Self Trade Prevention

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1 Background

As part of the anonymous matching process on the Exchange trading platform, trades may get executed in a scrip between buy & sell orders entered by the same member, which may be either proprietary or belonging to the same client, through same or different trading terminals. Such trades are commonly referred to as 'Self trades'. As part of the Exchange processes, it is proposed to implement a check to prevent such self trades at the order level.

Self-trade prevention is a mandatory order feature and will be applicable in all call auction sessions and continuous matching session. The matching behaviour with Self Trade Prevention functionality is explained with an example in section 4

2 IML Impact

Call Auction Order Entry Session (Pre-open/ PCAS/ SPOS)

- During call auction order entry session an incoming order will be checked against the opposite side order book. If an opposite side order having the same client code belonging to same member is already resting in the order book then the incoming order will be rejected.
- Similarly, order modification request during call auction order entry session shall be treated like an incoming order & the request shall be rejected if it fails the above-mentioned check.
- The incoming order (add/modify) will be rejected with error code 210 and error text as "Self trade not allowed".

Continuous/ Post Close Session

- During continuous session an incoming order will continue to match as per time priority logic till an opposite side matchable order having potential for resulting in a self-trade is encountered. If such order is encountered then the incoming order is cancelled for the residual quantity.
- The cancelled quantity will be sent using the existing Cancelled order UMS [Message type 3233].
- The Field Reason will provide the reason for the cancellation as 246.
- It is also possible that in the above scenario of matching, the passive order having the same client as of incoming order will be cancelled along with the incoming order. In such case Cancelled Order UMS [Message type 3233] will be sent for passive order also.
- <u>The feature of passive order cancellation is currently not enabled. Thus only the incoming order will be canceled.</u>
- The flow of Messages for Incoming Order could be :
  - Order Request [1025] → Order Response [1025] → Cancelled Order UMS [3233] → Trade [1521/3521].
- The Trade message is optional message in the above message flow. Additionally the sequence of Trade and cancelled order UMS may be interchangeable.

3 Messages

3.1.1 Cancelled Order UMS

Type of Message : UMS

Description : This message is sent by the BOLTPLUS whenever the orders are cancelled by the Exchange. The message may contain multiple cancelled orders.

The cancellation can take place for multiple reasons. Few examples could be orders of Special Pre Open which are not eligible for continuous session due to order price outside the price band, orders of PCAS which are not matched in the PCAS matching session, self trade orders

Field Name	Type	Description	Values, meanings, Validations
Message Type	Long	Type of message	3233
No of Records	Long	Number of orders	The maximum value of this field can be 14.
ORDER DETAILS		**The substructure is as given below. This sub structure will repeat up to the No. specified in No of Records field.**	
Instrument Code	Long	Instrument code for which order was placed	
Message Tag	Long	Reference Tag for the actual order	
Quantity	Long	Order Quantity returned	
Reason	Long	Reason Code for the cancellation action done by Exchange.	– Refer Section Reason codes for Cancelled Order UMS[3233]
Filler 1	Long	Reserved Field	
Filler 2	Long	For Future Use	
Filler 3	Long	For Future Use	
Filler 4	Long	For Future Use	
Order ID	Long Long	Order ID of the Order	

Year	Char	The Year at which the order was cancelled at the BOLTPLUS	
Month	Char	The Month at which the order was cancelled at the BOLTPLUS	
Day	Char	The Day at which the order was cancelled at the BOLTPLUS	
Hour	Char	The Hour at which the order was cancelled at the BOLTPLUS	
Minute	Char	The Minute at which the order was cancelled at the BOLTPLUS	
Second	Char	The Second at which the order was cancelled at the CTE	
Filler5	Char	For Future Use	
Filler6	Char	For Future Use	
Filler7	Char	For Future Use	
Filler 8	Char(14 +1)	Reserved Field	

3.1.2 Reason codes for Cancelled order UMS [3233]

Reason Code	Reason	Description
2	Security Suspended	The orders will be cancelled when the security is suspended during trading hours by Exchange due to regulatory compliance.
18	No Equilibrium Price determined in SPOS for relisting security	For relisting securities if the equilibrium price is not determined during SPOS, all the pending orders are cancelled.
19	Out of price band orders	All the orders submitted in SPOS which fall outside the price band which is determined after equilibrium price is established are cancelled.

20	Insufficient collateral	In case the Collateral utilization for orders in SPOS session exceeds the available collateral, the pending orders of SPOS session will be cancelled and sent using this error code.
21	Position Limit Exceeded	If the market wide position limit of an TM across all the contracts of a product of an asset exceeds beyond defined threshold, all the pending orders across all the contracts of the product of that asset will be cancelled.
149	Member or Trader suspended	The cancelled orders with this error code means some orders were accepted during the race condition of suspension.
150	Market Halt	Currently the pending orders are not returned whenever the market halt is triggered. However if such orders are returned in future it would be returned using this error code. The TPS application should be ready to handle the orders return in case of market halt which will be sent in above structure with this reason code.
151	RRM [Collateral Exhaustion]	The member is in RRM mode due to exhaustion of capital.
152	Trader Suspended	In case the trader is suspended by his admin or by Exchange, all the pending orders are returned with this error code.
420	End of Session Expiry Orders	All the orders submitted with end of session expiry will be cancelled as soon as the Trading (Continuous) session ends and will be sent using this error code.
422	End of Today Expiry Orders.	All the orders submitted with end of session expiry will be cancelled as soon as the Trading (Post Closing) session ends and will be sent using this error code.
423	Call Auction Failure	All orders cancelled due to call auction failure will be returned with this error code.
425	End of Session Expiry Orders	The cancelled orders with this error code means some orders were accepted during the race condition of session.
426	End of Today Expiry Orders.	The cancelled orders with this error code means some orders were accepted during the race condition of session.
31	Price worse than close price	Orders whose price is worse than the days determined close price.
240	Member Suspended	The member is suspended by exchange for regulatory compliance reasons.
241	RRM [Regulatory]	The member is in RRM due to regulatory compliance

		such as violation of Trade to order ratio in derivative segment.
199	Pending Cancel	The final confirmation for the deletion request sent in freeze period of call auction.
246	Self Trade Order	The order at the time of matching would result in self trade.

4 Example

Sell Order book for a scrip exists as follows:

Sell Price	Sell Quantity	No. of orders
100	500	1
101	200	3
102	200	2
103	200	3
104	100	1
105	200	2
106	100	1

The sell orders at price point 101 are as follows –

- Qty 100 entered by member "A" with client code "A1" – Priority 1
- Qty 75 entered by member "B" as "OWN" – Priority 2
- Qty 25 entered by member "C" with client code "C1" – Priority 3

Now a Buy order is entered by member "B" as "OWN" – Buy 1300 @105 Limit

Here the trade execution will be as follows:

- Trade 1 - Qty 500 @100
- Trade 2 - Qty 100 @101 (order with priority 1 shown above)
- Since the subsequent order with priority 2 is resulting into a self trade, the matching will stop at this point and the unexecuted quantity of 700 of the incoming buy order will be cancelled.
- The two passive orders at price point 101 will not be cancelled and will remain pending.

The Sell Side order book post matching will be as follows –

Sell Price	Sell Quantity	No. of orders
101	100	2
102	200	2
103	200	3
104	100	1
105	200	2
106	100	1

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