

## City College Norwich

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Keen to remain at the forefront of further and higher education provision in the UK, City College Norwich embarked on an infrastructure review and upgrade project

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Founded in 1891, City College Norwich is one of the largest and most comprehensive colleges of further and higher education in the UK. As such, the organisation offers nine Vocational Schools, a Sixth Form Centre, three Centres of Vocational Excellence and the first National Skills Academy in Financial Services in the UK. Every year, around 16,000 school leavers, adults and employers embark on more than 1,000 courses, ranging from Foundation Studies and Entry Level to Post-Graduate and Professional qualifications.

## The Challenge

City College Norwich prides itself on the unrivalled scope of its curriculum and its commitment to lifelong education and the promotion of learning within the community. Consequently, the organisation is currently undertaking an ambitious campus redevelopment project to ensure it offers a 21st century educational environment that continues to lead the way within the sector.

With new sites being integrated into the campus on a rolling basis, City College Norwich decided it was time to review its existing infrastructure, and used the opportunity to embark on a comprehensive campus-wide network upgrade project. As an existing customer, the organisation immediately turned to 3Com for support and advice. Nick Kershaw, Senior Network Engineer at City College Norwich, explains, "We had implemented some 3Com core switches in 1995 and 2000 and were already in the process of refreshing the edge of our network with newer 3Com Switch 5500EI technology. It therefore made sense to talk to 3Com and to tackle all our infrastructure requirements by developing one new optimal network design."

*"We were completely happy to be UK pioneers of the 3Com Switch S7900E, because we were confident in the technology and in the training and support we would receive from 3Com. We had no hesitation in agreeing, and our faith in 3Com was fully justified."*

**Nick Kershaw, Senior Network Engineer at City College Norwich**

# The Solution

City College Norwich considered several proposals for consolidating and simplifying its network to improve performance and resilience, and ensure current and future business continuity. Against competitive bids from Cisco and HP, 3Com was chosen based on superior price/performance, service and support and the company's environmental credentials. After an extensive re-cabling project, a seamless, trouble-free installation of the new core network infrastructure took place out of hours to avoid any risk of downtime, and was completed to an exacting deadline. The chosen infrastructure is based on a pair of high performance, high availability modular 3Com Switch S7910Es. At the access layer, 3Com Switch 5500s provide cost-effective, flexible connectivity for data, voice, video and other business-critical services.

Comprehensive network management is provided by 3Com Network Director. In the Financial Services Skills Academy, the boardroom and conference facilities use a managed wireless system based on a 3Com Wireless LAN Controller WX4400 and additional 3Com Switch 5500s. City College Norwich was the first UK organisation to adopt the industry-leading 3Com Switch S7900E core chassis switch. While this might have been a potential cause for concern for some organisations, 3Com rapidly and successfully mitigated any worries or risks. As Kershaw says, "We were completely happy to be UK pioneers of the 3Com Switch S7900E, because we were confident in the technology and in the training and support we would receive

from 3Com. We had no hesitation in agreeing, and our faith in 3Com was fully justified."

City College Norwich now has a next-generation network across all its four sites, providing staff and students with reliable, high speed access to educational resources and services. Wireless access at the main campus and the Academy site also provides users with the freedom to work independently at any time using designated remote 'hotspots'. Bandwidth at the core has also been significantly increased to 10Gb, providing City College Norwich with enhanced speed and capacity. Kershaw comments, "We now have a flexible and scaleable infrastructure that we can upgrade easily as our requirements change and increase in the future. The additional capacity means staff and students can now take advantage of new sophisticated multimedia technologies such as Internet Protocol (IP) TV, IP telephony and multi-casting without any support or availability issues. "The resilient nature of the architecture is due to the redundant power supplies and switching fabric of the 3Com Switch S7910E, which provides full failover support and fault tolerance. This is a distinct advantage for an organisation that depends on 24x7 business continuity, as does City College Norwich. The 3Com Switch 5500s are also delivering some noticeable economic benefits. As Kershaw notes, "By making network management easier and improving control, the modular configuration of the 3Com Switch 5500s is actually reducing our support overheads. This has proved to be a fantastic benefit."

## Why 3Com?

City College Norwich had an existing relationship with 3Com and a familiarity with, and confidence in, the 3Com technology. However, the decision was by no means already made, as Kershaw explains, "The fact that 3Com came out on top in several key areas against the comparable competitive offerings was ultimately what convinced us to select them. They were quite simply the best choice. "City College Norwich was particularly impressed by 3Com's price/performance offering, concluding that it could not be matched by competitor products. The level of available service and support – both pre- and post-project – was also praised by the organisation. The outstanding environmental credentials and energy efficiency of 3Com technology were also important deciding factors for City College Norwich. Kershaw explains, "City College Norwich takes sustainable IT very seriously and are implementing new 'green' initiatives all the

time. They are also an important consideration for any new build criteria. As a result, it was high on our agenda when choosing a project partner. The fact that the 3Com Switch 5500 uses significantly less power than competitors' switches was a definite benefit in this regard." 3Com Gold Partner, Kelway provided pre-sales service support on the continuous rolling replacement of the 3Com Switch 4400s, advised on the implementation of the fully managed wireless solution, and worked closely with City College Norwich to advise and supply a large portion of the 3Com network infrastructure, which was installed by City College Norwich's IT Services team. 3Com Professional Services provided consultation services on the core switch implementation, including the use of OSPF, VLANs and IP subnets, multicast and QoS.

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