

CAMPUS TECHNOLOGY Focus

Virtualizing With Vigor

Moving from the traditional to the virtual computer lab can be tough. Dell has a plan.

Even on well-equipped college campuses, virtualizing computer labs can be a nightmare. Thankfully, Dell has a new strategy to make the ordeal easier. Dubbed Dell Virtual Labs, the approach offers the very latest and greatest in application management and support. Senior Contributing Editor Matt Villano recently spoke with John Mullen, Dell's vice president and general manager for education, state and local government, to learn more about the new take.

Campus Technology: With more than a thousand PCs in different locations on the average college campus, why is virtualization so important?

John Mullen: Many schools have PC populations in this neighborhood—and more—and one of the key benefits we see is the ability to reduce the management burden with a virtual environment. The technology greatly improves the ability to manage patches, swap hardware, update software, and manage user profiles. It frees up the IT staff for more strategic projects, and makes the management of the PC environment more efficient. It also helps to provide remote access to the resources, regardless of whether that device is an actual PC in a lab, a notebook in a dorm room, or a tablet or a mobile device halfway around the world. When students

want to access these applications to complete their coursework, the virtual environment makes that capability a reality. Obviously, this has implications for learning outcomes with traditional students, but it also has a huge impact for at-risk students, transfer students, and distance learners.

CT: Can virtualizing change the physical layout of a traditional lab environment?

Mullen: Higher education is always in need of more classroom and building space. By virtualizing labs, a lot of schools are able to consolidate satellite labs and free up real estate for classrooms, offices, and things like that. Labs are becoming more collaborative learning spaces, where students can bring their own devices, connect to a host of different types of audiovisual equipment, and share information with other students. All this contributes to a greener environment by utilizing space more effectively. Finally, virtual labs offer a significant savings on electrical power. One school, West Virginia University Law School, recently did a one-for-one change-out of its lab PCs for thin clients, and it reduced the energy bill by half.

CT: Total Cost of Ownership (TCO) is a



priority for academic technologists these days. How can virtualization lower TCO?

Mullen: TCO is important, but I'm not convinced that virtualization alone is the answer. When we do TCO evaluations for our customers, we see a legitimate cost savings over a three- to five-year period, but those customers expecting to see acquisition cost savings immediately following implementation are likely to be disappointed.

CT: Not every application lends itself to virtualization. To what extent is it tough to put all these pieces together?

Mullen: That's the interesting point

of virtualization—there's a lot going on. There are different types of virtualization software, such as Citrix or VMware. There are certain requirements in the data center to help operate the virtual environment. Applications always are in various stages of readiness for virtualization, and performance can be affected. Staff needs to be trained and understand the solution so they can manage it. We've seen a lot of our customers struggle to fit all of these pieces together, and there have been endless numbers of pilots in higher education to figure it all out. We thought there was a real opportunity there for us to go and do the homework necessary to bring to market a solution stack that represented a tested framework. That's exactly what we've done with Dell Virtual Labs.

CT: How does this approach make the process easier?

Mullen: We've invested more than 50,000 hours of testing to identify the best solutions for higher education virtualized client environments. We've tested MATLAB, Adobe Creative Suite, Autodesk AutoCAD, and a number of other popular software packages on our solution stack, and we now know how to help our customers easily virtualize these complex applications. We take the cost and complexity out of the solution, getting our schools up and running much quicker than they could by themselves. And we use this as a starting point, recognizing that there will always be a need to further customize a solution to the customer's environment and to leverage their existing investments as much as possible. One of the biggest benefits of this strategy is that we subscribe to open standards. Because of this, we're finding

that we're able to fit most of our customers' existing environments into this virtualized solution without having to bulldoze the technology they've already invested in.

CT: Yours is not the only virtualization strategy in the marketplace. What sets your approach apart from the others?

Mullen: We provide and support the entire solution. We're able to troubleshoot a multivendor desktop implementation. We have the ability to take one call and find someone who understands how to troubleshoot, not just the server or the software, but all the components that fit together in this integrated stack.

CT: Generally speaking, where would you say most higher education campuses stand on the subject of virtualization today?

Mullen: It's really mixed. There are some schools that are way out in front and have done a very good job of embracing virtualized client environments on their campuses, and there are others that haven't even started yet. Anecdotal evidence indicates higher education is somewhat further ahead in this area than our commercial customers. Our customers continue to ask us for more help in this area, so we're moving full-speed ahead in driving the types of innovation that'll support their objectives down the road.

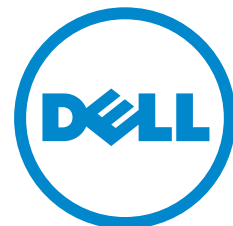
CT: How does a hardware vendor justify empowering customers with a scenario in which they need less hardware?

Mullen: It seems ironic, doesn't it? We're really in the business of providing our customers with solutions, regardless of what technology that leads to. We understand that desktops and notebooks

are no longer the sole answers, so we've made a huge investment in software, services, people and capabilities that help our customers—particularly K-12 and higher education customers—deploy, set up, manage, and maintain solutions that meet their instructional and institutional demands. It's about doing the right thing for our customers, enabling their mission.

CT: What's next from Dell in the area of virtualization?

Mullen: There are lots of opportunities to take this whole concept of simplification and reduce complexity even further. We've looked into hosting virtual desktops and providing a service to our customers where they pay on a per-user basis each month. We're also exploring this idea of access anywhere, anytime. Ultimately, we'd like to be able to have a student or faculty member use any one of his or her devices and see the same content on any device at any time. It's a complex solution and it's going to take some work, but once we can get to that point, we will really see the maximum benefits available through this exciting virtualized era.



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