

DXi-Series

DXi System Simplifies and Centralizes Virtual and Physical Backup for South Pasadena School District

IT environments can face daunting backup complexity, especially when protecting virtual servers enters the equation. The South Pasadena Unified School District gives Quantum's DXi solution an A+ when it comes to taming tough backups.

VIRTUALIZATION DRIVES BACKUP COMPLEXITY

Backup can be complicated, particularly when the job combines different data types, applications, backup systems, and retention requirements. For many IT departments, the addition of high levels of virtualization can push them to the breaking point.

That was the situation facing Gen Naydo, the director of technology for the South Pasadena Unified School District. The IT team is responsible for protecting almost a terabyte of data, encompassing critical student records and administrative files spanning five schools, 4,000 students and more than 500 employees—data that the State of California requires the district to maintain.

"We were using spare disk and server capacity to back up that data," says Naydo. "While that worked up to a point, it meant that everything was fragmented across multiple locations."

That fragmentation made both backup and restores difficult for Naydo and his team. It was hard to determine just how much capacity was available at any given moment, resulting in frequent overruns and failed backups several times each month. Restores were even worse, taking more than two hours as the team struggled to locate the correct files each time.

When the district moved to virtualize 15 of its servers, the complications in the backup process quickly began to mount. Although virtualization can streamline the IT job and reduce costs, it can also increase backup complexity. Originally, Naydo's team just backed

up the data on each virtual machine using NT Backup and Symantec's Backup Exec, but that made recovery difficult and left the virtual machines themselves completely unprotected.

"If one went down, it would be a nightmare to rebuild," says Naydo.

DEDUPLICATION THAT JUST WORKS

After assessing the problem, Naydo decided to upgrade the entire backup system at once, and he worked with consultants at reseller ICC in Torrance, CA, to put together a consolidated backup strategy that would protect both the physical servers and the virtual environment.

Naydo knew that deduplication would be important for load reduction, and he originally explored the idea of using the deduplication feature in his backup applications. However, the team at ICC had a different recommendation. They explained that outcomes were unpredictable with software deduplication, especially in virtual environments, but that they had seen consistent success when they combined Quantum DXi deduplication appliances with Veeam Backup and Replication software. An additional advantage was that the DXi system could also be used to consolidate all the backup data in a central resource.

"Our reseller explained how we could centralize all of our data protection, handle our multiple backup applications and retention requirements, and even accommodate the new virtual backup, all at the same time," says Naydo. "It sounded good to me."

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Gen Naydo
Director of Technology

SOLUTION OVERVIEW

- Quantum DXi4510 appliance
- Veeam Backup and Replication software
- Symantec Backup Exec 2010

KEY BENEFITS

- Consolidates fragmented backup environment
- Centralizes backup of physical and virtual servers
- Eliminates backup failures
- Deduplicates data across multiple backup applications
- Restores data in minutes rather than hours

CASE STUDY

ICC quickly installed the new Quantum solution and redirected all the existing backup software and the new Veeam application to the central target. The district now had all its critical data partitioned, protected and safe on a single Quantum DXi appliance.

PROTECTING MORE DATA THAN EVER BEFORE

The first thing Naydo noticed about his new backup system was that it was much more stable than previously.

"We used to have multiple failures a month, and since we've installed the DXi it's been great—the backup hasn't failed once," he reports.

Moreover, thanks to the speed of the DXi and its extremely efficient data deduplication, the district is able to protect more of its data and systems than ever before.

"Slow backup speeds with the old system meant that we had to pick and choose what to back up—say, these home folders and that database," explains Naydo. "The DXi has given us faster backups so now we can just back up everything. It really opened up our options on what we can protect."

Retention has also been dramatically improved, a key factor for a department protecting critical records. According to Naydo, because of the data reduction provided by the DXi, he expects to be able to retain many months of backup on a modest amount of storage in the DXi appliance.

Restores are also both easier and faster now.

"Locating and restoring a lost file used to take a couple of hours each time," says Naydo. "And if an entire machine went down, forget it because even though we protected the underlying data we didn't have the VM itself backed up. It would take hours to rebuild it. Now with all backups centralized on the fast DXi appliance, restores take as little as 15 minutes."

In addition, the IT department has two options for files inside VMs: it can restore the files through BackupExec, or it can restore the entire VM using Veeam, and then read the files from there.

The district has been so pleased with its DXi system that Naydo and his team are planning to purchase another unit to handle offsite backup and disaster recovery. The second DXi would be placed at one of the other school facilities and connected to the main datacenter via a Fibre Channel connection. That would allow Naydo to both replicate critical data remotely and be in a position to quickly bring up a secondary site as a temporary district office in case of emergency.

Naydo is extremely pleased with the results from his transition to the new DXi system.

"Having our backup on one central DXi appliance makes it much more manageable," he says. "And it's proven so flexible that I'm confident even if we switch servers, applications or even change our virtualization strategy, the DXi will still always hold the data. You can never have enough good backups, and now thanks to Quantum I feel much more comfortable with what we've got in place."

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ABOUT SOUTH PASADENA UNIFIED SCHOOL DISTRICT

The South Pasadena Unified School District encompasses five schools and 500 employees serving the needs of over 4,000 students, their families and the surrounding community of Pasadena, California.

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