# Bombay Stock Exchange's NTA

# Enhanced Trading Interface

## Manual

Bombay Stock Exchange's NTA Release 2.1

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BSE Ltd.

Enhanced Trading Interface

V1.6.8

# Contents

# 1 List of Abbreviations

Please find a list of all the abbreviations used in the document. The first time an abbreviation is introduced in the document it is written in brackets after the phrase.

| | |
|---|---|
| **BSE ETI** | **BSE Enhanced Trading Interface** |
| **MDI** | BSE Market Data Interface |
| **EMDI** | **BSE Enhanced Market Data Interface** |
| **VALUES API** | Virtual Access Link Using Exchange Services Application Programming Interface |
| **UDF** | User-defined field that is not part of the official FIX Specification |
| **IOC** | **Immediate or Cancel Order** |
| **RRM** | **Risk Reducing Mode** |
| **HOVC** | **High Order Value Check** |
| **ZT Terminal** | **Zero Terminal** |
| **HF** | **High Frequency Session** |
| **LF** | **Low Frequency Session** |
| **OCO** | **One Cancels the Other Order** |
| **BOC** | **Book or Cancel Order** |
| **SLB** | **Securities Lending and Borrowing** |
| **STPC** | **Self Trade Prevention Check** |

# 2 Introduction

The BSE Exchange's Trading Architecture is the industry-leading, multi-asset trading platform of the Deutsche Börse Group, its affiliates and partners.

The system has best-in-class performance and is scalable to support markets of any size. It can be customized to support different types of markets.

The BSE Enhanced Trading Interface (BSE ETI) is the high performance interface designed for participants who require the highest throughput and the lowest latency for their transactions.

All application messages between the client and the BSE ETI follow FIX V5.0 SP2 semantics including all officially approved extension packs.

A proprietary session layer with flat binary encoding is used in order to interface with the exchange

In addition to supporting all trading functions, the BSE ETI enables participants to subscribe to private trading data:

- Trade notifications for all sessions of the business unit
- Drop copy for complete order history of all standard orders of a session

The following trading support information may be subscribed by each session:

- General messages from BSE market supervision

Private risk control messages are automatically sent to each session of the corresponding trading and clearing business unit.

The BSE ETI does not provide any market data, reference data, or administrative functions.

## 2.1 Purpose

The purpose of this document is to provide the Application Programming Interface details(API) of the new BSE ETI interface to participants

It describes the main concepts of the BSE ETI as well as all message formats.

In addition to this document a corresponding XML representation and the schema files are published.

## 2.2 Readership

The main target group are technical staff within the participant firms. Chapter Message Formats provides the detailed message formats and fields. An introduction to the XML Interface Description and important message flows are provided in the appendix. The chapter 8.5 Uniqueness of Identifiers documents criteria required for uniqueness of Ids.

# 3 Technical Overview

The BSE Enhanced Trading Interface (BSE ETI) is the high performance trading interface designed for participants who require the highest throughput and the lowest latency. This transactional interface is provided in parallel to the BSE FIX Gateway whose target groups are FIX 4.2 and FIX 4.4 customers.

The BSE ETI has the following main characteristics:

## 3.1 Message Based

The BSE ETI is an asynchronous, message-based interface. The connection between the participant and the new BSE trading architecture is established via a TCP/IP connection.

## 3.2 Low Footprint

Integration of the BSE ETI interface into the participant's existing IT infrastructure is simplified due to the following:

- No special hardware is required.
- No exchange software has to be installed.
- Free choice of operating system, programming language and compiler versions.

## 3.3 Standard

The BSE ETI is predominantly derived from the industry standard FIX protocol. The best practices of FIX have been adopted.

## 3.4 Session Oriented

The BSE ETI is a session oriented interface.

Participant applications connect to the trading system via the Exchange Application Gateways that host the client sessions. A session is established by opening a TCP/IP session to the gateway.

The exchange provides a unique session identifier that is used when logging on. A Session ID can only establish one session at any time. Each participant application requires its own session.

BSE ETI based applications receive information on orders and quotes which were entered in their own session. Several trading groups and traders of the same business unit may share a single session.

For each segment a separate session is required to be made by the BSE ETI based applications. The participant identifier remains same for both segment and the participant has the flexibility to use the same session or different session for each segment.

## 3.5 Subscription Mechanism

The BSE ETI provides information across sessions via a subscription mechanism. This includes trade notifications at a session level, the complete order history of standard orders of another session (listener broadcast), and public news messages.

## 3.6 Full Control in Case of a Failover

A two way heartbeat mechanism between the participant's application and the new BSE trading architecture enables the detection of disruptions in the trading session between the participant and the Exchange gateway.

**The BSE ETI does not include any mechanism for automatic fail over. Participant applications can implement a fail over mechanism of their choice that supports their requirements. Please refer to chapter Fail over for more information.**

## 3.7 Architecture Throttle

The number of transaction requests transmitted to the exchange in pre-defined time interval by each participant session is limited. This is to:

- Prevent single participant sessions generating excessively high transaction rates, which might adversely affect the exchange's trading as a whole.
- Guaranteed fairness between participant sessions.

For more details, please refer to chapter 5.4 Throughput Limits.

# 4 Service Description

## 4.1 FIX Semantics

All application messages between the participant and the BSE ETI follow FIX V5.0 SP2 semantics including all officially approved extension packs.

Additionally user defined fields (UDF) and messages have been added to cover functional gaps in the FIX standard or to increase performance.

The following changes have been made for enhanced performance reasons:

- All rejections and errors on an application and session level are communicated via the FIX standard *Reject (3)* message.

- All parties are identified by individual UDFs instead of repeating groups.

The FIX **messages** are denoted in the following way:

- Message name (Message Type)

The FIX **fields** are denoted in the following way:

- Field name (FIX Tag)

FIX repeating groups and components are denoted in the following way:

- <Group name>

## 4.2 Party Identification

The **participant** is the market entity accessing the Exchange. The BSE concept of a member remains in place, and will be represented by a "participant"' .

A participant may have several **business units** as independent entities taking part in trading at the exchange. Business units are identified by a business unit ID. A business unit belongs to a participant. The BSE ETI deals only with the concept of a business unit of a participant.

A **user** is a person, such as a trader or an exchange market supervisor who actually interacts with the Exchange. Users are identified by a user ID. A user belongs to one business unit. A user is a trader or administrator that logs on to the system and can perform various actions on the Exchange.

Users can be further assigned to a specific **trader group**, along with the *head trader* and *supervisor roles*:

- A user with a user level of **head trader** may modify or cancel orders of any user belonging to the same trader group.

- A user with a user level of **supervisor** may modify or cancel orders of any user belonging to the same business unit.

All requests that are received by the BSE Enhanced Trading Interface (BSE ETI), with the exception of session related requests, must carry the ID of a user that enters the request.

The details of the user of the business unit needs to be filled in the *SenderSubID (50) tag* of the request header. All orders and quotes must carry the identification of a physical person that is legally responsible for the order / quote.

The following roles and attributes are supported in BSE ETI: (The relevent ETI tags are given for clarity)

| Party | Description | Party Attributes | Relevant FIX Field |
| --- | --- | --- | --- |
| Participant | The participant is an entity accessing BSE Exchange's New Trading Architecture. | Participant Short Name | RootPartyExecutingFirm(22401) |
| Business Unit | Indicates the company or a part of a company that is set up as an independent entity taking part in trading at the exchange. | Business Unit ID | PartyIDExecutingUnit (20059), RootPartyIDExecutingUnit (20459), PartyDetailIDExecutingUnit (20259) |
| User | A business unit can have multiple users. A user can be a trading user and/or an administrator. | User ID | Username (553), SenderSubID (50) |
| Owning User | User who owns the transaction. | Owning User ID | PartyIDExecutingTrader (20012), RootPartyIDExecutingTrader (20412), TargetPartyIDExecutingTrader (20612) |
| | | Owning User Short Name | RootPartyExecutingTrader (22412) |
| Entering User | User who initiates/submits the order / quote transaction; could be the head trader or supervisor or a market supervision user. | Entering User ID | PartyIDEnteringTrader (20036) |
| Entering Entity | Identifies the entity that entered the transaction; might be market supervision, the participant or the clearing member. | Entering Entity ID | PartyIDEnteringFirm (20007) |
| | | Entering Entity Short Name | RequestingPartyEnteringFirm (22807) |
| Trader Group | Users can be assigned to a specific trader group. | Trader Group | TargetPartyIDDeskID (20676) |
| Session | Identification of the session. A session belongs to a business unit. | Session ID | PartyIDSessionID (20055), TargetPartyIDSessionID (20655), RootPartyIDSessionID (20455) |
| System | Executing system. | System ID | RequestingPartyIDExecutingSystem (20816) |

UDF tags for BSE ETI parties consist of an offset and the standard "enum" value of *PartyRole (452):*

- *PartyID (448)* has an offset of 20000
- *RootPartyID (1117)* has an offset of 20400
- *TargetPartyID (1462)* has an offset of 20600

UDF names for BSE ETI parties consist of the standard FIX field name (*PartyID (448), RootPartyID (1117), TargetPartyID (1462)*) concatenated with the symbolic name of the standard "enum" value of *PartyRole (452)* as defined in the FIX Repository.

For example the BSE ETI tag and field name for the user is *PartyIDExecutingTrader (20036).*

## 4.3 Security Identification

Each BSE product is processed on exactly one partition; a partition is a grouping of products. To optimize the routing to the corresponding partition, the product identifier needs to be provided in each order and quote transaction by the participant. The exceptions to this rule are Short Order Message Layouts, see chapter 4.6.8 Short Order Message Layouts.

Both single and multi leg instruments are uniquely identified by the unique instrument identifier.

Additionally for multi leg instruments it is mandatory to specify the instrument type in all order requests.

| Identifier | Description | Relevant FIX Tags |
|---|---|---|
| **Product Identifier** | **The product identifier uniquely identifies a BSE product.** | **MarketSegmentID (1300)** |
| **Instrument Identifier** | **The instrument identifier uniquely identifies an instrument in the core system.** | **SecurityID (48), SimpleSecurityID (30048)**[1] |
| **Instrument Type** | **Required for complex instruments, valid values are: 1 = Simple Instrument 5 = Futures Spread** | **ProductComplex (1227)** |

## 4.4 Order Identifiers

Market Participants may choose one of the following **options for order identification**:

- Use a constant client order ID over the complete lifetime of an order, like it is currently supported in the BSE Enhanced Transaction Solution interface.
- Standard FIX policy of client order ID chaining: client order ID must change on every modification and cancellation request.
- Use the exchange order ID.

Market participants may use the client order ID for order and order related message identification. Modification and cancellation of an order is supported both via the client order ID and the exchange order ID. Additionally . is required to be provided along with client order ID and exchange order ID

Once an order has a client order ID, it must have a client order ID for the rest of its life cycle. Respectively an order without a client order ID cannot be modified to have a client order ID later on in its life cycle.

[1] *SimpleSecurityID (30048):* Instrument identifier for simple instruments. Refer Instrument ID field. For MarketSegmentID(1300) refer ProductID field of BSE Contract Master file

### 4.4.1 Client Order ID

The FIX standard field *ClOrdID (11)* is used for the client order ID.

**Note: It is not mandatory for the market participants to use a new *ClOrdID (11)* for application messages related to a resting order; i.e. the *ClOrdID (11)* may stay the same during the life cycle of an order**.

The standard FIX policy regarding usage of client order IDs is also supported

- When modifying or cancelling an order, a new *ClOrdID (11)* must be provided.
- The order to be modified or cancelled is identified with the *OrigClOrdID (41)*. In this way the customer is able to find and track individual requests by their client order ID.

If a market participant changes the client order ID, the uniqueness of ClOrdID (11) is checked at entry time among currently live orders for the same instrument and session. Duplicate ClOrdID (11) values for the same session and instrument will be rejected with the exception of Immediate or Cancel (IOC) Orders.

### 4.4.2 Exchange Order ID

The exchange order ID is assigned by Exchange on every order and remains unchanged for the entire life time of the order. An order modify does not result in a change of the exchange order ID.

**An exchange order ID is guaranteed to be unique among all orders of the same product**.

The FIX standard field *OrderID (37)* is used for exchange order ID.

### 4.4.3 Activity Time

The field *ActivityTime (30645)* is the timestamp provided by matching engine for each order activity. This timestamp changes with each modification or immediate execution of an order and the new timestamp will be provided in every response and execution messages. The timestamp will not change for book order execution. The field *ActivityTime (30645)* is required field in modification and cancellation requests. Market participants have to mandatorily send activity timestamp in every modification or cancellation request of an order. The value of the field *ActivityTime (30645)* should always be equal to the timestamp that was received in last order response or immediate execution message of that order. The modification or cancellation request will be rejected if the activity timestamp value does not match the last activity timestamp value which is present in matching engine for that order.

The exceptions to above behaviour are multileg orders, RRM orders. The activity time will not be validated for these orders.

## 4.5 Order Handling

### 4.5.1 Order Types

The following BSE order types are supported via the BSE ETI interface:

| Order Type | Description | Relevant FIX Tags |
|---|---|---|
| **Market** | An order for buying or selling at the best price prevailing in the market at the time of submission of the order. Any unexecuted portion of the order remains as a pending order till it is matched or its duration expires. The MaxPricePercentage provides protection to market orders form unfair execution prices. **The protection percentage will be applied on the first trade price of the order and the worst price is arrived at. The subsequent execution of the order will happen till the worst price if opposite side avialbe else will be converted to limit order at the last executed price.** | **OrdType (40) = 5 MaxPricePercentage(28740)** |
| **Limit** | Limit orders include a specified price limit, and may not be executed at a price worse than that limit. | **OrdType (40) = 2 Price (44)** |
| **Stop (Market)** | Stop market orders create market orders when the specified trigger price is reached. Similar to market orders, stop orders are not visible in the order book for any market participant. The stop loss(market) order will be available at the exchange but will not be will not be visible to the market till the stop loss trigger price is reached for that asset. Once it is triggered it will be converted to a normal market order and will be subject to the respective rules applicable. | **OrdType (40) = 3 StopPx (99)** |
| **Stop (Limit)** | The stop loss (limit) order will be available at the exchange but will not be will not be visible to the market till the stop loss trigger price is reached for that asset. Once it is triggered it will be converted to a normal limit order and will be subject to the respective rules applicable. | **OrdType (40) = 4 Price (44) StopPx (99)** |
| **One-cancels-the-other** | An order that combines the functionality of a limit order and a stop (market) order, expressed as a single order. Traders will specify a limit price and a trigger price as part of one order. | **OrdType (40) = 2 Price (44) StopPx (99)** |
| **Good-for-day (Day)** | **All orders are assumed to be day orders unless otherwise specified. The validity of a day order ends at the close of that trading period for the calendar day.** | **TimeInForce (59) = 0** |
| **Good-for-session (Session)** | **All orders are assumed to be session orders unless otherwise specified. The validity of a session order ends at the close of that trading session for the calendar day.** | **TimeInForce (59) = 7** |
| **Immediate or Cancel (IOC)** | **An IOC order is to be filled immediately, either completely or to the extent possible; the portion that cannot be filled immediately is cancelled.** | **TimeInForce (59) = 3** |

| Order Type | Description | Relevant FIX Tags |
|---|---|---|
| Book or Cancel | An order, which is placed as resting liquidity in the order book to ensure passive execution. If immediate (and hence aggressive) execution is possible, the order is rejected without entry into the order book. | ExecInst (18) = 6 (encoded as bit map with third bit being set) |
| Non-persistent | Non-persistent orders are automatically cancelled in case of a trading interruption, session loss or exchange system failure and are only valid good-for-day. | ExecInst (18) = Q (encoded as bit map with second bit being set) |
| Persistent | A persistent order is an order that survives a trading interruption. Persistent orders are always written to disk to prevent them from being lost during an emergency and remain in the book until their validity expires. | ExecInst (18) = H (encoded as bit map with first bit being set) |
| Standard | The complete order history of an order having this flag set will be part of the listener broadcast and may be recovered via retransmission requests. Standard orders can be persistent or non-persistent. | ApplSeqIndicator (28703) = 1 (Recovery_Required) |
| Lean | The receipt of status information of orders having this flag set is restricted to the owning session. Only match events in the session scope and unsolicited events may be recovered via the retransmission request. Note: Lean orders are always Non-persistent and are only valid good-for-day. | ApplSeqIndicator (28703) = 0 (No_Recovery_Required) |
| Block Deal | Limit orders include a specified price limit which can match with another block deal order only. The matching will happen with opposite block deal order at the same rate and for the full quantity. No partial executions are possible for block deal | OrdType (40) = 6 Price (44) |
| All or None | Applicable for Multi leg orders only. IF the flag is set by the user then the matching for the multi leg order will happen for full quantity only. In case full quantity is not available then the multi leg order will be rejected. If the flag is not set then the matching for the multi leg order can happen for partial quantity also if full quantity is not available. In partial matching the quantity executed will be in the ratio of the order quantity. | AllOrNonFlag(30641) = Y ( Flag set) AllOrNonFlag(30641) = N ( Flag not set) |
| Recall/Early Return | These are special type of buying and selling which are applicable for SLB market only. They are validated against existing positions.<br>Recall is validated against existing sell position in that contract.<br>Early Return is validated against existing buy position in that contract. | Side (54) = 3<br>Side (54) = 4 |

| Order Type | Description | Relevant FIX Tags |
|---|---|---|

### 4.5.2 Order Quantity

Participants need to specify two quantity in the order request. The field *OrderQty (38)* will determine the total order quantity desired by the user. The field *MaxShow (210)* will determine the quantity desired by the user to be shown in the market data. The user can request to show total quantity in the market data or part of the total quantity subject to applicable criteria for the MaxShow quantity. The MaxShow quantity is also called as revealed quantity.

### 4.5.3 Cancellation

The owner of an order is the entering business unit, session and user. The Exchange also supports order cancellation on a different session for the same business unit. Head traders of the same trader group and the supervisor(ZT Terminal) of the business unit may cancel on behalf of the owning user. Cancelling an order will remove the remainder of a live order from the Exchange's order book. The participant may either use the *OrigClOrdID (41)* and *ActivityTime (30645)* or the *OrderID (37)* and *ActivityTime (30645)* to identify the corresponding order to cancel. The Exchange will respond with an *Execution Report (8)* or *Reject (3)* message for cancellation confirmation or cancellatio rejection respectively.

### 4.5.4 Modification

- An order may only be modified if the request comes from the same user, or a supervisor, or a head trader from the same trader group.
- The participant may either use combination of the *OrigClOrdID (41)* and *ActivityTime (30645)* or the combination of *OrderID (37)* and *ActivityTime (30645)* to identify the corresponding order to modify. The BSE ETI interface will respond with an *Execution Report (8)* or *Reject (3)* message for modification confirmation or modification rejection respectively.
- Orders that have been completely filled cannot be modified.
- The following order attributes cannot be modified:
  - Security identification: *MarketSegmentID (1300), SimpleSecurityID (30048), SecurityID (48), ProductComplex (1227)*
  - *Side (54)*
  - *TradingSessionSubID (625)*
  - *ExecInst (18)*
  - *ApplSeqIndicator (28703)*
- The following restrictions apply to the modification of the field *OrdType (40)*:

- A Limit Order (*OrdType (40)* = 2) may only be modified to a Market Order (*OrdType (40)* = 5).
- A Stop (Market) Order (*OrdType (40)* = 3) may only be modified to a Stop (Limit) Order (*OrdType (40)* = 4) or Limit Order (OrdType(40)=2) or Market Order (OrdType(40)=5)
- A Stop (Limit) Order (*OrdType (40)* = 4) may only be modified to a Stop (Market) Order (*OrdType (40)* = 3) or Limit Order (OrdType(40)=2) or Market Order (OrdType(40)=5).

- An order that is modified will lose its time priority, i.e. it will get a new priority timestamp, if
  - *Price (44)* is modified in any way, or
  - *OrderQty (38)* is increased, or
  - *OrdType (40)* is changed, or
  - *ClientCode(58)* is changed, or
  - *ExecType (150)* is "L = Triggered by system".
  - *Maxshow (210)* is increased .

### 4.5.5 MaxShow quantity modification

In modification request the user can modify the MaxShow(210) field to show either the full LeavesQty (151) or part of LeavesQty (151) in the market data.

The quantity to be sent in the MaxShow(210) field should be the desired visible quantity of the user.

All orders where the user desires to show the full LeavesQty (151) in the market data, the MaxShow (210) field can be set as 0 is the request.

There are certain business rules on visible quantity and it will be validated for each request.

### 4.5.6 Total Order Quantity Modification

Participants need to specify the new total order quantity when modifying the field *OrderQty (38)*. This approach leads, from a participant's point of view, to a clear and deterministic behaviour by specifying a total execution limit. The previously executed quantity of an order is maintained and is used to calculate the new open quantity. If this is zero or less then the order will be cancelled.

During the lifetime of an order, the total quantity of the order is always equal to the sum of the open order quantity and the accumulated traded quantity:

$$\textit{OrderQty (38)} = \textit{CumQty (14)} + \textit{LeavesQty (151)}$$

After an order has been cancelled (*OrdStatus (39)* is *"4 = Cancelled")*, the total quantity of the order is equal to the sum of the cancelled order quantity and the accumulated traded quantity, while the open order quantity is zero.

$$OrderQty\ (38) = CumQty\ (14) + CxlQty\ (84)$$

### 4.5.7 Order Mass Cancellation

Using the Order Mass Cancellation Request, a user can cancel all orders within a specified instrument, user or session scope using single request to exchange.

**The instrument scope can be extended to an entire product. The session scope can be extended to all sessions of the submitting user or may reference a single but different session.**

Only orders that are either directly owned by the executing user or which have been selected and are allowed to be cancelled according to the user's authorization level (trader, head trader, supervisor) will be cancelled.

The following filter criteria can be specified:

| Filter Criteria: Target Parties | Description |
|---|---|
| **TargetPartyIDExecutingTrad (20612)** | **Cancel all orders owned by a user ID.** |
| **TargetPartyIDSessionID (20655)** | **Cancel all orders of a session depending on the authorization of the user role.** |

The user may filter on a specific owning session or the session scope can be extended to all sessions of the business unit.

A head trader may cancel all orders of any user belonging to the same trader group or for the complete trader group. Additionally the session may be used as filter criteria.

**A supervisor may opt for the cancellation of all orders of any user, any trader group and any session of the business unit.**

The omission of the filter criteria results in a mass cancellation request for all orders of the business unit in a product or instrument respectively.

Note: Mass cancellation confirmation is not provided on a single order quote level. The owning session will be informed about the scope of the cancellation by a summary record with an exception list. Please find more information regarding unsolicited mass order cancellation in chapter Mass Cancellation Notification.

### 4.5.8 Text Fields

The new trading architecture supports three free-format text fields for trader-specific comments to an order or trade.

The mapping of the BSE text fields to the FIX tags is as follows:

| Text Field | Valid Characters (hex) | Relevant FIX Tags |
|---|---|---|
| Free Text Field 2 | \x20,\x22-\x7B,\x7D,\x7E | FreeText2 (25008) |
| Free Text Field 3 | \x20,\x22-\x7B,\x7D,\x7E | FreeText3 (25009) |

### 4.5.9 Short Order Message Layouts

The BSE ETI supports order message layouts with reduced message content for simple instruments: New Order Single (Short Layout) and Replace Order Single (Short Layout). The reduced payload of these messages, which is similar to quote messages, provides improved latency.

For short order message layouts the following order attributes are implicitly set:

Lean

Non-persistent

Limit order

Product Identifier

The usage of TimeInForce (59) in short order message layouts is limited to the following options:

Good for Day

Good for Session

Immediate or Cancel (IOC)

Note: Orders entered via New Order Single (Short Layout) may only be modified via Replace Order Single (Short Layout). The combined usage of short and "normal" order message layouts for the same order is not supported.

### 4.5.10 STPC Flag

The field *STPCFlag(30651)* indicates the preference of order to be cancelled in case of potential self-trade( match between same PAN) is encountered. The user can select for each order, if he desires to cancel the active( incoming) order or passive( resting) order in such case.

- The preference indicated in fresh order entry will be applicable for the life of order. The preference cannot be changed in modification requests.

- If the preference is set to passive then full resting order will be cancelled and session will be notified through Extended Order Information ( 10117).
- The preference set in active order will always have precedence over preference set in passive order.

The behaviour of matching based on flag set will be as per table below

| Order | STPCFlag(30651) = Active | STPCFlag(30651) = Passive |
|---|---|---|
| **Active(Incoming) order** | **If a self-trade case is encountered at a price point then matching will be restricted to that price point only.**<br><br>**The active order will be matched with other orders present at the price point only and remaining quantity of active order will be cancelled.** | **If a self-trade case is encountered at a price point then the passive order will be cancelled completely and matching of active order will continue to happen till the match able quantity is available at same price point or other match able price points.** |

### 4.5.11 Location ID

The Location Id of the end-user who is placing the orders should be registered with the Exchange. The location id consists of 16 digits and break-up of this Location Id is given below:

6 digits: Pin Code

5 digits: ETI Id / Branch ID

1 digit: Program Trading

Possible Values

0 – No Program Trading

1 – Program Trading Allowed

2 – DMA Allowed but No Program Trading

3 – DMA Allowed with Program Trading

4 – SOR

5 – Handheld Device

6 – SOR with DMA

7 – SOR with DMA with Program Trading

2 digits: Vendor Code

P.S:

The location ID needs to be registered through the web interface provided to the members.

If the end-user passes a Location Id with Invalid length (i.e. not equal to 16 digit) then the order request will be rejected. However if the user passes a valid length location ID but which is not registered with the exchange. In such case the order will be successfully accepted.

Such orders will be subjected to penalty at EOD.

### 4.5.12 Order Status and Execution Reports

The *Execution Report (8)* message is used to communicate many different events. The type of event is specified in the *ExecType (150)* field and the *OrdStatus (39)* field is used to convey the current status of an order.

The BSE ETI will always send only one response message per request. Unsolicited events are communicated via notifications.

In general scenarios triggered by another session do not differ from scenarios triggered by the same session, except for unsolicited modifications not resulting in an execution due to FIX compliance reasons.

The following table shows different order scenarios and their usage of *OrdStatus (39)*, *ExecType (150)* and *ExecRestatementReason (378)* in the *Execution Report (8)* sent by the BSE ETI Interface:

| Scenario | OrdStatus(39) | ExecType (150) | ExecRestatementReason (378) |
|---|---|---|---|
| NEW ORDER | | | |
| Non-IOC order added without execution | 0=New | 0=New | 101=Order added |
| Non-IOC order added with partial execution | 1=Partially filled | F=Trade | 101=Order added |
| Order (IOC or non-IOC) added with full execution | 2=Filled | F=Trade | 101=Order added |
| IOC order added without execution | 4=Cancelled | 4=Cancelled | 105=IOC order cancelled |
| IOC order added with partial execution | 4=Cancelled | F=Trade | 105=IOC order cancelled |
| Market order added without execution | 0=New | 5=Replaced | 135=Market order triggered |
| Market order added with partial execution | 1=Partially filled | F=Trade | 135=Market order triggered |
| Market order added with full execution | 2=Filled | F=Trade | 101=Order added |
| Stop order added and triggered without execution | 0=New | L=Triggered | 101=Order added |
| Stop order added and triggered with partial execution | 1=Partially filled | F=Trade | 101=Order added |

| Scenario | OrdStatus(39) | ExecType (150) | ExecRestatementReason (378) |
|---|---|---|---|
| Stop order added and triggered with full execution | 2=Filled | F=Trade | 101=Order added |
| Order added and cancelled because of self trade without execution | 4=Cancelled | 4=Cancelled | 246=Self trade order deleted |
| Order added and cancelled because of self trade with partial execution | 4=Cancelled | F=Trade | 246=Self trade order deleted |
| Order added and cancelled because of trade reversal without execution | 4=Cancelled | 4=Cancelled | 247=Trade reversal order deleted |
| Order added and cancelled because of trade reversal with partial execution | 4=Cancelled | F=Trade | 247=Trade reversal order deleted |
| Attempt to add executable BOC order | 4=Cancelled | 4=Cancelled | 212=BOC order cancelled |
| Market order added and cancelled because of range violation with partial execution | 4=Cancelled | F=Trade | 265=Market Order Out Of Range |
| Market order added and cancelled because of range violation without execution | 4=Cancelled | 4=Cancelled | 265=Market Order Out Of Range |
| REPLACE ORDER | | | |
| Unfilled order replaced (remaining non-IOC) without execution | 0=New | 5=Replaced | 102=Order replaced |
| Unfilled order replaced (remaining non-IOC) with partial execution | 1=Partially filled | F=Trade | 102=Order replaced |
| Partially filled order replaced without execution | 1=Partially filled | 5=Replaced | 102=Order replaced |
| Order quantity replaced at or below executed quantity | 4=Cancelled | 4=Cancelled | 102=Order replaced |
| Order replaced (remaining non-IOC) with partial execution | 1=Partially filled | F=Trade | 102=Order replaced |
| Order replaced (to IOC or non-IOC) with full execution | 2=Filled | F=Trade | 102=Order replaced |
| Order replaced to IOC without execution | 4=Cancelled | 4=Cancelled | 105=IOC order cancelled |
| Order replaced to IOC with partial execution | 4=Cancelled | F=Trade | 105=IOC order cancelled |
| Stop order replaced and triggered without execution | 0=New | L=Triggered | 102=Order replaced |
| Stop order replaced and triggered with partial execution | 1=Partially filled | F=Trade | 102=Order replaced |

| Scenario | OrdStatus(39) | ExecType (150) | ExecRestatementReason (378) |
|---|---|---|---|
| Stop order replaced and triggered with full execution | 2=Filled | F=Trade | 102=Order replaced |
| Order replaced and cancelled because of self trade without execution | 4=Cancelled | 4=Cancelled | 246=Self trade order deleted |
| Order replaced and cancelled because of self trade with partial execution | 4=Cancelled | F=Trade | 246=Self trade order deleted |
| Order replaced and cancelled because of trade reversal without execution | 4=Cancelled | 4=Cancelled | 247=Trade reversal order deleted |
| Order replaced and cancelled because of trade reversal with partial execution | 4=Cancelled | F=Trade | 246=Trade reversal order deleted |
| Market order replaced and cancelled because of range violation with partial execution | 4=Cancelled | F=Trade | 265=Market Order Out Of Range |
| Market order replaced and cancelled because of range violation without execution | 4=Cancelled | 4=Cancelled | 265=Market Order Out Of Range |
| CANCEL ORDER | | | |
| Order cancelled | 4=Cancelled | 4=Cancelled | 103=Order cancelled |
| Order cancellation deferred due to instrument freeze | 6=Pending Cancel | 6=Pending Cancel | 197=Order cancellation pending |
| Actual order cancellation after being initially deferred | 4=Cancelled | 4=Cancelled | 199=Pending cancellation executed |
| Market order cancelled after commit because of range violation | 4=Cancelled | 4=Cancelled | 265=Market Order Out Of Range |
| Market order cancelled after commit because of range violation with partial execution | 4=Cancelled | F=Trade | 265=Market Order Out Of Range |
| UNSOLICITED EVENT | | | |
| *Other session*: Unfilled order replaced (remaining non-IOC) without execution | 0=New | D=Restated | 102=Order replaced |
| *Other session*: Partially filled order replaced without execution | 1=Partially filled | D=Restated | 102=Order replaced |
| Partial execution of order resting on book | 1=Partially filled | F=Trade | 108=Book order executed |
| Full execution of order resting on book | 2=Filled | F=Trade | 108=Book order executed |
| Market order triggered and partially executed | 1=Partially filled | F=Trade | 135=Market order triggered |

| Scenario | OrdStatus(39) | ExecType (150) | ExecRestatementReason (378) |
|---|---|---|---|
| Market order triggered and fully executed | 2=Filled | F=Trade | 135=Market order triggered |
| Resting stop order triggered with partial execution | 1=Partially filled | F=Trade | 172=Stop order triggered |
| Resting stop order triggered with full execution | 2=Filled | F=Trade | 172=Stop order triggered |
| Restatement of unfilled order | 0=New | D=Restated | 1=Order book restatement |
| Restatement of partially filled order | 1=Partially filled | D=Restated | 1=Order book restatement |
| Resting stop order triggered without execution | 0=New | L=Triggered | 172=Stop order triggered |
| Orders outside the price bands cancelled | 4=Cancelled | 4=Cancelled | 236=Out Of Price Band Order |
| Resting order cancelled because of self trade | 4=Cancelled | 4=Cancelled | 246=Self trade order deleted |
| Partial executed resting order cancelled because of self trade | 4=Cancelled | F=Trade | 246=Self trade order deleted |
| Resting order cancelled because of trade reversal | 4=Cancelled | 4=Cancelled | 246=Trade reversal order deleted |
| Partial executed resting order cancelled because of trade reversal | 4=Cancelled | F=Trade | 246=Trade reversal order deleted |
| Resting OCO order triggered with partial execution | 1=Partially filled | F=Trade | 164=OCO order triggered |
| Resting OCO order triggered with full execution | 2=Filled | F=Trade | 164=OCO order triggered |
| Resting OCO order triggered without execution | 0=New | L=Triggered | 164=OCO order triggered |
| | | | |
| RISK REDUCING MODE ORDER EVENTS | | | |
| NEW ORDER | | | |
| RRM IOC order added with provisional confirmation | 9=Suspended | 0=New | 215= RRM Order Added |
| RRM IOC order added with final confirmation without execution | 4=Cancelled | 4=Cancelled | 105=IOC order cancelled |
| RRM IOC order added with final confirmation with partial execution | 4=Cancelled | F=Trade | 105=IOC order cancelled |
| RRM IOC order added with final confirmation with full execution | 2=Filled | F=Trade | 216=RRM Order Accepted |
| RRM IOC order final Rejection | 9=Suspended | N=RRM Reject | 219= RRM Order Deleted |

| Scenario | OrdStatus(39) | ExecType (150) | ExecRestatementReason (378) |
|---|---|---|---|
| DELETE ORDER | | | |
| RRM order deleted during provisional confirmation | 4=Cancelled | N=RRM Reject | 103=Order Cancelled |
| RRM order deleted after final confirmation | 4=Cancelled | N=RRM Reject | 103=Order Cancelled |
| | | | |
| Block Deal | | | |
| NEW ORDER | | | |
| Block Deal order added without execution | 0=New | 0=New | 101=Order added |
| Block Deal Order added with full execution | 2=Filled | F=Trade | 101=Order added |
| REPLACE ORDER | | | |
| Unfilled order replaced without execution | 0=New | 5=Replaced | 102=Order replaced |
| Order replaced with full execution | 2=Filled | F=Trade | 102=Order replaced |
| CANCEL ORDER | | | |
| Order cancelled | 4=Cancelled | 4=Cancelled | 103=Order cancelled |
| UNSOLICITED EVENTS | | | |
| Order cancelled due to time expiry | 4=Cancelled | 4=Cancelled | 235=Block Deal Order Timed Out |

Note: For performance reasons the BSE ETI will use the standard FIX *Reject (3)* message for all rejections on application and session level.

### 4.5.13 Order Book Restatement

Order status inquiries are not supported by the Exchange Participants must maintain the state of orders based on the *Execution Report (8)* messages.

During the start-of-day phase and after a market reset event, all active orders of a session will be transmitted to the market participant via the respective session.

Inititally a Trading Session Event message is sent informing the participant about start-of-day or a market reset event per partition respectively, optionally followed by Extended Order Information messages for each restated order of the corresponding session and finally a Trading Session Event message is sent indicating the end of the restatement per product.

Note: Order book restatement messages are recoverable. The owning session can request a retransmission in the event it was not logged on at the time. Order book restatement messages are also sent on the listener broadcast.

## 4.6 Quote Handling

### 4.6.1 Quote Characteristics

A (double sided) quote establishes both a limit to buy and to sell within a single transaction. Quantities to buy and to sell are independent of one another. The new trading architecture supports one-sided as well as double-sided quotes.

A quote is owned by the session. A session may have only one quote per instrument. Sessions belonging to the same business unit may have different quotes in the same instrument, but only one Quote per session. quotes of the same business unit will not be executed against each other nor with the quotes of other market makers.

A user may overwrite, modify or cancel any quote of another user that is owned by the same session.

One session cannot enter or modify individual quotes of another session.

Sessions may cancel all quotes or inactivate and reactivate the quotes of another session belonging to the same business unit.

quotes are non-persistent; they are automatically cancelled in case of a trading interruption or exchange system failure (i.e. market reset) and are only valid good-for-day.

### 4.6.2 Maintaining Quotes

Quotes are entered using the Mass Quote message. A mass quote request may contain several single-sided or double-sided Quotes for different instruments of the same product. This is possible, for instance, for all options, and futures on stock.

There can only be one quote for an instrument in a Mass Quote message. Actions can be different for each side of a single instrument, for example in a double-sided quote; a trader can cancel one side and replace the other side.

The Client Order ID is not supported for quotes; instead the participant defines a mass Quote identifier *(QuoteID (117))* for each Mass Quote message. The mass quote identifier is provided in each Quote Execution Notification *(QuoteMsgID (1166))* and Trade Notification *(ClOrdID (11))*.

The new trading architecture has two methods for updating quotes:

- Quote Entry
- Quote Modification

Note: Quote Entry and Quote Modification cannot both be used within the same Mass Quote message.

The two types of quoting models are distinguished by the usage of different values in field *QuotesizeType (28723):*

| Quoting Model | QuotesizeType (28723) |
|---|---|
| **Quote Entry** | **2=Open Size** |
| **Quote Modification** | **1=Total Size** |

Every quote entry simply overwrites an existing quote without considering an existing executed quantity. For each quote entry request, the user must specify the new price and the new quantity of the quote side. Under Quote entry, there can only be one entry per instrument. If a two sided quote is entered then both sides must be in the same entry.

Accepted quotes are not confirmed in the Mass Quote Response unless additional information needs to be conveyed back to the submitter. The field QuoteEntryStatus (1167) identifies the status of quote entries of a mass quote that could not be processed as requested.

If an individual quote side of a double-sided quote in a mass quote request is rejected (for instance after the price reasonability check or the extended price range validation), then both sides of the quote for the instrument are not processed, and both sides of the current quote are cancelled; see Mass Quote Response message.

If however, the entire mass quote request is rejected, then any old quotes of the session remain unaffected; even if there had been new quotes for the corresponding instruments in the rejected mass quote request.

Quote modification allows a trader to enter or modify quotes with a total execution limit, similar to orders where the quantity specified by the trader is always a total order quantity. The previously executed quantity of a quote side is maintained and is used to calculate the new open quantity. If this is zero or less then the quote side will be cancelled. If the previous quote is not found, for example as it has traded out, then the modification is ignored.

The priority timestamp of a quote stored in the order book is preserved when the price is left unchanged and the open quote quantity is not strictly increased. Like for orders, when price and quantity are not modified, the priority timestamp is also preserved. In all other cases, the priority timestamp is refreshed.

To cancel a quote side, the quote quantity must be set to zero and the limit price field must be omitted. Only quotes entered via the same session can be cancelled with the Mass Quote Request (i).

Quote mass cancellation functionality is provided via Quote Mass Cancellation Request. With the help of this request it is possible to cancel all own quotes in a product as well as all quotes in a product of another session belonging to the same business unit. Please find more information regarding unsolicited mass cancellation in chapter 4.16 Mass Cancellation Notification.

The following table list the scenarios for the valid values of QuoteEntryStatus (1167):

| Scenario | Quote in Book | QuoteEntryStatus (1167) | BidCxlSize (28547) and/or SellCxlSize (28548) provided) |
|---|---|---|---|
| Incoming Quote with error | no | 5 = Rejected | no |
| Incoming Quote with error | yes | 6 = Removed quote in book and Rejected | yes |
| Incoming Quote during Freeze | | 10 = Pending | no |

| Scenario | Quote in Book | QuoteEntryStatus (1167) | BidCxlSize (28547) and/or SellCxlSize (28548) provided) |
|---|---|---|---|
| Incoming Quote during Freeze (already pending) | | 5 = Rejected | no |
| Modify Quote | no | 0 = Accepted with warning | 0 |
| Modify Quote (Qty <= executed Qty) | yes | 0 = Accepted with warning | yes (remaining Qty) |
| Incoming Quote side would lead to Crossing | yes | 0 = Accepted with warning | yes (quote side in book cancelled) |

## 4.7 Trade Notifications

### 4.7.1 Trade Characteristics

If subscribed to the Trade broadcast (see chapter 6.9 Broadcast), a session will receive Trade Notification messages that confirm each trade for the entire business unit.

Notifications about trades are only provided on Exchange via *Trade Capture Report (AE)* messages. **Information provided via *Execution Reports (8, U8)* is indicative only and needs to be confirmed via a *Trade Capture Report (AE)*. For further details see chapter Best Practices for order and Quote handling.**

The Exchange will send out the Trade Notification message for each order and quote execution to the trading and clearing business units involved. The receiving clearing business unit may belong to a different participant.

For trades in complex instruments, the Trade Notification message will be generated for each instrument leg executions.

### 4.7.2 Trade Reconciliation

- There are several identifiers that can be used to associate an *Execution Report (8)* or a Quote Execution Report (U8) with *Trade Capture Reports (AE)* and public trades on the market data interface. Please find an example message flow in the appendix, Trade Reconciliation and Identifiers Trade reconciliation and identifiers.

- Every **match event** with one or more executions (**match steps**) in a simple or complex instrument results in only one *Execution Report (8) or a Quote Execution Report (U8)* message for each order respectively. A Trade Notification will then be sent to confirm each trade at each price level. For complex instruments, there is a Trade Notification for each leg execution of the instrument.

- Every match step occurring at the exchange has an identifier that is provided in the field *FillMatchID (28708)* in the *Execution Report (8) QuoteEventMatchID (8714) in the Quote Execution Report (U8)*, and *TrdMatchID (880)* in the Trade Notification. This identifier allows participants to link trade capture reports and the corresponding execution report. The same identifier is placed into the field

*MDEntryID (278)* of the market data incremental feed in the BSE Enhanced Market Data Interface (EMDI) so that the trade can also be tracked in the market data feed.

- The *TradeID (1003)* field in the Trade Notification in BSE ETI uniquely identifies all order leg allocations referring to the same matching event, simple instrument and price. The *TradeID (1003)* is equivalent to the trade identifier in BSE Clearing.
- The field *SideTradeID (1506)*, which is unique for a product and business day, in the Trade Notification provides the private identifier of an order or quote match step event, which can be reconciled with the corresponding *Execution Report (8)* for orders *and Execution Report (U8) for quotes* the following way:
  - For order match events in simple instruments, the *Execution Report (8)* message provides the order execution ID on each price level, *FillExecID (1363)*.
  - For order match events in complex instruments the *Execution Report (8)* message provides the order execution ID on each price level and additionally the order leg execution ID, *LegExecID (28725)*.
  - For quote match events in simple instruments the Quote Execution Report (U8) message provides the quote side execution ID on each price level, *QuoteEventExecID (28711)*.
  - For quote match events in complex instruments the *Quote Execution Report (U8)* message provides the quote side execution ID on each price level and additionally the quote side leg execution ID, *LegExecID (28725)*.

| Match Reporting | Execution Report (8), (U8) | Trade Notification |
|---|---|---|
| **Trade event on instrument level: public trade volume reporting** | **FillMatchID (28708), QuoteEventMatchID (8714)** | **TrdMatchID (880)** |
| **Identifier for all leg allocations referring to the same simple instrument** | | **TradeID (1003), OrigTradeID (1126)** |
| **Order in simple instrument** | **FillExecID (1363)** | **SideTradeID (1506)** |
| **Order in complex instruments** | **LegExecID (28725)** | **SideTradeID (1506)** |
| **Quote in simple instrument** | **QuoteEventExecID (28711)** | **SideTradeID (1506)** |
| **Quote in complex instrument** | **LegExecID (28725)** | **SideTradeID (1506)** |

Note: For trade cancellations a new *TradeID (1003)* is generated by the new trading architecture; the *SideTradeID (1506)* remains the same and allows the link to the cancelled trade. The original trade identifier is provided in field *OrigTradeID (1126)*.

## 4.8 Trade Enhancement Notification

If subscribed to the Trade Enhancement notification broadcast (see chapter 6.9 Broadcast), a session will receive Trade Enhancement Notification messages that confirms the acceptance of rejection of trade by the respective custodian.

The Exchange will send out the Trade Enhancement Notification message for each accepted/ rejected trade by the custodian. This message will be sent to the owing session and the admin session of the business unit.

## 4.9 Listener Broadcast

The new trading architecture offers 'drop copies' for standard orders (not for lean orders) to sessions within the same business unit. This service is provided on session level; for example each listener session may subscribe to listener broadcast data of one specified session or all sessions of a business unit.
The listener broadcast provides information of the complete order history of standard orders of a session and can be retransmitted. Complete order history means here: all changes to an order happening on the current business day

## 4.10 News

The News message provides public information from the BSE market supervision.

This public stream provides a unique sequence number to support retransmission, i.e. news messages are recoverable. The retransmission protocol includes the access to historical news, i.e. there is no cut at the end of the business day.

## 4.11 Risk Control

The BSE ETI supports advanced risk protection services. The private broadcast supports three types of message formats:

- When a breach on a certain level of risk limits occurs, the participant will be informed via the Risk Collateral Alert Message These alerts are sent at different thresholds as applicable for respective segments. These Alerts are sent when either the collateral or the position limits exceeds beyond defined threshold. The position limit alerts are applicable for Equity derivatives and currency derivatives segment only.
- The alerts are different for different users. The trader is notified with risk limit percentage reached and the admin users are notified with the risk limit percentage reached along with the actual consumption of the collateral.
- When a breach results the member to enter the Risk Reducing Mode (RRM) the participant will be informed via the Risk Notification message. In RRM Mode all open orders of the participants are canceled and fresh orders are subjected to different checks. The orders entered in RRM mode are called RRM orders and are accepted or rejected based of validations.

The participants are informed about the exit from RRM mode through the Risk notification message.

- Entitlement updates affecting the business unit are communicated via the Entitlement Notification message.
- This private stream is automatically sent to each session of the corresponding business unit and clearing unit, no subscription mechanism is supported.
- The Risk notification message specifies the risk event that has triggered. The field *"RiskModeStatus (30643)"* specifies if the participant is entering or existing the risk mode. The field *" (30633)"* provides the type of risk event that has triggered.The risk event having RRM implies that all open orders of the participants are cancelled and all subsequent fresh orders entered by the participants are subjected to collateral checks. This mechanism continues till the participant is notified about exit of that mode through risk notification message. The risk event having suspension implies that all open orders of the participants are cancelled and all subsequent fresh orders entered by the participants are rejected by the system This mechanism continues till the participant is notified about exit of that mode through risk notification message.

Each Risk Control broadcast message provides a unique sequence number and can be retransmitted.

## 4.12 Service Availability

The Service Availability message provides information on the availability of a partition. This public stream is not supported for retransmission, i.e. service availability messages are not recoverable.

Subscription is handled via the Subscribe message. As filter criteria for subscription a single partition or all partitions may be specified. The Subscribe Response message confirms the subscription followed by Service Availability messages providing the current status of the partitions. Any status change of a partition would then be communicated via a new Service Availability message.

The status of a partition refers to two different services:

- *MatchingEngineStatus (25005)* informs about the availability of the order management services.
- *TradeManagerStatus (25006)* informs about the availability of the trade broadcast services.
- *ApplSeqStatus (28732)* informs about the availability of the retransmission services for order and Quote events (session data and listener data).

The BSE ETI Gateway rejects all requests for order management services and trade broadcast services on partitions that are unavailable with the exception of subscription services to broadcast streams. Even if the partition is unavailable, existing subscriptions remain and new subscriptions can be made.

If the system is not able to process and distribute Trade Notifications for a partition, order management services for that partition will become unavailable as well.

If a certain service on one or even on all partitions becomes unavailable, the Gateway will not

- logout any user
- cancel any subscription
- logout any session

## 4.13 Mass Cancellation Notification

Mass cancellation notification is not provided on a single order or quote level. The FIX message format *OrderMassActionReport (BZ)* message is used for responses and notifications. The owning session will be informed about the scope of the cancellation by a summary record. The summary record will also provide the entering parties involved and the reason for the mass cancellation.

Orders that couldn't be cancelled due to an incompatible instrument state are provided with their client order ID (*NotAffOrigClOrdID (1372)*) and Exchange Order ID (*NotAffectedOrderID (1371)*) in the <NotAffectedOrdersGrp>.

Instruments where quotes couldn't be cancelled due to an incompatible instrument state are provided with their Instrument ID (NotAffectedSecurityID (28702)) in the <NotAffectedSecuritiesGrp>.

## 4.14 Mass Cancellation Events

BSE Exchange's New Trading Architecture informs additionally about events that implicitly led to the mass cancellation of orders or quotes via the Mass Cancellation Event message:

Persistent and non-persistent orders are the deleted for the following events depending on the value of ExecInst (18): no value – no order cancellation, 1 –cancellation of persistent orders, 2 – cancellation of non-persistent orders, 3 – cancellation of both, non-persistent and persistent orders. Quotes are always deleted for all of the following events:

- product holiday
- product halt
- instrument suspension
- product temporarily not trade-able

## 4.15 Trading Session Events

Trading session events triggered by the new trading architecture are communicated to **all** trading sessions via the Trading Session Event message. It is part of the session data stream, regardless if orders or quotes were entered for a product by the session.

Trading session events might imply mass cancellation events, where no explicit mass cancellation notifications are provided; for details see the following table:

| Trading Session Event | Level | Persistent Orders | Non-persistent Orders |
|---|---|---|---|
| Start of Service | Partition | No | Yes |
| Market Reset | Partition | No | Yes |
| End of Restatement[2] | Product | N/A | N/A |
| End of Service | Partition | No | Yes |

For all Trading Session Event messages to be sent out on Partition level (see above) the field MarketSegmentId is not set.

## 4.16 Timestamps

All BSE ETI timestamps will provide date and time, in UTC, represented as nanoseconds past the UNIX epoch (00:00:00 UTC on 1 January 1970).

The BSE ETI provides the following timestamp information:

| Timestamp | FIX field | Description |
|---|---|---|
| Transaction timestamp | ExecID (17), MassActionReportID (1369), QuoteResponseID (693), SecurityResponseID (322), MMParameterReportID (28717) | Taken when a transaction is functionally processed and used as a unique message identifier per product for messages sent by the BSE ETI. *ExecID (17)* maps to *MDEntryTime (273)*in BSE EMDI for order and Quote events. |
| Entry timestamp | TrdRegTSEntryTime (21009) | Time of the creation of the order. It will be set when an order is received and processed by the Matching Engine. This timestamp is only provided for Standard Orders. |
| Priority timestamp | TrdRegTSTimePriority (21008) | Is initially set to the entry timestamp and then gets re-stamped when the order looses time priority, see chapter Modification Modification. This timestamp is only provided for Standard Orders. |

[2] Order Book Restatement is only provided for Low Frequency Sessions (LF), see chapter Session Concept.

| Timestamp | FIX field | Description |
|---|---|---|
| Creation timestamp | LastUpdateTime (779), OrigTime (42) | Creation Time of a strategy, respectively of market supervision News. |
| Gateway request in | RequestTime (5979) | Provides the time the BSE application has read an inbound message on a gateway from the TCP socket. |
| Gateway request out | RequestOut (7764) | Provides the time the BSE application has sent an outbound message from a gateway to the matching engine. |
| Gateway response in | ResponseIn(7765) | Provides the time the BSE application has received an inbound message on a gateway from a matching engine. |
| Gateway response out | SendingTime (52) | Provides the time the BSE application has written an outbound message on a gateway to the TCP socket. |
| Matching engine in | TrdRegTSTimeIn (21002) | Provides the time the BSE application has received an inbound message on a matching engine. |
| Matching engine out | TrdRegTSTimeOut (21003) | Provides the time the BSE application has sent an outbound message from a matching engine. |

# 5 Connectivity and Session Parameters

## 5.1 Session Concept

The Exchange implementation is a session oriented interface whereby the session is the basic scope of the interaction with the new trading architecture. Several users may share a single session, but every session may only be instantiated once. Each TCP/IP connection may only support one session instance.

The receiver of the direct response to a request sent to the gateway is always the submitting session. Additionally the session is informed about system events and all unsolicited messages referring to status changes of orders and quotes belonging to that session.

The BSE ETI interface will support two session types with different capacities: low and high-frequency sessions. Both session types differ in the number of requests per time interval allowed.

The following table provides an overview on the functionality supported by session:

| Functionality | Low Frequency Session (LF) | High Frequency Session (HF) |
|---|---|---|
| **Standard Order** | **Yes** | **No** |
| **Lean Order** | **Yes** | **Yes** |
| **Persistent Order** | **Yes** | **No** |
| **Non-persistent Order** | **Yes** | **Yes** |
| **Order Book Restatement** | **Yes** | **No** |

| Functionality | Low Frequency Session (LF) | High Frequency Session (HF) |
|---|---|---|
| Short Order Message Layouts | Yes | Yes |
| Quotes | Yes | Yes |
| Maintaining orders of another session (same business unit) | Yes | Yes[1] |
| Maintaining quotes of another session (same business unit)[4] | Yes | Yes |
| Listener Broadcast | Yes | No |
| Trade Broadcast | Yes | Yes |
| News Broadcast | Yes | No |
| Risk Control Broadcast | Yes | Yes |
| Service Availability Broadcast | Yes | Yes |
| Session List Inquire | Yes | No |

### 5.1.1 Low Frequency Session (LF)

This session type supports the complete BSE ETI functionality. It is specially aimed at participant applications that rely on the complete order history to be recoverable. Although the submission of for example non-persistent and lean orders or quotes is supported.

Modification for another session of the same business unit is only supported for standard orders.

A LF session may also be used to subscribe broadcast streams, for example: Listener broadcast, trade notifications at a business unit level.

### 5.1.2 High Frequency Session (HF)

This session type is aimed at high frequency trading; only executions of orders and quotes and foreign events may be recovered.

The submission of standard and persistent orders is not supported by this session type.

The HF session type does not support the subscription of the broadcasts listener and news and the cancellation of single orders of another session.

Mass cancellation and quote activation/inactivation for another session is supported.

## 5.2 Identification and Authentication

The BSE ETI has a three-step logon procedure, with a Connection Gateway Request message to retrieve the assigned application gateway from the connection gateway, followed by a Session Logon at the assigned gateway and followed by one or multiple User Logon messages.

[1] Only Order Mass Cancellation is supported via HF sessions.
4 Only Order Mass Cancellation is supported via HF sessions.

The assigned application gateways are different for each segment and the participant needs to retrieve the assigned application gateway for each segment separately through different connection gateways. Each session for the respective segment needs to retrieve the assigned gateways from different connection gateways.

### 5.2.1 IP Addresses and Ports

At first the participant must establish a TCP/IP session to the Connection Gateway — the IP/port numbers are provided by the exchange. Participants will be provided with a "Primary" and "Secondary" Connection Gateway address via the member portal. If the connection to the primary Connection Gateway fails, participants should connect to the secondary Connection Gateway.

Once that connection is established, the participant sends a Connection Gateway Request message. The Connection Gateway will validate *PartyIDSessionID (20055)* and *Password (554)*, which are parameters provided by the exchange. The Connection Gateway cannot be used for any other purpose.

The Connection Gateway Response contains the IP/ports of the primary and secondary application gateway where the member application can establish an active BSE ETI session. Once the Connection Gateway Response message is received, the Connection Gateway connection is closed.

The participant must now try to connect to one of the provided application gateways within 120 seconds. If the connection is not made within this time, the slots are released and the participant must start again from scratch.

For more details regarding network topology and how to deal with the Connection Gateways please refer to the document "BOLTPLUS Connectivity Manual".

### 5.2.2 Session Authentication

The participant must first open a TCP/IP connection to the specified gateway. The Session Logon message must be the first message sent by the participant authenticating the BSE ETI session. **Any other messages other than Session Logon will be rejected and the TCP connection will be disconnected by the Exchange.**

The gateway will validate *PartyIDSessionID (20055)* and *Password (554)*, which are parameters provided by the exchange. A successful logon will initiate a BSE ETI session.

Note: The Session Logon message is not used to log on and authenticate a user on the new BSE trading architecture.

The following messages may be sent on a session without any authenticated trader:

- Session logon/logout
- Heartbeat messages
- Subscription and un-subscription of broadcasts

- Retransmission of recoverable data
- Trader authentication
- Session list inquiry

All other requests must be submitted with an authenticated trader name in the *SenderSubID (50)* of the message header.

### 5.2.3 User Authentication

The User Logon message identifies and authenticates a qualified user establishing access to the new trading architecture. A BSE ETI session may be shared by several users belonging to the same business unit.

The participant must provide the binary **User ID** in the *Username (553)* field, and the corresponding password in the *Password (554)* field.

A successful user logon will grant the user access to the trading system.
All further transactions that require a user scope from the session are validated in the gateway against an authenticated User ID, i.e. *SenderSubID (50)* in the message header.

Users may logon to the new trading architecture via all sessions of their business unit.

Multiple User Logon messages for a user via the same session are rejected.

### 5.2.4 Password Management

A password is required to be sent in the Connection Gateway Request, Session Logon Request and User Logon Request. The New Trading system enforces certain rules on password required for session and user authentication.

Maximum 3 consecutive attempts with incorrect password are allowed. The session or user account will get locked with $4^{th}$ attempt of login with incorrect password. In case the account is locked then the account is required to be unlocked by a password reset action which can be done by the administrator through ZT Terminal. Also password will also expire immediately whenever the account is unlocked (i.e. whenever password reset is done by the administrator).

Additionally, the account password will expire every $15^{th}$ day from the date when the password was last modified. In all cases of password expiry,

The password for a user and session can be changed using Session Password Change Request or User Password Change Request.

There are certain policies enforced on the password that can be set for an account. They are:

- The password should be minimum 8 characters and maximum 10 characters long
- The password should be alpha numeric
- The password cannot be blank.

- The last 2 password should not be same.
- The passwords should be changed every 15 days
- Following special characters are allowed in the password
    - ! , # , $ , % , & , * , + , - , / , = , @ , _

Handling Expired Password.

The password for session and user expires every 15$^{th}$ day from the date when the password was last modified. The password will also expire immediately whenever the account is unlocked (i.e. password reset) is done by the administrator.

The Exchange will allow successful login with the expired password once I.e. grace authentication will be provided once post expiry. The member application is communicated about the grace authentication through the Session Logon Response.

The member application should change the password in the grace login. In case the member application fails to change the password in the grace authentication then the successful login will not be grated in the subsequent login attempts with the expired [passwords]. In case the account is locked then the account is required to be unlocked by a password reset action which can be done by the administrator through ZT Terminal.

## 5.3 Failover

### 5.3.1 Network Failover

In the event of a network connection failure, active BSE ETI sessions will be disconnected from the gateway. There will be no automatic session failover if a connection to the gateway is lost.

Participants should therefore implement a failover mechanism in their application, in order to be able to establish a BSE ETI session over the alternative connection.

### 5.3.2 Application Failover

In the event of a BSE ETI gateway failure, active sessions will be disconnected.

If the active BSE ETI session is ever disconnected, for any reason, the participant application must reconnect to the Connection Gateway by resending the Gateway Request message, and then receives a new gateway assignment.

## 5.4 Throughput Limits

HF and LF sessions differ in the number of requests per time interval allowed.

A participant application may send multiple messages without waiting for a response. However, the number of messages allowed within a given timeframe is limited by the use of throttles.

The limits are configured by the new trading architecture for each session type, and are provided to the participant application in the Session Logon Response message.

The limit parameters are upper limits and do not guarantee throughput rates. As loads fluctuate in the exchange system, actual throughput rates can vary.

The mechanism uses two components:

- Transaction limit
- Reject/disconnect limit

### 5.4.1 Transaction Limit

The transaction limit is the maximum number of messages that a participant application may send within a configured time interval without getting rejected (sliding window approach).

If a participant application exceeds the threshold "number of transactions per time interval", the exceeding request will be rejected and not queued. The unit of the time interval is milliseconds.

Required heartbeats do not count against the transaction limit.

For example, a transaction limit of 200 messages per second could be represented in the Logon (A) response message as:

ThrottleNoMsgs (1613) = 200

ThrottleTimeInterval (1614) = 1000

### 5.4.2 Reject/Disconnect Limit

The purpose of the Reject/Disconnect Limit is to protect the gateway from large amounts of invalid data. It defines the maximum number of sequential message rejects due to the violation of the transaction limit allowed by the BSE ETI.

Once an acknowledgement has been sent, the reject/disconnect limit counter is reset to zero.

If the participant application continues to send messages which are rejected for exceeding the transaction limit and the reject/disconnect limit is exceeded, the BSE ETI will disconnect the session.

For example, a disconnect limit of 500 rejects is represented in the Logon (A) response message as:

ThrottleRejectNoMsg (25002) = 500

## 5.5 Mass Cancellation on Disconnect

Quotes and non-persistent orders are automatically cancelled on session disconnect.

In case of a session loss or a session logout the following (retransmittable) messages will be generated for all products where the Matching Engine cancelled non-persistent orders (either lean or standard orders) and/or quotes of the lost session:

- Order Mass Cancellation Notification(via listener broadcast and session data) for cancelled non-persistent orders (*MassActionReason (28721)*:6 = "Session Loss"). Potentially followed-up by Cancel Order Notificationmessages for each order of <NotAffectedOrdersGrp>that could not be cancelled due to an incompatible instrument state.
- Quote Mass Cancellation Notification for cancelled quotes *(MassActionReason (28721):* 6 = "Session Loss"). Potentially followed-up by quote Execution Notification messages for each quote on an instrument in *<NotAffectedSecuritiesGrp>* that could not be cancelled due to an incompatible instrument state.

# 6 Session Layer

The BSE ETI follows standard FIX 5.0 semantics, however, the header and trailers have been suitable modified.

Each message in the BSE ETI has a unique numeric *TemplateID (28500)* assigned to it in addition to the standard FIX *MsgType (35)* information provided in the header.

The BSE ETI will echo the participant's *MsgSeqNum (34)* of the request header in the corresponding response header.

Retransmission is not supported on the session layer; it is available on the application layer for a subset of messages. It is not possible to retransmit all messages received on a session. It is possible to retransmit some message types using application message sequencing.

## 6.1 Flat Binary Encoding

ETI messages have a defined order of fixed-length fields and arrays of fixed-length elements. BSE ETI avoids string fields wherever possible.

The arrays (repeating groups) consist of a counter (FIX NoXXX fields, indicating the number of array elements) and their fixed-length elements. In general, repeating groups are at the end of the ETI messages.

Binary values are presented in little endian byte order.

**The length of ETI messages (*BodyLen (9)*) sent by the ETI gateway is always set to a multiple of 8. If there is a variable size string at the end of a message, it is "filled up" with binary zeroes.**

**Padding bytes required for proper alignment do not need to be initialized.**

## 6.2 Logon

The participant application needs to open a TCP/IP connection to the new trading architecture during start-up.

The first message to be sent on the connection must be the Session Logon message.

If the Session Logon message is not sent within a certain time interval, the connection will be closed by the new trading architecture.

If the session logon fails, no further logon attempts will be accepted on that TCP connection. The application must drop the TCP session and restart the logon to the Connection Gateway.

## 6.3 Logout

The participant may log out the session using the Session Logout message.

The BSE ETI will automatically drop a session if:

- The TCP/IP session is disconnected.
- If three consecutive heartbeats are missed.
- If reject/disconnect limit is exceeded.

After a successful session logout, the participant should shut down the connection and close the socket.

Participant applications must disconnect from the BSE ETI each day after trading and should close the TCP/IP socket after logging off the session.

The system will perform a forced logout overnight after which time the participant may log back in.

## 6.4 Heartbeat

The *HeartBtInt (108)* must be specified by the participant in the Session Logon message. This parameter specifies the period in which the BSE ETI sends heartbeats to the participant and the interval the BSE ETI checks for request messages from the application.

The Heartbeat message should be sent by the participant if no other message has been processed during the defined *HeartBtInt (108)* interval. It is used by the BSE ETI gateway to monitor the status of the communication link to the ETI client during periods of inactivity.

A heartbeat interval of zero indicates that BSE ETI will not take any action for missed heartbeats. ( This setting can only be used on test systems). If the heart beat value is sent as zero in the request then the BSE ETI will use a default value

The heartbeat value can be set to any value from 100 milliseconds to 60 seconds.

If the field is not supplied or set as zero, then the BSE ETI will use a default value. The applied heartbeat interval is provided in the Session Logon Response.

The TCP session will be disconnected if more than 3 heart beats are sent in the defined interval.

Note: Heartbeats do not count against, nor do they reduce, any of the throttle counters.

The Heartbeat Notification is sent by BSE ETI based on the heartbeat interval, regardless if the participant application sends Heartbeat messages or not. It may be used by the ETI client to monitor the status of the communication link to the BSE ETI gateway during periods of inactivity.

## 6.5 Reject

All rejections and errors on the application and session level are communicated via the FIX standard Reject (3) message; i.e. none of the fields in the request message other than *MsgSeqNum (34)* will be echoed.

## 6.6 Message Sequence Number

The *MsgSeqNum (34)* in the request header must increment with each message sent by the participant to the gateway, starting with the Session Logon message as sequence number 1.

The BSE ETI will echo the participant's *MsgSeqNum (34)* of the request header in the corresponding response header.

In case of any unexpected sequence numbers, sequence number gaps, or duplicate sequence numbers, the request message will be rejected with a sequence number error, and the session will be disconnected.

**Note: There is no recovery mechanism for message sequence numbers in the BSE ETI. All participant connections (including a reconnection after a disconnection) are considered "new," and all Session Logon requests are expected to contain the message sequence number 1.**

## 6.7 Application Message Sequencing

### 6.7.1 Application Message Identifier

All recoverable session data sent by BSE ETI will provide an application message identifier, *ApplMsgID (28704)*, to uniquely identify order and quote related data sent by the gateway.

With the help of the application message identifier, the participant is able to ask for a retransmission of recoverable order / quote data.

The *ApplMsgID (28704)* has the following characteristics:

- It is unique per partition and business day.
- It is ascending during a business day until end-of-stream.
- Gap detection is not possible.
- It does not start at any particular number.
- Consists of 16 bytes, ordered with the highest significant byte first (as in big endian).
- Two Application Message Identifiers ApplMsgID1 and ApplMsgID2 are equal, if the character array of size 16 of ApplMsgID1 and ApplMsgID2 are equal at all positions.
- The ApplMsgID1 is greater than ApplMsgID2, if at the first differing position i, the corresponding character ApplMsgID1[i] is greater than ApplMsgID2[i].
- The ApplMsgID1 is less than ApplMsgID2, if at the first differing position i, the corresponding character ApplMsgID1[i] is less than ApplMsgID2[i].

### 6.7.2 Application Message Sequence Number

BSE ETI will assign an application message sequence number, the *ApplSeqNum (1181)*, to messages related to Trade Notification, News and Risk Control (Risk Notification and Entitlement Notification).

The *ApplSeqNum (1181)* has the following characteristics:

- The first message will be the message sequence number 1.
- It is ascending during a business day until end-of-stream (Trade Notification).
- The message sequence will be gapless and allows gap detection.
- Trade notification: unique per business day, partition and business unit.
- News: unique per market.
- Risk Control: unique per business unit.

## 6.8 Session Data

Each session receives information on orders and quotes which were entered in their own session automatically without any subscription. The Session Data include Trading Session Event messages: start of service, market reset, and end of service.

For standard orders the complete order history may be recovered.

For lean orders only match events in the session scope and unsolicited events may be recovered.

Session Data are recoverable, if and only if they have an *ApplMsgId (28704)*.

Note: The retransmission message template used for order and quote events may differ from the session data response template. For more details, please refer to chapter 7.7.25 Retransmit Response (Order/QuoteEvent)

## 6.9 Broadcast

A broadcast is an application message that is available to multiple sessions, such as Trades or News messages.

Sessions may receive the following broadcast types:

| Broadcast | FIX Message Type | Application Identifier | Broadcast Message Identifier |
|---|---|---|---|
| Listener: complete order history of standard orders of a session | Execution Report (8), Trading Session Status (h), Order Mass Action Report (BZ) | 5 | ApplMsgID (28704) |
| Trades: Trade data on business unit level | Trade Capture Report (AE) | 1 | ApplSeqNum (1181) |
| News: Public general messages from BSE market supervision | News (B) | 2 | ApplSeqNum (1181) |
| Risk Control: Private risk control messages | Party Risk Limits Update Report (CR), Party Entitlements Update Report (CZ) | 6 | ApplSeqNum (1181) |
| Service Availability: Provides information on the availability of a partition | User Notification (CB) | 3 | N/A |
| Trade Enhancement: Provides information on acceptance or rejection of trades by custodian | Trade Enhancement Notification (U31) | 0 | ApplSeqNum (1181) |

After a session is established, it is not subscribed to any broadcast, but the risk control broadcast; nevertheless unsolicited session data is received.

For broadcast subscription, the Subscribe message is used. Per request only one broadcast type, via *RefApplID (1355)*, may be subscribed. The response provides a unique subscription identifier in *ApplSubID (28727)*.

For broadcast un-subscription, the Unsubscribe message is used. Per request only one subscription, via *RefApplSubID (28728)*, may be un-subscribed.

The following tables shows the results of different subscriptions:

| RefApplID (1355) | SubscriptionScope (25001) | Result |
|---|---|---|
| Trade (1) | 0xFFFFFFFF (no value) | All trade data of the own business unit. This subscription is allowed only for admin session |
| News (2) | Market ID (1=BSE) | All public general messages from the market supervision of the specified market. |

| RefApplID (1355) | SubscriptionScope (25001) | Result |
|---|---|---|
| **Service Availability (3)** | **Partition ID** | **Availability of the services provided by the specified partition.** |
| **Service Availability (3)** | **0xFFFFFFFF (no value)** | **Availability of the services provided by all known partitions.** |
| **Listener Data (5)** | **0xFFFFFFFF (no value)** | **Complete history of standard orders (of the current business day) submitted via the specified session.** |
| **Listener Data (5)** | **0xFFFFFFFF (no value)** | **Complete history of standard orders (of the current business day) of the own business unit.** |
| **Trade Enhancement** | **0xFFFFFFFF (no value)** | **All trade enhancement data of the own business unit. This subscription is allowed only for admin session** |

Note: Broadcasts may only be subscribed by LF sessions with the exception of service availability, trade broadcast trade enhancement notification and risk control, which are available on HF and LF sessions. The receipt of the risk control broadcast is required by the regulator for all sessions; therefore no subscription is needed.

The FIX Application Sequencing concept[1] is used for broadcasts on BSE ETI:

- Each broadcast type is assigned a unique *ApplID (1180)*.
- Application-level messages are uniquely identified using a combination of *ApplID (1180)* and *ApplSeqNum (1181)* or *ApplID (1180)* and *ApplMsgID (28704)* respectively.

## 6.10 Recovery

### 6.10.1 Retransmission

Re-transmission is supported for recoverable session data and the broadcast types, trades, news, trade enhancement and risk control.

Since application message identifiers and sequence numbers are unique per partition, the *PartitionID (5948)* is a mandatory parameter for all retransmission requests.

For retransmission, the Retransmit and Retransmit (Order/ QuoteEvent) message respectively is used.

With a re-transmission request, only data in the scope of one broadcast type and partition can be requested via *RefApplID (1355)* and *PartitionID (5948)*.

The FIX application level recovery concept can be used by the participant for selective recovery and late start restatements:

[1] See FIX 5.0 SP2 Specification, Vol.1

| Recoverable Data | Scope | Application Message Sequencing | Application Identifier RefApplID (1355) | Retransmission Sequencing |
|---|---|---|---|---|
| Recoverable session data | session | ApplMsgID (28704) | 4 | ApplBegMsgID (28718), ApplEndMsgID (28719) |
| Listener broadcast (standard order drop copy) | session[2] | ApplMsgID (28704) | 5 | ApplBegMsgID (28718), ApplEndMsgID (28719) |
| Trades | business unit | ApplSeqNum (1181) | 1 | ApplBegSeqNum (1182), ApplEndSeqNum (1183) |
| News | market | ApplSeqNum (1181) | 2 | ApplBegSeqNum (1182), ApplEndSeqNum (1183) |
| Trade Enhancement | Session | ApplSeqNum (1181) | 0 | ApplBegSeqNum (1182), ApplEndSeqNum (1183) |

Optionally, the application message identifiers and respectively the application message sequence numbers provide the retransmission sequencing range. If no start value is specified, it is assumed to be "1". If ending range is absent, it is assumed to be infinity ("all available messages").

The re-transmission response, Retransmit Response and Retransmit Response (Order/QuoteEvent) message respectively, will provide the range of recovered order and quote data in the fields *ApplBegMsgID (28718) and ApplEndMsgID (28719)* and for all other broadcasts respectively in the fields *ApplBegSeqNum (1182)* and *ApplEndSeqNum (1183).*

This range may differ from the requested range, i.e. further retransmission requests may need to be submitted.

### 6.10.2 Best Practices for Order and Quote Handling

All order and quote response information in the BSE ETI is sent out immediately after the order and quote has been processed by the core matching process.

[2]8 Retransmission of listener broadcast data must be requested for each session separately. No session wildcard processing is supported for retransmission.

All order and quote response information in the BSE ETI is preliminary; this includes *Execution Reports (8)* sent out for non-persistent orders as well as quote Execution Reports (U8) sent out for quotes. This is also true for the standard order drop copy information published via the Listener broadcast.

Note: Market data on the new BSE trading architecture is based on order and quote execution information. The BSE MDI and BSE EMDI interfaces provide trade price messages on the basis of this preliminary information.

For these reasons, a participant application always needs to confirm the preliminary execution information with the corresponding legally binding Trade Notification message (*Trade Capture Report (AE)*).

In case of an exchange system failure, the participant is informed of a market reset event via the Trading Session Event message including the last persisted application message identifier. This message is followed by an order book restatement of all active orders.

In this event it is highly recommended to reconcile all *Execution Reports (8, U8)* with higher application message identifiers with the corresponding *Trade Capture Reports (AE)*. If there is no *Trade Capture Report (AE)* for a given *Execution Report (8)* or a *Quote Execution Report (U8)* then this *Execution Report (8)* or a *Quote Execution Report (U8)* has to be considered invalid and should be discarded. Please find detailed information regarding trade reconciliation in chapter 4.7.2 Trade reconcilation.

## 6.11 Order Handling for RRM mode

The order handling mechanism for participant in RRM mode is different from normal course of order handling mechanism. If a participant is notified "In RRM" through *Risk notification [10033]* message and then all the open orders of the participants are cancelled and Order *Mass Cancellation notification [10122]*is sent to all the sessions of the business unit having open orders. The cancellation is sent at a product level and the member application should cancel all the orders in their order book for that product. The application should be cautious about the *<NotAffectedOrdersGrp>* and *ExecInst(18)* Field and cancel according to the value received in these fields.

All subsequent fresh orders are subjected to position checks before acceptance in matching engine.All fresh orders are given provisional conformation followed by the final confirmation of acceptance or rejection. All fresh orders are acknowledged using the new order response message. This is provisional confirmation. The field *ExecRestatementReason(378)=215* in new order response message indicates provisional confirmation.

The provisional confirmation will be followed by the final confirmation through the message *Extended order information [10117]*. The field *ExecRestatementReason(378)=216* or *218* in the message will specify the final state of confirmation I.e. the order is either accepted or rejected.

## 6.12 Order Handling for Exception Cases

In normal course of trading, it is seldom possible that there is some disruption in trading due to excessive order flow or due to some technical issue. In either case it is prudent to make member application aware of it and the member application should be able to handle the impact of disruption so that the order book of member is consistent with exchange and trading is not halted abruptly. The disruption can happen for a specific product or for a specific partition or there can be case of few order state unknown.

In case a partition or a specific product(s) face any disruption then it is possible that the trading only in those specific product(s) or partition(s) is disrupted. It becomes necessary to inform the member applications about the affected products/ partition so that the necessary exception steps can be taken by the member applications to handle such cases.

The handling of exception cases is divided into 3 major areas.

1. Order Level
2. Product Level
3. Partition Level

**I. Exception Handling: Order Level**

In certain cases of disruption, the order request for addition/amendment/deletion is acknowledged with a standard *Reject*[ TemplateID: 10010] having the *SessionRejectReason(373)=104* and error text as *"Result of Transaction Unknown"*.

This case of *Reject* message is not an actual rejection of the order request. This is an auxiliary acknowledgment and not actual rejection of the order request. This is sent by the gateway when the actual confirmation of an order from matching engine is not received within a defined time. This auxiliary acknowledgement is sent by the gateway presuming the actual confirmation of order is delayed in matching engine due to queuing of orders or some other technical reason. The rationale of sending auxiliary acknowledgement is not to keep the user waiting long for the confirmation and to make user aware that there is a technical lag in processing.

Further, once the auxiliary acknowledgement is already sent to the user and later if the order request was processed successfully by matching engine after taking unduly high time, the exchange does not send the actual confirmation of such orders again. It is expected the member applications to build a reconciliation mechanism for such orders.

The most precise way of reconciliation would be to initiate a retransmission of orders and trades. The retransmission can be initiated for incremental order and trades from the point of last successful confirmation or user can also initiate a retransmission for full orders and trades.

However, the process of retransmission could be time consuming and since most application do not allow order flow during retransmission process would mean that for few such orders, the trading in other products would also be stalled till the retransmission process is completed.

Though the above approach is the correct way to reconcile in this case but to avoid full retransmission, following are few alternate methods of reconciliation wherein the user would not need to stall the trading of other products for fetching status of such orders.

Kindly note that the methods explained below are suggested ways and do not guarantee accurate reconciliation. Moreover, the steps involved would need some manual intervention too.

**Alternative Reconciliation method**
Any order whose status is unknown to user would be having any of the following confirmed state in matching engine order book.

1. The order is fully traded.
2. The order is fully pending in order book.
3. The order is partially traded and partially pending.
4. The order is cancelled.

**Firstly, it is highly recommended that the member applications should park such orders in freeze state and do not consider it as rejected order.** Further they should not initiate any modification on such orders till the actual state of the order is reconciled.

If the order is traded, then it would require checking the trade notifications to figure out if it is traded. If it is not traded, then it would mean to check the order book to find if it is pending. Following are the ways to reconcile such orders in trades and pending order book.

1. **Reconciliation in trades:**

   In case the order is traded completely or partially then no explicit reconciliation/ retransmission of trade would be required to be initiated unless the member application detects a gap in the *ApplSeqNum(1181)* field of *Trade Notification message[TemplateID 10500].*

   The trade notification messages possess following characteristics which enables the trading application to decide if retransmission of trades is required intraday or no.

   - The first message will be the message sequence number 1.
   - It is ascending during a business day until end-of-stream (Trade Notification).
   - The message sequence will be gapless and allows gap detection.
   - Trade notification: unique per business day, partition, and session.

   Thus, if an order got traded while the order execution status was unknown to member application then its trade will surely be part of the online trade notification message and the user can get the status of such order through trades. Retransmission process would not be required.

It is important to note that not necessarily in this case of unknown order status but also in any other case of issue if there is a gap detected in *ApplSeqNum(1181)* field then it would mean some trade is missing and the member application should initiate a reconciliation of trades from the last received *ApplSeqNum(1181)* sequence number. This is recommended for all cases where gap is detected.

2. **Reconciliation in pending order book:**

   If an order is not traded, then it may be either pending in the order book or must have been cancelled. There is no mechanism to fetch the current state of a particular order thus the suggested mechanism would be that if such order is not traded and do not reflect in Trade notification message then it is likely that the order is either pending or cancelled. To ascertain that, the member application can initiate a cancel request for such orders.

   If the cancellation goes through successfully then it would mean that the order was pending, and it is now cancelled completely and thus the member can decide on placing same order again.

   If the cancellation request is rejected with standard Reject message with error text as "Order not found" then it would mean that the order is not pending anymore. It would mean the order is either traded or cancelled.

   The member application should be cautious about the order identifier *(OrderID(37)* or *ClOrdID(11)* submitted in cancelation request. The Order ID *OrderID(37)* is available with the user if the order is already successfully added and the status of either the modification or cancelation request of the user is unknown.

   However, if the order request is for addition and if such order is acknowledged with auxiliary response "Result of Transaction Unknown" then the user will not have the *OrderID( 37)* to initiate the cancel request. Thus in such cases the Client Order ID *ClOrdId(11)* can be used to initiate the cancel request.

   While using *ClOrdID(11)*,the user has to be careful about the original client order id *OrigClOrdID(41)* and *ClOrdID(11)* about the changing of Client Order ID *(ClOrdId)*. *OrigClOrdID(41)* should be set to the value which was sent in *ClOrdID(11)* in the earlier request whose state is unknown. If this is not set correctly it would result in "Order not found" rejection even though the order may be present in the order book.

   In addition to above method of reconciliation, an alternative mode of reconciliation would be from RTRMS Zero Terminal

   The RTRMS Zero Terminal provides the view of pending orders and trades and member can reconcile the status of such order(s) from RTRMS Zero Terminal. This method can be adopted if the number of such orders are few.

### II. Exception Handling: Product Level.

When the trading in a particular product or a set of products is disrupted due to some extremely high load or technical issue, the existing lean orders are cancelled, and new add/ amend requests are rejected while deletion of orders will be allowed in this period.

A *Mass cancellation event ( TemplateID 10308)* message is sent to all the users informing about the unavailability of a particular product where the field *MassActionReason( 28721)* is set to 111 . Unlike the mass cancellation notification message, which is sent to the users having pending order, the mass cancellation event is sent to all the users connected to the exchange. This message also specifies the cancellation scope of orders i.e. either persistent, non-persistent, both or none. The member application is expected to use the message and cancel the orders in their order book accordingly.

The add and amend request are rejected in standard *Reject (TemplateID: 10010)* message with field *SessionRejectReason(373)* set to 102 and *VarText( 30355)* set to *"Transaction not allowed Due to Slow Partition"*. This rejection will continue till the load in that product(s) retracts to permissible limits.

To Summarise:-

- In case of any issue encountered for a specific product then the Mass cancellation Event message will be sent to all the users. The field *MarketSegmentID(1300 )*in the message provides the product information. The field *ExecInst(18)* in the message provides the scope of cancellation i.e. either persistent or non-persistent or both. In certain cases, no orders are cancelled and thus the scope of cancellation in the field *ExecInst(18)* of Mass cancellation event is set to 255.
- All fresh orders in the product will get rejected if the product is unavailable.
- The mass cancellation event messages also form part of the retransmission messages.

### III. Exception Handling: Partition Level.

A partition provides following services to the member applications.

- Matching Engine Services
  The service includes acceptance of fresh orders, modification, deletion and generation of trades.
- Order Download Services
  The service includes serving the retransmission request by the member applications. This service is used by the member application to reconcile their order books with exchange
- Trade Download Services
  The service includes serving the trades download request by the member applications. The service is used by the member application to reconcile the trade books.

When there is an issue within a partition, then it is possible that either one or all the above services become unavailable to the member application. Depending on the service which is unavailable the availability information will be communicated using the *Service Availability. [TemplateID: 10030]* Message.

The *service availability* message provides information on the availability of different services of a partition at EOD and at BOD after the services of the trading system is completed functional. Additionally, any status change of a service in a partition during the day would also be communicated via a *service availability* message.

For e.g. If the matching engine service of a partition becomes unavailable due to some technical issue, then the *service availability* message indicating the *MatchingEngineStatus(25005)* unavailable is sent to the member application. This would mean the matching engine is not functional at this moment and it will not match orders. In such case the gateway rejects all incoming order requests for that partition. The orders are rejected in standard *Reject [ TemplateID: 10010]* having the *SessionRejectReason(373)=102* and error text as *"Service Temporarily not available"*.

This behaviour of rejection continues till the matching engine service is unavailable.

Later, when the matching engine services becomes available again, a new service availability message is sent informing *MatchingEngineStatus(25005)* available is sent to the member application and then the gateway starts accepting fresh orders.

While one partition is unavailable the request for orders on other partitions can continue to be accepted and processed. The gateways will not logout any user if a partition is unavailable.

The sequence of service availability messages would be as follows :-

- The service availability message is available on subscription only.
- During the day in case of any issue encountered in the partition the *service availability* message *[TemplateID: 10030]* will be sent to all the sessions (HF and LF) connected to the exchange.
- If an issue arises in the partition then the matching engine services are halted immediately and status of matching engine is sent as 0 (unavailable) in the service availability message in the field *MatchingEngineStatus(25005)*
- The other services status may or may not be available depending upon the nature of the problem.
- Once the matching services are unavailable, all fresh orders sent for that partition will be rejected.
- On resumption of partition, the *service availability* message will be sent again. It is possible that multiple service availability messages are sent separately for each service or it may be possible that even a single *service availability* message with indicators for all services is sent.
- The *Service Availability* messages also form part of the retransmission messages.

- Following table describes the possible status of each service that can be received through service availability message and the transactions allowed with each state.

| Service | Available ( State = 1) | Unavailable ( State = 0) |
|---|---|---|
| Matching Engine Service (MatchingEngineStatus) | Acceptance of fresh orders. In certain cases of matcher restart there can be cancellation of earlier orders. | All fresh orders are rejected. |
| Trade Manager Services (TradeManagerStatus) | Trade Download request allowed. | Trade Download request will be rejected. |
| Order Manager Services (ApplSeqStatus) | Order Download request allowed. | Order Download request will be rejected. |

Order Cancellation in certain cases of issue at partition level.

In certain cases of disruption in a partition, the matching engine of that partition is reinitialised. Consequently, all the orders of a **HF Session** are cancelled by the exchange. Whenever the matching engine resumes trading, all the sessions are notified about the cancellation through *Trading session event [TemplateID:10307]* messages.

Trading session event message with specific value imply mass cancellation, i.e. it indicates cancellation of orders and no explicit mass cancellation notifications are sent in such cases. Trading session event message are sent to both HF and LF sessions and should be considered as mass cancel message. **The scope of cancellation is only lean orders**. The HF session should cancel all the orders belonging to the partition while LF sessions should cancel the lean orders only for the partition for which the trading session event message is received.

The standard orders are not cancelled, and the matching engine restates all the standard orders which is pending in its order book to the respective sessions.

The matching engine will send product wise, all the pending standard orders to the user to enable synchronization of the user's order book with exchange and eliminate any inconsistency in the order book. Any **standard** order present in the member order book other than the restated orders needs to be cancelled by the member application.

The sequence of events and the messages that would flow in above scenario are as follows: -

- In case the cancellation of orders happens then sequence of messages that the member application will receive will be as follows:

*Service Availability Message [TemplateID: 10030]* → *Trading Session Event[TemplateID : 10307]* → *Restatement Messages [TemplateID: 10117]* → *Trading Session Event [TemplateID : 10307]*

The *trading session event [TemplateID: 10307]* message will follow the *service availability* message. The field *Trading Session Event (1368)* in the *trading session* *event* message will be set to 102: Market Reset. This indicates the market is reset and all lean orders of the members are cancelled. On receipt of this information member application should cancel all the lean orders for specific partition only.

- After cancellation the matching engine will resend all the pending persistent orders of users present in the exchange for that partition. All persistent orders of the user will be sent to the user via Extended Order message *[TemplateID: 10117]*.

- The restatement will happen for each product belonging to that partition. Once the restatement is complete a Trading Session Event with field *Trading Session Event(1368)* set to 103: End of Restatement is sent to the user indicating the completion of restatement. The completion of restatement is sent for each product separately.

# 7 Message Formats

This chapter provides details on the administrative and application messages used by the BSE ETI. Information on data types and the most important error codes are provided. Messages sent by participants not listed in this section are rejected by the server via a Reject (3) message.

Each ETI message format has a unique binary message type identifier (*TemplateID (28500)*) and is based on a standard FIX message.

The Interface version used by the participant needs to be provided during Session Logon in *DefaultCstmApplVerID (1408)*; the Session Logon Response will return the Interface Version, which the BSE ETI Gateway currently uses, in the same field.

In production, the Interface Version will allow the participant to recognize that the BSE ETI has changed.

The Build Number shows to which ETI XML file, ETI XSD file, canned data, exchange software the ETI Manual belongs to.

## 7.1 Message Fragmentation

In case the complete data of a transaction does not fit into a single message, BSE ETI automatically sends a sequence of messages to the participant.

The field *LastFragment (893)* in the corresponding header structure indicates whether the current message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction or if the application should wait for further messages in order to retrieve the full data set.

Another mechanism for message fragmentation that is used for inquiring reference data (session) bases on the LastEntityProcess (25035) field that is part of the requests and the responses.

In the first inquiry (request) LastEntityProcess (25035) must not be set. The application should continue sending the inquiries using the LastEntityProcess (25035) from the recent response. A response with LastEntityProcess (25035) not set indicates that no more data is available.

## 7.2 Data Types

BSE ETI supports following data types:

| ETI Data Type | Description | No Value[2] |
|---|---|---|
| signed int | ▪ - little endian byte order<br>- supported are 1, 2, 4 and 8-byte, signed integers<br>- two's complement representation | 1 byte signed int: 0x80<br>2 byte signed int: 0x8000<br>4 byte signed int: 0x80000000<br>8 byte signed int: 0x8000000000000000 |
| unsigned int | ▪ - little endian byte order<br>- supported are 1, 2, 4 and 8-byte, unsigned integers | 1 byte unsigned int: 0xFF<br>2 byte unsigned int: 0xFFFF<br>4 byte unsigned int: 0xFFFFFFFF<br>8 byte unsigned int: 0xFFFFFFFFFFFFFFFF |
| Float | ▪ - encoded as 8-byte signed integer<br>8 implicit decimals | 0x8000000000000000 |
| Fixed String | ▪ - length information specifies the fixed size<br>- encoded as character array<br>- completely filled with valid characters (space padding if required) | 0x00 at the first position |
| Fixed String (0- terminable) | ▪ - length information specifies the fixed size<br>- encoded as character array<br>optionally 0-terminable (minimum string size of 1)<br>- XML file: attribute "isTerminable" is set to true<br>- padding after 0-terminator required up to fixed size | 0x00 at the first position |

| ETI Data Type | Description | No Value[3] |
|---|---|---|
| Variable String | ▪ - length information specifies the maximum possible size<br>- separate counter field specifies the transmitted string size<br>- XML file: attribute "variableSize" set to true<br>- the message is filled up to a multiple of 8 bytes and truncated | 0x00 at the first position (if the field is not the last one of a certain message) |
| Counter | This data type represents an unsigned integer as a counter for arrays of variable size. | see 1 byte unsigned int and 2 byte unsigned int respectively |
| LocalMktDate | Date of Local Market (as opposed to UTC) in YYYYMMDD 4 byte unsigned binary format. | see 4 byte unsigned int |
| PriceType | Price in integer format including 8 decimals. For certain asset classes, prices may have negative values. | see 8 byte signed int |
| Amount | Amount in integer format including 2 decimals. | see 8 byte signed int |
| Qty | Quantity in signed 4 byte integer format. | see 4 byte signed int |
| SeqNum | Message sequence number in 8 byte unsigned binary format. | see 8 byte unsigned int |
| UTCTimestamp | Date and time, in UTC, represented as nanoseconds past the UNIX epoch (00:00:00 UTC on 1 January 1970). | see 8 byte unsigned int |
| char | String of length 1. | 0x00 |
| Data | Byte array where each byte has a value from 0 to 255:<br>▪ - the length information specifies the fixed size<br>- encoded as byte array<br>- byte array is always filled completely | Each byte filled with 0x00. |
| chartext | ▪ - length information specifies the fixed size<br>- encoded as character array<br>optionally 0-terminable (minimum string size of 1)<br>- XML file: attribute "isTerminable" is set to true<br>- padding after 0-terminator required up to fixed size | 0x00 at the first position |

| ETI Data Type | Description | No Value[4] |
|---|---|---|

## 7.3 Error Codes

All rejections and errors on an application and session level are communicated via the FIX standard *Reject (3)*message except for Mass Quote Response.

The error code will be provided in field *SessionRejectReason (373)*, the error text in field *VarText (30355)*.

BSE ETI offers detailed error description in the error text, only for selected errors unique error codes are available.

The BSE ETI will provide the following dedicated error codes, which the participant application may interpret for automated processing:

| SessionRejectReason (373) | Description |
|---|---|
| 100 | Reject due to exceeded throttle limit. |
| 101 | Exposure limit exceeded. |
| 102 | Service temporarily not available. |
| 103 | Service not available. |
| 104 | Result of transaction unknown. |
| 211 | User already logged in |
| 10000 | Order not found. |
| 10001 | Price reasonability check failed. |

The Mass Quote Response will provide error notifications for rejected quotes in the *<QuoteEntryAckGrp>*. The field *QuoteEntryRejectReason (368)* will provide dedicated error codes:

| MMorderEntryRejectReason (368) | Description |
|---|---|
| 1 | Unknown Security |
| 6 | Duplicate Quote |
| 8 | Invalid Price |
| 16 | No Reference Price Available |
| 100 | No Single Sided QuotesAllowed. |
| 103 | Invalid Quotiing Model |
| 106 | Invalid Size |
| 107 | Invalid Underlying Price. |
| 108 | Bid Price Not Reasonable |
| 109 | Ask Price Not Reasonable |
| 110 | Bid Price Exceed Range |

[3] Fields marked as optional (**Req'd = „N"**) or marked as not used (**Req'd = „U"**) are provided with a „no value" content that depends on the corresponding data type.

[4] Fields marked as optional (**Req'd = „N"**) or marked as not used (**Req'd = „U"**) are provided with a „no value" content that depends on the corresponding data type.

| MMorderEntryRejectReason (368) | Description |
|---|---|
| 111 | Ask Price Exceed Range |
| 115 | Instrument State Freeze |
| 116 | Cancellation Already Pending |
| 131 | Incompatible Instrument State |

## 7.4 Overview of Supported Message Types

The following message formats are based on:

- Interface Version: 2.3
- Build Number: 600.002.900-600002900.22

Additionally, ETI clients implementing interface version '0.1' will be supported. Please refer to chapter Change Log for details regarding interface changes between the version '0.1', '1.0' and '2.0'.

### 7.4.1 Other

| ETI Message | TemplateID (28500) | Sender | FIX Message | MsgType (35) |
|---|---|---|---|---|
| Risk Collateral Alert Admin | 10048 | ETI Gateway | CollateralAlertAdminReport | U23 |
| Risk Collateral Alert Trader | 10049 | ETI Gateway | CollateralAlertReport | U24 |
| Trade Notification | 10500 | ETI Gateway | TradeCaptureReport | AE |
| Trade Enhancement Notification | 10989 | ETI Gateway | TradeEnhancementStatus | U31 |
| Trade Notification Status | 10501 | ETI Gateway | TradingSessionStatus | h |
| Service Availability | 10030 | ETI Gateway | UserNotification | CB |
| News | 10031 | ETI Gateway | News | B |
| Risk Notification | 10033 | ETI Gateway | PartyRiskLimitsUpdateReport | CR |
| Trading Session Event | 10307 | ETI Gateway | TradingSessionStatus | h |
| Mass Cancellation Event | 10308 | ETI Gateway | OrderMassActionReport | BZ |
| Gap Fill | 10032 | ETI Gateway | ApplicationMessageReport | BY |

### 7.4.2 Quote Handling

| ETI Message | TemplateID (28500) | Sender | FIX Message | MsgType (35) |
|---|---|---|---|---|
| Mass Quote Request | 10405 | Participant | MassQuote | i |
| Quote Cancellation Notification | 10412 | ETI Gateway | QuoteExecutionReport | U8 |
| Mass Quote Response | 10406 | ETI Gateway | MassQuoteAcknowledgement | b |
| Quote Execution Notification | 10407 | ETI Gateway | QuoteExecutionReport | U8 |
| Quote Mass Cancellation Request | 10408 | Participant | OrderMassActionRequest | CA |

| ETI Message | TemplateID (28500) | Sender | FIX Message | MsgType (35) |
|---|---|---|---|---|
| Quote Mass Cancellation Response | 10409 | ETI Gateway | OrderMassActionReport | BZ |
| Quote Mass Cancellation Notification | 10410 | ETI Gateway | OrderMassActionReport | BZ |

### 7.4.3 Session Layer

| ETI Message | TemplateID (28500) | Sender | FIX Message | MsgType (35) |
|---|---|---|---|---|
| Connection Gateway Request | 10020 | Participant | ApplicationMessageRequest | BW |
| Session List Inquire Response | 10036 | ETI Gateway | SessionDetailsListResponse | U6 |
| Session Password Change | 10997 | Participant | Logon | A |
| Session Password Change Response | 10995 | ETI Gateway | Logon | A |
| User Password Change | 10996 | Participant | UserRequest | BE |
| User Password Change Response | 10043 | ETI Gateway | UserResponse | BF |
| Connection Gateway Response | 10021 | ETI Gateway | ApplicationMessageRequestAck | BX |
| Session Logon | 10000 | Participant | Logon | A |
| Session Logon Response | 10001 | ETI Gateway | Logon | A |
| Session Logout | 10002 | Participant | Logout | 5 |
| Session Logout Response | 10003 | ETI Gateway | Logout | 5 |
| Session Logout Notification | 10012 | ETI Gateway | Logout | 5 |
| Heartbeat | 10011 | Participant | Heartbeat | 0 |
| Heartbeat Notification | 10023 | ETI Gateway | Heartbeat | 0 |
| User Logon | 10018 | Participant | UserRequest | BE |
| User Logon Response | 10019 | ETI Gateway | UserResponse | BF |
| User Logout | 10029 | Participant | UserRequest | BE |
| User Logout Response | 10024 | ETI Gateway | UserResponse | BF |
| Throttle Update Notification | 10028 | ETI Gateway | UserNotification | CB |
| Subscribe | 10025 | Participant | ApplicationMessageRequest | BW |
| Subscribe Response | 10005 | ETI Gateway | ApplicationMessageRequestAck | BX |
| Unsubscribe | 10006 | Participant | ApplicationMessageRequest | BW |
| Unsubscribe Response | 10007 | ETI Gateway | ApplicationMessageRequestAck | BX |
| Retransmit | 10008 | Participant | ApplicationMessageRequest | BW |
| Retransmit Response | 10009 | ETI Gateway | ApplicationMessageRequestAck | BX |
| Retransmit (Order/Quote Event) | 10026 | Participant | ApplicationMessageRequest | BW |
| Retransmit Response (Order/Quote Event) | 10027 | ETI Gateway | ApplicationMessageRequestAck | BX |
| Reject | 10010 | ETI Gateway | Reject | 3 |
| Session List Inquire | 10035 | Participant | SessionDetailsListRequest | U5 |

### 7.4.4 Order Handling

| ETI Message | TemplateID (28500) | Sender | FIX Message | MsgType (35) |
|---|---|---|---|---|
| Debt Inquiry Request | 10390 | Participant | DebtInquiryRequest | U32 |
| Debt Inquiry Response | 10391 | ETI Gateway | DebtInquiryResponse | U33 |
| Order Mass Cancellation Notification | 10122 | ETI Gateway | OrderMassActionReport | BZ |
| Order Mass Cancellation Response No Hits | 10124 | ETI Gateway | OrderMassActionReport | BZ |
| Order Mass Cancellation Request | 10120 | Participant | OrderMassActionRequest | CA |
| Order Mass Cancellation Response | 10121 | ETI Gateway | OrderMassActionReport | BZ |
| Order Confirmation | 10990 | ETI Gateway | ApplicationMessageRequestAck | BX |
| Extended Order Information(MultiLeg) | 10994 | ETI Gateway | MultiLegExecutionReport | U30 |
| Immediate Execution Response(MultiLeg) | 10993 | ETI Gateway | MultiLegExecutionReport | U30 |
| Reject(MultiLeg) | 10992 | ETI Gateway | MultiLegOrder-Acknowledgement | U29 |
| New Order MultiLeg | 10991 | Participant | MultiLegOrder | U28 |
| New Order Single | 10100 | Participant | NewOrderSingle | D |
| Extended Order Information | 10117 | ETI Gateway | ExecutionReport | 8 |
| New Order Single (short layout) | 10125 | Participant | NewOrderSingle | D |
| New Order Complex | 10113 | Participant | NewOrderMultileg | AB |
| New Order Response (Standard Order) | 10101 | ETI Gateway | ExecutionReport | 8 |
| New Order Response (Lean Order) | 10102 | ETI Gateway | ExecutionReport | 8 |
| Immediate Execution Response | 10103 | ETI Gateway | ExecutionReport | 8 |
| Book Order Execution | 10104 | ETI Gateway | ExecutionReport | 8 |
| Replace Order Single | 10106 | Participant | OrderCancelReplaceRequest | G |
| Replace Order Single (short layout) | 10126 | Participant | OrderCancelReplaceRequest | G |
| Replace Order Complex | 10114 | Participant | MultilegOrderCancelReplace | AC |
| Replace Order Response (Standard Order) | 10107 | ETI Gateway | ExecutionReport | 8 |
| Replace Order Response (Lean Order) | 10108 | ETI Gateway | ExecutionReport | 8 |
| Cancel Order Single | 10109 | Participant | OrderCancelRequest | F |
| Cancel Order Complex | 10123 | Participant | OrderCancelRequest | F |

| ETI Message | TemplateID (28500) | Sender | FIX Message | MsgType (35) |
|---|---|---|---|---|
| Cancel Order Response (Standard Order) | 10110 | ETI Gateway | ExecutionReport | 8 |
| Cancel Order Response (Lean Order) | 10111 | ETI Gateway | ExecutionReport | 8 |
| Cancel Order Notification | 10112 | ETI Gateway | ExecutionReport | 8 |

## 7.5 Other

### 7.5.1 Risk Collateral Alert Admin

This message informs about collateral alerts for the business unit. The alert is sent only to the admin session. For more details, please refer to chapter 4.11 Risk Control.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| <MessageHeaderOut> | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10048 (CollateralAlertAdminReport, MsgType = U23) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| <RBCHeader> | | | | | | |
| 52 | SendingTime | Y | 8 | 8 | UTCTimestamp | Gateway response out timestamp. |
| 1181 | ApplSeqNum | Y | 8 | 16 | unsigned int | Application sequence number assigned to a non-order related BSE ETI data stream. |
| 28727 | ApplSubID | U | 4 | 24 | unsigned int | not used |
| 5948 | PartitionID | Y | 2 | 28 | unsigned int | Grouping of BSE products.<br>Belongs to the scope of Service Availability and Retransmit requests. |
| 1352 | ApplResendFlag | Y | 1 | 30 | unsigned int | Indicates a retransmission message.<br>Value / Description:<br>0 False<br>1 True |
| 1180 | ApplID | Y | 1 | 31 | unsigned int | Identifier for an ETI data stream.<br>Value / Description:<br>8 Risk Admin |
| 893 | LastFragment | Y | 1 | 32 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value / Description:<br>1 Last Message |
| 25022 | Pad7 | U | 7 | 33 | Fixed String | not used |
| <Message Body> | | | | | | |
| 30614 | TotalCollateral | N | 8 | 40 | signed int | The Total collateral value present with the member. The value will be in paise. |

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>30615</td><td>UtilizedCollateral</td><td>N</td><td>8</td><td>48</td><td>signed int</td><td>The collateral value already consumed by the member. The value will be in paise.</td></tr>
<tr><td>30616</td><td>UnutilizedCollateral</td><td>N</td><td>8</td><td>56</td><td>signed int</td><td>The collateral value remaining with the member. The value will be in paise.</td></tr>
<tr><td>42</td><td>OrigTime</td><td>N</td><td>8</td><td>64</td><td>UTCTimestamp</td><td>Creation timestamp of the News message.</td></tr>
<tr><td>30613</td><td>PercentageUtilized</td><td>Y</td><td>4</td><td>72</td><td>signed int</td><td>The utilization of the member in term of percentage. The value would be sent upto 2 decimal places. For eg 70.21 would be sent as 7021</td></tr>
<tr><td>1300</td><td>MarketSegmentID</td><td>N</td><td>4</td><td>76</td><td>signed int</td><td>Product identifier.</td></tr>
<tr><td>1301</td><td>MarketID</td><td>Y</td><td>2</td><td>80</td><td>unsigned int</td><td>Market ID.<table><tr><th>Value</th><th>Description</th></tr><tr><td>1</td><td>BSE</td></tr><tr><td>2</td><td>XEEE</td></tr><tr><td>*</td><td>More Values</td></tr></table></td></tr>
<tr><td>30354</td><td>VarTextLen</td><td>N</td><td>2</td><td>82</td><td>Counter</td><td>Number of bytes for field VarText (30355).</td></tr>
<tr><td>30611</td><td>RRMState</td><td>N</td><td>1</td><td>84</td><td>unsigned int</td><td>The field indicates the RRM state of the member.<table><tr><th>Value</th><th>Description</th></tr><tr><td>0</td><td>No RRM</td></tr><tr><td>1</td><td>In RRM</td></tr><tr><td>2</td><td>Out Of RRM</td></tr></table></td></tr>
<tr><td>30620</td><td>MemberType</td><td>N</td><td>1</td><td>85</td><td>unsigned int</td><td>The field indicates the type of member for whom the alert is sent.<table><tr><th>Value</th><th>Description</th></tr><tr><td>1</td><td>Trading Member</td></tr><tr><td>2</td><td>Clearing Member</td></tr><tr><td>3</td><td>Proprietary</td></tr></table></td></tr>
<tr><td>30618</td><td>IncrementDecrement-Status</td><td>N</td><td>1</td><td>86</td><td>signed int</td><td>Indicates if the collateral utilization has changed with respect to previous state.<table><tr><th>Value</th><th>Description</th></tr><tr><td>1</td><td>Increment</td></tr><tr><td>0</td><td>No Change</td></tr><tr><td>-1</td><td>Decrement</td></tr></table></td></tr>
</table>

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 30636 | SegmentIndicator | N | 1 | 87 | unsigned int | The applicable segment<br><table><tr><th>Value</th><th>Description</th></tr><tr><td>2</td><td>Equity</td></tr><tr><td>7</td><td>Currency Derivatives (Full Segment)</td></tr><tr><td>8</td><td>Currency Asset Class (CDX)</td></tr><tr><td>9</td><td>Interest Rate Asset Class (IRD)</td></tr><tr><td>11</td><td>Equity Derivatives</td></tr><tr><td>12</td><td>Derivatives</td></tr><tr><td>15</td><td>Commodity Derivatives</td></tr><tr><td>16</td><td>Electronic Gold Receipts (EGR)</td></tr></table> |
| 30650 | Duration | N | 1 | 88 | unsigned int | <table><tr><th>Value</th><th>Description</th></tr><tr><td>1</td><td>NEAR</td></tr><tr><td>2</td><td>MID</td></tr><tr><td>3</td><td>FAR</td></tr></table> |
| 58 | ClientCode | N | 12 | 89 | Fixed String (0-terminable) | The Unique Client Code (UCC) of the person for whom the order is entered. For Proprietary Account Client code should be OWN always.<br>Valid characters: A-Z,0-9,\x2A,\x2D, \x2E,\x2F,\x5C |
| 30619 | BusinessUnitSymbol | Y | 8 | 101 | Fixed String | The member ID for whom the alert is sent<br>Valid characters: \x01-\x7E |
| 25018 | Pad3 | U | 3 | 109 | Fixed String | not used |
| 30355 | VarText | N | 2000 | 112 | Variable String | Error text.<br>Valid characters: \x09,\x0A,\x0D, \x20,\x22-\x7B,\x7D,\x7E |

### 7.5.2 Risk Collateral Alert Trader

This message informs about collateral alert for the business unit. The alert is sent to all the session of the business unit. For more details, please refer to chapter 4.11 Risk Control.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10049 (CollateralAlertReport, MsgType = U24) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<RBCHeader>* | | | | | | |
| 52 | SendingTime | Y | 8 | 8 | UTCTimestamp | Gateway response out timestamp. |
| 1181 | ApplSeqNum | Y | 8 | 16 | unsigned int | Application sequence number assigned to a non-order related BSE ETI data stream. |
| 28727 | ApplSubID | U | 4 | 24 | unsigned int | not used |
| 5948 | PartitionID | Y | 2 | 28 | unsigned int | Grouping of BSE products.<br>Belongs to the scope of Service Availability and Retransmit requests. |
| 1352 | ApplResendFlag | Y | 1 | 30 | unsigned int | Indicates a retransmission message.<br>Value \| Description<br>0 \| False<br>1 \| True |
| 1180 | ApplID | Y | 1 | 31 | unsigned int | Identifier for an ETI data stream.<br>Value \| Description<br>6 \| Risk Control |
| 893 | LastFragment | Y | 1 | 32 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value \| Description<br>1 \| Last Message |
| 25022 | Pad7 | U | 7 | 33 | Fixed String | not used |
| *<Message Body>* | | | | | | |
| 42 | OrigTime | N | 8 | 40 | UTCTimestamp | Creation timestamp of the News message. |
| 30613 | PercentageUtilized | Y | 4 | 48 | signed int | The utilization of the member in term of percentage. The value would be sent upto 2 decimal places. For eg 70.21 would be sent as 7021 |

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>1300</td><td>MarketSegmentID</td><td>N</td><td>4</td><td>52</td><td>signed int</td><td>Product identifier.</td></tr>
<tr><td>1301</td><td>MarketID</td><td>Y</td><td>2</td><td>56</td><td>unsigned int</td><td>Market ID.<table><tr><th>Value</th><th>Description</th></tr><tr><td>1</td><td>BSE</td></tr><tr><td>2</td><td>XEEE</td></tr><tr><td>*</td><td>More Values</td></tr></table></td></tr>
<tr><td>30354</td><td>VarTextLen</td><td>N</td><td>2</td><td>58</td><td>Counter</td><td>Number of bytes for field VarText (30355).</td></tr>
<tr><td>30611</td><td>RRMState</td><td>N</td><td>1</td><td>60</td><td>unsigned int</td><td>The field indicates the RRM state of the member.<table><tr><th>Value</th><th>Description</th></tr><tr><td>0</td><td>No RRM</td></tr><tr><td>1</td><td>In RRM</td></tr><tr><td>2</td><td>Out Of RRM</td></tr></table></td></tr>
<tr><td>30620</td><td>MemberType</td><td>N</td><td>1</td><td>61</td><td>unsigned int</td><td>The field indicates the type of member for whom the alert is sent.<table><tr><th>Value</th><th>Description</th></tr><tr><td>1</td><td>Trading Member</td></tr><tr><td>2</td><td>Clearing Member</td></tr><tr><td>3</td><td>Proprietary</td></tr></table></td></tr>
<tr><td>30618</td><td>IncrementDecrement-Status</td><td>N</td><td>1</td><td>62</td><td>signed int</td><td>Indicates if the collateral utilization has changed with respect to previous state.<table><tr><th>Value</th><th>Description</th></tr><tr><td>1</td><td>Increment</td></tr><tr><td>0</td><td>No Change</td></tr><tr><td>-1</td><td>Decrement</td></tr></table></td></tr>
</table>

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>30636</td><td>SegmentIndicator</td><td>N</td><td>1</td><td>63</td><td>unsigned int</td><td>The applicable segment
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>2</td><td>Equity</td></tr>
<tr><td>7</td><td>Currency Derivatives (Full Segment)</td></tr>
<tr><td>8</td><td>Currency Asset Class (CDX)</td></tr>
<tr><td>9</td><td>Interest Rate Asset Class (IRD)</td></tr>
<tr><td>11</td><td>Equity Derivatives</td></tr>
<tr><td>12</td><td>Derivatives</td></tr>
<tr><td>15</td><td>Commodity Derivatives</td></tr>
<tr><td>16</td><td>Electronic Gold Receipts (EGR)</td></tr>
</table></td></tr>
<tr><td>30650</td><td>Duration</td><td>N</td><td>1</td><td>64</td><td>unsigned int</td><td>
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>1</td><td>NEAR</td></tr>
<tr><td>2</td><td>MID</td></tr>
<tr><td>3</td><td>FAR</td></tr>
</table></td></tr>
<tr><td>58</td><td>ClientCode</td><td>N</td><td>12</td><td>65</td><td>Fixed String (0-terminable)</td><td>The Unique Client Code (UCC) of the person for whom the order is entered. For Proprietary Account Client code should be OWN always.<br>Valid characters: A-Z,0-9,\x2A,\x2D, \x2E,\x2F,\x5C</td></tr>
<tr><td>30619</td><td>BusinessUnitSymbol</td><td>Y</td><td>8</td><td>77</td><td>Fixed String</td><td>The Member ID for whom the alert is sent<br>Valid characters: \x01-\x7E</td></tr>
<tr><td>25018</td><td>Pad3</td><td>U</td><td>3</td><td>85</td><td>Fixed String</td><td>not used</td></tr>
<tr><td>30355</td><td>VarText</td><td>N</td><td>2000</td><td>88</td><td>Variable String</td><td>Error text.<br>Valid characters: \x09,\x0A,\x0D, \x20,\x22-\x7B,\x7D,\x7E</td></tr>
</table>

### 7.5.3 Trade Notification

The Trade Notification message is the legally binding confirmation for a trade. For more details, please refer to chapter 4.7 Trade Notifications.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10500 (TradeCaptureReport, MsgType = AE) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<RBCHeader>* | | | | | | |
| 52 | SendingTime | Y | 8 | 8 | UTCTimestamp | Gateway response out timestamp. |
| 1181 | ApplSeqNum | Y | 8 | 16 | unsigned int | Application sequence number assigned to a non-order related BSE ETI data stream. |
| 28727 | ApplSubID | N | 4 | 24 | unsigned int | Unique ID assigned by the BSE system during broadcast subscription in order to link broadcasts to the related subscription. |
| 5948 | PartitionID | Y | 2 | 28 | unsigned int | Grouping of BSE products.<br>Belongs to the scope of Service Availability and Retransmit requests. |
| 1352 | ApplResendFlag | Y | 1 | 30 | unsigned int | Indicates a retransmission message.<br>Value \| Description<br>0 \| False<br>1 \| True |
| 1180 | ApplID | Y | 1 | 31 | unsigned int | Identifier for an ETI data stream.<br>Value \| Description<br>1 \| Trade |
| 893 | LastFragment | Y | 1 | 32 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value \| Description<br>1 \| Last Message |
| 25022 | Pad7 | U | 7 | 33 | Fixed String | not used |
| *<Message Body>* | | | | | | |
| 48 | SecurityID | Y | 8 | 40 | signed int | Instrument identifier. |
| 1650 | RelatedSecurityID | N | 8 | 48 | signed int | Instrument identifier of the original BSE strategy. |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 44 | Price | N | 8 | 56 | PriceType | Order Price |
| 31 | LastPx | Y | 8 | 64 | PriceType | Price of this fill. |
| 28585 | SideLastPx | N | 8 | 72 | PriceType | Fill price for the original BSE strategy. |
| 1596 | ClearingTradePrice | N | 8 | 80 | PriceType | The Trade price. |
| 236 | Yield | N | 8 | 88 | PriceType | The Yield corresponding to the clean price. |
| 882 | UnderlyingDirtyPrice | N | 8 | 96 | PriceType | The dirty price. |
| 60 | TransactTime | Y | 8 | 104 | UTCTimestamp | Transaction timestamp. |
| 37 | OrderID | N | 8 | 112 | unsigned int | Exchange Order ID generated by BSE System; it remains constant over the lifetime of an order. |
| 142 | SenderLocationID | Y | 8 | 120 | unsigned int | The location ID of the order from where it is originated |
| 11 | ClOrdID | N | 8 | 128 | unsigned int | Client Order ID: Unique participant defined order request identifier. |
| 30645 | ActivityTime | Y | 8 | 136 | UTCTimestamp | Activity timestamp for that order |
| 30646 | Filler1 | N | 8 | 144 | unsigned int | not used |
| 30647 | Filler2 | N | 4 | 152 | unsigned int | not used |
| 526 | MessageTag | Y | 4 | 156 | signed int | The message tag as provided by the user in order request |
| 1003 | TradeID | Y | 4 | 160 | unsigned int | Uniquely identifies all order leg allocations referring to the same match event, simple instrument and price. |
| 1126 | OrigTradeID | N | 4 | 164 | unsigned int | not used. |
| 20459 | RootPartyIDExecutingUnit | Y | 4 | 168 | unsigned int | Business Unit ID. |
| 20455 | RootPartyIDSessionID | N | 4 | 172 | unsigned int | Session ID. |
| 20412 | RootPartyIDExecutingTrader | Y | 4 | 176 | unsigned int | Owning User ID. |
| 25026 | RootPartyIDClearingUnit | Y | 4 | 180 | unsigned int | not used |
| 14 | CumQty | N | 4 | 184 | Qty | Cumulated executed quantity of an order. |
| 151 | LeavesQty | N | 4 | 188 | Qty | Remaining quantity of the order at the time of the execution. If the order has been executed partially this field contains the non-executed quantity. A remaining size of 0 indicates that the order is fully matched or no longer active. |
| 1300 | MarketSegmentID | Y | 4 | 192 | signed int | Product identifier. |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 1649 | RelatedSymbol | N | 4 | 196 | signed int | Product identifier of the original BSE strategy. |
| 32 | LastQty | Y | 4 | 200 | Qty | Quantity executed in this fill. |
| 1009 | SideLastQty | N | 4 | 204 | signed int | Fill quantity for the original BSE strategy. |
| 28736 | ClearingTradeQty | N | 4 | 208 | Qty | The Traded quantity. |
| 1506 | SideTradeID | Y | 4 | 212 | unsigned int | Private trade identifier of an order match step. |
| 28582 | MatchDate | Y | 4 | 216 | LocalMktDate | Business day of the match event. |
| 880 | TrdMatchID | Y | 4 | 220 | unsigned int | Unique identifier for each price level (match step) of a match event; it is used for public trade reporting. |
| 1851 | StrategyLinkID | N | 4 | 224 | unsigned int | Identifier that links all trades resulting from a match step of a strategy order. |
| 748 | TotNumTradeReports | N | 4 | 228 | signed int | Number of leg executions of the original strategy order. |
| 30652 | Filler4 | N | 2 | 232 | unsigned int | not used |
| 442 | MultiLegReportingType | N | 1 | 234 | unsigned int | Indicates if the trade resulted from a single order or a multi leg order.<br>Value \| Description<br>1 \| Single Order<br>2 \| Individual Leg of a Complex Order. |
| 856 | TradeReportType | Y | 1 | 235 | unsigned int | not used |
| 830 | TransferReason | Y | 1 | 236 | unsigned int | not used<br>Value \| Description<br>1 \| Owner<br>2 \| Clearer |
| 30653 | RolloverFlag | N | 1 | 237 | unsigned int | not used |
| 20432 | RootPartyIDBeneficiary | N | 9 | 238 | Fixed String | not used<br>Valid characters: \x20,\x22-\x7B, \x7D,\x7E |
| 20496 | RootPartyIDTakeUpTradingFirm | N | 5 | 247 | Fixed String | not used<br>Valid characters: \x20,\x22-\x7B, \x7D,\x7E |
| 20413 | RootPartyIDOrderOriginationFirm | N | 7 | 252 | Fixed String | not used<br>Valid characters: A-Z,0-9,\x20 |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 581 | AccountType | Y | 1 | 259 | unsigned int | Value \| Description<br>20 \| Own<br>30 \| Client |
| 574 | MatchType | N | 1 | 260 | unsigned int | The point in the matching process at which this trade was matched.<br>Value \| Description<br>4 \| Auto Match Incoming<br>7 \| Call Auction<br>11 \| Auto Match Resting |
| 28610 | MatchSubType | N | 1 | 261 | unsigned int | not used<br>Value \| Description<br>1 \| Opening Auction<br>3 \| Intraday Auction |
| 54 | Side | Y | 1 | 262 | unsigned int | Side of the trade. Leg executions of sell orders for complex instruments will have an inverted value compared to the signature.<br>Value \| Description<br>1 \| Buy<br>2 \| Sell<br>3 \| Recall<br>4 \| Early Return |
| 1057 | AggressorIndicator | N | 1 | 263 | unsigned int | Indicates whether the order added or removed liquidity.<br>Value \| Description<br>0 \| Passive<br>1 \| Aggressive |
| 1815 | TradingCapacity | Y | 1 | 264 | unsigned int | not used |
| 1 | Account | N | 2 | 265 | Fixed String | not used<br>Valid characters: 1-9,\x41,\x47,\x4D, \x50 |
| 77 | PositionEffect | N | 1 | 267 | char | not used<br>Valid characters: \x01-\x7E |
| 1031 | CustOrderHandlingInst | N | 1 | 268 | Fixed String | not used.<br>Valid characters: \x20,\x22-\x7B, \x7D,\x7E |
| 30649 | AlgoID | N | 16 | 269 | Fixed String (0-terminable) | Unique identifier of the algorithm.<br>Valid characters: A-Z,0-9 |

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>58</td><td>ClientCode</td><td>Y</td><td>12</td><td>285</td><td>Fixed String (0-terminable)</td><td>The Unique Client Code (UCC) of the person for whom the order is entered. For Proprietary Account Client code should be OWN always.<br>Valid characters: A-Z,0-9,\x2A,\x2D, \x2E,\x2F,\x5C</td></tr>
<tr><td>30642</td><td>CPCode</td><td>N</td><td>12</td><td>297</td><td>Chartext</td><td>The Participant code.<br>Valid characters: \x00,\x21,\x23, \x24,\x28,\x29,\x2A,\x2B,\x2D, \x2E,\x2F,\x30-\x39,\x3A,\x3B, \x3D,\x3E,\x3F,\x40,\x41-\x5A, \x5C,\x5D,\x5F,\x60,\x7B,\x7D</td></tr>
<tr><td>25009</td><td>FreeText3</td><td>N</td><td>12</td><td>309</td><td>Chartext</td><td>Free-format text field for trader-specific or customer-related comments.<br>Valid characters: \x00,\x21,\x23, \x24,\x28,\x29,\x2A,\x2B,\x2D, \x2E,\x2F,\x30-\x39,\x3A,\x3B, \x3D,\x3E,\x3F,\x40,\x41-\x5A, \x5C,\x5D,\x5F,\x60,\x7B,\x7D</td></tr>
<tr><td>1115</td><td>OrderCategory</td><td>N</td><td>1</td><td>321</td><td>char</td><td>Indicates if the trade notification results from an order.<table><tr><th>Value</th><th>Description</th></tr><tr><td>1</td><td>Order</td></tr><tr><td>2</td><td>Quote</td></tr><tr><td>3</td><td>Multi Leg Order</td></tr></table></td></tr>
<tr><td>40</td><td>OrdType</td><td>N</td><td>1</td><td>322</td><td>unsigned int</td><td>Order type.<table><tr><th>Value</th><th>Description</th></tr><tr><td>2</td><td>Limit</td></tr><tr><td>3</td><td>Stop Market</td></tr><tr><td>4</td><td>Stop Limit</td></tr><tr><td>5</td><td>Market</td></tr><tr><td>6</td><td>Block Deal</td></tr></table></td></tr>
<tr><td>28587</td><td>RelatedProduct-Complex</td><td>N</td><td>1</td><td>323</td><td>unsigned int</td><td>Instrument type of the original BSE strategy.<table><tr><th>Value</th><th>Description</th></tr><tr><td>2</td><td>Standard Option Strategy</td></tr><tr><td>5</td><td>Futures Spread</td></tr></table></td></tr>
</table>

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 28586 | OrderSide | N | 1 | 324 | unsigned int | Side of the order in the original BSE strategy.<br>Value \| Description<br>1 \| Buy<br>2 \| Sell<br>3 \| Recall<br>4 \| Early Return |
| 22421 | RootPartyClearing-Organization | Y | 4 | 325 | Fixed String | not used<br>Valid characters: \x20,\x22-\x7B, \x7D,\x7E |
| 22401 | RootPartyExecuting-Firm | Y | 5 | 329 | Fixed String | Participant Short Name.<br>Valid characters: \x20,\x22-\x7B, \x7D,\x7E |
| 22412 | RootPartyExecuting-Trader | Y | 6 | 334 | Fixed String | Owning User Short Name.<br>Valid characters: \x20,\x22-\x7B, \x7D,\x7E |
| 22404 | RootPartyClearingFirm | Y | 5 | 340 | Fixed String | not used<br>Valid characters: \x20,\x22-\x7B, \x7D,\x7E |
| 25022 | Pad7 | U | 7 | 345 | Fixed String | not used |

### 7.5.4 Trade Enhancement Notification

This message informs about the acceptance/rejection of a trade by the custodian . The alert is sent to the originating session and the admin session of the business unit. For more details, please refer to chapter 4.8 Trade Enhancement Notification.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10989 (TradeEnhancementStatus, MsgType = U31) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<RBCHeader>* | | | | | | |
| 52 | SendingTime | Y | 8 | 8 | UTCTimestamp | Gateway response out timestamp. |
| 1181 | ApplSeqNum | Y | 8 | 16 | unsigned int | Application sequence number assigned to a non-order related BSE ETI data stream. |
| 28727 | ApplSubID | N | 4 | 24 | unsigned int | Unique ID assigned by the BSE system during broadcast subscription in order to link broadcasts to the related subscription. |
| 5948 | PartitionID | Y | 2 | 28 | unsigned int | Grouping of BSE products.<br>Belongs to the scope of Service Availability and Retransmit requests. |
| 1352 | ApplResendFlag | Y | 1 | 30 | unsigned int | Indicates a retransmission message.<br>Value / Description<br>0 False<br>1 True |
| 1180 | ApplID | Y | 1 | 31 | unsigned int | Identifier for an ETI data stream.<br>Value / Description<br>0 Trade Enhancement |
| 893 | LastFragment | Y | 1 | 32 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value / Description<br>1 Last Message |
| 25022 | Pad7 | U | 7 | 33 | Fixed String | not used |
| *<Message Body>* | | | | | | |
| 48 | SecurityID | Y | 8 | 40 | signed int | Instrument identifier. |
| 1596 | ClearingTradePrice | N | 8 | 48 | PriceType | The Trade price. |

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>60</td><td>TransactTime</td><td>N</td><td>8</td><td>56</td><td>UTCTimestamp</td><td>Transaction timestamp.</td></tr>
<tr><td>37</td><td>OrderID</td><td>N</td><td>8</td><td>64</td><td>unsigned int</td><td>Exchange Order ID generated by BSE System; it remains constant over the lifetime of an order.</td></tr>
<tr><td>1003</td><td>TradeID</td><td>N</td><td>4</td><td>72</td><td>unsigned int</td><td>Uniquely identifies all order leg allocations referring to the same match event, simple instrument and price.</td></tr>
<tr><td>20455</td><td>RootPartyIDSessionID</td><td>Y</td><td>4</td><td>76</td><td>unsigned int</td><td>Session ID.</td></tr>
<tr><td>1506</td><td>SideTradeID</td><td>Y</td><td>4</td><td>80</td><td>unsigned int</td><td>Private trade identifier of an order match step.</td></tr>
<tr><td>1300</td><td>MarketSegmentID</td><td>N</td><td>4</td><td>84</td><td>signed int</td><td>Product identifier.</td></tr>
<tr><td>28582</td><td>MatchDate</td><td>N</td><td>4</td><td>88</td><td>LocalMktDate</td><td>Business day of the match event.</td></tr>
<tr><td>28736</td><td>ClearingTradeQty</td><td>N</td><td>4</td><td>92</td><td>Qty</td><td>The Traded quantity.</td></tr>
<tr><td>581</td><td>AccountType</td><td>N</td><td>1</td><td>96</td><td>unsigned int</td><td><table><tr><th>Value</th><th>Description</th></tr><tr><td>20</td><td>Own</td></tr><tr><td>30</td><td>Client</td></tr></table></td></tr>
<tr><td>54</td><td>Side</td><td>N</td><td>1</td><td>97</td><td>unsigned int</td><td>Side of the order.<table><tr><th>Value</th><th>Description</th></tr><tr><td>1</td><td>Buy</td></tr><tr><td>2</td><td>Sell</td></tr></table></td></tr>
<tr><td>754</td><td>AutoAcceptIndicator</td><td>N</td><td>1</td><td>98</td><td>Boolean</td><td>Flag informing the status of the acceptance/rejection of trade by the custodian.<table><tr><th>Value</th><th>Description</th></tr><tr><td>Y</td><td>Accepted</td></tr><tr><td>N</td><td>Rejected</td></tr></table></td></tr>
<tr><td>30642</td><td>CPCode</td><td>N</td><td>12</td><td>99</td><td>Chartext</td><td>The Participant code.<br>Valid characters: \x00,\x21,\x23, \x24,\x28,\x29,\x2A,\x2B,\x2D, \x2E,\x2F,\x30-\x39,\x3A,\x3B, \x3D,\x3E,\x3F,\x40,\x41-\x5A, \x5C,\x5D,\x5F,\x60,\x7B,\x7D</td></tr>
<tr><td>58</td><td>ClientCode</td><td>N</td><td>12</td><td>111</td><td>Fixed String (0-terminable)</td><td>The Unique Client Code (UCC) of the person for whom the order is entered. For Proprietary Account Client code should be OWN always.<br>Valid characters: A-Z,0-9,\x2A,\x2D, \x2E,\x2F,\x5C</td></tr>
<tr><td>25020</td><td>Pad5</td><td>U</td><td>5</td><td>123</td><td>Fixed String</td><td>not used</td></tr>
</table>

### 7.5.5 Trade Notification Status

This message informs about the end of the Trade Notification stream.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10501 (TradingSessionStatus, MsgType = h) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<RBCHeader>* | | | | | | |
| 52 | SendingTime | Y | 8 | 8 | UTCTimestamp | Gateway response out timestamp. |
| 1181 | ApplSeqNum | Y | 8 | 16 | unsigned int | Application sequence number assigned to a non-order related BSE ETI data stream. |
| 28727 | ApplSubID | N | 4 | 24 | unsigned int | Unique ID assigned by the BSE system during broadcast subscription in order to link broadcasts to the related subscription. |
| 5948 | PartitionID | Y | 2 | 28 | unsigned int | Grouping of BSE products.<br>Belongs to the scope of Service Availability and Retransmit requests. |
| 1352 | ApplResendFlag | Y | 1 | 30 | unsigned int | Indicates a retransmission message.<br>Value / Description:<br>0 False<br>1 True |
| 1180 | ApplID | Y | 1 | 31 | unsigned int | Identifier for an ETI data stream.<br>Value / Description:<br>1 Trade |
| 893 | LastFragment | Y | 1 | 32 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value / Description:<br>1 Last Message |
| 25022 | Pad7 | U | 7 | 33 | Fixed String | not used |
| *<Message Body>* | | | | | | |
| 1368 | TradSesEvent | Y | 1 | 40 | unsigned int | Trading session event type.<br>Value / Description:<br>104 End Of Day Service |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 25022 | Pad7 | U | 7 | 41 | Fixed String | not used |

### 7.5.6 Service Availability

The Service Availability message provides information on the availability of a partition. For more details, please refer to chapter 4.12 Service Availability.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10030 (UserNotification, MsgType = CB) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<NRBCHeader>* | | | | | | |
| 52 | SendingTime | Y | 8 | 8 | UTCTimestamp | Gateway response out timestamp. |
| 28727 | ApplSubID | Y | 4 | 16 | unsigned int | Unique ID assigned by the BSE system during broadcast subscription in order to link broadcasts to the related subscription. |
| 1180 | ApplID | Y | 1 | 20 | unsigned int | Identifier for an ETI data stream.<br>Value \| Description<br>3 \| Service Availability |
| 893 | LastFragment | Y | 1 | 21 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value \| Description<br>0 \| Not Last Message<br>1 \| Last Message |
| 25017 | Pad2 | U | 2 | 22 | Fixed String | not used |
| *<Message Body>* | | | | | | |
| 25030 | MatchingEngineTradeDate | N | 4 | 24 | LocalMktDate | Current business day of order management service. |
| 25031 | TradeManagerTradeDate | N | 4 | 28 | LocalMktDate | Current business day of retransmission service for trades. |
| 25032 | ApplSeqTradeDate | N | 4 | 32 | LocalMktDate | Current business day of retransmission service for order events (session and listener data). |
| 5948 | PartitionID | Y | 2 | 36 | unsigned int | Grouping of BSE products.<br>Belongs to the scope of Service Availability and Retransmit requests. |

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>25005</td><td>MatchingEngineStatus</td><td>Y</td><td>1</td><td>38</td><td>unsigned int</td><td>Informs if trading is active for grouping of BSE products.<table><tr><th>Value</th><th>Description</th></tr><tr><td>0</td><td>Unavailable</td></tr><tr><td>1</td><td>Available</td></tr></table></td></tr>
<tr><td>25006</td><td>TradeManagerStatus</td><td>Y</td><td>1</td><td>39</td><td>unsigned int</td><td>Informs if trade broadcast dissemination is active for a grouping of BSE products.<table><tr><th>Value</th><th>Description</th></tr><tr><td>0</td><td>Unavailable</td></tr><tr><td>1</td><td>Available</td></tr></table></td></tr>
<tr><td>28732</td><td>ApplSeqStatus</td><td>Y</td><td>1</td><td>40</td><td>unsigned int</td><td>Informs about the availability of the retransmission services for order events (session data and listener data).<table><tr><th>Value</th><th>Description</th></tr><tr><td>0</td><td>Unavailable</td></tr><tr><td>1</td><td>Available</td></tr></table></td></tr>
<tr><td>25022</td><td>Pad7</td><td>U</td><td>7</td><td>41</td><td>Fixed String</td><td>not used</td></tr>
</table>

### 7.5.7 News

The News message provides public information from the BSE market supervision. News messages distributed without an ApplSeqNum are not part of the retransmission responses. For more details, please refer to chapter 4.10 News.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10031 (News, MsgType = B) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<RBCHeader>* | | | | | | |
| 52 | SendingTime | Y | 8 | 8 | UTCTimestamp | Gateway response out timestamp. |
| 1181 | ApplSeqNum | N | 8 | 16 | unsigned int | Application sequence number assigned to a non-order related BSE ETI data stream. |
| 28727 | ApplSubID | N | 4 | 24 | unsigned int | Unique ID assigned by the BSE system during broadcast subscription in order to link broadcasts to the related subscription. |
| 5948 | PartitionID | Y | 2 | 28 | unsigned int | Grouping of BSE products.<br>Belongs to the scope of Service Availability and Retransmit requests. |
| 1352 | ApplResendFlag | Y | 1 | 30 | unsigned int | Indicates a retransmission message.<br>Value \| Description<br>0 \| False<br>1 \| True |
| 1180 | ApplID | Y | 1 | 31 | unsigned int | Identifier for an ETI data stream.<br>Value \| Description<br>2 \| News |
| 893 | LastFragment | Y | 1 | 32 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value \| Description<br>1 \| Last Message |
| 25022 | Pad7 | U | 7 | 33 | Fixed String | not used |
| *<Message Body>* | | | | | | |
| 42 | OrigTime | Y | 8 | 40 | UTCTimestamp | Creation timestamp of the News message. |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 30354 | VarTextLen | Y | 2 | 48 | Counter | Number of bytes for field VarText (30355). |
| 148 | Headline | Y | 256 | 50 | Fixed String | The headline of a News message.<br>Valid characters: \x20,\x22-\x7B, \x7D,\x7E |
| 25021 | Pad6 | U | 6 | 306 | Fixed String | not used |
| 30355 | VarText | N | 2000 | 312 | Variable String | News text.<br>Valid characters: \x09,\x0A,\x0D, \x20,\x22-\x7B,\x7D,\x7E |

### 7.5.8 Risk Notification

This message informs about risk events for the business unit. For more details, please refer to chapter 4.11 Risk Control.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10033 (PartyRiskLimitsUpdateReport, MsgType = CR) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<RBCHeader>* | | | | | | |
| 52 | SendingTime | Y | 8 | 8 | UTCTimestamp | Gateway response out timestamp. |
| 1181 | ApplSeqNum | Y | 8 | 16 | unsigned int | Application sequence number assigned to a non-order related BSE ETI data stream. |
| 28727 | ApplSubID | U | 4 | 24 | unsigned int | not used |
| 5948 | PartitionID | Y | 2 | 28 | unsigned int | Grouping of BSE products.<br>Belongs to the scope of Service Availability and Retransmit requests. |
| 1352 | ApplResendFlag | Y | 1 | 30 | unsigned int | Indicates a retransmission message.<br>Value \| Description<br>0 \| False<br>1 \| True |
| 1180 | ApplID | Y | 1 | 31 | unsigned int | Identifier for an ETI data stream.<br>Value \| Description<br>6 \| Risk Control<br>8 \| Risk Admin |
| 893 | LastFragment | Y | 1 | 32 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value \| Description<br>1 \| Last Message |
| 25022 | Pad7 | U | 7 | 33 | Fixed String | not used |
| *<Message Body>* | | | | | | |
| 60 | TransactTime | Y | 8 | 40 | UTCTimestamp | Transaction timestamp. |
| 75 | TradeDate | Y | 4 | 48 | LocalMktDate | Business date. |
| 20259 | PartyDetail-IDExecutingUnit | Y | 4 | 52 | unsigned int | Business Unit ID. |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 20816 | RequestingParty-IDExecutingSystem | Y | 4 | 56 | unsigned int | System ID.<br><br>Value / Description:<br>1 – Eurex Clearing |
| 1300 | MarketSegmentID | N | 4 | 60 | signed int | Product identifier. |
| 1301 | MarketID | N | 2 | 64 | unsigned int | Market ID.<br><br>Value / Description:<br>1 – BSE<br>2 – XEEE<br>* – More Values |
| 30643 | RiskModeStatus | N | 1 | 66 | unsigned int | The field indicates the RRM or Suspension state of the member.<br><br>Value / Description:<br>1 – IN<br>2 – OUT |
| 30636 | SegmentIndicator | N | 1 | 67 | unsigned int | The applicable segment<br><br>Value / Description:<br>2 – Equity<br>7 – Currency Derivatives (Full Segment)<br>8 – Currency Asset Class (CDX)<br>9 – Interest Rate Asset Class (IRD)<br>11 – Equity Derivatives<br>12 – Derivatives<br>15 – Commodity Derivatives<br>16 – Electronic Gold Receipts (EGR) |
| 1324 | ListUpdateAction | Y | 1 | 68 | char | Invocation (A = Add) or release (D = Delete) of a risk limitation.<br><br>Value / Description:<br>A – Add<br>D – Delete |
| 1767 | RiskLimitAction | N | 1 | 69 | unsigned int | Risk protection action.<br><br>Value / Description:<br>4 – Warning<br>0 – Queue Inbound<br>2 – Reject |

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>30633</td><td>ScopeIdentifier</td><td>N</td><td>1</td><td>70</td><td>unsigned int</td><td>The Regulatory status of the member.<br><table><tr><th>Value</th><th>Description</th></tr><tr><td>1</td><td>MEMBER SUSPENSION</td></tr><tr><td>2</td><td>POSITION LIMIT SUSPENSION</td></tr><tr><td>3</td><td>COLLATERAL SUSPENSION</td></tr><tr><td>4</td><td>COOLINGOFF SUSPENSION</td></tr><tr><td>5</td><td>POSITION LIMIT RRM</td></tr><tr><td>6</td><td>MARKET</td></tr><tr><td>7</td><td>COOLINGOFF RRM</td></tr><tr><td>8</td><td>COLLATERAL RRM</td></tr><tr><td>9</td><td>POSITION LIMIT RRM (NEAR MONTH CONTRACT)</td></tr></table></td></tr>
<tr><td>58</td><td>ClientCode</td><td>N</td><td>12</td><td>71</td><td>Fixed String (0-terminable)</td><td>The Unique Client Code (UCC) of the person for whom the order is entered. For Proprietary Account Client code should be OWN always.<br>Valid characters: A-Z,0-9,\x2A,\x2D, \x2E,\x2F,\x5C</td></tr>
<tr><td>22807</td><td>RequestingParty-EnteringFirm</td><td>Y</td><td>9</td><td>83</td><td>Fixed String</td><td>Entering Entity Short Name.<br>Valid characters: A-Z,0-9,\x20</td></tr>
<tr><td>22804</td><td>RequestingParty-ClearingFirm</td><td>N</td><td>9</td><td>92</td><td>Fixed String</td><td>not used<br>Valid characters: A-Z,0-9,\x20</td></tr>
<tr><td>30619</td><td>BusinessUnitSymbol</td><td>N</td><td>8</td><td>101</td><td>Fixed String</td><td>The member ID for whom the alert is sent<br>Valid characters: \x01-\x7E</td></tr>
<tr><td>25018</td><td>Pad3</td><td>U</td><td>3</td><td>109</td><td>Fixed String</td><td>not used</td></tr>
</table>

### 7.5.9 Trading Session Event

This message informs about session related events. For more details, please refer to chapter 4.15 Trading Session Events.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10307 (TradingSessionStatus, MsgType = h) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<RBCHeaderME>* | | | | | | |
| 21003 | TrdRegTSTimeOut | N | 8 | 8 | UTCTimestamp | Matching engine out timestamp. |
| 52 | SendingTime | Y | 8 | 16 | UTCTimestamp | Gateway response out timestamp. |
| 28727 | ApplSubID | N | 4 | 24 | unsigned int | Only set for Listener Data. |
| 5948 | PartitionID | Y | 2 | 28 | unsigned int | Grouping of BSE products.<br>Belongs to the scope of Service Availability and Retransmit requests. |
| 28704 | ApplMsgID | Y | 16 | 30 | data | Application message identifier assigned to an order event. |
| 1180 | ApplID | Y | 1 | 46 | unsigned int | Identifier for an ETI data stream.<br>Value \| Description<br>4 \| Session Data<br>5 \| Listener Data |
| 1352 | ApplResendFlag | Y | 1 | 47 | unsigned int | Indicates a retransmission message.<br>Value \| Description<br>0 \| False<br>1 \| True |
| 893 | LastFragment | Y | 1 | 48 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value \| Description<br>1 \| Last Message |
| 25022 | Pad7 | U | 7 | 49 | Fixed String | not used |
| *<Message Body>* | | | | | | |
| 1300 | MarketSegmentID | N | 4 | 56 | signed int | Product identifier. |
| 75 | TradeDate | N | 4 | 60 | LocalMktDate | Business date. |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 1368 | TradSesEvent | Y | 1 | 64 | unsigned int | Trading session event type.<br>Value / Description:<br>101 Start Of Service<br>102 Market Reset<br>103 End Of Restatement<br>104 End Of Day Service |
| 28722 | RefApplLastMsgID | N | 16 | 65 | data | Last persisted application message identifier in case of a Market Reset event. |
| 25022 | Pad7 | U | 7 | 81 | Fixed String | not used |

### 7.5.10 Mass Cancellation Event

This message informs about an event that implicitly led to the mass cancellation of orders.

For more details see chapter 4.13 Mass Cancellation Notification and chapter 4.14 Mass Cancellation Events

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10308 (OrderMassActionReport, MsgType = BZ) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<RBCHeaderME>* | | | | | | |
| 21003 | TrdRegTSTimeOut | N | 8 | 8 | UTCTimestamp | Matching engine out timestamp. |
| 52 | SendingTime | Y | 8 | 16 | UTCTimestamp | Gateway response out timestamp. |
| 28727 | ApplSubID | N | 4 | 24 | unsigned int | Unique ID assigned by the BSE system during broadcast subscription in order to link broadcasts to the related subscription. |
| 5948 | PartitionID | Y | 2 | 28 | unsigned int | Grouping of BSE products.<br>Belongs to the scope of Service Availability and Retransmit requests. |
| 28704 | ApplMsgID | N | 16 | 30 | data | Application message identifier assigned to an order event. |
| 1180 | ApplID | Y | 1 | 46 | unsigned int | Identifier for an ETI data stream.<br>Value \| Description<br>4 \| Session Data<br>5 \| Listener Data |
| 1352 | ApplResendFlag | Y | 1 | 47 | unsigned int | Indicates a retransmission message.<br>Value \| Description<br>0 \| False<br>1 \| True |
| 893 | LastFragment | Y | 1 | 48 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value \| Description<br>1 \| Last Message |
| 25022 | Pad7 | U | 7 | 49 | Fixed String | not used |
| *<Message Body>* | | | | | | |
| 1369 | MassActionReportID | Y | 8 | 56 | UTCTimestamp | Transaction timestamp. |

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>48</td><td>SecurityID</td><td>N</td><td>8</td><td>64</td><td>signed int</td><td>Instrument identifier.</td></tr>
<tr><td>1300</td><td>MarketSegmentID</td><td>Y</td><td>4</td><td>72</td><td>signed int</td><td>Product identifier.</td></tr>
<tr><td>28721</td><td>MassActionReason</td><td>Y</td><td>1</td><td>76</td><td>unsigned int</td><td>Reason for mass cancellation.
<table>
<tr><td>Value</td><td>Description</td></tr>
<tr><td>105</td><td>Product State Halt</td></tr>
<tr><td>106</td><td>Product State Holiday</td></tr>
<tr><td>107</td><td>Instrument Suspended</td></tr>
<tr><td>109</td><td>Complex Instrument Deletion</td></tr>
<tr><td>110</td><td>Volatility Interruption</td></tr>
<tr><td>111</td><td>Product Temporarily Not Tradable</td></tr>
<tr><td>114</td><td>Product State Closing</td></tr>
<tr><td>115</td><td>Product State EOD</td></tr>
<tr><td>*</td><td>More Values</td></tr>
</table></td></tr>
<tr><td>18</td><td>ExecInst</td><td>N</td><td>1</td><td>77</td><td>unsigned int</td><td>Cancellation scope for orders."No valueïndicates no order cancellation.
<table>
<tr><td>Value</td><td>Description</td></tr>
<tr><td>1</td><td>Persistent Order (FIX value "H")</td></tr>
<tr><td>2</td><td>Non-persistent Order (FIX value "Q")</td></tr>
<tr><td>3</td><td>Persistent and non-persistent Orders (FIX value "H Q")</td></tr>
</table></td></tr>
<tr><td>25017</td><td>Pad2</td><td>U</td><td>2</td><td>78</td><td>Fixed String</td><td>not used</td></tr>
</table>

#### 7.5.11 Gap Fill

This message informs that the provided message must be skipped over, due to the fact that the BSE system is not able to provide the functional data to the participant. The exchange may be contacted for further error analysis.

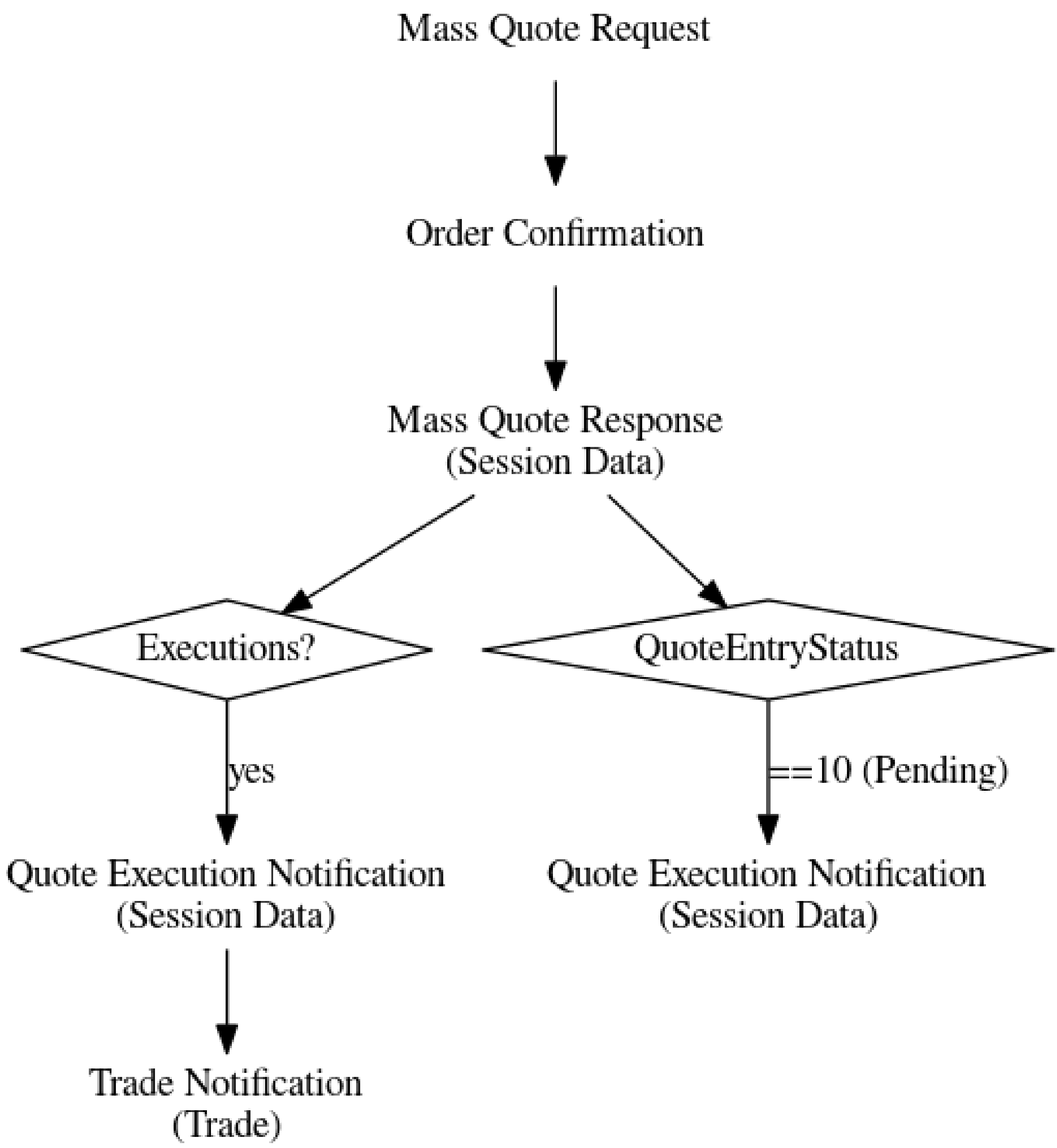
| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10032 (ApplicationMessageReport, MsgType = BY) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<NotifHeader>* | | | | | | |
| 52 | SendingTime | Y | 8 | 8 | UTCTimestamp | Gateway response out timestamp. |
| *<Message Body>* | | | | | | |
| 28724 | ApplIDStatus | Y | 4 | 16 | unsigned int | Application sequencing related error code.<br>Value / Description:<br>105 Outbound Conversion Error<br>* More Values |
| 28728 | RefApplSubID | N | 4 | 20 | unsigned int | Unique ID for the subscription instance assigned by the BSE system during broadcast subscription. |
| 30354 | VarTextLen | Y | 2 | 24 | Counter | Number of bytes for field VarText (30355). |
| 1355 | RefApplID | Y | 1 | 26 | unsigned int | Application identifier of a BSE ETI data stream.<br>Value / Description:<br>0 Trade Enhancement<br>1 Trade<br>2 News<br>3 Service Availability<br>4 Session Data<br>5 Listener Data<br>6 Risk Control<br>8 Risk Admin |
| 1409 | SessionStatus | Y | 1 | 27 | unsigned int | Session status.<br>Value / Description:<br>0 Session active<br>4 Session logout complete |
| 25019 | Pad4 | U | 4 | 28 | Fixed String | not used |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 30355 | VarText | Y | 2000 | 32 | Variable String | Error text.<br>Valid characters: \x09,\x0A,\x0D, \x20,\x22-\x7B,\x7D,\x7E |

## 7.6 Quote Handling

### 7.6.1 Mass Quote Request

Double sided orders are entered using the Mass Quote message. For more details, please refer to chapter 4.6.2 Maintaining Quotes.




| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderIn>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10405 (MassQuote, MsgType = i) |
| 25028 | NetworkMsgID | U | 8 | 6 | Fixed String | not used |
| 25017 | Pad2 | U | 2 | 14 | Fixed String | not used |
| *<RequestHeader>* | | | | | | |
| 34 | MsgSeqNum | Y | 4 | 16 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 50 | SenderSubID | Y | 4 | 20 | unsigned int | User ID. |
| *<Message Body>* | | | | | | |
| 142 | SenderLocationID | Y | 8 | 24 | unsigned int | The location ID of the order from where it is originated |
| 117 | QuoteID | Y | 8 | 32 | unsigned int | Customer defined mass quote identifier. |
| 1300 | MarketSegmentID | Y | 4 | 40 | signed int | Product identifier. |
| 25029 | RegulatoryID | N | 4 | 44 | unsigned int | not used. |
| 25033 | EnrichmentRuleID | N | 2 | 48 | unsigned int | Identifies an enrichment rule |
| 581 | AccountType | Y | 1 | 50 | unsigned int | Value / Description:<br>20 Own<br>30 Client |
| 28710 | PriceValidityCheckType | Y | 1 | 51 | unsigned int | not used.<br>Value / Description:<br>0 None |
| 28723 | QuoteSizeType | Y | 1 | 52 | unsigned int | Identifies the quoting model.<br>Value / Description:<br>1 Total Size (Quote Modification)<br>2 Open Size(Quote Entry) |
| 30651 | STPCFlag | Y | 1 | 53 | unsigned int | Indicates the preference of order to be cancelled if self-trade is encountered. Preference not applicable in a modification requests.<br>Value / Description:<br>0 Passive<br>1 Active |
| 295 | NoQuoteEntries | Y | 1 | 54 | Counter | The number of quote entries for a Mass Quote. |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 30649 | AlgoID | N | 16 | 55 | Fixed String (0-terminable) | Unique identifier of the algorithm.<br>Valid characters: A-Z,0-9 |
| 58 | ClientCode | Y | 12 | 71 | Fixed String (0-terminable) | The Unique Client Code (UCC) of the person for whom the order is entered. For Proprietary Account Client code should be OWN always.<br>Valid characters: A-Z,0-9,\x2A,\x2D, \x2E,\x2F,\x5C |
| 30642 | CPCode | N | 12 | 83 | Chartext | The Participant code.<br>Valid characters: \x00,\x21,\x23, \x24,\x28,\x29,\x2A,\x2B,\x2D, \x2E,\x2F,\x30-\x39,\x3A,\x3B, \x3D,\x3E,\x3F,\x40,\x41-\x5A, \x5C,\x5D,\x5F,\x60,\x7B,\x7D |
| 25016 | Pad1 | U | 1 | 95 | Fixed String | not used |
| *<QuoteEntryGrp>* | | | | | | Cardinality: 0-100, Record counter: NoQuoteEntries |
| 48 | >SecurityID | Y | 8 | 96 | signed int | Instrument identifier. |
| 132 | >BidPx | N | 8 | 104 | PriceType | Bid price/rate. |
| 133 | >OfferPx | N | 8 | 112 | PriceType | Offer price/rate. |
| 134 | >BidSize | N | 4 | 120 | Qty | Quantity of bid. |
| 135 | >OfferSize | N | 4 | 124 | Qty | Quantity of offer. |
| 526 | >MessageTag | Y | 4 | 128 | signed int | User defined free field. The field is echoed in the trade notifications, listener data, session data. |
| 25019 | >Pad4 | U | 4 | 132 | Fixed String | not used |

### 7.6.2 Quote Cancellation Notification

This message informs about cancellation of single quote on a particular contract.

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td colspan="7"><MessageHeaderOut></td></tr>
<tr><td>9</td><td>BodyLen</td><td>Y</td><td>4</td><td>0</td><td>unsigned int</td><td>Number of bytes for the message, including this field.</td></tr>
<tr><td>28500</td><td>TemplateID</td><td>Y</td><td>2</td><td>4</td><td>unsigned int</td><td>Unique identifier for a BSE ETI message layout. Value: 10412 (QuoteExecutionReport, MsgType = U8)</td></tr>
<tr><td>25017</td><td>Pad2</td><td>U</td><td>2</td><td>6</td><td>Fixed String</td><td>not used</td></tr>
<tr><td colspan="7"><RBCHeaderME></td></tr>
<tr><td>21003</td><td>TrdRegTSTimeOut</td><td>N</td><td>8</td><td>8</td><td>UTCTimestamp</td><td>Matching engine out timestamp.</td></tr>
<tr><td>52</td><td>SendingTime</td><td>Y</td><td>8</td><td>16</td><td>UTCTimestamp</td><td>Gateway response out timestamp.</td></tr>
<tr><td>28727</td><td>ApplSubID</td><td>N</td><td>4</td><td>24</td><td>unsigned int</td><td>Unique ID assigned by the BSE system during broadcast subscription in order to link broadcasts to the related subscription.</td></tr>
<tr><td>5948</td><td>PartitionID</td><td>Y</td><td>2</td><td>28</td><td>unsigned int</td><td>Grouping of BSE products.<br>Belongs to the scope of Service Availability and Retransmit requests.</td></tr>
<tr><td>28704</td><td>ApplMsgID</td><td>N</td><td>16</td><td>30</td><td>data</td><td>Application message identifier assigned to an order event.</td></tr>
<tr><td>1180</td><td>ApplID</td><td>Y</td><td>1</td><td>46</td><td>unsigned int</td><td>Identifier for an ETI data stream.<table><tr><th>Value</th><th>Description</th></tr><tr><td>4</td><td>Session Data</td></tr></table></td></tr>
<tr><td>1352</td><td>ApplResendFlag</td><td>Y</td><td>1</td><td>47</td><td>unsigned int</td><td>Indicates a retransmission message.<table><tr><th>Value</th><th>Description</th></tr><tr><td>0</td><td>False</td></tr><tr><td>1</td><td>True</td></tr></table></td></tr>
<tr><td>893</td><td>LastFragment</td><td>Y</td><td>1</td><td>48</td><td>unsigned int</td><td>Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<table><tr><th>Value</th><th>Description</th></tr><tr><td>0</td><td>Not Last Message</td></tr><tr><td>1</td><td>Last Message</td></tr></table></td></tr>
<tr><td>25022</td><td>Pad7</td><td>U</td><td>7</td><td>49</td><td>Fixed String</td><td>not used</td></tr>
<tr><td colspan="7"><Message Body></td></tr>
<tr><td>17</td><td>ExecID</td><td>Y</td><td>8</td><td>56</td><td>UTCTimestamp</td><td>Transaction timestamp.</td></tr>
<tr><td>28706</td><td>NoQuoteEvents</td><td>Y</td><td>1</td><td>64</td><td>Counter</td><td>Number of QuoteEvent repeating group instances.</td></tr>
</table>

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 30651 | STPCFlag | Y | 1 | 65 | unsigned int | Indicates the preference of order to be cancelled if self-trade is encountered. Preference not applicable in a modification requests.<br>Value \| Description<br>0 \| Passive<br>1 \| Active |
| 25021 | Pad6 | U | 6 | 66 | Fixed String | not used |
| *<QuoteEventGrp>* | | | | | | Cardinality: 1-100, Record counter: NoQuoteEvents |
| 37 | >OrderID | Y | 8 | 72 | unsigned int | Exchange Order ID generated by BSE System; it remains constant over the lifetime of an order. |
| 142 | >SenderLocationID | Y | 8 | 80 | unsigned int | The location ID of the order from where it is originated |
| 48 | >SecurityID | Y | 8 | 88 | signed int | Instrument identifier. |
| 28553 | >QuoteEventPx | N | 8 | 96 | PriceType | Price of this fill. |
| 1166 | >QuoteMsgID | Y | 8 | 104 | unsigned int | Customer defined mass quote identifier. |
| 28714 | >QuoteEventMatchID | N | 4 | 112 | unsigned int | Unique identifier for each price level (match step) of a match event; it is used for public trade reporting. |
| 526 | >MessageTag | Y | 4 | 116 | signed int | User defined free field. The field is echoed in the trade notifications, listener data, session data. |
| 28711 | >QuoteEventExecID | N | 4 | 120 | signed int | Private identifier of a quote match step, which can be reconciled with the field SideTradeID (1506) in the Trade Notification. |
| 28542 | >QuoteEventQty | N | 4 | 124 | Qty | Quantity executed in this fill. |
| 28539 | >QuoteEventType | Y | 1 | 128 | unsigned int | Conveys the quote event type.<br>Value \| Description<br>3 \| Removed Quote Side<br>4 \| Partially Filled<br>5 \| Filled |
| 28581 | >QuoteEventSide | Y | 1 | 129 | unsigned int | Side of the quote.<br>Value \| Description<br>1 \| Buy<br>2 \| Sell |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 28641 | >QuoteEventLiquidity-Ind | N | 1 | 130 | unsigned int | Indicates whether the quote added or removed liquidity.<br>Value \| Description<br>1 \| Added Liquidity<br>2 \| Removed Liquidity |
| 28733 | >QuoteEventReason | N | 1 | 131 | unsigned int | Additional information why quote side was removed.<br>Value \| Description<br>14 \| Pending Cancellation Executed<br>15 \| Invalid Price<br>16 \| Self Trade Quote Deleted<br>17 \| Reverse Trade Quote Deleted<br>18 \| Client RRM Quote Deleted |
| 581 | >AccountType | Y | 1 | 132 | unsigned int | Value \| Description<br>20 \| Own<br>30 \| Client |
| 30649 | >AlgoID | N | 16 | 133 | Fixed String (0-terminable) | Unique identifier of the algorithm.<br>Valid characters: A-Z,0-9 |
| 58 | >ClientCode | Y | 12 | 149 | Fixed String (0-terminable) | The Unique Client Code (UCC) of the person for whom the order is entered. For Proprietary Account Client code should be OWN always.<br>Valid characters: A-Z,0-9,\x2A,\x2D, \x2E,\x2F,\x5C |
| 30642 | >CPCode | N | 12 | 161 | Chartext | The Participant code.<br>Valid characters: \x00,\x21,\x23, \x24,\x28,\x29,\x2A,\x2B,\x2D, \x2E,\x2F,\x30-\x39,\x3A,\x3B, \x3D,\x3E,\x3F,\x40,\x41-\x5A, \x5C,\x5D,\x5F,\x60,\x7B,\x7D |
| 25018 | >Pad3 | U | 3 | 173 | Fixed String | not used |

### 7.6.3 Mass Quote Response

This message is the acknowledgement for a Mass Quote request. For more details, please refer to chapter 4.6.2 Maintaining Quotes.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10406 (MassQuoteAcknowledgement, MsgType = b) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<NRResponseHeaderME>* | | | | | | |
| 5979 | RequestTime | Y | 8 | 8 | UTCTimestamp | Gateway request in timestamp. |
| 7764 | RequestOut | Y | 8 | 16 | UTCTimestamp | Timestamp the gateway sends a message to the Matching Engine |
| 21002 | TrdRegTSTimeIn | Y | 8 | 24 | UTCTimestamp | Matching engine in timestamp. |
| 21003 | TrdRegTSTimeOut | Y | 8 | 32 | UTCTimestamp | Matching engine out timestamp. |
| 7765 | ResponseIn | Y | 8 | 40 | UTCTimestamp | Timestamp the gateway receives a message from the Matching Engine |
| 52 | SendingTime | Y | 8 | 48 | UTCTimestamp | Gateway response out timestamp. |
| 34 | MsgSeqNum | Y | 4 | 56 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 893 | LastFragment | Y | 1 | 60 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value: 1 — Description: Last Message |
| 25018 | Pad3 | U | 3 | 61 | Fixed String | not used |
| *<Message Body>* | | | | | | |
| 117 | QuoteID | Y | 8 | 64 | unsigned int | Customer defined mass quote identifier. |
| 693 | QuoteResponseID | Y | 8 | 72 | UTCTimestamp | Mass quote response identifier generated by the exchange. |
| 1300 | MarketSegmentID | Y | 4 | 80 | signed int | Product identifier. |
| 295 | NoQuoteEntries | Y | 1 | 84 | Counter | The number of quote entries of a Mass Quote that could not be processed as requested. |
| 25018 | Pad3 | U | 3 | 85 | Fixed String | not used |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<QuoteEntryAckGrp>* | | | | | | Cardinality: 0-100, Record counter: NoQuoteEntries |
| 48 | >SecurityID | Y | 8 | 88 | signed int | Instrument identifier. |
| 28547 | >BidCxlSize | N | 4 | 96 | Qty | Quote quantity that has been cancelled on the buy side. |
| 28548 | >OfferCxlSize | N | 4 | 100 | Qty | Quote quantity that has been cancelled on the sell side. |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 368 | >QuoteEntryReject-Reason | N | 4 | 104 | unsigned int | Reason code indicating why the quote entry has been rejected.<br><br>Value / Description:<br>1 Unknown Security<br>6 Duplicate Quote<br>8 Invalid Price<br>16 No Reference Price Available<br>100 No Single Sided Quotes<br>103 Invalid Quoting Model<br>106 Invalid Size<br>107 Invalid Underlying Price<br>108 Bid Price Not Reasonable<br>109 Ask Price Not Reasonable<br>110 Bid Price Exceeds Range<br>111 Ask Price Exceeds Range<br>115 Instrument State Freeze<br>116 Cancellation Already Pending<br>117 Pre Trade Risk Session Limit Exceeded<br>118 Pre Trade Risk BU Limit Exceeded<br>131 Incompatible Instrument State<br>132 Location Id Not Set<br>133 Client Code Not Set<br>134 Client Cannot Be Modified<br>135 Client Type Not Set<br>136 Invalid Client Code For Client Type Own<br>137 Own Client Type Not Allowed<br>138 Message Tag Not Set<br>139 Price Beyond Circuit Limit<br>140 Quantity Not A Multiple Of Lot Size<br>141 Quotes Not Allowed In RRM<br>* More Values |

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>368</td><td>>QuoteEntryReject-Reason</td><td>N</td><td>4</td><td>104</td><td>unsigned int</td><td>Reason code indicating why the quote entry has been rejected.
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>142</td><td>Amount Exceeds TVL</td></tr>
<tr><td>143</td><td>Quotes Not Allowed In Auction</td></tr>
<tr><td>144</td><td>Client Code Debarred</td></tr>
<tr><td>145</td><td>Price Not Multiple Of Tick Size</td></tr>
<tr><td>146</td><td>Quotes Not Allowed In Post Closing</td></tr>
<tr><td>147</td><td>Participant Code Cannot Be Modified</td></tr>
<tr><td>148</td><td>Client Type Cannot Be Modified</td></tr>
<tr><td>149</td><td>Quoting Not Allowed</td></tr>
<tr><td>150</td><td>Invalid Participant Code</td></tr>
<tr><td>151</td><td>Price Band Not Set</td></tr>
<tr><td>152</td><td>Tick Size Not Set</td></tr>
<tr><td>153</td><td>Client Type Not Allowed</td></tr>
<tr><td>154</td><td>Invalid Value</td></tr>
<tr><td>155</td><td>Client Code Not Allowed To Trade In Trading Restriction Window PIT</td></tr>
<tr><td>156</td><td>Deactivated Vide SEBI Cir Dtd 29 07 22</td></tr>
<tr><td>*</td><td>More Values</td></tr>
</table></td></tr>
<tr><td>1167</td><td>>QuoteEntryStatus</td><td>Y</td><td>1</td><td>108</td><td>unsigned int</td><td>Identifies the status of an individual quote.
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>0</td><td>Accepted with warning</td></tr>
<tr><td>5</td><td>Rejected</td></tr>
<tr><td>6</td><td>Removed quote in book and Rejected</td></tr>
<tr><td>10</td><td>Pending</td></tr>
</table></td></tr>
<tr><td>25018</td><td>>Pad3</td><td>U</td><td>3</td><td>109</td><td>Fixed String</td><td>not used</td></tr>
</table>

### 7.6.4 Quote Execution Notification

This message informs about Quote match events. For more details, please refer to chapter 4.6.2 Maintaining Quotes.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10407 (QuoteExecutionReport, MsgType = U8) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<RBCHeaderME>* | | | | | | |
| 21003 | TrdRegTSTimeOut | N | 8 | 8 | UTCTimestamp | Matching engine out timestamp. |
| 52 | SendingTime | Y | 8 | 16 | UTCTimestamp | Gateway response out timestamp. |
| 28727 | ApplSubID | U | 4 | 24 | unsigned int | not used |
| 5948 | PartitionID | Y | 2 | 28 | unsigned int | Grouping of BSE products.<br>Belongs to the scope of Service Availability and Retransmit requests. |
| 28704 | ApplMsgID | N | 16 | 30 | data | Application message identifier assigned to an order event. |
| 1180 | ApplID | Y | 1 | 46 | unsigned int | Identifier for an ETI data stream.<br>Value \| Description<br>4 \| Session Data |
| 1352 | ApplResendFlag | Y | 1 | 47 | unsigned int | Indicates a retransmission message.<br>Value \| Description<br>0 \| False<br>1 \| True |
| 893 | LastFragment | Y | 1 | 48 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value \| Description<br>0 \| Not Last Message<br>1 \| Last Message |
| 25022 | Pad7 | U | 7 | 49 | Fixed String | not used |
| *<Message Body>* | | | | | | |
| 17 | ExecID | Y | 8 | 56 | UTCTimestamp | Transaction timestamp. |
| 1300 | MarketSegmentID | Y | 4 | 64 | signed int | Product identifier. |
| 30555 | NoLegExecs | Y | 2 | 68 | Counter | Number of InstrmntLegExec repeating group instances. |

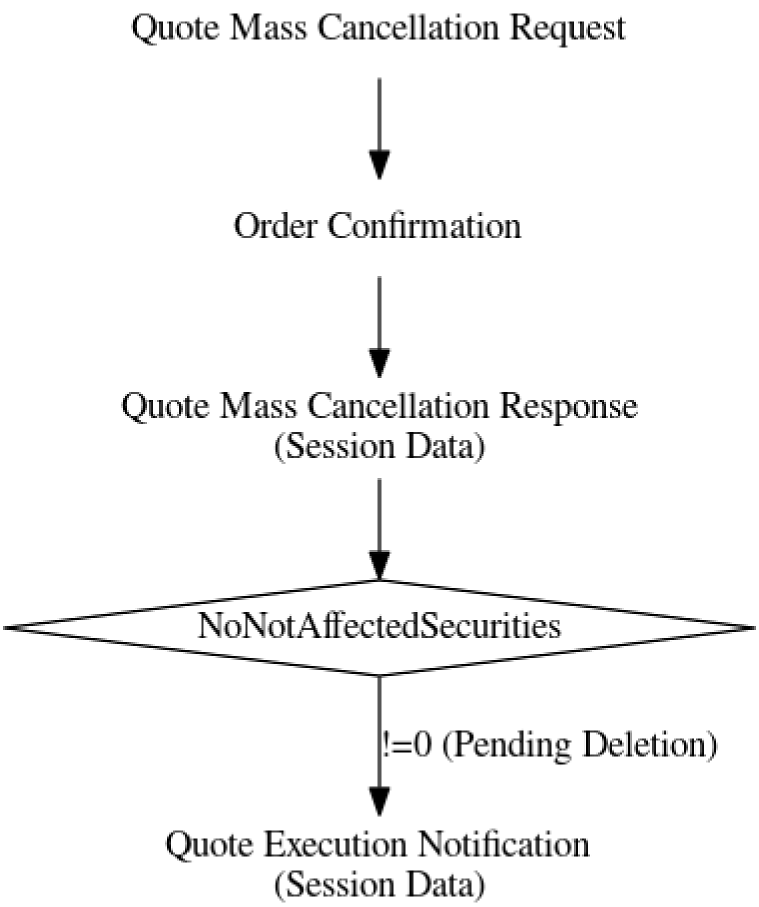
| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 28706 | NoQuoteEvents | Y | 1 | 70 | Counter | Number of QuoteEvent repeating group instances. |
| 30651 | STPCFlag | Y | 1 | 71 | unsigned int | Indicates the preference of order to be cancelled if self-trade is encountered. Preference not applicable in a modification requests.<br>Value / Description:<br>0 Passive<br>1 Active |
| <QuoteEventGrp> | | | | | | Cardinality: 1-100, Record counter: NoQuoteEvents |
| 37 | >OrderID | Y | 8 | 72 | unsigned int | Exchange Order ID generated by BSE System; it remains constant over the lifetime of an order. |
| 142 | >SenderLocationID | Y | 8 | 80 | unsigned int | The location ID of the order from where it is originated |
| 48 | >SecurityID | Y | 8 | 88 | signed int | Instrument identifier. |
| 28553 | >QuoteEventPx | N | 8 | 96 | PriceType | Price of this fill. |
| 1166 | >QuoteMsgID | Y | 8 | 104 | unsigned int | Customer defined mass quote identifier. |
| 28714 | >QuoteEventMatchID | N | 4 | 112 | unsigned int | Unique identifier for each price level (match step) of a match event; it is used for public trade reporting. |
| 526 | >MessageTag | Y | 4 | 116 | signed int | User defined free field. The field is echoed in the trade notifications, listener data, session data. |
| 28711 | >QuoteEventExecID | N | 4 | 120 | signed int | Private identifier of a quote match step, which can be reconciled with the field SideTradeID (1506) in the Trade Notification. |
| 28542 | >QuoteEventQty | N | 4 | 124 | Qty | Quantity executed in this fill. |
| 28539 | >QuoteEventType | Y | 1 | 128 | unsigned int | Conveys the quote event type.<br>Value / Description:<br>3 Removed Quote Side<br>4 Partially Filled<br>5 Filled |
| 28581 | >QuoteEventSide | Y | 1 | 129 | unsigned int | Side of the quote.<br>Value / Description:<br>1 Buy<br>2 Sell |

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>28641</td><td>>QuoteEventLiquidity-Ind</td><td>N</td><td>1</td><td>130</td><td>unsigned int</td><td>Indicates whether the quote added or removed liquidity.<table><tr><th>Value</th><th>Description</th></tr><tr><td>1</td><td>Added Liquidity</td></tr><tr><td>2</td><td>Removed Liquidity</td></tr></table></td></tr>
<tr><td>28733</td><td>>QuoteEventReason</td><td>N</td><td>1</td><td>131</td><td>unsigned int</td><td>Additional information why quote side was removed.<table><tr><th>Value</th><th>Description</th></tr><tr><td>14</td><td>Pending Cancellation Executed</td></tr><tr><td>15</td><td>Invalid Price</td></tr><tr><td>16</td><td>Self Trade Quote Deleted</td></tr><tr><td>17</td><td>Reverse Trade Quote Deleted</td></tr><tr><td>18</td><td>Client RRM Quote Deleted</td></tr></table></td></tr>
<tr><td>581</td><td>>AccountType</td><td>Y</td><td>1</td><td>132</td><td>unsigned int</td><td><table><tr><th>Value</th><th>Description</th></tr><tr><td>20</td><td>Own</td></tr><tr><td>30</td><td>Client</td></tr></table></td></tr>
<tr><td>30649</td><td>>AlgoID</td><td>N</td><td>16</td><td>133</td><td>Fixed String (0-terminable)</td><td>Unique identifier of the algorithm.<br>Valid characters: A-Z,0-9</td></tr>
<tr><td>58</td><td>>ClientCode</td><td>Y</td><td>12</td><td>149</td><td>Fixed String (0-terminable)</td><td>The Unique Client Code (UCC) of the person for whom the order is entered. For Proprietary Account Client code should be OWN always.<br>Valid characters: A-Z,0-9,\x2A,\x2D,\x2E,\x2F,\x5C</td></tr>
<tr><td>30642</td><td>>CPCode</td><td>N</td><td>12</td><td>161</td><td>Chartext</td><td>The Participant code.<br>Valid characters: \x00,\x21,\x23,\x24,\x28,\x29,\x2A,\x2B,\x2D,\x2E,\x2F,\x30-\x39,\x3A,\x3B,\x3D,\x3E,\x3F,\x40,\x41-\x5A,\x5C,\x5D,\x5F,\x60,\x7B,\x7D</td></tr>
<tr><td>25018</td><td>>Pad3</td><td>U</td><td>3</td><td>173</td><td>Fixed String</td><td>not used</td></tr>
<tr><td colspan="6"><QuoteLegExecGrp></td><td>Cardinality: 0-600, Record counter: NoLegExecs</td></tr>
<tr><td>602</td><td>>LegSecurityID</td><td>Y</td><td>8</td><td>0</td><td>signed int</td><td>Instrument identifier of the leg security.</td></tr>
<tr><td>637</td><td>>LegLastPx</td><td>Y</td><td>8</td><td>8</td><td>PriceType</td><td>Price of this leg fill.</td></tr>
<tr><td>1418</td><td>>LegLastQty</td><td>Y</td><td>4</td><td>16</td><td>Qty</td><td>Quantity executed in this leg fill.</td></tr>
</table>

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>1893</td><td>>LegExecID</td><td>Y</td><td>4</td><td>20</td><td>signed int</td><td>Private identifier of a leg match step, which can be reconciled with the field SideTradeID (1506) in the Trade Notification.</td></tr>
<tr><td>624</td><td>>LegSide</td><td>Y</td><td>1</td><td>24</td><td>unsigned int</td><td>The side of the individual leg of a strategy as defined in its signature.<table><tr><th>Value</th><th>Description</th></tr><tr><td>1</td><td>Buy</td></tr><tr><td>2</td><td>Sell</td></tr></table></td></tr>
<tr><td>25011</td><td>>NoQuoteEventsIndex</td><td>Y</td><td>1</td><td>25</td><td>unsigned int</td><td>Reference to the corresponding QuoteEvent repeating group instance.</td></tr>
<tr><td>25021</td><td>>Pad6</td><td>U</td><td>6</td><td>26</td><td>Fixed String</td><td>not used</td></tr>
</table>

### 7.6.5 Quote Mass Cancellation Request

This message is used to trigger a Quote Mass Cancellation request. For more details, please refer to chapter 4.6.2 Maintaining Quotes.




| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderIn>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10408 (OrderMassActionRequest, MsgType = CA) |
| 25028 | NetworkMsgID | U | 8 | 6 | Fixed String | not used |
| 25017 | Pad2 | U | 2 | 14 | Fixed String | not used |
| *<RequestHeader>* | | | | | | |
| 34 | MsgSeqNum | Y | 4 | 16 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 50 | SenderSubID | Y | 4 | 20 | unsigned int | User ID. |
| *<Message Body>* | | | | | | |
| 1300 | MarketSegmentID | Y | 4 | 24 | signed int | Product identifier. |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 20655 | TargetPartyIDSessionID | Y | 4 | 28 | unsigned int | Session ID. |
| 25029 | RegulatoryID | N | 4 | 32 | unsigned int | not used. |
| 25019 | Pad4 | U | 4 | 36 | Fixed String | not used |

### 7.6.6 Quote Mass Cancellation Response

This message confirms a Quote Mass Cancellation request.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10409 (OrderMassActionReport, MsgType = BZ) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<NRResponseHeaderME>* | | | | | | |
| 5979 | RequestTime | Y | 8 | 8 | UTCTimestamp | Gateway request in timestamp. |
| 7764 | RequestOut | Y | 8 | 16 | UTCTimestamp | Timestamp the gateway sends a message to the Matching Engine |
| 21002 | TrdRegTSTimeIn | N | 8 | 24 | UTCTimestamp | Matching engine in timestamp. |
| 21003 | TrdRegTSTimeOut | N | 8 | 32 | UTCTimestamp | Matching engine out timestamp. |
| 7765 | ResponseIn | Y | 8 | 40 | UTCTimestamp | Timestamp the gateway receives a message from the Matching Engine |
| 52 | SendingTime | Y | 8 | 48 | UTCTimestamp | Gateway response out timestamp. |
| 34 | MsgSeqNum | Y | 4 | 56 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 893 | LastFragment | Y | 1 | 60 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value / Description:<br>0 Not Last Message<br>1 Last Message |
| 25018 | Pad3 | U | 3 | 61 | Fixed String | not used |
| *<Message Body>* | | | | | | |
| 1369 | MassActionReportID | Y | 8 | 64 | UTCTimestamp | Transaction timestamp. |
| 28707 | NoNotAffected-Securities | Y | 2 | 72 | Counter | Number of NotAffectedSecurities repeating group instances. |
| 25021 | Pad6 | U | 6 | 74 | Fixed String | not used |
| *<NotAffectedSecuritiesGrp>* | | | | | | Cardinality: 0-500, Record counter: NoNotAffectedSecurities |
| 28702 | >NotAffectedSecurity-ID | Y | 8 | 80 | unsigned int | Instrument ID whose quote mass cancellation is pending. |

### 7.6.7 Quote Mass Cancellation Notification

This message informs about an unsolicited Quote Mass Cancellation event. For more details, please refer to chapter 4.13 Mass Cancellation Notification and chapter 4.14 Mass Cancellation Events.

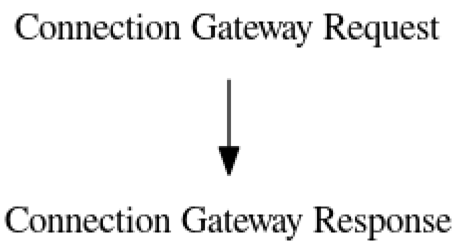
| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10410 (OrderMassActionReport, MsgType = BZ) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<RBCHeaderME>* | | | | | | |
| 21003 | TrdRegTSTimeOut | N | 8 | 8 | UTCTimestamp | Matching engine out timestamp. |
| 52 | SendingTime | Y | 8 | 16 | UTCTimestamp | Gateway response out timestamp. |
| 28727 | ApplSubID | U | 4 | 24 | unsigned int | not used |
| 5948 | PartitionID | Y | 2 | 28 | unsigned int | Grouping of BSE products.<br>Belongs to the scope of Service Availability and Retransmit requests. |
| 28704 | ApplMsgID | N | 16 | 30 | data | Application message identifier assigned to an order event. |
| 1180 | ApplID | Y | 1 | 46 | unsigned int | Identifier for an ETI data stream.<br>Value \| Description<br>4 \| Session Data |
| 1352 | ApplResendFlag | Y | 1 | 47 | unsigned int | Indicates a retransmission message.<br>Value \| Description<br>0 \| False<br>1 \| True |
| 893 | LastFragment | Y | 1 | 48 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value \| Description<br>0 \| Not Last Message<br>1 \| Last Message |
| 25022 | Pad7 | U | 7 | 49 | Fixed String | not used |
| *<Message Body>* | | | | | | |
| 1369 | MassActionReportID | Y | 8 | 56 | UTCTimestamp | Transaction timestamp. |
| 48 | SecurityID | U | 8 | 64 | signed int | not used |
| 1300 | MarketSegmentID | Y | 4 | 72 | signed int | Product identifier. |
| 20655 | TargetPartyIDSessionID | Y | 4 | 76 | unsigned int | Session ID. |

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>20036</td><td>PartyIDEnteringTrader</td><td>N</td><td>4</td><td>80</td><td>unsigned int</td><td>Entering User ID.</td></tr>
<tr><td>20612</td><td>TargetParty-IDExecutingTrader</td><td>N</td><td>4</td><td>84</td><td>unsigned int</td><td>Owning User ID.</td></tr>
<tr><td>28707</td><td>NoNotAffected-Securities</td><td>Y</td><td>2</td><td>88</td><td>Counter</td><td>Number of NotAffectedSecurities repeating group instances.</td></tr>
<tr><td>28721</td><td>MassActionReason</td><td>Y</td><td>1</td><td>90</td><td>unsigned int</td><td>Reason for mass cancellation.<table><tr><th>Value</th><th>Description</th></tr><tr><td>0</td><td>No Special Reason</td></tr><tr><td>1</td><td>Stop Trading</td></tr><tr><td>2</td><td>Emergency</td></tr><tr><td>3</td><td>Market Maker Protection</td></tr><tr><td>4</td><td>Stop Button Activated</td></tr><tr><td>5</td><td>Business Unit Suspended</td></tr><tr><td>6</td><td>Session Loss</td></tr><tr><td>*</td><td>More Values</td></tr></table></td></tr>
<tr><td>20007</td><td>PartyIDEnteringFirm</td><td>N</td><td>1</td><td>91</td><td>unsigned int</td><td>Entering Entity ID.<table><tr><th>Value</th><th>Description</th></tr><tr><td>1</td><td>Participant</td></tr><tr><td>2</td><td>Market Supervision</td></tr></table></td></tr>
<tr><td>20676</td><td>TargetPartyIDDeskID</td><td>N</td><td>3</td><td>92</td><td>Fixed String</td><td>Trader Group.<br>Valid characters: A-Z,0-9,\x20</td></tr>
<tr><td>25016</td><td>Pad1</td><td>U</td><td>1</td><td>95</td><td>Fixed String</td><td>not used</td></tr>
<tr><td colspan="6"><NotAffectedSecuritiesGrp></td><td>Cardinality: 0-500, Record counter: NoNotAffectedSecurities</td></tr>
<tr><td>28702</td><td>>NotAffectedSecurity-ID</td><td>Y</td><td>8</td><td>96</td><td>unsigned int</td><td>Instrument ID whose quote mass cancellation or activation is pending.</td></tr>
</table>

## 7.7 Session Layer

### 7.7.1 Connection Gateway Request

This message is used to retrieve the assigned gateway from the connection gateway. For more details, please refer to chapter 5.2.1 IP Addresses and Ports.




| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderIn>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10020 (ApplicationMessageRequest, MsgType = BW) |
| 25028 | NetworkMsgID | U | 8 | 6 | Fixed String | not used |
| 25017 | Pad2 | U | 2 | 14 | Fixed String | not used |
| *<RequestHeader>* | | | | | | |
| 34 | MsgSeqNum | Y | 4 | 16 | unsigned int | Must be set to 1. |
| 50 | SenderSubID | U | 4 | 20 | unsigned int | not used |
| *<Message Body>* | | | | | | |
| 20055 | PartyIDSessionID | Y | 4 | 24 | unsigned int | Session ID. |
| 1408 | DefaultCstmApplVerID | Y | 30 | 28 | Fixed String (0-terminable) | Indicates the BSE ETI interface version the ETI gateway software uses. Must be set as 2.3 Valid characters: \x20,\x22-\x7B, \x7D,\x7E |
| 554 | Password | Y | 32 | 58 | Fixed String (0-terminable) | Password. Valid characters: 0-9,A-Z,a-z,\x21, \x23,\x24,\x25,\x26,\x2A,\x2B, \x2D,\x2E,\x2F,\x3D,\x40,\x5F |
| 25021 | Pad6 | U | 6 | 90 | Fixed String | not used |

### 7.7.2 Session List Inquire Response

This message confirms the Session List Inquire request and provides information about sessions of the own business unit. The SessionSubMode (28730) is only set for LF sessions.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10036 (SessionDetailsListResponse, MsgType = U6) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<ResponseHeader>* | | | | | | |
| 5979 | RequestTime | Y | 8 | 8 | UTCTimestamp | Gateway request in timestamp. |
| 52 | SendingTime | Y | 8 | 16 | UTCTimestamp | Gateway response out timestamp. |
| 34 | MsgSeqNum | Y | 4 | 24 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 25019 | Pad4 | U | 4 | 28 | Fixed String | not used |
| *<Message Body>* | | | | | | |
| 28734 | NoSessions | Y | 2 | 32 | Counter | Number of sessions in a response |
| 25021 | Pad6 | U | 6 | 34 | Fixed String | not used |
| *<SessionsGrp>* | | | | | | Cardinality: 1-1000, Record counter: NoSessions |
| 20055 | >PartyIDSessionID | Y | 4 | 40 | unsigned int | Session ID. |
| 28730 | >SessionMode | Y | 1 | 44 | unsigned int | Session type.<br>Value / Description:<br>1 HF<br>2 LF |
| 28735 | >SessionSubMode | N | 1 | 45 | unsigned int | Is set. if SessionMode(28730) = 2(LF)<br>Value / Description:<br>0 Regular Trading Session<br>1 FIX Trading Session<br>2 Regular Back Office Session |
| 25017 | >Pad2 | U | 2 | 46 | Fixed String | not used |

### 7.7.3 Session Password Change

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderIn>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10997 (Logon, MsgType = A) |
| 25028 | NetworkMsgID | U | 8 | 6 | Fixed String | not used |
| 25017 | Pad2 | U | 2 | 14 | Fixed String | not used |
| *<RequestHeader>* | | | | | | |
| 34 | MsgSeqNum | Y | 4 | 16 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 50 | SenderSubID | Y | 4 | 20 | unsigned int | User ID. |
| *<Message Body>* | | | | | | |
| 20055 | PartyIDSessionID | Y | 4 | 24 | unsigned int | Session ID. |
| 554 | Password | Y | 32 | 28 | Fixed String (0-terminable) | Password. Valid characters: 0-9,A-Z,a-z,\x21, \x23,\x24,\x25,\x26,\x2A,\x2B, \x2D,\x2E,\x2F,\x3D,\x40,\x5F |
| 925 | NewPassword | Y | 32 | 60 | Fixed String (0-terminable) | The new password for the user. Valid characters: 0-9,A-Z,a-z,\x21, \x23,\x24,\x25,\x26,\x2A,\x2B, \x2D,\x2E,\x2F,\x3D,\x40,\x5F |
| 25019 | Pad4 | U | 4 | 92 | Fixed String | not used |

### 7.7.4 Session Password Change Response

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10995 (Logon, MsgType = A) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<ResponseHeader>* | | | | | | |
| 5979 | RequestTime | Y | 8 | 8 | UTCTimestamp | Gateway request in timestamp. |
| 52 | SendingTime | Y | 8 | 16 | UTCTimestamp | Gateway response out timestamp. |
| 34 | MsgSeqNum | Y | 4 | 24 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 25019 | Pad4 | U | 4 | 28 | Fixed String | not used |

### 7.7.5 User Password Change

This message is used to change the password of the user. For more details, please refer to chapter 5.2.3 User Authentication.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderIn>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10996 (UserRequest, MsgType = BE) |
| 25028 | NetworkMsgID | U | 8 | 6 | Fixed String | not used |
| 25017 | Pad2 | U | 2 | 14 | Fixed String | not used |
| *<RequestHeader>* | | | | | | |
| 34 | MsgSeqNum | Y | 4 | 16 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 50 | SenderSubID | Y | 4 | 20 | unsigned int | User ID. |
| *<Message Body>* | | | | | | |
| 553 | Username | Y | 4 | 24 | unsigned int | User ID. |
| 554 | Password | Y | 32 | 28 | Fixed String (0-terminable) | Password. Valid characters: 0-9,A-Z,a-z,\x21, \x23,\x24,\x25,\x26,\x2A,\x2B, \x2D,\x2E,\x2F,\x3D,\x40,\x5F |
| 925 | NewPassword | Y | 32 | 60 | Fixed String (0-terminable) | The new password for the user. Valid characters: 0-9,A-Z,a-z,\x21, \x23,\x24,\x25,\x26,\x2A,\x2B, \x2D,\x2E,\x2F,\x3D,\x40,\x5F |
| 25019 | Pad4 | U | 4 | 92 | Fixed String | not used |

### 7.7.6 User Password Change Response

This message confirms the User Password Change request. For more details, please refer to chapter 5.2.4 Password Management.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10043 (UserResponse, MsgType = BF) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<ResponseHeader>* | | | | | | |
| 5979 | RequestTime | Y | 8 | 8 | UTCTimestamp | Gateway request in timestamp. |
| 52 | SendingTime | Y | 8 | 16 | UTCTimestamp | Gateway response out timestamp. |
| 34 | MsgSeqNum | Y | 4 | 24 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 25019 | Pad4 | U | 4 | 28 | Fixed String | not used |

### 7.7.7 Connection Gateway Response

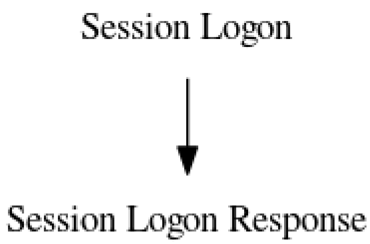
This message confirms the Connection Gateway request. For more details, please refer to chapter 5.2.1 IP Addresses and Ports.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10021 (ApplicationMessageRequestAck, MsgType = BX) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<ResponseHeader>* | | | | | | |
| 5979 | RequestTime | Y | 8 | 8 | UTCTimestamp | Gateway request in timestamp. |
| 52 | SendingTime | Y | 8 | 16 | UTCTimestamp | Gateway response out timestamp. |
| 34 | MsgSeqNum | Y | 4 | 24 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 25019 | Pad4 | U | 4 | 28 | Fixed String | not used |
| *<Message Body>* | | | | | | |
| 28644 | GatewayID | Y | 4 | 32 | unsigned int | IP address of the Primary Application Gateway where the member application can establish an active BSE ETI session.<br>Note: Binary values are presented in little endian byte order. |
| 28645 | GatewaySubID | Y | 4 | 36 | unsigned int | Port number to be used for the assigned Primary Application Gateway.<br>Note: Binary values are presented in little endian byte order. |
| 28725 | SecondaryGatewayID | Y | 4 | 40 | unsigned int | IP address of the Secondary Application Gateway where the member application can establish an active BSE ETI session. Note: Binary values are presented in little endian byte order. |
| 28726 | SecondaryGatewaySub-ID | Y | 4 | 44 | unsigned int | Port number to be used for the assigned Secondary Application Gateway.<br>Note: Binary values are presented in little endian byte order. |

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>28730</td><td>SessionMode</td><td>Y</td><td>1</td><td>48</td><td>unsigned int</td><td>Session type.<table><tr><th>Value</th><th>Description</th></tr><tr><td>1</td><td>HF</td></tr><tr><td>2</td><td>LF</td></tr></table></td></tr>
<tr><td>339</td><td>TradSesMode</td><td>Y</td><td>1</td><td>49</td><td>unsigned int</td><td>Trading session mode.<table><tr><th>Value</th><th>Description</th></tr><tr><td>1</td><td>Development</td></tr><tr><td>2</td><td>Simulation</td></tr><tr><td>3</td><td>Production</td></tr><tr><td>4</td><td>Acceptance</td></tr><tr><td>5</td><td>Disaster Recovery</td></tr></table></td></tr>
<tr><td>25021</td><td>Pad6</td><td>U</td><td>6</td><td>50</td><td>Fixed String</td><td>not used</td></tr>
</table>

### 7.7.8 Session Logon

This message must be the first message sent by the participant to the assigned gateway authenticating the BSE ETI session. Password change is not supported. For more details, please refer to chapter 5.2.2 Session Authentication and Logon.




| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderIn>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10000 (Logon, MsgType = A) |
| 25028 | NetworkMsgID | U | 8 | 6 | Fixed String | not used |
| 25017 | Pad2 | U | 2 | 14 | Fixed String | not used |
| *<RequestHeader>* | | | | | | |
| 34 | MsgSeqNum | Y | 4 | 16 | unsigned int | Must be set to 1. |
| 50 | SenderSubID | U | 4 | 20 | unsigned int | not used |
| *<Message Body>* | | | | | | |
| 108 | HeartBtInt | N | 4 | 24 | unsigned int | Heartbeat interval in milliseconds. see also Heartbeat |
| 20055 | PartyIDSessionID | Y | 4 | 28 | unsigned int | Session ID. |
| 1408 | DefaultCstmApplVerID | Y | 30 | 32 | Fixed String (0-terminable) | Indicates the BSE ETI interface version the ETI gateway software uses. Must be set as 2.3 Valid characters: \x20,\x22-\x7B, \x7D,\x7E |
| 554 | Password | Y | 32 | 62 | Fixed String (0-terminable) | Password. Valid characters: 0-9,A-Z,a-z,\x21, \x23,\x24,\x25,\x26,\x2A,\x2B, \x2D,\x2E,\x2F,\x3D,\x40,\x5F |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 25012 | ApplUsageOrders | Y | 1 | 94 | char | Participant application: type of order processing.<br><table><tr><th>Value</th><th>Description</th></tr><tr><td>A</td><td>Automated</td></tr><tr><td>M</td><td>Manual</td></tr><tr><td>B</td><td>Both (Automated and Manual)</td></tr><tr><td>N</td><td>None</td></tr></table> |
| 25013 | ApplUsageQuotes | Y | 1 | 95 | char | not used<br>Must be sent as N<br><table><tr><th>Value</th><th>Description</th></tr><tr><td>A</td><td>Automated</td></tr><tr><td>M</td><td>Manual</td></tr><tr><td>B</td><td>Both (Automated and Manual)</td></tr><tr><td>N</td><td>None</td></tr></table> |
| 25014 | OrderRoutingIndicator | Y | 1 | 96 | char | Indicates if the participant application is an order routing system.<br><table><tr><th>Value</th><th>Description</th></tr><tr><td>Y</td><td>Yes</td></tr><tr><td>N</td><td>No</td></tr></table> |
| 1600 | FIXEngineName | N | 30 | 97 | Fixed String (0-terminable) | Provides the name of the infrastructure component being used for session level communication. Normally this would be the FIX Engine or FIX Gateway product name.<br>Valid characters: \x20,\x22-\x7B, \x7D,\x7E |
| 1601 | FIXEngineVersion | N | 30 | 127 | Fixed String (0-terminable) | Provides the version of the FIX infrastructure component.<br>Valid characters: \x20,\x22-\x7B, \x7D,\x7E |
| 1602 | FIXEngineVendor | N | 30 | 157 | Fixed String (0-terminable) | Provides the name of the vendor providing the FIX infrastructure component.<br>Valid characters: \x20,\x22-\x7B, \x7D,\x7E |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 1603 | ApplicationSystem-Name | Y | 30 | 187 | Fixed String (0-terminable) | Provides the name of the application system being used to generate BSE ETI application messages. This will normally be a trading system, OMS, or EMS.<br>Valid characters: \x20,\x22-\x7B, \x7D,\x7E |
| 1604 | ApplicationSystem-Version | Y | 30 | 217 | Fixed String (0-terminable) | Provides the version of the application system being used to initiate BSE ETI application messages.<br>Valid characters: \x20,\x22-\x7B, \x7D,\x7E |
| 1605 | ApplicationSystem-Vendor | Y | 30 | 247 | Fixed String (0-terminable) | Provides the vendor of the application system.<br>Valid characters: \x20,\x22-\x7B, \x7D,\x7E |
| 25018 | Pad3 | U | 3 | 277 | Fixed String | not used |

### 7.7.9 Session Logon Response

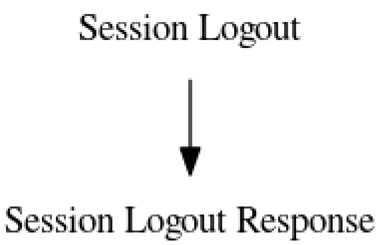
This message confirms the Session Logon request. For more details, please refer to chapter 5.2.2 Session Authentication and Logon.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10001 (Logon, MsgType = A) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<ResponseHeader>* | | | | | | |
| 5979 | RequestTime | Y | 8 | 8 | UTCTimestamp | Gateway request in timestamp. |
| 52 | SendingTime | Y | 8 | 16 | UTCTimestamp | Gateway response out timestamp. |
| 34 | MsgSeqNum | Y | 4 | 24 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 25019 | Pad4 | U | 4 | 28 | Fixed String | not used |
| *<Message Body>* | | | | | | |
| 1614 | ThrottleTimeInterval | Y | 8 | 32 | signed int | Throttle time interval in number of milliseconds; applicable for transaction limit. |
| 1772 | LastLoginTime | N | 8 | 40 | UTCTimestamp | The time when last successful login was performed. |
| 1771 | LastLoginIP | N | 4 | 48 | unsigned int | The IP address of the machine from where last successful login was made. |
| 1613 | ThrottleNoMsgs | Y | 4 | 52 | unsigned int | Transaction limit per ThrottleTimeInterval (1614). If set to 0, throttling will be switched off. |
| 25002 | ThrottleDisconnect-Limit | Y | 4 | 56 | unsigned int | Disconnect limit: maximum number of sequential message rejects due to throttle violation allowed by the BSE ETI. |
| 108 | HeartBtInt | Y | 4 | 60 | unsigned int | Heartbeat interval in milliseconds as applied by the gateway. I.e., either the request's HeartBtInt or the gateway's default value, if HeartBtInt was not set by the Session Logon request. |
| 25004 | SessionInstanceID | Y | 4 | 64 | unsigned int | Unique ID for the session instance assigned by the BSE system during session logon; to be communicated to helpdesk for troubleshooting. |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 339 | TradSesMode | Y | 1 | 68 | unsigned int | Trading session mode.<br>Value / Description:<br>1 Development<br>2 Simulation<br>3 Production<br>4 Acceptance<br>5 Disaster Recovery |
| 1770 | NoOfPartition | N | 1 | 69 | unsigned int | Total number of Partitions in the segment. |
| 1774 | DaysLeftForPasswd-Expiry | N | 1 | 70 | unsigned int | Number of days remaining for the expiry of password. The field will be populated 3 days prior to the expiry else it will contain<br>"no value"data. |
| 1773 | GraceLoginsLeft | N | 1 | 71 | unsigned int | Number of successful logins allowed with expired password. The field will have value set , once the password is expired else it would contain no value data. The value 0 indicates no new login with expired password will be allowed. |
| 1408 | DefaultCstmApplVerID | Y | 30 | 72 | Fixed String (0-terminable) | Indicates the BSE ETI interface version the ETI gateway software uses.<br>Must be set as 2.3<br>Valid characters: \x20,\x22-\x7B, \x7D,\x7E |
| 25017 | Pad2 | U | 2 | 102 | Fixed String | not used |

### 7.7.10 Session Logout

Session Logout request. For more details, please refer to chapter 6.3 Logout.




| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderIn>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10002 (Logout, MsgType = 5) |
| 25028 | NetworkMsgID | U | 8 | 6 | Fixed String | not used |
| 25017 | Pad2 | U | 2 | 14 | Fixed String | not used |
| *<RequestHeader>* | | | | | | |
| 34 | MsgSeqNum | Y | 4 | 16 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 50 | SenderSubID | U | 4 | 20 | unsigned int | not used |

### 7.7.11 Session Logout Response

This message confirms the Session Logout request. For more details, please refer to chapter 6.3 Logout.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| <MessageHeaderOut> | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10003 (Logout, MsgType = 5) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| <ResponseHeader> | | | | | | |
| 5979 | RequestTime | Y | 8 | 8 | UTCTimestamp | Gateway request in timestamp. |
| 52 | SendingTime | Y | 8 | 16 | UTCTimestamp | Gateway response out timestamp. |
| 34 | MsgSeqNum | Y | 4 | 24 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 25019 | Pad4 | U | 4 | 28 | Fixed String | not used |

### 7.7.12 Session Logout Notification

The Session Logout Notification message is used to inform about an unsolicited session logout triggered by the operator of the BSE system or by the BSE system itself. For more details, please refer to chapter 6.3 Logout.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10012 (Logout, MsgType = 5) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<NotifHeader>* | | | | | | |
| 52 | SendingTime | Y | 8 | 8 | UTCTimestamp | Gateway response out timestamp. |
| *<Message Body>* | | | | | | |
| 30354 | VarTextLen | Y | 2 | 16 | Counter | Number of bytes for field VarText (30355). |
| 25021 | Pad6 | U | 6 | 18 | Fixed String | not used |
| 30355 | VarText | Y | 2000 | 24 | Variable String | Error text.<br>Valid characters: \x09,\x0A,\x0D, \x20,\x22-\x7B,\x7D,\x7E |

### 7.7.13 Heartbeat

The Heartbeat message is used by the BSE ETI gateway to monitor the status of the communication link to the ETI client during periods of inactivity. For more details, please refer to chapter 6.4 Heartbeat.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderIn>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10011 (Heartbeat, MsgType = 0) |
| 25028 | NetworkMsgID | U | 8 | 6 | Fixed String | not used |
| 25017 | Pad2 | U | 2 | 14 | Fixed String | not used |

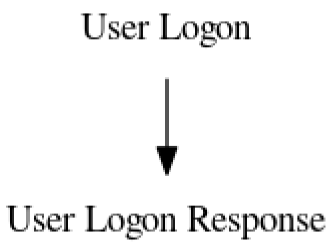
### 7.7.14 Heartbeat Notification

The Heartbeat notification may be used by the ETI client to monitor the status of the communication link to the BSE ETI gateway during periods of inactivity. For more details please refer to chapter 6.4 Heartbeat.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10023 (Heartbeat, MsgType = 0) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<NotifHeader>* | | | | | | |
| 52 | SendingTime | Y | 8 | 8 | UTCTimestamp | Gateway response out timestamp. |

### 7.7.15 User Logon

Each user needs to logon to BSE via the User Logon message. For more details, please refer to chapter 5.2.3 User Authentication.




| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderIn>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10018 (UserRequest, MsgType = BE) |
| 25028 | NetworkMsgID | U | 8 | 6 | Fixed String | not used |
| 25017 | Pad2 | U | 2 | 14 | Fixed String | not used |
| *<RequestHeader>* | | | | | | |
| 34 | MsgSeqNum | Y | 4 | 16 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 50 | SenderSubID | U | 4 | 20 | unsigned int | not used |
| *<Message Body>* | | | | | | |
| 553 | Username | Y | 4 | 24 | unsigned int | User ID. |
| 554 | Password | Y | 32 | 28 | Fixed String (0-terminable) | Password. Valid characters: 0-9,A-Z,a-z,\x21, \x23,\x24,\x25,\x26,\x2A,\x2B, \x2D,\x2E,\x2F,\x3D,\x40,\x5F |
| 25019 | Pad4 | U | 4 | 60 | Fixed String | not used |

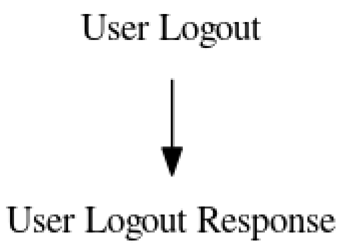
### 7.7.16 User Logon Response

The User Logon Response message is used to confirm a user logon. For more details, please refer to chapter 5.2.3 User Authentication.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| <MessageHeaderOut> | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10019 (UserResponse, MsgType = BF) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| <ResponseHeader> | | | | | | |
| 5979 | RequestTime | Y | 8 | 8 | UTCTimestamp | Gateway request in timestamp. |
| 52 | SendingTime | Y | 8 | 16 | UTCTimestamp | Gateway response out timestamp. |
| 34 | MsgSeqNum | Y | 4 | 24 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 25019 | Pad4 | U | 4 | 28 | Fixed String | not used |
| <Message Body> | | | | | | |
| 1772 | LastLoginTime | N | 8 | 32 | UTCTimestamp | The time when last successful login was performed. |
| 1774 | DaysLeftForPasswd-Expiry | N | 1 | 40 | unsigned int | Number of days remaining for the expiry of password. The field will be populated 3 days prior to the expiry else it will contain "no value"data. |
| 1773 | GraceLoginsLeft | N | 1 | 41 | unsigned int | Number of successful logins allowed with expired password. The field will have value set , once the password is expired else it would contain no value data. The value 0 indicates no new login with expired password will be allowed. |
| 25021 | Pad6 | U | 6 | 42 | Fixed String | not used |

### 7.7.17 User Logout

Each user may logout from BSE via the User Logout message.




| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderIn>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10029 (UserRequest, MsgType = BE) |
| 25028 | NetworkMsgID | U | 8 | 6 | Fixed String | not used |
| 25017 | Pad2 | U | 2 | 14 | Fixed String | not used |
| *<RequestHeader>* | | | | | | |
| 34 | MsgSeqNum | Y | 4 | 16 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 50 | SenderSubID | U | 4 | 20 | unsigned int | not used |
| *<Message Body>* | | | | | | |
| 553 | Username | Y | 4 | 24 | unsigned int | User ID. |
| 25019 | Pad4 | U | 4 | 28 | Fixed String | not used |

### 7.7.18 User Logout Response

The User Logout Response message is used to confirm a user logout.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| <MessageHeaderOut> | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10024 (UserResponse, MsgType = BF) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| <ResponseHeader> | | | | | | |
| 5979 | RequestTime | Y | 8 | 8 | UTCTimestamp | Gateway request in timestamp. |
| 52 | SendingTime | Y | 8 | 16 | UTCTimestamp | Gateway response out timestamp. |
| 34 | MsgSeqNum | Y | 4 | 24 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 25019 | Pad4 | U | 4 | 28 | Fixed String | not used |

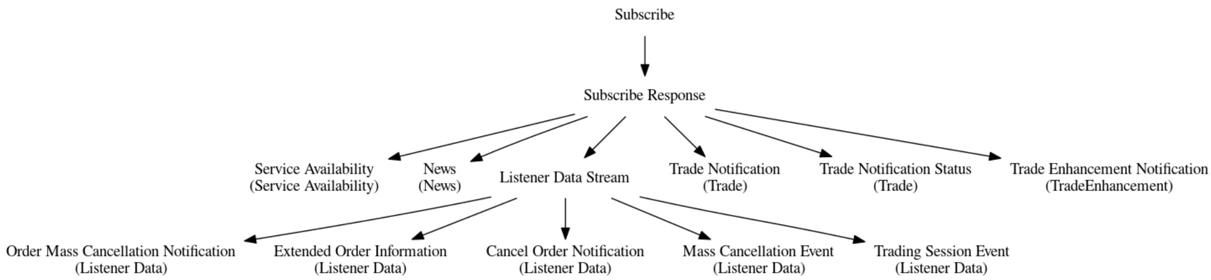
### 7.7.19 Throttle Update Notification

This message informs about throttle parameters that have been updated intraday.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10028 (UserNotification, MsgType = CB) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<NotifHeader>* | | | | | | |
| 52 | SendingTime | Y | 8 | 8 | UTCTimestamp | Gateway response out timestamp. |
| *<Message Body>* | | | | | | |
| 1614 | ThrottleTimeInterval | Y | 8 | 16 | signed int | Throttle time interval in number of milliseconds; applicable for transaction limit. |
| 1613 | ThrottleNoMsgs | Y | 4 | 24 | unsigned int | Transaction limit per ThrottleTimeInterval (1614). If set to 0, throttling will be switched off. |
| 25002 | ThrottleDisconnectLimit | Y | 4 | 28 | unsigned int | Disconnect limit: maximum number of sequential message rejects due to throttle violation allowed by the BSE ETI. |

### 7.7.20 Subscribe

This message is used to subscribe to a BSE ETI broadcast. Multiple subscriptions to the same pair of RefApplId (1355) and SubscriptionScope (25001) are not allowed. For more details, please refer to chapter 6.9 Broadcast.




<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td colspan="7"><MessageHeaderIn></td></tr>
<tr><td>9</td><td>BodyLen</td><td>Y</td><td>4</td><td>0</td><td>unsigned int</td><td>Number of bytes for the message, including this field.</td></tr>
<tr><td>28500</td><td>TemplateID</td><td>Y</td><td>2</td><td>4</td><td>unsigned int</td><td>Unique identifier for a BSE ETI message layout. Value: 10025 (ApplicationMessageRequest, MsgType = BW)</td></tr>
<tr><td>25028</td><td>NetworkMsgID</td><td>U</td><td>8</td><td>6</td><td>Fixed String</td><td>not used</td></tr>
<tr><td>25017</td><td>Pad2</td><td>U</td><td>2</td><td>14</td><td>Fixed String</td><td>not used</td></tr>
<tr><td colspan="7"><RequestHeader></td></tr>
<tr><td>34</td><td>MsgSeqNum</td><td>Y</td><td>4</td><td>16</td><td>unsigned int</td><td>Message sequence number used by the participant for requests sent to the gateway.</td></tr>
<tr><td>50</td><td>SenderSubID</td><td>U</td><td>4</td><td>20</td><td>unsigned int</td><td>not used</td></tr>
<tr><td colspan="7"><Message Body></td></tr>
<tr><td>25001</td><td>SubscriptionScope</td><td>N</td><td>4</td><td>24</td><td>unsigned int</td><td>- Subscription Scope : Value<br>- Trade : Session ID<br>- Trade (Business Unit) : No Value<br>- News broadcast : 1<br>- Risk Control broadcast: No Value<br>- Service Availability : Partition ID or No Value</td></tr>
<tr><td>1355</td><td>RefApplID</td><td>Y</td><td>1</td><td>28</td><td>unsigned int</td><td>Application identifier of a BSE ETI data stream.<table><tr><th>Value</th><th>Description</th></tr><tr><td>1</td><td>Trade</td></tr><tr><td>2</td><td>News</td></tr><tr><td>3</td><td>Service Availability</td></tr><tr><td>5</td><td>Listener Data</td></tr><tr><td>0</td><td>Trade Enhancement</td></tr></table></td></tr>
</table>

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 25018 | Pad3 | U | 3 | 29 | Fixed String | not used |

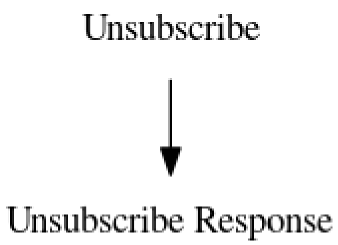
### 7.7.21 Subscribe Response

The Subscribe Broadcast Response message is used to confirm the broadcast subscription. For more details, please refer to chapter 6.9 Broadcast.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10005 (ApplicationMessageRequestAck, MsgType = BX) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<ResponseHeader>* | | | | | | |
| 5979 | RequestTime | Y | 8 | 8 | UTCTimestamp | Gateway request in timestamp. |
| 52 | SendingTime | Y | 8 | 16 | UTCTimestamp | Gateway response out timestamp. |
| 34 | MsgSeqNum | Y | 4 | 24 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 25019 | Pad4 | U | 4 | 28 | Fixed String | not used |
| *<Message Body>* | | | | | | |
| 28727 | ApplSubID | Y | 4 | 32 | unsigned int | Unique ID assigned by the BSE system during broadcast subscription in order to link broadcasts to the related subscription. |
| 25019 | Pad4 | U | 4 | 36 | Fixed String | not used |

### 7.7.22 Unsubscribe

This message is used to revoke a broadcast subscription.




| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderIn>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10006 (ApplicationMessageRequest, MsgType = BW) |
| 25028 | NetworkMsgID | U | 8 | 6 | Fixed String | not used |
| 25017 | Pad2 | U | 2 | 14 | Fixed String | not used |
| *<RequestHeader>* | | | | | | |
| 34 | MsgSeqNum | Y | 4 | 16 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 50 | SenderSubID | U | 4 | 20 | unsigned int | not used |
| *<Message Body>* | | | | | | |
| 28728 | RefApplSubID | Y | 4 | 24 | unsigned int | Unique ID for the subscription instance assigned by the BSE system during broadcast subscription. |
| 25019 | Pad4 | U | 4 | 28 | Fixed String | not used |

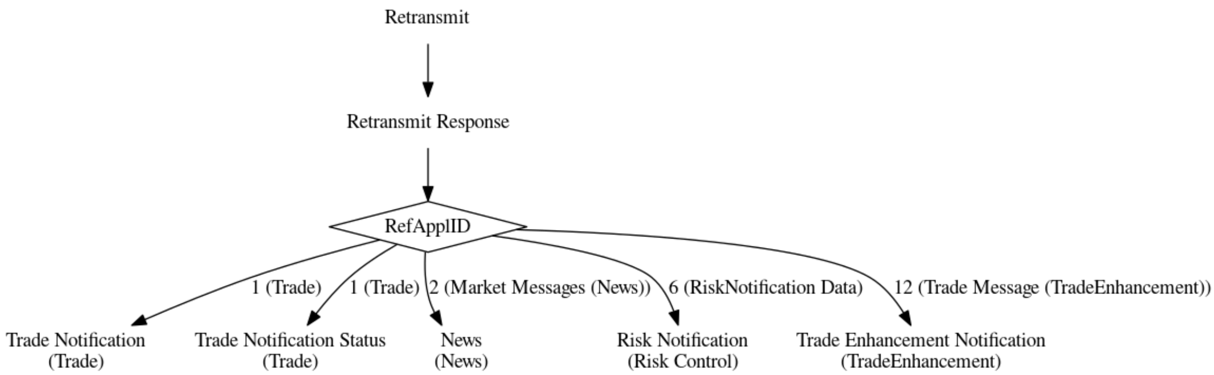
### 7.7.23 Unsubscribe Response

The Unsubscribe Broadcast Response message is used to confirm the revocation of a broadcast subscription.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10007 (ApplicationMessageRequestAck, MsgType = BX) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<ResponseHeader>* | | | | | | |
| 5979 | RequestTime | Y | 8 | 8 | UTCTimestamp | Gateway request in timestamp. |
| 52 | SendingTime | Y | 8 | 16 | UTCTimestamp | Gateway response out timestamp. |
| 34 | MsgSeqNum | Y | 4 | 24 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 25019 | Pad4 | U | 4 | 28 | Fixed String | not used |

### 7.7.24 Retransmit

This message is used for re-transmission of trade, risk control and news data for recovery purposes. The specified application sequence number range will lead to the retransmission of data whose application sequence number is >= ApplBegSeqNum (1182) and <= ApplEndSeqNum (1183). For more details, please refer to chapter 6.10.1 Retransmission.




| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderIn>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10008 (ApplicationMessageRequest, MsgType = BW) |
| 25028 | NetworkMsgID | U | 8 | 6 | Fixed String | not used |
| 25017 | Pad2 | U | 2 | 14 | Fixed String | not used |
| *<RequestHeader>* | | | | | | |
| 34 | MsgSeqNum | Y | 4 | 16 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 50 | SenderSubID | U | 4 | 20 | unsigned int | not used |
| *<Message Body>* | | | | | | |
| 1182 | ApplBegSeqNum | N | 8 | 24 | SeqNum | "no value"means first known sequence number: 1 |
| 1183 | ApplEndSeqNum | N | 8 | 32 | SeqNum | Ending range of application sequence numbers. |
| 25001 | SubscriptionScope | N | 4 | 40 | unsigned int | - Subscription Scope : Value<br>- Trade : Session ID<br>- News broadcast : 1<br>- Risk Control broadcast: No Value<br>- Service Availability : Partition ID or No Value |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 5948 | PartitionID | Y | 2 | 44 | unsigned int | The application sequence numbers are only unique per RefApplID, SubcriptionScope and PartionID. Therefore, the PartitionID is required to define the scope of a Retransmission Request.<br>For News and Risk Control broadcast to be set to 0. |
| 1355 | RefApplID | Y | 1 | 46 | unsigned int | Application identifier of a BSE ETI data stream.<br>Value / Description:<br>1 Trade<br>2 News<br>6 Risk Control<br>8 Risk Admin<br>0 Trade Enhancement |
| 25016 | Pad1 | U | 1 | 47 | Fixed String | not used |

### 7.7.25 Retransmit Response

The Retransmission Response message confirms the Retransmit request and delivers only a fixed number of the requested data packages. So the requesting client would have to send a new retransmission request (with updated sequence numbers) if the captured response does not contain all requested data. (See below: ApplEndSeqNum (1183)).
The field ApplTotalMessageCount (1349) indicates how many retransmitted broadcast messages will follow. They will not be interrupted by other messages.
All these messages will consist of:

- a <MessageHeaderOut>.
- a < RBCHeader>, where ApplSubID (28727) is always set to "no valueänd ApplResendFlag (1352) is always set to True (indicating a retransmission message).
- a <MessageBody>, which is specific for the TemplateID (28500) in <MessageHeaderOut>.

For more details, please refer to chapter 6.10.1 Retransmission.

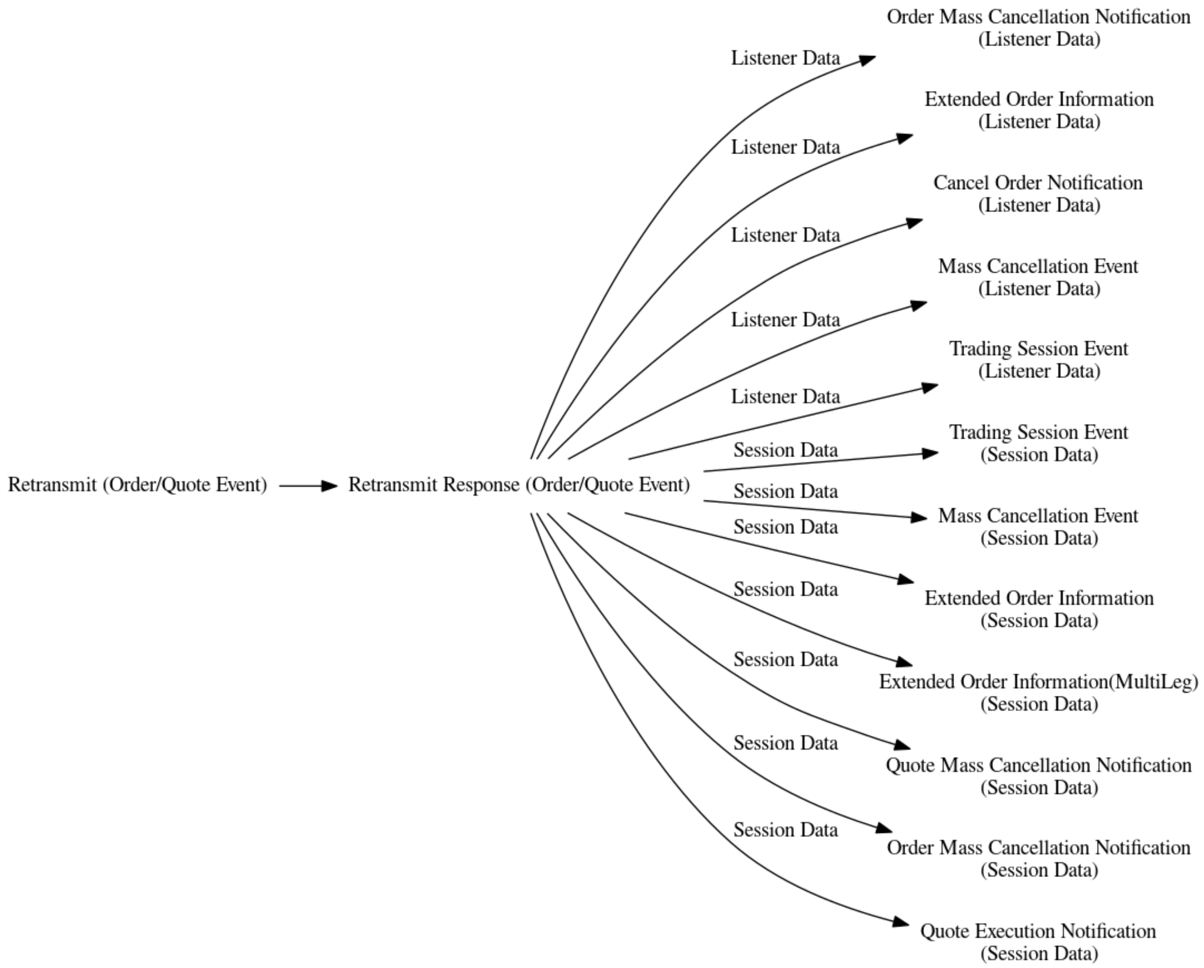
| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10009 (ApplicationMessageRequestAck, MsgType = BX) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<ResponseHeader>* | | | | | | |
| 5979 | RequestTime | Y | 8 | 8 | UTCTimestamp | Gateway request in timestamp. |
| 52 | SendingTime | Y | 8 | 16 | UTCTimestamp | Gateway response out timestamp. |
| 34 | MsgSeqNum | Y | 4 | 24 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 25019 | Pad4 | U | 4 | 28 | Fixed String | not used |
| *<Message Body>* | | | | | | |
| 1183 | ApplEndSeqNum | N | 8 | 32 | SeqNum | Ending range of application sequence numbers. If it is not set to the related request's ApplEndSeqNum, the client will have to send another retransmission request (with an updated ApplBegSeqNum). "no value"means the requested data is not available. |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 1357 | RefApplLastSeqNum | N | 8 | 40 | SeqNum | Last application sequence number known by the BSE system for a certain scope of RefApplID, SubscriptionScope and PartitionID. "no value"means that there is no data persisted yet for the requested stream/subscription scope. |
| 1349 | ApplTotalMessage-Count | Y | 2 | 48 | unsigned int | Total number of messages included in transmission. |
| 25021 | Pad6 | U | 6 | 50 | Fixed String | not used |

### 7.7.26 Retransmit (Order/Quote Event)

This message is used for re-transmission of recoverable order/quote event data for recovery purposes. The specified application message identifier range will lead to the retransmission of data whose application message identifier is > ApplBegMsgID (28718) and <= ApplEndMsgID (28719).

For more details, please refer to chapter 6.10.1 Retransmission.




| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderIn>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10026 (ApplicationMessageRequest, MsgType = BW) |
| 25028 | NetworkMsgID | U | 8 | 6 | Fixed String | not used |
| 25017 | Pad2 | U | 2 | 14 | Fixed String | not used |
| *<RequestHeader>* | | | | | | |

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>34</td><td>MsgSeqNum</td><td>Y</td><td>4</td><td>16</td><td>unsigned int</td><td>Message sequence number used by the participant for requests sent to the gateway.</td></tr>
<tr><td>50</td><td>SenderSubID</td><td>U</td><td>4</td><td>20</td><td>unsigned int</td><td>not used</td></tr>
<tr><td colspan="7"><Message Body></td></tr>
<tr><td>25001</td><td>SubscriptionScope</td><td>N</td><td>4</td><td>24</td><td>unsigned int</td><td>- Subscription Scope : Value<br>- Session Data : No Value<br>- Listener Data : Session ID</td></tr>
<tr><td>5948</td><td>PartitionID</td><td>Y</td><td>2</td><td>28</td><td>unsigned int</td><td>Application message identifiers are only unique per RefApplID, SubcriptionScope and PartitionID. Therefore, the PartitionID is required to define the scope of a Retransmit request.</td></tr>
<tr><td>1355</td><td>RefApplID</td><td>Y</td><td>1</td><td>30</td><td>unsigned int</td><td>Application identifier of a BSE ETI data stream.<table><tr><th>Value</th><th>Description</th></tr><tr><td>4</td><td>Session Data</td></tr><tr><td>5</td><td>Listener Data</td></tr></table></td></tr>
<tr><td>28718</td><td>ApplBegMsgID</td><td>N</td><td>16</td><td>31</td><td>data</td><td>Beginning range of application message identifiers; "no valueïndicates first known application message identifier.</td></tr>
<tr><td>28719</td><td>ApplEndMsgID</td><td>N</td><td>16</td><td>47</td><td>data</td><td>Ending range of application message identifiers; "no value"means last known application message identifier.</td></tr>
<tr><td>25016</td><td>Pad1</td><td>U</td><td>1</td><td>63</td><td>Fixed String</td><td>not used</td></tr>
</table>

### 7.7.27 Retransmit Response (Order/Quote Event)

This message confirms the Retransmit (Order/Quote Event) request and delivers only a fixed number of the requested data packages. So the requesting client would have to send a new Retransmit (Order/Quote Event) request (with updated application message identifiers), if the captured response does not contain all requested data. (See below: ApplEndMsgID (28719)).
The field ApplTotalMessageCount (1349) indicates how many retransmitted broadcast messages will follow. They will not be interrupted by other messages.
All these messages will consist of:

- a <MessageHeaderOut>.
- a < RBCHeaderME>, where ApplSubID (28727) is always set to "no value", TrdRegTSTimeOut (21003) is always set to "no value", and ApplResendFlag (1352) is always set to True (indicating a retransmission message).
- a <MessageBody>, which is specific for the TemplateID (28500) in <MessageHeaderOut>.

The retransmission message template used for order events differs from the session data response template in the following cases:

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10027 (ApplicationMessageRequestAck, MsgType = BX) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<ResponseHeader>* | | | | | | |
| 5979 | RequestTime | Y | 8 | 8 | UTCTimestamp | Gateway request in timestamp. |
| 52 | SendingTime | Y | 8 | 16 | UTCTimestamp | Gateway response out timestamp. |
| 34 | MsgSeqNum | Y | 4 | 24 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 25019 | Pad4 | U | 4 | 28 | Fixed String | not used |
| *<Message Body>* | | | | | | |
| 1349 | ApplTotalMessage-Count | Y | 2 | 32 | unsigned int | Total number of messages included in transmission. |
| 28719 | ApplEndMsgID | N | 16 | 34 | data | Ending range of application message identifiers. If it is not set to the related request's ApplEndMsgID, the client will have to send another Retransmit request (with an updated ApplBegMsgID). |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 28722 | RefApplLastMsgID | N | 16 | 50 | data | Last application message identifier known by the BSE system for a certain scope of RefApplID, SubscriptionScope and PartitionID. |
| 25021 | Pad6 | U | 6 | 66 | Fixed String | not used |

### 7.7.28 Reject

All rejections and errors on an application and session level are communicated via the FIX standard Reject (3) message.

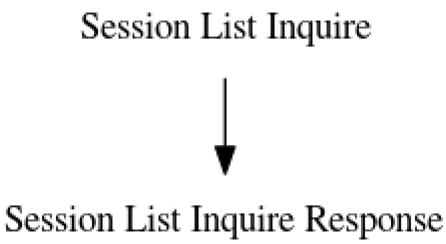
| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10010 (Reject, MsgType = 3) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<NRResponseHeaderME>* | | | | | | |
| 5979 | RequestTime | Y | 8 | 8 | UTCTimestamp | Gateway request in timestamp. |
| 7764 | RequestOut | N | 8 | 16 | UTCTimestamp | Timestamp the gateway sends a message to the Matching Engine |
| 21002 | TrdRegTSTimeIn | N | 8 | 24 | UTCTimestamp | Matching engine in timestamp. |
| 21003 | TrdRegTSTimeOut | N | 8 | 32 | UTCTimestamp | Matching engine out timestamp. |
| 7765 | ResponseIn | N | 8 | 40 | UTCTimestamp | Timestamp the gateway receives a message from the Matching Engine |
| 52 | SendingTime | Y | 8 | 48 | UTCTimestamp | Gateway response out timestamp. |
| 34 | MsgSeqNum | Y | 4 | 56 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 893 | LastFragment | Y | 1 | 60 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value \| Description<br>0 \| Not Last Message<br>1 \| Last Message |
| 25018 | Pad3 | U | 3 | 61 | Fixed String | not used |
| *<Message Body>* | | | | | | |

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>373</td><td>SessionRejectReason</td><td>Y</td><td>4</td><td>64</td><td>unsigned int</td><td>Error code.
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>1</td><td>Required Tag Missing</td></tr>
<tr><td>5</td><td>Value Is Incorrect</td></tr>
<tr><td>7</td><td>Decryption Problem</td></tr>
<tr><td>11</td><td>Invalid Msg ID</td></tr>
<tr><td>16</td><td>Incorrect Num In Group Count</td></tr>
<tr><td>99</td><td>Other</td></tr>
<tr><td>100</td><td>Throttle Limit Exceeded</td></tr>
<tr><td>101</td><td>Exposure Limit Exceeded</td></tr>
<tr><td>102</td><td>Service Temporarily Not Available</td></tr>
<tr><td>103</td><td>Service Not Available</td></tr>
<tr><td>104</td><td>Result Of Transaction Unknown</td></tr>
<tr><td>105</td><td>Outbound Conversion Error</td></tr>
<tr><td>152</td><td>Heartbeat Violation</td></tr>
<tr><td>200</td><td>Internal Technical Error</td></tr>
<tr><td>210</td><td>Validation Error</td></tr>
<tr><td>211</td><td>User Already Logged In</td></tr>
<tr><td>10000</td><td>Order Not Found</td></tr>
<tr><td>10001</td><td>Price Not Reasonable</td></tr>
<tr><td>10002</td><td>Client Order ID Not Unique</td></tr>
<tr><td>10004</td><td>BU Book Order Limit Exceeded</td></tr>
<tr><td>10005</td><td>Session Book Order Limit Exceeded</td></tr>
<tr><td>10006</td><td>Activity Timestamp Not Matched</td></tr>
</table></td></tr>
<tr><td>30354</td><td>VarTextLen</td><td>Y</td><td>2</td><td>68</td><td>Counter</td><td>Number of bytes for field VarText (30355).</td></tr>
<tr><td>1409</td><td>SessionStatus</td><td>Y</td><td>1</td><td>70</td><td>unsigned int</td><td>Session status.
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>0</td><td>Session active</td></tr>
<tr><td>4</td><td>Session logout complete</td></tr>
</table></td></tr>
<tr><td>25016</td><td>Pad1</td><td>U</td><td>1</td><td>71</td><td>Fixed String</td><td>not used</td></tr>
<tr><td>30355</td><td>VarText</td><td>Y</td><td>2000</td><td>72</td><td>Variable String</td><td>Error text.<br>Valid characters: \x09,\x0A,\x0D, \x20,\x22-\x7B,\x7D,\x7E</td></tr>
</table>

### 7.7.29 Session List Inquire

This message is used to get the list of sessions for the own business unit. These returned sessions (PartyIDSessionID (20055)) can be used as SubscriptionScope (25001) for retransmission and subscriptions requests to Listener Data (RefApplID (1355) = 4).

For more details, please refer to chapter 6.10.1 Retransmission

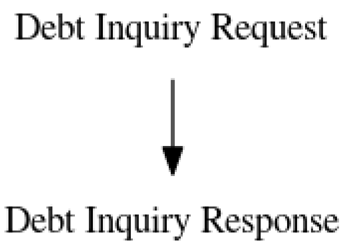



| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderIn>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10035 (SessionDetailsListRequest, MsgType = U5) |
| 25028 | NetworkMsgID | U | 8 | 6 | Fixed String | not used |
| 25017 | Pad2 | U | 2 | 14 | Fixed String | not used |
| *<RequestHeader>* | | | | | | |
| 34 | MsgSeqNum | Y | 4 | 16 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 50 | SenderSubID | U | 4 | 20 | unsigned int | not used |

## 7.8 Order Handling

### 7.8.1 Debt Inquiry Request

This message can be used to enquire about the debt instrument parameters by providing the clean price or yield.




| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderIn>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10390 (DebtInquiryRequest, MsgType = U32) |
| 25028 | NetworkMsgID | U | 8 | 6 | Fixed String | not used |
| 25017 | Pad2 | U | 2 | 14 | Fixed String | not used |
| *<RequestHeader>* | | | | | | |
| 34 | MsgSeqNum | Y | 4 | 16 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 50 | SenderSubID | Y | 4 | 20 | unsigned int | User ID. |
| *<Message Body>* | | | | | | |
| 810 | UnderlyingPx | N | 8 | 24 | PriceType | The clean price. |
| 236 | Yield | N | 8 | 32 | PriceType | The Yield corresponding to the clean price. |
| 48 | SecurityID | Y | 8 | 40 | signed int | Instrument identifier. |
| 38 | OrderQty | Y | 4 | 48 | Qty | Total Order Quantity. |
| 25019 | Pad4 | U | 4 | 52 | Fixed String | not used |

### 7.8.2 Debt Inquiry Response

This message is sent against the Debt Inquiry Request message.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10391 (DebtInquiryResponse, MsgType = U33) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<NRResponseHeaderME>* | | | | | | |
| 5979 | RequestTime | Y | 8 | 8 | UTCTimestamp | Gateway request in timestamp. |
| 7764 | RequestOut | Y | 8 | 16 | UTCTimestamp | Timestamp the gateway sends a message to the Matching Engine |
| 21002 | TrdRegTSTimeIn | N | 8 | 24 | UTCTimestamp | Matching engine in timestamp. |
| 21003 | TrdRegTSTimeOut | N | 8 | 32 | UTCTimestamp | Matching engine out timestamp. |
| 7765 | ResponseIn | Y | 8 | 40 | UTCTimestamp | Timestamp the gateway receives a message from the Matching Engine |
| 52 | SendingTime | Y | 8 | 48 | UTCTimestamp | Gateway response out timestamp. |
| 34 | MsgSeqNum | Y | 4 | 56 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 893 | LastFragment | Y | 1 | 60 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value \| Description<br>0 \| Not Last Message<br>1 \| Last Message |
| 25018 | Pad3 | U | 3 | 61 | Fixed String | not used |
| *<Message Body>* | | | | | | |
| 810 | UnderlyingPx | N | 8 | 64 | PriceType | The clean price. |
| 236 | Yield | N | 8 | 72 | PriceType | The Yield corresponding to the clean price. |
| 159 | AccruedInterestAmt | N | 8 | 80 | PriceType | The interest amount accrued till date. |
| 381 | GrossTradeAmt | N | 8 | 88 | Amount | The total obligation value. ( total consideration) |
| 882 | UnderlyingDirtyPrice | N | 8 | 96 | PriceType | The dirty price. |
| 48 | SecurityID | N | 8 | 104 | signed int | Instrument identifier. |
| 38 | OrderQty | N | 4 | 112 | Qty | Total Order Quantity. |
| 63 | SettlType | N | 4 | 116 | LocalMktDate | The settlement date. |

### 7.8.3 Order Mass Cancellation Notification

This message informs about an unsolicited mass cancellation event of orders. For more details, please refer to chapter 4.13 Mass Cancellation Notification and chapter 4.14 Mass Cancellation Events

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10122 (OrderMassActionReport, MsgType = BZ) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<RBCHeaderME>* | | | | | | |
| 21003 | TrdRegTSTimeOut | N | 8 | 8 | UTCTimestamp | Matching engine out timestamp. |
| 52 | SendingTime | Y | 8 | 16 | UTCTimestamp | Gateway response out timestamp. |
| 28727 | ApplSubID | N | 4 | 24 | unsigned int | Only set for Listener Data. |
| 5948 | PartitionID | Y | 2 | 28 | unsigned int | Grouping of BSE products.<br>Belongs to the scope of Service Availability and Retransmit requests. |
| 28704 | ApplMsgID | Y | 16 | 30 | data | Application message identifier assigned to an order event. |
| 1180 | ApplID | Y | 1 | 46 | unsigned int | Identifier for an ETI data stream.<br>Value \| Description<br>4 \| Session Data<br>5 \| Listener Data |
| 1352 | ApplResendFlag | Y | 1 | 47 | unsigned int | Indicates a retransmission message.<br>Value \| Description<br>0 \| False<br>1 \| True |
| 893 | LastFragment | Y | 1 | 48 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value \| Description<br>0 \| Not Last Message<br>1 \| Last Message |
| 25022 | Pad7 | U | 7 | 49 | Fixed String | not used |
| *<Message Body>* | | | | | | |
| 1369 | MassActionReportID | Y | 8 | 56 | UTCTimestamp | Transaction timestamp. |
| 48 | SecurityID | N | 8 | 64 | signed int | Only set for mass cancellations on instrument (SecurityID) level. |
| 1300 | MarketSegmentID | Y | 4 | 72 | signed int | Product identifier. |

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>20655</td><td>TargetPartyIDSessionID</td><td>Y</td><td>4</td><td>76</td><td>unsigned int</td><td>Session ID.</td></tr>
<tr><td>20612</td><td>TargetParty-IDExecutingTrader</td><td>N</td><td>4</td><td>80</td><td>unsigned int</td><td>Owning User ID.</td></tr>
<tr><td>20036</td><td>PartyIDEnteringTrader</td><td>N</td><td>4</td><td>84</td><td>unsigned int</td><td>Entering User ID.</td></tr>
<tr><td>1370</td><td>NoNotAffectedOrders</td><td>Y</td><td>2</td><td>88</td><td>Counter</td><td>Number of NotAffectedOrders repeating group instances.</td></tr>
<tr><td>20007</td><td>PartyIDEnteringFirm</td><td>N</td><td>1</td><td>90</td><td>unsigned int</td><td>Entering Entity ID.
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>1</td><td>Participant</td></tr>
<tr><td>2</td><td>Market Supervision</td></tr>
</table></td></tr>
<tr><td>28721</td><td>MassActionReason</td><td>Y</td><td>1</td><td>91</td><td>unsigned int</td><td>Reason for mass cancellation.
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>0</td><td>No Special Reason</td></tr>
<tr><td>1</td><td>Stop Trading</td></tr>
<tr><td>2</td><td>Emergency</td></tr>
<tr><td>3</td><td>Market Maker Protection</td></tr>
<tr><td>4</td><td>Stop Button Activated</td></tr>
<tr><td>5</td><td>Business Unit Suspended</td></tr>
<tr><td>6</td><td>Session Loss</td></tr>
<tr><td>7</td><td>RRM: Collateral</td></tr>
<tr><td>8</td><td>Price Band Shrink</td></tr>
<tr><td>114</td><td>Product State Closing</td></tr>
<tr><td>115</td><td>Product State EOD</td></tr>
<tr><td>116</td><td>RRM : Regulatory</td></tr>
<tr><td>117</td><td>RRM : MWPL</td></tr>
<tr><td>*</td><td>More Values</td></tr>
</table></td></tr>
<tr><td>18</td><td>ExecInst</td><td>Y</td><td>1</td><td>92</td><td>unsigned int</td><td>Instructions for order handling.
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>3</td><td>Persistent and non-persistent Orders (FIX value "H Q")</td></tr>
<tr><td>2</td><td>Non-persistent Order (FIX value "Q")</td></tr>
</table></td></tr>
<tr><td>25018</td><td>Pad3</td><td>U</td><td>3</td><td>93</td><td>Fixed String</td><td>not used</td></tr>
<tr><td colspan="6"><NotAffectedOrdersGrp></td><td>Cardinality: 0-500, Record counter: NoNotAffectedOrders</td></tr>
<tr><td>1371</td><td>>NotAffectedOrderID</td><td>Y</td><td>8</td><td>96</td><td>unsigned int</td><td>Exchange Order ID of an order whose cancellation is pending.</td></tr>
<tr><td>1372</td><td>>NotAffOrigClOrdID</td><td>N</td><td>8</td><td>104</td><td>unsigned int</td><td>Original Client Order ID of an order whose cancellation is pending.</td></tr>
</table>

### 7.8.4 Order Mass Cancellation Response No Hits

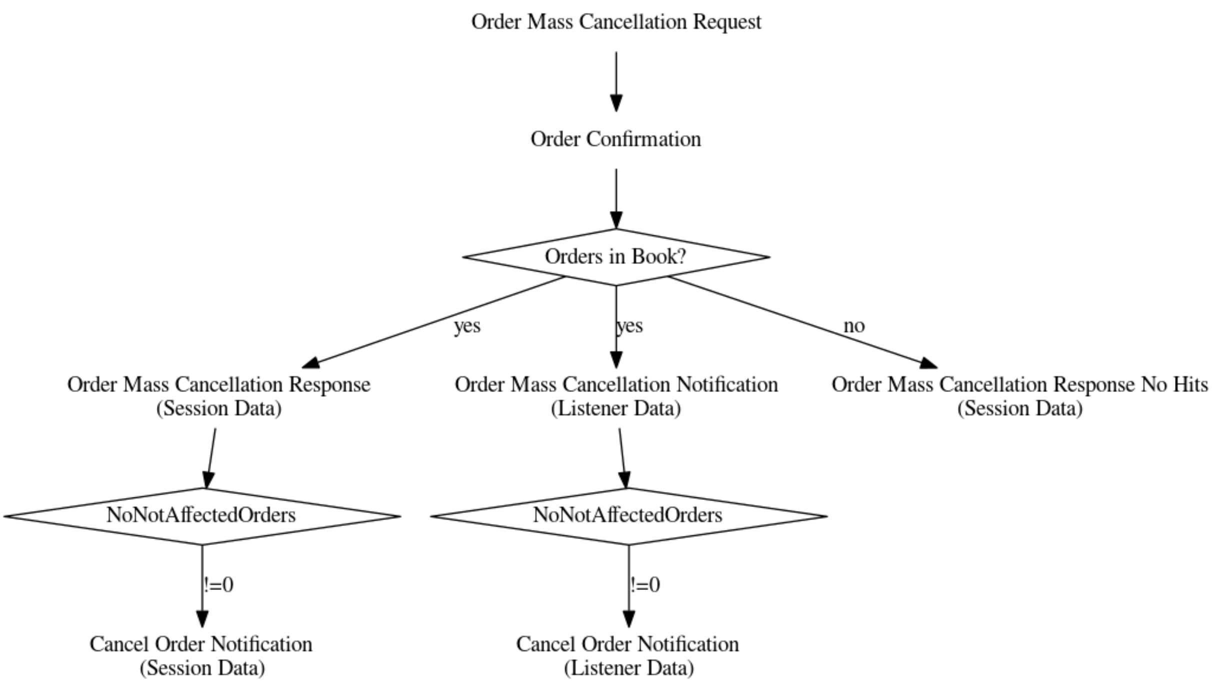
This message confirms the Mass Cancellation request for orders if the order book of the session was not affected.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10124 (OrderMassActionReport, MsgType = BZ) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<NRResponseHeaderME>* | | | | | | |
| 5979 | RequestTime | Y | 8 | 8 | UTCTimestamp | Gateway request in timestamp. |
| 7764 | RequestOut | Y | 8 | 16 | UTCTimestamp | Timestamp the gateway sends a message to the Matching Engine |
| 21002 | TrdRegTSTimeIn | Y | 8 | 24 | UTCTimestamp | Matching engine in timestamp. |
| 21003 | TrdRegTSTimeOut | Y | 8 | 32 | UTCTimestamp | Matching engine out timestamp. |
| 7765 | ResponseIn | Y | 8 | 40 | UTCTimestamp | Timestamp the gateway receives a message from the Matching Engine |
| 52 | SendingTime | Y | 8 | 48 | UTCTimestamp | Gateway response out timestamp. |
| 34 | MsgSeqNum | Y | 4 | 56 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 893 | LastFragment | Y | 1 | 60 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value / Description:<br>1 / Last Message |
| 25018 | Pad3 | U | 3 | 61 | Fixed String | not used |
| *<Message Body>* | | | | | | |
| 1369 | MassActionReportID | Y | 8 | 64 | UTCTimestamp | Transaction timestamp. |

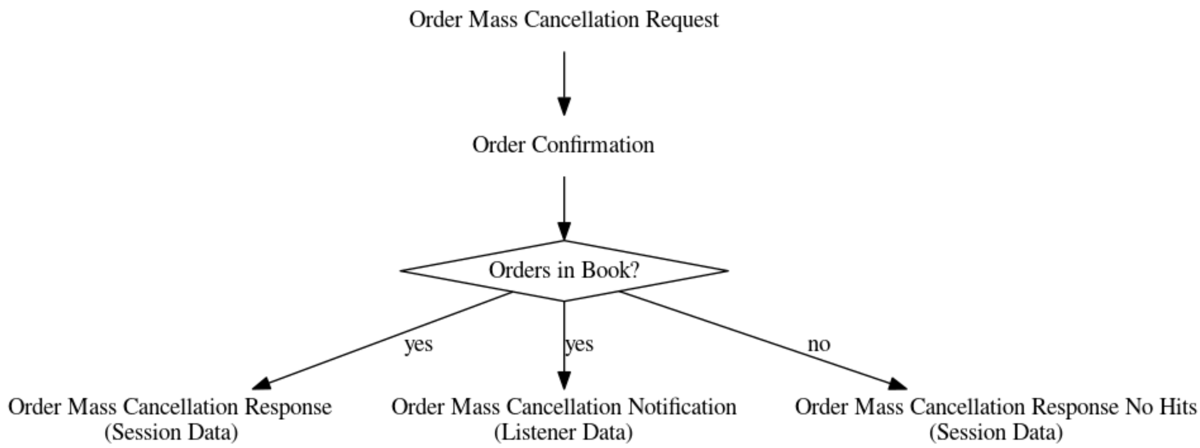
### 7.8.5 Order Mass Cancellation Request

This message is used for Mass Cancellation services for orders. For more details, please refer to chapter 4.5.7 Order Mass Cancellation.

### 7.8.6 Delete All Order




### 7.8.7 Delete All Order Complex




| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderIn>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10120 (OrderMassActionRequest, MsgType = CA) |
| 25028 | NetworkMsgID | U | 8 | 6 | Fixed String | not used |
| 25017 | Pad2 | U | 2 | 14 | Fixed String | not used |
| *<RequestHeader>* | | | | | | |
| 34 | MsgSeqNum | Y | 4 | 16 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 50 | SenderSubID | Y | 4 | 20 | unsigned int | User ID. |
| *<Message Body>* | | | | | | |
| 48 | SecurityID | N | 8 | 24 | signed int | Instrument identifier. |
| 1300 | MarketSegmentID | Y | 4 | 32 | signed int | Product identifier. |
| 25029 | RegulatoryID | N | 4 | 36 | unsigned int | not used. |
| 20655 | TargetPartyIDSessionID | N | 4 | 40 | unsigned int | Session ID. |
| 20612 | TargetPartyIDExecutingTrader | N | 4 | 44 | unsigned int | Owning User ID. |

### 7.8.8 Order Mass Cancellation Response

This message confirms the Mass Cancellation request for orders. For more details, please refer to chapter 4.13 Mass Cancellation Notification and chapter 4.14 Mass Cancellation Events

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10121 (OrderMassActionReport, MsgType = BZ) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<ResponseHeaderME>* | | | | | | |
| 5979 | RequestTime | Y | 8 | 8 | UTCTimestamp | Gateway request in timestamp. |
| 7764 | RequestOut | Y | 8 | 16 | UTCTimestamp | Timestamp the gateway sends a message to the Matching Engine |
| 21002 | TrdRegTSTimeIn | Y | 8 | 24 | UTCTimestamp | Matching engine in timestamp. |
| 21003 | TrdRegTSTimeOut | Y | 8 | 32 | UTCTimestamp | Matching engine out timestamp. |
| 7765 | ResponseIn | Y | 8 | 40 | UTCTimestamp | Timestamp the gateway receives a message from the Matching Engine |
| 52 | SendingTime | Y | 8 | 48 | UTCTimestamp | Gateway response out timestamp. |
| 34 | MsgSeqNum | Y | 4 | 56 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 5948 | PartitionID | Y | 2 | 60 | unsigned int | Grouping of BSE products.<br>Belongs to the scope of Service Availability and Retransmit requests. |
| 1180 | ApplID | Y | 1 | 62 | unsigned int | Identifier for an ETI data stream.<br>Value \| Description<br>4 \| Session Data |
| 28704 | ApplMsgID | Y | 16 | 63 | data | Application message identifier assigned to an order event. |
| 893 | LastFragment | Y | 1 | 79 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value \| Description<br>0 \| Not Last Message<br>1 \| Last Message |
| *<Message Body>* | | | | | | |
| 1369 | MassActionReportID | Y | 8 | 80 | UTCTimestamp | Transaction timestamp. |
| 1370 | NoNotAffectedOrders | Y | 2 | 88 | Counter | Number of NotAffectedOrders repeating group instances. |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 25021 | Pad6 | U | 6 | 90 | Fixed String | not used |
| *<NotAffectedOrdersGrp>* | | | | | | Cardinality: 0-500, Record counter: NoNotAffectedOrders |
| 1371 | >NotAffectedOrderID | Y | 8 | 96 | unsigned int | Exchange Order ID of an order whose cancellation is pending. |
| 1372 | >NotAffOrigClOrdID | N | 8 | 104 | unsigned int | Original Client Order ID of an order whose cancellation is pending. |

### 7.8.9 Order Confirmation

The message indicates the receipt of an order. This would be the first response to any order message.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10990 (ApplicationMessageRequestAck, MsgType = BX) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<ResponseHeader>* | | | | | | |
| 5979 | RequestTime | Y | 8 | 8 | UTCTimestamp | Gateway request in timestamp. |
| 52 | SendingTime | Y | 8 | 16 | UTCTimestamp | Gateway response out timestamp. |
| 34 | MsgSeqNum | Y | 4 | 24 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 25019 | Pad4 | U | 4 | 28 | Fixed String | not used |
| *<Message Body>* | | | | | | |
| 29000 | PrimaryOrderID | Y | 8 | 32 | unsigned int | Primary Order ID: Unique Exchange defined order request identifier. Uniqueness is guaranteed at the session level. |
| 11 | ClOrdID | N | 8 | 40 | unsigned int | Client Order ID: Unique participant defined order request identifier; used for client order id chaining. |
| 526 | MessageTag | N | 4 | 48 | signed int | User defined free field. The field is echoed in the trade notifications, listener data, session data. |
| 25019 | Pad4 | U | 4 | 52 | Fixed String | not used |

### 7.8.10 Extended Order Information(MultiLeg)

This message format is used for re-transmission of multileg execution response,within the session data. For more details, please refer to chapter 4.5.12 Order Status and Execution Reports.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10994 (MultiLegExecutionReport, MsgType = U30) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<RBCHeaderME>* | | | | | | |
| 21003 | TrdRegTSTimeOut | N | 8 | 8 | UTCTimestamp | Matching engine out timestamp. |
| 52 | SendingTime | Y | 8 | 16 | UTCTimestamp | Gateway response out timestamp. |
| 28727 | ApplSubID | N | 4 | 24 | unsigned int | Unique ID assigned by the BSE system during broadcast subscription in order to link broadcasts to the related subscription. |
| 5948 | PartitionID | Y | 2 | 28 | unsigned int | Grouping of BSE products.<br>Belongs to the scope of Service Availability and Retransmit requests. |
| 28704 | ApplMsgID | N | 16 | 30 | data | Application message identifier assigned to an order event. |
| 1180 | ApplID | Y | 1 | 46 | unsigned int | Identifier for an ETI data stream.<br>Value \| Description<br>4 \| Session Data<br>5 \| Listener Data |
| 1352 | ApplResendFlag | Y | 1 | 47 | unsigned int | Indicates a retransmission message.<br>Value \| Description<br>0 \| False<br>1 \| True |
| 893 | LastFragment | Y | 1 | 48 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value \| Description<br>0 \| Not Last Message<br>1 \| Last Message |
| 25022 | Pad7 | U | 7 | 49 | Fixed String | not used |
| *<Message Body>* | | | | | | |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 142 | SenderLocationID | Y | 8 | 56 | unsigned int | The location ID of the order from where it is originated |
| 11 | ClOrdID | N | 8 | 64 | unsigned int | Client Order ID: Unique participant defined order request identifier; used for client order id chaining. |
| 17 | ExecID | Y | 8 | 72 | UTCTimestamp | Transaction timestamp. |
| 30555 | NoLegExecs | Y | 2 | 80 | Counter | Number of InstrmntLegExec repeating group instances. Applicable only in case of spread instruments. |
| 581 | AccountType | Y | 1 | 82 | unsigned int | Value \| Description<br>20 \| Own<br>30 \| Client |
| 28998 | NoOfMultiLeg | Y | 1 | 83 | Counter | Number of MultiLegExecGrp repeating group instances. |
| 28997 | NoOfMultiLegExecs | Y | 1 | 84 | Counter | Number of MultiLegFillGrp repeating group instances. |
| 30649 | AlgoID | N | 16 | 85 | Fixed String (0-terminable) | Unique identifier of the algorithm.<br>Valid characters: A-Z,0-9 |
| 58 | ClientCode | Y | 12 | 101 | Fixed String (0-terminable) | The Unique Client Code (UCC) of the person for whom the order is entered. For Proprietary Account Client code should be OWN always.<br>Valid characters: A-Z,0-9,\x2A,\x2D, \x2E,\x2F,\x5C |
| 30642 | CPCode | N | 12 | 113 | Chartext | The Participant code.<br>Valid characters: \x00,\x21,\x23, \x24,\x28,\x29,\x2A,\x2B,\x2D, \x2E,\x2F,\x30-\x39,\x3A,\x3B, \x3D,\x3E,\x3F,\x40,\x41-\x5A, \x5C,\x5D,\x5F,\x60,\x7B,\x7D |
| 25018 | Pad3 | U | 3 | 125 | Fixed String | not used |
| *<MultiLegGrp>* | | | | | | Cardinality: 2-99, Record counter: NoOfMultiLeg |
| 48 | >SecurityID | Y | 8 | 128 | signed int | Instrument identifier. |
| 37 | >OrderID | Y | 8 | 136 | unsigned int | Exchange Order ID generated by BSE System; it remains constant over the lifetime of an order. |
| 44 | >Price | N | 8 | 144 | PriceType | Limit price. Required if OrdType (40) is Limit (2) or Stop Limit (4). |

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>28740</td><td>>MaxPricePercentage</td><td>N</td><td>8</td><td>152</td><td>PriceType</td><td>Indicates the protection range for market order. Required if OrderType (40) is Market(5).</td></tr>
<tr><td>526</td><td>>MessageTag</td><td>Y</td><td>4</td><td>160</td><td>signed int</td><td>User defined free field. The field is echoed in the trade notifications, listener data, session data.</td></tr>
<tr><td>38</td><td>>OrderQty</td><td>Y</td><td>4</td><td>164</td><td>Qty</td><td>Total Order Quantity.</td></tr>
<tr><td>14</td><td>>CumQty</td><td>Y</td><td>4</td><td>168</td><td>Qty</td><td>Cumulated executed quantity of an order.</td></tr>
<tr><td>84</td><td>>CxlQty</td><td>Y</td><td>4</td><td>172</td><td>Qty</td><td>Total quantity cancelled for this order.</td></tr>
<tr><td>378</td><td>>ExecRestatement-Reason</td><td>Y</td><td>2</td><td>176</td><td>unsigned int</td><td>Code to further qualify the field ExecType (150) of the Execution Report (8) message.
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>101</td><td>Order Added</td></tr>
<tr><td>105</td><td>IOC Order Cancelled</td></tr>
<tr><td>246</td><td>Self Trade Order Deleted</td></tr>
<tr><td>247</td><td>Reverse Trade Order Deleted</td></tr>
<tr><td>265</td><td>Market Order Out Of Range</td></tr>
</table></td></tr>
<tr><td>39</td><td>>OrdStatus</td><td>Y</td><td>1</td><td>178</td><td>char</td><td>Conveys the current status of an order.
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>2</td><td>Filled</td></tr>
<tr><td>4</td><td>Cancelled</td></tr>
</table></td></tr>
<tr><td>150</td><td>>ExecType</td><td>Y</td><td>1</td><td>179</td><td>char</td><td>The reason why this message was generated.
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>4</td><td>Cancelled</td></tr>
<tr><td>F</td><td>Trade</td></tr>
</table></td></tr>
<tr><td>54</td><td>>Side</td><td>Y</td><td>1</td><td>180</td><td>unsigned int</td><td>Side of the order.
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>1</td><td>Buy</td></tr>
<tr><td>2</td><td>Sell</td></tr>
</table></td></tr>
<tr><td>40</td><td>>OrdType</td><td>Y</td><td>1</td><td>181</td><td>unsigned int</td><td>Order type.
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>2</td><td>Limit</td></tr>
<tr><td>5</td><td>Market</td></tr>
</table></td></tr>
</table>

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 25017 | >Pad2 | U | 2 | 182 | Fixed String | not used |
| *<MultiLegFillGrp>* | | | | | | Cardinality: 0-100, Record counter: NoOfMultiLegExecs |
| 1364 | >FillPx | Y | 8 | 0 | PriceType | Price of Fill. |
| 48 | >SecurityID | Y | 8 | 8 | signed int | Instrument identifier. |
| 1365 | >FillQty | Y | 4 | 16 | Qty | Quantity of Fill. |
| 28708 | >FillMatchID | Y | 4 | 20 | unsigned int | Unique identifier for each price level (match step) of a match event; it is used for public trade reporting. |
| 1363 | >FillExecID | Y | 4 | 24 | signed int | Private identifier of an order match step event, which can be reconciled with the field SideTradeID (1506) in the Trade Notification. |
| 25019 | >Pad4 | U | 4 | 28 | Fixed String | not used |
| *<InstrmntLegExecGrp>* | | | | | | Cardinality: 0-600, Record counter: NoLegExecs |
| 602 | >LegSecurityID | Y | 8 | 0 | signed int | Instrument identifier of the leg security. |
| 637 | >LegLastPx | Y | 8 | 8 | PriceType | Price of this leg fill. |
| 1418 | >LegLastQty | Y | 4 | 16 | Qty | Quantity executed in this leg fill. |
| 1893 | >LegExecID | Y | 4 | 20 | signed int | Private identifier of a leg match step, which can be reconciled with the field SideTradeID (1506) in the Trade Notification. |
| 624 | >LegSide | Y | 1 | 24 | unsigned int | The side of the individual leg of a strategy as defined in its signature.<br>Value \| Description<br>1 \| Buy<br>2 \| Sell |
| 25010 | >NoFillsIndex | Y | 1 | 25 | unsigned int | Reference to the corresponding FillsGrp repeating group instance. |
| 25021 | >Pad6 | U | 6 | 26 | Fixed String | not used |

### 7.8.11 Immediate Execution Response(MultiLeg)

This message informs about the immediate execution of an incoming multileg order. For more details, please refer to chapter 4.5.12 Order Status and Execution Reports.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10993 (MultiLegExecutionReport, MsgType = U30) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<ResponseHeaderME>* | | | | | | |
| 5979 | RequestTime | Y | 8 | 8 | UTCTimestamp | Gateway request in timestamp. |
| 7764 | RequestOut | Y | 8 | 16 | UTCTimestamp | Timestamp the gateway sends a message to the Matching Engine |
| 21002 | TrdRegTSTimeIn | Y | 8 | 24 | UTCTimestamp | Matching engine in timestamp. |
| 21003 | TrdRegTSTimeOut | Y | 8 | 32 | UTCTimestamp | Matching engine out timestamp. |
| 7765 | ResponseIn | Y | 8 | 40 | UTCTimestamp | Timestamp the gateway receives a message from the Matching Engine |
| 52 | SendingTime | Y | 8 | 48 | UTCTimestamp | Gateway response out timestamp. |
| 34 | MsgSeqNum | Y | 4 | 56 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 5948 | PartitionID | Y | 2 | 60 | unsigned int | Grouping of BSE products.<br>Belongs to the scope of Service Availability and Retransmit requests. |
| 1180 | ApplID | Y | 1 | 62 | unsigned int | Identifier for an ETI data stream.<br>Value: 4 = Session Data |
| 28704 | ApplMsgID | N | 16 | 63 | data | Application message identifier assigned to an order event. |
| 893 | LastFragment | Y | 1 | 79 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value: 0 = Not Last Message<br>Value: 1 = Last Message |
| *<Message Body>* | | | | | | |

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>11</td><td>ClOrdID</td><td>N</td><td>8</td><td>80</td><td>unsigned int</td><td>Client Order ID: Unique participant defined order request identifier; used for client order id chaining.</td></tr>
<tr><td>17</td><td>ExecID</td><td>Y</td><td>8</td><td>88</td><td>UTCTimestamp</td><td>Transaction timestamp.</td></tr>
<tr><td>30555</td><td>NoLegExecs</td><td>Y</td><td>2</td><td>96</td><td>Counter</td><td>Number of InstrmntLegExec repeating group instances. Applicable only in case of spread instruments.</td></tr>
<tr><td>28998</td><td>NoOfMultiLeg</td><td>Y</td><td>1</td><td>98</td><td>Counter</td><td>Number of MultiLegExecGrp repeating group instances.</td></tr>
<tr><td>28997</td><td>NoOfMultiLegExecs</td><td>Y</td><td>1</td><td>99</td><td>Counter</td><td>Number of MultiLegFillGrp repeating group instances.</td></tr>
<tr><td>30649</td><td>AlgoID</td><td>N</td><td>16</td><td>100</td><td>Fixed String (0-terminable)</td><td>Unique identifier of the algorithm.<br>Valid characters: A-Z,0-9</td></tr>
<tr><td>25019</td><td>Pad4</td><td>U</td><td>4</td><td>116</td><td>Fixed String</td><td>not used</td></tr>
<tr><td colspan="6"><MultiLegExecGrp></td><td>Cardinality: 2-99, Record counter: NoOfMultiLeg</td></tr>
<tr><td>37</td><td>>OrderID</td><td>Y</td><td>8</td><td>120</td><td>unsigned int</td><td>Exchange Order ID generated by BSE System; it remains constant over the lifetime of an order.</td></tr>
<tr><td>48</td><td>>SecurityID</td><td>Y</td><td>8</td><td>128</td><td>signed int</td><td>Instrument identifier.</td></tr>
<tr><td>14</td><td>>CumQty</td><td>Y</td><td>4</td><td>136</td><td>Qty</td><td>Cumulated executed quantity of an order.</td></tr>
<tr><td>84</td><td>>CxlQty</td><td>Y</td><td>4</td><td>140</td><td>Qty</td><td>Total quantity cancelled for this order.</td></tr>
<tr><td>378</td><td>>ExecRestatement-Reason</td><td>Y</td><td>2</td><td>144</td><td>unsigned int</td><td>Code to further qualify the field ExecType (150) of the Execution Report (8) message.
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>101</td><td>Order Added</td></tr>
<tr><td>105</td><td>IOC Order Cancelled</td></tr>
<tr><td>246</td><td>Self Trade Order Deleted</td></tr>
<tr><td>247</td><td>Reverse Trade Order Deleted</td></tr>
<tr><td>265</td><td>Market Order Out Of Range</td></tr>
</table></td></tr>
<tr><td>39</td><td>>OrdStatus</td><td>Y</td><td>1</td><td>146</td><td>char</td><td>Conveys the current status of an order.
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>2</td><td>Filled</td></tr>
<tr><td>4</td><td>Cancelled</td></tr>
</table></td></tr>
</table>

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 150 | >ExecType | Y | 1 | 147 | char | The reason why this message was generated.<br>Value / Description:<br>4 Cancelled<br>F Trade |
| 25019 | >Pad4 | U | 4 | 148 | Fixed String | not used |
| *<MultiLegFillGrp>* | | | | | | Cardinality: 0-100, Record counter: NoOfMultiLegExecs |
| 1364 | >FillPx | Y | 8 | 0 | PriceType | Price of Fill. |
| 48 | >SecurityID | Y | 8 | 8 | signed int | Instrument identifier. |
| 1365 | >FillQty | Y | 4 | 16 | Qty | Quantity of Fill. |
| 28708 | >FillMatchID | Y | 4 | 20 | unsigned int | Unique identifier for each price level (match step) of a match event; it is used for public trade reporting. |
| 1363 | >FillExecID | Y | 4 | 24 | signed int | Private identifier of an order match step event, which can be reconciled with the field SideTradeID (1506) in the Trade Notification. |
| 25019 | >Pad4 | U | 4 | 28 | Fixed String | not used |
| *<InstrmntLegExecGrp>* | | | | | | Cardinality: 0-600, Record counter: NoLegExecs |
| 602 | >LegSecurityID | Y | 8 | 0 | signed int | Instrument identifier of the leg security. |
| 637 | >LegLastPx | Y | 8 | 8 | PriceType | Price of this leg fill. |
| 1418 | >LegLastQty | Y | 4 | 16 | Qty | Quantity executed in this leg fill. |
| 1893 | >LegExecID | Y | 4 | 20 | signed int | Private identifier of a leg match step, which can be reconciled with the field SideTradeID (1506) in the Trade Notification. |
| 624 | >LegSide | Y | 1 | 24 | unsigned int | The side of the individual leg of a strategy as defined in its signature.<br>Value / Description:<br>1 Buy<br>2 Sell |
| 25010 | >NoFillsIndex | Y | 1 | 25 | unsigned int | Reference to the corresponding FillsGrp repeating group instance. |
| 25021 | >Pad6 | U | 6 | 26 | Fixed String | not used |

### 7.8.12 Reject(MultiLeg)

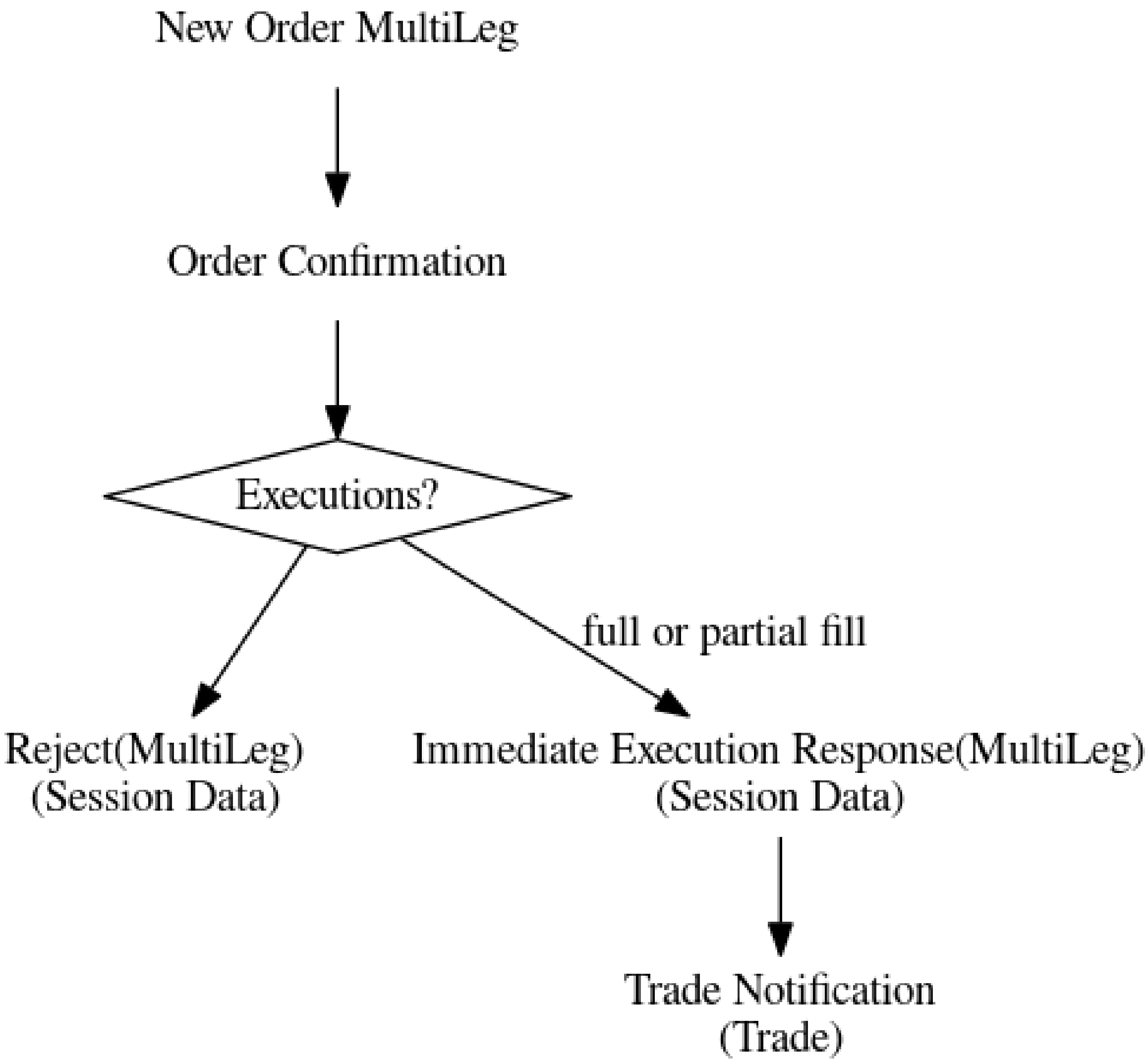
All rejections and errors for multileg orders are communicated using Reject message.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10992 (MultiLegOrderAcknowledgement, MsgType = U29) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<NRResponseHeaderME>* | | | | | | |
| 5979 | RequestTime | Y | 8 | 8 | UTCTimestamp | Gateway request in timestamp. |
| 7764 | RequestOut | Y | 8 | 16 | UTCTimestamp | Timestamp the gateway sends a message to the Matching Engine |
| 21002 | TrdRegTSTimeIn | Y | 8 | 24 | UTCTimestamp | Matching engine in timestamp. |
| 21003 | TrdRegTSTimeOut | Y | 8 | 32 | UTCTimestamp | Matching engine out timestamp. |
| 7765 | ResponseIn | Y | 8 | 40 | UTCTimestamp | Timestamp the gateway receives a message from the Matching Engine |
| 52 | SendingTime | Y | 8 | 48 | UTCTimestamp | Gateway response out timestamp. |
| 34 | MsgSeqNum | Y | 4 | 56 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 893 | LastFragment | Y | 1 | 60 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value / Description:<br>1 / Last Message |
| 25018 | Pad3 | U | 3 | 61 | Fixed String | not used |
| *<Message Body>* | | | | | | |
| 48 | SecurityID | N | 8 | 64 | signed int | Instrument identifier. |

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>373</td><td>SessionRejectReason</td><td>Y</td><td>4</td><td>72</td><td>unsigned int</td><td>Error code.
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>1</td><td>Required Tag Missing</td></tr>
<tr><td>5</td><td>Value Is Incorrect</td></tr>
<tr><td>7</td><td>Decryption Problem</td></tr>
<tr><td>11</td><td>Invalid Msg ID</td></tr>
<tr><td>16</td><td>Incorrect Num In Group Count</td></tr>
<tr><td>99</td><td>Other</td></tr>
<tr><td>100</td><td>Throttle Limit Exceeded</td></tr>
<tr><td>101</td><td>Exposure Limit Exceeded</td></tr>
<tr><td>102</td><td>Service Temporarily Not Available</td></tr>
<tr><td>103</td><td>Service Not Available</td></tr>
<tr><td>104</td><td>Result Of Transaction Unknown</td></tr>
<tr><td>105</td><td>Outbound Conversion Error</td></tr>
<tr><td>152</td><td>Heartbeat Violation</td></tr>
<tr><td>200</td><td>Internal Technical Error</td></tr>
<tr><td>210</td><td>Validation Error</td></tr>
<tr><td>211</td><td>User Already Logged In</td></tr>
<tr><td>10000</td><td>Order Not Found</td></tr>
<tr><td>10001</td><td>Price Not Reasonable</td></tr>
<tr><td>10002</td><td>Client Order ID Not Unique</td></tr>
<tr><td>10004</td><td>BU Book Order Limit Exceeded</td></tr>
<tr><td>10005</td><td>Session Book Order Limit Exceeded</td></tr>
<tr><td>10006</td><td>Activity Timestamp Not Matched</td></tr>
</table></td></tr>
<tr><td>30354</td><td>VarTextLen</td><td>Y</td><td>2</td><td>76</td><td>Counter</td><td>Number of bytes for field VarText (30355).</td></tr>
<tr><td>25017</td><td>Pad2</td><td>U</td><td>2</td><td>78</td><td>Fixed String</td><td>not used</td></tr>
<tr><td>30355</td><td>VarText</td><td>Y</td><td>2000</td><td>80</td><td>Variable String</td><td>Error text.<br>Valid characters: \x09,\x0A,\x0D, \x20,\x22-\x7B,\x7D,\x7E</td></tr>
</table>

### 7.8.13 New Order MultiLeg

The New Order Multileg message is used by the participant to submit an order for multiple securities. For more details, please refer to chapter 4.5.1 Order Types.



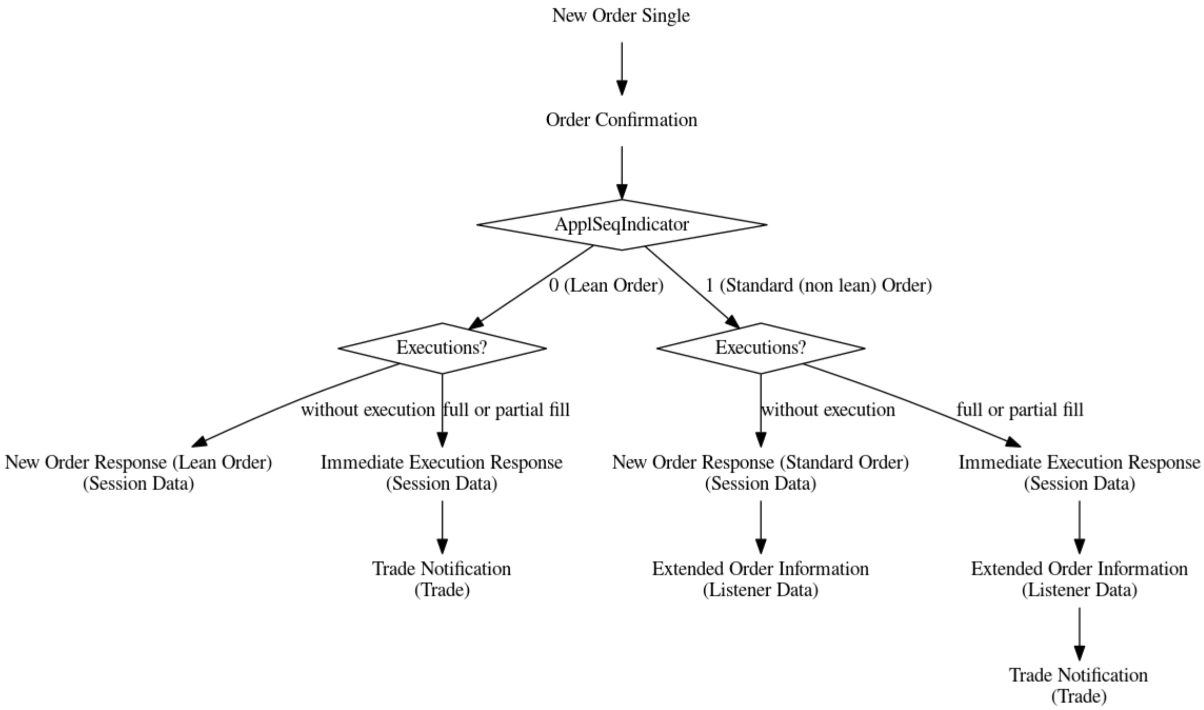

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderIn>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10991 (MultiLegOrder, MsgType = U28) |
| 25028 | NetworkMsgID | U | 8 | 6 | Fixed String | not used |
| 25017 | Pad2 | U | 2 | 14 | Fixed String | not used |
| *<RequestHeader>* | | | | | | |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 34 | MsgSeqNum | Y | 4 | 16 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 50 | SenderSubID | Y | 4 | 20 | unsigned int | User ID. |
| *<Message Body>* | | | | | | |
| 142 | SenderLocationID | Y | 8 | 24 | unsigned int | The location ID of the order from where it is originated |
| 11 | ClOrdID | Y | 8 | 32 | unsigned int | Client Order ID: Unique participant defined order request identifier; used for client order id chaining. |
| 581 | AccountType | Y | 1 | 40 | unsigned int | Value / Description: 20 Own; 30 Client |
| 30641 | AllOrNoneFlag | N | 1 | 41 | Boolean | Value / Description: Y Full Execution Only; N Full or Partial Execution |
| 28998 | NoOfMultiLeg | Y | 1 | 42 | Counter | Number of MultiLegOrdGrp repeating group instances. |
| 30649 | AlgoID | N | 16 | 43 | Fixed String (0-terminable) | Unique identifier of the algorithm. Valid characters: A-Z,0-9 |
| 58 | ClientCode | Y | 12 | 59 | Fixed String (0-terminable) | The Unique Client Code (UCC) of the person for whom the order is entered. For Proprietary Account Client code should be OWN always. Valid characters: A-Z,0-9,\x2A,\x2D, \x2E,\x2F,\x5C |
| 30642 | CPCode | N | 12 | 71 | Chartext | The Participant code. Valid characters: \x00,\x21,\x23, \x24,\x28,\x29,\x2A,\x2B,\x2D, \x2E,\x2F,\x30-\x39,\x3A,\x3B, \x3D,\x3E,\x3F,\x40,\x41-\x5A, \x5C,\x5D,\x5F,\x60,\x7B,\x7D |
| 25020 | Pad5 | U | 5 | 83 | Fixed String | not used |
| *<MultiLegOrdGrp>* | | | | | | Cardinality: 2-99, Record counter: NoOfMultiLeg |
| 48 | >SecurityID | Y | 8 | 88 | signed int | Instrument identifier. |
| 44 | >Price | N | 8 | 96 | PriceType | Limit price. Required if OrdType (40) is Limit (2) or Stop Limit (4). |

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>28740</td><td>>MaxPricePercentage</td><td>N</td><td>8</td><td>104</td><td>PriceType</td><td>Indicates the protection range for market order. Required if OrderType (40) is Market(5).</td></tr>
<tr><td>526</td><td>>MessageTag</td><td>Y</td><td>4</td><td>112</td><td>signed int</td><td>User defined free field. The field is echoed in the trade notifications, listener data, session data.</td></tr>
<tr><td>1300</td><td>>MarketSegmentID</td><td>N</td><td>4</td><td>116</td><td>signed int</td><td>Product identifier.</td></tr>
<tr><td>38</td><td>>OrderQty</td><td>Y</td><td>4</td><td>120</td><td>Qty</td><td>Total Order Quantity.</td></tr>
<tr><td>1227</td><td>>ProductComplex</td><td>N</td><td>1</td><td>124</td><td>unsigned int</td><td>This field qualifies an instrument type on BSE.<table><tr><th>Value</th><th>Description</th></tr><tr><td>1</td><td>Simple Instrument</td></tr><tr><td>2</td><td>Standard Option Strategy</td></tr><tr><td>5</td><td>Futures Spread</td></tr></table></td></tr>
<tr><td>54</td><td>>Side</td><td>Y</td><td>1</td><td>125</td><td>unsigned int</td><td>Side of the order.<table><tr><th>Value</th><th>Description</th></tr><tr><td>1</td><td>Buy</td></tr><tr><td>2</td><td>Sell</td></tr></table></td></tr>
<tr><td>40</td><td>>OrdType</td><td>Y</td><td>1</td><td>126</td><td>unsigned int</td><td>Order type.<table><tr><th>Value</th><th>Description</th></tr><tr><td>2</td><td>Limit</td></tr><tr><td>5</td><td>Market</td></tr></table></td></tr>
<tr><td>25016</td><td>>Pad1</td><td>U</td><td>1</td><td>127</td><td>Fixed String</td><td>not used</td></tr>
</table>

### 7.8.14 New Order Single

The New Order Single message is used by the participant to submit an order for single leg securities. For more details, please refer to chapter 4.5.1 Order Types.




| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderIn>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10100 (NewOrderSingle, MsgType = D) |
| 25028 | NetworkMsgID | U | 8 | 6 | Fixed String | not used |
| 25017 | Pad2 | U | 2 | 14 | Fixed String | not used |
| *<RequestHeader>* | | | | | | |
| 34 | MsgSeqNum | Y | 4 | 16 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 50 | SenderSubID | Y | 4 | 20 | unsigned int | User ID. |
| *<Message Body>* | | | | | | |
| 44 | Price | N | 8 | 24 | PriceType | Limit price. Required if OrdType (40) is Limit (2) or Stop Limit (4). |
| 99 | StopPx | N | 8 | 32 | PriceType | Stop price. Required if OrdType (40) is Stop (3) or Stop (4). |
| 28740 | MaxPricePercentage | N | 8 | 40 | PriceType | Indicates the protection range for market order. Required if OrderType (40) is Market(5). |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 142 | SenderLocationID | Y | 8 | 48 | unsigned int | The location ID of the order from where it is originated |
| 11 | ClOrdID | N | 8 | 56 | unsigned int | Client Order ID: Unique participant defined order request identifier; used for client order id chaining. |
| 30646 | Filler1 | N | 8 | 64 | unsigned int | not used |
| 30647 | Filler2 | N | 4 | 72 | unsigned int | not used |
| 526 | MessageTag | Y | 4 | 76 | signed int | User defined free field. The field is echoed in the trade notifications, listener data, session data. |
| 38 | OrderQty | Y | 4 | 80 | Qty | Total Order Quantity. |
| 210 | MaxShow | N | 4 | 84 | Qty | The quantity to be made visible in the market data. |
| 432 | ExpireDate | N | 4 | 88 | LocalMktDate | not used |
| 1300 | MarketSegmentID | N | 4 | 92 | signed int | Product identifier. |
| 30048 | SimpleSecurityID | Y | 4 | 96 | unsigned int | Instrument identifier for simple instruments. Should be filled with the 4 least significant bytes of SecurityID (48) provided in BSE reference data. |
| 25029 | RegulatoryID | N | 4 | 100 | unsigned int | not used. |
| 30652 | Filler4 | N | 2 | 104 | unsigned int | not used |
| 20096 | PartyIDTakeUpTrading-Firm | N | 5 | 106 | Fixed String | not used.<br>Valid characters: A-Z,0-9,\x20 |
| 20013 | PartyIDOrder-OriginationFirm | N | 7 | 111 | Fixed String | not used.<br>Valid characters: A-Z,0-9,\x20 |
| 20032 | PartyIDBeneficiary | N | 9 | 118 | Fixed String | not used.<br>Valid characters: A-Z,0-9,\x20 |
| 581 | AccountType | Y | 1 | 127 | unsigned int | Value – Description<br>20 – Own<br>30 – Client |
| 28703 | ApplSeqIndicator | Y | 1 | 128 | unsigned int | Indicates if the order is a Lean Order. Application sequencing is limited for Lean Orders.<br>Value – Description<br>0 – Lean Order<br>1 – Standard (non lean) Order |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 54 | Side | Y | 1 | 129 | unsigned int | Side of the order.<br>Value / Description:<br>1 Buy<br>2 Sell<br>3 Recall<br>4 Early Return |
| 40 | OrdType | Y | 1 | 130 | unsigned int | Order type.<br>Value / Description:<br>2 Limit<br>3 Stop Market<br>4 Stop Limit<br>5 Market<br>6 Block Deal |
| 28710 | PriceValidityCheckType | Y | 1 | 131 | unsigned int | not used.<br>Value / Description:<br>0 None |
| 59 | TimeInForce | Y | 1 | 132 | unsigned int | Execution and trading restriction parameters supported by BSE.<br>Value / Description:<br>0 Day (GFD)<br>3 Immediate or Cancel (IOC)<br>7 Session (GFS) |
| 18 | ExecInst | Y | 1 | 133 | unsigned int | Instructions for order handling.<br>Value / Description:<br>1 Persistent Order (FIX value "H")<br>2 Non-persistent Order (FIX value "Q")<br>5 Persistent BOC Order (FIX value "H 6")<br>6 Non-persistent BOC Order (FIX value "Q 6") |
| 30651 | STPCFlag | Y | 1 | 134 | unsigned int | Indicates the preference of order to be cancelled if self-trade is encountered. Preference not applicable in a modification requests.<br>Value / Description:<br>0 Passive<br>1 Active |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 30653 | RolloverFlag | N | 1 | 135 | unsigned int | not used |
| 625 | TradingSessionSubID | N | 1 | 136 | unsigned int | not used |
| 1815 | TradingCapacity | Y | 1 | 137 | unsigned int | not used.<br>Must be sent as 1 |
| 1 | Account | Y | 2 | 138 | Fixed String | not used.<br>Must be sent as A1<br>Valid characters: 1-9,\x41,\x47,\x4D,\x50 |
| 77 | PositionEffect | Y | 1 | 140 | char | must be set to C<br>Valid characters: \x01-\x7E |
| 20075 | PartyIDLocationID | N | 2 | 141 | Fixed String | not used.<br>Valid characters: \x01-\x7E |
| 1031 | CustOrderHandlingInst | N | 1 | 143 | Fixed String | not used.<br>Valid characters: \x20,\x22-\x7B,\x7D,\x7E |
| 25015 | RegulatoryText | N | 20 | 144 | Fixed String | This field is used to provide additional regulatory information (according to respective rules & regs, circulars and/or bilateral coordination between participant and Trading Surveillance Office).<br>Valid characters: \x20,\x22-\x7B,\x7D,\x7E |
| 30649 | AlgoID | N | 16 | 164 | Fixed String (0-terminable) | Unique identifier of the algorithm.<br>Valid characters: A-Z,0-9 |
| 58 | ClientCode | Y | 12 | 180 | Fixed String (0-terminable) | The Unique Client Code (UCC) of the person for whom the order is entered. For Proprietary Account Client code should be OWN always.<br>Valid characters: A-Z,0-9,\x2A,\x2D,\x2E,\x2F,\x5C |
| 30642 | CPCode | N | 12 | 192 | Chartext | The Participant code.<br>Valid characters: \x00,\x21,\x23,\x24,\x28,\x29,\x2A,\x2B,\x2D,\x2E,\x2F,\x30-\x39,\x3A,\x3B,\x3D,\x3E,\x3F,\x40,\x41-\x5A,\x5C,\x5D,\x5F,\x60,\x7B,\x7D |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 25009 | FreeText3 | N | 12 | 204 | Chartext | Free-format text field for trader-specific or customer-related comments.<br>Valid characters: \x00,\x21,\x23,\x24,\x28,\x29,\x2A,\x2B,\x2D,\x2E,\x2F,\x30-\x39,\x3A,\x3B,\x3D,\x3E,\x3F,\x40,\x41-\x5A,\x5C,\x5D,\x5F,\x60,\x7B,\x7D |

### 7.8.15 Extended Order Information

This message format is used for order book restatement, retransmission of order events, the Listener Broadcast and for unsolicited order events within the session data. For more details, please refer to chapter 4.5.12 Order Status and Execution Reports.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10117 (ExecutionReport, MsgType = 8) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<RBCHeaderME>* | | | | | | |
| 21003 | TrdRegTSTimeOut | N | 8 | 8 | UTCTimestamp | Matching engine out timestamp. |
| 52 | SendingTime | Y | 8 | 16 | UTCTimestamp | Gateway response out timestamp. |
| 28727 | ApplSubID | N | 4 | 24 | unsigned int | Only set for Listener Data. |
| 5948 | PartitionID | Y | 2 | 28 | unsigned int | Grouping of BSE products.<br>Belongs to the scope of Service Availability and Retransmit requests. |
| 28704 | ApplMsgID | N | 16 | 30 | data | Application message identifier assigned to an order event. |
| 1180 | ApplID | Y | 1 | 46 | unsigned int | Identifier for an ETI data stream.<br>Value \| Description<br>4 \| Session Data<br>5 \| Listener Data |
| 1352 | ApplResendFlag | Y | 1 | 47 | unsigned int | Indicates a retransmission message.<br>Value \| Description<br>0 \| False<br>1 \| True |
| 893 | LastFragment | Y | 1 | 48 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value \| Description<br>0 \| Not Last Message<br>1 \| Last Message |
| 25022 | Pad7 | U | 7 | 49 | Fixed String | not used |
| *<Message Body>* | | | | | | |
| 37 | OrderID | Y | 8 | 56 | unsigned int | Exchange Order ID generated by BSE System; it remains constant over the lifetime of an order. |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 11 | ClOrdID | N | 8 | 64 | unsigned int | Client Order ID: Unique participant defined order request identifier; used for client order id chaining. |
| 41 | OrigClOrdID | N | 8 | 72 | unsigned int | ClOrdID (11) of the last successfully processed task (request) referring to the specific order. |
| 48 | SecurityID | Y | 8 | 80 | signed int | Instrument identifier. |
| 28740 | MaxPricePercentage | N | 8 | 88 | PriceType | Indicates the protection range for market order. Required if OrderType (40) is Market(5). |
| 142 | SenderLocationID | Y | 8 | 96 | unsigned int | The location ID of the order from where it is originated |
| 17 | ExecID | Y | 8 | 104 | UTCTimestamp | Transaction timestamp. |
| 21009 | TrdRegTSEntryTime | Y | 8 | 112 | UTCTimestamp | The entry timestamp is the time of the creation of the order. |
| 21008 | TrdRegTSTimePriority | Y | 8 | 120 | UTCTimestamp | Priority timestamp. |
| 44 | Price | N | 8 | 128 | PriceType | Limit price. Required if OrdType (40) is Limit (2) or Stop Limit (4). |
| 99 | StopPx | N | 8 | 136 | PriceType | Stop price. Required if OrdType (40) is Stop (3) or Stop (4). |
| 882 | UnderlyingDirtyPrice | N | 8 | 144 | PriceType | The dirty price. |
| 236 | Yield | N | 8 | 152 | PriceType | The Yield corresponding to the clean price. |
| 30645 | ActivityTime | Y | 8 | 160 | UTCTimestamp | Activity timestamp for that order |
| 30646 | Filler1 | N | 8 | 168 | unsigned int | not used |
| 30647 | Filler2 | N | 4 | 176 | unsigned int | not used |
| 1300 | MarketSegmentID | Y | 4 | 180 | signed int | Product identifier. |
| 526 | MessageTag | Y | 4 | 184 | signed int | The message tag as provided by the user in order request |
| 151 | LeavesQty | Y | 4 | 188 | Qty | Remaining quantity of an order. If the order has been executed partially this field contains the non-executed quantity. A remaining size of 0 indicates that the order is fully matched or no longer active. |
| 210 | MaxShow | N | 4 | 192 | Qty | The quantity to be made visible in the market data. |
| 14 | CumQty | Y | 4 | 196 | Qty | Cumulated executed quantity of an order. |
| 84 | CxlQty | Y | 4 | 200 | Qty | Total quantity cancelled for this order. |
| 38 | OrderQty | Y | 4 | 204 | Qty | Total Order Quantity. |
| 432 | ExpireDate | N | 4 | 208 | LocalMktDate | not used |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 20059 | PartyIDExecutingUnit | Y | 4 | 212 | unsigned int | Business Unit ID. |
| 20055 | PartyIDSessionID | Y | 4 | 216 | unsigned int | Session ID. |
| 20012 | PartyIDExecuting-Trader | Y | 4 | 220 | unsigned int | Owning User ID. |
| 20036 | PartyIDEnteringTrader | N | 4 | 224 | unsigned int | Entering User ID. |
| 30652 | Filler4 | N | 2 | 228 | unsigned int | not used |
| 30555 | NoLegExecs | Y | 2 | 230 | Counter | Number of InstrmntLegExec repeating group instances. |

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>378</td><td>ExecRestatement-Reason</td><td>Y</td><td>2</td><td>232</td><td>unsigned int</td><td>Code to further qualify the field ExecType (150) of the Execution Report (8) message.
<table>
<tr><td>Value</td><td>Description</td></tr>
<tr><td>001</td><td>Order Book Restatement</td></tr>
<tr><td>101</td><td>Order Added</td></tr>
<tr><td>102</td><td>Order Replaced</td></tr>
<tr><td>105</td><td>IOC Order Cancelled</td></tr>
<tr><td>108</td><td>Book Order Executed</td></tr>
<tr><td>135</td><td>Market Order Triggered</td></tr>
<tr><td>164</td><td>OCO Order Triggered</td></tr>
<tr><td>172</td><td>Stop Order Triggered</td></tr>
<tr><td>212</td><td>BOC Order Cancelled</td></tr>
<tr><td>199</td><td>Pending Cancellation Executed</td></tr>
<tr><td>215</td><td>RRM Order Added</td></tr>
<tr><td>216</td><td>RRM Order Accepted</td></tr>
<tr><td>219</td><td>RRM Order Deleted</td></tr>
<tr><td>220</td><td>RRM Market Order Triggered</td></tr>
<tr><td>221</td><td>Provisional Order Added</td></tr>
<tr><td>222</td><td>Provisional Order Accepted</td></tr>
<tr><td>223</td><td>Provisional Order Updation Rejected</td></tr>
<tr><td>224</td><td>Provisional Order Updated Successfully</td></tr>
<tr><td>225</td><td>Provisional Order Deleted</td></tr>
<tr><td>226</td><td>Provisional Market Order Triggered</td></tr>
<tr><td>231</td><td>CALLAUC Order Deleted</td></tr>
<tr><td>232</td><td>Order Cancelled: Session Expiry</td></tr>
<tr><td>233</td><td>Order Cancelled: Day Expiry</td></tr>
<tr><td>234</td><td>Order Cancelled: Halt</td></tr>
<tr><td>235</td><td>Block Deal Order Timed Out</td></tr>
<tr><td>236</td><td>Out Of Price Band Order</td></tr>
</table></td></tr>
</table>

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 378 | ExecRestatement-Reason | Y | 2 | 210 | unsigned int | Code to further qualify the field ExecType (150) of the Execution Report (8) message.<br>Value / Description:<br>237 Order Worse Than Close Price<br>238 Auction Market Order Triggered<br>243 Order Cancelled : SPOS Price undetermined<br>246 Self Trade Order Deleted<br>247 Reverse Trade Order Deleted<br>250 Client RRM For Product<br>251 Client Suspended<br>252 Client RRM For Contract<br>253 Member RRM For Contract<br>254 Client RRM<br>265 Market Order Out Of Range |
| 581 | AccountType | Y | 1 | 234 | unsigned int | Value / Description:<br>20 Own<br>30 Client |
| 20007 | PartyIDEnteringFirm | N | 1 | 235 | unsigned int | Entering Entity ID.<br>Value / Description:<br>1 Participant<br>2 Market Supervision |
| 1227 | ProductComplex | Y | 1 | 236 | unsigned int | This field qualifies an instrument type on BSE.<br>Value / Description:<br>1 Simple Instrument<br>2 Standard Option Strategy<br>5 Futures Spread |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 39 | OrdStatus | Y | 1 | 237 | char | Conveys the current status of an order.<br>Value / Description:<br>0 New<br>1 Partially Filled<br>2 Filled<br>4 Cancelled<br>9 Suspended |
| 150 | ExecType | Y | 1 | 238 | char | The reason why this message was generated.<br>Value / Description:<br>0 New<br>4 Cancelled<br>5 Replaced<br>9 Suspended<br>D Restated<br>L Triggered<br>F Trade<br>M RRM Order Accept<br>N RRM Order Reject<br>X Provisional Accept<br>Y Provisional Reject |
| 54 | Side | Y | 1 | 239 | unsigned int | Side of the order.<br>Value / Description:<br>1 Buy<br>2 Sell<br>3 Recall<br>4 Early Return |
| 40 | OrdType | Y | 1 | 240 | unsigned int | Order type.<br>Value / Description:<br>2 Limit<br>3 Stop Market<br>4 Stop Limit<br>5 Market<br>6 Block Deal |
| 1815 | TradingCapacity | Y | 1 | 241 | unsigned int | not used |

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>59</td><td>TimeInForce</td><td>N</td><td>1</td><td>242</td><td>unsigned int</td><td>Execution and trading restriction parameters supported by BSE.<table><tr><th>Value</th><th>Description</th></tr><tr><td>0</td><td>Day (GFD)</td></tr><tr><td>3</td><td>Immediate or Cancel (IOC)</td></tr><tr><td>7</td><td>Session (GFS)</td></tr></table></td></tr>
<tr><td>18</td><td>ExecInst</td><td>N</td><td>1</td><td>243</td><td>unsigned int</td><td>Instructions for order handling.<table><tr><th>Value</th><th>Description</th></tr><tr><td>1</td><td>Persistent Order (FIX value "H")</td></tr><tr><td>2</td><td>Non-persistent Order (FIX value "Q")</td></tr><tr><td>5</td><td>Persistent BOC Order (FIX value "H 6")</td></tr><tr><td>6</td><td>Non-persistent BOC Order (FIX value "Q 6")</td></tr></table></td></tr>
<tr><td>625</td><td>TradingSessionSubID</td><td>N</td><td>1</td><td>244</td><td>unsigned int</td><td>not used</td></tr>
<tr><td>28703</td><td>ApplSeqIndicator</td><td>N</td><td>1</td><td>245</td><td>unsigned int</td><td>Indicates if the order is a Lean Order. Application sequencing is limited for Lean Orders.<table><tr><th>Value</th><th>Description</th></tr><tr><td>0</td><td>Lean Order</td></tr><tr><td>1</td><td>Standard (non lean) Order</td></tr></table></td></tr>
<tr><td>30651</td><td>STPCFlag</td><td>Y</td><td>1</td><td>246</td><td>unsigned int</td><td>Indicates the preference of order to be cancelled if self-trade is encountered. Preference not applicable in a modification requests.<table><tr><th>Value</th><th>Description</th></tr><tr><td>0</td><td>Passive</td></tr><tr><td>1</td><td>Active</td></tr></table></td></tr>
<tr><td>30653</td><td>RolloverFlag</td><td>N</td><td>1</td><td>247</td><td>unsigned int</td><td>not used</td></tr>
<tr><td>1</td><td>Account</td><td>N</td><td>2</td><td>248</td><td>Fixed String</td><td>not used<br>Valid characters: 1-9,\x41,\x47,\x4D,\x50</td></tr>
<tr><td>77</td><td>PositionEffect</td><td>N</td><td>1</td><td>250</td><td>char</td><td>must be set to C<br>Valid characters: \x01-\x7E</td></tr>
<tr><td>20096</td><td>PartyIDTakeUpTrading-Firm</td><td>N</td><td>5</td><td>251</td><td>Fixed String</td><td>not used.<br>Valid characters: A-Z,0-9,\x20</td></tr>
</table>

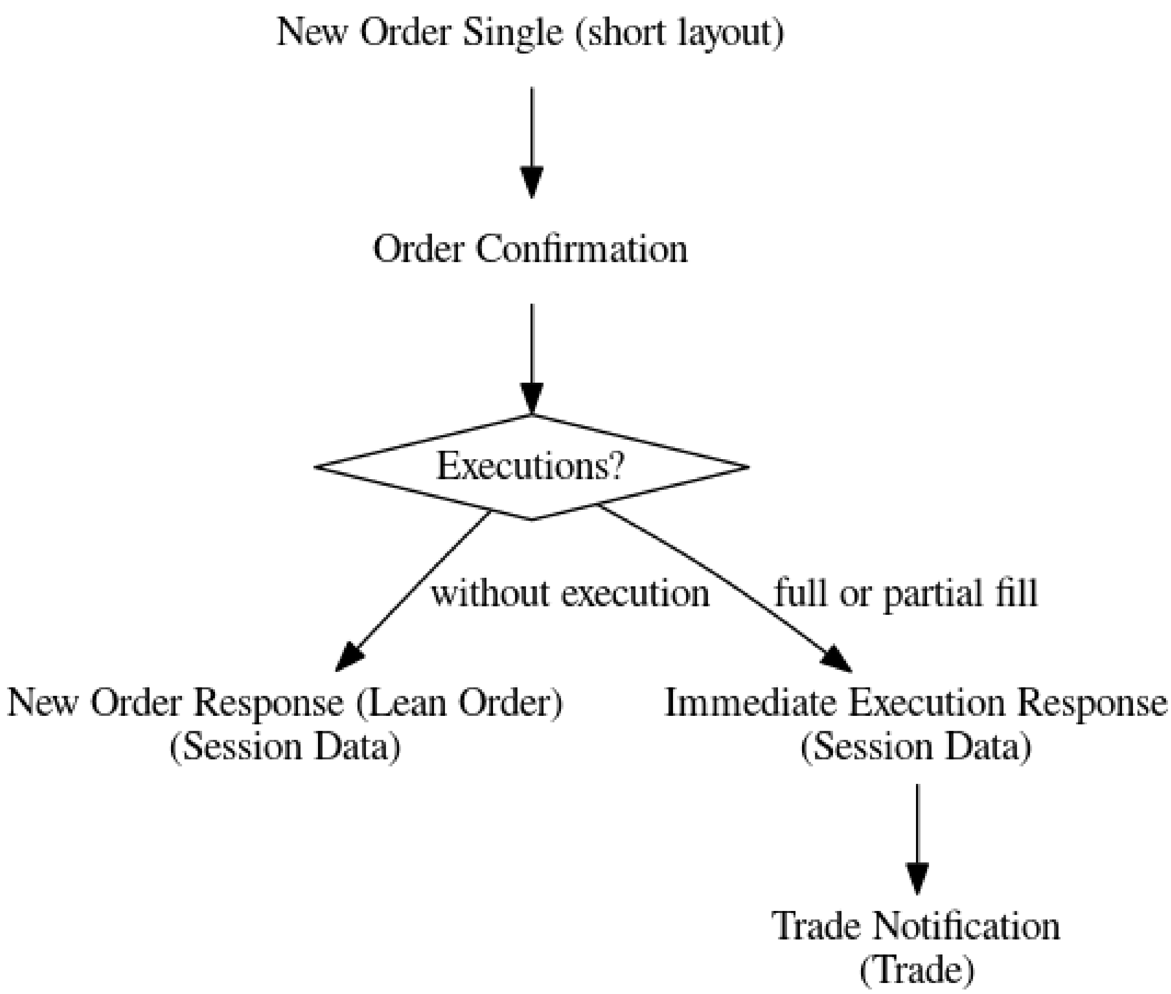
| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 20013 | PartyIDOrder-OriginationFirm | N | 7 | 256 | Fixed String | not used.<br>Valid characters: A-Z,0-9,\x20 |
| 20032 | PartyIDBeneficiary | N | 9 | 263 | Fixed String | not used.<br>Valid characters: A-Z,0-9,\x20 |
| 20075 | PartyIDLocationID | N | 2 | 272 | Fixed String | not used.<br>Valid characters: \x01-\x7E |
| 1031 | CustOrderHandlingInst | N | 1 | 274 | Fixed String | not used.<br>Valid characters: \x20,\x22-\x7B, \x7D,\x7E |
| 25015 | RegulatoryText | N | 20 | 275 | Fixed String | This field is used to provide additional regulatory information (according to respective rules & regs, circulars and/or bilateral coordination between participant and Trading Surveillance Office).<br>Valid characters: \x20,\x22-\x7B, \x7D,\x7E |
| 30649 | AlgoID | N | 16 | 295 | Fixed String (0-terminable) | Unique identifier of the algorithm.<br>Valid characters: A-Z,0-9 |
| 58 | ClientCode | Y | 12 | 311 | Fixed String (0-terminable) | The Unique Client Code (UCC) of the person for whom the order is entered. For Proprietary Account Client code should be OWN always.<br>Valid characters: A-Z,0-9,\x2A,\x2D, \x2E,\x2F,\x5C |
| 30642 | CPCode | N | 12 | 323 | Chartext | The Participant code.<br>Valid characters: \x00,\x21,\x23, \x24,\x28,\x29,\x2A,\x2B,\x2D, \x2E,\x2F,\x30-\x39,\x3A,\x3B, \x3D,\x3E,\x3F,\x40,\x41-\x5A, \x5C,\x5D,\x5F,\x60,\x7B,\x7D |
| 25009 | FreeText3 | N | 12 | 335 | Chartext | Free-format text field for trader-specific or customer-related comments.<br>Valid characters: \x00,\x21,\x23, \x24,\x28,\x29,\x2A,\x2B,\x2D, \x2E,\x2F,\x30-\x39,\x3A,\x3B, \x3D,\x3E,\x3F,\x40,\x41-\x5A, \x5C,\x5D,\x5F,\x60,\x7B,\x7D |
| 1362 | NoFills | Y | 1 | 347 | Counter | Specifies the number of partial fills included in this Execution Report. |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 555 | NoLegs | Y | 1 | 348 | Counter | Number of LegOrd repeating group instances. Must be set as 2. |
| 1823 | Triggered | Y | 1 | 349 | unsigned int | Indicates if an order has been previously triggered.<br>Value \| Description<br>0 \| Not Triggered<br>1 \| Triggered Stop Order<br>2 \| Triggered OCO Order |
| 25017 | Pad2 | U | 2 | 350 | Fixed String | not used |
| *<LegOrdGrp>* | | | | | | Cardinality: 0-5, Record counter: NoLegs |
| 28715 | >LegAccount | Y | 2 | 352 | Fixed String | not used<br>Must be sent as A1<br>Valid characters: 1-9,\x41,\x47,\x4D,\x50 |
| 564 | >LegPositionEffect | Y | 1 | 354 | char | not used.<br>Must be set as C.<br>Valid characters: \x01-\x7E |
| 25020 | >Pad5 | U | 5 | 355 | Fixed String | not used |
| *<FillsGrp>* | | | | | | Cardinality: 0-100, Record counter: NoFills |
| 1364 | >FillPx | Y | 8 | 0 | PriceType | Price of Fill. |
| 1623 | >FillYield | N | 8 | 8 | PriceType | The Yield corresponding to the fill price. |
| 30644 | >FillDirtyPx | N | 8 | 16 | PriceType | The Dirty price corresponding to the fill price. |
| 1365 | >FillQty | Y | 4 | 24 | Qty | Quantity of Fill. |
| 28708 | >FillMatchID | Y | 4 | 28 | unsigned int | Unique identifier for each price level (match step) of a match event; it is used for public trade reporting. |
| 1363 | >FillExecID | Y | 4 | 32 | signed int | Private identifier of an order match step event, which can be reconciled with the field SideTradeID (1506) in the Trade Notification. |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 1443 | >FillLiquidityInd | N | 1 | 36 | unsigned int | Indicates whether the order added or removed liquidity. Required only for execution reports generated for fills.<br>Value / Description:<br>1 Added Liquidity<br>2 Removed Liquidity<br>5 Triggered Stop Order<br>6 Triggered OCO Order<br>7 Triggered Market Order |
| 25018 | >Pad3 | U | 3 | 37 | Fixed String | not used |
| *<InstrmntLegExecGrp>* | | | | | | Cardinality: 0-600, Record counter: NoLegExecs |
| 602 | >LegSecurityID | Y | 8 | 0 | signed int | Instrument identifier of the leg security. |
| 637 | >LegLastPx | Y | 8 | 8 | PriceType | Price of this leg fill. |
| 1418 | >LegLastQty | Y | 4 | 16 | Qty | Quantity executed in this leg fill. |
| 1893 | >LegExecID | Y | 4 | 20 | signed int | Private identifier of a leg match step, which can be reconciled with the field SideTradeID (1506) in the Trade Notification. |
| 624 | >LegSide | Y | 1 | 24 | unsigned int | The side of the individual leg of a strategy as defined in its signature.<br>Value / Description:<br>1 Buy<br>2 Sell |
| 25010 | >NoFillsIndex | Y | 1 | 25 | unsigned int | Reference to the corresponding FillsGrp repeating group instance. |
| 25021 | >Pad6 | U | 6 | 26 | Fixed String | not used |

### 7.8.16 New Order Single (short layout)

This short order message layout is used by the participant to submit an order in a simple instrument. Selected order attributes are implicitly set. For more details, please refer to chapter 4.5.9 Short Order Message Layouts.



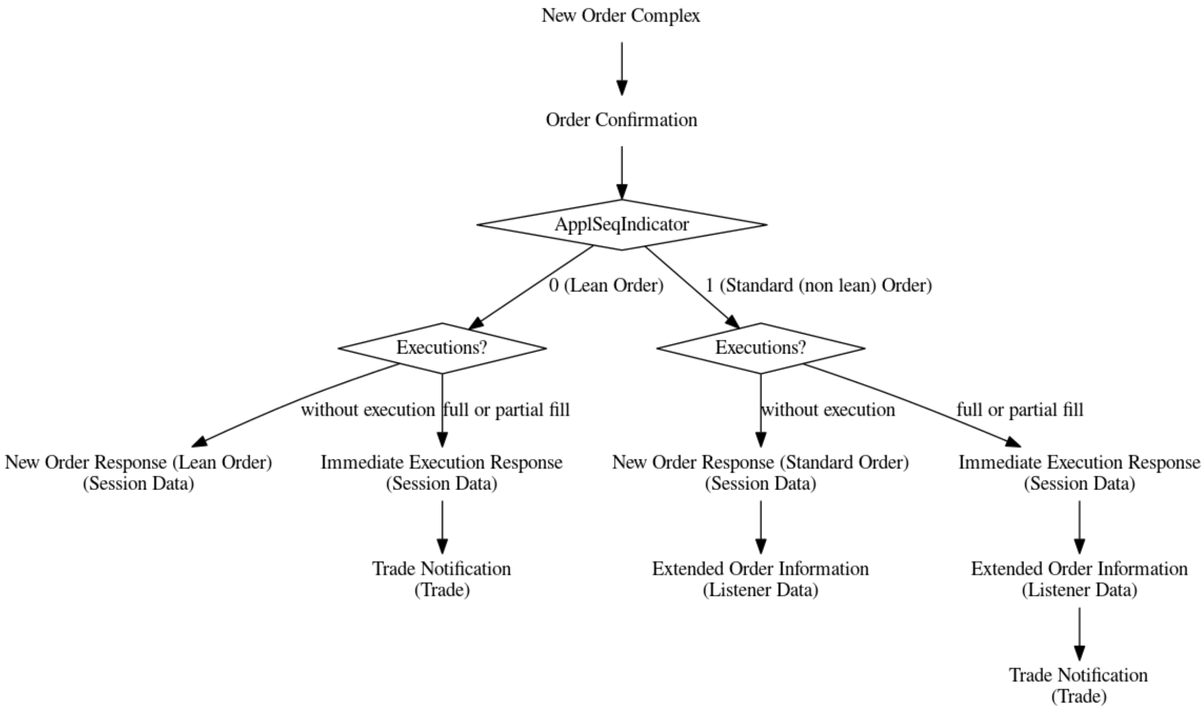

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderIn>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10125 (NewOrderSingle, MsgType = D) |
| 25028 | NetworkMsgID | U | 8 | 6 | Fixed String | not used |
| 25017 | Pad2 | U | 2 | 14 | Fixed String | not used |
| *<RequestHeader>* | | | | | | |
| 34 | MsgSeqNum | Y | 4 | 16 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 50 | SenderSubID | Y | 4 | 20 | unsigned int | User ID. |
| *<Message Body>* | | | | | | |
| 44 | Price | Y | 8 | 24 | PriceType | Limit price. |
| 142 | SenderLocationID | Y | 8 | 32 | unsigned int | The location ID of the order from where it is originated |
| 11 | ClOrdID | N | 8 | 40 | unsigned int | Client Order ID: Unique participant defined order request identifier; used for client order id chaining. |
| 38 | OrderQty | Y | 4 | 48 | Qty | Total Order Quantity. |
| 210 | MaxShow | N | 4 | 52 | Qty | The quantity to be made visible in the market data. |
| 30048 | SimpleSecurityID | Y | 4 | 56 | unsigned int | Instrument identifier for simple instruments. Should be filled with the 4 least significant bytes of SecurityID (48) provided in BSE reference data. |
| 30647 | Filler2 | N | 4 | 60 | unsigned int | not used |
| 30652 | Filler4 | N | 2 | 64 | unsigned int | not used |
| 581 | AccountType | Y | 1 | 66 | unsigned int | Value \| Description<br>20 \| Own<br>30 \| Client |
| 54 | Side | Y | 1 | 67 | unsigned int | Side of the order.<br>Value \| Description<br>1 \| Buy<br>2 \| Sell<br>3 \| Recall<br>4 \| Early Return |
| 28710 | PriceValidityCheckType | Y | 1 | 68 | unsigned int | not used.<br>Value \| Description<br>0 \| None |
| 59 | TimeInForce | Y | 1 | 69 | unsigned int | Execution and trading restriction parameters supported by BSE.<br>Value \| Description<br>0 \| Day (GFD)<br>3 \| Immediate or Cancel (IOC)<br>7 \| Session (GFS) |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 30651 | STPCFlag | Y | 1 | 70 | unsigned int | Indicates the preference of order to be cancelled if self-trade is encountered. Preference not applicable in a modification requests.<br><br>Value / Description<br>0 Passive<br>1 Active |
| 18 | ExecInst | U | 1 | 71 | unsigned int | not used |
| 30649 | AlgoID | N | 16 | 72 | Fixed String (0-terminable) | Unique identifier of the algorithm.<br>Valid characters: A-Z,0-9 |
| 58 | ClientCode | Y | 12 | 88 | Fixed String (0-terminable) | The Unique Client Code (UCC) of the person for whom the order is entered. For Proprietary Account Client code should be OWN always.<br>Valid characters: A-Z,0-9,\x2A,\x2D, \x2E,\x2F,\x5C |
| 30642 | CPCode | N | 12 | 100 | Chartext | The Participant code.<br>Valid characters: \x00,\x21,\x23, \x24,\x28,\x29,\x2A,\x2B,\x2D, \x2E,\x2F,\x30-\x39,\x3A,\x3B, \x3D,\x3E,\x3F,\x40,\x41-\x5A, \x5C,\x5D,\x5F,\x60,\x7B,\x7D |

### 7.8.17 New Order Complex

The New Order Multi Leg message is provided to submit orders for securities that are made up of multiple securities, known as "legs". For more details, please refer to chapter 4.5.1 Order Types.




| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderIn>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10113 (NewOrderMultileg, MsgType = AB) |
| 25028 | NetworkMsgID | U | 8 | 6 | Fixed String | not used |
| 25017 | Pad2 | U | 2 | 14 | Fixed String | not used |
| *<RequestHeader>* | | | | | | |
| 34 | MsgSeqNum | Y | 4 | 16 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 50 | SenderSubID | Y | 4 | 20 | unsigned int | User ID. |
| *<Message Body>* | | | | | | |
| 11 | ClOrdID | N | 8 | 24 | unsigned int | Client Order ID: Unique participant defined order request identifier; used for client order id chaining. |
| 48 | SecurityID | Y | 8 | 32 | signed int | Instrument identifier. |

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>28740</td><td>MaxPricePercentage</td><td>N</td><td>8</td><td>40</td><td>PriceType</td><td>Indicates the protection range for market order. Required if OrderType (40) is Market(5).</td></tr>
<tr><td>142</td><td>SenderLocationID</td><td>Y</td><td>8</td><td>48</td><td>unsigned int</td><td>The location ID of the order from where it is originated</td></tr>
<tr><td>44</td><td>Price</td><td>Y</td><td>8</td><td>56</td><td>PriceType</td><td>Limit price. Required if OrdType (40) is Limit (2) or Stop Limit (4).</td></tr>
<tr><td>30646</td><td>Filler1</td><td>N</td><td>8</td><td>64</td><td>unsigned int</td><td>not used</td></tr>
<tr><td>30647</td><td>Filler2</td><td>N</td><td>4</td><td>72</td><td>unsigned int</td><td>not used</td></tr>
<tr><td>526</td><td>MessageTag</td><td>Y</td><td>4</td><td>76</td><td>signed int</td><td>User defined free field. The field is echoed in the trade notifications, listener data, session data.</td></tr>
<tr><td>1300</td><td>MarketSegmentID</td><td>Y</td><td>4</td><td>80</td><td>signed int</td><td>Product identifier.</td></tr>
<tr><td>38</td><td>OrderQty</td><td>Y</td><td>4</td><td>84</td><td>Qty</td><td>Total Order Quantity.</td></tr>
<tr><td>210</td><td>MaxShow</td><td>N</td><td>4</td><td>88</td><td>Qty</td><td>The quantity to be made visible in the market data.</td></tr>
<tr><td>432</td><td>ExpireDate</td><td>N</td><td>4</td><td>92</td><td>LocalMktDate</td><td>not used</td></tr>
<tr><td>25029</td><td>RegulatoryID</td><td>N</td><td>4</td><td>96</td><td>unsigned int</td><td>not used.</td></tr>
<tr><td>30652</td><td>Filler4</td><td>N</td><td>2</td><td>100</td><td>unsigned int</td><td>not used</td></tr>
<tr><td>20096</td><td>PartyIDTakeUpTrading-Firm</td><td>N</td><td>5</td><td>102</td><td>Fixed String</td><td>not used.<br>Valid characters: A-Z,0-9,\x20</td></tr>
<tr><td>20013</td><td>PartyIDOrder-OriginationFirm</td><td>N</td><td>7</td><td>107</td><td>Fixed String</td><td>not used.<br>Valid characters: A-Z,0-9,\x20</td></tr>
<tr><td>20032</td><td>PartyIDBeneficiary</td><td>N</td><td>9</td><td>114</td><td>Fixed String</td><td>not used.<br>Valid characters: A-Z,0-9,\x20</td></tr>
<tr><td>581</td><td>AccountType</td><td>Y</td><td>1</td><td>123</td><td>unsigned int</td><td><table><tr><th>Value</th><th>Description</th></tr><tr><td>20</td><td>Own</td></tr><tr><td>30</td><td>Client</td></tr></table></td></tr>
<tr><td>28703</td><td>ApplSeqIndicator</td><td>Y</td><td>1</td><td>124</td><td>unsigned int</td><td>Indicates if the order is a Lean Order. Application sequencing is limited for Lean Orders.<table><tr><th>Value</th><th>Description</th></tr><tr><td>0</td><td>Lean Order</td></tr><tr><td>1</td><td>Standard (non lean) Order</td></tr></table></td></tr>
<tr><td>1227</td><td>ProductComplex</td><td>Y</td><td>1</td><td>125</td><td>unsigned int</td><td>This field qualifies an instrument type on BSE.<table><tr><th>Value</th><th>Description</th></tr><tr><td>2</td><td>Standard Option Strategy</td></tr><tr><td>5</td><td>Futures Spread</td></tr></table></td></tr>
</table>

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>54</td><td>Side</td><td>Y</td><td>1</td><td>126</td><td>unsigned int</td><td>Side of the order.<table><tr><th>Value</th><th>Description</th></tr><tr><td>1</td><td>Buy</td></tr><tr><td>2</td><td>Sell</td></tr></table></td></tr>
<tr><td>40</td><td>OrdType</td><td>Y</td><td>1</td><td>127</td><td>unsigned int</td><td>Order type.<table><tr><th>Value</th><th>Description</th></tr><tr><td>2</td><td>Limit</td></tr></table></td></tr>
<tr><td>28710</td><td>PriceValidityCheckType</td><td>Y</td><td>1</td><td>128</td><td>unsigned int</td><td>not used.<table><tr><th>Value</th><th>Description</th></tr><tr><td>0</td><td>None</td></tr></table></td></tr>
<tr><td>18</td><td>ExecInst</td><td>Y</td><td>1</td><td>129</td><td>unsigned int</td><td>Instructions for order handling.<table><tr><th>Value</th><th>Description</th></tr><tr><td>1</td><td>Persistent Order (FIX value "H")</td></tr><tr><td>2</td><td>Non-persistent Order (FIX value "Q")</td></tr></table></td></tr>
<tr><td>59</td><td>TimeInForce</td><td>Y</td><td>1</td><td>130</td><td>unsigned int</td><td>Execution and trading restriction parameters supported by BSE.<table><tr><th>Value</th><th>Description</th></tr><tr><td>0</td><td>Day (GFD)</td></tr><tr><td>3</td><td>Immediate or Cancel (IOC)</td></tr><tr><td>7</td><td>Session (GFS)</td></tr></table></td></tr>
<tr><td>30651</td><td>STPCFlag</td><td>Y</td><td>1</td><td>131</td><td>unsigned int</td><td>Indicates the preference of order to be cancelled if self-trade is encountered. Preference not applicable in a modification requests.<table><tr><th>Value</th><th>Description</th></tr><tr><td>0</td><td>Passive</td></tr><tr><td>1</td><td>Active</td></tr></table></td></tr>
<tr><td>30653</td><td>RolloverFlag</td><td>N</td><td>1</td><td>132</td><td>unsigned int</td><td>not used</td></tr>
<tr><td>1815</td><td>TradingCapacity</td><td>Y</td><td>1</td><td>133</td><td>unsigned int</td><td>not used.<br>Must be sent as 1</td></tr>
<tr><td>20075</td><td>PartyIDLocationID</td><td>N</td><td>2</td><td>134</td><td>Fixed String</td><td>not used.<br>Valid characters: \x01-\x7E</td></tr>
</table>

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 25015 | RegulatoryText | N | 20 | 136 | Fixed String | This field is used to provide additional regulatory information (according to respective rules & regs, circulars and/or bilateral coordination between participant and Trading Surveillance Office).<br>Valid characters: \x20,\x22-\x7B, \x7D,\x7E |
| 30649 | AlgoID | N | 16 | 156 | Fixed String (0-terminable) | Unique identifier of the algorithm.<br>Valid characters: A-Z,0-9 |
| 1031 | CustOrderHandlingInst | N | 1 | 172 | Fixed String | not used.<br>Valid characters: \x20,\x22-\x7B, \x7D,\x7E |
| 58 | ClientCode | Y | 12 | 173 | Fixed String (0-terminable) | The Unique Client Code (UCC) of the person for whom the order is entered. For Proprietary Account Client code should be OWN always.<br>Valid characters: A-Z,0-9,\x2A,\x2D, \x2E,\x2F,\x5C |
| 30642 | CPCode | N | 12 | 185 | Chartext | The Participant code.<br>Valid characters: \x00,\x21,\x23, \x24,\x28,\x29,\x2A,\x2B,\x2D, \x2E,\x2F,\x30-\x39,\x3A,\x3B, \x3D,\x3E,\x3F,\x40,\x41-\x5A, \x5C,\x5D,\x5F,\x60,\x7B,\x7D |
| 25009 | FreeText3 | N | 12 | 197 | Chartext | Free-format text field for trader-specific or customer-related comments.<br>Valid characters: \x00,\x21,\x23, \x24,\x28,\x29,\x2A,\x2B,\x2D, \x2E,\x2F,\x30-\x39,\x3A,\x3B, \x3D,\x3E,\x3F,\x40,\x41-\x5A, \x5C,\x5D,\x5F,\x60,\x7B,\x7D |
| 555 | NoLegs | Y | 1 | 209 | Counter | Number of LegOrd repeating group instances. |
| 25021 | Pad6 | U | 6 | 210 | Fixed String | not used |
| *<LegOrdGrp>* | | | | | | Cardinality: 0-5, Record counter: NoLegs |
| 28715 | >LegAccount | Y | 2 | 216 | Fixed String | not used<br>Must be sent as A1<br>Valid characters: 1-9,\x41,\x47,\x4D, \x50 |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 564 | >LegPositionEffect | Y | 1 | 218 | char | not used.<br>Must be set as C.<br>Valid characters: \x01-\x7E |
| 25020 | >Pad5 | U | 5 | 219 | Fixed String | not used |

### 7.8.18 New Order Response (Standard Order)

This message confirms a New Order request for a Standard (non lean) Order. For more details, please refer to chapter 4.5.12 Order Status and Execution Reports.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10101 (ExecutionReport, MsgType = 8) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<ResponseHeaderME>* | | | | | | |
| 5979 | RequestTime | Y | 8 | 8 | UTCTimestamp | Gateway request in timestamp. |
| 7764 | RequestOut | Y | 8 | 16 | UTCTimestamp | Timestamp the gateway sends a message to the Matching Engine |
| 21002 | TrdRegTSTimeIn | Y | 8 | 24 | UTCTimestamp | Matching engine in timestamp. |
| 21003 | TrdRegTSTimeOut | Y | 8 | 32 | UTCTimestamp | Matching engine out timestamp. |
| 7765 | ResponseIn | Y | 8 | 40 | UTCTimestamp | Timestamp the gateway receives a message from the Matching Engine |
| 52 | SendingTime | Y | 8 | 48 | UTCTimestamp | Gateway response out timestamp. |
| 34 | MsgSeqNum | Y | 4 | 56 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 5948 | PartitionID | Y | 2 | 60 | unsigned int | Grouping of BSE products.<br>Belongs to the scope of Service Availability and Retransmit requests. |
| 1180 | ApplID | Y | 1 | 62 | unsigned int | Identifier for an ETI data stream.<br>Value \| Description<br>4 \| Session Data |
| 28704 | ApplMsgID | Y | 16 | 63 | data | Application message identifier assigned to an order event. |
| 893 | LastFragment | Y | 1 | 79 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value \| Description<br>1 \| Last Message |
| *<Message Body>* | | | | | | |
| 37 | OrderID | Y | 8 | 80 | unsigned int | Exchange Order ID generated by BSE System; it remains constant over the lifetime of an order. |

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>11</td><td>ClOrdID</td><td>N</td><td>8</td><td>88</td><td>unsigned int</td><td>Client Order ID: Unique participant defined order request identifier; used for client order id chaining.</td></tr>
<tr><td>48</td><td>SecurityID</td><td>Y</td><td>8</td><td>96</td><td>signed int</td><td>Instrument identifier.</td></tr>
<tr><td>1110</td><td>PriceMkToLimitPx</td><td>N</td><td>8</td><td>104</td><td>PriceType</td><td>The price at which the market order got converted into regular limit order. Applicable for OrderType (40) = 5.</td></tr>
<tr><td>236</td><td>Yield</td><td>N</td><td>8</td><td>112</td><td>PriceType</td><td>The Yield corresponding to the clean price.</td></tr>
<tr><td>882</td><td>UnderlyingDirtyPrice</td><td>N</td><td>8</td><td>120</td><td>PriceType</td><td>The dirty price.</td></tr>
<tr><td>17</td><td>ExecID</td><td>Y</td><td>8</td><td>128</td><td>UTCTimestamp</td><td>Transaction timestamp.</td></tr>
<tr><td>21009</td><td>TrdRegTSEntryTime</td><td>Y</td><td>8</td><td>136</td><td>UTCTimestamp</td><td>The entry timestamp is the time of the creation of the order.</td></tr>
<tr><td>21008</td><td>TrdRegTSTimePriority</td><td>Y</td><td>8</td><td>144</td><td>UTCTimestamp</td><td>Priority timestamp.</td></tr>
<tr><td>30645</td><td>ActivityTime</td><td>Y</td><td>8</td><td>152</td><td>UTCTimestamp</td><td>Activity timestamp for that order</td></tr>
<tr><td>30646</td><td>Filler1</td><td>N</td><td>8</td><td>160</td><td>unsigned int</td><td>not used</td></tr>
<tr><td>30647</td><td>Filler2</td><td>N</td><td>4</td><td>168</td><td>unsigned int</td><td>not used</td></tr>
<tr><td>30652</td><td>Filler4</td><td>N</td><td>2</td><td>172</td><td>unsigned int</td><td>not used</td></tr>
<tr><td>39</td><td>OrdStatus</td><td>Y</td><td>1</td><td>174</td><td>char</td><td>Conveys the current status of an order.<table><tr><th>Value</th><th>Description</th></tr><tr><td>0</td><td>New</td></tr><tr><td>4</td><td>Cancelled</td></tr><tr><td>9</td><td>Suspended</td></tr></table></td></tr>
<tr><td>150</td><td>ExecType</td><td>Y</td><td>1</td><td>175</td><td>char</td><td>The reason why this message was generated.<table><tr><th>Value</th><th>Description</th></tr><tr><td>0</td><td>New</td></tr><tr><td>4</td><td>Cancelled</td></tr><tr><td>L</td><td>Triggered</td></tr><tr><td>5</td><td>Replaced</td></tr></table></td></tr>
</table>

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>378</td><td>ExecRestatement-Reason</td><td>Y</td><td>2</td><td>176</td><td>unsigned int</td><td>Code to further qualify the field ExecType (150) of the Execution Report (8) message.
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>101</td><td>Order Added</td></tr>
<tr><td>105</td><td>IOC Order Cancelled</td></tr>
<tr><td>212</td><td>BOC Order Cancelled</td></tr>
<tr><td>135</td><td>Market Order Triggered</td></tr>
<tr><td>215</td><td>RRM Order Added</td></tr>
<tr><td>221</td><td>Provisional Order Added</td></tr>
<tr><td>246</td><td>Self Trade Order Deleted</td></tr>
<tr><td>247</td><td>Reverse Trade Order Deleted</td></tr>
<tr><td>265</td><td>Market Order Out Of Range</td></tr>
</table></td></tr>
<tr><td>1227</td><td>ProductComplex</td><td>Y</td><td>1</td><td>178</td><td>unsigned int</td><td>This field qualifies an instrument type on BSE.
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td>1</td><td>Simple Instrument</td></tr>
<tr><td>2</td><td>Standard Option Strategy</td></tr>
<tr><td>5</td><td>Futures Spread</td></tr>
</table></td></tr>
<tr><td>30653</td><td>RolloverFlag</td><td>N</td><td>1</td><td>179</td><td>unsigned int</td><td>not used</td></tr>
<tr><td>25019</td><td>Pad4</td><td>U</td><td>4</td><td>180</td><td>Fixed String</td><td>not used</td></tr>
</table>

### 7.8.19 New Order Response (Lean Order)

This message confirms a New Order request for a Lean Order. For more details, please refer to chapter 4.5.12 Order Status and Execution Reports.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10102 (ExecutionReport, MsgType = 8) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<NRResponseHeaderME>* | | | | | | |
| 5979 | RequestTime | Y | 8 | 8 | UTCTimestamp | Gateway request in timestamp. |
| 7764 | RequestOut | Y | 8 | 16 | UTCTimestamp | Timestamp the gateway sends a message to the Matching Engine |
| 21002 | TrdRegTSTimeIn | Y | 8 | 24 | UTCTimestamp | Matching engine in timestamp. |
| 21003 | TrdRegTSTimeOut | Y | 8 | 32 | UTCTimestamp | Matching engine out timestamp. |
| 7765 | ResponseIn | Y | 8 | 40 | UTCTimestamp | Timestamp the gateway receives a message from the Matching Engine |
| 52 | SendingTime | Y | 8 | 48 | UTCTimestamp | Gateway response out timestamp. |
| 34 | MsgSeqNum | Y | 4 | 56 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 893 | LastFragment | Y | 1 | 60 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value — Description<br>1 — Last Message |
| 25018 | Pad3 | U | 3 | 61 | Fixed String | not used |
| *<Message Body>* | | | | | | |
| 37 | OrderID | Y | 8 | 64 | unsigned int | Exchange Order ID generated by BSE System; it remains constant over the lifetime of an order. |
| 11 | ClOrdID | N | 8 | 72 | unsigned int | Client Order ID: Unique participant defined order request identifier; used for client order id chaining. |
| 48 | SecurityID | Y | 8 | 80 | signed int | Instrument identifier. |
| 1110 | PriceMkToLimitPx | N | 8 | 88 | PriceType | The price at which the market order got converted into regular limit order. Applicable for OrderType (40) = 5. |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 236 | Yield | N | 8 | 96 | PriceType | The Yield corresponding to the clean price. |
| 882 | UnderlyingDirtyPrice | N | 8 | 104 | PriceType | The dirty price. |
| 17 | ExecID | Y | 8 | 112 | UTCTimestamp | Transaction timestamp. |
| 30645 | ActivityTime | Y | 8 | 120 | UTCTimestamp | Activity timestamp for that order |
| 30646 | Filler1 | N | 8 | 128 | unsigned int | not used |
| 30647 | Filler2 | N | 4 | 136 | unsigned int | not used |
| 30652 | Filler4 | N | 2 | 140 | unsigned int | not used |
| 39 | OrdStatus | Y | 1 | 142 | char | Conveys the current status of an order.<br>Value \| Description<br>0 \| New<br>4 \| Cancelled<br>9 \| Suspended |
| 150 | ExecType | Y | 1 | 143 | char | The reason why this message was generated.<br>Value \| Description<br>0 \| New<br>4 \| Cancelled<br>L \| Triggered<br>5 \| Replaced |
| 378 | ExecRestatement-Reason | Y | 2 | 144 | unsigned int | Code to further qualify the field ExecType (150) of the Execution Report (8) message.<br>Value \| Description<br>101 \| Order Added<br>105 \| IOC Order Cancelled<br>212 \| BOC Order Cancelled<br>135 \| Market Order Triggered<br>215 \| RRM Order Added<br>221 \| Provisional Order Added<br>246 \| Self Trade Order Deleted<br>247 \| Reverse Trade Order Deleted<br>265 \| Market Order Out Of Range |

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>1227</td><td>ProductComplex</td><td>Y</td><td>1</td><td>146</td><td>unsigned int</td><td>This field qualifies an instrument type on BSE.<table><tr><th>Value</th><th>Description</th></tr><tr><td>1</td><td>Simple Instrument</td></tr><tr><td>2</td><td>Standard Option Strategy</td></tr><tr><td>5</td><td>Futures Spread</td></tr></table></td></tr>
<tr><td>30653</td><td>RolloverFlag</td><td>N</td><td>1</td><td>147</td><td>unsigned int</td><td>not used</td></tr>
<tr><td>25019</td><td>Pad4</td><td>U</td><td>4</td><td>148</td><td>Fixed String</td><td>not used</td></tr>
</table>

### 7.8.20 Immediate Execution Response

This message informs about the immediate execution of an incoming order or the execution of a book order due to a replace request. For more details, please refer to chapter 4.5.12 Order Status and Execution Reports.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10103 (ExecutionReport, MsgType = 8) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<ResponseHeaderME>* | | | | | | |
| 5979 | RequestTime | Y | 8 | 8 | UTCTimestamp | Gateway request in timestamp. |
| 7764 | RequestOut | Y | 8 | 16 | UTCTimestamp | Timestamp the gateway sends a message to the Matching Engine |
| 21002 | TrdRegTSTimeIn | Y | 8 | 24 | UTCTimestamp | Matching engine in timestamp. |
| 21003 | TrdRegTSTimeOut | Y | 8 | 32 | UTCTimestamp | Matching engine out timestamp. |
| 7765 | ResponseIn | Y | 8 | 40 | UTCTimestamp | Timestamp the gateway receives a message from the Matching Engine |
| 52 | SendingTime | Y | 8 | 48 | UTCTimestamp | Gateway response out timestamp. |
| 34 | MsgSeqNum | Y | 4 | 56 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 5948 | PartitionID | Y | 2 | 60 | unsigned int | Grouping of BSE products.<br>Belongs to the scope of Service Availability and Retransmit requests. |
| 1180 | ApplID | Y | 1 | 62 | unsigned int | Identifier for an ETI data stream.<br>Value / Description:<br>4 Session Data |
| 28704 | ApplMsgID | N | 16 | 63 | data | Not set if the submitting session is not the owner of the executed order. |
| 893 | LastFragment | Y | 1 | 79 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value / Description:<br>0 Not Last Message<br>1 Last Message |
| *<Message Body>* | | | | | | |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 37 | OrderID | Y | 8 | 80 | unsigned int | Exchange Order ID generated by BSE System; it remains constant over the lifetime of an order. |
| 11 | ClOrdID | N | 8 | 88 | unsigned int | Client Order ID: Unique participant defined order request identifier; used for client order id chaining. |
| 41 | OrigClOrdID | N | 8 | 96 | unsigned int | ClOrdID (11) of the last successfully processed task (request) referring to the specific order. |
| 48 | SecurityID | Y | 8 | 104 | signed int | Instrument identifier. |
| 17 | ExecID | Y | 8 | 112 | UTCTimestamp | Transaction timestamp. |
| 21009 | TrdRegTSEntryTime | N | 8 | 120 | UTCTimestamp | The entry timestamp is the time of the creation of the order. |
| 21008 | TrdRegTSTimePriority | N | 8 | 128 | UTCTimestamp | Priority timestamp. |
| 30645 | ActivityTime | Y | 8 | 136 | UTCTimestamp | Activity timestamp for that order |
| 30646 | Filler1 | N | 8 | 144 | unsigned int | not used |
| 30647 | Filler2 | N | 4 | 152 | unsigned int | not used |
| 1300 | MarketSegmentID | Y | 4 | 156 | signed int | Product identifier. |
| 151 | LeavesQty | Y | 4 | 160 | Qty | Remaining quantity of an order. If the order has been executed partially this field contains the non-executed quantity. A remaining size of 0 indicates that the order is fully matched or no longer active. |
| 14 | CumQty | Y | 4 | 164 | Qty | Cumulated executed quantity of an order. |
| 84 | CxlQty | Y | 4 | 168 | Qty | Total quantity cancelled for this order. |
| 30652 | Filler4 | N | 2 | 172 | unsigned int | not used |
| 30555 | NoLegExecs | Y | 2 | 174 | Counter | Number of InstrmntLegExec repeating group instances. |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 378 | ExecRestatement-Reason | Y | 2 | 176 | unsigned int | Code to further qualify the field ExecType (150) of the Execution Report (8) message.<br>Value \| Description<br>101 \| Order Added<br>102 \| Order Replaced<br>105 \| IOC Order Cancelled<br>135 \| Market Order Triggered<br>246 \| Self Trade Order Deleted<br>247 \| Reverse Trade Order Deleted<br>265 \| Market Order Out Of Range |
| 1227 | ProductComplex | Y | 1 | 178 | unsigned int | This field qualifies an instrument type on BSE.<br>Value \| Description<br>1 \| Simple Instrument<br>2 \| Standard Option Strategy<br>5 \| Futures Spread |
| 39 | OrdStatus | Y | 1 | 179 | char | Conveys the current status of an order.<br>Value \| Description<br>1 \| Partially Filled<br>2 \| Filled<br>4 \| Cancelled |
| 150 | ExecType | Y | 1 | 180 | char | The reason why this message was generated.<br>Value \| Description<br>F \| Trade |
| 1823 | Triggered | Y | 1 | 181 | unsigned int | Indicates if an order has been previously triggered.<br>Value \| Description<br>0 \| Not Triggered<br>1 \| Triggered Stop Order<br>2 \| Triggered OCO Order |
| 30653 | RolloverFlag | N | 1 | 182 | unsigned int | not used |
| 1362 | NoFills | Y | 1 | 183 | Counter | Specifies the number of partial fills included in this Execution Report. |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 30649 | AlgoID | N | 16 | 184 | Fixed String (0-terminable) | Unique identifier of the algorithm. Valid characters: A-Z,0-9 |
| *<FillsGrp>* | | | | | | Cardinality: 0-100, Record counter: NoFills |
| 1364 | >FillPx | Y | 8 | 200 | PriceType | Price of Fill. |
| 1623 | >FillYield | N | 8 | 208 | PriceType | The Yield corresponding to the fill price. |
| 30644 | >FillDirtyPx | N | 8 | 216 | PriceType | The Dirty price corresponding to the fill price. |
| 1365 | >FillQty | Y | 4 | 224 | Qty | Quantity of Fill. |
| 28708 | >FillMatchID | Y | 4 | 228 | unsigned int | Unique identifier for each price level (match step) of a match event; it is used for public trade reporting. |
| 1363 | >FillExecID | Y | 4 | 232 | signed int | Private identifier of an order match step event, which can be reconciled with the field SideTradeID (1506) in the Trade Notification. |
| 1443 | >FillLiquidityInd | N | 1 | 236 | unsigned int | Indicates whether the order added or removed liquidity. Required only for execution reports generated for fills.<br>Value: Description<br>2: Removed Liquidity<br>5: Triggered Stop Order |
| 25018 | >Pad3 | U | 3 | 237 | Fixed String | not used |
| *<InstrmntLegExecGrp>* | | | | | | Cardinality: 0-600, Record counter: NoLegExecs |
| 602 | >LegSecurityID | Y | 8 | 0 | signed int | Instrument identifier of the leg security. |
| 637 | >LegLastPx | Y | 8 | 8 | PriceType | Price of this leg fill. |
| 1418 | >LegLastQty | Y | 4 | 16 | Qty | Quantity executed in this leg fill. |
| 1893 | >LegExecID | Y | 4 | 20 | signed int | Private identifier of a leg match step, which can be reconciled with the field SideTradeID (1506) in the Trade Notification. |
| 624 | >LegSide | Y | 1 | 24 | unsigned int | The side of the individual leg of a strategy as defined in its signature.<br>Value: Description<br>1: Buy<br>2: Sell |
| 25010 | >NoFillsIndex | Y | 1 | 25 | unsigned int | Reference to the corresponding FillsGrp repeating group instance. |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 25021 | >Pad6 | U | 6 | 26 | Fixed String | not used |

### 7.8.21 Book Order Execution

This message informs about the execution of a resting book order. For more details, please refer to chapter 4.5.12 Order Status and Execution Reports.

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td colspan="7"><MessageHeaderOut></td></tr>
<tr><td>9</td><td>BodyLen</td><td>Y</td><td>4</td><td>0</td><td>unsigned int</td><td>Number of bytes for the message, including this field.</td></tr>
<tr><td>28500</td><td>TemplateID</td><td>Y</td><td>2</td><td>4</td><td>unsigned int</td><td>Unique identifier for a BSE ETI message layout. Value: 10104 (ExecutionReport, MsgType = 8)</td></tr>
<tr><td>25017</td><td>Pad2</td><td>U</td><td>2</td><td>6</td><td>Fixed String</td><td>not used</td></tr>
<tr><td colspan="7"><RBCHeaderME></td></tr>
<tr><td>21003</td><td>TrdRegTSTimeOut</td><td>N</td><td>8</td><td>8</td><td>UTCTimestamp</td><td>Matching engine out timestamp.</td></tr>
<tr><td>52</td><td>SendingTime</td><td>Y</td><td>8</td><td>16</td><td>UTCTimestamp</td><td>Gateway response out timestamp.</td></tr>
<tr><td>28727</td><td>ApplSubID</td><td>U</td><td>4</td><td>24</td><td>unsigned int</td><td>not used</td></tr>
<tr><td>5948</td><td>PartitionID</td><td>Y</td><td>2</td><td>28</td><td>unsigned int</td><td>Grouping of BSE products.<br>Belongs to the scope of Service Availability and Retransmit requests.</td></tr>
<tr><td>28704</td><td>ApplMsgID</td><td>Y</td><td>16</td><td>30</td><td>data</td><td>Application message identifier assigned to an order event.</td></tr>
<tr><td>1180</td><td>ApplID</td><td>Y</td><td>1</td><td>46</td><td>unsigned int</td><td>Identifier for an ETI data stream.<table><tr><th>Value</th><th>Description</th></tr><tr><td>4</td><td>Session Data</td></tr></table></td></tr>
<tr><td>1352</td><td>ApplResendFlag</td><td>Y</td><td>1</td><td>47</td><td>unsigned int</td><td>Indicates a retransmission message.<table><tr><th>Value</th><th>Description</th></tr><tr><td>0</td><td>False</td></tr><tr><td>1</td><td>True</td></tr></table></td></tr>
<tr><td>893</td><td>LastFragment</td><td>Y</td><td>1</td><td>48</td><td>unsigned int</td><td>Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<table><tr><th>Value</th><th>Description</th></tr><tr><td>0</td><td>Not Last Message</td></tr><tr><td>1</td><td>Last Message</td></tr></table></td></tr>
<tr><td>25022</td><td>Pad7</td><td>U</td><td>7</td><td>49</td><td>Fixed String</td><td>not used</td></tr>
<tr><td colspan="7"><Message Body></td></tr>
<tr><td>37</td><td>OrderID</td><td>Y</td><td>8</td><td>56</td><td>unsigned int</td><td>Exchange Order ID generated by BSE System; it remains constant over the lifetime of an order.</td></tr>
<tr><td>142</td><td>SenderLocationID</td><td>Y</td><td>8</td><td>64</td><td>unsigned int</td><td>The location ID of the order from where it is originated</td></tr>
</table>

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 11 | ClOrdID | N | 8 | 72 | unsigned int | Client Order ID: Unique participant defined order request identifier; used for client order id chaining. |
| 41 | OrigClOrdID | N | 8 | 80 | unsigned int | ClOrdID (11) of the last successfully processed task (request) referring to the specific order. |
| 48 | SecurityID | Y | 8 | 88 | signed int | Instrument identifier. |
| 17 | ExecID | Y | 8 | 96 | UTCTimestamp | Transaction timestamp. |
| 30645 | ActivityTime | Y | 8 | 104 | UTCTimestamp | Activity timestamp for that order |
| 30646 | Filler1 | N | 8 | 112 | unsigned int | not used |
| 30647 | Filler2 | N | 4 | 120 | unsigned int | not used |
| 526 | MessageTag | Y | 4 | 124 | signed int | The message tag provided by the user in the order request |
| 1300 | MarketSegmentID | Y | 4 | 128 | signed int | Product identifier. |
| 151 | LeavesQty | Y | 4 | 132 | Qty | Remaining quantity of an order. If the order has been executed partially this field contains the non-executed quantity. A remaining size of 0 indicates that the order is fully matched or no longer active. |
| 14 | CumQty | Y | 4 | 136 | Qty | Cumulated executed quantity of an order. |
| 84 | CxlQty | Y | 4 | 140 | Qty | Total quantity cancelled for this order. |
| 30555 | NoLegExecs | Y | 2 | 144 | Counter | Number of InstrmntLegExec repeating group instances. |
| 30652 | Filler4 | N | 2 | 146 | unsigned int | not used |
| 378 | ExecRestatement-Reason | Y | 2 | 148 | unsigned int | Code to further qualify the field ExecType (150) of the Execution Report (8) message.<br>Value / Description:<br>108 Book Order Executed<br>135 Market Order Triggered<br>164 OCO Order Triggered<br>172 Stop Order Triggered<br>199 Pending Cancellation Executed<br>265 Market Order Out Of Range |

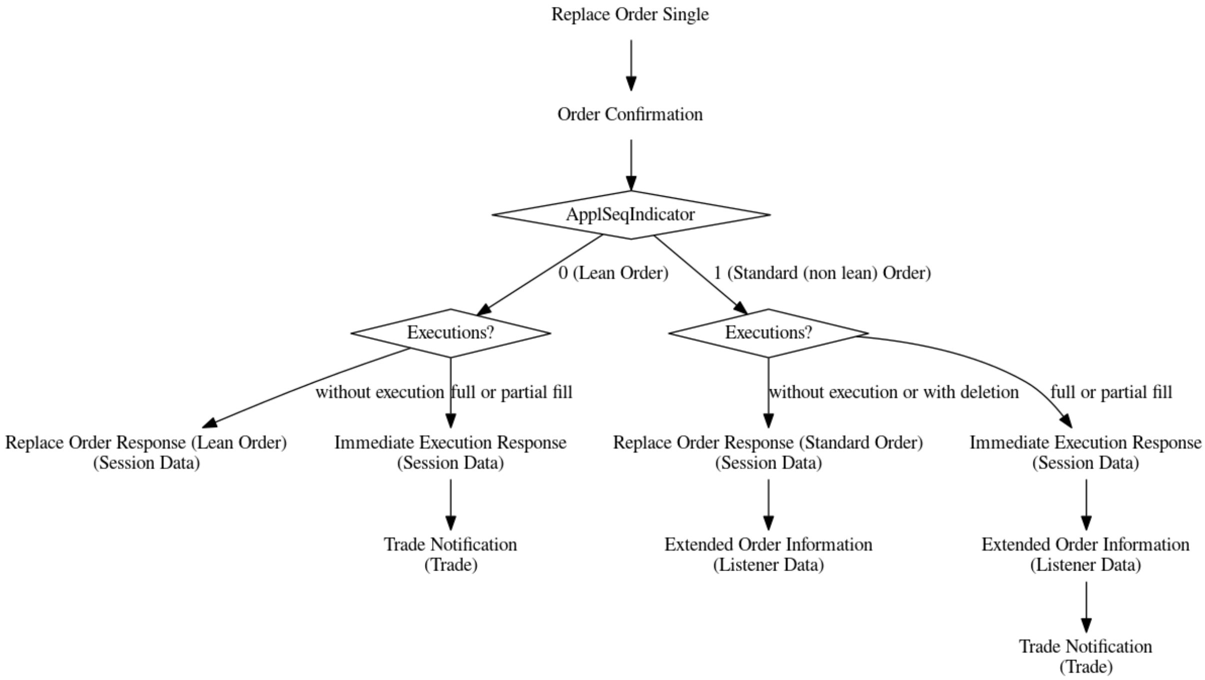
| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 581 | AccountType | Y | 1 | 150 | unsigned int | Value / Description: 20 Own; 30 Client |
| 1227 | ProductComplex | Y | 1 | 151 | unsigned int | This field qualifies an instrument type on BSE. Value / Description: 1 Simple Instrument; 2 Standard Option Strategy; 5 Futures Spread |
| 39 | OrdStatus | Y | 1 | 152 | char | Conveys the current status of an order. Value / Description: 1 Partially Filled; 2 Filled; 9 Suspended; 4 Cancelled |
| 150 | ExecType | Y | 1 | 153 | char | The reason why this message was generated. Value / Description: F Trade; 9 Suspended |
| 1823 | Triggered | Y | 1 | 154 | unsigned int | Indicates if an order has been previously triggered. Value / Description: 0 Not Triggered; 1 Triggered Stop Order; 2 Triggered OCO Order |
| 1362 | NoFills | Y | 1 | 155 | Counter | Specifies the number of partial fills included in this Execution Report. |
| 54 | Side | Y | 1 | 156 | unsigned int | Side of the order. Value / Description: 1 Buy; 2 Sell; 3 Recall; 4 Early Return |
| 30653 | RolloverFlag | N | 1 | 157 | unsigned int | not used |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 1 | Account | Y | 2 | 158 | Fixed String | not used<br>Valid characters: 1-9,\x41,\x47,\x4D,\x50 |
| 30649 | AlgoID | N | 16 | 160 | Fixed String (0-terminable) | Unique identifier of the algorithm.<br>Valid characters: A-Z,0-9 |
| 58 | ClientCode | Y | 12 | 176 | Fixed String (0-terminable) | The Unique Client Code (UCC) of the person for whom the order is entered. For Proprietary Account Client code should be OWN always.<br>Valid characters: A-Z,0-9,\x2A,\x2D,\x2E,\x2F,\x5C |
| 30642 | CPCode | N | 12 | 188 | Chartext | The Participant code.<br>Valid characters: \x00,\x21,\x23,\x24,\x28,\x29,\x2A,\x2B,\x2D,\x2E,\x2F,\x30-\x39,\x3A,\x3B,\x3D,\x3E,\x3F,\x40,\x41-\x5A,\x5C,\x5D,\x5F,\x60,\x7B,\x7D |
| 25009 | FreeText3 | N | 12 | 200 | Chartext | Free-format text field for trader-specific or customer-related comments.<br>Valid characters: \x00,\x21,\x23,\x24,\x28,\x29,\x2A,\x2B,\x2D,\x2E,\x2F,\x30-\x39,\x3A,\x3B,\x3D,\x3E,\x3F,\x40,\x41-\x5A,\x5C,\x5D,\x5F,\x60,\x7B,\x7D |
| 25019 | Pad4 | U | 4 | 212 | Fixed String | not used |
| *<FillsGrp>* | | | | | | Cardinality: 0-100, Record counter: NoFills |
| 1364 | >FillPx | Y | 8 | 216 | PriceType | Price of Fill. |
| 1623 | >FillYield | N | 8 | 224 | PriceType | The Yield corresponding to the fill price. |
| 30644 | >FillDirtyPx | N | 8 | 232 | PriceType | The Dirty price corresponding to the fill price. |
| 1365 | >FillQty | Y | 4 | 240 | Qty | Quantity of Fill. |
| 28708 | >FillMatchID | Y | 4 | 244 | unsigned int | Unique identifier for each price level (match step) of a match event; it is used for public trade reporting. |
| 1363 | >FillExecID | Y | 4 | 248 | signed int | Private identifier of an order match step event, which can be reconciled with the field SideTradeID (1506) in the Trade Notification. |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 1443 | >FillLiquidityInd | N | 1 | 252 | unsigned int | Indicates whether the order added or removed liquidity. Required only for execution reports generated for fills.<br>Value \| Description<br>1 \| Added Liquidity<br>5 \| Triggered Stop Order<br>6 \| Triggered OCO Order<br>7 \| Triggered Market Order |
| 25018 | >Pad3 | U | 3 | 253 | Fixed String | not used |
| *<InstrmntLegExecGrp>* | | | | | | Cardinality: 0-600, Record counter: NoLegExecs |
| 602 | >LegSecurityID | Y | 8 | 0 | signed int | Instrument identifier of the leg security. |
| 637 | >LegLastPx | Y | 8 | 8 | PriceType | Price of this leg fill. |
| 1418 | >LegLastQty | Y | 4 | 16 | Qty | Quantity executed in this leg fill. |
| 1893 | >LegExecID | Y | 4 | 20 | signed int | Private identifier of a leg match step, which can be reconciled with the field SideTradeID (1506) in the Trade Notification. |
| 624 | >LegSide | Y | 1 | 24 | unsigned int | The side of the individual leg of a strategy as defined in its signature.<br>Value \| Description<br>1 \| Buy<br>2 \| Sell |
| 25010 | >NoFillsIndex | Y | 1 | 25 | unsigned int | Reference to the corresponding FillsGrp repeating group instance. |
| 25021 | >Pad6 | U | 6 | 26 | Fixed String | not used |

### 7.8.22 Replace Order Single

This message is used to replace an existing order in a simple instrument. For more details, please refer to chapter 4.5.4 Modification and Total Order Quantity Modification.




| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderIn>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10106 (OrderCancelReplaceRequest, MsgType = G) |
| 25028 | NetworkMsgID | U | 8 | 6 | Fixed String | not used |
| 25017 | Pad2 | U | 2 | 14 | Fixed String | not used |
| *<RequestHeader>* | | | | | | |
| 34 | MsgSeqNum | Y | 4 | 16 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 50 | SenderSubID | Y | 4 | 20 | unsigned int | User ID. |
| *<Message Body>* | | | | | | |
| 37 | OrderID | N | 8 | 24 | unsigned int | Exchange Order ID generated by BSE System; it remains constant over the lifetime of an order. |
| 11 | ClOrdID | N | 8 | 32 | unsigned int | Client Order ID: Unique participant defined order request identifier; used for client order id chaining. |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 41 | OrigClOrdID | N | 8 | 40 | unsigned int | ClOrdID (11) of the last successfully processed task (request) referring to the specific order. |
| 44 | Price | N | 8 | 48 | PriceType | Limit price. Required if OrdType (40) is Limit (2) or Stop Limit (4). |
| 99 | StopPx | N | 8 | 56 | PriceType | Stop price. Required if OrdType (40) is Stop (3) or Stop (4). |
| 28740 | MaxPricePercentage | N | 8 | 64 | PriceType | Indicates the protection range for market order. Required if OrderType (40) is Market(5). |
| 142 | SenderLocationID | Y | 8 | 72 | unsigned int | The location ID of the order from where it is originated |
| 30645 | ActivityTime | Y | 8 | 80 | UTCTimestamp | Activity timestamp for that order |
| 30646 | Filler1 | N | 8 | 88 | unsigned int | not used |
| 30647 | Filler2 | N | 4 | 96 | unsigned int | not used |
| 526 | MessageTag | Y | 4 | 100 | signed int | User defined free field. The field is echoed in the trade notifications, listener data, session data. |
| 38 | OrderQty | Y | 4 | 104 | Qty | Total Order Quantity. |
| 210 | MaxShow | N | 4 | 108 | Qty | The quantity to be made visible in the market data. |
| 432 | ExpireDate | N | 4 | 112 | LocalMktDate | not used |
| 1300 | MarketSegmentID | N | 4 | 116 | signed int | Product identifier. |
| 30048 | SimpleSecurityID | Y | 4 | 120 | unsigned int | Instrument identifier for simple instruments. Should be filled with the 4 least significant bytes of SecurityID (48) provided in BSE reference data. |
| 20655 | TargetPartyIDSessionID | N | 4 | 124 | unsigned int | Session ID. |
| 25029 | RegulatoryID | N | 4 | 128 | unsigned int | not used. |
| 30652 | Filler4 | N | 2 | 132 | unsigned int | not used |
| 20096 | PartyIDTakeUpTrading-Firm | N | 5 | 134 | Fixed String | not used.<br>Valid characters: A-Z,0-9,\x20 |
| 20013 | PartyIDOrder-OriginationFirm | N | 7 | 139 | Fixed String | not used.<br>Valid characters: A-Z,0-9,\x20 |
| 20032 | PartyIDBeneficiary | N | 9 | 146 | Fixed String | not used.<br>Valid characters: A-Z,0-9,\x20 |
| 581 | AccountType | Y | 1 | 155 | unsigned int | Value / Description:<br>20 — Own<br>30 — Client |

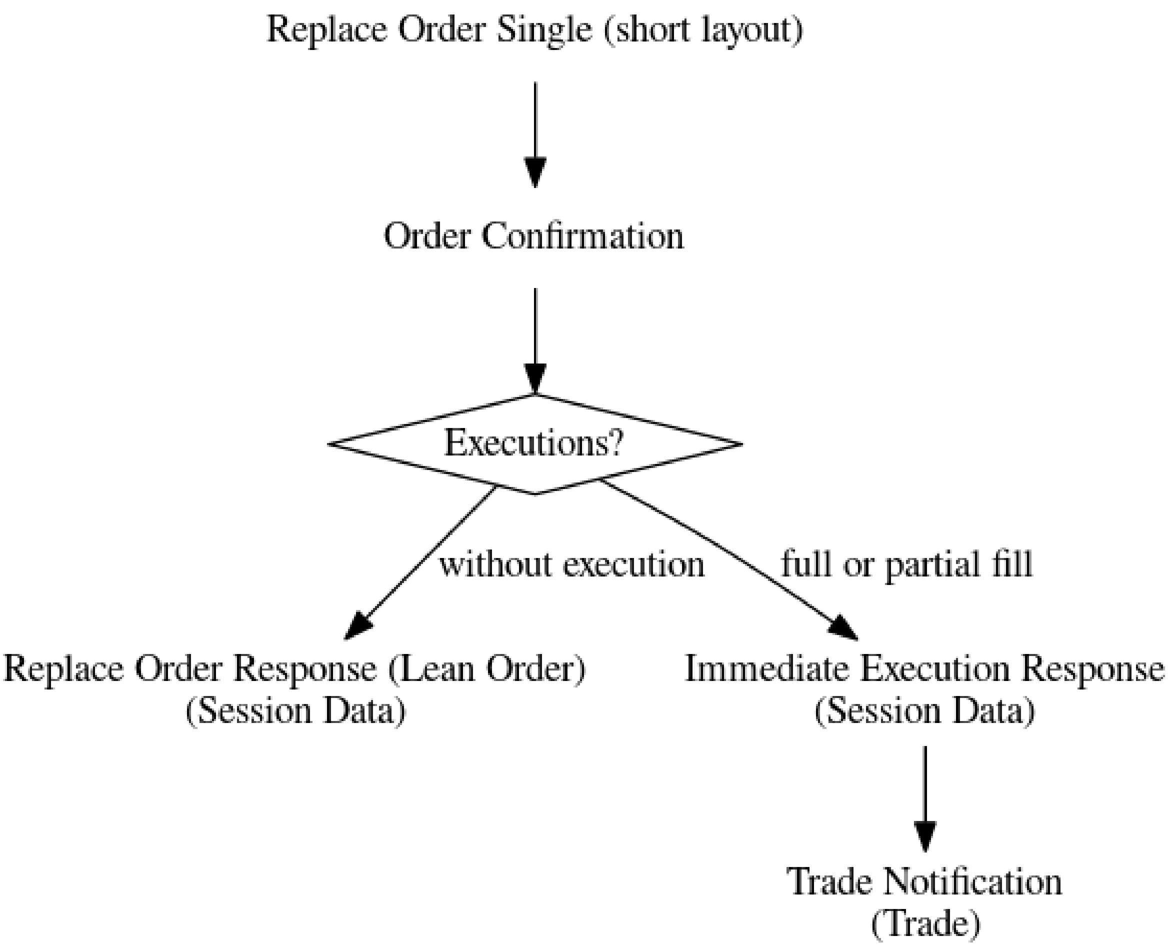
| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 28703 | ApplSeqIndicator | Y | 1 | 156 | unsigned int | Indicates if the order is a Lean Order. Application sequencing is limited for Lean Orders.<br>Value / Description:<br>0 Lean Order<br>1 Standard (non lean) Order |
| 54 | Side | Y | 1 | 157 | unsigned int | Side of the order.<br>Value / Description:<br>1 Buy<br>2 Sell<br>3 Recall<br>4 Early Return |
| 40 | OrdType | Y | 1 | 158 | unsigned int | Order type.<br>Value / Description:<br>2 Limit<br>3 Stop Market<br>4 Stop Limit<br>5 Market<br>6 Block Deal |
| 28710 | PriceValidityCheckType | Y | 1 | 159 | unsigned int | not used.<br>Value / Description:<br>0 None |
| 59 | TimeInForce | Y | 1 | 160 | unsigned int | Execution and trading restriction parameters supported by BSE.<br>Value / Description:<br>0 Day (GFD)<br>3 Immediate or Cancel (IOC)<br>7 Session (GFS) |
| 18 | ExecInst | Y | 1 | 161 | unsigned int | Instructions for order handling.<br>Value / Description:<br>1 Persistent Order (FIX value "H")<br>2 Non-persistent Order (FIX value "Q")<br>5 Persistent BOC Order (FIX value "H 6")<br>6 Non-persistent BOC Order (FIX value "Q 6") |
| 30653 | RolloverFlag | N | 1 | 162 | unsigned int | not used |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 625 | TradingSessionSubID | N | 1 | 163 | unsigned int | not used |
| 1815 | TradingCapacity | Y | 1 | 164 | unsigned int | not used.<br>Must be sent as 1 |
| 30640 | DeltaQtyFlag | N | 1 | 165 | char | not used<br>Valid characters: \x01-\x7E |
| 1 | Account | Y | 2 | 166 | Fixed String | not used.<br>Must be sent as A1<br>Valid characters: 1-9,\x41,\x47,\x4D,\x50 |
| 77 | PositionEffect | Y | 1 | 168 | char | must be set to C<br>Valid characters: \x01-\x7E |
| 20075 | PartyIDLocationID | N | 2 | 169 | Fixed String | not used.<br>Valid characters: \x01-\x7E |
| 1031 | CustOrderHandlingInst | N | 1 | 171 | Fixed String | not used.<br>Valid characters: \x20,\x22-\x7B,\x7D,\x7E |
| 25015 | RegulatoryText | N | 20 | 172 | Fixed String | This field is used to provide additional regulatory information (according to respective rules & regs, circulars and/or bilateral coordination between participant and Trading Surveillance Office).<br>Valid characters: \x20,\x22-\x7B,\x7D,\x7E |
| 30649 | AlgoID | N | 16 | 192 | Fixed String (0-terminable) | Unique identifier of the algorithm.<br>Valid characters: A-Z,0-9 |
| 58 | ClientCode | Y | 12 | 208 | Fixed String (0-terminable) | The Unique Client Code (UCC) of the person for whom the order is entered. For Proprietary Account Client code should be OWN always.<br>Valid characters: A-Z,0-9,\x2A,\x2D,\x2E,\x2F,\x5C |
| 30642 | CPCode | N | 12 | 220 | Chartext | The Participant code.<br>Valid characters: \x00,\x21,\x23,\x24,\x28,\x29,\x2A,\x2B,\x2D,\x2E,\x2F,\x30-\x39,\x3A,\x3B,\x3D,\x3E,\x3F,\x40,\x41-\x5A,\x5C,\x5D,\x5F,\x60,\x7B,\x7D |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 25009 | FreeText3 | N | 12 | 232 | Chartext | Free-format text field for trader-specific or customer-related comments.<br>Valid characters: \x00,\x21,\x23, \x24,\x28,\x29,\x2A,\x2B,\x2D, \x2E,\x2F,\x30-\x39,\x3A,\x3B, \x3D,\x3E,\x3F,\x40,\x41-\x5A, \x5C,\x5D,\x5F,\x60,\x7B,\x7D |
| 25019 | Pad4 | U | 4 | 244 | Fixed String | not used |

### 7.8.23 Replace Order Single (short layout)

This short order message layout is used by the participant to replace an order in a simple instrument. Selected order attributes are implicitly set. For more details, please refer to chapter 4.5.9 Short Order Message Layouts.



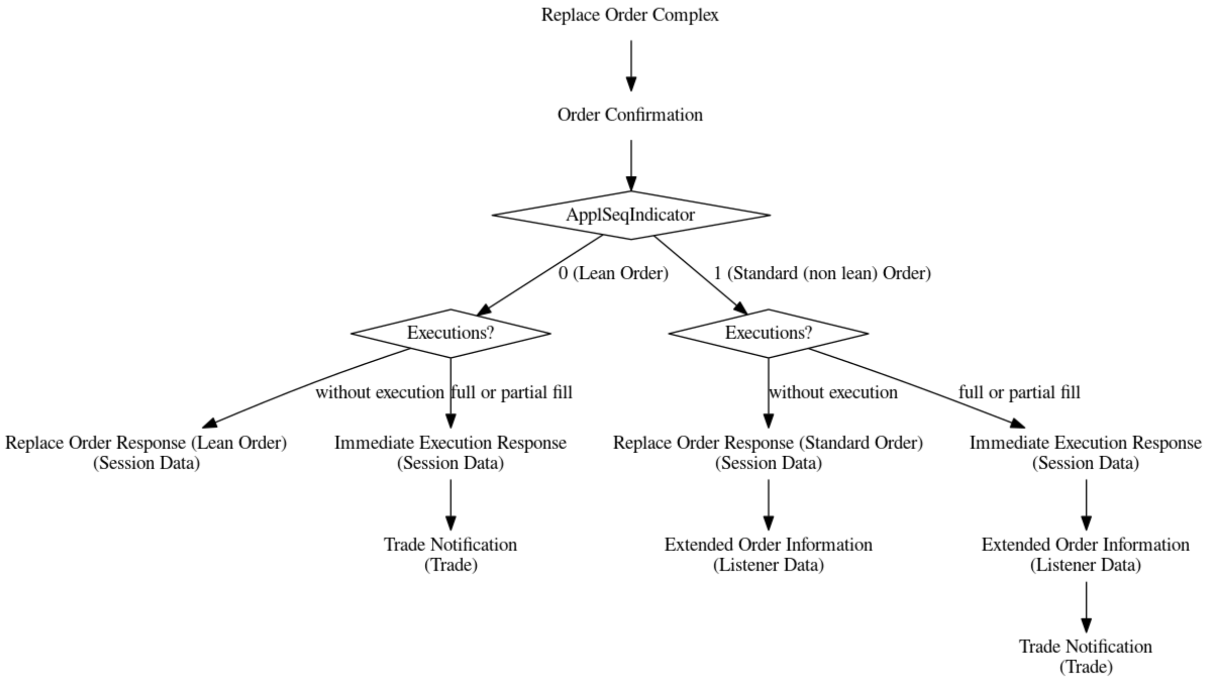

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderIn>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10126 (OrderCancelReplaceRequest, MsgType = G) |
| 25028 | NetworkMsgID | U | 8 | 6 | Fixed String | not used |
| 25017 | Pad2 | U | 2 | 14 | Fixed String | not used |
| *<RequestHeader>* | | | | | | |
| 34 | MsgSeqNum | Y | 4 | 16 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 50 | SenderSubID | Y | 4 | 20 | unsigned int | User ID. |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<Message Body>* | | | | | | |
| 37 | OrderID | N | 8 | 24 | unsigned int | Exchange Order ID generated by BSE System; it remains constant over the lifetime of an order. |
| 11 | ClOrdID | N | 8 | 32 | unsigned int | Client Order ID: Unique participant defined order request identifier; used for client order id chaining. |
| 41 | OrigClOrdID | N | 8 | 40 | unsigned int | ClOrdID (11) of the last successfully processed task (request) referring to the specific order. |
| 44 | Price | Y | 8 | 48 | PriceType | Limit price. Required if OrdType (40) is Limit (2) or Stop Limit (4). |
| 142 | SenderLocationID | Y | 8 | 56 | unsigned int | The location ID of the order from where it is originated |
| 30645 | ActivityTime | Y | 8 | 64 | UTCTimestamp | Activity timestamp for that order |
| 38 | OrderQty | Y | 4 | 72 | Qty | Total Order Quantity. |
| 210 | MaxShow | N | 4 | 76 | Qty | The quantity to be made visible in the market data. |
| 30048 | SimpleSecurityID | Y | 4 | 80 | unsigned int | Instrument identifier for simple instruments. Should be filled with the 4 least significant bytes of SecurityID (48) provided in BSE reference data. |
| 30647 | Filler2 | N | 4 | 84 | unsigned int | not used |
| 30652 | Filler4 | N | 2 | 88 | unsigned int | not used |
| 581 | AccountType | Y | 1 | 90 | unsigned int | Value / Description:<br>20 Own<br>30 Client |
| 54 | Side | Y | 1 | 91 | unsigned int | Side of the order.<br>Value / Description:<br>1 Buy<br>2 Sell<br>3 Recall<br>4 Early Return |
| 28710 | PriceValidityCheckType | Y | 1 | 92 | unsigned int | not used.<br>Value / Description:<br>0 None |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 59 | TimeInForce | Y | 1 | 93 | unsigned int | Execution and trading restriction parameters supported by BSE.<br>Value – Description<br>0 – Day (GFD)<br>3 – Immediate or Cancel (IOC)<br>7 – Session (GFS) |
| 18 | ExecInst | U | 1 | 94 | unsigned int | not used |
| 30649 | AlgoID | N | 16 | 95 | Fixed String (0-terminable) | Unique identifier of the algorithm.<br>Valid characters: A-Z,0-9 |
| 58 | ClientCode | Y | 12 | 111 | Fixed String (0-terminable) | The Unique Client Code (UCC) of the person for whom the order is entered. For Proprietary Account Client code should be OWN always.<br>Valid characters: A-Z,0-9,\x2A,\x2D,\x2E,\x2F,\x5C |
| 30642 | CPCode | N | 12 | 123 | Chartext | The Participant code.<br>Valid characters: \x00,\x21,\x23,\x24,\x28,\x29,\x2A,\x2B,\x2D,\x2E,\x2F,\x30-\x39,\x3A,\x3B,\x3D,\x3E,\x3F,\x40,\x41-\x5A,\x5C,\x5D,\x5F,\x60,\x7B,\x7D |
| 25016 | Pad1 | U | 1 | 135 | Fixed String | not used |

### 7.8.24 Replace Order Complex

This message is used to replace a multi leg order (previously submitted using the New Order Multi Leg message). For more details, please refer to chapter 4.5.4 Modification and Total Order Quantity Modification.




| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderIn>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10114 (MultilegOrderCancelReplace, MsgType = AC) |
| 25028 | NetworkMsgID | U | 8 | 6 | Fixed String | not used |
| 25017 | Pad2 | U | 2 | 14 | Fixed String | not used |
| *<RequestHeader>* | | | | | | |
| 34 | MsgSeqNum | Y | 4 | 16 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 50 | SenderSubID | Y | 4 | 20 | unsigned int | User ID. |
| *<Message Body>* | | | | | | |
| 37 | OrderID | N | 8 | 24 | unsigned int | Exchange Order ID generated by BSE System; it remains constant over the lifetime of an order. |
| 11 | ClOrdID | N | 8 | 32 | unsigned int | Client Order ID: Unique participant defined order request identifier; used for client order id chaining. |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 41 | OrigClOrdID | N | 8 | 40 | unsigned int | ClOrdID (11) of the last successfully processed task (request) referring to the specific order. |
| 48 | SecurityID | Y | 8 | 48 | signed int | Instrument identifier. |
| 44 | Price | Y | 8 | 56 | PriceType | Limit price. Required if OrdType (40) is Limit (2) or Stop Limit (4). |
| 28740 | MaxPricePercentage | N | 8 | 64 | PriceType | Indicates the protection range for market order. Required if OrderType (40) is Market(5). |
| 142 | SenderLocationID | Y | 8 | 72 | unsigned int | The location ID of the order from where it is originated |
| 30645 | ActivityTime | Y | 8 | 80 | UTCTimestamp | Activity timestamp for that order |
| 30646 | Filler1 | N | 8 | 88 | unsigned int | not used |
| 30647 | Filler2 | N | 4 | 96 | unsigned int | not used |
| 1300 | MarketSegmentID | Y | 4 | 100 | signed int | Product identifier. |
| 526 | MessageTag | Y | 4 | 104 | signed int | User defined free field. The field is echoed in the trade notifications, listener data, session data. |
| 38 | OrderQty | Y | 4 | 108 | Qty | Total Order Quantity. |
| 210 | MaxShow | N | 4 | 112 | Qty | The quantity to be made visible in the market data. |
| 432 | ExpireDate | N | 4 | 116 | LocalMktDate | not used |
| 20655 | TargetPartyIDSessionID | N | 4 | 120 | unsigned int | Session ID. |
| 25029 | RegulatoryID | N | 4 | 124 | unsigned int | not used. |
| 30652 | Filler4 | N | 2 | 128 | unsigned int | not used |
| 20096 | PartyIDTakeUpTrading-Firm | N | 5 | 130 | Fixed String | not used.<br>Valid characters: A-Z,0-9,\x20 |
| 20013 | PartyIDOrder-OriginationFirm | N | 7 | 135 | Fixed String | not used.<br>Valid characters: A-Z,0-9,\x20 |
| 20032 | PartyIDBeneficiary | N | 9 | 142 | Fixed String | not used.<br>Valid characters: A-Z,0-9,\x20 |
| 581 | AccountType | Y | 1 | 151 | unsigned int | Value / Description:<br>20 Own<br>30 Client |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 28703 | ApplSeqIndicator | Y | 1 | 152 | unsigned int | Indicates if the order is a Lean Order. Application sequencing is limited for Lean Orders.<br>Value / Description:<br>0 Lean Order<br>1 Standard (non lean) Order |
| 1227 | ProductComplex | Y | 1 | 153 | unsigned int | This field qualifies an instrument type on BSE.<br>Value / Description:<br>2 Standard Option Strategy<br>5 Futures Spread |
| 54 | Side | Y | 1 | 154 | unsigned int | Side of the order.<br>Value / Description:<br>1 Buy<br>2 Sell |
| 40 | OrdType | Y | 1 | 155 | unsigned int | Order type.<br>Value / Description:<br>2 Limit |
| 28710 | PriceValidityCheckType | Y | 1 | 156 | unsigned int | not used.<br>Value / Description:<br>0 None |
| 18 | ExecInst | Y | 1 | 157 | unsigned int | Instructions for order handling.<br>Value / Description:<br>1 Persistent Order (FIX value "H")<br>2 Non-persistent Order (FIX value "Q") |
| 59 | TimeInForce | Y | 1 | 158 | unsigned int | Execution and trading restriction parameters supported by BSE.<br>Value / Description:<br>0 Day (GFD)<br>3 Immediate or Cancel (IOC)<br>7 Session (GFS) |
| 30653 | RolloverFlag | N | 1 | 159 | unsigned int | not used |
| 1815 | TradingCapacity | Y | 1 | 160 | unsigned int | not used.<br>Must be sent as 1 |
| 30640 | DeltaQtyFlag | N | 1 | 161 | char | not used<br>Valid characters: \x01-\x7E |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 20075 | PartyIDLocationID | N | 2 | 162 | Fixed String | not used.<br>Valid characters: \x01-\x7E |
| 1031 | CustOrderHandlingInst | N | 1 | 164 | Fixed String | not used.<br>Valid characters: \x20,\x22-\x7B, \x7D,\x7E |
| 25015 | RegulatoryText | N | 20 | 165 | Fixed String | This field is used to provide additional regulatory information (according to respective rules & regs, circulars and/or bilateral coordination between participant and Trading Surveillance Office).<br>Valid characters: \x20,\x22-\x7B, \x7D,\x7E |
| 30649 | AlgoID | N | 16 | 185 | Fixed String (0-terminable) | Unique identifier of the algorithm.<br>Valid characters: A-Z,0-9 |
| 58 | ClientCode | Y | 12 | 201 | Fixed String (0-terminable) | The Unique Client Code (UCC) of the person for whom the order is entered. For Proprietary Account Client code should be OWN always.<br>Valid characters: A-Z,0-9,\x2A,\x2D, \x2E,\x2F,\x5C |
| 30642 | CPCode | N | 12 | 213 | Chartext | The Participant code.<br>Valid characters: \x00,\x21,\x23, \x24,\x28,\x29,\x2A,\x2B,\x2D, \x2E,\x2F,\x30-\x39,\x3A,\x3B, \x3D,\x3E,\x3F,\x40,\x41-\x5A, \x5C,\x5D,\x5F,\x60,\x7B,\x7D |
| 25009 | FreeText3 | N | 12 | 225 | Chartext | Free-format text field for trader-specific or customer-related comments.<br>Valid characters: \x00,\x21,\x23, \x24,\x28,\x29,\x2A,\x2B,\x2D, \x2E,\x2F,\x30-\x39,\x3A,\x3B, \x3D,\x3E,\x3F,\x40,\x41-\x5A, \x5C,\x5D,\x5F,\x60,\x7B,\x7D |
| 555 | NoLegs | Y | 1 | 237 | Counter | Number of LegOrd repeating group instances.Must be greater than 1. |
| 25017 | Pad2 | U | 2 | 238 | Fixed String | not used |
| *<LegOrdGrp>* | | | | | | Cardinality: 0-5, Record counter: NoLegs |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 28715 | >LegAccount | Y | 2 | 240 | Fixed String | not used<br>Must be sent as A1<br>Valid characters: 1-9,\x41,\x47,\x4D, \x50 |
| 564 | >LegPositionEffect | Y | 1 | 242 | char | not used.<br>Must be set as C.<br>Valid characters: \x01-\x7E |
| 25020 | >Pad5 | U | 5 | 243 | Fixed String | not used |

### 7.8.25 Replace Order Response (Standard Order)

This message confirms a Replace Order request for a Standard (non lean) Order. For more details, please refer to chapter 4.5.12 Order Status and Execution Reports.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10107 (ExecutionReport, MsgType = 8) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<ResponseHeaderME>* | | | | | | |
| 5979 | RequestTime | Y | 8 | 8 | UTCTimestamp | Gateway request in timestamp. |
| 7764 | RequestOut | Y | 8 | 16 | UTCTimestamp | Timestamp the gateway sends a message to the Matching Engine |
| 21002 | TrdRegTSTimeIn | Y | 8 | 24 | UTCTimestamp | Matching engine in timestamp. |
| 21003 | TrdRegTSTimeOut | Y | 8 | 32 | UTCTimestamp | Matching engine out timestamp. |
| 7765 | ResponseIn | Y | 8 | 40 | UTCTimestamp | Timestamp the gateway receives a message from the Matching Engine |
| 52 | SendingTime | Y | 8 | 48 | UTCTimestamp | Gateway response out timestamp. |
| 34 | MsgSeqNum | Y | 4 | 56 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 5948 | PartitionID | Y | 2 | 60 | unsigned int | Grouping of BSE products.<br>Belongs to the scope of Service Availability and Retransmit requests. |
| 1180 | ApplID | Y | 1 | 62 | unsigned int | Identifier for an ETI data stream.<br>Value \| Description<br>4 \| Session Data |
| 28704 | ApplMsgID | N | 16 | 63 | data | Not set if the submitting session is not the owner of the replaced order. |
| 893 | LastFragment | Y | 1 | 79 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value \| Description<br>1 \| Last Message |
| *<Message Body>* | | | | | | |
| 37 | OrderID | Y | 8 | 80 | unsigned int | Exchange Order ID generated by BSE System; it remains constant over the lifetime of an order. |

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>11</td><td>ClOrdID</td><td>N</td><td>8</td><td>88</td><td>unsigned int</td><td>Client Order ID: Unique participant defined order request identifier; used for client order id chaining.</td></tr>
<tr><td>41</td><td>OrigClOrdID</td><td>N</td><td>8</td><td>96</td><td>unsigned int</td><td>ClOrdID (11) of the last successfully processed task (request) referring to the specific order.</td></tr>
<tr><td>48</td><td>SecurityID</td><td>Y</td><td>8</td><td>104</td><td>signed int</td><td>Instrument identifier.</td></tr>
<tr><td>17</td><td>ExecID</td><td>Y</td><td>8</td><td>112</td><td>UTCTimestamp</td><td>Transaction timestamp.</td></tr>
<tr><td>1110</td><td>PriceMkToLimitPx</td><td>N</td><td>8</td><td>120</td><td>PriceType</td><td>The price at which the market order got converted into regular limit order. Applicable for OrderType (40) = 5.</td></tr>
<tr><td>236</td><td>Yield</td><td>N</td><td>8</td><td>128</td><td>PriceType</td><td>The Yield corresponding to the clean price.</td></tr>
<tr><td>882</td><td>UnderlyingDirtyPrice</td><td>N</td><td>8</td><td>136</td><td>PriceType</td><td>The dirty price.</td></tr>
<tr><td>21008</td><td>TrdRegTSTimePriority</td><td>Y</td><td>8</td><td>144</td><td>UTCTimestamp</td><td>Priority timestamp.</td></tr>
<tr><td>30645</td><td>ActivityTime</td><td>Y</td><td>8</td><td>152</td><td>UTCTimestamp</td><td>Activity timestamp for that order</td></tr>
<tr><td>30646</td><td>Filler1</td><td>N</td><td>8</td><td>160</td><td>unsigned int</td><td>not used</td></tr>
<tr><td>30647</td><td>Filler2</td><td>N</td><td>4</td><td>168</td><td>unsigned int</td><td>not used</td></tr>
<tr><td>151</td><td>LeavesQty</td><td>Y</td><td>4</td><td>172</td><td>Qty</td><td>Remaining quantity of an order. If the order has been executed partially this field contains the non-executed quantity. A remaining size of 0 indicates that the order is fully matched or no longer active.</td></tr>
<tr><td>14</td><td>CumQty</td><td>Y</td><td>4</td><td>176</td><td>Qty</td><td>Cumulated executed quantity of an order.</td></tr>
<tr><td>84</td><td>CxlQty</td><td>Y</td><td>4</td><td>180</td><td>Qty</td><td>Total quantity cancelled for this order.</td></tr>
<tr><td>30652</td><td>Filler4</td><td>N</td><td>2</td><td>184</td><td>unsigned int</td><td>not used</td></tr>
<tr><td>39</td><td>OrdStatus</td><td>Y</td><td>1</td><td>186</td><td>char</td><td>Conveys the current status of an order.<table><tr><th>Value</th><th>Description</th></tr><tr><td>0</td><td>New</td></tr><tr><td>1</td><td>Partially Filled</td></tr><tr><td>2</td><td>Filled</td></tr><tr><td>4</td><td>Cancelled</td></tr><tr><td>9</td><td>Suspended</td></tr></table></td></tr>
</table>

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 150 | ExecType | Y | 1 | 187 | char | The reason why this message was generated.<br>Value / Description:<br>4 Cancelled<br>5 Replaced<br>L Triggered |
| 378 | ExecRestatement-Reason | Y | 2 | 188 | unsigned int | Code to further qualify the field ExecType (150) of the Execution Report (8) message.<br>Value / Description:<br>102 Order Replaced<br>105 IOC Order Cancelled<br>135 Market Order Triggered<br>215 RRM Order Added<br>221 Provisional Order Added<br>246 Self Trade Order Deleted<br>247 Reverse Trade Order Deleted<br>265 Market Order Out Of Range |
| 1227 | ProductComplex | Y | 1 | 190 | unsigned int | This field qualifies an instrument type on BSE.<br>Value / Description:<br>1 Simple Instrument<br>2 Standard Option Strategy<br>5 Futures Spread |
| 30653 | RolloverFlag | N | 1 | 191 | unsigned int | not used |

### 7.8.26 Replace Order Response (Lean Order)

This message confirms a Replace Order request for a Lean Order. For more details, please refer to chapter 4.5.12 Order Status and Execution Reports.

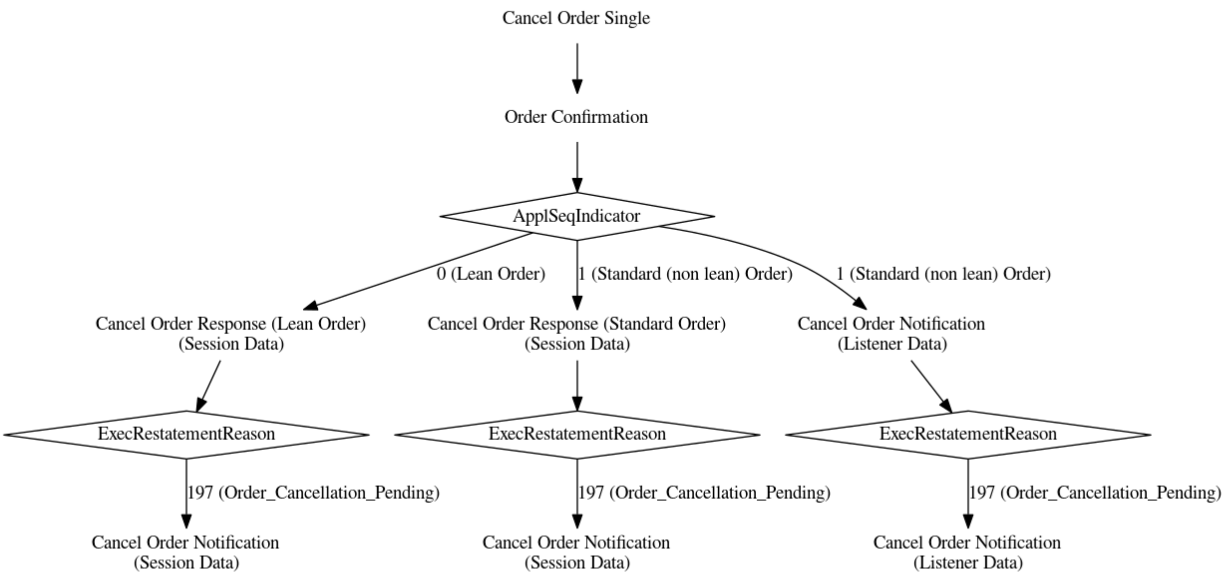
| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| <MessageHeaderOut> | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10108 (ExecutionReport, MsgType = 8) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| <NRResponseHeaderME> | | | | | | |
| 5979 | RequestTime | Y | 8 | 8 | UTCTimestamp | Gateway request in timestamp. |
| 7764 | RequestOut | Y | 8 | 16 | UTCTimestamp | Timestamp the gateway sends a message to the Matching Engine |
| 21002 | TrdRegTSTimeIn | Y | 8 | 24 | UTCTimestamp | Matching engine in timestamp. |
| 21003 | TrdRegTSTimeOut | Y | 8 | 32 | UTCTimestamp | Matching engine out timestamp. |
| 7765 | ResponseIn | Y | 8 | 40 | UTCTimestamp | Timestamp the gateway receives a message from the Matching Engine |
| 52 | SendingTime | Y | 8 | 48 | UTCTimestamp | Gateway response out timestamp. |
| 34 | MsgSeqNum | Y | 4 | 56 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 893 | LastFragment | Y | 1 | 60 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value / Description:<br>1 – Last Message |
| 25018 | Pad3 | U | 3 | 61 | Fixed String | not used |
| <Message Body> | | | | | | |
| 37 | OrderID | Y | 8 | 64 | unsigned int | Exchange Order ID generated by BSE System; it remains constant over the lifetime of an order. |
| 11 | ClOrdID | N | 8 | 72 | unsigned int | Client Order ID: Unique participant defined order request identifier; used for client order id chaining. |
| 41 | OrigClOrdID | N | 8 | 80 | unsigned int | ClOrdID (11) of the last successfully processed task (request) referring to the specific order. |
| 48 | SecurityID | Y | 8 | 88 | signed int | Instrument identifier. |
| 17 | ExecID | Y | 8 | 96 | UTCTimestamp | Transaction timestamp. |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 1110 | PriceMkToLimitPx | N | 8 | 104 | PriceType | The price at which the market order got converted into regular limit order. Applicable for OrderType (40) = 5. |
| 236 | Yield | N | 8 | 112 | PriceType | The Yield corresponding to the clean price. |
| 882 | UnderlyingDirtyPrice | N | 8 | 120 | PriceType | The dirty price. |
| 30645 | ActivityTime | Y | 8 | 128 | UTCTimestamp | Activity timestamp for that order |
| 30646 | Filler1 | N | 8 | 136 | unsigned int | not used |
| 30647 | Filler2 | N | 4 | 144 | unsigned int | not used |
| 151 | LeavesQty | Y | 4 | 148 | Qty | Remaining quantity of an order. If the order has been executed partially this field contains the non-executed quantity. A remaining size of 0 indicates that the order is fully matched or no longer active. |
| 14 | CumQty | Y | 4 | 152 | Qty | Cumulated executed quantity of an order. |
| 84 | CxlQty | Y | 4 | 156 | Qty | Total quantity cancelled for this order. |
| 30652 | Filler4 | N | 2 | 160 | unsigned int | not used |
| 39 | OrdStatus | Y | 1 | 162 | char | Conveys the current status of an order.<br>Value \| Description<br>0 \| New<br>1 \| Partially Filled<br>2 \| Filled<br>4 \| Cancelled<br>9 \| Suspended |
| 150 | ExecType | Y | 1 | 163 | char | The reason why this message was generated.<br>Value \| Description<br>4 \| Cancelled<br>5 \| Replaced<br>L \| Triggered |

<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>378</td><td>ExecRestatement-Reason</td><td>Y</td><td>2</td><td>164</td><td>unsigned int</td><td>Code to further qualify the field ExecType (150) of the Execution Report (8) message.<br>
<table>
<tr><td>Value</td><td>Description</td></tr>
<tr><td>102</td><td>Order Replaced</td></tr>
<tr><td>105</td><td>IOC Order Cancelled</td></tr>
<tr><td>135</td><td>Market Order Triggered</td></tr>
<tr><td>215</td><td>RRM Order Added</td></tr>
<tr><td>221</td><td>Provisional Order Added</td></tr>
<tr><td>246</td><td>Self Trade Order Deleted</td></tr>
<tr><td>247</td><td>Reverse Trade Order Deleted</td></tr>
<tr><td>265</td><td>Market Order Out Of Range</td></tr>
</table></td></tr>
<tr><td>1227</td><td>ProductComplex</td><td>Y</td><td>1</td><td>166</td><td>unsigned int</td><td>This field qualifies an instrument type on BSE.<br>
<table>
<tr><td>Value</td><td>Description</td></tr>
<tr><td>1</td><td>Simple Instrument</td></tr>
<tr><td>2</td><td>Standard Option Strategy</td></tr>
<tr><td>5</td><td>Futures Spread</td></tr>
</table></td></tr>
<tr><td>30653</td><td>RolloverFlag</td><td>N</td><td>1</td><td>167</td><td>unsigned int</td><td>not used</td></tr>
</table>

### 7.8.27 Cancel Order Single

This message is used to cancel a single order. For more details, please refer to chapter 4.5.3 Cancellation.

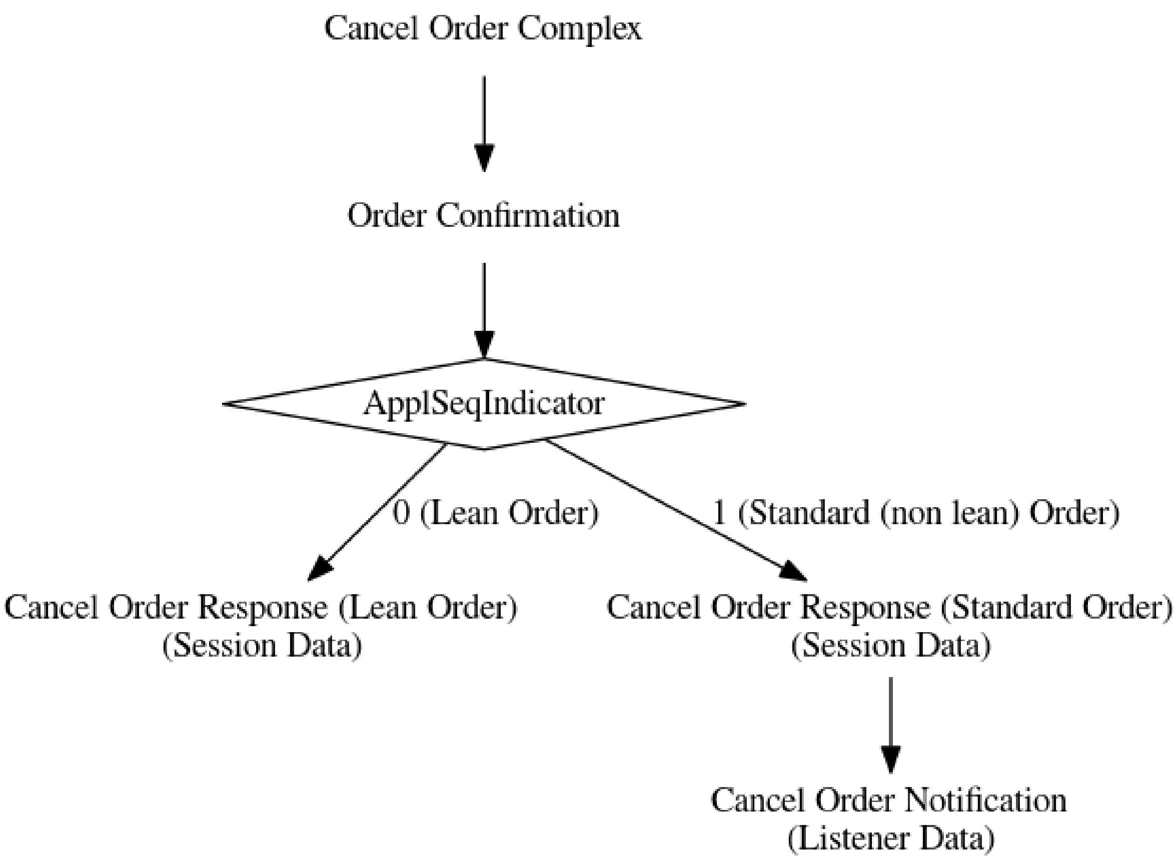



| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderIn>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10109 (OrderCancelRequest, MsgType = F) |
| 25028 | NetworkMsgID | U | 8 | 6 | Fixed String | not used |
| 25017 | Pad2 | U | 2 | 14 | Fixed String | not used |
| *<RequestHeader>* | | | | | | |
| 34 | MsgSeqNum | Y | 4 | 16 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 50 | SenderSubID | Y | 4 | 20 | unsigned int | User ID. |
| *<Message Body>* | | | | | | |
| 37 | OrderID | N | 8 | 24 | unsigned int | Exchange Order ID generated by BSE System; it remains constant over the lifetime of an order. |
| 11 | ClOrdID | N | 8 | 32 | unsigned int | Client Order ID: Unique participant defined order request identifier; used for client order id chaining. |
| 41 | OrigClOrdID | N | 8 | 40 | unsigned int | ClOrdID (11) of the last successfully processed task (request) referring to the specific order. |
| 30645 | ActivityTime | Y | 8 | 48 | UTCTimestamp | Activity timestamp for that order |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 526 | MessageTag | Y | 4 | 56 | signed int | User defined free field. The field is echoed in the trade notifications, listener data, session data. |
| 1300 | MarketSegmentID | N | 4 | 60 | signed int | Product identifier. |
| 30048 | SimpleSecurityID | Y | 4 | 64 | unsigned int | Instrument identifier for simple instruments. Should be filled with the 4 least significant bytes of SecurityID (48) provided in BSE reference data. |
| 20655 | TargetPartyIDSessionID | N | 4 | 68 | unsigned int | Session ID. |
| 25029 | RegulatoryID | N | 4 | 72 | unsigned int | not used. |
| 30649 | AlgoID | N | 16 | 76 | Fixed String (0-terminable) | Unique identifier of the algorithm. Valid characters: A-Z,0-9 |
| 25019 | Pad4 | U | 4 | 92 | Fixed String | not used |

### 7.8.28 Cancel Order Complex

This message is used to cancel a multi leg order. For more details, please refer to chapter 4.5.3 Cancellation.




| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderIn>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10123 (OrderCancelRequest, MsgType = F) |
| 25028 | NetworkMsgID | U | 8 | 6 | Fixed String | not used |
| 25017 | Pad2 | U | 2 | 14 | Fixed String | not used |
| *<RequestHeader>* | | | | | | |
| 34 | MsgSeqNum | Y | 4 | 16 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 50 | SenderSubID | Y | 4 | 20 | unsigned int | User ID. |
| *<Message Body>* | | | | | | |
| 37 | OrderID | N | 8 | 24 | unsigned int | Exchange Order ID generated by BSE System; it remains constant over the lifetime of an order. |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 11 | ClOrdID | N | 8 | 32 | unsigned int | Client Order ID: Unique participant defined order request identifier; used for client order id chaining. |
| 41 | OrigClOrdID | N | 8 | 40 | unsigned int | ClOrdID (11) of the last successfully processed task (request) referring to the specific order. |
| 48 | SecurityID | Y | 8 | 48 | signed int | Instrument identifier. |
| 30645 | ActivityTime | Y | 8 | 56 | UTCTimestamp | Activity timestamp for that order |
| 526 | MessageTag | Y | 4 | 64 | signed int | User defined free field. The field is echoed in the trade notifications, listener data, session data. |
| 1300 | MarketSegmentID | Y | 4 | 68 | signed int | Product identifier. |
| 20655 | TargetPartyIDSessionID | N | 4 | 72 | unsigned int | Session ID. |
| 25029 | RegulatoryID | N | 4 | 76 | unsigned int | not used. |
| 30649 | AlgoID | N | 16 | 80 | Fixed String (0-terminable) | Unique identifier of the algorithm. Valid characters: A-Z,0-9 |

### 7.8.29 Cancel Order Response (Standard Order)

This message confirms the cancellation of a Standard (non lean) Order. For more details, please refer to chapter 4.5.12 Order Status and Execution Reports.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10110 (ExecutionReport, MsgType = 8) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<ResponseHeaderME>* | | | | | | |
| 5979 | RequestTime | Y | 8 | 8 | UTCTimestamp | Gateway request in timestamp. |
| 7764 | RequestOut | Y | 8 | 16 | UTCTimestamp | Timestamp the gateway sends a message to the Matching Engine |
| 21002 | TrdRegTSTimeIn | Y | 8 | 24 | UTCTimestamp | Matching engine in timestamp. |
| 21003 | TrdRegTSTimeOut | Y | 8 | 32 | UTCTimestamp | Matching engine out timestamp. |
| 7765 | ResponseIn | Y | 8 | 40 | UTCTimestamp | Timestamp the gateway receives a message from the Matching Engine |
| 52 | SendingTime | Y | 8 | 48 | UTCTimestamp | Gateway response out timestamp. |
| 34 | MsgSeqNum | Y | 4 | 56 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 5948 | PartitionID | Y | 2 | 60 | unsigned int | Grouping of BSE products.<br>Belongs to the scope of Service Availability and Retransmit requests. |
| 1180 | ApplID | Y | 1 | 62 | unsigned int | Identifier for an ETI data stream.<br>Value \| Description<br>4 \| Session Data |
| 28704 | ApplMsgID | N | 16 | 63 | data | Not set if the submitting session is not the owner of the cancelled order. |
| 893 | LastFragment | Y | 1 | 79 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value \| Description<br>1 \| Last Message |
| *<Message Body>* | | | | | | |
| 37 | OrderID | Y | 8 | 80 | unsigned int | Exchange Order ID generated by BSE System; it remains constant over the lifetime of an order. |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 11 | ClOrdID | N | 8 | 88 | unsigned int | Client Order ID: Unique participant defined order request identifier; used for client order id chaining. |
| 41 | OrigClOrdID | N | 8 | 96 | unsigned int | ClOrdID (11) of the last successfully processed task (request) referring to the specific order. |
| 48 | SecurityID | Y | 8 | 104 | signed int | Instrument identifier. |
| 17 | ExecID | Y | 8 | 112 | UTCTimestamp | Transaction timestamp. |
| 14 | CumQty | Y | 4 | 120 | Qty | Cumulated executed quantity of an order. |
| 84 | CxlQty | Y | 4 | 124 | Qty | Total quantity cancelled for this order. |
| 39 | OrdStatus | Y | 1 | 128 | char | Conveys the current status of an order.<br>Value / Description:<br>4 Cancelled<br>6 Pending Cancel<br>9 Suspended |
| 150 | ExecType | Y | 1 | 129 | char | The reason why this message was generated.<br>Value / Description:<br>4 Cancelled<br>6 Pending Cancel<br>Y Provisional Reject<br>N RRM Order Reject |
| 378 | ExecRestatement-Reason | Y | 2 | 130 | unsigned int | Code to further qualify the field ExecType (150) of the Execution Report (8) message.<br>Value / Description:<br>103 Order Cancelled<br>197 Order Cancellation Pending<br>265 Market Order Out Of Range |
| 1227 | ProductComplex | Y | 1 | 132 | unsigned int | This field qualifies an instrument type on BSE.<br>Value / Description:<br>1 Simple Instrument<br>2 Standard Option Strategy<br>5 Futures Spread |
| 25018 | Pad3 | U | 3 | 133 | Fixed String | not used |

### 7.8.30 Cancel Order Response (Lean Order)

This message confirms the cancellation of a Lean Order. For more details, please refer to chapter 4.5.12 Order Status and Execution Reports.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10111 (ExecutionReport, MsgType = 8) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<NRResponseHeaderME>* | | | | | | |
| 5979 | RequestTime | Y | 8 | 8 | UTCTimestamp | Gateway request in timestamp. |
| 7764 | RequestOut | Y | 8 | 16 | UTCTimestamp | Timestamp the gateway sends a message to the Matching Engine |
| 21002 | TrdRegTSTimeIn | Y | 8 | 24 | UTCTimestamp | Matching engine in timestamp. |
| 21003 | TrdRegTSTimeOut | Y | 8 | 32 | UTCTimestamp | Matching engine out timestamp. |
| 7765 | ResponseIn | Y | 8 | 40 | UTCTimestamp | Timestamp the gateway receives a message from the Matching Engine |
| 52 | SendingTime | Y | 8 | 48 | UTCTimestamp | Gateway response out timestamp. |
| 34 | MsgSeqNum | Y | 4 | 56 | unsigned int | Message sequence number used by the participant for requests sent to the gateway. |
| 893 | LastFragment | Y | 1 | 60 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value \| Description<br>1 \| Last Message |
| 25018 | Pad3 | U | 3 | 61 | Fixed String | not used |
| *<Message Body>* | | | | | | |
| 37 | OrderID | Y | 8 | 64 | unsigned int | Exchange Order ID generated by BSE System; it remains constant over the lifetime of an order. |
| 11 | ClOrdID | N | 8 | 72 | unsigned int | Client Order ID: Unique participant defined order request identifier; used for client order id chaining. |
| 41 | OrigClOrdID | N | 8 | 80 | unsigned int | ClOrdID (11) of the last successfully processed task (request) referring to the specific order. |
| 48 | SecurityID | Y | 8 | 88 | signed int | Instrument identifier. |
| 17 | ExecID | Y | 8 | 96 | UTCTimestamp | Transaction timestamp. |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 14 | CumQty | Y | 4 | 104 | Qty | Cumulated executed quantity of an order. |
| 84 | CxlQty | Y | 4 | 108 | Qty | Total quantity cancelled for this order. |
| 39 | OrdStatus | Y | 1 | 112 | char | Conveys the current status of an order.<br>Value / Description:<br>4 Cancelled<br>6 Pending Cancel<br>9 Suspended |
| 150 | ExecType | Y | 1 | 113 | char | The reason why this message was generated.<br>Value / Description:<br>4 Cancelled<br>6 Pending Cancel<br>Y Provisional Reject<br>N RRM Order Reject |
| 378 | ExecRestatement-Reason | Y | 2 | 114 | unsigned int | Code to further qualify the field ExecType (150) of the Execution Report (8) message.<br>Value / Description:<br>103 Order Cancelled<br>197 Order Cancellation Pending<br>265 Market Order Out Of Range |
| 1227 | ProductComplex | Y | 1 | 116 | unsigned int | This field qualifies an instrument type on BSE.<br>Value / Description:<br>1 Simple Instrument<br>2 Standard Option Strategy<br>5 Futures Spread |
| 25018 | Pad3 | U | 3 | 117 | Fixed String | not used |

### 7.8.31 Cancel Order Notification

This message informs about an unsolicited cancellation of a single order. For more details, please refer to chapter 4.5.12 Order Status and Execution Reports.

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| *<MessageHeaderOut>* | | | | | | |
| 9 | BodyLen | Y | 4 | 0 | unsigned int | Number of bytes for the message, including this field. |
| 28500 | TemplateID | Y | 2 | 4 | unsigned int | Unique identifier for a BSE ETI message layout. Value: 10112 (ExecutionReport, MsgType = 8) |
| 25017 | Pad2 | U | 2 | 6 | Fixed String | not used |
| *<RBCHeaderME>* | | | | | | |
| 21003 | TrdRegTSTimeOut | N | 8 | 8 | UTCTimestamp | Matching engine out timestamp. |
| 52 | SendingTime | Y | 8 | 16 | UTCTimestamp | Gateway response out timestamp. |
| 28727 | ApplSubID | N | 4 | 24 | unsigned int | Unique ID assigned by the BSE system during broadcast subscription in order to link broadcasts to the related subscription. |
| 5948 | PartitionID | Y | 2 | 28 | unsigned int | Grouping of BSE products.<br>Belongs to the scope of Service Availability and Retransmit requests. |
| 28704 | ApplMsgID | N | 16 | 30 | data | Application message identifier assigned to an order event. |
| 1180 | ApplID | N | 1 | 46 | unsigned int | Identifier for an ETI data stream.<br>Value \| Description<br>4 \| Session Data<br>5 \| Listener Data |
| 1352 | ApplResendFlag | Y | 1 | 47 | unsigned int | Indicates a retransmission message.<br>Value \| Description<br>0 \| False<br>1 \| True |
| 893 | LastFragment | Y | 1 | 48 | unsigned int | Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction.<br>Value \| Description<br>1 \| Last Message |
| 25022 | Pad7 | U | 7 | 49 | Fixed String | not used |
| *<Message Body>* | | | | | | |

| Tag | Field Name | Req'd | Len | Ofs | Data Type | Description |
|---|---|---|---|---|---|---|
| 37 | OrderID | Y | 8 | 56 | unsigned int | Exchange Order ID generated by BSE System; it remains constant over the lifetime of an order. |
| 11 | ClOrdID | N | 8 | 64 | unsigned int | Client Order ID: Unique participant defined order request identifier; used for client order id chaining. |
| 41 | OrigClOrdID | N | 8 | 72 | unsigned int | ClOrdID (11) of the last successfully processed task (request) referring to the specific order. |
| 48 | SecurityID | Y | 8 | 80 | signed int | Instrument identifier. |
| 17 | ExecID | Y | 8 | 88 | UTCTimestamp | Transaction timestamp. |
| 526 | MessageTag | Y | 4 | 96 | signed int | The message tag as provided by the user in order request |
| 14 | CumQty | Y | 4 | 100 | Qty | Cumulated executed quantity of an order. |
| 84 | CxlQty | Y | 4 | 104 | Qty | Total quantity cancelled for this order. |
| 1300 | MarketSegmentID | N | 4 | 108 | signed int | Product identifier. |
| 20036 | PartyIDEnteringTrader | N | 4 | 112 | unsigned int | Entering User ID. |
| 378 | ExecRestatement-Reason | Y | 2 | 116 | unsigned int | Code to further qualify the field ExecType (150) of the Execution Report (8) message.<br>Value / Description:<br>103 Order Cancelled<br>197 Order Cancellation Pending<br>199 Pending Cancellation Executed<br>265 Market Order Out Of Range |
| 20007 | PartyIDEnteringFirm | N | 1 | 118 | unsigned int | Entering Entity ID.<br>Value / Description:<br>1 Participant<br>2 Market Supervision |
| 39 | OrdStatus | Y | 1 | 119 | char | Conveys the current status of an order.<br>Value / Description:<br>4 Cancelled<br>6 Pending Cancel<br>9 Suspended |

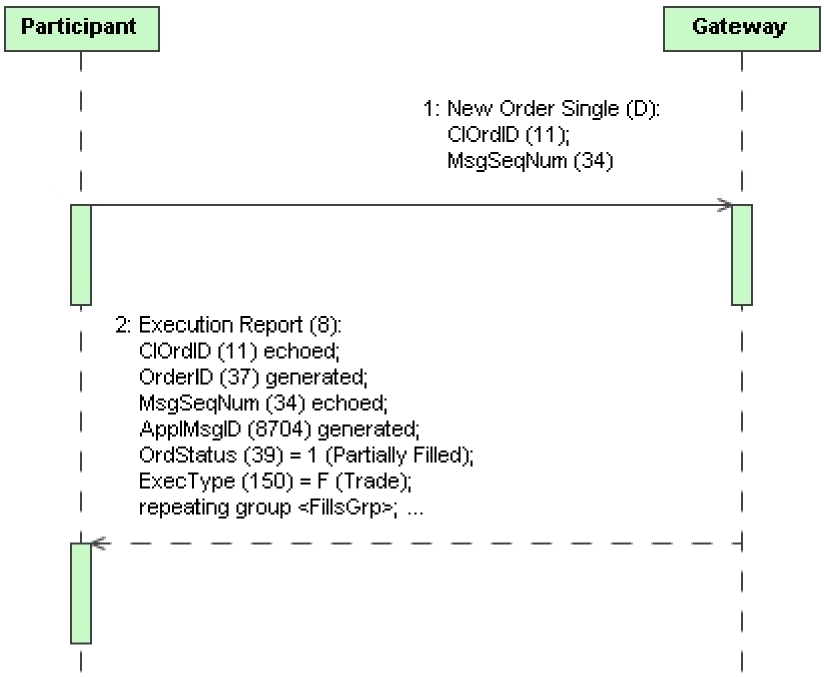
<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>150</td><td>ExecType</td><td>Y</td><td>1</td><td>120</td><td>char</td><td>Indicates if a request has been entered by the participant or by market supervision.<table><tr><td>Value</td><td>Description</td></tr><tr><td>4</td><td>Cancelled</td></tr><tr><td>6</td><td>Pending Cancel</td></tr></table></td></tr>
<tr><td>1227</td><td>ProductComplex</td><td>Y</td><td>1</td><td>121</td><td>unsigned int</td><td>This field qualifies an instrument type on BSE.<table><tr><td>Value</td><td>Description</td></tr><tr><td>1</td><td>Simple Instrument</td></tr><tr><td>2</td><td>Standard Option Strategy</td></tr><tr><td>5</td><td>Futures Spread</td></tr></table></td></tr>
<tr><td>54</td><td>Side</td><td>Y</td><td>1</td><td>122</td><td>unsigned int</td><td>Side of the order.<table><tr><td>Value</td><td>Description</td></tr><tr><td>1</td><td>Buy</td></tr><tr><td>2</td><td>Sell</td></tr><tr><td>3</td><td>Recall</td></tr><tr><td>4</td><td>Early Return</td></tr></table></td></tr>
<tr><td>25020</td><td>Pad5</td><td>U</td><td>5</td><td>123</td><td>Fixed String</td><td>not used</td></tr>
</table>

# 8 Appendix

## 8.1 Message Flows

### 8.1.1 Enter Order

The following example message flow shows the entry of an aggressively matching order in a simple instrument:




Each entry of an aggressively matching order will be answered by the Gateway with the Immediate Execution Response (Execution Report (8)) message indicating OrdStatus (39) and ExecType (150). In case of an immediate match, the fill details (i.e. prices, quantities and IDs) of all partial executions (<FillsGrp>) will be provided as well.

The *Execution Report (8)* message within the session submitting the request will not completely contain the order data sent by the participant. The participant application should record the details of each sent order. The field *MsgSeqNum (34)* in the response header contains the message sequence number of the original *New Order Single (D)* request.

For lean orders, (*ApplSeqIndicator (28703)* = 0), an application message identifier is only provided in the response of the order entry in case the order has been immediately executed. Regarding lean orders only executions and unsolicited messages are recoverable.

### 8.1.2 Enter Mass Quote

The following example message flow shows the entry of a mass quote request which results in the immediate execution of its quote items.

Each successful mass quote entry will be answered by the gateway with the Mass Quote Response (Mass *Quote Acknowledgement (b))* message.

The *Mass Quote Acknowledgement (b)* message will not echo at all the quote data sent by the participant. The participant application should record the details of each sent quote. The field *MsgSeqNum (34)* in the response header contains the message sequence number of the original Mass Quote message.

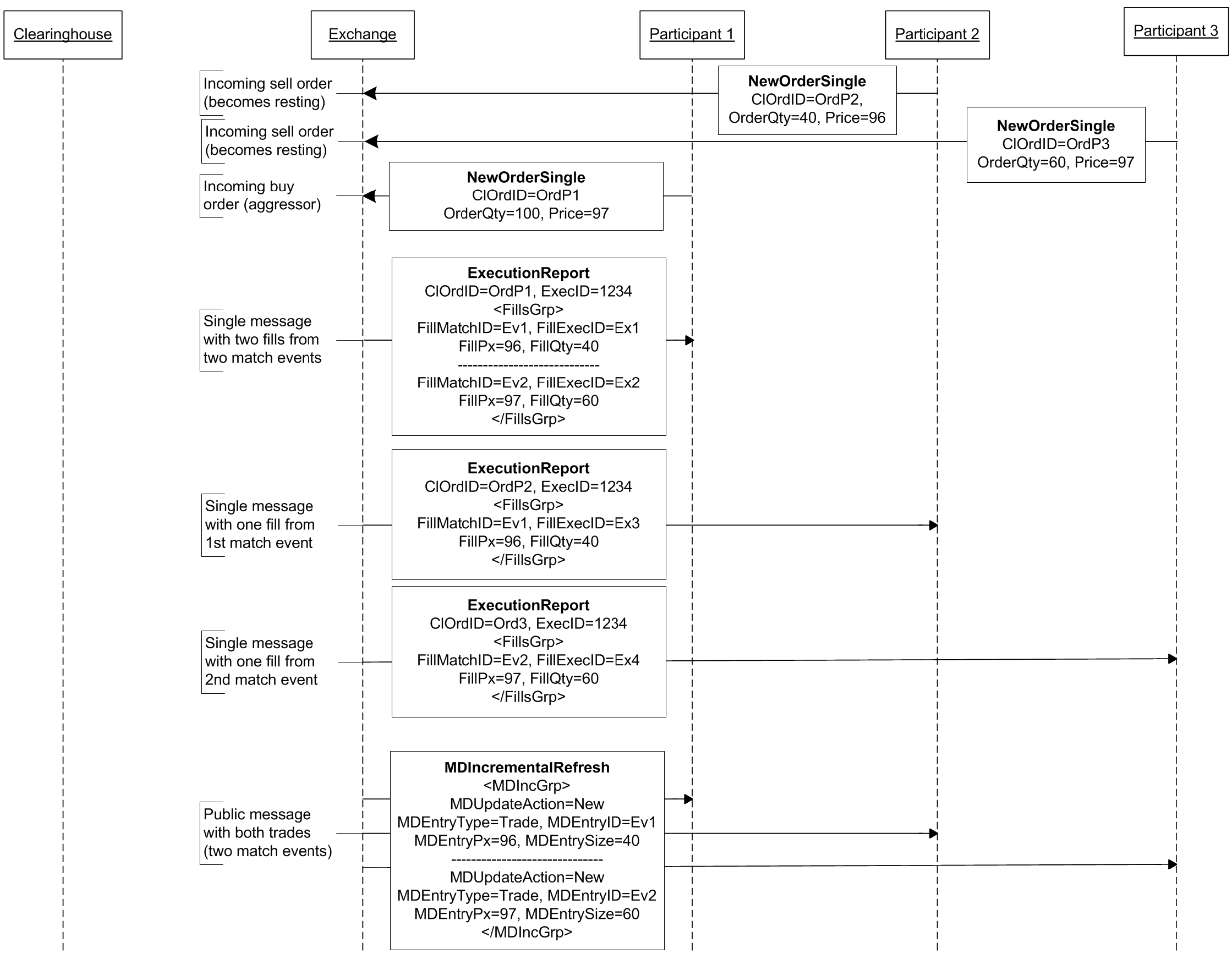
When a quote is matched, a Quote Execution Notification is sent to the owning session. The field *QuoteMsgID (1166)* contains the *QuoteID (117)* of the quote. Additionally the application message identifier *ApplMsgID (28704)* is provided to enable the retransmission of quote match events.

## 8.2 Trade Reconciliation and Identifiers

The following message flow shows a match event of an incoming aggressively matching order against two resting orders in the book at two different price levels.

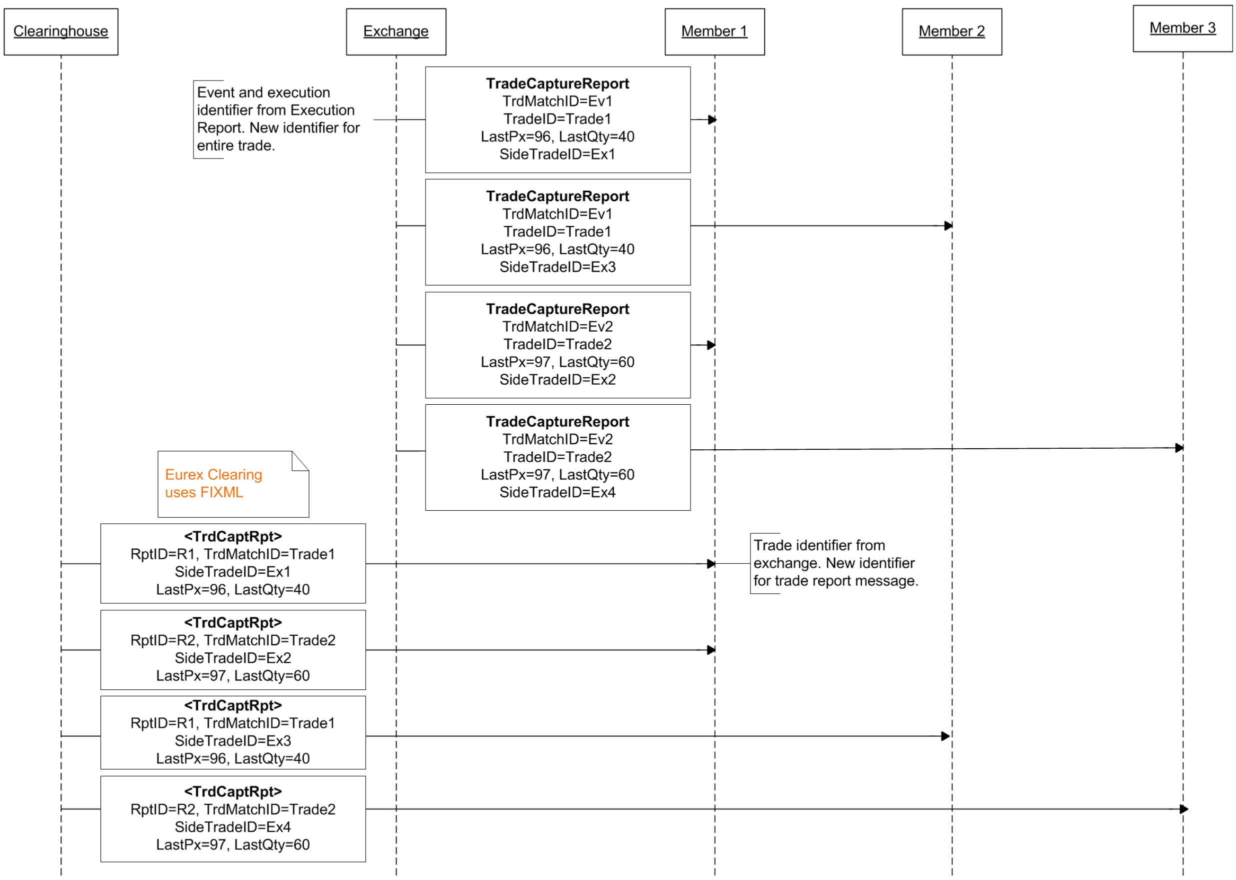
The focus of this message flow is to show, how trade reconciliation is based on the different execution and trade identifiers.

The first figure shows the relevant private execution identifiers and the identifier of the match event in the *Execution Report (8)* message as well as in the public trade information (message MDIncrementalRefresh refers to the BSE EMDI and BSE MDI interface).



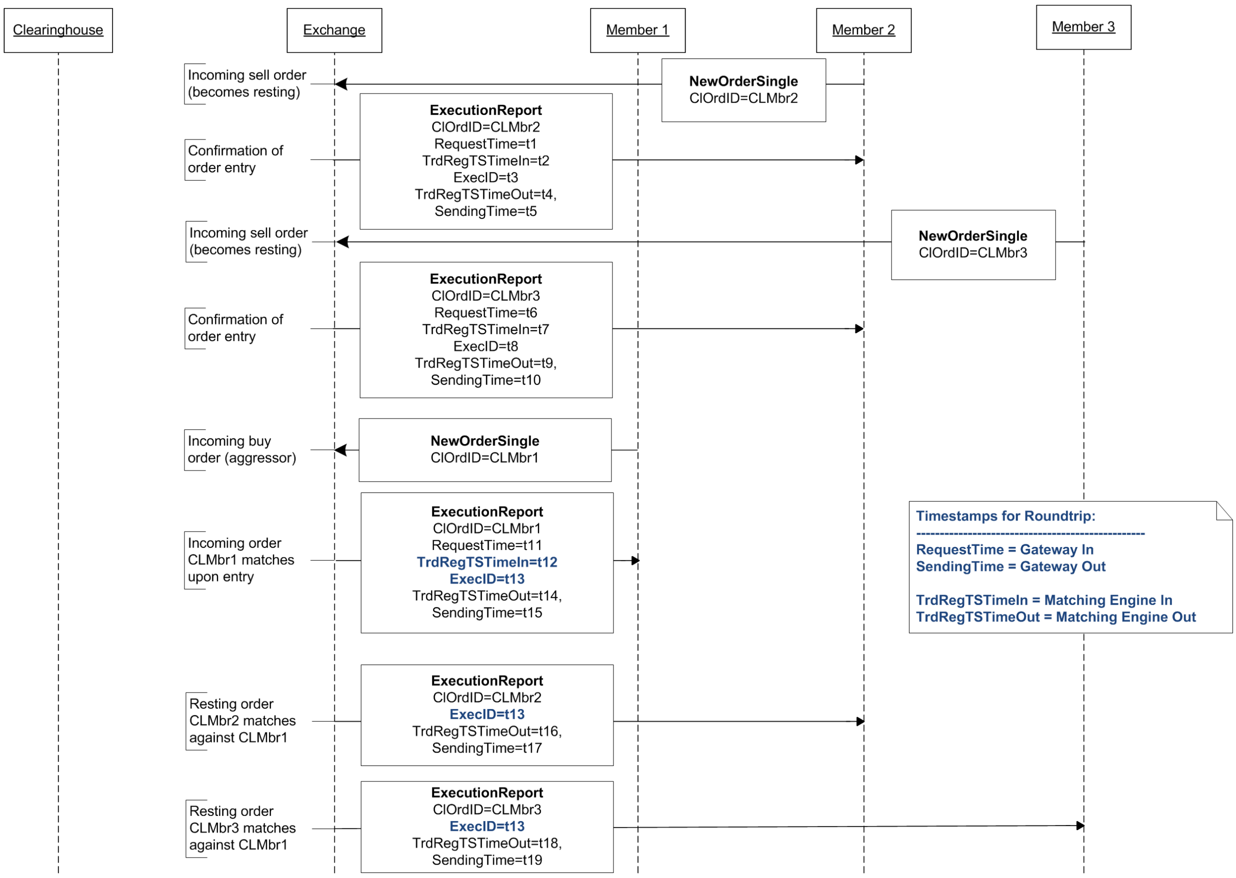
The second figure shows how the private execution identifiers and the identifier of the match event can also be found in the *Trade Capture Report (AE)*.

Additionally it is illustrated, how trades within the new BSE trading architecture can be mapped to the trade information provided by BSE Clearing.



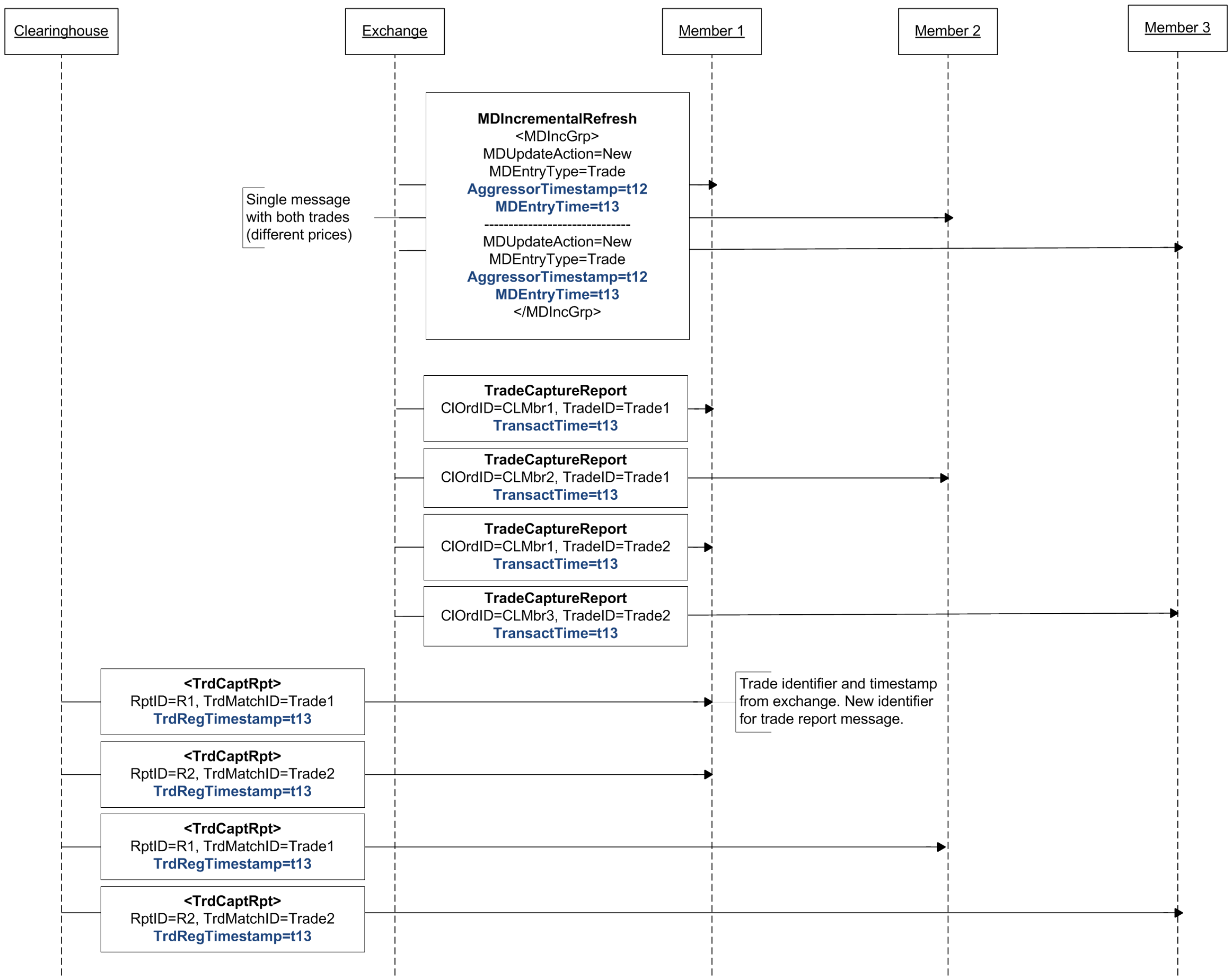
## 8.3 Reconciliation of Timestamps in BSE ETI and BSE EMDI

Transaction and matching engine in timestamps can be mapped in BSE ETI and BSE EMDI in order to identify own transactions that led to a public market data update as well as trades. A not 'successful' aggressor may investigate how much he was too late.



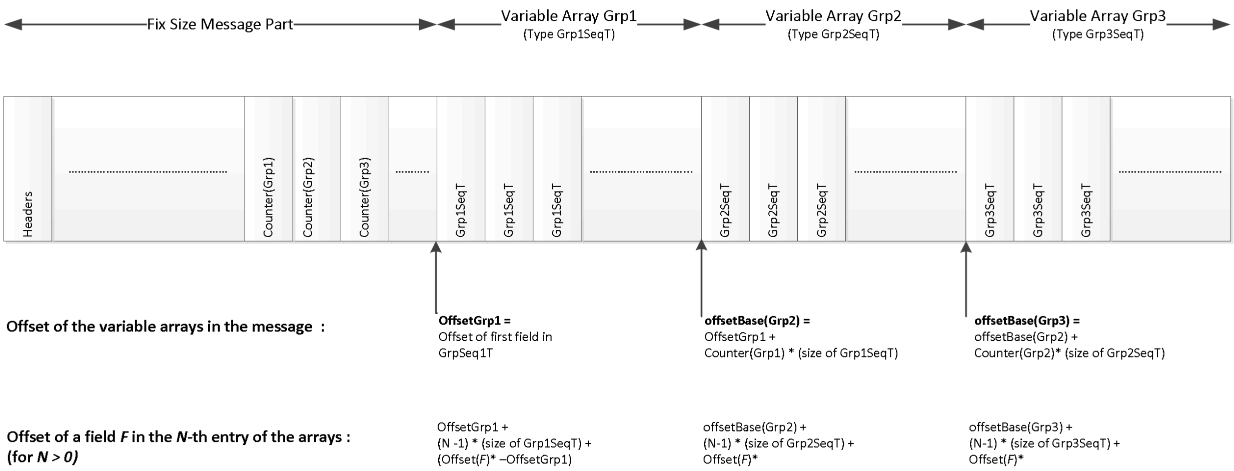

**T13**: *MDEntryTime (273)* in BSE EMDI maps to ExecID (17) in BSE ETI order / Quote responses and notifications as well as to *TransactTime (60)* in the BSE ETI Trade Notification.

**T12**: *AggressorTimeStamp (8820)* in BSE EMDI maps to *TrdRegTSTimeIn (21002)* in BSE ETI. It comprises the matching engine in time of the order that triggered the trade.


Clearinghouse
Exchange
Member 1
Member 2
Member 3
MDIncrementalRefresh
<MDIncGrp>
MDUpdateAction=New
MDEntryType=Trade
AggressorTimestamp=t12
MDEntryTime=t13
------------------------------
MDUpdateAction=New
MDEntryType=Trade
AggressorTimestamp=t12
MDEntryTime=t13
</MDIncGrp>
Single message with both trades (different prices)
TradeCaptureReport
ClOrdID=CLMbr1, TradeID=Trade1
TransactTime=t13
TradeCaptureReport
ClOrdID=CLMbr2, TradeID=Trade1
TransactTime=t13
TradeCaptureReport
ClOrdID=CLMbr1, TradeID=Trade2
TransactTime=t13
TradeCaptureReport
ClOrdID=CLMbr3, TradeID=Trade2
TransactTime=t13
<TrdCaptRpt>
RptID=R1, TrdMatchID=Trade1
TrdRegTimestamp=t13
Trade identifier and timestamp from exchange. New identifier for trade report message.
<TrdCaptRpt>
RptID=R2, TrdMatchID=Trade2
TrdRegTimestamp=t13
<TrdCaptRpt>
RptID=R1, TrdMatchID=Trade1
TrdRegTimestamp=t13
<TrdCaptRpt>
RptID=R2, TrdMatchID=Trade2
TrdRegTimestamp=t13

## 8.4 Variable Arrays

**How to Access Variable Arrays and Fields within Variable Arrays**




* Offset → taken from XML-file: value of the offset attribute of a field 'F' in a message

## 8.5 Uniqueness of Identifiers

The following table documents the criteria required for uniqueness of IDs.

| MMor (368) | Description | | | | |
|---|---|---|---|---|---|
| 11 | ClOrdID | Client Order ID: Unique participant defined order request identifier. | P[1] | The uniqueness of ClOrdID (11) is checked at entry time among currently live orders for the same instrument and session. Duplicate ClOrdID (11) values for the same session and instrument will be rejected with the exception of Immediate or Cancel (IOC) Orders. | Session Instrument |
| 37 | OrderID | Exchange Order ID generated by BSE System; it remains constant over the lifetime of an order. | E | An exchange order ID is guaranteed to be unique among all orders of the same product that have an open quantity on the same business day. | Product |
| 17 | ExecID | Transaction timestamp. | E | Is unique per product. | Product |
| 34 | MsgSeqNum | Message sequence number used by the participant for requests sent to the gateway. | P | The MsgSeqNum (34) in the request header must increment with each message sent by the participant to the gateway, starting with the Session Logon message as sequence number 1. | Session |
| 28704 | ApplMsgID | Application Message Identifier. | E | Is unique per software release and partition. Any kind of "reset" will be announced via the related release notes. | Software Release Partition |
| 1181 | ApplSeqNum | Application Message Sequence Number. | E | Trade notification: unique per business day, partition and business unit. Starts every business day with 1. | Partition Business Unit |
| | | | | News: unique per market. | Market |
| | | | | Risk Control: unique per business unit. | Business Unit |
| 880 28708 | TrdMatchID FillMatchID | Unique identifier for each price level (match step) of a match event; it is used for public trade reporting. | E | Is unique for the product of the order and business day. | Business Day Product |
| 1363 28725 1506 | FillExecID LegExecID SideTradeID | Private identifier of an order match step event, which can be reconciled with the field SideTradeID (1506) in the Trade Notification. | E | Is unique for the product of the order and business day. | BusinessDay Product |
| 1003 1126 | TradeID OrigTradeID | The TradeID (1003) field in the Trade Notification in BSE ETI uniquely identifies all order leg allocations referring to the same matching event, simple instrument and price. The TradeID (1003) is equivalent to the trade identifier in BSE Clearing. | E | Is unique per product and business day. | BusinessDay Product |

[1] P = Participant, E = BSE

## 8.6 XML Interface Description

The BSE ETI interface description is also available as a machine readable XML file. The structure of the XML is described by an XML schema file.

The XML file consists of the following parts and definitions:

| Definitions | Description |
|---|---|
| **MessageFlow** | **A "MessageFlow" is a flow diagram describing the system behavior from the user's point of view. The MessageFlow is represented as a tree of nodes.** |
| **ApplicationMessage** | **An "ApplicationMessage" represents a top-level structure which describes a message transmitted between the participant and user and the exchange. In contrast to the "Structure" definition, all components and repeating groups are uncollapsed. Valid values and description of fields are provided in the application scope.** |
| **Structure** | **A "Structure" is either the definition of a top-level-structure ("Message") or of a (repeated) sub-structure. Components and repeating groups are provided in a collapsed representation. All fields show the complete list of valid values.** |
| DataType | A "DataType" is the technical and functional description of a data field. Each "DataType" is part of a (multi-level) inheritance tree based on the following "rootTypes": **String**, **float**, **int**, and **data**. |

For a detailed description of all available XML elements and attributes please refer to the XML schema file.

# 9 Change Log

## 9.1 Major Changes compared to the version 1.6.3

| Chapter | Description |
|---|---|
| 7.6.1 Mass Quote Request<br>7.6.2 Quote Cancellation Notification<br>7.6.4 Quote Execution Notification<br>7.8.14 New Order Single<br>7.8.15 Extended Order Information<br>7.8.16 New Order Single (short layout<br>7.8.17 New Order Complex | New field ***STPCFlag (30651)*** added to accept the preference of cancellation in case of self-trade is encountered while matching. |
| 7.5.3 Trade Notification<br>7.8.14 New Order Single<br>7.8.15 Extended Order Information<br>7.8.17 New Order Complex<br>7.8.18 New Order Response (Standard Order)<br>7.8.19 New Order Response (Lean Order)<br>7.8.20 Immediate Execution Response<br>7.8.21 Book Order Execution<br>7.8.22 Replace Order Single<br>7.8.24 Replace Order Complex<br>7.8.25 Replace Order Response (Standard Order)<br>7.8.26 Replace Order Response (Lean Order) | Existing field *Filler3 (30648)* removed.<br><br>New fields *Filler4 (30652)* and *Filler5 (30653)* added for future use. |

| Chapter | Description |
|---|---|
| 7.8.16 New Order Single (short layout)<br>7.8.23 Replace Order Single (short layout) | New fields *Filler2 (30647)* and Filler4 (30652) added for future use. |
| 7.7.1 Connection Gateway Request<br>7.7.8 Session logon<br>7.7.9 Session Logon Response | The field DefaultCstmApplVerID(1408) must be set to 2.3 and the changes mentioned in change log needs to be handled in the application.<br><br>The existing message structures defined in API 1.6.3 will continue to be supported in parallel to the new structures defined in API 1.6.4.<br><br>The existing structures will be discontinued in near future with advance notification. |

## 9.2 Major Changes compared to the version 1.6.4

| Chapter | Description |
|---|---|
| 6.12 Order Handling for Exception Cases | Handling of Exception cases are added. |

## 9.3 Major Changes compared to the version 1.6.5

| Chapter | Description |
|---|---|
| 7.5.3 Trade Notification<br>7.8.14 New Order Single<br>7.8.15 Extended Order Information<br>7.8.17 New Order Complex<br>7.8.18 New Order Response (Standard Order)<br>7.8.19 New Order Response (Lean Order)<br>7.8.20 Immediate Execution Response<br>7.8.21 Book Order Execution<br>7.8.22 Replace Order Single<br>7.8.24 Replace Order Complex<br>7.8.25 Replace Order Response (Standard Order)<br>7.8.26 Replace Order Response (Lean Order) | Field *FreeText1 (58)* changed to *ClientCode (58)* |

| Chapter | Description |
|---|---|
| 7.5.3 Trade Notification<br>7.8.14 New Order Single<br>7.8.15 Extended Order Information<br>7.8.17 New Order Complex<br>7.8.18 New Order Response (Standard Order)<br>7.8.19 New Order Response (Lean Order)<br>7.8.20 Immediate Execution Response<br>7.8.21 Book Order Execution<br>7.8.22 Replace Order Single<br>7.8.24 Replace Order Complex<br>7.8.25 Replace Order Response (Standard Order)<br>7.8.26 Replace Order Response (Lean Order) | Field *Filler5 (30653)* changed to *RolloverFlag (30653)* |
| 7.7.7 Connection Gateway Response<br>7.7.9 Session Logon Response | New value *Disaster Recovery (5)* added to *TradSesMode (339)* |
| 7.5.1 Risk Collateral Alert Admin<br>7.5.2 Risk Collateral Alert Trader<br>7.5.8 Risk Notification | New value *Electronic Gold Receipts (EGR) (16)* added to *SegmentIndicator (30636)* |

## 9.4 Major Changes compared to the version 1.6.6

| Chapter | Description |
|---|---|
| 7.6.3 Mass Quote Response | New values added to *QuoteEntryRejectReason (368)* field:<br>*Client Code not allowed to trade in Trading Restriction Window-PIT (155).*<br>*Deactivated vide SEBI cir dtd 29-07-22 (156).* |
| 7.5.3 Trade Notification<br>7.5.4 Trade Enhancement Notification<br>7.6.1 Mass Quote Request<br>7.6.2 Quote Cancellation Notification<br>7.6.4 Quote Execution Notification<br>7.8.10 Extended Order Information (MultiLeg)<br>7.8.13 New Order MultiLeg<br>7.8.14 New Order Single<br>7.8.15 Extended Order Information<br>7.8.16 New Order Single (short layout)<br>7.8.17 New Order Complex<br>7.8.21 Book Order Execution<br>7.8.22 Replace Order Single<br>7.8.23 Replace Order Single (short layout)<br>7.8.24 Replace Order Complex | Removed AccountType *Special Client (40)* and *Institution (90)* |

## 9.5 Major Changes compared to the version 1.6.7

| Chapter | Description |
|---|---|
| **7.8.10 Extended Order Information (MultiLeg)**<br>**7.8.11 Immediate Execution Response(MultiLeg)**<br>**7.8.15 Extended Order Information**<br>**7.8.18 New Order Response (Standard Order)**<br>**7.8.19 New Order Response (Lean Order)**<br>**7.8.20 Immediate Execution Response**<br>**7.8.21 Book Order Execution**<br>**7.8.25 Replace Order Response (Standard Order)**<br>**7.8.26 Replace Order Response (Lean Order)**<br>**7.8.29 Cancel Order Response (Standard Order)**<br>**7.8.30 Cancel Order Response (Lean Order)**<br>**7.8.31 Cancel Order Notification** | **New value added to ExecRestatement-Reason (378) field:**<br>***Market Order Out Of Range (265).***<br>***Section 4.5.12 (Order Status and Execution Reports): New cases added for market order execution.*** |