



Global Investment Bank Enables Better Trading Performance with nGenius Solutions

Move from portable analyzers to the nGenius Service Assurance Solution automates problem isolation and provides end-to-end visibility into trading infrastructure and applications.

Customer

This top 20 global investment bank provides a range of banking and trading-related products and services to clients in North America and select global markets in 160 countries.

Applications in Use

200+ market data feeds, FIX and Fast FIX trading applications

Business Challenge

Despite layers of redundancy, the company was experiencing latency and packet loss in their market trading activities. Using only portable network analyzers, the company had little visibility into its market trading infrastructure or market traffic, making diagnosing these issues a manual process that was tedious, time consuming and frustrating.

Solution

- nGenius® Performance Manager
- nGenius® InfiniStreams™
- Sniffer® Financial Intelligence
- NetScout Consulting Implementation Service

Business Results

- Gained end-to-end monitoring of all trading activity, including providing the ability to replay trades in detail and report on packet loss, latency and the detailed timing of trades in relation to the market
- Reengineered and automated their problem isolation processes to gain significant efficiency and effectiveness.
- Enhanced customer satisfaction through better transaction times and the ability to provide detailed evidence of trade timing.

The Challenge: Manually tracking down packet loss

This top 20 global investment bank is active globally in debt origination, sales and trading, foreign exchange, infrastructure finance, and structured products. Its North American operation includes a significant U.S. middle market investment banking franchise and leading equity, underwriting, sales, trading and research businesses.

Despite layers of redundancy, the company still experienced latency and packet loss in their market trading activities. Both the network and market data quality were blamed for poor trade executions, but because the company had little visibility into its market trading infrastructure or market traffic, diagnosing these issues was a manual process that was tedious, time consuming and frustrating.

Jointly, the network operations and market data teams would spend hours each day tracking down trade problems. When the traders alerted them to an issue, they would grab a portable analyzer and monitor the link in question, keeping an eye open for out of sequence packets. This process would sometimes happen 20 to 30 times a day. A lean network team that is also responsible for engineering, planning and operations, they would often find their resources outstripped by demand. In addition, the use of a real-time only tool allowed issues to recur repeatedly, continuing to impact customer trades.

The Solution: Continuous, End-to-End Visibility with nGenius Solutions

To combat these problems and gain more visibility into their trading infrastructure and applications, the network team purchased an nGenius Performance Manager license and six nGenius InfiniStream continuous capture appliances and Sniffer Financial Intelligence. The nGenius InfiniStreams were positioned to monitor the data center and the 10-Gigabit Ethernet links serving trading customers.

In addition, because the network team was fully consumed by daily demands, they made the business decision to leverage expertise of NetScout's Implementation Consulting Service to speed deployment and maximize value. During the 10-day assignment, an experienced NetScout consultant worked with both the network manager and the market data manager to gather requirements and then design, install and configure the NetScout appliances and software in such a way as to re-engineer and automate their troubleshooting process and optimize the efficiency and effectiveness of their troubleshooting efforts.

The consultant identified and configured 200-plus market data feeds as well as FIX and FAST FIX-based trading applications. In addition, he enabled the nGenius Solution's Site Monitoring feature to monitor traffic flows destined for remote MPLS sites. The consultant also created customized Workspaces, making it easy to monitor common trouble spots, as well as created relevant historical and ad hoc reports for long-term trending and capacity planning.

Business Results: Diagnosing Latency and Packet Loss

At the conclusion of the consulting engagement, the nGenius Service Assurance Solution was delivering the real-time and historical information necessary to monitor the end-to-end visibility of all trading activity, including providing the ability to replay trades in detail and report on their timing, packet loss and latency. Microburst alarming gives the team advanced warning of brewing problems that can have a grave impact on trading performance and latency and the nGenius InfiniStream appliances' intelligent deep packet capture capabilities enable retrospective analysis and accelerates problem resolution.

Shortly after the consulting engagement was completed, a recurring packet loss problem that had been baffling the London office for months resurfaced. Because they were at a loss as to what was causing the problem, the U.S. network manager put one of his engineers on a plane to London the same day with an nGenius InfiniStream appliance. Within four hours of installing the intelligent deep packet capture device, the engineer was able to use nGenius Performance Manager to determine that there were significant negative acknowledgements or NAKs with the TIBCO multicast application. Once this situation was identified, they were quickly able to isolate the problem – a bug with Cisco IOS was affecting the TIBCO traffic. The team sent a screen capture of the decode to Cisco to provide background on the situation and Cisco promptly responded with a patch that fixed the problem.

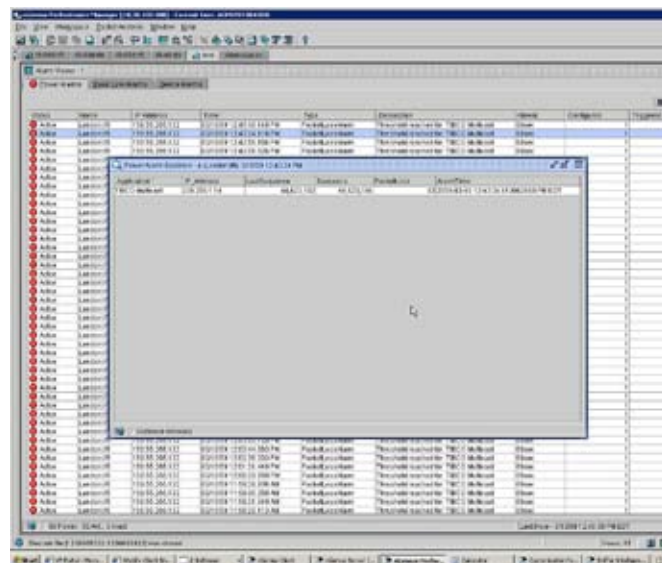


Figure 1. The first sign of trouble was the flurry of Packet Loss alerts for TIBCO Multicast.

“A slow network means your orders are not being met or hit since you are behind the market.”

- Market Data Manager

Another time, a high profile hedge fund customer called with complaints of slow order execution. Using Sniffer Financial Intelligence, the market data manager was able to pull the customer's entire transaction with time and price details along with all other orders submitted milliseconds before and after and compare them to the price coming off the market data feeds at the same time. By having a detailed, highly granular recording of all transactions, the market data manager was able to prove the hedge fund customer received the best price available and demonstrate unequivocally that on that particular day, the entire market was backed up due to market volatility and high volume.

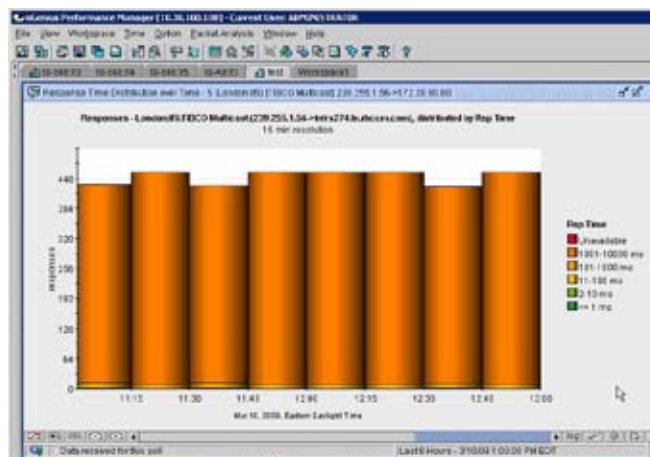


Figure 2. Another sign of trouble was when TIBCO Multicast started experience significant delays in response time.

The Bottom Line: Enhance Visibility, Enhanced Customer Satisfaction

This global bank gained unprecedented, millisecond-level visibility into all of its network, but especially the trading network. The network and market data teams were able to automate the monitoring, detection, and alerting of packet loss for all the critical data feeds and gain detailed timing of trades in relation to market. This level of detail enables the company to better and more reliably service its trading customers.

Using the nGenius Solution not only automates what were the network and market data team's most painful and expensive manual tasks but also provides preemptive notification of brewing problems that enables the teams to take action before the traders realize there's a problem. In addition, the network and market data teams are able to proactively provide the traders with valuable information about which feeds and exchanges are performing best.

For More information

For more information please visit

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