

Financial Information Services Firm Trims Costs and Boosts Flexibility with Xsigo Virtual I/O

Real-time financial information firm gains scalability, simplified management with Xsigo virtual I/O

- Responsive, easily scaled infrastructure
- Accelerated VMotion
- Remote management

Based in New York City, this financial information services firm provides data to hundreds of organizations including investment management companies, investment banks, hedge funds, law firms, regulators and others. The company provides its high-profile clientele with real-time information including databases, in-depth studies, Internet libraries, and on-demand research.

Limited resources, high growth

Before adopting the Xsigo server I/O infrastructure, the company had 20 HP servers operating in a traditional data center model with one Windows application per server and a staff of two managing operations. While this configuration was sufficient for existing requirements, the company's management recognized several fundamental challenges:

- 1) System Scalability:** Their business was expected to grow in significant incremental steps as they added new large-scale customers. With a traditional model, this growth would require additional servers, I/O infrastructure, and staff, all of which would require time to bring on line.
- 2) High cost:** Although still operating on a modest scale, the environment drove both capital and management costs. Server acquisition and power costs were only the beginning. The company was also spending time to keep the servers updated and running reliably, time that could be better used on higher value tasks. Furthermore, as the company grew the management tasks would multiply, further driving up expense.
- 3) Limited availability:** The company's business model demanded the delivery of highly time-sensitive information, creating the need for continuous system uptime. But the high cost of clustering made full server redundancy unattractive, which meant downtime and high-pressure fire drills when infrequent outages occurred.

The company recognized that a new approach was required, one that could resolve the short term management challenges and provide a long-term growth path.

Virtualization delivers scalability

In early 2008 the company initiated a conversion to a fully virtualized environment. They took a broad look at virtualization technologies and concluded that the greatest benefit would be achieved by virtualizing both the servers and the server I/O infrastructure.

Virtual I/O delivers a scalable environment where new customers and services can be quickly brought on line.

For server virtualization the company selected VMware ESX; for I/O virtualization they chose the Xsigo VP780 I/O Director. All other data center elements remained the same, including their existing HP Procurve Ethernet switching architecture and their Left Hand Networks iSCSI storage.

The move to virtualization delivered significant economies. The most obvious of which was a savings on servers: twenty servers were consolidated to four. Since virtual machines could be run on any server, the consolidation not only saved capital costs but also enabled rapid response to outages and flexible scaling.

Virtual I/O adds remote management, uptime

Xsigo virtual I/O also added significant cost and flexibility benefits that further enhanced cost and scalability. These benefits included:

- 1) Remote management:** With the previous I/O architecture, a trip to the data center was usually in order whenever operational issues demanded I/O maintenance. With the Xsigo wire-once infrastructure, most issues could be remedied remotely, thus saving cost and enhancing uptime.
- 2) Availability:** Xsigo also helps enhance uptime with virtual NICs that were deployed in redundant pairs to critical virtual machines. Furthermore, virtual NICs could be migrated among physical servers, which accelerated the task of bringing up new devices.
- 3) Faster VMotion:** An additional benefit was the improved performance of VMotion. When migrating a virtual machine between two physical servers with Xsigo, the process could be completed in less than 30 seconds, rather than minutes with traditional I/O. The high-speed, low latency 10Gb link between servers provided a fast data path for VMotion and for all other processes that required communication among servers.
- 4) Scalability:** The new architecture allowed simple, non-disruptive growth in response to new requirements. New servers would require only one card and one cable each, and there would be less need for new switches. Cabling demands were decreased by 80% compared with the previous architecture. Furthermore, if I/O needs should change on the existing servers, there would be no requirement to re-cable. All modifications could be made in software.

The end result for this user was a server environment that was not only more efficient but also more easily managed day-to-day, and one that could be quickly expanded as requirements grew. The company recognized that virtualization could deliver huge benefits, and that server virtualization alone was only half of the story.

By adopting Xsigo I/O virtualization, they simplified their infrastructure, preserved their existing investment in Ethernet, and positioned themselves to fully capitalize on the flexibility promise of virtualization as their requirements grew.

About Xsigo Systems

Xsigo is the technology leader in data center I/O virtualization, a solution that dramatically reduces operational expense by changing the way that servers are connected to networks and storage.



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