

Currenex_NOW FIX Specification

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1 Introduction

1.1 Purpose

This document describes the FIX messages used to deliver Currenex_NOW market data.

2 Product Overview

The Currenex_NOW service provides real-time access to FOREX spot market data. It comprises four (4) distinct market data feeds:

- **NOW_Depth of Book:**
- **NOW_Weighted Average Mid-Rate (WAMR) with Confidence Factor:**
- **NOW_Paid/Given with Size Indicator:**
- **NOW_Mid Activity Indicator:**

A user can choose to subscribe to all or a subset of the above.

2.1 NOW_Depth of Book

Currenex NOW_Depth of Book is a real-time feed of foreign exchange (FOREX) spot bid and offer quotes with cumulative amounts and depth. The first x price levels and amounts within y pips of the top of the book (TOB) are delivered. Up to twenty (20) levels of price depth are supported.

By default, x = 20 and y = +/- 5 for major market currency pairs and x = 5 and y = +/- 100 for emerging market pairs.

2.2 NOW_Weighted Average Mid-Rate (WAMR) with Confidence Factor

Delivers the calculated Weighted Average Mid-Rate (WAMR) with bid and offer quotes banded into confidence quartiles: 75, 50 and 25.

2.3 NOW_Paid/Given with Size Indicator

A Paid/Given feed containing the price, aggressor status, banded amount and the transaction time of the most recent trade done against Currenex_NOW liquidity. Three (3) amount bands are supported:

- less (<) 500K
- between (<=) 500K – 2M
- greater than (>) 2M

2.4 NOW_Mid Activity Indicator

A feed that indicates if Currenex Mid deal has completed in the previous fifteen (15) or forty-five (45) seconds or previous to the most recent (45) seconds. i.e. a t20 event has occurred.

The indicator is published every thirty (30) seconds relative to the start of the minute.

3 FIX Service

Access to Currenex_NOW data is supported via the Financial Information eXchange (FIX) protocol.

Currenex_NOW supports FIX 4.4 version messaging, only.

3.1 Availability

The FIX service is available from 5 pm ET Sunday to 5 pm ET Fridays.

3.2 FIX Sequence Numbering

3.2.1 Message Persistence

Currenex_NOW FIX messages are not persisted. The initial inbound and outbound sequence numbers on any Logon message should always be one (1) and or have `ResetSeqNumFlag (141)` set to 'Y.'

3.2.2 Weekly Sequence Number Reset

Currenex resets its FIX Market Data Service sequence numbers to one (1) weekly when the service is offline, Friday 17:00:00 EST/EDT until Sunday 17:00:00 EST/EDT.

Once the service is back on line, a client must also have its inbound and outbound sequence numbers reset to one (1).

4 Message and Workflow Details

The standard Currenex FIX message header, trailer, heartbeat, logon, and logout message apply for the Currenex_NOW service. For completeness, these messages are repeated in the following section. All messaging is FIX 4.4.

The values under the “Required” column indicate one of the following:

‘Y’ – Field is mandatory and will or must be present on the message.

‘N’ – Non-required field that should be omitted unless directed otherwise by Currenex.

Note: ***Bold italics*** font is used to indicate fields that are members of a repeating group

4.1 Session Messages

4.1.1 Standard Header

Tag	Field Name	Required	Comments
8	BeginString	Y	Message start. Handled by the FIX engine.
9	BodyLength	Y	Message length. Handled by the FIX engine.
34	MsgSeqNum	Y	Message sequence number count. Handled by the FIX engine.
35	MsgType	Y	The message type. Refer to individual messages for valid values.
49	SenderCompID	Y	Provided by Currenex: the user’s trading account id.
52	SendingTime	Y	The GMT timestamp on the message. Handled by FIX engine; e.g., 20070214-20:07:28.196
56	TargetCompID	Y	CNX = default; can be changed upon request.

4.1.2 Standard Trailer

Tag	Field Name	Required	Comments
10	Checksum	Y	A value calculated by the FIX engine from the message data and transferred with the data. If the data received does not match the <i>Checksum</i> (10) value, the data was corrupted in transit.

4.1.3 Heartbeat

Tag	Field Name	Required	Comments
	<i>Standard Header</i>	Y	MsgType (35=0)
112	TestReqID	C	Required if heartbeat is due to a <i>TestRequest</i> (35=1) message.
	<i>Standard Trailer</i>	Y	

4.1.4 Logon

Tag	Field Name	Required	Comments
	<i>Standard Header</i>	Y	MsgType (35=A)
98	EncryptMethod	Y	0 – not encrypted is the only accepted value.
108	HeartBtInt	Y	Heartbeat interval in seconds.
141	ResetSeqNumFlag	N	Y – Resets both the inbound and outbound sequence numbers to one (1).
554	Password	Y	Id specific password
	<i>Standard Trailer</i>	Y	

4.1.5 Logout

Tag	Field Name	Required	Comments
	<i>Standard Header</i>	Y	MsgType (35=5)
58	Text	N	Descriptive text message.
	<i>Standard Trailer</i>	Y	

4.2 Subscription and Message Flow

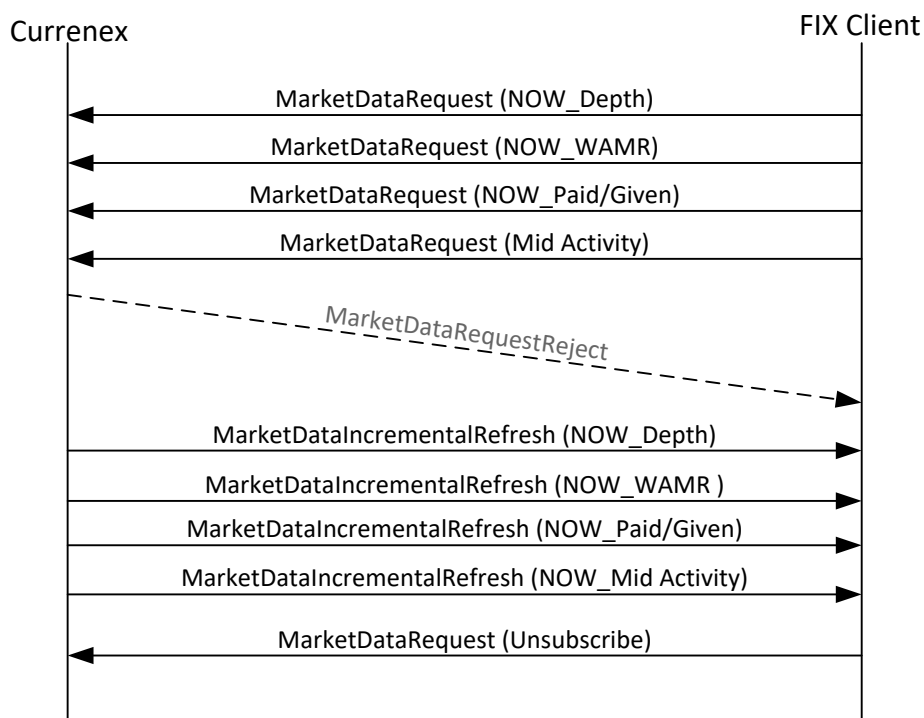


Figure 1: CNX Now Data Subscription and Streaming

Subscriptions to Currenex_NOW data is made by service and currency pair. A subscription that cannot be processed will be rejected. A successful subscription will be responded to with data messages.

4.3 Application Messages

4.3.1 Market Data Request

Tag	Field Name	Required	Comments
	Standard Header	Y	MsgType (35=V)
262	MDReqID	Y	A unique ID assigned by the client to the Market Data Request. The same MDReqID (262) is used in subscribing and unsubscribing to data within the same session.
263	SubscriptionRequestType	Y	Data request type: A – Subscribe to all instruments (55=NA and 65=NA) C – Currenex Now Snapshot and Update Request U – Unsubscribe from a previous Currenex Now request
264	MarketDepth	Y	0 - only value supported. Note: this tag is only present due to it being a mandatory FIX 4.4 tag.
Component <MDReqGrp>			
267	NoMDEntryTypes	Y	Number of services being requested; i.e., the number of times MDEntryType (269) is repeated: 1, 2, 3 or 4 – the only values supported.
269	MDEntryType	Y	Requested Market Data type: b – NOW_DepthOfBook t – NOW_Paid/Given with Bucketed Size w – NOW_WAMR with Confidence Factor m – NOW_Mid Activity Indicator Note: Lowercase symbols are used due to their being available in FIX 5.0.
End Component <MDReqGrp>			
Component < InstrmtMDReqGrp >			
146	NoRelatedSym	Y	Number of related symbols in the request: 1 – Only value supported.
Component < Instrument >			
55	Symbol	Y	Currency pair for which the request is being made when 263=C. Set to 'NA' when 263=A.
65	SymbolSfx	Y	SP – Spot (only supported tenor) NA – Subscribe to all instruments when 263=A.
End Component < Instrument >			

Tag	Field Name	Required	Comments
End Component < InstrmtMDReqGrp >			

4.3.2 Market Data Request Reject

Tag	Field Name	Required	Comments
	Standard Header	Y	MsgType (35=Y)
262	MDReqID	Y	A unique ID assigned by the client to the Market Data Request.
281	MDReqRejReason	Y	Text description of the rejection: 0 = Unknown symbol 1 = Duplicate MDReqID 2 = Insufficient Bandwidth 3 = Insufficient Permissions 4 = Unsupported SubscriptionRequestType 8 = Unsupported MDEntryType
58	Text	N	Free format text string. Note: there is no specified maximum length for this field.

4.3.3 Market Data – Incremental Refresh NOW_DepthOfBook

Tag	Field Name	Required	Comments
	Standard Header	Y	MsgType (35=X)
1022	MDFeedType	Y	b = NOW_DepthOfBook This is a FIX 5.0 tag.
262	MDReqID	Y	The unique ID assigned by the client to the Market Data Request.
Component <MDIncGrp>			
268	NoMDEntries	Y	Number of levels to the market data depth.
	279 MDUpdateAction	Y	0 = New – only value supported
	264 MarketDepth	Y	Book depth level; e.g., 1, 2, 3, ...,18,19,20
	269 MDEntryType	Y	Requested Market Data type: 0 = Bid 1 = Offer
Component <Instrument>			
	55 Symbol	Y	Currency pair symbol
	65 SymbolSfx	Y	SP = spot – only value supported

Tag	Field Name	Required	Comments
End Component <Instrument>			
270	MDEntryPx	Y	The spot rate
271	MDEntrySize	Y	Aggregated amount at this level
End Component < MDIncGrp >			

4.3.4 Market Data – Incremental Refresh NOW_Paid/Given

Tag	Field Name	Required	Comments
	Standard Header	Y	MsgType (35=X)
1022	MDFeedType	Y	t – NOW_Paid/Given This is a FIX 5.0 tag.
262	MDReqID	Y	A unique ID assigned by the client to the Market Data Request.
Component <MDIncGrp>			
268	NoMDEntries	Y	1 = only value supported
279	MDUpdateAction	Y	0 = New
269	MDEntryType	Y	2 = trade
Component <Instrument>			
55	Symbol	Y	Currency pair symbol
65	SymbolSfx	Y	SP = spot
End Component <Instrument>			
270	MDEntryPx	Y	Trade execution rate
271	MDEntrySize	Y	Size indicator: 1 = < 500k 2 = <> 500k – 2M 3 = >2M
7562	MDTickerType	Y	Paid/Given indicator: G = given P = paid
60	TransactTime	Y	Execution time in GMT; e.g., 20070214-20:07:29.196
End Component < MDIncGrp >			

4.3.5 Market Data - Incremental Refresh NOW_WAMR with Confidence Factor

Tag	Field Name	Required	Comments
	Standard Header	Y	MsgType (35=X)
1022	MDFeedType	Y	w = NOW_WAMR This is a FIX 5.0 tag.
262	MDReqID	Y	A unique ID assigned by the client to the Market Data Request.
Component < MDIncGrp >			
268	NoMDEntries	Y	6 = Number of times <MDIncGrp> repeats: Note: tags: 279, 55, 65 and 270 will have the same values in each repeating group.
279	MDUpdateAction	Y	0 = New
269	MDEntryType	Y	0 – Bid 1 – Offer
Component <Instrument>			
55	Symbol	Y	Currency pair symbol
65	SymbolSfx	Y	SP – spot (only value supported)
End Component <Instrument>			
270	MDEntryPx	Y	Weighted Average Mid-Rate (WAMR)
7597	MDEntryPx2	Y	Price corresponding to WAMR_ConfFactor (7620)
7620	WAMR_ConfFactor	Y	Quartile (percentile) Value: 25, 50 or 75
273	MDEntryTime	Y	WAMR calculation time
End Component < MDIncGrp >			

4.3.6 Market Data – Incremental Refresh NOW_MidFX Activity Indicator

Tag	Field Name	Required	Comments
	Standard Header	Y	MsgType (35=X)
1022	MDFeedType	Y	M = NOW_Mid Activity Indicator Note: This is a FIX 5.0 tag
262	MDReqID	Y	Unique identifier assigned to the market data request by the client.
Component < MDIncGrp >			
268	NoMDEntries	Y	1 - only value supported

Tag	Field Name		Required	Comments
	279	MDUpdateAction	Y	0 = New – only value supported
Component <Instrument>				
	55	Symbol	Y	Currency pair symbol
	65	SymbolSfx	Y	SP = spot - only value supported
End Component <Instrument>				
	7621	MDMid_ActivityIndicator	Y	Indicates if a Mid T ₂₀ trade has occurred within A = < 15 seconds B = < 45 seconds C = > 45 seconds
End Component < MDIncGrp >				