John Willmott School enhances its learning environment with HP Networking

“After deploying the HP Networking solution, we have significantly expanded the number of learning areas equipped with interactive whiteboards and data projectors. For example, in Design Technology, it reinforces our commitment to developing the teaching of Computer Aided Design and Manufacture. This network truly reflects our status as a technology college.”
Ken Nimmo, headteacher, John Willmott School

Objective
John Willmott School needed to replace an unreliable, under-performing networking infrastructure to improve the ICT environment and introduce new technologies to enrich the students’ learning experience.

Approach
The school engaged First Class Technologies (FCT) to design, implement and support the networking infrastructure. FCT then worked with Azlan to help put the solution together. A wired HP Networking solution and a wireless solution were then deployed.

IT improvements
• Network availability has increased to nearly 100 per cent, meaning staff and teachers can rely on the network to support their work.
• Improved network performance allows data to be shared easily across the network, enhancing the learning environment.
• The open standards-based, scalable solution provides flexibility and aids the introduction of new technologies.
• Easier network management releases staff to complete more strategic projects, saving time and money.

Business benefits
• The lifetime warranty lowers Total Cost of Ownership (TCO); the school no longer spends £10,000 annually maintaining the network, allowing its budget to go further.
• An improved learning environment enhances service delivery to students, augmenting the school’s reputation.
• Delivering new technologies boosts the school’s technical college credentials, safeguarding valuable funding.

John Willmott School, part of the Birmingham Local Education Authority, is a community comprehensive school for 11 to 18 year olds with Technology College status. Located in Sutton Coldfield, England, approximately 1,200 students including 230 sixth-form scholars study in this energetic learning environment.

A recent Ofsted report praised the school for its effective sixth form by stating: “The quality of teaching and learning is good, providing lessons that are engaging, well planned and well resourced. Students’ personal development is good and they enjoy their experiences. The leadership and management of the sixth form are good.”

1 www.ofsted.gov.uk report number 323849, dated January 2009, URN 103522
Poor performance threatens learning experience

Information and Communication Technology (ICT) play a vital role within schools, colleges and universities. It supports traditional subjects via computer-based learning, presentations and research, and aids education management information systems. Many specialist schools, such as John Willmott School, champion the use of ICT to enhance teaching and learning. ICT is also a field in its own right, forming part of the UK’s national curriculum and all students must study the subject.

For ICT to work effectively, schools need a modern IT architecture, including a reliable networking infrastructure that offers high availability. John Willmott School employs Microsoft SharePoint Server for its virtual learning environment and runs various multi-media and design applications across its network. To aid communications, disseminate information throughout the school and access resources, it uses Microsoft Outlook Web Access. Several large departments including ICT, Mathematics, Science and Design Technology utilise interactive whiteboards with all classrooms using audio-visual technology. In addition, the school has ten ICT classrooms and four other classrooms with wireless connectivity.

“We store all our resources on our IT system and access them via the network. We simply cannot function and communicate without a robust network,” says Mushfiq Rahman, ICT operations manager, John Willmott School.

However, John Willmott School had an outdated, underperforming, unmanaged network based on Cisco switching technology, which impeded the effective use of multi-media, web-based applications and Computer Aided Design (CAD) packages. Consequently, the network lacked scalability, limited the students’ learning experience and potentially jeopardised the school’s reputation as a technology college.

“Network performance was restricted because our core infrastructure was based on a 100 MB backbone. There were also serious reliability, manageability and maintenance issues,” explains Mr Rahman. “The network regularly ground to a halt and frequently crashed. At times, reliability was so poor, our staff and students resorted to paper-based documentation. Moreover, manageability proved too complex for my technicians and we lacked the skills to maintain the network. I estimate we were spending approximately £10,000 per year supporting the system.”

John Willmott School approached First Class Technologies (FCT), an authorised HP Networking reseller, for advice. In turn FCT contacted Azlan, a division of Tech Data Corporation and a leading European distributor of networking, communications, mid-range enterprise server, storage and software solutions. After discussing a network specification, Azlan helped FCT to design the network and proposed an HP Networking solution that offered cost-effective and reliable core and edge networking. Based on open standards technology the HP Networking switches’ interoperability also satisfied the school’s desire to introduce another vendor’s wireless access points.

After assessing tenders from several network solution providers, the school’s board of governors engaged FCT to design, implement and support an HP Networking solution and deploy the wireless component.

First Class Technologies, a well established networking solutions provider, offers a comprehensive range of products and services to commercial and educational establishments. “We really liked First Class Technologies’ honest and frank approach about costs, its friendly working attitude and collaborative methodology,” states Mr Rahman.
Networking, management and wireless components working in harmony

Based on a 1 GB backbone, the HP Networking solution comprises an HP E5412 zl switch at the core and 18 HP E2510 managed switches at the edge. The new Local Area Network (LAN) serves over 200 points throughout the school including all offices, classrooms and the main reception area. The wireless component of the network comprised 56 Access Points.

To convince the school that HP PCM+ software could resolve its manageability problems, First Class Technologies first demonstrated the software’s capabilities with the proposed core switch. PCM+ now allows the school’s IT technicians to configure, update, monitor and troubleshoot switches centrally and remotely.

To deploy the solution within the school’s demanding schedule, First Class Technologies installed all the required cabling over a five-week period during term time between four o’clock in the afternoon and midnight. The HP partner then tested and deployed the switches during a half-term holiday. Consequently, the network went ‘live’ on time and to budget with minimal disruption to lessons.

Reliability, performance, scalability and manageability

Today, John Willmott School has a reliable, scalable and easily managed networking infrastructure. When appropriate, the HP Networking open standards-based solution will also aid the introduction of new technologies and applications including advanced CAD software. The school will undoubtedly benefit from the switches’ lifetime warranty because it eliminates maintenance costs, driving down Total Cost of Ownership (TCO).

“Network availability is virtually 100 per cent and we do not experience any issues even under heavy workloads,” comments Mr Rahman. “We are now processing increased data volumes and manageability is considerably easier. Our technicians can easily administer the system, releasing my time for more pressing priorities.”

“After deploying the new HP Networking solution, both students and staff are a lot more confident about using technology. Previously, they openly stated that the equipment they used at home was better than anything the school operates. Now, they say the complete opposite and thoroughly enjoy their learning environment,” concludes Mr Rahman.
To learn more, visit www.hp.com/networking