

## PROCEDURE FOR INACTIVATING ORDERS AUTOMATICALLY WITH THE CANCEL ON DISCONNECT FUNCTIONALITY

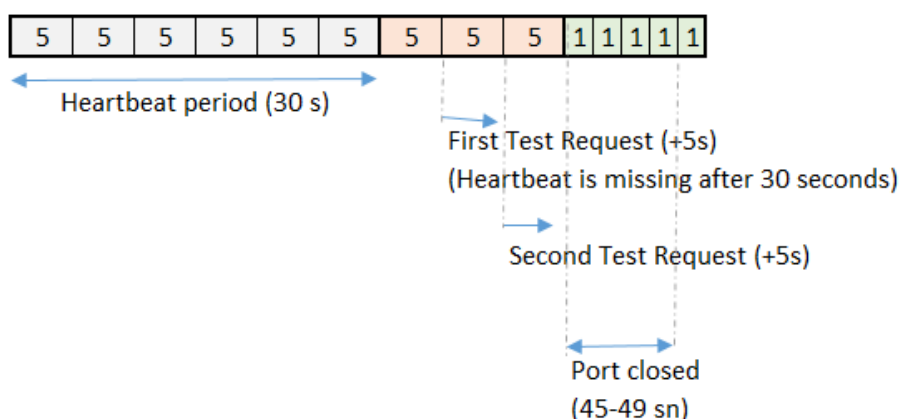
FIX and OUCH API user's active orders in the order book could be automatically inactivated (suspended) in case of connection loss in the BISTECH Trading System (System). Although this functionality is actually inactivation of passive orders, it is widely known "cancel on disconnect" facility. This service is provided to the trading members only if requested. Automatically suspended (inactivated) orders could be reactivated via Trader Workstation (TW). New order identification number is not produced for this type of orders, but reordered according to its price priority in the related book.

Unlike FIX and OUCH API orders, System gives brand new order identification number to TW order which is inactivated then re-activated by TW, and also these orders lost its time priority.

Inactivation process on System side works differently for FIX and OUCH channels. Additionally, "User Disconnection" and "Order Inactivation" processes are carried out in two consecutive phase, first step is performed in the Gateway (GW) side (FIX/OUCH) and the second phase is performed in the matching engine (ME) side.

### 1. FIX API

Heartbeat interval is negotiated at logon cycle by using the HeartBtInt (108) field. The system allows heartbeat intervals greater than 10 seconds. Recommended heartbeat interval is 30 s. Test Request (MsgType = 1) is used to "ping" the client whenever a heartbeat has not arrived at the negotiated heartbeat interval. Test Request message is sent twice at intervals of five seconds in case of heartbeat absence. The first test request is sent by FIX GW after 5 seconds when the 30 second heartbeat interval time expires. Then the second (also final) test request is sent after 5 seconds. The last test request is awaited 5 more seconds for an answer. The port will be closed when the final test request does not receive a reply. This process is completed in between 45 and 49 seconds in totally.



After closing the user port, the phase between FIX GW and the trading system (ME) is triggered and user connection information is cleared from the System. In order to provide this, a timeout period of 40 + 7 seconds performed by internal modules. This process is carried out at minimum in 40 seconds and maximum in 47 seconds.

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In summary, the total time of an inactivation for FIX orders;

- At best ; 45 (GW side) + 40 (ME side) = 85 seconds
- At worst ; 49 (GW side) + 47 (ME side) = 96 seconds

It is technically possible to decrease total time period for inactivation with two different ways. Firstly, clients can declare lower heartbeat interval than recommended of 30 seconds. The other one is the Exchange itself can configure the 47 second maximum default timeout period to a lower value (from 47 seconds to 17 seconds) by request of the client.

## **2. OUCH API**

The connection port between OUCH GW and client is closed after 15 seconds (constant period). ME side time-out period for OUCH user after disconnection of port is completely identical with FIX API.

In summary, the total time of an inactivation for OUCH orders;

- At best ; 15 (GW side) + 40 (ME side) = 55 seconds
- At worst ; 15 (GW side) + 47 (ME side) = 62 seconds

It is technically possible to decrease the total time period for inactivation with configuring maximum internal timeout period (from 47 seconds to 17 seconds) on the Exchange side.