

Deliver the Best Price, Do Not Be Late & Prove It!

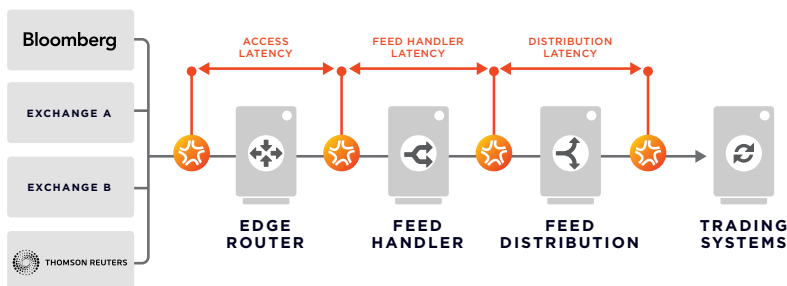
Corvil Analytics is regarded as the gold standard solution by financial market participants and venues for monitoring, analyzing and assuring infrastructure health and performance. Therefore, infrastructure service providers that use Corvil and provide reporting and service level agreements based on Corvil are viewed positively and are more likely to win business from financial markets clients.

PROBLEM OVERVIEW

Financial markets clients are major consumers of connectivity, bandwidth, data and colocation services provided by infrastructure service providers. Critical applications for these services include order execution and market data distribution. Competition is tough in this market with an increasingly undifferentiated service offering. This often leads to price erosion and commoditization. In addition, service providers must keep up with exponentially increasing traffic volumes associated with these services. This requires constant upgrading of capacity without a corresponding increase in client revenue. Traditional NPM and APM tools used by service providers have not been able to meet the unique needs of financial markets clients. These tools lack the granularity, analytics, and accuracy demanded by financial markets clients and information provided by service providers in terms of monitoring, SLAs, troubleshooting, and upgrade recommendations are often not trusted and/or ignored. Quite often the financial markets clients have Corvil installed and are able to tell more about the quality of the service than the provider themselves.

OUTCOMES

- Minimized risk of missing fills due to slow or gapped market data
- Demonstrated execution compliance based on best market price
- Assured latency of critical market data plant infrastructure components
- Faster response time to client queries about latency and quality issues
- Slashed time to troubleshoot and fix market data quality problems
- Maximized return on investment with direct and consolidated feeds
- Reduced costs of capturing and analyzing market data ticks



As Saxo continues to grow, Corvil's best-in-class solution was a natural choice to meet our market data monitoring needs. Corvil has a stellar reputation within the financial industry and is the only solution that can adequately handle the volume of market data we process at enough granularity. For us, there were really no good alternatives to Corvil.

SAXO BANK

SOLUTION OVERVIEW

Corvil taps into the market data flowing through the ticker plant infrastructure, providing a real-time authoritative view of all market data feeds with nanosecond precision. Corvil sees every tick, every symbol across each infrastructure hop. Corvil passively captures, timestamps, decodes, correlates and analyzes the market data flows, in real-time, with zero impact on the performance of the ticker plant infrastructure. The result is a real-time picture of the latency, performance and capacity utilization of the ticker plant. Operations personnel are alerted proactively when problems arise, and Corvil provides a sophisticated suite of analytics for detecting and troubleshooting market data specific issues, e.g., determining whether the A or the B feed is the fastest, detecting market data gaps, predicting bandwidth requirements.

Corvil supports analytics plug-ins for hundreds of market data protocols across Equities, Options, Derivatives, FX and Fixed Income, including popular middleware protocols like Tibco. These are updated monthly and can be extended on demand as required by our clients. Corvil supports streaming its enriched timestamped data and detected ticker events to a wide range of external tools such as Kdb, Hadoop and Splunk. Capable of ingesting monster feeds like Opra in real-time, the Corvil solution meets the performance, granularity and accuracy requirements for the most demanding ticker plant and market data distribution environments.

Managing Market Data Quality and Performance

Corvil provides full support for managing the quality and performance of market data with the ability to detect gaps, determine impact of microbursts and measure both absolute and relative latency for symbol updates or events in any feed. With support for all market data protocols globally, Corvil provides the most comprehensive off-the-shelf solution available for monitoring both order flow and market data within the broker environment.

Making Sure You Never Miss Order Flow

With client and venue sessions being added and removed on a weekly or daily basis, it can be hard to keep application and monitoring systems up to date. Client on-boarding processes do not always notify the technology teams of required changes to monitoring systems, leaving you with potential blind spots. Corvil auto discovery handles this, ensuring that all client trading flows are automatically discovered, tagged and monitored. Configuration APIs allow you to proactively push knowledge of sessions into your Corvil deployment.

Right Sizing Your Systems So You Are “Fast Enough”

Combining internal and external latency visibility, Corvil helps you determine how fast you need to be and pinpoints any bottlenecks that stand in your way. We provide comprehensive performance monitoring of external exchange latency, as well as hop-by-hop latency across internal processing stages, and across the networks that connect you to your markets and clients. We analyze microburst workloads to help ensure that each network and application processing stage is correctly sized for optimal performance.

TRADE PERFORMANCE ANALYTICS

Fill Rate

Order tracking state is used to monitor the success or failure of orders through the fill-rate calculation: the percentage of the request volume that was filled.

Tick-to-Order

Calculates the algorithm response latency: the time from receipt of the triggering tick to the transmission of the order.

Order-to-Tick

Calculates the venue response latency: the time from transmission of an order to receipt of tick update on the venue feed reflecting the trade.

Order Response

Calculates the venue response latency: the time from transmission of an order to receipt of acknowledgment of the order from the venue.

Microburst Analysis

Calculates the volume of a specified metric for short timescales, e.g., the number of messages received in 1ms.

Gap Detection

Tracks the sequence numbers of all multicast market data feeds, and uses this tracking to report and alert on any gaps.

Relative Latency

Calculates the relative latency between two measured events with time stamps from a common time reference.

Bandwidth Prediction

Calculates an estimate of the amount of bandwidth needed to meet a quality of service objective for a given traffic load e.g., a market data feed.

CHALLENGES

- Managing risk of everything related to stale prices or delivering stale prices to clients
- Lowering risk of business-impacting outage and improving time to fix problems
- Managing escalating cost of ticker plant to keep up with exponential message rates
- Data demands from the business to show transparency and compliance of operations

MANAGE CLIENTS

- Prove latency SLA of data service
- Provide full transparency hop-by-hop
- Quickly respond to client queries
- Report ticker performance KPIs
- Stream tick compliance data to client

MANAGE TICKER PLANT

- Report latency of feeds through every hop
- Manage ticker plant capacity needs reliably
- Quickly troubleshoot and fix problems
- Provide diagnostic assist to app. dev teams
- Hold service providers to account for SLAs

MANAGE FEEDS

- See every tick timestamped - all feeds
- Detect gaps and determine impact
- Monitor microburst and message rates
- Measure transit latency from venue
- Determine if A or B feed is fastest

We use Corvil to assure market data quality, discover all consumers of data and inventory usage patterns across sites in real time. With Corvil, we stay ahead of service management, network design and capacity planning.

FLOW TRADERS