

# CASE STUDY

## Liquidnet, Inc.

Powered by Talarian infrastructure software, a revolutionary e-brokerage system brings liquidity to the world's largest money management institutions.

Liquidnet is the leading Alternative Trading System (ATS) designed to bring liquidity to large money management and investment advisory firms through a decentralized, Internet-enhanced model. Liquidnet needed a robust, scalable, proven infrastructure software solution that would enable it to instantly distribute time-sensitive information to its Members, match up institutional buyers and sellers, facilitate order negotiations and execute transactions worth billions of dollars—securely, anonymously and in real time.

### HIGH VOLUME INSTITUTIONAL TRADING

As a start-up enterprise, Liquidnet set out with a clear vision to create a country club-like network of like-minded, large institutional investors and provide a system by which member institutions could trade very large blocks of stock *directly* amongst themselves—and do so with *complete anonymity*.

By enabling institutions to bypass the typical middleman broker, Liquidnet allows its fast growing membership base—representing over 3 trillion dollars in managed equity assets—to dramatically reduce transaction costs. The ability to execute trades anonymously minimizes the market impact such large trading activities can often cause.

**BUILD VS. BUY** Building versus buying infrastructure software to support its distributed e-brokerage application was never a question for Liquidnet. It needed to get to market fast, and that meant finding a proven, experienced infrastructure software vendor who could meet its needs.

**DEMANDING REQUIREMENTS** Given the massive volume of time-sensitive information and confidential transactions the Liquidnet system

would need to distribute and exchange, Internet bandwidth, high message throughput and security were critical requirements.

So were publish-subscribe and real-time performance. “To be fair to all of our Members, we needed to make sure that when a new Member came on board with a lot of liquidity to present, that we could present that liquidity to all Members at the same time,” said Seth Merrin, Chief Executive Officer of Liquidnet.

Other key requirements included high system reliability, global scalability, multi-platform support, load balancing and guaranteed message delivery.

### SMARTSOCKETS CRUSHES THE COMPETITION

Having identified its requirements, Liquidnet created a short list of vendors and put them to the test. “We conducted trials with three major vendors, performed side-by-side comparisons, ran tons of benchmarks, and compared results,” Merrin said. “Talarian SmartSockets came through with flying colors—while the others fell short. The choice was obvious.”

*“The biggest money management firms on the planet rely on our transaction-oriented system to execute literally billions of dollars of transactions. Our infrastructure software has to be absolutely flawless and unbelievably fast. Talarian delivers.”*

Seth Merrin  
Liquidnet  
Chief Executive Officer

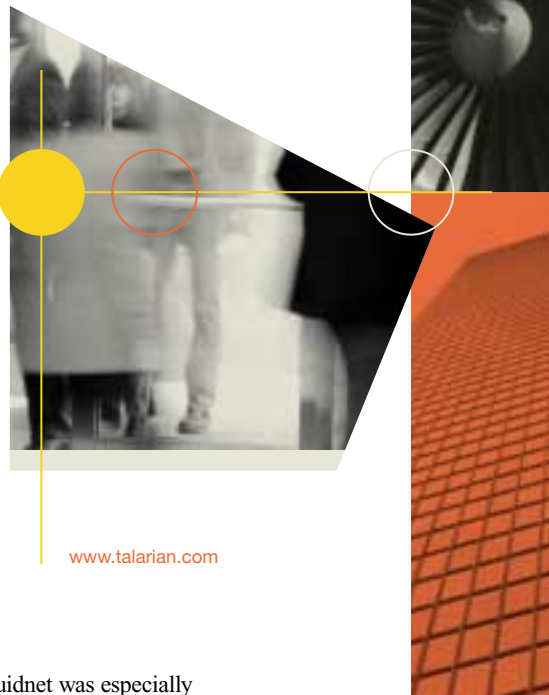
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**EXCEEDING EXPECTATIONS** “We were very impressed with how eager Talarian was to help us meet our objectives,” added Merrin. “The Talarian team consistently exceeded our expectations, delivering not only what they said they would, but when they said they would—that’s virtually unheard of in the software world.”

As a result, Liquidnet achieved its time-to-market goals, debuting its service in April 2001 with first-day executed shares exceeding 3.8 million and an average execution size of 51,000 shares per trade. “Without Talarian, I doubt that we would have gotten to market this decade,” said Merrin. “When we flicked the switch on, there was instant liquidity available—and we’ve been averaging roughly 4 million shares traded per day since we went live.”

**TRULY DISTRIBUTED PROCESSING** Because Liquidnet software and services were designed to run completely over the Internet, there was no need to install any dedicated lines at Member sites—which, from a business standpoint, could have been a deal breaker.

Using both the Talarian C++ and Java APIs, the Liquidnet front end is a Java application that resides on the institutional trader’s desktop. Liquidnet’s back-end business processes are built in C++ and run on large Sun servers at the company’s data hosting site.

**BIG JAVA ADVANTAGES** Liquidnet was especially pleased to leverage the programming speed and flexibility of Java. “With all the different platforms and operating systems our customers are running, Java frees us from having to maintain multiple code bases—saving us time and money,” said Kevin Lupowitz, Liquidnet’s Chief Development Officer. Also, without a lot of business logic residing on the client side, Java was an ideal solution for presenting visuals to Liquidnet Members.

**HIGH PERFORMANCE AND BANDWIDTH** “During beta testing we took our front end to our customers and the results were absolutely jaw dropping,” added Lupowitz. “Even with very fast Internet connections, our customers are used to some latency in response—but there wasn’t any with SmartSockets. That kind of performance gives us a real competitive edge.” According to Liquidnet field tests, SmartSockets also provided superior bandwidth over the Internet.

**A GENUINE PARTNERSHIP** Reflecting on Liquidnet’s relationship with Talarian, Merrin summed it up this way: “One of the nicest things about Talarian is that they work with us very much in a partnership mode—we can really feel it. They’ve been an absolute dream to work with and we are looking forward to continuing our relationship in the future.”

*“Our programmers really enjoy working with SmartSockets. Frankly, it’s given us a big recruiting advantage because we can offer developers the chance to work with the newest, coolest technologies such as publish-subscribe.”*

Kevin Lupowitz  
Liquidnet  
Chief Development Officer

**Talarian**  
Exchange Instantly. Distribute Globally.™