



ALL EVENTS DATA

ABOUT

All Events data provides a record of every message the exchange sends out in the date or dates selected. This not only includes all Quotes and Trades but also any statistic about the session the exchange published. The data comes in a .CSV file and contains the following message types:

- Trade Summary – Details about the Trade
- Trade Match – Details about each order that was matched in the Trade
- Volume – Update on new volume for the session after the Trade
- Quote – Details about a quote within levels 1 – 10 on the bid or ask
- MBO – Details about a quote at any level on the bid or ask
- Limit Daily – Details about what the limit price for the session
- Daily Statistics – Details about Settlements, Open Interest, Fixing Price, and Cleared Volume
- Session Statistics – Details about Opening Price, High Bid or Low Ask, and Session High or Low
- Security Status – Indicates when the trading status has changed in the market i.e. Open, Halt etc..

For every Trade the order of messages is as follows: A Trade Summary message detailing the trade, then Trade Match messages for each order that was matched. The first Trade Match message is the aggressive order that the Trade Summary message detailed. All Trade Match messages that follow are the orders that the Trade was matched to. The last message is the Volume Message that gives the new volume for the day. This order happens for every trade of the session.

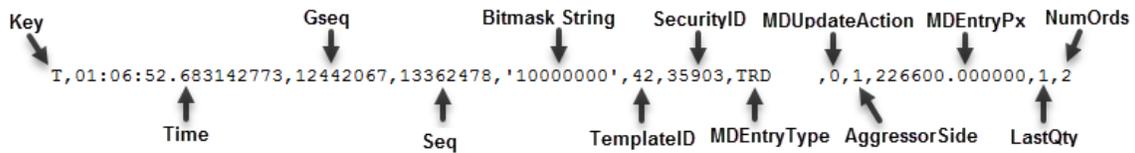
Quotes within the first ten levels of book will have both a Quote message and an MBO message, with the Quote message coming first. Quotes at level 11 or higher will have an MBO message (only).

Below is a breakdown of the fields found in each of the four messages:



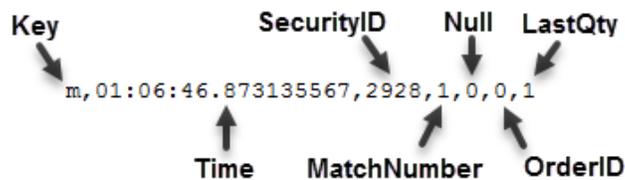
Message Breakdown

TRADE SUMMARY



- Key: Message type
- Time: Time in CST with nanosecond precision
- Gseq: Packet level sequence number per channel
- Seq: Instrument level sequence number (reset weekly to 1 on Sunday)
- Bitmask String: Used to determine if this is the last event for a given message. For more information please refer to the CME MDP 3.0 documentation [HERE](#).
- TemplateID: Identifies message type
- SecurityID: Unique instrument ID
- MDEntryType: Type of event that occurred in this message
- MDUpdateAction: Event action: 0=New, 1=Change, 2=Delete, 3=Delete Thru and 4=Delete From
- AggressorSide: The side of the aggressor: 1=Buy, 2=Sell and 0=Implied
- MDEntryPx: Price at which the event occurred
- LastQty: Quantity matched for this order
- NumOrds: Identifies the total number of non-implied orders per instrument that participated in this match event

TRADE MATCH

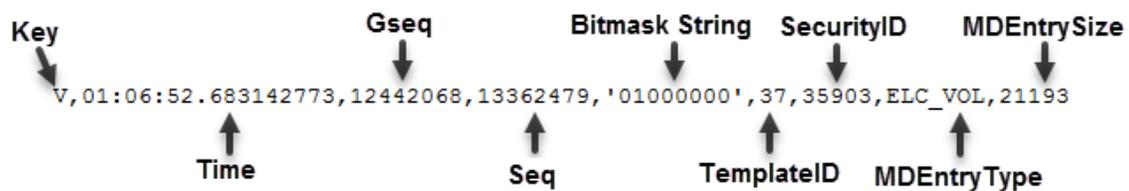


- Key: Message type
- Time: Time in CST with nanosecond precision



SecurityID: Unique instrument ID
MatchNumber: The order of this match
Null: Deprecated to be removed in a future version
OrderID: The Order ID only available when trader ops in
LastQty: The amount filled in this match

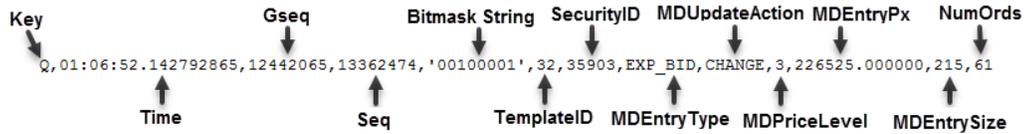
VOLUME



Key: Message type
Time: Time in CST with nanosecond precision
Gseq: Packet level sequence number per channel
Seq: Instrument level sequence number (reset weekly to 1 on Sunday)
Bitmask String: Used to determine if this is the last event for a given message. For more information please refer to the CME MDP 3.0 documentation [HERE](#).
TemplateID: Identifies message type
SecurityID: Unique instrument ID
MEntryType: Type of event that occurred in this message
MEntrySize: Represents cumulative traded volume of the Daily Trade session

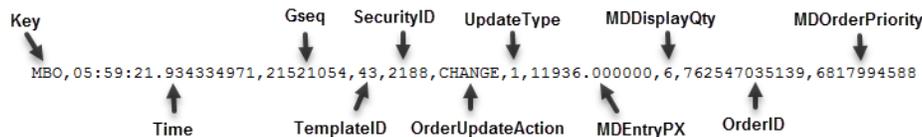


QUOTE



- Key: Message type
- Time: Time in CST with nanosecond precision
- Gseq: Packet level sequence number per channel
- Seq: Instrument level sequence number (reset weekly to 1 on Sunday)
- Bitmask String: Used to determine if this is the last event for a given message. For more information please refer to the CME MDP 3.0 documentation [HERE](#).
- TemplateID: Identifies message type
- SecurityID: Unique instrument ID
- MEntryType: Is it a Bid or an Offer. EOE (end-of-Event) appears when more than one book update comes on the same message and is used to announce the end of book updates for the message.
- MUpdateAction: What occurred in the book. It can be New, Delete or Change
- MPriceLevel: The number of price levels away from the market at which the event occurred
- MEntryPx: Price at which the event occurred
- MEntrySize: Total quantity at this book level
- NumOrds: Number of orders at this book level

MARKET-BY-ORDER (“MBO”)



- Key: Message type
- Time: Time, in nanoseconds, that the message occurred
- Gseq: Global sequence number for the message
- TemplateID: Identifies what data is in this message
- SecurityID: Unique instrument ID



OrderUpdateAction: What occurred in the book. It can be overlay, new, delete, or change

UpdateType: Side of the book. 0 = Bid And 1 = Offer

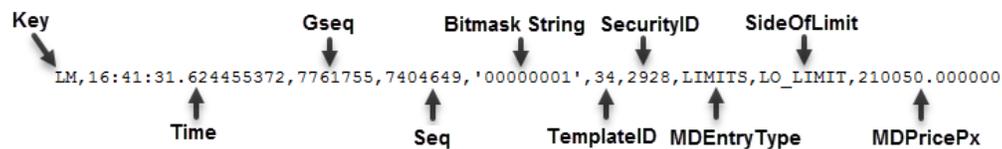
MDEntryPx: Price level where this occurred

MDDisplayQty: Visible quantity of an order to the market

OrderID: Identification number of the order

MDOOrderPriority: Order priority for execution on the order book. A lower value is a higher priority.

LIMITS DAILY



Key: Message type

Time: Time, in nanoseconds, that the message occurred

Gseq: Global sequence number for the message

Seq: Entry sequence number per instrument update. Reset weekly.

Bitmask String: Used to determine if this is the last message for a given event. For more information please refer to the CME MDP 3.0 documentation [HERE](#).

TemplateID: Identifies what data is in this message

SecurityID: Unique instrument ID

MDEntryType: Type of event that occurred in this message

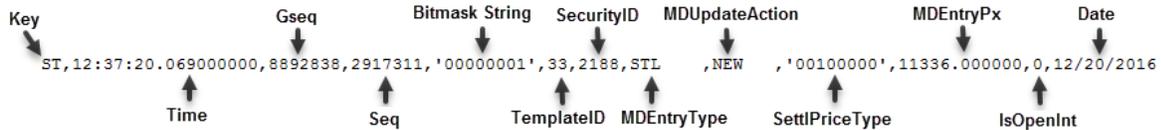
SideOfLimit: Side of the limit. Can be high or low

MDEntryPx: Price level of the limit



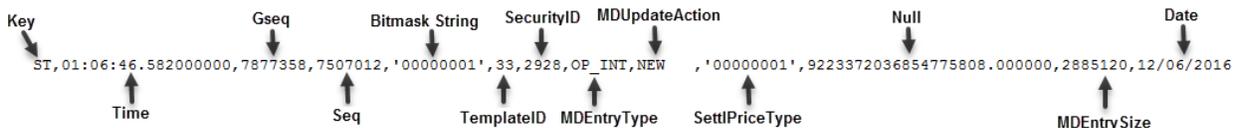
DAILY STATISTICS

SETTLEMENT



- Key: Message type
- Time: Time in CST with nanosecond precision
- Gseq: Packet level sequence number per channel
- Seq: Instrument level sequence number (reset weekly to 1 on Sunday)
- Bitmask String: Used to determine if this is the last event for a given message. For more information please refer to the CME MDP 3.0 documentation [HERE](#).
- TemplateID: Identifies message type
- SecurityID: Unique instrument ID
- MDEntryType: The type of message
- MDUpdateAction: Event action: 0=New, 1=Change, 2=Delete, 3=Delete Thru and 4=Delete From
- SettlePriceType: Which type of settle price. See the CME website for further [details](#).
- MDEntryPx: Price of the product Settlement
- IsOpenInt: 0 for a settle message and filled for an OI message
- Date: Date of trade session corresponding to the statistic entry

OPEN INTEREST



- Key: Message type
- Time: Time in CST with nanosecond precision
- Gseq: Packet level sequence number per channel
- Seq: Instrument level sequence number (reset weekly to 1 on Sunday)



Bitmask String: Used to determine if this is the last event for a given message. For more information please refer to the CME MDP 3.0 documentation [HERE](#).

TemplateID: Identifies message type

SecurityID: Unique instrument ID

MDEntryType: The type of message

MUpdateAction: Event action: 0=New, 1=Change, 2=Delete, 3=Delete Thru and 4=Delete From

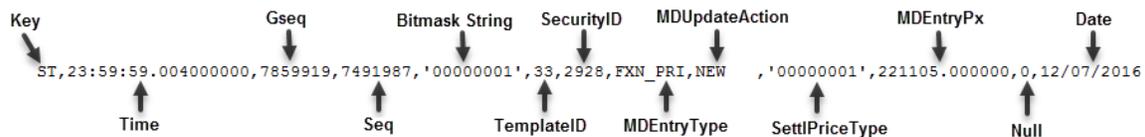
SettlePriceType: Ignore, only for Settle message

Null: Deprecated to be removed in a future version

MDEntrySize: The total Open Interest

Date: Date of trade session corresponding to the statistic entry

FIXING PRICE



Key: Message type

Time: Time in CST with nanosecond precision

Gseq: Packet level sequence number per channel

Seq: Instrument level sequence number (reset weekly to 1 on Sunday)

Bitmask String: Used to determine if this is the last event for a given message. For more information please refer to the CME MDP 3.0 documentation [HERE](#).

TemplateID: Identifies message type

SecurityID: Unique instrument ID

MDEntryType: The type of message

MUpdateAction: Event action: 0=New, 1=Change, 2=Delete, 3=Delete Thru and 4=Delete From

SettlePriceType: Ignore, only for Settle messages

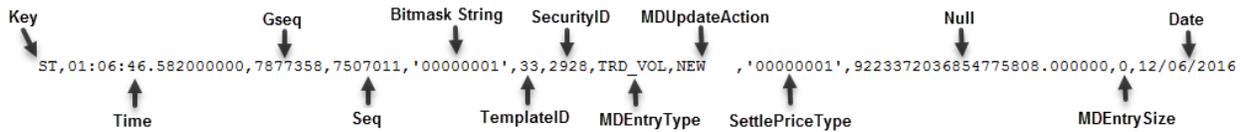
MDEntryPx: Price at which the event occurred

Null: Deprecated to be removed in a future version

Date: Date of trade session corresponding to the statistic entry



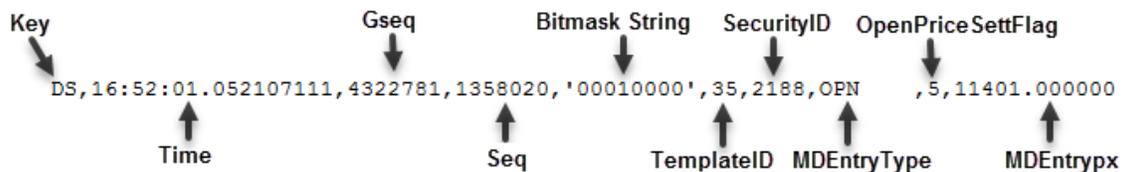
CLEARED VOLUME



- Key: Message type
- Time: Time in CST with nanosecond precision
- Gseq: Packet level sequence number per channel
- Seq: Instrument level sequence number (reset weekly to 1 on Sunday)
- Bitmask String: Used to determine if this is the last event for a given message. For more information please refer to the CME MDP 3.0 documentation [HERE](#).
- TemplateID: Identifies message type
- SecurityID: Unique instrument ID
- MEntryType: The type of message
- MDUpdateAction: Event action: 0=New, 1=Change, 2=Delete, 3=Delete Thru and 4=Delete From
- SettlePriceType: Ignore, only for Settle messages
- Null: Deprecated to be removed in a future version
- MEntrySize: The total volume
- Date: Date of trade session corresponding to the statistic entry

SESSION STATISTICS

OPENING PRICE



- Key: Message type
- Time: Time in CST with nanosecond precision
- Gseq: Packet level sequence number per channel
- Seq: Instrument level sequence number (reset weekly to 1 on Sunday)



Bitmask String: Used to determine if this is the last event for a given message. For more information please refer to the CME MDP 3.0 documentation [HERE](#).

TemplateID: Identifies message type

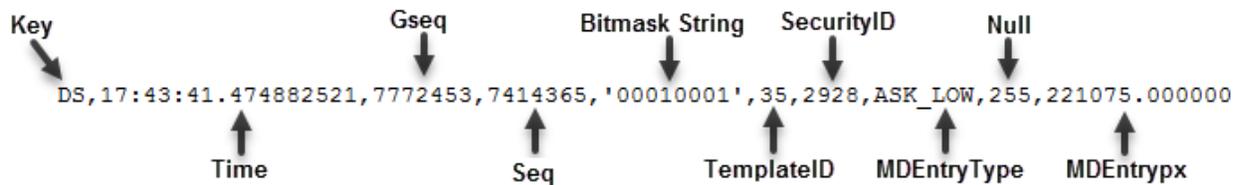
SecurityID: Unique instrument ID

MDEntryType: Which daily statistic is in this message

OpenPriceSettFlag: The opening price. 0=Daily Open Price, 5=Indicative Opening

MDEntryPx: Price at which the event occurred

HIGH BID OR LOW ASK



Key: Message type

Time: Time in CST with nanosecond precision

Gseq: Packet level sequence number per channel

Seq: Instrument level sequence number (reset weekly to 1 on Sunday)

Bitmask String: Used to determine if this is the last event for a given message. For more information please refer to the CME MDP 3.0 documentation [HERE](#).

TemplateID: Identifies message type

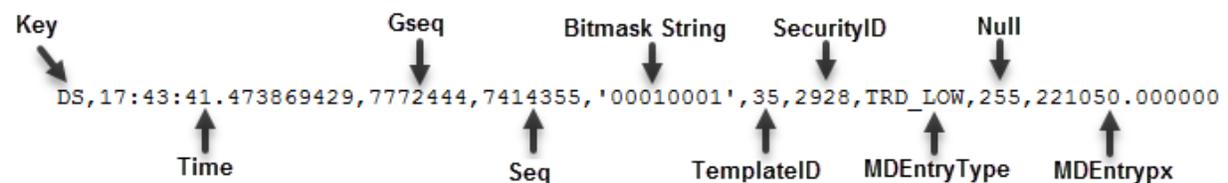
SecurityID: Unique instrument ID

MDEntryType: Which daily statistic is in this message

Null: Deprecated to be removed in a future version

MDEntryPx: Price at which the event occurred

SESSION HIGH OR LOW

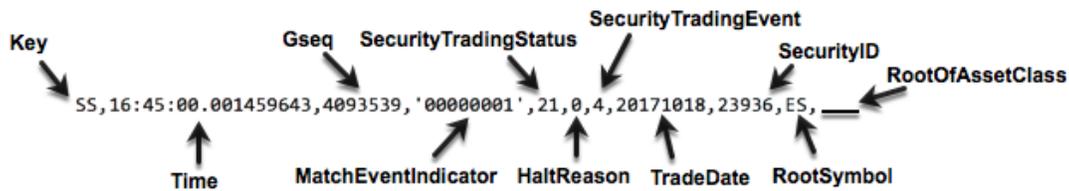


Key: Message type



Time: Time in CST with nanosecond precision
 Gseq: Packet level sequence number per channel
 Seq: Instrument level sequence number (reset weekly to 1 on Sunday)
 Bitmask String: Used to determine if this is the last event for a given message. For more information please refer to the CME MDP 3.0 documentation [HERE](#).
 TemplateID: Identifies message type
 SecurityID: Unique instrument ID
 MDEntryType: Which daily statistic is in this message
 Null: Deprecated to be removed in a future version
 MDEntryPx: Price at which the event occurred

SECURITY STATUS



Key: Message type
 Time: Time in CST with nanosecond precision
 Gseq: Packet level sequence number per channel
 MatchEventIndicator: Used to determine if this is the last event for a given message. For more information please refer to the CME MDP 3.0 documentation [HERE](#)
 SecurityTradingStatus: Identifies the trading status applicable to the instrument or instrument group.

- 2 = Trading Halt
- 4 = Close
- 15 = New Price Indication
- 17 = Ready to trade (Start of Session)
- 18 = Not available for trading
- 20 = Unknown or Invalid
- 21 = Pre-Open



- 24 = Pre-Cross
 - 25 = Cross
 - 26 = Post Cross
 - 103 = No Change
- HaltReason: Identifies the reason for the status change
- 0 = Group schedule
 - 1 = Surveillance intervention
 - 2 = Market event
 - 3 = Instrument activation
 - 4 = Instrument expiration
 - 5 = Unknown
 - 6 = Recovery in Process
- SecurityTradingEvent: Identifies an additional event or a rule related to the SecurityTradingStatus
- 0 = No Event (default)
 - 1 = No Cancel
 - 4 = Change of trading session (reset statistics)
 - 5 = Implied matching ON
 - 6 = Implied matching OFF
- TradeDate: Indicates the date of the trade session.
- SecurityID: Unique instrument ID
- RootSymbol: Root symbol of the product
- RootOfAssetClass: Root symbol of the asset. EX: If pulling an option this will have the root of the option (can be blank as shown above)