the focus

Virtualization Cuts Desktop Support Costs

Like many districts, Winters Independent School District in Winters, Texas, was caught in a costly yearly cycle of replacing a segment of outdated PCs every summer in preparation for the new school year. The rural district—with 650 students and some 500 desktop machines to support—was spending vast amounts of its small IT staff's time upgrading hardware and software across its three campuses. "We would rotate around the district and replace a certain number of computers in one location [every year]," according to Superintendent for Schools David Hutton. "We were constantly investing in upgrading our PCs and software."

Considering the rapid pace of technological change, district leaders realized they needed to change how they managed the network. "We realized that we were going to have to be innovative," Hutton says. "Rather than replacing technology, we needed to extend what we had. Virtual Bridges was a perfect fit."

The concept of desktop virtualization – moving processing power and software from the user's desktop to centrally located servers, where it can be managed far more easily – can be an excellent solution for education. By using Virtual Desktop Infrastructure (VDI), school districts can simplify the headache of desktop management in classrooms and labs, improve system control and security, and extend the life of aging PCs.

By moving user desktops to a central server through the VDI solution from Virtual Bridges, called VERDE, Winters' IT staff now maintains operating systems and applications in a central location. Users access a "virtual" desktop whenever they log on, for a PC-like experience with ready access to RAM, disk, and I/O resources. Individual documents, settings, and bookmarks are automatically blended into each session, delivering a fully personalized desktop.

Re-imaging a lab full of computers, a time-consuming task each summer, is now a simple matter of deploying a master copy from one central server-based unit. "It cuts down on time and manpower, and we believe it will save on many other long-term costs as well," Hutton says.

The district is running various iterations of Windows, Linux, and Apple operating systems and desktops, all of which are supported by Virtual Bridges. With Virtual Bridges, the same installed image is used for virtual desktops for any of those machines. Previously, specific software had to be installed on each machine individually. Virtual Bridges runs on top of the district's Ubuntu Linux operating system and requires almost no attention. "It takes care of itself," according to Technology Director Jeremy Fluhmann. "We hardly ever touch the Linux side, just the [Virtual Bridges] management console."

The Virtual Bridges solution also includes an offline VDI capability that pushes some processing to the client level if a connection is lost, so that the desktop remains available. That gives Winters the flexibility of allowing students, for example, to log on from home through a browser connection, then run applications on the server without needing extensive processing power.

There's another advantage to the Virtual Bridges solution: With a mix of old and new PCs at Winters, virtual desktop technology will help in extending the life of older machines. Because VDI shifts most of the processing power to a central server, there's no need to continually update desktops with new and more powerful PCs.

That will help, Hutton says, as teachers become increasingly sophisticated in using technology. Video presentations, virtual field trips, and complex lab setups will all require more computing power, but with the Virtual Bridges solution in place, Winters ISD can continue to use the PCs it already has.

Other rural school districts in the region, who are wrestling with some of the same issues as Winters —aging desktops, small IT support staffs, and ever-increasing technology demands—are watching the district closely. "We're definitely on the cutting edge here," Hutton says.

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