

OANDA FIX Rules of Engagement

Specifications for OANDA fxTrade and fxTrade Practice FIX Server version 2.3.20
Supporting FIX Protocol versions 4.2 and 4.4

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Introduction

This document describes the behavior of the current version of OANDA FIX Server, and tells you how to interact with and place trades through this service.

What's New

Note: Typically, new versions of the server are deployed first on fxTrade Practice and then deployed to fxTrade the week afterward.

Version 2.3:

- Version 2.3 provides faster market data to clients
- Clients are encouraged to migrate their setup to the industry-typical separate rates and orders connections.

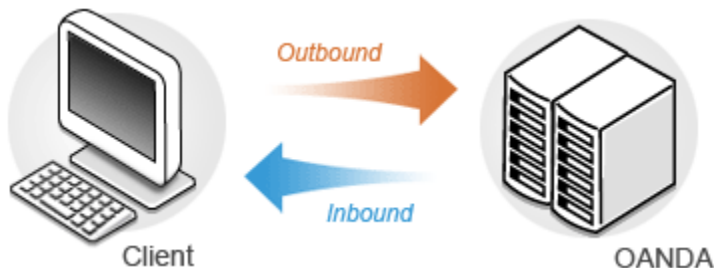
What is FIX?

The Financial Information eXchange ("FIX") Protocol is a series of messaging specifications for the electronic communication of financial data, including trade-related messages. It is a globally accepted standard of messaging specifications developed through the collaboration of banks, brokers, exchanges, institutional investors, and information technology providers from around the world.

OANDA fxTrade supports versions 4.2 and 4.4 of the FX protocol. You are urged to download and consult the official FIX 4.2 and FIX 4.4 specifications and the recommended best practices document at <http://www.fixprotocol.org/>. (Note this web site only supports certain browsers, such as Internet Explorer Version 5.)

How FIX Messages Work

The client machine sends FIX messages to the OANDA server (in this document, these are referred to as **outbound** messages, meaning messages sent "out" from the client to the server). Then the server responds back to the client machine with **inbound** messages, meaning messages sent from the server "in" to the client.

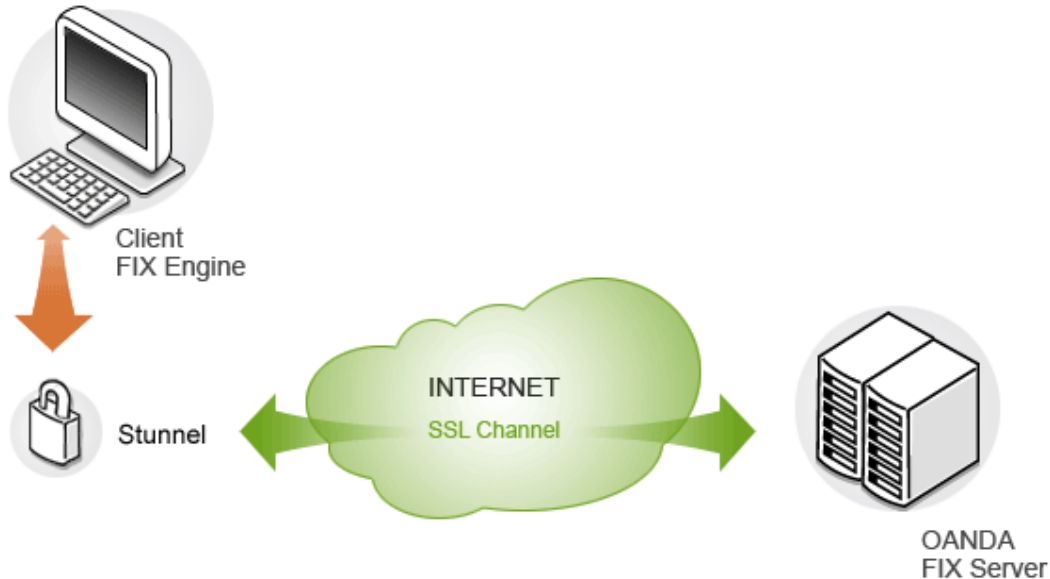


FIX sessions must be initiated through logon messages (and the logon session is maintained as long as the client machine sends heartbeat messages at pre-determined intervals).

Encryption

The OANDA FIX Server only accepts SSL-encrypted connections for communications security. Customers using FIX engines that do not provide SSL connectivity can use stunnel, a tunneling proxy software package that will SSL-encrypt your communications to the OANDA FIX Server.

The following diagram shows an overview of how FIX messages are encrypted using stunnel and then transmitted between the client and the server:



Requirements

To send FIX messages to the OANDA server:

- You must have an API License agreement with OANDA.
- You need to install and configure SSL encryption tunneling software (such as *stunnel*) on your system if your FIX engine is not already SSL-capable. Configuration details are provided when you sign up.
- You need to use your own FIX engine to connect to our server.

OANDA Compliance to the FIX Protocol

The OANDA fxTrade FIX Server is designed to closely follow the official FIX Protocol Ltd FIX 4.2 and FIX 4.4 specifications and the published FIX Protocol Best Practices as closely as is practical. Any differences or items of note are identified in this document.

Readers are urged to consult the official specifications and best practices documents, found at the FIX Protocol Ltd website at <http://fixprotocol.org/>.

Supported Message Types

The OANDA FIX Server supports the following FIX outbound and inbound messages.

Outbound Messages (from client to server)

Supported Message <MsgType> (from Client)	Server Responses
Logon <A>	Logon <A>, Reject <3>
Logout <5>	Logout <5>
Heartbeat <0>	Heartbeat <0>
New Order - Single <D>	Execution Report <8>
Order Cancel Request <F>	Execution Report <8>, Order Cancel Reject <9>
Order Cancel / Replace Request <G>	Execution Report <8>, Order Cancel Reject <9>
Order Status Request <H>	Execution Report <8>
Market Data Request <V>	Market Data - Snapshot / Full Refresh <W>, Market Data - Incremental Refresh <X>, Market Data Request Reject <Y>

Inbound Messages (from server to client)

Supported Message <MsgType> (from Server)	In Response To Client Messages:
Logon <A>	Logon <A>
News 	Logon <A>
Logout <5>	Logout <5>
Heartbeat <0>	Heartbeat <0>
Execution Report <8>	New Order - Single <D>, Order Cancel Request <F>, Order Cancel / Replace Request <G>, Order Status Request <H>
Order Cancel Reject <9>	Order Cancel Request <F>, Order Cancel / Replace Request <G>
Reject <3>	Any client message with incorrect syntax
Business Message Reject <j>	Any client message that does not meet business requirements (but has correct syntax).
Market Data - Snapshot/Full Refresh <W>	Market Data Request <V>
Market Data - Incremental Refresh <X>	Market Data Request <V>
Market Data Request Reject <Y>	Market Data Request <V>

About the Examples Shown in this Document

The examples shown in this document have been formatted for readability, and do not reflect the ordering or formatting required by the official FIX Protocol specification. In particular, the examples have been turned into tables and include field names that are not used.

For instance, the code for first example shown in the document, “Client outbound request (with valid logon)”, would be coded as follows (with SOH represented here by a space):

```
8=FIX.4.4 9=91 35=A 34=1 49=testusr4109 52=20101124-20:27:25.000 56=OANDA 98=0 108=300  
141=Y 554=Passw0rd 10=133
```

OANDA FIX Server General Guidelines

Technical Support

You can contact the OANDA FIX API team at api@oanda.com for questions or technical support.

So that we can help you more quickly, please include the following with your support requests:

- The complete version string reported in the News message sent right after a logon response.
- Detailed text files of the timestamped local logs of the FIX messaging demonstrating the issue or concern.

Clock Synchronization

Note that timing issues may arise if clocks are out of synchronization. The OANDA Server is configured to Reject <3> with SessionRejectReason <373> = 10 "SendingTime <52> accuracy problem" any message received with a SendingTime that is older than 15 seconds.

If you receive this message, verify with your system administrator that your client FIX engine host clock is synchronized via a properly-configured NTP service.

Connection-Oriented Sessions

The current OANDA FIX Server follows an internet service style, connection-oriented behavior. Each connection establishes its own separate session for the lifetime of the connection.

Some ramifications of connection-oriented sessions include:

- The OANDA Server acts as an acceptor only.
- ResetSeqNumFlag <141> = Y is required on all Logon <A> messages
Message replay is not supported (Resend Request <2> and Sequence Reset <4>).
- Order fills while disconnected are not communicated automatically on the next connection. Instead, use the Order Status Request <H> on reconnection to query information on any order including orders outstanding whose status may have been updated while disconnected

Separate Rates and Orders Connections

The version 2 servers support multiple connections per customer.

All connections use the customer's OANDA login username as the SenderCompID <49> value.

A rates session is established by specifying TargetSubID <57> = **RATES** for all messages on this connection. These connections will be routed to dedicated market data servers delivering the fastest price updates, and no order processing is available here.

An orders session is established by omitting any TargetSubID <57> tag for all messages on the connection. All orders must be submitted on an order server connection.

Customers using an order server connection to receive market data are advised that this capability will be phased out shortly.

Simultaneous connections from both FIX 4.2 and a FIX 4.4 sessions are supported. Note that some message formats are different (for example, Execution Report) and some order types are not specifiable (for example, OrdType=J on FIX 4.2 sessions).

Asynchronous order notifications (fills and expiries on DAY and GTD orders) are broadcast on the current order server connection for the user.

24-Hour Trading Sessions

The OANDA System runs a continuous 24-hour trading session. Customers are able to trade currencies at any time during the trading week.

DAY orders expire at 5:00 p.m. North American Eastern time (UTC -0500 or UTC -0400 during Daylight Savings Time) if placed at least 5 minutes before 5:00 p.m. DAY orders placed after the 4:55 p.m. cutoff time expire 5:00 p.m. the next **calendar** day.

Trading is not available during system maintenance, which is typically on Fridays performed after market close, starting at 5 p.m. North American Eastern time.

Supported Order Types

Immediately Executed Order Types

Market Orders

Market orders are orders to buy or sell a particular quantity of a currency pair at the prevailing price at the time the order was received at the OANDA servers. OANDA FIX Market Orders are placed with no TimelnForce <59> or Price <44> tags.

Fill-or-Kill (FOK) Orders, Immediate-or-Cancel (IOC) Orders

Orders placed with TimelnForce FOK are executed immediately if the price and quantity stipulations are met at the time the order is received. If they are not met, the order is cancelled in full. Orders placed TimelnForce IOC are executed immediately if the price stipulation is met, up to the available quantity for execution, and the remaining quantity is cancelled. Because FOK and IOC orders are always limit or stop orders, the Price <44> or StopPx <99> tags are required, as appropriate.

Price-Conditional Order Types

Standard Limit Orders

A standard limit order requests a trade of some quantity of a currency pair, at the requested price or better. If the prevailing market price is already better than the request price at the time the order is received, the order fills immediately. Otherwise, the order waits for execution until the price stipulation is met or the order expires.

Standard limit orders requesting Fill-or-Kill (FOK) or Immediate-or-Cancel (IOC) behave as described in the previous section.

Standard Stop Orders

A standard stop order requests a trade of some quantity of a currency pair, at the requested price or worse. If the prevailing market price is already worse than the request price, the order fills

immediately. Otherwise, the order waits for execution until the price stipulation is met or the order expires.

Standard stop orders requesting Fill-or-Kill (FOK) or Immediate-or-Cancel (IOC) behave as described in the previous section.

Market-if-Touched Orders

(This order type is called a “limit order” in OANDA’s other APIs and graphical interfaces.)

A market-if-touched order requests a trade of some quantity of a currency pair when the requested price is touched. If the prevailing market price is exactly the request price at the time the order is received, the order fills immediately. Otherwise, the order waits for execution until the market price touches/crosses the request price or the order expires.

Market-if-touched orders execute at OANDA-published prices; if a waiting market-if-touched order triggers due to the market price crossing the request price, the fill will occur at the first market price after the request price is crossed.

- Market-if-touched orders cannot be requested FOK or IOC.
- Market-if-touched orders can only be placed on FIX.4.4 sessions.

Mapping of FIX Orders to OANDA Transaction Tickets

The FIX server processes orders submitted via the FIX protocol, but the resulting actions take place on the OANDA server and follow the OANDA protocols in updating your OANDA account. These protocols and order models are different from each other, so the OANDA transaction tickets returned by the FIX server may be different from your original FIX requests.

Actions performed via FIX requests generally result in OANDA transaction tickets in your account, but the mapping is not always one-to-one. In particular:

- The ClOrdID <11> used in the FIX interface is not recorded in your transaction history.
- There may be multiple tickets implementing one FIX request. To assist in tracking your orders, Execution Reports include text in the Text <58> field of the form **OANDA transaction ID(s): [list]**, where [list] is a comma-separated list of ticket number ranges. For example, tickets 21, 22, 23, 26, 27, and 30 will be shown as **21-23,26-27,30**. The string “none” is used if no OANDA tickets correspond to the order.
- Limit and Stop Fill or Kill (FOK) and Immediate or Cancel (IOC) orders viewed via the fxTrade Practice and fxTrade GUI applets may appear instead as BuyMarket and SellMarket transactions.

Market Depth

The OANDA fxTrade trading system imposes a maximum trade size for individual trades. The end result is that the system behaves as if there is only one level of market depth, with the maximum trade size as the quantity available.

The maximum trade size is specified in the MDEntrySize tag in Market Data Snapshot / Full Refresh <W> and Market Data Incremental Refresh <X> messages. Before placing orders, customers are urged to consult the most recently published MDEntrySize for each currency pair to verify the quantity is available for execution.

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At time of writing, the maximum trade sizes for the OANDA trading system are the following (although these maximums may not be available at all times due to limited liquidity):

Pair	Maximum Units
XAG/USD	100 000
XAU/USD	5 000
All other tradeable pairs	10 000 000

(Users are welcome to place multiple trades to trade higher quantities.)

Orders submitted with OrderQty larger than the quantity available for execution are handled differently depending on the order type:

Order Type	Result	Notes
FOK orders	OrdStatus=CANCELED CumQty=0	Not filled at all
IOC orders	OrdStatus=CANCELED CumQty=[quantity available]	Partially filled up to the quantity available
all others	Rejected	Order rejected outright

Account Management

- The OANDA FIX Server does not support any account status requests. To review your account balance, open positions, margin exposure, P/L numbers, and so on, please log in to the graphical interface or access them through the fxTrade website.
- All orders submitted through the FIX interface should be modified or canceled through the FIX interface. We currently do not support order entry through FIX and modification or adjustments through the GUI.
- The OANDA FIX Server does not provide any drop copy execution reports for orders entered via the graphical or proprietary API interfaces.
- Adjustments or corrections to trades filled incorrectly due to price spikes are not reported by the FIX Server. Notification of these corrections is done through email.

Headers and Trailers

All FIX messages must begin with header fields and end with a trailing <10> field.

Header Fields

The following fields must be present at the beginning of all FIX messages:

TAG	FieldName	Req'd by FIX	Req'd by OANDA	Type (Value)	Comments
8	BeginString	Y	Y	string, "FIX.4.2" or "FIX.4.4"	Identifies beginning of new message and protocol version. Must always be the first field in a FIX message, and always unencrypted.
9	BodyLength	Y	Y	int	Message length, in bytes, forwarded to the CheckSum <10> field. Must always be the second field in a message, and always unencrypted.
35	MsgType	Y	Y	string	Defines the specific message type (MsgType). Must always be the third field in a message, and always unencrypted. See the next section for a list of supported message types.
49	SenderCompID	Y	Y	string	Assigned value used to identify the sender of the message. For outbound messages: your OANDA login user ID (Inbound messages will have the value, "OANDA")
56	TargetCompID	Y	Y	string	Assigned value used to identify the message destination. For outbound messages: "OANDA" (Inbound messages will contain your login user ID)
34	MsgSeqNum	Y	Y	int	Integer message sequence number.
52	SendingTime	Y	Y	UTC Timestamp	Time of message transmission (always expressed in UTC (Universal Time Coordinated, also known as 'GMT'))
57	TargetSubID	N	N	string	For outbound sessions that are intended only for rates subscriptions and snapshots. It is highly recommended the value "RATES" be used, to allow routing of that session to resources best

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					capable of providing the lowest latency access to OANDA's rates.
--	--	--	--	--	--

Trailer Field

The following field must conclude all FIX messages.

TAG	FieldName	Req'd by FIX	Req'd by OANDA	Type (Value)	Comments
10	Checksum	Y	Y	3-character string	Three byte, simple checksum serves (with the trailing <SOH>) as the end-of-message delimiter. Always defined as three characters.

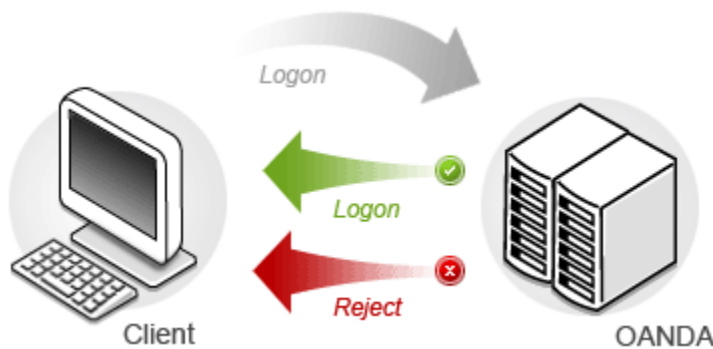
Administrative Messages

Logon (Outbound, Inbound) <A>

The Logon <A> message authenticates a user and starts a session. It must be the first message sent by any application requesting to initiate a FIX session.

Upon receipt of a Logon message, the OANDA server will authenticate the party requesting connection and issue a Logon message as acknowledgment that the connection request has been accepted. This acknowledgment Logon can be used by the initiator to validate that the connection was established with the correct party.

If the server cannot authenticate the logon request, it will return a Logout <5> or Reject <3> message, or may not respond at all in some cases as a precaution against Denial of Service (DoS) attacks.



Notes

- ResetSeqNumFlag=Y must be used on logon.
- The HeartBtInt <108> field declares the timeout interval for generating heartbeat messages (the same interval is used by both sides). This field must be included in the logon request, and echoed back in the logon message from the OANDA server. The HeartBtInt value must be at least 30 seconds. We recommended a HeartBtInt value of 300 seconds (5 minutes).

Fields <A>

TAG	FieldName	Req'd by FIX	Req'd by OANDA	Type (Value)	Comments
	Standard Header	Y	Y		See Header Fields . MsgType = A
98	EncryptMethod	Y	Y	char "0"	Method of encryption. (Always unencrypted)

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					Valid values: 0 = None / other
108	HeartBtInt	Y	Y	int	Heartbeat <0> interval (seconds). Heartbeat <0> messages are transmitted automatically by the FIX software at this time interval. Recommended value: 300
	Logon Password				See below.
141	ResetSeqNumFlag	N	Y	Boolean	Indicates that both sides of the FIX session should reset sequence numbers. Valid values: Y = Yes, reset sequence numbers
	Standard Trailer	Y	Y		See Trailer Fields

For FIX 4.2 sessions, the fields used to supply the logon password are:

95	RawDataLength	N	Y	length	Number of bytes in raw data field.
96	RawData	N	Y	data	Unformatted raw data, contains the logon password.

For FIX 4.4 sessions, the field used to supply the logon password is:

554	Password	N	Y	string	The logon password.
-----	----------	---	---	--------	---------------------

Note that for FIX.4.4 sessions, the Username <553> tag is not used. Any value supplied in tag 553 will be ignored. Instead, the SenderCompID is used to determine the login username.

On a successful logon, the server sends a News message with information about the OANDA FIX server.

***News (Inbound) ***

The News message is returned by the server and provides important information concerning changed behavior or upcoming releases.

The version number shown in this message is presented as numbers only, separated by dots (for example, "version: 2.2"). Version updates may involve amendments to this Rules of Engagement document, and thus may require changes to customer programs.

**Fields **

TAG	FieldName	Req'd by FIX	Type (Value)	Comments
	Standard Header	Y		See Header Fields . MsgType = B
148	Headline	Y	string	"OANDA FIX Server Information"
33	LinesOfText	Y	int	Indicates the number of Text <58> tags following.
58	Text	Y	string	Uses the following format: keyword: value Keywords: <ul style="list-style-type: none"> • "version"—shows the current version of the OANDA FIX server • "notice"—provides important information that should be noted • "warning"—explicitly flags issues such as backwards compatibility concerns
	Standard Trailer	Y		See Trailer Field .

Examples

Client outbound request (with valid logon):

```

+-HEADER
|      8 BeginString      = FIX.4.4
|     35 MsgType          = Logon (A)
|     34 MsgSeqNum        = 1
|     49 SenderCompID     = testusr4109
|     52 SendingTime      = 20101124-20:27:25.000
|     56 TargetCompID     = OANDA
+-BODY
|     98 EncryptMethod    = NONE_OTHER (0)
|    108 HeartBtInt       = 300
|    141 ResetSeqNumFlag  = Y
|    554 Password         = Passw0rd
+-TRAILER
|     10 CheckSum         = 133
+=====
    
```

Server inbound response:

The server sends a logon response and a news message.

```

+-HEADER
|      8 BeginString      = FIX.4.4
|      9 BodyLength       = 74
|     35 MsgType          = Logon (A)
|     34 MsgSeqNum        = 1
|     49 SenderCompID     = OANDA
|     52 SendingTime      = 20101124-20:27:25
|     56 TargetCompID     = testusr4109
+-BODY
    
```

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```
|    98 EncryptMethod = NONE_OTHER (0)
|    108 HeartBtInt   = 300
|    141 ResetSeqNumFlag = Y
+-TRAILER
|    10 CheckSum      = 216
+=====

+-HEADER
|    8 BeginString    = FIX.4.4
|    9 BodyLength     = 124
|   35 MsgType        = News (B)
|   34 MsgSeqNum      = 2
|   49 SenderCompID   = OANDA
|   52 SendingTime    = 20101124-20:27:25
|   56 TargetCompID   = testusr4109
+-BODY
|   33 LinesOfText    = 1
|  148 Headline       = OANDA FIX Server Information
+-LinesOfText-Member-0
|   58 Text           = version: 2.2
+-TRAILER
|   10 CheckSum       = 255
+=====
```

Client outbound request (with wrong password):

```
+-HEADER
|    8 BeginString    = FIX.4.2
|   35 MsgType        = Logon (A)
|   34 MsgSeqNum      = 7
|   49 SenderCompID   = testusr
|   52 SendingTime    = 20090605-14:37:48.000
|   56 TargetCompID   = OANDA
+-BODY
|   95 RawDataLength  = 10
|   96 RawData        = wrongwrong
|   98 EncryptMethod  = NONE_OTHER (0)
|  108 HeartBtInt     = 300
|  141 ResetSeqNumFlag = YES_RESET_SEQUENCE_NUMBERS (Y)
+-TRAILER
|   10 CheckSum       = 240
+=====
```

Server inbound response:

The server will not respond at all, as a security precaution.

Logout (Outbound, Inbound) <5>

The Logout <5> message initiates or confirms the termination of a FIX session. A session disconnected without the exchange of Logout messages should be interpreted as an abnormal condition (such as network failure).

Before closing the session, the client should wait for the OANDA server to respond with a confirming Logout message. This allows the server to complete any final operations.

Fields <5>

TAG	FieldName	Req'd by FIX	Req'd by OANDA	Type	Comments
	Standard Header	Y	Y		See Header Fields . MsgType = 5
58	Text	N (Inbound)		string	Explanatory text returned by the server (for example, "Rejected")
	Standard Trailer	Y	Y		See Trailer Fields .

Example

Client Outbound Request:

```

+-HEADER
|   8 BeginString      = FIX.4.4
|   35 MsgType         = Logout (5)
|   34 MsgSeqNum       = 2
|   49 SenderCompID    = testusr4109
|   52 SendingTime     = 20101124-20:31:07.000
|   56 TargetCompID    = OANDA
+-BODY
+-TRAILER
|   10 CheckSum        = 019
+=====
    
```

Server Inbound Response:

```

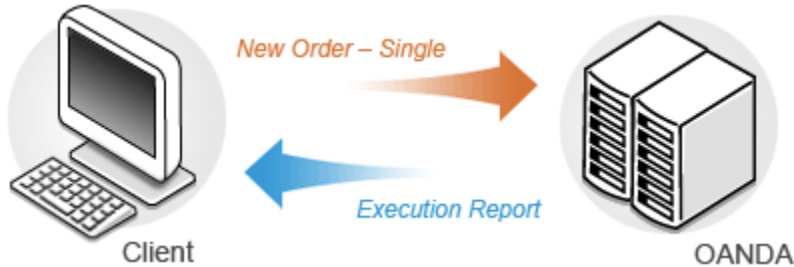
+-HEADER
|   8 BeginString      = FIX.4.4
|   9 BodyLength       = 88
|   35 MsgType         = Logout (5)
|   34 MsgSeqNum       = 3
|   49 SenderCompID    = OANDA
|   52 SendingTime     = 20101124-20:31:07
|   56 TargetCompID    = testusr4109
+-BODY
|   58 Text             = Thank you for choosing OANDA.
+-TRAILER
|   10 CheckSum        = 008
+=====
    
```

Client Requests (Outbound)

New Order – Single (Outbound) <D>

New Order - Single <D> is used on the client side to submit forex orders to OANDA. It can only be issued after a Login <A> session is established.

The OANDA server will respond to a New Order - Single request with an Execution Report <8>. This message will provide information on the execution of the order, whether successful or not.



Fields <D>

TAG	FieldName	Req'd by FIX	Req'd by OANDA	Type	Comments
	Standard Header	Y	Y		See Header Fields . MsgType = D
11	ClOrdID	Y	Y	string	Unique order identifier assigned by the client.
1	Account	N	Y	string	The OANDA fxTrade or fxTrade Practice account number. Required for outbound order or trade requests to the OANDA server where indicated in this document.
21	HandlInst	Y (FIX 4.2) N (FIX 4.4)	Y (FIX 4.2) N (FIX 4.4)	"1"	Instructions for order handling on Broker trading floor. In FIX 4.4, the absence of this field is interpreted as value 1. Valid values: 1 = Automated execution order, private, no Broker intervention
55	Symbol	Y	Y	string	Must be a valid ISO currency pair, with forward slash. For example, EUR/USD.
54	Side	Y	Y	char	Side of order. Valid values: 1 = Buy 2 = Sell

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60	TransactTime	Y	Y	UTC Time stamp	Time of execution/order creation, expressed in UTC (Universal Time Coordinated, also known as 'GMT'). The timestamp in this field allows the OANDA server to apply business rules to determine if the order is potentially "stale" (for example, in the event of communication problems).
38	OrderQty	N	Y	qty	Number of units ordered.
40	OrdType	Y	Y	char	Order type. Valid values: 1 = Market 2 = Limit 3 = Stop J = Market-if-Touched (FIX 4.4 only)
44	Price	N	Y for limit and market-if-touched orders only	price	Price.
99	StopPx	N	Y for stop orders only	price	Stop price.
59	TimeInForce	N	N	char	For limit, stop, and market-if-touched orders, not market orders. Specifies how long the order remains in effect. Absence of this field is interpreted as DAY. Valid values: 0 = Day 3 = Immediate or Cancel (IOC) 4 = Fill or Kill (FOK) 6 = GTD. (GTD orders further require one of ExpireDate <432> or ExpireTime <126>.) IOC and FOK are only valid for limit and stop orders.
432	ExpireDate	N		LocalMkt Date	For GTD orders, requests expire at local 5pm ET (EDT or EST) on the date indicated.
126	ExpireTime	N		UTC Time stamp	For GTD orders, requests expiry at the exact UTC date and time indicated.
	Standard Trailer	Y	Y		See Trailer Fields

Examples

Client outbound request:

For a limit buy order, 7500 units XAU/USD, limit price 1500, Immediate or Cancel:

```

+-HEADER
|   8 BeginString      = FIX.4.4
|   9 BodyLength       = 138
|  35 MsgType          = NewOrderSingle (D)
|  34 MsgSeqNum        = 2
|  49 SenderCompID     = testusr4109
|  52 SendingTime      = 20101125-14:53:25.000
|  56 TargetCompID     = OANDA
+-BODY
|   1 Account           = 562121
|  11 ClOrdID          = limit_ioc_buy_gold_overlimit
|  21 HandlInst         = AUTOMATED_EXECUTION_ORDER_PRIVATE (1)
|  38 OrderQty          = 7500
|  40 OrdType           = LIMIT (2)
|  44 Price              = 1500
|  54 Side              = BUY (1)
|  55 Symbol            = XAU/USD
|  59 TimeInForce       = IMMEDIATE_OR_CANCEL (3)
|  60 TransactTime      = 20101125-14:52:49
+-TRAILER
|  10 CheckSum          = 157
+=====

```

Server inbound response:

OrderQty exceeds maximum trade size for symbol; only 5000 units filled:

```

+-HEADER
|   8 BeginString      = FIX.4.4
|   9 BodyLength       = 352
|  35 MsgType          = ExecutionReport (8)
|  34 MsgSeqNum        = 3
|  49 SenderCompID     = OANDA
|  52 SendingTime      = 20101125-14:53:26
|  56 TargetCompID     = testusr4109
+-BODY
|   1 Account           = 562121
|   6 AvgPx            = 1373.517
|  11 ClOrdID          = limit_ioc_buy_gold_overlimit
|  14 CumQty           = 5000
|  17 ExecID           = T176342045
|  21 HandlInst         = AUTOMATED_EXECUTION_ORDER_PRIVATE (1)
|  31 LastPx           = 1373.517
|  32 LastQty          = 5000
|  37 OrderID          = 3561
|  38 OrderQty          = 7500
|  39 OrdStatus         = CANCELED (4)
|  40 OrdType           = LIMIT (2)
|  44 Price              = 1500
|  54 Side              = BUY (1)
|  55 Symbol            = XAU/USD
|  58 Text              = OrderQty <38> = 7500 exceeds maximum trade size for symbol.
OANDA transaction ID(s): 176342045.
|  59 TimeInForce       = IMMEDIATE_OR_CANCEL (3)
|  60 TransactTime      = 20101125-14:53:25
|  150 ExecType         = TRADE (F)
|  151 LeavesQty        = 0
|  461 CFICode          = MRCXXX
+-TRAILER
|  10 CheckSum          = 060
+=====

```

OANDA FIX Rules of Engagement

Client outbound request:

For a market-if-touched buy order, 5 units USD/CAD, price 1.5

```
+--HEADER
|   8 BeginString      = FIX.4.4
|   9 BodyLength      = 113
|  35 MsgType         = NewOrderSingle (D)
|  34 MsgSeqNum       = 2
|  49 SenderCompID    = testusr4109
|  52 SendingTime     = 20101126-20:19:53.000
|  56 TargetCompID    = OANDA
+--BODY
|   1 Account          = 562121
|  11 ClOrdID         = mit_buy
|  21 HandlInst       = AUTOMATED_EXECUTION_ORDER_PRIVATE (1)
|  38 OrderQty        = 5
|  40 OrdType         = MARKET_IF_TOUCHED (J)
|  44 Price           = 1.5
|  54 Side            = BUY (1)
|  55 Symbol          = USD/CAD
|  59 TimeInForce     = DAY (0)
|  60 TransactTime    = 20101126-20:19:38
+--TRAILER
|  10 CheckSum        = 013
+=====
```

Server inbound response:

```
+--HEADER
|   8 BeginString      = FIX.4.4
|   9 BodyLength      = 259
|  35 MsgType         = ExecutionReport (8)
|  34 MsgSeqNum       = 3
|  49 SenderCompID    = OANDA
|  52 SendingTime     = 20101126-20:19:53
|  56 TargetCompID    = testusr4109
+--BODY
|   1 Account          = 562121
|   6 AvgPx           = 0
|  11 ClOrdID         = mit_buy
|  14 CumQty          = 0
|  17 ExecID          = T176342075
|  21 HandlInst       = AUTOMATED_EXECUTION_ORDER_PRIVATE (1)
|  37 OrderID         = 3576
|  38 OrderQty        = 5
|  39 OrdStatus       = NEW (0)
|  40 OrdType         = MARKET_IF_TOUCHED (J)
|  44 Price           = 1.5
|  54 Side            = BUY (1)
|  55 Symbol          = USD/CAD
|  58 Text            = OANDA transaction ID(s): 176342075.
|  59 TimeInForce     = DAY (0)
|  60 TransactTime    = 20101126-20:19:53
| 126 ExpireTime      = 20101126-22:00:00
| 150 ExecType        = NEW (0)
| 151 LeavesQty       = 5
| 461 CFICode         = MRCXXX
+--TRAILER
|  10 CheckSum        = 029
+=====
```

OANDA FIX Rules of Engagement

Client outbound request:

For a limit buy order, 10 units EUR/USD, price 1.25, GTD ExpiryTime 20090725-12:34:56 (UTC):

```
+--HEADER
|   8 BeginString      = FIX.4.2
|   9 BodyLength       = 141
|  35 MsgType          = NewOrderSingle (D)
|  34 MsgSeqNum        = 171
|  49 SenderCompID     = testusr9
|  52 SendingTime      = 20091020-14:03:08.000
|  56 TargetCompID     = OANDA
+--BODY
|   1 Account          = 9
|  11 ClOrdID          = new_std_limit_order
|  21 HandlInst         = AUTOMATED_EXECUTION_ORDER_PRIVATE_NO_BROKER_INTERVENTION (1)
|  38 OrderQty         = 10
|  40 OrdType          = LIMIT (2)
|  44 Price            = 1.25
|  54 Side             = BUY (1)
|  55 Symbol           = EUR/USD
|  59 TimeInForce      = GOOD_TILL_DATE (6)
|  60 TransactTime     = 20091020-14:02:36
| 126 ExpireTime       = 20091025-12:34:56
+--TRAILER
|  10 CheckSum         = 029
+=====
```

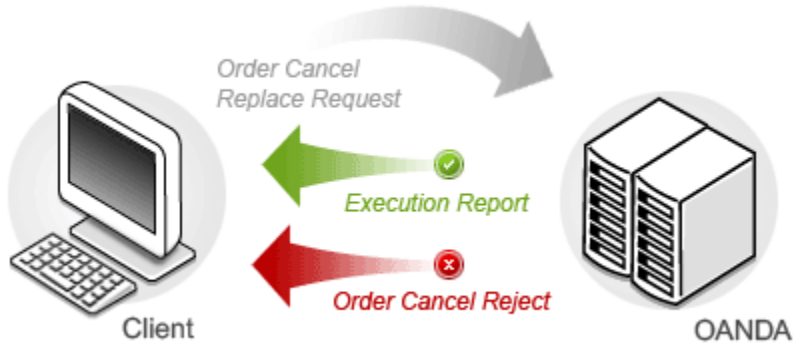
Server inbound response:

```
+--HEADER
|   8 BeginString      = FIX.4.2
|   9 BodyLength       = 277
|  35 MsgType          = ExecutionReport (8)
|  34 MsgSeqNum        = 172
|  49 SenderCompID     = OANDA
|  52 SendingTime      = 20091020-14:03:09.024
|  56 TargetCompID     = testusr9
+--BODY
|   1 Account          = 9
|   6 AvgPx           = 0
|  11 ClOrdID          = new_std_limit_order
|  14 CumQty          = 0
|  17 ExecID           = T175433116
|  20 ExecTransType    = NEW (0)
|  21 HandlInst         = AUTOMATED_EXECUTION_ORDER_PRIVATE_NO_BROKER_INTERVENTION (1)
|  31 LastPx          = 0
|  32 LastShares       = 0
|  37 OrderID          = 8726
|  38 OrderQty         = 10
|  39 OrdStatus        = NEW (0)
|  40 OrdType          = LIMIT (2)
|  44 Price            = 1.25
|  54 Side             = BUY (1)
|  55 Symbol           = EUR/USD
|  58 Text             = OANDA transaction ID(s): 175433116.
|  59 TimeInForce      = GOOD_TILL_DATE (6)
|  60 TransactTime     = 20091020-14:03:08
| 126 ExpireTime       = 20091025-12:34:56
| 150 ExecType         = NEW (0)
| 151 LeavesQty        = 10
+--TRAILER
|  10 CheckSum         = 056
+=====
```

Order Cancel / Replace Request (Outbound, Inbound) <G>

Also known as an Order Modification Request.

Use Order Cancel/Replace Request <G> to change the parameters of an existing limit, stop, or market-if-touched message. The server returns an execution report.



At present, the Order Cancel / Replace can be used to change the price / stop price, order expiry time, and order quantity for existing limit, stop, and market-if-touched orders with an expiry time.

The provided ClOrdID, Symbol, and Side fields are used to find the subject order. If multiple orders match the criteria, an OrderID field is needed to disambiguate.

Any request issued with a different Symbol and/or Side field will not result in the expected order match, and will be rejected due to the order being unknown.

Fields <G>

TAG	FieldName	Req'd by FIX	Req'd by OANDA	Type	Comments
	Standard Header	Y	Y		See Header Fields . MsgType = G
37	OrderID	N	N	string	Unique identifier for the order as assigned by the OANDA server
41	OrigClOrdID	Y	Y	string	Used to identify the previous order in cancel and cancel/replace requests.
11	ClOrdID	Y	Y	string	Unique order identifier assigned by the client.
1	Account	N	Y	string	The OANDA fxTrade or fxTrade Practice account number. Required for outbound order or trade requests to the OANDA server where indicated in this document.
21	HandlInst	Y (FIX 4.2) N (FIX 4.4)	Y (FIX 4.2) N (FIX 4.4)	char	Instructions for order handling on Broker trading floor. In FIX 4.4, the absence of this field is interpreted as value 1. Valid values:

OANDA FIX Rules of Engagement

					1 = Automated execution order, private, no Broker intervention
55	Symbol	Y	Y	string	Must be a valid ISO currency pair, with forward slash. For example, EUR/USD.
54	Side	Y	Y	char	Side of order Valid values: 1 = Buy 2 = Sell
60	TransactTime	Y	Y	UTC Time stamp	Time of execution/order creation, expressed in UTC (Coordinated Universal Time, also known as 'GMT'). The timestamp in this field allows the OANDA server to apply business rules to determine if the order is potentially "stale" (for example, in the event of communication problems).
38	OrderQty	N	Y	qty	Number of units ordered.
40	OrdType	Y	Y	char	Order type. Valid values: 2 = Limit 3 = Stop J = Market-if-Touched (FIX 4.4 only)
44	Price	N	Y for limit and market-if-touched orders only	price	Price for currency pair.
99	StopPx	N	Y for stop orders only	price	Stop price for currency pair.
59	TimeInForce	N	N	char	Specifies how long the order remains in effect. Absence of this field is interpreted as DAY. Valid Values: 0 = Day 6 = GTD. (GTD orders further require one of ExpireDate <432> or ExpireTime <126>.)
432	ExpireDate	N		Local Mkt Date	For GTD orders, requests expiry at local 5pm ET (EDT or EST) on the date indicated.
126	ExpireTime	N		UTC Time stamp	For GTD orders, requests expiry at the exact UTC date and time indicated.

OANDA FIX Rules of Engagement

	Standard Trailer	Y	Y		See Trailer Fields
--	------------------	---	---	--	------------------------------------

Example

Client outbound request:

For a modify previous limit buy order, changing the price to 1.28, changing the quantity to 15, TimeInForce was omitted in request so expiry is now DAY:

```

+-HEADER
|   8 BeginString      = FIX.4.2
|   9 BodyLength       = 140
|  35 MsgType          = OrderCancelReplaceRequest (G)
|  34 MsgSeqNum        = 172
|  49 SenderCompID     = testusr9
|  52 SendingTime      = 20091020-14:04:48.000
|  56 TargetCompID     = OANDA
+-BODY
|   1 Account          = 9
|  11 ClOrdID          = modify_std_limit_order
|  21 HandlInst        = AUTOMATED_EXECUTION_ORDER_PRIVATE_NO_BROKER_INTERVENTION (1)
|  38 OrderQty         = 15
|  40 OrdType           = LIMIT (2)
|  41 OrigClOrdID     = new_std_limit_order
|  44 Price             = 1.28
|  54 Side              = BUY (1)
|  55 Symbol           = EUR/USD
|  60 TransactTime     = 20091020-14:04:33
+-TRAILER
|  10 CheckSum         = 210
+=====

```

Server inbound response:

```

+-HEADER
|   8 BeginString      = FIX.4.2
|   9 BodyLength       = 312
|  35 MsgType          = ExecutionReport (8)
|  34 MsgSeqNum        = 173
|  49 SenderCompID     = OANDA
|  52 SendingTime      = 20091020-14:04:48.929
|  56 TargetCompID     = testusr9
+-BODY
|   1 Account          = 9
|   6 AvgPx            = 0
|  11 ClOrdID          = modify_std_limit_order
|  14 CumQty           = 0
|  17 ExecID           = T175433117
|  20 ExecTransType    = NEW (0)
|  21 HandlInst        = AUTOMATED_EXECUTION_ORDER_PRIVATE_NO_BROKER_INTERVENTION (1)
|  31 LastPx           = 0
|  32 LastShares       = 0
|  37 OrderID          = 8726
|  38 OrderQty         = 15
|  39 OrdStatus        = REPLACED (5)
|  40 OrdType           = LIMIT (2)
|  41 OrigClOrdID     = new_std_limit_order
|  44 Price             = 1.28
|  54 Side              = BUY (1)
|  55 Symbol           = EUR/USD
|  58 Text              = OANDA transaction ID(s): 175433116-175433117.
|  59 TimeInForce      = GOOD_TILL_DATE (6)
|  60 TransactTime     = 20091020-14:04:48
| 126 ExpireTime       = 20091020-21:00:00
| 150 ExecType         = REPLACE (5)
| 151 LeavesQty        = 15
+-TRAILER

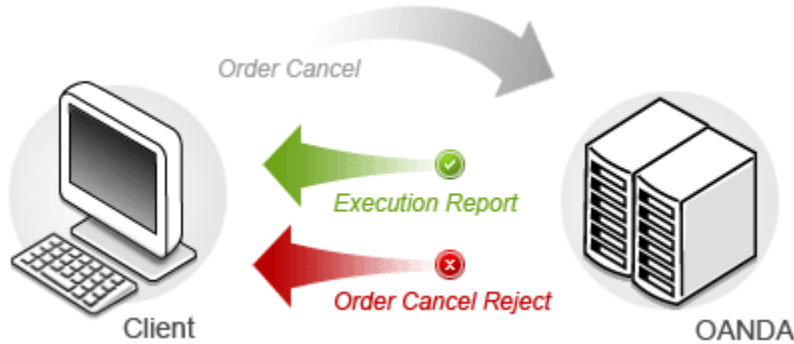
```

| 10 CheckSum = 225
+=====

Order Cancel Request (Outbound) <F>

The Order Cancel Request <F> message requests the cancellation of an order.

The Order Cancel Request will only be accepted (and an Execution Report <8> returned) if the order hasn't already been executed and can be pulled back successfully. Otherwise, an Order Cancel Reject <9> message is returned.



The OANDA server supports full cancellations only. The OrderQty tag is conditionally required by the FIX specification, but is not required on the OANDA Server. Any OrderQty value supplied in a request will be ignored; the full order will be canceled. To reduce the quantity of an order, use the Order Cancel / Replace <G> message instead.

Fields <F>

TAG	FieldName	Req'd by FIX	Req'd by OANDA	Type	Comments
	Standard Header	Y	Y		See Header Fields . MsgType = F
37	OrderID	N	N	string	Unique identifier for the order as assigned by the OANDA server.
41	OrigClOrdID	Y	Y	string	Used to identify the previous order in cancel and cancel/replace requests.
11	ClOrdID	Y	Y	string	Unique order identifier assigned by the client.
1	Account	N	Y	string	The OANDA fxTrade or fxTrade Practice account number Required for outbound order or trade requests to the OANDA server where indicated in this document.
55	Symbol	Y	Y	string	Must be a valid ISO currency pair, with forward slash. For example, EUR/USD.
54	Side	Y	Y	char	Side of order. Valid values:

OANDA FIX Rules of Engagement

					1 = Buy 2 = Sell
60	TransactTime	Y	Y	UTC Time stamp	Time of execution/order creation, expressed in UTC (Universal Time Coordinated, also known as 'GMT'). The timestamp in this field allows the OANDA server to apply business rules to determine if the order is potentially "stale" (for example, in the event of communication problems).
	Standard Trailer	Y	Y		See Trailer Fields

Example

Client outbound request:

Canceling the previous limit order:

```

+-HEADER
|   8 BeginString      = FIX.4.2
|   9 BodyLength       = 119
|  35 MsgType          = OrderCancelRequest (F)
|  34 MsgSeqNum        = 173
|  49 SenderCompID     = testusr9
|  52 SendingTime      = 20091020-14:05:34.000
|  56 TargetCompID     = OANDA
+-BODY
|   1 Account           = 9
|  11 ClOrdID           = cancel_std_limit_order
|  41 OrigClOrdID       = modify_std_limit_order
|  54 Side              = BUY (1)
|  55 Symbol            = EUR/USD
|  60 TransactTime      = 20091020-14:05:32
+-TRAILER
|  10 CheckSum          = 207
+=====

```

Server inbound response:

```

+-HEADER
|   8 BeginString      = FIX.4.2
|   9 BodyLength       = 314
|  35 MsgType          = ExecutionReport (8)
|  34 MsgSeqNum        = 174
|  49 SenderCompID     = OANDA
|  52 SendingTime      = 20091020-14:05:35.405
|  56 TargetCompID     = testusr9
+-BODY
|   1 Account           = 9
|   6 AvgPx            = 0
|  11 ClOrdID           = cancel_std_limit_order
|  14 CumQty            = 0
|  17 ExecID            = T175433118
|  20 ExecTransType     = NEW (0)
|  21 HandlInst         = AUTOMATED_EXECUTION_ORDER_PRIVATE_NO_BROKER_INTERVENTION (1)
|  31 LastPx           = 0
|  32 LastShares        = 0
|  37 OrderID           = 8726
|  38 OrderQty          = 15
|  39 OrdStatus         = CANCELED (4)
|  40 OrdType           = LIMIT (2)
|  41 OrigClOrdID       = modify_std_limit_order
|  44 Price             = 1.28
|  54 Side              = BUY (1)
|  55 Symbol            = EUR/USD
|  58 Text              = OANDA transaction ID(s): 175433116-175433118.

```

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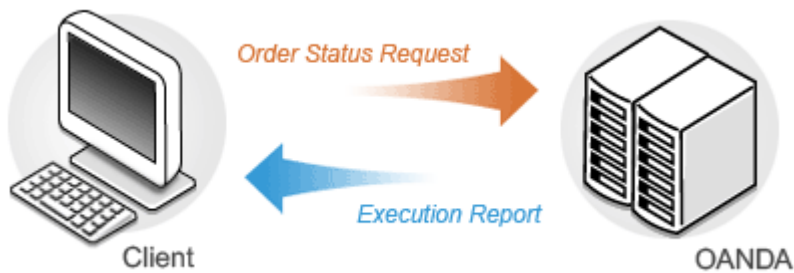
```

| 59 TimeInForce = GOOD_TILL_DATE (6)
| 60 TransactTime = 20091020-14:05:35
| 126 ExpireTime = 20091020-21:00:00
| 150 ExecType = CANCELED (4)
| 151 LeavesQty = 0
+-TRAILER
| 10 CheckSum = 185
+=====
    
```

Order Status Request (Outbound) <H>

Information on previous orders is available through the Order Status Request <H> message. An Execution Report message reply supplies information for the requested order.

Status information on an order is available for at least one month after the order's completion (fill, expiry, cancellation).



Fields <H>

TAG	FieldName	Req'd by FIX	Req'd by OANDA	Type	Comments
	Standard Header	Y	Y		See Header Fields . MsgType = H
37	OrderID	N	N	string	Unique identifier for the order as assigned by the OANDA server.
11	ClOrdID	Y	Y	string	Unique order identifier assigned by the client.
55	Symbol	Y (FIX 4.2) N (FIX 4.4)	Y (always)	string	Must be a valid ISO currency pair, with forward slash. For example, EUR/USD.
54	Side	Y	Y	char	Side of order. Valid values: 1 = Buy 2 = Sell
	Standard Trailer	Y	Y		See Trailer Fields

Example

Client outbound request for a previous order:

```

+-HEADER
|   8 BeginString      = FIX.4.2
|   9 BodyLength       = 68
|  35 MsgType          = OrderStatusRequest (H)
|  34 MsgSeqNum        = 174
|  49 SenderCompID     = testusr9
|  52 SendingTime      = 20091020-14:06:18.000
|  56 TargetCompID     = OANDA
+-BODY
|  11 ClOrdID          = cancel_std_limit_order
|  54 Side              = BUY (1)
|  55 Symbol            = EUR/USD
+-TRAILER
|  10 CheckSum         = 044
+=====
    
```

Server inbound response:

```

+-HEADER
|   8 BeginString      = FIX.4.2
|   9 BodyLength       = 269
|  35 MsgType          = ExecutionReport (8)
|  34 MsgSeqNum        = 175
|  49 SenderCompID     = OANDA
|  52 SendingTime      = 20091020-14:06:18.948
|  56 TargetCompID     = testusr9
+-BODY
|   1 Account          = 9
|   6 AvgPx            = 0
|  11 ClOrdID          = cancel_std_limit_order
|  14 CumQty           = 0
|  17 ExecID           = 0
|  20 ExecTransType    = STATUS (3)
|  21 HandlInst        = AUTOMATED_EXECUTION_ORDER_PRIVATE_NO_BROKER_INTERVENTION (1)
|  37 OrderID          = 8726
|  38 OrderQty         = 15
|  39 OrdStatus        = CANCELED (4)
|  40 OrdType          = LIMIT (2)
|  44 Price            = 1.28
|  54 Side              = BUY (1)
|  55 Symbol            = EUR/USD
|  58 Text              = OANDA transaction ID(s): 175433116-175433118.
|  59 TimeInForce      = GOOD_TILL_DATE (6)
|  60 TransactTime     = 20091020-14:05:35
| 126 ExpireTime       = 20091020-21:00:00
| 150 ExecType         = CANCELED (4)
| 151 LeavesQty        = 0
+-TRAILER
|  10 CheckSum         = 108
+=====
    
```

Market Data Request (Outbound) <V>

FIX clients can access OANDA's real-time price information using a Market Data Request <V>, which is a general request for market data on specific forex rates.



Types of Market Data Requests

The Snapshot (SubscriptionRequestType = 0) is best for one-time requests. If you require rates to be continuously updated, we recommend the subscription request (Snapshot+updates, (SubscriptionRequestType = 1) rather than using rapid snapshot polling.

SubscriptionRequestType = 0, Snapshot

If a Market Data Request message is valid and successful, the OANDA server returns one or more Market Data - Snapshot/Full Refresh <W> messages containing one or more market data entries. If it's not valid or is otherwise unsuccessful, the OANDA server returns a Market Data Request Reject <Y>.

For best performance, we recommend submitting all desired symbols (that is, currency pairs) with a single market data request. We also recommend requesting both Buy and Sell side data in the same request instead of submitting separate requests per side. If you request multiple symbols, a Market Data Snapshot reply will be returned for each symbol.

SubscriptionRequestType = 1, Snapshot + Updates (Subscribe)

When a subscription is requested, an initial snapshot is returned followed by Market Data - Incremental Refresh <X> messages continuously updating the rates as they change. These incremental refresh messages will continue arriving until the subscription is canceled or the session is disconnected or otherwise ended.

MDUpdateType <265> = 1 must be specified for subscriptions, or else a Market Data Reject <Y> MDReqRejReason = 6 (Unsupported MDUpdateType) is returned. If it is rejected, the entire new subscription is rejected and none of the requested symbols are subscribed.

The MDReqID must be unique among subscriptions; duplicates are detected, and a Market Data Reject <Y> MDReqRejReason = 1 (Duplicate MDReqID) message is returned. If rejected, the entire new subscription is rejected and none of the requested symbols are subscribed.

If any symbol requested in a subscription is already the subject of another subscription, the entire subscription is rejected via Market Data Reject <Y> with Text <58> indicating the duplicate

OANDA FIX Rules of Engagement

symbols. If rejected, the entire new subscription is rejected; none of the requested symbols are subscribed.

For best performance, OANDA recommends you place one single subscription with all the symbols you are interested in, with both bid and offer requests.

OANDA reserves the right to optimize or modify subscription behavior in the future.

SubscriptionRequestType = 2, Disable Previous Snapshot + Update Request (Unsubscribe)

An unsubscribe request must provide the MDReqID of an existing active subscription. The entire subscription is removed; all symbols of the referenced request are unsubscribed.

MDEntryTypes and Symbols are ignored in unsubscribe requests. If it is supported by your client FIX engine, we recommend you set NoMDEntryTypes <267> = 0 and NoRelatedSym <146> = 0 and omit any MDEntryType / Symbol tags completely (but this is not mandatory).

The exact format of snapshot and incremental refresh messages is described in the Server Responses section later in this document.

Fields <V>

TAG	FieldName	Req'd by FIX	Req'd by OANDA	Type	Comments
	Standard Header	Y	Y		See Header Fields . MsgType = V
262	MDReqID	Y	Y	string	Unique identifier for Market Data Request . Must be unique, or the ID of previous Market Data Request to disable if SubscriptionRequestType = Disable previous Snapshot + Updates Request (2).
263	SubscriptionRequestType	Y	Y	char	Indicates to the other party what type of response is expected. Valid values: 0 = Snapshot (only asks for current information) 1 = Snapshot + Updates (Subscribe) (asks for current information and subscribes for incremental updates) 2 = Disable previous Snapshot + Updates Request (Unsubscribe) (cancels a previous subscription)
264	MarketDepth	Y	Y	int	Depth of market for Book Snapshot Valid values: 1 = Top of Book

OANDA FIX Rules of Engagement

265	MDUpdateType	N	Y for subscriptions	int	Specifies the type of Market Data update. Valid values: 1 = Incremental refresh Market data full refreshes are not supported. This tag must be omitted for snapshot-only and unsubscribe requests.
267	NoMDEntryTypes	Y	Y	int	Specifies the number of repeating MDEntryType <269> entries.
269	MDEntryType	Y	Y	char	Entries that the firm requesting the Market Data is interested in receiving. There can be multiple fields, as defined by field 267. Valid values: 0 = Bid 1 = Offer
146	NoRelatedSym	Y	Y	int	Specifies the number of repeating Symbol <55> tags.
55	Symbol	Y	Y	string	Must be a valid ISO currency pair, with forward slash. For example, EUR/USD.
	Standard Trailer	Y	Y		See Trailer Fields

Example

Client outbound request for a single symbol:

```

+-HEADER
|   8 BeginString      = FIX.4.2
|   9 BodyLength       = 81
|  35 MsgType          = MarketDataRequest (V)
|  34 MsgSeqNum        = 2
|  49 SenderCompID     = testusr9
|  52 SendingTime      = 20100119-17:17:02.377
|  56 TargetCompID     = OANDA
+-BODY
|  146 NoRelatedSym    = 1
|  262 MDReqID         = foo
|  263 SubscriptionRequestType = SNAPSHOT (0)
|  264 MarketDepth     = 1
|  267 NoMDEntryTypes = 2
+-NoRelatedSym-Member-0
|   55 Symbol          = EUR/USD
+-NoMDEntryTypes-Member-0
|  269 MDEntryType     = BID (0)
+-NoMDEntryTypes-Member-1
|  269 MDEntryType     = OFFER (1)
+-TRAILER
|  10 CheckSum         = 028
+=====

```

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Server inbound response:

```
+--HEADER
|   8 BeginString      = FIX.4.2
|   9 BodyLength       = 195
|  35 MsgType          = MarketDataSnapshotFullRefresh (W)
|  34 MsgSeqNum        = 3
|  49 SenderCompID     = OANDA
|  52 SendingTime      = 20100119-17:17:02.379
|  56 TargetCompID     = testusr9
+--BODY
|   55 Symbol           = EUR/USD
|  262 MDReqID         = foo
|  268 NoMDEntries     = 2
+--NoMDEntries-Member-0
|  269 MDEntryType     = BID (0)
|  270 MDEntryPx       = 1.42706
|  271 MDEntrySize     = 10000000
|  272 MDEntryDate     = 20100119
|  273 MDEntryTime     = 17:17:02
+--NoMDEntries-Member-1
|  269 MDEntryType     = OFFER (1)
|  270 MDEntryPx       = 1.42715
|  271 MDEntrySize     = 10000000
|  272 MDEntryDate     = 20100119
|  273 MDEntryTime     = 17:17:02
+--TRAILER
|   10 CheckSum        = 215
+=====
```

Server Responses (Inbound)

Execution Report (Inbound) <8>

The Execution Report <8> message is returned by the OANDA server to report that a client order was executed or rejected. For example, this message could:

- confirm receipt of an order (New Order - Single <D>)
- confirm changes to an existing order were made (Order Cancel Request <F>, Order Cancel / Replace Request <G>)
- reject new orders

Rejected order modifications or cancellations are communicated via Order Cancel Reject <9>.

Note that the format of an Execution Report message varies by FIX version. In FIX 4.2, each execution report contains three fields that are used to communicate both the current state of the order and the purpose of the message: OrdStatus <39>, ExecType <150> and ExecTransType <20>. In FIX 4.4, each execution report contains two fields that are used to communicate both the current state of the order (OrdStatus <39>) and the purpose of the message (ExecType <150>).

In execution reports, the TimeInForce <59> tag that is reported for a long-duration order will be reported as DAY in response to a request where TimeInForce=DAY was specified. In general, order expiry times will be reported using TimeInForce=GTD with the exact UTC expiry time reported via ExpireTime <126>.

The Text <58> field provides supplemental information about the order execution. It consists of phrases or sentences separated with a period and space. Execution reports also list the OANDA transaction IDs (transaction tickets) that correspond to the FIX order as discussed in the section ["Mapping of FIX Orders to OANDA Transaction tickets"](#).

An Execution Report for a Market-if-Touched order appearing on a FIX 4.2 session will be reported as OrdType <40> = 2 with a Text <58> annotation "OrdType=J".

Fields <8>

TAG	FieldName	Req'd by FIX	Type	Comments
	Standard Header	Y		See Header Fields . MsgType = 8
37	OrderID	Y	string	Unique identifier for the order as assigned by the OANDA server.
11	ClOrdID	N	string	Unique order identifier assigned by the client.
41	OrigClOrdID	N	string	ClOrdID <11> of the previous order (NOT the initial order of the day) assigned by the client, used to identify the previous order in cancel and cancel/replace requests.
17	ExecID	Y	string	Execution ID as assigned by the OANDA server.

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20	ExecTransType (FIX 4.2 only)	Y	char	Identifies transaction type. Valid values: 0 = New
150	ExecType	Y	char	Describes the specific Execution Report (for example, Pending Cancel) while OrdStatus <39> will always identify the current order status (for example, Partially Filled). Valid values: 0 = New 2 = Fill (FIX 4.2 only) 4 = Canceled 5 = Replace 8 = Rejected C = Expired F = Trade (FIX 4.4 only)
39	OrdStatus	Y	char	Identifies the current status of the order. Valid values: 0 = New 2 = Filled 4 = Canceled 5 = Replaced (FIX 4.2 only) 8 = Rejected C = Expired
103	OrdRejReason	N	int	Code to identify reason for order rejection. Valid values: 0 = Broker option 1 = Unknown symbol 2 = Exchange closed 3 = Order exceeds limit 4 = Too late to enter 5 = Unknown Order 6 = Duplicate Order (e.g. duplicate ClOrdID <11>) 8 = Stale Order 99 = Other (FIX 4.4 only)
1	Account	N	string	The OANDA fxTrade or fxTrade Practice account number. Required for outbound order or trade requests to the OANDA server where indicated in this document.
21	HandlInst	Y (FIX 4.2) N (FIX 4.4)	"1"	Instructions for order handling on the broker trading floor. In FIX 4.4, the absence of this field is interpreted as value 1. Valid values: 1 = Automated execution order, private, no broker intervention
55	Symbol	Y	string	Must be a valid ISO currency pair, with forward slash. For example, EUR/USD.

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461	CFICode (FIX 4.4 only)	N	string	ISO 10962-compliant CFI code Valid values: MRCXXX
54	Side	Y	char	Side of order Valid values: 1 = Buy 2 = Sell
38	OrderQty	N	qty	Number of units ordered.
40	OrdType	N	char	Order type. Valid values: 1 = Market 2 = Limit 3 = Stop J = Market-if-Touched Note Execution Reports for Market-if-Touched orders on FIX 4.2 sessions will report OrdType=2 with a supplementary Text <58> token.
44	Price	N	Price	Present if specified in the order.
99	StopPx	N	Price	Present if specified in the order.
59	TimeInForce	N	char	Present if specified in the order. Valid Values: 0 = Day 3 = Immediate or Cancel (IOC) 4 = Fill or Kill (FOK) 6 = GTD
126	ExpireTime	N	UTC Time stamp	Provided to indicate the expiry time of an entry, limit, or stop order.
32	LastShares (FIX 4.2) LastQty (FIX 4.4)	N	qty	Units bought/sold on this (last) fill.
31	LastPx	N	price	Price of this (last) fill.
151	LeavesQty	Y	qty	Amount open for further execution. If the OrdStatus is Canceled, Expired, or Rejected (in which case the order is no longer active) then LeavesQty could be 0, otherwise LeavesQty = OrderQty - CumQty.
14	CumQty	Y	qty	Total number of units filled.
6	AvgPx	Y	price	Calculated average price of all fills on this order.
60	TransactTime	N	UTC Time Stamp	Time the transaction represented by this Execution Report occurred.

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58	Text	N	string	Text message providing supplemental information on the order. Market-if-Touched order messages on FIX 4.2 sessions will contain token OrdType=J . Also, the resulting OANDA transaction IDs are listed here.
	Standard Trailer	Y		See Trailer Fields

Order Cancel Reject (Inbound) <9>

The Order Cancel Reject <9> message is issued by the OANDA server in response to Cancel Request <F> or Cancel/Replace Request <G> messages which cannot be honored.

Requests to change price or quantity are executed only when an outstanding quantity exists. Filled orders cannot be changed.

Fields <9>

TAG	FieldName	Req'd by FIX	Type	Comments
	Standard Header	Y		See Header Fields . MsgType = 9
37	OrderID	N	string	Unique identifier for the order as assigned by the OANDA server.
11	ClOrdID	Y	string	Unique order identifier assigned by the client.
41	OrigClOrdID	Y	string	ClOrdID which could not be canceled/replaced. ClOrdID of the previous order (NOT the initial order of the day) when canceling or replacing an order.
39	OrdStatus	Y	char	OrdStatus value after this cancel reject is applied. Valid values: 0 = New 2 = Filled 4 = Canceled 8 = Rejected C = Expired
1	Account	N	string	The OANDA fxTrade or fxTrade Practice account number. Required for outbound order or trade requests to the OANDA server where indicated in this document.
434	CxlRejResponseTo	Y	char	Identifies the type of request that the Cancel Reject is in response to. Valid values: 1 - Order Cancel Request <F> 2 - Order Cancel/Replace Request <G>

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102	CxlRejReason	N	int	Code to identify reason for cancel rejection. Valid values: 0 = Too late to cancel 1 = Unknown order 2 = Broker / Exchange Option 6 = Duplicate ClOrdID received (FIX 4.4 only) 99 = Other (FIX 4.4 only)
58	Text	N	string	Could note an Invalid field. See list below.
	Standard Trailer	Y		See Trailer Fields

Possible Values for Text Field (58)

Depending on the situation, one or more of the following messages will appear in the Text (58) field. This is not an exhaustive list.

Note: The text field (58) also includes OANDA transaction tickets—see the earlier section, “Mapping of FIX Orders to OANDA Transaction Tickets.”

TYPE Situation	Format	Selected Examples	Example Explanation
ERROR: required tag missing	[tag] required.	OrigClOrdID <41> required. OrderQty <38> required. Account <1> required.	
ERROR: the tag value supplied is not supported	[tag] = [value] not supported.	Side <54> = 4 not supported. OrdType <40> = P not supported.	
ERROR: tag value not valid	[tag] value invalid.	OrderQty <38> value invalid.	for example, if -100 units are requested
		Account <1> value invalid.	for example, if account "johnny's" is given when a numeric value is required
ERROR: tag value not in correct format	[tag] format error.	OrderID <37> format error.	for example, if order ID "three" is given when a numeric value is required
		ExpireTime <126> format error.	for example, if a wrong date format "January 15th" is used

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ERROR: tag specified but is not valid for the specific request	[tag] not valid when [tag2] = [value2].	Price <44> not valid when OrdType <40> = 1.	user tries to specify a limit price for a market order
		StopPx <99> not valid when OrdType <40> = 1.	user tries to specify a stop price for a market order
		StopPx <99> not valid when OrdType <40> = 2.	user tries to specify a stop price for a limit order
ERROR: tag required for specific request type is missing	[tag] required when [tag2] = [value2].	Price <44> required when OrdType <40> = 2.	the limit price is not supplied for a limit order
		StopPx <99> required when OrdType <40> = 3.	the stop price is not supplied for a stop order
		One of ExpireDate <432>, ExpireTime <126> required when TimeInForce <59> = 6.	the specific order lifetime is not supplied
ERROR: tag value supplied not supported for specific request	[tag] = [value] not supported when [tag2] = [value2].	TimeInForce <59> = 3 not supported when OrdType <40> = J.	user asks for IOC execution on a market-if-touched order
WARNING: day order placed too close to day expiration time		Order received after 16:55 ET; order will expire next day 17:00 ET (21:00 UTC).	
ERROR: an attempt to trade on an account without permission	Account <1> = [value] access denied.	Account <1> = 15 access denied.	
ERROR: value supplied is not a valid value	[tag] = [value] not valid.	Symbol <55> = gold/dollar not valid.	
ERROR: trade fails due to NSF	Account <1> = [value] insufficient funds.		
ERROR: trading halted on symbol	Symbol <55> = [value] trading halted.		
NOTICE or ERROR: trade size	OrderQty <38> = [value] exceeds available quantity for		

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exceeds maximum	symbol.		
ERROR: request on existing order results in multiple candidate matched orders (resubmit request with specific OrderID)	Multiple orders matched: [orderid](ordertype), [orderid](ordertype). OR Multiple orders match (COrdID,OrderID,OrdType): [clordid],[orderid],[ordtype];[repeats].	Multiple orders matched: 15(2), 19(1), 25(3). Multiple orders matched: buymore,15,2; buymore,19,1; buymore,25,3.	There are two formats: A comma-separated list: "b(c)" Or, a semicolon-separated list: "a,b,c" (where b is the orderid, c is the ordtype).
ERROR: exact order orderid provided, but some values specified do not match order particulars	[tag] value incorrect.	Symbol <55> value incorrect. Side <54> value incorrect.	
ERROR: user tries to change fixed order parameters	[tag] changes not permitted.	TimelnForce <59> changes not permitted. Symbol <55> changes not permitted. Side <54> changes not permitted. OrdType <40> changes not permitted.	
ERROR: order duration out of range	[tag] = [value] out of range; Order lifetime minimum 5 minutes, maximum 30 calendar days.	ExpireDate <432> = 21000115 out of range; Order lifetime minimum 5 minutes, maximum 30 calendar days.	
NOTICE: FOK/IOC error was canceled due to price stipulation not met	[tag] = [value] not met (market [type] = [price]).	Price <44> = 1.01 not met (market offer = 1.00). StopPx <99> = 1.01 not met (market bid = 1.00).	

Reject (Inbound) <3>

The Reject <3> message is issued by the OANDA server when a message is received but cannot be properly processed due to a syntax error or other coding logic violation. For example, the string " MsgType <35>=&" would successfully pass de-encryption, CheckSum <10> and BodyLength <9> checks, but would be rejected by the OANDA server with a Reject message.

The reason for the rejection may be given in the SessionRejectReason <373> tag, with further explanation given in the Text <58> field.

Fields <3>

TAG	FieldName	Req'd by FIX	Type	Comments
	Standard Header	Y		See Header Fields . MsgType = 3
45	RefSeqNum	Y	int	MsgSeqNum of rejected message
371	RefTagID	N	int	The tag number of the FIX field being referenced.
372	RefMsgType	N	string	The MsgType of the FIX message being referenced.
373	SessionReject Reason	N	int	Code to identify the reason for a session-level Reject message. Possible 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 incorrect (out of range) for this tag 6 Incorrect data format for value 7 Decryption problem 8 Signature <89> problem 9 CompID problem 10 SendingTime <52> accuracy problem 11 Invalid MsgType <35> (Note other session-level rule violations may exist in which case SessionRejectReason <373> is not specified)
58	Text	N	string	Where possible, this message explains the reason for rejection
	Standard Trailer	Y		See Trailer Fields

Business Message Reject (Inbound) <j>

The Business Message Reject <j> message rejects a client request message that fulfills session-level rules but fails to meet business requirements and cannot be rejected via any other means.

Fields <j>

TAG	FieldName	Req'd by FIX	Type	Comments
	Standard Header	Y		See Header Fields . MsgType = j (lower case)
45	RefSeqNum	N	int	MsgSeqNum of rejected message
372	RefMsgType	Y	string	The MsgType of the FIX message being referenced.
379	BusinessRejectRefID	N	string	The value of the business-level "ID" field on the message being referenced. Required unless the corresponding ID field (see list above) was not specified.
380	BusinessRejectReason	Y	int	Code to identify reason for a Business Message Reject message. Valid values: 1 = Unkown ID 3 = Unsupported Message Type 4 = Application Not Available 5 = Conditionally Required Field Missing
58	Text	N	string	Where possible, message to explain reason for rejection
	Standard Trailer	Y		See Trailer Fields

Market Data - Snapshot/Full Refresh <W>

Market Data - Snapshot/Full Refresh <W> messages respond to Market Data Request <V> messages. Snapshot <W> messages provide the Market Data Request <V> information via their MDReqID tag.

If multiple symbols were requested in one <V> message, multiple <W> responses are returned because each <W> message only provides information for one symbol.

Indicative prices (for non-tradable pairs) report MDEntrySize=0 and Text="Indicative".

Fields <W>

TAG	FieldName	Req'd by FIX	Type	Comments
	Standard Header	Y		See Header Fields . MsgType = W
262	MDReqID	N	string	Unique identifier for Market Data Request <V>
55	Symbol	Y	string	Must be a valid ISO currency pair, with forward slash. For example, EUR/USD.
268	NoMDEntries	Y	int	Number of entries following
269	MDEntryType	Y	char	Type Market Data entry. Must be the first field in this repeating group. Valid values: 0 = Bid 1 = Offer
270	MDEntryPx	Y	price	Price of the Market Data Entry
271	MDEntrySize	N	int	Number of units available (or the maximum trade size) at the time the market data snapshot was generated
272	MDEntryDate	N	UTCDate	UTC date of rate data
273	MDEntryTime	N	UTCTimeOnly	UTC time of rate data
58	Text	N	String	Indicative prices are marked "Indicative".
	Standard Trailer	Y		See Trailer Fields

Example

For an example of a full refresh message, see the previous market data <V> example.

Market Data - Incremental Refresh <X>

On a Market Data Request <V> subscription request, after the snapshot for the requested symbols is sent, Incremental Refresh <X> messages are sent on rate updates. If the rate is unchanged, no message is sent.

The OANDA rates system always updates the bid and offer rates simultaneously; if both bid and offer are subscribed to, they will always be provided together in the incremental refresh.

The tags MDEntrySize and MDEntryDate may or may not appear in incremental refresh messages; if they are absent, the most recent previously-indicated value for the symbol still applies.

Notes on Multiple Subscriptions

The <X> message supports multiple market data entries, so each <X> message may provide rate updates on multiple symbols, possibly from multiple subscriptions.

- For one subscription: If an incremental refresh <X> message contains rate data for symbols that all belong to one subscription, its MDReqID tag indicates the requesting subscription.
- For multiple subscriptions: If the message contains data for symbols from multiple subscriptions, each MD entry will include a Text field with the string "MDReqID=<id>", where "<id>" indicates the requesting subscription.

OANDA reserves the right to optimize or modify subscription behavior in the future.

Fields <X>

TAG	FieldName	Req'd by FIX	Type	Comments
	Standard Header	Y		See Header Fields . MsgType = X
262	MDReqID	N	string	Conditionally provided if this message is in response to a single Market Data Request <V>. See the section on multiple subscriptions above.
268	NoMDEntries	Y	int	Number of entries following
	Entries			There can be multiple entries based on the NoMDEntries field. (See the MD entries table below for details on fields.)
	Standard Trailer	Y		See Trailer Fields

MD Entries

Multiple MD entries may be returned (the number of entries is defined in the NoMDEntries field).

TAG	FieldName	Req'd by FIX	Type	Comments
279	MDUpdateAction	Y	char	Valid values: 1 = Change

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269	MDEntryType	N	char	Type of Market Data entry. Valid values: 0 = Bid 1 = Offer
55	Symbol	N	string	A valid ISO currency pair, must include the forward slash. For example, "EUR/USD".
270	MDEntryPx	N	price	Price of the Market Data Entry.
271	MDEntrySize	N	Int	Number of units available (or the maximum trade size) at the time the market data snapshot was generated
272	MDEntryDate	N	UTCDate	UTC date of rate data
273	MDEntryTime	N	UTCTimeOnly	UTC time of rate data
58	Text	N	String	Indicative prices are marked "Indicative".
58	Text	N	string	If there are multiple subscriptions, indicates the MDReqID. See the section on multiple subscriptions above.

Examples:

Sample incremental refresh message, in response to a subscription MDReqID=foo, giving data for two symbols (request and initial snapshot response not shown):

```

+-HEADER
|   8 BeginString      = FIX.4.2
|   9 BodyLength       = 315
|  35 MsgType          = MarketDataIncrementalRefresh (X)
|  34 MsgSeqNum        = 229
|  49 SenderCompID     = OANDA
|  52 SendingTime      = 20090618-15:03:56.000
|  56 TargetCompID     = testusr
+-BODY
|  262 MDReqID         = foo
|  268 NoMDEntries     = 4
+-NoMDEntries-Member-0
|  279 MDUUpdateAction = CHANGE (1)
|  269 MDEntryType     = BID (0)
|   55 Symbol          = USD/CAD
|  270 MDEntryPx       = 1.12654
|  272 MDEntryDate     = 20090618
|  273 MDEntryTime     = 15:03:56
+-NoMDEntries-Member-1
|  279 MDUUpdateAction = CHANGE (1)
|  269 MDEntryType     = OFFER (1)
|   55 Symbol          = USD/CAD
|  270 MDEntryPx       = 1.12694
|  272 MDEntryDate     = 20090618
|  273 MDEntryTime     = 15:03:56
+-NoMDEntries-Member-2
|  279 MDUUpdateAction = CHANGE (1)
|  269 MDEntryType     = BID (0)
|   55 Symbol          = EUR/USD
|  270 MDEntryPx       = 1.39651

```

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```
| 272 MDEntryDate = 20090618
| 273 MDEntryTime = 15:03:56
+-NoMDEntries-Member-3
| 279 MUpdateAction = CHANGE (1)
| 269 MDEntryType = OFFER (1)
| 55 Symbol = EUR/USD
| 270 MDEntryPx = 1.39663
| 272 MDEntryDate = 20090618
| 273 MDEntryTime = 15:03:56
+-TRAILER
| 10 CheckSum = 253
+=====
```

Sample incremental refresh message, with symbols requested from two different subscription requests, MDReqID=foo and MDReqID=bar:

```
+--HEADER
| 8 BeginString = FIX.4.2
| 9 BodyLength = 366
| 35 MsgType = MarketDataIncrementalRefresh (X)
| 34 MsgSeqNum = 26
| 49 SenderCompID = OANDA
| 52 SendingTime = 20090618-15:08:15.000
| 56 TargetCompID = testusr
+-BODY
| 268 NoMDEntries = 4
+-NoMDEntries-Member-0
| 279 MUpdateAction = CHANGE (1)
| 269 MDEntryType = BID (0)
| 55 Symbol = GBP/CHF
| 270 MDEntryPx = 1.76829
| 272 MDEntryDate = 20090618
| 273 MDEntryTime = 15:08:15
| 58 Text = MDReqID=bar
+-NoMDEntries-Member-1
| 279 MUpdateAction = CHANGE (1)
| 269 MDEntryType = OFFER (1)
| 55 Symbol = GBP/CHF
| 270 MDEntryPx = 1.76882
| 272 MDEntryDate = 20090618
| 273 MDEntryTime = 15:08:15
| 58 Text = MDReqID=bar
+-NoMDEntries-Member-2
| 279 MUpdateAction = CHANGE (1)
| 269 MDEntryType = BID (0)
| 55 Symbol = USD/CAD
| 270 MDEntryPx = 1.12607
| 272 MDEntryDate = 20090618
| 273 MDEntryTime = 15:08:15
| 58 Text = MDReqID=foo
+-NoMDEntries-Member-3
| 279 MUpdateAction = CHANGE (1)
| 269 MDEntryType = OFFER (1)
| 55 Symbol = USD/CAD
| 270 MDEntryPx = 1.12647
| 272 MDEntryDate = 20090618
| 273 MDEntryTime = 15:08:15
| 58 Text = MDReqID=foo
+-TRAILER
| 10 CheckSum = 008
+=====
```

Market Data Request Reject <Y>

The Market Data Request Reject <Y> is used when the broker cannot honor the Market Data Request <V>, due to business or technical reasons. Brokers may choose to limit various parameters, such as the size of requests, whether just the top of book or the entire book may be displayed, and whether Full or Incremental updates must be used.

Fields

TAG	FieldName	Req'd by FIX	Type	Comments
	Standard Header	Y		See Header Fields . MsgType = Y
262	MDReqID	Y	string	Unique identifier for Market Data Request <V>
281	MDReqRejReason	N	char	Reason for the rejection of a Market Data request. Valid values: 0 = Unknown symbol 4 = Unsupported SubscriptionRequestType
58	Text	N	string	Explanatory text from the server.
	Standard Trailer	Y		See Trailer Fields

Example

Sample client request with invalid symbol:

```

+-HEADER
|   8 BeginString      = FIX.4.2
|   9 BodyLength       = 88
|  35 MsgType          = MarketDataRequest (V)
|  34 MsgSeqNum        = 28
|  49 SenderCompID     = testusr
|  52 SendingTime      = 20090605-16:23:59.000
|  56 TargetCompID     = OANDA
+-BODY
|  146 NoRelatedSym    = 1
|  262 MDReqID         = 6
|  263 SubscriptionRequestType = SNAPSHOT (0)
|  264 MarketDepth     = 1
|  267 NoMDEntryTypes  = 2
+-NoRelatedSym-Member-0
|   55 Symbol          = Dubloon/Buckazoid
+-NoMDEntryTypes-Member-0
|  269 MDEntryType     = BID (0)
+-NoMDEntryTypes-Member-1
|  269 MDEntryType     = OFFER (1)
+-TRAILER
|  10 CheckSum         = 115
+=====

```

Server inbound response:

```

+-HEADER
|   8 BeginString      = FIX.4.2
|   9 BodyLength       = 92
|  35 MsgType          = MarketDataRequestReject (Y)
|  34 MsgSeqNum        = 29
|  49 SenderCompID     = OANDA
|  52 SendingTime      = 20090605-16:23:59.000
|  56 TargetCompID     = testusr
+-BODY
|   58 Text            = InvalidPairException
|  262 MDReqID         = 6
|  281 MDReqRejReason  = UNKNOWN_SYMBOL (0)
+-TRAILER
|  10 CheckSum         = 121
+=====

```

Appendix: FIX Data Types

Type: char

Single character value, can include any alphanumeric character or punctuation except the delimiter. All char fields are case sensitive (i.e. m != M).

Type: data

(Boolean) Raw data with no format or content restrictions. Data fields are always immediately preceded by a length field. The length field should specify the number of bytes of the value of the data field (up to but not including the terminating SOH). Caution: the value of one of these fields may contain the delimiter (SOH) character. Note that the value specified for this field should be followed by the delimiter (SOH) character as all fields are terminated with an "SOH".

Type: int

Sequence of digits without commas or decimals and optional sign character (ASCII characters "-" and "0" - "9"). The sign character utilizes one byte (i.e. positive int is "99999" while negative int is "-99999"). Note that int values may contain leading zeros (e.g. "00023" = "23"). Examples: 723 in field 21 would be mapped int as |21=723|, -723 in field 12 would be mapped int as |12=-723|.

Type: length

A positive integer denoting the number of bytes of the value of a data field.

Type: LocalMktDate

Date of Local Market, in YYYYMMDD format, where YYYY = 0000-9999, MM = 01-12, DD = 01-31. Contrast with UTCTimestamp.

Type: price

A positive floating value, with up to five decimal places.

Type: string

An alpha-numeric free-format string of characters that can include any character or punctuation except the delimiter. All char fields are case sensitive.

Type: UTCDate

YYYYMMDD portion of UTCTimestamp.

Type: UTCTimeOnly

HH:MM:SS portion of UTCTimestamp.

Type: UTCTimestamp

A time/date combination represented in UTC (Universal Time Coordinated, also known as "GMT") in either YYYYMMDD-HH:MM:SS (whole seconds) or YYYYMMDD-HH:MM:SS.sss (milliseconds) format. The colons, dash, and period are required. Contrast with LocalMktDate.

Appendix: FIX Message Types

(This list shows all FIX message types. Message types supported by OANDA fxTrade are **bolded**.)

0 = Heartbeat (automatically handled by the FIX engine software)

1 = Test Request

2 = Resend Request (automatically handled by the FIX engine software)

3 = Reject

4 = Sequence Reset (automatically handled by the FIX engine software)

5 = Logout

6 = Indication of Interest

7 = Advertisement

8 = Execution Report

9 = Order Cancel Reject

A = Logon

B = News (sent by the OANDA server following successful logon)

C = Email

D = New Order - Single

E = Order - List

F = Order Cancel Request

G = Order Cancel/Replace Request

H = Order Status Request

J = Allocation

K = List Cancel Request

L = List Execute

M = List Status Request

N = List Status

P = Allocation ACK

Q = Don't Know Trade (DK)

R = Quote Request

S = Quote

T = Settlement Instructions

V = Market Data Request

W = Market Data - Snapshot/Full Refresh

X = Market Data - Incremental Refresh

Y = Market Data Request Reject

Z = Quote Cancel

a = Quote Status Request

b = Quote Acknowledgement

c = Security Definition Request

d = Security Definition

e = Security Status Request

f = Security Status

g = Trading Session Status Request

h = Trading Session Status

i = Mass Quote

j = Business Message Reject

k = Bid Request

l = Bid Response (lowercase L)

m = List Strike Price

Addendum: Additional Features for Institutional Clients

OANDA institutional clients can access additional features on the OANDA FIX Server. Your sales or account representative will advise if one or more of the following features is available for your FIX access.

Limitation to Immediate-fill Order Types

Some clients are limited to those order types that provide an immediate fill notification:

- market orders
- limit orders submitted FOK or IOC
- stop orders submitted FOK or IOC

These order types receive expedient processing by the transaction systems, and are ideal for customers who require faster response times.

Varying Liquidity

Users are advised to check the MDEntrySize <271> tag in Market Data Snapshot <W> and Incremental Refresh <X> messages. This value indicates the maximum quantity that can be traded per trade for the symbol indicated.

At times, this value will be zero, indicating that no quantity is available for execution. Any trades submitted at times of zero quantity available will receive OrdStatus <39> = CANCELED for FOK/IOC orders, REJECTED for all other order types..

Value Date

This feature is called "Value Date" but involves tags named "Settlement Date".

Certain users will receive the tag FutSettDate <64> (FIX.4.2) / SettIDate <64> (FIX.4.4) in both Market Data Snapshot <W> and Incremental Refresh <X> messages. The value in this tag is in LocalMktDate (New York) time, and indicates when the position will be settled in the user's account with their Prime Broker, should the user place a trade on this symbol at the time indicated by SendingTime <52> value of the FIX message.

Tag <64> is **not normally a valid tag** for <W> and <X> messages, so the client's FIX engine **must be modified to accept this tag** in <W> and <X> messages. Otherwise, the engine may reject the messages due to structural validation failure. An entry for tag <64> should be inserted after any instance of tag <287> in <W> and <X> messages in the FIX data dictionary (that is, as part of a NoMDEntries group item).

Market Data Snapshot / Full Refresh <W> -- Fields				
TAG	FieldName	Req'd by FIX	Type	Comments
	Standard Header	Y		Standard header fields; MsgType = W
262	MDReqID	N	string	Unique identifier for Market Data Request <V>

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55		Symbol	Y	string	Must be a valid ISO currency pair, with forward slash
268		NoMDEntries	Y	int	Number of entries following
->	269	MDEntryType	Y	char	Type of Market Data entry. Must be the first field in this repeating group.
->	270	MDEntryPx	Y	price	Price of the Market Data Entry
->	271	MDEntrySize	N	int	Number of units available (the maximum trade size)
->	272	MDEntryDate	N	UTCDate	UTC date of rate data
->	273	MDEntryTime	N	UTCTimeOnly	UTC time of rate data
->	64	SettlDate	N	LocalMktDate	New York time
		Standard Trailer	Y		standard trailer fields

Market Data Incremental Refresh <X> -- Fields					
TAG		FieldName	Req'd by FIX	Type	Comments
		Standard Header	Y		Standard header fields; MsgType = X
262		MDReqID	N	String	Unique identifier for Market Data Request <V>
268		NoMDEntries	Y	int	Number of entries following
->	279	MDUpdateAction	Y	char	Must be first field in this repeating group
->	269	MDEntryType	N	char	Type of Market Data entry
->	55	Symbol	Y	String	ISO currency pair with forward slash
->	270	MDEntryPx	Y	price	Price of the Market Data Entry
->	271	MDEntrySize	N	int	Number of units available (the maximum trade size)
->	272	MDEntryDate	N	UTCDate	UTC date of rate data

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->	273	MDEntryTime	N	UTCTimeOnly	UTC time of rate data
->	64	SettlDate	N	LocalMktDate	New York time
->	58	Text	N	String	Indicates MDReqID if this message updates market data from multiple subscriptions.
		Standard Trailer	Y		standard trailer fields

Tag <64> is added to Execution Report <8> messages to indicate the LocalMktDate (New York) time when the position will be settled in the user's account with their Prime Broker.

Conversion Rate Reporting

Certain users will receive information on the approximate home currency conversion rate applicable on their account at the time a trade is transacted. This rate is provided as a bid/offer pair, expressed as home/quote where "home" represents the account home currency, and "quote" is the quote currency of the pair traded (CCY2 in "CCY1/CCY2").

No conversion rate information is provided if:

- the information cannot be determined
- the quote currency is the home currency (meaning the conversion rates are 1.0)

Execution Report <8> Fields				
TAG	FieldName	Req'd by FIX	Type	Comments
	Standard Header	Y		standard header fields; MsgType = 8
(usual execution report fields)				
20000	ConversionRateSymbol	N	string	Currency pair, expressed as home/quote.
20001	ConversionRateBid	N	price	
20002	ConversionRateOffer	N	price	
20003	ConversionRateTime	N	UTCTimestamp	Timestamp of the approximate rates.
	Standard Trailer	Y		standard trailer fields

Note that these conversion rate tags are **not standard FIX protocol tags**. These tags are defined in the unregistered user-defined tags range, and the user's FIX engine **must be modified to accept these tags** in the Execution Report <8> message. Otherwise, the engine may reject the messages due to structural validation failure.