



Customer Case Study

Customer: Array Networks

Challenge: Capacity and performance with no downtime

Solution: Total solution from Promise, Hitachi and QLogic provides a consolidated, easy-to-manage, scalable and cost-effective IP Storage Solution



Array Networks

Array Networks Employs iSCSI SAN Solution Across Global Offices

Background

Array Networks is a world leader in secure application acceleration and deployment appliances for global enterprises. Array Networks is the recognized leader in the fast-growing Enterprise VPN market. Built upon the Array SpeedStack™ technology, Array's unified secure content access solutions enable industry-leading performance, integration, scalability and ease of implementation and management.

Introduction

With multiple offices in the Americas, Europe and Asia, Array Networks is a world leader in secure application acceleration and deployment appliances for global enterprises. Since it was founded in 2000, the company has accumulated an impressive 1.5 terabytes of intellectual property, which until recently was dispersed among more than 20 servers, each with its own attached storage and tape backup systems.

The Challenge: Capacity and Performance with No Downtime

As Array Networks expands its operation in Europe and Asia-Pacific, the lack of a scalable storage solution becomes increasingly detrimental to their daily operations. Array Networks was determined to consolidate its current storage and server infrastructure.

"The existing decentralized infrastructure—which worked fine when the company was young—was unable to keep pace with rapidly growing network demands and was expensive to manage," says Hao Sam, Array Networks system administrator for information-technology infrastructure.

As Array Networks creates, archives and shares technical data and business information across its global locations, some of the needs and challenges include:

- > Increase storage space
- > Consolidate and protect data integrity
- > Improve reliability and manageability
- > Support enterprise file sharing
- > Speed up backup and disaster recovery procedures
- > Reduce overall complexity and TCO

Most important, however, was the difficulty faced by engineers as they looked for the files they needed to perform their jobs. "Important files were highly dispersed, sometimes with unnecessary redundant copies of critical information on different servers," said Sam. "There was a bottleneck in data throughput that created an unbearable response time."

Intellectual property—from source code and technical specifications to documentation and manuals—is the lifeblood of technology companies. At Array Networks, that lifeblood now courses across a global network unimpeded into the hands of engineers thanks to the VTrak™ 15200 RAID storage system comprised of 400 GB Hitachi Deskstar 7K400 hard drives and high performance SANblade iSCSI adapters from QLogic Corporation.



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The Solution: Cost Effective IP storage Solution to Match Business Requirements and Ensure Business Continuity

The company began its search with a well-defined list of requirements for the new information system that included increased storage capacity; consolidated and faster backup and recovery processes to protect data integrity; improved reliability and manageability; and stronger file-sharing capabilities across the enterprise.

The sum of these requirements had to reduce overall system management complexity and total cost of ownership.

To satisfy these requirements, Sam said the Array Networks IT team considered a number of alternatives. They quickly dismissed the most obvious solution: An upgrade to the tape backup system with new tapes and an automated changer. Networked attached storage could add more storage capacity on the existing network but lacked the reliability and throughput to satisfy demand. The purchase of new departmental servers with larger disk drives could alleviate CPU and storage capacity bottlenecks, but the cost and time for implementation were too high. iSCSI and Fiber Channel storage area networks were also considered, and dismissed as too costly.

Based on cost, performance, reliability and overall ROI, Array Networks determined the most fitting solution to be the VTrak from Promise Technology. The VTrak iSCSI enabled a plug-and-play upgrade to their existing storage solution without having to take down a single server or reconfigure the network topology. The PerfectRAID and predictive data migration technologies provided an extra level of resiliency.

Business Benefits: Lower TCO, Improve Data Availability and Resiliency

The VTrak iSCSI system combines cost-effective Serial ATA (SATA) hard disk drives from Hitachi Global Storage Technologies with a QLogic iSCSI host interface capable of delivering up to 200 megabyte-per-second throughput.

“Hitachi drives and QLogic iSCSI technology is a product of joint development work between the three companies,” says Thuy Ton, strategic alliance program manager at Promise Technology. “Together, we have worked very hard to assure that our products are compatible and interoperable to provide the best possible solutions to our customers.”

Populated with 15 Hitachi Deskstar drives, each featuring 400 gigabytes of storage capacity, the system is initialized into two RAID-5 volumes that yielded approximately 2.4 terabytes each. “One partition is responsible for

nightly disk-to-disk backups of 15 Windows servers,” says Sam. “The second is used for archival of engineering related codes and documents.”

The two iSCSI ports conveniently allowed for dedicated links from different subnets, and the management from browser-based user interface was fairly intuitive. To facilitate the processing of iSCSI and TCP/IP stack, Array Network added QLogic SANblade 4010 iSCSI adapters with complete TCP/IP and iSCSI offload to its servers.

The entire process of implementation, says Sam, went off without complication. “It was as easy as installing a network printer,” he explains. “The most time was spent initializing the RAID-5 volumes and formatting the partitions.”

The simplicity, however, belies the power of the system in satisfying the needs of Array Networks engineering team, including increased data availability and resiliency, scalable storage capacity, improved storage utilization and a centralized management system with a reduced backup window.

“Our IT infrastructure is much improved,” said Sam. “Promise’s VTrak with Hitachi Deskstar drives and QLogic high-speed iSCSI technology gives us a consolidated, easy-to-manage, scalable and cost-effective IP storage solution to match our business requirements and ensure our business continuity.”

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