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D-Link®

Building Networks for People

Corby Community College

2005 is the deadline when schools across the country must demonstrate an innovative deployment of IT and certain levels of pupil access and dependency. Many education authorities have already submitted plans to the government's taskforce. Improvements have already been made to some schools, but none so significant as those at Corby Community College in Corby, Northamptonshire.

Paul Wilson welcomed the government's latest campaign with open arms. A computer teacher by profession, he arrived in the UK six years ago from Canada. Having grown up and attended school in a country which prioritised IT in education, Paul was shocked at the lack of IT investment allocated to UK schools.

"It was clear to see that IT facilities in UK schools were outdated, being up to ten years behind those in Canada and the U.S.A," Paul stated.

Paul Wilson - Head of Corby Community Colleges I.T. Department

As in many 'cash-strapped' state schools in the UK, his learned knowledge as a computer teacher naturally elected him a dual responsibility as Head of Corby Community College's IT department. He was required to juggle his two roles throughout the day attending to critical IT management tasks between lessons, during breaks and outside normal school hours.

Paul Wilson's arrival in the UK coincided with a major regeneration programme at the college. Two schools, Queen Elizabeth High and Beanfield Comprehensive, were closed down to make way for a new modern facility called Corby Community College.

Paul quickly realised the opportunity to create his vision for a high performance network that could be accessed and available to both staff and students. He helped secure major funding and assistance that has today enabled the rollout of an IT infrastructure which is un-paralleled by any other secondary school in the region.

THE CHALLENGE

Heading the IT department, it was Paul's job to purchase IT equipment for the new school and he knew exactly what he wanted to achieve - to roll out a network which would maximise the use of IT by pupils, administration staff and teachers at Corby Community College.

"The value of IT in education is greatly underestimated in the UK. Access to the Internet and multimedia applications is a direct path to a wealth of up-to-date electronic information. IT should be readily available to all pupils as it can benefit and enhance the whole learning experience," Paul said.

Rolling out a network at a site undergoing a major refurbishment, without having to consider existing installations, meant this was a good opportunity for Paul to start from scratch and build for the future.

He convinced the decision-makers that as technology is constantly changing, a short-term solution might prove to be more costly in the long term. He observed that network managers find themselves managing dormant networks with high equipment redundancy levels, resulting in drastic and costly changes having to be implemented. He believed investment needed to be made with the long-term in mind.

THE SOLUTION

Paul sought outside advice and guidance from numerous, regionally based, Value Added Resellers (VAR). He submitted a brief outlining his goals and objectives with high performance, easy to manage and scalable products as compulsory requirements.

Paul wanted one network using one infrastructure that could be customised; allowing him to direct curriculum and/or administration tasks to different workstations as required. With the constraint of managing the network in his spare time, he required a highly reliable network that would also need minimal maintenance.

Paul had to consider a network topology. A RING network was the cheaper option, but potentially required more attention and management. A STAR topology was favoured due to its dependability and network segmentation, whereby problems are localised to the affected section not the whole network. In other words, a network failure in the science lab needn't bother those working online in the design studio. However, extra efficiency and autonomy would incur extra cost, as this topology naturally required more equipment.

Peterborough based VAR, Systeq Solutions Ltd, prepared a network solution that not only met Paul's requirements, but also captured his imagination. Over a period of time, the solution evolved as changes were negotiated but, more importantly, Systeq devised an advanced solution based on the desirable 'STAR' topology that was within Paul's budget.

The solution prepared by Systeq Solutions deployed an entire D-Link Gigabit backbone. Dave Morris, Director, Systeq said, "Our reputation rests on the quality and reliability of our suppliers. Technology demands in today's education sector are every bit as high as they are in the business sector - having D-Link products at the core of our network business keeps us innovative and competitive."

A DES-6000 (Managed Chassis Based Modular Gigabit Switch) was used at the central location. Nine separate D-Link DES-3624 switches (24 port 10/100Mbps Gigabit Switches) were placed in each separate department to complete the solution.

Work on the network began in June 2001 and was progressed in phases as buildings were extended. Paul was under pressure to complete the network installation by September 2001 because this marked the start of the new school's first academic year.

"As I had been assured by Systeq, D-Link's products proved to be as dependable as I had hoped. From beginning to end we encountered very few problems," said Paul.

The DES-6000 switch acts as a gateway to nine other departments around the school, including three network segments in the Science department, three segments in Humanities, one segment in the Design and Administration offices respectively and one to the Designated Special Provision Department. In all, the main gateway switch polices data traffic to and from more than 550 users, supporting over 108 workstations throughout the building.

D-Link's DES-6000 is specially designed for a flexible departmental and backbone connection, ideal for a school environment. Its high port density exceeded the requirements at the time, but importantly left room for expansion, which was prioritised by Paul.

In each school department, there's one of D-Link's DES-3624 switches. Again, these switches are scalable - ideal for expanding organisations. They can be stacked without sacrificing performance, which allows for additional workstations to be added to the network in order to cope with higher demands for increased concurrent usage. Paul has recently ordered another 64 computers for the school and is reassured to know this will not exceed the high capacity levels permitted through his D-Link network.

THE OUTCOME

From a management perspective, the whole network is running smoothly. There were a few initial teething problems, but such issues were diagnosed and solved on the same day.

"D-Link has provided me with the stability, confidence and support to expand and progress with additional plans that I'm sure will test these products to their full capacity," Paul said.

The introduction of one unified LAN at Corby Community College has increased both the efficiency and productivity of the school. Administration staff and teachers are able to access files on the same network, increasing the efficiency of back office tasks and teaching practice. The staff now benefit from a remote dial-in facility opening up a whole range of possibilities such as home working, video conferencing and Computer Aided Design (CAD).

Corby Community College is now in its second academic year and has been rejuvenated as a place of work and study for staff, teachers and over 800 pupils in the area.

The new infrastructure has had a positive effect on the popularity and appreciation of IT as a subject. In the previous academic year only 12 periods a week of ICT were offered - this figure has now risen dramatically to 72 periods. As a result, students in Year

Ten have sat an external examination in ICT for the first time in over three academic years; results of which have exceeded expectations.

Paul enthused, "The infrastructure of D-Link products is second to none. D-Link has made the IT vision possible for this school. Technology colleges nearby can't boast a better infrastructure than Corby's. This only helps to promote the image of the college externally to parents and the community, whilst boosting moral for the staff and pupils."

THE FUTURE

D-Link's networking solution has enabled the first stage of the development of Paul Wilson's plans. A reliable network has been created for students and staff, nurturing an appreciation of IT from all those benefiting from it at Corby Community College. Most importantly, the next step is to ensure the good foundation is built upon and further investment is made in new technologies to maintain and increase the capabilities of the network.

Paul recently gained trust money to purchase a trolley of laptops, knowing he can deploy D-Link's 'AIR Plus' range of wireless products to enable wireless network access at Corby Community College. He envisages that students will be able to access the secured LAN and Internet from anywhere on the site and that the IT lessons can come to the students, rather than students walking to different classrooms.

Multiple data points around the building offer Internet access virtually anywhere on the site. Paul has ambitious plans for Corby Community College's very own Cyber Café.

"Why not?" he said, "There is no better way to keep the children on site during breaks, lunch hours and after school. Personal use of the Internet means they'll learn from the experience, increasing their general knowledge and appreciation of IT as a functional and educational tool," Paul continued.

The new telephone system, also supplied by Systeq, will eventually make full use of the VoIP capability made possible by the high bandwidth capacity of D-Link's networking products. In time, this will help to extend flexibility and to decrease day-to-day running costs of the school.

"D-Link products have proved to be an excellent investment allowing for an impressively reliable infrastructure with room for future expansion and development," said Paul Wilson. "Through Systeq, D-Link's products, service and support have enabled the first part of the vision for a 21st Century school. In the future, we will not only push the products to their limits, but also invest in new D-Link technology to keep Corby at the forefront."

"The reliability, high performance capabilities and scalability of D-Link products have been crucial in the success of the deployment of the IT infrastructure at Corby Community College," said Bal Phull, Marketing Communications Manager, D-Link (Europe). "The variety and range of D-Link products enables adopters like Corby Community College to put our products to innovative uses to provide solutions that can offer true benefits to the end user."

ABOUT D-LINK

Since its inception in 1986, D-Link has forged the way in the manufacture of highly engineered, quality networking solutions that it brings to the market at a cost effective price. D-Link's understanding of and commitment to the needs of the "network customer" has enabled D-Link to become a market leader of products that are acclaimed around the world. D-Link (Europe) Ltd operates in 17 European countries with 47 offices worldwide.

D-Link's commitment to "Building Networks for People" is the driving force behind its success, enabling it to provide flexible, cost effective, highly engineered products from LAN and WAN to mobile solutions. D-Link offers solutions for SMEs, SoHo, Enterprises and the Public Sector.

D-Link's continued investment in research and development enables it to move quickly into new higher speed, higher bandwidth technologies. This is reflected in the many new products it develops and launches year on year. Recent releases include Wireless, Home PNA, Voice Over IP, xDSL and Cable technologies.

For further information contact:
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The DES-6000 modular gigabit switch installed.

Corby Community College Schematic

Proxy Server

Curriculum Server 1

Admin Server

Curriculum Server 2

DES-6000 Modular Gigabit Switch

Humanities 1
DES-3624
+ 26 nodes

Humanities 2
DES-3624
+ 48 nodes

Humanities 3
DES-3624
+ 28 nodes

Design (DT)
DES-3624
+ 51 nodes

Library, Music, IT Suites, Staffroom

DES-3624
+ 156 nodes

Central Cabinet

Science 1
DES-3624
+ 24 nodes

DSP (Special Needs)
DES-3624
+ 48 nodes

Science 2
DES-3624
+ 42 nodes

Admin
DES-3624
+ 81 nodes

Science 3
DES-3624
+ 28 nodes