Health and Social Services Trust Overcomes Bandwidth Limits

Cisco unified computing and networking platform improves service levels for 20-50 users on single broadband link.

EXECUTIVE SUMMARY

Customer Name: Northern Health and Social Care Trust

Industry: Health and Social Care

Location: Northern Ireland

Number of Employees: 12,000

Partner: British Telecom Northern Ireland

BUSINESS CHALLENGE

- Help enable full staff productivity and highest-quality patient and client services at rural sites with limited-bandwidth connections

NETWORK SOLUTION

- Router-based Cisco UCS Express, maximizing benefits of compression/ optimization and caching to deliver remotely hosted applications at branch office level

BUSINESS RESULTS

- Improved service levels with no recurring costs or increased operating costs
- Enhanced user satisfaction
- Reduced burden on limited ICT support resources

Business Challenge

Headquartered in Ballymena, County Antrim, the Northern Health and Social Care Trust is one of six health trusts in Northern Ireland, which together make up the region's Health and Social Care (HSC) system. With nine hospitals and scores of clinics, small offices, and other community-based sites, the Trust provides acute and sub acute inpatient care as well as midwifery and mental health, children's, and social care services to a population of more than 440,000.

The Trust's network comprises 150 sites in all, with data centers located in the organization's two largest hospitals. The largest sites house 1,000 to 1,500 or more users; the smallest might have a just a few. Providing both standardization and economies of scale, the data centers host all of the Trust's care delivery and other applications, from diagnostic imaging to administration, finance, payroll, and file and print services.

Some 30 of the larger sites link to the data centers via a centrally managed regional HSC backbone or a mix of 100-megabit or 1-gigabit Ethernet connections. Of the remaining sites, about 80 have broadband service, and the rest have point-to-point connections of 1-megabit capacity or less, all supplied by British Telecom (BT).

"Our geography is primarily rural," says Pat Black, Northern Trust's ICT network and security manager, "and it's neither cost-effective nor, in some very remote locations, technically possible to have higher bandwidth options available."

> "Normally, people don't bother to tell you when ICT services are operating and performing at an acceptable level. They tend to call only when there's a perceived problem. So the fact that the number of ICT service desk calls have dropped significantly from the sites where we installed UCS Express is a good sign."
>
> **— Pat Black, ICT (Information and Communications Technology) Network and Security Manager, Northern Health and Social Care Trust, Northern Ireland**

Even so, when they were deployed five or more years ago, the broadband and slower connections were fit for their purposes as well as cost-effective, as the technology at the time was predominantly green-screen applications and local file and print services.

“But, obviously, application and traffic demands have grown a lot since then,” says Black, citing rapid growth in the deployment and utilization of core technologies such as email and internet access and the implementation of new systems and applications that require much higher bandwidth and network performance.

The problem was especially acute at 21 sites where 20 to 50 users per site shared a broadband connection. “With transmission speeds limited to 500kbps downstream and 250kbps upstream and a contention rate of 50:1, user access to the data resources they needed was heavily restricted,” says Black. “It was affecting application performance, and that, in turn, affects human performance in delivering the level of service we aspire to deliver.”

Network performance issues gave rise, in turn, to security and compliance issues. “Ideally, all confidential and sensitive patient data would be stored securely at our data centers and accessed remotely from the desktop,” says Black. “But at some sites the infrastructure limitations wouldn’t allow us to send such volumes of data back and forth. As a result, we had to store it locally, where it had to be encrypted to protect patient privacy in compliance with Trust policy and procedures and data protection legislation.”

Network Solution

By themselves, straightforward optimization approaches, including data compression and acceleration, were not enough to overcome the bandwidth limitations entirely. “Certain data types, including email and certain types of attachments, just don’t lend themselves to compression very well,” Black says.

So, together with BT Northern Ireland, their partner provider of Cisco solutions, Black and his colleagues decided to deploy Cisco Unified Computing System™ Express (UCS® Express) on Cisco 2900 Integrated Services Routers Generation 2 (ISR G2s) at the Trust’s 21 sites most hampered by limited-bandwidth connections. They considered competing solutions from other vendors. But they settled on UCS Express, a converged computing, virtualization, and networking platform for hosting services and applications at the branch office level, because of its ease of deployment and scalability and the fact that it would commit them to no recurring costs or increased operating costs.

They also chose to proceed with the deployment at a measured pace, for other non-technical and more practical reasons. “We’re a small team, having increased our permanent headcount from four to five people only recently,” Black said, “and we always have a large number of projects under way and lots of demands on our time.

“We also wanted to deploy UCS Express in a controlled way, to learn from each deployment and ensure that every one was configured in an optimal way.”

Business Results

Now complete, the Cisco® UCS Express deployment has successfully addressed several key network performance issues at the 21 Northern Trust sites.

“Service has improved dramatically to those sites,” says Black. “But more important is the greater **stability** of the infrastructure. With better traffic management, users experience fewer dropouts, timeouts, and loss of productivity. And of course, better application performance.”

For Black and his staff, that means fewer service desk calls, which means the team has more time to devote to other tasks and issues. He has to assume that users are happier.

“Normally, people don’t bother to tell you when ICT services are operating and performing at an acceptable level,” says Black. “They tend to call only when there’s a perceived problem. So the fact that the number of ICT service desk calls have dropped significantly from the sites where we installed UCS Express is a good sign.”

Most important, he adds, is that the Trust’s ICT service users are getting the level of data and application services that they need to provide better health and social care services to patients and clients.

“Improved services for patients,” says Black. “In the end, that’s what drives everything we do at the Trust, including the decisions we make about information communications and technology. That’s what it’s all about.”

PRODUCT LIST

- Cisco 2900 Integrated Services Routers G2
- Cisco Wide Unified Computing System Express

For More Information

To find out more about the Cisco Wide Unified Computing System Express and Integrated Services Routers G2, go to http://www.cisco.com/go/ucse and http://www.cisco.com/go/isrg2.

Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV Amsterdam,
The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at www.cisco.com/go/offices.

Printed in USA

C36-720717-00 01/13

EDCS-1229187