

Redstone Converged Solutions Case Study

County Durham and Darlington 
Acute Hospitals NHS Trust

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The Client

County Durham and Darlington Acute Hospitals NHS Trust was formed in October 2002 to provide acute healthcare for some 550,000 residents of the North East.

It works principally from three main sites – University Hospital of North Durham, Darlington Memorial Hospital and Bishop Auckland General Hospital – and it provides services from four community hospitals as well as co-operating closely with primary care trusts and local authorities in the area.

In 2005, the Trust cared for 50,000 emergency patients and carried out 36,574 planned operations. Its Accident and Emergency department handled almost 130,000 attendances.

Realising the benefits

With a large catchment area including 2,500 staff spread over 22 sites, implementing an efficient networking and communications system was high on the Trust's agenda.

It wanted a partner who could understand the specific challenges of NHS objectives, who could deliver good price/performance ratios and who had a proven track record in this sector. For effective support in its ongoing developments, it also needed a partner that embraced evolving ICT.

In addition to fulfilling maintenance and support contracts for all Cisco LAN, security and WAN equipment, Redstone Converged Solutions has also provided consultancy services to the Trust for a number of major communications projects.

The results

- Lines of communication have improved between distant sites
- Mobility and increased resilience of the networks enables staff to work more efficiently
- Vital security has been ensured
- Patients get a better service
- Maintenance and administration costs have reduced

County Durham and Darlington NHS Trust

“Having an innovative and experienced partner like Redstone Converged Solutions means that the network runs smoothly, and our staff and patients don’t know that any of this exists. Staff can focus on providing healthcare and patients enjoy better standards of care.”

Tony Gray, ICT Manager, County Durham and Darlington Acute Hospitals NHS Trust



The Challenge

Improvement in IT is today’s hot ticket in health. The NHS is currently engaged in one of the world’s biggest IT projects, a huge £6.2bn programme that will not be completed until the end of the decade.

The aim of this National Programme for IT (NPfIT) in the NHS is to replace a complex and outmoded landscape of 5,000 different computer systems with a nationwide infrastructure connecting more than 100,000 doctors, 380,000 nurses and 50,000 other health professionals.

Picture Archiving and Communications Systems (PACS) is one of nine major goals of NPfIT and it is also an area where County Durham and Darlington Acute Hospitals NHS Trust saw the need to take action.

The Trust is working to its own strategic five-year plan with the challenge to ensure that its local hospitals give a first class service and are the first choice for patients. Effective IT is the key to unlocking these goals and the Trust perceived that having efficient communications and networking was vital to the efficient running of its hospitals.

The Solution

In addition to fulfilling a maintenance contract and advising on vital security issues, Redstone Converged Solutions has also worked on a number of large projects with the Trust – three of note being the introduction of Virtual Private Networks (VPN) across the NHS N3 network; a huge network restructuring project involving new IP addresses and Virtual Local Area Networks (VLAN) and an exciting new wireless and mobility pilot.

Covering such a large area, the Trust does not have redundancy across all of its links so Redstone worked with the Trust on the innovative idea of installing ‘tunnelled’ VPN running through the N3 networks between sites. Now, if connectivity is lost across any of the main Wide Area Network (WAN) links, it can fall back on the VPN tunnel with traffic sent through fully encrypted N3 links.

“This is about leveraging the most connectivity we can get out of the N3 connections,” said Tony Gray. “When larger N3 links were installed, we thought it would be good to use them as a back-up for our existing infrastructure.”

Redstone Converged Solutions has also provided consultancy for an ambitious restructuring project which changes the entire way that the Trust’s network is addressed. New national networks brought a new set of IP ranges which everyone had to adopt and this was a logistical nightmare. For the Trust, it meant assigning new IP addresses to some 5,000 network items.

“It’s like changing all the street addresses in County Durham,” said Tony Gray. “It also means that we have had to look again at the way the network is designed and how VLANS are set up so we could standardise across the whole network.”

The latest project involving Redstone Converged Solutions is a wireless pilot which will enable the trust to track both staff and equipment around all of its hospitals. This will also give doctors and consultants instant access to centrally stored, diagnostic quality images and

data, no matter where they are. As would be expected, security is vital and if fully adopted, the system will not only detect devices that are not part of the network, but it will also pinpoint where they are on a map.

It incorporates the latest Cisco Wireless Enterprise Platform for management and deployment of WLAN systems and Radio Frequency Identification (RFID) tracking. Redstone is also assisting the Trust with video conferencing.

The Outcome

Medical staff are benefiting from the improved communications systems. Doctors, consultants and nurses get instant access to all the data and images they need, wherever they are, which improves their efficiency and the reliability of the systems meaning they can get on with their work, free of technical concerns.

Patients benefit from the stability and speed of the new systems and the efficiency of administrative staff is also increased. Having faster and more resilient lines of communication also helps the Trust drive down costs.

“Redstone Converged Solutions is a great company to work with,” concluded Tony Gray. “We get excellent pre-sales advice and their account management is always good. Also, the men on the ground who do all the technical work and installation are extremely good. If a problem starts to get very complex or if equipment needs replacing, Redstone moves in straightaway to put things right and that makes my life a lot easier.

“Having an innovative and experienced partner like Redstone Converged Solutions means that the network runs smoothly, and our staff and patients don’t know that any of this exists. Staff can focus on providing healthcare and patients enjoy better standards of care.

“I would recommend Redstone to anyone because we have had no problems at all with what they have done for us.”

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