



How Can A Microsecond Cost Your Company \$1M?

Network Visibility Is Critical for Financial Data

Today's financial trading networks process billions of dollars within an hour. This means you can't allow your links to major stock exchanges to ever degrade. One small blip of an outage can cost you thousands or millions of dollars in missed trades. So how can you optimize your trading network and maximize your profits?

Here are three fundamental solutions to consider:

- Optimize your network monitoring for 40GE and 100GE links
- Implement functionality which aids in the rapid identification and remediation of issues
- Create architectures that enable data latency reduction

Run Your Network at Full Throttle, All the Time

A fundamental design choice needs to be made. How you deal with ever increasing trade volumes is critical. A single packet dropped on high-speed market data feeds will result in multicast sequence gaps that cause data loss and latency increases. Keysight's Flex taps and TradeVision network packet brokers (NPBs) deliver the lossless visibility you need at speeds up to 100 Gbps. TradeVision uses dedicated FPGAs to process traffic at line speed. Other NPB solutions and transaction analytics tools, especially software-based solutions, just cannot keep up. This causes data analysis problems.

Microbursts are another problem. While bursty traffic issues are common, how will *your* monitoring network handle congestion? In addition, can you detect and receive microburst alerts in real time? This is another instance of where the proper choice of network visibility solution will be critical to your monitoring success. TradeVision accurately detects microbursts and generates alerts when the average data burst exceeds user specified thresholds.

Once you have optimized your monitoring network, you can squeeze out the best margins — even at high speeds — and run your network at full throttle.

Eliminate Issues Quickly and Reduce Data Latency

Though the focus is often on the search for microsecond latency savings, the reality is that if the network drops packets, this can have a significant impact on trading performance. This is because dropped packets lead to increased latencies, inaccurate trades, and even compliance issues. These issues impact all types of electronic trading.

The goal is to minimize latency and packet loss — from quote reception and order entry — to the completion and settlement of trades. To achieve this, your engineering and operations teams need to understand how the performance of networks, links, devices, and applications affects users. This means modeling and measuring performance using simulated and real traffic — in both live environments and stress test lab scenarios.

Keysight's TradeVision network packet broker solution gives you accurate information about key network events like market data gaps, latency, and the overall availability and health of links to trade houses. Specifically, TradeVision provides the following powerful features:

- Gap detection – Fix gap faults faster, identify owner of issue, and lower cost resolution
- Feed and channel health – Detect lack of traffic and know about multicast faults before the applications team
- Latency analytics – Understand the latency between trading exchanges and DC in real-time
- High resolution stats – Enable effective capacity planning
- Visual dashboards – Real-time display of latency, jitter and health messages

Keysight offers a wide range of monitoring and security solutions. This includes **high speed taps**, **bypass switches**, **network packet brokers**, **application intelligence**, and **performance monitoring**. Reach out to us and we will show you how to optimize your trading infrastructure.

Learn more at: <https://www.keysight.com/us/en/solutions/network-visibility.html>

For more information on Keysight Technologies' products, applications or services, please contact your local Keysight office or request information here:

<https://www.keysight.com/main/rcqCheckOut.jsp?cc=US&lc=eng>

