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CASE STUDY

Jefferson Union High School District

QLogic® and Hitachi Data Systems End Data Truancy at School District

Challenge

Find a scalable and cost-effective storage area network (SAN) for student projects, coursework, and administrative records at a mid-sized school district.

Solution

The Hitachi Data Systems® Plug-and-Play SAN Kit includes everything needed for a complete SAN in Microsoft® Windows Server™ environments: QLogic® 1000 switching components (one 10-port, 2Gbps QLogic 1400 switch, QLogic HBAs, connectors, cables, drivers), as well as a 2TB Hitachi Data Systems AMS200 TagmaStore™ Adaptable Modular Storage unit that can scale to up to 41TB of storage.

Results

The HDS SA N kit allows students and teachers to keep all their work on the scalable SAN instead of limited server direct-attached storage (DAS), which required deleting old documents to make way for new files. Centralized storage keeps the district in compliance with state funding mandates that require immediate access to attendance records.

A commitment to using computers in education has put data storage at the top of the list of required school supplies at the Jefferson Union High School District (JUHD) in northern California. The over 5,000 students in the district's five schools rely on storage to hold homework assignments, which are often submitted electronically in the form of Microsoft Word documents, PowerPoint presentations, and HTML documents.

Teachers in the district need more storage for their work as well, including attendance records, grades, lesson plans, class assignments, and e-mail. In addition, district administrators need access to student records and human resources information about staff.

Yet until recently, finding information was time-consuming because information was spread across direct-attached storage devices on servers used for file serving, e-mail, and printing. "People had to look on multiple servers to find the information they needed," said Lou Silberman, director of IT at JUHD.

Absentee Data Affects School District Performance

Because of a limited amount of storage on some servers, server crashes were a regular occurrence. "This impacted productivity in the classroom and our administrative offices," said Silberman, "It was difficult for students and teachers to reap the benefits of computer-based education. We could have continued to add disks to servers, but in the long run, this was too labor-intensive and the delays and disruptions required to get more storage installed made it impossible to meet our users' needs," he said. "Instead, we limited storage-per-user as a stop-gap measure to prevent the server crashes. Students were given 20MB at the beginning of the year, while teachers were given only 200MB to hold all their records. Unfortunately, these limitations meant that users frequently had to delete old files to make way for new documents."

Limited storage capacity also had an impact on district finances, Silberman said. "California pairs funding with student attendance records. We needed more storage to make sure we could store and quickly find every document affecting financial support," he said. "But because our DAS system was unwieldy, we were hesitant to digitize old administrative files—and this meant that teachers and support staff wasted a great deal of time looking for paper records in filing cabinets," Silberman added.

JUHD Gets a Real-World Storage Education

To resolve these issues once and for all, JUHD needed a centralized storage pool. "The prospect of installing a SAN was very appealing because it would give us the scalability we needed while reducing the amount of time we spend on administration," Silberman explained. "As we evaluated alternatives, networked storage appeared to be too expensive—and required more hands-on administration than we were able to provide. But then I talked to engineers at Hitachi Data Systems (HDS) who explained how their Plug-and- Play SAN Kit, built with QLogic switches, could solve these issues."

The HDS Plug-and-Play SAN Kit had the scalability to meet the district's centralized storage needs for several years to come. The kit includes a 2TB HDS AMS200 TagmaStore® Adaptable Modular Storage unit, which can scale up to 41TB of capacity. And to provide fast server access, the SAN connectivity package includes a 2Gbps QLogic 1400 Fibre Channel switch.

Installation and manageability is simple, requiring little IT staff time. Designed specifically for small and mid-sized organizations with limited IT resources, the Plug-and-Play SAN Kit includes all the connectors, cables, and drivers required for installation. Intuitive installation and configuration Wizards make configuration rapid and easy.

All these features impressed Silberman—as did the affordability of the comprehensive SAN kit. "Of all the alternatives we evaluated, the HDS Plug-and- Play SAN Kit offered the best value for the money," he said. "The price of the complete package was many thousands of dollars less than what we would have paid for just a switch and a storage array."

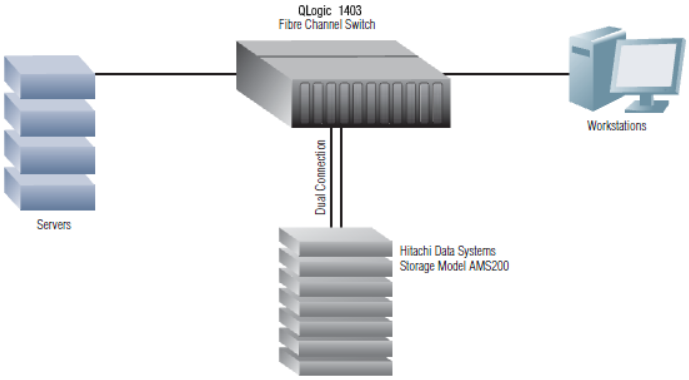
"Now that all servers share a central storage pool, we can expand the ways in which we use information technology. With the Plug-and-Play SAN Kit, our computer concerns revolve around possibilities instead of problems."

— Lou Silberman, Director of IT, Jefferson Union High School District

Students' Data Achieves a Perfect Attendance Record

With the intuitive QLogic installation wizard included with the package, Silberman quickly installed the SAN kit. "There was no need for time-consuming and expensive training," he said. "The QLogic CD included with the kit automatically detects servers, QLogic host bus adapters and HDS storage array and configures the entire system easily."

Silberman configured the HDS Plug-and-Play SAN Kit with 15 Fibre Channel disk drives, each with a capacity of 350GB—more than 5TB of storage, or four times the capacity of the DAS system on the 30 servers. "We now have twice the capacity we need, which ensures that records and files cannot be affected by downtime," Silberman continued. "Storing teaching records and homework assignments is no longer constrained by minimal amounts of storage. Students each get 300MB of personal storage, and we no longer have a limit on how much disk space teachers can use. Plus, the amount of time our staff spends finding administrative records has been significantly reduced."



As seen in this illustration, the QLogic 1400 Fibre Channel switch is central to the Jefferson Unified High School District SAN. The switch manages 5TB of data stored in a Hitachi Data Systems TagmaStore Adaptable Modular Storage, model AMS200. Data from the HDS array is relayed to a file server for past and current projects, as well as to other servers dedicated to printing, e-mail, and administrative records.

Because storage can now be quickly allocated to servers, the days of server crashes due to insufficient storage are long gone, which increases classroom and administrative efficiency, Silberman added. "The 10 ports of the QLogic 1400 provide more than enough switching capacity to keep pace with increasing user needs," he said.

Uninterrupted Information Access Broadens the Curriculum

"Now that all servers share common storage, we can expand the ways in which we use information technology rather than putting out fires," Silberman said. "Now, the IT staff spends very little time on storage management, so we have the time to put new programs into place, such as electronic grade books and online portfolios. With the HDS Plug-and-Play SAN Kit, our computer concerns revolve around possibilities instead of problems.

The HDS Plug-and-Play SAN Kit Makes Storage a Snap

Designed to help growing small and medium-sized businesses manage storage capacity effectively and easily, the competitively priced Hitachi Data Systems Plug-and-Play SAN Kit enables companies of any size to enjoy the benefits of networked storage—without having to hire a SAN expert. The kit includes the QLogic SAN Express Starter Kit 1000 and Hitachi Data Systems TagmaStore Modular Storage (models AMS200, AMS500).

QLOGIC®

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