GPW WATS 2.01 Native Order Gateway Specification

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2. PREFACE

This document has been prepared by Warsaw Stock Exchange in order to help in the implementation process of GPW WATS trading platform.

2.1. TARGET AUDIENCE

This document has been prepared to development staff, Independent Software Vendors who produce software integrated with GPW WATS, analysts, market participants and all clients who want to deepen their knowledge about GPW WATS.

2.2. DOCUMENT'S PURPOSE

The purpose of this document is to provide a full description of Native Order Gateway, which is part of GPW WATS.

2.3. ASSOCIATED DOCUMENTS

GPW WATS 2.01 Native Order Gateway Specification is a part of GPW WATS documentation set.

Please check the following documents to learn about the construction of Trading System.

- GPW WATS 1.01 Trading System

Please check the documentation of the trading protocols supported by GPW WATS.

- GPW WATS 2.01 Native Order Gateway Specification (this document)
- GPW WATS 2.02 FIX Order Gateway Specification .

Please check the description of the communication with Data Distribution Service.

- GPW WATS 3.01 Market Data Protocol

Please check the additional documentation which explains other services provided within GPW WATS.

- GPW WATS 4.01 Drop Copy Gateway
- GPW WATS 4.02 Post Trade Gateway
- GPW WATS 5.01 Risk Management Gateway.

Please check the additional documentation describing the following:

- GPW WATS 2.03 Rejection Codes
- GPW WATS 2.04 BenDec Message Definition Format
- GPW WATS 6.01 Connectivity.

It is recommended that you read the GPW WATS 1.01 Trading System document first.

Gateway messages are available in the Repository shared with ISV.

The contract is based on the BenDec library which is publicly available, see Bendec library.

3. Document History

Version	Date	Description
0.51	29.06.2023	The initial publication of the documentation.
0.52	26.07.2023	Messages that have been added or updated in version 0.52: **Added new messages:** • MassQuote • MassQuoteResponse • RiskLimitDefinition • RiskLimitDefinitionResponse • TradeBust **Modified** • OrderAddResponse - field source has new Value 7 - IcebergRefill • OrderCancelResponse - field source has new Value 7 - IcebergRefill • RiskLimitBreach - field limitType has new values (301-326) RiskLimitBreach - new fields: • riskWarningLevelAction • riskLimitUtilizationAmount • riskLimitUtilizationPercent. **Cancelled:** • OrderAddResponde field memo was deleated.
0.53	16.08.2023	Messages that have been updated accordingly to changes in messages v0.53: **MassQuoteResponse**: OrderBookRebuild value added in responses.source field. **OrderAddResponse**: OrderBookRebuild value added in source field. **OrderCancelResponse**: OrderBookRebuild value added in source field.
0.54	06.09.2023	Messages that have been updated accordingly to changes in messages v0.54: Changes in **MassQuote** messgage fields: • mifidFields.client.qualifier • mifidFields.executingTrader.qualifier **MassQuoteResponse** message field: • responses. **OrderAdd** • mifidFields.client.qualifier (values) • mifidFields.executingTrader.qualifier (values) • mifidFields.investmentDecisionMaker.qualifier (values) **OrderAddResponse** • reason (values) • source (values Activated added) **OrderCancelResponse** • reason (values) • source (values Activated added) **OrderModifyResponse** • reason (values) **RiskLimitDefinition** deleted: • elementType, side field added: • marketSegmentId, capacity field **RiskLimitDefinitionResponse** • reason (value MissingMicCode) **TradeCaptureReportDual** • algorithmicTradeIndicator (values) • tcrPartyBuy.mifidFields.client.qualifier (values) • tcrPartyBuy.mifidFields.executingTrader.qualifier (values) • tcrPartyBuy.mifidFields.investmentDecisionMaker.qualifier (values)

Version	Date	Description
		• tcrPartyBuy.mifidFields.investmentDecisionMaker.qualifier (values) • tcrPartySell.mifidFields.client.qualifier • tcrPartySell.mifidFields.executingTrader.qualifier • tcrPartySell.mifidFields.investmentDecisionMaker.qualifier **TradeCaptureReportResponse** • reason (values) **TradeCaptureReportSingle** • algorithmicTradeIndicator • tcrParty.mifidFields.client.qualifier • tcrParty.mifidFields.executingTrader.qualifier • tcrParty.mifidFields.investmentDecisionMaker.qualifier
0.55	16.10.2023	Messages that have been updated accordingly to changes in messages v0.55: Changes in **OrderAdd** message Listed values added in **reason** field: • InvalidPartyRoleForCLOB (1073) • InvalidPartyRoleQualifierForPartyId (1075) • RiskLimitNotDefined (7000) • RiskMaximumOrderVolumeExceeded (7001) • RiskMaximumOrderValueExceeded (7002) • RiskOrderPriceCollarExceeded (7003). **Reject** message Listed values added in **rejectReason** field: • NA (0) • InvalidSettlementDate (4). **RiskLimitDefinition** message **riskLimitId** field added. Modified values in **clientRoleQualifier** field: • NA (1) • Algorithm (2) • FirmOrLegalEntity (3) • NaturalPerson (4). **TradeCaptureReportDual** message Deleted fields: • tradeRequestId • lastParPx • tcrPartyBuy.side • tcrPartyBuy.counterpartyId • tcrPartySell.side • tcrPartySell.counterpartyId. **TradeCaptureReportResponse** message Added values in **reason** field: • SettlementDateCannotBeEarlierThanMinimumSettlementDate (2015) • SettlementDateCannotBeLaterThanMaximumSettlementDate (2016). **TradeCaptureReportSingle** message Deleted fields: • tradeRequestId • lastParPx. **tcrParty.counterpartyId** changed into **counterpartyId**
0.56	09.11.2023	Messages that have been updated accordingly to changes in messages v0.56: New message **TestEvent** has been added. Changes in **Header** message: **msgType** length value changed from 1 to 2 bytes.
0.57	30.11.2023	Messages that have been updated accordingly to changes in messages v0.57: • Unused messages removed: RiskLimitDefinition, RiskLimitDefinitionResponse, Test and TestEvent. • Rejection codes updated.

Version	Date	Description
		• Added the value 'Stp' to the enum 'OrderSource'. Cross transactions added in sections 4.1.2 and 4.5. Order source filed values updated – section 4.4.5. New chapter 4.6 describing quotes handling.
0.58	15.12.2023	Publication of v0.58.
0.59	25.01.2023	**RegularTrade** value has been removed from **TradeType** filed from **TradeCaptureReport** messages. New values have been added for **responses** (OrderRejectReason) field: • InvalidBidAskSpread – 1208, • RequestNotAllowedForBlockInstrument – 2026, • RequestNotAllowedForCrossInstrument – 2028. New value has been added for **source** (OrderSource) filed: • CorporateAction - 11. New values have been added for **rejectReason** field: • SettlementDateRequired – 5, • TradeReportIdRequired – 6, • MissingReportIdSecondaryTradeReportIdOrTradeReportRefId – 7. **MassQuoteResponse** message Fields **status** (MassQuoteStatus) and **reason** (MassQuoteRejectionReason) have been added. **TradeCaptureReportDual** message Values for **matchStatus** filed have been changed to: • NA – 0, • Matched – 1, • Unmatched – 2. Values for **reason** (TcrRejectionReason) field have changed to: Deleated: • CannotFindMatchingFirstLeg – 2025. Added: • InvalidMatchStatus – 2029, • CrossNotAllowedOutsideOfClobInstrumentSpread – 2030, • CrossPriceNotEqualToTheReferencePrice – 2031, • CrossNotAllowedDuringClobInstrumentAuctionOrSuspension – 2032, • ForbiddenSecondaryTradereportId – 2033, • UnknownSecondaryTradereportId – 2034. **TradeCaptureReportSingle** message Added fields: • secondaryTradeReportId Values for **matchStatus** filed have been changed to: • NA – 0, • Matched – 1, • Unmatched – 2. Correction of the throttling mechanism description. Division into business and technical limits.

4. Service Description

4.1. Native Service Description

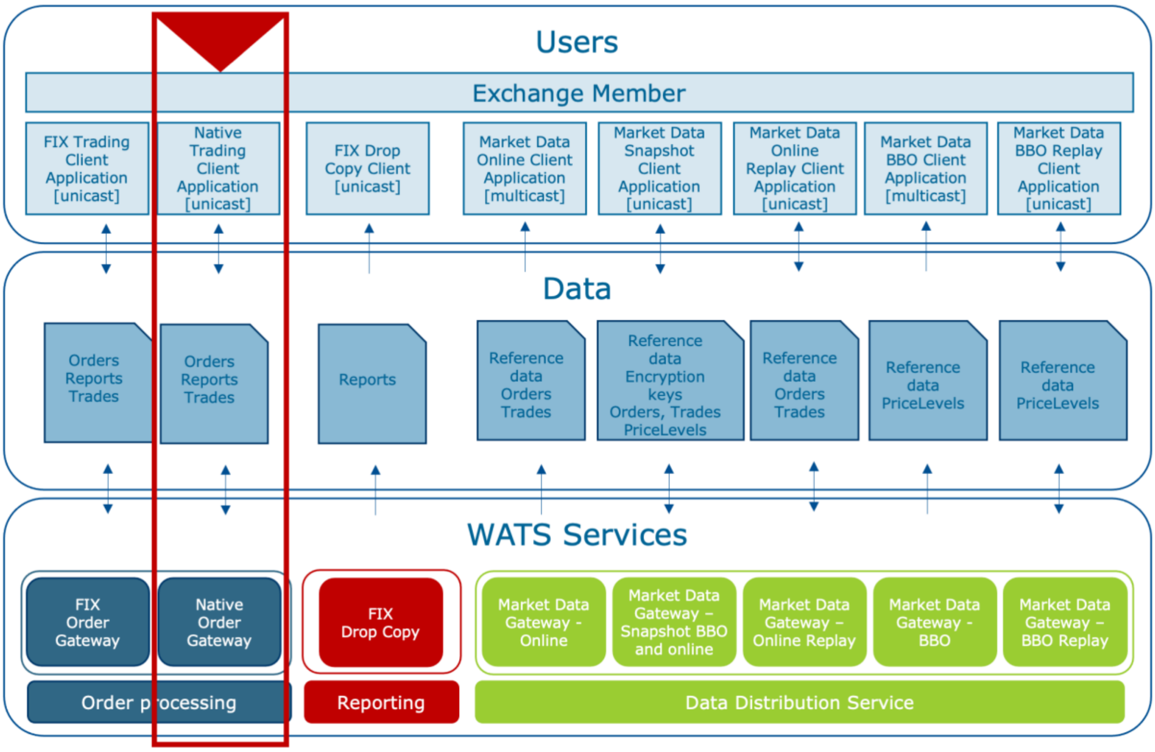
Native Order Gateway service provides a low-latency trading interface based on a proprietary binary protocol.

The main service functionalities:

- order submission
- order modification
- order cancellation
- transaction submission (block market).

Native Order Gateway is a point-to-point service based on the TCP-IP protocol.

Figure 1. GPW WATS Services



The following description is a brief introduction to the operation of the service, divided into the session and business layer. Detailed information can be found in the subsequent chapters of the document.

4.1.1. SESSION LAYER

To use the service, log in by sending a Login message. The message contains access parameters such as a token and a connection identifier. System confirms successful login with a LoginResult message which contains the result field set to "OK".

After logging in, a potential synchronization of missing messages takes place based on the sequential numbers exchanged during the login process (also called gap filling).

If no messages are sent within a specified time period, each party should send a Heartbeat message.

Participant can terminate the session at any time by sending a Logout message and closing the network connection. The Service responds to the Logout message with a LogoutResponse message.

Gateway can terminate the session by sending a ConnectionClose message and closes the network connection. The ConnectionClose message can be sent in a positive scenario similar to closing trading day, as well as in the case of significant session-level errors, e.g. communication protocol errors.

4.1.2. BUSINESS LAYER

Business communication is primarily based on the request - response pattern. We have the following main communication scenarios:

- An exchange member places an order by sending an OrderAdd message. Gateway responds with an OrderAddResponse message, which confirms the successful submission of the order or otherwise reject it.
- An exchange member modifies an order by sending an OrderModify message. Gateway responds with an OrderModifyResponse message to confirm the accuracy of the modification or otherwise reject it.
- An exchange member cancels an order by sending an OrderCancel message. Gateway responds with an OrderCancelResponse message to confirm the accuracy of the cancellation or subsequently reject it.
- An exchange member reports a block transaction conducted outside the market by sending a TradeCaptureReportSingle or TradeCaptureReportDual message. Gateway responds with a TradeCaptureReportAck message and continues to handle the blocked transaction.
- An exchange member reports a cross transaction using trade capture reports - similar to block transactions.

In addition to the above request – response pattern, where the exchange member initiates communication, it is also possible to receive ad-hoc messages from Gateway concerning the status of orders, transactions and order cancellations performed by System. Changes in the order status are sent to the exchange member in the OrderAddResponse message. Information about transactions based on the submitted orders is provided in the Trade message. With regards to order cancellations performed by System, the OrderCancelResponse message is used. Below is a diagram illustrating the usage of key business messages.

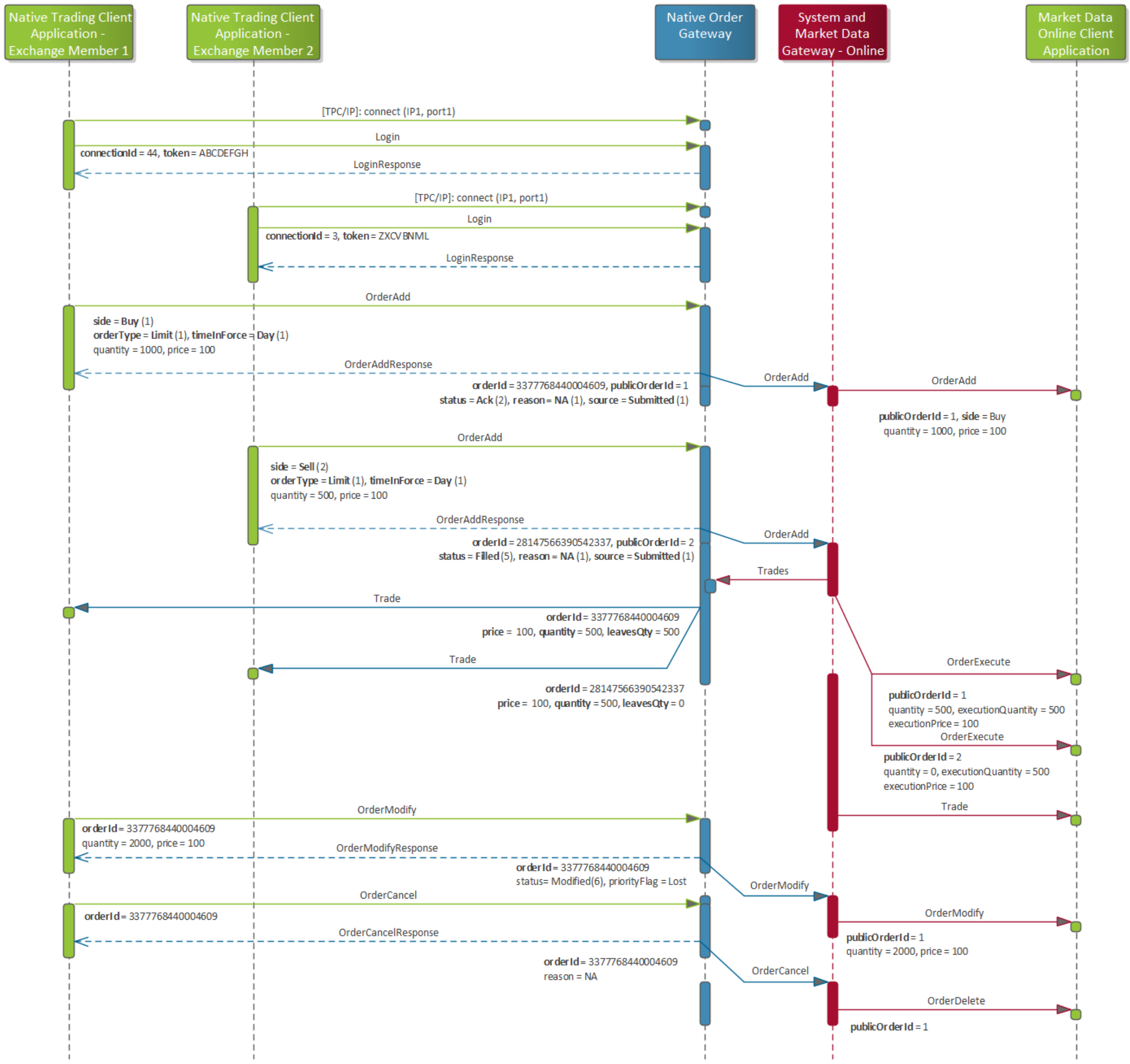


Figure 2. Scenario of messages exchange via Native Order Gateway

The diagram depicts the actions of two exchange members. Both log into the system and then submit crossed orders (an OrderAdd message). Gateway notifies about the transaction being executed by sending a Trade message. Next, Exchange Member 1 modifies the order by increasing the quantity to 2000 and cancels it. The above actions of exchange members are shown in the context of provided market data. It demonstrates the orders submission, execution, modification and cancellation.

4.2. Conditionally Required Fields

Conditional fields are ignored unless they are necessary in the message data (e.g. triggerPrice is ignored in orders other than Stop Loss and Stop Limit).

One sets unused conditional and optional numeric fields should to zero. One sets unused conditional and optional enumerable fields to a value which indicates their unrequired use (e.g. not applicable).

4.3. Security Identification

System assigns the instrument identifier (e.i. instrumentId). On the basis of reference data, one obtains other identifiers, e.g. ISIN number.

4.4. Order Management

The chapter describes important information about orders, including their identifiers, types, and processing rules.

4.4.1. ORDER IDENTIFIERS

The following order identification fields are used in messages:

- orderId
- publicOrderId.

4.4.1.1. orderId

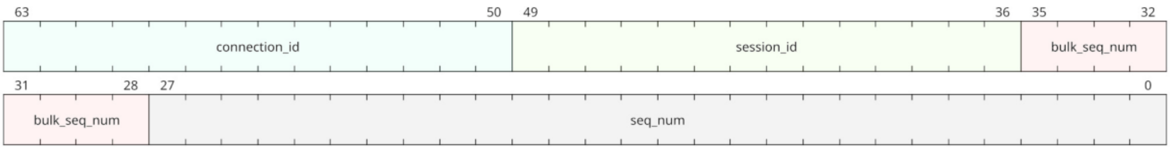
Trading System assigns a unique identifier for an order. The orderId field is unique across all trading days, all order books and all Participants. It is persistent for the entire life of an order (i.e. it does not change after an order modification). orderId is known only for the exchange member who submits the order, Exchange and possibly for supervisory entities (e.g. Polish Financial Supervision Authority - KNF). Other exchange members do not know that orderId field.

An orderId field is generated for each order as a concatenation of connection id, session id, bulk sequence number and sequence number of the OrderAdd message sent by an exchange member:

- connection Id – a connection number - connectivity parameter provided by GPW,
- session Id – a session number received during the login process,
- bulk sequence number – zero value for single orders (e.g. Market, Limit) and the value of subsequent orders for messages with multiple orders or quotes (e.g. MassQuote),
- sequence number - a sequence number of OrderAdd message.

All the above parts of the orderId field are known at the time of sending the OrderAdd message.

Figure3. orderId field construction.



Example

1. OderAddResponse message with orderId (highlighted in bold blue):

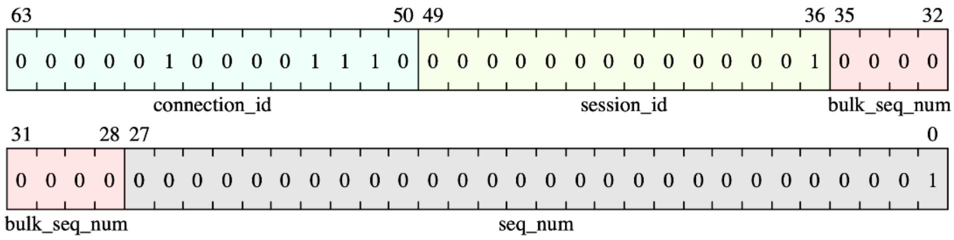
   1b 00 05 01 00 00 00 **01 00 00 00 10 00 38 04** 01 00 00 00 00 00 00 00 02 01 00 01,

2. Raw bytes of order id: 01 00 00 00 10 00 38 04,

3. Order id value 0x0438001000000001 (little endian byte order) and parts value:

   a) connection id = 0b00_0001_0000_1110 = 0x10E = 270
   b) session id = 0b00_0000_0000_0001 = 1
   c) bulk = 0b0000_0000 = 0
   d) sequence number = 0b0000_0000_0000_0000_0000_0000_0001 = 1.

Figure 4. orderId =0x0438001000000001



Despite the facility to calculate orderId during order sending, Gateway sends back the orderId value in response to the received order (see the OrderAddResponse message specification).

Then orderId is used across multiple messages throughout the entire life of the order.

orderId can be used by the exchange member when requesting an order modification (the OrderModify message) or order cancellation (the OrderCancel message) to identify the submitted order.

4.4.1.2. publicOrderId

System assigns the order identifier and published in Market Data (public information) and it corresponds to the publicOrderId field in Market Data OrderAdd (9), OrderModify (10), OrderDelete (11), OrderExecute (12) messages.

publicOrderId is unique across all order books and all exchange members, but only within a single trading day. On the next trading day, the numbering is reset and starts afresh(i.e. publicOrderId is not consistent for the entire life of an order). Moreover it also changes with each refill of an iceberg order or applies to transfer orders (e.g. orders with time in force set to Good Till Cancel or Good Till Date).

Gateway provides publicOrderId for an order only in the OrderAddResponse message. publicOrderId can be used to relate submitted orders to Market Data, however orders are modified or cancelled only using the orderId field.

4.4.2. ORDER TYPES

Exchange members may submit the following order types in the OrderAdd message via Gateway:

- Limit Order
- Market Order
- Market To Limit Order
- Iceberg Order
- Stop Limit Order
- Stop Loss Order.

4.4.2.1. Limit Order

Limit Order is an order to buy or sell at a stipulated limit price or a better one. Limit Order can be executed at a price equal to or better than its limit price, which means for buy order at its limit or lower price and for sell order at its limit or higher price. Unexecuted remainder of a Limit Order is added to the order book, unless order's validity attribute timeInForce specifies otherwise.

Relevant message fields:

- orderType = 1 (Limit)
- price = Limit Price.

4.4.2.2. Market Order

Market Order is an order to buy or sell without specified price. Market Order is executed at the best opposite prices with one or more counterpart resting orders.

During Continuous Trading market phase, Market Orders can only be submitted with IOC, FOK, VFA, VFC validity attributes, i.e. timeInForce = 3, 4, 5, 7.

During Auction market phase, Market Orders can only be submitted with VFA and VFC validity attributes, i.e. timeInForce = 5, 7.

Relevant message fields:

- ordType = 2 (Market),
- timeInForce = 3 (Immediate Or Cancel), 4 (Fill Or Kill), 5 (Valid For Auction), 7 (Valid For Closing).

4.4.2.3. Market To Limit

Market To Limit Order is an order to buy or sell without a specified price. Market To Limit Order is executed at the best opposite price level with one or more counterpart resting orders.

During Continuous Trading market phase, Market To Limit Orders can only be submitted with IOC, FOK, VFA, VFC validity attributes, i.e. timeInForce = 3, 4, 5, 7.

During Auction market phase, Market To Limit Orders can only be submitted with VFA and VFC validity attributes i.e. timeInForce = 5, 7.

Relevant message fields:

- ordType = 3 (Market To Limit)
- timeInForce = 3 (Immediate Or Cancel), 4 (Fill Or Kill), 5 (Valid For Auction), 7 (Valid For Closing).

4.4.2.4. Iceberg

Iceberg Order is an order, for which only a part of the total quantity is disclosed to the market via Market Data. The rest of the order is hidden (invisible) to the general market. An exchange member submitting an Iceberg Order must specify additionally the quantity that is going to be displayed initially, i.e. displayQty, which:

- must be lower than the total order quantity,
- must be greater or equal to the Minimum Display Quantity set in Trading System configuration,
- may be randomized by the Trading System within a specified range.

Once displayed quantity is completely filled, a new portion of the order is disclosed to the market according to the displayQty requested at the order entry (with possible randomization).

The value of each Iceberg Order (i.e. price x orderQty) at the moment of entry or during any modification must be equal or greater than the Minimum Iceberg Size set in the Trading System configuration.
Iceberg Orders can only be submitted with DAY, GTC, GTD validity attributes, i.e. timeInForce = 1, 2, 6, 8.
Relevant message fields:

- ordType = 4 (Iceberg),
- price = Limit Price,
- displayQty = Initially Displayed Quantity,
- timeInForce = 1 (Day), 2 (Good Till Cancel), 6 (Good Till Date), 8 (Good Till Time).

4.4.2.5. Stop Limit

Stop Limit is an order to buy or sell at a stipulated limit price or a better one, which is activated and inserted into the order book upon reaching or exceeding pre-defined price level (called Trigger Price) by the Last Traded Price on the market. Until activation, Stop Limit is hidden and cannot interact with the order book. Once activated, Stop Limit is processed the same way as a Limit Order with the same validity attribute that the original Stop Order had before its activation (nonetheless maintains its original Order Type = 5).

When submitting or modifying a Stop Limit order, the following conditions must be met:

- for buy order: Price >= Trigger Price > Last Traded Price (LTP),
- for sell order: Price <= Trigger Price < Last Traded Price (LTP).

Stop limit can only be submitted with DAY, GTC, GTD, GTT validity attributes, i.e. timeInForce = 1, 2, 6, 8.

The Trigger Price may be modified for inactive Stop Order, but once the order is activated, Trigger Price cannot be modified anymore.

Relevant message fields:

- ordType = 5 (Stop Limit),
- price = Limit Price,
- triggerPrice = Activation Price,
- timeInForce = 1 (Day), 2 (Good Till Cancel), 6 (Good Till Date), 8 (Good Till Time).

4.4.2.6. Stop Loss

Stop Loss is an order to buy or sell without specified price, which is activated and inserted into the order book upon reaching or exceeding pre-defined price level (called Trigger Price) by the Last Traded Price on the market. Until activation, Stop Loss is hidden and cannot interact with the order book. Once activated, Stop Loss is processed the same way as a Market Order with Immediate Or Cancel (IOC) validity attribute (nonetheless maintains its original Order Type = 6).

When submitting or modifying a Stop Loss Order, the following conditions must be met:

- for buy order: Trigger Price > Last Traded Price (LTP),
- for sell order: Trigger Price < Last Traded Price (LTP).

Stop Loss can only be submitted with DAY, GTC, GTD, GTT validity attributes, i.e. timeInForce = 1, 2, 6, 8.

The Trigger price may be modified for inactive Stop order, but once the order is activated, Trigger Price cannot be modified anymore.

Relevant message fields:

- ordType = 6 (Stop Loss),
- triggerPrice = Activation Price,
- timeInForce = 1 (Day), 2 (Good Till Cancel), 6 (Good Till Date), 8 (Good Till Time).

4.4.3. ORDER VALIDITY TYPES

Exchange members may submit orders with the following validity attributes (timeInForce field):

- Day (DAY),
- Good Till Cancel (GTC),
- Good Till Date (GTD),
- Good Till Time (GTT),
- Immediate Or Cancel (IOC),
- Fill Or Kill (FOK),
- Valid For Auction (VFA).
- Valid For Closing (VFC).

Not all validity attributes may be used with every order type throughout various market phases.

4.4.3.1. Day (DAY)

Day order is valid until the end of the current trading day only. Unexecuted Day orders are expired by Trading System at the end of the current trading day.

Day validity attribute may be used with all order types, except for Market Order and Market To Limit.

Relevant message fields:

- timeInForce = 1 (Day)

4.4.3.2. Good Till Cancel (GTC)

Good Till Cancel order is valid until it gets fully executed or canceled by the submitter or market operations (whichever comes first).

There is a maximum number of days threshold set up in Trading System configuration, that defines for how long a Good Till Cancel order may rest in the order book (ranging from 1 to 365 days). After that time elapses, GTC order gets expired as well.

Good Till Cancel validity attribute may be used with all order types, except for Market Order and Market To Limit.

Relevant message fields:

- timeInForce = 2 (Good Till Cancel)

4.4.3.3. Good Till Date (GTD)

Good Till Date order is valid until the end of the specified day.

If the expiry date specified for an order is not a trading day, the order gets expired at the end of the previous day.

The specified date cannot exceed the maximum number of days threshold defined by Market Operator (ranging from 1 to 365 days).

Good Till Date validity attribute may be used with all order types, except for Market Order and Market To Limit.

Relevant message fields:

- timeInForce = 6 (Good Till Date)
- expire = Expiry Date

4.4.3.4. Good Till Time (GTT)

Good Till Time order is valid until the specified time of the current trading day.

If the expiry time specified for an order is later than the end of the last market phase, the order gets expired at the end of the current trading day.

Good Till Time validity attribute must be used in conjunction with the expiry field set to the current date and time in the future.

Good Till Time validity attribute may be used with all order types, except for Market Order and Market To Limit.

Relevant message fields:

- timeInForce = 8 (Good Till Time)
- expire = Expiry Time (UTC timestamp with current date)

4.4.3.5. Immediate Or Cancel (IOC)

Immediate Or Cancel order must be executed immediately, in full or partially, upon order entry. IOC orders may be matched against one or more opposite orders (with the price limits within Trade Price Collars). Any unexecuted part of an IOC order is automatically canceled by Trading System.

Immediate Or Cancel orders may be submitted during Continuous Trading only.

Immediate Or Cancel validity attribute may be used with all order types, except for Stop Limit, Stop Loss and Iceberg.

Relevant message fields:

- timeInForce = 3 (Immediate Or Cancel)

4.4.3.6. Fill Or Kill (FOK)

Fill Or Kill order must be executed in full, immediately upon order entry. FOK orders may be matched against one or more opposite orders (with the price limits within Trade Price Collars). An unexecuted FOK order is automatically canceled by Trading System.

Fill Or Kill orders may be submitted during Continuous Trading market phase only.

Fill Or Kill validity attribute may be used with all order types, except for Stop Limit, Stop Loss and Iceberg.

Relevant message fields:

- timeInForce = 4 (Fill Or Kill)

4.4.3.7. Valid For Auction (VFA)

Valid For Auction order is activated and inserted into the order book at the beginning of the next Auction market phase (whether scheduled or unscheduled). VFA order submitted in Continuous Trading is hidden until its activation (i.e. it is not published via Market Data) and cannot interact with the order book. Once activated, VFA order is valid until the end of Auction and gets expired by Trading System immediately after uncrossing (if left unexecuted). VFA orders are valid for the current trading day only. Activated VFA orders retain their original priority timestamp from the moment of submission.

Valid For Auction validity attribute may be used with all order types, except for Stop Limit, Stop Loss and Iceberg.

Relevant message fields:

- timeInForce = 5 (Valid For Auction)

4.4.3.8. Valid For Closing (VFC)

Valid For Closing order is activated and inserted into the order book at the beginning of the Closing Auction market phase only. VFC order submitted in Continuous Trading or Auction other than Closing, is hidden until its activation (i.e. it is not published via Market Data) and cannot interact with the order book. Once activated, VFC order is valid until the end of the Closing Auction and gets expired by Trading System immediately after the uncrossing (if left unexecuted). VFC orders are valid for the current trading day only. Activated VFC orders retain their original priority timestamp from the moment of submission.

Valid For Closing validity attribute may be used with all order types, except for Stop Limit, Stop Loss and Iceberg.

Relevant message fields:

- timeInForce = 7 (Valid For Closing)

4.4.4. ORDER CAPACITY

Order capacity defines the capacity of the company, which submits an order. The capacity field values:

- 1 - Agency mapped as AOTC (Any other capacity)
- 2 - Principal mapped as DEAL (Dealing on own account)
- 3 - Riskless Principal mapped as MTCH (Matched principal)

It is required to set the correct capacity field value by the exchange member.

4.4.5. ORDER STATUS

The order status informs on the state in which it is in GPW WATS. With regards to orders submitted by an exchange member, the status may take the values acknowledged, cancelled, rejected or filled. Successful modification of the order by the exchange member results in the modified status. Similarly, a successful cancellation changes the status of the order to be cancelled.

An Exchange member may receive the following status for orders from Gateway:

- Acknowledged (1) – when an incoming unexecuted order is accepted into System or restated the next day in the morning (in the case of GTC/GTD orders),

- Cancelled (2) - when an order is cancelled by the exchange member, System itself or by Market Operations.
- Rejected (3) - when an order is rejected by System upon entry due to various business validations.
- Filled (4) - when an order is fully or partially executed.
- Modified (5) – when an order is modified by Participant as a confirmation of modification.

Information about the status of orders is sent in OrderAddResponse and OrderModifyResponse messages.

The reason for the order status change may be an order modification or cancelation by the exchange member, orders matching, System actions (e.g. cancelation via Cancel on Disconnect mechanism) and session supervision team operations.

More information concerning the reason for the order state change can be found in the source field description (see source field description in OrderAddResponse message). This field specifies the origin of the order message (e.i. OrderAddResponse), consequently, makes it possible to determine the possible cause of the status change. It takes the following values:

- Submitted – order message coming from Gateway,
- CoD– cancelled order by Cancel on Disconnect mechanism,
- Expired - cancelled order by System in the case of expiry,
- StopOrder - System (i.e. the order management service) notifies on the activation of a stop order,
- Suspended – cancelled order by System (i.e. canceller service) in the case of instrument suspension,
- Reinstated - reinstated order,
- IcebergRefill - iceberg order refill,
- OrderBookRebuild - order book rebuild after auction,
- Activated – VFA/C order got activated, from now on it will take part in matching,
- Stp – cancelled order due to self-trade prevention,
- CorporateAction - cancelled order due to submitted Corporate Action.

4.4.6. CANCELLATION

Cancellation of a previously submitted order by the exchange member is only possible on the same connection id on which the order was submitted. For example, an order submitted on the connection id = 123 cannot be removed from the connection id = 242.

The order is cancelled by sending the OrderAddCancel message with the appropriate orderId field (i.e. the orderId received in the OrderAddResponse message)

Connection allocation management is the responsibility of the exchange member.

Deleting orders is subject to business validation, in particular, it is not possible to delete an order which has already been fully executed.

More information about connections is presented in the Connectivity chapter.

4.4.7. MODIFICATION

Modification of the order, similarly to its cancellation, is only possible on the connection on which the order was previously sent (i.e. the same connection id).

The order is modified by sending the OrderAddModify message with the appropriate orderId field (i.e. the orderId received in the OrderAddResponse message).

4.4.8. ACCOUNT STRUCTURE

There are the following types of accounts (i.e. accoutType field):

- Customer - account is carried on the customer side of the books.
- House – house trader.

If there is no account placed in the order, the accountType field should be set to "Missing" and the account field should be filled with zeros.

4.4.9. TEXT FIELDS

A character in the text field is treated as an unsigned byte type. In the trading_port.json contract, the above type is called AnsiChar. The string is created as an AnsiChar array. Examples of text fields are account, token, micCode etc.

If the length of the text is less than the length of the field, the empty space should be filled with zeros.

ASCII characters, in the range 0 – 127, should be used. Messages containing text fields with characters outside the above range is rejected.

4.4.10. ORDER BOOK RESTATEMENT

At the beginning of each trading day, exchange members receive incoming orders from Gateway which were placed during the previous session and are still valid (e.g., orders with a Time In Force equal to GTD or GTC), known as restated orders.

More information can be found in the document GPW WATS 1.01 Trading System, chapter Trading Schedules.

Restated orders are sent using an OrderAddResponse message with fields set to the values from the end of the previous day. An order status is also set to the last status from the previous day (e.g. modified, filled). The field source is set to a Reinstated value.

Reinstated orders are not sent publicly in Market Data, only to the exchange members which submitted them.

Expired orders are not transferred – reinstated (e.g. order with TIF = Day, or Good Till Date orders with a past expiry date).

UNSOLICITED ORDER CANCELLATIONS GENERATED BY TRADING SYSTEM

Unsolicited order cancellations generated by System is carried out using OrderCancelResponse messages with the following characteristics:

1. order source (i.e. source field) takes a different value than submitted. This value explains the source of the order cancellation e.g. Cancel on Disconnect mechanism,
2. reason – a reason for cancelation if available.

4.5. Trade Capture

There are several situations where transaction capture reports are exchanged:

1. Block transactions (field tradeType = 38 - BlockTrade)
    - An exchange member may send a dual transaction capture report in a situation where a transaction involving clients of a given exchange member was made on the block market. The TradeCaptureReportDual message is used by the exchange member as a dual transaction capture report. A Gateway response should be the TradeCaptureReportResponse message.
    - An exchange member may send a single transaction capture report which requires confirmation by the other party. System ensures correct message exchange between the transaction parties. The TradeCaptureReportSingle message is used by the exchange member as a single transaction capture report. Gateway response should be the TradeCaptureReportResponse message.
2. Cross transactions (field tradeType = 22 - PrivatelyNegotiatedTrade)
    - An exchange member may send a dual transaction capture report (a TradeCaptureReportDual message) in a situation where a cross transaction is submitted.

FIX Order Gateway equivalent of the message about transaction capture reports are TradeCaptureReport (AE)/ TradeCaptureReportAck (AR) messages.

4.6. Quote Handling

Market makers send quotes into a market using a MassQuote message. For a given instrument, it is possible to send one quotation. The MassQuote message enables the sending of up to 30 quotations.

The trading platform sends a confirmation of the accepted and rejected quotations by transmitting a MassQuoteResponse message.

Quotations rules:

- Two-sided quotes are allowed,
- Only one market maker quotation is allowed per instrument,
- MassQuoteResponse message includes all submitted quotations along with their acceptance status (e.g. Accepted, Rejected),
- Modification of submitted quotations involves placing another MassQuote message with changed values for price or quantity,
- Cancellation of submitted quotations involves placing another MassQuote message with the quantity set to 0.

4.7. Cancel On Disconnect

Cancel on Disconnect (CoD) mechanism prevents orders from remaining outside the exchange member's control after an incorrect disconnection from System, i.e. without logging out.

Disconnection from Gateway is understood as breaking the TCP/IP connection or lack of communication from the Client Application, including the lack of Heartbeat messages for a period of 12 seconds (so-called grace period).

The CoD is a sub-service of Gateway service and can be enabled for any exchange member connection. Elimination of orders follows as per the CoD mechanism rules on a given trading connection. If the user has more than one connection, then the mechanism can be activated on each of these connections or only on chosen connections. The GPW is responsible for the configuration of the service and performs it at the exchange member request.

In the case of an unexpected party disconnection, the service would cancel orders with the following TIFs: DAY, GTT, VFA and VFC. Orders with the following TIFs: IOC, FOK, GTC, GTD are excluded from cancellation.

4.8. Reject Messages

Messages sent by the exchange member can be rejected at the session level and at the application level.

The Reject message informs on the message rejection at the session level i.e. in a situation where the message cannot be considered valid and can no longer be processed. Reason for rejection are given in the rejectReason field (e.g. Invalid message type).

Session-level valid messages related to submitting, cancelling and modifying orders may be rejected at the application level. Relevant information about the rejection is provided in the status and reason fields of the message which are a Response to the exchange member's message.

4.9. Timestamps And Dates

The time and date are stored on the Timestamp type, which is based on a 64-bit unsigned integer. On the Timestamp type, the time is given within nano second accuracy.

Below are the fields where the time is given and the rules for filling them in:

- expire - in the case of GTT orders only the time is filled in, in the case of GTD orders only the date is filled in.

5. Connectivity

This chapter provides information regarding: logon authentication, network parameters, failover and recovery.

5.1. Session Identification

5.1.1. LOGIN PARAMETERS

Establishing a session with GPW WATS requires logging into System. To do this, it is necessary to have a token associated with a unique connection ID. The token and connection ID are fields of the login message. Both parameters are obtained from GPW. You cannot log in with the same connection ID multiple times.

5.1.2. NETWORK CONNECTION

IP addresses and ports for Gateway are published in a separate configuration document. There are 2 IP addresses available for each connection. The primary address for typical use and secondary address used in the case of failure.

5.1.3. TECHNICAL SESSION IDENTIFICATION

The technical session begins when System starts up and ends when it is turned off. Thus, it typically covers a trading day. In special cases, such as an emergency system restart, another technical session is started. The technical session ID is published in the StartOfTechnicalSession market data message as a field sessionId. It is also possible to obtain the current session id when logging in. Then the session id is given in response to the login message.

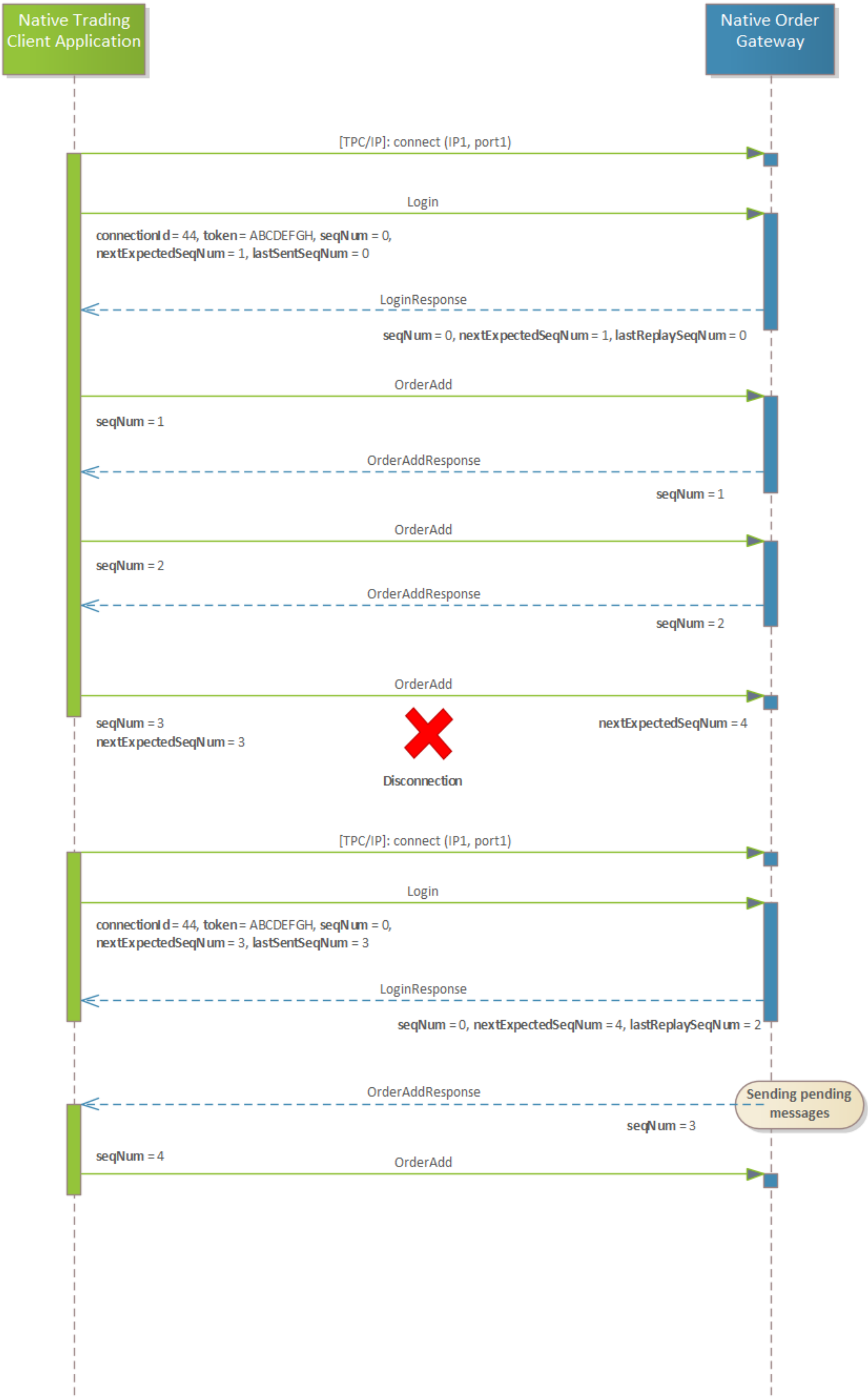
The session ID is used to create an order ID (see section "Order Identifiers").

5.2. Failover And Recovery

Due to a reduction to operational risk within GPW WATS, the failover and recovery mechanism has been designed.

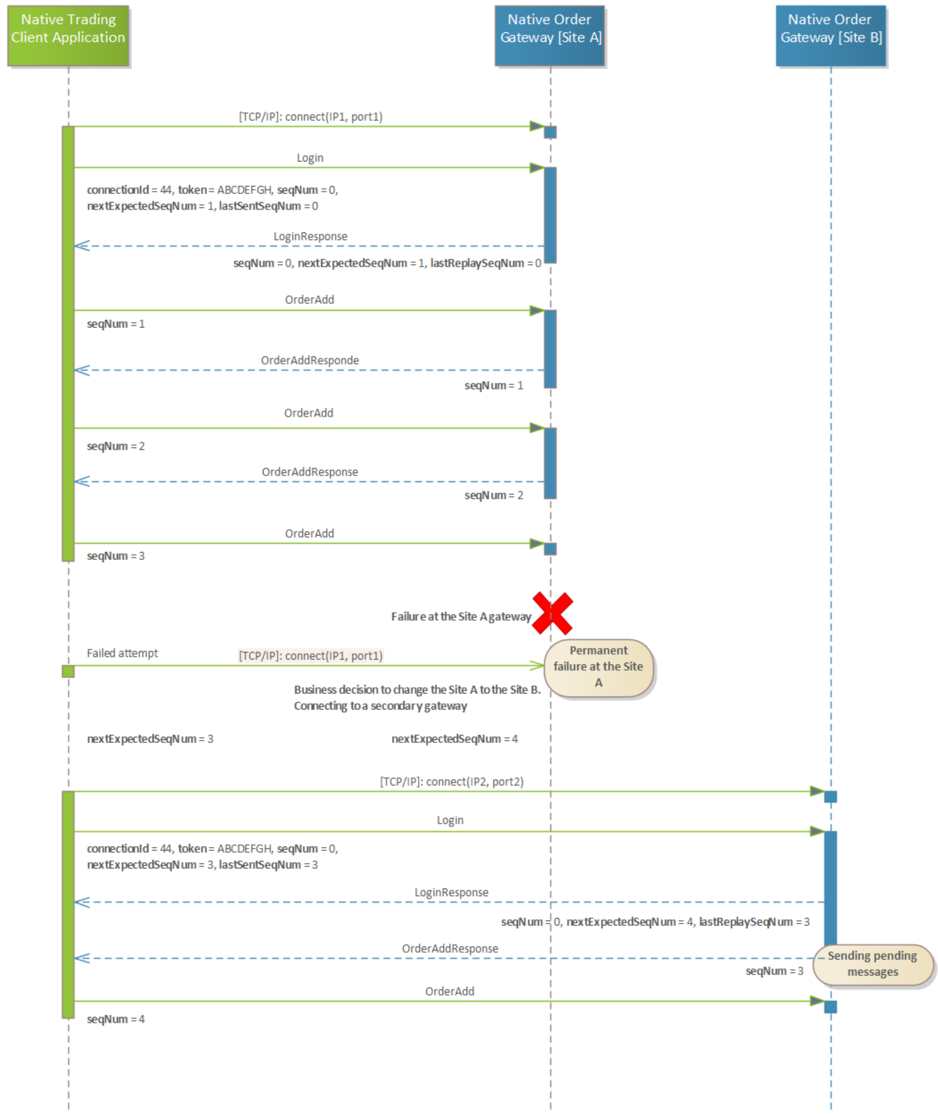
In the case of temporary and short unavailability of Gateway, the exchange member should attempt to re-establish the connection and login to Gateway. Subsequently the messages are resynchronized between the exchange member and Gateway based on the sequence numbers included in the Login and LoginResponse messages. There are nextExpectedSeqNum and lastSentSeqNum in the Login message. The nextExpectedSeqNum field means the next expected message sequence number to be received and the lastSentSeqNum field means the last sent sequence number. The LoginResponse message also contains the nextExpectedSeqNum field and, additionally, the lastReplaySeqNum field indicating the number of the last sent message or the last message currently waiting to be sent, if any. Any gap in the messages is filled by sending missing messages by each party. The diagram below shows such a situation.

Figure 5. The synchronization after disconnection scenario.



When the primary Gateway is unavailable for a long period, the procedure to switch to a secondary is launched. In such a situation, the exchange member receives information from the GPW concerning the need to switch to the secondary Gateway. The connection is established with the same login parameters but on a new IP address. After logging in, business messages are synchronized in the same manner as in the first case. The diagram below shows such a situation.

Figure 6. Switching gateway location in the case of disconnection.



Please note that when using the CoD mechanism and disconnecting without a logout message, which is natural for most failures, orders are cancelled (see section Cancel On Disconnect).

5.3. Message Throttling

The throttling mechanism protects Gateway against overloading with an excessive number of input messages.

There are 2 limits set in Gateway:

1. business throttling - after exceeding the business limit level, consecutive messages are rejected using Reject messages with the reason set to MaxThroughputExceeded,

2. technical throttling - after exceeding the technical limit level, the connection is closed by sending a ConnectionClose message with the reason set to AntiFloodingThresholdExceeded and then the socket is closed.

Limit calculations take into account all messages. However, Logout and OrderCancel messages will not be rejected.

The MassQuote messages are treated differently. When calculating limits for MassQuote, each side of each quotation is counted as a separate message. For example, a MassQuote message containing 8 quotations is counted as 16 messages.

The above limits are calculated over a period of time configurable in Gateway (i.e., measurement period).

The throttling parameters are configurable at Gateway service as follows:

- The business limit level is configured for each connection and depends on the level of service provision agreed upon between the System Operator and the exchange member. The measurement period - last 5 seconds.
- The technical limit level is configured as an internal gateway parameter and is set to 5000 messages per second. The measurement period - last 100 milliseconds.

In addition, after exceeding the technical limit level, it is not possible to log into System for 10 seconds.

Note: the measurement period means the period of time during which messages are counted and the limits which have possibly been exceeded are determined.

5.4. Connectivity Policy

Connectivity policy is described in the document **GPW WATS 6.01 CONNECTIVITY**.

6. Session Layer

6.1. Establishing a Session

Starting a session between the Native Trading Client Application and Gateway begins with establishing a TCP/IP connection and sending the correct Login message. The message should contain the connection parameters presented in the Connectivity chapter. In particular, the Login message should contain a token and a connection identifier. Both of the above parameters are provided by System Operator.

When successfully logging in, the client receives a LoginResponse message with the result field equals "OK". When there is a business level error, a reason is given in the result field, e.g. invalid token.

When there are protocol errors or it has not been possible to establish a session, Gateway sends the ConnectionClose message which contains the reason and then the TCP/IP connection would be closed.

Each user can only be logged in once with the same credentials. When the already logged user tries login again during another established session, Gateway sends the LoginResponse message with the result field set to "AlreadyLoggedIn".

If Participant exceeds the number of login attempts, Gateway blocks the account and the LoginResponse message is set to "AccountLocked". The limit of failed login attempts is set to 5.

The maximum limit of the login attempts with Gateway is set up as once every 3 seconds. In the situation of a failed login attempt, the exchange member is advised to contact the GPW service desk for further assistance.

6.2. Maintaining a Session

6.2.1. SEQUENCE NUMBER

Sequence numbers are only assigned to business messages within a trading day. Each trading day is associated with a session id available after logging in (see. a LoginResponse message and the sessionId field) or in market data (see. StartOfTechnicalSession and EndOfTechnicalSession messages). The sequence numbers start with 1 and are incremented by 1 in each sent business message. Session messages have a sequence number set to 0.

The following is a list of session message types (i.e. messages with a sequence number of zero):

- Login
- LoginResponse
- Logout
- LogoutResponse
- ConnectionClose
- Heartbeat
- Reject.

Message types other than those listed above belong to the business message set and require setting a sequence number.

6.2.2. HEARTBEATS

The heartbeat message used by Gateway and Client Application to provide information about the communication line during time gaps of inactivity and to verify that interfaces at each end are accessible. The length of heartbeat interval is 4 seconds. The heartbeat send time (i.e. interval) is counted from the time of the last sent message.

The Logout procedure and closing the TCP/IP connection is done once the server noticed an inactivity for 3 heartbeat intervals.

6.2.3. REJECTIONS

Client Application message is rejected at the session level by sending a "Reject" message. The reason for rejecting is presented in the “reason” field and includes:

- exceeding throughput limits (MaxThroughputExceeded),
- sending the wrong type of a message (InvalidMsgType),
- wrong expire field format (InvalidExpireTimePrecision).
- invalid settlement date in trade capture report (InvalidSettlementDate).

In the case of communication protocol errors, instead of rejecting the message, the connection is terminated (see next section).

6.3. Terminating a Connection

Client Application should terminate all used connections at the end of trading day by sending a Logout message. Then Gateway service closes TCP/IP connection.

If Client Application does not terminate a connection, Gateway does it automatically once it shuts down (a ConnectionClose message is sent).

During the trading day, in extraordinary cases, Gateway may initiate the termination of connection by sending the ConnectionClose message.

7. MESSAGES

Name	Type	Kind	Length	Description
ConnectionClose	ConnectionClose	Message	17	The ConnectionClose message confirms the termination of a session through the trading port service.
Heartbeat	Heartbeat	Message	16	Heartbeat message
Login	Login	Message	36	The login message authenticates a user establishing a connection to the trading port service. The login message must be the first message sent by the client application to request the initiation of a trading port session.
LoginResponse	LoginResponse	Message	27	The login response message. The result field describes the login status, indicating whether the login was successful or not (i.e. successful login).
Logout	Logout	Message	16	The logout message is sent from the client application to terminate the communication session with the trading port.
LogoutResponse	LogoutResponse	Message	16	The logout response message confirms the client logout message.
MassQuote	MassQuote	Message	1172	Mass Quote
MassQuoteResponse	MassQuoteResponse	Message	718	The response to a MassQuote message.
OrderAdd	OrderAdd	Message	140	Message used to add new orders to the system.
OrderAddResponse	OrderAddResponse	Message	36	The message is a response to an OrderAdd message and includes the order execution status.
OrderCancel	OrderCancel	Message	24	Message used to cancel the previously submitted order.
OrderCancelResponse	OrderCancelResponse	Message	27	The message is a response to an order cancel request and contains information about its execution, in particular whether the order to cancel was found or not.
OrderModify	OrderModify	Message	56	Message used to modify the submitted order.
OrderModifyResponse	OrderModifyResponse	Message	28	The response message for an OrderModify.
Reject	Reject	Message	21	The reject message is sent by the trading port service when receiving an erroneous message that cannot be further processed.
RiskLimitBreach	RiskLimitBreach	Message	53	Message to inform about violation of risk limit.
Trade	Trade	Message	52	The message used to report trades between counterparties (i.e. generated when two or more orders are matched).
TradeBust	TradeBust	Message	20	Message used to cancel previously accepted Trade Capture Report.
TradeCaptureReportDual	TradeCaptureReportDual	Message	210	Trade Capture Report - dual sided.
TradeCaptureReportResponse	TradeCaptureReportResponse	Message	55	The message is a response to an Trade Capture Report message, containing the state of TCR execution.
TradeCaptureReportSingle	TradeCaptureReportSingle	Message	175	Trade Capture Report - single side.

7.1.1. HEADER:

Name	Type	Kind	Length	Description
length	MsgLength	Alias (u16)	2	Total length of the message.
msgType	MsgType	Enum	2	Type of the message (e.g. Login).
seqNum	SeqNum	Alias (u32)	4	Sequence number of the message added by the sender.
timestamp	Timestamp	Alias (u64)	8	Sending time.

7.1.2. CONNECTIONCLOSE:

<table>
<tr><th>Name</th><th>Type</th><th>Kind</th><th>Length</th><th>Description</th></tr>
<tr><td>header</td><td>Header</td><td>Struct</td><td>16</td><td>Header.</td></tr>
<tr><td>reason</td><td>ConnectionCloseReason</td><td>Enum</td><td>1</td><td>Connection close reason.
<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>ProtocolError</td><td>1</td><td>Invalid message or frame length.</td></tr>
<tr><td>InvalidSeqNum</td><td>2</td><td>Message came with an incorrect sequence number.</td></tr>
<tr><td>EndOfDay</td><td>3</td><td>The session day has come to an end.</td></tr>
<tr><td>SyncFail</td><td>4</td><td>The synchronization of messages has failed.</td></tr>
<tr><td>AntiFloodingThresholdExceeded</td><td>5</td><td>The second level of the throttling limit has been exceeded.</td></tr>
</table></td></tr>
</table>

7.1.3. HEARTBEAT:

Name	Type	Kind	Length	Description
header	Header	Struct	16	Header.

7.1.4. LOGIN:

Name	Type	Kind	Length	Description
header	Header	Struct	16	Header.
version	MsgVersion	Alias (u16)	2	Indicates the version of the protocol in which the message is defined.
token	Token	Array (AnsiChar)	8	The security data required for authentication, which is a token received by the exchange member during the registration process.
connectionId	ConnectionId	Alias (u16)	2	ID of the connection.
nextExpectedSeqNum	SeqNum	Alias (u32)	4	Next expected message sequence number value to be received.
lastSentSeqNum	SeqNum	Alias (u32)	4	Last sent sequence number.

7.1.5. LOGINRESPONSE:

<table>
<tr><th>Name</th><th>Type</th><th>Kind</th><th>Length</th><th>Description</th></tr>
<tr><td>header</td><td>Header</td><td>Struct</td><td>16</td><td>Header.</td></tr>
<tr><td>result</td><td>LoginResult</td><td>Enum</td><td>1</td><td>Login response status code.
<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>Ok</td><td>1</td><td>Successful login.</td></tr>
</table></td></tr>
</table>

Name	Type	Kind	Length	Description
				NotFound | 2 | User not found. **InvalidToken** | 3 | Authorization failure. **AlreadyLoggedIn** | 4 | Already logged in. **AccountLocked** | 5 | Account locked. **LoginNotAllowed** | 6 | Login is currently unavailable due to reasons such as service unavailability. **InvalidLoginParameters** | 7 | The login parameters, such as the connection ID, are invalid. **ThrottlingTemporaryLock** | 8 | The login attempt failed due to exceeding the anti-flooding threshold. **Other** | 9 | Other errors.
nextExpectedSeqNum	SeqNum	Alias (u32)	4	Next expected message sequence number value to be received.
lastReplaySeqNum	SeqNum	Alias (u32)	4	Last replay sequence number.
sessionId	SessionId	Alias (u16)	2	ID of the session.

7.1.6. LOGOUT:

Name	Type	Kind	Length	Description
header	Header	Struct	16	Header.

7.1.7. LOGOUTRESPONSE:

Name	Type	Kind	Length	Description
header	Header	Struct	16	Header.

7.1.8. MASSQUOTE

Name	Type	Kind	Length	Description
header	Header	Struct	16	Message header.
onBehalfOf	OnBehalfOf	Alias (u16)	2	
stpId	STPId	Alias (u16)	2	An ID assigned by the client used in Self Match Prevention mechanism.
capacity	Capacity	Enum	1	Capacity of the party making the order (either principal or agency). Name | Value | D **Agency** | 1 | Agency (mapped to AOTC). **Principal** | 2 | Principal (mapped to DEAL). **RisklessPrincipal** | 3 | Riskless Principal (mapped to MTCH)
account	Account	Array (AnsiChar)	16	Account mnemonic as agreed between buy and sell sides.
accountType	AccountType	Enum	1	Type of account associated with the order. Name | Value | Description **Missing** | 1 | Account is missing. Account is expected to be filled with 0x00.

<table>
<tr><th>Name</th><th>Type</th><th>Kind</th><th>Length</th><th>Description</th></tr>
<tr><td></td><td></td><td></td><td></td><td><table><tr><td>Customer</td><td>2</td><td>Account is carried on customer side of the books.</td></tr><tr><td>House</td><td>3</td><td>House trader.</td></tr></table></td></tr>
<tr><td>mifidFields.flags</td><td>MifidFlags</td><td>Enum</td><td>1</td><td>Flags raised on an order in compliance with the MiFID directive.<table><tr><th>Name</th><th>Value</th><th>Description</th></tr><tr><td>None</td><td>0b0000</td><td></td></tr><tr><td>LiquidityProvisionActivity</td><td>0b0001</td><td></td></tr><tr><td>DirectOrSponsoredAccess</td><td>0b0010</td><td></td></tr><tr><td>AlgorithmicTrade</td><td>0b0100</td><td></td></tr><tr><td>MarketMakerOrSpecialist</td><td>0b1000</td><td></td></tr></table></td></tr>
<tr><td>mifidFields.client.shortCode</td><td>ShortCode</td><td>Alias (u32)</td><td>4</td><td>Short code of MiFID participant.</td></tr>
<tr><td>mifidFields.client.qualifier</td><td>PartyRoleQualifier</td><td>Enum</td><td>1</td><td>Qualifier of MiFID participant.<table><tr><th>Name</th><th>Value</th><th>Description</th></tr><tr><td>NA</td><td>1</td><td></td></tr><tr><td>Algorithm</td><td>2</td><td></td></tr><tr><td>FirmOrLegalEntity</td><td>3</td><td></td></tr><tr><td>NaturalPerson</td><td>4</td><td></td></tr></table></td></tr>
<tr><td>mifidFields.executingTrader.shortCode</td><td>ShortCode</td><td>Alias (u32)</td><td>4</td><td>Short code of MiFID participant.</td></tr>
<tr><td>mifidFields.executingTrader.qualifier</td><td>PartyRoleQualifier</td><td>Enum</td><td>1</td><td>Qualifier of MiFID participant.<table><tr><th>Name</th><th>Value</th><th>Description</th></tr><tr><td>NA</td><td>1</td><td></td></tr><tr><td>Algorithm</td><td>2</td><td></td></tr><tr><td>FirmOrLegalEntity</td><td>3</td><td></td></tr><tr><td>NaturalPerson</td><td>4</td><td></td></tr></table></td></tr>
<tr><td>mifidFields.investmentDecisionMaker.shortCode</td><td>ShortCode</td><td>Alias (u32)</td><td>4</td><td>Short code of MiFID participant.</td></tr>
<tr><td>mifidFields.investmentDecisionMaker.qualifier</td><td>PartyRoleQualifier</td><td>Enum</td><td>1</td><td>Qualifier of MiFID participant.<table><tr><th>Name</th><th>Value</th><th>Description</th></tr><tr><td>NA</td><td>1</td><td></td></tr><tr><td>Algorithm</td><td>2</td><td></td></tr><tr><td>FirmOrLegalEntity</td><td>3</td><td></td></tr><tr><td>NaturalPerson</td><td>4</td><td></td></tr></table></td></tr>
<tr><td>memo</td><td>Memo</td><td>Array (AnsiChar)</td><td>18</td><td>Free text.</td></tr>
<tr><td>clearingMemberCode</td><td>ClearingCode</td><td>Array (AnsiChar)</td><td>20</td><td>Clearing member code.</td></tr>
<tr><td>clearingMemberClearingIdentifier</td><td>ClearingIdentifier</td><td>Enum</td><td>1</td><td>Clearing member's clearing identifier.<table><tr><th>Name</th><th>Value</th><th>Description</th></tr><tr><td>NotApplicable</td><td>33</td><td>Not Applicable.</td></tr></table></td></tr>
</table>

<table>
<tr><th>Name</th><th>Type</th><th>Kind</th><th>Length</th><th>Description</th></tr>
<tr><td></td><td></td><td></td><td></td><td><table><tr><td>Lei</td><td>78</td><td>Legal Entity Identifier.</td></tr><tr><td>Bic</td><td>66</td><td>Business Identifier Code.</td></tr><tr><td>Custom</td><td>68</td><td>Custom clearing identifier.</td></tr></table></td></tr>
<tr><td>count</td><td>u8</td><td>Primitive</td><td>1</td><td>How many quotes this message contains.</td></tr>
<tr><td>quotes</td><td>Quotes</td><td>Array (Quote)</td><td>1080</td><td>The array of quotes.
Quote:<table><tr><th>Name</th><th>Type</th><th>Kind</th><th>Length</th><th>Description</th></tr><tr><td>instrumentId</td><td>ElementId</td><td>Alias (u32)</td><td>4</td><td>ID of the instrument being traded.</td></tr><tr><td>bid.price</td><td>Price</td><td>Alias (Number)</td><td>8</td><td>Indicates the price of the given order.</td></tr><tr><td>bid.quantity</td><td>Quantity</td><td>Alias (u64)</td><td>8</td><td>Indicates the quantity of the instrument included in the order.</td></tr><tr><td>ask.price</td><td>Price</td><td>Alias (Number)</td><td>8</td><td>Indicates the price of the given order.</td></tr><tr><td>ask.quantity</td><td>Quantity</td><td>Alias (u64)</td><td>8</td><td>Indicates the quantity of the instrument included in the order.</td></tr></table></td></tr>
</table>

7.1.9. MASSQUOTERESPONSE

<table>
<tr><th>Name</th><th>Type</th><th>Kind</th><th>Length</th><th>Description</th></tr>
<tr><td>header</td><td>Header</td><td>Struct</td><td>16</td><td>Message header.</td></tr>
<tr><td>massQuoteId</td><td>OrderId</td><td>Alias (u64)</td><td>8</td><td>Quote id</td></tr>
<tr><td>count</td><td>u8</td><td>Primitive</td><td>1</td><td>How many responses this message contains.</td></tr>
<tr><td>responses</td><td>QuoteOrderResponses</td><td>Array (QuoteOrderResponse)</td><td>690</td><td>The array of responses.
QuoteOrderResponse:<table><tr><th>Name</th><th>Data type</th><th>Kind</th><th>Length</th><th>Description</th></tr><tr><td>instrumentId</td><td>ElementId</td><td>Alias (u32)</td><td>4</td><td>ID of the instrument being traded.</td></tr><tr><td>bidOrderId</td><td>OrderId</td><td>Alias (u64)</td><td>8</td><td>Unique for each trading day order identifier based on the sequence number of order message, bulk sequence number, session ID and connection ID.</td></tr><tr><td>askOrderId</td><td>OrderId</td><td>Alias</td><td>8</td><td>Unique for each trading day order identifier based on the sequence number of order message, bulk sequence number, session ID and connection ID.</td></tr></table></td></tr>
</table>

<table>
<tr><th>Name</th><th>Type</th><th>Kind</th><th>Length</th><th>Description</th></tr>
<tr><td></td><td></td><td></td><td></td><td>
<table>
<tr><td></td><td></td><td>(u64)</td><td></td><td></td></tr>
<tr><td>status</td><td>OrderStatus</td><td>Enum</td><td>1</td><td>Status of the given order.
<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>Ack</td><td>1</td><td>Order acknowledged by system.</td></tr>
<tr><td>Cancelled</td><td>2</td><td>Order canceled.</td></tr>
<tr><td>Rejected</td><td>3</td><td>Order rejected.</td></tr>
<tr><td>Filled</td><td>4</td><td>Order filled.</td></tr>
<tr><td>Modified</td><td>5</td><td>Order modified.</td></tr>
</table>
</td></tr>
<tr><td>reason</td><td>OrderRejectionReason</td><td>Enum</td><td>2</td><td>Reason for rejecting the given order.
<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>NA</td><td>1</td><td>Not applicable.</td></tr>
<tr><td>ExchangeClosed</td><td>2</td><td>Exchange closed.</td></tr>
<tr><td>InvalidPriceIncrement</td><td>18</td><td>Invalid price increment.</td></tr>
<tr><td>Other</td><td>99</td><td>Other.</td></tr>
<tr><td>UnknownInstrumentId</td><td>100</td><td>Unknown instrument.</td></tr>
<tr><td>InstrumentPhaseNoTrading</td><td>106</td><td>Trading is not available for the instrument in its current phase.</td></tr>
<tr><td>UnknownOrder</td><td>1001</td><td>The order id is unrecognized.</td></tr>
<tr><td>InvalidExecutionTrader</td><td>1005</td><td>Invalid execution trader.</td></tr>
<tr><td>InvalidDecisionMaker</td><td>1006</td><td>Invalid decision maker.</td></tr>
<tr><td>InvalidClientId</td><td>1007</td><td>Invalid client.</td></tr>
<tr><td>InvalidPartyRoleQualifierForClientId</td><td>1008</td><td>Invalid Party Role Qualifier for Client Id Party group</td></tr>
<tr><td>InvalidPartyRoleQualifierForExecutingTrader</td><td>1009</td><td>Invalid Party Role Qualifier for Executing</td></tr>
</table>
</td></tr>
</table>
</td></tr>
</table>

Name	Type	Kind	Length	Description						
										Trader Party group
								InvalidPartyRoleQualifierForInvestmentDecisionMaker	1010	Invalid Party Role Qualifier for Investment Decision Maker Party group
								WrongDisplayQtyValue	1013	The display quantity (displayQty) cannot exceed the order quantity.
								InvalidDisplayQty	1014	The Display quantity (displayQty) not allowed for specified order type - only for Iceberg.
								WrongIcebergOrderValue	1015	The value of the iceberg order is less than the required.
								OrderQuantityMustBeGreaterThanMinimumQuantity	1025	The order quantity must be greater than the minimum quantity.
								OrderQuantityMustBeLowerThanMaximumQuantity	1026	The order quantity must be lower than the maximum quantity.
								OrderPriceMustBeGreaterThanMinimumPrice	1027	The order price must be greater than minimum price.

Name	Type	Kind	Length	Description						
								OrderPriceMustBeLowerThanMaximumPrice	1028	The order price must be greater than maximum price.
								OrderPriceMustBeNonzero	1029	The order price must be non-zero.
								OrderValueMustBeGreaterThanMinimumValue	1030	The order value must be greater than minimum value.
								OrderValueMustBeLowerThanMaximumValue	1031	The order value must be lower than maximum value.
								MarketOrderNotAllowedInAuction	1032	Market orders are not permitted during the auction.
								LeavesQuantityMustBeGreaterThanZeroAfter Modification	1034	The remaining quantity (LeavesQty) must be greater than 0 after the modification.
								PriceNotAllowed	1035	The price is not allowed for a market order. In the binary protocol, the price field should have a value of 0.
								InvalidMarketOrderTimeInForce	1039	A market order can only have a TimeInForce

Name	Type	Kind	Length	Description		
						value of 3 (IOC - Immediate or Cancel) or 4 (FOK - Fill or Kill).
				InvalidAuctionTimeInForce	1040	The TimeInForce value of 3 (IOC - Immediate or Cancel) or 4 (FOK - Fill or Kill) is not allowed during the auction.
				InvalidIcebergAndStopOrderTimeInForce	1041	Iceberg and Stop orders can only have a TimeInForce value of DAY, GTC (Good Till Cancel), GTD (Good Till Date), or GTT (Good Till Time).
				ExpireDateInPast	1045	The expiration date is earlier than the current date.
				ExpireTimeInPast	1047	The expiration time is earlier than the current time.
				AmbigousExpire	1048	Please provide either a time or a date, but not both.
				ExpireDateExceedsLimit	1049	The expiration date exceeds the allowed limit.

Name	Type	Kind	Length	Description		
				PriceBelowLowCollar	1037	The validation for collars has failed. The price is too low.
				PriceAboveHighCollar	1038	The validation for collars has failed. The price is too high.
				TriggerPriceNotAllowed	1063	The trigger price not allowed for a specified order type.
				TriggerPriceNotHigherThanLTP	1064	The trigger price is not higher than the last trade price.
				TriggerPriceNotLowerThanLTP	1065	The trigger price is not lower than the last trade price.
				TriggerPriceLowerThanPrice	1066	The trigger price is lower than the limit price.
				TriggerPriceHigherThanPrice	1067	The trigger price is higher than the limit price.
				TriggerPriceModifiedForActivatedOrder	1068	The trigger price has been modified for the activated order.
				InvalidPartyIdForClientId	1070	Invalid PartyID (448) for Client ID
				InvalidPartyIdForExecutingTrader	1071	Invalid PartyID (448) for

Name	Type	Kind	Length	Description						
										Executing Trader
								InvalidPartyIdForInvestmentDecisionMaker	1072	Invalid PartyID (448) for Investment Decision Maker
								InvalidPartyRoleQualifierForPartyId	1075	Invalid PartyRoleQualifier (2376) for PartyID (448)
								InvalidBidAskSpread	1208	OfferPx (133) must be greater than BidPx (132).
								RequestNotAllowedForBlockInstrument	2026	Request not allowed for BLOCK instrument
								RequestNotAllowedForCrossInstrument	2028	Request not allowed for CROSS instrument
								RiskLimitNotDefined	7000	The risk limit has not been defined.
								RiskMaximumOrderVolumeExceeded	7001	The maximum order volume for the risk limit has been exceeded.
								RiskMaximumOrderValueExceeded	7002	The maximum order value for the risk limit has been exceeded.
								RiskOrderPriceCollarExceeded	7003	The order price has exceeded the risk limit.

<table>
<tr><th>Name</th><th>Type</th><th>Kind</th><th>Length</th><th>Description</th></tr>
<tr><td>status</td><td>MassQuoteStatus</td><td>Enum</td><td>1</td><td>Status of the given mass quote order.
<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>Accepted</td><td>1</td><td>Mass quote acknowledged by system.</td></tr>
<tr><td>Rejected</td><td>2</td><td>Mass quote rejected.</td></tr>
</table></td></tr>
<tr><td>reason</td><td>MassQuoteRejectionReason</td><td>Enum</td><td>2</td><td>Reason for rejecting the given mass quote order.
<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>NA</td><td>1</td><td>Not applicable.</td></tr>
<tr><td>ExchangeClosed</td><td>2</td><td>Exchange closed.</td></tr>
<tr><td>Other</td><td>99</td><td>Other.</td></tr>
<tr><td>InvalidExecutionTrader</td><td>1005</td><td>Invalid execution trader.</td></tr>
<tr><td>InvalidDecisionMaker</td><td>1006</td><td>Invalid decision maker.</td></tr>
<tr><td>InvalidClientId</td><td>1007</td><td>Invalid client.</td></tr>
<tr><td>InvalidPartyRoleQualifierForClientId</td><td>1008</td><td>Invalid Party Role Qualifier for Client Id Party group</td></tr>
<tr><td>InvalidPartyRoleQualifierForExecutingTrader</td><td>1009</td><td>Invalid Party Role Qualifier for Executing Trader Party group</td></tr>
<tr><td>InvalidPartyRoleQualifierForInvestmentDecisionMaker</td><td>1010</td><td>Invalid Party Role Qualifier for Investment Decision Maker Party group</td></tr>
<tr><td>InvalidPartyIdForClientId</td><td>1070</td><td>Invalid PartyID (448) for Client ID</td></tr>
<tr><td>InvalidPartyIdForExecutingTrader</td><td>1071</td><td>Invalid PartyID (448) for Executing Trader</td></tr>
<tr><td>InvalidPartyIdForInvestmentDecisionMaker</td><td>1072</td><td>Invalid PartyID (448) for Investment Decision Maker</td></tr>
<tr><td>InvalidPartyRoleQualifierForPartyId</td><td>1075</td><td>Invalid PartyRoleQualifier (2376) for PartyID (448)</td></tr>
<tr><td>DuplicateInstrument</td><td>1202</td><td>Multiple quotes for the same instrument within Mass Quote message.</td></tr>
<tr><td>InvalidQuotesCount</td><td>1204</td><td>Invalid quotes count value.</td></tr>
</table></td></tr>
</table>

7.1.10. ORDERADD:

<table>
<tr><th>Name</th><th>Type</th><th>Kind</th><th>Length</th><th>Description</th></tr>
<tr><td>header</td><td>Header</td><td>Struct</td><td>16</td><td>Header.</td></tr>
<tr><td>onBehalfOf</td><td>OnBehalfOf</td><td>Alias (u16)</td><td>2</td><td>ID of the client party on behalf which order is submitted. The default value is 0.</td></tr>
<tr><td>stpId</td><td>STPId</td><td>Alias (u16)</td><td>2</td><td>ID assigned by the client used in the Self Trade Prevention mechanism.</td></tr>
<tr><td>instrumentId</td><td>ElementId</td><td>Alias (u32)</td><td>4</td><td>ID of the instrument being traded.</td></tr>
<tr><td>orderType</td><td>OrderType</td><td>Enum</td><td>1</td><td>Indicates the order type.
<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>Limit</td><td>1</td><td>Limit order type.</td></tr>
<tr><td>Market</td><td>2</td><td>Market order type.</td></tr>
<tr><td>MarketToLimit</td><td>3</td><td>Market to limit order type.</td></tr>
<tr><td>Iceberg</td><td>4</td><td>Iceberg order type.</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>Name</th><th>Type</th><th>Kind</th><th>Length</th><th>Description</th></tr>
<tr><td></td><td></td><td></td><td></td><td><table>
<tr><td>StopLimit</td><td>5</td><td>Stop limit order type.</td></tr>
<tr><td>StopLoss</td><td>6</td><td>Stop loss order type.</td></tr>
</table></td></tr>
<tr><td>timeInForce</td><td>TimeInForce</td><td>Enum</td><td>1</td><td>Indicates the order's time in force (e.g. GTC).<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>Day</td><td>1</td><td>A day order is valid until the end of the trading day.</td></tr>
<tr><td>GTC</td><td>2</td><td>A GTC order is good till canceled.</td></tr>
<tr><td>IOC</td><td>3</td><td>An Immediate or Cancel order must be filled immediately or canceled.</td></tr>
<tr><td>FOK</td><td>4</td><td>A Fill or Kill order must be filled or canceled.</td></tr>
<tr><td>VFA</td><td>5</td><td>A market or limit-price order to be executed at the opening of the stock or not at all; all or part of any order not executed at the opening is treated as canceled.</td></tr>
<tr><td>GTD</td><td>6</td><td>A Good Till Date order must be filled before timestamp provided in `Expire` field or canceled.</td></tr>
<tr><td>VFC</td><td>7</td><td>Indicated price is to be around the closing price, however, not held to the closing price.</td></tr>
<tr><td>GTT</td><td>8</td><td>A Good Till Time order must be filled before timestamp provided in `Expire` field or canceled within the day of submission.</td></tr>
</table></td></tr>
<tr><td>side</td><td>OrderSide</td><td>Enum</td><td>1</td><td>Indicates the order's side (buy or sell).<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>Buy</td><td>1</td><td>Indicates a buy-side order.</td></tr>
<tr><td>Sell</td><td>2</td><td>Indicates a sell-side order.</td></tr>
</table></td></tr>
<tr><td>price</td><td>Price</td><td>Alias (Number)</td><td>8</td><td>Indicates the price of the order.</td></tr>
<tr><td>triggerPrice</td><td>Price</td><td>Alias (Number)</td><td>8</td><td>Indicates the trigger price (Last Trade Price - LTP) after which the order should be added to the order book.</td></tr>
<tr><td>quantity</td><td>Quantity</td><td>Alias (u64)</td><td>8</td><td>Indicates the quantity of the instrument included in the order.</td></tr>
<tr><td>displayQty</td><td>Quantity</td><td>Alias (u64)</td><td>8</td><td>Used only for iceberg order. The quantity to be displayed.</td></tr>
<tr><td>capacity</td><td>Capacity</td><td>Enum</td><td>1</td><td>Capacity of the party making the order (either principal or agency).<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>Agency</td><td>1</td><td>Agency (mapped to AOTC).</td></tr>
<tr><td>Principal</td><td>2</td><td>Principal (mapped to DEAL).</td></tr>
<tr><td>RisklessPrincipal</td><td>3</td><td>Riskless Principal (mapped to MTCH)</td></tr>
</table></td></tr>
<tr><td>account</td><td>Account</td><td>Array (AnsiChar)</td><td>16</td><td>Account number.</td></tr>
<tr><td>accountType</td><td>AccountType</td><td>Enum</td><td>1</td><td>Type of account associated with the order.<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>Missing</td><td>1</td><td>Account is missing. Account is expected to be filled with 0x00.</td></tr>
<tr><td>Customer</td><td>2</td><td>Account is carried on customer side of the books.</td></tr>
<tr><td>House</td><td>3</td><td>House trader.</td></tr>
</table></td></tr>
<tr><td>mifidFields.flags</td><td>MifidFlags</td><td>Enum</td><td>1</td><td>Flags raised on an order in compliance with the MiFID directive.</td></tr>
</table>

<table>
<tr><th>Name</th><th>Type</th><th>Kind</th><th>Length</th><th>Description</th></tr>
<tr><td></td><td></td><td></td><td></td><td><table><tr><th>Name</th><th>Value</th><th>Description</th></tr><tr><td>None</td><td>0b0000</td><td></td></tr><tr><td>LiquidityProvisionActivity</td><td>0b0001</td><td></td></tr><tr><td>DirectOrSponsoredAccess</td><td>0b0010</td><td></td></tr><tr><td>AlgorithmicTrade</td><td>0b0100</td><td></td></tr><tr><td>MarketMakerOrSpecialist</td><td>0b1000</td><td></td></tr></table></td></tr>
<tr><td>mifidFields.client.shortCode</td><td>ShortCode</td><td>Alias (u32)</td><td>4</td><td>Short code of MiFID participant.</td></tr>
<tr><td>mifidFields.client.qualifier</td><td>PartyRoleQualifier</td><td>Enum</td><td>1</td><td>Qualifier of MiFID participant.<table><tr><th>Name</th><th>Value</th><th>Description</th></tr><tr><td>NA</td><td>1</td><td></td></tr><tr><td>Algorithm</td><td>2</td><td></td></tr><tr><td>FirmOrLegalEntity</td><td>3</td><td></td></tr><tr><td>NaturalPerson</td><td>4</td><td></td></tr></table></td></tr>
<tr><td>mifidFields.executingTrader.shortCode</td><td>ShortCode</td><td>Alias (u32)</td><td>4</td><td>Short code of MiFID participant.</td></tr>
<tr><td>mifidFields.executingTrader.qualifier</td><td>PartyRoleQualifier</td><td>Enum</td><td>1</td><td>Qualifier of MiFID participant.<table><tr><th>Name</th><th>Value</th><th>Description</th></tr><tr><td>NA</td><td>1</td><td></td></tr><tr><td>Algorithm</td><td>2</td><td></td></tr><tr><td>FirmOrLegalEntity</td><td>3</td><td></td></tr><tr><td>NaturalPerson</td><td>4</td><td></td></tr></table></td></tr>
<tr><td>mifidFields.investmentDecisionMaker.shortCode</td><td>ShortCode</td><td>Alias (u32)</td><td>4</td><td>Short code of MiFID participant.</td></tr>
<tr><td>mifidFields.investmentDecisionMaker.qualifier</td><td>PartyRoleQualifier</td><td>Enum</td><td>1</td><td>Qualifier of MiFID participant.<table><tr><th>Name</th><th>Value</th><th>Description</th></tr><tr><td>NA</td><td>1</td><td></td></tr><tr><td>Algorithm</td><td>2</td><td></td></tr><tr><td>FirmOrLegalEntity</td><td>3</td><td></td></tr><tr><td>NaturalPerson</td><td>4</td><td></td></tr></table></td></tr>
<tr><td>expire</td><td>Timestamp</td><td>Alias (u64)</td><td>8</td><td>Expiration time indicating the validity of the order - relevant only when TimeInForce is set to GTD (Good Till Date) or GTT (Good Till Time).</td></tr>
<tr><td>memo</td><td>Memo</td><td>Array (AnsiChar)</td><td>18</td><td>Free text.</td></tr>
<tr><td>clearingMemberCode</td><td>ClearingCode</td><td>Array (AnsiChar)</td><td>20</td><td>Clearing member code.</td></tr>
<tr><td>clearingMemberClearingIdentifier</td><td>ClearingIdentifier</td><td>Enum</td><td>1</td><td>Clearing member's clearing identifier.<table><tr><th>Name</th><th>Value</th><th>Description</th></tr><tr><td>NotApplicable</td><td>33</td><td>Not Applicable.</td></tr><tr><td>Lei</td><td>78</td><td>Legal Entity Identifier.</td></tr><tr><td>Bic</td><td>66</td><td>Business Identifier Code.</td></tr><tr><td>Custom</td><td>68</td><td>Custom clearing identifier.</td></tr></table></td></tr>
</table>

7.1.11. ORDERADDRESPONSE:

<table>
<tr><th>Name</th><th>Type</th><th>Kind</th><th>Length</th><th>Description</th></tr>
<tr><td>header</td><td>Header</td><td>Struct</td><td>16</td><td>Header.</td></tr>
<tr><td>orderId</td><td>OrderId</td><td>Alias (u64)</td><td>8</td><td>Unique for each trading day order identifier based on the sequence number of order message, bulk sequence number, session ID and connection ID.</td></tr>
<tr><td>publicOrderId</td><td>PublicOrderId</td><td>Alias (u64)</td><td>8</td><td>Unique for single trading day order identifier assigned by the trading system and shared publicly in market data (public information).</td></tr>
<tr><td>status</td><td>OrderStatus</td><td>Enum</td><td>1</td><td>Status of the given order.
<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>Ack</td><td>1</td><td>Order acknowledged by system.</td></tr>
<tr><td>Cancelled</td><td>2</td><td>Order canceled.</td></tr>
<tr><td>Rejected</td><td>3</td><td>Order rejected.</td></tr>
<tr><td>Filled</td><td>4</td><td>Order filled.</td></tr>
<tr><td>Modified</td><td>5</td><td>Order modified.</td></tr>
</table></td></tr>
<tr><td>reason</td><td>OrderRejectionReason</td><td>Enum</td><td>2</td><td>Reason for rejecting the given order.
<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>NA</td><td>1</td><td>Not applicable.</td></tr>
<tr><td>ExchangeClosed</td><td>2</td><td>Exchange closed.</td></tr>
<tr><td>InvalidPriceIncrement</td><td>18</td><td>Invalid price increment.</td></tr>
<tr><td>Other</td><td>99</td><td>Other.</td></tr>
<tr><td>UnknownInstrumentId</td><td>100</td><td>Unknown instrument.</td></tr>
<tr><td>InstrumentPhaseNoTrading</td><td>106</td><td>Trading is not available for the instrument in its current phase.</td></tr>
<tr><td>UnknownOrder</td><td>1001</td><td>The order id is unrecognized.</td></tr>
<tr><td>InvalidExecutionTrader</td><td>1005</td><td>Invalid execution trader.</td></tr>
<tr><td>InvalidDecisionMaker</td><td>1006</td><td>Invalid decision maker.</td></tr>
<tr><td>InvalidClientId</td><td>1007</td><td>Invalid client.</td></tr>
<tr><td>InvalidPartyRoleQualifierForClientId</td><td>1008</td><td>Invalid Party Role Qualifier for Client Id Party group</td></tr>
<tr><td>InvalidPartyRoleQualifierForExecutingTrader</td><td>1009</td><td>Invalid Party Role Qualifier for Executing Trader Party group</td></tr>
<tr><td>InvalidPartyRoleQualifierForInvestmentDecisionMaker</td><td>1010</td><td>Invalid Party Role Qualifier for Investment Decision Maker Party group</td></tr>
<tr><td>WrongDisplayQtyValue</td><td>1013</td><td>The display quantity (displayQty) cannot exceed the order quantity.</td></tr>
<tr><td>InvalidDisplayQty</td><td>1014</td><td>The Display quantity (displayQty) not allowed for specified order type - only for Iceberg.</td></tr>
<tr><td>WrongIcebergOrderValue</td><td>1015</td><td>The value of the iceberg order is less than the required.</td></tr>
<tr><td>OrderQuantityMustBeGreaterThanMinimumQuantity</td><td>1025</td><td>The order quantity must be greater than the minimum quanity.</td></tr>
<tr><td>OrderQuantityMustBeLowerThanMaximumQuantity</td><td>1026</td><td>The order quantity must be lower than the maximum quantity.</td></tr>
</table></td></tr>
</table>

Name	Type	Kind	Length	Description		
				OrderPriceMustBeGreaterThanMinimumPrice	1027	The order price must be greater than minimum price.
				OrderPriceMustBeLowerThanMaximumPrice	1028	The order price must be greater than maximum price.
				OrderPriceMustBeNonzero	1029	The order price must be non-zero.
				OrderValueMustBeGreaterThanMinimumValue	1030	The order value must be greater than minimum value.
				OrderValueMustBeLowerThanMaximumValue	1031	The order value must be lower than maximum value.
				MarketOrderNotAllowedInAuction	1032	Market orders are not permitted during the auction.
				LeavesQuantityMustBeGreaterThanZeroAfterModification	1034	The remaining quantity (LeavesQty) must be greater than 0 after the modification.
				PriceNotAllowed	1035	The price is not allowed for a market order. In the binary protocol, the price field should have a value of 0.
				InvalidMarketOrderTimeInForce	1039	A market order can only have a TimeInForce value of 3 (IOC - Immediate or Cancel) or 4 (FOK - Fill or Kill).
				InvalidAuctionTimeInForce	1040	The TimeInForce value of 3 (IOC - Immediate or Cancel) or 4 (FOK - Fill or Kill) is not allowed during the auction.
				InvalidIcebergAndStopOrderTimeInForce	1041	Iceberg and Stop orders can only have a TimeInForce value of DAY, GTC (Good Till Cancel), GTD (Good Till Date), or GTT (Good Till Time).
				ExpireDateInPast	1045	The expiration date is earlier than the current date.
				ExpireTimeInPast	1047	The expiration time is earlier than the current time.
				AmbigousExpire	1048	Please provide either a time or a date, but not both.
				ExpireDateExceedsLimit	1049	The expiration date exceeds the allowed limit.
				PriceBelowLowCollar	1037	The validation for collars has failed. The price is too low.
				PriceAboveHighCollar	1038	The validation for collars has failed. The price is too high.
				TriggerPriceNotAllowed	1063	The trigger price not allowed for a specified order type.
				TriggerPriceNotHigherThanLTP	1064	The trigger price is not higher than the last trade price.
				TriggerPriceNotLowerThanLTP	1065	The trigger price is not lower than the last trade price.

<table>
<tr><th>Name</th><th>Type</th><th>Kind</th><th>Length</th><th>Description</th></tr>
<tr><td></td><td></td><td></td><td></td><td>
<table>
<tr><td>TriggerPriceLowerThanPrice</td><td>1066</td><td>The trigger price is lower than the limit price.</td></tr>
<tr><td>TriggerPriceHigherThanPrice</td><td>1067</td><td>The trigger price is higher than the limit price.</td></tr>
<tr><td>TriggerPriceModifiedForActivatedOrder</td><td>1068</td><td>The trigger price has been modified for the activated order.</td></tr>
<tr><td>InvalidPartyIdForClientId</td><td>1070</td><td>Invalid PartyID (448) for Client ID</td></tr>
<tr><td>InvalidPartyIdForExecutingTrader</td><td>1071</td><td>Invalid PartyID (448) for Executing Trader</td></tr>
<tr><td>InvalidPartyIdForInvestmentDecisionMaker</td><td>1072</td><td>Invalid PartyID (448) for Investment Decision Maker</td></tr>
<tr><td>InvalidPartyRoleQualifierForPartyId</td><td>1075</td><td>Invalid PartyRoleQualifier (2376) for PartyID (448)</td></tr>
<tr><td>InvalidBidAskSpread</td><td>1208</td><td>OfferPx (133) must be greater than BidPx (132).</td></tr>
<tr><td>RequestNotAllowedForBlockInstrument</td><td>2026</td><td>Request not allowed for BLOCK instrument</td></tr>
<tr><td>RequestNotAllowedForCrossInstrument</td><td>2028</td><td>Request not allowed for CROSS instrument</td></tr>
<tr><td>RiskLimitNotDefined</td><td>7000</td><td>The risk limit has not been defined.</td></tr>
<tr><td>RiskMaximumOrderVolumeExceeded</td><td>7001</td><td>The maximum order volume for the risk limit has been exceeded.</td></tr>
<tr><td>RiskMaximumOrderValueExceeded</td><td>7002</td><td>The maximum order value for the risk limit has been exceeded.</td></tr>
<tr><td>RiskOrderPriceCollarExceeded</td><td>7003</td><td>The order price has exceeded the risk limit.</td></tr>
</table>
</td></tr>
<tr><td>source</td><td>OrderSource</td><td>Enum</td><td>1</td><td>Response message sources can include trading ports, order cancellation mechanisms, and more.
<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>Submitted</td><td>1</td><td>Order message coming from the trading port.</td></tr>
<tr><td>Cod</td><td>2</td><td>Order cancelled by the canceller on client disconnect.</td></tr>
<tr><td>Expired</td><td>3</td><td>Order cancelled by the canceller due to expiration.</td></tr>
<tr><td>StopOrder</td><td>4</td><td>Order message coming from the stop order subsystem, after the stop order got triggered.</td></tr>
<tr><td>Suspended</td><td>5</td><td>Order cancelled by canceller due to instrument suspension.</td></tr>
<tr><td>Reinstated</td><td>6</td><td>Order reinstated</td></tr>
<tr><td>IcebergRefill</td><td>7</td><td>Iceberg order refill</td></tr>
<tr><td>OrderBookRebuild</td><td>8</td><td>Order book rebuild after auction</td></tr>
<tr><td>Activated</td><td>9</td><td>VFA/C order got activated, from now on it will take part in matching</td></tr>
<tr><td>Stp</td><td>10</td><td>Order cancelled due to self-trade prevention</td></tr>
<tr><td>CorporateAction</td><td>11</td><td>Order cancelled due to submitted Corporate Action.</td></tr>
</table>
</td></tr>
</table>

7.1.12. ORDERCANCEL:

Name	Type	Kind	Length	Description
header	Header	Struct	16	Header.
orderId	OrderId	Alias (u64)	8	Unique for each trading day order identifier based on the sequence number of order message, bulk sequence number, session ID and connection ID.

7.1.13. ORDERCANCELRESPONSE:

Name	Type	Kind	Length	Description
header	Header	Struct	16	Header.
orderId	OrderId	Alias (u64)	8	Unique for each trading day order identifier based on the sequence number of order message, bulk sequence number, session ID and connection ID.
reason	OrderRejectionReason	Enum	2	Reason for rejecting the given order.

Name	Value	Description
NA	1	Not applicable.
ExchangeClosed	2	Exchange closed.
InvalidPriceIncrement	18	Invalid price increment.
Other	99	Other.
UnknownInstrumentId	100	Unknown instrument.
InstrumentPhaseNoTrading	106	Trading is not available for the instrument in its current phase.
UnknownOrder	1001	The order id is unrecognized.
InvalidExecutionTrader	1005	Invalid execution trader.
InvalidDecisionMaker	1006	Invalid decision maker.
InvalidClientId	1007	Invalid client.
InvalidPartyRoleQualifierForClientId	1008	Invalid Party Role Qualifier for Client Id Party group
InvalidPartyRoleQualifierForExecutingTrader	1009	Invalid Party Role Qualifier for Executing Trader Party group
InvalidPartyRoleQualifierForInvestmentDecisionMaker	1010	Invalid Party Role Qualifier for Investment Decision Maker Party group
WrongDisplayQtyValue	1013	The display quantity (displayQty) cannot exceed the order quantity.
InvalidDisplayQty	1014	The Display quantity (displayQty) not allowed for specified order type - only for Iceberg.
WrongIcebergOrderValue	1015	The value of the iceberg order is less than the required.
OrderQuantityMustBeGreaterThanMinimumQuantity	1025	The order quantity must be greater than the minimum quanity.
OrderQuantityMustBeLowerThanMaximumQuantity	1026	The order quantity must be lower than the maximum quantity.
OrderPriceMustBeGreaterThanMinimumPrice	1027	The order price must be greater than minimum price.
OrderPriceMustBeLowerThanMaximumPrice	1028	The order price must be greater than maximum price.
OrderPriceMustBeNonzero	1029	The order price must be non-zero.
OrderValueMustBeGreaterThanMinimumValue	1030	The order value must be greater than minimum value.
OrderValueMustBeLowerThanMaximumValue	1031	The order value must be lower than maximum value.
MarketOrderNotAllowedInAuction	1032	Market orders are not permitted during the auction.
LeavesQuantityMustBeGreaterThanZeroAfterModification	1034	The remaining quantity (LeavesQty) must be greater than 0 after the modification.
PriceNotAllowed	1035	The price is not allowed for a market order. In the binary protocol, the price field should have a value of 0.
InvalidMarketOrderTimeInForce	1039	A market order can only have a TimeInForce value of 3 (IOC - Immediate or Cancel) or 4 (FOK - Fill or Kill).

Name	Type	Kind	Length	Description		
				InvalidAuctionTimeInForce	1040	The TimeInForce value of 3 (IOC - Immediate or Cancel) or 4 (FOK - Fill or Kill) is not allowed during the auction.
				InvalidIcebergAndStopOrderTimeInForce	1041	Iceberg and Stop orders can only have a TimeInForce value of DAY, GTC (Good Till Cancel), GTD (Good Till Date), or GTT (Good Till Time).
				ExpireDateInPast	1045	The expiration date is earlier than the current date.
				ExpireTimeInPast	1047	The expiration time is earlier than the current time.
				AmbigousExpire	1048	Please provide either a time or a date, but not both.
				ExpireDateExceedsLimit	1049	The expiration date exceeds the allowed limit.
				PriceBelowLowCollar	1037	The validation for collars has failed. The price is too low.
				PriceAboveHighCollar	1038	The validation for collars has failed. The price is too high.
				TriggerPriceNotAllowed	1063	The trigger price not allowed for a specified order type.
				TriggerPriceNotHigherThanLTP	1064	The trigger price is not higher than the last trade price.
				TriggerPriceNotLowerThanLTP	1065	The trigger price is not lower than the last trade price.
				TriggerPriceLowerThanPrice	1066	The trigger price is lower than the limit price.
				TriggerPriceHigherThanPrice	1067	The trigger price is higher than the limit price.
				TriggerPriceModifiedForActivatedOrder	1068	The trigger price has been modified for the activated order.
				InvalidPartyIdForClientId	1070	Invalid PartyID (448) for Client ID
				InvalidPartyIdForExecutingTrader	1071	Invalid PartyID (448) for Executing Trader
				InvalidPartyIdForInvestmentDecisionMaker	1072	Invalid PartyID (448) for Investment Decision Maker
				InvalidPartyRoleQualifierForPartyId	1075	Invalid PartyRoleQualifier (2376) for PartyID (448)
				InvalidBidAskSpread	1208	OfferPx (133) must be greater than BidPx (132).
				RequestNotAllowedForBlockInstrument	2026	Request not allowed for BLOCK instrument
				RequestNotAllowedForCrossInstrument	2028	Request not allowed for CROSS instrument
				RiskLimitNotDefined	7000	The risk limit has not been defined.
				RiskMaximumOrderVolumeExceeded	7001	The maximum order volume for the risk limit has been exceeded.
				RiskMaximumOrderValueExceeded	7002	The maximum order value for the risk limit has been exceeded.
				RiskOrderPriceCollarExceeded	7003	The order price has exceeded the risk limit.

Name	Type	Kind	Length	Description
source	OrderSource	Enum	1	Response message sources can include trading ports, order cancellation mechanisms, and more. <table><tr><th>Name</th><th>Value</th><th>Description</th></tr><tr><td>**Submitted**</td><td>1</td><td>Order message coming from the trading port.</td></tr><tr><td>**Cod**</td><td>2</td><td>Order cancelled by the canceller on client disconnect.</td></tr><tr><td>**Expired**</td><td>3</td><td>Order cancelled by the canceller due to expiration.</td></tr><tr><td>**StopOrder**</td><td>4</td><td>Order message coming from the stop order subsystem, after the stop order got triggered.</td></tr><tr><td>**Suspended**</td><td>5</td><td>Order cancelled by canceller due to instrument suspension.</td></tr><tr><td>**Reinstated**</td><td>6</td><td>Order reinstated</td></tr><tr><td>**IcebergRefill**</td><td>7</td><td>Iceberg order refill</td></tr><tr><td>**OrderBookRebuild**</td><td>8</td><td>Order book rebuild after auction</td></tr><tr><td>**Activated**</td><td>9</td><td>VFA/C order got activated, from now on it will take part in matching</td></tr><tr><td>**Stp**</td><td>10</td><td>Order cancelled due to self-trade prevention</td></tr><tr><td>**CorporateAction**</td><td>11</td><td>Order cancelled due to submitted Corporate Action.</td></tr></table>

7.1.14. ORDERMODIFY:

Name	Type	Kind	Length	Description
header	Header	Struct	16	Header.
orderId	OrderId	Alias (u64)	8	Unique for each trading day order identifier based on the sequence number of order message, bulk sequence number, session ID and connection ID.
price	Price	Alias (Number)	8	Indicates the price of the given order.
triggerPrice	Price	Alias (Number)	8	Indicates the trigger price (Last Trade Price - LTP) after which the order should be added to the order book.
quantity	Quantity	Alias (u64)	8	Indicates the quantity of the instrument included in the order.
displayQty	Quantity	Alias (u64)	8	Used only for iceberg order. The quantity to be displayed.

7.1.15. ORDERMODIFYRESPONSE:

Name	Type	Kind	Length	Description
header	Header	Struct	16	Header.
orderId	OrderId	Alias (u64)	8	Unique for each trading day order identifier based on the sequence number of order message, bulk sequence number, session ID and connection ID.
status	OrderStatus	Enum	1	Status of the given order. <table><tr><th>Name</th><th>Value</th><th>Description</th></tr><tr><td>**Ack**</td><td>1</td><td>Order acknowledged by system.</td></tr><tr><td>**Cancelled**</td><td>2</td><td>Order canceled.</td></tr><tr><td>**Rejected**</td><td>3</td><td>Order rejected.</td></tr><tr><td>**Filled**</td><td>4</td><td>Order filled.</td></tr><tr><td>**Modified**</td><td>5</td><td>Order modified.</td></tr></table>
priorityFlag	PriorityFlag	Enum	1	Indicates whether the priority flag is lost or retained after modification. <table><tr><th>Name</th><th>Value</th><th>Description</th></tr></table>

<table>
<tr><th>Name</th><th>Type</th><th>Kind</th><th>Length</th><th>Description</th></tr>
<tr><td></td><td></td><td></td><td></td><td>
<table>
<tr><td>Lost</td><td>1</td><td>The priority flag was lost.</td></tr>
<tr><td>Retained</td><td>2</td><td>The priority flag was retained.</td></tr>
</table>
</td></tr>
<tr><td>reason</td><td>OrderRejectionReason</td><td>Enum</td><td>2</td><td>Reason for rejecting the given order.
<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>NA</td><td>1</td><td>Not applicable.</td></tr>
<tr><td>ExchangeClosed</td><td>2</td><td>Exchange closed.</td></tr>
<tr><td>InvalidPriceIncrement</td><td>18</td><td>Invalid price increment.</td></tr>
<tr><td>Other</td><td>99</td><td>Other.</td></tr>
<tr><td>UnknownInstrumentId</td><td>100</td><td>Unknown instrument.</td></tr>
<tr><td>InstrumentPhaseNoTrading</td><td>106</td><td>Trading is not available for the instrument in its current phase.</td></tr>
<tr><td>UnknownOrder</td><td>1001</td><td>The order id is unrecognized.</td></tr>
<tr><td>InvalidExecutionTrader</td><td>1005</td><td>Invalid execution trader.</td></tr>
<tr><td>InvalidDecisionMaker</td><td>1006</td><td>Invalid decision maker.</td></tr>
<tr><td>InvalidClientId</td><td>1007</td><td>Invalid client.</td></tr>
<tr><td>InvalidPartyRoleQualifierForClientId</td><td>1008</td><td>Invalid Party Role Qualifier for Client Id Party group</td></tr>
<tr><td>InvalidPartyRoleQualifierForExecutingTrader</td><td>1009</td><td>Invalid Party Role Qualifier for Executing Trader Party group</td></tr>
<tr><td>InvalidPartyRoleQualifierForInvestmentDecisionMaker</td><td>1010</td><td>Invalid Party Role Qualifier for Investment Decision Maker Party group</td></tr>
<tr><td>WrongDisplayQtyValue</td><td>1013</td><td>The display quantity (displayQty) cannot exceed the order quantity.</td></tr>
<tr><td>InvalidDisplayQty</td><td>1014</td><td>The Display quantity (displayQty) not allowed for specified order type - only for Iceberg.</td></tr>
<tr><td>WrongIcebergOrderValue</td><td>1015</td><td>The value of the iceberg order is less than the required.</td></tr>
<tr><td>OrderQuantityMustBeGreaterThanMinimumQuantity</td><td>1025</td><td>The order quantity must be greater than the minimum quanity.</td></tr>
<tr><td>OrderQuantityMustBeLowerThanMaximumQuantity</td><td>1026</td><td>The order quantity must be lower than the maximum quantity.</td></tr>
<tr><td>OrderPriceMustBeGreaterThanMinimumPrice</td><td>1027</td><td>The order price must be greater than minimum price.</td></tr>
<tr><td>OrderPriceMustBeLowerThanMaximumPrice</td><td>1028</td><td>The order price must be greater than maximum price.</td></tr>
<tr><td>OrderPriceMustBeNonzero</td><td>1029</td><td>The order price must be non-zero.</td></tr>
<tr><td>OrderValueMustBeGreaterThanMinimumValue</td><td>1030</td><td>The order value must be greater than minimum value.</td></tr>
<tr><td>OrderValueMustBeLowerThanMaximumValue</td><td>1031</td><td>The order value must be lower than maximum value.</td></tr>
<tr><td>MarketOrderNotAllowedInAuction</td><td>1032</td><td>Market orders are not permitted during the auction.</td></tr>
<tr><td>LeavesQuantityMustBeGreaterThanZeroAfterModification</td><td>1034</td><td>The remaining quantity (LeavesQty) must be greater than 0 after the modification.</td></tr>
<tr><td>PriceNotAllowed</td><td>1035</td><td>The price is not allowed for a market order. In the binary protocol, the price field should have a value of 0.</td></tr>
</table>
</td></tr>
</table>

Name	Type	Kind	Length	Description		
				InvalidMarketOrderTimeInForce	1039	A market order can only have a TimeInForce value of 3 (IOC - Immediate or Cancel) or 4 (FOK - Fill or Kill).
				InvalidAuctionTimeInForce	1040	The TimeInForce value of 3 (IOC - Immediate or Cancel) or 4 (FOK - Fill or Kill) is not allowed during the auction.
				InvalidIcebergAndStopOrderTimeInForce	1041	Iceberg and Stop orders can only have a TimeInForce value of DAY, GTC (Good Till Cancel), GTD (Good Till Date), or GTT (Good Till Time).
				ExpireDateInPast	1045	The expiration date is earlier than the current date.
				ExpireTimeInPast	1047	The expiration time is earlier than the current time.
				AmbigousExpire	1048	Please provide either a time or a date, but not both.
				ExpireDateExceedsLimit	1049	The expiration date exceeds the allowed limit.
				PriceBelowLowCollar	1037	The validation for collars has failed. The price is too low.
				PriceAboveHighCollar	1038	The validation for collars has failed. The price is too high.
				TriggerPriceNotAllowed	1063	The trigger price not allowed for a specified order type.
				TriggerPriceNotHigherThanLTP	1064	The trigger price is not higher than the last trade price.
				TriggerPriceNotLowerThanLTP	1065	The trigger price is not lower than the last trade price.
				TriggerPriceLowerThanPrice	1066	The trigger price is lower than the limit price.
				TriggerPriceHigherThanPrice	1067	The trigger price is higher than the limit price.
				TriggerPriceModifiedForActivatedOrder	1068	The trigger price has been modified for the activated order.
				InvalidPartyIdForClientId	1070	Invalid PartyID (448) for Client ID
				InvalidPartyIdForExecutingTrader	1071	Invalid PartyID (448) for Executing Trader
				InvalidPartyIdForInvestmentDecisionMaker	1072	Invalid PartyID (448) for Investment Decision Maker
				InvalidPartyRoleQualifierForPartyId	1075	Invalid PartyRoleQualifier (2376) for PartyID (448)
				InvalidBidAskSpread	1208	OfferPx (133) must be greater than BidPx (132).
				RequestNotAllowedForBlockInstrument	2026	Request not allowed for BLOCK instrument
				RequestNotAllowedForCrossInstrument	2028	Request not allowed for CROSS instrument
				RiskLimitNotDefined	7000	The risk limit has not been defined.
				RiskMaximumOrderVolumeExceeded	7001	The maximum order volume for the risk limit has been exceeded.
				RiskMaximumOrderValueExceeded	7002	The maximum order value for the risk limit has been exceeded.
				RiskOrderPriceCollarExceeded	7003	The order price has exceeded the risk limit.

7.1.16. REJECT:

<table>
<tr><th>Name</th><th>Type</th><th>Kind</th><th>Length</th><th>Description</th></tr>
<tr><td>header</td><td>Header</td><td>Struct</td><td>16</td><td>Header.</td></tr>
<tr><td>refSeqNum</td><td>SeqNum</td><td>Alias (u32)</td><td>4</td><td>Sequence number of the rejected message.</td></tr>
<tr><td>rejectReason</td><td>RejectReason</td><td>Enum</td><td>1</td><td>Reject reason.
<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>NA</td><td>0</td><td>Not applicable</td></tr>
<tr><td>MaxThroughputExceeded</td><td>1</td><td>Max throughput exceeded.</td></tr>
<tr><td>InvalidMsgType</td><td>2</td><td>Invalid message type.</td></tr>
<tr><td>InvalidExpireTimePrecision</td><td>3</td><td>Invalid expire time precision.</td></tr>
<tr><td>InvalidSettlementDate</td><td>4</td><td>Invalid settlement date.</td></tr>
<tr><td>SettlementDateRequired</td><td>5</td><td>Settlement date required.</td></tr>
<tr><td>TradeReportIdRequired</td><td>6</td><td>Trade report ID required.</td></tr>
<tr><td>MissingReportIdSecondaryTradeReportIdOrTradeReportRefId</td><td>7</td><td>Missing report id (SecondaryTradeReportId or TradeReportRefId).</td></tr>
</table></td></tr>
</table>

7.1.17. RISKLIMITBREACH:

<table>
<tr><th>Name</th><th>Type</th><th>Kind</th><th>Length</th><th>Description</th></tr>
<tr><td>header</td><td>Header</td><td>Struct</td><td>16</td><td>Header.</td></tr>
<tr><td>id</td><td>RiskDefinitionId</td><td>Alias (u64)</td><td>8</td><td>Risk limit definition id.</td></tr>
<tr><td>amount</td><td>RiskLimitAmount</td><td>Alias (u64)</td><td>8</td><td>Amount of the overrun.</td></tr>
<tr><td>riskLimitRequestType</td><td>RiskLimitRequestType</td><td>Enum</td><td>1</td><td>Type of risk limit information.
<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>Definitions</td><td>1</td><td>Definitions.</td></tr>
<tr><td>Utilization</td><td>2</td><td>Utilization.</td></tr>
<tr><td>DefinitionsAndUtilizations</td><td>3</td><td>Definitions and utilization.</td></tr>
</table></td></tr>
<tr><td>unsolicitedIndicator</td><td>bool</td><td>Primitive</td><td>1</td><td>Indicates whether or not message is being sent as a result of a subscription request or not.</td></tr>
</table>

<table>
<tr><th>Name</th><th>Type</th><th>Kind</th><th>Length</th><th>Description</th></tr>
<tr><td>limitType</td><td>RiskLimitType</td><td>Enum</td><td>1</td><td>Risk limit definition limit type.
<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>PerBuyOrderVolume</td><td>301</td><td>Per buy order volume.</td></tr>
<tr><td>PerBuyOrderNotionalValue</td><td>302</td><td>Per buy order notional value.</td></tr>
<tr><td>PerSellOrderVolume</td><td>311</td><td>Per sell order volume.</td></tr>
<tr><td>PerSellOrderNotionalValue</td><td>312</td><td>Per sell order notional value.</td></tr>
<tr><td>PerBuyPriceLimit</td><td>313</td><td>Per buy price limit.</td></tr>
<tr><td>PerSellPriceLimit</td><td>314</td><td>Per Sell Price Limit.</td></tr>
<tr><td>PerTotalBuyTradedValue</td><td>315</td><td>Per total buy traded value.</td></tr>
<tr><td>PerTotalSellTradedValue</td><td>316</td><td>Per total sell traded value.</td></tr>
<tr><td>PerTotalTradedValue</td><td>317</td><td>Per total traded value.</td></tr>
<tr><td>PerTotalBuyOpenOrdersValue</td><td>318</td><td>Per total buy open orders value.</td></tr>
<tr><td>PerTotalSellOpenOrdersValue</td><td>319</td><td>Per total sell open orders value.</td></tr>
<tr><td>PerTotalOpenOrdersValue</td><td>320</td><td>Per total open orders value.</td></tr>
<tr><td>PerTotalBuyRiskValue</td><td>321</td><td>Per total buy risk value.</td></tr>
<tr><td>PerTotalSellRiskValue</td><td>322</td><td>Per total sell risk value.</td></tr>
<tr><td>PerTotalRiskValue</td><td>323</td><td>Per total risk value.</td></tr>
<tr><td>PerTotalNetRiskValue</td><td>324</td><td>Per total net risk value.</td></tr>
<tr><td>PerTotalDailyNumberOfOrders</td><td>325</td><td>Per total daily number Of orders.</td></tr>
<tr><td>RiskLimitNotDefined</td><td>326</td><td>Required risk limits are missing.</td></tr>
</table></td></tr>
<tr><td>riskWarningLevelAction</td><td>RiskWarningLevelAction</td><td>Enum</td><td>1</td><td>Action that was take because warning level was exceeded.
<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>Reject</td><td>3</td><td>Reject.</td></tr>
</table></td></tr>
<tr><td>riskLimitUtilizationAmount</td><td>RiskLimitAmount</td><td>Alias (u64)</td><td>8</td><td>Absolute amount of utilization of a party's set risk limit.</td></tr>
<tr><td>riskLimitUtilizationPercent</td><td>Percentage</td><td>Alias (i64)</td><td>8</td><td>Percentage of utilization of a party's set risk limit.</td></tr>
</table>

7.1.18. TRADE:

Name	Type	Kind	Length	Description
header	Header	Struct	16	Header.
orderId	OrderId	Alias (u64)	8	Unique for each trading day order identifier based on the sequence number of order message, bulk sequence number, session ID and connection ID.
id	TradeId	Alias (u32)	4	ID of the trade.
price	Price	Alias (Number)	8	Price of the given trade.
quantity	Quantity	Alias (u64)	8	Quantity of the instrument involved in the given trade.
leavesQty	Quantity	Alias (u64)	8	How much of the given security is left on the market after the trade is concluded.

7.1.19. TRADEBUST:

Name	Type	Kind	Length	Description
header	Header	Struct	16	Header.
tradeId	TradeId	Alias (u32)	4	The unique ID assigned to the trade entity once it is received or matched by the exchange or central counterparty.

7.1.20. TRADECAPTUREREPORTDUAL:

<table>
<tr><th>Name</th><th>Type</th><th>Kind</th><th>Length</th><th>Description</th></tr>
<tr><td>header</td><td>Header</td><td>Struct</td><td>16</td><td>Header.</td></tr>
<tr><td>instrumentId</td><td>ElementId</td><td>Alias (u32)</td><td>4</td><td>ID of the instrument included in the order.</td></tr>
<tr><td>tradeReportId</td><td>TradeReportId</td><td>Array (AnsiChar)</td><td>20</td><td>Unique identifier of trade capture report.</td></tr>
<tr><td>tradeId</td><td>TradeId</td><td>Alias (u32)</td><td>4</td><td>The unique ID assigned to the trade entity once it is received or matched by the exchange or central counterparty.</td></tr>
<tr><td>tradeReportTransType</td><td>TradeReportTransType</td><td>Enum</td><td>1</td><td>Identifies Trade Report message transaction type.
<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>New</td><td>1</td><td>New.</td></tr>
<tr><td>Cancel</td><td>2</td><td>Cancel.</td></tr>
<tr><td>Replace</td><td>3</td><td>Replace.</td></tr>
</table></td></tr>
<tr><td>tradeReportType</td><td>TradeReportType</td><td>Enum</td><td>1</td><td>Type of Trade Report.
<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>Submit</td><td>1</td><td>Submit</td></tr>
<tr><td>Alleged</td><td>2</td><td>Alleged</td></tr>
<tr><td>Accept</td><td>3</td><td>Accept</td></tr>
<tr><td>Decline</td><td>4</td><td>Decline</td></tr>
<tr><td>TradeReportCancel</td><td>7</td><td>Trade Report Cancel</td></tr>
</table></td></tr>
<tr><td>tradeType</td><td>TradeType</td><td>Enum</td><td>1</td><td>Type of trade.
<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>PrivatelyNegotiatedTrade</td><td>22</td><td>Privately negotiated trade.</td></tr>
<tr><td>BlockTrade</td><td>38</td><td>Block trade.</td></tr>
</table></td></tr>
<tr><td>algorithmicTradeIndicator</td><td>AlgorithmicTradeIndicator</td><td>Enum</td><td>1</td><td>Indicates algorithmic trade.
<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>NA</td><td>1</td><td>Not applicable.</td></tr>
<tr><td>NonAlgorithmicTrade</td><td>1</td><td>Non-algorithmic trade.</td></tr>
<tr><td>AlgorithmicTrade</td><td>2</td><td>Algorithmic trade.</td></tr>
</table></td></tr>
<tr><td>execType</td><td>ExecType</td><td>Enum</td><td>1</td><td>Type of execution being reported. Uses subset of ExecType for trade capture reports.
<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>New</td><td>1</td><td>New.</td></tr>
<tr><td>Rejected</td><td>8</td><td>Rejected.</td></tr>
<tr><td>Trade</td><td>15</td><td>Trade.</td></tr>
<tr><td>TradeCorrect</td><td>16</td><td>Trade Correct.</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>Name</th><th>Type</th><th>Kind</th><th>Length</th><th>Description</th></tr>
<tr><td></td><td></td><td></td><td></td><td><table><tr><td>TradeCancel</td><td>17</td><td>Trade Cancel.</td></tr></table></td></tr>
<tr><td>tradeReportRefId</td><td>TradeReportRefID</td><td>Array (AnsiChar)</td><td>20</td><td>Reference identifier used with Cancel and Replace transaction types. The TradeReportID that is being referenced for trade correction or cancelation.</td></tr>
<tr><td>lastQty</td><td>Quantity</td><td>Alias (u64)</td><td>8</td><td>Quantity (e.g. shares) bought/sold on this (last) fill.</td></tr>
<tr><td>lastPx</td><td>Price</td><td>Alias (Number)</td><td>8</td><td>Price of this (last) fill.</td></tr>
<tr><td>settlementDate</td><td>Date</td><td>Alias (u32)</td><td>4</td><td>Settlement date of the trade is equal to current date plus actual settlement offset calendar days.</td></tr>
<tr><td>matchStatus</td><td>MatchStatus</td><td>Enum</td><td>1</td><td>The status of this trade with respect to matching or comparison.<table><tr><th>Name</th><th>Value</th><th>Description</th></tr><tr><td>NA</td><td>0</td><td>Not applicable.</td></tr><tr><td>Matched</td><td>1</td><td>Compared, matched or affirmed.</td></tr><tr><td>Unmatched</td><td>2</td><td>Uncompared, unmatched, or unaffirmed.</td></tr></table></td></tr>
<tr><td>tcrPartyBuy.mifidFields.flags</td><td>MifidFlags</td><td>Enum</td><td>1</td><td>Flags raised on an order in compliance with the MiFID directive.<table><tr><th>Name</th><th>Value</th><th>Description</th></tr><tr><td>None</td><td>0b0000</td><td></td></tr><tr><td>LiquidityProvisionActivity</td><td>0b0001</td><td></td></tr><tr><td>DirectOrSponsoredAccess</td><td>0b0010</td><td></td></tr><tr><td>AlgorithmicTrade</td><td>0b0100</td><td></td></tr><tr><td>MarketMakerOrSpecialist</td><td>0b1000</td><td></td></tr></table></td></tr>
<tr><td>tcrPartyBuy.mifidFields.client.shortCode</td><td>ShortCode</td><td>Alias (u32)</td><td>4</td><td>Short code of MiFID participant.</td></tr>
<tr><td>tcrPartyBuy.mifidFields.client.qualifier</td><td>PartyRoleQualifier</td><td>Enum</td><td>1</td><td>Qualifier of MiFID participant.<table><tr><th>Name</th><th>Value</th><th>Description</th></tr><tr><td>NA</td><td>1</td><td></td></tr><tr><td>Algorithm</td><td>2</td><td></td></tr><tr><td>FirmOrLegalEntity</td><td>3</td><td></td></tr><tr><td>NaturalPerson</td><td>4</td><td></td></tr></table></td></tr>
<tr><td>tcrPartyBuy.mifidFields.executingTrader.shortCode</td><td>ShortCode</td><td>Alias (u32)</td><td>4</td><td>Short code of MiFID participant.</td></tr>
<tr><td>tcrPartyBuy.mifidFields.executingTrader.qualifier</td><td>PartyRoleQualifier</td><td>Enum</td><td>1</td><td>Qualifier of MiFID participant.<table><tr><th>Name</th><th>Value</th><th>Description</th></tr><tr><td>NA</td><td>1</td><td></td></tr><tr><td>Algorithm</td><td>2</td><td></td></tr><tr><td>FirmOrLegalEntity</td><td>3</td><td></td></tr><tr><td>NaturalPerson</td><td>4</td><td></td></tr></table></td></tr>
<tr><td>tcrPartyBuy.mifidFields.investmentDecisionMaker.shortCode</td><td>ShortCode</td><td>Alias (u32)</td><td>4</td><td>Short code of MiFID participant.</td></tr>
<tr><td>tcrPartyBuy.mifidFields.investmentDecisionMaker.qualifier</td><td>PartyRoleQualifier</td><td>Enum</td><td>1</td><td>Qualifier of MiFID participant.<table><tr><th>Name</th><th>Value</th><th>Description</th></tr><tr><td>NA</td><td>1</td><td></td></tr><tr><td>Algorithm</td><td>2</td><td></td></tr><tr><td>FirmOrLegalEntity</td><td>3</td><td></td></tr><tr><td>NaturalPerson</td><td>4</td><td></td></tr></table></td></tr>
</table>

<table>
<tr><th>Name</th><th>Type</th><th>Kind</th><th>Length</th><th>Description</th></tr>
<tr><td>tcrPartyBuy.account</td><td>Account</td><td>Array (AnsiChar)</td><td>16</td><td>Account number.</td></tr>
<tr><td>tcrPartyBuy.accountType</td><td>AccountType</td><td>Enum</td><td>1</td><td>Type of account associated with the order.
<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>Missing</td><td>1</td><td>Account is missing. Account is expected to be filled with 0x00.</td></tr>
<tr><td>Customer</td><td>2</td><td>Account is carried on customer side of the books.</td></tr>
<tr><td>House</td><td>3</td><td>House trader.</td></tr>
</table></td></tr>
<tr><td>tcrPartyBuy.orderCapacity</td><td>Capacity</td><td>Enum</td><td>1</td><td>Designates the capacity of the firm placing the order.
<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>Agency</td><td>1</td><td>Agency (mapped to AOTC).</td></tr>
<tr><td>Principal</td><td>2</td><td>Principal (mapped to DEAL).</td></tr>
<tr><td>RisklessPrincipal</td><td>3</td><td>Riskless Principal (mapped to MTCH)</td></tr>
</table></td></tr>
<tr><td>tcrPartyBuy.orderRestrictions</td><td>ElementId</td><td>Alias (u32)</td><td>4</td><td>Restrictions associated with an order.</td></tr>
<tr><td>tcrPartyBuy.orderOrigination</td><td>ElementId</td><td>Alias (u32)</td><td>4</td><td>Identifies the origin of the order.</td></tr>
<tr><td>tcrPartyBuy.memo</td><td>Memo</td><td>Array (AnsiChar)</td><td>18</td><td>Free text.</td></tr>
<tr><td>tcrPartySell.mifidFields.flags</td><td>MifidFlags</td><td>Enum</td><td>1</td><td>Flags raised on an order in compliance with the MiFID directive.
<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>None</td><td>0b0000</td><td></td></tr>
<tr><td>LiquidityProvisionActivity</td><td>0b0001</td><td></td></tr>
<tr><td>DirectOrSponsoredAccess</td><td>0b0010</td><td></td></tr>
<tr><td>AlgorithmicTrade</td><td>0b0100</td><td></td></tr>
<tr><td>MarketMakerOrSpecialist</td><td>0b1000</td><td></td></tr>
</table></td></tr>
<tr><td>tcrPartySell.mifidFields.client.shortCode</td><td>ShortCode</td><td>Alias (u32)</td><td>4</td><td>Short code of MiFID participant.</td></tr>
<tr><td>tcrPartySell.mifidFields.client.qualifier</td><td>PartyRoleQualifier</td><td>Enum</td><td>1</td><td>Qualifier of MiFID participant.
<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>NA</td><td>1</td><td></td></tr>
<tr><td>Algorithm</td><td>2</td><td></td></tr>
<tr><td>FirmOrLegalEntity</td><td>3</td><td></td></tr>
<tr><td>NaturalPerson</td><td>4</td><td></td></tr>
</table></td></tr>
<tr><td>tcrPartySell.mifidFields.executingTrader.shortCode</td><td>ShortCode</td><td>Alias (u32)</td><td>4</td><td>Short code of MiFID participant.</td></tr>
<tr><td>tcrPartySell.mifidFields.executingTrader.qualifier</td><td>PartyRoleQualifier</td><td>Enum</td><td>1</td><td>Qualifier of MiFID participant.
<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>NA</td><td>1</td><td></td></tr>
<tr><td>Algorithm</td><td>2</td><td></td></tr>
<tr><td>FirmOrLegalEntity</td><td>3</td><td></td></tr>
<tr><td>NaturalPerson</td><td>4</td><td></td></tr>
</table></td></tr>
<tr><td>tcrPartySell.mifidFields.investmentDecisionMaker.shortCode</td><td>ShortCode</td><td>Alias (u32)</td><td>4</td><td>Short code of MiFID participant.</td></tr>
</table>

Name	Type	Kind	Length	Description
tcrPartySell.mifidFields.investmentDecisionMaker.qualifier	PartyRoleQualifier	Enum	1	Qualifier of MiFID participant. Name / Value / Description: **NA** – 1 **Algorithm** – 2 **FirmOrLegalEntity** – 3 **NaturalPerson** – 4
tcrPartySell.account	Account	Array (AnsiChar)	16	Account number.
tcrPartySell.accountType	AccountType	Enum	1	Type of account associated with the order. Name / Value / Description: **Missing** – 1 – Account is missing. Account is expected to be filled with 0x00. **Customer** – 2 – Account is carried on customer side of the books. **House** – 3 – House trader.
tcrPartySell.orderCapacity	Capacity	Enum	1	Designates the capacity of the firm placing the order. Name / Value / Description: **Agency** – 1 – Agency (mapped to AOTC). **Principal** – 2 – Principal (mapped to DEAL). **RisklessPrincipal** – 3 – Riskless Principal (mapped to MTCH)
tcrPartySell.orderRestrictions	ElementId	Alias (u32)	4	Restrictions associated with an order.
tcrPartySell.orderOrigination	ElementId	Alias (u32)	4	Identifies the origin of the order.
tcrPartySell.memo	Memo	Array (AnsiChar)	18	Free text.

7.1.21. TRADECAPTUREREPORTRESPONSE:

Name	Type	Kind	Length	Description
header	Header	Struct	16	Header.
instrumentId	ElementId	Alias (u32)	4	ID of the instrument included in the order.
tradeId	TradeId	Alias (u32)	4	The unique ID assigned to the trade entity once it is received or matched by the exchange or central counterparty.
tradeReportId	TradeReportId	Array (AnsiChar)	20	Unique identifier of trade capture report.
status	TcrStatus	Enum	1	Status of the given order. Name / Value / Description: **New** – 1 – New. **Accepted** – 2 – Accepted. **Rejected** – 3 – Rejected. **Cancelled** – 4 – Cancelled.
reason	TcrRejectionReason	Enum	2	Reason for rejecting the given TCR. Name / Value / Description: **NA** – 1 – Not applicable.

ExchangeClosed	2	Exchange closed.
InvalidPriceIncrement	18	Invalid price increment.
Other	99	Other.
UnknownInstrumentId	100	Unknown instrument.
InstrumentPhaseNoTrading	106	Trading is not available for the instrument in its current phase.
InvalidExecutionTrader	1005	Invalid execution trader.
InvalidDecisionMaker	1006	Invalid decision maker.
InvalidClientId	1007	Invalid client.
InvalidPartyRoleQualifierForClientId	1008	Invalid Party Role Qualifier for Client Id Party group
InvalidPartyRoleQualifierForExecutingTrader	1009	Invalid Party Role Qualifier for Executing Trader Party group
InvalidPartyRoleQualifierForInvestmentDecisionMaker	1010	Invalid Party Role Qualifier for Investment Decision Maker Party group
OrderQuantityMustBeGreaterThanMinimumQuantity	1025	The order quantity must be greater than the minimum quanity.
OrderQuantityMustBeLowerThanMaximumQuantity	1026	The order quantity must be lower than the maximum quantity.
OrderPriceMustBeGreaterThanMinimumPrice	1027	The order price must be greater than minimum price.
OrderPriceMustBeLowerThanMaximumPrice	1028	The order price must be greater than maximum price.
OrderPriceMustBeNonzero	1029	The order price must be non-zero.
OrderValueMustBeGreaterThanMinimumValue	1030	The order value must be greater than minimum value.
OrderValueMustBeLowerThanMaximumValue	1031	The order value must be lower than maximum value.
PriceBelowLowCollar	1037	The validation for collars has failed. The price is too low.
PriceAboveHighCollar	1038	The validation for collars has failed. The price is too high.
InvalidPartyIdForClientId	1070	Invalid PartyID (448) for Client ID
InvalidPartyIdForExecutingTrader	1071	Invalid PartyID (448) for Executing Trader
InvalidPartyIdForInvestmentDecisionMaker	1072	Invalid PartyID (448) for Investment Decision Maker
InvalidPartyRoleQualifierForPartyId	1075	Invalid PartyRoleQualifier (2376) for PartyID (448)
UnknownTradeReport	2001	Unknown trade report
DuplicateTradeReportId	2002	Duplicate TradeReportId
TradeReportTypeNotCompatibleWithTradeReportTransType	2005	TradeReportType not compatible with TradeReportTransType
InvalidExecType	2008	Invalid ExecType
TradeReportRefIdNotAllowed	2009	TradeReportRefId not allowed

Name	Type	Kind	Length	Description		
				SettlementDateCannotBeEarlierThanMinimumSettlementDate	2015	Settlement date cannot be earlier than minimum settlement date
				SettlementDateCannotBeLaterThanMaximumSettlementDate	2016	Settlement date cannot be later than maximum settlement date
				UnknownContraFirm	2022	Unknown contra firm.
				RequestNotAllowedForBlockInstrument	2026	Request not allowed for BLOCK instrument
				RequestNotAllowedForClobInstrument	2027	Request not allowed for CLOB instrument
				RequestNotAllowedForCrossInstrument	2028	Request not allowed for CROSS instrument
				InvalidMatchStatus	2029	Invalid MatchStatus
				CrossNotAllowedOutsideOfClobInstrumentSpread	2030	Cross not allowed outside of CLOB instrument spread
				CrossPriceNotEqualToTheReferencePrice	2031	Cross price not equal to the reference price
				CrossNotAllowedDuringClobInstrumentAuctionOrSuspension	2032	Cross not allowed during CLOB instrument Auction or Suspension
				ForbiddenSecondaryTradereportId	2033	Forbidden SecondaryTradeReportID
				UnknownSecondaryTradereportId	2034	Unknown SecondaryTradeReportID

7.1.22. TRADECAPTUREREPORTSINGLE:

<table>
<tr><th>Name</th><th>Type</th><th>Kind</th><th>Length</th><th>Description</th></tr>
<tr><td>header</td><td>Header</td><td>Struct</td><td>16</td><td>Header.</td></tr>
<tr><td>instrumentId</td><td>ElementId</td><td>Alias (u32)</td><td>4</td><td>ID of the instrument included in the order.</td></tr>
<tr><td>tradeReportId</td><td>TradeReportId</td><td>Array (AnsiChar)</td><td>20</td><td>Unique identifier of the trade capture report.</td></tr>
<tr><td>secondaryTradeReportId</td><td>OrderId</td><td>Alias (u64)</td><td>8</td><td>ID of the trade capture report.</td></tr>
<tr><td>tradeId</td><td>TradeId</td><td>Alias (u32)</td><td>4</td><td>The unique ID assigned to the trade entity once it is received or matched by the exchange or central counterparty.</td></tr>
<tr><td>tradeReportTransType</td><td>TradeReportTransType</td><td>Enum</td><td>1</td><td>Identifies Trade Report message transaction type.
<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>New</td><td>1</td><td>New.</td></tr>
<tr><td>Cancel</td><td>2</td><td>Cancel.</td></tr>
<tr><td>Replace</td><td>3</td><td>Replace.</td></tr>
</table></td></tr>
<tr><td>tradeReportType</td><td>TradeReportType</td><td>Enum</td><td>1</td><td>Type of Trade Report.
<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>Submit</td><td>1</td><td>Submit</td></tr>
<tr><td>Alleged</td><td>2</td><td>Alleged</td></tr>
<tr><td>Accept</td><td>3</td><td>Accept</td></tr>
<tr><td>Decline</td><td>4</td><td>Decline</td></tr>
<tr><td>TradeReportCancel</td><td>7</td><td>Trade Report Cancel</td></tr>
</table></td></tr>
<tr><td>tradeType</td><td>TradeType</td><td>Enum</td><td>1</td><td>Type of trade.
<table>
<tr><th>Name</th><th>Value</th><th>Description</th></tr>
<tr><td>PrivatelyNegotiatedTrade</td><td>22</td><td>Privately negotiated trade.</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>Name</th><th>Type</th><th>Kind</th><th>Length</th><th>Description</th></tr>
<tr><td></td><td></td><td></td><td></td><td><table><tr><td>BlockTrade</td><td>38</td><td>Block trade.</td></tr></table></td></tr>
<tr><td>algorithmicTradeIndicator</td><td>AlgorithmicTradeIndicator</td><td>Enum</td><td>1</td><td>Indicates algorithmic trader.<table><tr><th>Name</th><th>Value</th><th>Description</th></tr><tr><td>NA</td><td>1</td><td>Not applicable.</td></tr><tr><td>NonAlgorithmicTrade</td><td>2</td><td>Non-algorithmic trade.</td></tr><tr><td>AlgorithmicTrade</td><td>3</td><td>Algorithmic trade.</td></tr></table></td></tr>
<tr><td>execType</td><td>ExecType</td><td>Enum</td><td>1</td><td>Type of execution being reported. Uses subset of ExecType for trade capture reports.<table><tr><th>Name</th><th>Value</th><th>Description</th></tr><tr><td>New</td><td>1</td><td>New.</td></tr><tr><td>Rejected</td><td>8</td><td>Rejected.</td></tr><tr><td>Trade</td><td>15</td><td>Trade.</td></tr><tr><td>TradeCorrect</td><td>16</td><td>Trade Correct.</td></tr><tr><td>TradeCancel</td><td>17</td><td>Trade Cancel.</td></tr></table></td></tr>
<tr><td>tradeReportRefId</td><td>TradeReportRefID</td><td>Array (AnsiChar)</td><td>20</td><td>Reference identifier used with Cancel and Replace transaction types. The TradeReportID that is being referenced for trade correction or cancelation.</td></tr>
<tr><td>lastQty</td><td>Quantity</td><td>Alias (u64)</td><td>8</td><td>Quantity (e.g. shares) bought/sold on this (last) fill.</td></tr>
<tr><td>lastPx</td><td>Price</td><td>Alias (Number)</td><td>8</td><td>Price of this (last) fill.</td></tr>
<tr><td>settlementDate</td><td>Date</td><td>Alias (u32)</td><td>4</td><td>Settlement date of the trade is equal to current date plus actual settlement offset calendar days.</td></tr>
<tr><td>matchStatus</td><td>MatchStatus</td><td>Enum</td><td>1</td><td>The status of this trade with respect to matching or comparison.<table><tr><th>Name</th><th>Value</th><th>Description</th></tr><tr><td>NA</td><td>0</td><td>Not applicable.</td></tr><tr><td>Matched</td><td>1</td><td>Compared, matched or affirmed.</td></tr><tr><td>Unmatched</td><td>2</td><td>Uncompared, unmatched, or unaffirmed.</td></tr></table></td></tr>
<tr><td>side</td><td>OrderSide</td><td>Enum</td><td>1</td><td>Side of order.<table><tr><th>Name</th><th>Value</th><th>Description</th></tr><tr><td>Buy</td><td>1</td><td>Indicates a buy-side order.</td></tr><tr><td>Sell</td><td>2</td><td>Indicates a sell-side order.</td></tr></table></td></tr>
<tr><td>counterpartyId</td><td>CompId</td><td>Array (AnsiChar)</td><td>16</td><td>Company ID of the counterparty.</td></tr>
<tr><td>tcrParty.mifidFields.flags</td><td>MifidFlags</td><td>Enum</td><td>1</td><td>Flags raised on an order in compliance with the MiFID directive.<table><tr><th>Name</th><th>Value</th><th>Description</th></tr><tr><td>None</td><td>0b0000</td><td></td></tr><tr><td>LiquidityProvisionActivity</td><td>0b0001</td><td></td></tr><tr><td>DirectOrSponsoredAccess</td><td>0b0010</td><td></td></tr><tr><td>AlgorithmicTrade</td><td>0b0100</td><td></td></tr><tr><td>MarketMakerOrSpecialist</td><td>0b1000</td><td></td></tr></table></td></tr>
<tr><td>tcrParty.mifidFields.client.shortCode</td><td>ShortCode</td><td>Alias (u32)</td><td>4</td><td>Short code of MiFID participant.</td></tr>
<tr><td>tcrParty.mifidFields.client.qualifier</td><td>PartyRoleQualifier</td><td>Enum</td><td>1</td><td>Qualifier of MiFID participant.</td></tr>
</table>

<table>
<tr><th>Name</th><th>Type</th><th>Kind</th><th>Length</th><th>Description</th></tr>
<tr><td></td><td></td><td></td><td></td><td><table><tr><th>Name</th><th>Value</th><th>Description</th></tr><tr><td>NA</td><td>1</td><td></td></tr><tr><td>Algorithm</td><td>2</td><td></td></tr><tr><td>FirmOrLegalEntity</td><td>3</td><td></td></tr><tr><td>NaturalPerson</td><td>4</td><td></td></tr></table></td></tr>
<tr><td>tcrParty.mifidFields.executingTrader.shortCode</td><td>ShortCode</td><td>Alias (u32)</td><td>4</td><td>Short code of MiFID participant.</td></tr>
<tr><td>tcrParty.mifidFields.executingTrader.qualifier</td><td>PartyRoleQualifier</td><td>Enum</td><td>1</td><td>Qualifier of MiFID participant.<table><tr><th>Name</th><th>Value</th><th>Description</th></tr><tr><td>NA</td><td>1</td><td></td></tr><tr><td>Algorithm</td><td>2</td><td></td></tr><tr><td>FirmOrLegalEntity</td><td>3</td><td></td></tr><tr><td>NaturalPerson</td><td>4</td><td></td></tr></table></td></tr>
<tr><td>tcrParty.mifidFields.investmentDecisionMaker.shortCode</td><td>ShortCode</td><td>Alias (u32)</td><td>4</td><td>Short code of MiFID participant.</td></tr>
<tr><td>tcrParty.mifidFields.investmentDecisionMaker.qualifier</td><td>PartyRoleQualifier</td><td>Enum</td><td>1</td><td>Qualifier of MiFID participant.<table><tr><th>Name</th><th>Value</th><th>Description</th></tr><tr><td>NA</td><td>1</td><td></td></tr><tr><td>Algorithm</td><td>2</td><td></td></tr><tr><td>FirmOrLegalEntity</td><td>3</td><td></td></tr><tr><td>NaturalPerson</td><td>4</td><td></td></tr></table></td></tr>
<tr><td>tcrParty.account</td><td>Account</td><td>Array (AnsiChar)</td><td>16</td><td>Account number.</td></tr>
<tr><td>tcrParty.accountType</td><td>AccountType</td><td>Enum</td><td>1</td><td>Type of account associated with the order.<table><tr><th>Name</th><th>Value</th><th>Description</th></tr><tr><td>Missing</td><td>1</td><td>Account is missing. Account is expected to be filled with 0x00.</td></tr><tr><td>Customer</td><td>2</td><td>Account is carried on customer side of the books.</td></tr><tr><td>House</td><td>3</td><td>House trader.</td></tr></table></td></tr>
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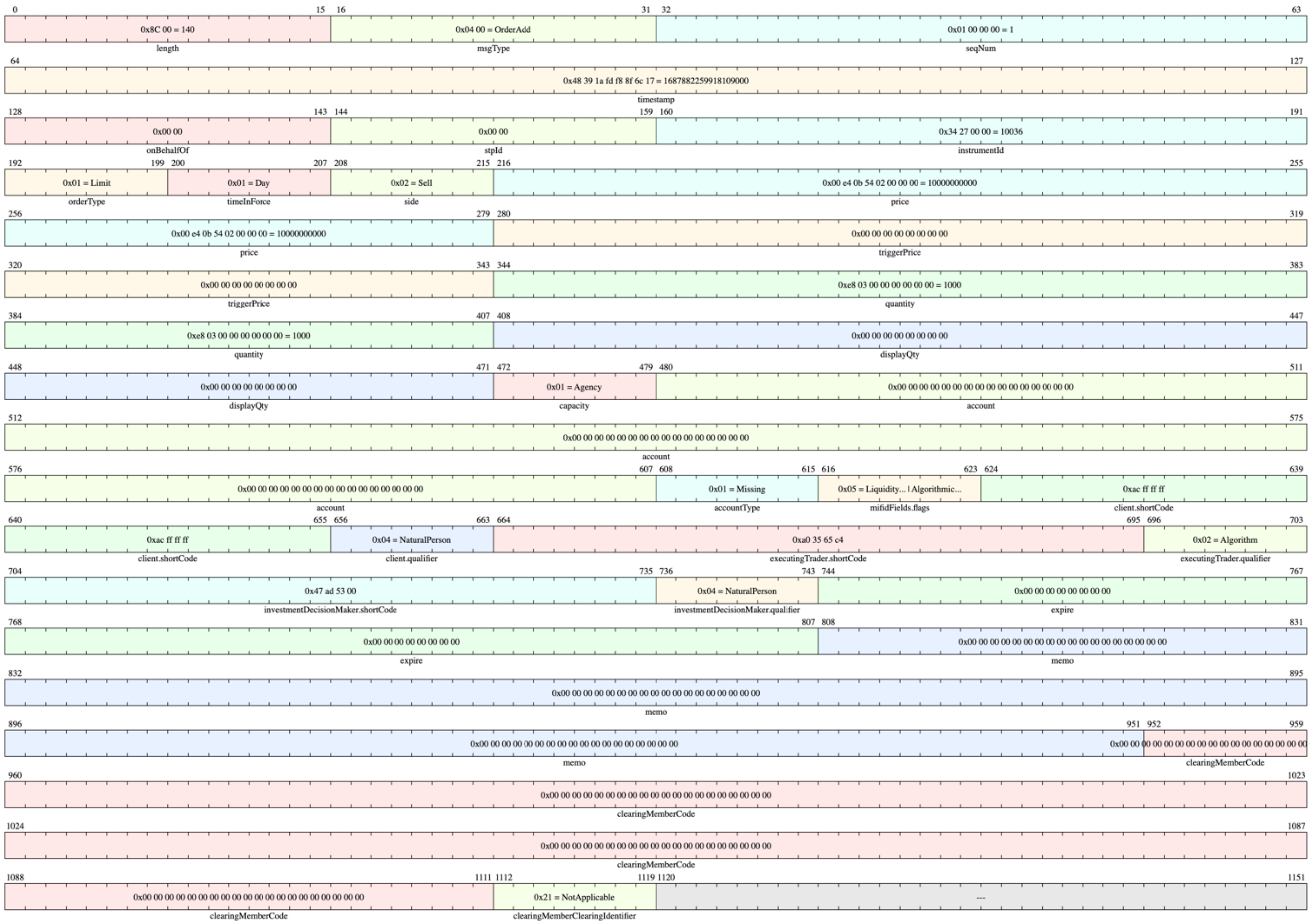
<tr><td>tcrParty.orderRestrictions</td><td>ElementId</td><td>Alias (u32)</td><td>4</td><td>Restrictions associated with an order.</td></tr>
<tr><td>tcrParty.orderOrigination</td><td>ElementId</td><td>Alias (u32)</td><td>4</td><td>Identifies the origin of the order.</td></tr>
<tr><td>tcrParty.memo</td><td>Memo</td><td>Array (AnsiChar)</td><td>18</td><td>Free text.</td></tr>
</table>

7.2. Order add example

Below is an example of an OrderAdd message, illustrating sample values for each field along with their binary representation.

Figure 7 OrderAdd message frame



8. Message Kinematics

Scope:

The purpose of this appendix is to present the message flow within the Native communication protocol, as used in GPW WATS. The appendix does not include all available message flows in GPW WATS, but only those selected for presentation purposes.

Remarks:

Due to ensuring transparency of message flow diagrams, the scope of presented fields is limited to basic components and does not include the complete set of all fields that a given message may contain. The scope of the fields for the same messages may also vary depending on the specific example described in the diagram. The complete range of fields in the messages is available in the description of each individual message within the protocol.

Actors:

For the purpose of the presentations, the following actors have been utilized in the context of kinematics:

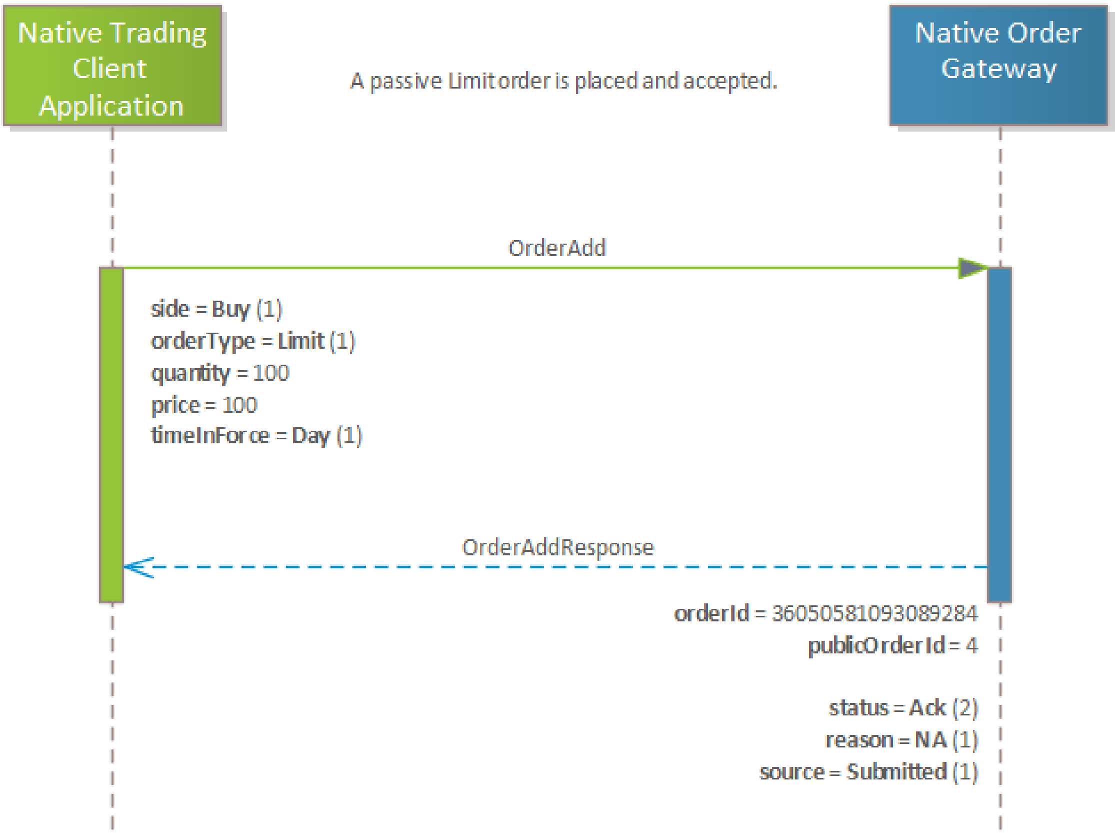
Native Trading Client Application – an exchange member authorized to submit buy and sell orders, communicating with the system represented by the Native Order Gateway.

Native Order Gateway – a system that communicates with the Native Protocol Client Application.

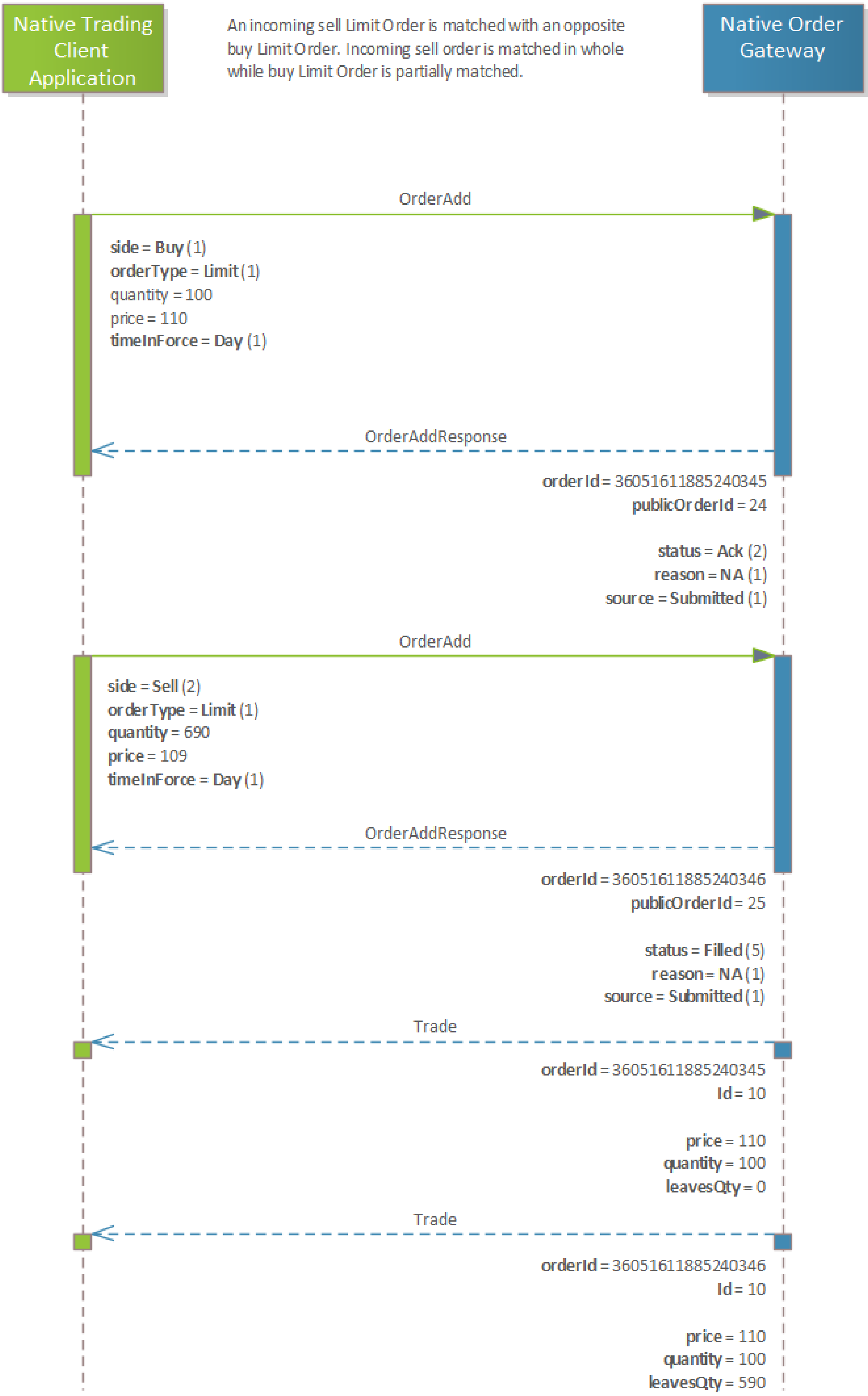
Note: presentation of simultaneous communication between multiple clients and Gateway was omitted. As a result, the Native Trading Client Application can either represent a single exchange member or simulate the exchange of messages between two different exchange members including buying, selling and conducting transactions.

8.1. CLOB

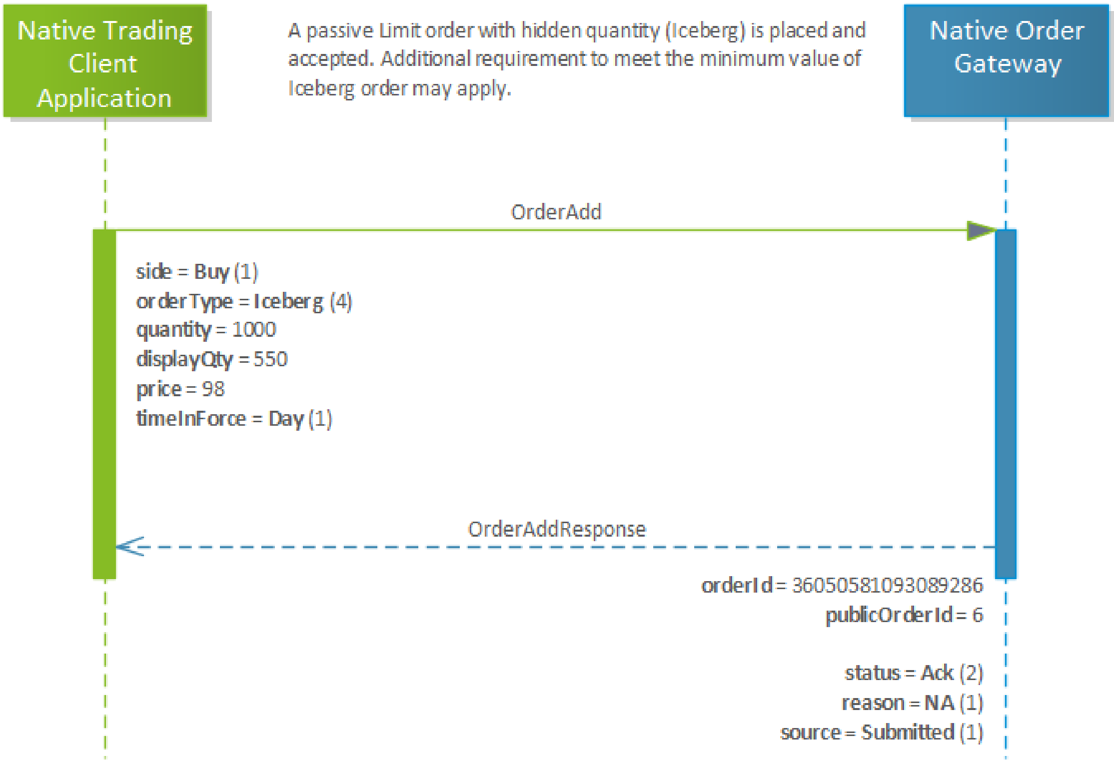
Order - Accepted



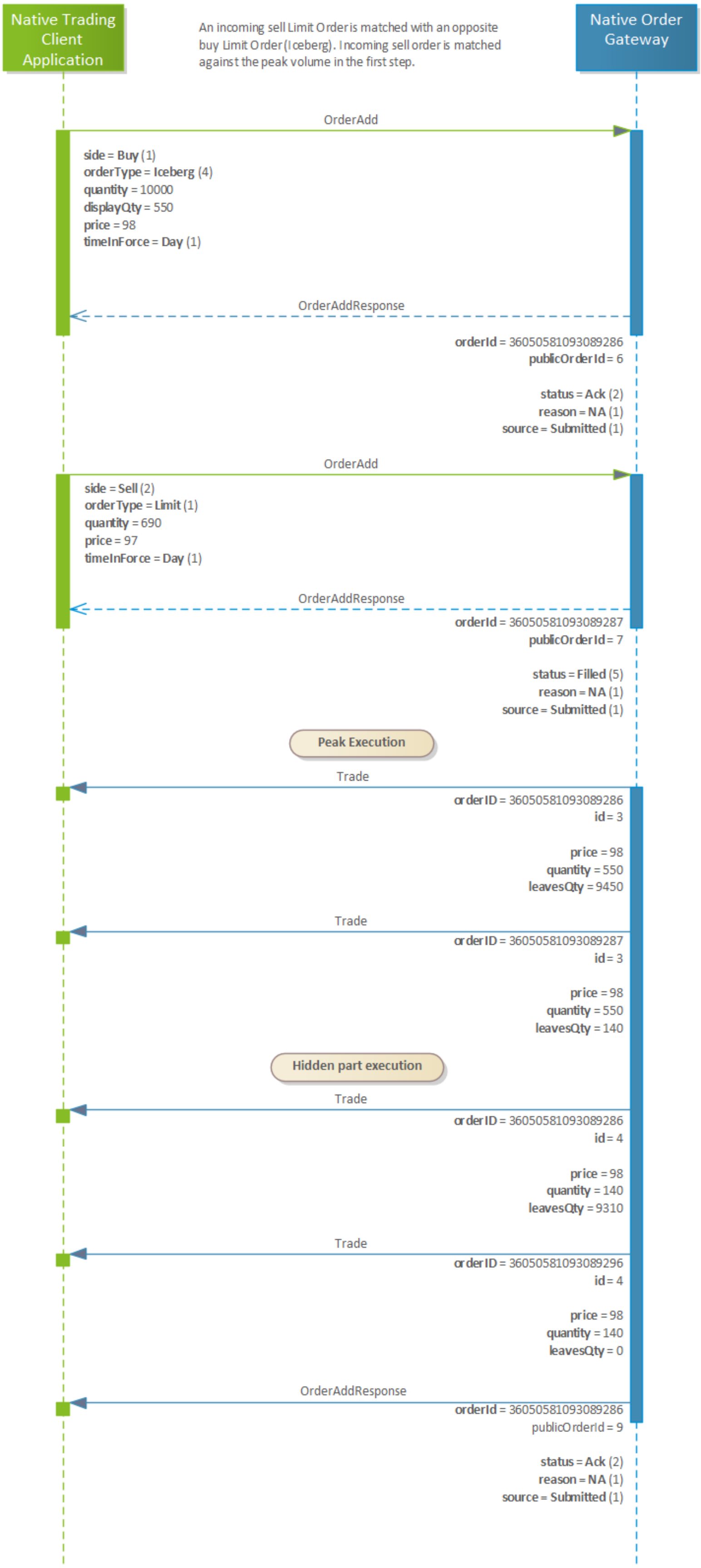
Order – Accepted and Filled – Full and Partially



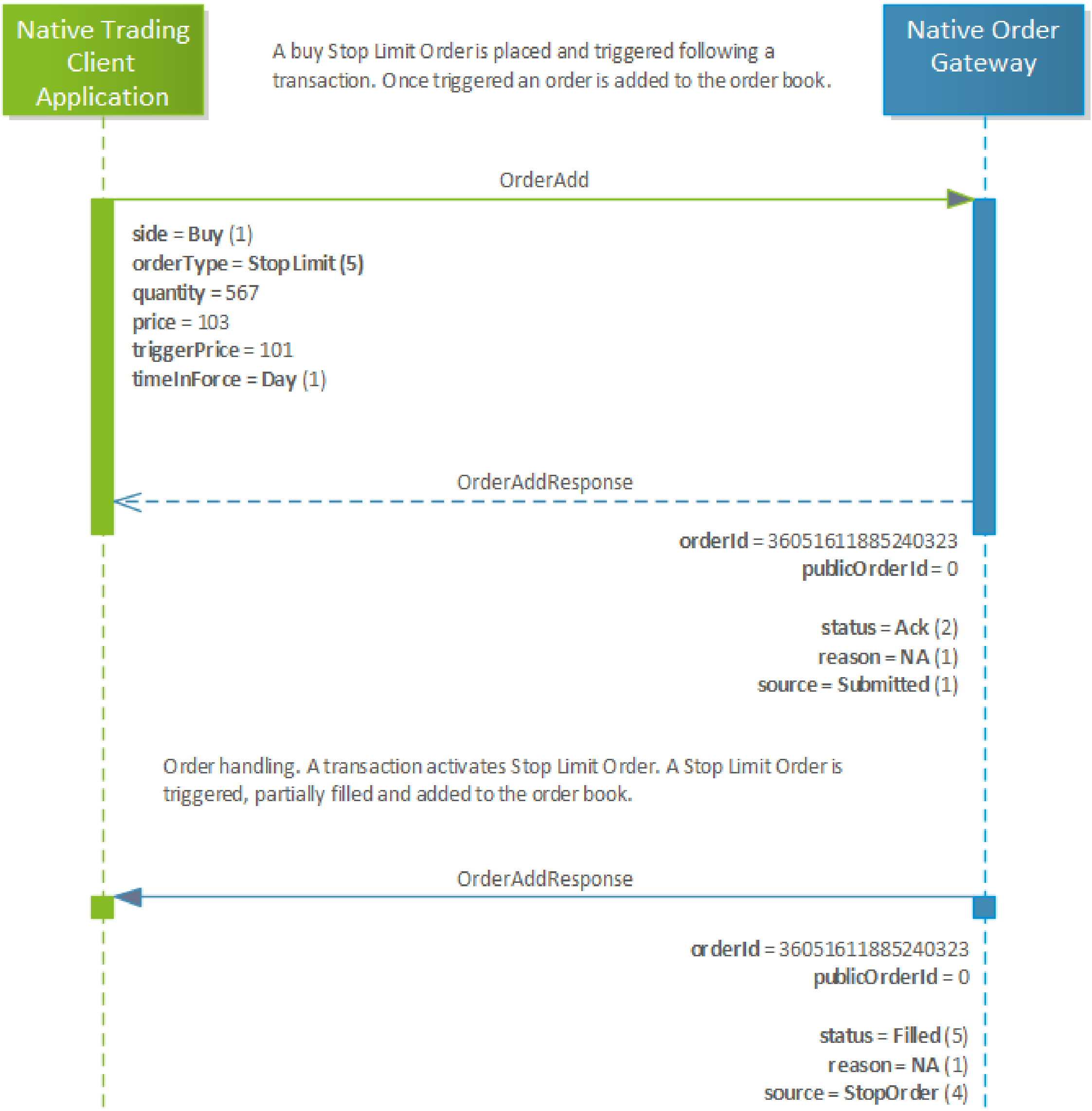
Iceberg Order – Accepted



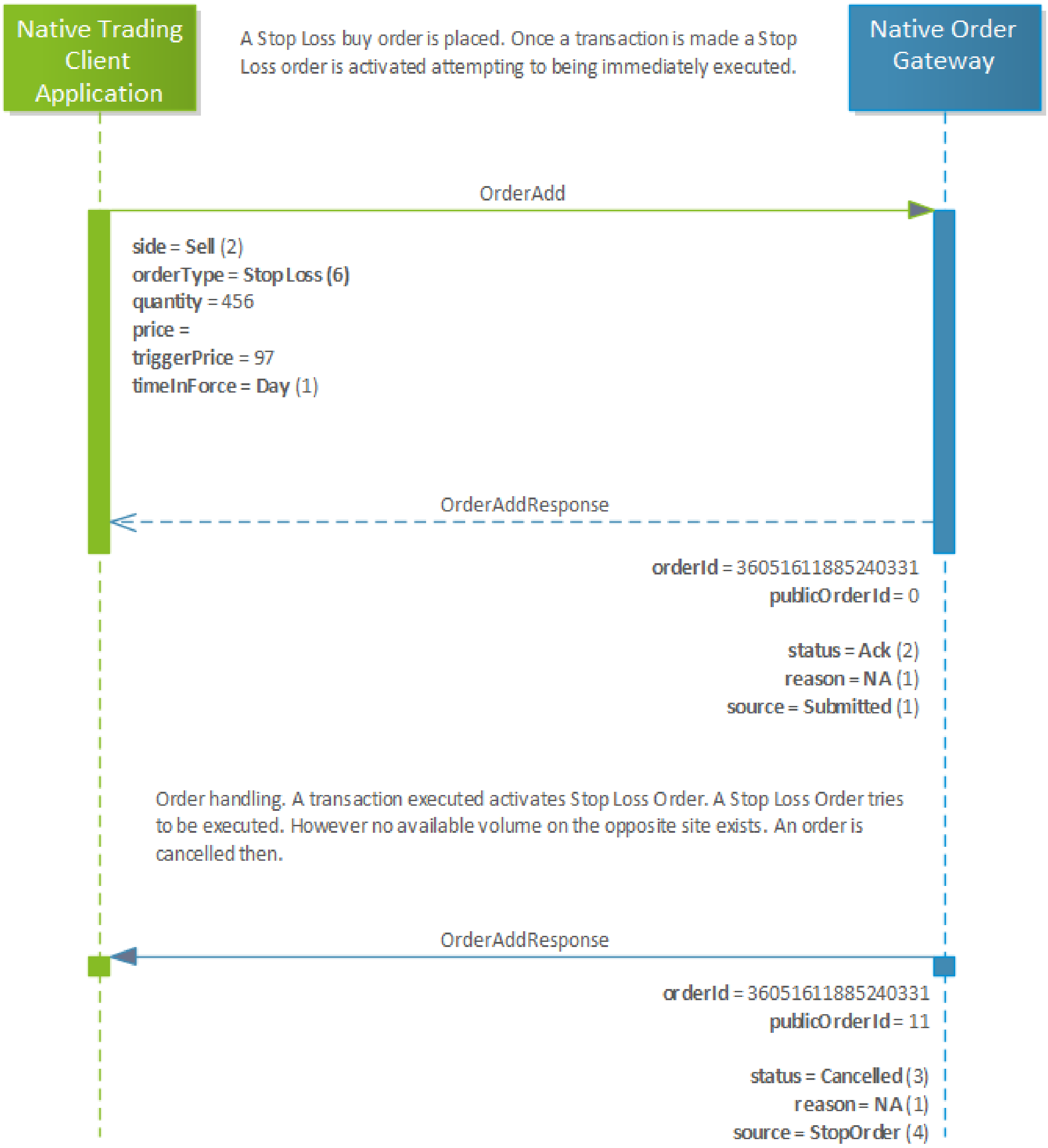
Iceberg Order – Accepted Partially Filled and Restated



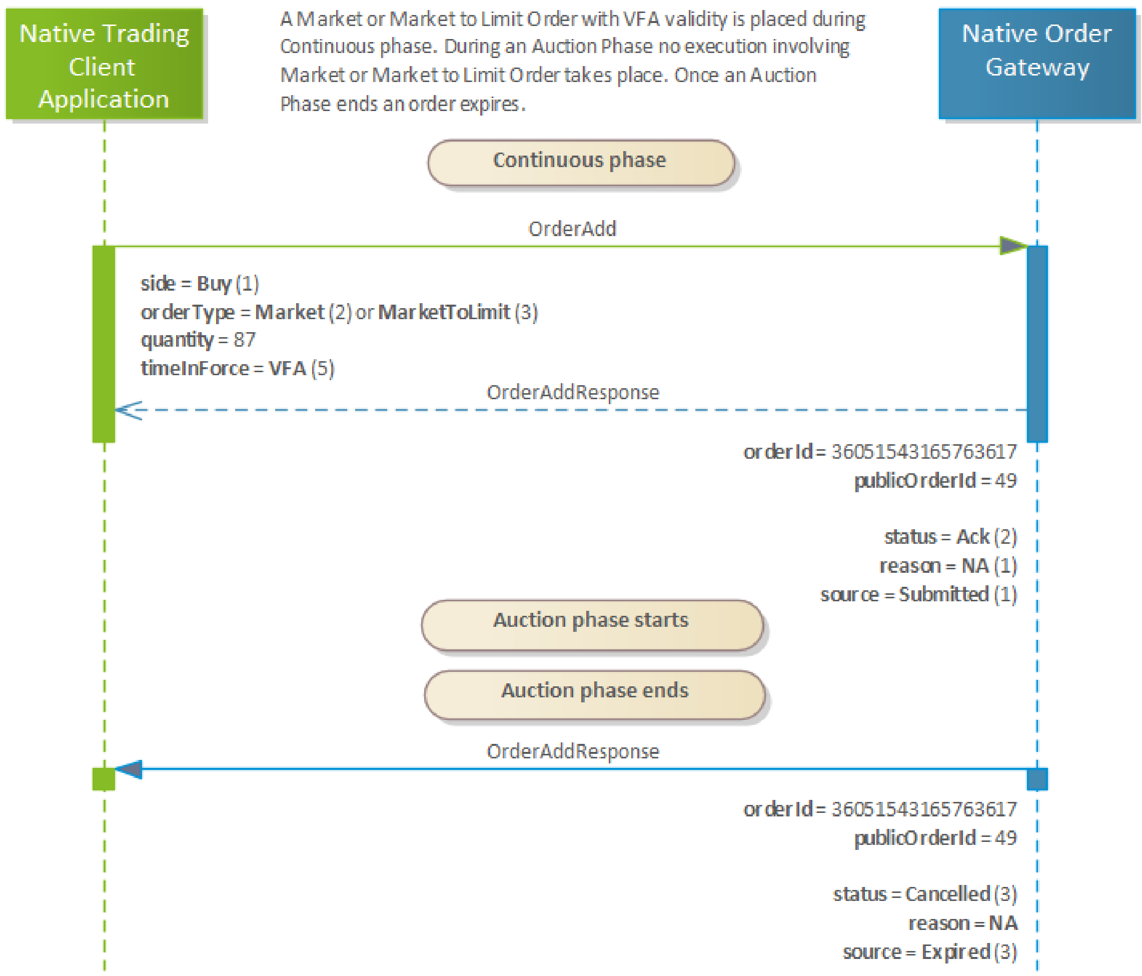
Stop Limit Order – Accepted and Triggered



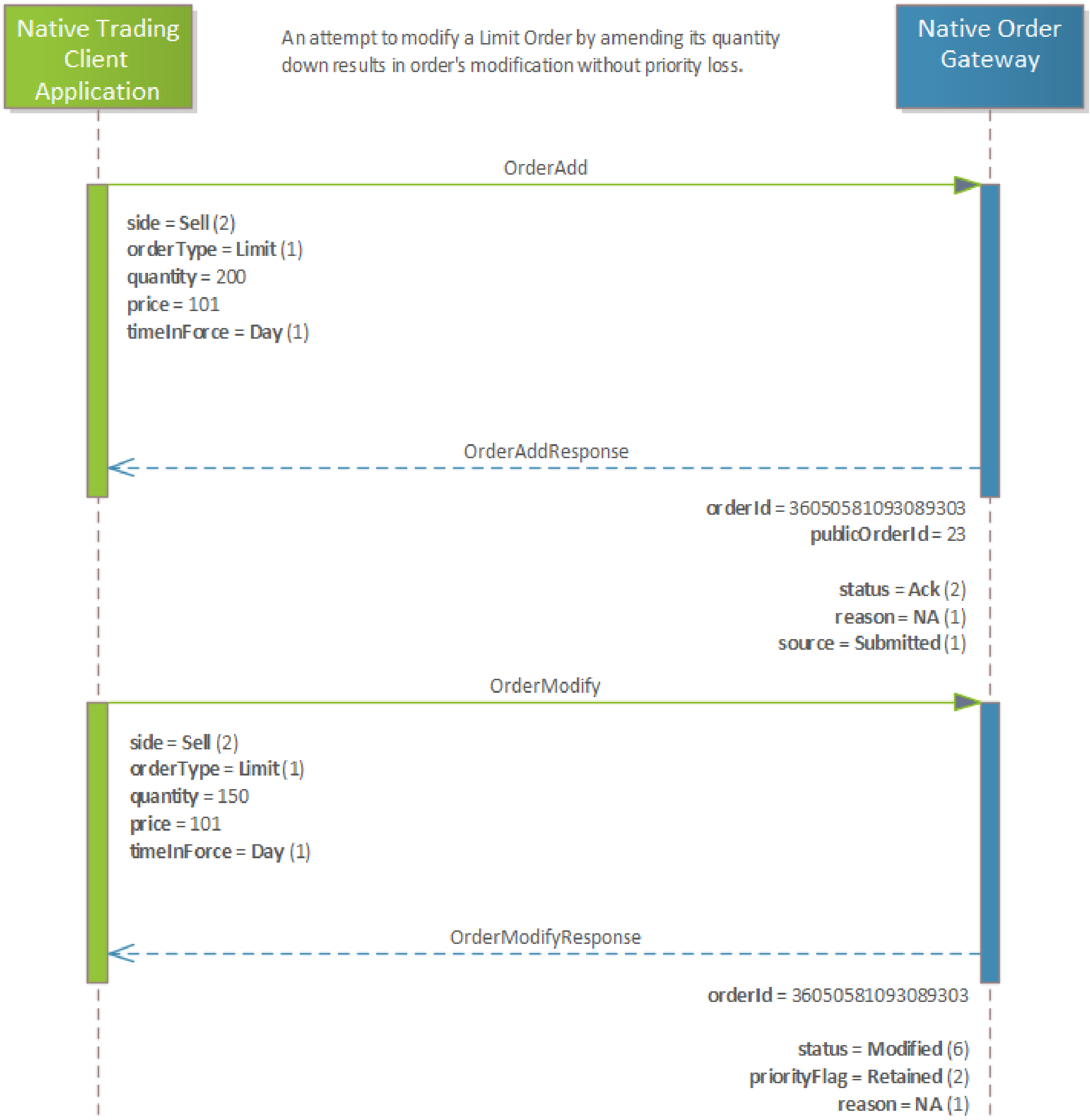
Stop Loss Order – Accepted, Triggered and Cancelled



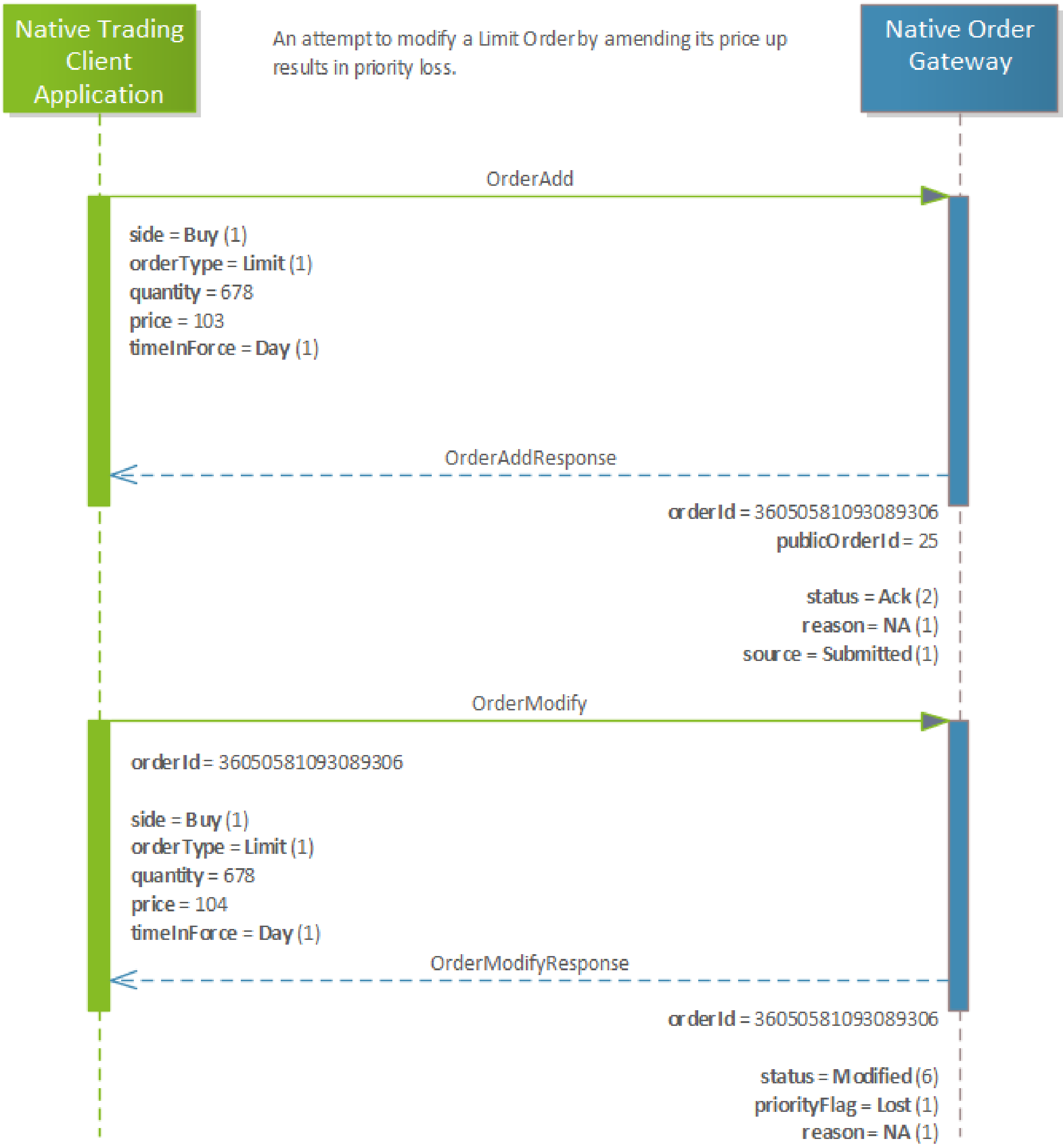
Market Order and Market to Limit Order with TIF VFA – Triggered during Auction



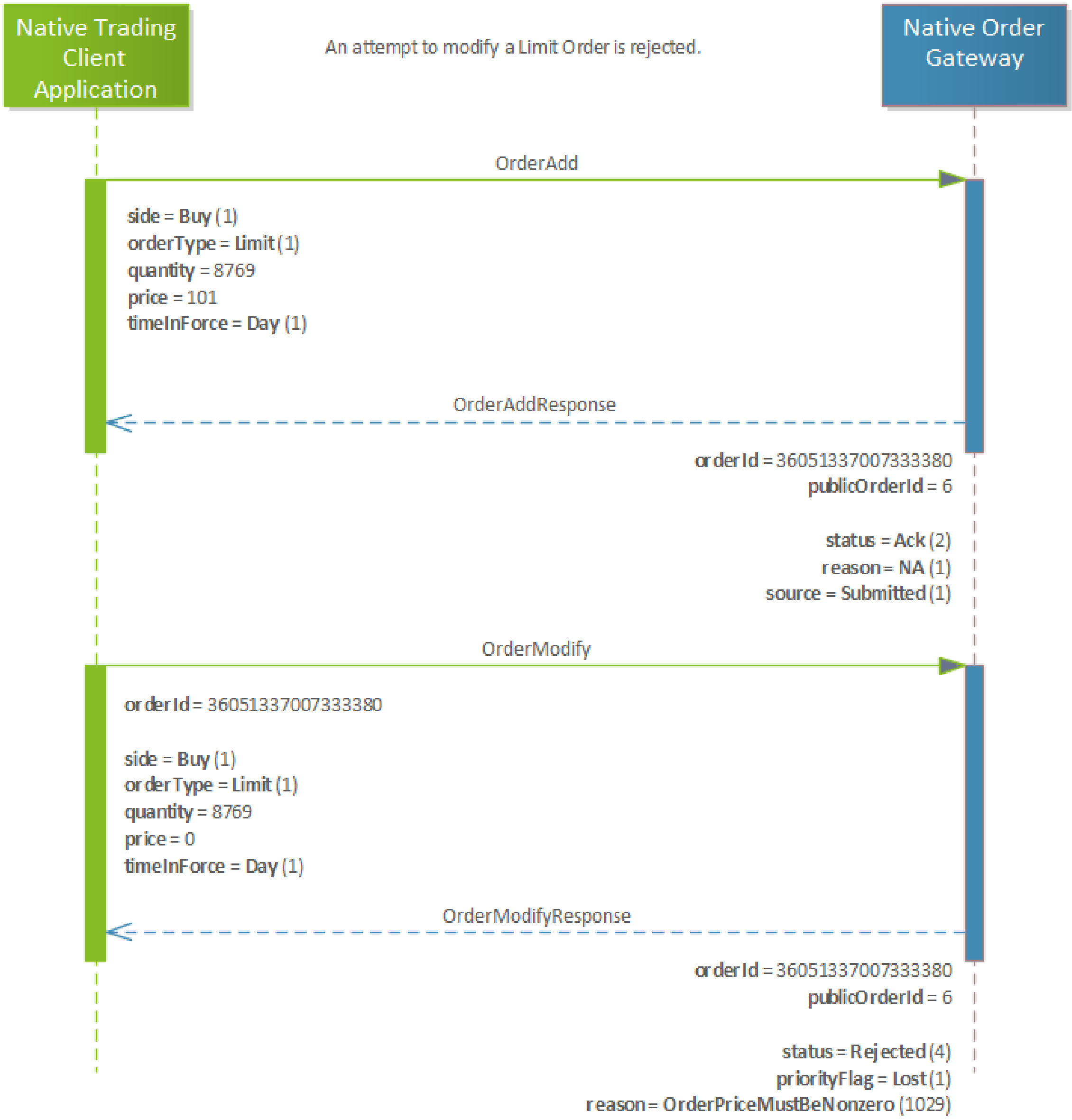
Order Modification without priority loss



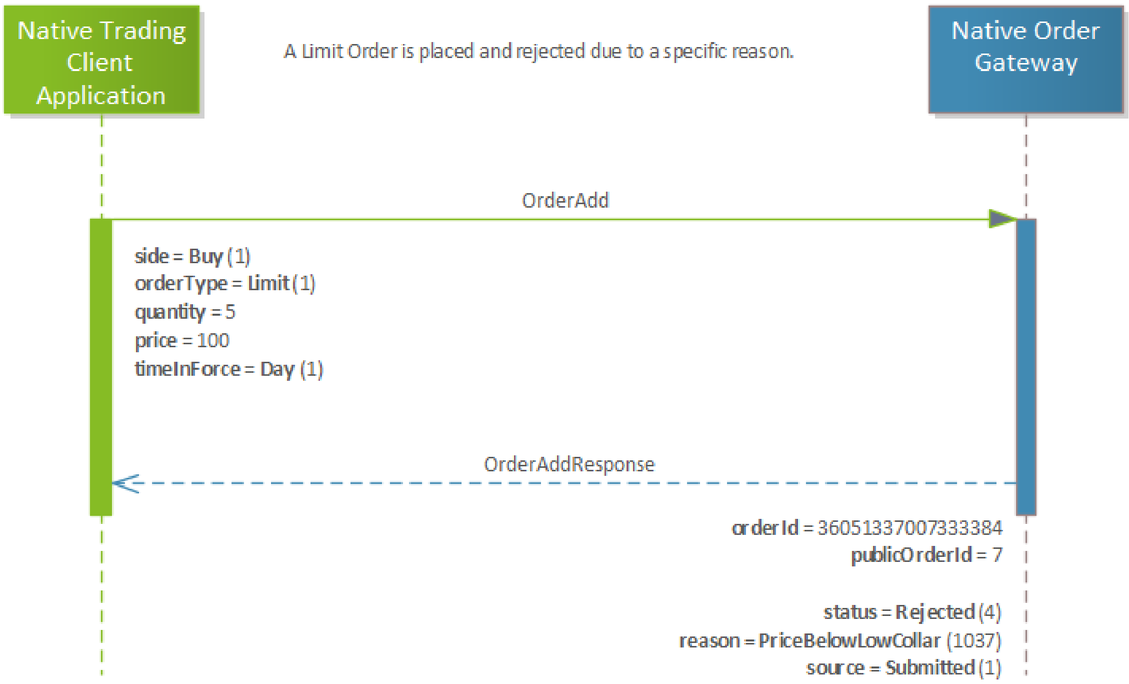
Order Modification with priority loss



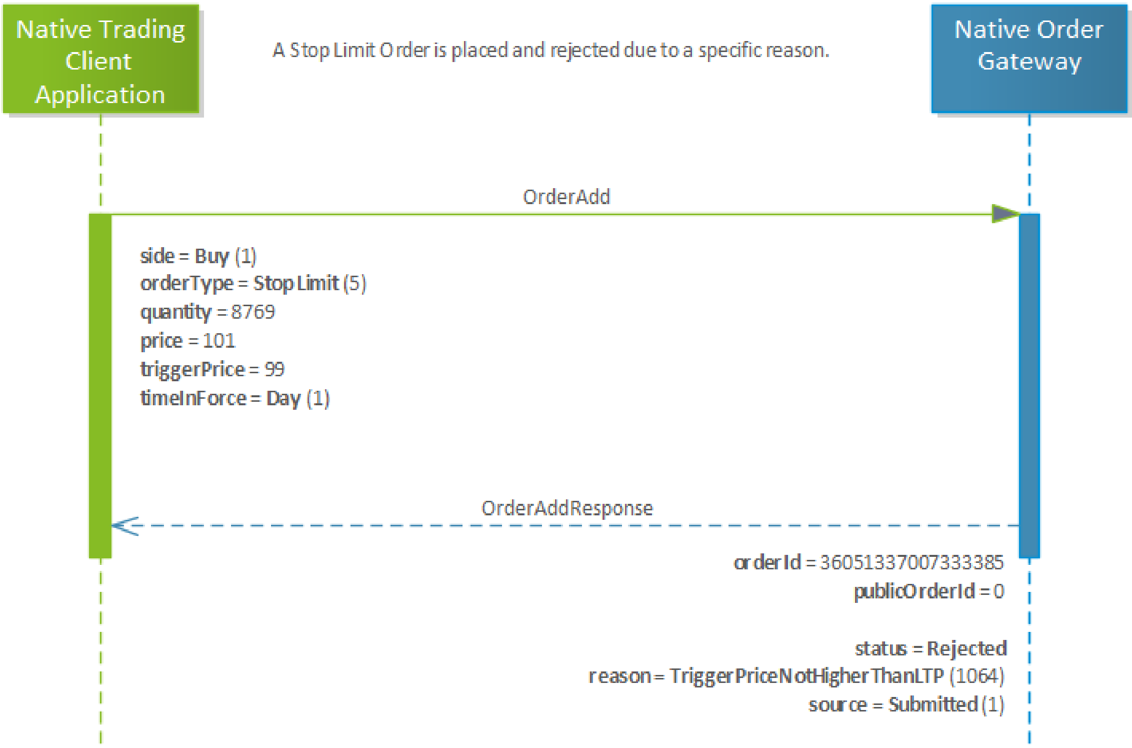
Order Modification – Rejected



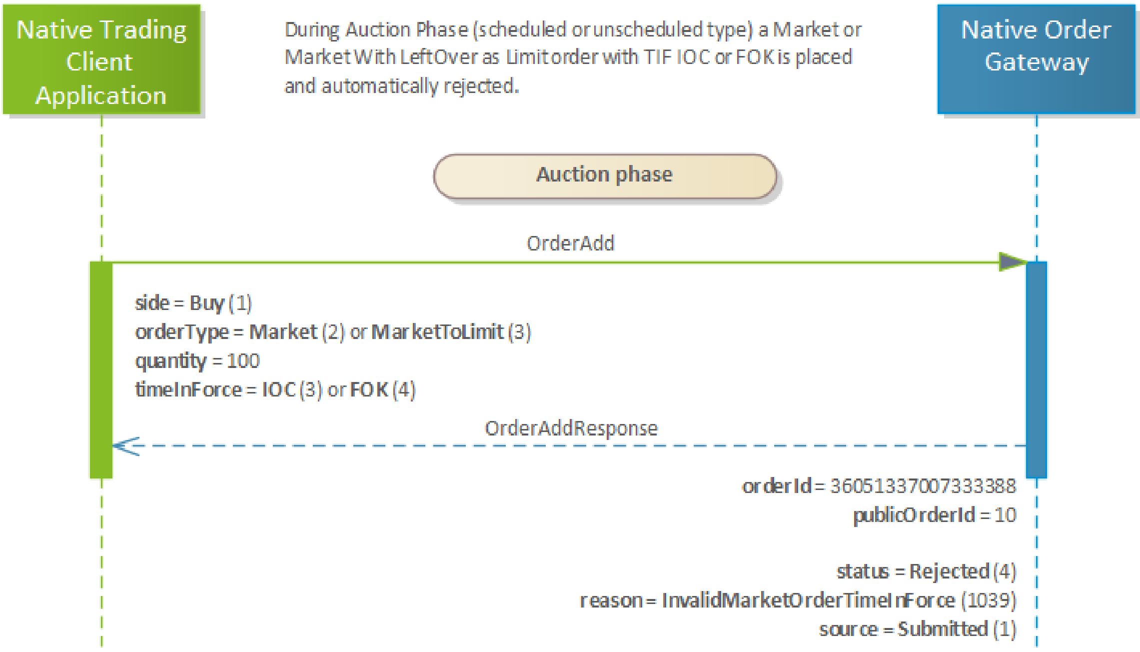
Order – Rejected



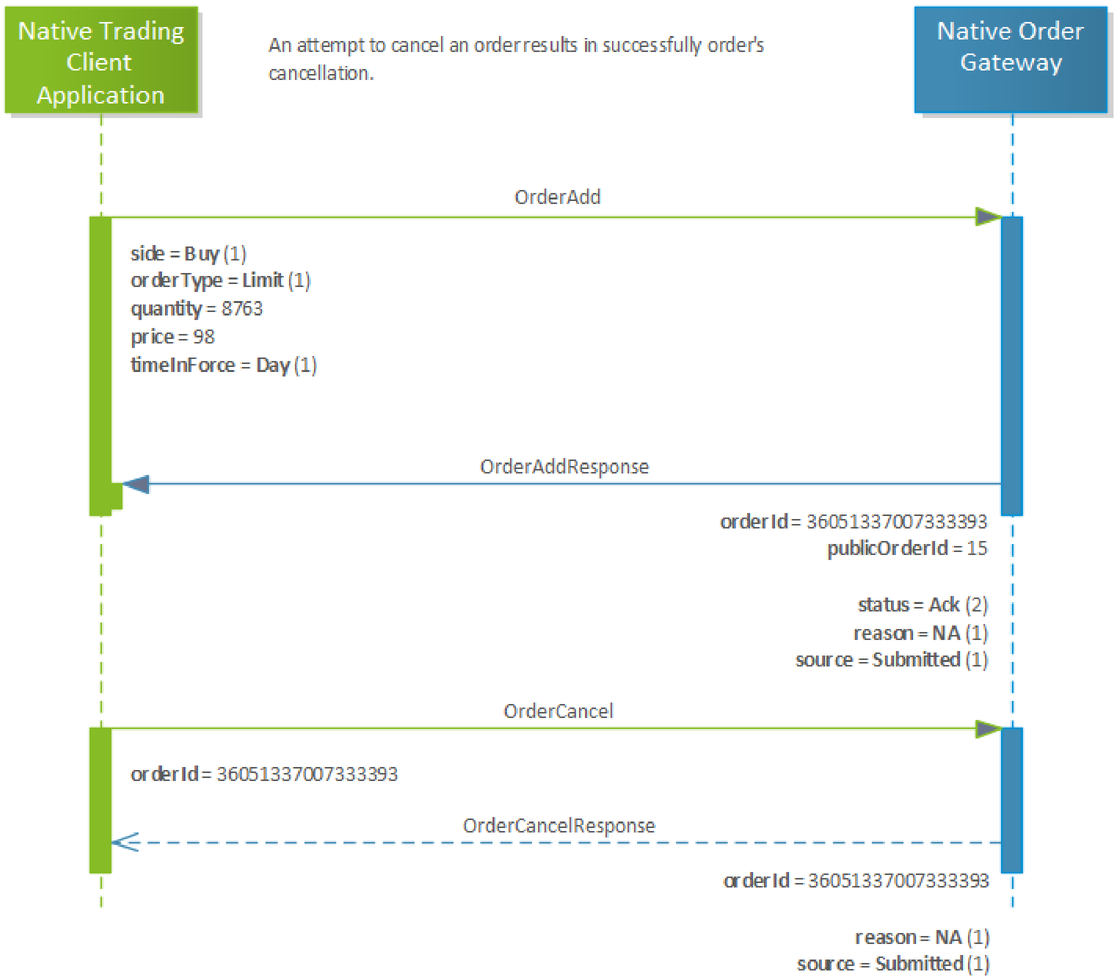
Stop Limit Order – Rejected



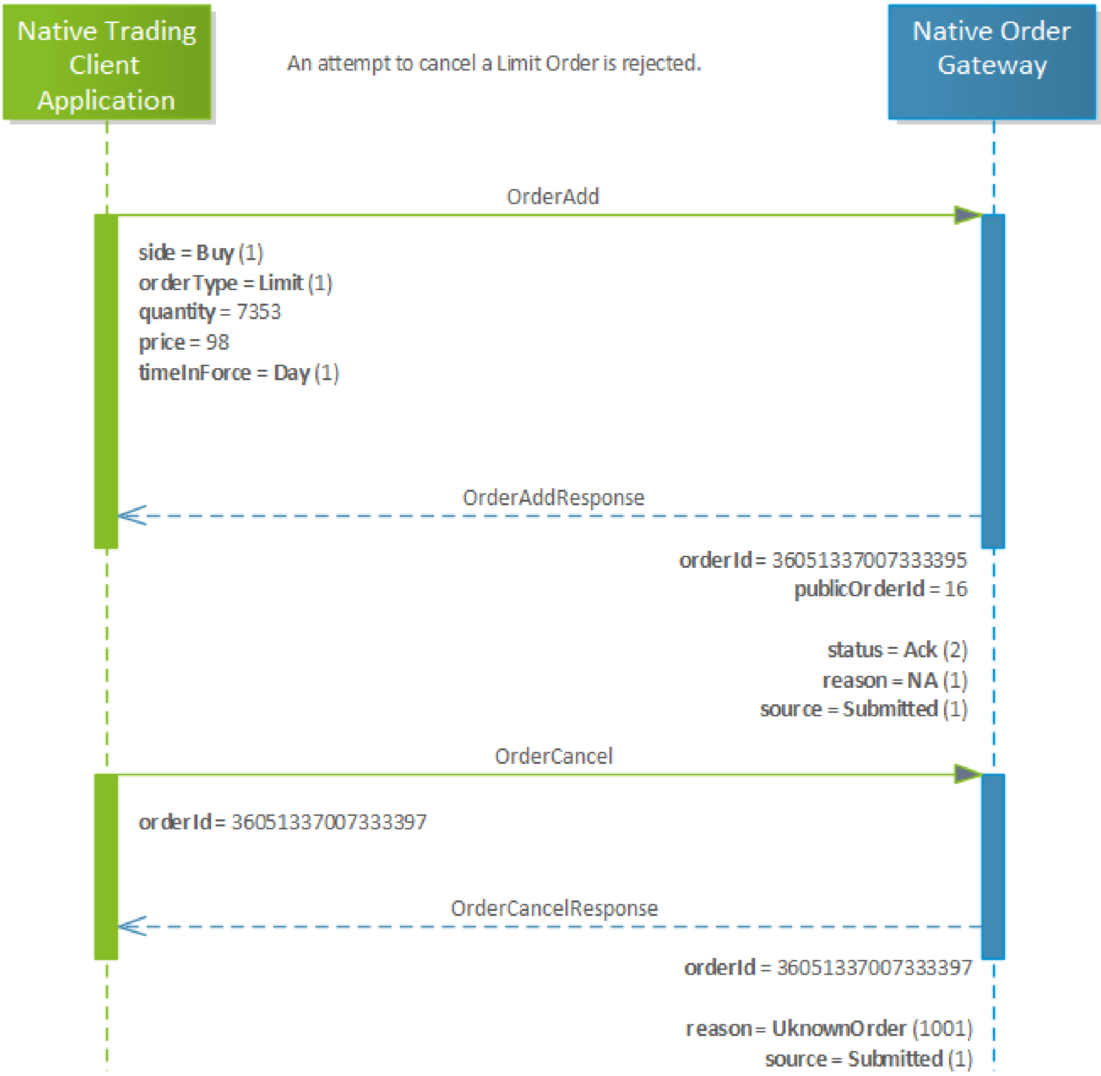
Market Order and Market to Limit Order ICO/FOK – Rejected during Auction



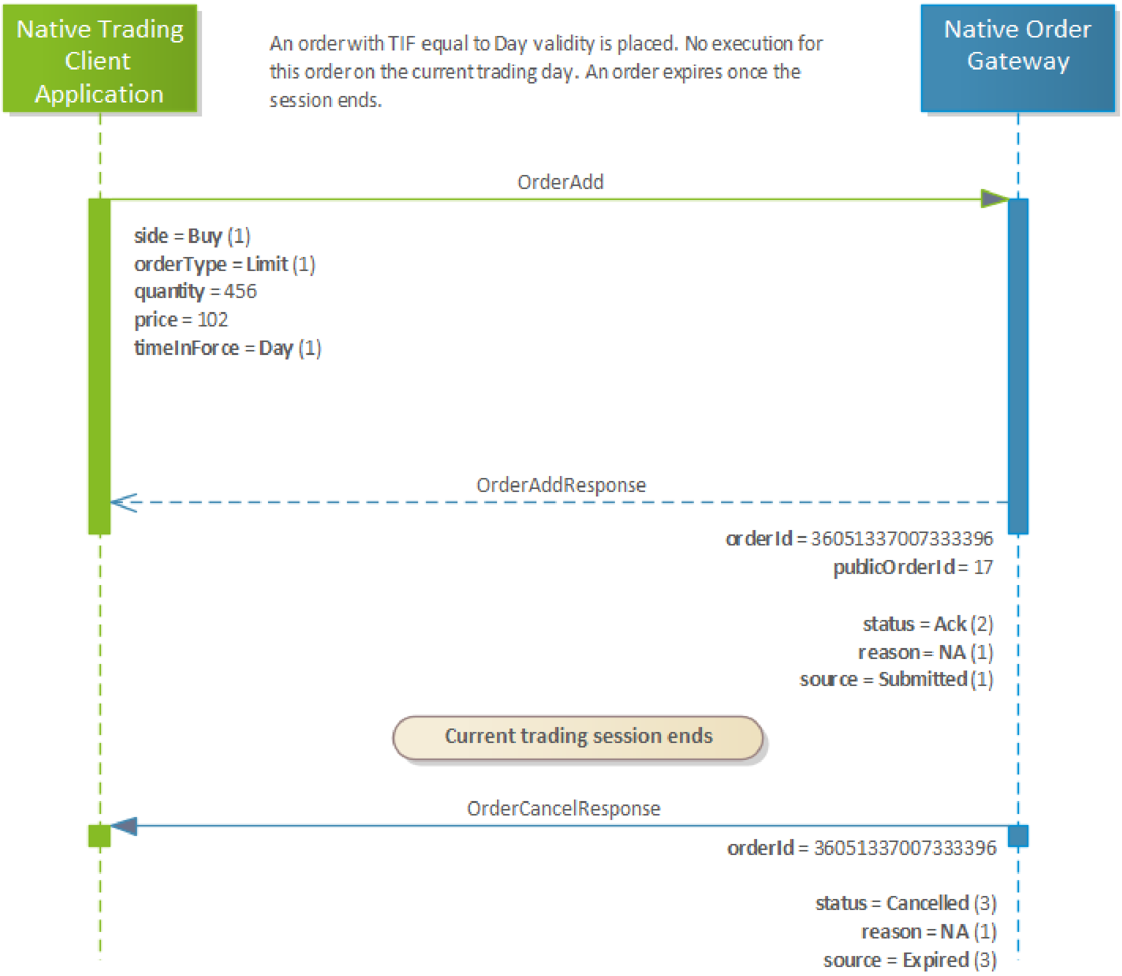
Order Cancellation – Accepted



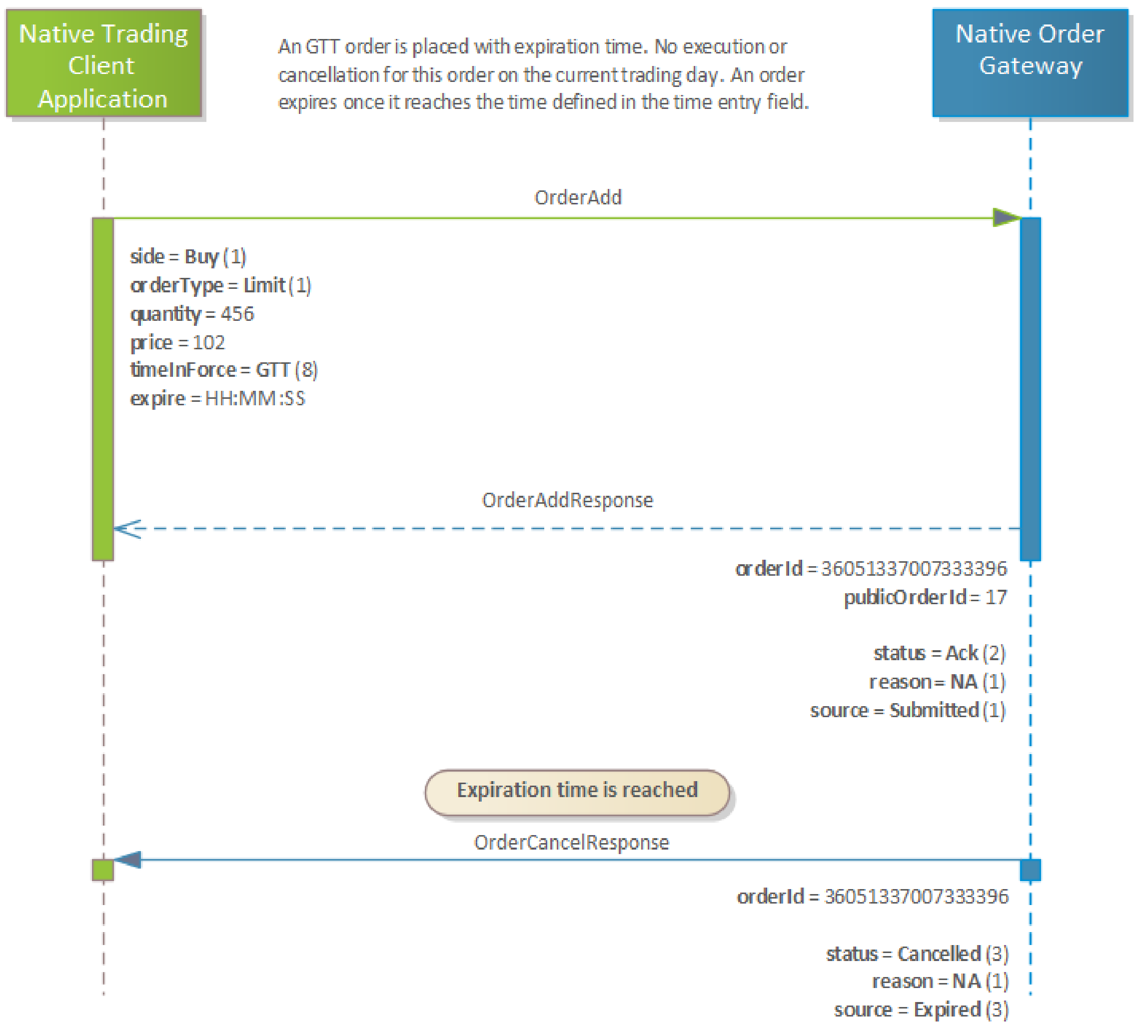
Order Cancellation – Rejected



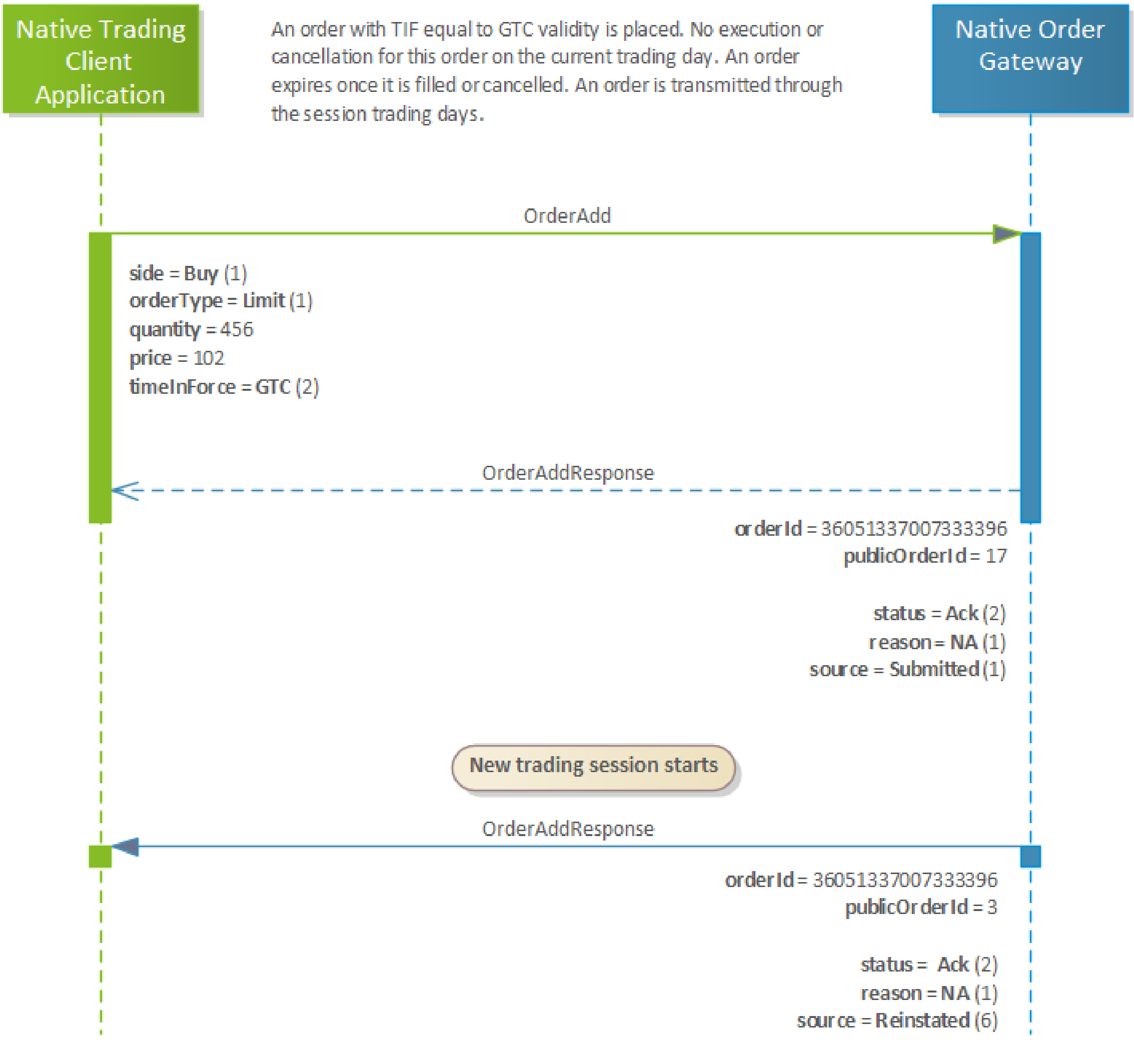
Day Order – Expired



GTT Order – Expired

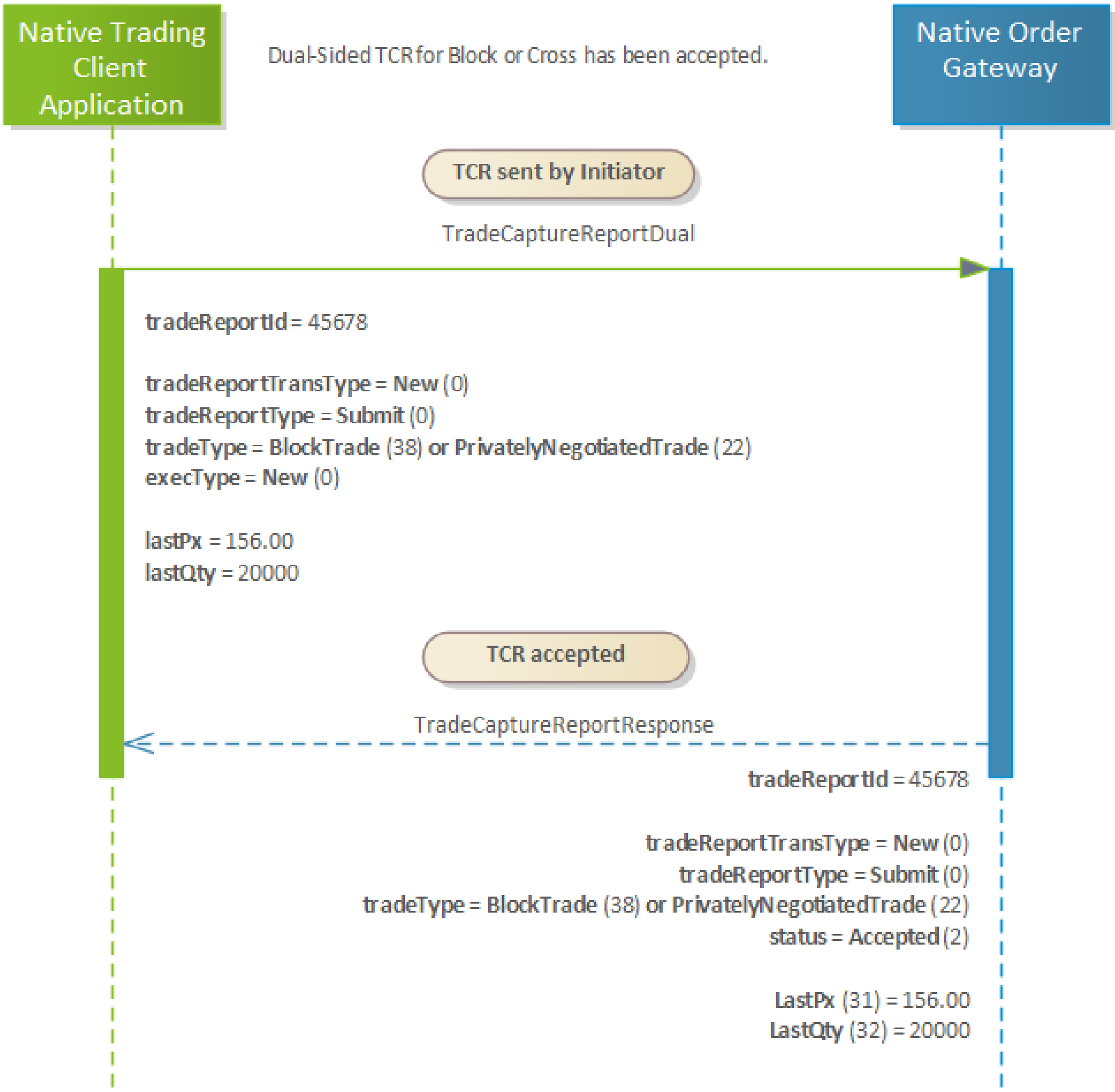


GTC Order – Reinstated

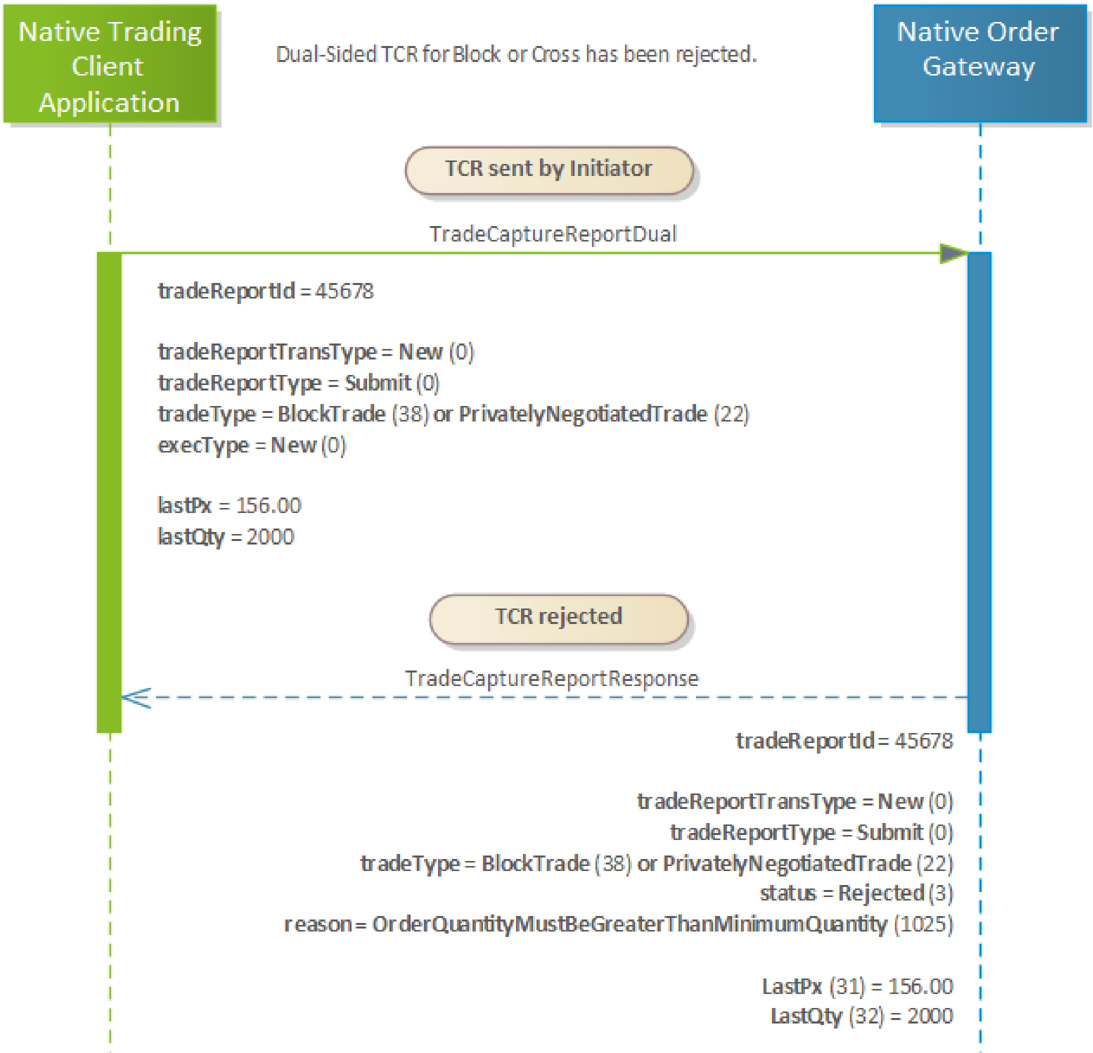


8.2. Off-Book (Block Or Cross)

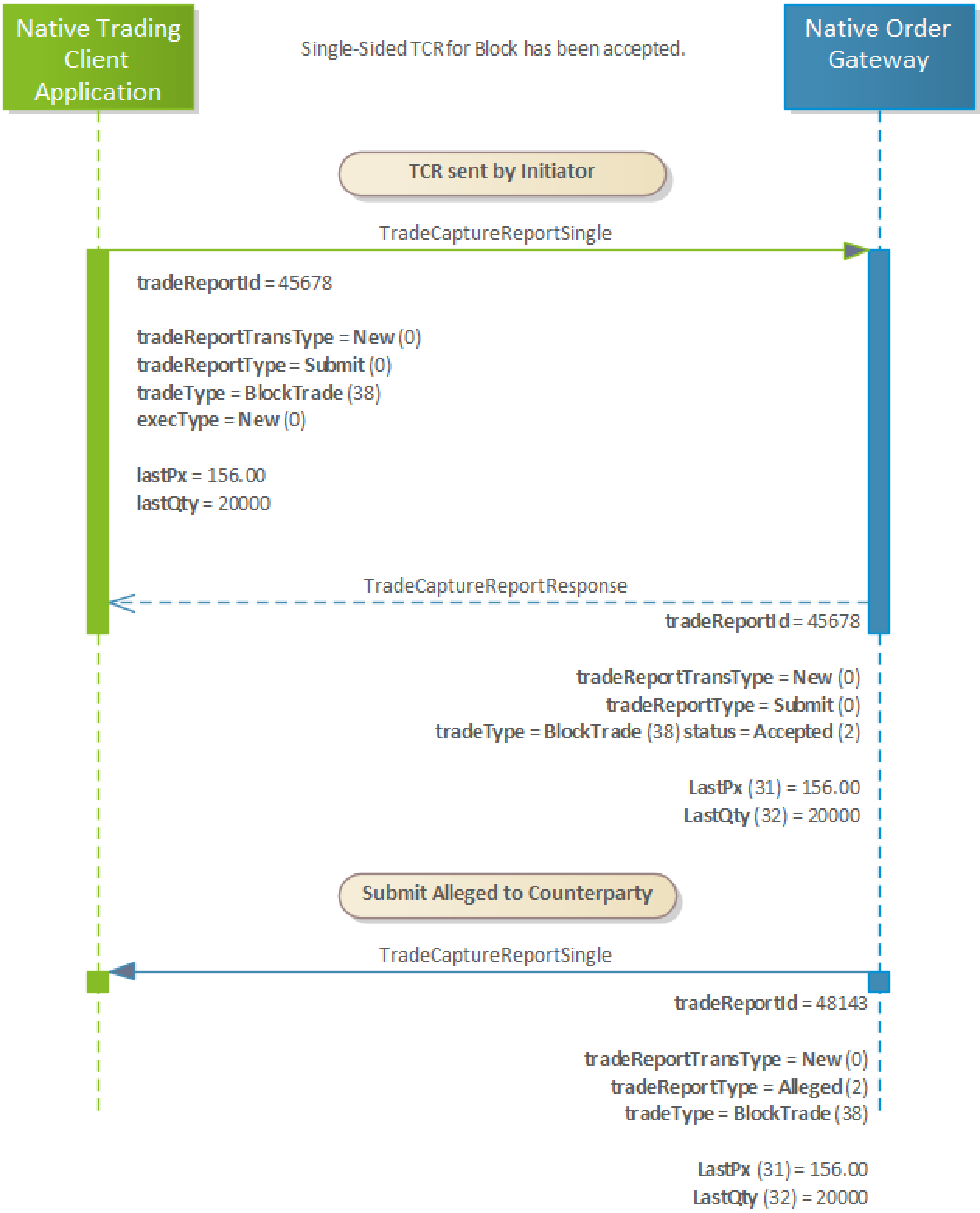
Dual Sided – Accepted



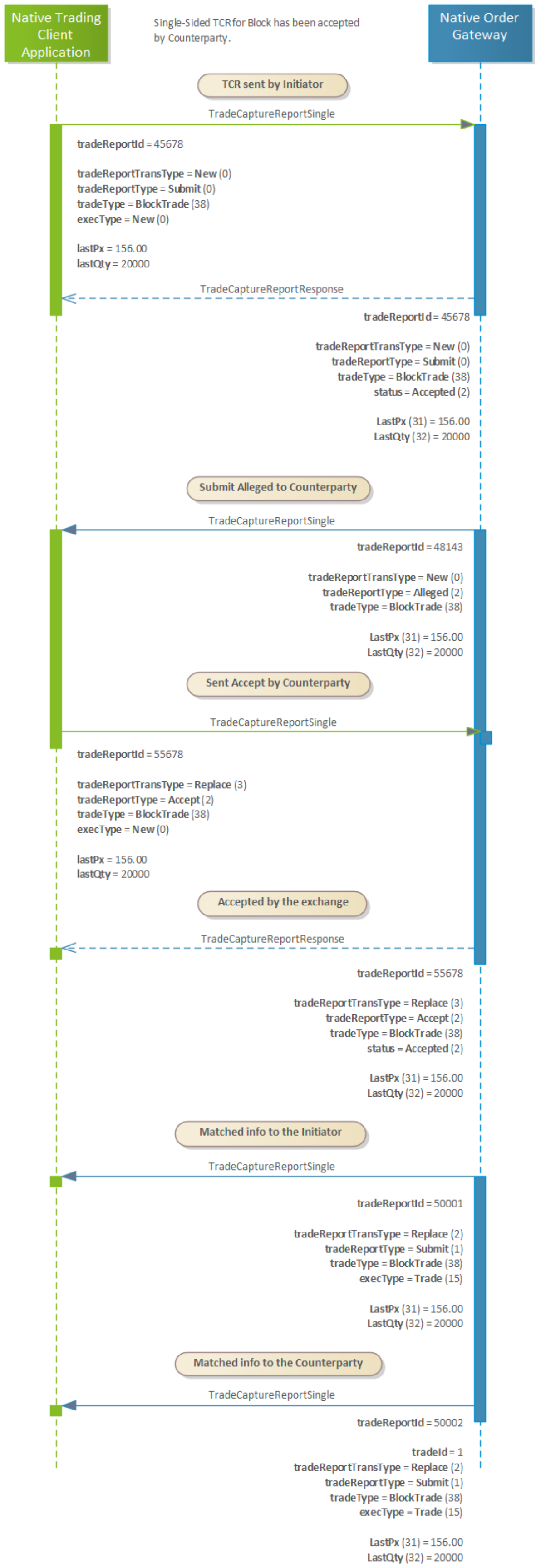
Dual Sided -Rejected



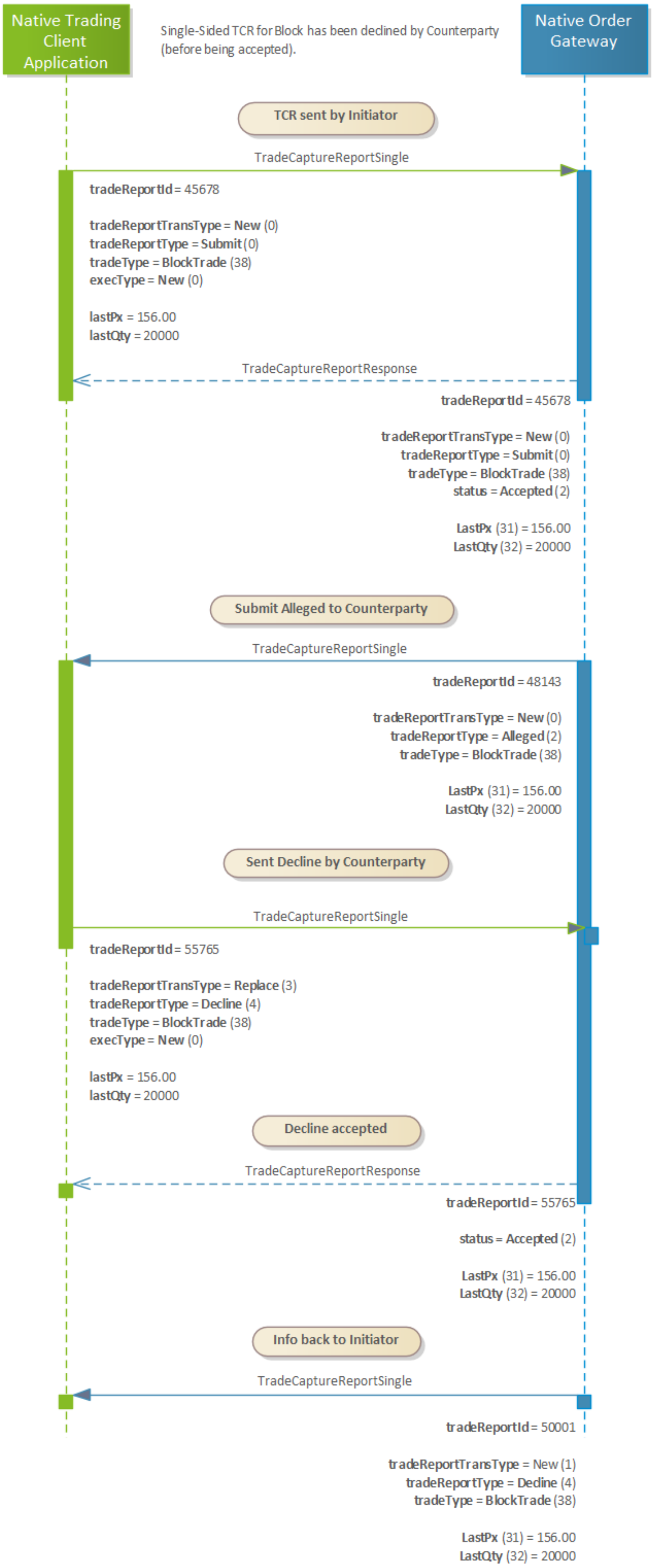
Single Sided – Accepted



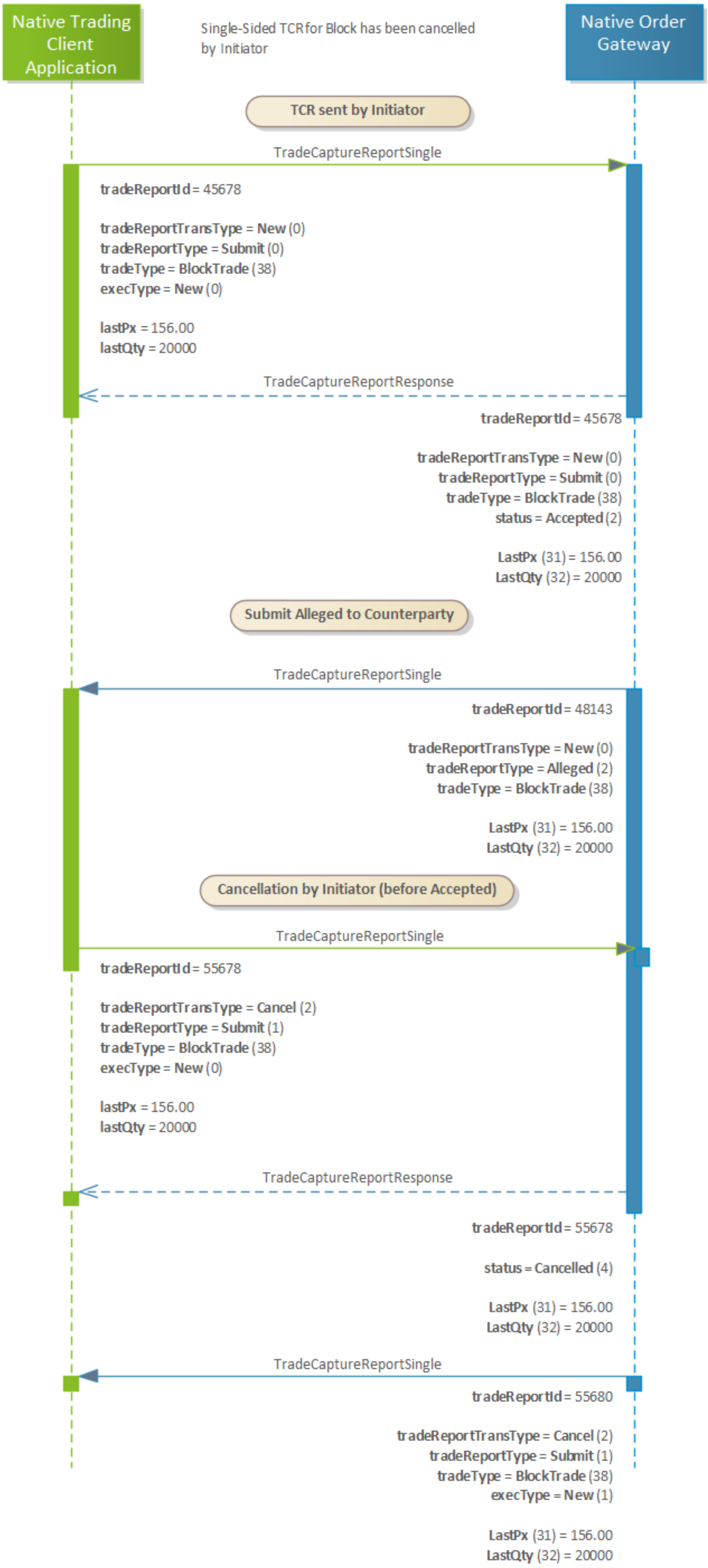
Single Sided – Accepted by Counterparty



Single Sided – Denied by Counterparty



Single Sided – Cancelled by Initiator



Single Sided – Rejected