

Pragmatix Trade Router

Version 1.7.4 Release Notes

12 November 2008

Introduction

This document describes the changes and improvements in the Pragmatix Trade Router software with respect to the previous version, 1.7.3. The Trade Router version number is shown in the application's startup screen. Alternatively, you can see the version number in the Help/About window.

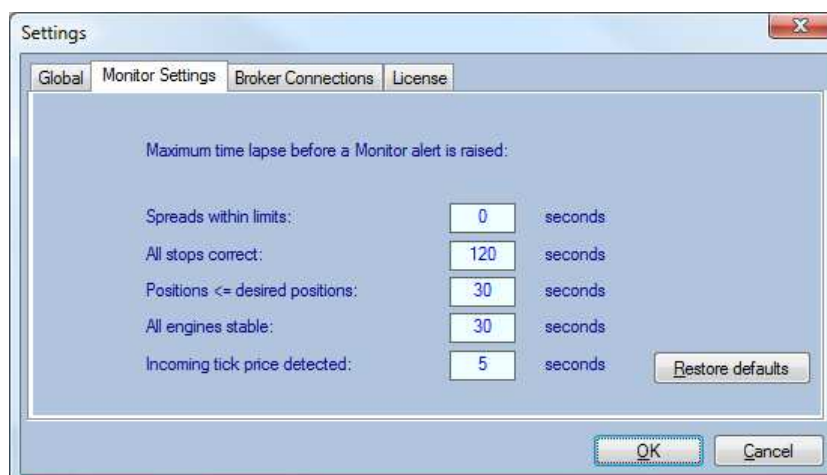
New Features

New Settings tab: Monitor Settings

Until this version of the Trade Router, the Monitor would check four criteria, each with its own fixed timeout value:

- Spreads within limits: 5 seconds;
- All stops correct: 120 seconds;
- Positions within desired positions: 30 seconds;
- All engines stable: 30 seconds.

A new monitoring criterion, *Incoming tick price detected*, has been added to this list (see below for more information about this new feature). Also, all monitoring timeout settings have become configurable from now on. The settings can be accessed in the Settings window (menu Configuration / Settings), tab 'Monitor Settings'.




A word on spread monitoring

If you wish to use spread monitoring, we recommend that you only enable this feature if you have a limited number of engines defined that use streaming prices. Spread monitoring can be a very processor-intensive task due to the huge frequency with which bid and ask prices change. Setting the value to 0 will disable the spread monitoring function.


The 'Restore defaults' button will load the recommended default values for the monitoring settings. Note that the default value for spread monitoring is 0 seconds (disabled).

New Monitor function: Price stream inactivity

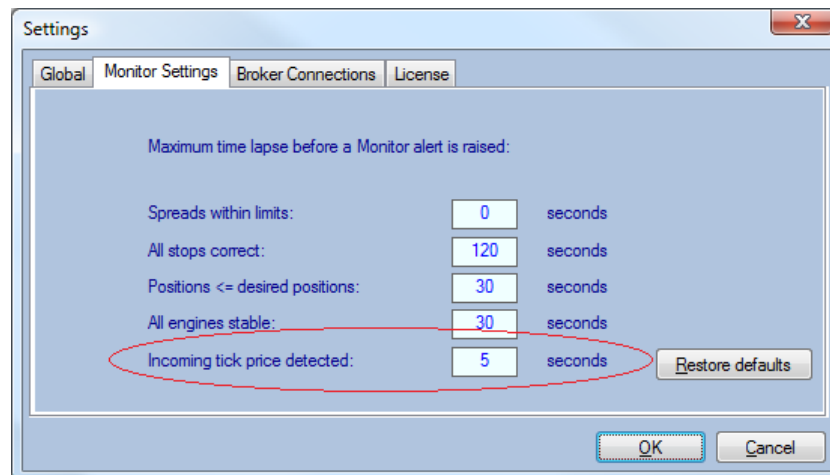
A new functionality has been implemented in the Monitor which helps detecting interruptions in incoming streaming price data. For each connection with streaming prices, the time is measured since the last tick came in. As soon as more than 5 seconds (configurable setting) passes since a tick came in, a Monitor alert is raised:

 19:12:51 Streaming prices interrupted for connection 'IB-data'

As soon as a new tick comes in, the alert is cleared:

 19:12:54 Streaming prices restored for connection 'IB-data'

The amount of 'tickless' seconds that must pass before the alert is triggered is set in the 'Monitor Settings' tab in the Settings window of the Trade Router (menu Configuration / Settings):



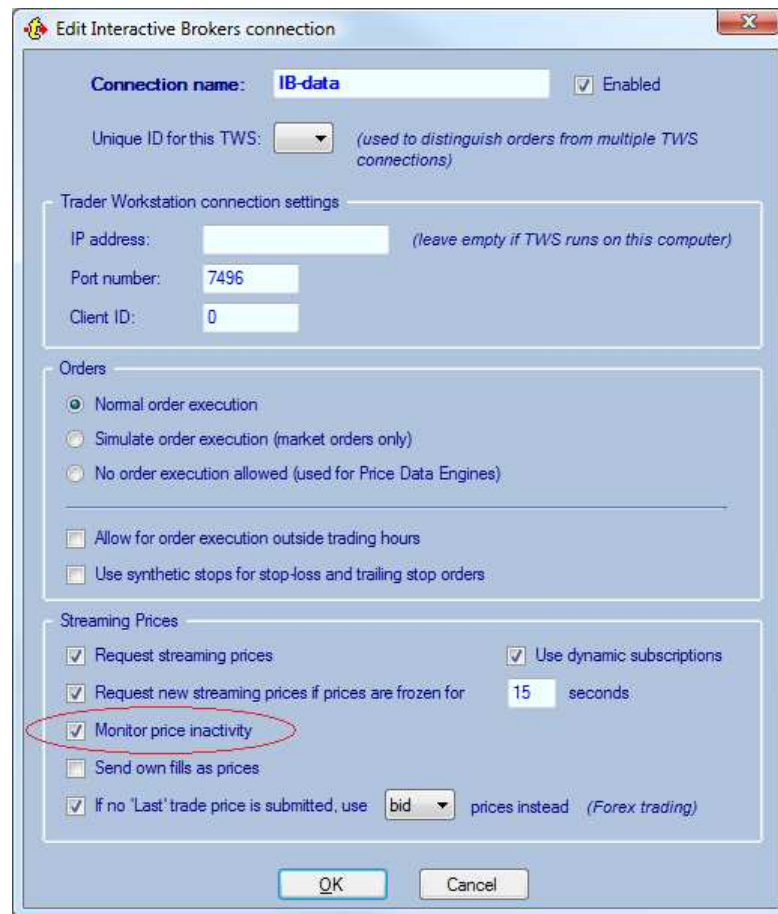
For a connection to be monitored for periods without ticks, the monitoring facility needs to be enabled in the connect*.*.config file.

For FIX and ESignal configuration files, the setting is:

```
<add key="MonitorPriceInactivity" value="true" />
```

If the setting is not included in the .config file, the setting is taken as "false"- that is , disabled.

For Interactive Brokers connections, the "Edit Connection Settings" window has been adapted:



In order for a connection to be monitored, a series of conditions must be satisfied:

- The connection must support streaming prices;
- The connection should be online;
- At least one Trade Engine's trading window should be active;
- At least one price stream should be subscribed (this also holds for dynamic subscriptions).

Note for Interactive Brokers users

Another price activity monitor system has been implemented in the past – the one that can be enabled by checking the 'Request new streaming prices if prices are frozen for N seconds' option in the Edit Interactive Brokers connection dialog, as shown above. Both systems will work together, provided that the timeout value of the new Price Stream Inactivity monitoring function is set to a larger value than the N seconds just mentioned. With both settings enabled, the following will happen when prices cease to be updated:

- First, the streaming prices are re-subscribed. If this solves the problem, no notifications are sent out as the system managed to correct the situation by itself.
- If after the re-subscription still no prices come in, the Monitor will detect this situation and send out the alert.

In case of no response to Position-order: Cancel sent out

Under rare conditions, it may happen that an order, sent out by the Trade Router to create a new position, remains unconfirmed by the exchange. In such case, a timeout expires, the Trade Router sends out a Critical Error message and then returns to the 'idle' state


(awaiting new SetDesiredPosition-commands). Effectively, the order is considered to be ineffective.

The lack of confirmation can have several causes:

- The order never reached the exchange;
- The order reached the exchange but nothing was done with the order;
- The order was accepted but the confirmation never came back;
- The order was rejected but the error message never came back.






It may be clear that without confirmation (or error received), the Trade Router cannot detect whether or not the order reached a 'working' state. In order to minimise the effects of this unknown factor, like future order fills from an order thought to be inactive, a Cancel message will now be sent out to the Exchange. Again, various responses to this Cancel request are possible (no answer at all, cancel confirmed, unknown order reference), but independent of the outcome of the Cancel request, the Trade Router will reenter 'idle' mode as before. Sending the Cancel will, however, minimise the possibility that unexpected fills come in at a later time.

This is the message sent out when a Position order remains unconfirmed:

 14:04:20 IBM: Position order has not been confirmed by exchange - trying to cancel the order.

These are the possible outcomes of this Cancel attempt:

- In case the exchange reports that it cannot cancel such order: any of the following¹:


 14:42:16 IBM: Cancelling the Position order failed: Order already in pending state
 14:42:16 IBM: Cancelling the Position order failed: Cancel request rejected by remote trading system
 14:42:16 IBM: Cancelling the Position order failed: Too late to cancel the order
 14:42:16 IBM: Cancelling the Position order failed: The Position order was not found
 14:42:16 IBM: Cancelling the Position order failed: An unspecified error was returned

Note that there is one 'warning' type message among these; that is the message confirming that the Position order never reached the exchange in the first place.

- In case no reply is received from the Cancel request:

 14:54:10 IBM: Cancel of unconfirmed Position order failed (no response)

- In case the exchange succeeded in cancelling the order:

 14:46:22 IBM: Unconfirmed Position order was cancelled successfully.

After any of these outcomes, the Trade Engine is reset and stable, ready for the next command.

Quicker registration of engines in ActiveX Front End

After an engine was registered in the Front End ActiveX control, it could take up to 3 seconds for the registration to be confirmed. This has been reduced to 250 milliseconds.

Once the engines have been registered, the ConnectionStatus event will fire. It is imperative that you wait with sending out commands, like SetDesiredPosition, until this event (with parameter Available set to True) has fired.

¹ Note that this level of reporting is only supported on FIX connections. On Interactive Brokers (TWS) connections, the message submitted is the error 'Cancel of unconfirmed Position order failed'.

Bug fixes

Trading Windows and Monitor Alerts about connection loss

The Monitor will only send out messages about lost and restored connections if at least one Trading Window for a Trade Engine is active. This works correctly as long as only one broker connection is used at a time. However, no check was made to which connection a Trading Window would belong – if a Trade Window for an engine belonging to connection A was found, then connection losses for connection B would be reported as well. This has now been corrected; Monitor Alerts about connection loss are only sent out if a Trading Window was found for an engine belonging to that connection.