OANDA FIX Rules of Engagement

Specifications for OANDA FXTrade and FXGame FIX Server version fixs-1.1.7
Supporting FIX Protocol versions 4.2 and 4.4

Last updated: June 11, 2010

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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 FXGame and then deployed to FXTrade the week afterward.

Version fixs-1.1.7:

- Logon messages now require ResetSeqNumFlag <141> = Y. Logon attempts without the flag or with value N will be rejected.

Version fixs-1.1.2:

- MDEntrySize information is now reported in Market Data Snapshot / Full Refresh messages

Version fixs-1.0.0:

- Standard Limit and Stop order semantics is now observed, meaning there is a significant change in the FIX server behavior. See the section Standard Limit and Stop Order Semantics and OANDA Entry Orders (New for fixs-1.0.0) for details.

- Limit and Stop orders now support TimeInForce = IOC and FOK.

For a list of changes before version 1, see Appendix: New Features Introduced Before Version 1.

What is FIX?

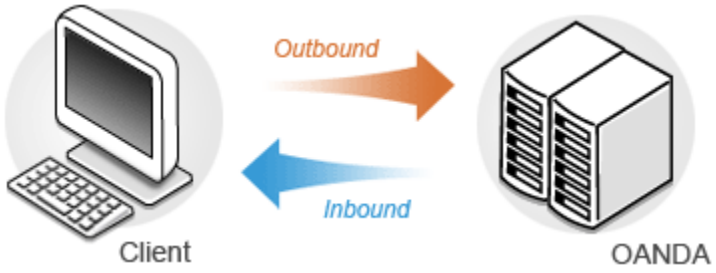
The Financial Information eXchange ("FIX") Protocol is a series of messaging specifications for the electronic communication of financial data, including trade-related messages. It is a globally accepted standard of messaging specifications developed through the collaboration of banks, brokers, exchanges,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

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.)

OANDA FXTrade supports versions 4.2 and 4.4 of this protocol. For queries or to report bugs, contact the OANDA API team, api@oanda.com.

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.

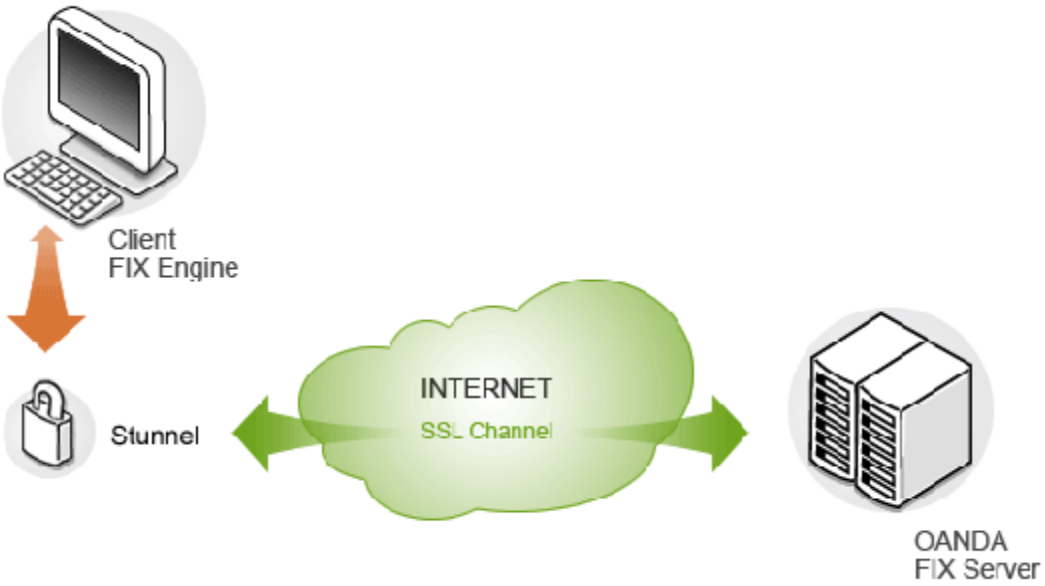


FIX sessions must be initiated through logon messages (and the logon session is maintained as long as the client machine sends heartbeat messages at pre-determined intervals).

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/.

Deviations from FIX Protocol Compliance

- Order Cancel / Replace <G> requests are only supported for entry, limit and stop orders with an order lifetime (TimeInForce = DAY or GTD).
- Only changes to OrderQty, Price, and expiry time (TimeInForce = DAY/GTD) are supported.
- The order type cannot be changed.

These deviations may be addressed in future releases.

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 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 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')

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.

Supported Message Types

The OANDA FIX Server supports the following FIX (version 4.2) 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 <B>	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.4.2 9=152 35=D 34=5 49=testusr 52=20090605-14:51:58.000 56=OANDA 1=1 11=1 21=1
38=10 40=2 44=1.25 54=1 55=EUR/USD 59=6 60=20090605-14:51:31 126=20090610-12:34:56
10=212
```

OANDA FIX Server General Guidelines

Standard Limit and Stop Order Semantics and OANDA Entry Orders (New for fixs-1.0.0)

As of version fixs-1.0.0, the OANDA FIX server provides standard limit and stop order semantics. This means that this document now uses the term "**Entry Order**" to refer to OANDA's style of Limit Order. The terms **standard limit** and **standard stop** now distinguish these particular standard order types from entry orders (that is, the limit orders as defined by OANDA).

Previous behavior:
In OANDA's FIX server versions fixs-0.3.x and earlier, the default order type provided by OrdType <40> = 2 was the Entry Order. Entry Orders had a bidirectional limit price, meaning that your order would wait to be filled at the request price regardless of whether the current market price was better or worse than the request price. That is, the Entry Order behaved like a standard limit order if the market price was worse than the request price (higher for buy, lower for sell) , and behaved like a standard stop order if the market price was better than the request price (lower for buy, higher for sell) .

New behavior:

- A standard limit order will execute immediately if the market price is already at or better than the request price (lower on buy, higher on sell). Otherwise it will wait the requested duration for a fill.
- A standard stop order will execute immediately if the market price is already at or worse than the request price (higher on buy, lower on sell). Otherwise, it will wait for the requested duration for a fill.

The chart below highlights the differences between entry, limit, and stop orders.

New Buy order behavior	If market price = request price	If market price > request price	If market price < request price
Buy entry order	fill	wait	wait
Buy limit order	fill	wait	fill
Buy stop order	fill	fill	Wait

New Sell order behavior	If market price = request price	If market price > request price	If market price < request price
Sell entry order	fill	wait	wait
Sell limit order	fill	fill	wait
Sell stop order	fill	wait	fill

Example scenario:

Assume EUR/USD bid/ask is 1.3800/1.3801:

- buy entry order at 1.39: waits until ask reaches/crosses 1.39
- buy entry order at 1.37: waits until ask reaches/crosses 1.37
- buy limit order at 1.39: immediate fill at current ask 1.3801
- buy limit order at 1.37: waits until ask reaches/crosses 1.37
- buy stop order at 1.39: waits until ask reaches/crosses 1.39
- buy stop order at 1.37: immediate fill at current ask 1.3801

Submitting and Managing Entry Orders

For the requests New Order Single <D> and Order Cancel / Replace <G>, OrdType <40> = 2 indicates a standard limit order and OrdType <40> = 3 indicates a standard stop order.

Orders submitted as OrdType <40> = 2 in server versions prior to fixs-1.0.0 are handled as Entry Orders.

To continue to submit entry orders in version fixs-1.0.0, use OrdType <40> = 2 and include the text token "**`OrdType=EntryOrder`**" (exact spelling and capitalization required) at the start of the Text <58> field. This token is required even when referring to existing entry orders submitted on pre fixs-1.0.0 servers.

If you do not wish to update your FIX engine to recognize this new text token, you can just cancel all existing open entry orders. (Order Cancel <F> does not require specifying the order type.) Then you can use the new order requests going forward without worrying about the text token requirement.

Execution Report <8> messages will indicate an order is an Entry Order in the same fashion: they will show OrdType <40> = 2 and the Text <58> field will include "**`OrdType=EntryOrder.`**"

The following table summarizes how to specify the three order types. (All other combinations are invalid.)

Text <58> field	OrdType <40> field	Resulting order type
	2	Standard limit order
`OrdType=EntryOrder` present	2	Entry order
	3	Standard stop order

Order types cannot be changed once created. For example, Entry Orders cannot be changed to standard limit orders, or vice versa.

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 FXGame and FXTrade GUI applets may appear instead as BuyMarket and SellMarket

transactions. At the time of release of version fixs-1.0.0, FOK and IOC order types were only available via the FIX Server, although the GUI applets are scheduled to be updated to display these order types at a future date..

Order Identification

In FIX Server versions fixs-0.2.2 and earlier, order requests had to include ClOrdID <11> = "1" and OrigClOrdID <41> = "1". Subsequent Order Cancel / Replace <G> and Order Cancel Request <F> messages required the OrderID <37> be returned in order to identify the order. Version fixs-0.3.0 is compatible with this order identification scheme.

As of the fixs-0.3.0 version, the server supports the client-supplied order identifier ClOrdID <11>. This identifier can be changed with each modification (via Order Cancel / Replace Request <G>) and cancelation (via Order Cancel Request <F>), as per the FIX specifications. The client must supply the ClOrdID <11> value for the order being modified or canceled as OrigClOrdID <41> in the modify or cancel request.

Note that we are aiming to support the FIX Protocol Ltd ECN Working Group's Recommended Best Practices, which recommend that duplicate ClOrdID values are treated as separate orders.

Order Types

The types of orders supported on the FIX interface differ from the types of orders you can submit through the OANDA graphical or proprietary API interfaces:

For example, OANDA stop loss, take profit, and trailing stop annotations to orders are not available from the FIX interface.

OrdType <40> = 2 change for version fixs-1.0.0:
Before version fixs-1.0.0, the default order resulting from an OrdType <40> = 2 request was an Entry Order (OANDA's style of Limit Order).

From fixs-1.0.0 on, the default OrdType <40> = 2 order is a standard limit order.

Customers wishing to continue using Entry Orders can submit Entry Orders via a special Text token as described in the section Submitting and Managing Entry Orders.

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> messages. At time of writing, the maximum trade sizes for the OANDA trading system are the following:

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 maximum trade size 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=[max trade size]	Partially filled up to the maximum trade size
all others	Rejected	Order rejected outright

Account Management

- The FIX protocol 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.

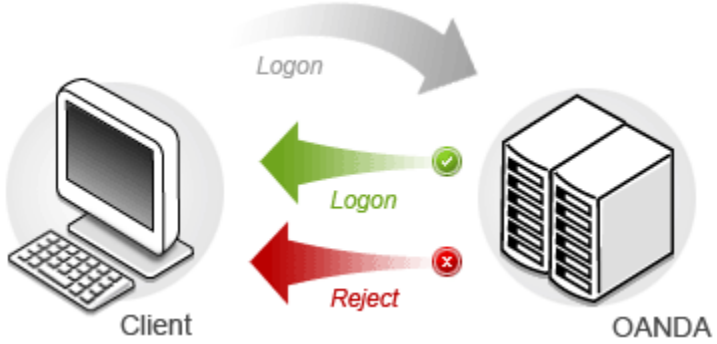
Administrative Messages

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

- In server versions prior to fixs-0.2.1.6, there were special requirements for the TargetSubID <57> value in the return Logon message. See What's New for historical requirements.
- 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. 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	Method of encryption. (Always

				“0”	unencrypted) 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.

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

News (Inbound) <B>

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

The version shown in this message is in a form that includes four numbers separated by dots (for example, "version: fixs-0.2.2.0"). The first three numbers (for example, "fixs-0.2.3"), when updated, may involve amendments to this Rules of Engagement document, and thus require possible changes to customer programs. (The last number is used internally by the OANDA FIX team to record minor updates or improvements.)

Fields <B>

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:** • "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.4.2
|    35 MsgType        = Logon (A)
|    34 MsgSeqNum      = 3
|    49 SenderCompID   = testusr
|    52 SendingTime    = 20090605-14:39:52.000
|    56 TargetCompID   = OANDA
+-BODY
|    95 RawDataLength  = 8
|    96 RawData        = Passw0rd
|    98 EncryptMethod  = NONE_OTHER (0)
|   108 HeartBtInt     = 300
|   141 ResetSeqNumFlag = YES_RESET_SEQUENCE_NUMBERS (Y)
+-TRAILER
|    10 CheckSum       = 123
+========
```

Server inbound response:

The server sends a logon response and a news message.

```
+-HEADER
|     8 BeginString    = FIX.4.2
|     9 BodyLength     = 88
|    35 MsgType        = Logon (A)
|    34 MsgSeqNum      = 1
|    49 SenderCompID   = OANDA
|    52 SendingTime    = 20090605-14:39:52.000
|    56 TargetCompID   = testusr
|    57 TargetSubID    = 1078K54503
```

```
+-BODY
|    98 EncryptMethod  = NONE_OTHER (0)
|   108 HeartBtInt     = 300
|   141 ResetSeqNumFlag = YES_RESET_SEQUENCE_NUMBERS (Y)
+-TRAILER
|    10 CheckSum       = 162
+========

+-HEADER
|     8 BeginString    = FIX.4.2
|     9 BodyLength     = 118
|    35 MsgType        = News (B)
|    34 MsgSeqNum      = 2
|    49 SenderCompID   = OANDA
|    52 SendingTime    = 20090605-14:39:52.000
|    56 TargetCompID   = testusr
+-BODY
|    33 LinesOfText    = 1
|   148 Headline       = OANDA FIX Server Information
+-LinesOfText-Member-0
|    58 Text           = version: fixs-0.2.1.6
+-TRAILER
|    10 CheckSum       = 046
+========
```

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:

```
+-HEADER
|     8 BeginString    = FIX.4.2
|     9 BodyLength     = 107
|    35 MsgType        = Logout (5)
|    34 MsgSeqNum      = 1
|    49 SenderCompID   = OANDA
|    52 SendingTime    = 20090605-14:37:48.000
|    56 TargetCompID   = testusr
+-BODY
|    58 Text           = Rejected Logon Attempt: InvalidPasswordException
+-TRAILER
|    10 CheckSum       = 151
+========
```

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.

After sending the Logout message, the logout initiator should not send any messages unless requested to do so by the logout acceptor via a ResendRequest <2>.

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.4.2
|    35 MsgType        = Logout (5)
|    34 MsgSeqNum      = 3
|    49 SenderCompID   = testusr
|    52 SendingTime    = 20090605-14:46:27.000
|    56 TargetCompID   = OANDA
+-BODY
+-TRAILER
|    10 CheckSum       = 086
+========
```

Server Inbound Response:

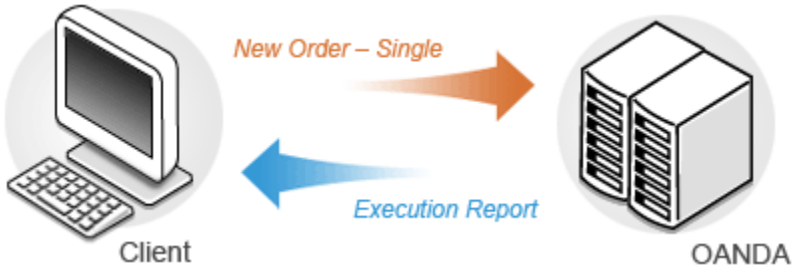
```
+-HEADER
|     8 BeginString    = FIX.4.2
|     9 BodyLength     = 55
|    35 MsgType        = Logout (5)
|    34 MsgSeqNum      = 4
|    49 SenderCompID   = OANDA
|    52 SendingTime    = 20090605-14:46:27.000
|    56 TargetCompID   = testusr
+-BODY
+-TRAILER
|    10 CheckSum       = 087
+========
```

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 FXGame 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

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
44	Price	N	Y for entry and limit orders only	price	Price.
99	StopPx	N	Y for stop orders only	price	Stop price.
59	TimeInForce	N	N	char	For entry, limit, and stop 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.
58	Text	N	N	string	For Entry Orders, include "OrdType=EntryOrder" (in addition to OrdType <40> = 2)
	Standard Trailer	Y	Y		See Trailer Fields

Examples

Client outbound request:
For a limit buy order, 7500 units XAU/USD, limit price 1100, Immediate or Cancel:

```
+-HEADER
|     8 BeginString    = FIX.4.2
|     9 BodyLength     = 130
|    35 MsgType        = NewOrderSingle (D)
|    34 MsgSeqNum      = 170
|    49 SenderCompID   = testusr9
|    52 SendingTime    = 20091020-14:00:48.000
|    56 TargetCompID   = OANDA
+-BODY
|     1 Account        = 9
|    11 ClOrdID        = limit_ioc_buy_gold_overlimit
|    21 HandlInst      = AUTOMATED_EXECUTION_ORDER_PRIVATE_NO_BROKER_INTERVENTION (1)
|    38 OrderQty       = 7500
|    40 OrdType        = LIMIT (2)
|    44 Price          = 1100
|    54 Side           = BUY (1)
|    55 Symbol         = XAU/USD
|    59 TimeInForce    = IMMEDIATE_OR_CANCEL (3)
|    60 TransactTime   = 20091020-14:00:33
+-TRAILER
|    10 CheckSum       = 246
+========
```

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

```
+-HEADER
|     8 BeginString    = FIX.4.2
|     9 BodyLength     = 282
|    35 MsgType        = ExecutionReport (8)
|    34 MsgSeqNum      = 171
|    49 SenderCompID   = OANDA
|    52 SendingTime    = 20091020-14:00:50.581
|    56 TargetCompID   = testusr9
+-BODY
|     1 Account        = 9
|     6 AvgPx          = 1062.79
|    11 ClOrdID        = limit_ioc_buy_gold_overlimit
|    14 CumQty         = 5000
|    17 ExecID         = T175433115
|    20 ExecTransType  = NEW (0)
|    21 HandlInst      = AUTOMATED_EXECUTION_ORDER_PRIVATE_NO_BROKER_INTERVENTION (1)
|    31 LastPx         = 1062.79
|    32 LastShares     = 5000
|    37 OrderID        = 8725
|    38 OrderQty       = 7500
|    39 OrdStatus      = CANCELED (4)
|    40 OrdType        = LIMIT (2)
|    44 Price          = 1100
|    54 Side           = BUY (1)
|    55 Symbol         = XAU/USD
|    58 Text           = OANDA transaction ID(s): 175433115.
|    59 TimeInForce    = IMMEDIATE_OR_CANCEL (3)
|    60 TransactTime   = 20091020-14:00:49
|   150 ExecType       = FILL (2)
|   151 LeavesQty      = 0
+-TRAILER
|    10 CheckSum       = 079
+========
```

Client outbound request:
For an entry buy order, 5 units USD/CAD, price 1.5

```
+-HEADER
|     8 BeginString    = FIX.4.2
|     9 BodyLength     = 137
|    35 MsgType        = NewOrderSingle (D)
|    34 MsgSeqNum      = 2
|    49 SenderCompID   = testusr9
|    52 SendingTime    = 20091020-15:08:41.000
|    56 TargetCompID   = OANDA
+-BODY
|     1 Account        = 9
|    11 ClOrdID        = new_entry_order
|    21 HandlInst      = AUTOMATED_EXECUTION_ORDER_PRIVATE_NO_BROKER_INTERVENTION (1)
|    38 OrderQty       = 5
|    40 OrdType        = LIMIT (2)
|    44 Price          = 1.5
|    54 Side           = BUY (1)
|    55 Symbol         = USD/CAD
|    58 Text           = OrdType=EntryOrder.
|    59 TimeInForce    = DAY (0)
|    60 TransactTime   = 20091020-15:08:25
+-TRAILER
|    10 CheckSum       = 211
+========
```

Server inbound response:

```
+-HEADER
|     8 BeginString    = FIX.4.2
|     9 BodyLength     = 287
|    35 MsgType        = ExecutionReport (8)
|    34 MsgSeqNum      = 3
|    49 SenderCompID   = OANDA
|    52 SendingTime    = 20091020-15:08:42.048
|    56 TargetCompID   = testusr9
+-BODY
|     1 Account        = 9
|     6 AvgPx          = 0
|    11 ClOrdID        = new_entry_order
|    14 CumQty         = 0
|    17 ExecID         = T175433179
|    20 ExecTransType  = NEW (0)
|    21 HandlInst      = AUTOMATED_EXECUTION_ORDER_PRIVATE_NO_BROKER_INTERVENTION (1)
|    31 LastPx         = 0
|    32 LastShares     = 0
|    37 OrderID        = 8759
|    38 OrderQty       = 5
|    39 OrdStatus      = NEW (0)
|    40 OrdType        = LIMIT (2)
|    44 Price          = 1.5
|    54 Side           = BUY (1)
|    55 Symbol         = USD/CAD
|    58 Text           = OrdType=EntryOrder. OANDA transaction ID(s): 175433179.
|    59 TimeInForce    = DAY (0)
|    60 TransactTime   = 20091020-15:08:41
|   126 ExpireTime     = 20091020-21:00:00
|   150 ExecType       = NEW (0)
|   151 LeavesQty      = 5
+-TRAILER
|    10 CheckSum       = 200
+========
```

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
+========
```

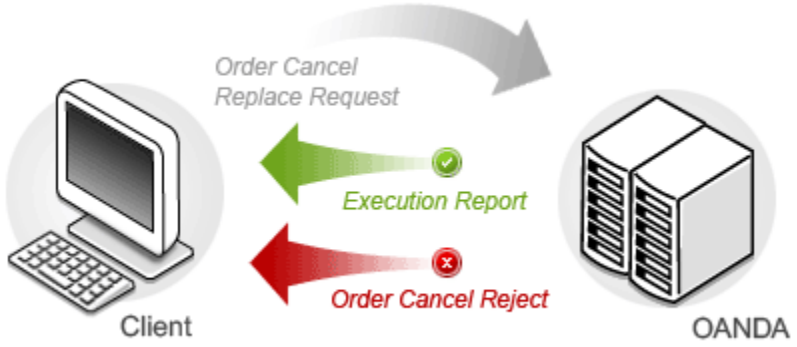
Server inbound response:

```
+-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 order (to update an entry, limit, or stop order). The server returns an execution report.



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

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 FXGame 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: 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: 1 = Market 2 = Limit 3 = Stop
44	Price	N	Y for entry and limit orders only	price	Price for currency pair.
99	StopPx	N	Y for stop orders only		
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		LocalMkt 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.
58	Text	N	N	string	For Entry Orders, include "OrdType=EntryOrder" (in addition to OrdType <40> = 2)
	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
+========
```

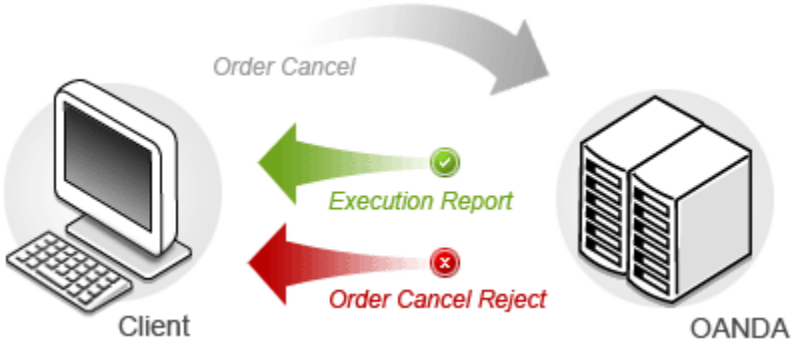
Server inbound response:

```
+-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 all of the remaining quantity of an existing order. It is also used to partially cancel (reduce) 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.



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 FXGame 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: 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:

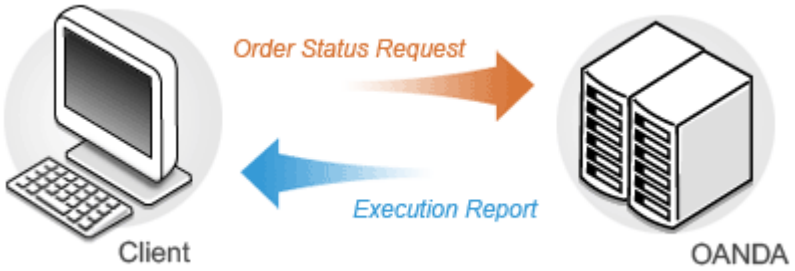
```
+-HEADER
|     8 BeginString    = FIX.4.2
|     9 BodyLength     = 314
|    35 MsgType        = ExecutionReport (8)
|    34 MsgSeqNum      = 174
|    49 SenderCompID   = OANDA
|    52 SendingTime    = 20091020-14:05:35.405
|    56 TargetCompID   = testusr9
+-BODY
|     1 Account        = 9
|     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.
|    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.

Order status information is only available for orders that were submitted to OANDA FIX Server versions fixs-0.3.x or later. Order information for orders submitted for previous versions is not available; the Execution Report for these requests will state that the order is unknown.

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:

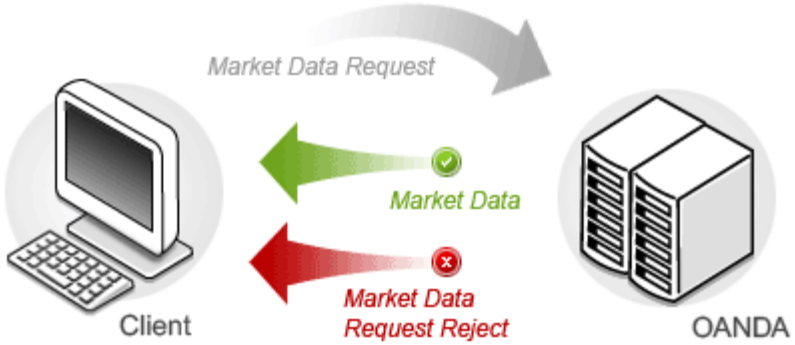
```
+-HEADER
|     8 BeginString    = FIX.4.2
|     9 BodyLength     = 68
|    35 MsgType        = OrderStatusRequest (H)
|    34 MsgSeqNum      = 174
|    49 SenderCompID   = testusr9
|    52 SendingTime    = 20091020-14:06:18.000
|    56 TargetCompID   = OANDA
+-BODY
|    11 ClOrdID        = cancel_std_limit_order
|    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

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. We recommend setting NoMDEntryTypes <267> = 0 and NoRelatedSym <146> = 0 and omitting any MDEntryType / Symbol tags completely.

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

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 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 symbols <55>.
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
+========
```

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 cancelations are communicated via Order Cancel Reject <9>.

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>).

The Text <58> field provides supplemental information about the order execution. It consists of phrases or sentences separated with a period and space. Entry Orders are flagged in this field with the token **`OrdType=EntryOrder`**. 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".

Fields <8>

TAG	FieldName	Req'd	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.
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 FXGame 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.
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
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, DoneForTheDay, Expired, Calculated, 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.
58	Text	N	string	Text message providing supplemental information on the order. Entry Orders are specified in this message with a token **`OrdType=EntryOrder`**. 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	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 5 = Replaced 8 = Rejected C = Expired
1	Account	N	string	The OANDA FXTrade or FXGame 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>
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.
	Standard Trailer	Y		See Trailer Fields

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	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.

Fields <W>

TAG	FieldName	Req'd	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 (the maximum trade size)
272	MDEntryDate	N	UTCDate	UTC date of rate data
273	MDEntryTime	N	UTCTimeOnly	UTC time of rate data
	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.

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	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	Type	Comments
279	MDUpdateAction	Y	char	Valid values: 1 = Change
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.
272	MDEntryDate	N	UTCDate	UTC date of rate data
273	MDEntryTime	N	UTCTimeOnly	UTC time of rate data
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 MDUpdateAction = 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 MDUpdateAction = 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 MDUpdateAction = CHANGE (1)
|   269 MDEntryType    = BID (0)
|    55 Symbol         = EUR/USD
|   270 MDEntryPx      = 1.39651
|   272 MDEntryDate    = 20090618
|   273 MDEntryTime    = 15:03:56
+-NoMDEntries-Member-3
|   279 MDUpdateAction = 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 MDUpdateAction = 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 MDUpdateAction = 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 MDUpdateAction = 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 MDUpdateAction = 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	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

Appendix: New Features Introduced Before Version 1

(For a list of what's new with current versions, see OANDA FIX Server Version Notes.)

Version fixs-0.3.1 introduced the following features:

- Order Status Request <H> is now supported. Order status is available for orders submitted to fixs-0.3.x and newer server versions.

- Asynchronous fill/expiry Execution Report message Price <44> and ExpireTime <126> is corrected.

Version fixs-0.3.0 introduced the following new features:

- FIX 4.4 messaging is now supported. Note that the format of some messages is different between FIX 4.2 and FIX 4.4 (for example, Logon and Execution Report).

- Standard ClOrdID <11> and OrigClOrdID <41> semantics now supported. Furthermore, The FIX Protocol Ltd ECN Group Recommended Best Practice of allowing duplicate ClOrdID values is followed. We recommend that users always supply unique ClOrdID values, or alternatively always provide the OrderID returned by the FIX Server.

- Execution Report <8> messages have been extensively reworked. The reports now provide correct information regarding the order request and results.

- Order Cancel Reject <9> currently reports OrdStatus=REJECTED instead of the actual current order status; this will be corrected in a future release.

- Limit order expiry or fill is now communicated asynchronously via the Execution Report. Asynchronous reports might list an incorrect account or fill quantity (but all fills will be full fills). This will be corrected in a future release.

Version fixs-0.2.2 included the following changes from the previous version (fixs-0.2.1.6):

- Streaming market data is now supported. See Market Data Request <V> for information on using streaming rates.

- The description for the News <B> message that is sent after successful logon provides additional important information to determine significant changes to the server.

Version fixs-0.2.1.6 included the following changes from previous versions:

- After a successful login, a News <B> message is sent to the client indicating the OANDA server version. Versions before fixs-0.2.1.6 did not send a News message and did not report the version number.

- In previous versions, a TargetSubID "session cookie" was returned to the client and was required to be sent as the SenderSubID in all subsequent requests during the session. This behaviour is now deprecated (that is, removed and to be avoided). For this release, logon responses will still return a TargetSubID for those clients coded to expect it, but this behavior will be removed altogether in a subsequent release.

- For orders, the tag TimeInForce <59> value 0 (Day) now correctly specifies orders to expire at end of day (5pm ET). Day orders created within five minutes of 5 p.m. expire at 5 p.m. the next day, and a warning is sent to the user in the Text <58> field indicating this outcome.

- For orders, tag TimeInForce <59> value 6 (GTD) is now accepted; one of ExpireDate <432> or ExpireTime <126> is required.