



CASE STUDY

University College School

Multi-site School in
North London

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The customer

Founded in 1830 by University College London, University College School (UCS) is an independent day school for boys with a coeducational sixth form. The school operates from four locations in North West London and has some 1,300 pupils enrolled.



Quick facts

Independent day school in North West London.

IT environment

- Four sites, each with its own LAN and Internet access
- Leased lines already in place at two sites

Challenges

- Inter-site connectivity with centralised, filtered Internet access and firewall required
- Delays to leased line installations at two sites



The need

UCS operates across four sites: the Pre-prep, the Junior Branch, the Senior School and the playing fields. The school had specified leased lines at each site and wanted to implement a centralised firewall with filtered Internet access. With over a thousand pupils making extensive use of web technology in their studies and leisure time, effective control over web access was a key priority resilience.

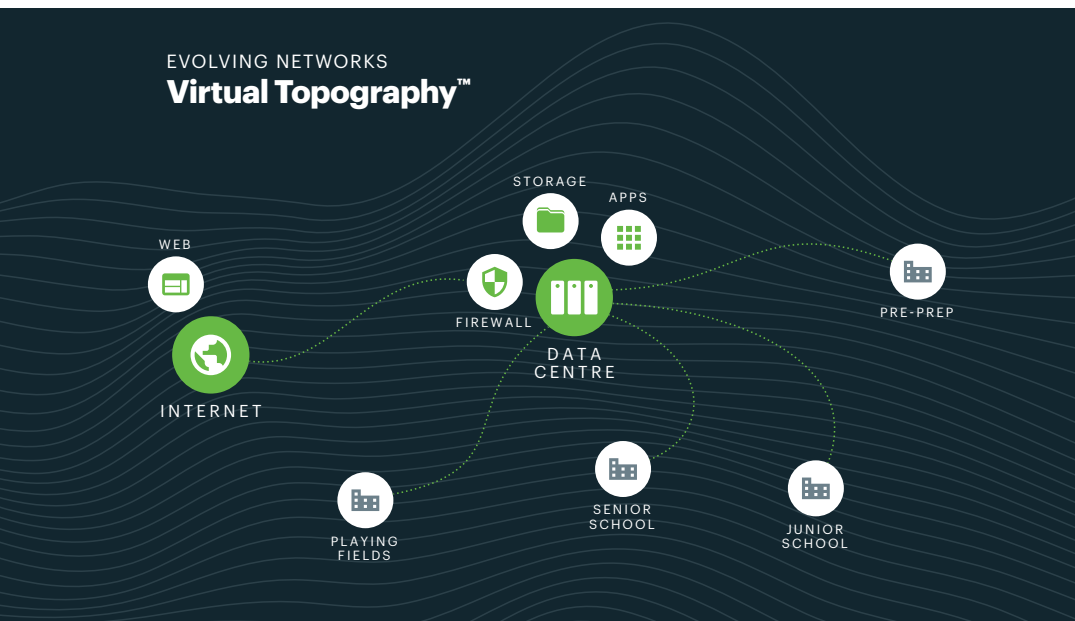
Complicating the situation, while 1gbps leased lines were installed as planned at the Pre-prep and Junior Branch sites, those for the Senior School and playing fields were delayed.

The solution

Using the leased lines already in place at the Pre-prep and Junior Branch sites, a temporary 4G connection at the playing fields, and a temporary FTTC circuit at the Senior School, Evolving Networks deployed a Layer 2 Software-Defined Wide Area Network (SD-WAN) connecting the four sites.

The centralised Internet access, web filtering and firewall are hosted in the school's datacentre space, provided by leading datacentre specialist iomart. Evolving Networks and iomart work in close partnership, the SD-WAN and connectivity specialist having built its infrastructure in iomart datacentres. With EVXcore devices already in place in iomart datacentres, Evolving Networks is ideally placed to deliver SD-WAN and other connectivity to iomart customers.

Meanwhile, the eView Live network monitoring suite, a standard component in all Evolving Networks deployments, gives UCS and iomart detailed visibility into the schools' SD-WAN performance, health and usage.



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The methodology

Having ordered leased lines for each site from iomart, UCS requested a centralised firewall with content filtering service to serve all four sites. Familiar through its partnership with Evolving Networks with the benefits network monitoring and an SD-WAN could offer UCS, and knowing how well it works with the SD-WAN specialist, iomart approached Evolving Networks for the help needed with connectivity.

An intelligent software overlay, the Intelligent Network Fabric which delivers Evolving Networks SD-WANs is not dependent on any specific underlying connectivity. Evolving Networks therefore supplied a temporary FTTC circuit for the Senior School, while the school put in place a 4G wireless connection for the playing fields site, allowing the SD-WAN, and centralised firewall and filtered Internet access projects to proceed despite the delays in the delivery of these two sites' leased lines.

This was in sharp contrast to the havoc that leased line installation delays typically play with MPLS solutions, which cannot be implemented until the underlying leased lines are installed and running reliably. With leased lines in at the Pre-prep and Junior Schools and temporary connectivity in place at the Senior School and playing fields, though, Evolving Networks was able to proceed immediately with implementing a fully functional SD-WAN to connect the four sites together, delivering the required network topology immediately.

The Intelligent Network Fabric... is not dependent on any specific underlying connectivity

All four sites to interact as if they were all on the same LAN

Evolving Networks supplied a pre-configured EVX appliance to each of the four sites. On plugging these into the circuits in place at each site, the Intelligent Network Fabric (INF) software automatically connected with the Evolving Networks EVXcore appliances in place in iomart datacentres across the country, connecting the four sites together with a Layer 2 SD-WAN. This allows devices across all four sites to interact as if they were all on the same LAN, giving UCS the network topology they required even though two of the leased lines were in delay.

With the SD-WAN in place, all Internet traffic was routed through the central firewall and web filter, hosted in UCS's iomart datacentre space, and the Evolving Networks eView Live network monitoring tool began delivering uniquely valuable visibility into the school's SD-WAN and its traffic.

The Layer 2 SD-WAN lends itself naturally to centralised Internet access, but should UCS need local Internet connectivity at any of the four sites in the future, the SD-WAN can easily be augmented to support this, even providing a hybrid of Layer 2 and local internet breakout if desired.

The results

With the Layer 2 SD-WAN in place across all four sites and the central firewall and web filtering up and running, UCS now has confidence that web browsing is safe, secure and free from inappropriate content, on all devices, at every site.

Meanwhile, the eView Live WAN network analytics suite provides unrivalled visibility into all aspects of the SD-WAN's operation.

Features include the following:

- Real-time throughput reporting
- Constant critical health-checking
- Historical statistics charting
- Monitoring via smartphone
- Proactive upgrade notifications and alerts on connection issues
- Performance benchmarking

With eView Live in place, should a fault or issue arise on the SD-WAN, iomart and Evolving Networks engineers can see immediately its nature and location, allowing it to be swiftly rectified. With the INF's ability to intelligently route traffic around such faults, they are often identified and resolved before the customer is even aware of their existence.

Furthermore, UCS is enjoying the benefits of improved bandwidth, key among which is enhanced user experience. When the leased lines are delivered at the Senior School and playing fields, bringing these new circuits into the SD-WAN will be a simple matter of disconnecting the temporary connectivity from the local EVX appliances and plugging in the new leased lines, at which point these sites will enjoy a further bandwidth boost, delivered seamlessly.

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Why Evolving Networks?

The close working relationship between iomart and Evolving Networks was key among the school's reasons for selecting Evolving Networks for this project. The fact that the Evolving Networks core EVX infrastructure is built in iomart datacentres made the implementation of the UCS SD-WAN straightforward and risk free, and the robust partnership between the two companies gave the school confidence that any issues arising would be promptly and efficiently resolved.

The network visibility afforded by eView Live was also attractive to UCS, and indeed to iomart, helping them deliver exceptional service to the school.

The school was also impressed by the ease with which temporary connectivity could be brought into play for the two sites at which the leased lines were delayed, allowing the SD-WAN and centralised filtered Internet access and firewall to be implemented despite these two missing circuits. The simplicity with which the temporary circuits could be replaced with the leased lines when they became available was a further attraction.

UCS also liked the solid, proven and utterly reliable nature of the Evolving Networks solution. The company has been delivering high performance, high uptime Multipath Ethernet Connectivity and SD-WAN solutions for ten years, with a customer list including such household names as Audi, the NHS and the Imperial War Museum.

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What UCS say about Evolving Networks

“Evolving Networks came to our rescue with an elegant but effective solution when we were really struggling with our leased line deployments. They have provided us with improved control and visibility of the flow of network data to, from, and within our organisation along with a rapid and, frequently, pre-emptive support service when the inevitable periodic issues arise.”

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