

SOLUTIONS FOR

# Exchanges and Liquidity Venues

**Members demand proof of fair treatment. Regulators require detailed audit trails. Technology behaviour directly affects liquidity formation — and service degradation erodes market confidence and revenue. Full observability is not optional. It is business-critical.**

## The Challenge

Exchanges and liquidity operate high-performance infrastructure, matching millions of trades per second. Member orders must be processed quickly, fairly, and transparently. Market data must be distributed at maximum speed. Operations teams require nanosecond-resolution detail across every component.

### Exchange operations teams must:

#### Prove fair treatment

Demonstrate consistent, equitable execution for all members.

#### Maintain member confidence

Identify and resolve performance issues before trading is affected.

#### Meet regulatory requirements

Provide detailed audit trails for compliance enquiries.

#### Link technology to outcomes

Connect infrastructure behaviour to latency, match quality, and member experience.

#### Assure market data performance

Maintain distribution quality and speed.

#### Manage operational risk

Detect problems across complex systems before they escalate.

#### Ensure business continuity

Prevent issues that could disrupt trading or damage market integrity.

## The xMetrics® Solution

Built for the most demanding trading environments, xMetrics delivers end-to-end observability across order execution and market data publishing. Every order and every market data tick is measured and correlated across every infrastructure hop.

### Order Entry and Execution

- Track latency from receipt through gateway to matching engine
- Correlate across unlimited execution hops
- Build custom metrics and real-time transformations with the Mutations Framework

### Market Data Quality & Performance

- Detect gaps and microburst impacts across all feeds
- Measure latency for symbol updates and events
- Identify distribution issues before members are affected

Complete visibility across network, matching engine, gateways, and market data distribution – with seamless integration into BI and data warehousing platforms for forensics and regulatory reporting.

### Member Monitoring

- Monitor colocation and WAN-connected members
- Track individual member connection health and performance
- Detect degradation before it impacts trading

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## What You Gain

### Member Experience and Transparency

- Full transparency on order execution outcomes
- Faster response to member enquiries
- Auto-discovery and monitoring of member order flows
- Measurable evidence of colocation performance advantages

### Operational Risk and Performance

- Reduced risk of service degradation and outages
- Faster troubleshooting and resolution times
- Optimised latency across every infrastructure hop and path
- Validated gateway, matching engine, and feed assembly performance

### Compliance & Accountability

- Lower regulatory risk through trusted compliance data
- Time-synchronised audit trail for every transaction
- Efficient adaptation to new regulatory data requirements

### Market Data Quality

- Precise analytics to maximise data feed quality
- Latency analysis for every hop in the distribution chain
- Gap and microburst detection across all feeds
- Network performance monitoring and bandwidth optimisation
- Optimised order-to-tick response times

### Capacity & Investment

- Capacity sizing for optimal performance
- Benchmarking of software updates, including matching engine changes
- Informed infrastructure investment decisions