Hewlett Packard Enterprise

Case Study

North Lindsey College

North Lindsey College takes the hyper-converged route

HPE Hyper Converged systems ensure security of critical data

Objective
Replace legacy storage boxes with a more powerful, easy-to-manage solution

Approach
Researched the market, issued framework proposals and made decision based on value for money, speed and capacity

IT Matters
- Back-up times reduced from seven hours to two
- Storage capacity increased by 100 percent
- System availability increased from 98.5 percent to 99.9 percent

Business Matters
- Critical educational and business data is now securely stored and available for both students and staff
- Ease of management releases IT staff from routine maintenance to support the college with more creative work
- System scalability supports future development of the college

The UK's North Lindsey College needs to store 20TB of critical data but its aged legacy systems were prone to downtime and rapidly running out of space. The college wanted to double its storage capacity with a solution that was easier to manage, faster and founded on new technology. The answer came with two HPE Hyper Converged appliances.

Challenge

Running out of space
With 4,790 students and over 500 staff, North Lindsey College is an associate college of the UK's University of Lincoln. Offering a wide range of vocational and academic further education programs and apprenticeship courses at a range of levels, it is the largest provider of post-16 education and training in North Lincolnshire.

The college processes large amounts of data including teaching and learning programs, student records, personal information and routine business materials. This amounts to a production storage requirement of approximately 20TB and its security is critical to the daily operation of the college.

"High availability is the key. If the network is down or the storage isn't working, people really notice it. Our HPE Hyper Converged systems take care of themselves so they are always up and the data is always accessible."

– Andrew Parker, IT infrastructure and desktop support manager, North Lindsey College

North Lindsey has an IT team of 13 and runs two data centers on its main campus – a principal production site and a separate back-up site replicating data in active/active mode across 10Gig fiber links. Having used VMware vSphere to virtualize some 50 production servers, the college had two legacy storage boxes configured in a stretch cluster but they were coming to their end-of-life and were out of support. The equipment was becoming more difficult and expensive to manage and hardware failures had put it out of action for up to two days at a time. More critically, the college was running out of storage space so a new solution was urgently required.

"We needed to double the capacity and we wanted a solution that was easier to manage, faster and based on newer technology," says Andrew Parker, North Lindsey's IT infrastructure and desktop support manager. "Investigating the types of solutions that were out there, we spoke to most of the suppliers directly, giving them our requirements and timescales and this generated six different possibilities. It then came down to the price. We put it out on the educational procurement framework which produced solutions which we compared on price and value for money; speed and capacity."

Many of the potential candidates were hyper-converged infrastructures, delivering a software-centric architecture that tightly integrates compute, storage, and virtualization resources and other technologies from scratch in commodity hardware boxes supported by a single vendor.

With its need for ease of management combined with powerful performance, North Lindsey College opted for this type of system. It chose the HPE solution over competing products because it was more competitively priced and focused on innovative technology. The college also had a good existing relationship with HPE and had confidence in its reputation.

Solution

HPE Hyper Converged systems
Already a user of HPE networking equipment, the college decided to investigate its storage solution. Hewlett Packard Enterprise provided case studies and demonstrations and also visited the college with its 3PAR Ninja tool, which was used to generate an assessment of its true storage requirements.

100%
increase in storage capacity

Following this, the college purchased two HPE Hyper Converged appliances backed by a three-year HPE Proactive Care contract for next business day support in the event of problems.

One appliance is located in each of the data centers and each appliance features four HPE Hyper Converged systems with StoreVirtual technology powered by Intel® Xeon® E5-2680 v2 Processors with integrated storage and networking. The college also purchased an additional HPE StoreVirtual storage to expand the storage externally, resulting in a total storage capacity of 40TB.

"The reason we chose these solutions was a mix of price point and the ability to set them up as a mirrored network. It was exactly what we needed to replace what we had before," says Parker.

HPE Hyper Converged appliances eliminate the need to have separate storage devices on one side, servers on the other and a complex Storage Area Network (SAN) between. Designed to be simple, easy to deploy and manage, they feature HPE StoreVirtual which is a scale-out, software-defined Virtual Storage Appliance (VSA) platform that provides data mobility across tiers and locations and between physical and virtual storage.

These pre-configured systems speed up the deployment of a virtualized environment and are made to support high availability with transparent failover in the event of failure and inherent disaster recovery capabilities.

Benefit

Increased capacity and availability
"Having a total of eight servers is a significant increase over what we had before and configuring them as a stretched cluster gives us a resilience that we did not have before. These systems have also doubled our storage capacity," says Keith Urry, North Lindsey's senior network officer. "We already had a VMware system in place so the user interface is more or less exactly what we were used to but it is on more up-to-date hardware with greater capacity. It has replaced the previous systems very well and was a very easy transition for us."

High availability is a key advantage. Previously, hardware failures had reduced availability levels to 98.5 percent but with the new HPE systems, they have risen to over 99.9 percent.

Case study
North Lindsey College

Industry
Higher Education

Customer at a glance

Hardware
- HPE ConvergedSystem 242-HC StoreVirtual servers
- HPE StoreVirtual system

Software
- VMware vSphere

HPE services
- HPE Proactive Care

> "Hewlett Packard Enterprise has been hands-on and proactive and working with them has been a good experience."
>
> – Andrew Parker, IT infrastructure and desktop support manager, North Lindsey College

"One of the advantages is the peace of mind that you get from having a fully redundant solution," adds Urry. "If anything goes wrong on one of the pieces of equipment, there is another that can take over its functions and you know that users will be able to continue working. We have data security, and we certainly did not have that before. We had hardware failures in our previous storage solution and we knew that if anything went wrong there was always going to be quite a bit of downtime with phones ringing and people complaining. A hardware failure on one of the boxes put it out of action until they had recovered all the backups on the other box. Now we don't have any unplanned downtime at all."

Data backup and restore times have also been significantly improved. The college does a full backup every night and previously this was a hit and miss process that would take the whole night. Now, the IT team consistently hit their back-up window target of two hours.

Ease of management of the HPE solutions has also released the team from routine maintenance and fire-fighting so they can give better support to the college by undertaking more creative work.

"The implementation was quite uneventful and that was a good thing because it meant that we did not have any disasters. The new appliances went into place very easily," comments Parker. "Many other solutions would have required a lot of tweaking to get us back up and running but the HPE appliances interfaced nicely and since then they have just taken care of themselves."

With its additional HPE StoreVirtual system, the college has already laid the foundations for scalability which ensures that critical data will continue to be secure and available for students and staff well into the future.

Learn more at
hpe.com/info/hyperconverged

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