

CASE STUDY: NETWORK REFRESH AND BACKUP SOLUTION ENHANCE COMPUTING FOR UNIVERSITY



Higher
Education

THE SITUATION

The academic computing services department at this large mid-Atlantic University provides computing and technology support to the faculty, staff and students in the College of Behavioral and Social Sciences. Included in this group are all the researchers in the Geographical Sciences department, which equates

to a lot of data on the University's network. The computing services department provides software, hardware, computing, and help desk support, classroom technology support and computer lab support. In addition to the day-to-day break-fix issues, this office is responsible for maintaining the servers, storage and backups.

Maintaining a highly available, efficient, and secure infrastructure is critical for this fast-paced University. Students and faculty are reliant on technology to maximize the learning experience.

THE CHALLENGE

The technology infrastructure at the school was aging and causing slow processing and system downtime. The system could not keep up with the growing number of users and data. More importantly, the school's data backup system was extremely inefficient – a normal backup of 8.31 TB of data was taking at least 75 hours to complete, sometimes longer. This equates to a backup rate of 40,366 KB per second. Not only did this put data at risk, but it meant IT staff were unavailable for other projects during this time. For

CLIENT

A large University in
Mid-Atlantic region

INDUSTRY

Higher Education

CHALLENGES

- Aging equipment
- Slow processing speeds
- Inefficient storage and backup process

SOLUTION

- Equipment refresh - IBM Storwize V5000, IBM Storwize V7000, and Lenovo Flex server
- IBM Spectrum Protect backup solution

RESULTS

- Faster processing times, high availability
- Enhanced backup/recovery program
- Lower IT costs
- Reduced networking speed from 10GB per second to 1GB per second
- Backups reduced from 75 hours to seven hours



A huge benefit that CAS Severn offers is that we build long-term

relationships with our clients. This allows us to develop a deep understanding of the client's business objectives so we can best support them from an IT perspective. We were well versed in the University's IT model and objective, which helped us to identify the best solution at the best cost.



– Kim Zimmerman, account executive for CAS Severn



CAS Severn

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a large, prominent higher education institution this was a major problem.

University technology leaders called on long-term technology partner CAS Severn to evaluate the situation and recommend a solution. After initial discussions, CAS Severn began its discovery process with a "Butterfly Study." This study analyzes existing data storage environments and identifies risk and performance utilization issues. It is a fast, non-intrusive discovery of an organization's hardware and software architecture based on empirical information.

THE SOLUTION

After analyzing the results of the study, CAS Severn recommended a large scale technology refresh and a new storage backup solution to address the department's pain points and to better serve students and faculty.

Technology Refresh. CAS Severn identified that the University's computing issues were due to an aging network. New technology was brought in that could handle the data, storage and processing needs of users. The equipment refresh included IBM Storwize V5000, IBM Storwize V7000 and Lenovo Flex System.

IBM Storwize V5000, built with IBM Spectrum Virtualize software, includes a highly flexible, easy-to-use, hybrid storage solution for improved performance. Storwize V5000 allowed the University to consolidate its existing infrastructure and to add new functionality.

The IBM Storwize V7000 model has a powerful hardware platform that can support the University's massive amounts of data created by the cloud, analytics and applications. The IBM Storwize V7000 also features Real-time Compression. The Real-time Compression can reduce the cost of storage by up to 80 percent while maintaining application performance.

Lenovo Flex System is just that... flexible. It is a multi-system solution that integrates Lenovo System x, IBM

Power System, Enterprise Storage, networking and management appliance in one single chassis. It is capable of scaling up and down to meet increasing demand of computing capacity. Its integration, optimization, security, cost-efficiency and flexibility made it a perfect choice for the University's cyclical computing patterns.

New Backup Solution. Based on CAS Severn's expertise in storage and data backup solutions, IBM® Spectrum Protect™, formerly Tivoli® Storage Manager, was recommended to the University. Spectrum Protect is a data protection platform that gives enterprises a single point of control and administration for backup and recovery. It enables reliable, cost effective backups and fast recovery for virtual, physical and cloud environments of all sizes. Spectrum Protect can scale up as workloads grow, which the University was anticipating.

THE RESULTS

The academic computing services department at the University is now operating with up-to-date technology and experiencing high processing speeds and almost no downtime. As a result of the new network, servers and storage solutions, the IT department has less maintenance and can focus on more strategic projects. The department is experiencing 10 GB per second networking speed compared to the one GB per second on the previous network. Overall, the University is experiencing faster and more reliable processing, less downtime, and higher utilization rates.

The IT team in the department is now managing all backups from a central console. Required backups are taking just over seven hours instead of 75 hours. The backup rate is now 249,250 KB per second. Faster backups and more automation provides a more secure backup and recovery process. Because it is more efficient and reliable, the Spectrum Protect solution has resulted in significant cost savings for the University in terms of computing and labor costs.