



## THE CHRISTIE SAFEGUARDS LIFE-SAVING CARE FOR CANCER PATIENTS



### The Christie NHS Foundation Trust

#### CUSTOMER

NHS CHRISTIE

#### WEB SITE

WWW.CHRISTIE.NHS.UK

#### INDUSTRY

PUBLIC SECTOR

#### LOCATION

UNITED KINGDOM

#### KEY CHALLENGES

- Reduce time spent by clinicians and staff accessing IT instead of caring for patients.
- Increase security and resilience to future-proof critical services and reduce downtime.
- Relieve pressure on constrained physical space, costs and a small infrastructure team.

#### SOLUTION

A comprehensive virtualized server, desktop and network infrastructure with additional operational management tools encompasses server consolidation, network optimization and security, desktop and mobile end user services, and performance monitoring and management.

#### BUSINESS BENEFITS

- Safeguarded patient care and hospital reputation by freeing up clinician/patient time.
- Delivered digital readiness through a scalable, efficient, highly secure infrastructure.
- Maximized time and cost savings, enabling IT to deliver more with less.

When a cancer patient comes to The Christie, the exceptional care they receive relies in part on the technology infrastructure underpinning critical services. For a decade, The Christie has worked with VMware to help safeguard that care through comprehensive server, network and desktop virtualization. By deploying a highly secure, resilient and efficient virtualized infrastructure, the hospital has embraced healthcare's digital future and transformed a small IT team's ability to do more with less. Clinicians and staff have more time to spend with patients, confident that the services and information they need are always available, well-protected and quick to access, wherever they are working.

The Christie NHS Foundation Trust is a world-renowned specialist cancer hospital in the UK, delivering life-changing and potentially life-saving care and support to 44,000 cancer patients and their families every year. 2,500 staff, 300 volunteers and 30,000 public members work across multiple sites in Greater Manchester and Cheshire to deliver the Trust's goal of a future without cancer. From launching its own 'Manchester method' of radium treatment in 1932, to opening the UK's first NHS high energy proton beam therapy centre later this year, the hospital's world-firsts have continued to give cancer patients across the UK access to leading treatments, outstanding care and the opportunity for the best outcomes.

#### The challenge

For thousands of UK cancer patients, the care, treatment and support provided by staff at The Christie is a lifeline with very real benefits to themselves and their families. However, delivering this care safely, consistently and efficiently 24/7 across a highly complex, multi-site estate presents a challenge for the Trust's IT team. Broader pressures compound the problem, from the NHS-wide "Paperless 2020" digital transformation strategy to the threat of cyber-attack, increasing compliance requirements, and the ever-present pressure to do more with less. Limited physical space for IT hardware and the need to secure extensive third-party network access test the small IT infrastructure team even further.

Most importantly, slow, inflexible IT takes up clinician and staff time that would otherwise be spent caring for patients. Doctors and nurses spending 20 minutes logging in and out of different applications at specific terminals to order treatment, check test results, update patient records or print prescriptions, with some applications and services unavailable across all sites.

“Thanks to VMware NSX, we were recently able to keep patient services fully operational during a high-profile cyber-attack. As the largest single site cancer centre in Europe dealing with more than 40,000 patients each year, we take the security of our infrastructure very seriously. Protecting patient care is our top priority, and VMware solutions are helping us deliver that outcome.”

EILEEN JESSOP  
CIO  
THE CHRISTIE

#### VMWARE FOOTPRINT

- VMware NSX® Data Center
- VMware Horizon®
- VMware Workspace ONE® powered by AirWatch technology
- VMware vRealize Operations™
- VMware vRealize® Log Insight™
- VMware vSphere®

The Christie's IT infrastructure team recognized that their existing physical infrastructure could not meet the Trust's current or future needs for a secure, always-available service that used space, time and money efficiently and prepared the Trust for a digital future.

#### The solution

The Christie's VMware journey began ten years ago with server virtualization and consolidation, using VMware vSphere® to ease issues with power, redundancy and cooling and reduce pressure on physical space. Having laid this foundation, The Christie recently turned its attention to transforming the user experience across device and location with VMware Horizon® supported by secure mobile device management with VMware Workspace ONE™ powered by AirWatch® technology (formerly VMware AirWatch). VMware NSX® Data Center deployment added server network optimization and security across all sites.

Now, 90 percent of The Christie's estate is virtualized. “We host almost every critical service on VMware,” says Stuart Burton, the Trust's ICT Infrastructure Architectuere Manager. “Using NSX hypervisor level introspection technology we can more effectively and efficiently protect our virtualised workloads, adding multi-layer and multi vendor protection to each virtual machine. This with coupled VMware vRealize® Operations™ and VMware vRealize® Log Insight™ allow us to gather useful data to monitor and manage our virtual workload performance. Our 700 seat Horizon implementation enables us to also utilize this technology for endpoints too.”

#### Business results & benefits

By making it safer, easier and faster for clinicians and staff to deliver outstanding patient care wherever and whenever needed, VMware solutions help safeguard the trust cancer patients and their families put in The Christie, and thereby safeguard the hospital's world-renowned reputation.

In a digital world, reputation also relies on a secure, resilient, scalable technology infrastructure. The impact of recent global cyber-attacks on hospitals and other institutions made the importance of network security resoundingly clear. “VMware NSX protects our hospital from cyber threats in a way we couldn't achieve with our old physical infrastructure,” says Eileen Jessop, The Christie's CIO. “Because of NSX, we've been able to continue offering cancer patients and their families the care they need safely and securely across all our sites and our many third-party partners.”

Clinicians and staff echo the CIO's sentiments on the time-saving and patient care benefits of secure, anytime, anywhere access to desktop applications and services.

The IT team also benefit from satisfied users, and the personal satisfaction of playing a part in patient care. Reduced downtime is a good example. With a virtualized infrastructure in place, neither system maintenance nor unforeseen issues affect availability of services critical to patient care and running the hospital. Moving virtual machines (VMs) between datacenters is frictionless and invisible to users. If a reboot is required, high-availability infrastructure means it only takes 30 seconds to reboot, so services are unaffected.

AirWatch provides a similar benefit in the desktop environment, by making it easy for IT to support every endpoint and every user from a single management console. Complex internal or NHS application requirements can now be managed with ease and AirWatch's enterprise security in every layer ensures the network and devices remain secure.

“With VMware solutions we can log into any terminal at any site in seconds and get the information we need to give every patient the exceptional care they rightly expect from a leading cancer care hospital, while improving the digital service to our clinicians.”

EILEEN JESSOP  
CIO  
THE CHRISTIE

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Applying security patches is equally painless, because NSX enables VMs to be patched virtually without a reboot. Similarly, NSX policy-driven rules have simplified compliance with data protection regulations such as GDPR and made it easier to allow partners to access the network without compromising security. “Despite the hospital treating thousands of UK cancer patients each year, we have a relatively small IT team, so the time we save with NSX policy-driven rules is hugely valuable,” says Stuart Burton, ICT Infrastructure Architecture Manager. “Before NSX, we had to prepare security and networking policies for each new VM, but now the rules we define upfront are applied automatically, keeping our network protected and compliant and freeing up our time for other work.”

With a small infrastructure team, every efficiency gain matters. A centralized application stack is easier to manage, a better user experience means reduced support calls, and consolidated servers save hardware space and cost. A single vendor also reduces management overhead and makes it easier to keep infrastructure up to date. The ability to proactively monitor and manage system performance with VMware vRealize Operations® boosts the team’s ability to do more with less even further.

Stuart Burton, ICT Infrastructure Architecture Manager comments, “Here at The Christie, we continue to invest in a platform fit for the future of a pioneering hospital leading the way in cancer care. Cancer affects so many families, I’m proud our technology can make a difference to the care they receive. Understanding the positive impact our work has on patients, is very rewarding.”

### Looking ahead

The Christie plans to expand its NSX footprint to protect its desktop and mobile infrastructure, as the final piece of the security and network automation puzzle. VMware vRealize Network Insight® will also be deployed for network troubleshooting, extending the infrastructure team’s ability to manage its environment as efficiently as possible.

In the end user environment, VMware Workspace One® will move the hospital’s digital workspace further towards a simple, secure integrated experience. The new platform will enable not just full remote desktop access, but secure remote access to specific services such as applications, websites or portals, for both staff and the hospital’s extensive network of third party partners.

