FOCUS INTEGRATION
deeper thinking

ACS International Schools Implements Next Generation Network Architecture for Enhanced Learning

Seamless installation of a new resilient LAN infrastructure across multiple campuses gives teachers, administrators and pupils access to reliable, high-speed ICT services.

Executive Summary

Customer name: ACS International Schools

Location: United Kingdom

Number of students: 3500+

The Challenge:
Providing scalable, resilient, 10Gb campus LANs, interconnected with DR Data Centre facilities to enable voice, video and data streaming for students and staff.

The Solution:
Cisco Catalyst 10Gb chassis-based cores across multiple sites with resilient access and distribution layers, fully managed through Focus Integration's NOC.

The Results:
An enterprise-grade, 10Gb LAN delivering high-speed voice, video and data connectivity delivering a reliable and collaborative environment for teachers and learners.

Intro

Focus Integration enables a service-ready adaptable, high availability and resilient LAN infrastructure that's optimised for connected classroom learning and fast evolving digital learning demands

The Challenge

Founded in 1967 to serve the needs of global and local families, ACS International Schools (ACS) educates over 3,500 students, aged 2 to 18, day and boarding, from more than 100 countries. Operating three UK schools – Cobham, Egham and Hillingdon – and one in Doha, Qatar, ACS is committed to using the very latest technologies to deliver truly transformative educational experiences.

Having implemented high performance WiFi at its campuses to support BYOD programmes and the delivery of media-rich connected learning for students, ACS now wanted to refresh its ageing WAN and LAN infrastructure. This would make it possible to unleash high speed connectivity at the desktop and confidently support

bandwidth-intensive applications such as video streaming and high-end graphics.

"Maintaining high levels of network availability was becoming an increasing resource-intensive challenge for our teams. This infrastructure is core to our business – delivering the curriculum. So, alongside moving to a 10 Gigabit Ethernet architecture, we also wanted to ensure mission-critical services could be maintained at all times," explains Graham Mayers, Head of IT Operations.

Complex to manage and configure, the ageing network was experiencing difficulties with surges in demand and capacity which lead to a sub-optimal experience across the campuses for both students and staff.

The Solution

Focus Integration proposed a 10GB Ethernet backbone complete with server farm to support a hyper-converged environment that's both efficient and highly optimised. Tightly integrating all computing, storage, networking and virtualisation resources would simplify infrastructure management going forward.

Next, the backbone and LAN infrastructures at each school campus were completely refreshed to create a scalable foundation for current and future services. This involved the implementation of Cisco Catalyst 6800 Series Switches optimised for high density 10 GB Ethernet, complete with power supply redundancy to limit network downtime at Cobham. And the installation of Cisco Catalyst 4500 Series Switches capable of

supporting up to 20 Gbps wireless throughput, 180 access points and over 2000 wireless clients on a single system at Egham and Hillingdon.

In all, over 700 components - featuring Cisco switching, routing and interface modules plus cabling - were deployed across all three UK campuses in under six weeks during the summer holiday period.

"Focus Integration completed this complex project within an incredibly aggressive timescale. While they completed all pre-staging off site prior to implementation, the scale of the challenge they faced was enormous when you consider Focus also had to re-patch thousands of ports as part and parcel of the refresh task," confirms Graham.

24/7 Managed Service

As part of its strategic rethink of its network infrastructure strategy, ACS took the decision to pass responsibility of the day-to-day management and support of their LAN environment to Focus Integration.

Alongside monitoring the entire LAN environment 24/7, Focus Integration is also in charge of undertaking all hardware maintenance and making all moves, changes and add-ons to the network.

"It feels as if we're their only customer – they are so responsive to our needs and are on-site the moment we want something done," explains Graham. "They know every cabinet and every port on each site and their people feel like members of our own team."

Going forward, as ACS continues to evolve its technology offerings and initiates new services like tele-presence and unified communications, Focus Integration is on hand to ensure everything runs smoothly and to plan.

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- Graham Mayers, Head of IT Operations, ACS International Schools

The Results

The rejuvenated network architecture now provides reliable and high capacity enterprise-grade performance that's a perfect fit for the delivery of an improved learning experience, both on campus and further afield.

"We now have dual core switches in every campus and have a truly resilient infrastructure in place to provide a learning environment that's comparable to the best in the world," confirms Graham.

Supporting reliable high-speed digital learning, thanks to the Cisco Catalyst Switching LANs, today there are fewer worries about technical issues.

"Previously, we spent 90% of our day fire fighting problems. But, thanks to Focus Integration, we've experienced a phenomenal turnaround in operations. The new management platform makes it easy to monitor performance and a quick phone call to Focus Integration is all it takes if we wish to make changes to the network. Going forward, we're now able to plan how and when to deploy new technologies that will take learning to the next level."

"THANKS TO FOCUS INTEGRATION, WE NO LONGER WORRY ABOUT ANY ASPECT OF NETWORK PERFORMANCE. INDEED, THEY'VE SET THE BAR AGAINST WHICH WE'LL MEASURE ANY OTHER MANAGED SERVICE PROVIDERS WE WORK WITH IN THE FUTURE."

- Graham Mayers, Head of IT Operations, ACS International Schools

Why Focus Integration?

Graham's team evaluated three potential Cisco implementation providers before deciding to partner with Focus Integration.

"It was clear from the outset that Focus simply 'eat, live and breathe' Cisco network technologies. Our research also confirmed they had deep experience at enabling services for today's digitally-led education institutions," says Graham.

Working closely with ACS' infrastructure team, Focus Integration's technical experts specified a scalable yet resilient and future-proofed network environment capable of supporting upcoming plans for the years ahead. This pre-sales consultancy was critical to ensuring that, prior to deployment, appropriate technology and design choices were made to meet upcoming needs.

"Focus Integration couldn't have been a better fit in terms of their understanding of our current and future objectives," confirms Graham. "We relied on their insight and knowledge to achieve the best architecture design possible. This included incorporating features to eliminate the risk of outages and real-time traffic and congestion management to support an increasingly media rich network environment."

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