Case Study

Networking & security

Datacentre

NETWORK UPGRADE BOOSTS SECURITY AND ENABLES NEW WAYS OF WORKING

Award-winning provider of specialist orthopaedic services

1000 staff

Renowned for innovative healthcare delivery

One of the largest specialist units of its kind in Europe, Birmingham's Royal Orthopaedic Hospital NHS Foundation Trust (ROH) is a local, national and international provider of planned orthopaedic surgery. Established for 200 years, it pioneers award-winning surgical techniques and harnesses technical innovation to help deliver the highest standards of care.

The Challenge

Innovative technologies and processes are revolutionising the healthcare sector. Wireless connectivity now plays a crucial role in healthcare delivery, impacting everything from how services are delivered to helping improve the patient experience. Simultaneously, we have the emergence of the Internet of Things where wireless-enabled devices can now communicate directly with IT infrastructure and new ways of working that are heavily reliant on mobile connectivity. In such an environment, a robust wireless and IT infrastructure is an essential facilitator.

ROH is committed to successfully implementing an electronic Prescribing and Medicines Administration (ePMA) strategy. It aims to improve efficiency and patient safety by reducing the likelihood of prescribing errors as well as contributing towards the Government's paperless NHS agenda.

Despite a recent datacentre upgrade, the ROH IT team had major concerns about the suitability of the existing wireless switching technologies to handle future workloads. New working practices and increased demand for wireless access would place intolerable strain on technology nearing the end of its effective life. Improvements in wireless access weren't just desirable, they were essential.

If ROH was to successfully introduce the ePMA strategy, enable wireless-reliant working practices and introduce cost-effective VOIP solutions further down the line - not to mention ensuring the security of patient data in an ever more connected environment - then a total refresh of its core, edge and wireless infrastructure was the only viable solution.

Critical Success Factors

- Increased wireless access
- Robust, secure solution required
- Enhanced connectivity to facilitate innovative healthcare services

The Solution

Ideally, the ROH IT team would have replaced the entire wireless network infrastructure at the same time as it carried out the datacentre refresh. However, financial constraints prevented that from happening at the time. A subsequent security workshop held with Softcat indicated just how critical a wireless refresh would be to not only guarantee the security of connected devices and patient data, but also enable improved working processes moving forward.

The in-house IT team spent 18 months building a robust business case and approaching a variety of providers capable of delivering the improved wireless functionality ROH required. "Although we were in discussions with multiple providers, we got the impression that we weren't really getting close to achieving the value the Trust needed and levels of service we expected from those we had approached," said Mark Bemrose, ROH Head of IT.

Softcat came on board and over a 12-month period carried out a number of onsite consultations, conference calls and discussions with its team of engineers to more clearly understand ROH's specific needs and source suitable technologies. It brokered negotiations with vendors and was able to secure an agreement with Cisco that was both cost-effective and would provide the agile wireless architecture ROH needed to fully leverage its enhanced datacentre capabilities and improve ongoing working processes.

Throughout the process, Softcat went to great lengths to ensure that any proposed solution would be fit for purpose and good value. Once suitable technologies and providers had been identified, Softcat presented its proposals to ROH to enable it to make an informed decision on exactly the best solution for its needs.

"Softcat's involvement really helped our in-house IT team identify the best technologies for our specific requirements," said Mark. "Although our highly-skilled in-house team installed the solution, the Softcat account team and engineers were always on hand to offer support throughout the project, which helped ensure the implementation went as smoothly as we could have hoped for."

Softcat recommended a Cisco hardware and software bundle, comprising of Cisco Catalyst Switches, Wireless technologies, a Nutanix Datacentre solution and software suite capable of enhancing the solution's overall capabilities. It would provide all of the functionality and resilience ROH would require now and in the future, as well as ensuring that best value could be achieved.

Security features included in the bundle, such as the capacity to automatically profile connected medical devices, would both enhance overall security and reduce the management complexity associated with securing sensitive patient data and protecting the network from malicious interventions. The solution would greatly increase the availability of wireless access points across the ROH estate, enabling more users and more devices to connect to the network efficiently and securely. Softcat project managed the implementation throughout, as well as providing Cisco professional services for the five-year lifetime of the contract.

Solution Highlights

- Enhanced wireless access capabilities from Cisco hardware and software bundle
- Total network refresh of core, edge and wireless infrastructure
- Automatic profiling capabilities to reduce manual intervention

The Benefits

ROH now has ubiquitous wireless access that's more secure, easier to manage and capable of enabling more efficient working practices in the future. Sensitive patient data and essential medical equipment that are critical to effective healthcare delivery now benefit from enhanced security features, negating many of the potential vulnerabilities associated with connected devices and minimising the risk of malicious attacks.

The solution enabled ROH to consolidate existing technologies, enhance the resilience of the IT estate as a whole and improve the patient experience through providing free Wi-Fi access without compromising security. Increases in bandwidth now ensure that cost-effective VOIP solutions can be implemented with confidence in the future and critical initiatives like the ePMA strategy can be more confidently rolled out.

Automatic profiling of connected devices is helping to reduce human intervention, drive down management costs and free up IT team members to concentrate on other essential tasks. Connected devices are now only granted access to the network according to strict criteria, which helps ensure that the benefits of connectivity aren't outweighed by the risks associated with a significant increase in wireless access points.

Softcat will be providing comprehensive support throughout the five-year lifecycle of the agreement through its professional services contract. And in a time where NHS organisations are under intense pressure to make cost savings, ROH was able to negotiate a particularly favourable finance agreement with Cisco that helped ensure significant cost-savings for the Trust.

Benefits at a Glance

- Improved resilience, increased uptime and enhanced network security
- High-quality network functionality backed by comprehensive professional support services
- Significant cost savings

Why Softcat?

"We've had a long association with Softcat through a previous Microsoft licensing agreement," said Mark. "Throughout the contract, Softcat has consistently provided great service, proving to be a responsive and flexible delivery partner that really does 'go the extra mile.' In our negotiations with other providers we've often got the impression that it was more about what was good for them, not what was good for us. Softcat's vendor agnostic approach means it takes the time to fully understand our needs and then ensure that any proposed solution is based on the functionality we require rather than favouring any particular provider. In short, we trust Softcat to do what's right for us."