Bombay Stock Exchange's NTA

Enhanced Trading Interface

Manual

Bombay Stock Exchange's NTA Release 2.1

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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.

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

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

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)**

Order Type	Description	Relevant FIX Tags
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**
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)**

Order Type	Description	Relevant FIX Tags
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. Recall is validated against existing sell position in that contract. Early Return is validated against existing buy position in that contract.**	**Side (54) = 3 Side (54) = 4**

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
  - *Freetext1(58)* i.e the client code is changed, or
  - *ExecType (150)* is "L = Triggered by system".

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:

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

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.** **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

74 digits: ETI 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

If type of user =0 (TWS) then Program Trading must be 0

If type of user =1 (IML) then Program Trading must be 0 to 7.

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) than 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.

Examples:

Digits	ETI Alloted by the Exchange	
	01001(Example 1)	**99999(Example 2)**
1st to 6th Digit	**Pin code of the area where ETI terminal is located**	**Pin code of the area where ETI terminal is located**
7th to 10th Digit	**0001**	**0099**
11th to 13th Digit	**001**	**099**
14th Digit	**Mode of Trading: Select relevant trading type applicable**	**Mode of Trading: Select relevant trading type applicable**
15th to 16th Digit	**#Vendor Code: Select relevant vendor code alloted by the Exchange**	**#Vendor Code: Select relevant vendor code alloted by the Exchange**

	01001(Example 1)	99999(Example 2)

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
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

Scenario	OrdStatus(39)	ExecType (150)	ExecRestatementReason (378)
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
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
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

Scenario	OrdStatus(39)	ExecType (150)	ExecRestatementReason (378)
Order replaced and cancelled because of trade reversal with partial execution	4=Cancelled	F=Trade	246=Trade reversal order deleted
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
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
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

Scenario	OrdStatus(39)	ExecType (150)	ExecRestatementReason (378)
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 Limit order added with provisional confirmation	9=Suspended	0=New	215= RRM Order Added
RRM Limit order added with final confirmation without execution	0=New	M=RRM Accept	216=RRM Order Accepted
RRM Limit order added with final confirmation with partial execution	1=Partially filled	F=Trade	216=RRM Order Accepted
RRM Limit order added with final confirmation with full execution	2=Filled	F=Trade	216=RRM Order Accepted
RRM Limit order final Rejection	9=Suspended	N=RRM Reject	219= RRM Order Deleted
RRM Market order added with provisional confirmation	9=Suspended	0=New	215= RRM Order Added
RRM Market order added with final confirmation without execution	0=New	D=Restated	220=RRM Market Order Triggered
RRM Market order added with final confirmation with partial execution	1=Partially filled	F=Trade	220=RRM Market Order Triggered
RRM Market order added with final confirmation with full execution	2=Filled	F=Trade	220=RRM Market Order Triggered
RRM Market order final Rejection	9=Suspended	N=RRM Reject	219= RRM Order Deleted
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

Scenario	OrdStatus(39)	ExecType (150)	ExecRestatementReason (378)
RRM IOC order final Rejection	9=Suspended	N=RRM Reject	219= RRM Order Deleted
REPLACE ORDER			
RRM Limit order replaced with provisional confirmation	9=Suspended	5=Replaced	215= RRM Order Added
RRM Limit order replaced with final confirmation without execution	0=New	M=RRM Accept	218= RRM Order Updated
RRM Limit order replaced with final confirmation with partial execution	1=Partially filled	F=Trade	218= RRM Order Updated
RRM Limit order replaced with final confirmation with full execution	2=Filled	F=Trade	218= RRM Order Updated
RRM Limit order final Rejection	9=Suspended	N=RRM Reject	217= RRM Order Update Rejected
RRM Limit to Market order replaced with provisional confirmation	9=Suspended	5=Replaced	215= RRM Order Added
RRM Limit to Market order replaced with final confirmation without execution	0=New	D=Restated	220=RRM Market Order Triggered
RRM Limit to Market order replaced with final confirmation with partial execution	1=Partially filled	F=Trade	220=RRM Market Order Triggered
RRM Limit to Market order replaced with final confirmation with full execution	2=Filled	F=Trade	220=RRM Market Order Triggered
RRM Limit to Market order final Rejection	9=Suspended	N=RRM Reject	217= RRM Order Update Rejected
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
Provisional Order Events			
NEW ORDER			
Provisional Limit order added with provisional confirmation	9=Suspended	0=New	221= Provisional Order Added
Provisional Limit order added with final confirmation without execution	0=New	X=Provisional Accept	222=Provisional Order Accepted

Scenario	OrdStatus(39)	ExecType (150)	ExecRestatementReason (378)
Provisional Limit order added with final confirmation with partial execution	1=Partially filled	F=Trade	222=Provisional Order Accepted
Provisional Limit order added with final confirmation with full execution	2=Filled	F=Trade	222=Provisional Order Accepted
Provisional Limit order final Rejection	9=Suspended	Y=Provisional Reject	225=Provisional Order Deleted
Provisional Market order added with provisional confirmation	9=Suspended	0=New	221=Provisional Order Added
Provisional Market order added with final confirmation without execution	0=New	D=Restated	135=Market order triggered
Provisional Market order added with final confirmation with partial execution	1=Partially filled	F=Trade	135=Market order triggered
Provisional Market order added with final confirmation with full execution	2=Filled	F=Trade	222=Provisional Order Accepted
Provisional Market order final Rejection	9=Suspended	Y=Provisional Reject	225=Provisional Order Deleted
Provisional IOC order added with provisional confirmation	9=Suspended	0=New	221=Provisional Order Added
Provisional IOC order added with final confirmation without execution	4=Cancelled	4=Cancelled	105=IOC order cancelled
Provisional IOC order added with final confirmation with partial execution	4=Cancelled	F=Trade	105=IOC order cancelled
Provisional IOC order added with final confirmation with full execution	2=Filled	F=Trade	222=Provisional Order Accepted
Provisional IOC order final Rejection	9=Suspended	Y=Provisional Reject	225=Provisional Order Deleted
Provisional Stop-loss Limit order added with provisional confirmation	9=Suspended	0=New	221=Provisional Order Added
Provisional Stop-loss Limit order added with final confirmation without trigger	0=New	X=Provisional Accept	222=Provisional Order Accepted

Scenario	OrdStatus(39)	ExecType (150)	ExecRestatementReason (378)
Provisional Stop-loss Limit order added with final confirmation with trigger without execution	0=New	L=Triggered	172=Stop order triggered
Provisional Stop-loss Limit order added with final confirmation with partial execution	1=Partially filled	F=Trade	172=Stop order triggered
Provisional Stop-loss Limit order added with final confirmation with full execution	2=Filled	F=Trade	172=Stop order triggered
Provisional Stop-loss Limit order final Rejection	9=Suspended	Y=Provisional Reject	225=Provisional Order Deleted
Provisional Stop-loss Market order added with provisional confirmation	9=Suspended	0=New	221=Provisional Order Added
Provisional Stop-loss Market order added with final confirmation without trigger	0=New	X=Provisional Accept	222=Provisional Order Accepted
Provisional Stop-loss Market order added with final confirmation with trigger without execution	0=New	D=Restated	135=Market order triggered
Provisional Stop-loss Market order added with final confirmation with partial execution	1=Partially filled	F=Trade	135=Market order triggered
Provisional Stop-loss Market order added with final confirmation with full execution	2=Filled	F=Trade	172=Stop order triggered
Provisional Stop-loss Market order final Rejection	9=Suspended	Y=Provisional Reject	225=Provisional Order Deleted
Provisional Stop-loss IOC order added with provisional confirmation	9=Suspended	0=New	221=Provisional Order Added
Provisional Stop-loss IOC order added with final confirmation without trigger	0=New	X=Provisional Accept	222=Provisional Order Accepted
Provisional Stop-loss IOC order added with final confirmation with trigger without execution	4=Cancelled	4=Cancelled	105=IOC order cancelled
Provisional Stop-loss IOC order added with final confirmation with partial execution	1=Partially filled	F=Trade	172=Stop order triggered

Scenario	OrdStatus(39)	ExecType (150)	ExecRestatementReason (378)
Provisional Stop-loss IOC order added with final confirmation with full execution	2=Filled	F=Trade	172=Stop order triggered
Provisional Stop-loss IOC order final Rejection	9=Suspended	Y=Provisional Reject	225=Provisional Order Deleted
REPLACEORDER			
Provisional Limit order replaced with provisional confirmation	9=Suspended	5=Replaced	221=Provisional Order Added
Provisional Limit order replaced with final confirmation without execution	0=New	X=Provisional Accept	224=Provisional Order Updated
Provisional Limit order replaced with final confirmation with partial execution	1=Partially filled	F=Trade	224=Provisional Order Updated
Provisional Limit order replaced with final confirmation with full execution	2=Filled	F=Trade	224=Provisional Order Updated
Provisional Limit order replaced with final Rejection	9=Suspended	Y=Provisional Reject	223=Provisional Order Update Rejected
Provisional Limit to Market order replaced with provisional confirmation	9=Suspended	5=Replaced	221=Provisional Order Added
Provisional Limit to Market order replaced with final confirmation without execution	0=New	D=Restated	135=Market order triggered
Provisional Limit to Market order replaced with final confirmation with partial execution	1=Partially filled	F=Trade	135=Market order triggered
Provisional Limit to Market order replaced with final confirmation with full execution	2=Filled	F=Trade	224=Provisional Order Updated
Provisional Limit to Market order replaced with final Rejection	9=Suspended	Y=Provisional Reject	223=Provisional Order Update Rejected
Provisional Limit to IOC order replaced with provisional confirmation	9=Suspended	5=Replaced	221=Provisional Order Added
Provisional Limit to IOC order replaced with final confirmation without execution	4=Cancelled	4=Cancelled	105=IOC order cancelled

Scenario	OrdStatus(39)	ExecType (150)	ExecRestatementReason (378)
Provisional Limit to IOC order replaced with final confirmation with partial execution	1=Partially filled	F=Trade	105=IOC order cancelled
Provisional Limit to IOC order replaced with final confirmation with full execution	2=Filled	F=Trade	224=Provisional Order Updated
Provisional Limit to IOC order replaced with final Rejection	9=Suspended	Y=Provisional Reject	224=Provisional Order Updated
Provisional Stop-loss Limit to Market order replaced with provisional confirmation	9=Suspended	5=Replaced	221=Provisional Order Added
Provisional Stop-loss Limit to Market order replaced with final confirmation without trigger	0=New	X=Provisional Accept	224=Provisional Order Updated
Provisional Stop-loss Limit to Market order replaced with final confirmation with trigger without execution	0=New	D=Restated	135=Market order triggered
Provisional Stop-loss Limit to Market order replaced with final confirmation with partial execution	1=Partially filled	F=Trade	135=Market order triggered
Provisional Stop-loss Limit to Market order replaced with final confirmation with full execution	2=Filled	F=Trade	172=Stop order triggered
Provisional Stop-loss Limit to Market order final Rejection	9=Suspended	Y=Provisional Reject	223=Provisional Order Update Rejected
Provisional Stop-loss Limit to IOC order replaced with provisional confirmation	9=Suspended	5=Replaced	221=Provisional Order Added
Provisional Stop-loss Limit to IOC order replaced with final confirmation without trigger	0=New	X=Provisional Accept	224=Provisional Order Updated
Provisional Stop-loss Limit to IOC order replaced with final confirmation with trigger without execution	4=Cancelled	4=Cancelled	105=IOC order cancelled
Provisional Stop-loss Limit to IOC order replaced with final confirmation with partial execution	1=Partially filled	F=Trade	172=Stop order triggered

Scenario	OrdStatus(39)	ExecType (150)	ExecRestatementReason (378)
Provisional Stop-loss Limit to IOC order replaced with final confirmation with full execution	2=Filled	F=Trade	172=Stop order triggered
Provisional Stop-loss Limit to IOC order final Rejection	9=Suspended	Y=Provisional Reject	224=Provisional Order Updated
DELETE ORDER			
Provisional order deleted during provisional confirmation	4=Cancelled	Y=Provisional Reject	103=Order Cancelled
Provisional order deleted after final confirmation	4=Cancelled	Y=Provisional 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)

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
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 and Mass Cancellation Events

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>.

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:

Mass Cancellation Event	Persistent Orders	Non-persistent Orders
Product Holiday	No	No
Product Halt	No	Yes
Instrument Suspension	No	No
Instrument Expiration	No	No
Product State Change (Applicable for Post Closing and End of Day)		Yes

Mass Cancellation Event messages are sent to all sessions, regardless if orders or quotes were entered for a product by the session. .

4.14 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.

4.15 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.

Note: Currently all sessions will be classified as HF sessions only. Support for LF session may be provided in future.

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

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.

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 "BSE Exchange's New Trading Architecture - Network Access to Exchange Applications".

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 4th 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 15th 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 15th 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 minimum value is 100 milliseconds in the production system. The upper limit is 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.

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.

RefAppID (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.

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.

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

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 message then all the open orders of the participants are cancelled and mass cancellation notification is sent to all the sessions of the business unit having open orders, All subsequent fresh orders are subjected to position checks before acceptance. The 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 same provisional confirmation holds true for the Replace orders request also.

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.

6.12 Order Handling for Provisional orders

Certain Orders needs to be pre validated for capital/position check before it could be sent for matching. The orders currently pre validated for capital check are

High Value Orders (Provisional) - All orders having order value larger than a value defined by exchange are considered as High value orders and are subjected to collateral check.

The orders pre validated for position are
Recall/EarlyReturn - These orders are validated against existing positions.

All such orders are called provisional orders and will be provided provisional confirmation followed by final confirmation. All fresh orders are acknowledged using the new order response message. This is provisional confirmation. The field ExecRestatementReason(378)=221 in New order response message indicates provisional confirmation. The same provisional confirmation holds true for the replace order request also.

The provisional confirmation will be followed by the final confirmation through the message Extended order information. The field ExecRestatementReason(378)=222 or 224 in the message will specify the final state of confirmation I.e. the order is either accepted.

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 - supported are 1, 2, 4 and 8-byte, signed integers - two's complement representation	1 byte signed int: 0x80 2 byte signed int: 0x8000 4 byte signed int: 0x80000000 8 byte signed int: 0x8000000000000000
unsigned int	▪ - little endian byte order - supported are 1, 2, 4 and 8-byte, unsigned integers	1 byte unsigned int: 0xFF 2 byte unsigned int: 0xFFFF 4 byte unsigned int: 0xFFFFFFFF 8 byte unsigned int: 0xFFFFFFFFFFFFFFFF
Float	▪ - encoded as 8-byte signed integer 8 implicit decimals	0x8000000000000000
Fixed String	▪ - length information specifies the fixed size - encoded as character array - completely filled with valid characters (space padding if required)	0x00 at the first position
Fixed String (0- terminable)	▪ - length information specifies the fixed size - encoded as character array optionally 0-terminable (minimum string size of 1) - XML file: attribute "isTerminable" is set to true - padding after 0-terminator required up to fixed size	0x00 at the first position

ETI Data Type	Description	No Value[2]
Variable String	▪ - length information specifies the maximum possible size - separate counter field specifies the transmitted string size - XML file: attribute "variableSize" set to true - 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: ▪ - the length information specifies the fixed size - encoded as byte array - byte array is always filled completely	Each byte filled with 0x00.
chartext	▪ - length information specifies the fixed size - encoded as character array optionally 0-terminable (minimum string size of 1) - XML file: attribute "isTerminable" is set to true - padding after 0-terminator required up to fixed size	0x00 at the first position

ETI Data Type	Description	No Value[3]

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
111	Ask Price Exceed Range
115	Instrument State Freeze
116	Cancellation Already Pending
131	Incompatible Instrument State

[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

7.4 Overview of Supported Message Types

The following message formats are based on:

- Interface Version: 2.2
- Build Number: 502.003.701-502003700.61

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
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. Belongs to the scope of Service Availability and Retransmit requests.
1352	ApplResendFlag	Y	1	30	unsigned int	Indicates a retransmission message. Value: Description 0: False 1: True
1180	ApplID	Y	1	31	unsigned int	Identifier for an ETI data stream. Value: Description 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. Value: Description 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.

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

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
30636	SegmentIndicator	N	1	87	unsigned int	The applicable segment. Value: Description 2: Equity 7: Currency Derivatives (Full Segment) 8: Currency Asset Class (CDX) 9: Interest Rate Asset Class (IRD) 11: Equity Derivatives 12: Derivatives 15: Commodity Derivatives
30650	Duration	N	1	88	unsigned int	Value: Description 1: NEAR 2: MID 3: FAR
58	FreeText1	N	12	89	Chartext	The Unique Client Code (UCC) of the person for whom the order is entered. 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
30619	BusinessUnitSymbol	Y	8	101	Fixed String	The member ID for whom the alert is sent Valid characters: \x01-\x7E
25018	Pad3	U	3	109	Fixed String	not used
30355	VarText	N	2000	112	Variable String	Error text. 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. Belongs to the scope of Service Availability and Retransmit requests.
1352	ApplResendFlag	Y	1	30	unsigned int	Indicates a retransmission message. Value: Description 0: False 1: True
1180	ApplID	Y	1	31	unsigned int	Identifier for an ETI data stream. Value: Description 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. Value: Description 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

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
1300	MarketSegmentID	N	4	52	signed int	Product identifier.
1301	MarketID	Y	2	56	unsigned int	Market ID. Value: Description 1: BSE 2: XEEE *: More Values
30354	VarTextLen	N	2	58	Counter	Number of bytes for field VarText (30355).
30611	RRMState	N	1	60	unsigned int	The field indicates the RRM state of the member. Value: Description 0: No RRM 1: In RRM 2: Out Of RRM
30620	MemberType	N	1	61	unsigned int	The field indicates the type of member for whom the alert is sent. Value: Description 1: Trading Member 2: Clearing Member 3: Proprietary
30618	IncrementDecrement-Status	N	1	62	signed int	Indicates if the collateral utilization has changed with respect to previous state. Value: Description 1: Increment 0: No Change -1: Decrement
30636	SegmentIndicator	N	1	63	unsigned int	The applicable segment Value: Description 2: Equity 7: Currency Derivatives (Full Segment) 8: Currency Asset Class (CDX) 9: Interest Rate Asset Class (IRD) 11: Equity Derivatives 12: Derivatives 15: Commodity Derivatives

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
30650	Duration	N	1	64	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	FreeText1	N	12	65	Chartext	The Unique Client Code (UCC) of the person for whom the order is entered. 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
30619	BusinessUnitSymbol	Y	8	77	Fixed String	The Member ID for whom the alert is sent Valid characters: \x01-\x7E
25018	Pad3	U	3	85	Fixed String	not used
30355	VarText	N	2000	88	Variable String	Error text. Valid characters: \x09,\x0A,\x0D, \x20,\x22-\x7B,\x7D,\x7E

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. Belongs to the scope of Service Availability and Retransmit requests.
1352	ApplResendFlag	Y	1	30	unsigned int	Indicates a retransmission message. Value: Description 0: False 1: True
1180	ApplID	Y	1	31	unsigned int	Identifier for an ETI data stream. Value: Description 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. Value: Description 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	RootPartyIDExecuting-Unit	Y	4	168	unsigned int	Business Unit ID.
20455	RootPartyIDSessionID	N	4	172	unsigned int	Session ID.
20412	RootPartyIDExecuting-Trader	Y	4	176	unsigned int	Owning User ID.
25026	RootPartyIDClearing-Unit	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. Value: Description 1: Single Order 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 Value: Description 1: Owner 2: Clearer
30653	Filler5	N	1	237	unsigned int	not used
20432	RootPartyIDBeneficiary	N	9	238	Fixed String	not used Valid characters: \x20,\x22-\x7B, \x7D,\x7E
20496	RootPartyIDTakeUp-TradingFirm	N	5	247	Fixed String	not used Valid characters: \x20,\x22-\x7B, \x7D,\x7E
20413	RootPartyIDOrder-OriginationFirm	N	7	252	Fixed String	not used Valid characters: A-Z,0-9,\x20

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
581	AccountType	Y	1	259	unsigned int	<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><tr><td>40</td><td>Special Client</td></tr><tr><td>90</td><td>Institution</td></tr></table>
574	MatchType	N	1	260	unsigned int	The point in the matching process at which this trade was matched.<table><tr><th>Value</th><th>Description</th></tr><tr><td>4</td><td>Auto Match Incoming</td></tr><tr><td>7</td><td>Call Auction</td></tr><tr><td>11</td><td>Auto Match Resting</td></tr></table>
28610	MatchSubType	N	1	261	unsigned int	not used<table><tr><th>Value</th><th>Description</th></tr><tr><td>1</td><td>Opening Auction</td></tr><tr><td>3</td><td>Intraday Auction</td></tr></table>
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.<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><tr><td>3</td><td>Recall</td></tr><tr><td>4</td><td>Early Return</td></tr></table>
1057	AggressorIndicator	N	1	263	unsigned int	Indicates whether the order added or removed liquidity.<table><tr><th>Value</th><th>Description</th></tr><tr><td>0</td><td>Passive</td></tr><tr><td>1</td><td>Aggressive</td></tr></table>
1815	TradingCapacity	Y	1	264	unsigned int	not used
1	Account	N	2	265	Fixed String	not used Valid characters: 1-9,\x41,\x47,\x4D,\x50
77	PositionEffect	N	1	267	char	not used Valid characters: \x01-\x7E
1031	CustOrderHandlingInst	N	1	268	Fixed String	not used. Valid characters: \x20,\x22-\x7B,\x7D,\x7E

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
30649	AlgoID	N	16	269	Fixed String (0-terminable)	Unique identifier of the algorithm. Valid characters: A-Z,0-9
58	FreeText1	Y	12	285	Chartext	The Unique Client Code (UCC) of the person for whom the order is entered. 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
30642	CPCode	N	12	297	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
25009	FreeText3	N	12	309	Chartext	Free-format text field for trader-specific or customer-related comments. 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
1115	OrderCategory	N	1	321	char	Indicates if the trade notification results from an order. Value: Description 1: Order 2: Quote 3: Multi Leg Order
40	OrdType	N	1	322	unsigned int	Order type. Value: Description 2: Limit 3: Stop Market 4: Stop Limit 5: Market 6: Block Deal

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
28587	RelatedProduct-Complex	N	1	323	unsigned int	Instrument type of the original BSE strategy. Value: Description 2: Standard Option Strategy 5: Futures Spread
28586	OrderSide	N	1	324	unsigned int	Side of the order in the original BSE strategy. Value: Description 1: Buy 2: Sell 3: Recall 4: Early Return
22421	RootPartyClearing-Organization	Y	4	325	Fixed String	not used Valid characters: \x20,\x22-\x7B, \x7D,\x7E
22401	RootPartyExecuting-Firm	Y	5	329	Fixed String	Participant Short Name. Valid characters: \x20,\x22-\x7B, \x7D,\x7E
22412	RootPartyExecuting-Trader	Y	6	334	Fixed String	Owning User Short Name. Valid characters: \x20,\x22-\x7B, \x7D,\x7E
22404	RootPartyClearingFirm	Y	5	340	Fixed String	not used 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. Belongs to the scope of Service Availability and Retransmit requests.
1352	ApplResendFlag	Y	1	30	unsigned int	Indicates a retransmission message. Value: Description 0: False 1: True
1180	ApplID	Y	1	31	unsigned int	Identifier for an ETI data stream. Value: Description 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. Value: Description 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.

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
60	TransactTime	N	8	56	UTCTimestamp	Transaction timestamp.
37	OrderID	N	8	64	unsigned int	Exchange Order ID generated by BSE System; it remains constant over the lifetime of an order.
1003	TradeID	N	4	72	unsigned int	Uniquely identifies all order leg allocations referring to the same match event, simple instrument and price.
20455	RootPartyIDSessionID	Y	4	76	unsigned int	Session ID.
1506	SideTradeID	Y	4	80	unsigned int	Private trade identifier of an order match step.
1300	MarketSegmentID	N	4	84	signed int	Product identifier.
28582	MatchDate	N	4	88	LocalMktDate	Business day of the match event.
28736	ClearingTradeQty	N	4	92	Qty	The Traded quantity.
581	AccountType	N	1	96	unsigned int	<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><tr><td>40</td><td>Special Client</td></tr><tr><td>90</td><td>Institution</td></tr></table>
54	Side	N	1	97	unsigned int	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>
754	AutoAcceptIndicator	N	1	98	Boolean	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>
30642	CPCode	N	12	99	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

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
58	FreeText1	N	12	111	Chartext	The Unique Client Code (UCC) of the person for whom the order is entered. 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	123	Fixed String	not used

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. Belongs to the scope of Service Availability and Retransmit requests.
1352	ApplResendFlag	Y	1	30	unsigned int	Indicates a retransmission message. Value: Description 0: False 1: True
1180	ApplID	Y	1	31	unsigned int	Identifier for an ETI data stream. Value: Description 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. Value: Description 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. Value: Description 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. Value: Description 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. Value: Description 0: Not Last Message 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. Belongs to the scope of Service Availability and Retransmit requests.

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

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. Belongs to the scope of Service Availability and Retransmit requests.
1352	ApplResendFlag	Y	1	30	unsigned int	Indicates a retransmission message. Value: Description 0: False 1: True
1180	ApplID	Y	1	31	unsigned int	Identifier for an ETI data stream. Value: Description 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. Value: Description 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. 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. 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. Belongs to the scope of Service Availability and Retransmit requests.
1352	ApplResendFlag	Y	1	30	unsigned int	Indicates a retransmission message. Value: Description 0: False 1: True
1180	ApplID	Y	1	31	unsigned int	Identifier for an ETI data stream. Value: Description 6: Risk Control 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. Value: Description 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	PartyDetailIDExecutingUnit	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. Value: 1 — Description: Eurex Clearing
1300	MarketSegmentID	N	4	60	signed int	Product identifier.
1301	MarketID	N	2	64	unsigned int	Market ID. Value: 1 — Description: BSE Value: 2 — Description: XEEE Value: * — Description: More Values
30643	RiskModeStatus	N	1	66	unsigned int	The field indicates the RRM or Suspension state of the member. Value: 1 — Description: IN Value: 2 — Description: OUT
30636	SegmentIndicator	N	1	67	unsigned int	The applicable segment. Value: 2 — Description: Equity Value: 7 — Description: Currency Derivatives (Full Segment) Value: 8 — Description: Currency Asset Class (CDX) Value: 9 — Description: Interest Rate Asset Class (IRD) Value: 11 — Description: Equity Derivatives Value: 12 — Description: Derivatives Value: 15 — Description: Commodity Derivatives
1324	ListUpdateAction	Y	1	68	char	Invocation (A = Add) or release (D = Delete) of a risk limitation. Value: A — Description: Add Value: D — Description: Delete
1767	RiskLimitAction	N	1	69	unsigned int	Risk protection action. Value: 4 — Description: Warning Value: 0 — Description: Queue Inbound Value: 2 — Description: Reject

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
30633	ScopeIdentifier	N	1	70	unsigned int	The Regulatory status of the member Value: Description 1: MEMBER SUSPENSION 2: POSITION LIMIT SUSPENSION 3: COLLATERAL SUSPENSION 4: COOLINGOFF SUSPENSION 5: POSITION LIMIT RRM 6: MARKET 7: COOLINGOFF RRM 8: COLLATERAL RRM 9: POSITION LIMIT RRM (NEAR MONTH CONTRACT)
58	FreeText1	N	12	71	Chartext	The Unique Client Code (UCC) of the person for whom the order is entered. 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
22807	RequestingParty-EnteringFirm	Y	9	83	Fixed String	Entering Entity Short Name. Valid characters: A-Z,0-9,\x20
22804	RequestingParty-ClearingFirm	N	9	92	Fixed String	not used Valid characters: A-Z,0-9,\x20
30619	BusinessUnitSymbol	N	8	101	Fixed String	The member ID for whom the alert is sent Valid characters: \x01-\x7E
25018	Pad3	U	3	109	Fixed String	not used

7.5.9 Trading Session Event

This message informs about session related events. For more details, please refer to chapter 4.14 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. 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. Value: Description 4: Session Data 5: Listener Data
1352	ApplResendFlag	Y	1	47	unsigned int	Indicates a retransmission message. Value: Description 0: False 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. Value: Description 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. Value: Description 101: Start Of Service 102: Market Reset 103: End Of Restatement 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 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. 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. Value: Description 4: Session Data 5: Listener Data
1352	ApplResendFlag	Y	1	47	unsigned int	Indicates a retransmission message. Value: Description 0: False 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. Value: Description 1: Last Message
25022	Pad7	U	7	49	Fixed String	not used
<Message Body>						
1369	MassActionReportID	Y	8	56	UTCTimestamp	Transaction timestamp.

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

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.

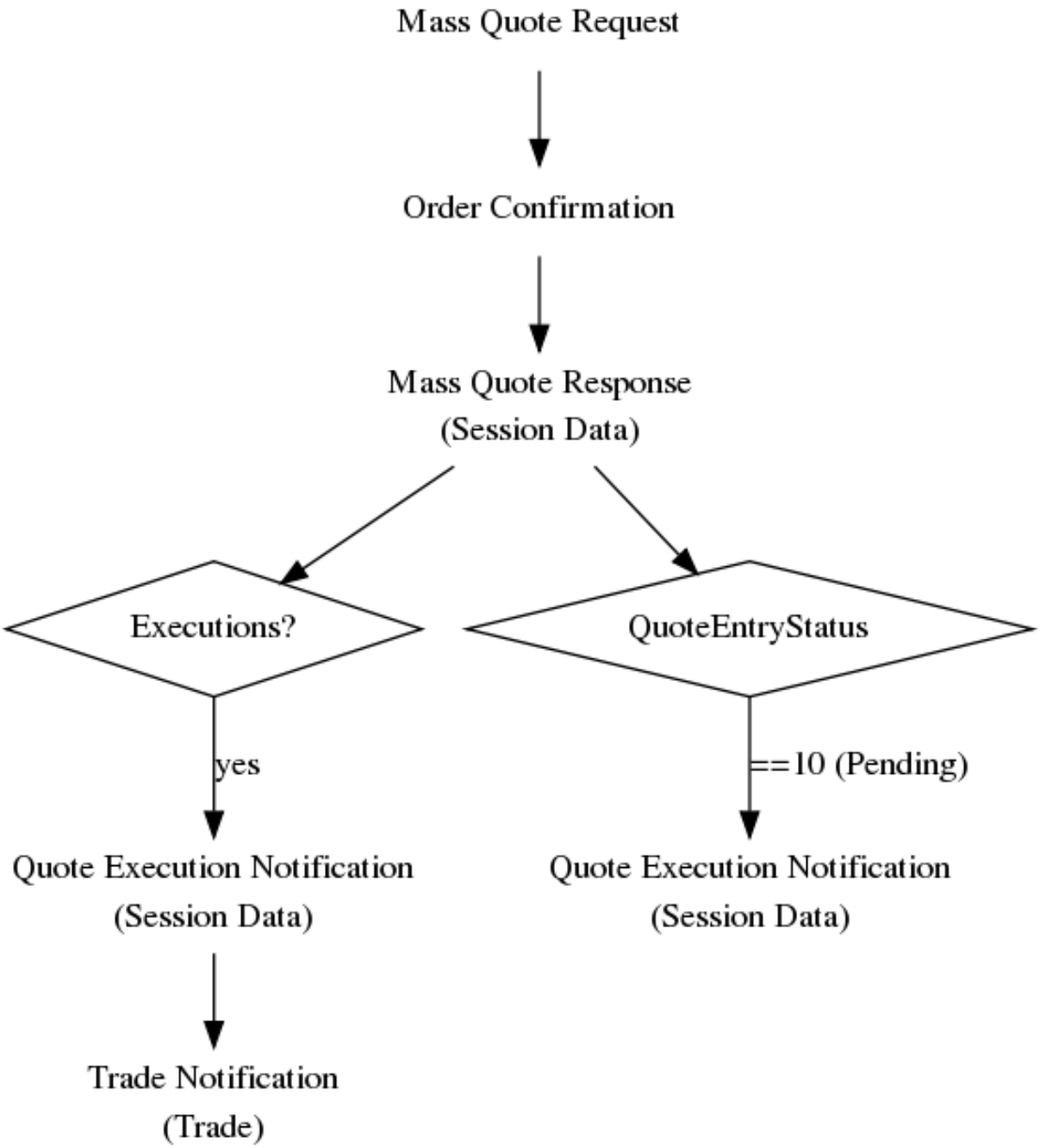
Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
<MessageHeaderOut>						
9	BodyLen	Y	4	0	unsigned int	Number of bytes for the message, including this field.
28500	TemplateID	Y	2	4	unsigned int	Unique identifier for a BSE ETI message layout. Value: 10032 (ApplicationMessageReport, MsgType = BY)
25017	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. Value: Description 105: Outbound Conversion Error *: 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. Value: Description 0: Trade Enhancement 1: Trade 2: News 3: Service Availability 4: Session Data 5: Listener Data 6: Risk Control 8: Risk Admin
1409	SessionStatus	Y	1	27	unsigned int	Session status. Value: Description 0: Session active 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. 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: 20 Own; 30 Client; 40 Special Client; 90 Institution
28710	PriceValidityCheckType	Y	1	51	unsigned int	not used. Value: 0 None
28723	QuoteSizeType	Y	1	52	unsigned int	Identifies the quoting model. Value: 1 Total Size (Quote Modification); 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. Value: 0 Passive; 1 Active

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
295	NoQuoteEntries	Y	1	54	Counter	The number of quote entries for a Mass Quote.
30649	AlgoID	N	16	55	Fixed String (0-terminable)	Unique identifier of the algorithm. Valid characters: A-Z,0-9
58	FreeText1	Y	12	71	Chartext	The Unique Client Code (UCC) of the person for whom the order is entered. 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
30642	CPCode	N	12	83	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
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.

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: 10412 (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	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. 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. Value: Description 4: Session Data
1352	ApplResendFlag	Y	1	47	unsigned int	Indicates a retransmission message. Value: Description 0: False 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. Value: Description 0: Not Last Message 1: Last Message
25022	Pad7	U	7	49	Fixed String	not used
<Message Body>						
17	ExecID	Y	8	56	UTCTimestamp	Transaction timestamp.
28706	NoQuoteEvents	Y	1	64	Counter	Number of QuoteEvent repeating group instances.

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. Value: Description 0: Passive 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. Value: Description 3: Removed Quote Side 4: Partially Filled 5: Filled
28581	>QuoteEventSide	Y	1	129	unsigned int	Side of the quote. Value: Description 1: Buy 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. Value: Description 1: Added Liquidity 2: Removed Liquidity
28733	>QuoteEventReason	N	1	131	unsigned int	Additional information why quote side was removed. Value: Description 14: Pending Cancellation Executed 15: Invalid Price 16: Self Trade Quote Deleted 17: Reverse Trade Quote Deleted 18: Client RRM Quote Deleted
581	>AccountType	Y	1	132	unsigned int	Value: Description 20: Own 30: Client 40: Special Client 90: Institution
30649	>AlgoID	N	16	133	Fixed String (0-terminable)	Unique identifier of the algorithm. Valid characters: A-Z,0-9
58	>FreeText1	Y	12	149	Chartext	The Unique Client Code (UCC) of the person for whom the order is entered. 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
30642	>CPCode	N	12	161	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
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. Value: Description 1: 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
<QuoteEntryAckGrp>						Cardinality: 0-100, Record counter: NoQuoteEntries

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
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	>QuoteEntryRejectReason	N	4	104	unsigned int	Reason code indicating why the quote entry has been rejected.

Value	Description
1	Unknown Security
6	Duplicate Quote
8	Invalid Price
16	No Reference Price Available
100	No Single Sided Quotes
103	Invalid Quoting Model
106	Invalid Size
107	Invalid Underlying Price
108	Bid Price Not Reasonable
109	Ask Price Not Reasonable
110	Bid Price Exceeds Range
111	Ask Price Exceeds Range
115	Instrument State Freeze
116	Cancellation Already Pending
117	Pre Trade Risk Session Limit Exceeded
118	Pre Trade Risk BU Limit Exceeded
131	Incompatible Instrument State
132	Location Id Not Set
133	Client Code Not Set
134	Client Cannot Be Modified
135	Client Type Not Set
136	Invalid Client Code For Client Type Own
137	Own Client Type Not Allowed
138	Message Tag Not Set
139	Price Beyond Circuit Limit
140	Quantity Not A Multiple Of Lot Size
141	Quotes Not Allowed In RRM
142	Amount Exceeds TVL
*	More Values

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. Value: Description 143: Quotes Not Allowed In Auction 144: Client Code Debarred 145: Price Not Multiple Of Tick Size 146: Quotes Not Allowed In Post Closing 147: Participant Code Cannot Be Modified 148: Client Type Cannot Be Modified 149: Quoting Not Allowed 150: Invalid Participant Code 151: Price Band Not Set 152: Tick Size Not Set 153: Client Type Not Allowed 154: Invalid Value *: More Values
1167	>QuoteEntryStatus	Y	1	108	unsigned int	Identifies the status of an individual quote. Value: Description 0: Accepted with warning 5: Rejected 6: Removed quote in book and Rejected 10: Pending
25018	>Pad3	U	3	109	Fixed String	not used

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. 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. Value: Description 4: Session Data
1352	ApplResendFlag	Y	1	47	unsigned int	Indicates a retransmission message. Value: Description 0: False 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. Value: Description 0: Not Last Message 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.

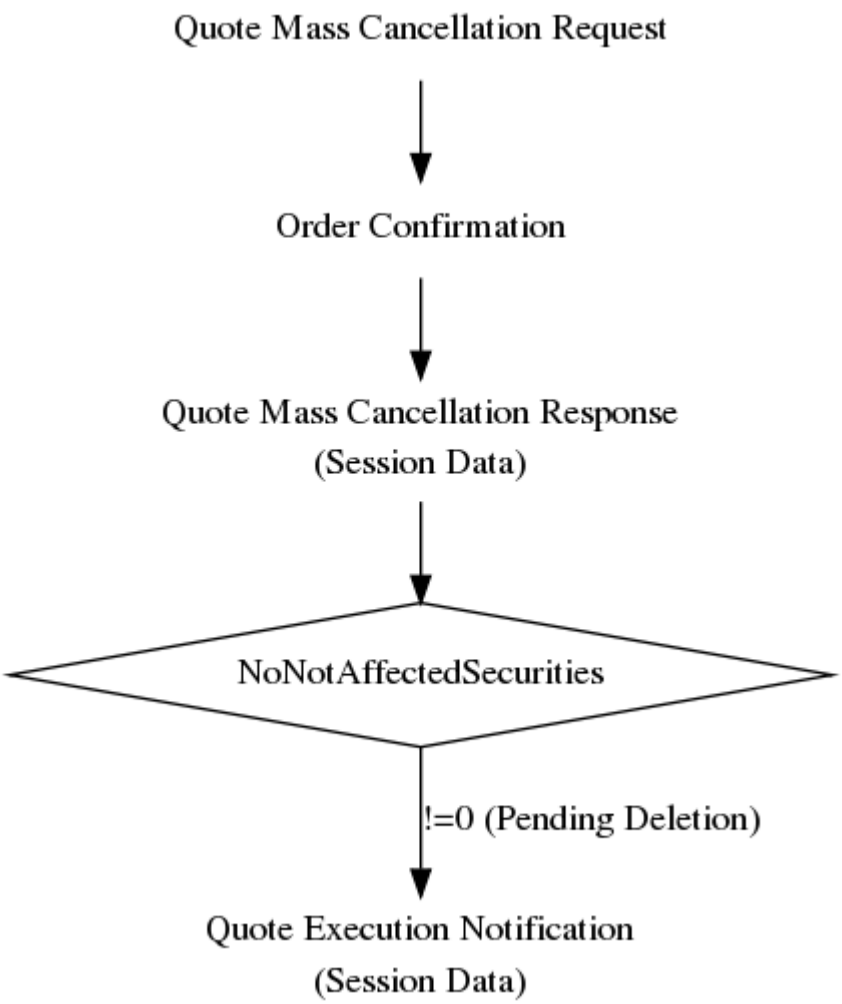
Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
28706	NoQuoteEvents	Y	1	70	Counter	Number of QuoteEvent repeating group instances.
30651	STPCFlag	Y	1	71	unsigned int	Indicates the preference of order to be cancelled if self-trade is encountered. Preference not applicable in a modification requests. Value: Description 0: Passive 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. Value: Description 3: Removed Quote Side 4: Partially Filled 5: Filled
28581	>QuoteEventSide	Y	1	129	unsigned int	Side of the quote. Value: Description 1: Buy 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. Value: Description 1: Added Liquidity 2: Removed Liquidity
28733	>QuoteEventReason	N	1	131	unsigned int	Additional information why quote side was removed. Value: Description 14: Pending Cancellation Executed 15: Invalid Price 16: Self Trade Quote Deleted 17: Reverse Trade Quote Deleted 18: Client RRM Quote Deleted
581	>AccountType	Y	1	132	unsigned int	Value: Description 20: Own 30: Client 40: Special Client 90: Institution
30649	>AlgoID	N	16	133	Fixed String (0-terminable)	Unique identifier of the algorithm. Valid characters: A-Z,0-9
58	>FreeText1	Y	12	149	Chartext	The Unique Client Code (UCC) of the person for whom the order is entered. 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
30642	>CPCode	N	12	161	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
25018	>Pad3	U	3	173	Fixed String	not used
<QuoteLegExecGrp>						Cardinality: 0-600, Record counter: NoLegExecs

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
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. Value: Description 1: Buy 2: Sell
25011	>NoQuoteEventsIndex	Y	1	25	unsigned int	Reference to the corresponding QuoteEvent repeating group instance.
25021	>Pad6	U	6	26	Fixed String	not used

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.

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
<Message Body>						
1300	MarketSegmentID	Y	4	24	signed int	Product identifier.
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. Value: Description 0: Not Last Message 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 Mass Cancellation Events.

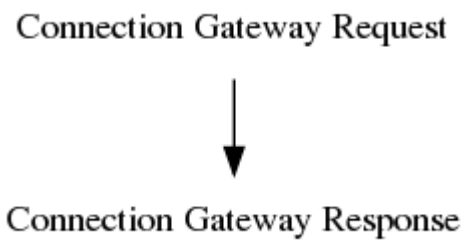
Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
<MessageHeaderOut>						
9	BodyLen	Y	4	0	unsigned int	Number of bytes for the message, including this field.
28500	TemplateID	Y	2	4	unsigned int	Unique identifier for a BSE ETI message layout. Value: 10410 (OrderMassActionReport, MsgType = BZ)
25017	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. 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. Value: Description 4: Session Data
1352	ApplResendFlag	Y	1	47	unsigned int	Indicates a retransmission message. Value: Description 0: False 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. Value: Description 0: Not Last Message 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.
20036	PartyIDEnteringTrader	N	4	80	unsigned int	Entering User ID.

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

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. Value: 1 = HF; 2 = LF
28735	>SessionSubMode	N	1	45	unsigned int	Is set. if SessionMode(28730) = 2(LF) Value: 0 = Regular Trading Session; 1 = FIX Trading Session; 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

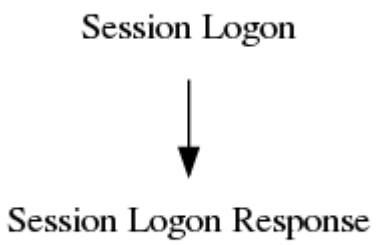
This message confirms the Connection Gateway request. For more details, please refer to chapter 5.2.1 IP Addresses and Ports.

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. 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. 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	SecondaryGatewaySubID	Y	4	44	unsigned int	Port number to be used for the assigned Secondary Application Gateway. 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>
</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. Value: Description A: Automated M: Manual B: Both (Automated and Manual) N: None
25013	ApplUsageQuotes	Y	1	95	char	not used Must be sent as N Value: Description A: Automated M: Manual B: Both (Automated and Manual) N: None
25014	OrderRoutingIndicator	Y	1	96	char	Indicates if the participant application is an order routing system. Value: Description Y: Yes N: No
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. Valid characters: \x20,\x22-\x7B, \x7D,\x7E
1601	FIXEngineVersion	N	30	127	Fixed String (0-terminable)	Provides the version of the FIX infrastructure component. 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. 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. 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. Valid characters: \x20,\x22-\x7B, \x7D,\x7E
1605	ApplicationSystem-Vendor	Y	30	247	Fixed String (0-terminable)	Provides the vendor of the application system. Valid characters: \x20,\x22-\x7B, \x7D,\x7E
25018	Pad3	U	3	277	Fixed String	not used

7.7.9 Session Logon Response

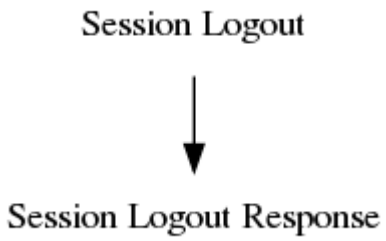
This message confirms the Session Logon request. For more details, please refer to chapter 5.2.2 Session Authentication and Logon.

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	ThrottleDisconnectLimit	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. Value: Description 1: Development 2: Simulation 3: Production 4: Acceptance
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 "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. Must be set as 2.3 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. 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

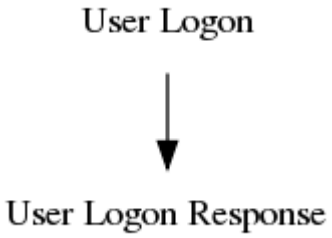
7.7.14 Heartbeat Notification

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

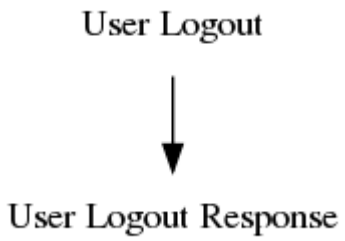
7.7.16 User Logon Response

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

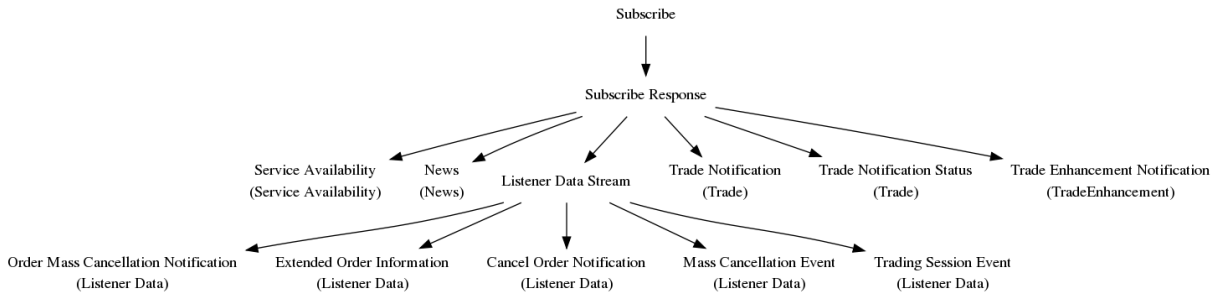
7.7.19 Throttle Update Notification

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 RefAppId (1355) and SubscriptionScope (25001) are not allowed. For more details, please refer to chapter 6.9 Broadcast.



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: 10025 (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>						
25001	SubscriptionScope	N	4	24	unsigned int	-Trade broadcast(Business Unit) : Wildcard (no value)[Applicable for admin session only] -Trade broadcast (Own Session) : Session ID - News broadcast: Market ID (1 = BSE) - Risk Control broadcast: "no value" - Service Availability: Partition ID or wildcard (no value) - Trading limits (User/ Group/ Instrument) : Session ID

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
1355	RefAppID	Y	1	28	unsigned int	Application identifier of a BSE ETI data stream. Value: Description 1: Trade 2: News 3: Service Availability 5: Listener Data 0: Trade Enhancement
25018	Pad3	U	3	29	Fixed String	not used

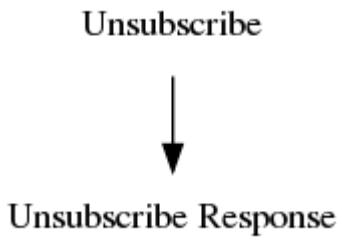
7.7.21 Subscribe Response

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

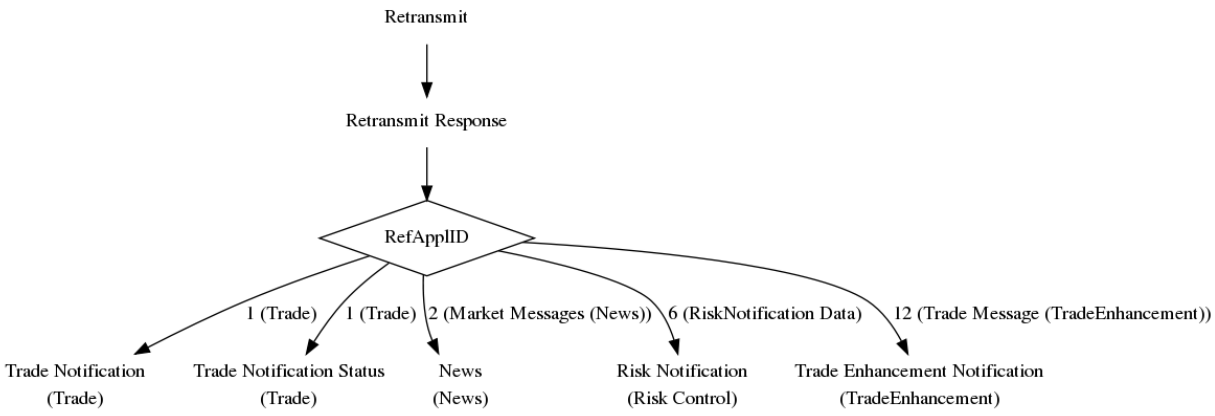
7.7.23 Unsubscribe Response

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.

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
25001	SubscriptionScope	N	4	40	unsigned int	-Trade broadcast(Business Unit) : Wildcard (no value)[Applicable for admin session only] -Trade broadcast (Own Session) : Session ID - News broadcast: Market ID (1 = BSE) - Risk Control broadcast: "no value" - Service Availability: Partition ID or wildcard (no value) - Trading limits (User/ Group/ Instrument) : Session ID
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. 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. Value: Description 1: Trade 2: News 6: Risk Control 8: Risk Admin 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.

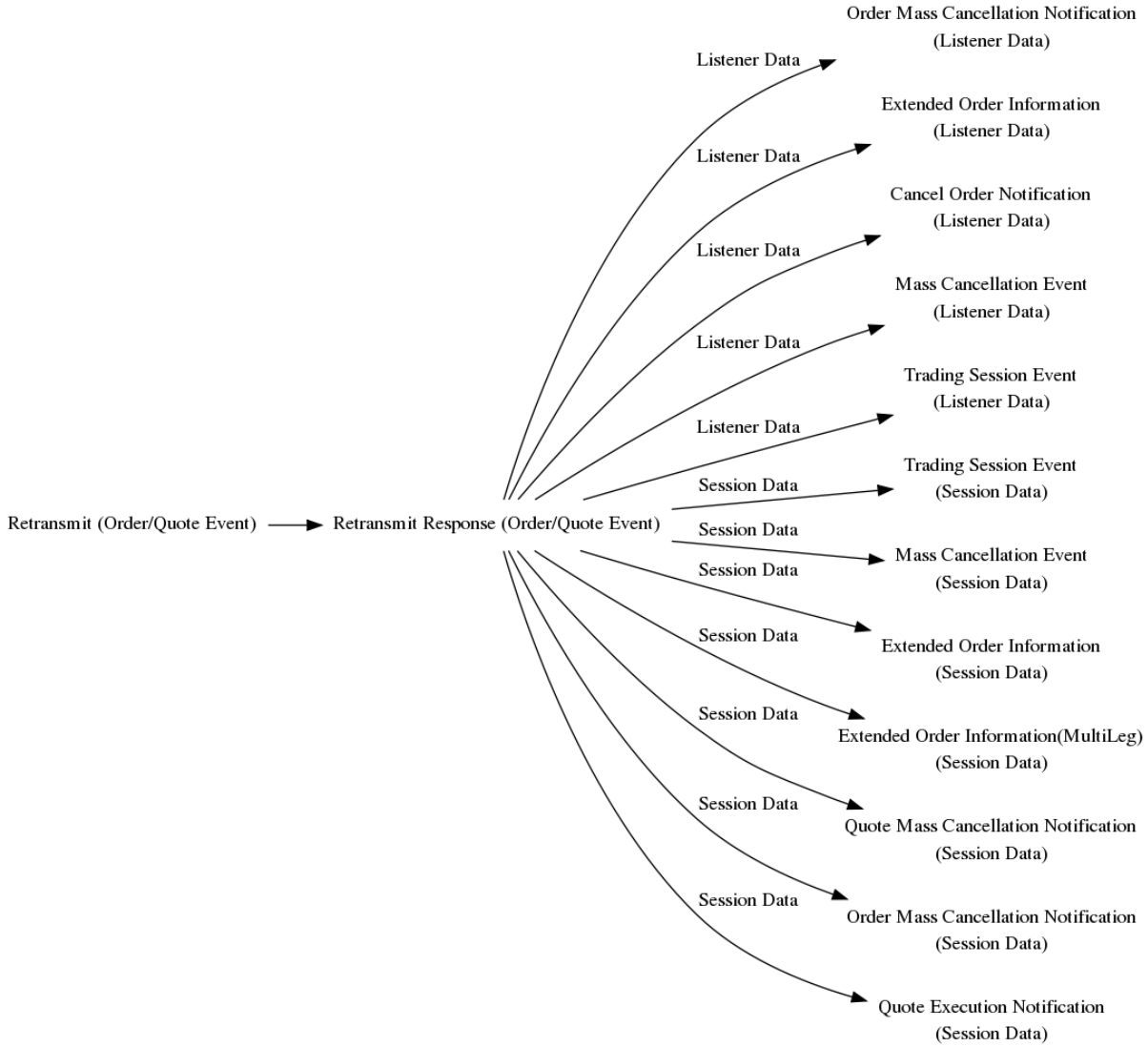
Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
<MessageHeaderOut>						
9	BodyLen	Y	4	0	unsigned int	Number of bytes for the message, including this field.
28500	TemplateID	Y	2	4	unsigned int	Unique identifier for a BSE ETI message layout. Value: 10009 (ApplicationMessageRequestAck, MsgType = BX)
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

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
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>						
25001	SubscriptionScope	N	4	24	unsigned int	-Trade broadcast(Business Unit) : Wildcard (no value)[Applicable for admin session only] -Trade broadcast (Own Session) : Session ID - News broadcast: Market ID (1 = BSE) - Risk Control broadcast: "no value" - Service Availability: Partition ID or wildcard (no value) - Trading limits (User/ Group/ Instrument) : Session ID
5948	PartitionID	Y	2	28	unsigned int	Application message identifiers are only unique per RefApplID, SubcriptionScope and PartitionID. Therefore, the PartitionID is required to define the scope of a Retransmit request.
1355	RefApplID	Y	1	30	unsigned int	Application identifier of a BSE ETI data stream. Value: 4 — Session Data Value: 5 — Listener Data
28718	ApplBegMsgID	N	16	31	data	Beginning range of application message identifiers; "no valueïndicates first known application message identifier.
28719	ApplEndMsgID	N	16	47	data	Ending range of application message identifiers; "no value"means last known application message identifier.
25016	Pad1	U	1	63	Fixed String	not used

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	ApplTotalMessageCount	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.

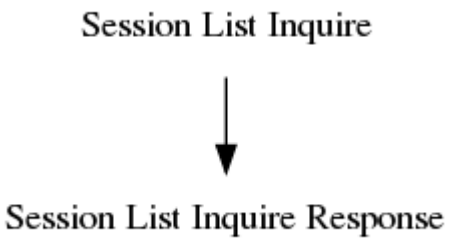
Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
<MessageHeaderOut>						
9	BodyLen	Y	4	0	unsigned int	Number of bytes for the message, including this field.
28500	TemplateID	Y	2	4	unsigned int	Unique identifier for a BSE ETI message layout. Value: 10010 (Reject, MsgType = 3)
25017	Pad2	U	2	6	Fixed 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. Value: Description 0: Not Last Message 1: Last Message
25018	Pad3	U	3	61	Fixed String	not used
<Message Body>						

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

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

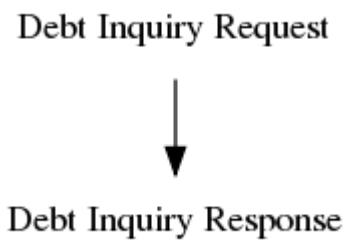


Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
<MessageHeaderIn>						
9	BodyLen	Y	4	0	unsigned int	Number of bytes for the message, including this field.
28500	TemplateID	Y	2	4	unsigned int	Unique identifier for a BSE ETI message layout. Value: 10035 (SessionDetailsListRequest, MsgType = U5)
25028	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. Value: Description 0: Not Last Message 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 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. 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. Value: Description 4: Session Data 5: Listener Data
1352	ApplResendFlag	Y	1	47	unsigned int	Indicates a retransmission message. Value: Description 0: False 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. Value: Description 0: Not Last Message 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.

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
20655	TargetPartyIDSessionID	Y	4	76	unsigned int	Session ID.
20612	TargetParty-IDExecutingTrader	N	4	80	unsigned int	Owning User ID.
20036	PartyIDEnteringTrader	N	4	84	unsigned int	Entering User ID.
1370	NoNotAffectedOrders	Y	2	88	Counter	Number of NotAffectedOrders repeating group instances.
20007	PartyIDEnteringFirm	N	1	90	unsigned int	Entering Entity ID. Value: Description 1: Participant 2: Market Supervision
28721	MassActionReason	Y	1	91	unsigned int	Reason for mass cancellation. Value: Description 0: No Special Reason 1: Stop Trading 2: Emergency 3: Market Maker Protection 4: Stop Button Activated 5: Business Unit Suspended 6: Session Loss 7: RRM: Collateral 8: Price Band Shrink 114: Product State Closing 115: Product State EOD 116: RRM : Regulatory 117: RRM : MWPL *: More Values
18	ExecInst	Y	1	92	unsigned int	Instructions for order handling. Value: Description 3: Persistent and non-persistent Orders (FIX value "H Q") 2: Non-persistent Order (FIX value "Q")
25018	Pad3	U	3	93	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.

7.8.4 Order Mass Cancellation Response No Hits

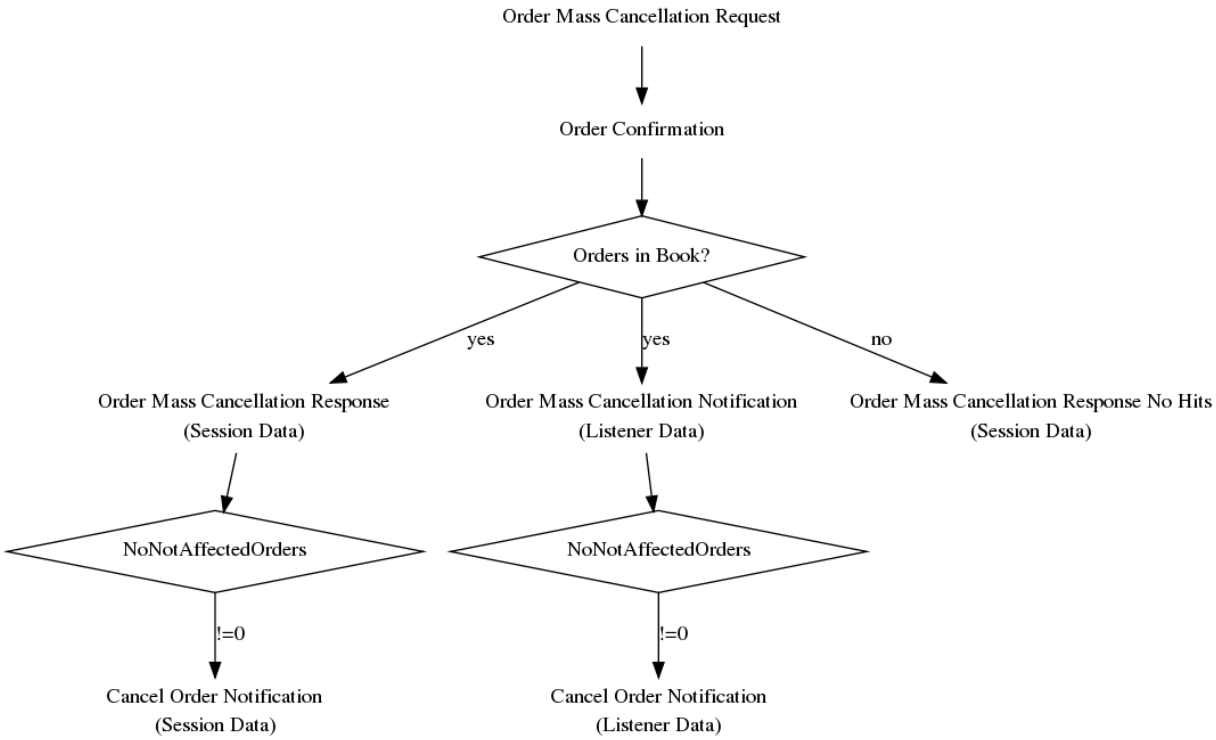
This message confirms the Mass Cancellation request for orders if the order book of the session was not affected.

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. Value: 1 — Description: Last Message
25018	Pad3	U	3	61	Fixed String	not used
<Message Body>						
1369	MassActionReportID	Y	8	64	UTCTimestamp	Transaction timestamp.

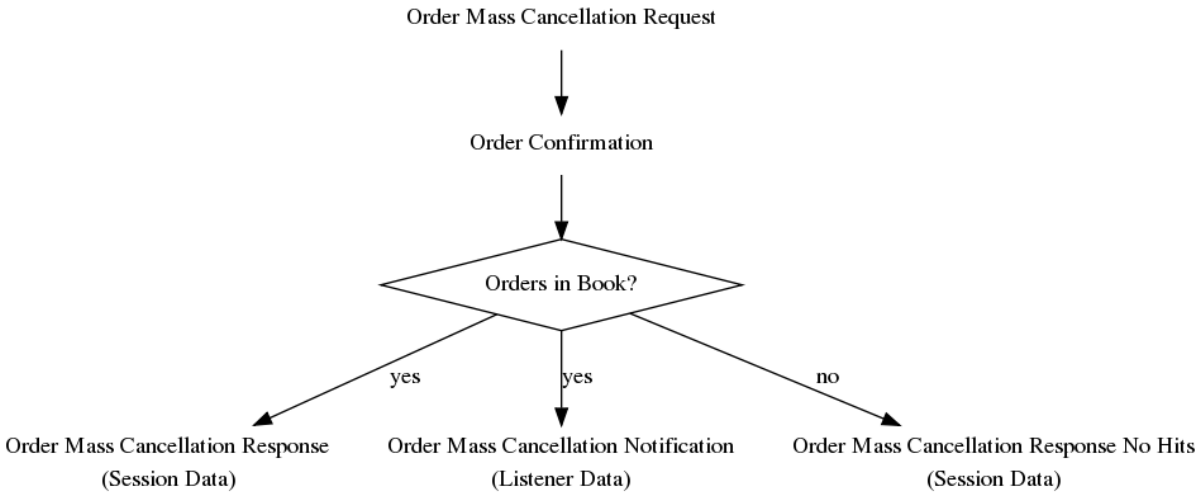
7.8.5 Order Mass Cancellation Request

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>						

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
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: 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 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. Belongs to the scope of Service Availability and Retransmit requests.
1180	ApplID	Y	1	62	unsigned int	Identifier for an ETI data stream. Value: Description 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. Value: Description 0: Not Last Message 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. 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. Value: Description 4: Session Data 5: Listener Data
1352	ApplResendFlag	Y	1	47	unsigned int	Indicates a retransmission message. Value: Description 0: False 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. Value: Description 0: Not Last Message 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	<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><tr><td>40</td><td>Special Client</td></tr><tr><td>90</td><td>Institution</td></tr></table>
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. Valid characters: A-Z,0-9
58	FreeText1	Y	12	101	Chartext	The Unique Client Code (UCC) of the person for whom the order is entered. 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
30642	CPCode	N	12	113	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
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.

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
44	>Price	N	8	144	PriceType	Limit price. Required if OrdType (40) is Limit (2) or Stop Limit (4).
28740	>MaxPricePercentage	N	8	152	PriceType	Indicates the protection range for market order. Required if OrderType (40) is Market(5).
526	>MessageTag	Y	4	160	signed int	User defined free field. The field is echoed in the trade notifications, listener data, session data.
38	>OrderQty	Y	4	164	Qty	Total Order Quantity.
14	>CumQty	Y	4	168	Qty	Cumulated executed quantity of an order.
84	>CxlQty	Y	4	172	Qty	Total quantity cancelled for this order.
378	>ExecRestatement-Reason	Y	2	176	unsigned int	Code to further qualify the field ExecType (150) of the Execution Report (8) message. Value: Description 101: Order Added 105: IOC Order Cancelled 246: Self Trade Order Deleted 247: Reverse Trade Order Deleted
39	>OrdStatus	Y	1	178	char	Conveys the current status of an order. Value: Description 2: Filled 4: Cancelled
150	>ExecType	Y	1	179	char	The reason why this message was generated. Value: Description 4: Cancelled F: Trade
54	>Side	Y	1	180	unsigned int	Side of the order. Value: Description 1: Buy 2: Sell
40	>OrdType	Y	1	181	unsigned int	Order type. Value: Description 2: Limit 5: Market

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. Value: 1 = Buy; 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. Belongs to the scope of Service Availability and Retransmit requests.
1180	ApplID	Y	1	62	unsigned int	Identifier for an ETI data stream. Value: Description 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. Value: Description 0: Not Last Message 1: Last Message
<Message Body>						
11	ClOrdID	N	8	80	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
17	ExecID	Y	8	88	UTCTimestamp	Transaction timestamp.
30555	NoLegExecs	Y	2	96	Counter	Number of InstrmntLegExec repeating group instances. Applicable only in case of spread instruments.
28998	NoOfMultiLeg	Y	1	98	Counter	Number of MultiLegExecGrp repeating group instances.
28997	NoOfMultiLegExecs	Y	1	99	Counter	Number of MultiLegFillGrp repeating group instances.
30649	AlgoID	N	16	100	Fixed String (0-terminable)	Unique identifier of the algorithm. Valid characters: A-Z,0-9
25019	Pad4	U	4	116	Fixed String	not used
<MultiLegExecGrp>						Cardinality: 2-99, Record counter: NoOfMultiLeg
37	>OrderID	Y	8	120	unsigned int	Exchange Order ID generated by BSE System; it remains constant over the lifetime of an order.
48	>SecurityID	Y	8	128	signed int	Instrument identifier.
14	>CumQty	Y	4	136	Qty	Cumulated executed quantity of an order.
84	>CxlQty	Y	4	140	Qty	Total quantity cancelled for this order.
378	>ExecRestatement-Reason	Y	2	144	unsigned int	Code to further qualify the field ExecType (150) of the Execution Report (8) message. Value: Description 101: Order Added 105: IOC Order Cancelled 246: Self Trade Order Deleted 247: Reverse Trade Order Deleted
39	>OrdStatus	Y	1	146	char	Conveys the current status of an order. Value: Description 2: Filled 4: Cancelled
150	>ExecType	Y	1	147	char	The reason why this message was generated. Value: Description 4: Cancelled F: Trade
25019	>Pad4	U	4	148	Fixed String	not used

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
<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. Value: 1 = Buy; 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)

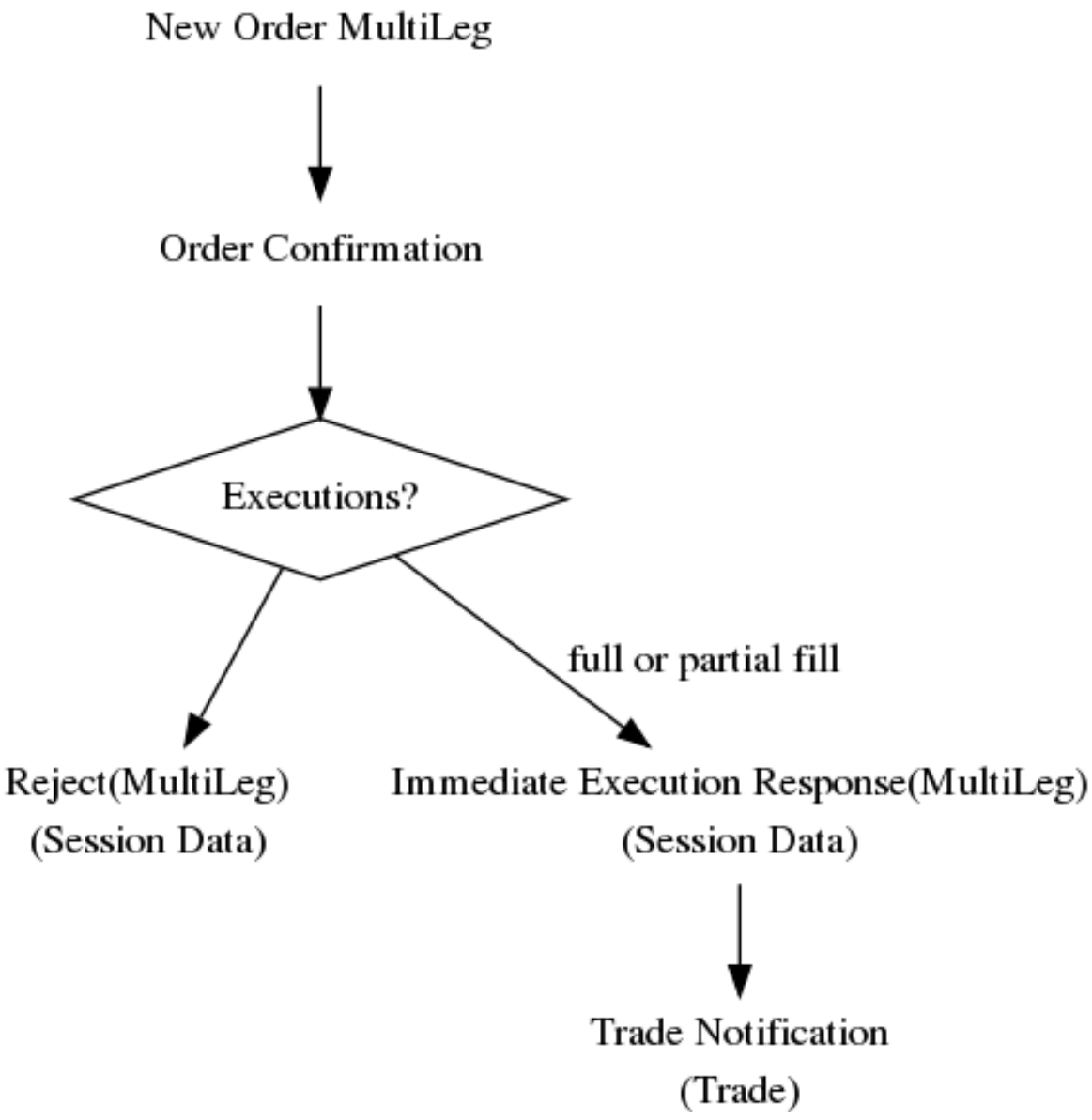
All rejections and errors for multileg orders are communicated using Reject message.

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. Value: Description 1: Last Message
25018	Pad3	U	3	61	Fixed String	not used
<Message Body>						
48	SecurityID	N	8	64	signed int	Instrument identifier.

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

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.



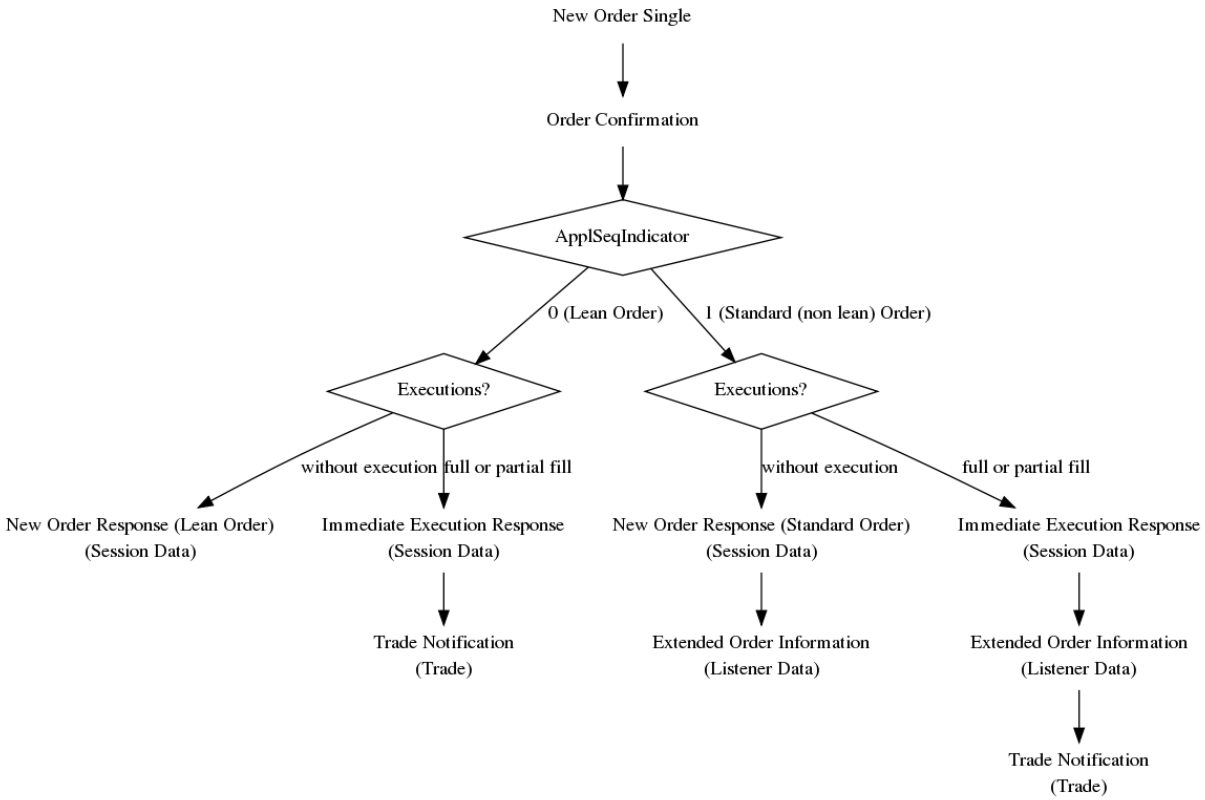
Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
<MessageHeaderIn>						
9	BodyLen	Y	4	0	unsigned int	Number of bytes for the message, including this field.
28500	TemplateID	Y	2	4	unsigned int	Unique identifier for a BSE ETI message layout. Value: 10991 (MultiLegOrder, MsgType = U28)
25028	NetworkMsgID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

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
<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
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 40: Special Client 90: Institution
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	FreeText1	Y	12	59	Chartext	The Unique Client Code (UCC) of the person for whom the order is entered. 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
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

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

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).

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
28740	MaxPricePercentage	N	8	40	PriceType	Indicates the protection range for market order. Required if OrderType (40) is Market(5).
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	PartyIDTakeUpTradingFirm	N	5	106	Fixed String	not used. Valid characters: A-Z,0-9,\x20
20013	PartyIDOrderOriginationFirm	N	7	111	Fixed String	not used. Valid characters: A-Z,0-9,\x20
20032	PartyIDBeneficiary	N	9	118	Fixed String	not used. Valid characters: A-Z,0-9,\x20
581	AccountType	Y	1	127	unsigned int	<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><tr><td>40</td><td>Special Client</td></tr><tr><td>90</td><td>Institution</td></tr></table>

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
28703	ApplSeqIndicator	Y	1	128	unsigned int	Indicates if the order is a Lean Order. Application sequencing is limited for Lean Orders. Value: Description 0: Lean Order 1: Standard (non lean) Order
54	Side	Y	1	129	unsigned int	Side of the order. Value: Description 1: Buy 2: Sell 3: Recall 4: Early Return
40	OrdType	Y	1	130	unsigned int	Order type. Value: Description 2: Limit 3: Stop Market 4: Stop Limit 5: Market 6: Block Deal
28710	PriceValidityCheckType	Y	1	131	unsigned int	not used. Value: Description 0: None
59	TimeInForce	Y	1	132	unsigned int	Execution and trading restriction parameters supported by BSE. Value: Description 0: Day (GFD) 1: Good Till Cancelled (GTC) 3: Immediate or Cancel (IOC) 6: Good Till Date (GTD) 7: Session (GFS)

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
18	ExecInst	Y	1	133	unsigned int	Instructions for order handling. Value: Description 1: Persistent Order (FIX value "H") 2: Non-persistent Order (FIX value "Q") 5: Persistent BOC Order (FIX value "H 6") 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. Value: Description 0: Passive 1: Active
30653	Filler5	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. Must be sent as 1
1	Account	Y	2	138	Fixed String	not used. Must be sent as A1 Valid characters: 1-9,\x41,\x47,\x4D,\x50
77	PositionEffect	Y	1	140	char	must be set to C Valid characters: \x01-\x7E
20075	PartyIDLocationID	N	2	141	Fixed String	not used. Valid characters: \x01-\x7E
1031	CustOrderHandlingInst	N	1	143	Fixed String	not used. 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). Valid characters: \x20,\x22-\x7B,\x7D,\x7E

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
30649	AlgoID	N	16	164	Fixed String (0-terminable)	Unique identifier of the algorithm. Valid characters: A-Z,0-9
58	FreeText1	Y	12	180	Chartext	The Unique Client Code (UCC) of the person for whom the order is entered. 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
30642	CPCode	N	12	192	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
25009	FreeText3	N	12	204	Chartext	Free-format text field for trader-specific or customer-related comments. 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. 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. Value: Description 4: Session Data 5: Listener Data
1352	ApplResendFlag	Y	1	47	unsigned int	Indicates a retransmission message. Value: Description 0: False 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. Value: Description 0: Not Last Message 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.
378	ExecRestatement-Reason	Y	2	232	unsigned int	Code to further qualify the field ExecType (150) of the Execution Report (8) message.

Value	Description
001	Order Book Restatement
101	Order Added
102	Order Replaced
105	IOC Order Cancelled
108	Book Order Executed
135	Market Order Triggered
164	OCO Order Triggered
172	Stop Order Triggered
212	BOC Order Cancelled
199	Pending Cancellation Executed
215	RRM Order Added
216	RRM Order Accepted
217	RRM Order Updation Rejected
218	RRM Order Updated Successfully
219	RRM Order Deleted
220	RRM Market Order Triggered
221	Provisional Order Added
222	Provisional Order Accepted
223	Provisional Order Updation Rejected
224	Provisional Order Updated Successfully
225	Provisional Order Deleted
226	Provisional Market Order 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>232</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>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>
<tr><td>237</td><td>Order Worse Than Close Price</td></tr>
<tr><td>238</td><td>Auction Market Order Triggered</td></tr>
<tr><td>243</td><td>Order Cancelled : SPOS Price undetermined</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>250</td><td>Client RRM For Product</td></tr>
<tr><td>251</td><td>Client Suspended</td></tr>
<tr><td>252</td><td>Client RRM For Contract</td></tr>
<tr><td>253</td><td>Member RRM For Contract</td></tr>
<tr><td>254</td><td>Client RRM</td></tr>
</table></td></tr>
<tr><td>581</td><td>AccountType</td><td>Y</td><td>1</td><td>234</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>
<tr><td>40</td><td>Special Client</td></tr>
<tr><td>90</td><td>Institution</td></tr>
</table></td></tr>
<tr><td>20007</td><td>PartyIDEnteringFirm</td><td>N</td><td>1</td><td>235</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>
</table>

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
1227	ProductComplex	Y	1	236	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	237	char	Conveys the current status of an order. Value: Description 0: New 1: Partially Filled 2: Filled 4: Cancelled 9: Suspended
150	ExecType	Y	1	238	char	The reason why this message was generated. Value: Description 0: New 4: Cancelled 5: Replaced 9: Suspended D: Restated L: Triggered F: Trade M: RRM Order Accept N: RRM Order Reject X: Provisional Accept Y: Provisional Reject
54	Side	Y	1	239	unsigned int	Side of the order. Value: Description 1: Buy 2: Sell 3: Recall 4: Early Return

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
40	OrdType	Y	1	240	unsigned int	Order type. Value: Description 2: Limit 3: Stop Market 4: Stop Limit 5: Market 6: Block Deal
1815	TradingCapacity	Y	1	241	unsigned int	not used
59	TimeInForce	N	1	242	unsigned int	Execution and trading restriction parameters supported by BSE. Value: Description 0: Day (GFD) 3: Immediate or Cancel (IOC) 7: Session (GFS)
18	ExecInst	N	1	243	unsigned int	Instructions for order handling. Value: Description 1: Persistent Order (FIX value "H") 2: Non-persistent Order (FIX value "Q") 5: Persistent BOC Order (FIX value "H 6") 6: Non-persistent BOC Order (FIX value "Q 6")
625	TradingSessionSubID	N	1	244	unsigned int	not used
28703	ApplSeqIndicator	N	1	245	unsigned int	Indicates if the order is a Lean Order. Application sequencing is limited for Lean Orders. Value: Description 0: Lean Order 1: Standard (non lean) Order
30651	STPCFlag	Y	1	246	unsigned int	Indicates the preference of order to be cancelled if self-trade is encountered. Preference not applicable in a modification requests. Value: Description 0: Passive 1: Active
30653	Filler5	N	1	247	unsigned int	not used

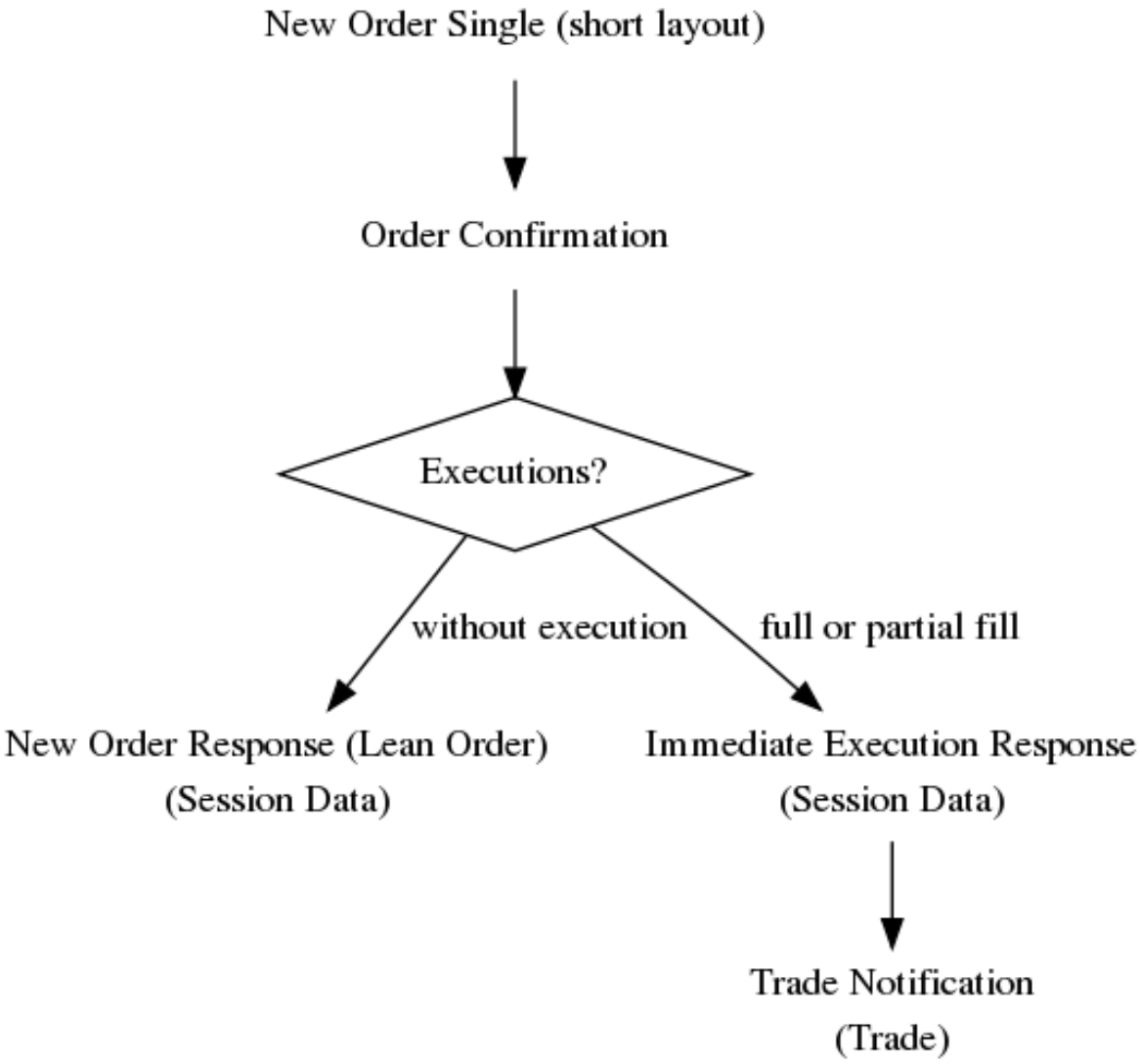
Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
1	Account	N	2	248	Fixed String	not used Valid characters: 1-9,\x41,\x47,\x4D,\x50
77	PositionEffect	N	1	250	char	must be set to C Valid characters: \x01-\x7E
20096	PartyIDTakeUpTrading-Firm	N	5	251	Fixed String	not used. Valid characters: A-Z,0-9,\x20
20013	PartyIDOrder-OriginationFirm	N	7	256	Fixed String	not used. Valid characters: A-Z,0-9,\x20
20032	PartyIDBeneficiary	N	9	263	Fixed String	not used. Valid characters: A-Z,0-9,\x20
20075	PartyIDLocationID	N	2	272	Fixed String	not used. Valid characters: \x01-\x7E
1031	CustOrderHandlingInst	N	1	274	Fixed String	not used. 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). Valid characters: \x20,\x22-\x7B,\x7D,\x7E
30649	AlgoID	N	16	295	Fixed String (0-terminable)	Unique identifier of the algorithm. Valid characters: A-Z,0-9
58	FreeText1	Y	12	311	Chartext	The Unique Client Code (UCC) of the person for whom the order is entered. 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
30642	CPCode	N	12	323	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

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
25009	FreeText3	N	12	335	Chartext	Free-format text field for trader-specific or customer-related comments. 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.
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. Value: Description 0: Not Triggered 1: Triggered Stop Order 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 Must be sent as A1 Valid characters: 1-9,\x41,\x47,\x4D, \x50
564	>LegPositionEffect	Y	1	354	char	not used. Must be set as C. 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.

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
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.
1443	>FillLiquidityInd	N	1	36	unsigned int	Indicates whether the order added or removed liquidity. Required only for execution reports generated for fills. Value: Description 1: Added Liquidity 2: Removed Liquidity 5: Triggered Stop Order 6: Triggered OCO Order 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. Value: Description 1: Buy 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.



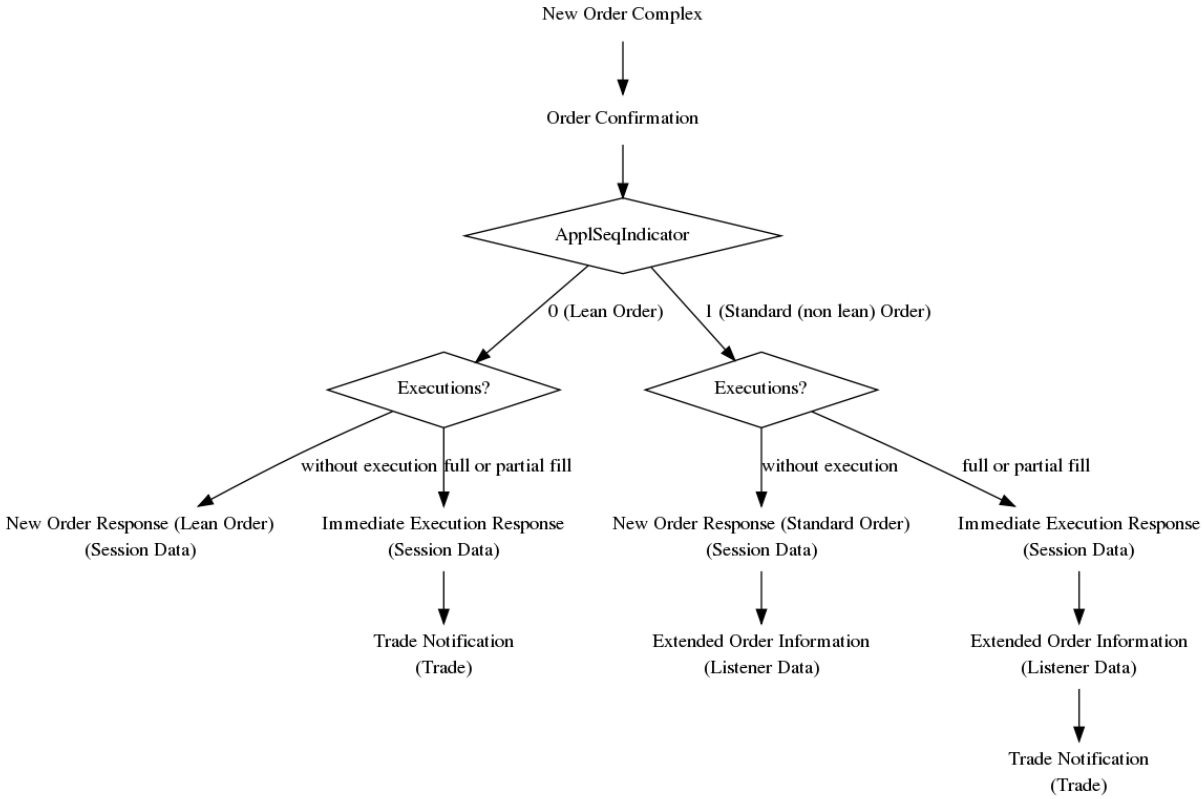
Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
<MessageHeaderIn>						
9	BodyLen	Y	4	0	unsigned int	Number of bytes for the message, including this field.
28500	TemplateID	Y	2	4	unsigned int	Unique identifier for a BSE ETI message layout. Value: 10125 (NewOrderSingle, MsgType = D)
25028	NetworkMsgID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

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>						
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 20 Own 30 Client 40 Special Client 90 Institution
54	Side	Y	1	67	unsigned int	Side of the order. Value / Description 1 Buy 2 Sell 3 Recall 4 Early Return
28710	PriceValidityCheckType	Y	1	68	unsigned int	not used. Value / Description 0 None

<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>Y</td><td>1</td><td>69</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>1</td><td>Good Till Cancelled (GTC)</td></tr>
<tr><td>3</td><td>Immediate or Cancel (IOC)</td></tr>
<tr><td>6</td><td>Good Till Date (GTD)</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>70</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>18</td><td>ExecInst</td><td>U</td><td>1</td><td>71</td><td>unsigned int</td><td>not used</td></tr>
<tr><td>30649</td><td>AlgoID</td><td>N</td><td>16</td><td>72</td><td>Fixed String (0-terminable)</td><td>Unique identifier of the algorithm. Valid characters: A-Z,0-9</td></tr>
<tr><td>58</td><td>FreeText1</td><td>Y</td><td>12</td><td>88</td><td>Chartext</td><td>The Unique Client Code (UCC) of the person for whom the order is entered. 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>30642</td><td>CPCode</td><td>N</td><td>12</td><td>100</td><td>Chartext</td><td>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</td></tr>
</table>

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.

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
28740	MaxPricePercentage	N	8	40	PriceType	Indicates the protection range for market order. Required if OrderType (40) is Market(5).
142	SenderLocationID	Y	8	48	unsigned int	The location ID of the order from where it is originated
44	Price	Y	8	56	PriceType	Limit price. Required if OrdType (40) is Limit (2) or Stop Limit (4).
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.
1300	MarketSegmentID	Y	4	80	signed int	Product identifier.
38	OrderQty	Y	4	84	Qty	Total Order Quantity.
210	MaxShow	N	4	88	Qty	The quantity to be made visible in the market data.
432	ExpireDate	N	4	92	LocalMktDate	not used
25029	RegulatoryID	N	4	96	unsigned int	not used.
30652	Filler4	N	2	100	unsigned int	not used
20096	PartyIDTakeUpTradingFirm	N	5	102	Fixed String	not used. Valid characters: A-Z,0-9,\x20
20013	PartyIDOrderOriginationFirm	N	7	107	Fixed String	not used. Valid characters: A-Z,0-9,\x20
20032	PartyIDBeneficiary	N	9	114	Fixed String	not used. Valid characters: A-Z,0-9,\x20
581	AccountType	Y	1	123	unsigned int	<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><tr><td>40</td><td>Special Client</td></tr><tr><td>90</td><td>Institution</td></tr></table>
28703	ApplSeqIndicator	Y	1	124	unsigned int	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>

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
1227	ProductComplex	Y	1	125	unsigned int	This field qualifies an instrument type on BSE. Value: Description 2: Standard Option Strategy 5: Futures Spread
54	Side	Y	1	126	unsigned int	Side of the order. Value: Description 1: Buy 2: Sell
40	OrdType	Y	1	127	unsigned int	Order type. Value: Description 2: Limit
28710	PriceValidityCheckType	Y	1	128	unsigned int	not used. Value: Description 0: None
18	ExecInst	Y	1	129	unsigned int	Instructions for order handling. Value: Description 1: Persistent Order (FIX value "H") 2: Non-persistent Order (FIX value "Q")
59	TimeInForce	Y	1	130	unsigned int	Execution and trading restriction parameters supported by BSE. Value: Description 0: Day (GFD) 1: Good Till Cancelled (GTC) 3: Immediate or Cancel (IOC) 6: Good Till Date (GTD) 7: Session (GFS)
30651	STPCFlag	Y	1	131	unsigned int	Indicates the preference of order to be cancelled if self-trade is encountered. Preference not applicable in a modification requests. Value: Description 0: Passive 1: Active
30653	Filler5	N	1	132	unsigned int	not used

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
1815	TradingCapacity	Y	1	133	unsigned int	not used. Must be sent as 1
20075	PartyIDLocationID	N	2	134	Fixed String	not used. Valid characters: \x01-\x7E
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). Valid characters: \x20,\x22-\x7B, \x7D,\x7E
30649	AlgoID	N	16	156	Fixed String (0-terminable)	Unique identifier of the algorithm. Valid characters: A-Z,0-9
1031	CustOrderHandlingInst	N	1	172	Fixed String	not used. Valid characters: \x20,\x22-\x7B, \x7D,\x7E
58	FreeText1	Y	12	173	Chartext	The Unique Client Code (UCC) of the person for whom the order is entered. 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
30642	CPCode	N	12	185	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
25009	FreeText3	N	12	197	Chartext	Free-format text field for trader-specific or customer-related comments. 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

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
28715	>LegAccount	Y	2	216	Fixed String	not used Must be sent as A1 Valid characters: 1-9,\x41,\x47,\x4D,\x50
564	>LegPositionEffect	Y	1	218	char	not used. Must be set as C. 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. Belongs to the scope of Service Availability and Retransmit requests.
1180	ApplID	Y	1	62	unsigned int	Identifier for an ETI data stream. Value: Description 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. Value: Description 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.
48	SecurityID	Y	8	96	signed int	Instrument identifier.
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.
17	ExecID	Y	8	128	UTCTimestamp	Transaction timestamp.
21009	TrdRegTSEntryTime	Y	8	136	UTCTimestamp	The entry timestamp is the time of the creation of the order.
21008	TrdRegTSTimePriority	Y	8	144	UTCTimestamp	Priority timestamp.
30645	ActivityTime	Y	8	152	UTCTimestamp	Activity timestamp for that order
30646	Filler1	N	8	160	unsigned int	not used
30647	Filler2	N	4	168	unsigned int	not used
30652	Filler4	N	2	172	unsigned int	not used
39	OrdStatus	Y	1	174	char	Conveys the current status of an order. Value: Description 0: New 4: Cancelled 9: Suspended
150	ExecType	Y	1	175	char	The reason why this message was generated. Value: Description 0: New 4: Cancelled L: Triggered 5: Replaced

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. Value: Description 101: Order Added 105: IOC Order Cancelled 212: BOC Order Cancelled 135: Market Order Triggered 215: RRM Order Added 221: Provisional Order Added 246: Self Trade Order Deleted 247: Reverse Trade Order Deleted
1227	ProductComplex	Y	1	178	unsigned int	This field qualifies an instrument type on BSE. Value: Description 1: Simple Instrument 2: Standard Option Strategy 5: Futures Spread
30653	Filler5	N	1	179	unsigned int	not used
25019	Pad4	U	4	180	Fixed String	not used

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. Value: Description 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. Value: Description 0: New 4: Cancelled 9: Suspended
150	ExecType	Y	1	143	char	The reason why this message was generated. Value: Description 0: New 4: Cancelled L: Triggered 5: Replaced
378	ExecRestatement-Reason	Y	2	144	unsigned int	Code to further qualify the field ExecType (150) of the Execution Report (8) message. Value: Description 101: Order Added 105: IOC Order Cancelled 212: BOC Order Cancelled 135: Market Order Triggered 215: RRM Order Added 221: Provisional Order Added 246: Self Trade Order Deleted 247: Reverse Trade Order Deleted

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
1227	ProductComplex	Y	1	146	unsigned int	This field qualifies an instrument type on BSE. Value: Description 1: Simple Instrument 2: Standard Option Strategy 5: Futures Spread
30653	Filler5	N	1	147	unsigned int	not used
25019	Pad4	U	4	148	Fixed String	not used

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. Belongs to the scope of Service Availability and Retransmit requests.
1180	ApplID	Y	1	62	unsigned int	Identifier for an ETI data stream. Value: Description 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. Value: Description 0: Not Last Message 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.
378	ExecRestatement-Reason	Y	2	176	unsigned int	Code to further qualify the field ExecType (150) of the Execution Report (8) message. Value: Description 101: Order Added 102: Order Replaced 105: IOC Order Cancelled 135: Market Order Triggered 246: Self Trade Order Deleted 247: Reverse Trade Order Deleted

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
1227	ProductComplex	Y	1	178	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	179	char	Conveys the current status of an order. Value: Description 1: Partially Filled 2: Filled 4: Cancelled
150	ExecType	Y	1	180	char	The reason why this message was generated. Value: Description F: Trade
1823	Triggered	Y	1	181	unsigned int	Indicates if an order has been previously triggered. Value: Description 0: Not Triggered 1: Triggered Stop Order 2: Triggered OCO Order
30653	Filler5	N	1	182	unsigned int	not used
1362	NoFills	Y	1	183	Counter	Specifies the number of partial fills included in this Execution Report.
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.

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
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. Value: Description 2: Removed Liquidity 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. Value: Description 1: Buy 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

7.8.21 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.

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: 10104 (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	U	4	24	unsigned int	not used
5948	PartitionID	Y	2	28	unsigned int	Grouping of BSE products. 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. Value: Description 4: Session Data
1352	ApplResendFlag	Y	1	47	unsigned int	Indicates a retransmission message. Value: Description 0: False 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. Value: Description 0: Not Last Message 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.
142	SenderLocationID	Y	8	64	unsigned int	The location ID of the order from where it is originated

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. Value: Description 108: Book Order Executed 135: Market Order Triggered 164: OCO Order Triggered 172: Stop Order Triggered 199: Pending Cancellation Executed

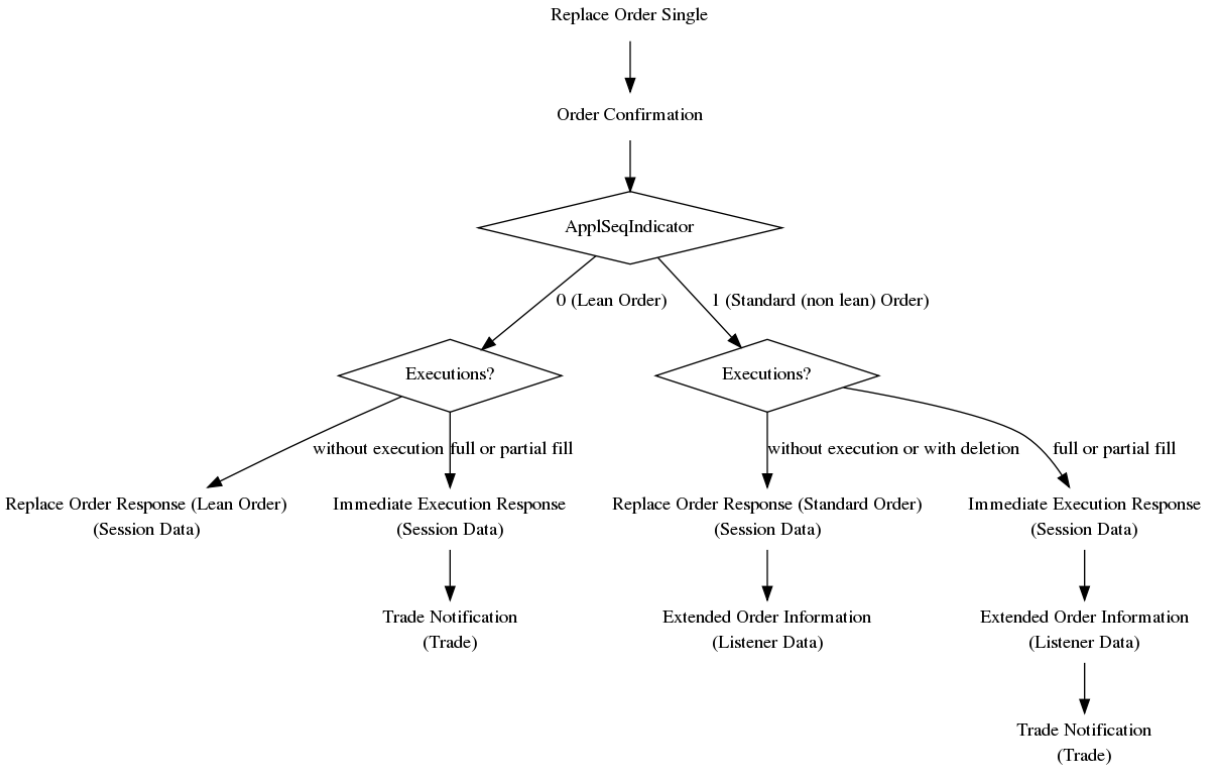
Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
581	AccountType	Y	1	150	unsigned int	Value: 20 Own; 30 Client; 40 Special Client; 90 Institution
1227	ProductComplex	Y	1	151	unsigned int	This field qualifies an instrument type on BSE. Value: 1 Simple Instrument; 2 Standard Option Strategy; 5 Futures Spread
39	OrdStatus	Y	1	152	char	Conveys the current status of an order. Value: 1 Partially Filled; 2 Filled; 9 Suspended; 4 Cancelled
150	ExecType	Y	1	153	char	The reason why this message was generated. Value: F Trade; 9 Suspended
1823	Triggered	Y	1	154	unsigned int	Indicates if an order has been previously triggered. Value: 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: 1 Buy; 2 Sell; 3 Recall; 4 Early Return
30653	Filler5	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 Valid characters: 1-9,\x41,\x47,\x4D,\x50
30649	AlgoID	N	16	160	Fixed String (0-terminable)	Unique identifier of the algorithm. Valid characters: A-Z,0-9
58	FreeText1	Y	12	176	Chartext	The Unique Client Code (UCC) of the person for whom the order is entered. 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
30642	CPCode	N	12	188	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
25009	FreeText3	N	12	200	Chartext	Free-format text field for trader-specific or customer-related comments. 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. Value: Description 1: Added Liquidity 5: Triggered Stop Order 6: Triggered OCO Order 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. Value: Description 1: Buy 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.

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.
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. Valid characters: A-Z,0-9,\x20
20013	PartyIDOrder-OriginationFirm	N	7	139	Fixed String	not used. Valid characters: A-Z,0-9,\x20
20032	PartyIDBeneficiary	N	9	146	Fixed String	not used. Valid characters: A-Z,0-9,\x20

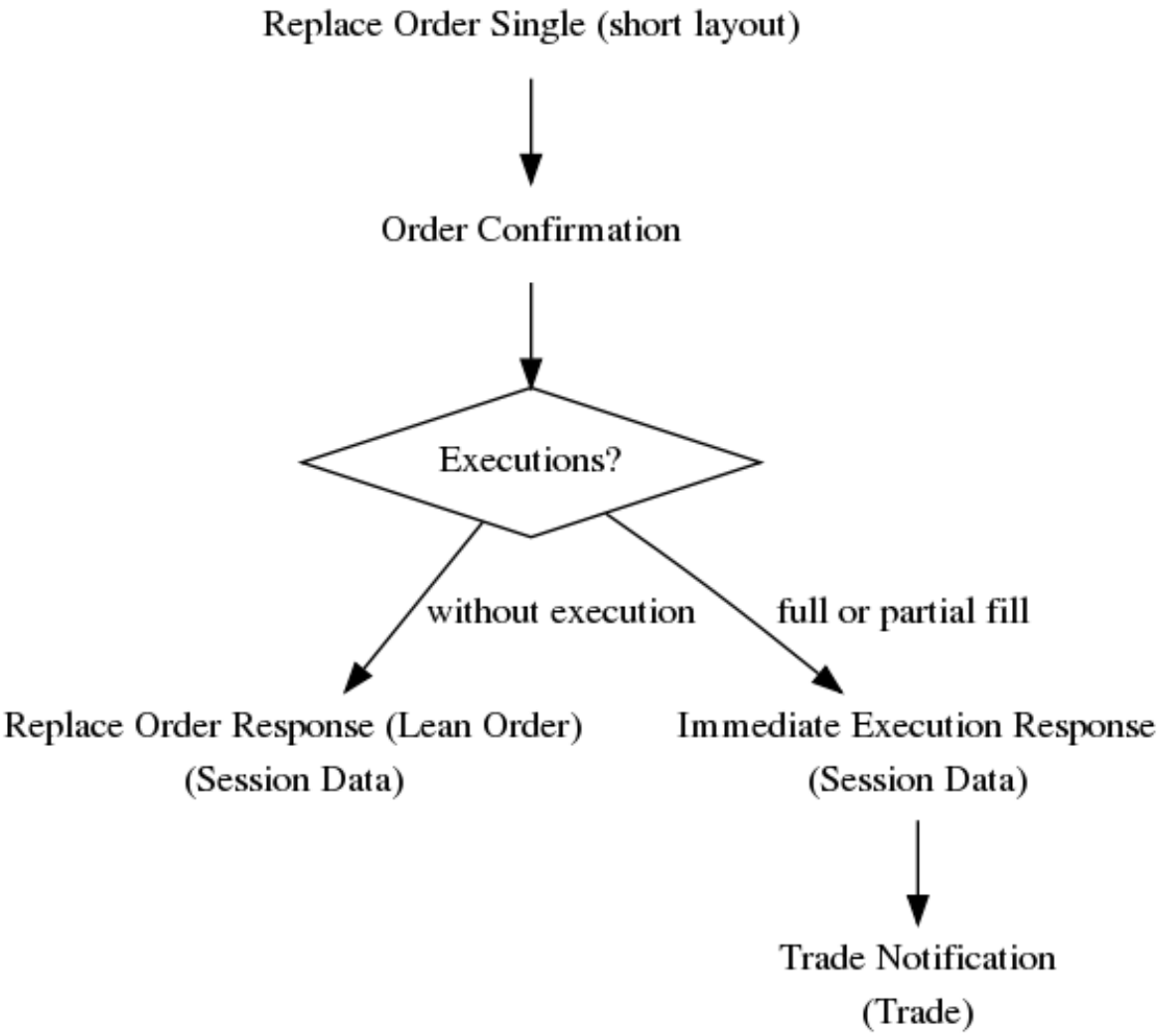
<table>
<tr><th>Tag</th><th>Field Name</th><th>Req'd</th><th>Len</th><th>Ofs</th><th>Data Type</th><th>Description</th></tr>
<tr><td>581</td><td>AccountType</td><td>Y</td><td>1</td><td>155</td><td>unsigned int</td><td><table><tr><th>Value</th><th>Description</th></tr><tr><td>20</td><td>Own</td></tr><tr><td>30</td><td>Client</td></tr><tr><td>40</td><td>Special Client</td></tr><tr><td>90</td><td>Institution</td></tr></table></td></tr>
<tr><td>28703</td><td>ApplSeqIndicator</td><td>Y</td><td>1</td><td>156</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>54</td><td>Side</td><td>Y</td><td>1</td><td>157</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><tr><td>3</td><td>Recall</td></tr><tr><td>4</td><td>Early Return</td></tr></table></td></tr>
<tr><td>40</td><td>OrdType</td><td>Y</td><td>1</td><td>158</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>28710</td><td>PriceValidityCheckType</td><td>Y</td><td>1</td><td>159</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>59</td><td>TimeInForce</td><td>Y</td><td>1</td><td>160</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>1</td><td>Good Till Cancelled (GTC)</td></tr><tr><td>3</td><td>Immediate or Cancel (IOC)</td></tr><tr><td>6</td><td>Good Till Date (GTD)</td></tr><tr><td>7</td><td>Session (GFS)</td></tr></table></td></tr>
</table>

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
18	ExecInst	Y	1	161	unsigned int	Instructions for order handling. Value: Description 1: Persistent Order (FIX value "H") 2: Non-persistent Order (FIX value "Q") 5: Persistent BOC Order (FIX value "H 6") 6: Non-persistent BOC Order (FIX value "Q 6")
30653	Filler5	N	1	162	unsigned int	not used
625	TradingSessionSubID	N	1	163	unsigned int	not used
1815	TradingCapacity	Y	1	164	unsigned int	not used. Must be sent as 1
30640	DeltaQtyFlag	N	1	165	char	not used Valid characters: \x01-\x7E
1	Account	Y	2	166	Fixed String	not used. Must be sent as A1 Valid characters: 1-9,\x41,\x47,\x4D,\x50
77	PositionEffect	Y	1	168	char	must be set to C Valid characters: \x01-\x7E
20075	PartyIDLocationID	N	2	169	Fixed String	not used. Valid characters: \x01-\x7E
1031	CustOrderHandlingInst	N	1	171	Fixed String	not used. 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). Valid characters: \x20,\x22-\x7B,\x7D,\x7E
30649	AlgoID	N	16	192	Fixed String (0-terminable)	Unique identifier of the algorithm. Valid characters: A-Z,0-9

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
58	FreeText1	Y	12	208	Chartext	The Unique Client Code (UCC) of the person for whom the order is entered. 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
30642	CPCode	N	12	220	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
25009	FreeText3	N	12	232	Chartext	Free-format text field for trader-specific or customer-related comments. 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.



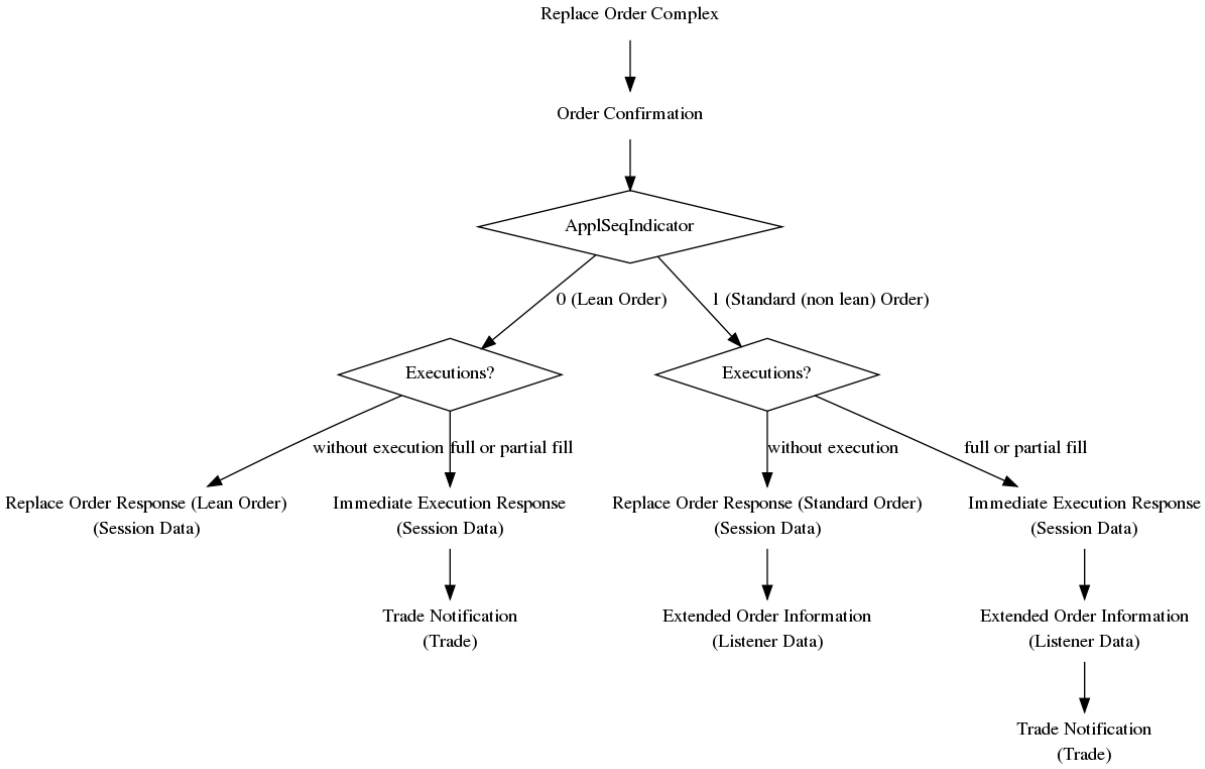
Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
<MessageHeaderIn>						
9	BodyLen	Y	4	0	unsigned int	Number of bytes for the message, including this field.
28500	TemplateID	Y	2	4	unsigned int	Unique identifier for a BSE ETI message layout. Value: 10126 (OrderCancelReplaceRequest, MsgType = G)
25028	NetworkMsgID	U	8	6	Fixed String	not used
25017	Pad2	U	2	14	Fixed String	not used
<RequestHeader>						

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>						
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	<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><tr><td>40</td><td>Special Client</td></tr><tr><td>90</td><td>Institution</td></tr></table>
54	Side	Y	1	91	unsigned int	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><tr><td>3</td><td>Recall</td></tr><tr><td>4</td><td>Early Return</td></tr></table>

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
28710	PriceValidityCheckType	Y	1	92	unsigned int	not used. Value: Description 0: None
59	TimeInForce	Y	1	93	unsigned int	Execution and trading restriction parameters supported by BSE. Value: Description 0: Day (GFD) 1: Good Till Cancelled (GTC) 3: Immediate or Cancel (IOC) 6: Good Till Date (GTD) 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. Valid characters: A-Z,0-9
58	FreeText1	Y	12	111	Chartext	The Unique Client Code (UCC) of the person for whom the order is entered. 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
30642	CPCode	N	12	123	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
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.

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.
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. Valid characters: A-Z,0-9,\x20
20013	PartyIDOrder-OriginationFirm	N	7	135	Fixed String	not used. Valid characters: A-Z,0-9,\x20
20032	PartyIDBeneficiary	N	9	142	Fixed String	not used. Valid characters: A-Z,0-9,\x20
581	AccountType	Y	1	151	unsigned int	<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><tr><td>40</td><td>Special Client</td></tr><tr><td>90</td><td>Institution</td></tr></table>

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. Value: Description 0: Lean Order 1: Standard (non lean) Order
1227	ProductComplex	Y	1	153	unsigned int	This field qualifies an instrument type on BSE. Value: Description 2: Standard Option Strategy 5: Futures Spread
54	Side	Y	1	154	unsigned int	Side of the order. Value: Description 1: Buy 2: Sell
40	OrdType	Y	1	155	unsigned int	Order type. Value: Description 2: Limit
28710	PriceValidityCheckType	Y	1	156	unsigned int	not used. Value: Description 0: None
18	ExecInst	Y	1	157	unsigned int	Instructions for order handling. Value: Description 1: Persistent Order (FIX value "H") 2: Non-persistent Order (FIX value "Q")
59	TimeInForce	Y	1	158	unsigned int	Execution and trading restriction parameters supported by BSE. Value: Description 0: Day (GFD) 1: Good Till Cancelled (GTC) 3: Immediate or Cancel (IOC) 6: Good Till Date (GTD) 7: Session (GFS)
30653	Filler5	N	1	159	unsigned int	not used
1815	TradingCapacity	Y	1	160	unsigned int	not used. Must be sent as 1

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
30640	DeltaQtyFlag	N	1	161	char	not used Valid characters: \x01-\x7E
20075	PartyIDLocationID	N	2	162	Fixed String	not used. Valid characters: \x01-\x7E
1031	CustOrderHandlingInst	N	1	164	Fixed String	not used. 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). Valid characters: \x20,\x22-\x7B, \x7D,\x7E
30649	AlgoID	N	16	185	Fixed String (0-terminable)	Unique identifier of the algorithm. Valid characters: A-Z,0-9
58	FreeText1	Y	12	201	Chartext	The Unique Client Code (UCC) of the person for whom the order is entered. 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
30642	CPCode	N	12	213	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
25009	FreeText3	N	12	225	Chartext	Free-format text field for trader-specific or customer-related comments. 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 Must be sent as A1 Valid characters: 1-9,\x41,\x47,\x4D,\x50
564	>LegPositionEffect	Y	1	242	char	not used. Must be set as C. 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. Belongs to the scope of Service Availability and Retransmit requests.
1180	ApplID	Y	1	62	unsigned int	Identifier for an ETI data stream. Value: Description 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. Value: Description 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.
1110	PriceMkToLimitPx	N	8	120	PriceType	The price at which the market order got converted into regular limit order. Applicable for OrderType (40) = 5.
236	Yield	N	8	128	PriceType	The Yield corresponding to the clean price.
882	UnderlyingDirtyPrice	N	8	136	PriceType	The dirty price.
21008	TrdRegTSTimePriority	Y	8	144	UTCTimestamp	Priority timestamp.
30645	ActivityTime	Y	8	152	UTCTimestamp	Activity timestamp for that order
30646	Filler1	N	8	160	unsigned int	not used
30647	Filler2	N	4	168	unsigned int	not used
151	LeavesQty	Y	4	172	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	176	Qty	Cumulated executed quantity of an order.
84	CxlQty	Y	4	180	Qty	Total quantity cancelled for this order.
30652	Filler4	N	2	184	unsigned int	not used
39	OrdStatus	Y	1	186	char	Conveys the current status of an order. Value: Description 0: New 1: Partially Filled 2: Filled 4: Cancelled 9: Suspended

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
150	ExecType	Y	1	187	char	The reason why this message was generated. Value: Description 4: Cancelled 5: Replaced L: Triggered
378	ExecRestatement-Reason	Y	2	188	unsigned int	Code to further qualify the field ExecType (150) of the Execution Report (8) message. Value: Description 102: Order Replaced 105: IOC Order Cancelled 135: Market Order Triggered 215: RRM Order Added 221: Provisional Order Added 246: Self Trade Order Deleted 247: Reverse Trade Order Deleted
1227	ProductComplex	Y	1	190	unsigned int	This field qualifies an instrument type on BSE. Value: Description 1: Simple Instrument 2: Standard Option Strategy 5: Futures Spread
30653	Filler5	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.

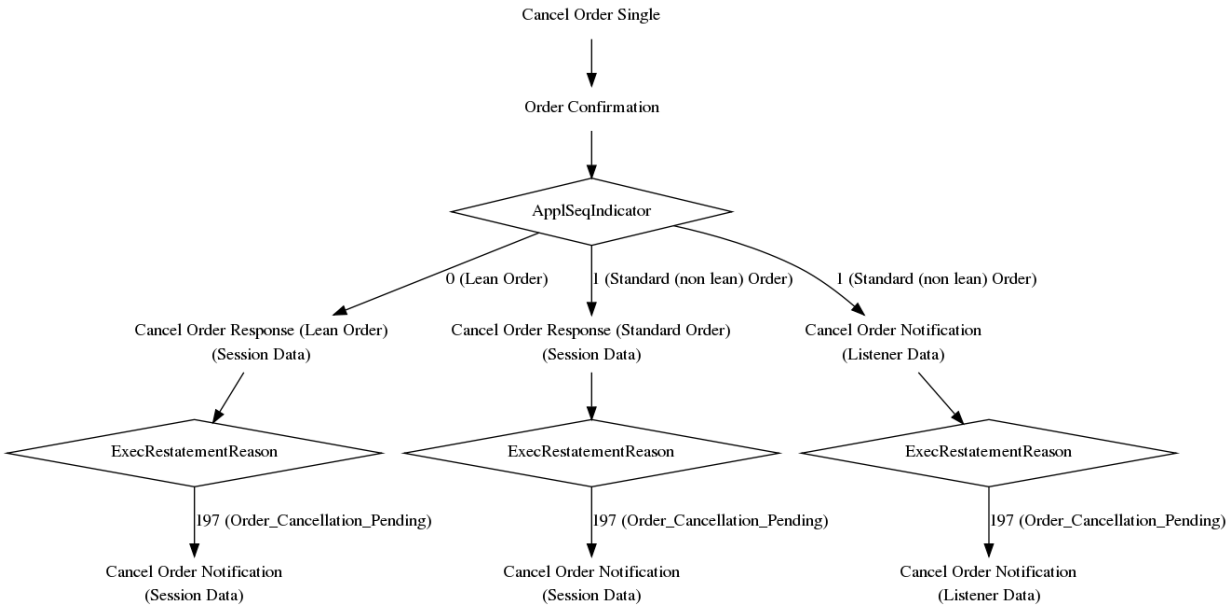
Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
<MessageHeaderOut>						
9	BodyLen	Y	4	0	unsigned int	Number of bytes for the message, including this field.
28500	TemplateID	Y	2	4	unsigned int	Unique identifier for a BSE ETI message layout. Value: 10108 (ExecutionReport, MsgType = 8)
25017	Pad2	U	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. Value: 1 — Description: 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. Value: Description 0: New 1: Partially Filled 2: Filled 4: Cancelled 9: Suspended
150	ExecType	Y	1	163	char	The reason why this message was generated. Value: Description 4: Cancelled 5: Replaced 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.
<table>
<tr><th>Value</th><th>Description</th></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>
</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.
<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>Filler5</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.

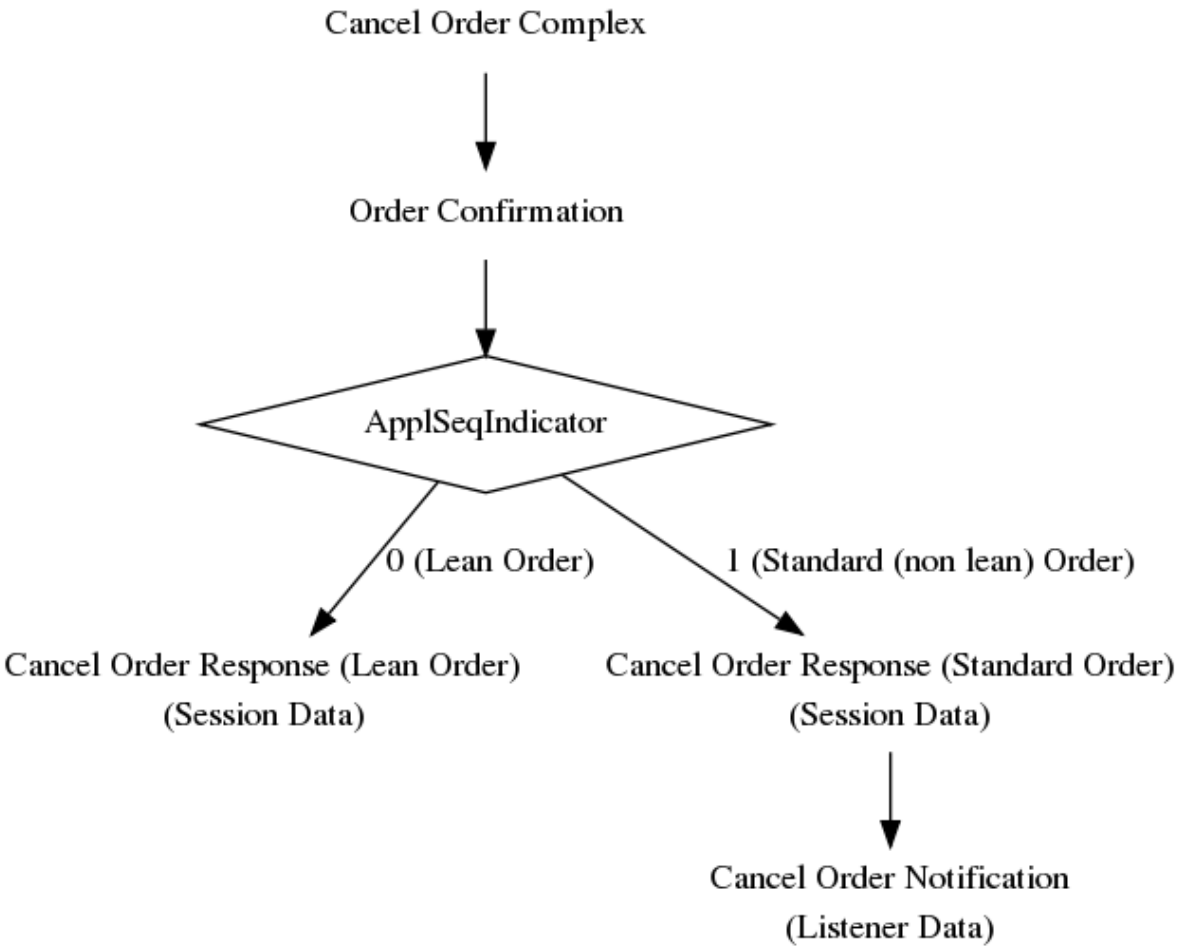


Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
<MessageHeaderIn>						
9	BodyLen	Y	4	0	unsigned int	Number of bytes for the message, including this field.
28500	TemplateID	Y	2	4	unsigned int	Unique identifier for a BSE ETI message layout. Value: 10109 (OrderCancelRequest, MsgType = F)
25028	NetworkMsgID	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>						

Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
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.
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. Belongs to the scope of Service Availability and Retransmit requests.
1180	ApplID	Y	1	62	unsigned int	Identifier for an ETI data stream. Value: Description 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. Value: Description 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. Value: Description 4: Cancelled 6: Pending Cancel 9: Suspended
150	ExecType	Y	1	129	char	The reason why this message was generated. Value: Description 4: Cancelled 6: Pending Cancel Y: Provisional Reject 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. Value: Description 103: Order Cancelled 197: Order Cancellation Pending
1227	ProductComplex	Y	1	132	unsigned int	This field qualifies an instrument type on BSE. Value: Description 1: Simple Instrument 2: Standard Option Strategy 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. Value: Description 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. Value: Description 4: Cancelled 6: Pending Cancel 9: Suspended
150	ExecType	Y	1	113	char	The reason why this message was generated. Value: Description 4: Cancelled 6: Pending Cancel Y: Provisional Reject 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. Value: Description 103: Order Cancelled 197: Order Cancellation Pending
1227	ProductComplex	Y	1	116	unsigned int	This field qualifies an instrument type on BSE. Value: Description 1: Simple Instrument 2: Standard Option Strategy 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. 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. Value: Description 4: Session Data 5: Listener Data
1352	ApplResendFlag	Y	1	47	unsigned int	Indicates a retransmission message. Value: Description 0: False 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. Value: Description 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. Value: Description 103: Order Cancelled 197: Order Cancellation Pending 199: Pending Cancellation Executed
20007	PartyIDEnteringFirm	N	1	118	unsigned int	Entering Entity ID. Value: Description 1: Participant 2: Market Supervision
39	OrdStatus	Y	1	119	char	Conveys the current status of an order. Value: Description 4: Cancelled 6: Pending Cancel 9: Suspended

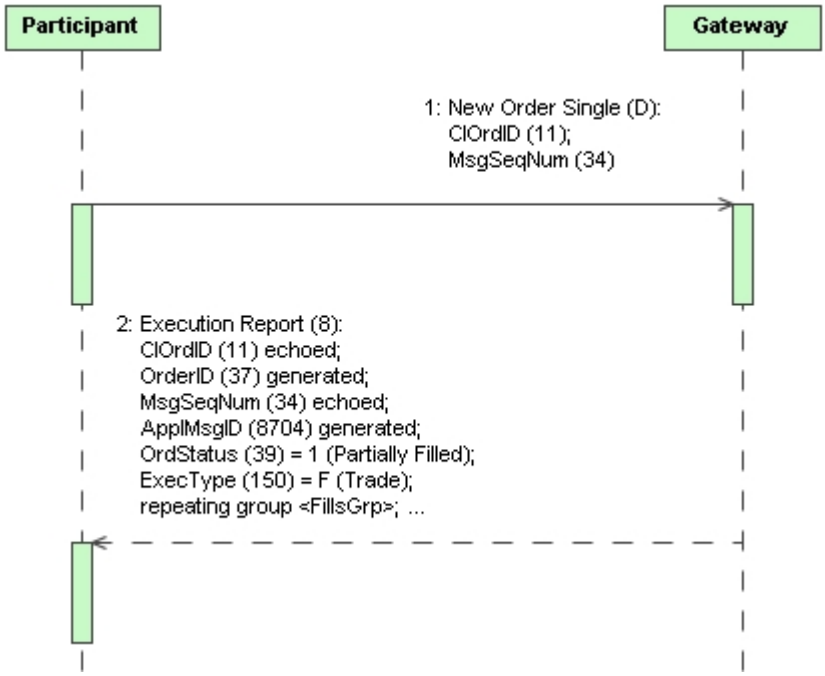
Tag	Field Name	Req'd	Len	Ofs	Data Type	Description
150	ExecType	Y	1	120	char	Indicates if a request has been entered by the participant or by market supervision. Value: Description 4: Cancelled 6: Pending Cancel
1227	ProductComplex	Y	1	121	unsigned int	This field qualifies an instrument type on BSE.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

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.

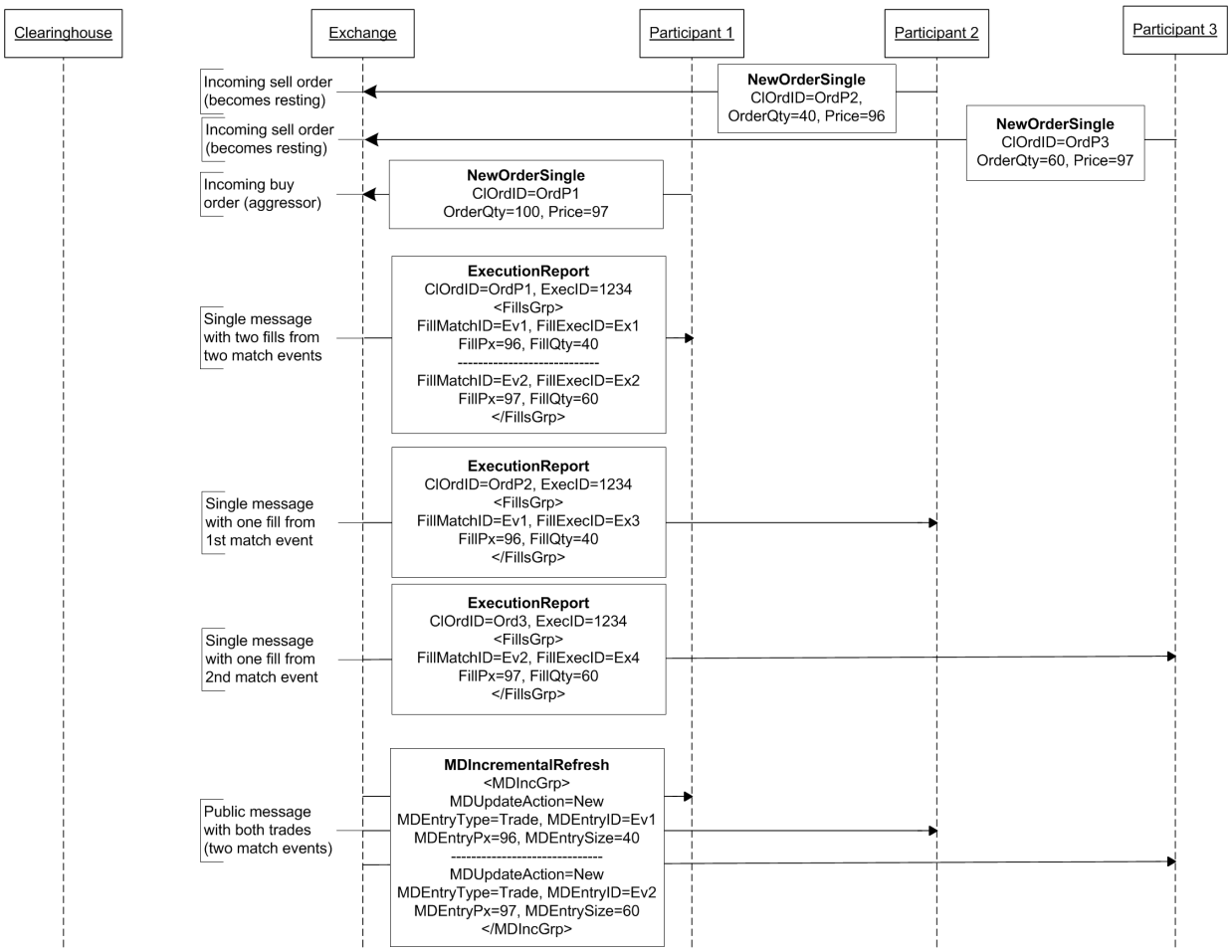
When a quote is matched, a Quote Execution Notification is sent to the owning session. The field *QuoteMsgID (1166)* contains the *QuoteID (117)* of the quote. Additionally the application message identifier *ApplMsgID (28704)* is provided to enable the retransmission of quote match events.

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.

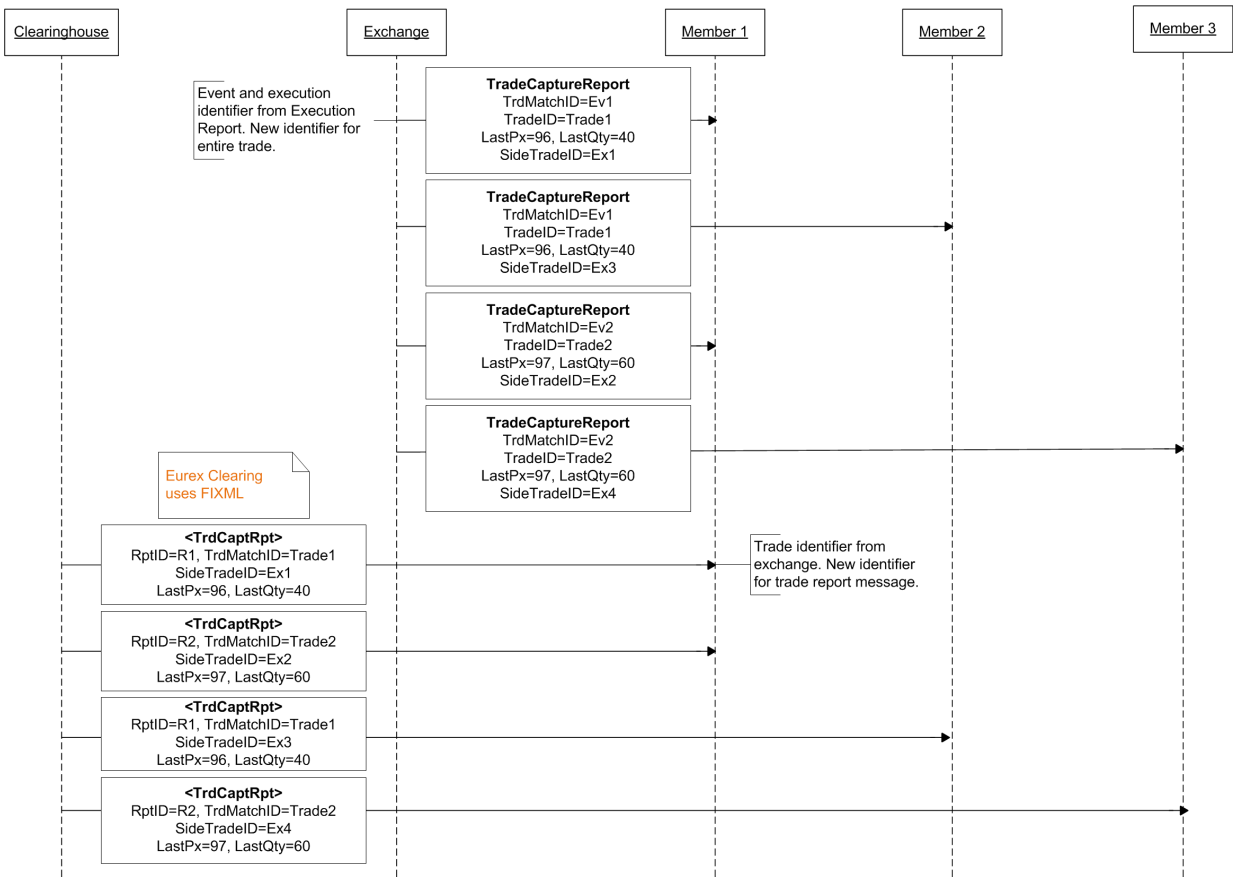
The focus of this message flow is to show, how trade reconciliation is based on the different execution and trade identifiers.

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).



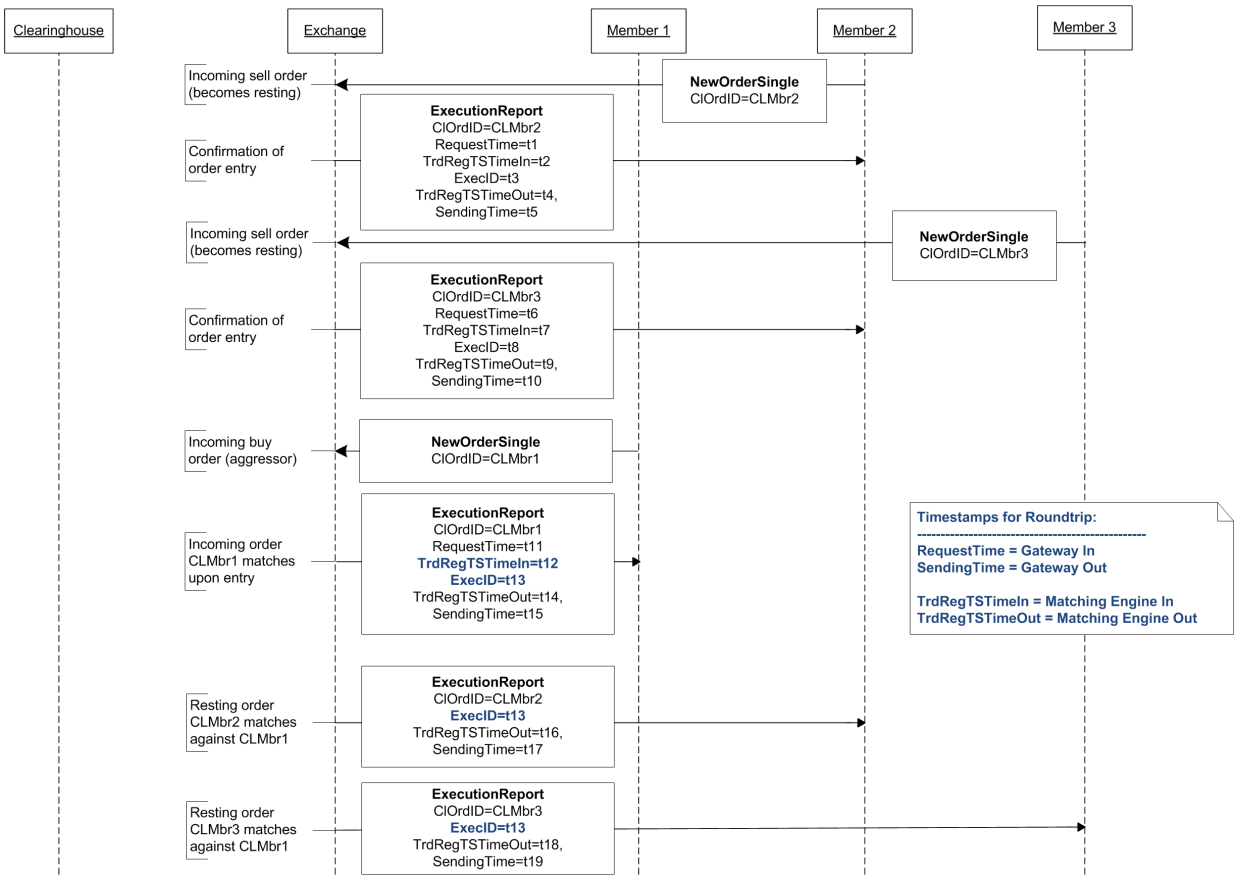
The second figure shows how the private execution identifiers and the identifier of the match event can also be found in the *Trade Capture Report (AE)*.

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



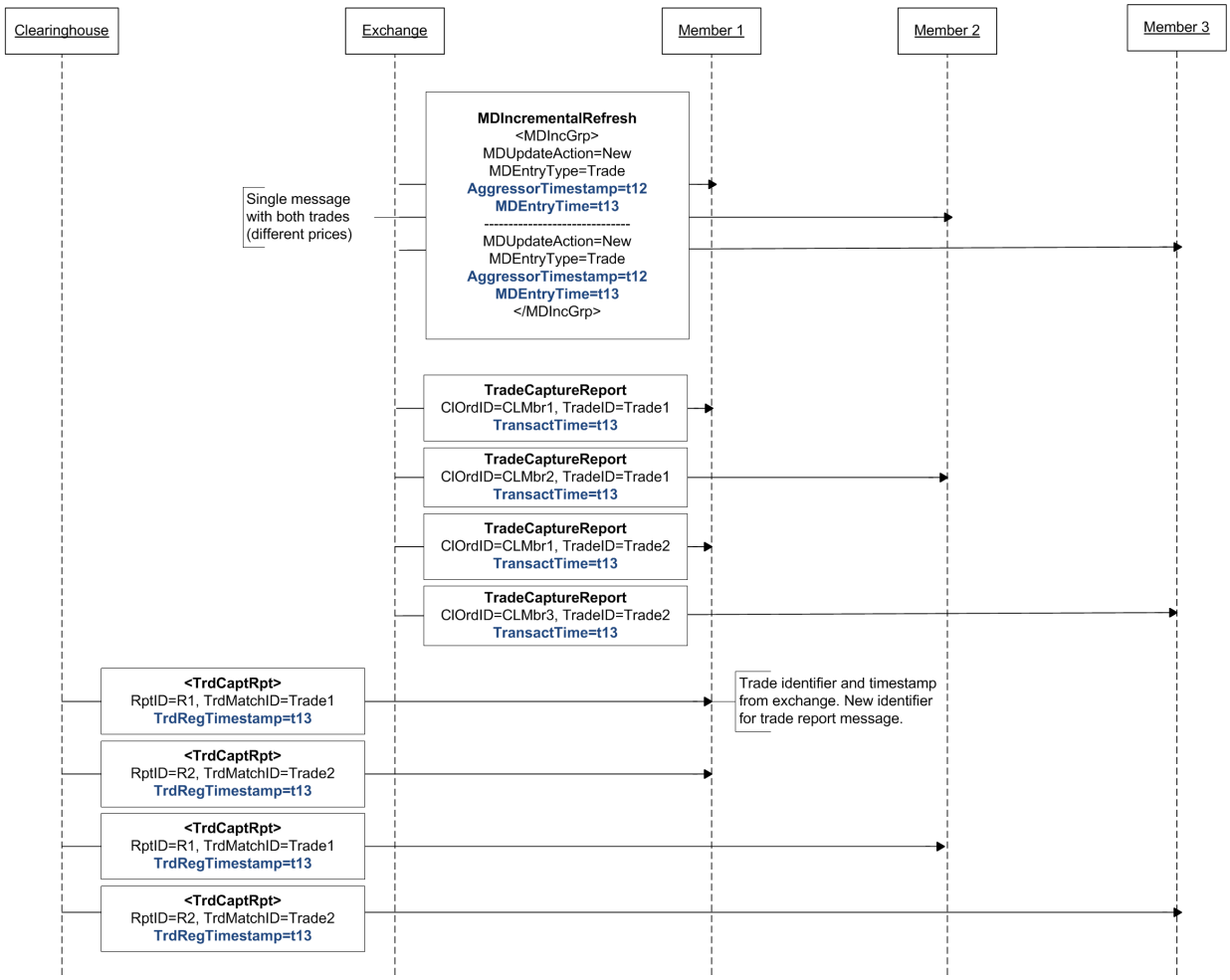
8.3 Reconciliation of Timestamps in BSE ETI and BSE EMDI

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.

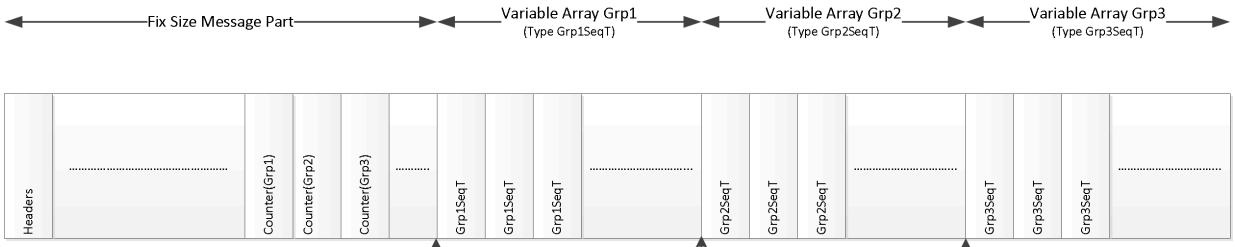
T12: *AggressorTimeStamp (8820)* in BSE EMDI maps to *TrdRegTSTimeIn (21002)* in BSE ETI. It comprises the matching engine in time of the order that triggered the trade.


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 of the variable arrays in the message :

OffsetGrp1 =
Offset of first field in
GrpSeq1T

offsetBase(Grp2) =
OffsetGrp1 +
Counter(Grp1) * (size of Grp1SeqT)

offsetBase(Grp3) =
offsetBase(Grp2) +
Counter(Grp2)* (size of Grp2SeqT)

Offset of a field *F* in the *N*-th entry of the arrays :
(for *N* > 0)

OffsetGrp1 +
(N -1) * (size of Grp1SeqT) +
(Offset(*F*)* –OffsetGrp1)

offsetBase(Grp2) +
(N-1) * (size of Grp2SeqT) +
Offset(*F*)*

offsetBase(Grp3) +
(N-1) * (size of Grp3SeqT) +
Offset(*F*)*

* 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.

MMorc (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 1.0:

Chapter	Description
7.6 Order Handling	New field Account Type added in Order Messages
7.5.3, 7.5.4 User password management	New message added for user password management.
-	Added messages: Risk notification to members, Collateral alerts to members.

9.2 Major Changes compared to the version 1.2

Chapter	Description
1 List of Abbreviations	Abbreviations added for RRM and HOVC
3.4 Session Oriented	Separate session required for each segment.
4.5.2 Order Quantity 4.5.5 MaxShow Quantity Modification	Revealed Quantity feature added for Equity Derivatives segment.
4.5.9 Order Status and Execution Reports	New Scenarios added for RRM orders and HOVC orders
4.9 Risk Controls	Description provided for RRM mode
5.2 Identification and Authentication	Description provided for handling multiple segment.
6.11 Order Handling For RRM Orders	Mechanism for handling RRM orders
6.12 Order Handling For HOVC Orders	Mechanism for handling High Value orders

9.3 Major Changes compared to the version 1.3

Chapter	Description
5.1 Session Concept	Trade Broadcast enabled for HF sessions also
5.1.2 HF session	All sessions currently are classified as HF session only

9.4 Major Changes compared to the version 1.4

Chapter	Description
4.5.9 Location ID	Logic for the location ID field *SenderLocationID(142)* to be sent in the order request
5.2.3 User Authentication	The description for password change elaborate d to include the password change policy is applicable for user and session both.
4.5.5 MaxShow Quantity Modification	For Modification of disclosed quantity field ***MaxShow(210)***, the user should send the desired quantity instead of sum of ***CumQty(14)*** and desired visible quantity.

9.5 Major Changes compared to the version 1.4.2

Chapter	Description
1 List of Abbreviations	Removal of HF and LF
2 Introduction	Drop copy for standard orders removed
3.5 Subscription Mechanism	Subscription to Listener Broadcast removed
4.5.1 order Types	Removal of Standard orders
4.5.4 Modification	Removal of facility to modify standard orders of another session
4.7 Listener Broadcast	Removed
4.12 Trading Session Events	Trading session events will not be available on listener broadcast
5.1 Session Concept 5.1.1 Low Frequency session (LF) 5.1.2 High Frequency Session (HF)	Removed HF and LF session related information
5.4 Throughput Limit	Removal of HF and LF session
6.8 Session data	Removal of standard order related information
6.9 Broadcast	Listener broadcast removed
6.10.1 Retransmission	Listener broadcast removed

9.6 Major Changes compared to the version 1.4.3

Chapter	Description
1 List of Abbreviations	Zero Terminal (ZT) Introduced
4.5.1 Order Types	New order Type Good-for-Session *TimeInForce (59) = 7* introduced.
4.5.10 Order Status and Execution	All Scenarios having HOVC word are rephrased with the word Provisional
4.10 Mass cancellation Notification and Mass Cancellation Events	New Event for mass cancellation (Product state = Post closing and End of Day) Introduced.
5.2.3 User Authentication	Rules for Password Expiry and Password Change introduced for Session and User Password.
6.12 Order Handling for Provisional orders	New case of call auction orders added.. Section rephrased from Order handling for HOVC orders to Order Handling for Provisional orders

9.7 Major Changes compared to the version 1.4.4

Chapter	Description
4.5.1 Order Types	New Order Type block deal OrdType (40) = 6 supported.
4.5.10 Order Status and Execution Reports	New cases for block deal orders added. New Case added in Unsoliciited Events for orders cancelled due to price outside price band.

Chapter	Description

9.8 Major Changes compared to the version 1.4.5

Chapter	Description
1 List of Abbreviations	Removal of HF and LF
2 Introduction	Drop copy for standard orders added
3.5 Subscription Mechanism	Subscription to Listener Broadcast added
4.5.1 order Types	Addition of Standard orders
4.5.4 Modification	Addition of facility to modify standard orders of another session
4.5.9 Short Order Message Layout	New messages structures with lesser payload is introduced.
4.7 Listener Broadcast	Added
4.9 Risk Control	Risk notification messages sent additionally for position limit violation in equity derivatives and currency derivatives segment.
4.12 Trading Session Events	Trading session events will not be available on listener broadcast
5.1 Session Concept 5.1.1 Low Frequency session (LF) 5.1.2 High Frequency Session (HF)	Removed HF and LF session related information
5.4 Throughput Limit	Addition of HF and LF session
6.8 Session data	Addition of standard order related information
6.9 Broadcast	Listener broadcast added
6.10.1 Retransmission	Listener broadcast added
6.12 Order Handling for Provisional orders	Orders submitted in call auction sessions will not be acknowledged with provisional acknowledgement. For each order added in call auction session, final confirmation would be provided immediately.
7.5.8 Risk Notification 7.5.1 Risk Collateral Alert Trader 7.5.2 Risk Collateral Alert Admin	Following new fields are added in the structures MarketsegmentID (1300) MemberStatus(30633) SegmentIndicatior (30636)
7.7.8 Extended Order Information	New values added for ExecRestatementReason (378)

9.9 Major Changes compared to the version 1.4.6

Chapter	Description
6.4 Heartbeat	Heartbeat interval value set as zero will not be effective in production. The exchange default heartbeat interval will be effective.

Chapter	Description
4.5.11 Order Status and Execution	***Orderstatus(39)* for Delete orders under Provisional orders and RRM orders is changed from 9=Suspended to 4= Order cancelled**

9.10 Major Changes compared to the version 1.4.7

1. In following messages a new field RegulatoryID has been added with description given below:

- Cancel Order Single = 10109
- Cancel Order Multi Leg = 10123
- Order Mass Cancellation Request = 10120

Field Name	Tag	DataType	Length	Required	Description
RegulatoryID		unsigned int	**4**	**N**	**not used**

2. In following messages two fields RequestOut and ResponseIn has been added with description given below:

- New Order Response (Standard Order) = 10101
- New Order Response (Lean Order) = 10102
- Replace Order Response (Standard Order) = 10107
- Replace Order Response (Lean Order) = 10108
- Cancel Order Response (Standard Order) = 10110
- Cancel Order Response (Lean Order) = 10111
- Order Mass Cancellation Response = 10121
- Order Mass Cancellation Response No Hits = 10124
- Immediate Execution Response = 10103

Field Name	Tag	DataType	Length	Required	Description
RequestOut	7764	UTCTimestamp	8	Y	Timestamp the gateway sends a message to the Matching Engine
ResponseIn	7765	UTCTimestamp	8	Y	Timestamp the gateway receives a message from the Matching Engine

3. In Field MassActionReason = 28721

- In Reason for mass cancellation new reason has been added

Value	Description
111	Product_temporarily_not_tradable

In Reason for mass cancellation an existing reason has been removed.

Value	Description
108	Instrument_Expired

4. In following messages three fields RegulatoryID , PartyIDLocationID and CustOrderHandlingInst have been added with description given below:

- New Order Single = 10100,
- Replace Order Single = 10106
- New Order Multi Leg = 10113
- Replace Order Multi Leg = 10114
- IN Extended Order Information = 10117 two Fields PartyIDLocationID,CustOrderHandlingInst have been added

Field Name	Tag	DataType	Length	Required	Description
RegulatoryID	25029	unsigned int	4	N	not used
PartyIDLocationID	20075	Fixed String	2	N	not used
CustOrderHandlingInst	1031	Fixed String	1	N	not used

5. In Cancel Order Notification = 10112 message two fields MarketSegmentID and Side have been added with description given below(these two fields are not new)

Field Name	Tag	DataType	Length	Required	Description
MarketSegmentID	1300	signed int	4	Y	Product identifier.
Side	54	unsigned int	1	Y	Side of the order. value: Description 1: Buy 2: Sell

6. In Immediate Execution Response= 10103 in field FillsGrp[NoFills] for following sub fields FillLiquidityInd(1443) enum 1,7 is removed

7. In following messages field TargetPartyIDDeskID removed

- Order Mass Cancellation Notification = 10122

· Order Mass Cancellation Request = 10120

8. In Reject = 10010,in place of *<ResponseHeader>,< NRResponseHeaderME> as a required field has been added with following subfields*

<NRResponseHeaderME>

Field Name	Tag	DataType	Length	Required	Description
RequestTime	5979	UTCTimestamp	8	Y	Gateway request in timestamp.
RequestOut	7764	UTCTimestamp	8	N	Timestamp the gateway sends a message to the Matching Engine
TrdRegTSTimeIn	21002	UTCTimestamp	8	N	Matching engine in timestamp.
TrdRegTSTimeOut	21003	UTCTimestamp	8	N	Matching engine out timestamp.
ResponseIn	7765	UTCTimestamp	8	N	Timestamp the gateway receives a message from the Matching Engine
SendingTime	52	UTCTimestamp	8	Y	Gateway response out timestamp.
MsgSeqNum	34	unsigned int	4	Y	Message sequence number used by the participant for requests sent to the gateway.
LastFragment	893	unsigned int	1	Y	Indicates whether this message is the last fragment (part) of a sequence of messages belonging to one dedicated transaction. Value: Description 0: Not Last Message 1: Last Message

9. InConnection Gateway Request= 10020 field DefaultCstmApplVerID has been added

Field Name	Tag	DataType	Length	Required	Description
DefaultCstmApp	1408	Fixed String	30	Y	Indicates the BSE ETI interface version the ETI gateway software uses. Must be set as 1.0 Valid characters: \x20,\x22-\x7B, \x7D,\x7E

10. IN News = 10031 Field ApplSeqNum modified from Required to not Not Mandatory

11. IN Trade Notification = 10500 new fields ClearingTradePrice , ClearingTradeQty, CustOrderHandlingInst have been added .

Field Name	Tag	DataType	Length	Required	Description
ClearingTradePrice	1596	PriceType	8	N	Not used
ClearingTradeQty	28736	Qty	4	N	Not used
CustOrderHandlingInst	1031	Fixed String	1	N	Not used

IN Trade Notification = 10500 Field AggressorSide DELETED and field RootPartyIDSessionID changes from mandatory to not required.

9.11 Major Changes compared to the version 1.5

Chapter	Description
7.6.9 Session Logon Response	**New Field *NoOf Partition(1770)* introduced which provides information about the total number of partitions present in the segment.**

9.12 Major Changes compared to the version 1.5.1

Chapter	Description
5.2.3 User Authentication	**Handling expired password scenario detailed.**
7.6.9 Session Logon Response 7.6.17 User Logon Response	**New authentication related fields are added LastLoginTime(1772) DaysLeftForPasswdExpiry(1774) GraceLoginsLeft(1773) LastLoginIP(1771)**

9.13 Major Changes compared to the version 1.5.2

Chapter	Description
7.7.8 Extended Order Information 7.7.11 New Order Response (Standard) 7.7.12 New Order Response (Lean) 7.7.13 Immediate Execution Response 7.7.18 Replace Order Response (Standard) 7.7.19 Replace Order Response (Lean)	**New value added for the field ExecRestatementReason (378) for orders deleted due to self trade prevention functionality**

Chapter	Description
4.5.11 Order Status and Execution	New cases added under New Order, Replace Order, Unsolicited Events for the orders cancelled due to self trade prevention functionality

9.14 Major Changes compared to the version 1.5.3

Chapter	Description
4.5.1 Order Types	All Or None execution introduced for multi leg orders.
7.7.7 Extended order Information (MultiLeg) 7.7.8 Immediate Execution Response (MultiLeg) 7.7.9 Reject (Multileg) 7.7.10 New Order MultiLeg	New Message type introduced to support multi leg order functionality
7.7.14 New Order Complex 7.7.21 Replace Order Complex 7.7.25 Cancel Order Complex	Message name changed as follows New Order Multi leg to New Order Complex Replace Order Multi leg to Replace Order Complex Cancel Order Multi leg to Cancel Order Complex

9.15 Major Changes compared to the version 1.5.4

Chapter	Description
7.7.7 Order Confirmation	Order Confirmation is introduced additionally to indicate the receipt of an order. This would be the first response to all type of order messages.

9.16 Major Changes compared to the version 1.5.5

Chapter	Description
7.7.7 Extended Order Information(MultiLeg) 7.7.8 Immediate Execution Response (MultiLeg) 7.7.8 Extended Order Information 7.7.11 New Order Response (Standard) 7.7.12 New Order Response (Lean) 7.7.13 Immediate Execution Response 7.7.18 Replace Order Response (Standard) 7.7.19 Replace Order Response (Lean)	New value 247 added for the field ExecRestatementReason (378) for orders deleted due to reversal trade prevention check.

Chapter	Description
4.5.11 Order Status and Execution	New cases added under New Order, Replace Order, Unsolicited Events for the orders cancelled due to trade reversal prevention functionality
Trade Enhancement Notification 6.9 Broadcast 6.10 Recovery	New message introduced providing information on acceptance or rejection of trades by custodian in their books. In all messages the existing field *FreeText2(25008)* is renamed as *CPCode(30642)* and can be used to pass the participant code in order messages for institutional orders where auto give-up functionality is desired.
4.6 Quote Handling 7.6 Quote Handling	In order to facilitate the market making functionality, new messages supporting double sided orders are introduced. In order to access this feature the field DefaultCstmApplVerID (1408) must be set to 2.1 in Session Logon message.

9.17 Major Changes compared to the version 1.5.6

Chapter	Description
7.6.3 Quote Execution Notification	Fields *AccountType(581), FreeText1(58), CPCOde(30642), SenderLocationID(142)* are moved from <Message Body> group to <QuoteEventGrp>.
7.6.7 Quote Activation Request 7.6.8 Quote Activation Response 7.6.9 Quote Activation Notification	Not supported

9.18 Major Changes compared to the version 1.5.7

Chapter	Description
4.5.1 Order Types 4.5.11 Order Status and Execution Reports	New description added for One-Cancel-the-Other (OCO) and Book or Cancel (BOC) orders. New Enumeration " OCO order Triggered " added in the fields *Triggered(1823)*, *FillLiquidityInd(1443)*, *ExecRestatementReason(378)*.
4.6 and 7.6 Quotes Handling	The term Market Maker (MM) is changed to Quotes in all descriptions and all messages.
7.8.1 Debt Inquiry Request 7.8.2 Debt Inquiry Response	New messages added to enquire about debt instrument related trading attributes.
7.5.3 Trade Notification 7.8.15 Extended Order Information 7.8.18 New Order Response (Standard Order) 7.8.19 New Order Response (Lean Order) 7.8.20 Immediate Execution Response 7.8.21 Book Order Execution 7.8.25 Replace Order Response (Standard Order) 7.8.26 Replace Order Response (Lean Order)	New fields *Yield(236)* and *UnderlyingDirtyPx(882)* are added. Additionally fields *FillYield(1623)* and *FillDirtyPx(30644)* are added in Extended Order Information, Immediate Execution Response and Book Order Execution. The field will contain value for debt instruments only. For rest of the instrument it will be contain NoValue of the data type.

9.19 Major Changes compared to the version 1.5.8

Chapter	Description
4.5.1 Order Types	New description added for " Recall " and " Early Return " applicable for SLB market only.
7.5.3 Trade Notification	New Enumeration " Recall " and " Early Return " added in the field *Side(54)* and *OrderSide(28586)* applicable for SLB market only.
7.8.14 New Order Single 7.8.15 Extended Order Information 7.8.16 New Order Single (short layout) 7.8.21 Book Order Execution 7.8.22 Replace Order Single 7.8.23 Replace Order Single (short layout) 7.8.31 Cancel Order Notification	New Enumeration " Recall " and " Early Return " added in the field *Side(54)* applicable for SLB market only

Chapter	Description
7.5.1 Risk Collateral Alert Admin 7.5.2 Risk Collateral Alert Trader 7.5.9 Risk Notification	New Enumeration " SLB " added in the field *SegmentIndicator(30636)* applicable for SLB market only.

9.20 Major Changes compared to the version 1.5.9

Chapter	Description
4.11 Risk Control	Additional information added for the fields *RiskModeStatus (30643)* and *ScopeIdentifier (30633)*.
7.5.1 Risk Collateral Alert Admin 7.5.2 Risk Collateral Alert Trader 7.5.8 Risk Notification	New Enumerations Currency and Interest Rate Derivatives added in field *SegmentIndicator(30636)*. Enumeration "SLB" removed from the field *SegmentIndicator(30636)*.
7.5.8 Risk Notification	Field "RRMState (30611)" is replaced with "RiskModeStatus (30643)". This field will now provide the information about the entry and exit of perticular risk event. Field "MemberStatus (30633)" is replaced with new field "ScopeIdentifier (30633)". This field will now provide information about the type of the risk event which has been triggered. The currency segment is further classified into asset class i.e. currency derivatives and interest rate derivatives. The new classification is included as new enumeration under field *"SegmentIndicator(30636)"*. The field "ScopeIdentifier (30633)= 7" may be sent either at the parent segment level (e.g. Currency) or at the asset class level (e.g. currency derivatives or interest rate derivatives products) values for which are included in field *"SegmentIndicator(30636)."* The change is applicable in Currency segment only. Scenario A: If notification with "ScopeIdentifier (30633)= 7" is sent for parent segment i.e. *SegmentIndicator(30636)*=7, then the member is in risk mode for all asset classes automatically. Scenario B: If notification of "ScopeIdentifier (30633)= 7" is sent for any of asset class level i.e. *SegmentIndicator(30636)*=8 or 9, then the member is in risk mode for the respective asset class only. (Asset class identifier is available in the BFX_CO file).

Chapter	Description

9.21 Major Changes compared to the version 1.5.10

Chapter	Description
7.5.1 Risk Collateral Alert Admin	As per Exchange circular number 20170920-10 dated 20th Sep 2017 and SEBI notification SEBI/HO/MRD/DP/CIR/P/2017/102 overall rupee based proprietary position limit alerts will be sent to all active trading members having prop level open position. In order to identify this alert, a new enumeration "Proprietary" is added in field *MemberType(30620)*.

9.22 Major Changes compared to the version 1.5.11

Chapter	Description
4.4 Order Identifier 4.4.3 Activity Time 4.5.3 Cancellation 4.5.4 Modification	Description and usage of the field *ActivityTime(30645)* added.
7.5.3 Trade Notification 7.8.15 Extended Order Information 7.8.18 New Order Response (Standard Order) 7.8.19 New Order Response (Lean Order) 7.8.20 Immediate Execution Response 7.8.21 Book Order Execution 7.8.22 Replace Order Single 7.8.23 Replace Order Single (short layout) 7.8.24 Replace Order Complex 7.8.25 Replace Order Response (Standard Order) 7.8.26 Replace Order Response (Lean Order) 7.8.27 Cancel Order Single 7.8.28 Cancel Order Complex	New field *ActivityTime (30645)* added.

Chapter	Description
7.5.3 Trade Notification 7.8.14 New Order Single 7.8.15 Extended Order Information 7.8.17 New Order Complex 7.8.18 New Order Response (Standard Order) 7.8.19 New Order Response (Lean Order) 7.8.20 Immediate Execution Response 7.8.21 Book Order Execution 7.8.22 Replace Order Single 7.8.24 Replace Order Complex 7.8.25 Replace Order Response (Standard Order) 7.8.26 Replace Order Response (Lean Order)	New fields *Filler1(30646)*, *Filler2(30647)* and *Filler3(30648)* added.
7.7.1 Connection Gateway Request 7.7.8 Session logon 7.7.9 Session Logon Response	The field *DefaultCstmApplVerID(1408)* must be compulsorily set to 2.2 and the changes mentioned in change log needs to be handled in the application. If the value is left to current value i.e. 2.1 then the login will be rejected with the error "Invalid DefaultCstmApplVerID 2.1 => immediate disconnect"
7.5.3 Trade Notification 7.6.1 Mass Quote Request 7.6.3 Quote Execution Notification 7.8.10 Extended Order Information(MultiLeg) 7.8.11 Immediate Execution Response(MultiLeg) 7.8.13 New Order MultiLeg 7.8.14 New Order Single 7.8.15 Extended Order Information 7.8.16 New Order Single (short layout) 7.8.17 New Order Complex 7.8.20 Immediate Execution Response 7.8.21 Book Order Execution 7.8.22 Replace Order Single 7.8.23 Replace Order Single (short layout)	New field *AlgoID (30649)* introduced to identify the algorithmic orders uniquely. The change has been proposed by SEBI vide circular number SEBI/HO/MRD/DP/CIR/P/2018/62.

Chapter	Description
7.8.24 Replace Order Complex 7.8.27 Cancel Order Single 7.8.28 Cancel Order Complex	
7.2 Data Types	Description of ETI Data Type "chartext" has been changed.

9.23 Major Changes compared to the version 1.6.1

Chapter	Description
7.5.1 Risk Collateral Alert Admin 7.5.2 Risk Collateral Alert Trader 7.5.8 Risk Notification	New Enumeration "Commodity Derivatives" added in the field *SegmentIndicator(30636)*. The length of field *BusinessUnitSymbol(30619)* has been increased from 5 to 8 bytes.
7.8.15 Extended Order Information	New Enumeration "Orders rejected due to Client RRM" added in the field *ExecRestatementReason(378).* New Enumeration "Orders rejected due to Client Suspension" added in the field *ExecRestatementReason(378).*
7.7.28 Reject 7.8.12 Reject(Multileg)	Description of value 10006 in field *SessionRejectReason(373)* has been changed to "Activity Timestamp Not Matched".

9.24 Major Changes compared to the version 1.6.2

Chapter	Description
7.5.8 Risk Notification	New Enumeration "POSITIONAL LIMIT RRM(NEAR MONTH CONTRACT)" added in the field *ScopeIdentifier(30633).* Applicable in commodity derivatives segment only. Refer field no. 80 in master file BCX_COddmmyyyy.csv for indentification of near month.
7.5.1 Risk Collateral Alert Admin 7.5.2 Risk Collateral Alert Trader	New field *Duration (30650)* added.
7.6.2 Quote Cancellation Notification	New message " Quote Cancellation Notification " added to inform cancellation of single quote.
7.8.15 Extended Order Information	New Enumerations added in the field *ExecRestatementReason(378).* 1.RRM For Client and Contract Combination 2.RRM For Member and Contract Combination 3.RRM For Client and Collateral Combination

9.25 Major Changes compared to the version 1.6.3

Chapter	Description
7.6.1 Mass Quote Request 7.6.2 Quote Cancellation Notification 7.6.4 Quote Execution Notification 7.8.14 New Order Single 7.8.15 Extended Order Information 7.8.16 New Order Single (short layout 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 7.8.14 New Order Single 7.8.15 Extended Order Information 7.8.17 New Order Complex 7.8.18 New Order Response (Standard Order) 7.8.19 New Order Response (Lean Order) 7.8.20 Immediate Execution Response 7.8.21 Book Order Execution 7.8.22 Replace Order Single 7.8.24 Replace Order Complex 7.8.25 Replace Order Response (Standard Order) 7.8.26 Replace Order Response (Lean Order)	Existing field *Filler3 (30648)* removed. New fields *Filler4 (30652)* and *Filler5 (30653)* added for future use.

Chapter	Description
7.8.16 New Order Single (short layout) **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 **7.7.8 Session logon** **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.** **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.** **The existing structures will be discontinued in near future with advance notification.**