



CASE STUDY

University Solves VM Backup Problems with Catalogic and Quantum

Southern Utah University's legacy data protection system stumbled badly when the school's infrastructure became heavily virtualized. The new system, built around Catalogic software and Quantum deduplication appliances, made VM backup and restore fast and easy, and it saved space in the data center as well.



FEATURED PRODUCTS

DXi®-Series Backup Appliances



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Assistant Director of IT Operations, Southern Utah University



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SOLUTION OVERVIEW

- Quantum DXi4800 deduplication and replication appliance, 19 TB capacity
- Catalogic DPX backup and recovery software for VMs and physical servers
- Pivotal Data Solutions design and integration services

KEY BENEFITS

- Both physical and VM server backup are managed using a single pane of glass, streamlining scheduling and reducing IT team overhead.
- Direct restore of individual files without having to rebuild the entire VM saves time and reduces network traffic.
- Direct, end-user file restoration accelerates file access and reduces admin involvement—file restores happen in minutes instead of hours.
- Robust data deduplication dramatically shrinks the amount of disk needed to store backup files, reducing data center space, power and cooling requirements.
- Rapid tech support response from Pivotal Data Solutions, Catalogic, and Quantum maximize performance and minimize downtime.

Southern Utah University is one of the premier institutions of higher learning in the West, offering its 10,000-plus students more than 160 undergraduate, graduate and certificate programs across 6 academic colleges. The University has been recognized by many for its unique combination of attributes—for years it has been included in the Princeton Review’s lists of “Best Colleges” and “Best Value Colleges,” the only institution in the state to receive that honor.

“We like to think that our IT department provides the same combination of quality and value,” explains Josh Foremaster, the University’s Assistant Director of IT Operations. “We have a much smaller staff—and a proportionally smaller budget—than the larger schools in our region, but we leverage careful planning and research to provide the same, or even higher levels, of support for our students and faculty.”

CHANGING BACKUP NEEDS OUTGROW LEGACY SYSTEMS

One of the areas in which the IT department has made dramatic changes has been in the area of protecting the data that is central to the University’s mission. “Years ago, when I first came to SUU, we used all physical servers and we used one of leading file-based backup software apps,” Foremaster remembers. “It worked incredibly well for years—until we began to increase the number of virtual machines.”

As the percentage of VMs approached 90%, backups became more and more complicated. “We had to schedule jobs by individual time slots, and if any of them ran over, it threw everything downstream out of whack, and we often had to start major parts of the backup over again,” Foremaster said. “Software changes to improve VM support never seemed well integrated, and the interface became way

too complex—we were looking at up to five separate screens to manage the process.”

The system also required too much storage. The team had been backing up to disk for years, and they expected efficiency in how files were stored. Instead, the amount of RAID arrays needed kept growing, eventually reaching a full 50 TB. “Our data center was stuffed with backup disk,” Foremaster said. Restores were another problem. “To recover a single file, we had to rebuild the whole VM first, something that always needed somebody on the IT team to manage. It often took hours to get it done, becoming a real burden both for the sys admins and the people who were waiting for files.”

INTEGRATOR PIVOTAL DATA SOLUTIONS PUTS THE PIECES TOGETHER

The IT team decided that they needed to move to backup software specifically designed for better VM support and to hardware that could deliver better data compression. Before the team found the right answer, they had false starts with other solution providers, but eventually called in Pivotal Data Solutions, an experienced integrator,

and asked for advice. “Pivotal was absolutely wonderful,” Foremaster explains. “They knew the problems we were facing and gave us an incredibly complete summary of different options, including pluses and minuses for each. It really gave us confidence.”

Pivotal recommended a combination of data protection software from Catalogic Software (www.catalogicsoftware.com/products/dpx) and a Quantum DXi deduplication appliance. “The team from Pivotal said they knew that the combination would work because they had seen it do the same for many of their other clients. We followed Pivotal’s advice, decided to go with Catalogic and Quantum, and we couldn’t be happier—the new system has solved all of our backup problems and has done exactly what the teams promised it would. It was a real relief to find products that live up to their marketing.”

CATALOGIC DPX AND QUANTUM DXI MAKE PROTECTION SIMPLE AND FAST

The team configured the system so that its Catalogic DPX application backs up all of the VMs and the physical servers to a single, 19-TB DXi4800. “The configuration was simple, the

ABOUT SOUTHERN UTAH UNIVERSITY

Southern Utah University is a caring campus community where students come to explore their interests and prepare for meaningful careers and life experiences. With more than 145 undergraduate programs and 18 graduate and certificate programs across six academic colleges, SUU proudly offers world-class, project-based learning opportunities where students gain professional experience before entering the job market.

For many years, the University has been widely recognized for its combination of academic excellence, community involvement, and overall value. The accolades include appearing in *The Princeton Review’s* lists of “Best Colleges” and “Best Value Colleges”; being one of only 40 public institutions to be included in the *US News & World Report’s* Best of the West annual collegiate rankings; and being listed by Institutional Research and Evaluation, Inc as one of America’s 100 Best College Buys.

ABOUT PIVOTAL DATA SOLUTIONS

Pivotal Data Solutions is an IT solution provider offering a wide range of technologies and services for every aspect of your environment. The Pivotal team delivers custom solutions with exceptional value for your unique goals and challenges and does everything possible to make your job easier. IT is a rapidly changing landscape, so it helps to have some of the best experts in the industry to advise, plan, and implement the latest technology to increase productivity, reduce risk, cut costs, and make IT easier to keep business moving forward. www.pivotaldatasolutions.com





support team quickly helped us through the usual startup glitches, and it works just as we had hoped. Scheduling backups has become a snap, and everything just works. We don't need to watch over it or restart jobs anymore."

The restore problems have also been resolved. "We can restore any single file from within a VM easily and quickly, and it is designed to let many of our end users, including our web development team, restore single files themselves without needing any help from IT. They get files in minutes instead of hours, and our IT team can spend their time working on other issues—it really is a win-win."

PRODUCTS THAT PERFORM AS PROMISED—WITH PREMIER SUPPORT

The Quantum deduplication solution was another major advance for the University. "After seeing poor results from other competitors, it was wonderful to see that the Quantum dedupe solution really delivers what it promised. We wrote over 23 TB of backup data to our DXi, it gobbled up the data quickly and easily, and stored it in just under 4 TB—it's like finding free space in the data center! Quantum also worked with us through the whole process, including helping us with strategies to maximize value within our budget." The DXi system is also designed

to grow economically and non-disruptively as data increases, and to provide a replication option for creating multiple copies of datasets at different sites.

Technical support has also been a highlight, a welcome change from the team's experience with other vendors. "We know we are not the largest institution in the university system and don't have the largest budget, but you'd never know that from the response we got. Everybody involved—Pivotal Data Solutions, Quantum, Catalogic—responded quickly when issues came up and went the extra mile to make sure everything worked. We can't recommend this solution highly enough."

Quantum®

Quantum technology and services help customers capture, create, and share digital content—and preserve and protect it for decades at the lowest cost. Quantum's platforms provide the fastest performance for high-resolution video, images, and industrial IoT, with solutions built for every stage of the data lifecycle, from high-performance ingest to real-time collaboration and analysis and low-cost archiving. Every day the world's leading entertainment companies, sports franchises, research scientists, government agencies, enterprises, and cloud providers are making the world happier, safer, and smarter on Quantum. See how at www.quantum.com.

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