



Case study: Tier 1 investment bank slashes tick-to-trade latency to 10 μ s



VELOCIMETRICS

Industry pain points

Growing competition and rapid changes have brought new business requirements in the equities trading marketplace. To optimize decision-making and support new investment initiatives in this changing landscape, it is imperative for industry players to adapt their practices and gain full, independent visibility of their networks and systems.

Challenge

Faced by this challenge, a global tier 1 investment bank needed to adapt its business processes. To keep up with faster trading speeds, the bank approached Velocimetrics to help them reduce tick-to-trade latency from 100 μ s to 10 μ s. Meanwhile, they wanted to implement an independent, high-performance monitoring and analytics solution to gain full visibility of their network, including their own infrastructure and third party applications.

Solution

Velocimetrics chose Napatech to ensure that the data would be

efficiently captured, monitored and analyzed. This helped them to meet a number of critical requirements from the investment bank:

1. Faster alerting and root cause analysis, leading to reduced system downtime and increased flexibility
2. Multiple functions in a single solution e.g. aggregation, tapping and analytics, making it more cost effective and less error prone
3. Reduced rack space and cabling
4. Greater flexibility and configurability

How it works

Napatech's FPGA SmartNICs ensure that the data is efficiently captured and delivered, each packet timestamped with nanosecond precision. This allows accurate identification of events and measurement of time-related quality of service parameters, such as latency and jitter.

Challenge

To keep up with faster trading speeds in an increasingly competitive equities market, Velocimetrics was engaged by a global tier 1 investment bank to help them reduce tick-to-trade latency from 100 μ s to 10 μ s.

Solution

Velocimetrics chose Napatech to ensure that the data would be efficiently captured, monitored and analyzed, helping them to meet the bank's requirements for faster alerting, quicker drill down and greater flexibility.

Benefits

The solution successfully reduced tick-to-trade from 100 μ s to 10 μ s, while enabling:

- improved visibility
- substantial cost savings due to rationalized infrastructure

The data is delivered to the Velocimetrics appliance, which decodes the on-the-wire information into a business object, correlates the data and provides a complete end-to-end breakdown of the business flow and a complete audit trail. It then feeds this information in near real-time to the trading systems, enabling time-accurate alerts, business insight and complete drill-down capabilities into individual packets as and when required.

Benefits

With this solution in place, the bank has seen improved profitability for the equities business and realized substantial operational cost savings through better network analytics and rationalized infrastructure.

Key highlights include:

- Ultra-low latency; tick-to-trade reduced from 100 μ s to 10 μ s
- Improved network visibility & insights
- Operational cost savings due to rationalized infrastructure
- Real-time feedback into the bank's trading systems
- Better incident management

Based on this solution the investment bank can now:

1. offer its clients a more stable and reliable wireless network to connect to global trading venues with the lowest possible latency
2. de-risk its infrastructure and business flows through independent monitoring and tracking of all trade flow data
3. provide updates to the equities pricing engines, allowing the bank to provide optimized pricing decisions in real time
4. improve network capacity through the use of dense, 96 port devices; saving costly rack space
5. realize operational cost savings through better incident management and targeted investment in infrastructure

Napatech

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