School district renews old PCs, saves millions

Curriculum goals guided Pearland schools in refreshing nearly 10,000 desktop PCs — some 12 years old — using cloud client-computing and saving millions of dollars

For the Pearland Independent School District (PISD) outside of Houston, Texas, keeping nearly 10,000 PCs and roughly 1,000 laptops updated has been a major challenge for its desktop support team. In fact, thousands of the PCs are older than five years, with about 1,000 of them dating back to 2001.

According to Desktop Services Manager Jonathan Block, many students and teachers found the older PCs to be practically useless because they lacked the processing power and memory to run today's educational programs and the latest Microsoft Office suite. "With so many PCs of different ages, we didn't have any standardization across the district, which made supporting all those PCs really difficult," he says.

Riding herd on nearly 10,000 desktop PCs
Across the district, a typical classroom will have a PC for the teacher and up to seven PCs for students. All the schools also have computer labs with up to 30 PCs in each. Students use the PCs for Internet research, test-taking, reading

comprehension practice, typing practice and completing assignments using Microsoft Office applications. Teachers also use their PCs to drive projectors, document cameras and printers. Some have connected interactive slates, so they can project handwritten notes and drawings for students to view.

The district's $6 million problem spawns a solution
Instead of replacing all but the most recently acquired desktop PCs, the district chose to employ cloud client-computing using a Dell end-to-end solution from systems integrator Logical Front.

"Replacing all the district's legacy desktops would have cost an estimated $6.4 million," says Greg Bartay, director of technology. "We saved approximately $4 million with the Dell cloud client-computing solution." Bartay adds that those savings don't count the staff time his team would have needed to install the new PCs or to decommission and dispose of the old ones. "That could've taken as long as two years, and we were

Business need
With nearly 10,000 PCs, some 12 years old, Pearland schools desperately needed an affordable and manageable way to deliver updated PC capabilities to students and staff.

Solution
Not only did the district save about $4 million by not buying new PCs, it also centralized system management and enabled BYOD with full remote access, all with Dell cloud client-computing.

Benefits
- Drastically improved the learning environment for 20,000+ students
- Saved approximately $4 million by not having to replace 4,500 legacy PCs
- Reduced IT desktop systems management services by 75%
- Enabled a true Bring Your Own Device (BYOD) initiative
- Reduced classroom disruptions by centrally managing more than 90% of desktop changes
- Provided the ability for students and staff to have full remote access to applications and files when outside the network

Solutions featured
- Cloud Client-Computing
- Support Services

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> *Greg Bartay, Director of Technology, Pearland Independent School District*

able to do it all in one-third the time," he says. "Nor does it account for all the classroom disruption that would've occurred."

Choosing the best value from many options

Once PISD made the decision to pursue a VDI solution, it started evaluating hardware and software manufacturers. After extensive research and careful consideration, the district found Dell to offer the best overall value.

Dell's Wyse Datacenter solution is comprised of Dell PowerEdge M710 or M620 servers, Dell EqualLogic PS Series or Compellent storage arrays and Force 10 or Power Connect networking, which can operate from a Dell PowerEdge M1000e enclosures. The solution also includes desktop virtualization software from Citrix, VMware, Microsoft or Dell plus Dell services to enhance the customers' IT resources. The district chose Dell Networking PowerConnect 8100 switches to provide the necessary 10GbE performance needed to deliver responsive virtual desktops. "System reliability from a hardware perspective was of the utmost importance and was crucial in the selection of the Dell platform," Bartay explains.

After a thorough search, PISD chose the Citrix® software suite for its VDI software. The solution includes XenDesktop®, XenServer®, XenApp® and Provisioning Services (PVS) that provide flexibility, mobility, and delivery of applications and desktop instances. This gave teachers and administrators the ability to access the software and peripherals they have always used from any platform or any location without any performance degradation.

Improving the district's learning environment, while saving IT resources

Block and his team are delighted with the many benefits the district has realized by deploying the Dell VDI solution. Topping the list is the enhanced learning environment that the standardized disk image brings to classrooms, along with minimizing the number of classroom IT support visits and their disruptions. "Often students wouldn't bother even booting a PC because it was so old and slow," he recalls. "Now they can access Windows® 7, Office and the latest educational applications, on every district PC, even ones with aging legacy hardware, thanks to the Dell solution."

The solution also supports secure remote access, without the cost and management of setting up a virtual private network (VPN) connection per user. This has allowed Pearland ISD to tear down the walls of the conventional classroom. Teachers and students can now access their desktops and application from anywhere with internet access.

Letting BYOD "take care of itself"

Additional advantages included streamlined preparation for mandated online testing, which sometimes requires last-minute updates to the software platform. Block noted that in the past he and other IT staff had to pull all-nighters to take care of those updates; now they can be done in less than an hour.

BYOD is a growing phenomenon that the district actively encourages, contrary to IT attitudes elsewhere. That's because Block's team can push the disk image to laptops, tablets and even smartphones without security concerns, while giving users tremendous flexibility in their access. "Instead of having at least one full-time employee manage our BYOD initiative, we use Dell's cloud client-computing solution instead," he says. "Now BYOD can almost take care of itself."

Technology at work

Services

Logical Front Implementation Services and Support

Support Services

- Dell ProSupport

Hardware

Dell EqualLogic PS Series

Dell Networking S4810 10/40 GbE switches

Dell Networking 8100 Series 10 GbE switches

Dell PowerEdge M710 and M620 blade servers

Dell PowerEdge M1000e blade enclosures

Dell Wyse Thin Clients

Software

Citrix® XenApp®, XenDesktop®, XenServer®

Microsoft Office® 2010

Windows® 7

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