

► Challenge

To find a cost-effective, feature-rich storage solution to handle need for increased storage capacity on campus setting.

► Solution

A tiered storage approach based on the creation of an IP SAN using SANRAD's V-Switch 3000 iSCSI switch, in conjunction with the district's existing FC SAN

► Benefits

- Centralized storage management & virtualization
- Based on familiar IP infrastructure
- Dynamic storage allocation
- Compatible with wide range of storage arrays and server operating systems
- No SCSI or Fibre Channel HBA card required

"The V-Switch did exactly what it promised to do. The virtualization capabilities, open architecture design and ability to integrate with our existing equipment really sold me."

Kevin Mount
Lead Network Administrator
SPOKANE SCHOOL DISTRICT



Spokane Public School District Puts iSCSI-based IP SAN to the Test

Tiered storage network rewards IT staff with dramatic cost savings and improved flexibility

The Spokane Public School District in Spokane, Washington is the largest employer in the city of Spokane, employing more than 3,000 teachers in its 6 high schools, 6 middle schools and 35 elementary schools. At the heart of the district is the technology services department, responsible for overseeing an enormous network of over 10,000 computers as well as an extensive Fibre Channel-based storage area network (FC SAN). The FC SAN hosts a conglomerate of FC switches and SCSI JBODs, including 24 terabytes of direct attached serial Gateway 840 ATA storage and six terabytes of Xiotech.

In response to a growing demand for increased storage capacity within the district, Spokane's technology services staff recently embarked on a search for a more cost-effective storage management solution. Explained Kevin Mount, lead network administrator, "We had teachers requesting terabytes of storage space just for themselves, but knew we couldn't continue to keep adding server after server to our FC SAN. The HBA costs alone were killing us." Mount knew that he could find cheaper FC SAN solutions, but believed a move to an iSCSI-based solution would prove not only more cost effective, but also superior in many other ways. Cost and virtualization capabilities were the most important criteria. With iSCSI as the clear answer, SANRAD's V-Switch 3000 iSCSI switch had the upper hand from the very beginning. "We found competing products at higher price points that didn't match SANRAD's feature set." SANRAD reseller RADirect, Inc. sent Mount a V-Switch 3000 unit to demo on the Spokane network. Says Mount, "The V-Switch did exactly what it promised to do. The virtualization capabilities, open architecture design and ability to integrate with our existing equipment really sold me"

The district purchased two V-Switch-3000 units and used them to create an IP SAN to co-exist with the already installed FC SAN in a tiered storage scenario. This enabled them to extend the life of the FC SAN by offloading several storage applications -including archival storage, yearbooks, photos, file servers, and a library of 12,000 volumes of video material—to the more cost-effective and less complex IP SAN. They continue to access the 6 terabytes of Xiotech storage through the FC SAN.

Today, Mount and his colleagues enjoy the cost savings, flexibility and simplicity delivered by their new and improved tiered storage network. Teachers and administrators have easy access to materials from anywhere within the district. "

We are now able to utilize our storage space so much more effectively", boasts Mount, adding, "Network storage costs have sunk to one tenth of what they were prior to the IP SAN implementation." The company began looking for a solution that would allow for failover to secondary devices or volumes while maintaining configuration of access and user rights and permissions. It also wanted an open system that would allow it to continue using existing storage assets for cost-savings benefits. "We are now able to utilize our storage space so much more effectively", boasts Mount, adding, "Network storage costs have sunk to one tenth of what they were prior to the IP SAN implementation".

In the near future, Spokane plans to add even more applications, including a document imaging system and disk-to-disk backup, as well as move the district's security system to the IP SAN. The purchase of additional V-Switch units for clustering purposes is also under consideration.

Solution's Implementation Diagram:

