



Objective

Provide better patient care with a reliable core-to-edge network solution designed, implemented, and supported for future innovation

Approach

Leverage expertise to deploy an integrated HPE and Aruba core-to-edge network solution with zero downtime for maximum patient impact

IT Matters

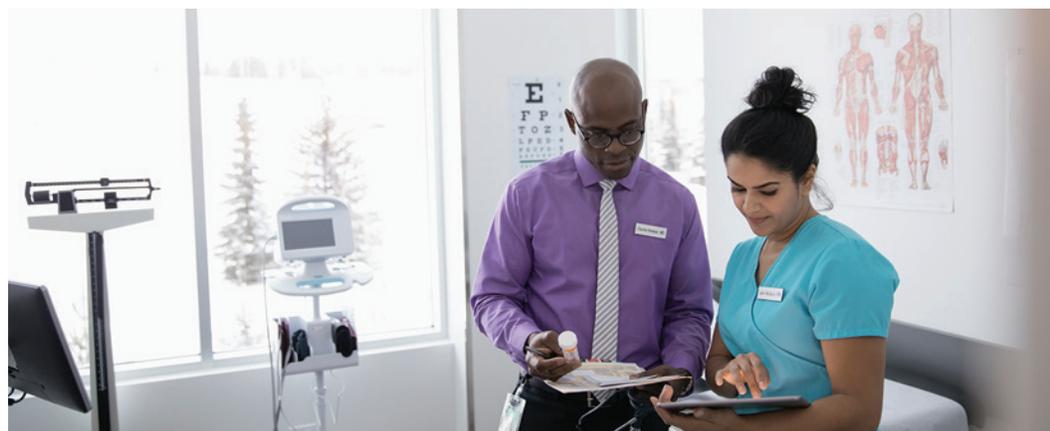
- Reduce downtime and ensure a consistent network experience from the core-to-edge
- Future-proof network design to handle future requirements
- Ensure seamless knowledge transfer to team for ongoing operations

Business Matters

- Maximize availability of electronic records for improved patient outcomes
- Reduce risk and accelerate time-to-value by working with experienced partners
- Minimize disruption to hospital operations and patient care during implementation

Wirral University Teaching Hospital improves patient outcomes with new network

HPE and Stoneleigh Consultancy Ltd support leading digital healthcare system



No time for downtime

“Our legacy network was being challenged as new applications and services were added,” states Phil Scott, Delivery Manager Head of Informatics, Wirral University Teaching Hospital. “We wanted to use our Cerner Millennium® application to support mobile devices at the patient’s bedside, but our network was preventing us from realizing the level of service our patients demanded. It was also impacting our ability to roll out new applications and services.”

Created in 1992, Wirral University Teaching Hospital (WUTH) is an NHS Foundation Trust in North West England. The hospital relies on its network infrastructure to support their Cerner Millennium Electronic Health

Record (EHR) application and share digital medical images via their picture archiving and communication system (PACS). If the network fails—or doesn’t have the capacity to meet demand—patients’ outcomes suffer with hospital staff unable to access required information in a timely manner.

“We’d moved to Aruba for our wireless network, and that was working well,” explains Phil Scott, “but the IT department was struggling to manage an aging, wired network infrastructure with escalating maintenance costs. As requirements exceeded capacity, network outages were becoming a regular occurrence—something which was totally unacceptable for a hospital environment.”

“Some staff were concerned their work would be disrupted during the deployment and contacted me about when it would take place. I was thrilled to let them know it had already been completed without them even realizing it had happened. To me, that’s the kind of value that HPE Pointnext and Stoneleigh brought to the table.”

— Phil Scott, Delivery Manager Head of Informatics, Wirral University Teaching Hospital

More than technology

“We needed a new solution that would be resilient, reliable, easy to manage, and capable of handling future needs at multiple hospital sites,” continues Phil Scott. “We also wanted it to seamlessly interoperate with Aruba, Cerner, and the other apps in the environment, and implemented with minimal disruption to the hospital network.”

WUTH chose Aruba and HPE Pointnext to work alongside Stoneleigh Consultancy Ltd.—a longtime partner and local systems integrator with a focus on IT for healthcare—to build a new core network leveraging the proven innovation, availability, and scalability of HPE networking solutions. Stoneleigh had implemented WUTH’s previous network and not only had a close customer relationship, but strong institutional knowledge of the existing network.

“In choosing a new vendor for the network upgrade, we were looking for more than a technology solution to support our current needs,” states Phil Scott categorically. “After experiencing the frustration of trying to work with multiple vendors with different technologies that didn’t always work well together, we were looking for a partner that could handle issues holistically. We wanted one technology partner to work with Stoneleigh to advise on the network design,

ensure a seamless migration experience, provide ongoing operational support, and transfer knowledge to our staff for onsite support.”

Mapping the course

“We knew HPE Pointnext had the expertise,” adds Phil Scott. “They were able to leverage their experience and best practices from doing countless similar engagements, which helped make the process much easier. In addition, the flexibility and willingness of the HPE Pointnext consultants to partner and collaborate with Stoneleigh gave us the confidence that this would be a supportive and integrated partnership that would help us reach our goals.”

The design for the new solution improved and simplified the network environment with a focus on resilience and availability due to the critical nature of the environment. HPE Pointnext and Stoneleigh experts helped the WUTH team convert the initial solution design into a robust, implementation-ready design that would not only satisfy current requirements, but would also enable continued innovation for patient care. To ensure reliability and minimize downtime, the design included built-in failover with HPE Intelligent Resilient Framework (IRF) technology, enabling the use of the complete network bandwidth.

“Partnering with the team from HPE Pointnext gave us the security of reduced risk, faster resolution of questions and issues with their direct access to HPE engineers, and they were able to provide the customer with both hands-on and informal training throughout the installation,” enthuses Tony Rutter, Director at Stoneleigh Consultancy Ltd.

Building for the future

HPE Pointnext, Aruba and Stoneleigh worked together to provide a complete network infrastructure upgrade at two of the hospitals managed by WUTH. This included implementing HPE FlexFabric 5900AF switches in the core and HPE FlexNetwork 5130 PoE+ switches at the edge, providing a consistent user experience right across the network.

To solve network instability problems, the design included HPE IRF switch stacking, LACP active/active uplinks, power redundancy, and resilient L2 and L3 protocols. The solution also included HPE Intelligent Management Center (IMC) and HPE IMC Network Traffic Analyzer (NTA) Software for single-pane-of-glass network management, simplifying management and reducing complexity. To support high-bandwidth applications and PACS, the design incorporated 20 GbE switch uplinks with 80 GbE core bandwidth.

Other features of the design included support of Wi-Fi deployment using PoE and HPE IMC, support of IP telephony deployment using LLDP, PoE, Voice VLAN, and Quality of Service (QoS). HPE Pointnext focused on creating a complete solution with security in mind, including SSH, TACACS, and HPE IMC TACACS+ Authentication Manager (TAM) Software for administrator authentication and accountability.

No news is good news

“Migrating from one system to another without experiencing downtime that might affect our patients was our primary concern,” states Phil Scott. “With HPE Pointnext’s technical expertise, Stoneleigh’s local knowledge of the site, and the fact that they partnered so well with one another, we were confident it would be a smooth experience and it was.”

“Once the detailed design was complete, the configuration, testing, integration and deployment of the solution was seamless,” continues Phil Scott. “Some staff were concerned their work would be disrupted during the deployment and contacted me about when it would take place. I was thrilled to let them know it had already been completed without them even realizing it had happened. To me, that’s the kind of value that HPE Pointnext and Stoneleigh brought to the table—their expertise on both the technical and the project management side ensured the transition risks were minimized.”

“Wi-Fi is a service like electricity,” Phil Scott adds, “you only really hear about it if it’s not working. Our doctors, nurses, and clinicians rely on it to access patient information on the floor and at patients’ bedsides via some 700 iPads. Before we installed the new network, they frequently faced network outages and black spots throughout the hospital. Now, things are totally different. We’ve stopped hearing about it at all from our staff. Complaints have stopped coming in. That’s a definite sign that things are working seamlessly across both our wired and wireless networks.”

Case study

Wirral University
Teaching Hospital

Industry

Health & Life
Sciences

Customer at a glance

HPE Pointnext services

- HPE Network and Mobility Consulting Services
- HPE Proactive Care
- HPE Foundation Care

HPE Hardware

- HPE FlexFabric 5900AF-48XG-4QSFP+ Switch
- HPE FlexNetwork 5130-48G-PoE+-4SFP+ EI switch
- HPE FlexNetwork 5130-24G-PoE+-4SFP+ EI switch

HPE Software

- HPE Intelligent Resilient Framework (IRF)
- HPE Intelligent Management Center Standard Software Platform
- HPE IMC Network Traffic Analyzer (NTA) Software Module
- HPE IMC TACACS+ Authentication Manager (TAM) Software Module

A partner you can rely on

“We chose Proactive Care from HPE Pointnext for business critical IT support for our core switches,” explains Phil Scott. “It enables us to preemptively prevent issues using tailored, proactive reports along with personalized analysis, recommendations, and advice from the HPE Pointnext team. We’ve really come to value their expert call experience and enhanced case management which helps us to rapidly resolve problems when they do occur. We also use HPE Foundation Care to help maximize availability at the edge, allowing us to reduce complexity and quickly resolve issues right across the network.”

“Our team can handle the day-to-day management of the network,” adds Phil Scott, “HPE Pointnext offers us that buffer when anything more challenging comes along. We know we can rely on them to assist with anything more in-depth. They not only help us identify and prevent problems before they impact performance, they give us access to the right experts to resolve issues quickly. They’ve truly become an extension of our team.”

“The HPE Pointnext team also actively engages in knowledge transfer to empower our internal team on how to manage and get the most out of the solution,” states Phil Scott. “Thanks to them, we now have the right tools in hand and the confidence to manage any onsite situations—with the assurance that support is just a phone call away.”

Paving the path for award-winning patient care

“The success of the installation has not only solved problems for today,” explains Phil Scott, “but it’s enabled us to continue on our path of innovation towards a digital future. This includes giving our staff the best possible infrastructure to help ensure a positive patient experience. It also provides rapid access to critical patient information, including the ability to access and share PACS images and other large files that require high-capacity transfer.”

“We’ve also been recognized as one of 12 NHS trusts recognized ‘as a global digital center of excellence,’” adds Phil Scott proudly. “This gives us the opportunity to help other hospitals around the world to improve patient outcomes by leveraging information technology to enhance patient care and improve business effectiveness. It also gives us the privilege of pioneering new approaches to digital services, fast tracking new technology implementations within NHS and helping patients right across the country.”

Phil Scott concludes: “Our business is to make patients better. Thanks to HPE and Stoneleigh we not only have a network we can rely on for our immediate needs, but also the capacity and capabilities to help keep us innovating to ensure the best possible health care for our patients.”

Learn more at
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