University of Hull Moves from NetApp to Tintri VM-aware Storage for Faster Performance

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Industry
- Higher Education

Geography
- Yorkshire, England

Virtualization environment
- VMware vSphere (350 VMs)
- Traditional storage: NetApp

VM profile
- Microsoft Exchange, SQL, MySQL, and Ingres databases

Key challenges
- Running out of storage capacity
- Existing NetApp systems were inflexible, costly, and exhibiting poor performance
- Support and management of the existing systems were becoming difficult

Tintri solution
- Tintri VMstore™ 800-series servers

Primary use case
- Tintri is being used for all campus applications and new student services environment

Business benefits
- Improved system performance
- Reduced datacenter footprint
- Achieved easy scalability
- Simplified support and management
- Enabled the launch of new applications and services

University of Hull

The University of Hull is located in Kingston upon Hull, a city in the East Riding of Yorkshire, England. Founded in 1927, the University has maintained a strong tradition of providing high quality education to an international base of students and a well-established reputation as a research-engaged institution.

Craig Stephenson is the data storage manager for the University of Hull. He works closely with Tom Aitken and Mike McLoughlin to maintain the university's VMware environment. Together, the three are responsible for supporting the IT needs of over 20,000 staff and students located on two main campuses in Hull and Scarborough – as well as a number of smaller locations across the region.

IT Challenges

"Although we monitor our storage environment very closely and utilize techniques such as data-deduplication and thin provisioning to help meet increasing demand, our existing capacity was close to being exhausted," noted Stephenson. "With the predicted growth of our e-mail environment and the rapid increase of data generated by our extensive research and multimedia recordings, we were close to filling our remaining capacity within just a few months."

Replacing NetApp

The University of Hull had been using a variety of NetApp storage systems since 2005. "Although the NetApp systems met most of our requirements during the first few years, they were becoming very expensive and the flexibility wasn't quite there," noted Stephenson. "We also had to mirror everything, doubling of the costs of our infrastructure. As you can imagine, our CapEx costs were becoming quite high for our organization."

The NetApp systems were also starting to exhibit performance issues, according to Stephenson. "Performance was degrading, but investigations into the cause of the issues proved inconclusive due to lack of visibility into the storage environment," he noted. "We were also getting ready to launch a number of new services, including a business intelligence solution and a student information system. Had we deployed them on the existing platform, it would have led to a further degradation in system performance."

" Tintri has met and surpassed all of our expectations for performance, manageability, and resiliency. As a result, Tintri will be our default storage platform for our virtual systems going forward."

Craig Stephenson, Data Storage Manager, University of Hull

The University's IT team began the search for new storage infrastructure that would be able to meet projected growth requirements for a minimum of three years. "We decided it was time to look for a more innovative storage platform," Stephenson said. "We wanted a solution that would enable us to accelerate development, reduce costs, enhance resiliency, and be easier to use and manage. As the person responsible for storage, I was getting spread too thinly managing the NetApp solution."

Looking for an IT Services Partner

The University of Hull decided to enlist the help of an IT service partner – one that could assist with the design, supply, installation, support, and development of its new data storage, backup, and archiving systems. The partner had to have substantial understanding of a variety of storage infrastructures so they could assist with decision-making and introducing new technologies that might further reduce costs and enhance resilience.

After a thorough review of potential partners, the University of Hull chose Solid State Solutions Limited, part of Capita plc (S3). "S3's aim is to become the UK's leading Big Data and virtualization infrastructure specialist," noted Mark Smith, managing director at S3. "The difference between S3 and our competitors lies in our ability to offer a truly consultative and storage-centric approach to address the specific needs of our customers. Through a journey of understanding, we were able to identify key operational requirements and implement 'best of breed' storage solution for the University from a trusted portfolio of established vendors. We felt that the Tintri systems were by far the best choice for their needs."

Easy Deployment and Management

The University of Hull deployed four Tintri 800 series systems in two campus data centers separated for geo-resilience, with redundancy within each location. "The Tintri deployment was fast and management looks as if it will be much easier from now on," noted Stephenson. "That was part of the reason we purchased Tintri—we wanted to move the responsibility for storage over to our VMware team since they have more resources. That team was able to roll out the new Tintri systems without my full involvement, giving an indication of how easy it was to install and bring up – it was even simpler than Tintri promised."

The University plans to run 200-300 different services on the Tintri systems, including its HR application, filing systems, research databases, and application development platform—all using the most recent version of VMware vSphere. "The Tintri systems are also freeing up a lot of datacenter space," noted Stephenson. "We are getting ready to deploy a high performance compute solution within the data center so space is at a premium."

Implementing Disaster Recovery

The University is now aiming to take advantage of Tintri's tiering capability to improve both application performance as well as its disaster recovery plan. "With Tintri, we have an opportunity to provide different service tiers, each with different backup and recovery policies that will improve our disaster recovery and business continuity capabilities substantially."

Conclusion

Performance figures from initial trials of the Tintri solution gave the University confidence to move forward with the launch of its new student information system. "We bought an additional Tintri system so we could create an isolated environment for our student services application—one that is completely separate from our main VMware environment for security and to ensure performance," Stephenson concluded. "To date, Tintri has met or surpassed all of our expectations for performance, manageability, and resiliency. As a result, Tintri will be our default storage platform for our virtual systems going forward."

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