

MINOOKA COMMUNITY CONSOLIDATED SCHOOL DISTRICT #201

Cutting costs and expanding access with HP thin clients



"There are really no limitations for us in using thin clients. We need to deliver what our faculty and students need in order to teach and to learn. Now HP thin clients seem to be the most efficient way to do that."

—Jason Willis, network manager, Minooka Community Consolidated School District #201, Minooka, Ill.

HP CUSTOMER CASE STUDY:

Thin client computing delivers reliability in the classroom

INDUSTRY:

K-8 education

OBJECTIVE:

Provide cost-effective, reliable technology in the classroom and improve student-to-computer ratio

APPROACH:

Minooka Community Consolidated School District has deployed HP thin clients on the desktop, supported by HP servers and storage

IT IMPROVEMENTS:

- More efficient centralized management of application software on servers
- Remote management of thin clients using HP Device Manager
- Improved reliability
- Security/data protection through centralized storage

BUSINESS BENEFITS:

- Improved access
- Availability for more users
- Hardware cost savings



Several years ago, Minooka Community Consolidated School District in Illinois faced multiple technology challenges: increasing the availability of desktop units for students, while also upgrading the technology. But the costs were prohibitive. So consultants advised the district to consider a radical idea: put thin clients in classrooms. It would save money, lengthen the life of desktop technology, and improve the user experience.

It took Jason Willis, network manager for the district, two years to embrace the idea. But now, he says, "the light bulb is on."

"With HP thin clients, there is no need to re-image 1,200 computers every summer. We load applications onto servers and push them down to virtual desktops, and everybody is good to go," he notes. "The technology just works."

Windows®. Life without Walls™. HP recommends Windows.

SAVING TIME, MONEY WITH THIN CLIENTS

Minooka is a K-8 district with some 4,000 students. The district has learned what a growing number of school districts across the country have learned: it pays to centralize application management in the data center, and deploy the most physically robust hardware available in classrooms and labs, where students are.

The most obvious benefit for cash-strapped public school systems: lower cost. "The thin clients are a lot less expensive per user at the desktop and there's almost nothing to go wrong with them," Willis notes. He's expecting the thin clients to last five to seven years—an excellent boost in product lifecycle.

"I honestly don't think the students know the difference in using a thin client. They're just logging into a machine to get to their applications and files."

*—Jason Willis, network manager,
Minooka Community Consolidated School District #201*

In the last two years, the district has deployed some 1100 HP Compaq t5740 and t5630 thin clients with assistance from Premier Data Solutions, an HP partner. They were chosen based on their overall value and design for long-term reliability.

Deployment of the thin clients follows significant upgrades in the district's underlying infrastructure: six new HP ProLiant DL580 servers, a new HP StorageWorks MSA 2000 modular smart array, and expansion of its network. Beefing up the infrastructure did require some of the technology budget. But with that investment in place, Minooka is positioned to continue on the path of delivering virtual desktops that can be centrally managed on its new thin clients (or aging PCs).

That means future technology investments will go further. The district will be able to deploy more thin clients in classrooms and on teachers' desks. More students will have access to specialized educational software, as well as the Internet and other online resources.

And with thin clients on the desktop, overall spending is still under control. In the most recent budget, for example, hardware accounted for only 8% of the technology budget.

EASY TO MANAGE

The schools realize additional savings because thin client computing is easy to administer. As Willis points out, individual imaging every year is no longer necessary. Instead, he simply loads software onto the virtualized servers. The thin clients, which run Windows® Embedded Standard 2009, access applications using Citrix XenDesktop.

For large-scale deployments, Willis uses HP Device Manager software to configure, clone and manage the thin clients. But if he's just adding one or two more clients to the network, he'll install Windows and the Citrix client from a USB flash drive. "It literally takes about five minutes to flash a machine so it will be ready to sit in our network," Willis notes.

As a result, the district can administer its desktops remotely in its seven schools for daily hardware and software maintenance. Willis can manage software issues centrally and the thin client hardware is incredibly reliable. If needed, a new thin client can be swapped into place in a few minutes.

HP thin clients also take up less space in the classroom. They literally attach to the back of an HP L1710 or L1711 17-inch LCD monitor. "A thin client and monitor make for a very small, neat package on the desktop," Willis says.

CUSTOMER SOLUTION AT A GLANCE

PRIMARY APPLICATIONS

K-8 classroom computing

PRIMARY HARDWARE

- HP Compaq t5740 and t5630 Thin Clients
- HP L1710 and L1711 monitors
- HP ProLiant DL580 server
- HP StorageWorks MSA 2000

PRIMARY SOFTWARE

- Windows® Embedded Standard 2009
- Microsoft® Windows
- HP Device Manager
- Citrix XenDesktop
- Citrix XenServer

“With HP thin clients, there is no need to re-image 1,200 computers every summer. We load applications onto servers and push them down to virtual desktops, and everybody is good to go. The technology just works.”

—Jason Willis, network manager,
Minooka Community Consolidated School District #201



FOR USERS, TECHNOLOGY THAT WORKS

As for users, they're happy to have technology that works. Hard disk failures are a thing of the past. Software can't be seriously corrupted by a user; at worst, the thin client simply needs to be re-booted to restore functionality.

“I honestly don't think the students know the difference in using a thin client,” Willis notes. “They're just logging into a machine to get to their applications and files.” With 2 GB of RAM and 1 GB of flash memory, the HP thin clients have sufficient memory to run all of the school's educational applications.

Each user has storage space for files on the network, which improves security. Among the applications being delivered to student and faculty users are Microsoft® Office, Kidspiration, Inspiration, Timeliner, Neighborhood MapMachine, Reader Rabbit and Print Shop. Additional applications can be added easily on the HP ProLiant servers and made available to specific grade levels or classes. Software licensing savings are also realized.

The web-based School Insight student information and attendance system is available on thin clients to teachers, administrators and other staff. It can be used to view student records and contact information and to generate report cards, attendance reports, and schedules.

VIRTUALIZATION OPTIMIZES DATA CENTER RESOURCES

When Willis was initially considering the planned transition to thin client computing, he was concerned about the number of servers it would take to support all the applications and users.

“Then a consultant from Premier suggested, ‘Instead of buying 30 physical servers, consider virtual servers.’ And it's been an ideal solution. We can literally copy and create a new server in minutes,” he says. Willis can provision a virtual server or turn a server off or on, all from his laptop.

Willis says the district's six HP ProLiant DL580 servers virtualized using Citrix XenServer provide more than enough capacity for all the thin clients. During the school year, the physical servers are running at about 65% of capacity. There are some 26 virtual servers currently running in the district.

In the Minooka data center, each physical server accommodates roughly five virtual servers—without taking up any additional rack space, or consuming more power. In fact, district-wide, the combination of virtualized servers and thin clients consume less power.

Willis counsels others considering a thin client solution to start by making sure that their underlying infrastructure is capable. “You need

to be sure your LAN, your WAN, and servers will support what you want to accomplish," he says. "We were fortunate to be working with HP and its partners who have a lot of experience with thin client computing and data center virtualization to support it," he says.

Willis envisions a day soon when 98% of the school district's population will be utilizing thin client computing. "There are really no limitations

for us in using thin clients," he says. "We need to deliver what our faculty and students need in order to teach and to learn. Now HP thin clients seem to be the most efficient way to do that."

To learn more, visit www.hp.com

Contact the HP Reference2Win Program, 866-REF-3734 for more information.

© 2010 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Microsoft and Windows are trademarks of the Microsoft group of companies.

4AA3-0833ENW, September 2010

