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Equiduct FIX Specification

V2.28

Revision History

Version	Date Issued	Comment
Please refer to previous document versions for full version history.		
V2.11	October 2013	Added RegulatoryID ("Algo ID") for trading algorithms as required by the German High-Frequency Trading Act.
V2.12	December 2013	Updated TimeInForce, allowing At Best orders for IOC/FOK TIFs.
V2.13	March 2014	Not Published, internal only changes.
V2.14	March 2015	Added additional TimeInForce values MOO and MOC to New Order Single and Execution Report messages.
V2.15	September 2015	Update to VBBO Market Data feed to include PartnerEx and SpotVBBO maximum trade sizes.
V2.16	February 2016	Added MinQty to New Order Single and Execution Report messages.
V2.16a	April 2017	Add Price to PartnerEx-related messages.
V2.17	December 2017	Change use of SecurityExchange and add new ReportingMIC tag. Removed unused/irrelevant tags from Execution Report – Trade Date, SettlType, SettlDate and SettlCurrency. Remove deprecated tags from PartnerEx messages. Deprecated FIX Market Data and removed Market Data examples. Deprecated Trade Reporting and removed from this specification. MiFID II changes. Added OrderCapacity R = Riskless. Added new MatchType values for SpotVBBO and Market Order Match.
V2.18	January 2018	Add RegulatoryTradeID group for MiFID II TVTIC.
V2.18a	April 2018	Reserved PartyID values NONE and NORE are now valid for Quote(S) messages. Sweep orders have OrdType = Limit, TimeInForce = IOC and PreventParticipantMatch = O.
V2.19	August 2018	Add Account to Quote messages.
V2.19a	December 2018	Add new MatchType values for OPN/CLS/AUC.
V2.20	March 2019	Add new "Free text" field (for clearing).
V2.21	June 2019	Removed FIX Market Data. Extend reasons for ExecRestatementReason. Add missing "Logout" message. Add missing "Reject" message. Add missing "Business Reject" message. Included PendingCancel and PendingReplace in OrdStatus and ExecType.
V2.21a	May 2021	Clarify sweep order behaviour. Update references of PartnerEx to Apex, SpotVBBO to Zenith, and HybridBook to Central Limit Order Book (CLOB) Remove remaining references to deprecated FIX Market Data.
V2.22	November 2021	Add Apex Liquidity Provision (ALP) orders Remove MOO TIF in Market Order Match.
V2.23	November 2022	Add additional peg types to ExecInst, change "Req'd" flag for TransactTime in inbound messages to "N", remove Market on Close (MOC), and remove Appendix A3 (iceberg orders).

V2.24	April 2023	Addition of Trade Reporting message flows. Adding inbound Trade Capture Report (MsgType(35) = AE) and Trade Capture Report Ack (MsgType(35) = AR), and outbound Trade Capture Report (MsgType(35) = AE).
V2.25	September 2023	Addition of TradeReportRejectReason to Trade Capture Report Ack (MsgType(35) = AR), and outbound Trade Capture Report (MsgType(35) = AE).
V2.26	January 2025	Added *TertiaryTrdType (2896)* to Trade Capture Report and added Section 3.2.7 to document use of trade type flags. *Removed TrdRegPublicationType (2669) = 1*, deferral can only be requested via *TradePublishIndicator (1390)*.
V2.27	February 2026	Format changes to all tables, addition of 'PEXA' and 'SVBA' MatchType values in Section 5.5.1 and Appendix B.2.
V2.28	July 2026	Update timestamp granularity in Section 3.2.2 to nanoseconds.

Related Documents

Name	Link
Financial Information Exchange Protocol (FIX)	https://www.fixtrading.org/online-specification
fixtrading.org/standards/fix-5-0-sp-2/#	https://www.fixtrading.org/standards/fix-5-0-sp-2
Equiduct Market Model Description	https://www.equiduct.com/news-resources/documentation
Equiduct ITCH (Market Data) Specification	https://www.equiduct.com/news-resources/documentation
Equiduct Record Keeping Specification	https://www.equiduct.com/news-resources/documentation

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1 Introduction

1.1 Document Purpose

This document describes how to programmatically access the functions of the Equiduct trading system.

1.2 Intended Audience

This document is aimed at systems developers of Equiduct members and ISVs who want to develop applications to communicate programmatically with Equiduct.

This document does not provide all of the business level information pertinent to Equiduct: see "Related Documents" for details of further system documentation. Updates to this and other key documents can be found at Equiduct.

2 Functional Overview

For a full specification of Equiduct functions please see the appropriate Market Model Description documents available from Equiduct.

In summary the Equiduct FIX Interface allows external systems to connect to Equiduct to:

- Enter orders for execution in Equiduct's trading mechanisms, namely:
  - (CLOB),
  - VBBO trading (Apex and Zenith).
- Receive order status and execution reports.
- Cancel and amend orders resting in the book.
- Open quotes (Market Makers only).
- Enter/update quotes and quote parameters (Market Makers only).
- Receive quote status and execution reports (Market Makers only).
- Enter Apex Liquidity Provision orders (Apex Liquidity Providers only).
- Manage VBBO liquidity for Apex and Zenith trading services (Liquidity Providers only).
- Report transactions concluded off-book for purposes of post-trade transparency.

For convenience and context this section provides a summary of the high-level business functions available, and the key messages used to access those functions.

2.1 Order Management / Execution

Equiduct provides the ability for all members to enter orders into the system for execution in one of the execution facilities. Equiduct's CLOB is the default execution facility if nothing is specified in the FIX Header *TargetSubID* field. A default execution facility can be set up at a member firm level in advance through Equiduct Market Control. Default behaviour can be overridden on a per order basis by specifying the appropriate value in the Standard Header, as illustrated below.

Orders are entered using the **New Order Single** message and, when resting in the book, can be updated using the **Order Cancel/Replace Request** message and cancelled using the **Order Cancel Request** message.

Order status changes and any trades are communicated by Equiduct using one or more **Execution Report** messages.

All orders which are accepted by the system and not filled immediately on entry will, subject to their *TimeInForce*, rest in the order book where they are visible and immediately executable. The only exception to this rule is Stop Orders, which are not introduced to the book until triggered by market conditions.

Orders entered into the system may additionally request execution at the VBBO in one of Equiduct's two Best Execution services – Apex and Zenith. For details of these services and of VBBO trading mechanics, consult the Equiduct Market Model document.

2.2 Quote Management / Execution

Market Maker quotes are opened and updated using the **Quote** message type. In response to a valid quote message, Equiduct will return a **Quote Status Report** message. Market Maker quotes must be two-sided; that is, there must be a bid and an offer price, and they must be in a size that is equal to or greater than the minimum quote size *(MQS)* for the quoted security as determined by Equiduct Market Control. Each side of the quote can be updated independently. Market Maker quotes participate in the order book and are therefore firm and available for immediate electronic execution.

A *TickMultiplier* parameter may be specified to override the default of 100, this is used by the quote refresh function. If an execution reduces the quote size below the minimum quote size for the security in question, then the quote is refreshed at a size equal to the minimum quote size and to a price (*TickMultiplier x TickSize*) lower/higher than the Market Maker's previous bid/offer, depending upon the side of the quote that is being refreshed. The Market Maker is advised of the execution through an **Execution Report** message and of the quote status change through a **Quote Status Report** message. If *TickMultiplier* is set to zero, then quote refresh is disabled and the Market Maker is responsible for refreshing quotes when traded below MQS.

3 FIX Message Exchange

Equiduct abide by the generally accepted FIX standards wherever possible. Any areas of deviation are explicitly documented.

3.1 Harmonised Workflow

Equiduct adopts the following elements of the harmonised workflow as described by the FPL Global Exchanges & Markets Committee Best Practices. Please refer to Volume 7 "FIX Usage Notes", Section "User Group: Exchanges and Markets" of the FIX 5.0 SP2 Specifications for further details, Fix Trading.

3.1.1 Order Identification

Reflecting the fact that exchanges typically manage their own order identification scheme, issuing an ID *(OrderID)* which is used to identify or access an order, best practice allows this ID to be used in preference to *ClOrdID* for order modifications and deletion.

3.1.2 Message Bundling

For performance reasons, best practice stipulates that multiple messages may be replaced with a single message where the recipient can infer all relevant information. For instance, if an order is partially filled on entry, only a 'partial fill' execution report will be generated, the 'new' state is elided as it can be inferred. Importantly this also applies to immediate partial execution of IOC and FOK orders, where in case of a single partial fill the only response will be a single execution report containing trade details and notifying the cancellation of remaining order quantity.

3.2 Messages and Fields

3.2.1 Message and Field Validation

The Equiduct FIX Gateway performs validation on messages and supported fields. Field validation checks include:

- Body length and checksum verification.
- Numeric field (e.g. price, amount) format validation.
- Allowed values validation.
- Date and time field format validation.
- Mandatory field verification.

Any failure in the above, or other message level failures, will result in a **Reject** message being returned to the Member system, with the appropriate *SessionRejectReason* and descriptive text.

3.2.2 Timestamps

Equiduct adheres to the FIX standard, requiring all timestamps to be in UTC and in ISO format. In line with the latest FIX standard, Equiduct will accept timestamp granularity ranging from whole seconds down to picosecond granularity, with at least nanosecond granularity preferred. Equiduct's FIX gateway will generate timestamps with nanosecond granularity.

3.2.3 Custom Fields

A number of custom tags are employed in the messages. Wherever possible these reuse custom tags already registered with FPL or utilise FIX 5.0 SP1 fields where applicable.

3.2.4 Symbology

In common with several other European markets, Equiduct uses Uniform Symbology where symbols consist of six characters or less and are constructed from a home market code with a trailing lowercase character which identifies the home market. An example of such a symbol is "GLEp".

The Equiduct FIX gateway supports native symbols specified via *Symbol(55)*, and ISIN identifiers. Native symbols are preferred and may result in improved performance.

In order to uniquely identify an instrument when not using Symbol, the listing market *(SecurityExchange)* and (optionally) Currency should also be provided when specifying the ISIN code for the instrument. In such cases, Symbol should be set to "[N/A]" (without the quotation marks), *SecurityID* should contain the ISIN and *SecurityIDSource*, *SecurityExchange*, and Currency should be populated accordingly.

> **Note:** *SecurityExchange* is not strictly required, and may be omitted, where the combination of ISIN and currency is sufficient to uniquely identify a tradable instrument on Equiduct. Moreover, for compatibility reasons, Equiduct may define a default instrument for a given combination of ISIN and currency which will be selected if *SecurityExchange* is not provided.

Response messages generated by Equiduct will, except in the case of an unknown or invalid instrument, contain *Symbol*, ISIN *(SecurityID)*, Currency and listing market *(SecurityExchange)*.

3.2.5 ReportingMIC

Instruments traded on Equiduct are allocated a specific MIC (Market Identification Code) for transaction reporting purposes. National Regulators may require these specific MICs to be provided, in preference to a generic "XEQT" code, when reporting transactions which occurred on Equiduct. The transaction reporting MIC is provided in Equiduct static data but is also available in the custom *ReportingMIC(10017)* tag in outbound messages from Equiduct whenever a specific instrument is involved.

3.2.6 Short Codes

In common with several European markets, Equiduct will use short codes – numeric values which map to an underlying identifier – for the purposes of providing data required under MiFID II RTS 24 "Order record keeping" requirements.

Details can be found in the "Equiduct Record Keeping Specification" documentation.

3.2.7 Trade Reporting Service – Trade Type Flags

ESMA's review of equity and non-equity transparency (RTS1 and RTS2) resulted in the requirement to identify portfolio, benchmark and contingent transactions. Equiduct's trade reporting service supports the following flags:

BENC = 64 (Benchmark transaction)
PORT = 50 (Portfolio transaction)
CONT = 65 (Contingent transaction)

The fields used to pass trade type information to Equiduct are *TrdType (828)*, *SecondaryTrdType (855)* and *TertiaryTrdType (2896)*.

Where either one or two secondary trade types are applicable, *TrdType* should be set to '0' (Regular Trade) and *SecondaryTrdType*, and optionally *TertiaryTrdType*, should be populated.

Where a combination of all three secondary types applies then *TrdType* should be set to '50', *SecondaryTrdType* to '64', and *TertiaryTrdType* to '65'.

The table below details all supported combinations:

Flags	TrdType (828)	SecondTrdType (855)	TertiaryTrdType (2896)
BENC	0 (Regular)	64 (Benchmark)	
PORT	0 (Regular)	50 (Portfolio)	
CONT	0 (Regular)	65 (Contingent)	
BENC & PORT	0 (Regular)	64 (Benchmark)	50 (Portfolio)
BENC & CONT	0 (Regular)	64 (Benchmark)	65 (Contingent)
PORT & CONT	0 (Regular)	50 (Portfolio)	65 (Contingent)
PORT & BENC & CONT	50 (Portfolio)	64 (Benchmark)	65 (Contingent)

3.3 FIX Session

Equiduct supports standard FIX session semantics including sequence number management, resend requests, gap fills etc.

Equiduct does not support message level encryption.

3.3.1 Unique Message IDs

Where message IDs will be used to refer back to earlier messages, it is the client's responsibility to guarantee their uniqueness. Equiduct will return message IDs on resultant response messages without validating their uniqueness. In particular, Client Order IDs *(ClOrdID)* are not checked for uniqueness, and it is the responsibility of clients to avoid duplication.

3.3.2 Session Level Rejects

In accordance with the FIX specification, session level rejects (**Reject**) will be issued only when messages fail data integrity checks. They will include *SessionRejectReason*, and a description in the Text tag. Where possible, messages will be forwarded to the Equiduct core system, which may respond with an appropriate rejection (for instance an **Execution Report** or **Order Cancel Reject**) or, as a last resort, a **Business Message Reject**. Please refer to the FIX specification for examples of failures resulting in session level rejection.

3.3.3 Nightly Maintenance

Equiduct will log-off all FIX sessions before performing nightly maintenance. A new FIX session must be established the following day, with sequence numbers commencing from 1 in the normal way.

Equiduct supports persistent (aka "multi-day") orders, and as such GTC and unexpired GTT orders will remain active in the order book on the following day. Quotes are automatically closed as part of the closing procedure.

3.3.4 Connections

Equiduct members may request the setup of multiple FIX connections (separate FIX user sessions) by Equiduct Market Control. Standard Equiduct FIX connections support order entry, quote management and VBBO liquidity provision, concurrently on a single session, although members may wish to spread their activity across multiple connections.

Where members use multiple connections, member systems are responsible for segregation of activity and load balancing as desired. In general, Equiduct will observe the expected semantics by returning status/response messages on the same FIX connection as the corresponding entry message. However, for historical reasons, there is one exception to this rule in that the default behaviour is that Liquidity Provider VBBO trades (Execution Reports) are delivered to the FIX connection which submitted/last updated the LP quote in the book. This behaviour is configurable, and LPs may request that VBBO fills be routed to the FIX connection which submitted/last updated VBBO liquidity instead.

3.3.5 Trade Drop Copy Connection

A member may request a separate FIX connection to receive copies of all fills (and trade cancellations) for their trading activity on Equiduct. These will be delivered in the form of standard **Execution Reports** and will be logically identical to the **Execution Reports** received on their Order/Quote submission connection (although they will differ in FIX Standard Header content as they are sent on a separate FIX session).

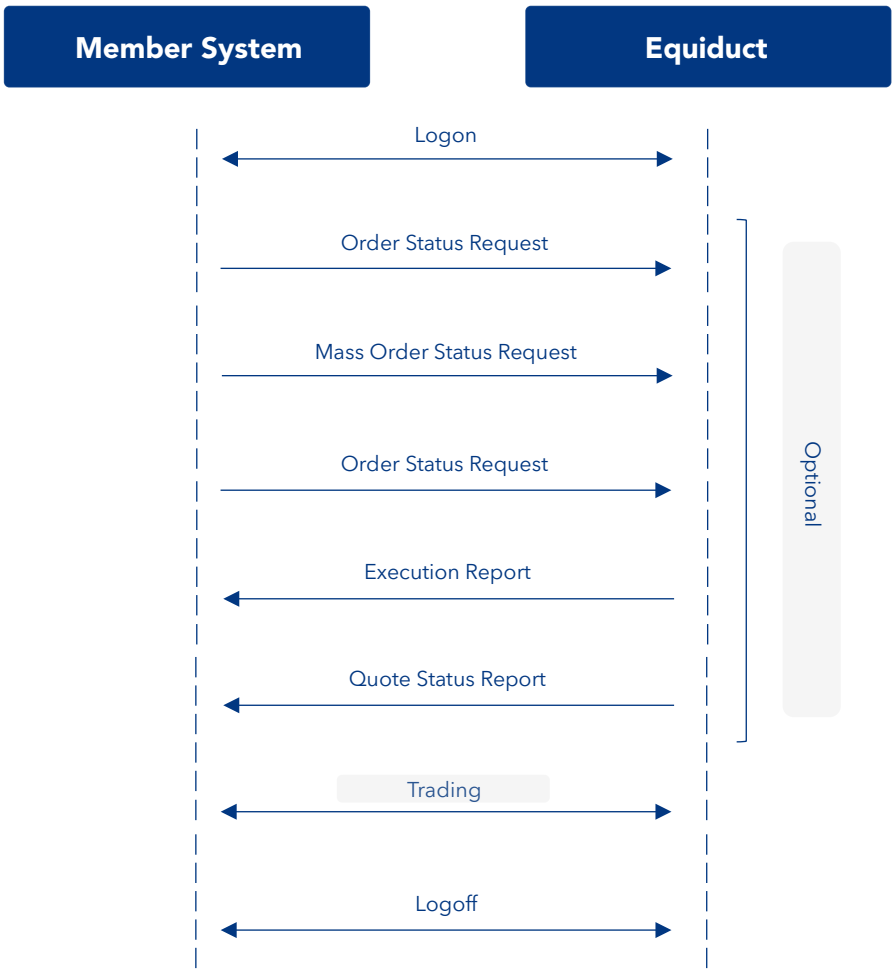
4 Message Flows

This section describes typical message flows between the Member system and the Equiduct Gateway, providing an insight into the overall behaviour of the system.

The following subsections describe the flow of messages related to establishing and ending a session.

The session for exchange of transactional messages consists of four phases:

1. **Logon**: The Member system issues a Logon request to Equiduct. Equiduct responds with a Logon message for successful connections.
2. **Synchronise systems**: Standard FIX session resynchronisation and gap fill. Followed by an optional set of **Order Status Request**, **Quote Status Request**, **Mass Order Status Request** and **VBBO Status Request** messages to obtain the latest state of any of the entities in the system.
3. **Trading**: Trading phase, business messages are exchanged. Status Request messages can be issued at any time.
4. **Logoff**: The Member system issues a **Logoff** request to Equiduct. Equiduct responds with a **Logoff** message.



4.1 Synchronise Systems

After successful completion of the logon phase the FIX session will then be synchronised. If the member system needs further clarification after any retransmissions (that may have taken place during session synchronisation) then Equiduct supports **Order Status Request**, **Mass Order Status Request**, **Quote Status Request** and **VBBO Status Request** messages to obtain the latest state of entities in the system. These messages can be issued by the member system at any time.

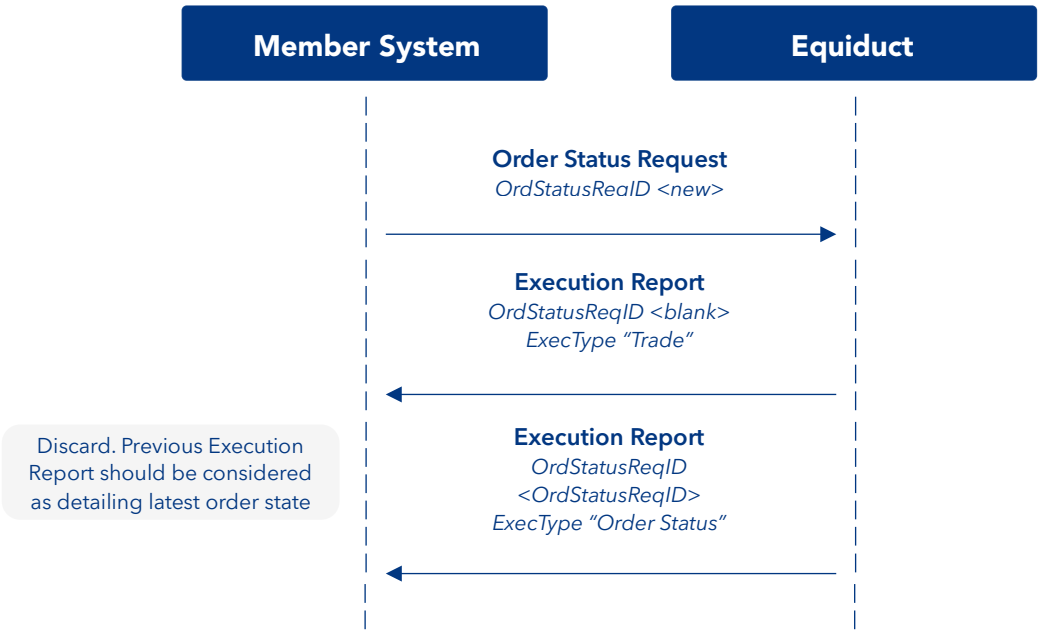
> **Note:** If an update is received for an entity whilst the response to a Status Request for that entity is outstanding then the response should be ignored once it is received. If there is any doubt about the latest status to be applied, then the *TransactTime* field can be used to identify the most current status.

4.1.1 Order Status

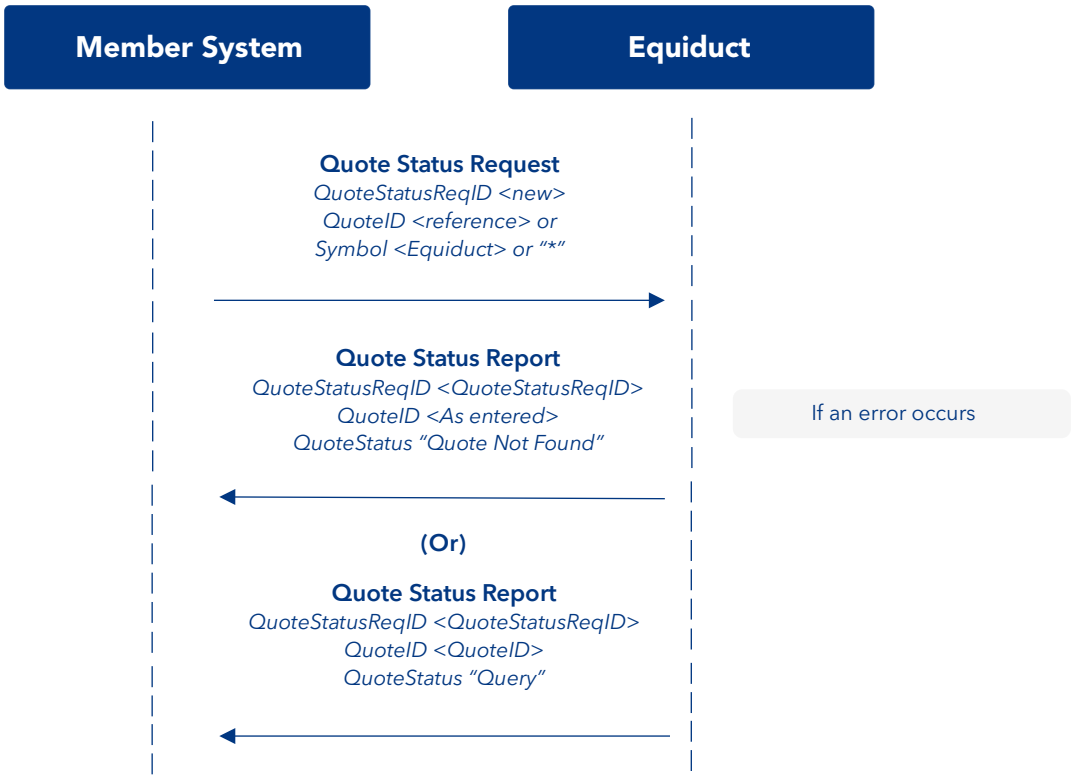
Order Mass Status Request flow is the same apart from multiple **Execution Report** messages may be returned in response to the request.

In the event that an unsolicited **Execution Report** for the Order that was requested is received before the **Execution Report** responding to the status request, then that unsolicited **Execution Report** should be deemed as detailing the latest state of the Order. Alternatively, in the event that it is not possible to apply such logic then *TransactTime* can be used to identify the latest state of the Order.

> **Note:** To provide a complete workflow, the **Execution Report** response to the **Order Status Request** will still be sent when an unsolicited **Execution Report** for the same order precedes it.



4.1.2 Quote Status



As for **Order Status Request** messages, if an **Execution Report** (and potentially a **Quote Status Report** in the event of an execution that triggers quote refresh) is received prior to the receipt of a **Quote Status Report** then the **Execution Report** (or **Quote Status Report**) should be considered as the most up-to-date view of the side of the Quote that the **Execution Report** pertains to. Alternatively, in the event that it is not possible to apply such logic then *TransactTime* can be used to identify the latest state of the Quote.

Note: To provide a complete workflow the **Quote Status Report** response to **the Quote Status Request** will still be sent when an unsolicited **Quote Status Report** or **Execution Report** precedes it.

4.2 Quote Management

Note: It is not possible in Equiduct to begin quoting in a new instrument, or to cancel / delete an existing quote – these actions can only be performed by Equiduct Market Control. Quotes can however be amended at any time. Quote amendments to zero size, or with invalid prices, will be rejected.

4.2.1 Quote Actions

At the beginning of each trading day, all quotes will have a status of "Closed". Equiduct rules require Market Makers to adjust the status of all of their quotes in a given market segment to "Open" before a specified time for that market segment on each trading day. The member should take a positive action to perform this function (i.e. quotes will not be "forced" open by Equiduct).

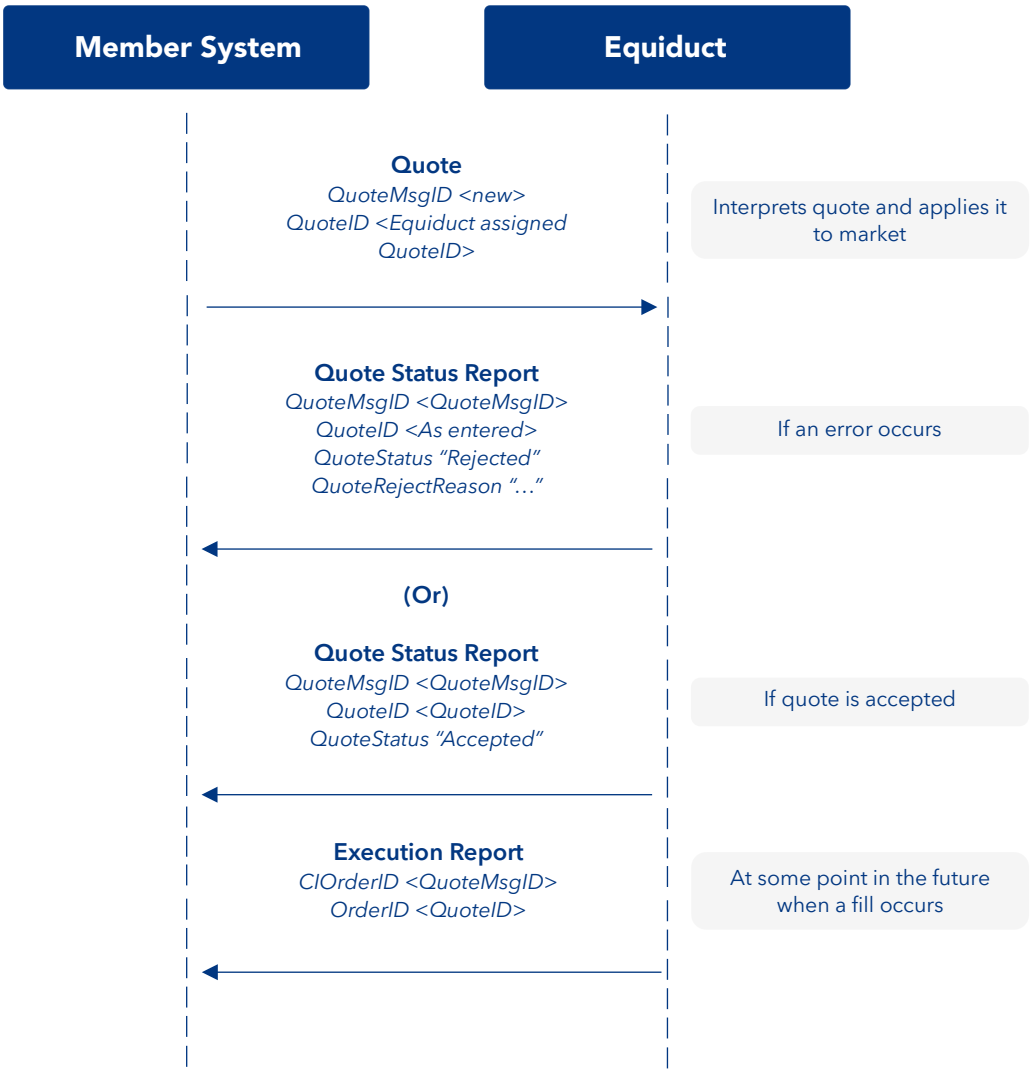
To open a specific quote or set of quotes, the **Quote** message should be used, with *QuoteCondition* set to A "Open". It is possible to adjust quote prices and / or volumes at the same time as opening a quote. It is also possible to explicitly close a Quote by setting *QuoteCondition* = B "Closed", and to adjust quote prices/volumes without opening the quote by omitting *QuoteCondition* or setting to "Closed".

A successful open quote for a single instrument using the **Quote** message will be acknowledged with a **Quote Status Report** message with *QuoteStatus* = 0 "Accepted".

4.2.2 Automatic Quote Actions

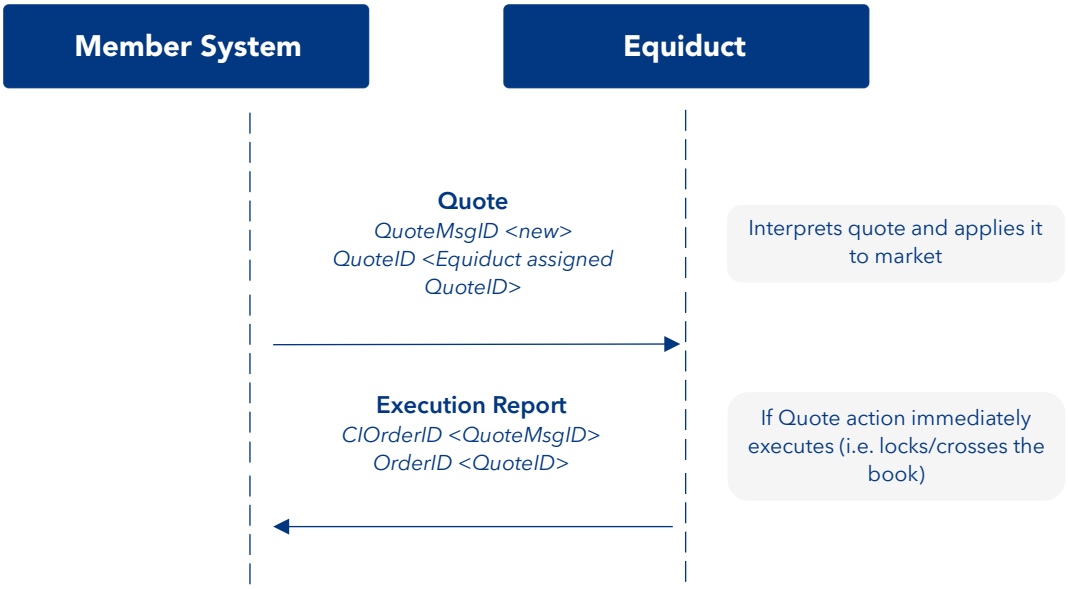
By default, all quotes for a Market Maker will be closed (via "cancel on disconnect") if a connection is abruptly disconnected or closed cleanly by sending a **Logout** message. It is the responsibility of the Market Maker to open their quotes when connectivity has been re- established.

Cancel on disconnect may be disabled, on request, by Equiduct Market Control.

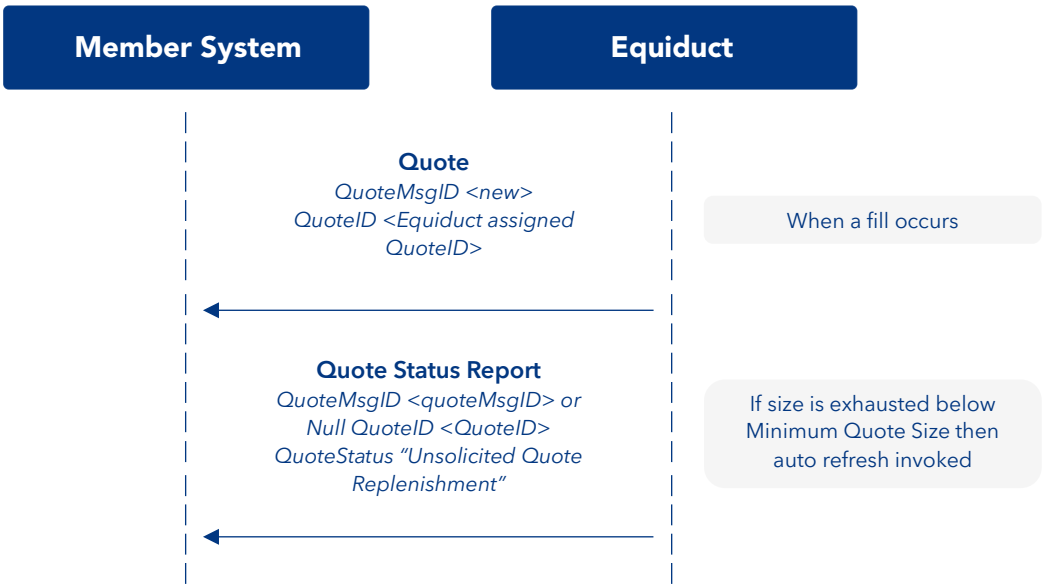


4.2.3 Execution

Opening a quote or amending an open quote may give rise to an immediate execution in the book, and therefore there may be a number of **Execution Reports** returned instead of the normal **Quote Status Report**.



If the quote is depleted sufficiently to invoke a quote refresh, then a **Quote Status Report** will be sent after the execution(s).



If the book is still locked or crossed after the quote refresh, there may be further **Execution Report** and **Quote Status Report** messages until the book is uncrossed.

A Market Maker quote may be matched at any time during continuous trading hours for the relevant market segment. Additionally, Market Makers offering best execution through the VBBO services could be matched at any point during opening hours of the VBBO service. The trades resulting from both types of match will be conveyed through an unsolicited **Execution Report**.

> **Note:** For avoidance of doubt, the state of a Quote on the book is unaffected by executions occurring in the Apex and Zenith services.

4.2.4 Rejects

An unsuccessful quote action will be rejected with a **Quote Status Report** message detailing *QuoteStatus* as 5 "Rejected", or 9 "Quote Not Found" if a Quote cannot be found based upon the given criteria. For rejects, the previous values and status of the quote are retained by Equiduct.

In certain circumstances, such as an attempt to take an unauthorised action, Equiduct may return a **Business Message Reject** message.

4.3 Order Management

The following sections describe order-related business functions and unsolicited messages for orders on Equiduct.

4.3.1 New Order

New orders are submitted using the **New Order Single** message. All order types can be entered using this message.

Successful acceptance of a new order will be acknowledged one or **more Execution Report** messages. In all cases the **Execution Report** message will contain the unique *OrderID* assigned by Equiduct which is the preferred identifier to be used for further adjustments to the order.

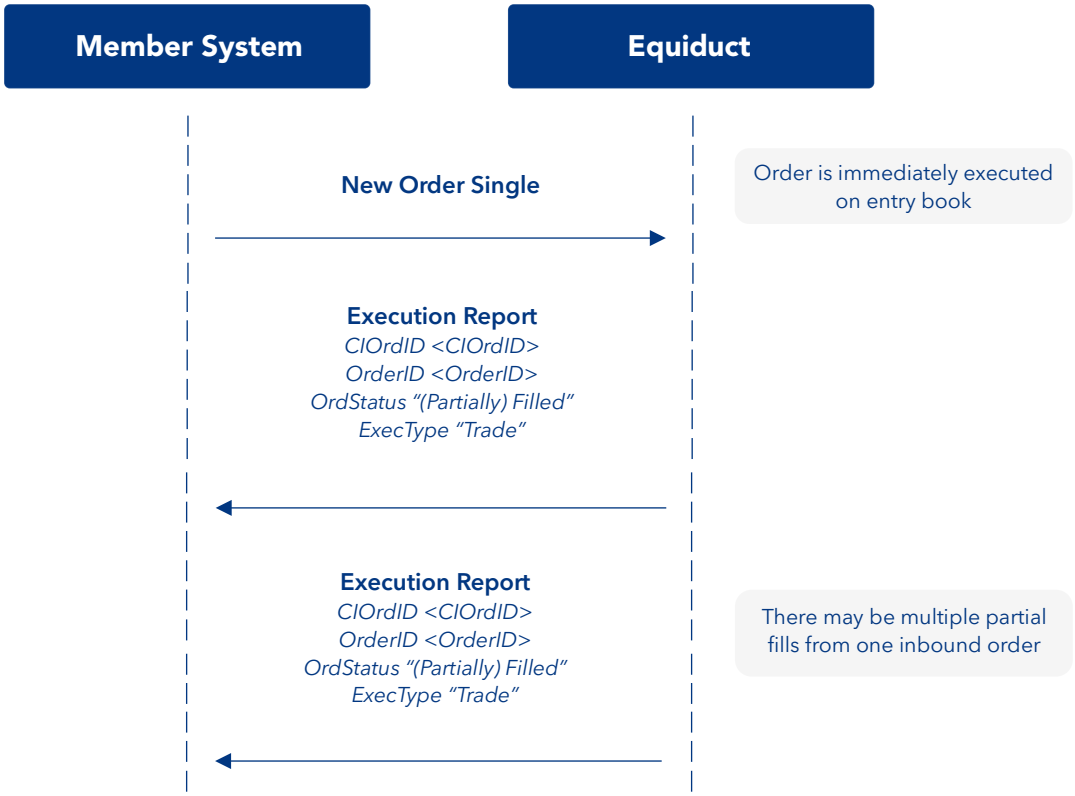
Successful acceptance of an order which is written to the order book without immediate execution will be acknowledged with an Execution Report message indicating that *OrdStatus* = "New" (or *OrdStatus* = "Pending new", in the case of a Stop order).

This applies to orders that do not result in immediate execution, including all orders entered with a *TimeInForce* of ATO ("At the Opening") or ATC ("At the Close").

Orders with a *TimeInForce* of GFS ("Good For Session") will only be accepted during continuous trading and will be rejected at all other times. Orders with a *TimeInForce* of GFS will automatically be expired at the end of continuous trading.

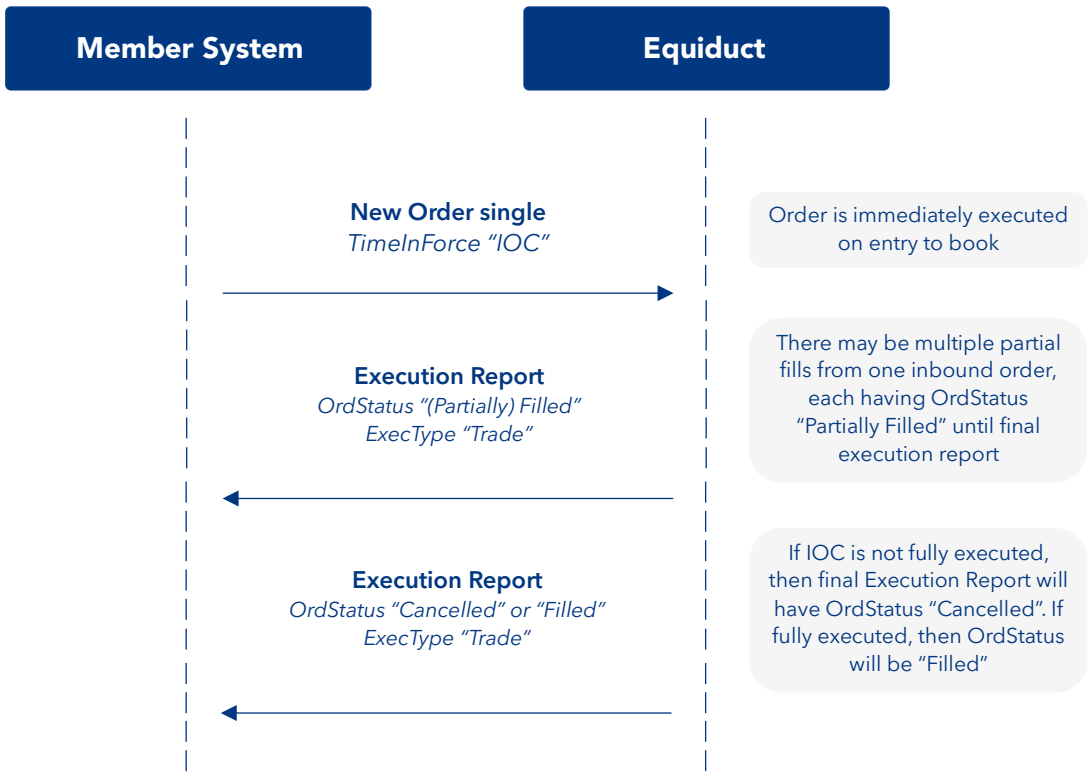
4.3.2 Immediate Execution on Entry

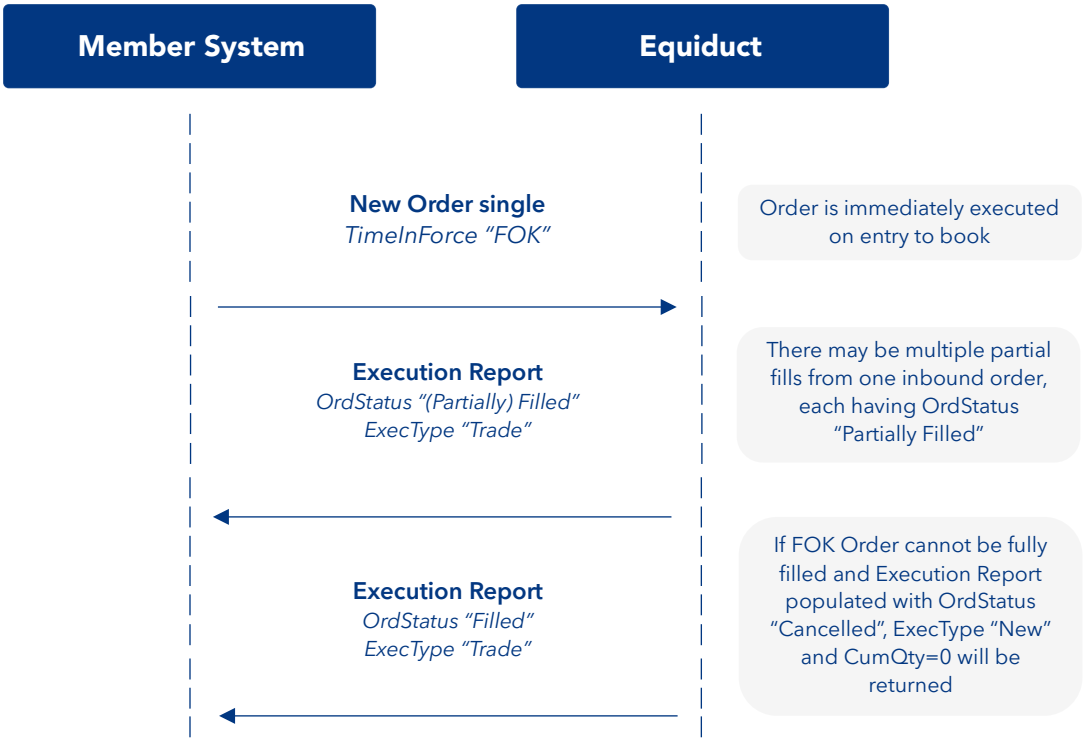
An order may match and execute immediately on entry or modification (cancel/replace). This will be communicated by one or more Execution Report messages with *OrdStatus* = "Partially Filled" or "Filled" and *ExecType* = "Trade" in line with the FPL Global Exchanges & Markets Committee best practices recommendations. See section *3.1 Harmonised Workflow*.



4.3.3 IOC/FOK Orders

Successful acceptance of an order with a *TimeInForce* of IOC or FOK will be acknowledged by zero or more **Execution Report** messages with *ExecType* = "Trade" and *OrdStatus* = "Partially Filled". The final (it may be the only) **Execution Report** message will have *OrdStatus* = "Cancelled" or "Filled" and *ExecType* = "New" or "Trade" respectively. This is in line with the FPL Global Exchanges & Markets Committee best practices recommendations.





4.3.4 Cancel Order

The **Order Cancel Request** message is used to request cancellation of an order on Equiduct. This message must either specify the unique system-generated *OrderID* of the order to be cancelled or use *OrigClOrdID* to reference the client-generated *ClOrdID* of the order in question.

If *OrderID* is specified on an **Order Cancel Request**, this field alone will be used to lookup the matching order for cancellation, any *OrigClOrdID* specified will be ignored. If *OrderID* is not specified, then *OrigClOrdID* must be provided and will be used for order lookup.

If the Order is successfully cancelled, then Equiduct will respond with an **Execution Report** message with *OrdStatus* = "Cancelled".

If the cancellation request is rejected by Equiduct, then the member will receive an **Order Cancel Reject** message containing a reason code for the rejection.

4.3.5 Automatic Cancellation of Orders

By default, all orders for a user will be cancelled if that user's connection is abruptly disconnected or closed cleanly by sending a **Logout** message ("cancel on disconnect"). It is the responsibility of the user to resubmit their orders when connectivity has been re-established. This default behaviour can be changed by Equiduct Market Control.

4.3.6 Order Expiry

Orders may be expired by Equiduct at various times during the day, according to the *TimeInForce* specified for the order. At such times an Execution Report message will be sent to the Member System with *OrdStatus* = "Expired".

4.3.7 Rejects

Unsuccessful orders of all types (sent to Equiduct, yet rejected because of business validations) will be acknowledged with an **Execution Report** message with *OrdStatus* = "Rejected".

In certain circumstances, such as an attempt to take an unauthorised action or omitted conditionally required fields, Equiduct may return a **Business Message Reject** message.

4.3.8 Self-match Prevention

By default, orders may trade against orders submitted by the same member ("self-matching"). A member may set the *PreventParticipantMatch* tag on orders they submit to avoid self-matching. In cases where a self-match is about to occur and this flag is set, the resting order will be cancelled back to the member and the aggressive order will continue to match against remaining interest in the book. Self-match prevention is only applicable to Principal orders.

4.4 VBBO Trading Behaviour

4.4.1 Order Submission

Orders to execute at the VBBO (in the Apex and Zenith services) are entered using the **New Order Single** message, with *TargetSubID* filled out as detailed in section *5.1.1 Standard Header* or left blank if the default destination for the firm is set to "PARTNEREX". The order can specify the target Liquidity Provider (via a *PartyID* entry) to which the order is to be directed. If no target LP is specified Equiduct will match against all LPs with whom the submitting member has an established VBBO trading configuration, in the priority as predetermined by the submitting member.

Limit orders with a *TimeInForce* other than IOC or FOK which cannot be completely executed against one or more Liquidity Providers will have any remaining quantity placed on the order book where they will be available for passive execution.

Market orders with a *TimeInForce* other than IOC or FOK which cannot be completely executed against one or more Liquidity Providers will have any remaining quantity placed on the order book for a short period before being retried at the VBBO with any unexecuted quantity returned to the member.

Orders with a *TimeInForce* other than IOC or FOK can participate in the opening and/or closing procedure and can be submitted at any time apart from the order book freeze which occurs shortly before the opening/closing cross. All orders submitted during the order book freeze will be rejected with *ExecType* = "Rejected" and *OrdStatus* = "Rejected". At the end of the opening/closing procedure **Execution Report**(s) will be sent for all trades that occurred during the cross, limit orders which are not filled and have a *TimeInForce* other than ATO/ATC (as applicable) will remain in the order book whilst market orders and orders with a *TimeInForce* of ATO/ATC will be expired.

4.4.2 Liquidity Provider

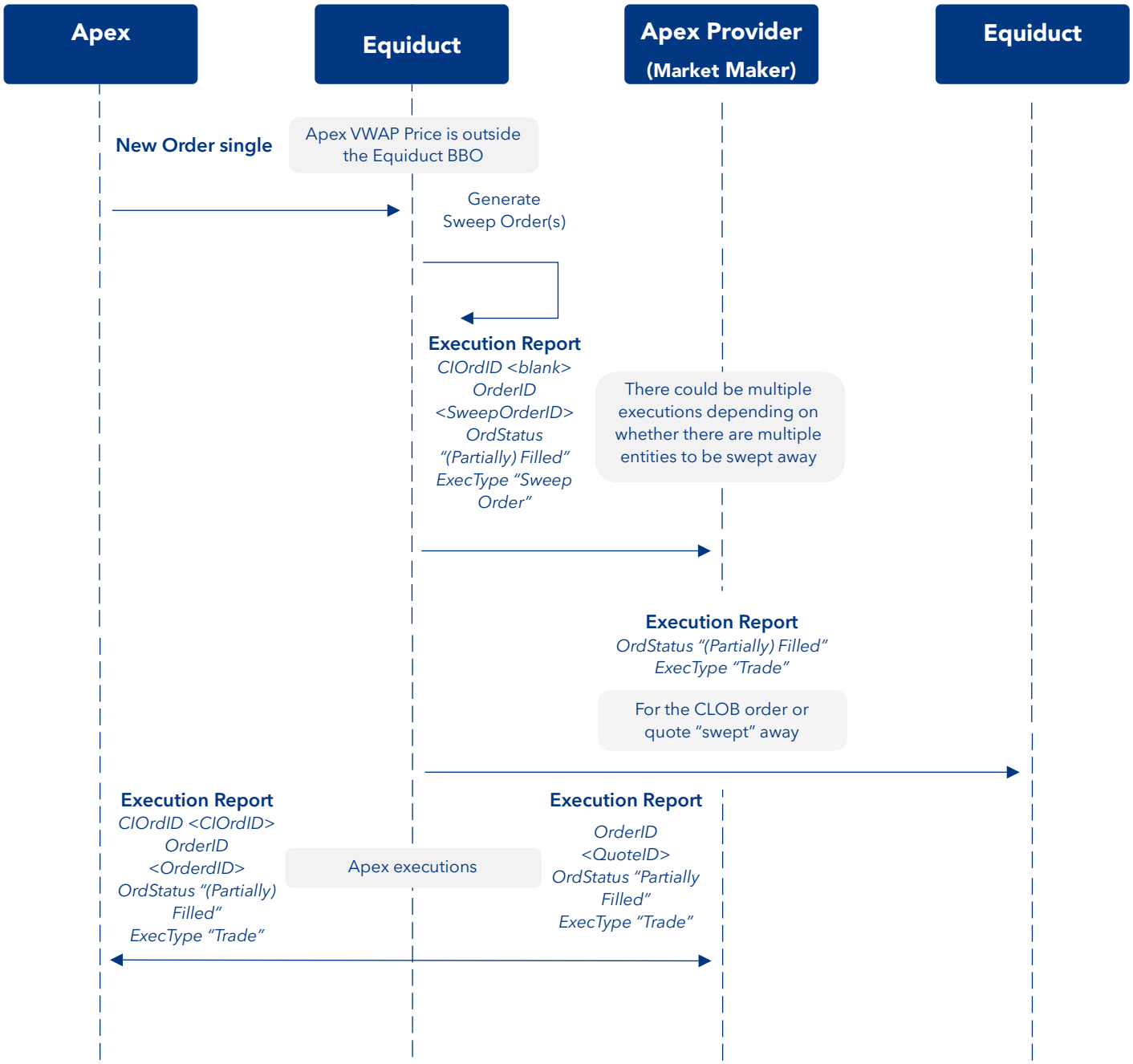
The Liquidity Provider on the other side of a VBBO trade will receive an unsolicited **Execution Report** message containing the details of the execution.

Before the customer order is executed, however, Equiduct may need to "sweep" or interact with better-priced orders in the order book to ensure that no VBBO trade occurs outside the Equiduct Best Bid-Offer (BBO).

In such cases Equiduct will generate a Sweep order and submit this to the order book to execute all better-priced quotes or orders in the book. The Liquidity Provider may, therefore, receive a series of unsolicited executions for an order which was not submitted by their system. The resulting **Execution Report**(s) will contain *ExecType* = "Triggered or Activated by System", *OrdType* = "Limit", *OrdStatus* = "Partially Filled", "Filled" or "Cancelled" (where the Sweep order cannot execute due to self-match prevention) and

TimeInForce = "Immediate or Cancel". *ClOrdID* will contain the last *QuoteMsgID* (if provided) taken from the corresponding quote for that instrument in the order book. Sweep orders will be entered in a principal capacity for the Liquidity Provider and will have the *PreventParticipantMatch* flag set to O, such that resting orders from the same Liquidity Provider, if flagged with *PreventParticipantMatch* = O, will be cancelled rather than traded against the Sweep order.

The following figure illustrates the flow for a market order with *TimeInForce* of IOC.



Note: VBBO executions do not affect the price / volume of a Liquidity Provider's quote in the order book.

4.4.3 VBBO Liquidity Management

The current status of all or any particular trading liquidity being offered can be obtained at any time using the **VBBO Status Reques**t message. One or more **VBBO Status** messages will be returned

The **Update VBBO Status** message is used for managing liquidity parameters.

4.4.4 SenderSubID

It is possible for an order targeted to trade at the VBBO to carry additional information about the originating business unit or client, and further for this to be used when selecting VBBO Liquidity Providers against which this order is eligible to trade. This additional "client" information is provided via the *SenderSubID* tag in the FIX header.

Members wishing to take advantage of this feature must pre-register *SenderSubID* values with Equiduct and with the Liquidity Providers with whom they wish to trade. Once enabled, only orders carrying a valid registered *SenderSubID*, or with this tag omitted, will be accepted.

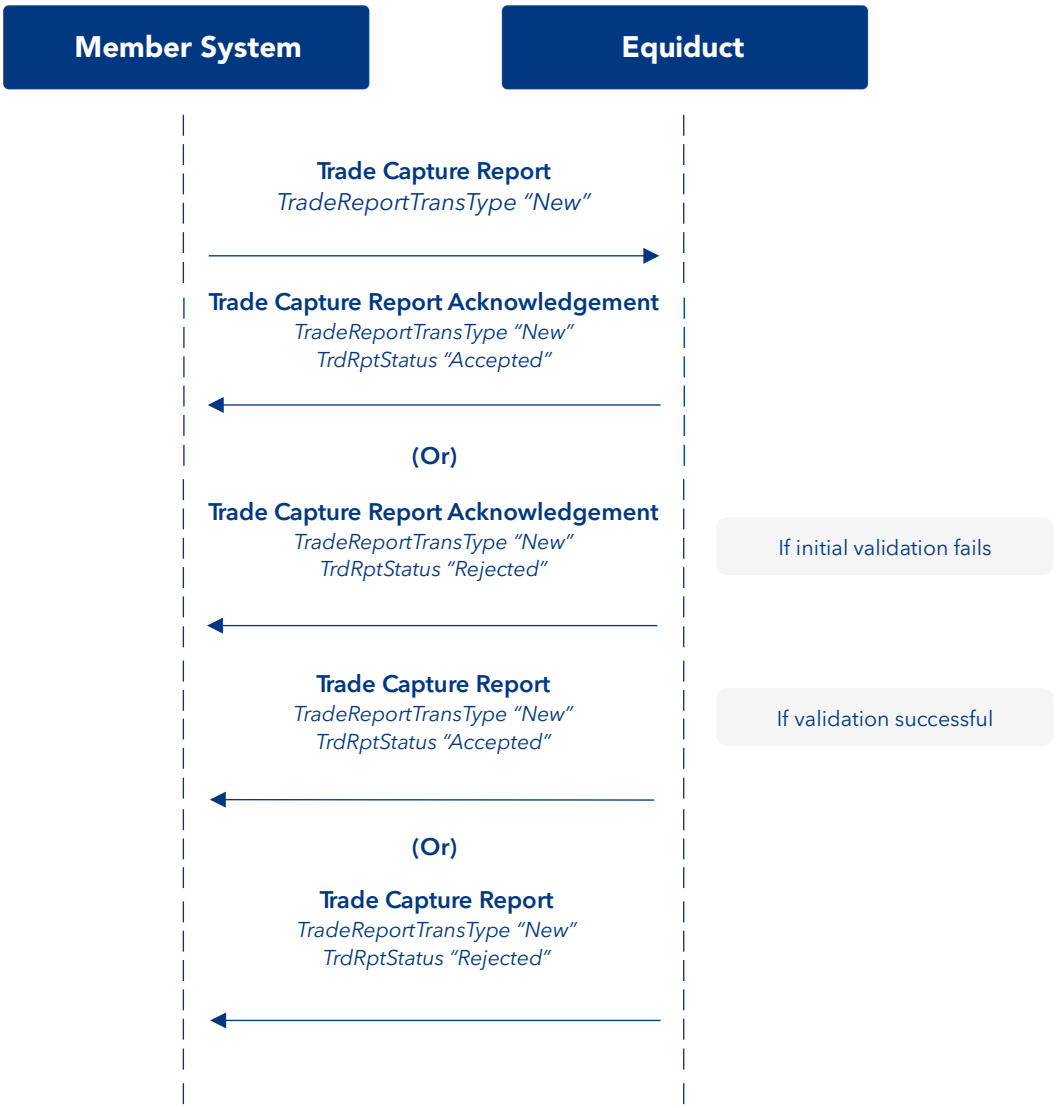
Where orders with a *SenderSubID* trade against an LP at the VBBO, the agreed client identifier is shared with the LP via the *TargetSubID* tag in the FIX header of the LP's **Execution Report** notifying the VBBO trade.

4.5 Trade Reporting

Receipt of a **Trade Capture Report** message will be acknowledged with a **Trade Capture Report Ack** message, which provides technical confirmation of receipt. Completed processing of a **Trade Capture Report** is signalled by a subsequent **Trade Capture Report** response from the exchange.

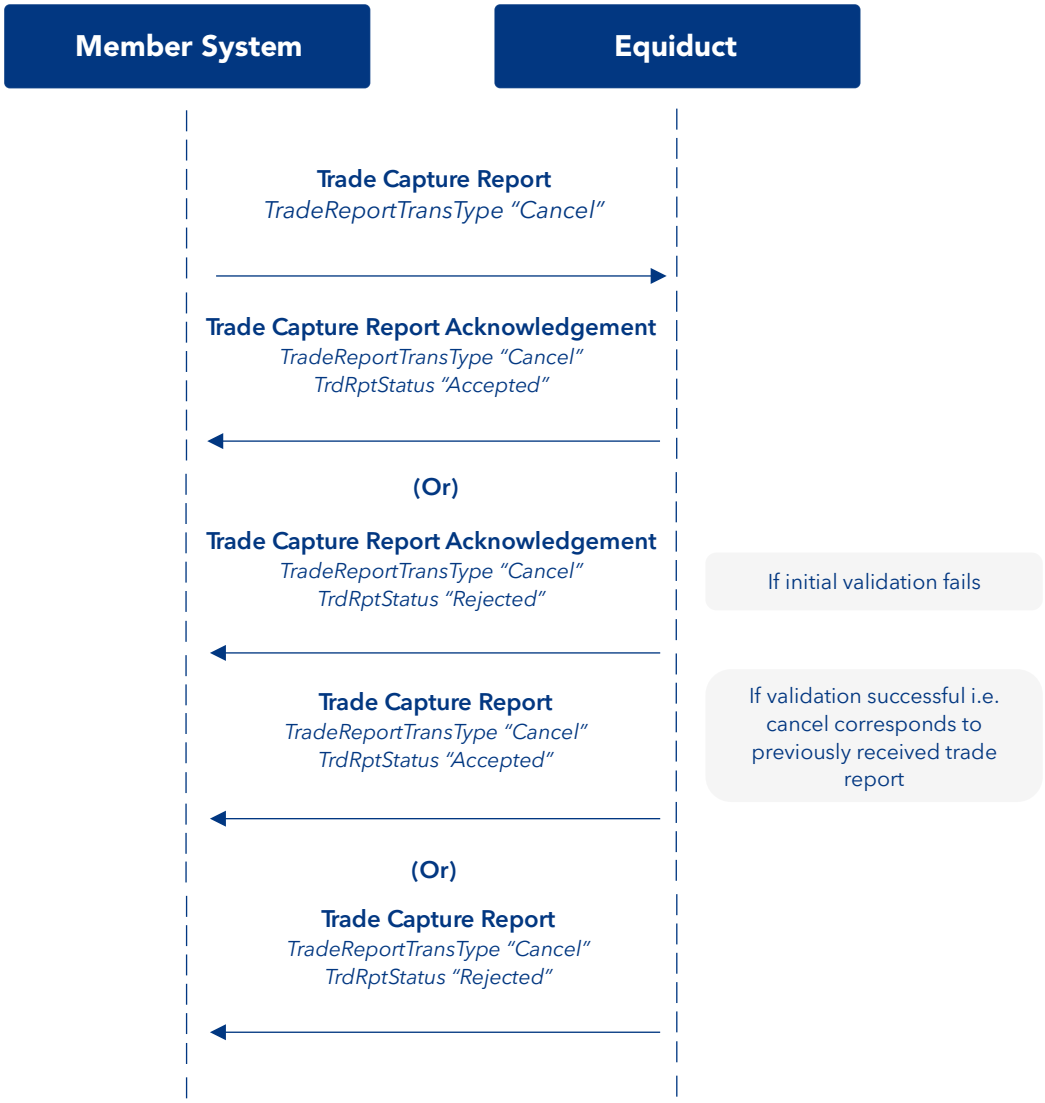
4.5.1 New Trade Reports

Negotiated trades made between an Equiduct member and a non-member firm, or between two member firms can be reported to Equiduct for publication in Equiduct market data.



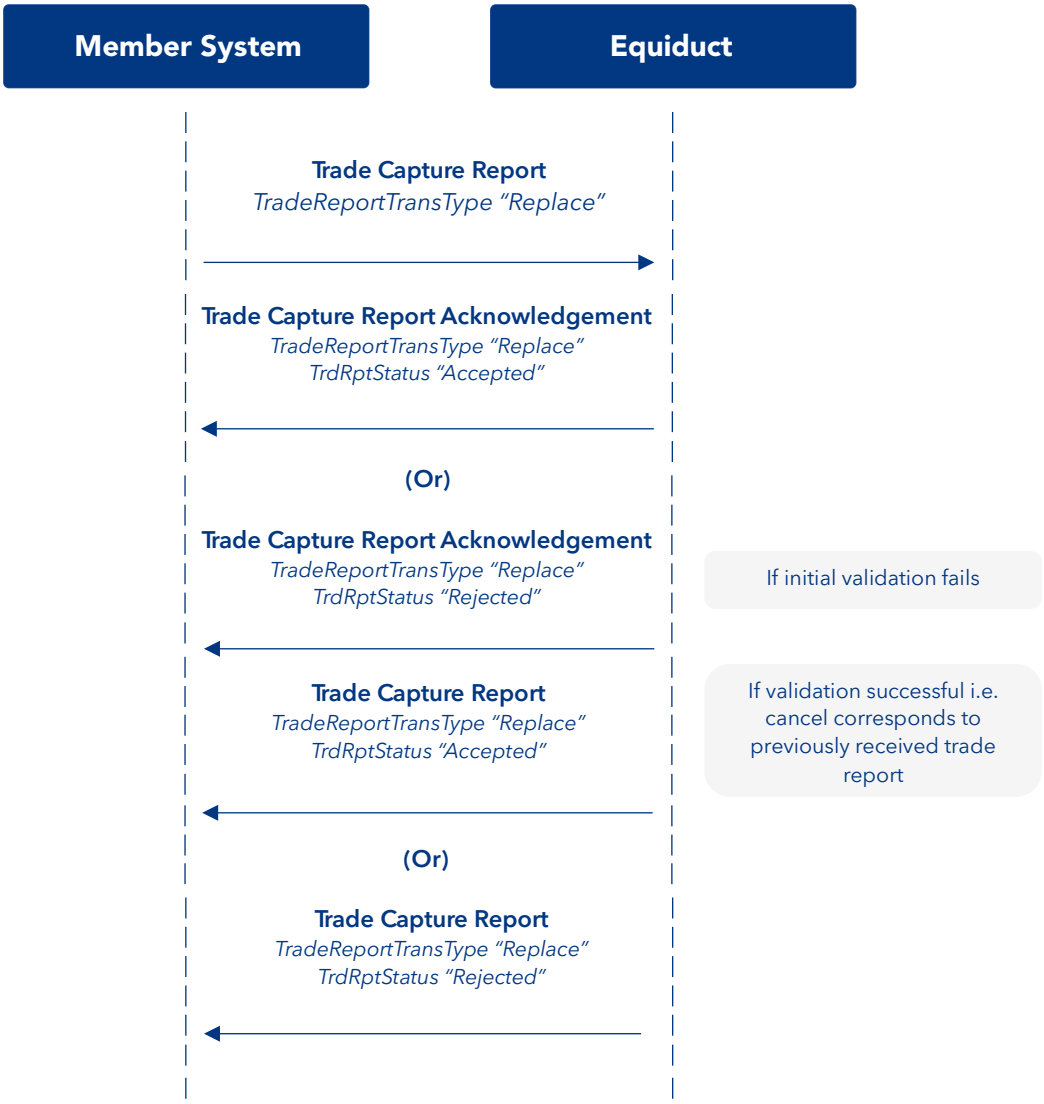
4.5.2 Trade Report Cancellations

Previously submitted trade reports can be cancelled by the reporting member firm. The same work flow used to submit new trade reports must be used for a cancellation.



4.5.3 Trade Report Amendments

Previously submitted trade reports can be amended by the reporting member firm. The same work flow used to submit new trade reports must be used for an amendment.



4.5.3.1 Trade Report Rejection

Should the **Trade Capture Report** message be rejected because of a business validation failure, Equiduct will send a **Trade Capture Report Ack** message to the Member system with a *TrdRptStatus* "Rejected" followed by a Trade Capture Report with a *TrdRptStatus* "Rejected" as confirmation of processing. In certain circumstances a **Business Message Reject** message may be used.

5 FIX Message Formats

This section defines the messages supported by the Equiduct FIX Gateway. These messages are based on the FIX 4.4 specification, some custom fields and values are used and where possible are in line with FIX 5.0 SP1 where FIX 4.4 does not provide the required coverage.

Only messages and fields supported by Equiduct are listed in this guide; all other FIX messages and fields are ignored by the system. Message fields are identified as required, optional, or conditionally required (that is, fields required based on the presence or value of other fields).

The following sections contain tables describing message content. Each of these tables has the columns shown below.

Column Name	Description
Tag	FIX field identification number.
Field Name	FIX field name.
Req'd	Specifies whether this is a mandatory (Y), conditionally required (C) or optional (N) field.
Comments	Description of field usage.

5.1 Headers and Trailers

Every FIX message is composed of three sections: the header, the body, and the trailer. The header and trailer, the first and last sections of each message, are common to all FIX messages. They provide session support for the FIX protocol, helping to ensure that messages are delivered reliably.

The header and trailer supported by Equiduct are compatible with the standard FIX headers and trailers. For further details, refer to the FIX 4.4 specification.

5.1.1 Standard Header

The following table defines the fields in the message header supported by the Equiduct gateway.

Standard Message Header

Tag	Field Name	Req'd	Comments
8	BeginString	Y	"FIX.4.4" (Always unencrypted, must be first field in message)
9	BodyLength	Y	(Always unencrypted, must be second field in message)
35	MsgType	Y	(Always unencrypted, must be third field in message)
49	SenderCompID	Y	On inbound messages, this must be populated as assigned by (or agreed with) Equiduct Market Control. On outbound transactional messages, specifies "EQTX".
56	TargetCompID	Y	On inbound transactional messages, specify "EQTX". On outbound messages will reflect inbound SenderCompID.
34	MsgSeqNum	Y	
50	SenderSubID	N	May be used to identify desks / business units / clients as agreed with Equiduct Market Control.
57	TargetSubID	N	On inbound transactional messages, specifies the Equiduct execution mechanism that the message is targeted at. The default execution mechanism is configurable per-participant by Equiduct Market Control Valid values: HYBRID = Message is targeted at CLOB PARTNEREX = Message is targeted at VBBO services On outbound messages may be populated with client identifier from a VBBO trade counterparty.
43	PossDupFlag	N	Always required for retransmitted messages, whether prompted by the sending system or as the result of a resend request.
97	PossResend	N	Required when message may be duplicate of another message sent under a different sequence number.
52	SendingTime	Y	

122	OrigSendingTime	N	Required for message resent as a result of a ResendRequest. If data is not available set to same value as SendingTime.

5.1.2 Standard Trailer

The following table defines the only field in the message trailer supported by the Equiduct gateway.

Standard Message Trailer

Tag	Field Name	Req'd	Comments
10	Checksum	Y	

5.2 Session Messages

All session messages adhere to the standard FIX 4.4 specification in both format and usage, apart from the **Logon** message, described below. For further documentation of session messages, please refer to the FIX 4.4 specification.

5.2.1 Logon

The **Logon** message provides the initial contact between the Member system and the FIX Gateway. The *HeartBtInt* field is used to declare the timeout interval for generating heartbeats and must be within a predefined window agreed with Equiduct Market Control.

Upon receipt of a **Logon** message Equiduct will validate the username and password against those stored for the session and issue a **Logon** message as acknowledgement, or a **Logout** message with failure reason.

The connecting Member system should not transfer any FIX messages until a Logon message is received from the Gateway.

> **Note:** The Equiduct FIX Gateway does not process *NextExpectedMsgSeqNum*(789), it will be ignored on inbound (sent by Member system) Logon messages and not populated on outbound (sent to Member system) responses.

Logon Message

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType(35) = A
98	EncryptMethod	Y	No encryption supported. Must be "0" (zero).
108	HeartBtInt	Y	Session heartbeat interval in seconds.
553	Username	Y	Username, as specified by Equiduct Market Control.
554	Password	Y	Password, as specified by Equiduct Market Control.
	Standard Trailer	Y	

5.2.2 Logout

The **Logout** message allows for the graceful closure of a session between the Member system and the FIX Gateway.

Logout Message

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType(35) = 5
58	Text	N	Information text to be set in the response.
	Standard Trailer	Y	

5.3 Unique Identifiers

This section further explains the usage of some of the identifiers used in the transactional messages.

The table below summarises the format and maximum size of the key ID fields used in this specification:

Tag	Field Name	Format / Length
11	ClOrdID	Client-specified, max 20 characters
37	OrderID	20 characters
117	QuoteID	20 characters
526	SecondaryClOrdID	20 characters
41	OrigClOrdID	Same as ClOrdID
1166	QuoteMsgID	Same as ClOrdID

649	QuoteStatusReqID	Client-specified, max 20 characters
790	OrdStatusReqID	Client-specified, max 20 characters
584	MassStatusReqID	Client-specified, max 20 characters
17	ExecID	20 characters when reporting a trade or trade cancel. Sequence number unique at Instrument level in other cases.
19	ExecRefID	20 characters
10002	PartnerExReqID	Client-specified, max 20 characters
10011	PartnerExID	20 characters
198	SecondaryOrderID	12 characters
10015	BuyQuoteID	Same as SecondaryOrderID
10016	SellQuoteID	Same as SecondaryOrderID
571	TradeReportID	Client-specified, max 20 characters
1003	TradeID	20 characters

5.3.1 ClOrdID, OrigClOrdID

Unique Client Order IDs must be supplied by the member on every order. This ID can subsequently be used to cancel, replace or query the order and is chained in the normal way, compliant with FIX standards.

Although *ClOrdID* is required on every order and replace, Equiduct prefer *OrderID* when referring to an existing order. Once a member has been notified of the *OrderID* (see below) they may use this in place of the *ClOrdID* when querying an order, or in place of *OrigClOrdID* when cancelling and replacing. Use of the *OrderID* may result in faster processing of the request. This is in accordance with recommended best practice.

ClOrdIDs are limited to 20 characters; anything over this limit will be silently truncated before being processed.

5.3.2 OrderID

When a new order is entered it is assigned a globally unique *OrderID* by Equiduct which will last for the life of the order, although the order details may change over time. The *OrderID* will be contained in the **Execution Report** message. The *OrderID* can be used to modify, cancel or request the status of an order.

5.3.3 QuoteID

When a Market Maker is first registered to quote in an instrument a new quote is created - an action performed by Equiduct Market Control. This relationship of Market Maker to instrument is given a unique *QuoteID*. This will last for the life of the quote, although the quote values will change over time. The *QuoteID* will be obtainable through the **Quote Status Report** message. The *QuoteID* can be used to open, modify, close or query the status of a quote.

5.3.4 SecondaryOrderID, BuyQuoteID and SellQuoteID

In order to link orders and quotes to updates in the ITCH market data feed Equiduct use three FIX fields: *SecondaryOrderID* (used in **Execution Reports**), and *BuyQuoteID* and *SellQuoteID* (used in **Quote Status Reports**). These fields are populated with a 12-character identifier which is unique for an order, or each side of a quote (bid or offer), over a single trading day. This ID will be generated when the order is entered and may be updated when an order or quote is updated. In the case of GTC and GTD orders resting in the book, and all quotes, this ID will, at a minimum, be regenerated at the start of each trading day.

> **Note:** These fields cannot be used to modify, cancel or query the status of a quote or order - they may only be used to reference updates in the ITCH market data feed.

5.3.5 ExecID

ExecID is a mandatory field in the **Execution Report** message. Where an **Execution Report** communicates a trade or trade cancel, this field is populated with a 20-character globally unique execution ID. For *ExecType* = I (Order status) this field will be zero. In all other cases the field contains an (up to) 20-digit sequence number which is unique per instrument (i.e. may be reused for different instruments).

5.3.6 TradeReportID, TradeID

Members are required to provide a day-unique *TradeReportID* with each **Trade Capture Report** message they submit. This ID is echoed back in response messages (**Trade Capture Report Ack** and **Trade Capture Report**) which also contain the Equiduct-generated *TradeID* which is globally unique and may be used to identify a trade for the purposes of amendment or cancellation.

5.4 Transactional Messages Inbound (Sent by Member System)

5.4.1 Quote

The **Quote** message enables a Market Maker to open and amend the details of a quote on the market.

All quotes are implicitly in Principal capacity and are always classified as *Liquidity Provision* activity.

Quote

Tag		Field Name	Req'd	Comments
		Standard Header	Y	MsgType(35) = S
1166		QuoteMsgID	N	Quote issuer assigned identifier for this quote message, must be unique for every submission of a quote.
117		QuoteID	N	Static quote identifier assigned by Equiduct. This is supplied by Equiduct Market Control or can be obtained by issuing a non-specific (wild card) QuoteStatusRequest.
453		NoPartyIDs	Y	
⇒	**448**	PartID	Y	Used to identify source of quote and other information (MiFID II Order Record Keeping). Reserved values (applicable with PartyIDSource = P): Applicable when PartyRole = 3 (Client ID) 0 = NONE (No client for this order) Applicable when PartyRole = 12 (Executing Trader) 3 = NORE (Execution Decision made by Client)
⇒	**447**	PartyIDSource	Y	Valid value: C = Generally accepted market participant identifier (i.e. Equiduct mnemonic) P = Proprietary / Custom Code (Short code)
⇒	**452**	PartyRole	Y	Valid value: 1 = Executing Firm 3 = Client ID (Client of Executing Firm)

				12 = Executing Trader (Person or algorithm responsible for execution of order) 122 = Investment Decision Maker (Person or algorithm responsible for investment decision)
276		QuoteCondition	N	Indicates whether to transition the quote into open status or to close the quote (remove it from the market). If unset the current QuoteCondition (either "Open" or "Closed") is maintained. Valid values: A = Open B = Closed
55		Symbol	Y	Equiduct symbol. Can also be specified as "[N/A]"
48		SecurityID	C	Required if Symbol is "[N/A]", only ISIN supported.
22		SecurityIDSource	C	Required if Symbol is "[N/A]". Valid value: 4 = ISIN number
207		SecurityExchange	C	Conditionally required if Symbol is "[N/A]". Used to specify the MIC for the appropriate primary listing market.
15		Currency	C	Conditionally required if Symbol is "[N/A]". Used to specify the traded currency for the instrument.
132		BidPx	N	Specifies the bid price. If not specified, the price on the market remains unchanged.
133		OfferPx	N	Specifies the offer price. If not specified, the price on the market remains unchanged.
134		BidSize	N	Specifies the bid size. If not specified, the BidSize on the market remains unchanged.
135		OfferSize	N	Specified the offer size. If not specified, the OfferSize on the market remains unchanged.
60		TransactTime	N	Time this request was initiated/released by client
9816		TickMultiplier	N	Number of price ticks applied to bid and offer price, as appropriate, to widen the quote spread when the auto quote refresh function is triggered. Defaults to 100 if not specified. Where configured by Equiduct Market Control, may be set to zero to disable auto quote refresh.
1		Account	N	Clearing or Settlement account number. Validations performed by Equiduct will vary

			depending on the clearing arrangements for the Instrument.
9938	ClearingHandlingType	N	Indicates the pre-posting and give-up action to be taken by the clearing system when a trade has occurred. Valid values: 0 = Manual Mode 1 = Automatic Extraction 2 = Automatic Allocation Note: This field is specific to LCH SA.
9952	FreeText	N	Free text to be pass to the clearing system when a trade has occurred. Note: This field is specific to LCH SA.
8015	OrderAttributeTypes	N	Space delimited list of attributes. Note that quotes are, by definition, classified as Liquidity Provision activity. Valid values: 4 = Algorithmic Order
1724	OrderOrigination	N	Set to indicate that the quote was placed as a result of activity defined as DEA under MiFID II (aka DMA). If not set, the quote does not result from DEA. Valid value: 5 = Order received from a direct access customer (DEA)
	Standard Trailer	Y	

5.4.2 Quote Status Request

The **Quote Status Request** message enables a Market Maker to query the details of a quote on the market, either by *QuoteID* or by security. It will result in a **Quote Status Report** message with *QuoteStatus*="Query" being returned to the member.

This message also allows members to request status of all their quotes (by specifying Symbol as '*'), resulting in one or more **Quote Status Report** messages. This can be used as a mechanism to dynamically retrieve Equiduct assigned *QuoteIDs*.

Note: It is possible that, after issuing a **Quote Status Request**, an **Execution Report** or unsolicited **Quote Status Report** (one with *QuoteStatus* other than "Query") may be received for a given security before the **Quote Status Report** response is received. If this happens, the **Execution Report** or unsolicited **Quote Status Report** should be considered to reflect the most current state (i.e. the delayed **Quote Status Report** (*QuoteStatus*="Query") should be discarded). If there is any doubt about the latest status to be applied then the *TransactTime(60)* field should be used to identify the newest status. See section *4.1 Synchronise Systems* for further explanation and discussion of this point.

Quote Status Request

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType(35) = a (lowercase).
649	QuoteStatusReqID	N	Unique message identifier.
117	QuoteID	N	If specified, only status for a specific Quote (if found) will be returned.
55	Symbol	Y	Equiduct symbol. Specify "*" to receive status for all quotes.
48	SecurityID	C	Required if QuoteID is not specified and Symbol is "[N/A]", only ISIN supported.
55	Symbol	Y	Equiduct symbol. Can also be specified as "[N/A]"
48	SecurityID	C	Required if Symbol is "[N/A]", only ISIN supported.
22	SecurityIDSource	C	Required if SecurityID is specified. Valid value: 4 = ISIN number
207	SecurityExchange	C	Conditionally required if Symbol is "[N/A]". Used to specify the MIC for the appropriate primary listing market.

15		Currency	C	Conditionally required if Symbol is "[N/A]". Used to specify the traded currency for the instrument.
453		NoPartyIDs	Y	Valid value 1.
⇒	**448**	PartyID	Y	Used to identify source of request (i.e. the business owner of the transaction).
⇒	**447**	PartyIDSource	Y	Valid value: C = Generally accepted market participant identifier (i.e. Equiduct mnemonic)
⇒	**452**	PartyRole	Y	Valid value: 1 = Executing Firm
		Standard Trailer	Y	

5.4.3 New Order Single

The **New Order Single** message is used to submit various types of orders to Equiduct for execution.

New Order Single

Tag		Field Name	Req'd	Comments
	Standard Header		Y	MsgType(35) = D
11		ClOrdID	Y	Unique identifier of the order as assigned by institution or by the intermediary (CIV term, not a hub/service bureau) with closest association with the investor.
453		NoPartyIDs	Y	
⇒	**448**	PartyID	Y	Used to identify source of order and provide other information about the order (MiFID II Order Record Keeping). Reserved values (with PartyIDSource = P): Applicable when PartyRole = 3 (Client ID): 0 = NONE (No client for this order) 1 = AGGR (An aggregation of multiple client orders) 2 = PNAL (Clients are pending allocation) Applicable when PartyRole = 12 (Executing Trader): 3 = NORE (Execution Decision made by Client)
⇒	**447**	PartyIDSource	Y	Valid values: C = Generally accepted market participant identifier (i.e. Equiduct mnemonic) P = Short code identifier
⇒	**452**	PartyRole	Y	Identifies the type of PartyID. Valid values: 1 = Executing Firm (Order owner) – Required 3 = Client ID (Client of Executing Firm) 11 = Order Origination Trader (End client)

				12 = Executing Trader (Person or algorithm responsible for execution of order) 17 = Contra Firm (Liquidity Provider) – VBBO orders only 122 = Investment Decision Maker (Person or algorithm responsible for investment decision)
111		MaxFloor	N	Maximum quantity (e.g. number of shares) within an order to be shown on the exchange floor at any given time. Order volume to be displayed to the market; "peak" volume. When specified, limit order is converted into an iceberg order.
55		Symbol	Y	Equiduct symbol. Can be '[N/A]'.
48		SecurityID	C	Required if Symbol is "[N/A]", only ISIN supported.
22		SecurityIDSource	C	Required if Symbol is "[N/A]". Valid value: 4 = ISIN number
207		SecurityExchange	C	Conditionally required if Symbol is "[N/A]". Used to specify the MIC for the appropriate primary listing market.
15		Currency	C	Conditionally required if Symbol is "[N/A]". Used to specify the traded currency for the instrument.
54		Side	Y	Side of order. Valid values: 1 = Buy 2 = Sell
60		TransactTime	N	Time this request was initiated/released by client
38		OrderQty	Y	Order quantity in number of shares
110		MinQty	N	Minimum quantity to be executed. Only valid if TimeInForce = IOC.
40		OrdType	Y	Order type. Valid values: 1 = Market 2 = Limit

			3 = Stop loss 4 = Stop limit P = Pegged K = At Best
44	Price	C	Price per share. Required for limit and stop limit orders. Price must not be specified for Pegged or AtBest orders. For stop limit orders, Price must be greater than or equal to StopPx for buy orders and less than or equal to StopPx for sell orders.
99	StopPx	C	Required if OrdType is 'Stop loss' or 'Stop limit'. The price at which the order will be triggered. Must be greater than the last reference price for buy orders and less than the last reference price for sell orders.
59	TimeInForce	N	Specifies how long the order remains in effect. Absence of this field is interpreted as DAY (or IOC for VBBO orders). Valid values: 0 = Good for Day 1 = Good Till Cancel (GTC) 2 = At the Opening (OPG or ATO) † 3 = Immediate or Cancel (IOC) † 4 = Fill or Kill (FOK) † 5 = Good For Session (GFS) ** 6 = Good Till Date (also for specifying GTT) 7 = At the Close (ATC) † † Not valid for Stop loss and Stop limit orders. ** Only valid during continuous trading.
126	ExpireTime	C	Conditionally required if TimeInForce = GTD. If ExpireTime is set to a time during the current trading day then the order will expire at that time. If the ExpireTime is on a day other than the current trading day then it will expire at the time specified on that day. If the ExpireTime is outside of trading hours then the order will expire before the start of the next trading day. Note that midnight ("00:00:00") is treated as the first second of a given day, so in order to

			have an order remain valid for the whole of a given trading day the time component of ExpireTime should be set to a time after market close and before midnight, for example "23:59:00".
528	OrderCapacity	Y	Designates the capacity of the firm placing the order. Valid values: A = Agency P = Principal R = Riskless
18	ExecInst	N	A single value used to identify the type of peg for a Pegged order (OrdType=P). Valid values: P = Market peg. Buy Order pegs the Offer of the PBBO. Sell Order pegs the Bid of the PBBO. R = Primary peg. Buy Order pegs the Bid of the PBBO. Sell Order pegs the Offer of the PBBO. p = Market peg (Default). Buy Order pegs the Offer of the EBBO (excluding the CLOB). Sell Order pegs the Bid of the EBBO. r = Primary peg. Buy Order pegs the Bid of the EBBO (excluding the CLOB). Sell Order pegs the Offer of the EBBO.
211	PegOffsetValue	N	A signed amount up to 4 decimal places in the traded currency that will be added to the peg price and rounded to the tick size. Limit price for a buy order will be rounded down, and for a sell order will be rounded up. The default value is zero, i.e. limit price will match the EBB or EBO.
7928	PreventParticipantMatch	N	Required if a participant wishes to avoid self-matching on submitted Principal orders. Valid values: O = Cancel
1	Account	N	Clearing or Settlement account number. Validations performed by Equiduct will vary depending on the clearing arrangements for the Instrument.
660	AcctIDSource	N	Valid values:

			99 = Other (custom or proprietary)
9938	ClearingHandlingType	N	Usage depends on the clearing arrangements for the instrument. Indicates the pre-posting and give-up action to be taken by the clearing system when a trade has occurred. Valid values: 0 = Manual Mode 1 = Automatic Extraction 2 = Automatic Allocation Note: This field is specific to LCH SA.
9952	FreeText	N	Free text to be passed to the clearing system when a trade has occurred. Note: This field is specific to LCH SA.
8015	OrderAttributeTypes	N	Space delimited list of order attributes. Multiple values can be set. Valid values: 4 = Algorithmic order 2 = Liquidity Provision activity order 1001 = Apex Liquidity Provision order
1724	OrderOrigination	N	Set to indicate that the order was placed as a result of activity defined as DEA under MiFID II (aka DMA). If not set, the order does not result from DEA. Valid value: 5 = Order received from a direct access customer (DEA)
	Standard Trailer	Y	

5.4.4 Order Cancel/Replace Request

Only *Price*, *StopPx*, *Quantity*, *TimeInForce* and *OrdType* can be amended. Fields stating, "if specified, must match original order" are optional, even if they were included on the original order. Other fields stating "must match original order" are required to be populated if they were included on the original order.

Order Modification

Tag		Field Name	Req'd	Comments
		Standard Header	Y	MsgType(35) = G
37		OrderID	C	Unique identifier as assigned by Equiduct. Required if OrigClOrdID not specified. Note, OrderID is preferred to OrigClOrdID and may result in faster processing.
453		NoPartyIDs	Y	Valid value 1.
⇒	**448**	PartyID	Y	Used to identify source of order . Business owner of the transaction must be specified i.e. PartyRole = 1 (Executing Firm).
⇒	**447**	PartyIDSource	Y	Valid value: 1 = Executing Firm
⇒	**452**	PartyRole	Y	Valid value: 1 = Executing Firm (Order owner)
41		OrigClOrdID	C	ClOrdID of the previous non rejected order (NOT the initial order of the day). Required if OrderID is not specified.
11		ClOrdID	Y	Unique identifier of replacement order as assigned by institution or by the intermediary with closest association with the investor. Note that this identifier will be used in ClOrdID field of the Cancel Reject message if the replacement request is rejected.
111		MaxFloor	N	Maximum quantity (e.g. number of shares) within an order to be shown on the exchange floor at any given time. Order volume to be displayed to the market; "peak" volume. When specified, limit order is converted into an iceberg order. If specified, must match original order.

55	Symbol	Y	Equiduct symbol. Must match original order.
48	SecurityID	C	Required if Symbol is "[N/A]". Must match original order.
22	SecurityIDSource	C	Required if SecurityID is specified. Must match original order.
207	SecurityExchange	C	Conditionally required if Symbol is "[N/A]". Used to specify the MIC for the appropriate primary listing market.
15	Currency	C	Conditionally required if Symbol is "[N/A]". Used to specify the traded currency for the instrument.
54	Side	Y	Side of order. Must match original order.
60	TransactTime	N	Time this order request was initiated/released by client.
38	OrderQty	C	New total intended investor quantity (irrespective of the amount already executed for this chain of orders).
40	OrdType	Y	Order type. May be amended to any type except Pegged, At Best, Stop loss or Stop limit. Note: It is valid to amend a Stop loss to a Stop limit and vice versa.
44	Price	C	Price per share. Only valid for limit order types.
99	StopPx	N	Ignored if OrdType is not 'Stop loss' or 'Stop limit' The price at which the order will be triggered. Must be greater than the last reference price for buy orders and less than the last reference price for sell orders. StopPx can only be amended if the order has not been triggered.
59	TimeInForce	N	Amendments can be made from any TimeInForce except IOC and FOK. Additionally, GFS can only be modified to IOC or FOK.
126	ExpireTime	C	Time of order expiration. Conditionally required if TimeInForce is specified as GTD.
528	OrderCapacity	N	If specified, must match original order.
18	ExecInst	N	A single value used to identify the type of peg for a Pegged order (OrdType=P). Valid values:

			P = Market peg. Buy Order pegs the Offer of the PBBO. Sell Order pegs the Bid of the PBBO. R = Primary peg. Buy Order pegs the Bid of the PBBO. Sell Order pegs the Offer of the PBBO. p = Market peg (Default). Buy Order pegs the Offer of the EBBO (excluding the CLOB). Sell Order pegs the Bid of the EBBO. r = Primary peg. Buy Order pegs the Bid of the EBBO (excluding the CLOB). Sell Order pegs the Offer of the EBBO.
211	PegOffsetValue	N	A signed amount up to 4 decimal places in the traded currency that will be added to the peg price and rounded to the tick size. A buy order will be rounded down and a sell order will be rounded up. The default value is zero (0). Note: Must match original order - amending of this value is currently not supported.
8015	OrderAttributeTypes	N	Space delimited list of order attributes. Multiple values can be set. Valid values: 4 = Algorithmic order 2 = Liquidity Provision activity order 1001 = Apex Liquidity Provision order Note: Must match original order - amending of this value is currently not supported.
	Standard Trailer	Y	

5.4.5 Order Cancel Request

The **Order Cancel Request** message is used to request the cancellation of an existing order on the system. This includes orders that have been partially executed, and those which are not yet visible in the market (e.g. ATO orders and untriggered Stop orders).

The **Order Cancel Request** message requests the cancellation of all remaining quantity for an existing order – members may not request the cancellation of part of an order.

Order Cancel Request

Tag		Field Name	Req'd	Comments
		Standard Header	Y	MsgType(35) = F
37		OrderID	C	Unique identifier as assigned by Equiduct. Required if OrigClOrdID not specified. Note, OrderID is preferred to OrigClOrdID and can result in faster processing.
41		NoPartyIDsOrigClOrdID	C	ClOrdID of the previous non rejected order (NOT the initial order of the day). Required if OrderID is not specified.
11		ClOrdID	Y	Unique ID of cancel request as assigned by the institution.
453		NoPartyIDs	Y	Valid value 1.
⇒	**448**	PartyID	Y	Used to identify source of order. Business owner of the transaction must be specified i.e. PartyRole = 1 (Executing Firm)
⇒	**447**	PartyIDSource	Y	Valid value: C = Generally accepted market participant identifier (i.e. Equiduct mnemonic)
⇒	**452**	PartyRole	Y	Valid value: 1 = Executing Firm (Order owner)
55		Symbol	Y	Equiduct symbol. Must match original order.
48		SecurityID	C	Required if Symbol is "[N/A]". Must match original order.
22		SecurityIDSource	C	Required if SecurityID is specified. Must match original order.

207	SecurityExchange	C	Conditionally required if Symbol is "[N/A]". Used to specify the MIC for the appropriate primary listing market.
15	Currency	C	Conditionally required if Symbol is "[N/A]". Used to specify the traded currency for the instrument.
54	Side	Y	Side of order. Must match original order.
60	TransactTime	N	Time this order request was initiated/released by client.
38	OrderQty	Y	Order quantity in number of shares.
	Standard Trailer	Y	

5.4.6 Order Status Request

The **Order Status Request** message enables a member to query the details of an order on the market, either by *OrderID* or by *ClOrdID*. It will result in an **Execution Report** with *ExecType(150)* of "Order Status" being returned to the member.

Note: It is possible that, after issuing an **Order Status Request**, an **Execution Report** not relating to the request (one with *ExecType* other than "Order Status") may be received for the given order before the response to the **Order Status Request** is received. If this happens, the unsolicited **Execution Report** will reflect the most current state of the order (i.e. the delayed **Execution Report** with *ExecType* "Order Status" should be discarded). If there is any doubt about the latest status to be applied then the *TransactTime(60)* field should be used to identify the newest status. See Section *4.1 Synchronise Systems* for further explanation and discussion of this point.

Order Status Request

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType(35) = H
37	OrderID	C	Unique identifier as assigned by Equiduct. Required if ClOrdID not specified. Note, OrderID is preferred to ClOrdID and can result in faster processing.
11	ClOrdID	C	The ClOrdID of the order whose status is being requested. Required if OrderID is not specified.
453	NoPartyIDs	Y	Valid value 1.

⇒	**448**	PartyID	Y	Used to identify source of request. Business owner of the transaction must be specified i.e. PartyRole = 1 (Executing Firm)
⇒	**447**	PartyIDSource	Y	Used to identify class source of PartyID value. Valid value: C = Generally accepted market participant identifier (i.e. Equiduct mnemonic)
⇒	**452**	PartyRole	Y	Identifies the type of PartyID. Valid value: 1 = Executing Firm (Order owner)
790		OrdStatusReqID	N	Uniquely identify a specific Order Status Request message. Echoed back on Execution Report if provided.
55		Symbol	Y	Equiduct symbol. Must match original order.
48		SecurityID	N	If specified, must match original order.
22		SecurityIDSource	C	Required if SecurityID is specified. Must match original order.
207		SecurityExchange	C	Conditionally required if Symbol is "[N/A]". Used to specify the MIC for the appropriate primary listing market.
15		Currency	C	Conditionally required if Symbol is "[N/A]". Used to specify the traded currency for the instrument.
54		Side	Y	Side of order. Must match original order.
		Standard Trailer	Y	

5.4.7 Order Mass Status Request

The **Order Mass Status Request** message enables a member to query the details of all of their orders, or all orders for a given security. It will result in one or more **Execution Reports** with *ExecType(150)* of "Order Status" being returned to the member.

> **Note:** It is possible that, after issuing an **Order Status Request**, an **Execution Report** not relating to the request (one with *ExecType* other than "Order Status") may be received before the response to the **Order Mass Status Request** is received. If this happens, the unsolicited **Execution Reports** will reflect the most current state of these orders (i.e. subsequent delayed **Execution Reports** with *ExecType* "Order Status" should be discarded). If there is any doubt about the latest status to be applied then the *TransactTime(60)* field should be used to identify the newest status. See Section *4.1 Synchronise Systems* for further explanation and discussion of this point.

Order Mass Status Request

Tag		Field Name	Req'd	Comments
		Standard Header	Y	MsgType(35) = AF
584		MassStatusReqID	Y	Unique ID of Mass Status Request as assigned by the institution.
585		MassStatusReqType	Y	Specifies the scope of the Mass Status Request. Valid values: 1 = Status for orders for a security 7 = Status for all orders
453		NoPartyIDs	Y	Valid value 1.
⇒	**448**	PartyID	Y	Used to identify source of request. Business owner of the transaction must be specified i.e. PartyRole = 1 (Executing Firm)
⇒	**447**	PartyIDSource	Y	Valid value: C = Generally accepted market participant identifier (i.e. Equiduct mnemonic)
⇒	**452**	PartyRole	Y	Valid value: 1 = Executing Firm (Order owner)
55		Symbol	C	Equiduct symbol. Required if MassStatusRequestType is 1. Can be "[N/A]".
48		SecurityID	C	Required if Symbol is "[N/A]" and MassStatusRequestType is 1, only ISIN supported.

22	SecurityIDSource	C	Required if Symbol is "[N/A]" and MassStatusRequestType is 1, only ISIN supported. Valid value: 4 = ISIN number
207	SecurityExchange	C	Conditionally required if Symbol is "[N/A]" and MassStatusRequestType is 1. Used to specify the MIC for the appropriate primary listing market.
15	Currency	C	Conditionally required if Symbol is "[N/A]" and MassStatusRequestType is 1. Used to specify the traded currency for the instrument.
	Standard Trailer	Y	

5.4.8 Trade Capture Report

The **Trade Capture Report** message is used to report privately negotiated transactions under the rules of Equiduct for the purposes of post-trade transparency. The trade report must contain both sides of the trade (*NoSides(552)* = 2). See section 3.2.7 for explanatory note on *TrdType* fields.

Inbound Trade Capture Report – Member to Equiduct

Tag		Field Name	Req'd	Comments
		Standard Header	Y	MsgType(35) = AE
552		NoSides	Y	Must always be 2.
⇒	**54**	Side	Y	Valid values: 1 = Buy 2 = Sell
⇒	**528**	Capacity	N	Valid values: A = Agency (AOTC) P = Principal (DEAL) R = Riskless Principal (MTCH) "N/A" if not provided
453		NoPartyIDs	Y	Must always be 1.
⇒	**448**	PartyID	Y	Equiduct mnemonic.
⇒	**447**	PartyIDSource	Y	D = Proprietary / Custom code
⇒	**452**	PartyRole	Y	Valid values: 1 = ExecutingFirm (if used, must be set on both sides. 7 = Entering Firm. 17 = ContraFirm (the party the trade is alleged against).
55		Symbol	Y	Equiduct symbol. Can be '[N/A]'.
48		SecurityID	C	Required if Symbol is "[N/A]", only ISIN supported.
22		SecurityIDSource	C	Required if 55 Symbol is "[N/A]". Valid value: 4 = ISIN number

207	SecurityExchange	C	Conditionally required if Symbol is "[N/A]". Used to specify the MIC for the appropriate primary listing market.
15	Currency	C	Conditionally required if Symbol is "[N/A]". Used to specify the traded currency for the instrument.
60	TransactTime	C	Timestamp at which trade was concluded. Required if 487 TradeReportTransType = 0
31	LastPx	Y	Trade price.
32	LastQty	Y	Trade quantity in number of shares.
150	ExecType	N	Defaults to F if unspecified. Valid value: F = Trade
1430	VenueType	N	*Corresponds to MMT level 1* Defaults to O if unspecified. Valid value: O = Off Book
574	MatchType	N	*Corresponds to MMT level 2 'Trading Mode'* Defaults to TRD if unspecified. Valid value: TRD = Privately Negotiated Transaction (Off Book, On-Exchange)
828	TrdType	N	*See explanatory note in section 3.2.7 for details on Trade Type Flags.* Defaults to 0 if unspecified. Valid value: 0 = Regular (MMT level 3.1) 50 = Portfolio (MMT level 3.11)
855	SecondaryTrdType	N	Optional field used to identify a Benchmark trade, or a Portfolio trade, or a Contingent Trade. Valid values: 64 = Benchmark (MMT level 3.5) 50 = Portfolio (MMT level 3.11) 65 = Contingent (MMT level 3.12)
2896	TertiaryTrdType	N	Optional field only required when used in conjunction with SecondaryTrdType. Valid values: 50 = Portfolio (MMT level 3.11) 65 = Contingent (MMT level 3.12)

1115		OrderCategory	N	*Corresponds to MMT level 3.2* Defaults to 3 if unspecified. Valid value: 3 = Privately Negotiated Trade
2668		NoTrdRegPublications	N	Valid values: 1 or 2
⇒	**2669**	TrdRegPublicationType	N	Valid values: 0 = Pre-trade transparency waiver
⇒	**2670**	TrdRegPublicationReason	N	Corresponds to MMT level 3.2 Valid values when 2669=0: 0 = transaction price set within average spread of a liquid instrument (NLIQ) 1 = transaction price depends on system-set reference price for an illiquid instrument (OLIQ) 2 = transaction subject to conditions other than current market price (PRIC)
487		TradeReportTransType	N	Specifies whether this trade report is new, a cancellation or an amendment. Defaults to 0 (New) if unspecified. Valid values: 0 = New 1 = Cancel 2 = Replace
571		TradeReportID	Y	Unique ID chosen by member Day-unique ID chosen by client. 20 characters or less.
1003		TradeID	C	Used to specify a previously reported trade to be amended or cancelled. Mandatory when TradeReportTransType(487) = 1 or 2, must be absent when TradeReportTransType(487) = 0.
1123		TradeHandlingInstr	N	Defaults to 1 if unspecified. Valid value: 1 = Two-Party Report
1390		TradePublishIndicator	N	This field corresponds to the MMT Level 4.1 field 'Publication Mode' and can be used to request that the publication be delayed. It is ignored if the trade does not qualify for delayed publication. OrderCapacity(528) must be "P" DEAL in order for deferral to be considered.

			Defaults to 1 if unspecified. Valid values: 1 = Immediate publication 2 = Deferred publication
2405	ExecMethod	N	Used to indicate that the method by which the trade was executed. Valid values: 0 = Unspecified (default) 1 = Manual 2 = Automated
2667	AlgorithmicTradeIndicator	N	Used to indicate that the method by which the trade was executed. Valid values: 0 = No algorithm was involved (the default). 1 = The trade was an algorithmic trade (ALGO).

5.5 Transactional Messages Outbound (Sent to Member System)

5.5.1 Execution Report

The **Execution Report** message has a wide variety of uses in Equiduct:

- Confirm receipt of an order.
- Confirm changes to an existing order. Relay cancellation of a trade.
- Relay order status information.
- Reject an order.
- Relay order fill information.
- Relay quote execution information

Note: For Liquidity Providers in the VBBO services, Equiduct may – in certain circumstances – interact with the order book on behalf of the LP (i.e. sweep orders). Where this occurs, the **Execution Report** received will (a) be unsolicited in nature, (b) correspond to an order generated in Equiduct, and not entered by the Member System, and (c) have *ExecType* = L. Such trades must be accepted and processed by the Member System, as they correspond to legally binding trades.

Execution Report Message

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType(35) = 8
37	OrderID	Y	Unique order ID or quote ID generated by Equiduct.
198	SecondaryOrderID	C	Required unless ExecType(150) = 8 (Rejected). Identifies the order or quote in the ITCH market data feed. Each order or each side of a quote will receive a new ID when created and this will remain unchanged throughout the trading day A new ID will automatically be assigned to GTC and GTD orders or quotes at the start of each trading day.
526	SecondaryClOrdID	N	Populated with quote ID when Execution Report refers to an execution against a quote in the CLOB.

			It is also populated with the quote ID of the VBBO Provider when the Execution Report refers to an execution in the VBBO service and is destined for the VBBO Provider.
11	ClOrdID	N	Populated for executions against electronically submitted orders which were assigned an ID by the submitting member. Not populated for orders manually entered by other means. If the execution report is for a quote, then populated with quote message id (QuoteMsgID) from the current quote.
41	OrigClOrdID	N	Conditionally populated for response to a Cancel or Cancel/Replace request (ExecType=Replace or Cancelled). ClOrdID of the previous accepted order (NOT the initial order of the day) when cancelling or replacing an order.
790	OrdStatusReqID	N	Populated if responding to and if provided on the Order Status Request message. Echoes back the value provided by the requester.
584	MassStatusReqID	N	Required if responding to an Order Mass Status Request. Echoes back the value provided by the requester.
912	LastRptRequested	N	Used when responding to an Order Mass Status Request to indicate that this is the last Execution Report that will be returned as a result of the request.
453	NoPartyIDs	Y	Between 1 and 7 depending on the ExecType and short codes. The Executing Broker is always provided. When ExecType = F, H and for Sweep orders the clearing house or settlement location / agent (for non- cleared markets) and optionally the counterparty mnemonic (Contra Firm) will be provided. Client ID, Investment Decision Maker and Executing Trader short codes can be provided for orders and quotes. Order Origination Trader is only used for orders.
⇒ **448**	PartyID	Y	Used to identify parties.

⇒	**447**	PartyIDSource	Y	Executing Broker and Contra Firm are always "C". Clearing Organisation is always "B". Settlement Location can be either "B" or "C". Short codes are always "P". Valid values: B = BIC (See FIX Specification Appendix 6-B) C = Generally accepted market participant identifier P = Proprietary / Custom Code (Short code)
⇒	**452**	PartyRole	Y	Valid values: 1 = Executing Broker 3 = Client ID (Client of Executing Firm) 10 = Settlement Location 11 = Order Origination Trader (End client) 12 = Executing Trader (Person or algorithm responsible for execution of order) 17 = Contra Firm 21 = Clearing Organisation 122 = Investment Decision Maker (Person or algorithm responsible for investment decision)
17		ExecID	Y	Unique identifier of execution message as assigned by Equiduct (will be 0 (zero) for ExecType=I (Order Status)).
19		ExecRefID	C	Required if ExecType = H (Trade Cancel). Will be ExecID of previous ExecutionReport which is now cancelled.
150		ExecType	Y	Describes the purpose of the execution report, while OrdStatus will always identify the current order status. Valid values: 0 = New 4 = Cancelled 5 = Replace 8 = Rejected C = Expired D = Restated F = Trade (partial fill or fill)

			H = Trade Cancel (Trade cancelled by Equiduct Market Control) I = Order Status L = Triggered or Activated by System (e.g. Equiduct Sweep Order)
39	OrdStatus	Y	Describes the current state of a CHAIN of orders, same scope as OrderQty, CumQty, LeavesQty, and AvgPx. Valid values: 0 = New 1 = Partially filled 2 = Filled 4 = Cancelled 8 = Rejected A = Pending New* C = Expired * Only valid for a Stop loss or Stop limit order which has not yet been triggered.
103	OrdRejReason	N	For optional use with ExecType = 8 (Rejected) or ExecType = I (Order Status). Valid values: 5 = Unknown Order 99 = Other Text field provides description of reject reason.
378	ExecRestatementReason	C	Conditionally required if ExecType = D (Restated) Code to identify the reason for an unsolicited Execution Report: 0 = GT Corporate Action 8 = Market 11 = Peg Refresh 99 = Other This tag will be set to "0" when cancelling an order due to a Corporate Action requiring a cancellation of the order at the start of the trading day. This tag will be set to "8" (Market) to inform the member of the cancellation of the order when the cancel request was made by the customer to Equiduct Market Control. This tag will be set to "11" (Peg Refresh) to inform the member that the reference price for the Pegged order has changed.

			This tag will be set to "99" to inform the member of one of the following conditions: that a previously entered ATO/ATC order has become "active" as the market has entered the open or closing period, to acknowledge an order entered on previous day (ExecRestatementReason=99 will be sent even if the ATO/ATC order is placed during that auction phase) or for a Stop order which has been triggered without an immediate trade.
1	Account	N	Clearing or Settlement Account number.
660	AcctIDSource	N	Valid values: 99 = Other (custom or proprietary)
574	MatchType	N	Conditionally required when ExecType = Trade or Trade Cancel. Identifies the trading mechanism the Execution Report relates to. Valid values: HYB = CLOB execution PEX = Apex execution PEXA = Apex ALP-VBBO execution LOP = Limit Order Protection execution SVB = Zenith execution SVBA = Zenith ALP-VBBO execution SVP = Zenith POOL execution OPN = Opening execution CLS = Closing execution AUC = Auction Execution
55	Symbol	Y	Equiduct symbol.
48	SecurityID	Y	ISIN code.
22	SecurityIDSource	Y	Set to 4 indicating ISIN.
207	SecurityExchange	Y	MIC for primary listing market.
15	Currency	Y	Trading currency.
54	Side	Y	Valid values: 1 = Buy 2 = Sell
38	OrderQty	Y	Order quantity in number of shares.
110	MinQty	N	Minimum quantity to be executed.

			Will only be populated if specified on the order.
40	OrdType	Y	Order type. Valid values: 1 = Market 2 = Limit 3 = Stop loss 4 = Stop limit P = Pegged K = At Best
44	Price	N	Required if specified on the order.
99	StopPx	C	Required for OrdType of 'Stop loss' or 'Stop limit'.
211	PegOffsetValue	N	Will only be populated if specified on the order.
59	TimeInForce	Y	Valid values: 0 = Good for Day 1 = Good Till Cancel (GTC) 2 = At the Opening (ATO) 3 = Immediate or Cancel (IOC) 4 = Fill or Kill (FOK) 5 = Good For Session (GFS) 6 = Good Till Date (GTD) 7 = At the Close (ATC)
126	ExpireTime	C	Conditionally required if TimeInForce = GTD.
18	ExecInst	N	A single value used to identify the type of peg for a Pegged order (OrdType=P). Valid values: P = Market peg (pegged to PBO) R = Primary peg (pegged to PBB) p = Market peg (pegged to EBO) r = Primary peg (pegged to EBB)
528	OrderCapacity	Y	Designates the capacity of the firm. Valid values: A = Agency P = Principal R = Riskless

32	LastQty	N	Quantity (e.g. shares) bought/sold on this (last) fill. Required if ExecType = Trade or Trade Cancel.
31	LastPx	N	Price of this (last) fill. Required if ExecType = Trade or Trade Cancel.
151	LeavesQty	Y	Quantity open for further execution. If the OrdStatus is Cancelled, Expired, or Rejected (in which case the order is no longer active) then LeavesQty will be 0, otherwise LeavesQty = OrderQty - CumQty.
14	CumQty	Y	Currently executed quantity for chain of orders. Will always be zero for Execution Reports relating to quotes.
6	AvgPx	Y	Will always be zero for Execution Reports relating to quotes.
60	TransactTime	Y	Time the transaction represented by this Execution Report occurred.
111	MaxFloor	N	
851	LastLiquidityInd	N	Applicable only on ExecType of Trade or Trade Cancel 1 = Added Liquidity 2 = Removed Liquidity
58	Text	N	Text description of reject reason.
8015	OrderAttributeTypes	N	Space delimited list of order attributes. Multiple values can be set. Valid values: 4 = Algorithmic order 2 = Liquidity Provision activity order 1001 = Apex Liquidity Provision order
1724	OrderOrigination	N	Set to indicate that the order was placed as a result of activity defined as DEA under MiFID II (aka DMA). If not set, the order does not result from DEA. Valid value: 5 = Order received from a direct access customer (DEA)
9938	ClearingHandlingType	N	Indicates the pre-posting and give-up action to be taken by the clearing system when a trade has occurred. Valid values:

			0 = Manual Mode 1 = Automatic Extraction 2 = Automatic Allocation
9952	FreeText	N	Free text to be passed to the clearing system when a trade has occurred.
10017	ReportingMIC	Y	Transaction Reporting MIC (Market Identification Code – ISO 10383). Valid values: EQTA EQTB EQTC
1907	NoRegulatoryTradeIDs	C	Set to 1 when ExecType = F (Trade) or ExecType = H (Trade Cancel).
⇒ **1903**	RegulatoryTradeID	Y	Trading Venue Transaction Identification Code (TVTIC) for the trade being reported in this message.
⇒ **1906**	RegulatoryTradeIDType	Y	Valid value: 5 = Trading Venue Transaction Identifier
	Standard Trailer	Y	

5.5.2 Order Cancel Reject

The **Order Cancel Reject** message is used report a failed attempt to cancel or amend an order in the central limit order book.

Order Cancel Reject Message

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType(35) = 9
37	OrderID	Y	If CxlRejReason="Unknown order" then this will be "NONE".
11	ClOrdID	Y	ClOrdID from the inbound Order Cancel Request or Order Cancel Replace Request.
41	OrigClOrdID	C	ClOrdID which could not be cancelled/replaced. If the CxlRejReason="Unknown Order" then this field will not be present on the outgoing message.

39		OrdStatus	Y	OrdStatus value after this cancel reject is applied, i.e. current status of the order. If CxlRejReason = "Unknown Order", this specifies "Rejected"
60		TransactTime	Y	Time the transaction occurred.
434		CxlRejResponseTo	Y	Identifies the type of request that a Cancel Reject is in response to. Valid values: 1 = Order Cancel Request 2 = Order Cancel/Replace Request
102		CxlRejReason	Y	Code to identify reason for cancel rejection. Valid values: 1 = Unknown order 99 = Other
58		Text	N	Description of rejection reason.
453		NoPartyIDs	Y	Valid value 1.
⇒	**448**	PartyID	Y	Business owner of the transaction i.e. PartyRole = 1 (Executing Firm).
⇒	**447**	PartyIDSource	Y	Valid value: C = Generally accepted market participant identifier (i.e. Equiduct mnemonic).
⇒	**452**	PartyRole	Y	Valid value: 1 = Executing Firm (Order Cancel Request owner).
		Standard Trailer	Y	

5.5.3 Quote Status Message

The **Quote Status Report** message reports the current state of a quote on the market as requested by the **Quote Status Request** message. It may also be generated in response to a **Quote** message (acknowledgement), or as a result of unsolicited quote replenishment performed by Equiduct.

Quote Status Report

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType(35) = AI
649	QuoteStatusReqID	N	When responding to a Quote Status Request, this will reflect the value from the request message (if supplied).
117	QuoteID	Y	Static quote identifier assigned by Equiduct.
10015	BuyQuoteID	C	Identifies the buy side for the quote in the ITCH market data feed. This field will always be populated in response to a Quote message that is accepted.
10016	SellQuoteID	C	Identifies the sell side for the quote in the ITCH market data feed. This field will always be populated in response to a Quote message that is accepted.
1166	QuoteMsgID	N	Will contain the QuoteMsgID from the last Quote message sent by the user.
276	QuoteCondition	Y	Populated by Equiduct to indicate if this quote is open or closed. Valid values: A = Open B = Closed
912	LastRptRequested	N	Used when responding to a Quote Status Request to indicate that this is the last Quote status Report that will be returned as a result of the request.
453	NoPartyIDs	Y	Between 1 and 4. Executing Firm is always provided.
⇒ **448**	PartyID	Y	Used to identify Business owner (Market Maker) for the quote and other information (MiFID II Order Record Keeping).

⇒	**447**	PartyIDSource	Y	Valid value: C = Generally accepted market participant identifier (i.e. Equiduct mnemonic) P = Proprietary / Custom Code (Short code)
⇒	**452**	PartyRole	Y	Valid value: 1 = Executing Firm 3 = Client ID (Client of Executing Firm) 12 = Executing Trader (Person or algorithm responsible for execution of order) 122 = Investment Decision Maker (Person or algorithm responsible for investment decision)
1		Account	N	Clearing or Settlement Account number.
660		AcctIDSource	N	Valid values: 99 = Other (custom or proprietary)
9938		ClearingHandlingType	N	Indicates the pre-posting and give-up action to be taken by the clearing system when a trade has occurred. Valid values: 0 = Manual Mode 1 = Automatic Extraction 2 = Automatic Allocation
9952		FreeText	N	Free text to be passed to the clearing system when a trade has occurred. Note: This field is specific to LCH SA.
55		Symbol	Y	Equiduct symbol.
48		SecurityID	Y	ISIN code.
22		SecurityIDSource	Y	Set to 4 indicating ISIN.
207		SecurityExchange	Y	MIC for primary listing market.
15		Currency	Y	Trading currency for the instrument.
132		BidPx	Y	Equiduct will populate with current quote details.
133		OfferPx	Y	Equiduct will populate with current quote details.
134		BidSize	Y	Equiduct will populate with current quote details.
135		OfferSize	Y	Equiduct will populate with current quote details.

60	TransactTime	Y	Last update time of quote.
297	QuoteStatus	Y	Identifies the status of the quote acknowledgement. Valid values: 0 = Accepted 5 = Rejected 6 = Removed from Market 8 = Query 9 = Quote Not Found 10 = Pending. Sent when a Quote has been automatically removed from the market due to failing to satisfy requirements of the Market Model, for example quote volume below MQS. 32 = Unsolicited Quote Update
9816	TickMultiplier	Y	Number of ticks applied to bid and offer price to widen the bid or offer price, as appropriate, when the auto quote refresh function is triggered.
58	Text	N	Text description of reject reason.
8015	OrderAttributeTypes	N	Space delimited list of attributes. Note that quotes are, by definition, classified as Liquidity Provision activity. Valid values: 4 = Algorithmic Order
1724	OrderOrigination	N	Set to indicate that the quote was placed as a result of activity defined as DEA under MiFID II (aka DMA). If not set, the quote does not result from DEA. Valid value: 5 = Order received from a direct access customer (DEA)
10017	ReportingMIC	Y	Transaction Reporting MIC (Market Identification Code – ISO 10383). Valid values: EQTA EQTB EQTC
	Standard Trailer	Y	

5.5.4 Trade Capture Report Ack

The **Trade Capture Report Ack** is sent by Equiduct to acknowledge the receipt of a **Trade Capture Report**.

Outbound Trade Capture Ack – Equiduct to Member

Tag		Field Name	Req'd	Comments
		Standard Header	Y	MsgType(35) = AR
552		NoSides	Y	Always set to 2.
⇒	**54**	Side	Y	Valid values: 1 = Buy 2 = Sell
⇒	**528**	Capacity	N	Valid values: A = Agency (AOTC) P = Principal (DEAL) R = Riskless Principal (MTCH) "N/A" if not provided
453		NoPartyIDs	Y	Must always be 1.
⇒	**448**	PartyID	Y	Equiduct mnemonic.
⇒	**447**	PartyIDSource	Y	D = Proprietary / Custom code
⇒	**452**	PartyRole	Y	Valid values: 1 = ExecutingFirm (if used, must be set on both sides) 7 = Entering Firm 17 = ContraFirm (the party the trade is alleged against)
55		Symbol	Y	Equiduct symbol.
48		SecurityID	Y	ISIN code.
22		SecurityIDSource	Y	Set to 4 indicating ISIN.
207		SecurityExchange	Y	MIC for primary listing market.
15		Currency	Y	Trading currency.
60		TransactTime	Y	Timestamp at which trade was concluded.
31		LastPx	Y	Trade price.

32		LastQty	Y	Quantity in number of shares.
150		ExecType	Y	Valid value: F = Trade
1430		VenueType	Y	Valid value: O = Off Book
574		MatchType	Y	Valid value: TRD = Privately Negotiated Transaction (Off Book, On-Exchange)
828		TrdType	Y	Valid value: 0 = regular trade 50 = Portfolio
855		SecondaryTrdType	N	Valid values: 64 = Benchmark 50 = Portfolio 65 = Contingent
2896		TertiaryTrdType	N	Valid values: 50 = Portfolio 65 = Contingent
1115		OrderCategory	Y	Valid value: 3 = Privately Negotiated Trade
2668		NoTrdRegPublications	N	Valid values: 1 or 2
⇒	**2669**	TrdRegPublicationType	N	Valid values: 0 = Pre-trade transparency waiver
⇒	**2670**	TrdRegPublicationReason	N	Valid values: 0 = transaction price set within average spread of a liquid instrument (NLIQ) 1 = transaction price depends on system- set reference price for an illiquid instrument (OLIQ) 2 = transaction subject to conditions other than current market price (PRIC)
487		TradeReportTransType	Y	Specifies whether this trade report is new, a cancellation or an amendment. Valid values: 0 = New 1 = Cancel 2 = Replace

571	TradeReportID	Y	Unique ID chosen by member.
1003	TradeID	Y	Unique identifier for trade report as provided by Equiduct. Used to identify previously submitted trade capture reports for amendment and cancellations.
1123	TradeHandlingInstr	Y	Valid values: 1 = Two-Party Report
1390	TradePublishIndicator	Y	Valid values: 1 = Immediate publication 2 = Deferred publication
2405	ExecMethod	Y	Valid values: 0 = Unspecified (default) 1 = Manual 2 = Automated
2667	AlgorithmicTradeIndicator	Y	Valid values: 0 = No algorithm was involved (the default). 1 = The trade was an algorithmic trade (ALGO).
10017	ReportingMIC	Y	Transaction Reporting MIC (Market Identification Code – ISO 10383). Valid values: EQTA EQTB EQTC
939	TrdRptStatus	Y	Valid values: 0 = Accepted 1 = Rejected
58	Text	N	If present, indicates additional reason for message. Valid values: S=Suspended; security is suspended D=Duplicate; duplicate TradeReportID Y=Symbol Not Valid; Symbol not included within Equiduct universe or not valid for the TR service. N = Negotiated Trade Waiver Suspended – if a trade report has been submitted, the security has been

			suspended and the trade is not considered LIS E = Outside Price Tolerance – exec price is not valid based on price tolerances configured F = Price validation check cannot be performed due to instrument halt.
751	TradeReportRejectReason	N	If present, indicates additional reason for rejection. Valid values: 100=Trade Report not found for amend/cancel 101=Invalid date/time received 102=Trade side not same as configured entering side 103=Trade Reporting not supported for this instrument 104=Trade Reporting Waiver (LIS/NT1/NT2/NT3) is not available 105=Trade Reporting Waiver (NT1) not available as instrument DVC suspended 106=Trade Reporting not available without MM 107=Inconsistent Trade Reporting cancellation 108=Inconsistent Trade Reporting amendment 109=Instrument is suspended 110=Trade price outside of price tolerance
8013	TrdRegPublicationReasons	N	If present, indicates the waiver and/or deferral derived and applied by Equiduct. Valid values: 0 = Negotiated Trade in Liquid Instrument (NLIQ) 1 = Negotiated Trade in Illiquid Instrument (OILQ) 2 = Negotiated Trade Subject to Conditions Other Than Current Market Price (PRIC) 6 = Deferral for Large in Scale (LRGS) Multiple values in this field will be separated by spaces

5.5.5 Trade Capture Report

The **Trade Capture Report** is sent by Equiduct to the participant to confirm that a **Trade Capture Report** has been fully processed.

Outbound Trade Capture Report – Equiduct to Member

Tag		Field Name	Req'd	Comments
		Standard Header	Y	MsgType(35) = AE
552		NoSides	Y	Always set to 2.
⇒	**54**	Side	Y	Valid values: 1 = Buy 2 = Sell
⇒	**528**	Capacity	N	Valid values: A = Agency (AOTC) P = Principal (DEAL) R = Riskless Principal (MTCH) "N/A" if not provided
453		NoPartyIDs	Y	Must always be 1.
⇒	**448**	PartyID	Y	Equiduct mnemonic.
⇒	**447**	PartyIDSource	Y	D = Proprietary / Custom code
⇒	**452**	PartyRole	Y	Valid values: 1 = ExecutingFirm (if used, must be set on both sides) 7 = EnteringFirm 17 = ContraFirm (the party the trade is alleged against)
55		Symbol	Y	Equiduct symbol.
48		SecurityID	Y	ISIN code.
22		SecurityIDSource	Y	Set to 4 indicating ISIN.
207		SecurityExchange	Y	MIC for primary listing market.
15		Currency	Y	Trading currency.
60		TransactTime	Y	Timestamp at which trade was concluded.
31		LastPx	Y	Trade price.

32	LastQty	Y	Quantity in number of shares
150	ExecType	Y	Valid value: F = Trade
1430	VenueType	Y	Valid value: O = Off Book
574	MatchType	Y	Valid value: TRD = Privately Negotiated Transaction (Off-Book, On-Exchange)
828	TrdType	Y	Valid value: 0 = regular trade 50 = Portfolio
855	SecondaryTrdType	N	Valid value: 64 = Benchmark 50 = Portfolio 65 = Contingent
2896	TertiaryTrdType	N	Valid values: 50 = Portfolio 65 = Contingent
1115	OrderCategory	Y	Valid value: 3 = Privately Negotiated Trade
2668	NoTrdRegPublications	N	Valid values: 1 or 2
⇒ **2669**	TrdRegPublicationType	N	Valid values: 0 = Pre-trade transparency waiver
⇒ **2670**	TrdRegPublicationReason	N	Valid values: 0 = transaction price set within average spread of a liquid instrument (NLIQ) 1 = transaction price depends on system-set reference price for an illiquid instrument (OLIQ) 2 = transaction subject to conditions other than current market price (PRIC)
487	TradeReportTransType	Y	Specifies whether this trade report is new, a cancellation or an amendment. Valid values: 0 = New 1 = Cancel 2 = Replace

571	TradeReportID	Y	Unique ID chosen by member.
1003	TradeID	Y	Unique identifier for trade report as provided by Equiduct. Used to identify previously submitted trade capture reports for amendment and cancellations.
1123	TradeHandlingInstr	Y	Valid value: 1 = Two-Party Report
1390	TradePublishIndicator	Y	Valid values: 1 = Immediate publication 2 = Deferred publication
2405	ExecMethod	Y	Valid values: 0 = Unspecified (default) 1 = Manual 2 = Automated
2667	AlgorithmicTradeIndicator	Y	Valid values: 0 = No algorithm was involved (the default). 1 = The trade was an algorithmic trade (ALGO).
10017	ReportingMIC	Y	Transaction Reporting MIC (Market Identification Code – ISO 10383). Valid values: EQTA EQTB EQTC
939	TrdRptStatus	Y	Valid values: 0 = Accepted 1 = Rejected
58	Text	N	If present, indicates additional reason for message. Valid values: S=Suspended; security is suspended D=Duplicate; duplicate TradeReportID Y=Symbol Not Valid; Symbol not included within Equiduct universe or not valid for the TR service. N = Negotiated Trade Waiver Suspended – if a trade report has been submitted, the security has been suspended and the trade is not considered LIS

			E = Outside Price Tolerance – exec price is not valid based on price tolerances configured F = Price validation check cannot be performed due to instrument halt.
751	TradeReportRejectReason	N	If present, indicates additional reason for rejection. Valid values: 100=Trade Report not found for amend/cancel 101=Invalid date/time received 102=Trade side not same as configured entering side 103=Trade Reporting not supported for this instrument 104=Trade Reporting Waiver (LIS/NT1/NT2/NT3) is not available 105=Trade Reporting Waiver (NT1) not available as instrument DVC suspended 106=Trade Reporting not available without MM 107=Inconsistent Trade Reporting cancellation 108=Inconsistent Trade Reporting amendment 109=Instrument is suspended 110=Trade price outside of price tolerance
8013	TrdRegPublicationReasons	N	If present, indicates the waiver and/or deferral derived and applied by Equiduct. Valid values: 0 = Negotiated Trade in Liquid Instrument (NLIQ) 1 = Negotiated Trade in Illiquid Instrument (OILQ) 2 = Negotiated Trade Subject to Conditions Other Than Current Market Price (PRIC) 6 = Deferral for Large in Scale (LRGS) Multiple values in this field will be separated by spaces
1907	NoRegulatoryTradeIDs	C	Set to 1 when ExecType = F (Trade) or ExecType = H (Trade Cancel)

				Will be populated when 939 TrdRptStatus = 0
⇒	**1903**	RegulatoryTradeID	Y	Trading Venue Transaction Identification Code (TVTIC) for the trade being reported in this message
⇒	**1906**	RegulatoryTradeIDType	Y	5 = Trading Venue Transaction Identifier
7570		RptTime	Y	Indicates the time at which a deferred trade report will be automatically published. If RptTime for a 1 or 2 hour deferral falls outside of operating hours the trade report will be published at the close of the trade reporting service for that day. Where an end of day deferral is granted within 2 hours of market close the trade report will be published at 12 (noon) CET the following trading day. When no deferral is requested, or when the trade does not qualify for a deferral, the time returned will match the time the transaction is published.

5.6 VBBO Status Messages

Equiduct allows the trading member to maintain and view certain information relating to VBBO trading services. This section provides details of these functions.

Note: For historical reasons, the user-defined FIX tags used in the VBBO-related messages are named "**PartnerEx** ...". In fact, these messages are applicable to all VBBO trading services, i.e. both Apex and Zenith.

5.6.1 VBBO Status Request (Sent by Member System)

The following message is used to query for current status of VBBO liquidity. If no liquidity is found, based on the criteria specified, then a **VBBO Status** message with *PartnerExStatus* "Unknown Relationship" will be returned.

VBBO Status Request

Tag		Field Name	Req'd	Comments
		Standard Header	Y	MsgType(35) = U1
10002		PartnerExReqID	N	Optional identifier of request.
10011		PartnerExID	N	Unique identifier for the VBBO liquidity. Can be used to request status of a single record.
453		NoPartyIDs	Y	Must be 1, 2 or 3. Should be 1, and specify Entering Firm only, if PartnerExID is specified. If 1, and no PartnerExID is specified, then all records for the instrument (or all instruments) will be returned for the member. For further filtering specify either or both of Executing Broker and Contra Firm (Liquidity Provider). It is only possible to query relationships where the Entering Firm is either the Broker or Liquidity Provider.
⇒	**448**	PartyID	Y	Equiduct mnemonic.
⇒	**447**	PartyIDSource	Y	Always "C"
⇒	**452**	PartyRole	Y	Valid Values: 1 = Executing Broker 7 = Entering Firm (Trading member) - Mandatory 17 = Contra Firm (Liquidity Provider)

55	Symbol	C	Equiduct symbol. "*"if liquidity across all stocks is required.
48	SecurityID	C	Required if Symbol is "[N/A]".
22	SecurityIDSource	C	Required if Symbol is "[N/A]". Valid values: 4 = ISIN number
207	SecurityExchange	C	Conditionally required if Symbol is "[N/A]". Used to specify the MIC for the appropriate primary listing market.
15	Currency	C	Conditionally required if Symbol is "[N/A]". Used to specify the traded currency for the instrument.
60	TransactTime	N	Time this request was initiated.
	Standard Trailer	Y	

5.6.2 Update VBBO Configuration (Sent by Member System)

The following message may be used by either the Broker or Liquidity Provider to adjust the details of VBBO liquidity. On successful validation these changes will take immediate effect in the system.

Update VBBO Liquidity Message

Tag		Field Name	Req'd	Comments
		Standard Header	Y	MsgType(35) = U2
10002		PartnerExReqID	N	Optional identifier of request for change to liquidity.
10011		PartnerExID	N	Unique identifier for the VBBO liquidity. Can be used to identify an individual record to be updated.
10003		PartnerExUpdateAction	Y	Valid Values: 1 = Amend 2 = Halt 3 = Resume
453		NoPartyIDs	Y	If PartnerExID is not specified, then may be 1, 2 or 3. If PartnerExID is specified must be 1 and specify Entering Firm.
⇒	**448**	PartyID	Y	When PartyRole = Executing Broker or Contra Firm, then "*" is a valid value for PartyID to allow acting on VBBO liquidity with multiple counterparties.
⇒	**447**	PartyIDSource	Y	Always "C"
⇒	**452**	PartyRole	Y	Valid Values: 1 = Executing Broker 7 = Entering Firm (Trading Member) - Mandatory 17 = Contra Firm (Liquidity Provider)
55		Symbol	Y	Equiduct symbol, or "[N/A]", or "*" to apply action across all instruments.
48		SecurityID	C	Required if Symbol is "[N/A]".
22		SecurityIDSource	C	Required if Symbol is "[N/A]". Valid values: 4 = ISIN number

207	SecurityExchange	C	Conditionally required if Symbol is "[N/A]". Used to specify the MIC for the appropriate primary listing market.
15	Currency	C	Conditionally required if Symbol is "[N/A]". Used to specify the traded currency for the instrument.
38	OrderQty	N	Risk limit (maximum trade quantity) for the VBBO liquidity targeted. Only the Liquidity Provider can adjust this parameter.
44	Price	N	Liquidity protection price. Trading against offered liquidity will only be possible where the VBBO trade price does not breach this limit.
10005	PartnerExPriority	N	Integer priority value from 1 (highest) to 999 (lowest). Only the Broker can adjust this parameter.
10013	PartnerExProviderSide	N	Whether the update applies to a buy-side, sell-side, or two-sided trading liquidity. 0 = Both (default) 1 = Buy 2 = Sell Side is from the Liquidity Provider perspective – buy- side set-up will interact with sell orders from Broker.
60	TransactTime	N	Time this update request was initiated.
	Standard Trailer	Y	

5.6.3 VBBO Liquidity Status (Sent to Member System)

This message is sent upon request or following the update of VBBO liquidity by either of the parties or Equiduct Market Control.

Note: In the following message specification "Y*" indicates that the field will not be present where the liquidity is unknown (indicated with *PartnerExStatus(10004)*=Unknown Relationship(4).

VBBO Liquidity Status Message

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType(35) = U3
10002	PartnerExReqID	N	Optional identifier of change.
10011	PartnerExID	Y	Unique identifier for the VBBO liquidity.
10004	PartnerExStatus	Y	Status of the VBBO liquidity. Valid values: 0 = OK 1 = Suspended 2 = Deleted 3 = Halted 4 = Unknown Relationship
10012	PartnerExHaltStatus	Y*	Valid Values: 0 = OK (Relationship not halted) 1 = Relationship halted by customer 2 = Relationship halted by provider 3 = Relationship halted by both parties.
912	LastRptRequested	N	Used when responding to a VBBO Status Request to indicate that this is the last VBBO Liquidity Status that will be returned as a result of the request.
453	NoPartyIDs	Y	If the liquidity exists then NoPartyIDs will be 3 or 4. Clearing/settlement information is optional; otherwise default clearing and settlement procedures for the member and instrument will apply. When PartnerExStatus is "Unknown Relationship", then NoPartyIDs will be 1 and identify the Entering Firm.

⇒	**448**	PartyID	Y	Equiduct mnemonic for member firms, BIC for clearing house, or "INT" to indicate that clearing will be disabled.
⇒	**447**	PartyIDSource	Y	Will be C if the party is an Equiduct member. Both B and C are for specifying Settlement Location (PartyRole = 10). Valid values: B = BIC (See FIX documentation "Appendix B") C = Generally accepted market participant identifier (i.e. Equiduct mnemonic)
⇒	**452**	PartyRole	Y	Valid values: 1 = Executing Broker 7 = Entering Firm (Trading member) 10 = Clearing House or Settlement Location 17 = Contra Firm (Liquidity Provider)
55		Symbol	Y*	Equiduct symbol.
48		SecurityID	Y*	ISIN code.
22		SecurityIDSource	Y*	Set to 4 indicating ISIN.
207		SecurityExchange	Y*	MIC for primary listing market.
15		Currency	Y*	Trading currency.
38		OrderQty	Y*	Maximum accepted quantity for liquidity. Note: Only a Liquidity Provider can adjust this parameter.
44		Price	N	Liquidity protection price.
10005		PartnerExPriority	N	Integer priority value from 1 (highest) to 999 (lowest). NOTE: Only the Broker can adjust this parameter. Will not be sent when the message is destined for the Liquidity Provider.
10013		PartnerExProviderSide	Y	Valid values: 0 = Both 1 = Buy 2 = Sell
58		Text	N	Reason text of any failure to adjust or query liquidity.
60		TransactTime	Y	Time the update was generated by the trading System.

10017	ReportingMIC	Y*	Transaction Reporting MIC (Market Identification Code – ISO 10383). Valid values: EQTA EQTB EQTC
	Standard Trailer	Y	

5.7 Error Handling

The integrity and validity of data sent by members is checked. In accordance with the FIX specification, session level rejects (**Reject**) will be issued only when messages fail data integrity checks.

In certain circumstances, such as an attempt to take an unauthorised action, Equiduct may return a **Business Message Reject** message.

5.7.1 Rejections (Outbound)

The **Reject** message is used to communicate when messages fail data integrity checks.

Reject Message

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType(35) = 3
45	RefSeqNum	Y	The sequence number of the rejected message.
371	RefTagID	N	The tag number of the FIX field being referenced.
372	RefMsgType	N	The MsgType of the FIX message being referenced.
373	SessionRejectReason	N	Code to identify reason for a session-level Reject message. 0 = Invalid tag number 1 = Required tag missing 2 = Tag not defined for this message type 3 = Undefined Tag 4 = Tag specified without a value 5 = Value is incorrect (out of range) for this tag 6 = Incorrect data format for value 7 = Decryption problem 8 = Signature problem 9 = CompID problem 10 = SendingTime accuracy problem 11 = Invalid MsgType 12 = XML Validation error 13 = Tag appears more than once 14 = Tag specified out of required order 15 = Repeating group fields out of order 16 = Incorrect NumInGroup count for repeating group

			17 = Non 'data' value includes field delimiter (SOH character) 99 = Other
58	Text	N	Where possible, message to explain reason for rejection.
	Standard Trailer	Y	

The **Business Reject** message is used to communicate when messages fail certain data checks, such as an attempt to take an unauthorised action.

Business Reject Message

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType(35) = j (lowercase)
45	RefSeqNum	N	The sequence number of the rejected message.
372	RefMsgType	Y	The MsgType of the FIX message being referenced.
379	BusinessRejectRefID	N	The value of the business-level ID field on the message being referenced. Required unless the corresponding ID field was not specified.
380	BusinessRejectReason	Y	Code to identify reason for a Business Message Reject message. 0 = Other 1 = Unknown ID 2 = Unknown Security 3 = Unsupported Message Type 4 = Application not available 5 = Conditionally Required Field Missing 6 = Not authorized 7 = DeliverTo firm not available at this time
58	Text	N	Where possible, message to explain reason for rejection.
	Standard Trailer	Y	

Appendix A Example Transactional Scenarios

Appendix A.1 Order Immediate Execution & Cancel / Replace

The table details the population of key fields when an order is immediately executed on entry; followed by a cancel/replace to increase the size of the order.

Time	Message Received (ClOrdID, OrigClOrdID)	Message Sent (ClOrdID, OrigClOrdID)	Exchange (OrderID)	Exc Type	Ord Status	Order Qty	Cum Qty	Leaves Qty	Comment
1	New Order (X)					10,000			
2		Exec Report (X)	A	Trade	Partially Filled	10,000	1,000	9,000	Execution for 1,000.
3	Replace Request (Y,X)		A			12,000			Request to increase total order quantity from 10,000 to 12,000.
4		Exec Report (Y,X)	A	Replace	Partially Filled	12,000	1,000	11,000	Order continues to exist with an executed quantity for 1,000, client order ID changes from X to Y, exchange order ID remains A.
5		Exec Report (Y)	A	Trade	Partially Filled	12,000	2,000	10,000	Execution for 1,000.

Notes:

In line with the FPL Global Exchanges & Markets Committee best practices:

1) The absence of an Execution Report with ExecType “New” and OrdStatus “New” prior to the Execution Report on line 2.
2) OrderQty specified on line 3 is interpreted as the new total investor quantity on the order.

The table below illustrates what would have happened in the above example had the investor wanted to reduce the quantity.

Time	Message Received (ClOrdID, OrigClOrdID)	Message Sent (ClOrdID, OrigClOrdID)	Exchange (OrderID)	Exc Type	Ord Status	Order Qty	Cum Qty	Leaves Qty	Comment
1	New Order (X)					10,000			
2		Exec Report (X)	A	Trade	Partially Filled	10,000	1,000	9,000	Execution for 1,000.
3	Replace Request (Y,X)		A			8,000			Request to decrease total order quantity from 10,000 to 8,000.
4		Exec Report (Y,X)	A	Replace	Partially Filled	8,000	1,000	7,000	Order continues to exist with an executed quantity of 1,000, client order ID changes from X to Y, exchange order ID remains A.
5		Exec Report (Y)	A	Trade	Partially Filled	8,000	2,000	6,000	Execution for 1,000.

Appendix A.2 IOC and FOK Orders

Time	Message Received (ClOrdID, OrigClOrdID)	Message Sent (ClOrdID, OrigClOrdID)	Exchange (OrderID)	Exc Type	Ord Status	Order Qty	Cum Qty	Leaves Qty	Comment
1	New Order (X)					10,000			Order is IOC.
2		Exec Report (X)	A	Trade	Cancelled	10,000	1,000	9,000	Execution for 1,000 and cancellation of remainder.
3	New Order (X)					10,000			Order is FOK.
4		Exec Report (X)	A	New	Cancelled	10,000	0	0	No execution ¾ order cannot be fully filled.
5	New Order (X)					10,000			Order is FOK.
6		Exec Report (X)	A	Trade	Partially Filled	10,000	1,000	9,000	Matched against an order/quote for 1,000.
7		Exec Report (X)	A	Trade	Partially Filled	10,000	5,000	5,000	Matched against an order/quote for 4,000.
8		Exec Report (X)	A	Trade	Partially Filled	10,000	10,000	0	Matched against an order/quote for final 5,000, order now filled.

Appendix B Custom FIX Tags and Values

Appendix B.1 Appendix B.1 Custom FIX Tags

Additional information not provided for in the current FIX 4.4 specification is communicated using custom FIX tags and values. Where possible tags already registered with the FPL are used.

Tag	Field Name	Type	Comments
10003	PartnerExUpdateAction	Char	Valid Values: 1 = Amend 2 = Halt 3 = Resume
10002	PartnerExReqID	String	Optional identifier of request or change to VBBO trading configuration.
10005	PartnerExPriority	Int	Integer priority value from 1 (highest) to 999 (lowest).
10004	PartnerExStatus	Char	Status of the VBBO trading configuration. Valid values: 0 = OK 1 = Suspended 2 = Deleted 3 = Halted 4 = Unknown Relationship
10011	PartnerExID	String	Unique identifier for the VBBO trading configuration.
10012	PartnerExHaltStatus	Char	Valid Values: 0 = OK (Relationship not halted) 1 = Relationship halted by customer 2 = Relationship halted by provider 3 = Relationship halted by both parties
10013	PartnerExProviderSide	Char	Whether the message applies to a buy-side, sell-side or both-side VBBO trading set-up. 0 = Both 1 = Buy 2 = Sell
10015	BuyQuoteID	String	Identifies the buy side for the quote in the ITCH market data feed.

10016	SellQuoteID	String	Identifies the buy side for the quote in the ITCH market data feed.
10017	ReportingMIC	String	Transaction Reporting MIC (Market Identification Code – ISO 10383). Valid values: EQTA EQTB EQTC
1166	QuoteMsgID	String	Market Maker assigned identifier for this quote message, must be unique for every submission of a quote.
6138	TickSize	Price	Minimum permitted price change.
9816	TickMultiplier	Int	Number of ticks applied to bid and offer price to widen the bid or offer price, as appropriate, when the auto quote refresh function is triggered.
9871	RefreshSize	Int	Minimum Quotation Size (MQS). The number of shares that a quote will be refreshed to by the auto quote refresh mechanism.
9938	ClearingHandlingType	Int	Usage depends on the clearing and Settlement structure in place for the Instrument.
9952	FreeText	String	Free text to be passed to the clearing system when a trade has occurred.
8015	OrderAttributeTypes	Char	The type of order attribute. Valid values: 4 = Algorithmic order 2 = Liquidity Provision activity order 1001 = Apex Liquidity Provision order
8013	TrdRegPublicationReasons	Char	If present, indicates the waiver and/or deferral derived and applied by Equiduct. Valid values: 0 = Negotiated Trade in Liquid Instrument (NLIQ) 1 = Negotiated Trade in Illiquid Instrument (OILQ) 2 = Negotiated Trade Subject to Conditions Other Than Current Market Price (PRIC) 6 = Deferral for Large in Scale (LRGS) Multiple values in this field will be separated by spaces

Appendix B.2 Custom FIX Tag Values

Some standard FIX tags have been extended to meet the specific needs of the Equiduct Market Model. The table below lists the non-standard values used in the Equiduct FIX interface.

Tag	Field Name	Type	Comments
297	QuoteStatus	Char	32 = Unsolicited Quote Replenishment
574	MatchType	String	HYB = CLOB execution PEX = Apex execution PEXA = Apex ALP-VBBO execution SVB = Zenith execution SVBA = Zenith ALP-VBBO execution SVP = Zenith POOL execution LOP = Limit Order Protection execution OPN = Opening execution CLS = Closing execution AUC = Auction Execution
18	ExecInst	Char	p = Market peg (pegged to EBO) r = Primary peg (pegged to EBB)

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