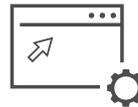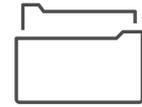Data security is strengthened with VMware NSX Data Center

VMware vSAN transforms disaster recovery approach by removing repetitive tasks

IT management is simplified with greater automation and clear visibility of operations

Costs and complexity of data storage are reduced, with flexible pool of data capacity

Lancaster University Drives Global Growth with a Platform Built for Digital Innovation

To thrive in an increasingly competitive, global marketplace, and given its international coverage and ambitions, Lancaster University needs to be digitally innovative to support research data, curriculum, and student engagement. It looked to VMware for its hyperconverged infrastructure, networking and micro-segmentation, and cloud needs.

Creating a responsive IT environment

It is not enough for Lancaster University to be well regarded in the UK, it wants to become a university that is globally significant. Its goal is to be a leader in higher education, providing the highest quality research and teaching, and engaging internationally on the issues of the day.

It is making progress. In recent years the university has formed partnerships with universities in Ghana, China, Malaysia and Germany.

"Our aim is to be one of the best universities in the world," says Dr Matt Storey, head of storage and virtualization, Lancaster University. "As part of that, we need to create a physical infrastructure and an IT infrastructure that best supports students, staff and researchers."

The university's digital vision is named Digital Lancaster. It sets out the ambition to be digitally innovative in support of the university's global strategy. Its goals align with the university's priorities of research, teaching and engagement. In practical terms this means online classes, chat and collaboration between students and faculty. It also involves the provision of self-service compute clusters to researchers.

Lancaster University

Lancaster University is among the best in the UK. Top 10 in three major national league tables, it is also highly ranked in international league tables such as the QS World Rankings. Its vision is to be a sustainable and academically excellent institution recognized as one of the leading universities in the world.

INDUSTRY
Education

LOCATION
Lancaster, UK

VMWARE FOOTPRINT
VMware vSAN
VMware NSX Data Center
VMware vRealize Suite

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"We would love to say we only work during term dates, but we're a year-round, 24/7 operation," says Storey. "We have students all around the world, and research never stops. Our systems need to be always-on."

Lancaster University needs enterprise IT performance, but with non-enterprise budgets. It requires a responsive IT infrastructure that is able to adapt to changes, the ability to store and access a growing amount of data, and it needs this environment to be secure.

"We wanted something that was flexible enough to allow us to move to the cloud, if and when that was right for us," says Storey. "Any investment in IT has to be in line with our long-term commitment."

Managing a hyperconverged infrastructure

Lancaster University is a long time VMware customer. Storey says the engagement with VMware has been an extremely productive one. Successive projects have delivered the required efficiency, with minimal downtime.

"We're an early adopter of virtualization technology. We're always prepared to look at new technologies," he says. "The current objective is a hyperconverged infrastructure. We have all the components of VMware Cloud™."

The VMware solution consists of three important elements: efficient data storage, security governance and simplified management.

VMware vSAN™ is an enterprise-class, storage virtualization software that, when combined with VMware vSphere®, allows the university to manage compute and storage with a single platform. It seamlessly joins all storage devices across a vSphere cluster into a shared data pool, allowing Storey's team to easily scale up or down as needs change.

The micro-segmentation capabilities in VMware NSX® Data Center enable the university to lock down critical apps, create a logical DMZ in software, and reduce the attack surface of a virtual desktop environment. It means zero-trust security is now attainable and efficient in private and public cloud environments. Storey says this is vital in creating the isolated environments needed by different research teams.

Finally, VMware vRealize® Suite is a hybrid cloud management platform that helps Lancaster University's developers to quickly build applications in any cloud with secure and consistent operations. It has a common approach to hybrid and multi-cloud, supporting major public clouds such as Amazon Web Services, Microsoft Azure, and Google Cloud Platform.

"VMware has been very open. We've been very fortunate to have worked with some great people," says Storey. "We have faith in the VMware products, and in our ability to work together to sort any issues."

Strengthening data storage and security governance

The engagement with VMware enables the university to accelerate its Digital Lancaster initiative, reducing the strain on the IT team and freeing budget resources. As the university expands overseas, it strengthens data security and IT control.

Storey says it has reduced operational costs, strengthened security, and created an environment that is less complex.

"Lancaster University is now a digitally innovative university. The ability for us to be digitally innovative is built on VMware solutions."

DR MATT STOREY
HEAD OF STORAGE AND VIRTUALIZATION
LANCASTER UNIVERSITY

"We've moved our entire corporate estate across to VMware vSAN. It's produced some fantastic gains in terms of scalability and dynamism. We can move resources around really easily. We don't have to worry about storage anymore."

For example, rather than replicating data between data centers with the traditional SAN environment, vSAN transforms Lancaster University's disaster recovery approach. "We realized quickly that we could simply move workloads seamlessly in the event of an error. These features are all in the box. We're a small team. VMware vSAN removes a huge amount of mundane repetitive tasks." Storey says the university has embraced the virtualization of networking: "VMware NSX Data Center is fundamental to everything we do now. We can spin up whole new environments that are restricted in a more secure manner, then cookie-cutter them to deliver them again and again."

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The result is a more dynamic research environment. Lancaster University is better able to work with third parties on research projects, anywhere in the world, while keeping workloads separate. "VMware NSX Data Center keeps our network stacks pristine," says Storey. "We use it every day. It has to work, and it does."

VMware vRealize Suite, he continues, delivers a broad portfolio of features: "We make particular use of monitoring, and interpreting logs. It's helped us understand what's normal, and what's not. We can be a lot more proactive in how we manage workloads. Ultimately it's all about being faster and more efficient in our service delivery."

Delivering a digital vision

Storey says Lancaster University now has an IT environment that can adapt to the needs of a global research community and supports students and faculty: "We can open up our digital resources."

This will include broadening access to virtual desktops and applications, managed globally from the university on VMware Horizon® 7 and available on-premise, in the cloud of a hybrid environment. In this way it can better provision the resources researchers need.

Long term, Storey continues, conversations are taking place to formalize the use of VMware Cloud Suite. "The solution fits the university's roadmap. We're looking at Kubernetes to help with the speed of application builds, and we're discussing VMware Tanzu.

"Lancaster University is now a digitally innovative university. The ability for us to be digitally innovative is built on VMware solutions."

A hyperconverged **#VMware** infrastructure allows Lancaster University to remain agile, efficient and secure