

CME Globex EBS Market - Market Data Message Specification

This message specification provides the message layout for each FIX message type supported by the applicable SBE schema for EBS markets. Clients can also review message specification details via the SBE schemas:

- Core CME Globex
- Global TCP Recovery
- TCP Session Management

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Revision History

Date	Description
April 29, 2022	"Market Data Incremental Refresh - Trade Summary" - Added tag 346.
July 15, 2021	Added note where applicable, Note: EBS Market does not support implied functionality.
July 13, 2021	"Market Data Incremental Refresh - Trade Summary" - Added note to tag 5799-MatchEventIndicator description.
March 15, 2021	Updated tag 1231-MinLotSize type from DecimalQty to UInt64 on template MDIncrementalRefreshFX63.
December 7, 2020	Removed implied values from Market Data Incremental Refresh (35=X) and Snapshot (35=W) messages
December 3, 2020	Initial publication

Binary Packet Headers

A standard technical header sent in a packet.

Binary Packet Header for UDP Connections

A standard technical header is included in all packets sent on Real-Time Feed, UDP Market Recovery, and Instrument Recovery Feeds.

Name	Type	Description
MsgSeq Num	uint32	Packet sequence number. A unique sequence number given to each packet sent. Each channel will have its own separate set of sequence numbers that will increment sequentially with each packet and reset weekly.
Sending Time	uint64	UTC Time of message transmission by the Gateway. UTC Timestamps are sent in number of nanoseconds since Unix epoch synced to a master clock to microsecond accuracy.

SBE Technical Header for TCP Conflated Connections

A standard technical header is included as preamble to all TCP conflated SBE messages sent by Customer to Exchange, as well as Exchange to Customer for TCP.

Name	Type	Description
encoding Type	integral enumeration value '0xCAFE'	CME SBE version 1.0 little-endian - value 0xCAFE
MsgSeqNum	uint32	TCP sequence number. A unique sequence number given to each TCP message sent. Each connection will have its own separate set of sequence numbers that will increment sequentially with each packet and reset on connection termination.
SendingTime	uint64	UTC Time of message transmission by the MD Gateway. UTC Timestamps are sent in number of nanoseconds since Unix epoch.

CME Group MDP Core Message Specification

The CME Group MDP Core Message Specification provides the message layout for each FIX message type supported by the CME Group MDP 3.0 market data messaging format in the Core CME Globex SBE Schema. See the [Core Globex SBE Schema Overview Section](#) to determine which templates apply to your system.

Market Data Header

The following section outlines MDP headers for the Core CME Globex SBE Schema.

Message Header

Each message in the packet starts with a Binary message header that consists of the Binary Size and SBE header (Length, TemplateID, SchemaID, and Version).

Name	Type	Description
MsgSize	uint16	Length of entire message, including binary header in number of bytes
Simple Binary Encoding Header		
BlockLength	uint16	Length of the root of the FIX message contained before repeating groups or variable/conditions fields
TemplateID	uint16	Template ID used to encode the message
SchemaID	uint16	ID of the system publishing the message

Version	uInt16	Schema version
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Market Data Incremental Refresh (tag 35-MessageType=X)

The Market Data Incremental Refresh (tag 35-MessageType=X) is sent for incremental updates including bid, offer, and trade data and trading session.

Market Data Incremental Refresh - Market by Price (MBP) Book Management


The Market Data Incremental Refresh message below is sent for book updates that includes Market by Price (MBP) updates. This message maps to the MDIncrementalRefreshBookLongQty64 template in the SBE MDP Core Message schema.

Tag	FIX Name	Type	Semantic Type	Valid Values for EBS	Description
60	TransactTime	uInt64	UTCTimestamp		Start of event processing time in number of nanoseconds since Unix epoch
5799	MatchEventIndicator	MatchEventIndicator	MultipleCharValue	example: 00000100 – end of quotes, not end of event example: 10010000 – end of implied quotes, end of event	Bitmap field of eight Boolean type indicators reflecting the end of updates for a given CME Globex Event: Bit 0: (least significant bit) Last Trade Summary message for a given event Bit 1: Last electronic volume message for a given event Bit 2: Last customer order quote message for a given event Bit 3: Last statistic message for a given event Bit 4: Last implied quote message for a given event. Note: EBS Market does not support implied functionality. Bit 5: Message resent during recovery Bit 6: Reserved for future use Bit 7: (most significant bit) Last message for a given event
Repeating Group 1					
268	NoMDEntries	NumInGroup			Number of entries in Market Data message
270	MDEntryPx	PRICENULL9	Price		Market Data entry price
271	MDEntrySize	uInt64NULL	Qty		Market Data entry quantity This field is in a notional format
48	SecurityID	Int32	int		A unique instrument ID value will not be reused until the next trade date following an instrument expiration or deletion.
83	RptSeq	uInt32	int		Market Data entry sequence number per instrument update. The MDP Conflated TCP market data group sends a RptSeq value of zero.
346	NumberOfOrders	Int32NULL	int		In Book entry - aggregate number of orders at given price level
1023	MDPriceLevel	uInt8	int		Aggregate book level
279	MDUpdateAction	MDUpdateAction	int	0=New 1=Change 2=Delete	Market Data update action
269	MDEntryType	MDEntryTypeBook	char	0=Bid 1=Offer w=MarketBestOffer x=MarketBestBid	Market Data entry type
Repeating Group 2					
37705	NoOrderIDEntries	NoOrderIDEntries		0	Not used for EBS markets. Repeating group of MBO book updates included in an event. Repeating group used for MBP and MBO combined updates .

37	OrderID	uint64	int		Unique ID assigned by CME Globex to identify orders.
37707	MOrderPriority	uint64NULL	int		Order priority for execution on the order book
37706	MDDisplayQty	Int32NULL	Qty		Visible quantity of an order to the market. Orders may have additional hidden display quantity.
9633	ReferenceID	uint8NULL	int		Reference to corresponding Price and Security ID, sequence of MD entry in the message
37708	OrderUpdateAction	OrderUpdateAction	int	0=New 1=Change 2=Delete	Order book update action to be applied to the order referenced by OrderID

Market Data Incremental Refresh - Trade Summary

The Market Data Incremental Refresh message below is sent for Trade Summary. This message maps to the MDIncrementalRefreshTradeSummaryL ongQty65 template in the SBE MDP Core schema.

Tag	FIX Name	Type	Semantic Type	Valid Values for EBS	Description
60	TransactTime	uint64	UTCTimestamp		Start of event processing time in number of nanoseconds since Unix epoch
5799	MatchEventIndicator	MatchEventIndicator	MultipleCharValue	example: 00000001 – end of trades, not end of event	<p>Bitmap field of eight Boolean type indicators reflecting the end of updates for a given CME Globex event:</p> <p>Bit 0: (least significant bit) Last Trade Summary message for a given event</p> <div style="border: 1px solid #ccc; padding: 5px; margin: 5px 0;"> <p> For conflated TCP MDP channels, end of trades (Bit 0) will be one for each trade summary message.</p> </div> <p>Bit 1: Last electronic volume message for a given event</p> <p>Bit 2: Last customer order quote message for a given event</p> <p>Bit 3: Last statistic message for a given event</p> <p>Bit 5: Message resent during recovery</p> <p>Bit 6: Reserved for future use</p> <p>Bit 7: (most significant bit) Last message for a given event</p>
Repeating Group 1					
268	NoMDEntries	NumInGroup			Number of entries in Market Data message
270	MDEntryPx	PRICE9	Price		Trade price
271	MDEntrySize	uint64	Qty	0	Always set to zero This field is in a notional format
48	SecurityID	Int32	int		A unique instrument ID value will not be reused until the next trade date following an instrument expiration or deletion.
83	RptSeq	uint32	int		Sequence number per instrument update. The MDP Conflated TCP market data group sends a RptSeq value of zero.
346	NumberOfOrders	Int32	int	0	Always set to zero.
37711	MDTradeEntryID	uint32	int		Market Data Trade Entry ID.
5797	AggressorSide	AggressorSide	int	0=No aggressor 1=Buy 2=Sell	<p>Indicates which side is aggressor of the trade. If there is a zero value present, then there is no aggressor.</p> <p>Note: Trades without aggressors occur at Market Open, after a Pre-Open or after a Pause, and also when the event includes customer order participation in a trade with a CME Globex-generated implied bid or offer.</p> <p>Note: EBS Market does not support implied functionality.</p>

279	MDUpdateAction	MDUpdateAction	int	0=New (new trade) 1=Change (adjustment) 2=Delete (cancel)	Market Data update action
269	MDEntryType	MDEntryTypeTrade	char	2=Trade Summary	Market Data entry type.
Repeating Group 2					
37705	NoOrderIDEntries	NoOrderIDEntries		0	Number of OrderID entries
37	OrderID	uint64	int		Unique ID assigned by CME Globex to identify orders.
32	LastQty	Int32	Qty		Quantity bought or sold on this last fill

Market Data Incremental Refresh - Limits and Banding

The Market Data Incremental Refresh message below is sent for limits and banding. This message maps to the MDIncrementalRefreshLimitsBanding50 template in the SBE MDP Core schema.

Tag	FIX Name	Type	Semantic Type	Valid Values for EBS	Description
60	TransactTime	uint64	UTCTimestamp		Start of event processing time in number of nanoseconds since Unix epoch
5799	MatchEventIndicator	MatchEventIndicator	MultipleCharValue	example: 10000000 - last message in the event example: 00000000 - not last message in the event	Bitmap field of eight Boolean type indicators reflecting the end of updates for a given CME Globex Event: Bit 0: (least significant bit) Last Trade Summary message for a given event Bit 1: Last electronic volume message for a given event Bit 2: Last customer order quote message for a given event Bit 3: Last statistic message for a given event Bit 5: Message resent during recovery Bit 6: Reserved for future use Bit 7: (most significant bit) Last message for a given event
Repeating Group 1					
268	NoMDEntries	NumInGroup			Number of entries in Market Data message
1149	HighLimitPrice	PRICENULL9	Price		Upper price threshold for the instrument
1148	LowLimitPrice	PRICENULL9	Price		Lower price threshold for the instrument
1143	MaxPriceVariation	PRICENULL9	Price		Differential static value for price banding
48	SecurityID	Int32	int		A unique instrument ID value will not be reused until the next trade date following an instrument expiration or deletion.
83	RptSeq	uint32	int		MD Entry sequence number per instrument update. The MDP Conflated TCP market data group sends a RptSeq value of zero.
279	MDUpdateAction	MDUpdateActionNew	int	0=New	Market Data update action
269	MDEntryType	MDEntryTypeLimits	char	g=Threshold Limits and Price Band Variation	Market Data entry type.

Market Data Incremental Refresh - Channel Reset

This Market Data channel reset message is used to indicate a channel reset. This message maps to the ChannelReset4 template in the SBE MDP Core schema.

Tag	FIX Name	Type	Semantic Type	Valid Values for EBS	Description
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60	TransactTime	uint64	UTCTimesta mp		Start of event processing time in number of nanoseconds since Unix epoch
5799	MatchEventI ndicator	MatchEventIndica tor	MultipleChar Value	example: 10000000 - last message in the event example: 00000000 - not last message in the event	Bitmap field of eight Boolean type indicators reflecting the end of updates for a given CME Globex Event: Bit 0: (least significant bit) Last Trade Summary message for a given event Bit 1: Last electronic volume message for a given event Bit 2: Last customer order quote message for a given event Bit 3: Last statistic message for a given event Bit 5: Message resent during recovery Bit 6: Reserved for future use Bit 7: (most significant bit) Last message for a given event
Repeating Group 1					
268	NoMDEntries	NumInGroup			Number of entries in Market Data message
279	MDUpdateA ction	MDUpdateTypeN ew	int	0=New	Market Data update action
269	MDEntryType	MDEntryTypeCha nnelReset	char	J=Empty Book	Market Data Entry Type
1180	ApplID	Int16	int		Indicates the channel ID as defined in the XML configuration file

Market Data Snapshot (tag 35-MsgType=W)

The Market Data Snapshot (tag 35-MsgType=W) is utilized on the UDP Market Recovery Feeds, Market By Order Limited Depth (MBOLD) Book Processing and book recovery.

Market Data Snapshot - Full Recovery

The Market Data Snapshot message below is the Market Data Snapshot recovery message. This message is utilized by the MBP UDP Market Recovery feeds. This message maps to the SnapshotFullRefreshLongQty69 template in the SBE MDP Core schema.

Tag	FIX Name	Type	Semantic Type	Valid Values for EBS	Description
369	LastMsgSeqNum Processed	uint32	SeqNum		Sequence number of the last Incremental feed packet processed. This value is used to synchronize the snapshot loop with the real-time feed
911	TotNumReports	uint32	int		Total number of messages replayed in the loop
48	SecurityID	Int32	int		A unique instrument ID value will not be reused until the next trade date following an instrument expiration or deletion.
83	RptSeq	uint32	int		Sequence number of the last Market Data entry processed for the instrument. The MDP Conflated TCP market data group sends a RptSeq value of zero.
60	TransactTime	uint64	UTCTimestamp		Timestamp of the last publication event instrument participated in, sent in number of nanoseconds since Unix epoch.
779	LastUpdateTime	uint64	UTCTimestamp		UTC Date and time of last Security Definition add, update or delete on a given Market Data channel
75	TradeDate	LocalMktDate	LocalMktDate		Trade session date sent as number of days since Unix epoch
1682	MDSecurityTradingStatus	SecurityTradingStatus	int	4=Close 17=Ready to trade (start of session) 18=Not available for trading 21=Pre Open	Identifies the current trading state of the instrument
1149	HighLimitPrice	PRICENULL9	Price		Upper price threshold for the instrument
1148	LowLimitPrice	PRICENULL9	Price		Lower price threshold for the instrument
1143	MaxPriceVariation	PRICENULL9	Price		Differential value for price banding
Repeating Group 1					

268	NoMDEntries	NumInGroup			Number of entries in Market Data message
270	MDEntryPx	PRICENULL9	Price		Market Data entry price
271	MDEntrySize	uInt64NULL	Qty		Market Data entry quantity This field is in a notional format
346	NumberOfOrders	Int32NULL	int		Aggregate number of orders at the given price level
1023	MDPriceLevel	Int8NULL	int		Aggregate book position
286	OpenCloseSettlFlag	OpenCloseSettlFlag	int	null	Always set to null. Flag that identifies a market data entry
269	MDEntryType	MDEntryType	char	0=Bid 1=Offer w=MarketBestOffer x=MarketBestBid 2=Trade	Market Data entry type.

Market Data Snapshot - Conflated TCP Recovery

The Market Data Snapshot message below is used by the CME MDP Conflated TCP market data group. This message maps to the SnapshotFullRefreshTCPLongQty68 template in the SBE MDP Core schema.

Tag	FIX Name	Type	Semantic Type	Valid Values for EBS	Description
60	TransactTime	uInt64	UTCTimestamp		Time of execution/order creation; expressed in UTC.
5799	MatchEventIndicator	MatchEventIndicator	MultipleCharValue		Bitmap field of eight Boolean type indicators reflecting the end of updates for a given CME Globex Event: Bit 0: (least significant bit) Last Trade Summary message for a given event Bit 1: Last electronic volume message for a given event Bit 2: Last customer order quote message for a given event Bit 3: Last statistic message for a given event Bit 5: Message resent during recovery Bit 6: Reserved for future use Bit 7: (most significant bit) Last message for a given event
48	SecurityID	Int32	int		A unique instrument ID value will not be reused until the next trade date following an instrument expiration or deletion.
83	RptSeq	uInt32	int		Sequence number of the last Market Data entry processed for the instrument. The MDP Conflated TCP market data group sends a RptSeq value of zero.
1149	HighLimitPrice	PRICENULL9	Price		Upper price threshold for the instrument. Orders submitted with prices above the upper limit will be rejected.
1148	LowLimitPrice	PRICENULL9	Price		Lower price threshold for the instrument. Orders submitted with prices below the lower limit will be rejected.
1143	MaxPriceVariation	PRICENULL9	Price		Differential static value for price banding.
Repeating Group 1					
268	NoMDEntries	NumInGroup			Number of entries in Market Data message
270	MDEntryPx	PRICENULL9	Price		Price of the Market Data Entry
271	MDEntrySize	uInt64NULL	Qty		MD entry quantity This field is in a notional format
346	NumberOfOrders	Int32NULL	int		Aggregate number of orders at given price level. In Trade Entry - Identifies the total number of real orders per instrument that participated in a match step within a match event.
1023	MDPriceLevel	Int8NULL	int		Aggregate book price level, number from 1 to 10

286	OpenCloseSettleFlag	OpenCloseSettleFlag	int	null	Always set to null. Flag that identifies a market data entry
269	MDEntryType	MDEntryType	char	0=Bid 1=Offer w=MarketBestOffer x=MarketBestBid 2=Trade	Market Data entry type.

Market Data Security Definition (tag 35-MessageType=d)

The market data Security Definition (tag 35-MessageType=d) message identifies the instrument and provides instrument attributes such as expiration, currency, etc.

Additional product and instrument referential data can be obtained via [CME Reference Data API](#). CME Globex tag 48-SecurityID maps to the Reference data API instrument field globexSecurityId.

Market Data Security Definition - FX

This Market Data Security Definition message is sent for EBS FX products. This message maps to the MDInstrumentDefinitionFX63 template in the SBE MDP Core schema.

Tag	FIX Name	Type	Semantic Type	Valid Values for EBS	Description
5799	MatchEventIndicator	MatchEventIndicator	MultipleCharValue	example: 10000000 – Security Definition message is the last message of the event example:00000000 – Security Definition is not the last message of the even	Bitmap field of eight Boolean type indicators reflecting the end of updates for a given CME Globex Event: Bit 0: (least significant bit) Last Trade Summary message for a given event Bit 1: Last electronic volume message for a given event Bit 2: Last customer order quote message for a given event Bit 3: Last statistic message for a given event Bit 4: Last implied quote message for a given event Note: EBS Market does not support implied functionality. Bit 5: Message resent during recovery Bit 6: Reserved for future use Bit 7: (most significant bit) Last message for a given event
911	TotNumReports	uInt32NULL	int		Total number of instruments in the Replay loop. Used on Replay Feed only
980	SecurityUpdateAction	SecurityUpdateAction	char	A=Add D=Delete M=Modify	Included in the message on the Incremental feed when a mid-week deletion or modification (i.e. extension) occurs. Add represents Security Definition messages that are: <ul style="list-style-type: none"> Newly added during the current week Disseminated during the Sunday Startup period Resent by the system during the week Modify represents modifications to a Security Definition Delete represents deletions of a Security Definition
779	LastUpdateTime	uInt64	UTCTimestamp		Timestamp of when the instrument was last added, modified or deleted
1682	MDSecurityTradingStatus	SecurityTradingStatus	int	2=Trading Halt 4=Close 17=Ready to trade (start of session) 18=Not available for trading 21=Pre Open	Identifies the current state of the instrument. The data is available in the Instrument Replay feed only
1180	AppID	Int16	int		The channel ID as defined in the XML Configuration file
1300	MarketSegmentID	uInt8	int		Identifies the market segment, populated for all CME Globex instruments
462	UnderlyingProduct	uInt8NULL	int		Product complex
207	SecurityExchange	SecurityExchange	Exchange		Exchange or market used to identify a security
1151	SecurityGroup	SecurityGroup	String		Security Group Code

6937	Asset	Asset	String		The underlying asset code also known as Product Code
55	Symbol	Symbol	String		Instrument Name or Symbol. Previously used as Group Code
48	SecurityID	Int32	int		Unique instrument ID
22	SecurityIDSource	SecurityIDSource	char	8=Exchange symbol	Identifies class or source of the security ID (Tag 48) value
167	SecurityType	SecurityType	String		Security Type
461	CFICode	CFICode	String		ISO standard instrument categorization code
15	Currency	Currency	Currency		Identifies currency used for price e.g. for EUR/USD spot this field will contain EUR
120	SettlCurrency	Currency	Currency		Currency used for settlement, which may be different from Local currency specified in Tag 1524 PriceQuoteCurrency. Example - Local currency is different from SettlCurrency for NDF (always settle in USD).
1524	PriceQuoteCurrency	Currency	Currency		Local (counter) currency. For EUR/USD spot this field will contain USD.
1142	MatchAlgorithm	CHAR	char	F=First In, First Out (FIFO) V=Institutional Prioritization	Matching algorithm
562	MinTradeVol	uint32	Qty		The minimum trading volume for a security
1140	MaxTradeVol	uint32	Qty		The maximum trading volume for a security
969	MinPriceIncrement	PRICENULL9	Price		Minimum constant tick for the instrument, sent only if instrument is non-VTT (Variable Tick table) eligible
9787	DisplayFactor	Decimal9	float		Contains the multiplier to convert the CME Globex display price to the conventional price
2349	PricePrecision	uint8	int		Specifies price decimal precision for EBS instrument
996	UnitOfMeasure	UnitOfMeasure	String		Unit of measure for the products' original contract size
1147	UnitOfMeasureQty	Decimal9NULL	Qty		This field contains the contract size for each instrument. Used in combination with tag 996-UnitOfMeasure
1149	HighLimitPrice	PRICENULL9	Price		Allowable high limit price for the trading day
1148	LowLimitPrice	PRICENULL9	Price		Allowable low limit price for the trading day
1143	MaxPriceVariation	PRICENULL9	Price		Differential value for price banding
9779	UserDefinedInstrument	UserDefinedInstrument	char	Y=User defined instrument N=Not a user defined instrument	User-defined instruments flag
2714	FinancialInstrumentFullName	LongName	String		Long name of the instrument
37725	FXCurrencySymbol	String7	String		Base/Local. Denotes the currency pair in CCY1/CCY2 convention
63	SettlType	String3	String		For SPOTs will contain 0. For Fixed date NDFs will contain the value 'B'. For the standard NDFs tenors expressed using Dx, Mx, Wx, and Yx values, where 'x' does not denote business days, but calendar days
37730	InterveningDays	uint16	int		For SPOT, number of business days between trade date and value (settlement) date. For NDF, number of business days between NDF valuation (fixing) and settlement
2796	FXBenchmarkRateFix	String20	String		Fixing Rate Description
1446	RateSource	String12	String		Fixing Rate Source
37726	FixRateLocalTime	String8	String		Fixing Rate Local Time, denoted in HH:MM:SS format
37727	FixRateLocalTimeZone	String20	String		Fixing Rate Local Time Zone corresponding to Fixing Local Time.
37731	MinQuoteLife	uint32	int		Minimum Quote Life in number of microseconds
37728	MaxPriceDiscretionOffset	PRICE9	Price		Max allowed discretionary offset from Limit order price. When the value in this field = 0, discretionary price cannot be submitted for the instrument
37513	InstrumentGUID	uint64NULL	int		External unique instrument ID
200	MaturityMonthYear	MaturityMonthYear	MonthYear		Fixed Date NDF Maturity
37734	SettlementLocale	String8	String		Settlement Locale. Optionally used to differentiate settlement location
Repeating Group 1					
864	NoEvents	NuminGroup			Number of repeating entries.
865	EventType	EventType	int	5=Activation 7=Last eligible trade date	Code to represent the type of event
1145	EventTime	uint64	UTCTimestamp		Date and time of instrument Activation or Expiration event sent as number of nanoseconds since Unix epoch

Repeating Group 2					
1141	NoMDFeedTypes	NuminGroup			Number of repeating entries.
1022	MDFeedType	MDFeedType	String		Describes a class of service for a given data feed. GBX=Real Book.
264	MarketDepth	Int8	int		Identifies the depth of book
Repeating Group 3					
870	NoInstAttrib	NuminGroup			Number of repeating entries.
871	InstAttribType	InstAttribType	int	24=Eligibility	Instrument Eligibility Attributes
872	InstAttribValue	InstAttribValue	MultipleCharValue		<p>Tag 871-InstAttribType and tag 872-InstAttribValue function together where tag 871 indicates the type of value that the following tag 872 will contain.</p> <p>Bitmap field of 32 Boolean type indicators:</p> <p>0 (least significant bit): Electronic Match Eligible</p> <p>1: Order Cross Eligible</p> <p>2: Block Trade Eligible</p> <p>3: EFP Eligible</p> <p>4: EBF Eligible</p> <p>5: EFS Eligible</p> <p>6: EFR Eligible</p> <p>7: OTC Eligible</p> <p>8: iLink Mass Quoting Eligible</p> <p>9: Negative Strike Eligible</p> <p>10: Negative Price Eligible</p> <p>11: Is Fractional (indicates product has fractional display price)</p> <p>12: Volatility Quoted Option</p> <p>13: RFQ Cross Eligible</p> <p>14: Zero Price Eligible</p> <p>15: Decaying Product Eligibility</p> <p>16: Variable Quantity Product Eligibility</p> <p>17: DailyProduct Eligibility</p> <p>18: GT Orders Eligibility (Previously Tag 827)</p> <p>19: Implied Matching Eligibility (Previously tag 1144) Note: EBS Market does not support implied functionality.</p> <p>20: Triangulation Eligibility</p> <p>21: Variable Cabinet Eligible</p> <p>22: Inverted Book</p> <p>23: All or None Instrument</p> <p>24: SEFRegulated (1=ON-SEF, 0=OFF-SEF)</p> <p>25: MTFRegulated (1=ON-MTF, 0=OFF-MTF)</p> <p>26: eFixInstrument (1=eFix Instrument)</p> <p>28-31 – Reserved for future use</p>
Repeating Group 4					
1234	NoLotTypeRules	NuminGroup			Number of repeating entries.
1093	LotType	Int8	int	2=minimum order entry quantity for an instrument 5=order quantity increment	This tag is required to interpret the value in tag 1231-MinLotSize

1231	MinLotSize	uint64	Qty		<p>If tag 1093-LotType=2, this value is minimum quantity accepted for order entry.</p> <p>For FX contracts, if tag 1093-LotType=2, this value is a Regular Amount used as default order quantity on the Workstation screen.</p> <p>If tag 1093-LotType=5, the 1231-MinLotSize is order quantity increment. For example, if 1093-LotType=2 & 1231-MinLotSize orders may be entered in increments of 2. Therefore, order sizes of 1, 3, 5, etc can be entered.</p>
Repeating Group 5					
386	NoTradingSessions	NuminGroup			Number of scheduled Trading Dates
75	TradeDate	LocalMktDate			Trade Date
64	SettlDate	LocalMktDate			Settle (Value) Date corresponding to Trade Date
541	MaturityDate	LocalMktDate			For Spot instruments will not contain the value. For NDFs, the valuation (fixing) date of the NDF. For Fixed Date NDFs Value Date and Maturity Date remain constant for all Trade Dates
455	SecurityAltID	String12			ISIN value as provided by ANNA, Association of National Numbering Agencies. This field is populated for MTF-Regulated NDFs and is unique for each Settle Date
456	SecurityAltIDSource	SecurityAltIDSourceISIN			Identifies class or source of the SecurityAltID (455) value

Market Data Security Status (tag 35-MsgType=f)

Market Data Security Status (tag 35-MsgType=f) is used to indicate market status updates.

Market Data Security Status

This Market Data Security Status message is used to indicate:

- Security group market state change
- Instrument state change
- Implied matching OFF/ ON state. **Note: EBS Market does not support implied functionality.**

This message maps to the SecurityStatus30 template in the SBE MDP Core Message schema.

Tag	FIX Name	Type	Semantic Type	Valid Values for EBS	Description
60	TransactTime	uint64	UTCTimesta mp		Start of event processing time in number of nanoseconds since Unix epoch.
1151	SecurityGroup	SecurityGroup	String		If this tag is present, 35=f message is sent for the Product Code.
6937	Asset	Asset	String		Product Code within Security Group specified
48	SecurityID	Int32NULL	int		A unique instrument ID value will not be reused until the next trade date following an instrument expiration or deletion. If this tag is present, 35=f message is sent for an instrument
75	TradeDate	LocalMktDate	LocalMktDate		Trade Session Date
5799	MatchEventI ndicator	MatchEventI ndicator	MultipleChar Value	<p>example: 10000000 - last message in the event</p> <p>example: 00000000 - not last message in the event</p>	<p>Bitmap field of eight Boolean type indicators reflecting the end of updates for a given CME Globex Event:</p> <p>Bit 0: (least significant bit) Last Trade Summary message for a given event</p> <p>Bit 1: Last electronic volume message for a given event</p> <p>Bit 2: Last customer order quote message for a given event</p> <p>Bit 3: Last statistic message for a given event</p> <p>Bit 4: Last implied quote message for a given event. Note: EBS Market does not support implied functionality.</p> <p>Bit 5: Message resent during recovery</p> <p>Bit 6: Reserved for future use</p> <p>Bit 7: (most significant bit) Last message for a given event</p>

326	SecurityTradingStatus	SecurityTradingStatus	int	2=Trading Halt 4=Close 17=Ready to trade (start of session) 18=Not available for trading 21=Pre Open	Identifies the trading status applicable to the instrument or Security Group
327	HaltReason	HaltReason	int	0=Group schedule (default) 1=Surveillance intervention 2=Market event 3=Instrument activation 4=Instrument expiration 5=Unknown 6=Recovery in Process 7=TradeDateRoll	Identifies the reason for the status change
1174	SecurityTradingEvent	SecurityTradingEvent	int	0=No Event (default) 1=No Cancel 4=Change of Trading Session (reset statistics)	Identifies an additional event or a rule related to the status

Market Data Heartbeat (tag 35-MsgType=0)

Heartbeat (tag 35-MsgType=0) message is sent on UDP Real-Time Feed and Recovery Feeds in periods of no activity at a configurable time interval and consists of only a standard technical header and a FIX message header. Currently, the configurable time interval is 30 seconds. This message maps to the AdminHeartbeat12 template in the SBE MDP Core Message schema.

Tag	FIX Name	FIX Type	Valid Values for EBS	Description
35	MsgType	Int	0=Heartbeat	FIX Message Type

CME Group Global TCP Recovery for UDP Message Specification

The following section outlines the logon messages is for TCP Recovery for UDP recovery in the [Global TCP Recovery](#) schema. Client systems implementing TCP Recovery on UDP for EBS market data should utilize this schema. Consult the [MDP Dissemination section](#) for more information.

SBE Message Header

Each message in the packet starts with a Binary message header that consists of the Binary Size and SBE header (Length, TemplateID, SchemaID, and Version). The SBE message header is sent by Customer to Exchange and Exchange to Customer.

Name	Type	Description
MsgSize	uInt16	Length of entire message, including binary header in number of bytes
Simple Binary Encoding Header		
BlockLength	uInt16	Length of the root of the FIX message contained before repeating groups or variable/conditions fields
TemplateID	uInt16	Template ID used to encode the message
SchemaID	uInt16	ID of the system publishing the message
Version	uInt16	Schema version

Market Data Logon (tag 35-MsgType=A)

Logon from Client System to MDP

The Market Data Logon (tag 35-MsgType=A) message is an ASCII message sent by the client system to MDP to initiate logon for TCP Recovery for UDP.

Required fields are:

Tag	FIX Name	Type	Semantic Type	Valid Values for EBS	Description
553	Username	String	String		User ID or username.
554	Password	String	String		Password or pass phrase.
10	Checksum	String	String		Always last tag in message. Functions as end-of-message delimiter.

Logon from MDP to Client System

The Market Data Logon (tag 35-MsgType=A) message is sent from MDP to the client system to confirm logon. This message is SBE encoded maps to the AdminLogin408 template in the Global TCP Recovery schema.

Tag	FIX Name	Type	Semantic Type	Valid Values for EBS	Description
108	HeartBtInt	Int	Int8		Heartbeat interval (seconds).

Market Data Logout (tag 35-MsgType=5)

The Market Data Logout message is sent from MDP to confirm logout. This message is SBE encoded. This message is SBE encoded maps to the AdminLogout409 template in the Global TCP Recovery schema.

Tag	FIX Name	Type	Semantic Type	Valid Values for EBS	Description
58	Text	String	String		Free format text string. May include logout confirmation or reason for the request reject and logout.

Market Data Replay Request (tag 35-MsgType=V)

The market data Replay Request (tag 35-MsgType=V) message is sent by the client system to request a range of messages for recovery. Required fields:

Tag	FIX Name	Type	Semantic Type	Valid Values for EBS	Description
1180	AppID	String			The channel ID from the XML Configuration file for which this request is made.
262	MDReqID	String			Unique identifier for Market Data Request.
1182	ApplBeginSeqNo	SeqNum			Message sequence number of the first message in range to be re-sent. If the request is for a single message, tag 1182-AppBeginSeqNo and tag 1183-AppEndSeqNo are the same.
1183	ApplEndSeqNo	SeqNum			Message sequence number of last message in range to be re-sent. The maximum number of messages that can be requested in a given request is 2000.
10	Checksum	String			Always last tag in message. Functions as end-of-message delimiter.

CME Group MDP TCP Session Management Specification

The CME Group MDP Session Message Specification provides the message layout for each FIX message type supported by the CME MDP Conflated TCP market data group in the TCP Session Management SBE Schema. Consult the MDP Dissemination section for more information.

Market Data Header

The following section outlines MDP headers for the Global TCP Recovery for UDP schema.

SBE Technical Header - Customer to Exchange, Exchange to Customer

For TCP MDP 3.0 stream, a standard technical header is included as preamble to all SBE messages. The SBE technical header is sent by Customer to Exchange and Exchange to Customer.

Name	Type	Description
encodingType	integral enumeration value '0xCAFE'	CME SBE version 1.0 little-endian - value 0xCAFE

MsgSeqNum	uint32	Template ID used to encode the message
SendingTime	uint64	ID of the system publishing the message

SBE Message Header - Customer to Exchange, Exchange to Customer

Each FIX SBE message will start with a Binary message header that consists of the Binary Size and SBE header (Length, TemplateID, SchemaID, and Version). The SBE message header is sent by Customer to Exchange and Exchange to Customer.

Name	Type	Description
MsgSize	uint16	Length of entire message, including binary header in number of bytes
Simple Binary Encoding Header		
BlockLength	uint16	Length of root of the message
TemplateID	uint16	Template ID used to encode the message
SchemaID	uint16	ID of the system publishing the message
Version	uint16	Schema version

MDP Session Management Messages - Client to Exchange

The following section outlines client messages sent to CME Globex for a CME MDP Conflated TCP market data group.

Negotiate Message

This message maps to the Negotiate200 template in the TCP Session Management SBE Schema.

Tag	FIX Name	Type	Semantic Type	Valid Values for EBS	Description
39003	HMACVersion	HMACVersion	String	CME-1-SHA-256	Constant value representing CME HMAC version
39005	HMACSignature	String32Req	String		Contains the HMAC signature.
39004	AccessKeyID	String20Req	String		Contains the AccessKeyID assigned to this session on this port.
39001	UUID	uint64	int		Session Identifier defined as type long (uint64); recommended to use timestamp as number of microseconds since epoch (Jan 1, 1970)
39002	RequestTimestamp	uint64	UTCTimestamp		Time of request (UTC) recommended to use timestamp as number of nanoseconds since epoch (Jan 1, 1970)
39006	Session	String5	String		Session ID
39007	Firm	String5	String		Firm ID

Market Data Request Message (tag 35-MessageType=V)

This message maps to the MarketDataRequest205 template in the TCP Session Management SBE Schema.

Tag	FIX Name	Type	Semantic Type	Valid Values for EBS	Description
262	MDReqID	uint32	int		Unique identifier for Market Data Request. Must be unique per session so it can be referenced in Request Ack or Request Reject responses from the exchange
263	SubscriptionReqType	SubscriptionReqType	int	0=Snapshot 1=Snapshot and updates 2=Disable previous subscription	Subscription Request Type indicates to the type of response expected
Repeating Group 1					

37022	NoSecurityGroups	NuminGroup		0	Not applicable to EBS markets.
1151	SecurityGroup	SecurityGroup	String		Security Group
Repeating Group 2					
146	NoRelatedSym	NuminGroup			Number of instruments requested. When NoSecurityGroups > 0 specified in the request, the NoRelatedSym should be equal 0
48	SecurityID	Int32	int		Security ID

Security List Request Message (tag 35-MessageType=x)

This message maps to the SecurityListRequest208 template in the TCP Session Management SBE Schema.

Tag	FIX Name	Type	Semantic Type	Valid Values for EBS	Description
262	MDReqID	uInt32	int		Unique identifier of the Request. Must be unique per session so it can be referenced in Request Acknowledgment or Request Reject responses from the exchange
263	SubscriptionReqType	SubscriptionReqType	int	0=Snapshot 1=Snapshot and updates 2=Disable previous subscription	Subscription Request Type indicates to the type of response expected
Repeating Group 1					
37022	NoSecurityGroups	NuminGroup		0	Not applicable to EBS markets.
1151	SecurityGroup	SecurityGroup	String		Security Group
Repeating Group 2					
146	NoRelatedSym	NuminGroup			Number of instruments requested. When NoSecurityGroups > 0 specified in the request, the NoRelatedSym should be equal 0
48	SecurityID	Int32	int		Security ID

Security Status Request Message (tag 35-MessageType=g)

This message maps to the SecurityStatusRequest209 template in the TCP Session Management SBE Schema.

Tag	FIX Name	Type	Semantic Type	Valid Values for EBS	Description
262	MDReqID	uInt32	int		Unique identifier of the Request. Must be unique per session so it can be referenced in Request Acknowledgment or Request Reject responses from the exchange
263	SubscriptionReqType	SubscriptionReqType	int	0=Snapshot 1=Snapshot and updates 2=Disable previous subscription	Subscription Request Type indicates to the type of response expected
Repeating Group 1					
37022	NoSecurityGroups	NuminGroup		0	Not applicable to EBS markets.
1151	SecurityGroup	SecurityGroup	String		Security Group
Repeating Group 2					
146	NoRelatedSym	NuminGroup			Number of instruments requested. When NoSecurityGroups > 0 specified in the request, the NoRelatedSym should be equal 0
48	SecurityID	Int32	int		Security ID

Subscriber Heartbeat (tag 35-MessageType=0)

This message maps to the SubscriberHeartbeat210 template in the TCP Session Management SBE Schema. The heartbeat time Interval is configured to 30 seconds.

Tag	FIX Name	Type	Semantic Type	Valid Values for EBS	Description
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MDP Session Management Messages - Exchange to Client

The following section outlines CME Globex messages sent to client systems for a CME MDP Conflated TCP market data group.

Negotiation Reject

This message maps to the NegotiationReject201 template in the TCP Session Management SBE Schema.

Tag	FIX Name	Type	Semantic Type	Valid Values for EBS	Description
39011	Reason	String48	String		Reject reason details
39001	UUID	uint64	int		Matches Negotiate.UUID
39002	RequestTimestamp	uint64	UTCTimestamp		Matches Negotiate.RequestTimestamp
39012	ErrorCodes	ErrorCodes	int	0=Failed authentication 1=Invalid value 2=Slow connection 3=Other	Error code for reject reason

Negotiation Response

This message maps to the NegotiationResponse202 template in the TCP Session Management SBE Schema.

Tag	FIX Name	Type	Semantic Type	Valid Values for EBS	Description
39001	UUID	uint64	int		Matches Negotiate.UUID
39002	RequestTimestamp	uint64	UTCTimestamp		Matches Negotiate.RequestTimestamp
39022	SecretKeySecureIDExpiration	uint16NULL	int		This indicates in how many days the HMAC secret key will expire

Request Acknowledgement (tag 35-MsgType=V)

This message maps to the RequestAck206 template in the TCP Session Management SBE Schema.

Tag	FIX Name	Type	Semantic Type	Valid Values for EBS	Description
262	MDReqID	uint32	int		Unique identifier for Market Data Request.
263	SubscriptionReqType	SubscriptionReqType	int	0=Snapshot 1=Snapshot and updates 2=Disable previous subscription	Subscription ReqType
37720	MDReqIDStatus	RequestIDStatus	int	0=Requested subscription scope is fully acknowledged 1=Requested subscription scope is partially acknowledged	Status of the request acknowledgement
Repeating Group 1					
37022	NoSecurityGroups	NuminGroup		0	Not applicable to EBS markets.
1151	SecurityGroup	SecurityGroup	String		Security Group
Repeating Group 2					
146	NoRelatedSym	NuminGroup			Number of securities acknowledged
48	SecurityID	Int32	int		Security ID

Request Reject (tag 35-MsgType=Y)

This message maps to the RequestReject207 template in the TCP Session Management SBE Schema.

Tag	FIX Name	Type	Semantic Type	Valid Values for EBS	Description
262	MDReqID	uint32NULL	int		Unique identifier for Market Data Request.
281	MDReqRejReason	MDReqRejReason	int	0=Unknown Security 1=Unknown or Invalid Message 2=Unsupported Scope 3=Other	Market Data Request Reject reason code
58	Text	String100	String		Reject reason details

MDP Session Management Message - Client to Exchange and Exchange to Client

Terminate

This message maps to the Terminate203 template in the TCP Session Management SBE Schema. Both client systems and the exchange use this message.

Tag	FIX Name	Type	Semantic Type	Valid Values for EBS	Description
39011	Reason	String48	String		Reject reason details
39001	UUID	uint64	int		Matches Negotiate.UUID used to establish the connection
39002	RequestTimestamp	uint64	UTCTimestamp		Time of request; recommended to use timestamp as number of nanoseconds since Unix epoch (Jan 1, 1970)
39012	ErrorCodes	ErrorCodes	int	0=Unknown Security 1=Unknown or Invalid Message 2=Unsupported Scope 3=Other	Error code for reject reason