

HIGHLIGHTS

CHALLENGE

Power and cooling capabilities of existing data center are maxed out

SOLUTION

VMware® and Intel technology create a platform for a virtual infrastructure that consolidates servers, reducing power and cooling requirements.

VMWARE AND INTEL AT WORK

VMware® Infrastructure 3 Enterprise, featuring:

ESX Server

Dell 6850 and IBM X3650 servers with Intel Xeon processors attached to NetApp FAS 6030 SAN

VirtualCenter 2

VMotion™

Distributed Resource Scheduler (DRS)

High Availability (HA)

DEPLOYMENT ENVIRONMENT

Guest operating systems: Windows 2000, Windows 2003, Red Hat 4, AIX 5.3

Virtualized Applications: Outlook, Exchange, SQL, file servers, print servers, Blackboard distance learning application, PeopleSoft

“VMware is definitely a leader in the virtualization space, and we think Intel is right on the money with the chipsets they’re developing for virtual environments.”

Brian Viscuso

*Lead, Enterprise Systems Engineering,
Virginia Community College System*

“YES, VIRGINIA, THERE IS A WAY TO REDUCE POWER AND COOLING IN YOUR DATA CENTER...”

The Virginia Community College System (VCCS) oversees 23 colleges on 40 campuses located throughout the state of Virginia. The system serves nearly 250,000 students every year.

Behind the scenes, VCCS’ Information Technology Services Department was facing a growing challenge with its data center. “We had reached maximum capacity for power and cooling,” says Brian Viscuso, lead for enterprise systems engineering at VCCS. “We were looking at either doing a huge revamp of our existing facilities or moving to a new building altogether unless we found a way to consolidate servers and be more efficient.”

With a virtualization platform anchored by VMware technology and Intel hardware, VCCS was able to streamline its IT infrastructure and reduce costs associated with server sprawl. “We are a state agency, so we are limited on resources,” says Viscuso. “Virtualization enabled us to look at our environment and weed out any waste by finding servers that were doing next to nothing except soaking up power and creating heat, and then consolidating those servers onto a VMware ESX hypervisor. It’s really terrific the way that virtualization produces tangible results and benefits so quickly—almost shockingly quickly!”

RESULTS

- Reduce power consumption by 6 percent. “In addition to power reduction, we had a 90,000 BTU/hour heat reduction which equals 7.5 tons less cooling per hour in the data center,” says Viscuso. “That is huge!”
- Remove five racks from data center. “Virtualization has helped us remove a lot of servers from our data center, plus all the associated cabling and everything else that goes with it,” says Viscuso. “That really helps streamline our data center real estate.”
- Achieve 15:1 server consolidation ratio. “The Intel platform manages the virtualized environment very well,” says Viscuso. “Some of our ESX hypervisors have upwards of 12 to 15 virtual machines on them, and the Intel processor handles all the requests that come to it in a very efficient way. We haven’t seen any degradation in performance whatsoever.”



vmware®



Building the Foundation of Virtualization