

Barnsley College Modernizes Virtual IT on Tegile Storage



Barnsley College provides an excellent standard of further education to meet personal and professional development needs, conducting several full-time and part-time courses in addition to apprenticeships programmes for students to gain practical experience to master skills within the workplace. The college employs just over 800 teachers and reported 9550 students enrolled in either full or part-time courses in 2014.



Challenges

- Exploding capacity requirements and performance strain on existing IBM storage hardware
- Required a more robust data protection strategy
- Desired a storage solution that could reduce licensing fees for document management software

Solutions

- Tegile Intelligent Flash Arrays

Results

- Decreased log-on times from 3.5 minutes to 30 seconds for network users
- Provided unparalleled de-duplication and compression performance which reduced the size of the document partition by 70 percent
- Reduced system restore time frame and provided instantaneous file backups

Like many educational institutions though, Barnsley College has been under increasing pressure to update its IT infrastructure as its legacy systems installed in the last decade are beginning to show signs of struggling with the requirements of modern day computing. As computers take even more active roles inside and outside of the classroom, many schools are realising the need to adopt modern solutions like virtual environments and cloud computing to reduce maintenance and hardware replacement costs. Upon an evaluation of its existing infrastructure, Barnsley College discovered a need to purchase a new storage solution to future proof campus networking and increase the performance of the virtual desktop environment by optimising access to user profiles and stored files and documentation.

Compiling the brief

With the demand from students and staff on campus increasing and performance from existing IBM infrastructure failing to support the network, Barnsley College was struggling to provide an efficient service. In the education environment, large numbers of users require constant access to the virtualised desktop as well as their personal profiles and documents. In order to support such a vast user community, storage infrastructure needs to be able to cope with heavy network traffic from multiple access points. With a large quantity of documents and office files stored on the original drives, the college was also looking for an effective de-duplication and compression which would speed up read/write processes and maximise storage potential.

Barnsley College investigated solutions which could offer superior performance in comparison to the existing IBM hardware, while also future-proofing the college's storage infrastructure, adding cost-value and flexibility to the proposition.

"In the education sector the majority of our stored information is either user profiles or documents and office files. As students and staff require 24 hour access to their personal files and information as well as sufficient space to store additional documentation, we wanted to acquire a new storage solution that would offer both high capacity storage capabilities as well as streamlined operations for all users. Being a public institution with government funding, we explored the market for the best value solution which would provide the required performance at an affordable price," said Mark Kendrick, Head of IT Services, Barnsley College.

Increasing Performance

To resolve its storage difficulties, Barnsley College implemented Tegile's Intelligent Flash Arrays. The most important aspect for the college was the HA2100's the hybrid array's compression and de-duplication capability, which promised to significantly decrease the size of the files currently stored in the campus servers. Tegile's Hybrid Storage arrays not only reported a significantly superior performance over other systems that were evaluated, it also included all of the software as part of the solution, eliminating the need for software licences.

"We went to market to look for a more advanced storage solution, as we were no longer confident our existing solution could support the storage needs of the college. We were not only looking to increase our storage capacity, we also required high performance hardware which could cope with the increasing demands of the student body and staff on campus. In addition to everyday operations, we wanted to increase the robustness of our recovery system, as our previous backup window was around three days."

Backups are an essential feature of any modern business and slow data recovery can mean extensive data availability issues and slow performance. Barnsley College were therefore particularly attracted to the Tegile solution, as it offers instantaneous file backups and a 24 hour window for full network restore functionality.

A smooth transition

Following the confirmation of the order, the unit arrived within a week and was installed within 24 hours of delivery. Once the new units were online all the existing data was seamlessly transferred from the old servers to the Tegile solution, without any

noticeable disruption to the service. The benefits were immediate, with huge performance increases due to the compression and de-duplication capability of the Tegile array.

"Through the installation of the Tegile solution, we managed to reduce our document storage on disk from around 50 gigabytes to 15 gigabytes. Prior to implementation we received endless complaints about the speed of the network, as it could take up to three and a half minutes to load a single student profile. As soon as the array went online, the de-duplication software brought our VMware infrastructure up to 92 percent utilisation and log on times were reduced to 30 seconds. The complaints regarding performance issues all but ceased within a month of implementation," said Kendrick.

"We originally approached Net App our existing supplier with a budget of approximately £70,000 and we were quoted a single solution, exclusive of the licencing for supporting software. Tegile's attractive all-inclusive pricing model meant that we were able to purchase two Tegile solutions all within the initial budget. Not only that, the customer support service was 100 percent responsive from the moment we contacted them, throughout the purchase and installation process and we continue to have a strong relationship with the company today."

Examining the long term benefits, the Tegile solution will provide Barnsley College with considerably more flexibility in terms of network interfaces and protocols, performance and capacity as well as significant cost savings on future storage arrays.

"At our current rate of growth, the college would have needed a new storage bank every year at around £35,000 per unit. We

only purchased a 20TB system, but with the new Tegile array and its phenomenal compression and de-duplication, we won't need to purchase additional storage for at least the next five to six years, saving us up to £40,000 a year in total cost of ownership."

The new Tegile system represents numerous advantages for Barnsley College. The virtualisation and enhanced resource potential of the array will allow for the creation of sandboxed virtual environments to provide networking apprenticeships in the operation and management of large data networks. The network ports have also been expanded to increase flexibility and enable fibre connections once the required infrastructure has been installed. Most importantly, the exceptional performance of the Tegile array will reduce the need to buy more storage space in future, saving the college tens of thousands of pounds in near future investment, while providing streamlined day to day operations and reliable data recovery function.

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