

CASESTUDY
WORCESTERSHIRE
HEALTH IT SERVICES
(WHITS)



Welcome to Our Community Hospitals

**WORCESTERSHIRE
HEALTH IT SERVICES**

(WHITS) is a shared IT center that serves all the organisations within the European national Healthcare Service (NHS) including primary care, mental health and the Acute hospital system.

**HEALTH GROUP ANSWERS THE GROWTH
OF DIGITAL MEDICAL IMAGING WITH
HIGH-DENSITY STORAGE**

With around 14,000 users, one million patients and the digitisation of patient data, the National Health Service in England's Worcestershire faces a constantly growing demand for storage. To meet the challenge, they have implemented a storage virtualisation strategy that leverages fast, easy and reliable storage from Nexsan.

BACKGROUND

Worcestershire Health IT Services (WHITS) is a shared IT center that serves all the organisations within the European National Healthcare Service (NHS) including primary care, mental health and the Acute hospital system.

Centralised IT Services Manager for WHITS, Peter Lowe manages approximately 400TB of storage connected to 250 servers - 60% of them virtualised. "Every user on an NHS computer in Worcestershire will be using our systems and a large proportion of the storage is Nexsan. We have around a million patients and Nexsan gives us the scalability to deal with the growing data," explains Lowe.

Serving healthcare IT needs, WHITS is heavily focused on servers, systems and IT management, which requires a robust and easy-to-manage storage infrastructure. A major task for WHITS is to accommodate the change in the way healthcare stores its data from analogue to digital. This is particularly true when it comes to medical imagery, which means that the organization must continually keep up with the need for added disk capacity. As an example, a broken bone requires several high resolution X-rays from different angles for the doctor to get a full view of the fracture. This translates into many terabytes of new data every year... and that is just for radiology. Other departments including diabetic retinopathy have also switched to using high resolution digital images for diagnostics. These images and data must also be secured and retained. To provide this capacity and resilience, WHITS uses Nexsan to backup Worcestershire's medical records.

BUSINESS CHALLENGE

As well as the continual demand for more storage capacity, Lowe says that WHITS users are always looking for more performance and better reliability. The WHITS data is clustered, with multiple paths through their Nexsan dual controller arrays with mirrored data backup. "What people talk about is 'five nines' and that is true for us. We need availability 99.999% of the time," Lowe adds. "It is very difficult to achieve. But healthcare is a 24X7 need and you can't have any downtime on clinical systems, so the aim is permanent availability."

Lowe notes that the need for cost-effective solutions and the demand for better performance is often a conflicting demand without a simple answer. Many organisations find themselves with a "storage gap" where they either spend a lot of money on an enterprise-class product to meet their performance needs, or settle for a commodity product that meets their budget - but not their other requirements.



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You buy Nexsan for dependable, high density storage with confident support. But prepare yourself to be surprised at the performance. It's much closer to the leading enterprise-class vendors than you might think."

PETER LOWE

CENTRALISED IT SERVICES MANAGER,
WORCESTERSHIRE HEALTH IT SERVICES

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"Whenever comparing new storage platforms, there are three main factors I look at: cost, reliability and performance," Lowe says. "They're in a triangle, all pulling in different directions. You can maximize any two but not the third. While Nexsan is not the cheapest, it is inexpensive and their support and reliability is outstanding. You buy Nexsan for dependable, high density storage with confident support. But prepare yourself to be surprised at the performance. It's much closer to the leading enterprise-class vendors than you might think."

Lowe adds that good technical support from Nexsan is essential, given the 24x7 demands of healthcare. "We have dealt with other suppliers whose support hasn't been as good. And they didn't get our repeat business as a result."

SOLUTION

WHITS was first introduced to Nexsan around nine years ago by reseller Cristie Data, and given a thorough briefing by the two companies on what its storage systems could do. Cristie Data has been a key supplier of Worcester NHS Trust's infrastructure to support primary storage, backup, archive and disaster recovery. Cristie's consultative approach to customer engagements ensures that the right technology is always chosen for the right application, with price, performance and reliability always at the forefront of their recommendations.

At one time, WHITS systems were equipped only with server-based local disk, so the shift to network-based storage was a big one. Over the years, WHITS has deployed Nexsan Beast and Boy SAN storage products and more recently, the Nexsan E18 from the latest Nexsan E-Series.

WHITS architected a virtualisation solution by adding a software layer on top of the storage, converting the physical volumes to blocks which can be pooled and allocated to logical volumes as needed. This provides a layer of abstraction, in effect turning a set of storage systems – even dissimilar ones – into a single giant storage array, complete with performance tiers.

Using FalconStor visualisation software enabled the WHITS IT team to try out, and ultimately discard storage from other suppliers who didn't match up to expectations. Now, WHITS has begun using Nexsan successfully in other roles beyond bulk storage. "With Nexsan introducing SAS to host, which rivals the performance of Fibre Channel, we have begun using the Nexsan E18 for primary storage," Lowe explains.

RESULTS

"Nexsan [products] delivered beyond expectations," Lowe says. "We originally bought Nexsan for archiving and bulk storage, but have been so impressed with the performance that we now use it for production data like our Oracle database. Perhaps that's the best kept secret about Nexsan storage systems – they're not just for archive or bulk storage."

"The storage systems are also easy to use with a very user-friendly GUI that provides good granularity of control. In all, Nexsan wins on performance – especially with its SAS to host arrays – plus its reliability and density." Lowe concludes: "If you don't know anything about Nexsan, take up references – you'll hear some good things."

ABOUT NEXSAN

Nexsan™ is a global leader in unified storage solutions that are focused on seamlessly and securely enabling a connected workforce. Its broad solution portfolio empowers enterprises to securely manage, protect and utilize valuable business data – while allowing users to sync, share and access files from any device, anywhere, anytime. www.nexsan.com.