Cambium Networks™

Devonport School Adapts Through Adversity Thanks to Cambium Networks

"Working with Cambium Networks and Magicka has helped us realise our vision of a serverless school, which would not have been possible without having robust wireless infrastructure in place. This has been critical to our delivery of teaching and operations during the pandemic, as it was far easier for us to be flexible given everything was cloud-based."

NICK BERRYMAN,
ASSISTANT HEADTEACHER,
DEVONPORT SCHOOL FOR BOYS

Overview

SCHOOLS HAVE FACED ENORMOUS CHALLENGES in the past 24 months in delivering learning. As educators look to make up for lost time in the classroom, these pressures have changed but their seriousness has not abated. We are now very much in a position where digitally enabled hybrid learning is less a nice to have and more a cornerstone of curriculum delivery. Nowhere is this more evident than Devonport High School for Boys. Having embarked on a mission to rapidly roll out the digital delivery of teaching in the last seven years, the school needed a wireless infrastructure that could enable their ambitions for a serverless school that delivered cloud-based, personalised learning that supported students into further education or apprenticeships.

The Challenge

IN A SCHOOL WHERE NINE IN TEN STUDENTS have their learning delivered via their own dedicated Google Chromebook, being able to get online was a priority. However, with the previous wireless architecture delivering connectivity to less than two-thirds of the school, the network was not providing the comprehensive coverage the teachers required.

In making a change, Devonport School did not just want to meet their network needs today, they wanted to get ahead of future requirements. Technology such as interactive whiteboards were already being used widely across the school, mobile applications for administration were becoming commonplace, and Devonport's leadership team were alive to the potential for AI-enabled teaching delivery in the future. Moreover, with the Department for Education pushing more and more exams online, it had become absolutely critical to the success of students that the school had a robust network, capable of supporting multiple users in the same room(s), all at the same time.

The school also opens its facilities to organisations in the local

community, allowing them to host events. In such instance, these organisations and groups often need internet access to run their event. This meant that the network not only had to be robust, but also easy to manage to allow for the seamless granting and removing of access.

Moreover, the pandemic brought with it the unique challenges of remote and hybrid learning. Not only did teaching need to be delivered digitally, but the operations of the school, parent's evenings, and governor's meetings all had to move online.

Finally, amongst all of this, the UK's education sector faces strict budgetary requirements. This means that the potential of every pound spent to enrich the student experience and deliver better learning has to be maximised to the fullest. As such, a solution that delivered robust high performance and value for money was needed.

The Solution

THE SCHOOL USES what was the Stoke Military Hospital in Plymouth, which given its previous purpose has incredibly thick walls which do not make for an ideal Wi-Fi environment. It also means the classrooms are spread across four main buildings, plus additional outbuildings. As a result, making sure that each classroom had the connectivity it needed was not straightforward. To ensure the best possible ROI, Magicka opted for a primary fibre ring around the school site and gave each block up and down back up for added resilience. Due to the thickness of the walls, the site survey showed that every classroom would need its own access point. In total, 131 access points were installed across the school. Cambium Networks XV3-8 access points were chosen to deliver Wi-Fi 6 connectivity in high bandwidth areas, with XV2-2T0 Wi-Fi 6 access points being used outdoors. Across the rest of the school, XR-320, XD2-230, XD2-240, and XD4-240 access points were used chosen. The school also installed 37 switches, choosing from the EX2010-P, EX2016M-P, EX2028-P, AND EX2052-P models to provide a resilient backbone for

"The new network has improved the seamless delivery of teaching, underpinned the running of the school, and the ease of management means that staff can troubleshoot basic problems themselves without expert knowledge. Thanks to Cambium Networks and Magicka the school can confidently guarantee that students can take their exams online, and it will open up new learning opportunities that will enrich our student's learning for years to come."

Nick Berryman,
Assistant Headteacher,
Devonport School for Boys

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the network. Thanks to the cost of Cambium Networks' equipment, Magicka and the Devonport School team could opt for such a design whilst also staying within the cost of the solutions offered by Cambium's competitors.

It was crucial that the network was easy to manage and that problems could be resolved quickly. The network is managed using Cambium Networks' XMS-Cloud Management platform, which means that any issues can be highlighted and dealt with quickly whilst guest assess can be easily granted and removed from anywhere by the Magicka team. In fact, the network management is so simple that members of the Devonport School staff also have access and often troubleshoot network issues themselves. This is made even easier by the zero-touch configuration of Cambium equipment, allowing faulty access points to be swapped out without expert technical knowledge.

The Result

THANKS TO HAVING A ROBUST NETWORK INFRASTRUCTURE, the school was able to have full confidence in its decision to become completely cloud-based, realising its ambition to become a serverless school. The upshot of this over the past two years has been immeasurable, as this flexibility allowed the school to quickly pivot between remote and hybrid learning in a way, they would not have been able to do before. In the long term, this flexibility will ensure that children don't fall behind if they are off ill for extended periods of time or if the school has to close due to snow or bad weather. Connected learning is also opening up opportunities for schools and trusts to join together to optimise their individual specialisms. This means that schools will be able to offer high-quality teaching across a broader range of the curriculum, providing a major benefit to students.

As well as learning, the management of the school is also now able to be done remotely. Instead of holding socially distanced in-person meetings, everything from governor's meetings to the school's financial operations were organised remotely.

With robust connectivity, the experience during lessons is seamless with no breaks that might cause disruption. Class registers can be taken on laptop or mobile devices and the student's work is easily shared to internet connected whiteboards to inspire further discussion and learning. In future, the network will also be ready to support applications such as Virtual Reality, for subjects such as Design & Technology or the sciences, where 3D modelling will help students gain an even greater understanding of the subject.

As education digitalises further, this will increasingly extend to exams as well as learning. In 2020 and 2021, the school had to find a way of allowing its Year 7 students to sit their Cognitive Abilities Tests safely. Thanks to the robustness of the network, this was made possible with 180 students simultaneously taking their exams in a socially distanced manner in the school's sports hall each year. This clearly demonstrates that Devonport School is well setup to continue to meeting this requirement now and in the future, and has the wireless infrastructure it needs to support its students and operations for years to come.

ABOUT CAMBIUM NETWORKS

Cambium Networks delivers wireless communications that work for businesses, communities and cities worldwide. Millions of our radios are deployed to connect people, places and things with a unified wireless fabric that spans multiple standards and frequencies of fixed wireless and Wi-Fi, all managed centrally via the cloud. Our multi-gigabit wireless fabric offers a compelling value proposition over traditional fiber and alternative wireless solutions. We work with our Cambium certified ConnectedPartners to deliver purpose-built networks for service provider, enterprise, industrial, and government connectivity solutions in urban, suburban, and rural environments, with wireless that just works.

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