



DAMOVO INJECTS NETWORK IMPROVEMENTS INTO ADDENBROOKE'S NHS FOUNDATION TRUST

IT is recognised as one of the main drivers in improving the diagnosis and treatment available to patients through the NHS. Back in 2001 – before the Government introduced its National Programme to standardise IT systems across the NHS – Addenbrooke's NHS Foundation Trust in Cambridge had already identified the importance of technology in improving patient care.

In particular, it realised that if IT was going to improve services for patients, its data network, which serves more than 6,500 staff, had to be reliable, resilient and perform to an extremely high standard. Damovo provided the design assistance, project management skills and proactive maintenance that ensured the implementation ran smoothly and met the Trust's goals.

For people living in the environs of Cambridge, Addenbrooke's NHS Foundation Trust is their local district hospital offering acute and maternity services.

Its location on the same site as such leading academic research centres as Cambridge

University, the Medical Research Council and the Wellcome Trust, also makes it a hub for biomedical research and medical education.

As IT use grew within Addenbrooke's the IT department realised that it needed to improve its network to ensure that IT could meet growing demand. ***“Our main drivers were performance, availability and resilience,”*** recalls Geof Smith, deputy technical manager at Addenbrooke's. ***“We took a decision that our network had to have at least 99.99% availability, which means that we could only allow total network downtime of one minute a week.”***

The LAN architecture, which had originally been built on 3Com technology, was also going through some significant changes. When 3Com took the decision to exit the enterprise LAN market, customers – such as Addenbrooke's – were encouraged to migrate to Extreme Networks' technology. However, Addenbrooke's was unsure of the optimum design for the architecture of its new LAN infrastructure to gain maximum benefit. ***“We were at a transitory period and were debating the best way to go forward,”*** remembers Gary Ward, senior network engineer at Addenbrooke's.

KEY IMPROVEMENTS TO DELIVER A RELIABLE, EFFICIENT AND RESILIENT MANAGED NETWORK

The Damovo solution

Unfortunately, its previous 3Com supplier was not providing the strategic guidance and advice the Trust was looking for, nor was it helping to rectify a problem that had occurred with some of the new Extreme networking equipment already installed.

Coincidentally, a member of Damovo's sales team contacted Addenbrooke's and offered to send an engineer to fix the problem. Once this was resolved, and Damovo had demonstrated its understanding of Extreme equipment as an Extreme Advanced Solutions Partner, Damovo embarked on talks with Addenbrooke's about a much bigger project: the design, implementation, project management and maintenance of its Extreme infrastructure to give increased performance, resilience and availability.

Delivering an improved LAN architecture

The scale of the work involved means that the implementation at Addenbrooke's is ongoing, but Damovo has already instigated some key improvements to deliver a reliable, efficient and resilient managed network.

To meet Addenbrooke's target of four 9s availability, Damovo has rationalised the network by splitting the default Virtual Local Area Network (VLAN) into 50 location-based VLANs that serve a radius of 100m. **"Before Damovo came in, everything was on the same default VLAN and if a machine started to 'shout very loudly', it affected every other machine,"** explains Smith. **"Now if we divide the VLAN into lots of smaller VLANs, there is less trouble if one PC is experiencing problems."** Furthermore, the inclusion of Rapid Spanning Tree Protocol (RSTP) in the design provides loop protection and fast failover between the core and server farm switches.

Damovo's remit is also to provide maintenance services in case some aspect of the network infrastructure fails. Smith recalls one event – when one of the core Extreme Networks Black Diamond

switches stopped working – that could have proved catastrophic because there was no back-up system in place. **"Damovo came out in four hours and new equipment was ferried in within eight hours,"** recalls Smith. **"It would not be as critical if it happened again because the system is now resilient and would re-route all traffic through the remaining Black Diamond. Damovo would probably also know in advance as they monitor the system remotely from the Damovo HQ in Horsham, 24/7,"** he adds.

Smith particularly praises the quality of engineering and support provided by Damovo throughout the project: **"We have recorded our satisfaction on more than one occasion with Damovo about the service we receive from engineering staff."**

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HELPING THE IT TEAM PERFORM BETTER AND FASTER. PROVIDING BENEFITS FOR PATIENTS AND CLINICIANS

Enabling the NHS to do more

While Damovo's services have undoubtedly helped the IT team perform their job better and faster, Smith also points to the benefits for patients and clinicians as a result of improving the IT network. For example, multi-disciplinary team meetings, in which a number of specialists discuss particular sets of patients, rely on clinicians being able to use digital notes, the Picture Archiving Communications System (PACS) and other applications. More crucially, greater stability in the network ensures that systems monitoring the seriously ill do not stop functioning.

There is also the possibility in the future of using video conferencing across the network to show students operations while they are in progress. **"The more reliable the network, the more you can do these things and speed up the transit of the patient through the 'hospital experience',"** says Smith.

Next on Addenbrooke's' agenda is the installation of a wireless LAN solution that will give staff a connection to the network wherever they are based on site. **"Damovo is helping with the design and consultation about the type of infrastructure that will integrate with our existing network in a transparent and seamless manner,"** reveals Smith.

Commenting on the work with Addenbrooke's, Paul Butcher, managing director of Damovo UK, says: **"The main objective throughout has been to achieve the most reliable and resilient high-performance LAN design possible with the equipment available to Addenbrooke's. The new network ensures the high availability of mission-critical applications to staff and puts patients at the heart of the Trust's thinking."**



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Damovo UK Ltd

Broadlands Business Park, Langhurstwood Road,
Horsham, West Sussex, RH12 4QP
Tel: +44 (0) 1403 244 000 Fax: +44 (0) 1403 244 660
Email: talktous@damovo.com
www.damovo.co.uk

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