

A Large University in Texas

“VMware vSphere has been a huge benefit to us. It saves time, it saves money, and it makes our critical applications more available and recoverable. It’s hard to think of an aspect of IT where vSphere isn’t playing an important supporting role for us.”

— Systems Administrator,
A Large University in Texas

KEY HIGHLIGHTS

Challenge

Create a more flexible and recoverable IT infrastructure for the University.

Solution

VMware vSphere 4 creates an IT environment that is easier to manage, easier to keep available, and easier to recover—all while lowering overall costs.

VMware at Work

- VMware vSphere™ 4, featuring
- VMware ESX® 4
- VMware vCenter™ Server 4
- VMware Fault Tolerance (FT)
- VMware vStorage Thin Provisioning
- VMware vMotion™
- VMware Distributed Resource Scheduler (DRS)
- VMware High Availability (HA)

Deployment environment

- Hardware: Dell PowerEdge 6950s and R905s with Clarion CX500 fibre channel SAN
- Guest operating systems: Windows 2003, Windows 2008, Red Hat Linux
- Virtualized production applications: Microsoft Exchange 2007, Active Directory, domain controllers, SharePoint, SQL, IIS

With a location in “hurricane country,” the university’s IT team has to make application availability and redundancy a high priority. “The university needed us to come up with a way to ensure continuous email and Web presence in the event of a natural disaster,” says a systems administrator at the university. “Virtualization seemed like the best way to achieve this goal.”

By first using VMware Infrastructure 3—and, later on, VMware vSphere 4—the university has been able to migrate its Microsoft Exchange environment from physical servers to an almost entirely virtual environment. “We already liked the performance and results we achieved with VMware Infrastructure 3,” says the systems administrator. “vSphere went one better with features like Fault Tolerance for zero downtime, so it was kind of a no-brainer to upgrade.”

In addition to Microsoft Exchange, the university has virtualized other key pieces of its infrastructure, such as Microsoft SharePoint and critical SQL databases, achieving 75 percent virtualization overall. Having VMware vSphere so widely deployed has allowed the university to take a step towards creating a cloud-type model that provides resources on demand. “Various departments ask for resources, and we’re able to quickly and easily provide them, thanks to the flexibility that vSphere offers,” says the systems administrator. “That makes a lot of sense for us as we move forward.”

Results

- Virtualize 40,000 Microsoft Exchange mailboxes. “Email is a critical means of communication amongst teachers and students alike—if it goes down, things really grind to a halt,” says the systems administrator. “That’s why we run our Exchange system virtually on vSphere.”
- Increase availability of vital applications. “In July 2007, we experienced a hurricane and our entire datacenter had to be shut down for three days,” says the systems administrator. “Luckily, our Exchange environment is replicated to standby virtual machines at our disaster recovery site. That allowed us to maintain our email and Web presence, even with no IT functionality here on campus.”
- Increase business agility. “We can respond to changes on demand when the business requires more resources,” says the systems administrator. “For example, when we had to add more RAM for our Exchange virtual machines, all we had to do was add chips and reboot. That was it. Done.”
- Increase productivity. “The vCenter feature really streamlines IT administration for our staff by giving us a single pane of glass to manage our entire IT environment,” says the systems administrator. “Without it, we would have been swamped with mundane, repetitive tasks, and a lot of higher-value projects would not get completed—or even started.”
- Save thousands of dollars in hardware costs. “When we migrated to Exchange 2007, we didn’t need to purchase a bunch of new 64-bit servers to host it,” says the systems administrator. “We simply spun up some new virtual machines to add to our 64-bit ESX cluster, and we were all set.”

