

Campbell Union School District



“When I discovered VMware I was blown away by the maturity of the software. Now that we are running applications like Microsoft Exchange as virtualized implementations, our environment is easier to manage and costs our district less. VMware vSphere technology is well worth the investment.”

— Derek Moore,
Supervisor of Technology,
Campbell Union School District

KEY HIGHLIGHTS

Challenge

Deliver robust, highly available technology services to teachers and academic staff despite tight budgets and lean staff.

Solution

Implement a VMware virtualized environment to enable the flexible and cost-effective deployment of up-to-date applications, including Microsoft Exchange.

Virtualization Helps Campbell Union School District Deliver Education Beyond the Expected

The mission statement for Campbell Union School District, a K-8 system of 12 schools southwest of San Jose, California, promises its 7400 students an “education beyond the expected.” But academics is not the only area where Campbell sets high standards. Its IT organization has virtualized the district’s infrastructure—including its Microsoft Exchange servers—as a VMware vSphere environment. And by doing that, Campbell delivers IT services beyond the expected as well.

Managing from single pane of glass

Like many organizations, Campbell once allocated applications on dedicated physical servers. Because of budget constraints, however, some of its “servers” were not exactly top-of-the-line systems. “In a lot of cases, we were using old desktop machines as servers,” explains Derek Moore, Supervisor of Technology, Campbell Union School District.

It was not an optimal strategy for architecting the district’s server environment. And to make matters worse, the district has budget for only two IT staff to manage its servers and network; another two look after the desktop systems for Campbell’s 700 staff and 7400 students, which are spread across 12 district sites. When problems cropped up, the staff often found itself stretched too thin to respond as quickly as it wanted to.

So Campbell turned to virtualization, and today its data center houses four Sun servers and a Sun network-attached storage (NAS) device running a VMware vSphere environment.

The environment is much simpler and easier to manage than the old infrastructure. “We now manage all four of our VMware ESXi hosts using VMware vCenter software,” Moore says. “We have a single pane of glass for handling tasks like maintenance and upgrades. It’s a big time-saver for us.”

The console’s graphical, point-and-click interface is also friendly. “It is so straightforward we were able to learn it without formal training,” Moore notes. “All we needed was the documentation and the VMware website.”

Even more important to the district is that the VMware environment has enabled it to improve the quality and functionality of the IT services required by its teachers and staff.

Cost-effective Exchange upgrade

At one time, Campbell had two different email applications deployed within its environment. Some teachers and staff were using Microsoft Exchange 2003. The rest were on an equally outdated Mirapoint Message Server. “It was a management nightmare,” Moore recalls. Emails were stored in two different locations, and there were two different user directories. Even straightforward management tasks required extra steps. Before the IT

VMWARE AT WORK

VMware vSphere 4

- VMware ESXi
- VMware vCenter
- VMware vMotion

DEPLOYMENT ENVIRONMENT

- VMware vSphere deployed on four Sun Fire X4150 servers
- Sun Storage 7110 system
- Applications include Microsoft Exchange 2007, Microsoft SQL, PowerSchool Student Information System, library inventory management system, district websites, data warehouse middleware, Blackberry services, HVAC systems, and maintenance department work order system

staff could answer a support request, for instance, they had to figure out whether the user was on Microsoft Exchange or Mirapoint.

The two-application environment also negatively impacted users. They didn't have a common address book. The Mirapoint system didn't offer calendaring.

So Moore decided to consolidate all of the district's email users onto a virtualized Microsoft Exchange 2007 environment.

Implementing the consolidated email system as a virtualized instance made the upgrade simpler and less costly than it would have been otherwise. "If we had decided on dedicated servers, we would have had to purchase two new systems," Moore says. The combined cost would have been \$8,000-\$10,000, plus service contracts and ongoing maintenance costs. Instead, Moore says, "We were able to allocate existing server capacity, and do the upgrade without purchasing additional hardware."

The virtualized Exchange deployment is easier to manage. Part of this is because Campbell now has only one mail environment, so Moore doesn't have to switch between systems to perform tasks like configuring mailbox settings.

But other management improvements are a function of the VMware technology. Moore's team no longer has to take the Exchange servers off-line to perform monthly maintenance. He simply moves the environment to a different physical host while he's installing a patch or servicing the hardware. "We can perform maintenance during business hours," Moore says. "We're working fewer 'off hours' which is a real bonus for us."

The users are also happy. Not only is there less downtime, but they can now share calendars with each other. And they have a common address book, which makes email communication easier.

Capacity to spare

Campbell's Microsoft Exchange environment is not the only business critical application that Moore has virtualized. The district's PowerSchool Student Information System, library inventory management system, and websites all run with the VMware vSphere environment, as well as the middleware servers for the district's data warehouse, maintenance department applications, Blackberry services, and a Microsoft SQL database used by the human resources department.

And there's room for more. "With our VMware environment in place, we can easily spin up new virtual machines to support other applications," Moore notes. Recently, for instance, Campbell set up a virtual server to run Rosetta Stone software for its foreign language students, and another server to deploy and manage a netbook pilot. "With VMware technology, we have the flexibility to respond to our school's technology needs without having to purchase additional hardware."

With benefits that compelling, Moore predicts that other school districts will soon follow Campbell's virtualization example. "Virtualizing with VMware vSphere technology has enabled us to do things we wouldn't be able to do any other way," he says. "We are more flexible and responsive to our users' needs, and we're also more cost-effective. It's a solution I believe all school districts should strongly consider."

