

NO WI-FI, NO WORK: EQUIPPING BRADFIELD COLLEGE FOR MODERN LEARNING



Bradfield College is a British co-educational independent school. It operates both on a day school and boarding school basis, catering to approximately 770 students from Britain and overseas.

The school's ethos is to encourage independent learning as well as intellectual curiosity, and it views technology as just one tool in achieving this. Its attitudes towards technology are relaxed, with its staff always eager to try new tools to see what fits. It's this willingness to experiment and openness to change that now sees the school equipped with a future-ready wireless network.

For teenagers, easy access to Wi-Fi is as precious as oxygen, or so they like to proclaim. But the staff at Bradfield College understand this mentality. They recognise that students need readily available internet access, not just as a part of their education in the classroom, but for entertainment and communication purposes too. Laptops, smartphones and tablets had replaced textbooks, exercise books and the television – and so the school had to accommodate this.

BYOD COMPLICATIONS

A decade ago, Bradfield College provided students with individual devices. However, over time, this evolved into a BYOD policy – yet their wireless system remained unchanged. This proved problematic for a number of reasons. The network struggled to accommodate the growing number of mobile devices that were trying to connect to it, every day. What's more, newer devices were incompatible with the aging network.

Rob Dearing, Bradfield College's technical network manager, recalls: "Our internet performance was poor. It was dropping out too much, especially in the boarding houses. Instead of talking to an access point that was closest, the student's wireless was talking to access points further away. It wasn't a single cell solution, and so access points were holding onto clients for as long as they could."

After daily complaints from students and teachers alike, the IT team at Bradfield College realised that they needed a change. The new wireless system would have to be strong enough to accommodate the growing number of devices on campus, reliable enough for all users, and future-proofed against inevitable change.

"User demand called for a solution that was bigger and better. That's when we deployed Fortinet."

– Rob Dearing
Technical Network Manager,
Bradfield College

DETAILS

CUSTOMER: Bradfield College

INDUSTRY: Education

LOCATION: Berkshire, England

BUSINESS IMPACT

- Future-proofed connectivity and ease of expansion
- Stronger wireless coverage across the campus
- Improved security and greater visibility into student activity

SOLUTIONS

- FortiWLC-500D
- 300+ Fortinet 832 APs
- FortiGate-500D
- FortiAnalyzer

They researched various solutions on the market, and decided to trial Fortinet based on its reputation amongst many IT experts as an intelligent and scalable network security platform.

SCHOOL'S OUT, WIRELESS IS IN

Bradfield College trialed the FortiWLC-500D wireless controller with some Fortinet 832 Access Points with its first year boarding house. "These students had spent the whole academic year complaining about the wireless network. I suppose they were used to fast internet at home, so their patience was tested when they moved into our boarding houses," Dearing explains.

The trial began towards end of the third term. If the trial was successful, the team would use the summer break to roll the full solution out.

"We did the POC based on just one location to see if the scale of the solution could be extended. Feedback was gathered by spending a number of evenings in the boarding house with a Fortinet engineer. The position of the box and signal strength were tweaked according to the students' responses," Dearing recounted.

The trial was considered a success. "It had delivered everything to the user experience we expected. It was the only trial we did, and we're still happy with the solution today," he notes. Bradfield College enlisted the help of Commercial, an IT managed service provider, to complete the full installation of over 300 Fortinet 832 APs.

SECURITY BOOST

In addition to the improved wireless coverage, Fortinet's single cell solution allowed the school's IT administrators to have better control over what students could access.

Dearing recalls, "With our previous BYOD policy, we had limited onboarding solutions. We tended to use WEP as a security protocol, but this was problematic because it didn't give us control over who was coming online. Visibility into whether the person logged on was a trusted user (i.e. a student or a teacher) was limited. It also didn't let us segment our guests away from our regular users. And if we wanted to change this key to protect the network, distributing a new key was a logistical nightmare."

With Fortinet's FortiGate-500D and FortiAnalyzer, Bradfield College could provide secure, identity-based user access across the campus. The IT team could also forward browsing reports to the school's child protection officer, who would monitor for keywords of concern.

"This is an important element for boarding schools," Dearing explains. "We're responsible for students while they're in the classroom as well as in their rooms. Which means total visibility is key in case anything goes wrong. For instance, we could be missing out on a silent, online cry for help. These changes keep us compliant with Prevent legislation and keep students safe in a completely unobtrusive way." At the moment, Bradfield College are operating the FortiGate-500D as a web-filter for their entire site. They're intending to integrate more features of

the enterprise firewall solution in the near future. Combined with the newly deployed Fortinet solutions, this will put Bradfield College on another step towards leveraging the full benefits of Fortinet's Security Fabric.

The school remains on an exciting journey towards technological improvement. It recognises that the best people to suggest digital change are those actually in the classrooms. As such, it has a steering committee dominated by teachers and support staff, with just one IT team member. This committee has already achieved success with its vote on the need for improved Wi-Fi, and are on hand to push for any other changes that will ensure the school is digitally fit for the future.

"Fortinet has given us wider roaming and ease of on-boarding. But it has also given us a solution that allows for easy expansion and allows us to be ready the future," Dearing affirms. "With a Fortinet solution at the helm, the school can benefit from complete integration, broader visibility and stronger protections."

It's only inevitable that technological innovation will continue to drive change across the school's critical infrastructure. And as Bradfield College realises, only innovative solutions will do.



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