (UINT16) version field: a major version and a minor update version. For example, a value of 258 (0x0102), indicates major version 1, minor update 2. NOTE: If the version provided on a client-to-server message does not match the expected version, the client will be disconnected and the message will not be processed.
NumGroups	6	1	<a href="#">UINT8</a>	A count of repeating groups at the root level of the message. The count does not include nested repeating groups.

## 4 Symbology

MEMO SBE for Crypto protocol uses a Token ID to uniquely identify a specific instrument. Upon request via a separate channel, the exchange provides a list of instrument directory messages. Each instrument directory message provides, among other information, a Token Name with the format base/quote, (i.e. BTC/USD) and a Token ID: an 8 character String that uniquely and permanently identifies the token on the exchange. The Token ID is used in all order-related messages.

## 5 Order Quantities

Tokens on the exchange trade in lots called a 'unit'. A pre-configured Unit Multiplier is applied to all order quantities for a given token to calculate quantity of the underlying instrument being referenced. The Unit Multiplier is not applied to the price of the order, only the quantity. All quantities referenced in MEMO messages are specified as a whole numbers of units.

For example: a limit order with a quantity of 350 (units) and a limit price of 100.00, for a token "BTC/USD" that was configured with a Unit Multiplier of  $-8$ , would imply 100.00 USD for  $350 \times 10^{-8}$  BTC, or 0.00000350 BTC.

Unit Multipliers are constant, configured on the exchange, and will not change during a single logical trading session. The user is required to re-specify the unit multiplier on the order entry protocols as a safety measure to ensure they are trading the quantities they expect to be trading. Any order entered with a unit multiplier that does not match the configured multiplier on the exchange for a given token will be rejected.

## 6 Message Field Types

All messages are composed of fields. Each field has a type. This section defines the non-primitive field types, their underlying type on the wire, acceptable values, and their descriptions.

### 6.1 ExecInstType Bitset (FIX tag 18)

The ExecInstType provides instructions for order handling on the exchange.

ExecInstType is a 2-byte [UINT16](#) value.

Enable an execution instruction by setting a bit. Disable an execution instruction by clearing the bit. Bit Index 0 is the least significant bit.

Bit Index	Name	Description
0	ParticipateDoNotInitiate	Post-Only - order will not attempt to remove liquidity on entry.

### 6.2 ExtendedExecInstType Bitset (FIX tag 9416)

Designates that an order is a Retail order or a Retail Liquidity Providing order.

ExtendedExecInstType is 1-byte [UINT8](#) value.

Enable an execution instruction by setting a bit. Disable an execution instruction by clearing the bit. Bit Index 0 is the least significant bit.

Bit Index	Name	Description
0	DesignatedRetail	Designated Retail Only - allowed to interact with Retail Liquidity Provider Orders.
1	RetailLiquidityProvider	Order Providing Liquidity For Designated Retail Orders Only.

### 6.3 ExecRestatementType (FIX tag 378)

Defines the reason for a restatement.

ExecRestatementType is a 1-byte [UINT8](#) value.

Value	Name	Description
1	GTT renewal / restatement	GTT order is reinstated on the book following a maintenance window.
5	SelfTradePrevention	The order quantity was reduced to prevent a wash trade.

### 6.4 LastLiquidityIndType (FIX tag 851)

Indicates the liquidity code for this execution.

LastLiquidityIndType is a 1-byte [UINT8](#) value.

Value	Name	Description
1	AddDisplayed	The order added displayed liquidity to the Exchange book.
2	Removed	The order removed liquidity from the Exchange book.
70	RetailLiquidityAdded	The order available for retail access only added liquidity to the Exchange book.
71	RetailLiquidityRemoved	The order available for retail access only removed liquidity from the Exchange book.
170	DesignatedRetailAdded	The designated retail only order added liquidity to the Exchange book.
171	DesignatedRetailRemoved	The designated retail only order removed liquidity from the Exchange book.

## 6.5 OrderCapacityType (FIX tag 528)

Designates the capacity of the firm placing the order.

OrderCapacityType is a CHAR value.

Value	Name
'A'	Agency
'P'	Principal
'R'	Riskless Principal

## 6.6 CustOrderCapacityType (FIX tag 582)

Capacity of customer placing the order.

CustOrderCapacityType is a 1-byte [UINT8](#) value.

Value	Name
5	RetailCustomer
1	MemberTradingOnTheirOwnAccount

## 6.7 OrdStatusType (FIX tag 39)

Indicates the status of an order.

OrdStatusType is a [CHAR](#) value.

Value	Name
'0'	New
'1'	PartialFilled
'2'	Filled
'4'	Canceled
'6'	PendingCancel
'8'	Rejected
'A'	PendingNew
'E'	PendingReplace
'C'	Expired

## 6.8 OrdType (FIX tag 40)

Indicates the type of an order.

OrdType is a [CHAR](#) value.

Value	Name
'1'	Market
'2'	Limit

## 6.9 SelfTradePreventionType (Custom FIX tag 21001)

Defines the self trade operation which will be used if the exchange self-trade-prevention functionality is triggered on this order.

If this order would execute against opposite side resting interest with the same self-trade prevention identifier, the behavior specified by this value will be triggered.

SelfTradePreventionType is a 1-byte [UINT8](#) value.

Value	Name	Description
0	CancelNewest	If triggered, this order (the incoming order) will be canceled.
1	CancelOldest	If triggered, the resting order will be canceled.
2	N/A	Reserved value.
3	CancelBoth	If triggered, both the incoming and the resting orders will be canceled.

## 6.10 SideType (FIX tag 54)

Defines the side of an order.

SideType is a [CHAR](#) value.

Value	Name
'1'	Buy
'2'	Sell

## 6.11 STPGroupIDType (FIX tag 2362)

This field uniquely identifies the self trade prevention group. Several of the values are reserved values while other values are treated as custom values and are at the discretion of the client.

STPGroupID is a 2-byte [UINT16](#) value.

Value	Name	Description
0	Firm Scope	Prevents orders from the same firm trading with each other.
1	CPID Scope	Prevents orders from the same Crypto Participant ID trading with each other.
2	Account Scope	Prevents orders from the same account trading with each other.
3-65534	Custom Scope	Prevents orders with matching STPGroupID across the firm from trading with each other.

Value	Name	Description
65535	NULL	The UINT16 Null value (0xFFFF) disables custom self-trade prevention grouping.

## 6.12 TimeInForceType (FIX tag 59)

Defines the time during which an order is eligible for execution.

TimeInForceType is a 1-byte [CHAR](#) value.

Value	Name	Description
'3'	Immediate Or Cancel (IOC)	The order shall be partially or completely executed immediately, or canceled outright.
'4'	Fill Or Kill (FOK)	The order shall be immediately executed in full or canceled outright.
'A'	GoodForTime	The order shall be eligible for execution during the supplied time interval.

## 6.13 CancelReasonCode (Custom FIX tag 21004)

CancelReasonCode represents the reason the order was canceled by the system.

CancelReasonCode is a 1-byte [UINT8](#) value.

Value	Name	Description
0	Other	This order was canceled for some other reason not listed.
1	UserRequestedCancel	The client sent a OrderCancelRequest or OrderMassCancelRequest for this order.
2	PriceExceedsCurrentPriceBand	The price of the order fell outside execution price collar bands.
3	Halted	The market on the order's security was halted.
4	ExchangeSupervisory	Operational or supervisory actions taken by the Exchange resulted in the cancellation of this order.
5	OrderExpired	The order was sent with an expiration time and had the "good for time" time in force set.
6	ParticipantDisconnect	The participant directed that their orders should be canceled when the trading system detects a disconnection, and the participant disconnected.
7	OrderNotBookable	Order is not of bookable type (this may include market orders, IOC, etc).
8	FirmDisabled	Order was canceled because the firm was disabled.
9	CPIDDisabled	Order was canceled because the Crypto Participant ID was disabled.
10	AccountDisabled	Order was canceled because the Account for the order port was disabled.
11	NotionalExposureRiskBreach	Order was canceled because a Notional Exposure Risk Rule was breached.
12	InsufficientCredit	Order was canceled due to lack of credit with a counter-party during an execution action.
13	OrderLocksOrCrosses	Order was canceled because it would lock or cross the displayed order book.



Value	Name	Description
14	OrderCannotBeFullyFilled	A Fill-Or-Kill or Immediate-Or-Cancel order cannot execute for its full quantity upon entry and is being canceled.

## 6.14 OrdRejReason (FIX tag 103)

Identifies the reason why a new order was rejected by the system.

Values 0-99 are reserved by the FIX specification. Note that not all of the reserved FIX codes are used.

Values 100-199 are used to denote issues with specific request fields.

Values 200-299 are used to denote issues with the request as a whole.

Values 300-399 are used to denote issues related to risk.

Also note that some codes in this table may not be sent in SBE but are listed here to maintain consistency with the FIX order entry specification, or reserved for future use.

OrdRejReason is a 2-byte [UINT16](#) value.

Value	Name	Description
1	UnknownSymbol	The order contained a valid token identifier, but the token is not currently traded on this port or exchange.
2	ExchangeClosed	The exchange is closed and not accepting orders at this time.
6	DuplicateOrder	The user entered a duplicate order identifier (CLOrdID for single orders, or the combination of CLOrdID, Side, and QuoteIndex for components of Bulk Quote entry).
16	PriceExceedsCurrentPriceBand	The price of the order fell outside execution price collar bands.
18	InvalidPriceIncrement	The order contained an invalid limit price increment.
99	Other	This order was rejected for some other reason not listed.
100	MissingTokenID	The order did not supply the TokenID.
101	InvalidTokenID	A TokenID was present but contained illegal characters. NOTE: this code is only used when the field is malformed. If the TokenID is otherwise well-formed, but the Token it refers to is not traded on the port or exchange, the standard FIX code UnknownSymbol (1) will be sent.
102	MissingCLOrdID	The order did not supply the CLOrdID.
103	InvalidCLOrdID	A CLOrdID was present but contained illegal characters.
104	MissingSide	The order did not supply the side.
105	InvalidSide	The order contained an invalid side.
106	MissingOrderQty	The order did not supply the quantity.
107	InvalidOrderQty	The order contained an invalid order quantity.
108	MissingOrderType	The order did not supply the order type.
109	InvalidOrderType	The order contained an invalid order type.
110	MissingTimeInForce	The order did not supply the time in force.

Value	Name	Description
111	InvalidTimeInForce	The order contained an invalid time in force.
112	MissingOrderCapacity	The order did not supply the order capacity.
113	InvalidOrderCapacity	The order contained an invalid capacity.
114	MissingExecInst	The order did not supply the execution instructions field.
115	InvalidExecInst	The order contained an invalid execution instruction.
116	MissingExtendedExecInst	The order did not supply the extended execution instructions field.
117	InvalidExtendedExecInst	The order contained an invalid extended execution instruction.
118	MissingLimitPrice	The order did not supply the limit price.
119	InvalidLimitPrice	The order contained an invalid limit price.
120	MissingCustomerCapacity	The order did not supply the customer capacity.
121	InvalidCustomerCapacity	The order contained an invalid customer capacity.
122	MissingExpireTime	The order did not supply the expire time.
123	InvalidExpireTime	The order contained an invalid expire time.
124	MissingSelfTradePreventionType	The order supplied the STPGroupID field but did not supply the SelfTradePreventionType field.
125	InvalidSelfTradePreventionType	The order contained an invalid SelfTradePreventionType.
126	MissingCancelGroupID	The order did not supply the CancelGroupID field (used when a port is configured with a fixed set of allowable CancelGroupIDs).
127	InvalidCancelGroupID	The order contained an invalid CancelGroupID (used when a port is configured with a fixed set of allowable CancelGroupIDs).
128	MissingSTPGroupID	The order did not supply the STPGroupID field (used when a port is configured with a fixed set of allowable STPGroupIDs).
129	InvalidSTPGroupID	The order contained an invalid STPGroupID (used when a port is configured with a fixed set of allowable STPGroupIDs).
130	MissingLnkID	The order did not supply the LnkID field (currently unused - reserved for consistency / future usage).
131	InvalidLnkID	The order was rejected for an invalid LnkID (value contained non-printable ASCII characters).
132	MissingUnitMultiplier	The order did not supply the unit multiplier.
133	InvalidUnitMultiplier	The supplied unit multiplier did not match the configured multiplier on the exchange.
134	MissingRiskGroupID	The order did not supply the RiskGroupID field (used when a port is configured with a fixed set of allowable RiskGroupIDs).
135	InvalidRiskGroupID	The order contained an invalid RiskGroupID (used when a port is configured with a fixed set of allowable RiskGroupIDs).
136	MissingCPID	The order did not supply the CPID field.
137	InvalidCPID	The order contained an invalid CPID.
138-199	N/A	Reserved.
200	Halted	The token supplied in the order is currently halted.
201	FirmDisabled	The order was rejected because the firm sending the order has been disabled.

Value	Name	Description
202	CPIDDisabled	The order was rejected because the Crypto Participant ID used in the order has been disabled.
203	AccountDisabled	The order was rejected because the account sending the order has been disabled.
204	InvalidModifierForOrderType	The order contained one or more modifiers that are not compatible with the order type provided.
205	InvalidTimeInForceForOrderType	The order contained a time in force that is not compatible with the order type provided.
206	InvalidOrderTypeForTradingState	The order type is not accepted during the current trading state for the token. (Market order sent during Quoting or LimitOnlyTrading states).
207	PostOnlyNotAllowed	Post-only behavior is not allowed with one or more of the supplied order directives.
208-299	N/A	Reserved.
300	NonTestTokensBlocked	The order was for a non-test token and the port is configured in test-only mode (exchange configuration).
301	NotionalValueExceedsThreshold	The notional value of the order exceeded an exchange configured maximum.
302	MaxNotionalValuePerOrder RiskRuleViolated	The notional value of the order violated the firm's max notional value per order risk rule.
303	BlockNonTestToken RiskRuleViolated	The order violated the firm's test token trading risk rule.
304	MaxSizePerOrder RiskRuleViolated	The order breached the firm's max tokens per order risk rule.
305	PricePercentCollar RiskRuleViolated	The order violated the firm's price percent collar risk rule.
306	PriceValueCollar RiskRuleViolated	The order violated the firm's price value collar risk rule.
307	MaxADVPercentPerOrder RiskRuleViolated	The order violated the firm's max ADV (average daily volume) percentage risk rule.
308	MaxNumDuplicateOrders RiskRuleBreach	The system detected a breach in the firm's max number of duplicate orders risk rule. Orders are being rejected until the breach is manually cleared.
309	MaxOrderRate RiskRuleBreach	The system detected a breach in the firm's max number of orders per second risk rule. Orders are being rejected until the breach is manually cleared.
310	GrossNotionalExposure RiskRuleBreach	The system detected a breach in the firm's gross notional exposure risk rule. Orders are being rejected until the breach is manually cleared.
311	NetNotionalExposure RiskRuleBreach	The system detected a breach in the firm's net notional exposure risk rule. Orders are being rejected until the breach is manually cleared.
312	MarketOrder GrossNotionalExposure RiskRuleBreach	The system detected a breach in the firm's market order gross notional exposure risk rule. Orders are being rejected until the breach is manually cleared.
313	MarketOrder NetNotionalExposure RiskRuleBreach	The system detected a breach in the firm's market order net notional exposure risk rule. Orders are being rejected until the breach is manually cleared.

## 6.15 CxlRejReason (FIX tag 102)

Identifies the reason why an order cancellation or replace request was rejected.

Values 0-99 are reserved by the FIX specification. Note that not all of the reserved FIX codes are used.

Values 100-199 are used to denote issues with specific request fields.

Values 200-299 are used to denote issues with the request as a whole.

Values 300-399 are used to denote issues related to risk.

Also note that some codes in this table may not be sent in SBE but are listed here to maintain consistency with the FIX order entry specification, or reserved for future use.

CxlRejReason is a 2-byte [UINT16](#) value.

Value	Name	Description
0	TooLateToCancel	A cancel or replace request was received after the exchange has closed.
1	UnknownOrder	An order with the specified identifier was not found. (OrigClOrdID or OrderID for single orders, or the combination of OrigClOrdID, Side, and QuoteIndex for components of BulkQuote requests).
3	OrderAlreadyPendingCancelOrReplace	There is a pending request on this order.
6	DuplicateClOrdID	The supplied ClOrderID was already used on a previous request.
8	PriceExceedsCurrentPriceBand	The price of the replacement order fell outside execution price collar bands.
18	InvalidPriceIncrement	Request Limit Price increment is invalid.
99	Other	This request was rejected for some other reason not listed.
100	MissingTokenID	The request did not supply a Token ID.
101	InvalidTokenID	The request supplied an invalid Token ID.
102	MissingClOrdID	The request did not supply a ClOrdID.
103	InvalidClOrdID	The request supplied an invalid ClOrdID.
104	MissingSide	The request did not supply a side.
105	InvalidSide	The request supplied an invalid side.
106	MissingOrderQty	The request did not supply a quantity.
107	InvalidOrderQty	The request supplied a quantity, but it was set to an invalid value (i.e. 0, larger than exchange max, etc).
108	MissingOrderType	The request did not supply an order type.
109	InvalidOrderType	The request supplied an invalid order type.
110	MissingLimitPrice	The request did not supply a LimitPrice field and was required to due to OrderType requested.
111	InvalidLimitPrice	The request supplied the LimitPrice field but the value was invalid (0, more than the max allowed by the exchange, etc) or not applicable (i.e. the OrderType was set to Market).
112	MissingLnkID	The request did not supply the LnkID field. (currently unused as this field is optional - reserved for future use if needed to keep specification values consistent)

Value	Name	Description
113	InvalidLnkID	The request supplied the LnkID field, but it was too large, contained illegal characters, etc.
114	MissingQuoteIndex	The request did not supply the QuoteIndex field.
115	InvalidQuoteIndex	The request supplied the QuoteIndex field, but it was set to an invalid value.
116	MissingOrigClOrdID	The request did not supply the OrigClOrdID field.
117	InvalidOrigClOrdID	The request supplied the OrigClOrdID field, but it was too large, contained illegal characters, etc.
118	MissingOrderID	The request did not supply the OrderID field, and was required to (for example, request omitted the OrigClOrdID field and was trying to perform a delegated cancel for an order from another port).
119	InvalidOrderID	The request supplied the OrderID field, but it was too large, contained illegal characters, etc.
120-199	N/A	Reserved.
200	Halted	The token supplied in the request is currently halted.
201	FirmDisabled	The request was rejected because the firm sending the order has been disabled.
202	CPIDDisabled	The request was rejected because the Crypto Participant ID used in the order has been disabled.
203	AccountDisabled	The request was rejected because the account sending the order has been disabled.
204	UnsupportedOrdTypeChange	Change of OrdType in replace request not supported.
205	UnsupportedSideChange	Change of side in replace request not supported.
206	TokenIDMismatch	Token ID provided on a replace request does not match the Token ID on the original order associated with the provided OrigClOrdID or OrderID.
207	OrigOrderIDMismatch	OrigClOrdID and OrderID were both provided, but the provided OrderID does not match the actual OrderID associated with the provided OrigClOrdID (or OrigClOrdID, Side, and QuoteIndex for components of BulkQuote requests).
208-299	N/A	Reserved.
300	NonTestTokensBlocked	The request was for a non-test token and the port is configured in test-only mode (exchange configuration).
301	NotionalValueExceedsThreshold	The notional value of the replace request exceeded an exchange configured maximum.

Value	Name	Description
302	MaxNotionalValuePerOrder RiskRuleViolated	The notional value of the replace request violated the firm's max notional value per order risk rule.
303	BlockNonTestToken RiskRuleViolated	The replace request violated the firm's test token trading risk rule.
304	MaxSizePerOrder RiskRuleViolated	The replace request breached the firm's max tokens per order risk rule.
305	PricePercentCollar RiskRuleViolated	The replace request violated the firm's price percent collar risk rule.
306	PriceValueCollar RiskRuleViolated	The replace request violated the firm's price value collar risk rule.
307	MaxADVPercentPerOrder RiskRuleViolated	The replace request violated the firm's max ADV (average daily volume) percentage risk rule.
308	MaxNumDuplicateOrders RiskRuleBreach	The system detected a breach in the firm's max number of duplicate orders risk rule. Orders are being rejected until the breach is manually cleared.
309	MaxOrderRate RiskRuleBreach	The system detected a breach in the firm's max number of orders per second risk rule. Orders are being rejected until the breach is manually cleared.
310	GrossNotionalExposure RiskRuleBreach	The system detected a breach in the firm's gross notional exposure risk rule. Orders are being rejected until the breach is manually cleared.
311	NetNotionalExposure RiskRuleBreach	The system detected a breach in the firm's net notional exposure risk rule. Orders are being rejected until the breach is manually cleared.
312	MarketOrder GrossNotionalExposure RiskRuleBreach	The system detected a breach in the firm's market order gross notional exposure risk rule. Orders are being rejected until the breach is manually cleared.
313	MarketOrder NetNotionalExposure RiskRuleBreach	The system detected a breach in the firm's market order net notional exposure risk rule. Orders are being rejected until the breach is manually cleared.

## 6.16 CxlRejResponseToType (FIX tag 434)

CxlRejResponseToType identifies the request type that a cancel reject was issued for.

CxlRejResponseToType is a 1-byte [CHAR](#) value.

Value	Name	Description
'1'	OrderCancelRequest	This response is for a cancel request.
'2'	OrderCancelReplaceRequest	This response is for a replace request.

## 6.17 MassCancelRejectReasonCode

Identifies the reason why a mass cancellation request was rejected.

MassCancelRejectReasonCode is a 1-byte [UINT8](#) value.

Value	Name	Description
0	Other	This order was rejected for some other reason not listed.
1	UnknownToken	Unknown requested Token ID.
2	UnknownSide	Unknown requested Side.
3	UnknownGroupID	Unknown request GroupID for firm.
4	HigherPriceLowerOrEqualToLowerPrice	When both HigherThanPrice and LowerThanPrice fields are configured on MassCancelRequest HigherThanPrice must be greater than LowerThanPrice.
5	TokenIDMissingForPriceRestriction	Cancel per price restriction (HigherPrice / LowerPrice) requires presence of valid Token ID on the request.
6	DuplicateClOrdID	The ClOrdID is a duplicate and cannot be reused.
7	MissingClOrdID	The request is malformed, it is missing the ClOrdID field.
8	InvalidCancelGroupID	The cancel group ID supplied is invalid for the account.
9	InvalidClOrdID	Request was rejected for invalid CHAR value in ClOrdID field.
10	InvalidLowerPrice	Lower price, if present, must be a positive value.
11	InvalidHigherPrice	Higher price, if present, must be a positive value.
12	InvalidOrigClOrdID	Request was rejected for invalid CHAR value in OrigClOrdID field.

## 6.18 QuoteRejectReason (FIX Tag 300)

Identifies the reason why a bulk quote request was rejected as a whole.

Values 0-99 are reserved by the FIX specification. Note that not all of the reserved FIX codes are used.

Values 100-199 are used to denote issues with specific request fields.

Values 200-299 are used to denote issues with the request as a whole.

Values 300-399 are used to denote issues related to risk.

Also note that some codes in this table may not be sent in SBE but are listed here to maintain consistency with the FIX order entry specification, or reserved for future use.

QuoteRejectReason is a 2-byte [UINT16](#) value.

Value	Name	Description
1	UnknownSymbol	The request contained a valid token identifier, but the token is not currently traded on this port or exchange.



Value	Name	Description
2	ExchangeClosed	The exchange is closed and not accepting orders at this time.
6	DuplicateQuote	Duplicate ClOrdID, or duplicate QuoteIndex specified in a single Bulk Quote Request.
99	Other	This request was rejected for some other reason not listed.
100	MissingTokenID	The request did not supply a Token ID.
101	InvalidTokenID	The request supplied an invalid Token ID.
102	MissingClOrdID	The request did not supply a ClOrdID.
103	InvalidClOrdID	The request supplied an invalid ClOrdID.
104	MissingBidQty	The request did not supply a bid quantity on a quote entry.
105	InvalidBidQty	The request supplied an invalid bid quantity on a quote entry.
106	MissingAskQty	The request did not supply an ask quantity on a quote entry.
107	InvalidAskQty	The request supplied an invalid ask quantity on a quote entry.
108	MissingBidPrice	The request did not supply a bid price on a quote entry.
109	InvalidBidPrice	The request supplied an invalid bid price on a quote entry.
110	MissingAskPrice	The request did not supply an ask price on a quote entry.
111	InvalidAskPrice	The request supplied an invalid ask price on a quote entry.
112	MissingOrderCapacity	The request did not supply the order capacity.
113	InvalidOrderCapacity	The request contained an invalid capacity.
114	MissingExecInst	The request did not supply the execution instructions field.
115	InvalidExecInst	The request contained an invalid execution instruction.
116	MissingExtendedExecInst	The request did not supply the extended execution instructions field.
117	InvalidExtendedExecInst	The request contained an invalid extended execution instruction.
118	MissingCustomerCapacity	The request did not supply the customer capacity.
119	InvalidCustomerCapacity	The request contained an invalid customer capacity.
120	MissingExpireTime	The request did not supply the expire time.
121	InvalidExpireTime	The request contained an invalid expire time.
122	MissingSelfTradePreventionType	The request supplied the STPGroupID field but did not supply the SelfTradePreventionType field.
123	InvalidSelfTradePreventionType	The request contained an invalid SelfTradePreventionType.
124	MissingCancelGroupID	The request did not supply the CancelGroupID field (used when a port is configured with a fixed set of allowable CancelGroupIDs).
125	InvalidCancelGroupID	The request contained an invalid CancelGroupID (used when a port is configured with a fixed set of allowable CancelGroupIDs).
126	MissingSTPGroupID	The request did not supply the STPGroupID field (used when a port is configured with a fixed set of allowable STPGroupIDs).



Value	Name	Description
127	InvalidSTPGroupID	The request contained an invalid STPGroupID (used when a port is configured with a fixed set of allowable STPGroupIDs).
128	MissingLnkID	The request did not supply the LnkID field (currently unused - reserved for consistency / future usage).
129	InvalidLnkID	The request was rejected for an invalid LnkID (value contained non-printable ASCII characters).
130	MissingQuoteIndex	The request did not supply a quote index on a quote entry.
131	InvalidQuoteIndex	The request supplied an invalid quote index on a quote entry.
132	MissingUnitMultiplier	The request did not supply the unit multiplier.
133	InvalidUnitMultiplier	The supplied unit multiplier did not match the configured multiplier on the exchange.
134	MissingRiskGroupID	The request did not supply the RiskGroupID field (used when a port is configured with a fixed set of allowable RiskGroupIDs).
135	InvalidRiskGroupID	The request contained an invalid RiskGroupID (used when a port is configured with a fixed set of allowable RiskGroupIDs).
136	MissingCPID	The request did not supply the CPID field.
137	InvalidCPID	The request contained an invalid CPID.
138	MissingQuoteCount	The request did not supply a quote count.
139	InvalidQuoteCount	The request contained an invalid quote count.
140-199	N/A	Reserved.
200	Halted	The token supplied in the request is currently halted.
201	FirmDisabled	The request was rejected because the firm sending the order has been disabled.
202	CPIDDisabled	The request was rejected because the Crypto Participant ID used in the order has been disabled.
203	AccountDisabled	The request was rejected because the account sending the order has been disabled.
204	PostOnlyNotAllowed	Post-only behavior is not allowed with one or more of the supplied order directives.
205-299	N/A	Reserved.
300	NonTestTokensBlocked	The request was for a non-test token and the port is configured in test-only mode (exchange configuration).
301	BlockNonTestToken RiskRuleViolated	The replace request violated the firm's test token trading risk rule.
302	MaxNumDuplicateOrders RiskRuleBreach	The system detected a breach in the firm's max number of duplicate orders risk rule. Orders are being rejected until the breach is manually cleared.
303	MaxOrderRate RiskRuleBreach	The system detected a breach in the firm's max number of orders per second risk rule. Orders are being rejected until the breach is manually cleared.
304	GrossNotionalExposure RiskRuleBreach	The system detected a breach in the firm's gross notional exposure risk rule. Orders are being rejected until the breach is manually cleared.
305	NetNotionalExposure RiskRuleBreach	The system detected a breach in the firm's net notional exposure risk rule. Orders are being rejected until the breach is manually cleared.

Value	Name	Description
306	MarketOrder GrossNotionalExposure RiskRuleBreach	The system detected a breach in the firm's market order gross notional exposure risk rule. Orders are being rejected until the breach is manually cleared.
307	MarketOrder NetNotionalExposure RiskRuleBreach	The system detected a breach in the firm's market order net notional exposure risk rule. Orders are being rejected until the breach is manually cleared.

## 6.19 UserStatusType (FIX tag 926)

Defines the changed with the session state as it pertains the User.

UserStatusType is a [UINT8](#) value.

Value	Name
8	Session shutdown warning.
100	Session shutdown, end of events for session.

## 7 Messages

This section defines the messages that make up the protocol.

### 7.1 Client To Server

#### 7.1.1 NewOrderSingle

The new order message type is used by institutions to electronically submit orders to the exchange for execution.

This message corresponds to FIX message type D

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
SBE Header	0	7	N/A	N/A	Y	SBE Header with blockLength = 73 (0x49), template = 1
ClOrdID	7	16	<a href="#">CHAR</a>	11	Y	Unique identifier of the order as assigned by the client. This field is restricted to the use of uppercase alphanumerics.
CPID	23	4	<a href="#">CHAR</a>	21007	N	The CPID associated with the new order, if it is not supplied, the CPID assigned as the default CPID for the Port/Account is associated with the new order.
TokenID	27	8	<a href="#">CHAR</a>	55	Y	Token identifier of the token.
UnitMultiplier	35	2	<a href="#">INT16</a>	21024	Y	Unit Multiplier for the supplied Token ID. Must match the Exchange's configured Unit Multiplier for the Token, or the order will be rejected.
Side	37	1	<a href="#">SideType</a>	54	Y	Side of order.
OrderQty	38	8	<a href="#">INT64</a>	38	Y	Order quantities are specified as whole numbers of token <a href="#">units</a> .
OrdType	46	1	<a href="#">OrdType</a>	40	Y	Type of the order.
Price	47	8	<a href="#">FixedPointDecimal</a>	44	N	Price per unit of quantity.

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
TimeInForce	55	1	<a href="#">TimeInForceType</a>	59	Y	Defines the time during which an order is eligible for execution.
OrderCapacity	56	1	<a href="#">OrderCapacityType</a>	528	Y	Designates the capacity of the firm placing the order.
CustOrderCapacity	57	1	<a href="#">CustOrderCapacityType</a>	582	Y	Capacity of the customer placing the order.
ExecInst	58	2	<a href="#">ExecInstType</a>	18	Y	Instructions for order handling on exchange.
ExtendedExecInst	60	1	<a href="#">ExtendedExecInstType</a>	9416	Y	Designates the order as Retail or Retail Liquidity Providing order.
ExpireTime	61	8	<a href="#">UTCTimestampNanos</a>	126	N	The expiration time of a GoodForTime TimeInForce order. Expire time must be at least a 1 millisecond in the future. Specified in UTC timestamp since unix epoch in nanoseconds.
CancelGroupID	69	2	<a href="#">UINT16</a>	21000	N	Unique identifier of custom cancel group.
STPGroupID	71	2	<a href="#">STPGroupIDType</a>	2362	N	Unique identifier of custom self-trade prevention group. If this field is set, the SelfTradePrevention field must also be set.
SelfTradePrevention	73	1	<a href="#">SelfTradePreventionType</a>	21001	N	Defines the desired behavior in the event of a potential trade with an order from the same firm. The UINT8 Null (0xFF) value disables self trade prevention. If this field is set, the STPGroupID field must also be set.
RiskGroupID	74	2	<a href="#">UINT16</a>	21005	N	Unique identifier of a custom risk control set to be

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
						applied to this order. The UINT16 Null value (0xFFFF) disables custom risk controls.
LnkID	76	4	<a href="#">CHAR</a>	583	N	Permits clients to assign a link identifier used for their own order tracking.

## 7.1.2 BulkQuote

The bulk quote message type is used by market makers wishing to electronically submit multiple two-sided quotes with similar semantics to the exchange for execution. Each quote will be entered as two individual orders, identified by the combination of the provided ClOrdID, Side, and QuoteIndex. All Bulk Quotes are implied to have an OrderType of "Limit", with a TimeInForce of "GoodForTime."

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
SBE Header	0	7	N/A	N/A	Y	SBE Header with blockLength = 54 (0x36), template = 2
ClOrdID	7	16	<a href="#">CHAR</a>	11	Y	Unique identifier of the order as assigned by the client. This field is restricted to the use of uppercase alphanumeric.
CPID	23	4	<a href="#">CHAR</a>	21007	N	The CPID associated with the new order, if it is not supplied, the CPID assigned as the default CPID for the Port/Account is associated with the new order.
TokenID	27	8	<a href="#">CHAR</a>	55	Y	Token identifier used for all quotes contained in this message.
UnitMultiplier	35	2	<a href="#">INT16</a>	21024	Y	Unit Multiplier for the supplied Token ID. Must match the

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
						Exchange's configured Unit Multiplier for the Token, or the entire BulkQuote will be rejected.
OrderCapacity	37	1	<a href="#">OrderCapacityType</a>	528	Y	Designates the capacity of the firm placing the order.
CustOrderCapacity	38	1	<a href="#">CustOrderCapacityType</a>	582	Y	Capacity of the customer placing the order.
ExecInst	39	2	<a href="#">ExecInstType</a>	18	Y	Instructions for order handling on exchange.
ExtendedExecInst	41	1	<a href="#">ExtendedExecInstType</a>	9416	N	Designates the order as Retail or Retail Liquidity Providing order.
ExpireTime	42	8	<a href="#">UTCTimestampNanos</a>	126	Y	The expiration time of a GoodForTime TimeInForce order. Expire time must be at least a 1 millisecond in the future. Specified in UTC timestamp since unix epoch in nanoseconds.
CancelGroupID	50	2	<a href="#">UINT16</a>	21000	N	Unique identifier of custom cancel group.
STPGroupID	52	2	<a href="#">STPGroupIDType</a>	2362	N	Unique identifier of custom self-trade prevention group.
SelfTradePrevention	54	1	<a href="#">SelfTradePreventionType</a>	21001	N	Defines the desired behavior in the event of a wash. The UINT8 Null (0xFF) value disables self trade prevention.
RiskGroupID	55	2	<a href="#">UINT16</a>	21005	N	Unique identifier of a custom risk control set to be applied to this order. The UINT1

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
						6 Null value (0xFFFF) disables custom risk controls.
LnkID	57	4	<a href="#">CHAR</a>	583	N	Permits clients to assign a link identifier used for their own order tracking. Will be applied to every quote in this message.
RepeatingGroupDimension	61	2	<a href="#">RepeatingGroupDimensions</a>	N/A	Y	The dimensions of the Repeating Group.
Quote	63	33	<a href="#">Quote</a>	N/A	Y	The characteristics of each two-sided quote.

### 7.1.3 OrderCancelReplaceRequest

The order cancel/replace request is used to change the parameters of an existing order.

This message corresponds to FIX message type G

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
SBE Header	0	7	N/A	N/A	Y	SBE Header with blockLength = 63 (0x3F), template = 3
OrigClOrdID	7	16	<a href="#">CHAR</a>	41	Y	ClOrdID (11) of the previous order (NOT the initial order of the day).
ClOrdID	23	16	<a href="#">CHAR</a>	11	Y	Unique identifier of the replacement order as assigned by the client. This field is restricted to the use of uppercase alphanumerics.
TokenID	39	8	<a href="#">CHAR</a>	55	Y	This field may not change from the value stated in the original order.
Side	47	1	<a href="#">SideType</a>	54	Y	This field may not change from the value stated in the original order.
QuoteIndex	48	1	<a href="#">UINT8</a>	21023	Y	This field is used for identifying a specific order entered via Bulk Quote request. This field may not change from the

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
						value stated in the original Bulk Quote. If this individual component is replaced, the ClOrdID of the component will change to the ClOrdID supplied on this request, but the Side and QuoteIndex will not be changed. For orders entered via New Order Single, this field should be set to 0.
OrderQty	49	8	<a href="#">INT64</a>	38	Y	Order quantities are specified as whole numbers of token <a href="#">units</a> . Increasing the order quantity will cause the order to lose its priority in the book.
OrdType	57	1	<a href="#">OrdType</a>	40	Y	OrderType may only change from Limit order to Market order.
Price	58	8	<a href="#">FixedPointDecimal</a>	44	N	For Limit Orders: Price per unit of quantity (e.g. per token). Changing the price will cause the order to lose its priority in the book.
LnkID	66	4	<a href="#">CHAR</a>	583	N	Permits clients to assign a link identifier used for their own order tracking.

Note: Orders entered as a group via Bulk Quote request may be canceled as a group by providing the Bulk Quote ClOrdID in the Mass Cancel request. If such an order replace is accepted due to Cancel Replace Request it will no longer be associated with the original Bulk Quote ClOrdID and thus will not be affected by a subsequent Mass Cancel request for the group.

### 7.1.4 OrderCancelRequest

The order cancel request message requests the cancellation all remaining size on an order.

Note: this message can be used to cancel an order for a different account by specifying the order's exchange order ID (`OrderID`), the remote order may have been entered via SBE or FIX.

This message corresponds to FIX message type F

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
SBE Header	0	7	N/A	N/A	Y	SBE Header with blockLength = 58 (0x3A), template = 4



Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
OrigClOrdID	7	16	<a href="#">CHAR</a>	41	Y*	ClOrdID (11) of the previous order (NOT the initial order of the day) as assigned by the customer.
OrderID	23	16	<a href="#">UUIDType</a>	37	Y*	OrderID as assigned by the exchange.
ClOrdID	39	16	<a href="#">CHAR</a>	11	Y	An identifier for the cancel request. This field is restricted to the use of uppercase alphanumerics.
TokenID	55	8	<a href="#">CHAR</a>	55	Y	This must be the same token Id as the order request.
Side	63	1	<a href="#">SideType</a>	54	Y	This must be the same side as the order request.
QuoteIndex	64	1	<a href="#">UINT8</a>	21023	Y	This field is used to identify a specific order entered via Bulk Quote request. For orders entered via New Order Single this field should be set to 0.

Note: either OrigClOrdID or OrderID fields must be present. When OrderID is used, the Side and QuoteIndex are not required to uniquely identify an order entered as part of a Bulk Quote.

### 7.1.5 MassCancelRequest

The mass cancel request message requests the cancellation all remaining size on a set of existing orders that match the given criteria.

Note: this message can be used to cancel orders from different accounts. Orders affected by this request may have been entered via either MEMO or MEMO FIX supported protocols.

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
SBE Header	0	7	N/A	N/A	Y	SBE Header with blockLength = 59 (0x3B), template = 5
ClOrdID	7	16	<a href="#">CHAR</a>	11	Y	A unique identifier for the mass cancel request. This field is restricted to the use of uppercase alphanumerics.
TokenID	23	8	<a href="#">CHAR</a>	55	N	For Mass Cancel scenario, providing a value here will result in all orders for that token being canceled.
OrigClOrdID	31	16	<a href="#">CHAR</a>	41	N	For Mass Cancel scenario, any order

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
						entered via Bulk Quote request.
Side	47	1	<a href="#">SideType</a>	54	N	Side of order. If Null then side is not used as a cancel filter.
LowerThanPrice	48	8	<a href="#">FixedPointDecimal</a>	N/A	N	For Mass Cancel scenario, Any order with a lower or equal limit price would be included in the cancel filter. This filter can only be used in conjunction with a specific token.
HigherThanPrice	56	8	<a href="#">FixedPointDecimal</a>	N/A	N	For Mass Cancel scenario, Any order with a higher or equal limit price would be included in the cancel filter. This filter can only be used in conjunction with a specific token.
CancelGroupID	64	2	<a href="#">UINT16</a>	21000	N	Identifier of custom cancel group.

## 7.2 Server To Client

### 7.2.1 Business Flow Message

#### 7.2.1.1 ExecutionReport\_New

The ExecutionReport\_New is a response to [NewOrderSingle](#) or each order within BulkQuote in the event the order was accepted by the exchange. This message echoes the accepted state of the order back to the requester.

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
SBE Header	0	7	N/A	N/A	Y	SBE Header with blockLength = 139 (0x8B), template = 6
SendingTime	7	8	<a href="#">UTCTimestampNanos</a>	52	Y	The time the ExecutionReport was sent. UTC timestamp since unix

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
						epoch with nanosecond precision.
OrderID	15	16	<a href="#">UUIDType</a>	37	Y	OrderID as assigned by the exchange.
ClOrdID	31	16	<a href="#">CHAR</a>	11	Y	As stated in the order.
ExecID	47	16	<a href="#">UUIDType</a>	17	Y	Unique identifier of execution message as assigned by the exchange.
CorrelationID	63	8	<a href="#">INT64</a>	21025	Y	A reference number used to match this order with orders broadcast on MEMOIR Depth for Crypto. Values will be unique per token, per trading session.
CPID	71	4	<a href="#">CHAR</a>	21007	Y	The CPID associated with the new order, if it is not supplied, the CPID assigned as the default CPID for the Port/Account is associated with the new order.
OrdStatus	75	1	<a href="#">OrdStatusType</a>	39	Y	The status of the order.
TokenID	76	8	<a href="#">CHAR</a>	55	Y	As stated in the order.
UnitMultiplier	84	2	<a href="#">INT16</a>	21024	Y	As stated in the order.
Side	86	1	<a href="#">SideType</a>	54	Y	As stated in the order.
QuoteIndex	87	1	<a href="#">UINT8</a>	21023	Y	As stated in BulkQuote request or 0 for NewOrderSingle request.

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
OrdType	88	1	<a href="#">OrdType</a>	40	Y	As stated in NewOrderSingle request or Limit for BulkQuote request.
OrderQty	89	8	<a href="#">INT64</a>	38	Y	As stated in the order.
Price	97	8	<a href="#">FixedPointDecimal</a>	44	N	As stated in the order.
TimeInForce	105	1	<a href="#">TimeInForceType</a>	59	Y	As stated in NewOrderSingle request or GTT for BulkQuote request.
OrderCapacity	106	1	<a href="#">OrderCapacityType</a>	528	Y	As stated in the order.
CustOrderCapacity	107	1	<a href="#">CustOrderCapacityType</a>	582	Y	As stated in the order
ExecInst	108	2	<a href="#">ExecInstType</a>	18	Y	As stated in the order.
ExtendedExecInst	110	1	<a href="#">ExtendedExecInstType</a>	9416	N	As stated in the order.
ExpireTime	111	8	<a href="#">UTCTimestampNanos</a>	126	N	As stated in the order.
CancelGroupID	119	2	<a href="#">UINT16</a>	21000	N	As stated in the order.
STPGroupID	121	2	<a href="#">STPGroupIDType</a>	2362	N	As stated in the order.
SelfTradePrevention	123	1	<a href="#">SelfTradePreventionType</a>	21001	N	As stated in the order.
RiskGroupID	124	2	<a href="#">UINT16</a>	21005	N	As stated in the order.
LeavesQty	126	8	<a href="#">INT64</a>	151	Y	Quantity open for further execution. See <a href="#">Order Quantities</a> for more info.
CumQty	134	8	<a href="#">INT64</a>	14	Y	Total quantity filled. See <a href="#">Order Quantities</a> for more info.
LnkID	142	4	<a href="#">CHAR</a>	583	N	As stated in the order.

## 7.2.1.2 ExecutionReport\_Rejected

The ExecutionReport\_Rejected is a response to [NewOrderSingle](#) or each order within BulkQuote in the event the order was rejected by the Exchange. This message echoes back to the requester some of the fields as specified on the request along with the reason for rejection.

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
SBE Header	0	7	N/A	N/A	Y	SBE Header with blockLength = 73 (0x48), template = 7
SendingTime	7	8	<a href="#">UTCTimestampNanos</a>	52	Y	The time the ExecutionReport was sent. UTC timestamp since unix epoch with nanosecond precision.
ClOrdID	15	16	<a href="#">CHAR</a>	11	Y	As stated in the order.
ExecID	31	16	<a href="#">UUIDType</a>	17	Y	Unique identifier of execution message as assigned by the exchange.
Side	47	1	<a href="#">SideType</a>	54	Y	As stated in the order.
QuoteIndex	48	1	<a href="#">UINT8</a>	21023	Y	As stated in BulkQuote request or 0 for NewOrderSingle request.
OrdStatus	49	1	<a href="#">OrdStatusType</a>	39	Y	The status of the order.
TokenID	50	8	<a href="#">CHAR</a>	55	Y	As stated in the order.
LeavesQty	58	8	<a href="#">INT64</a>	151	Y	Quantity open for further execution. See <a href="#">Order Quantities</a> for more info.
CumQty	66	8	<a href="#">INT64</a>	14	Y	Total quantity filled. See <a href="#">Order Quantities</a> for more info.
RejectReason	74	2	<a href="#">OrdRejReason</a>	103	Y	Reason code for order rejection.
LnkID	76	4	<a href="#">CHAR</a>	583	N	As stated in the order.

## 7.2.1.3 ExecutionReport\_Trade

The ExecutionReport\_Trade is an unsolicited response triggered as a result of a trade. The message contains all the data describing the trade.

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
SBE Header	0	7	N/A	N/A	Y	SBE Header with blockLength = 120 (0x78), template = 8
SendingTime	7	8	<a href="#">UTCTimestampNanos</a>	52	Y	The time the ExecutionReport was sent. UTC timestamp since unix epoch with nanosecond precision.
OrderID	15	16	<a href="#">UUIDType</a>	37	Y	OrderID as assigned by the exchange.
ClOrdID	31	16	<a href="#">CHAR</a>	11	Y	The unique identifier as specified by the client.
Side	47	1	<a href="#">SideType</a>	54	Y	As stated in the order.
QuoteIndex	48	1	<a href="#">UINT8</a>	21023	Y	As stated in BulkQuote request or 0 for NewOrderSingle request.
ExecID	49	16	<a href="#">UUIDType</a>	17	Y	Unique identifier of execution message as assigned by the exchange.
OrdStatus	65	1	<a href="#">OrdStatusType</a>	39	Y	The status of the order.
LastQty	66	8	<a href="#">INT64</a>	32	Y	Quantity bought/sold on this (last) fill. See <a href="#">Order Quantities</a> for more info.
LastPx	74	8	<a href="#">FixedPointDecimal</a>	31	Y	Price of this (last) fill.
LeavesQty	82	8	<a href="#">INT64</a>	151	Y	Quantity open for further execution. See <a href="#">Order Quantities</a> for more info.
CumQty	90	8	<a href="#">INT64</a>	14	Y	Total quantity filled. See <a href="#">Order Quantities</a> for more info.
TransactTime	98	8	<a href="#">UTCTimestampNanos</a>	60	Y	The time at which the transaction occurred. UTC timestamp since

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
						epoch with nanosecond precision.
LastLiquidityInd	106	1	<a href="#">LastLiquidityIndType</a>	851	Y	Indicator denoting whether the referenced order removed liquidity from or added liquidity to the exchange book.
TrdMatchID	107	16	<a href="#">UUIDType</a>	880	Y	Identifier assigned to the Trade by the matching system.
LnkID	123	4	<a href="#">CHAR</a>	583	N	As stated in the order.

#### 7.2.1.4 ExecutionReport\_PendingCancel

The ExecutionReport\_PendingCancel is a response to OrderCancelRequest request indicating the request has been received by the exchange and is in the process of being handled.

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
SBE Header	0	7	N/A	N/A	Y	SBE Header with blockLength = 87 (0x57), template = 9
SendingTime	7	8	<a href="#">UTCTimestampNanos</a>	52	Y	The time the ExecutionReport was sent. UTC timestamp since unix epoch with nanosecond precision.
OrderID	15	16	<a href="#">UUIDType</a>	37	Y	OrderID as assigned by the exchange.
ClOrdID	31	16	<a href="#">CHAR</a>	11	Y	As stated in the cancel request.
OrigClOrdID	47	16	<a href="#">CHAR</a>	41	Y	As stated in the cancel request.
Side	63	1	<a href="#">SideType</a>	54	Y	As stated in the cancel request.
QuoteIndex	64	1	<a href="#">UINT8</a>	21023	Y	As stated in the cancel request.
TokenID	65	8	<a href="#">CHAR</a>	55	Y	As stated on the previous order.
OrdStatus	73	1	<a href="#">OrdStatusType</a>	39	Y	The status of the order.
LeavesQty	74	8	<a href="#">INT64</a>	151	Y	Quantity open for further execution. See <a href="#">Order Quantities</a> for more info.

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
CumQty	82	8	<a href="#">INT64</a>	14	Y	Total quantity filled. See <a href="#">Order Quantities</a> for more info.
LnkID	90	4	<a href="#">CHAR</a>	583	N	As stated in the order. For a cancel request being issued from a port other than the port that the order was originally placed, this field will not be present.

#### 7.2.1.5 ExecutionReport\_Canceled

The ExecutionReport\_Canceled message is an event denoting that an order has been fully canceled from the Exchange's book. Orders that are canceled by the exchange because of Time in Force instructions will have an OrdStatus of "Expired". All other cases will have OrdStatus of "Canceled."

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
SBE Header	0	7	N/A	N/A	Y	SBE Header with blockLength = 104 (0x68), template = 10
SendingTime	7	8	<a href="#">UTCTimestampNanos</a>	52	Y	The time the ExecutionReport was sent. UTC timestamp since unix epoch with nanosecond precision.
ClOrdID	15	16	<a href="#">CHAR</a>	11	Y	The identifier for the cancel request or the canceled order in the event of an unsolicited cancel*.
OrigClOrdID	31	16	<a href="#">CHAR</a>	41	N	A Unique identifier for the canceled order if available*.
OrderID	47	16	<a href="#">UUIDType</a>	37	Y	OrderID as assigned by the exchange to the canceled order.
Side	63	1	<a href="#">SideType</a>	54	Y	As stated in the cancel request.
QuoteIndex	64	1	<a href="#">UINT8</a>	21023	Y	As stated in the cancel request.
ExecID	65	16	<a href="#">UUIDType</a>	17	Y	Unique identifier of execution message as assigned by the exchange.



Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
OrdStatus	81	1	<a href="#">OrdStatusType</a>	39	Y	The status of the order.
LeavesQty	82	8	<a href="#">INT64</a>	151	Y	Quantity open for further execution. See <a href="#">Order Quantities</a> for more info.
CumQty	90	8	<a href="#">INT64</a>	14	Y	Total quantity filled. See <a href="#">Order Quantities</a> for more info.
CancelReason	98	1	<a href="#">CancelReasonCode</a>	21004	Y	Reason code for order cancellation.
TransactTime	99	8	<a href="#">UTCTimestampNanos</a>	60	Y	The time at which the transaction occurred. UTC timestamp since epoch with nanosecond precision.
LnkID	107	4	<a href="#">CHAR</a>	583	N	As stated on the order. For a cancel request being issued from a port other than the port that the order was originally placed, this field will not be present.

NOTE: Orders that are canceled as a result of a mass cancel request will be reported back to customers as Unsolicited cancels - i.e. the `ClOrdID` and `OrigClOrdID` fields will contain the canceled order identifier.

#### 7.2.1.6 ExecutionReport\_PendingReplace

The `ExecutionReport_PendingReplace` message is a response to `OrderCancelReplaceRequest` request indicating the request has been received by the exchange and is in the process of being handled.

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
SBE Header	0	7	N/A	N/A	Y	SBE Header with <code>blockLength = 120 (0x78)</code> , <code>template = 11</code>
SendingTime	7	8	<a href="#">UTCTimestampNanos</a>	52	Y	The time the <code>ExecutionReport</code> was sent. UTC timestamp since unix epoch with nanosecond precision.

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
OrderID	15	16	<a href="#">UUIDType</a>	37	Y	OrderID as assigned by the exchange to the canceled order.
ClOrdID	31	16	<a href="#">CHAR</a>	11	Y	As stated in the replace request.
OrigClOrdID	47	16	<a href="#">CHAR</a>	41	Y	As stated in the replace request.
ExecID	63	16	<a href="#">UUIDType</a>	17	Y	Unique identifier of execution message as assigned by the exchange.
Side	79	1	<a href="#">SideType</a>	54	Y	As stated in the order.
QuoteIndex	80	1	<a href="#">UINT8</a>	21023	Y	As stated in BulkQuote request or 0 for NewOrderSingle request.
TokenID	81	8	<a href="#">CHAR</a>	55	Y	As stated on the previous order.
OrderQty	89	8	<a href="#">INT64</a>	38	Y	As stated on the previous order.
OrdType	97	1	<a href="#">OrdType</a>	40	Y	As stated on the previous order.
Price	98	8	<a href="#">FixedPointDecimal</a>	44	N	As stated on the previous order.
OrdStatus	106	1	<a href="#">OrdStatusType</a>	39	Y	The status of the order. (PendingReplace).
LeavesQty	107	8	<a href="#">INT64</a>	151	Y	Quantity open for further execution. See <a href="#">Order Quantities</a> for more info.
CumQty	115	8	<a href="#">INT64</a>	14	Y	Total quantity filled. See <a href="#">Order Quantities</a> for more info.
LnkID	123	4	<a href="#">CHAR</a>	583	N	As stated on the replace request, or the original order if not supplied on the replace request.

#### 7.2.1.7 ExecutionReport\_Replaced

The ExecutionReport\_Replaced is an event on an order triggered by a successful handling of OrderCancelReplaceRequest for the original order. The original order can be considered fully cancelled and replaced by the stated replacement order upon receipt of this event.

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
SBE Header	0	7	N/A	N/A	Y	SBE Header with blockLength = 136 (0x88), template = 12
SendingTime	7	8	<a href="#">UTCTimestampNanos</a>	52	Y	The time the ExecutionReport was sent. UTC timestamp since unix epoch with nanosecond precision.
OrderID	15	16	<a href="#">UUIDType</a>	37	Y	OrderID as assigned by the exchange.
CIOrdID	31	16	<a href="#">CHAR</a>	11	Y	As stated in the replace request.
OrigCIOrdID	47	16	<a href="#">CHAR</a>	41	Y	As stated in the replace request.
ExecID	63	16	<a href="#">UUIDType</a>	17	Y	Unique identifier of execution message as assigned by the exchange.
CorrelationID	79	8	<a href="#">INT64</a>	21025	Y	A reference number used to match this order with orders broadcast on MEMOIR Depth for Crypto. Values will be unique per token, per trading session.
TokenID	87	8	<a href="#">CHAR</a>	55	Y	As stated in the replace request.
Side	95	1	SideType	54	Y	As stated in the replace request.
QuoteIndex	96	1	<a href="#">UINT8</a>	21023	Y	As stated in BulkQuote request or 0 for NewOrderSingle request.
OrderQty	97	8	<a href="#">INT64</a>	38	Y	As stated in the replace request.
OrdType	105	1	<a href="#">OrdType</a>	40	Y	As stated in the replace request.
Price	106	8	<a href="#">FixedPointDecimal</a>	44	Y	As stated in the replace request.
OrdStatus	114	1	<a href="#">OrdStatusType</a>	39	Y	The status of the order.
LeavesQty	115	8	<a href="#">INT64</a>	151	Y	Quantity open for further execution. See <a href="#">Order Quantities</a> for more info.

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
CumQty	123	8	<a href="#">INT64</a>	14	Y	Total quantity filled. See <a href="#">Order Quantities</a> for more info.
TransactTime	131	8	<a href="#">UTCTimestampNanos</a>	60	Y	The time at which the transaction occurred. UTC timestamp since epoch with nanosecond precision.
LnkID	139	4	<a href="#">CHAR</a>	583	N	As stated on the replace request, or the original order if not supplied on the replace request.

#### 7.2.1.8 ExecutionReport\_Restatement

The ExecutionReport\_Restatement is an unsolicited event to notify the client that an open order has been updated by the system. This message can be sent if the order quantity is partially or fully cancelled because of Self Trade Prevention. This message is also sent to reinstate existing GoodForTime orders after the turn of a logical trading session for maintenance.

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
SBE Header	0	7	N/A	N/A	Y	SBE Header with blockLength = 112 (0x70), template = 13
SendingTime	7	8	<a href="#">UTCTimestampNanos</a>	52	Y	UTC timestamp since unix epoch with nanosecond precision.
OrderID	15	16	<a href="#">UUIDType</a>	37	Y	OrderID as assigned by the exchange.
ClOrdID	31	16	<a href="#">CHAR</a>	11	Y	The ClOrdID associated with the order.
ExecID	47	16	<a href="#">UUIDType</a>	17	Y	Unique identifier of execution message as assigned by the exchange.
CorrelationID	63	8	<a href="#">INT64</a>	21025	Y	A reference number used to match this order with orders broadcast on MEMOIR Depth for Crypto. Values will be unique per token, per trading session.
Side	71	1	<a href="#">SideType</a>	54	Y	Order side.

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
QuoteIndex	72	1	<a href="#">UINT8</a>	21023	Y	As stated in BulkQuote request or 0 for NewOrderSingle request.
OrdStatus	73	1	<a href="#">OrdStatusType</a>	39	Y	Order status.
LastPx	74	8	<a href="#">FixedPointDecimal</a>	31	Y	ExecRestatementType(1): The updated booked price. This is the price that the order can match at. ExecRestatementType(5): The match price if this order had not been prevented from executing due to STP restrictions.
LeavesQty	82	8	<a href="#">INT64</a>	151	Y	Quantity open for further execution.
CumQty	90	8	<a href="#">INT64</a>	14	Y	Total quantity filled.
LastQty	98	8	<a href="#">INT64</a>	32	N	ExecRestatementType(5): The quantity that would have matched if this order had not been prevented from executing due to STP restrictions. See <a href="#">Order Quantities</a> for more info.
ExecRestatementReason	106	1	<a href="#">ExecRestatementType</a>	378	Y	The reason for the restatement.
TransactTime	107	8	<a href="#">UTCTimestampNanos</a>	60	Y	The time at which the transaction occurred. UTC timestamp since epoch with nanosecond precision.
LnkID	115	4	<a href="#">CHAR</a>	583	N	As stated in the order.

#### 7.2.1.9 PendingBulkQuote

The PendingBulkQuote is a response to [BulkQuote](#) request indicating the request has been received by the exchange and is in the process of being handled.

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
SBE Header	0	7	N/A	N/A	Y	SBE Header with blockLength (minimum size)

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
						= 79 (0x4F), template = 14
SendingTime	7	8	<a href="#">UTCTimestampNanos</a>	52	Y	The time the ExecutionReport was sent. UTC timestamp since unix epoch with nanosecond precision.
CIOrdID	15	16	<a href="#">CHAR</a>	11	Y	The CIOrdID associated with the order.
ExecID	31	16	<a href="#">UUIDType</a>	17	Y	Unique identifier of execution message as assigned by the exchange.
CPID	47	4	<a href="#">CHAR</a>	21007	N	The CPID associated with the new order, if it is not supplied, the CPID assigned as the default CPID for the Port/Account is associated with the new order.
TokenID	51	8	<a href="#">CHAR</a>	55	Y	As stated in the order.
UnitMultiplier	59	2	<a href="#">INT16</a>	21024	Y	As stated in the order.
OrderCapacity	61	1	<a href="#">OrderCapacityType</a>	528	Y	As stated in the order.
CustOrderCapacity	62	1	<a href="#">CustOrderCapacityType</a>	582	Y	As stated in the order.
ExecInst	63	2	<a href="#">ExecInstType</a>	18	Y	As stated in the order.
ExtendedExecInst	65	1	<a href="#">ExtendedExecInstType</a>	9416	N	As stated in the order.
ExpireTime	66	8	<a href="#">UTCTimestampNanos</a>	126	Y	As stated in the order.
CancelGroupID	74	2	<a href="#">UINT16</a>	21000	N	As stated in the order.
STPGroupID	76	2	<a href="#">STPGroupIDType</a>	2362	N	As stated in the order.
SelfTradePrevention	78	1	<a href="#">SelfTradePreventionType</a>	21001	N	As stated in the order.

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
RiskGroupID	79	2	<a href="#">UINT16</a>	21005	N	As stated in the order.
LnkID	81	4	<a href="#">CHAR</a>	583	N	As stated in the order.
NoQuoteEntries	85	1	<a href="#">UINT8</a>	295	Y	The number of quotes being processed for the bulk quote with the specified ClOrdID.

#### 7.2.1.10 BulkQuoteRejected

The BulkQuoteRejected is a response to a [BulkQuote](#) request to indicate the entire request can not be honored as sent.

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
SBE Header	0	7	N/A	N/A	Y	SBE Header with blockLength = 39 (0x27), template = 21
SendingTime	7	8	<a href="#">UTCTimestampNanos</a>	52	Y	The time the ExecutionReport was sent. UTC timestamp since unix epoch with nanosecond precision.
ClOrdID	15	16	<a href="#">CHAR</a>	11	Y	As stated in the order.
TokenID	31	8	<a href="#">CHAR</a>	55	Y	As stated in the order.
BulkRejectReason	39	2	<a href="#">QuoteRejectReason</a>	300	Y	Reason code for quote rejection.
NoQuoteEntries	41	1	<a href="#">UINT8</a>	295	Y	The number of quotes for the BulkQuote request with the specified ClOrdID.
LnkID	42	4	<a href="#">CHAR</a>	583	N	As stated in the request.

#### 7.2.1.11 PendingMassCancel

The PendingMassCancel is a response to [MassCancelRequest](#) request indicating the request has been received by the exchange and is in the process of being handled.

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
SBE Header	0	7	N/A	N/A	Y	SBE Header with blockLength = 67 (0x43), template = 16
SendingTime	7	8	<a href="#">UTCTimestampNanos</a>	52	Y	The time the ExecutionReport was sent. UTC timestamp since unix epoch with nanosecond precision.
ClOrdID	15	16	<a href="#">CHAR</a>	11	Y	The identifier for this mass cancel, as stated in the mass cancel request.
TokenID	31	8	<a href="#">CHAR</a>	55	N	As stated in the mass cancel request.
OrigClOrdID	39	16	<a href="#">CHAR</a>	41	N	As stated in the mass cancel request.
Side	55	1	<a href="#">SideType</a>	54	N	As stated in the mass cancel request.
LowerThanPrice	56	8	<a href="#">FixedPointDecimal</a>	N/A	N	As stated in the mass cancel request.
HigherThanPrice	64	8	<a href="#">FixedPointDecimal</a>	N/A	N	As stated in the mass cancel request.
CancelGroupID	72	2	<a href="#">UINT16</a>	21000	N	As stated in the mass cancel request.

## 7.2.1.12 MassCancelReject

The MassCancelReject message is used by the exchange to indicate a [MassCancelRequest](#) cannot be honored as sent.

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
SBE Header	0	7	N/A	N/A	Y	SBE Header with blockLength = 68 (0x44), template = 17
SendingTime	7	8	<a href="#">UTCTimestampNanos</a>	52	Y	The time the



Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
						message was sent. UTC timestamp since unix epoch with nanosecond precision.
CIOrdID	15	16	<a href="#">CHAR</a>	11	Y	The identifier for this mass cancel, as stated in the mass cancel request.
TokenID	31	8	<a href="#">CHAR</a>	55	N	As stated in the mass cancel request.
OrigCIOrdID	39	16	<a href="#">CHAR</a>	41	N	As stated in the mass cancel request.
Side	55	1	<a href="#">SideType</a>	54	N	As stated in the mass cancel request.
LowerThanPrice	56	8	<a href="#">FixedPointDecimal</a>	N/A	N	As stated in the mass cancel request.
HigherThanPrice	64	8	<a href="#">FixedPointDecimal</a>	N/A	N	As stated in the mass cancel request.
CancelGroupID	72	2	<a href="#">UINT16</a>	21000	N	As stated in the mass cancel request.
RejectReason	74	1	<a href="#">MassCancelRejectReasonCode</a>	N/A	Y	Code to identify reason for mass cancel rejection.

## 7.2.1.13 MassCancelDone

The MassCancelDone is sent when all the orders specified in the MassCancelRequest have been processed.

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
SBE Header	0	7	N/A	N/A	Y	SBE Header with blockLength = 24 (0x18), template = 18
SendingTime	7	8	<a href="#">UTCTimestampNanos</a>	52	Y	The time the ExecutionReport was sent. UTC timestamp since unix epoch with nanosecond precision.
ClOrdID	15	16	<a href="#">CHAR</a>	11	Y	The identifier for this cancel, as stated in the cancel request.

#### 7.2.1.14 OrderCancelReject

The OrderCancelReject message is used by the exchange to indicate an [OrderCancelRequest](#) or [OrderCancelReplaceRequest](#) cannot be honored.

This message corresponds to FIX message type 9

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
SBE Header	0	7	N/A	N/A	Y	SBE Header with blockLength = 33 (0x21), template = 19
SendingTime	7	8	<a href="#">UTCTimestampNanos</a>	52	Y	UTC timestamp since unix epoch with nanosecond precision.
ClOrdID	15	16	<a href="#">CHAR</a>	11	Y	Unique identifier of the request being rejected.
Side	31	1	<a href="#">SideType</a>	54	Y	As stated in the request.
QuoteIndex	32	1	<a href="#">UINT8</a>	21023	Y	As stated in the request.
CxlRejResponseTo	33	1	<a href="#">CxlRejResponseToType</a>	434	Y	Identifies the type of request that this cancel reject is responding to.
CxlRejReason	34	2	<a href="#">CxlRejReason</a>	102	Y	Code to identify reason for

Field	Offset	Length	Type	Tag Ref Num	Req'd	Description
						cancel rejection.
LnkID	36	4	<a href="#">CHAR</a>	583	N	As stated in the order, if order is still live.

## 7.2.2 Administrative Messages

### 7.2.2.1 UserNotification

The UserNotification message is used to notify the user of an event or information about the exchange. This message will be used to provide a logical session shutdown warning for an upcoming maintenance window.

This message corresponds to FIX message type CB

Field	Offset	Length	Type	Tag Ref Num	Req'd	Meaning
SBE Header	0	7	N/A		Y	SBE Header with blockLength = 9 (0x9), template = 20
SendingTime	7	8	<a href="#">UTCTimestampNanos</a>	52	Y	The timestamp when the event occurred.
UserStatus	15	1	<a href="#">UserStatusType</a>	926	Y	Reason for notification.