Quantum

CASE STUDY

DX*i*-Series & vmPRO

VM Backup and Restore Times Reduced by 90% at Santa Barbara City College

The more that Santa Barbara City College relied on virtualization, the harder its backup became… until the College switched to Quantum's vmPRO data protection software and DXi® deduplication appliances. Now, backup, restore and DR protection are fast, easy and automated, and administrators can spend their time on other, even more strategic projects.

Santa Barbara City College is one of the premier community colleges in the United States, recognized by the Aspen Institute in 2013 with a first-place award for excellence from among more than 1,000 community colleges nationwide. Its curricula are far-reaching, covering both practical job-preparation skills and the academic courses needed by students to transfer to 4-year colleges and universities. Protecting the fast-growing student and administrative data is a primary mission of the IT department, one that became more complex and expensive as the staff took advantage of VMware to virtualize the College's server environment.

VIRTUALIZATION CREATES BACKUP LOGJAM

"We implemented a major initiative to virtualize as much of our server infrastructure as we could," explains Brandon Lovelace, the network administrator responsible for backup and DR protection, "but the more we virtualized—today we're at about 90%—the harder the backup got and the more problems we had."

The College used NetBackup to protect its physical servers, writing data to tape, but it needed a different approach for the virtual machines. The IT team started out using VMware Consolidated Backup (VCB), the backup software provided by VMware, but discovered that it needed to customize the environment to get the data protected and written to tape—the medium the school was using for retention and offsite storage.

"It was a mess," Lovelace says. "We wrote scripts, spooled data to disk, and then used NetBackup to send that data to tape so we could get it offsite and retain it. It was way too complex for me and for the admins who owned different applications, and we spent a couple of hours a week just moving tapes around."

Besides being complex, both backup and restore were seeing poor performance. Full weekly backups were taking two to three days to complete, and the system performance did not allow effective daily incremental backups, so some data was not getting protected each day. Restores were also a major bottleneck.

"If a lost file had already been moved to offsite storage, there was an automatic delay of 24 hours while we retrieved the tapes, and it could take hours to restore the VM and find the right file," Lovelace reports.

"We talked to all of our current providers and everybody else we could find," says Lovelace. "Lots of the solutions were way too expensive, and they didn't seem really designed for good VM protection. Others didn't have a good way of providing offsite protection, and in some cases, we weren't confident that the suppliers had the experience to support us long term."

The solution the College selected consisted of two Quantum products: vmPRO data protection software and a pair of DXi deduplication appliances.

SBCC
SANTA BARBARA CITY COLLEGE

"Restoring files inside VMs used to be delayed by at least one day and take hours of my time. Now, with vmPRO and the DXi, it just takes me a few minutes once I've found the file I want—it's great."

Brandon Lovelace
Santa Barbara City College
Network Administrator

SOLUTION OVERVIEW

- Quantum vmPRO™ VM data protection software
- Quantum DXi deduplication appliances
- Symantec NetBackup backup software

KEY BENEFITS

- Reduces backup times by 90% and allows daily incrementals for improved protection and more restore points
- Provides daily, automated offsite protection for all data while eliminating tape handling
- Restores files, even in VMs, in minutes instead of days
- Provides most economical total solution designed for protecting VMs, saving resources
- Reduces time spent managing backup and restore, freeing admins for other strategic tasks

"The Quantum system had all the features we wanted, it was the most cost-effective solution we saw, and we had confidence in Quantum as a supplier that understood backup, provided wonderful support, and was in the business for the long haul," says Lovelace.

In the new system, all the VMs are backed up by vmPRO software and written directly to one of the DXi appliances in the school's main data center. The physical servers are still backed up by NetBackup, but the data is now written directly to disk, to a second share in the same DXi. The backups for all the data are replicated to the second DXi appliance, which is located in a remote data center to provide a second copy for offsite DR protection.

With the help of the Quantum service team, the installation was completed in a matter of hours, and the advantages were immediately clear.

REDUCES BACKUP WINDOW BY 90%

"Those two- to three-day long weekly backups now all finish in 4 to 6 hours—so we've seen a 90% reduction in our backup window," reports Lovelace. "And the vmPRO software tracks and snaps just the changed blocks within the VMs, letting us finally do daily incrementals for all of the VMs, so we've got better, more frequent protection. It's just a better approach—it's the way VMs should be backed up."

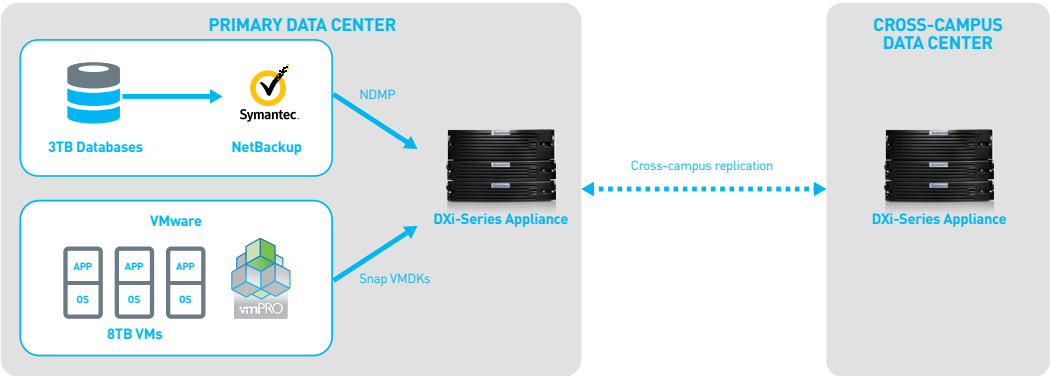
In the original system, holding backup data on disk was much too expensive to even consider. But now, with the DXi's patented variable-length deduplication, a full six-month cycle of backup data can be retained on disk cost-effectively enough for the College's tight budget. Offsite protection is also handled with more efficient use of network bandwidth; each day the primary DXi automatically replicates all the backup changes to the second unit.

"We get instant, daily offsite copies for all our backups, and I am completely out of the business of managing tape," Lovelace notes.

RESTORES TAKE MINUTES NOT DAYS

Further, because vmPRO creates copies of VMs in their native format and reduces the size of VM images before they are backed up, file-level access to protected data is greatly accelerated and virtual server and network loads are reduced as well. As a result, the IT team can restore or boot VMs quickly without using a separate backup application.

"Restoring files inside VMs used to be delayed by at least one day and take hours of my time," says Lovelace. "Now, with vmPRO and the DXi, it just takes me a few minutes once I've found the file I want—it's great. With this kind of backup and restore performance, when we get to our goal of 100% virtualization, vmPRO will be the only backup software we need."



"The Quantum system had all the features we wanted, it was the most cost-effective solution we saw, and we had confidence in Quantum as a supplier."

Brandon Lovelace
Santa Barbara City College
Network Administrator

ABOUT SANTA BARBARA CITY COLLEGE

Named the #1 community college in the nation in 2013 by the Aspen Institute, Santa Barbara City College is a comprehensive educational institution serving the south coast of Santa Barbara County. Established in 1909, the college has a wide range of associate degree and certificate programs, as well as transfer programs that provide the first two years of study toward the baccalaureate degree. Students are attracted to SBCC by virtue of its outstanding faculty, small classes, state-of-the-art facilities, student support services and incredible location.

To contact your local sales office, please visit www.quantum.com

©2014 Quantum Corporation (NYSE:QTM). All rights reserved. Quantum, the Quantum logo, DXi and Quantum vmPRO are either registered trademarks or trademarks of Quantum Corporation and its affiliates in the United States and/or other countries. All other trademarks are the property of their respective owners.

Quantum
BE CERTAIN

CS00303A-v01