VMware Cloud Foundation enables secure anywhere patient record access on any device

Monitoring capabilities save half a day in IT resources each week

vSAN

Stretch cluster means the trust has two mutually redundant and highly available data centers

Enterprise-level security protects the trust's entire IT environment against cyberattacks

Gloucestershire Hospitals NHS Foundation Trust Migrates to the Cloud with VMware Cloud Foundation

Gloucestershire Hospitals NHS Foundation Trust needed to modernize its data center platform as the first step toward building an electronic patient record system. VMware Cloud Foundation™ offered a reliable and secure hybrid cloud platform for supporting this project and the organization's wider digital transformation. Partner LIMA Networks helped Gloucestershire NHS implement a solution that includes VMware vSAN™ for storage, VMware NSX® Data Center networking, and VMware vRealize® Suite for management and automation. The trust is now able to use IT resources more efficiently and is prepared to migrate its systems to the public cloud.

Transforming hospital services for future generations

Gloucestershire NHS provides high-quality healthcare for the entire population of Gloucestershire. The NHS trust has approximately 8,000 staff and provides a wide range of specialized hospital services from two main sites at Gloucestershire Royal and Cheltenham General Hospital, as well as maternity services at Stroud Maternity Hospital. The trust's five-year strategic plan, called Our Journey to Outstanding, lays out a program to provide care for the next generation of patients through a significant digital transformation.

NHS
Gloucestershire Health and Care
NHS Foundation Trust

Gloucestershire Hospitals NHS Foundation Trust provides high-quality healthcare for the entire population of Gloucestershire. Around 8,000 staff provide a wide range of specialist hospital services, primarily from two main sites at Gloucestershire Royal and Cheltenham General Hospital.

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HEADQUARTERS
Gloucestershire, UK

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VMware Cloud Foundation™
VMware vSAN™
VMware NSX® Data Center
VMware vRealize® Suite

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GLOUCESTERSHIRE NHS ROLLS OUT ELECTRONIC PATIENT RECORDS WITH VMWARE

Modernizing a tired data center backbone

Central to the plan, the trust wanted to be more dynamic and efficient in the way it deploys IT resources. It also wanted to replace patient records from a manual, paper system to a new electronic system. "Our ambitious five-year strategy is to have one electronic patient record where you can find out everything you need to know about your patient on any device," says Mark Hutchinson, chief digital and information officer at Gloucestershire NHS.

Aisling O'Hora, ward manager at Gloucestershire NHS, explains how electronic patient records are critical for reducing medical risks. "Technology has made my job easier and improved patient care. One of the primary reasons for medical errors is illegible handwriting," she says, "and electronic patient records completely eliminate that."

But the trust's legacy data center platform lacked the kind of modern capabilities essential to the efficient use of IT resources, such as automation and monitoring. It was also unable to match the mobility, scalability, availability and agility benefits delivered by a hybrid cloud environment.

The trust realized that it needed to modernize its data center platform as a first step toward building the electronic patient record system. "We knew we wanted a hyperconverged system with consistent operations that we could build on in a modular fashion," says Tim Mullan, IT transformation program lead at Gloucestershire NHS.

Adopting a reliable and flexible foundation

Gloucestershire NHS turned to solutions partner LIMA Networks for help. The IT specialist recommended VMware Cloud Foundation to drive the digital transformation, with VMware vSAN the ideal storage platform to power VMware Cloud Foundation as a full-stack hyperconverged infrastructure (HCI) solution.

The trust needed a robust and reliable foundation for the critical electronic patient records system that doctors and nurses would rely on every day and a cost-efficient path for its journey to the cloud. "When we sat down with LIMA Networks and looked at the competing technologies available, VMware was the clear answer," says Mullan. "VMware could provide a hybrid cloud

solution with an asynchronous stretch cluster for true high availability across our hospital sites."

Partner LIMA helped Gloucestershire NHS implement VMware Cloud Foundation which combines vSAN storage technology, NSX Data Center networking, and vRealize Suite management and automation. "Once we helped the trust migrate its existing application stacks to this new platform, it was then in a position to roll out electronic patient records," says Mark Howie, account director at LIMA Networks.

VMware Cloud Foundation provided the backbone for the suite of products Gloucestershire NHS is delivering as part of its digital transformation. The platform currently supports upwards of 50 plus clinical systems along with corporate systems, building management systems and IT infrastructure systems. These are critical systems which simplify the management of IT, enable the introduction of electronic patient records, and improve collaborative working across diverse medical teams. It also provides capacity for 2,000 virtual desktops which allows staff remote access and the opportunity for home working.

Highly available platform key for electronic patient records

Built on full-stack HCI technology, the VMware Cloud Foundation hybrid cloud platform enables consistent, secure infrastructure and operations. Together vSAN, NSX Data Center and vRealize Suite provide a robust and resilient foundation to support the trust's digital transformation and, specifically, its new electronic patient record system. Doctors and nurses can now find anything they need to know about a patient from anywhere and on any device. "VMware Cloud Foundation means care is no longer limited to the location of a paper set of notes," says Hutchinson. "The extent to which that allows people to work more smartly has been transformative."

"VMware Cloud Foundation provided the platform to enable home working during the COVID-19 pandemic. We had over 2,000 staff logging on remotely each day, which was previously unthinkable."

TIM MULLAN
IT TRANSFORMATION PROGRAM LEAD,
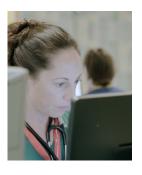GLOUCESTERSHIRE HOSPITALS NHS FOUNDATION
TRUST

NSX Data Center networking ensures enterprise-level security. The trust can, for instance, protect its entire environment against cyberattacks aimed at legacy platforms. "VMware NSX Data Center allows us to soft firewall anything within our data center," says Mullan. "We can put a cage around any specific entity so it

can only communicate with the entities – servers or users – we define."

The importance of security was quickly recognized by LIMA. "The trust looks after a great deal of highly personal patient data, we knew VMware NSX Data Center micro-segmentation was vital in order to isolate applications and secure the trust against any potential threats," explains Howie.

vRealize Suite combines automation and operations capabilities for a hybrid cloud environment. The vRealize Suite dashboard provides deep intelligence on what's happening on the platform, enabling the trust to proactively fix issues before they turn into problems and keep the hospital running 24/7. The trust's engineers have saved half a day each week they

previously spent checking applications and the infrastructure. Mullan describes how the suite also provides an early warning system that automatically identifies and fixes errors before they turn into problems. "VMware vRealize Suite gives us the ability to be proactive and fix things before they impact the end-user," he says.

vSAN provides a stretch cluster with the ability to run two data centers, each of them highly available. It also provides disaster recovery protection, enabling the trust to function in the event one of its data centers were to fail. "It just worked," says Mullan. "Once we had set it up, then VMware vSAN delivered that stretch without lots of manipulation at the back end. And that stretch means we could lose our data center at Gloucester Royal and we would still be able to run the electronic patient record system."

Moreover, when the trust had to quickly facilitate remote working during the COVID-19 pandemic, VMware Cloud Foundation provided a platform from which to give staff remote access so they could carry on working from their homes. "We were in the fortunate position that we had already deployed VMware Cloud Foundation," says Mullan. "At the height of the pandemic, we probably had about 2,000 people logging on each day, which was unthinkable just a few weeks earlier."

Looking ahead

While Gloucestershire NHS is currently running a traditional on-premise data center, the hybrid cloud based on VMware Cloud Foundation allows the trust to migrate in stages. "With VMware Cloud Foundation, we can keep our older systems on-premise, and we can move other systems out into the public cloud as needed," said Mullan.

Moreover, the trust also has plans to enable disaster recovery to just 'swing' systems into the cloud in the event of an incident. "Cloud-ready, for us, is a journey that we've started with VMware Cloud Foundation," concludes Mullan.

@gloshospitals implements #VMware #Cloud Foundation to help its people work