TECH TRENDS

Virtual Rider

Colleges use desktop virtualization to streamline software deployment, upgrades and maintenance.

Karen D. Schwartz

Ray Soto isn't your typical IT director because the organization he works for isn't a typical college. Soto works at the Poughkeepsie location of the four-campus Ridley-Lowell Business & Technical Institute, an East Coast college that offers hands-on programs in everything from medical and legal assistant training to criminal justice, accounting and massage therapy.

Ray Soto of Ridley-Lowell Business & Technical Institute is enjoying his ride with desktop virtualization. He says the biggest benefits are ease of software deployment, upgrades and maintenance.

Photo Credit: Andrew Kist

With its diverse curriculum and a commuter student body, the college's IT requirements are challenging; each curriculum has specialized and unique software, some more difficult to maintain and manage than others.

Determined to build up the school's technology infrastructure and services, Soto, with the blessing of the college's president, began researching options for virtualizing the PCs in the computer labs.

So far, desktop virtualization has been a success. Two of the six labs at the Poughkeepsie campus are now outfitted with NComputing L230 virtual desktops. The virtual desktops are connected to a Microsoft Windows 2003 server in the college's data center that runs NComputing's vSpace software. vSpace creates an independent workspace for each user that looks and feels like a standalone PC on the shared computer.

The biggest gain has been ease of software deployment, upgrades and maintenance.

"We manage so many specialized applications that deployment and upgrades can take a long time and get complicated," Soto explains. "Some of these applications don't even have a Windows Installer, which can really complicate things. Before we moved to desktop virtualization, we had to go to each workstation individually, and that was time consuming."

The move to desktop virtualization that Ridley-Lowell began last year is one that other colleges and universities are doing in droves — and for many of the same reasons. It comes down to this: IT departments are overworked and understaffed, and anything that can lighten their management load is most welcome.

Ease the Burden

For Brion Keagle, assistant director for IT core services at Fitchburg State College in Massachusetts, desktop virtualization is a major timesaver, reducing the burden on the college's 18-person IT staff.

Fitchburg State moved slowly but surely into desktop virtualization. In its first pass, the college installed about 100 kiosks using Wyse Technology terminals in various places throughout

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campus, including libraries, testing centers, open areas and the registrar's office. The terminals are connected to two blade servers in the university's data center running Microsoft Terminal Services and Windows 2003 R2. Depending on the location and purpose of the kiosk, students are given online access to various applications and websites via Internet Explorer.

The first deployment was so popular that, about two years ago, the IT department decided to use desktop virtualization to give remote access to its staff and faculty. The employees use their own PCs to access the student information system for billing, student grading and other administrative purposes. The system is based on Citrix, which runs on two HP ProLiant BL460 servers in the data center.

Both of these projects made the IT staff more efficient and responsive to students and faculty.

"We have custom reporting software that requires specialized ODBC connections and a specialized Oracle driver, along with other components that are needed to run it locally," Keagle says, "but it's fraught with error. More often than not, we find ourselves needing to fix it. But after we switched to Citrix, we don't hear from users of that software anymore, because it's working like it should be."

41% The number of CIOs surveyed who advocate for a VDI solution.

The IT server group came in second, at **23%**.

Source: Enterprise Strategy Group

The move to virtualization also reduced the amount of backup that the IT staff has to provide to its outsourced help desk. With this system, the help-desk company can securely access the Active Directory tools it needs to reset passwords. It can also connect to the student information system to troubleshoot problems without involving the IT staff.

Both systems are working so well that Fitchburg is contemplating a full-scale VDI project in its more than 20 computer labs across campus. Today, those labs have traditional PCs, but keeping all of the software updated and maintaining the PCs securely has become a burden. Although the staff hasn't decided whether to stay with Citrix or switch to VMware (which is now used for its server virtualization), the plan is to move forward. "We're hoping to have a pilot up this summer," Keagle says.

Virtual Benefits

Although the University of Maryland's A. James Clark School of Engineering is just starting down the road to desktop virtualization, James Zahniser, executive director of information technology for the school, already anticipates benefits for his staff.

The division converted one of its engineering labs to a desktop virtualization setup, using streaming technology from Citrix Provisioning Services for Desktops to deliver a single image that is managed centrally.

"It allows us to add applications easily and quickly, which is important because there are times when the faculty doesn't give us much notice to get the lab up and running with a specific application," he says. Zahniser says it used to take several hours to image a lab, whereas now the IT staff can do it in a matter of minutes.

In addition, Zahniser says he notices fewer security issues, because each time a machine is rebooted, it creates a clean image. There is so much potential that he plans to roll out the desktop virtualization infrastructure to additional labs.

Windows 7's Many Virtual Features

Most organizations will eventually deploy Microsoft's Windows 7 operating system, so it makes sense to become comfortable with the way the new OS handles virtualization. In most cases, says Chris Wolf, a senior analyst at the Burton Group, Windows 7 does a nice job with virtualization.

Windows 7 Professional, Ultimate and Enterprise editions have many virtualization features, including Windows XP mode, application publishing and offline VHD (virtual hard disk) servicing. In addition, Windows 7 physical hosts can boot from a VHD file; VHD files can be mounted on drives on Windows 7; and Windows 7 OS images can be automatically backed up to VHD. And finally, a feature called Windows Virtual PC (VPC) allows virtualized Windows client OS instances to run on a Windows 7 host.

Other virtualization strengths of Windows 7 include Remote Desktop Protocol, native VHD support, and the ability to deploy 32-bit client applications in Windows virtual machines, Wolf says.

The Burton Group recommends delaying Windows virtual PC adoption until at least mid-2010, when the first service pack for Microsoft Enterprise Desktop Virtualization (MED-V) is likely to be released.