

Systems Integration

Exchange Integration and Interface Performance Improvement

A major broker-dealer was experiencing message processing delays when receiving bursts of equities trade execution messages from the NYSE. Traders complained of noticeable screen refresh delays on large orders.

Approach

A Katahdin Solutions consultant led team diagnosed the problem and identified a bottleneck in the inbound message processing server. The team designed an alternative solution which enabled over 100 times the processing throughput. The consulting team developed and implemented the following changes:

- A clustered application server environment and work distribution model to allocate processing across multiple processors
- A thread-pool management Java application and threading algorithm which distributed processes and dynamically allocated additional threads to execution message processing when needed
- A new Java application to more efficiently process and translate messages and eliminate database-dependent downstream message processing modules

All application development was performed by the consulting team.

Results

The solution was implemented and eliminated all message processing delays, ensuring traders receive order status updates as fast as possible, including during large message bursts.

Through information technology and advisory capabilities, Katahdin Solutions provides consulting services to organizations seeking to achieve greater efficiency and value from their project delivery and compliance initiatives.