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Groton Utilities Provides Comprehensive Data Protection with DXi, Scalar Tape, and Veeam

When the Groton Utilities IT team needed to protect its critical data against data loss and malware, and reduce overall costs, it consolidated multi-site backup and disaster recovery (DR) using a combination of Veeam software and Quantum's DXi® appliance and Scalar tape library.

GROTON UTILITIES

FEATURED PRODUCTS

DXi-Series Deduplication and Scalar Tape Library

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Tom O'Farrell
System administrator, Groton Utilities

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GROTON UTILITIES

SOLUTION OVERVIEW

- DXi4700 deduplication and replication appliance
- Scalar® i40 LTO tape library
- Veeam Backup & Replication software

KEY BENEFITS

- Backup to disk provides fast backup and restore to keep data available.
- High deduplication rates allow retention of backup data for a full 30 days.
- Writing data to tape provides "air gap" protection against data loss and malware, including ransomware.
- Consolidating vendors simplifies backup operations and reduces overall costs.
- Replicating backup data will provide multi-site protection and reduce network loading by a factor of 10.
- Strong, proactive service support keeps systems running and reduces administrative overhead.

Groton Utilities is a municipally owned and operated utility that provides water, power, and other essential services for a wide area of Southeastern Connecticut, including the City of Groton. The organization places a premium on ensuring the safety and availability of the utilities it supplies to its customers, and it is committed to both encouraging and exemplifying conservation in everything it does.

The organization's IT team reflects those same values. "We are a small team, so we have to leverage technology and a smart management approach to make sure we can maintain the safety and security of our data, and stay within budget," explains Tom O'Farrell, Groton Utilities system administrator. The task is made more complex because of the range of IT services the company provides to its customers, which also include other regional organizations, including police, fire, and local governments. The range of applications is also large, everything from

Exchange and Active Directory to SharePoint, Citrix, and VMware—and they are supported in two data centers, located several miles from each other.

The IT team's approach to backup and DR protection has evolved over the years in response to changing approaches to storage and servers. Originally the servers were all physical, and backup meant writing data to a tape library. Later servers became increasingly virtualized—today more than 95% of the servers are VMs—and disk became part of the backup strategy. The team selected backup software from Veeam because it was designed to handle VMs more effectively than its legacy backup application. As data volumes increased, the team decided to add deduplication appliances, selecting a Quantum DXi model, in part because the company had such a positive experience with Quantum's tape library and service support team.

TAPE COMPONENT DELIVERS CRITICAL PROTECTION AGAINST RANSOMWARE

"We have long been committed to a 3-2-1 approach to protection," says O'Farrell, "but it took quite a bit of work to make sure we have at least three copies of data, in two different locations, with one copy off-site." Tape is a critical component for the IT team to provide important protection against malware. "We have seen the damage and costs that recent ransomware attacks have created, and we know the best protection is having a kind of 'air gap'—keeping a copy of critical data on tape that is isolated from the vulnerable spinning disk."

The IT team created a configuration using the two different data centers to provide redundancy and failover capability, and the replication capability of its EMC storage arrays to create copies of the primary data in CIFS shares across the two locations. Veeam backs up the VMs to the DXi appliance with secondary backup copy jobs written to the CIFS shares, and the team's legacy backup application creates tapes from the replicated CIFS shares for the final level of protection.

REDUCING COMPLEXITY FOR THE NEXT STAGE

"It works," O'Farrell explains, "but it is too complicated for me. There are still too many steps and vendors involved. Replicating primary data between sites takes lots of bandwidth that we could use for other things, and we have ended up using two different backup applications." To simplify and reduce network loading, the IT team is planning to rework the backup system in the future.

"We are going to add a second DXi and install it at the second data center," O'Farrell explains. The plan is to back up everything—both VMs and CIFS shares on physical servers—to the DXi appliances using Veeam and replicate the backup data between data centers using the DXi instead of the existing arrays. "Replicating backup data between DXis is a much better option. It will use a small fraction of the bandwidth that we need now—less than a tenth—and it will eliminate one additional job that the primary arrays carry out now."

As part of the next stage, Groton Utilities will leverage integration of the DXi with the Veeam Data Mover protocol—a recent announcement that enables even faster backup and restore performance, supporting advanced Veeam features like synthetic full backup and Instant VM Recovery directly on a DXi appliance.

The team will also consolidate backup vendors, use Veeam to back up the remaining physical servers, and create tapes for all the

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data that needs that level of protection. "Good technology is letting us simplify. The DXis are getting very good dedupe rates and offer very effective replication. Veeam can now do backups for both VMs and physical servers, and it can write data both to CIFS shares and to tape libraries. Our experience over the last year is that Veeam and DXi work very well together."

EFFECTIVE SERVICE PROVIDES CONFIDENCE

As with many small and medium-sized organizations, Groton Utilities' small IT staff handles everything from applications support and servers to networks and backup. "Anything we can do to improve operational efficiency is really key to letting us provide better service and keep overall costs as low as possible," says O'Farrell. Having strong service for critical equipment is one of the important factors, and Quantum has been exemplary. "We received great help from Quantum when we initially set up the DXi, and a very quick response when an issue arose with the Scalar i40."

At one point, one of the drives in the Groton tape library failed and needed replacing. "We called one day, and the Quantum service guys showed up the next morning. They replaced not only the drive that had failed, but the other drive in the library as well. That was great service." On another occasion, a large-scale power outage in one data center caused most of the equipment to shut down. When the power came back on and devices started booting up again, the Quantum remote service team saw the start-up sequence and contacted the Groton IT team to make sure that everything went smoothly during the restart. "They actually called us before we noticed what was happening, and helped us get everything back up and working cleanly. It was great."

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