Case study

Leominster High School (LHS)

HP gets coveted A+ for connecting LHS students and teachers

Industry
Education

Objective
Deploy a state-of-the-art scalable storage solution to support state Common Core directives and turn Leominster into an exemplary school system with support of modern wireless, BYOD, and video technologies

Approach
Refresh and build new HP Converged Storage Infrastructure with HP servers, storage and networking to support desired mission-critical initiatives and be positioned for future growth

IT matters
- HP 3PAR StoreServ 7200 Storage provides 60% headroom for future growth

- HP Networking supports BYOD, wireless campus access for students, and video and streaming

- The combined HP Converged Infrastructure solution increases agility and speeds up future deployments and expansions

- Centralized network management saves significant travel time and frees up IT staff for more critical applications—troubleshooting time reduced from 2 hours to 10 minutes

Business matters
- Students matter: Leominster can now meet Common Core requirements, providing students with superior educational technical support systems

- Scalable, efficient HP 3PAR StoreServ storage and low-TCO HP networks save significant money

- New HP storage and HP network functionality makes for happy teachers and ongoing implementation of BYOD initiative, will allow both teachers and students to excel

- HP technology roadmap provides for the future expansion and growth

"We did it for the kids. AdvizeX and HP are tremendous technology partners and fulfilled everything they said they would. Our teachers give their new reliable connectivity an A+, and with our HP Storage and Network Converged Infrastructure, LHS now has a leading-edge competitively. I've already recommended our partners to other school systems as a way to best serve their students and meet Common Core requirements."

– K. Geraldine Ashe, director of technology, Leominster Public Schools

Leominster High School (LHS), located in Leominster, Massachusetts, boasts a student population of 2,000, and an IT staff determined to provide the technology needed to help them succeed. To this end, LHS implemented a major infrastructure refresh, working with HP and its Platinum Partner, AdvizeX Technologies. Its new HP Converged Infrastructure positions LHS to adhere to Massachusetts Common Core regulations and provides students with reliable wireless access and internet connectivity.

HP Converged Storage and Networking Infrastructure positions LHS for future

LHS is dedicated to providing students with skills that prepare them for the 21st century and was therefore excited at the opportunity to update and refresh its current storage and network system. Its previous storage and wireless solution, installed 10 years earlier, provided minimum services for a building that serves 1,760 students and over 160 administrators, teachers, and support staff. The goal of the LHS IT department, spearheaded by Geraldine Ashe, director of technology, was to improve connectivity, add storage that would allow for future needs, and improve the wireless infrastructure to support a BYOD initiative, among others, as the district moved forward with future curriculum technologies.

According to Ashe, the LHS systems were simply outdated—the networking didn't allow the addition of any more access points and performance was so inconsistent that the teaching staff couldn't count on the wonderful tools at its disposal. Downtime led to limited file access, and LHS didn't have the storage horsepower to support its new BYOD and vocational video initiatives, or meet student and staff needs.

"AdvizeX Technologies, an HP Platinum Partner, in concert with HP, designed an end-to-end converged infrastructure which fully integrates our new HP 3PAR StoreServ storage, HP network, and HP ProLiant servers," says Ashe. "We're saving great personnel efficiencies on HP's centralized remote wireless management capability alone—what used to take two hours of travel time to fix, now takes only ten minutes from the central panel. Our IT staff is now available to work on our more strategic projects."

HP and AdvizeX receive high marks for listening

LHS undertook a full evaluation of competitive solutions. Since the student database is not currently hosted on-site, reliable connectivity to the Internet from desktops and laptops is critical for teachers, administrators, and students. The need to centrally manage the new architecture was also key. Each vendor was required to demonstrate a wireless prototype as well as present its storage solutions. AdvizeX initially held many meetings with LHS, bringing along HP engineers to fully detail the recommended solution. HP came out on top.

"The competition proposed a lot of inexpensive packages designed to win our business, but not necessarily fulfill our current and future needs," recalls Ashe. "AdvizeX and HP really listened to us and designed their proposal based on our set of requirements. We told all the vendors that we wanted the best solution that met our budget, and AdvizeX was the only one who listened, and who had the ability to deliver the comprehensive architecture we wanted."

Once the decision to go with HP Converged Storage and Networking Infrastructure was made, AdvizeX engaged its fully trained HP Storage and HP Networking Accredited Systems Engineers to systematically implement the solution. This included initial explanation of the proposed storage and network refresh plans and recommendations as related to LHS' goals.

"We were initially unfamiliar with the proposed HP 3PAR StoreServ 7200 Storage solution and we enjoyed the way AdvizeX and HP walked us through the process," says the technology team. This was a department decision. "The completed design met all aspects of our proposal and resolved the ongoing and problematic issues that had previously confounded us daily. The most strategic significance of the HP Converged Storage Architecture is the way it allows for scalability for our future needs."

HP stays after school

Ashe and the entire technology team has been through a plethora of upgrades and refreshes and knows that one of the most trying times is going live. The data transfer from the previous storage to the new 3PAR StoreServ SAN, the addition of the new network devices, as well as the deployment of the new wireless network, all had to be deployed seamlessly while maintaining daily activity. The implementation was one of the most complex projects that the Leominster IT staff had done because of the need to simultaneously keep its older systems up and running. Ashe gives AdvizeX extra-credit for "being there" to help deal with real-world problems when LHS went live.

"This implementation was by far the easiest, albeit the most complicated, that we have attempted," emphasizes Ashe and the Technology Team. "The extensive planning by

the HP-certified AdvizeX engineers, combined with HP expertise, was the key to a very seamless transition. They were very accessible and supportive, and they were there every time we needed them."

The overall AdvizeX and HP design created a comprehensive, integrated infrastructure moving LHS from a "flat" network to a VLAN architecture. The VLAN increased connection speed and reliability significantly and supports approximately 2,000 users doing multiple tasks. These tasks include CAD, testing, online classes, wider use of online services such as Discovery Learning and other video tutorials, as well as fully utilizing subscriptions services purchased by the district. According to Ashe, it's a great success because, as hoped, more staff and students are utilizing technology daily.

"As a direct result of the new HP network, school policy now allows use of smart phones on campus, and we recently recorded 1,200 wireless users logged into the network," notes Robert Baron, Network Technology Specialist.

"Students and staff are no longer frustrated working within the environment and, in fact, are incorporating technology into their daily routines and educational activities. Our HP network and wireless solutions have exceeded expectations," says Ashe.

HP meets common core online testing requirements

Meeting the Massachusetts Common Core State Standards Initiative requires that all testing be done online and in a controlled

environment. This means providing the necessary per-student bandwidth—a capability which LHS now happily possesses. LHS can now fulfill its upcoming needs for online testing—and its online educational and vocational courses—with its new HP network and Converged Infrastructure. The 3PAR StoreServ 7200 SAN is only at about 40% capacity and affords considerable room for growth. LHS will be implementing video and streaming-oriented functionality in support of its vocational students with the latest 21st century resources.

"The HP access points and controllers give us the coverage required by staff and students to access modern curriculum materials," explains Ashe. "As we begin the conversation about our upcoming BYOD and delivery of services over multiple end-user devices, we're now confident that our HP network both meets current needs, and provides future growth for the expected and unexpected."

HP Converged Infrastructure provides higher education

"Ultimately, we do it for the students," reiterates Ashe, but there are many benefits that LHS highlights from the implementation of the new HP Converged Infrastructure— some human, some economic.

On the economic side, Ashe is quick to point out that the efficiency of the new system is related to the meaningful increase in services that LHS gains—better services to students and staff without an increase in manpower and with less down times equals significant savings. IT staff, due to system reliability,

Customer at a glance

Application
Leominster High School student information system X2 Aspen, MUNIS financial system, and Microsoft® Exchange Version 2010

Hardware
• HP 3PAR StoreServ 7200 Storage
• HP ProLiant (3) DL360p Gen8 Servers
• HP 5400 zl Switch series
• HP 2920 Switch series
• HP 5406-48G zl Switch series
• HP 8200 zl Switch series (core)
• HP MSM 460 Wireless Access Points
• HP MSM765 zl Premium Mobility Controller

Software
• HP IMC Wireless Services Manager Software

Operating system
• Windows® 7, Windows® 8, Active Directory® 2003, Mac OS 10.5

Applications on HP Network
CAD licensing, Rosetta Stone software, iPads Apps, IOS devices, Office Suite, United Streaming, Khan Academy, Student Information System, EnGrade, College Application System, Virtual High School Courses, Plato, Health Software and Financial Software

HP Partner
• AdvizeX Technologies, HP Platinum Partner

Support
• AdvizeX Technologies [AdvizeX HP Storage Accredited Systems Engineer, AdvizeX HP Networking Accredited Systems Engineer]

up-time, and centralized management, can now focus on more mission-critical initiatives. The highly scalable HP storage SAN has the ability to grow with minimal additional investment. User productivity has increased, functionality has increased, and Common Core testing requirements have been met.

"LPS has eleven sites and 7300 users district wide. The IT staff utilizing HP Intelligent Management Center can now begin to remotely manage from one place," says Ashe. "This is our first site to use the HP Intelligent Management software and our productivity has jumped considerably."

On the human side, Ashe likes to list the benefits to the students and their increased quality of life and education.

"Now we can focus on providing all the programs that will better prepare our students for a technological future," she concludes. "Our students can now use their phones at school and have increased access to educational materials and videos over the Internet, through wireless and better networking, which makes school more enjoyable and productive. The teachers are happy because the system is reliable and we can now attract more teachers. This is the human face and benefit to the HP solution."