

Exegy to 'Turn Heads' with Mean 80 Micros of Latency at 2 Million UPS

At Sifma, the word was – as we reported it – that the forthcoming Stac (Securities Technology Analysis Center) report on Exegy Inc.'s ticker plant would "turn heads." If the numbers are to be believed – and why shouldn't they be? – then perhaps they'll turn a few, not least because the tests showed the Exegy box able to handle 2.4 times the projected data rate for the U.S. Options Price Reporting Authority (Opra) data feed for January 2008.

Exegy, you'll remember, was first out of the box, if you'll excuse the pun, at the 2006 SIA Show with a hardware solution to the low-latency market data delivery challenge. At that time, it was talking up its pending merger with Hyperfeed Technologies, a deal that never materialized and ended up with Hyperfeed calling in the receivers.

Back operating under its own steam, Exegy spent the better part of the past year optimizing its Field Programmable Gate Array (FPGA)-based ticker plant solution. The result is Exegy Ticker Plant version 1.2, which underwent benchmark tests at Stac during the spring.

Stac has performed similar tests this year for other low-latency platforms, among them those offered by Wombat Financial Software, Reuters and others, and makes use of T-S Associates' TipOff

latency monitoring tool to measure data rates at various levels of throughput. The tests captured every message going into and out of the system, measuring end-to-end latency with a precision of +/- 1 microsecond.

According to Scott Parsons, chief scientist at Exegy, the company contacted Stac because it wanted to come up with an independent view of the performance of its ticker plant technology. Parsons knew Stac principal Peter Lankford from their time at Reuters, which provided an initial contact.

The subsequent tests, using a single-box Exegy ticker plant system receiving typically sized messages from recorded a (Opra) U.S. options data feed, generated the following stats:

- A mean latency of 80 microseconds at the benchmark data rate of 1 million updates per second across redundant lines (2 million updates per second aggregate).
- Maximum throughput of 1.68 million updates per second inbound across redundant lines (3.4 million aggregate) while sending every update to two consumers.
- Efficiency, at maximum throughput, of 2,503 updates per second (ups) per watt, translating into 559,000 ups per rack unit and 559,000 ups per network connection.

- Predictability of 99% that updates through the ticker plant had less than 150 microseconds, at the benchmark throughput of 1 million ups across redundant lines or 2 million ups in aggregate.

Exegy says its Exegy Ticker Plant 1.2 provides the standard functions of a modern ticker plant, including exchange connectivity, normalization, caching, request management, inline analysis, permissioning, time stamping, and so forth. The system uses unicast to distribute data over Ethernet and InfiniBand networks, with client applications accessing updates via Exegy's C API.

Parsons says Exegy introduced version 1.2 of the ticker plant in March and has since implemented the system on a proof of concept basis at several primarily U.S. client sites. Declining to be specific about customers, Parsons stresses that the institutions currently evaluating the platform range represent a broad spectrum of firms in terms of size and resource. "You don't have to be a bulge-bracket firm to use the Exegy Ticker Plant," he says.

Parsons says Exegy sees additional opportunity in Europe, particularly as the EU's Markets in Financial Instruments Directive (MiFID) takes effect this coming November. Indeed, Exegy has set up an office in London and Parsons expects to see significant activity there soon.