

The Best Visibility, Analytics and Reporting When Speed Really Matters

Corvil Analytics for the Market Maker

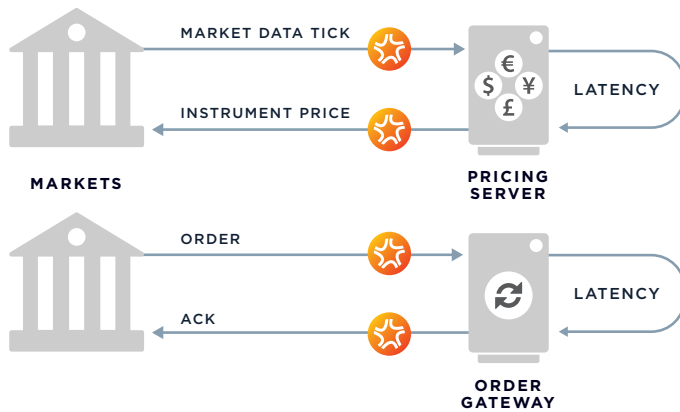
The Corvil solution for market makers is used by those who need the best visibility, analytics, and reporting to achieve transparency and determinism in their operations. Market makers must operate in extremely high-speed low-latency trading environments to efficiently cover both sides of a trade and meet their liquidity obligations. Corvil is the platform of choice for these businesses to operate.

PROBLEM OVERVIEW

Today's market making business leaves little room for second best in technology and infrastructure. Successful market makers must operate a predictable, reliable low-latency trading environment. Market makers must be as fast as the fastest traders on the venue they are providing liquidity on.

Best-in-class tools are needed to provide visibility, optimization, troubleshooting, data capture and reporting of all electronic activity related to the business of making markets. Traditionally, market makers have built their own tools in-house to maximize competitive advantage. However, that has changed in recent times.

The cost of developing and maintaining these tools is prohibitive as the business expands to more markets, more asset classes and as the burden of regulatory obligation increases.



SOLUTION OVERVIEW

Corvil provides microsecond machine-time visibility and real-time analysis of both order transaction and market data processes capable of handling the most demanding market making environments. The latency of every order sent and every tick received can be measured and analyzed through every infrastructure hop. All messages involved are captured, analyzed, recorded and can be streamed to external BI and data warehousing systems for further forensics and reporting.

The Corvil solution can be used both for production and lab testing. It is critical for market makers to develop highly optimized algorithms for price analysis and quoting. Corvil can be used to measure, test and assure the quality of this software in advance for production deployment. Once deployed, Corvil assures the performance goals of the business and mitigates risk of outage and service degradation. Corvil can be used to collect a precision machine-time data record of all transactions and maintains a forensic audit-trail record of all messages involved in a transaction as required by new regulations like MiFID II.

OUTCOMES

- Nanosecond precision visibility into order lifecycle achieved
- Optimized quote response time with improved venue visibility
- Minimized exposure to price slippage on exchanges
- Reduced risk of service quality degradation and outages
- Slashed time to troubleshoot and fix service quality problems
- Maximized quality of data feeds with precise data and analytics
- Lower regulatory tail risk with trusted data to demonstrate compliance
- Time-synchronized audit trail captured for ever order

At Flow Traders we are constantly looking to put in place the best tools and processes to optimize the performance and transparency of our IT systems, while minimizing operational risk. Corvil was the only platform capable of meeting our demands.

FLOW TRADERS

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 don't always notify the technology terms 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

- Putting in place best-in-class visibility and analytics for infrastructure operations
- Reducing operating expenses and optimizing investment in IT systems and infrastructure
- Lowering risk of business impacting outage and improving time to fix problems
- Meeting the new data requirements for regulatory compliance

MANAGE QUOTING

- Detect gaps in market data
- Optimize quote latency response
- Reduce Mean Time to Resolve (MTTR)
- Track order lifecycle precisely
- Reduce order gateway latency

MANAGE IT SYSTEMS

- Validate performance of gateways
- Optimize response times e.g., tick-to-order
- Benchmark performance of software updates
- Keep third-party software vendors accountable
- Offload logging to speed up performance

MANAGE VENUES

- Analyze exchange latency
- Balance flows across gateways
- Monitor connectivity health
- Analyze throttling on order flow
- Measure order-to-tick for venue

We are getting visibility and trust in our ability to monitor for issues we have not had before from other tools. Everything from the customizations, to viewing the data collected in near real time has had a profound impact on our organization.

FLOW TRADERS