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## Desktop Virtualization Takes Off

Platforms ease enterprise management of end-user systems and bring Windows to Macs.

Karen D. Schwartz

With about 1,200 PCs spread throughout nine facilities to maintain, patch and upgrade, Mark Lamson has his work cut out for him. But Lamson, director of IT at Westerly Public School District in Rhode Island, has found a way to make his job more manageable while saving money.

Following a successful server virtualization project in 2008, Lamson decided to embark on desktop virtualization. "We saw how the server virtualization had reduced energy expenditures and simplified all of the tasks that go with maintaining and upgrading computers, so moving to desktop virtualization just made sense," he says.

Lamson started slowly, outfitting a new computer lab at one of Westerly's high schools with dozens of thin clients, each with a keyboard and mouse, connected to a server running [VMware vSphere 4](#) in the data center. The lab is available for use by both students who need resources to complete assignments and teachers who conduct classes there.

"If you had 30 standard PCs in a lab, you would have to patch, update and manage 30 hard drives," Lamson says. "But with this setup there are no hard drives, so we're effectively managing one 'golden image'. If we need to patch it, add an application or create an entirely new image for a class taking place later that day, it's easy and quick."

The first lab worked so well that plans are under way to scatter about 40 virtual desktops throughout one of the middle schools. Over time, Lamson expects to expand desktop virtualization into staff and faculty areas.

"There is no reason why it can't be a desktop replacement for a standard knowledge worker or administrator," he says. "And with a ratio of techs to PCs of about 1-to-600, everything helps."

Desktop virtualization makes a lot of sense for educational institutions, for both ease of use and security, says Chris Wolf, a senior analyst at Burton Group. "A lot of these schools may have two guys supporting hundreds or thousands of users. They need to be as efficient as possible, and the ability to streamline and standardize on a couple of images and quickly roll them back allows them to support those larger environments very efficiently," he says.

### Opening Windows

Greenwich Academy, a private K-12 school in Greenwich, Conn., has turned to desktop virtualization for much different reasons. The school requires its middle and high school students to use a specific Apple MacBook, which the school supports. But while the MacBooks are the platform of choice, there are times when Windows-only environments or applications are required, says Dirk DeLo, director of technology and information services.

To manage the two environments, DeLo deployed [Parallels Desktop](#) on each MacBook, which, in essence, provides a virtual Windows desktop on demand. Machines can run Macintosh natively and Vista, XP or Windows 7 when needed.

"Since we have to support Windows for a variety of applications in a Mac-only environment, we found that virtualization was the best way to do that," DeLo says. "We can maintain a single image and the user can run the Mac applications in the Mac environment and have a shortcut for the handful of Windows applications they need to use."



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**\$2 billion:** Size of the desktop virtualization market by 2011.

Source: IDC

The Parallels Desktop environment is used most heavily by administrative staff because much of the software used in departments such as accounting, human resources and fundraising runs only on Windows. And language students learning Chinese must use Parallels to access software that also runs only on Windows.

“It’s a drag-and-drop installation,” DeLo says. “All we do is give them a USB key, and they can install it themselves by launching Parallels, which starts up the image.”

Although the desktop virtualization technology available today offers significant performance and cost benefits, greater strides are being made — improvements that Wolf says will really cause desktop virtualization adoption to explode.

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Chief among these improvements is the client hypervisor, which increases flexibility and security while reducing back-end infrastructure. With this technology, users will be able to take their virtual desktops on the road and sync back to the server, creating something Wolf calls device-agnostic computing. Both VMware and Citrix are developing client hypervisor solutions for release this year.

“It will run locally on the user’s endpoint system instead of consuming server resources in the data center,” Wolf explains. “You get the management benefits of desktop virtualization but you get a scaled-out approach to architecture.”

## Deployment Do’s and Don’ts

Desktop virtualization comes with myriad benefits, but as with all new technologies and processes, it takes time. Heed this advice:

- Do prepare users for the change. Many believe they will have less control, which creates resistance. Instead, accentuate the positive by explaining the increased flexibility they will gain. For example, they will be able to access their desktop from any location within the building.
- Don’t dive in head first. Deploy slowly, and make sure you test the product with all applications before deployment. Deploy department by department instead of all at once.
- Do include representatives from each department to create the most usable, user-accepted desktop.
- Don’t expect to implement desktop virtualization at every level of the organization; it’s particularly well-suited to standardized tasks and situations, and somewhat less suited to users with more customized needs.

