

# Network upgrade boosts capacity and provides a resilient future-proof access

## Challenge

With a combination of digital and analogue technologies, the University of Ulster's network was seven years old and starting to show its age. Some of the hardware was nearing end-of-life, but more importantly there was a requirement for more capacity - the number of users had already hit peaks of 7,000 simultaneous connections - and there was an aspiration to move to new technologies such as Voice over IP (VoIP) and IP Telephony.

Logistical challenges were posed by the geographical spread of the network which spans four main campuses in Northern Ireland, each with its own switched LAN infrastructure and wiring closets. A leased line WAN infrastructure connects the campuses together.

Upgrading existing switches was impractical so the University went to tender with a detailed technical requirement for the deployment and maintenance of new network infrastructure.

"We wanted core and edge switches that would serve us for the next seven or eight years," said Harry Young, Network Manager. "At the edge, we wanted 1GB connectivity while at the core we needed Fast Ethernet to support 10GB. Some of our servers and computer racks will need that kind of capacity within two years."

Ultimately, the University wanted to make an investment that would create an IP platform for future development, encompassing the roll out of VoIP in the short term and Unified Communications in the long, eventually supporting speeds of up to 100GB.

The strategy was a perfect fit for BT and its Network Optimisation proposition, a convergence roadmap that helps customers to future-proof multi-site LAN and WAN investments.

## Offices worldwide

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## Benefits

BT won the tender with a network design based on the use of Nortel equipment for edge and core switches, current versions of hardware and software already in use by the University.

Over a 10-month period, BT began implementing the network upgrade across the four main sites. The key product was the Ethernet Routing Switch 4500, a high performance switch used for Fast Ethernet and Gigabit Ethernet connectivity, ideal for a scalable, "pay-as-you-grow" implementation.

The benefit of the BT approach is that a gradual migration suited the strategy and the budget of the University. "There was no way we were going to implement it as a big bang," said Harry Young. "We wanted to do it site-by-site across the hundreds of wiring closets with minimum disruption to students and staff."

At the end of the process, the University will be able to support existing demands and ready to start the next phase of development towards VoIP.

"The project reflects the kind of partnership approach that BT excels at," said Andrea Whyte, Account manager, BT. "We take our customers on a journey to prepare for their future needs."

Harry Young is very happy with BT's work. "They were able to give us assurances that smaller companies were unable to match, and based on this experience we would certainly consider them for future projects," he said.