

HUDSON FALLS CENTRAL SCHOOL DISTRICT

HP SchoolCloud solution delivers reliable, flexible classroom technology



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Hudson Falls Central School District, Hudson Falls, N.Y.*

HP CUSTOMER CASE STUDY:

HP Thin Client solution delivers on the promise of technology in the classroom

INDUSTRY:

Education

OBJECTIVE:

Provide reliable technology in the classroom, while improving student access

APPROACH:

Hudson Falls Central School District implemented the HP SchoolCloud solution, including HP Thin Clients in the classroom linked to HP Server Blades

IT IMPROVEMENTS:

- Greater reliability with HP Thin Clients
- Centralized software management from data center
- Ability to access both private and public cloud resources

BUSINESS BENEFITS:

- Lower costs due to:
 - licensing fewer copies of software and managing access at the server
 - replacing traditional desktops with thin clients that cost substantially less
 - centralized server (and software) management in the data center
- Improved access with greater number of workstations, more uptime
- Students access a consistent desktop
- More 'time on task' in the classroom



When Greg Partch left his job in industry to head the Hudson Falls (N.Y.) Central School District technology department, he faced a major challenge. The town had lost most of its traditional industrial base, so schools were terribly underfunded, yet desperately in need of effective classroom technology.

"I needed to find technology that would be cost-effective, that would run all the time, be accessible 24 x 7, and not require a large staff to manage it," says Partch, director of education technology for the Hudson Falls schools. "The HP SchoolCloud Solution, with HP Thin Clients and application servers combined with the ClassLink LaunchPad technology portal, does all that for us."

CUSTOMER SOLUTION AT A GLANCE

PRIMARY APPLICATIONS

Classroom technology

PRIMARY HARDWARE

- HP Compaq t5530 Thin Client
- HP Compaq t5540 Thin Client
- HP 4320t Mobile Thin Client
- HP ProLiant BL460 Server Blade

PRIMARY SOFTWARE

- HP SchoolCloud
- ClassLink LaunchPad
- VMware®
- Citrix XenApp

A NEW PARADIGM FOR CLASSROOM TECHNOLOGY

Thin client computing is a new paradigm for classroom technology. Traditionally, schools deploy individual desktop PCs. But often with challenges. “Kids can get into the operating system, delete applications, download the wrong patch, upgrade to a new version of an application that isn’t compatible with everyone else, and pretty soon you’ve got a classroom with technology that won’t work,” says Partch. “A lot of schools have a lot of computers that really don’t work well.”

Hudson Falls’ implementation of the SchoolCloud solution prevents that. HP Thin Clients have no hard drive and no resident software. Instead, when students or teachers log in, they get a virtual desktop delivered by Citrix XenApp from an application server in the district’s main data center. The desktop is delivered by SchoolCloud’s use of ClassLink LaunchPad software, a cloud-based instructional desktop developed specifically for education.

“We realized 10 years ago that schools need help with their instructional technology,” recalls Berj Akian, the founder and CEO of ClassLink. “What teachers and students really want is technology that works and provides reliable access to their software, and that’s what we built.”

ClassLink LaunchPad delivers a customized virtual desktop to the HP Thin Client with the exact instructional learning software tools intended for a particular student (based on the student’s login identity and class schedule). First graders get a virtual desktop with one set of software, second graders a slightly different set, and so on. By high school, the student’s virtual desktop features programs for specific classes.

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Students get the same access whether they log in at school, at home, or the public library. So they can start a project at school and continue it from nearly anywhere they have access to a computer. They log in and have all the same software, as well as personal project files located in their home folders. Partch says in one year, the district had some 16,000 hours of remote usage.

After previously allowing access to the virtual desktops only with the district’s HP Thin Clients, the school is now extending access to allow students and teachers to use their own notebook PCs. “In time, we’ll be providing ‘Bring Your Own Device’ access to any student or faculty member that has a mobile computing device,” Partch explains.

TECHNOLOGY SYNERGY IN HP SCHOOLCLOUD

Akian says there’s real synergy between the schools’ HP Thin Client infrastructure and ClassLink’s LaunchPad virtual desktop software. “ClassLink makes a great instructional desktop that delivers software using application servers and virtualization. HP is a leader in thin client and server technology, as well as virtualization solutions. When you combine these strengths of ClassLink and HP, you get the SchoolCloud solution, which offers education what it has always needed: reliable instructional technology.”

In the classroom, Hudson Falls teachers agree. “It was very frustrating working with our old classroom computers. You couldn’t count on anything working the way it was supposed to,” says Joy Lindsay, a first grade teacher at Hudson Falls Primary School. “With the HP Thin Clients, I can do a lot more as a teacher. We divide the class into groups, and while I’m working with one group, another group is doing exercises on the computers. And they’re so kid-friendly and easy to use, that if one student has difficulty, all they have to do is turn to their neighbor for help. They really can learn from each other.”

Anthony Nassivera, an American history teacher in the high school, is equally enthusiastic. His students can retrieve assignments and handouts from his shared folder on the network, then access a variety of software programs and research sources to begin their work. And he doesn’t have to spend his whole prep period making sure the computers will work. “I’m able to spend a lot more time on instruction now,” he says. “With SchoolCloud, technology’s not taking over the classroom. Instead, it’s making learning possible. It’s allowing students with different learning styles and learning speeds to work in their own way.”

Akian notes that research supports Nassivera’s point. Thin client computing is more reliable, provides better access and therefore makes the most of instructional software. “What that all adds up to is that the class spends more ‘time on task’—which every educator knows is one of the most important things to improving learning.”

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STRETCHING SCHOOL DOLLARS

Partch says the thin client environment doesn't just deliver a better instructional tool—it also does it for far less money. The savings come from less expensive hardware, easier IT management, savings in software licensing, and reduced energy costs.

First, user hardware is less expensive. Thin clients typically cost substantially less than other desktop hardware. That has enabled Hudson Falls to deploy more hardware in its schools—some 1,800 thin clients in all—giving some classes 1:1 access. Of course, there's the added cost of the servers back in the data center, too. Partch has reduced that cost by running VMware® software to support virtualization on HP ProLiant BL460 Server Blades and a NetApp® storage solution. As a result, the district supports all the students and teachers on just 10 server blades (compared to 70 servers pre-virtualization).

"Our research into the market made it clear that HP has taken the lead in product performance, customer support and service in servers and virtualization," says Partch. "With virtualization I know that our servers can be configured to move automatically to a different physical server upon a hardware failure. Through virtualization and these blade servers our whole system is much more reliable."

Thin clients are also much easier to support. Rather than sending technicians to each classroom to deal with desktop units that have developed hardware or software issues, most of the management takes place back in the data center. "Instead of managing 1,800 copies of software on individual desktop PCs, we have

it on 10 servers, so we manage 10 copies. In fact, we essentially only manage one," Partch says. "The total cost of ownership is much lower. And our staff can spend time on more value-added projects."

The energy consumption of a typical desktop computer and CRT monitor is about 450 watts, while a thin client device and flat screen monitor is around 110 watts—a savings of nearly 75% in energy, Partch says.

As for hardware issues on the thin clients, Partch chuckles. "Nothing really breaks. We may have to replace a keyboard or a mouse, but that's it."

Finally, the district saves on software licensing. Suppose the district wants to make a given piece of software available on 750 computers. Rather than purchasing 750 copies, it might purchase a license for 100 copies. LaunchPad has a software-metering feature within it that monitors the number of users that have launched the software. When the 101st student tries to use it, ClassLink shuts them out from using the metered application. But that rarely happens.

"If we had to buy licensing for every desktop for every application, it would bankrupt the district," Partch explains. "Thin client computing makes us a lot more efficient with the technology budget."

He adds that another ClassLink software tool, Inquiry, enables his staff to track usage of various parts of the SchoolCloud solution. He targeted software usage, and discovered the district had licensing for \$30,000 worth of software that wasn't being used, so when it came time to refresh that software, he saved that cost.

BRIDGING THE DIGITAL DIVIDE

Providing better access, greater reliability, and lower cost would be enough for any senior technology manager, right? Partch argues that Hudson Falls' HP SchoolCloud solution provides one more important benefit: equal access

In Hudson Falls, any student with access to any kind of computer—even one that's otherwise obsolete—can log in to the same desktop they have at school. Students can also access the system through the network connection the district provides at the Hudson Falls Public Library. Partch even enabled students at the nearby county detention center for incarcerated youth to have prescriptive access to their software applications as well. "It goes a long way toward bridging the digital divide," Partch notes.

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Looking ahead, Partch anticipates students will begin to make greater use of public cloud resources. Until now, they could only access the district's private cloud, with its virtual desktops providing access to educational software and mass storage. But with innovations enabled by SchoolCloud, students will increasingly be

accessing outside resources from the public cloud. "We've been working essentially all with Windows®-based applications, but in the next few years, many of those will become web-enabled," he explains.

He also anticipates eliminating dedicated computer labs with thin clients hard wired into a room. Instead, the district will purchase HP Compaq 4320t Mobile Thin Clients, which can move from room to room within a school as needed on mobile carts. "The lab will go to the students, rather than the other way around," Partch says. That frees up space within the schools for other uses, including origination of Distance Learning presentations, virtual field trips, and collaborative learning with schools elsewhere.

Partch continues to work with other school districts and organizations throughout the state to encourage and help them take advantage of the benefits of thin client computing. "What Hudson Falls is doing today is being considered as a possible approach to state-wide technology needs in public schools for the future," he notes. "The savings are potentially huge. But what's more important is that a thin client solution based on HP and ClassLink technology can deliver what computers have long promised in education."

To learn more, visit www.hp.com
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Contact the HP Reference2Win Program, 866-REF-3734 for more information.

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4AA3-6951ENW, September 2011

