

# Pittsford Central School District learns about HP's commitment to educational market

Need for storage and file server consolidation drives change



“HP truly cares about the needs of the educational sector. The commitment we have from HP is not just talk; we see it in the way they work with us – and even through the quality of their partners, like SMP.”

– Jeffrey Cimmerer, Director of Technology, Pittsford Central School District

#### Executive summary:

The Pittsford Central School District, a recipient of the prestigious New York State Governor's Excelsior Award for quality, is one of the top school districts in the United States. To maintain learning excellence today demands a state-of-the-art information technology infrastructure that helps teachers connect with students and parents, streamlines administration, and supports the many requirements and demands of state and national regulatory authorities. As Pittsford teachers and staff increasingly adopt new technologies, the district's total data storage is growing by more than 100 percent per year, and the need for improved storage management along with it.

To gain greater control over storage assets, improve performance, and increase security, the Pittsford Central School District's Technology Department is consolidating storage islands on a storage area network (SAN) based on the HP StorageWorks 4000 Enterprise Virtual Array. The district is automating and strengthening backups with HP OpenView Storage Data Protector and consolidating file-server management using the HP BladeSystem.

Pittsford  
Schools

#### The quest for quality

At the heart of most prosperous, successful communities is a great school system, and the area of Pittsford, New York, is no exception. Yet, high quality education requires vision and planning. Pittsford Central School District captures its technology plans and objectives in its “Tech Quest” guidelines. The District Technology Management Committee – a cross-sectional group of teachers, parents, students, administrators, and IT staff – updates Tech Quest annually.

The current Tech Quest plan provides a roadmap for improving and leveraging technological resources to enhance learning and help prepare students for college, careers, and the real world. One of the plan's central objectives is to embrace and implement new learning environments – including student-centered learning, multimedia, collaborative work, critical thinking, and active inquiry-based learning.

To help meet these educational objectives and improve the efficiency and reliability of its overall IT infrastructure, the Pittsford Technology Department began searching for solutions to some of its critical challenges. Pittsford's Director of Technology Jeff Cimmerer explains:

- **“From kindergarten to the 12th grade, the need for storage and access to large files is becoming more and more common.”** Multimedia resources, research projects, student portfolios, and lesson content have grown rapidly in recent years.
- **“As a district, we had perhaps 1 TB of information stored as of a year or two ago. Today, we have nearly 4 TB district-wide.”** The district's data is distributed among its nine schools and administrative offices in a heterogeneous, networked environment that includes HP, Dell, and Apple servers.





- **“We still use a lot of microfilm to archive documents, particularly those the government requires us to retain.** A SAN environment offered us a way to transition to a system that will allow us to scan, index, and access documents much more easily and cost-effectively.”
- **“We have at least five separate information systems that require separate sign-ons, separate passwords.** We needed to migrate from Novell NetWare to Microsoft® Windows® and Active Directory to create a more secure and efficient environment with single sign-on capability.”

#### **Lesson learned: commitment counts**

Cimmerer and his evaluation team looked at SAN and file-server management solutions from HP, Dell/EMC, and Apple. While the district has deployed both Dell and HP technology extensively in the past, HP’s strong commitment to the educational market impressed the evaluation team most.

- **“HP showed us that they want to be partners with us, and they take the time to understand our needs,”** relates Pittsford Senior Network Technician Chas Profitt.
- **“The HP approach is very refreshing, and its support is phenomenal,”** says Cimmerer. “We had an initial problem with the UPS that came with the SAN. Our HP reseller, Systems Management/Planning (SMP), came out immediately to assess the situation. It took a few visits, but HP Services, SMP, and our staff really worked as a team to resolve the problem.”
- **“We attended some of the HP informational events for the education market and learned that HP has a vision and dedication to the future,”** Profitt notes. “HP is trying new things and not waiting for someone else to lead them. We also met many other HP customers and felt that strong spirit of partnership reflected in them as well.”

- **“I boil it down to one main message: HP cares about the educational sector,”** Cimmerer emphasizes. “A lot of companies focus on private industry because that’s where they believe the money is. We have spent millions on technology over the years, yet few vendors give us the service and support we deserve. The commitment we see with HP is not just talk – we see it in the way they work with us and even through the quality of their partners, like SMP.”

#### **Reading, writing, and...consolidation**

The heart of Pittsford’s new, consolidated storage architecture is the HP StorageWorks 4000 Enterprise Virtual Array SAN, with 5 TB of storage capacity and scalable to 16.8 TB. Cimmerer and his staff are initially migrating data to the HP SAN from four legacy Dell file servers and their associated storage. Pittsford’s IT pros will reassign the legacy servers to other chores.

The staff will also manage storage access using a new file-serving platform built on four HP ProLiant BL25p server blades running Microsoft Windows Server 2003 Enterprise Edition. The four server blades are clustered in pairs, with two blades dedicated to serving the data access needs of students and the other two for staff data.

The district now backs up data using HP OpenView Storage Data Protector software running on a dedicated HP ProLiant DL360 server, along with a third-party tape library. The backup site, located five miles from the new HP SAN, provides additional security against single-point failure. A fiber optic network links the sites.

- **“I like the storage virtualization features and built-in reliability of the HP Enterprise Virtual Array,”** Profitt says. “I can simply add another shelf of storage whenever we need it, as opposed to other storage architectures that require me to buy additional controllers and software. HP’s virtualization capabilities give me the option to distribute storage as I see fit or do it automatically. Manageability is a clear advantage.”

- **“We have already moved several departments over to the new HP SAN and HP BladeSystem file servers, including elementary libraries, food services, maintenance, and transportation,”** Cimmerer explains. “We will migrate our central administrative offices very soon, and by the end of the summer, we will have everyone on Active Directory and accessing files on the HP BladeSystem clusters and HP SAN.”

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– Chas Proffitt, Senior Network Technician, Pittsford Central School District

- **“Our goal is to eventually provide a single sign-on capability district-wide,”** Cimmerer says. “Right now, we have at least five separate information systems, which each require their own passwords and sign-ons. A single sign-on using Active Directory through the HP file server and SAN infrastructure will not only reduce the administrative burden, but will be both easier to access and more secure.”

According to Proffitt, the decision to replace the district’s Veritas Backup Exec software with HP OpenView Storage Data Protector is already paying dividends. “I can back up both our Windows and NetWare servers with the same system at no additional licensing costs for ‘remote agents.’ We’ve already seen a 30 percent reduction in the time required for backups.”

#### About Pittsford Central School District

Located along the historic Erie Canal, Pittsford Central School District ([www.pittsfordschools.org](http://www.pittsfordschools.org)) spans approximately 30 square miles and includes portions of six Rochester suburbs – including Pittsford, Perinton, Penfield, Victor, Mendon, and Brighton. The award-winning district operates nine schools with an enrollment of approximately 6,100.



## At a glance

### Hardware:

- HP StorageWorks 4000 Enterprise Storage Array (EVA4000) configured as SAN (5 TB installed and scalable to 16.8 TB)
- 4 HP ProLiant BL25p server blades with dual AMD Opteron™ processors
- HP Integrated Lights-Out (iLO) intelligent management processor and firmware on ProLiant servers noted above
- 3 HP ProLiant DL360 servers – one dedicated to HP OpenView Storage Data Protector software
- HP R12000 XR Uninterruptible Power Supply (UPS)
- 300 HP DeskJet 800 series printers
- 300 HP LaserJet 4000 series printers
- 2 Cisco MDS 9120 Multilayer Fabric Switches

### Software:

- HP StorageWorks Continuous Access EVA
- HP OpenView Storage Data Protector
- HP Systems Insight Manager
- Microsoft Windows Server 2000 and Windows Server 2003 Enterprise Edition
- Microsoft Active Directory
- Microsoft Windows XP on client desktops
- Microsoft SQL Server 2000
- Microsoft Internet Information Services
- Novell NetWare 6.0 SP5 on legacy file servers
- Kronos workforce management applications
- Nutrikids from LunchByte Systems Inc. nutritional analysis software

- Chancery SMS student information system from Chancery Software Ltd.

- WinCap integrated school management applications from Capital Computer Associates, Inc.

### Services from HP and HP reseller SMP:

- In-depth understanding and support previously demonstrated by HP Services and SMP (key decision factor for Pittsford)
- HP SAN installation and implementation
- HP Services knowledge transfer
- 9x5, 4-hour response, onsite coverage from SMP

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## Challenge

- Provide a consolidated storage infrastructure that can scale to meet 100 percent annual growth in storage demands
- Improve the ease-of-use in configuring and managing storage
- Migrate from a Novell NetWare to a Microsoft Windows environment to achieve single sign-on security, ease-of-use, and closer integration among key applications
- Implement centralized backup system that can accommodate combined Windows and legacy NetWare environment without additional cost
- Update an aging technology infrastructure to better meet educational goals and provide a more relevant learning environment

## Solution

- Consolidated SAN architecture based on an HP StorageWorks 4000 Enterprise Virtual Array foundation
- Clustered HP BladeSystem for a powerful, remotely manageable file server infrastructure
- Demonstrated HP commitment to the educational market through HP Services and HP reseller, SMP
- Fast, reliable, remote backup with HP OpenView Data Protector running on dedicated ProLiant DL360 server

## Results

- Consolidating five systems, including servers and storage, into one
- Enhanced security and easier access with single sign-on capability through Microsoft Active Directory
- Responsive, superior support of HP Services and HP reseller SMP
- Improved backup time, providing increased backup frequency and reducing chance of data loss
- Flexibility to meet changing education demands
- 30+ percent reduction in backup time
- Scalable SAN architecture to accommodate 100 percent annual storage growth

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