

► Challenge

To consolidate storage from 14 servers into a SAN and have the ability to provision the total SAN capacity into unique and secured volumes while reducing on-going costs and complexity

► Solution

A high performance iSCSI SAN utilizing SANRAD's V-Switch and Alacritech's TCP/IP Offload Engine Network Interface Cards

► Benefits

- Significantly reduced overhead expenses
- Centralized storage management & virtualization
- Secure and trusted access to logical volumes
- No SCSI or Fibre Channel HBA card required

"The V-Switch provided a very cost effective platform for scaling our capacity with inexpensive SCSI/IDE storage systems in addition to allowing us to re-use our legacy storage investments. The installation was fairly easy. The switches work with our existing SCSI storage systems and standard IP LAN connections."

Sterling Griffin, IT Manager
UNIVERSITY OF ALABAMA SCHOOL OF MEDICINE



University of Alabama Gains Extraordinary Benefits from IP SAN

SANRAD Guarantees Full Access to Digitized X-Rays and Patient Records

The University of Alabama at Birmingham (UAB), one of the top research universities in the nation, is gaining tremendous benefits from its high performance iSCSI Storage Area Network (SAN) utilizing leading technology from the SANRAD's V-Switch and Alacritech's TCP/IP Offload Engine (TOE) Network Interface Cards (TNICs). The combined solution provides a highly reliable, scalable solution to enable the top research university to easily consolidate storage and reduce on-going costs and complexity to achieve maximum ROI from its IP-based SAN.

The Challenge

Sterling Griffin, IT manager for the Department of Pathology at UAB, needed to consolidate his storage into a SAN and have the ability to provision the total SAN capacity into unique and secured volumes. He was confident once he tested the V-Switch that an iSCSI SAN was an appropriate choice to replace the direct-attached storage systems for the more than 14 servers in his department.

The SANRAD Choice

"The main benefit with the V-Switch is that we could select any storage system we desired and share it within a SAN among all our servers," said Griffin. "Our capacity requirement grows 10GBs each month. The V-Switch provided a very cost effective platform for scaling our capacity with inexpensive SCSI/IDE storage systems in addition to allowing us to re-use our legacy storage investments. V-Switch virtualization was also critical because we needed to create very large volumes across these storage systems for our many file servers, which support over 500 students and staff at the School of Medicine. The installation was fairly easy. The switches work with our existing SCSI storage systems and standard IP LAN connections."



Griffin says he looked at Fibre Channel SAN storage systems but the prices exceeded his budget. Aside from being cost-prohibitive, he was concerned about the lack of industry standards in Fibre Channel products.

"They might say FC is not proprietary, but anyone who's ever worked with it knows it is proprietary," said Griffin. In addition, competing IP storage vendors he investigated also used proprietary technologies, which alarmed UAB. "I would not evaluate anything that is not using standard iSCSI. We wanted to start with a standard that had wide industry acceptance. Our future plans for the V-Switch IP SAN include adding SQL, Exchange, web and backup servers along with implementation of the DRP features."

"The University of Alabama was able to implement an affordable, reliable and high-performance SAN solution that met their data availability and budgetary needs," said Zophar Santé, Vice President of Market Development at SANRAD. "Alacritech's innovative SLIC acceleration technology combined with the intelligent functionality of the V-Switch ensures that they will derive the full performance potential possible from their iSCSI SANs while ensuring continuous access to mission-critical data using SANRAD active/active multi-pathing, data replication and volume management features."

"UAB is an example of how operations of all sizes can benefit from SANs built around the iSCSI V-Switch because of the lower cost of ownership and lack of complexity compared to traditional SANs, while Alacritech accelerators provide the added advantage of optimum performance," said Kim Peyser, vice president of Sales and Marketing, Alacritech, Inc.

The V-Switch provides iSCSI-networked hosts with secure and trusted access to a variety of logical volumes residing on diverse storage systems within a SAN architecture. Requiring no host agents, the V-Switch operates in the data path of a storage network, between servers and SCSI, FC, FC Fabric or iSCSI storage systems, providing a highly scalable and easy to use connectivity and management platform for IT professionals responsible for administering small to enterprise class storage resources.

The SLIC Technology TCP/IP offload engine (TOE) technology uses a method known as data-path offload to perform TCP/IP protocol processing. With SLIC Technology, the TCP stack is divided into two planes, with the TCP control plane remaining in software, and one or more hardware planes implementing the TCP data path. This enables a significantly streamlined Windows server accelerator solution that is flexible and doesn't compromise performance. Centralized software control provides link aggregation and failover support using industry-standard Gigabit EtherChannel and IEEE 802.3ad Link Aggregation protocols. SLIC Technology solves system performance bottlenecks created by traditional network interface architectures including memory traffic, CPU interrupts and PCI traffic, leaving the Windows server free to handle application processing.