Overview

Session Identification

FIX connections are established based on SenderCompID and TargetCompID only.

	SenderCompID	TargetCompID
A sends directly to B	A	B
B sends directly to A	B	A

Security Identification

In the order entry messages, the only required field to uniquely identify a security is Symbol (55). Which the readable form of MarketData Instrument Definition feed SecurityID.

Client Identification

Client Identification should be sent in the Account (1) field. The account field can be the Clear User Id or one of the accounts informed in the UserResponse message (which is sent after the logon when the session was previously configured to do so).

High Frequency

The Clear OMS has limit of orders sent per sec. It's configurable per account and defined by the trading desk.

Target Strategies

A client must specify in which strategy the NewOrderSingle should be allocated. At this moment, only the SwingTrade and DayTrade strategies are available on the api.

You can choose between following approaches:

Target Strategy Tag

This is the simplest one: you can choose the target strategy by specifying the tag 847 (TargetStrategy) = 1001 (SwingTrade) or 1002 (DayTrade).

Prefixed Account identifiers

In this mode, the strategy is identified based on the account tag value prefix. The oms will match the tag value. Ex:
- If it starts with "DT-", the oms will assume that the desired strategy is DayTrade
- If it starts with "ST-", the oms will assume that the desired strategy is SwingTrade

The possible values are sent after a session logon, in a form of an User Response message. The client side must inform the Clear User Id in the Logon's Username tag.

This option should be informed to the Clear IT department before the FIX session setup.

Position and Intraday Orders reporting

The clear oms can send a snapshot of the current user assets and the intraday orders. The messages (Position Reports and Execution Reports) will be sent after a successful login.

This option should be informed to the Clear IT department before the FIX session setup.

Fix Specification

Version

This spec is based on the 4.4 version of the Financial Information eXchange ("FIX") Protocol.

Changes to the official FIX specification

Despite of the effort to make it adherent to the FIX.4.4 specification as possible, in some scenarios it is necessary to extend and slightly alter the standard specification. The changes are specified on the message and fields descriptions.

We don't validate the presence (or the absence) of the fields not listed in this document. Also, we won't echo fields sent by the client.

Standard Message Header (SMH)

Tag	Tag name	Req'd	Data Type	Comment
8	BeginString	Y	String (7)	"FIX.4.4".
9	BodyLength	Y	Length (6)	(Always unencrypted, must be second field in message)
35	MsgType	Y	String (4)	(Always unencrypted, must be third field in message) Valid values: 0 - Heartbeat 1 - Test Request 2 - Resend Request 3 - Reject 4 - Sequence Reset 5 - Logout 8 - Execution Report 9 - Order Cancel Reject A - Logon D - New Order Single F - Order Cancel Request G - Order Cancel Replace Request
49	SenderCompID	Y	String (50)	Please contact Clear IT deparment for appropriate CompID assignment.
56	TargetCompID	Y	String (50)	Please contact Clear IT deparment for appropriate CompID assignment.
34	MsgSeqNum	Y	Seqnum (9)	Integer message sequence number.
43	PossDupFlag	N	Boolean (1)	Indicates possible retransmission of message with this sequence number.
97	PossResend	N	Boolean (1)	Indicates that message may contain information that has been sent under another sequence number.

52	SendingTime	Y	UTCTimestamp (21)	Expressed in UTC (Universal Time Coordinated)

Standard Message Trailer (SMT)

Tag	Tag name	Req'd	Data Type	Comment
10	CheckSum	Y	String (3)	Always unencrypted, always last field in message

Session Level Messages

Heartbeat (35=0)

Tag	Tag name	Req'd	Data Type	Comment
SMH				
112	TestReqID	N	String	Required when the heartbeat is the result of a Test Request message.
SMT				

TestRequest (35=1)

Tag	Tag name	Req'd	Data Type	Comment
SMH				
112	TestReqID	Y	String	Identifier included in Test Request message to be returned in resulting Heartbeat
SMT				

ResendRequest (35=2)

Tag	Tag name	Req'd	Data Type	Comment
SMH				
7	BeginSeqNo	Y	Seqnum (9)	Message sequence number of first message in range to be resent
16	EndSeqNo	Y	Seqnum (9)	Message sequence number of last message in range to be resent. If request is for a single message BeginSeqNo = EndSeqNo. If request is for all messages subsequent to a particular message, EndSeqNo = 0 (representing=infinity).
SMT				

Reject (35=3)

Tag	Tag name	Req'd	Data Type	Comment
SMH				
45	RefSeqNum	Y	Seqnum (9)	MsgSeqNum of rejected message.
371	RefTagID	N	Int	The tag number of the FIX field being referenced.
372	RefMsgType	N	String (2)	The MsgType of the FIX message being referenced.
373	SessionRejectReason	N	Int (6)	Code to identify reason for a session-level Reject message. Valid values: 0 - Invalid Tag Number 1 - Required Tag Missing 2 - Tag Not Defined For This Message Type 3 - Undefined Tag 4 - Tag Specified Without A Value 5 - Value Is Incorrect 6 - Incorrect Data Format For Value 9 - Compid Problem 10 - Sendingtime Accuracy Problem 11 - Invalid Msgtype 13 - Tag Appears More Than Once 14 - Tag Specified Out Of Required Order 15 - Repeating Group Fields Out Of Order 16 - Incorrect Numingroup Count For Repeating Group 17 - Non Data Value Includes Field Delimiter 99 - Other
58	Text	N	String (250)	Where possible, message to explain reason for rejection.
SMT				

SequenceReset (35=4)

Tag	Tag name	Req'd	Data Type	Comment
SMH				
123	GapFillFlag	N	Boolean (1)	Indicates that the Sequence Reset message is replacing administrative or application messages which will not be resent.
36	NewSeqNo	Y	Seqnum (9)	New sequence number.

35033	PossMissingApplMsg	N	Boolean (1)	Indicates that the range of messages retransmitted after a Resend Request may not include all the application messages contained in the original range requested.
SMT				

Logout (35=5)

Tag	Tag name	Req'd	Data Type	Comment
SMH				
58	Text	N	String (250)	Explanation for Logout reason (if any).
SMT				

Logon (35=A)

Tag	Tag name	Req'd	Data Type	Comment
SMH				
98	EncryptMethod	Y	Int (1)	Must be “0”
108	HeartBtInt	Y	Int	Recommended: “30”
141	ResetSeqNumFlag	N	Boolean (1)	Indicates that the both sides of the FIX session should reset sequence numbers.
464	TestMessageIndicator	N	Boolean (1)	Sent only by BM&FBOVESPA
553	Username	N	String(10)	The Clear User Id
SMT				

Application Level Messages

BusinessMessageReject (35=j)

Tag	Tag name	Req’d	Data Type	Comment
SMH				
45	RefSeqNum	N	Seqnum (9)	MsgSeqNum of rejected message.
372	RefMsgType	Y	String (2)	The MsgType of the FIX message being referenced.
380	BusinessRejectReason	Y	Int (6)	Code to identify the reason of the rejection. Please refer to the error codes document for domain information.
58	Text	N	String (250)	Message to explain reason for rejection, if available.
SMT				

NewOrderSingle (35=D)

Tag	Tag name	Req'd	Data Type	Comment
SMH				
11	ClOrdID	Y	String (38)	Unique identifier of the order as assigned by the market participant.
1	Account	N	Int (10)	Account mnemonic.
55	Symbol	Y	String (20)	BM&FBOVESPA human readable form of the SecurityID tag. Ex: PETR4
54	Side	Y	Char (1)	Side of order. Valid values: 1 - Buy 2 - Sell
60	TransactTime	Y	UTCTimestamp (21)	Time of execution/order creation; expressed in UTC.
38	OrderQty	Y	Qty (15)	Quantity ordered.
40	OrdType	Y	Char (1)	Order type. Valid values: 1 - Market 2 - Limit 3 - Stop X - OCO (One Cancels the Other)
44	Price	N	Price (20)	Price per share or contract. Conditionally required if the order type is Limit. If the tag isn't present, the order will be sent as a Market or StopMarket order.
99	StopPx	N	Price (20)	The stop loss price of a stop order or and OCO order. (Conditionally required if OrdType = '3' or 'X').
6001	GainPrice	N	Price (20)	The stop gain price of an OCO order. (Conditionally required if OrdType = 'X').
847	TargetStrategy	N	Int(4)	Specifies the module which the order should be inserted: 1001 – SwingTrade 1002 – DayTrade
59	TimeInForce	N	Char (1)	Specifies how long the order remains in effect. Absence of this field is interpreted as DAY. Valid values: 1 - Day 6 - Good Till Date
432	ExpireDate	N	LocalMktDate (8)	Required only if TimeInForce (Tag 59) = Good Till Date (GTD). Only expiration date can be set. Orders expire at the end of the trading session.

SMT				

ExecutionReport (35=8)

Tag	Tag name	Req'd	Data Type	Comment
SMH				
37	OrderID	Y	String (36)	Unique identifier for Order as assigned by the exchange. Uniqueness is guaranteed within a single trading day/instrument.
11	ClOrdID	N	String (38)	Unique identifier of the order as assigned by the market participant.
41	OrigClOrdID	N	String (38)	Contains the ClOrdID of the replacement order. Conditionally required when ExecType = 5 (Replace).
382	NoContraBrokers	N	NumInGroup (1)	Number of contra brokers in an execution. Currently, this field will be always set to 1. Conditionally required when reporting trades.
> 375	ContraBroker	N	String (50)	Identifies contra broker.
17	ExecID	Y	String (36)	Unique identifier of execution message as assigned by the exchange – unique per instrument.
19	ExecRefID	N	String (36)	Optionally sent when reporting a trade bust. Contains the identifier of the busted trade.
150	ExecType	Y	Char (1)	Describes the action that triggered this specific Execution Report - see the OrdStatus (39) tag for the current order status (e.g, Partially Filled). Valid Values: A - Pending New 0 - New 4 - Canceled 5 - Replace 8 - Rejected 9 - Suspended C - Expired D - Restated F - Trade H - Trade Cancel I - Order Status
39	OrdStatus	Y	Char (1)	Order status. Valid values: A - Pending New 1 - New 2 - Partially Filled 3 - Filled

				4 - Canceled 5 - Replaced 8 - Rejected 9 - Suspended C - Expired
636	WorkingIndicator	N	Boolean (1)	Indicates if an order has been triggered and is available for trading. Used with Stop (Limit, with protection) orders and the At the Close validity.
103	OrdRejReason	N	Int (6)	Code to identify reason for order rejection. For optional use with ExecType = 8.
1	Account	N	String (10)	Account mnemonic.
55	Symbol	Y	String (20)	BM&FBOVESPA human readable form of the SecurityID tag. Ex: PETR4.
54	Side	Y	Char (1)	Side of order. Valid values: 1 - Buy 2 - Sell
38	OrderQty	Y	Qty (15)	Quantity ordered.
40	OrdType	N	Char (1)	Conditionally required when ExecType != 8 (Reject) or ExecType != H (Trade bust). Valid values: 1 - Market 2 - Limit 3 - Stop X - OCO (One Cancels the Other)
44	Price	N	Price (20)	Price per share or contract. Required if specified on the order.
99	StopPx	N	Price (20)	The stop price of a stop order (Conditionally required if OrdType = 3).
59	TimeInForce	N	Char (1)	Specifies how long the order remains in effect. Absence of this field is interpreted as Day. Valid values: 1 - Day 6 - Good Till Date 7 - At The Close
432	ExpireDate	N	LocalMktDate (8)	Required only if TimeInForce (Tag 59) = Good Till Date (GTD). Only expiration date can be set. Orders expire at the end of the trading session.
32	LastQty	N	Qty (9)	Quantity of shares bought/sold on this (last) fill. Conditionally required when ExecType = F (Trade).

31	LastPx	N	Price (20)	Price of this (last) fill.
151	LeavesQty	Y	Qty (9)	Amount of shares open for further execution, or unexecuted. LeavesQty = OrderQty - CumQty.
14	CumQty	Y	Qty (9)	Total number of shares or contracts filled.
6	AvgPx	Y	Price (1)	Order Average Price.
75	TradeDate	N	LocalMktDate (8)	Indicates date of trade referenced in this message in YYYYMMDD format (expressed in local time at place of trade). Absence of this field indicates current day (expressed in local time at place of trade).
60	TransactTime	N	UTCTimestamp (21)	Time of execution/order creation; expressed in UTC.
58	Text	N	String (250)	Free fomat text string.
378	ExecRestatementReason	N	Int (2)	Reason of restatement. Condionally required when ExecType = D
911	TotNumReports	N	Int (4)	Total number of execution reports. Only on post logon report.
SMT				

OrderCancelReplaceRequest (35=G)

Tag	Tag name	Req'd	Data Type	Comment
SMH				
41	OrigClOrdID	Y	String (38)	ClOrdID which should be replaced.
11	ClOrdID	Y	String (38)	Unique ID of cancel replace request as assigned by the institution.
1	Account	Y	String (10)	Account mnemonic.
55	Symbol	Y	String (20)	BM&FBOVESPA human readable form of the SecurityID tag. Ex: PETR4.
54	Side	Y	Char (1)	Side of order. Valid values: 1 - Buy 2 - Sell
60	TransactTime	Y	UTCTimestamp (21)	Time of execution/order creation; expressed in UTC.
38	OrderQty	Y	Qty (15)	Quantity ordered.
40	OrdType	Y	Char (1)	Order type. Valid values: 1 - Market 2 - Limit 3 - Stop X - OCO (One Cancels the Other)

44	Price	N	Price (20)	Price per share or contract. Conditionally required if the order type requires a price (not market orders).
99	StopPx	N	Price (20)	The stop price of a stop order (Conditionally required if OrdType = 3).
59	TimeInForce	N	Char (1)	Specifies how long the order remains in effect. Absence of this field is interpreted as Day. Valid values: 1 - Day 6 - Good Till Date
432	ExpireDate	N	LocalMktDate (8)	Required only if TimeInForce (Tag 59) = Good Till Date (GTD). Only expiration date can be set. Orders expire at the end of the trading session.
SMT				

OrderCancelRequest (35=F)

Tag	Tag name	Req'd	Data Type	Comment
SMH				
41	OrigClOrdID	Y	String (38)	ClOrdID of the order that the client is trying to cancel.
11	ClOrdID	Y	String (38)	Unique order id assigned by institution to the cancel request.
1	Account	Y	String (10)	Account mnemonic.
55	Symbol	Y	String (20)	BM&FBOVESPA human readable form of the SecurityID tag. Ex: PETR4
54	Side	Y	Char (1)	Side of order. Valid values: 1 - Buy 2 - Sell
60	TransactTime	Y	UTCTimestamp (21)	Time of execution/order creation; expressed in UTC.
38	OrderQty	N	Qty (15)	Quantity ordered.
SMT				

OrderCancelReject (35=9)

Tag	Tag name	Req'd	Data Type	Comment
SMH				
37	OrderID	Y	String (26)	If CxlRejReason=”Unknown order”, value is: “NONE”. Otherwise, unique identifier for Order.
11	ClOrdID	Y	String (38)	Unique identifier of the order as assigned

				by the market participant.
41	OrigClOrdID	Y	String (38)	ClOrdID of the order that could not be canceled.
39	OrdStatus	Y	Char (1)	OrdStatus value after this cancel reject is applied. If CxlRejReason = “Unknown Order”, this field’s value is Order status. Valid values: A - Pending New 1 - New 2 - Partially Filled 3 - Filled 4 - Canceled 5 - Replaced 8 - Rejected 9 - Suspended C - Expired
1	Account	N	String (10)	Account mnemonic.
434	CxlRejResponseTo	Y	Char (1)	Identifies the type of request that this Cancel Reject is in response to. Valid values: 1 - Order Cancel Request 2 - Order Cancel Replace Request
102	CxlRejReason	N	Int (6)	Code to identify reason for cancel rejection. Please refer to the error codes document for domain information.
55	Symbol	Y	String (20)	BM&FBOVESPA human readable form of the SecurityID tag. Ex: PETR4
54	Side	N	Char (1)	Side of order. Valid values: 1 - Buy 2 - Sell
58	Text	Y	String (250)	Free format text string. Contains a description of the error.
SMT				

PositionReport (35=AP)

Tag	Tag name	Req'd	Data Type	Comment
SMH				
721	PosMainRptId	Y	String (26)	Unique identifier for this Position Report (AP).
728	PosReqResult	Y	String (38)	Result of the Report. Constant = 0.
715	ClearingBusinessDate	Y	Int (1)	The date covered by this report.
581	AccountType	Y	Int (1)	The type of the Account. Always = 1
1	Account	N	String (10)	Account mnemonic.
730	SettlPrice	Y	Price (20)	VWAP of the position.
731	SettlPriceType	N	Price (1)	Type of the Price. Always = 2.

734	PriorSettlPrice	Y	String (20)	Reserved.
55	Symbol	Y	String (20)	BM&FBOVESPA human readable form of the SecurityID tag. Ex: PETR4
727	TotalNumPosReports	N	Int (4)	Total number of position reports that will be sent.
702	NoPositions	Y	Int (1)	Number of entries.
> 703	PosType	Y	String (3)	Type of the position. Always = “ETR”
> 706	PosQtyStatus	Y	Int (1)	Status of the position. Always = 1
> 704	LongQty	Y	Qty (15)	Current Long position. Zero if the position is Short.
> 705	ShortQty	Y	Qty (15)	Current Short position. Zero if the position is Long.
SMT				

UserResponse (35=BF)

Tag	Tag name	Req'd	Data Type	Comment
SMH				
923	UserRequestID	Y	String (38)	Constant. = “1” .
553	Username	Y	String (38)	The Clear User Id.
1	UserStatus	Y	Int (10)	Constant = “6”.
927	UserStatusText	Y	String (20)	Contains the prefixed codes list (comma separated), specifying the DayTrade and SwingTrade targeted Account codes. Ex: DT-130,ST-130
SMT				