Brentside High School transforms ICT with progressive Converged Infrastructure strategy

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—Robert Don, ICT director, Brentside High School

HP customer case study
Brentside High School enhances the learning experience by deploying wired and wireless HP Networking technologies as part of a Converged Infrastructure strategy

Industry
Public sector

Objective
Sought a reliable and scalable high performance IT architecture with wired and wireless networking capabilities to support teaching activities and enhance the student learning experience

Approach
Identified a reputable partner to rapidly design and implement an enterprise-level IT platform and support the school's IT transformation programme

IT improvements
- Offers reliable wired and wireless networking within a Converged Infrastructure, boosting availability and reducing complexity
- Bestows additional bandwidth, scale and connectivity to support network intensive applications, satisfying the school's current and future needs
- Delivers centralised network management, saving time and releasing staff for more important project work
- Provides a highly reliable server and storage environment with a robust disaster recovery capability, safeguarding business continuity

Business benefits
- Creates a fully-immersed ICT environment, enhancing the student learning experience
- Reduces hardware replacement costs by at least 35 per cent, releasing valuable funds for additional IT projects
- Lowers Total Cost of Ownership (TCO) significantly, offering a sound Return on Investment (ROI)
- Supports new technologies, satisfying student and staff expectations and reinforcing the school’s prestigious reputation

The latest Ofsted report stated: “Brentside High School is a good school, which lives up to its vision of high expectations for all, with no exceptions, no excuses. Equality of opportunity sits at the heart of that ambition and is demonstrated through the consistently good progress made by all groups of students. Care, guidance and support for students are exceptional.”

Maintaining this high standard is no mean feat. Like most forward-thinking educational establishments, Brentside High School has welcomed the use of computer-based technology to support activities in its 17 teaching departments, sixth form and administrative offices. Indeed, this specialist college actively champions Information and Communication Technology (ICT) as a tool to enhance teaching, learning and attainment. The school’s motto is ‘Learning and achieving together.’
Embracing enterprise-level ICT

Brentside High School, a large, mixed comprehensive school for 1,300 pupils aged 11 to 18, serves a culturally and socially diverse community in the London Borough of Ealing. The school holds specialist status in the visual arts and applied learning and has won several awards. Arwel Jones, the headteacher, recently won the Secondary School Headteacher of the Year award for London and the South-East.

ICT is also a field in its own right, forming part of the UK's national curriculum and all students must study the subject. “In a drive to deliver an outstanding curriculum, our mission involves transforming our infrastructure with modern technology to establish a future-proof landscape that would support both current and upcoming technologies,” explains Robert Don, ICT director, Brentside High School.

“ICT in schools should be ubiquitous and we strongly believe ICT requires a robust enterprise-level system. Furthermore, to offer this type of service to all users and make this approach work seamlessly, our IT team must conduct proactive monitoring and provide rapid support.”

To deliver ICT effectively, schools need modern IT architectures containing reliable, high-availability IT platforms running both traditional business and specialised applications. These fully-integrated Converged Infrastructures generally incorporate server, storage and networking technologies specifically tailored to each establishment’s requirements. Designed to maximise automation, simplify manageability and lower risk, they reduce cost, support growth and offer sufficient performance and flexibility to accommodate the most demanding applications.

Heterogeneous infrastructure evolves

“The systems at Brentside High School had become outdated and as a result could not deliver the quality of ICT required to support the outstanding level of teaching and learning prevalent at the school.” Consequently, teachers, students and administrators regularly experienced reliability, performance and availability issues for mission-critical applications. Conversely, reliable, high-quality systems provide a feel-good factor and sense of ownership. Students treat it with respect and enjoy their ICT experiences. The infrastructure simply didn’t deliver the educational services or support the learning environment to a level that satisfied the students’ and teachers’ expectations.”

Brentside High School issued a Request for Proposal (RFP) to the majority of vendors that had supplied components of the existing infrastructure. The document clearly explained the school’s IT development plan which initially involved replacing the existing server, storage and wired networking infrastructure before deploying a site-wide wireless capability.

“Clearly servers and storage are important, but a reliable wired and wireless network infrastructure is a vital foundation for innovation and development,” says Don. “We required an end-to-end networking capability within a robust enterprise Converged Infrastructure to support network-intensive applications and provide mobile connectivity regardless of location within our building. An ability to roam without losing connectivity is essential. Moreover, it needed sufficient scalability to handle forthcoming technologies and enough flexibility to accommodate how users will employ ICT in the future.”
During separate negotiations with CSE Education Systems Ltd, an HP Gold Preferred Partner and HP Networking specialist, the school outlined its software requirements for a management interface. “We then turned to CSE for an HP wired and wireless networking solution, as it could deliver within our four to five week timeframe. CSE produced an acceptable enterprise solution within three days,” reveals Don.

Don reflects: “In recent years, there’s been a trend by many suppliers to view the technology required by educational establishments as non-enterprise technology. This is contrary to our IT philosophy as only enterprise technology will satisfy our needs. We will not settle for second best. We therefore sought a partner that concurs with our belief and which would treat the school as an enterprise customer. CSE and HP understood our standards and fully appreciated our point of view.”

**Networking creates Converged Infrastructure foundation**

The HP Converged Infrastructure initially comprised a wired HP Networking solution with a 1GB backbone and six HP ProLiant DL380 rack-mounted servers while two HP MSA2000 G2 systems with a total capacity of 8TB formed the Storage Area Network (SAN). The HP Networking solution involved an HP Networking 5412zl core switch and 14 HP Networking 2610 intelligent edge switches. The infrastructure employs the Microsoft® Windows® operating system and the Citrix ZenServer acts as the virtualisation platform, creating eight virtual machines for the two core servers.

“The HP Networking solution forms the foundation of our new Converged Infrastructure and the wireless component makes ICT ubiquitous,” comments Don. “With two IT staff and a CSE engineer, we successfully replaced the old infrastructure as planned and on time. By working together, we all took ownership of the project, cementing our relationship for the foreseeable future. HP and CSE make us feel special.”

During the second phase of the project, the school increased the network backbone to 10GB and deployed a wireless HP Networking solution involving three HP Networking 2910al switches with Power over Ethernet (PoE), an HP MSM765 zl Mobility Controller and 46 HP MSM422 Access Points.

“The new backbone supports a variety of network-intensive applications including drama performance streaming through our theatre studio and BBC School Report websites. It also supports ClickView, a system that assists classroom learning by providing digital video and television around the clock,” states Don. “From a wireless perspective, everybody has reliable connectivity whether they employ a phone, laptop or iPad. With its low Total Cost of Ownership (TCO), the solution represents a sound Return on Investment (ROI).”

To manage the wired and wireless networks, Brentside High School employs HP PCM Plus Network Management software. HP PCM Plus allows the school’s IT team to configure, update, monitor and troubleshoot switches centrally and remotely. Consequently, they do not need to roam buildings when problems arise, saving time and money while boosting network availability.
Saving money and looking to the future

After implementing the HP Converged Infrastructure solution, the school estimates higher system reliability will lower hardware replacement costs by at least 35 per cent, releasing valuable funds for additional IT projects. “We plan to extend the wireless network to outdoor areas, create a virtualised desktop environment and introduce high-specification HP servers to support Autodesk animation software,” says Don.

“It is not just having the vision that is important, it is having the clarity of vision that allows for successful development, innovation and change management,” continues Don. “A notice in the department summarises our work ethic. It reads: ‘Concentrate on the solution not the problem.’

Working with HP and CSE has helped to provide that clarity. Our new infrastructure is enhancing the students’ learning experience further as we strive to deliver an outstanding curriculum and reinforce our reputation as a specialist arts college,” concludes Don.

For more information
To read more about HP Converged Infrastructure, go to [hp.com/go/convergedinfrastructure](http://hp.com/go/convergedinfrastructure)