Case study: Cambridge Regional College
How eduroam helps meet learners’ demand for wireless – on campus and beyond

Strolling among the famous green parks and spaces of the university city of Cambridge is an enviable activity at the best of times. But in the case of Les Black, director of ICT and facilities at Cambridge Regional College (CRC), it’s doubly enviable – because Black is likely to be testing whether he can get a wireless connection via eduroam.

Since 2014, staff and students at CRC have been able to access wireless internet not only throughout their own campus, but also at access points maintained by other organisations around the city, including the University of Cambridge, Anglia Ruskin University, and Addenbrooke’s Hospital. And it’s all thanks to eduroam.

This helps to raise CRC’s reputation in the eyes of students – supporting independent learning, and helping build important links with other eduroam organisations, who are also major local employers.

Meeting student expectations

Before eduroam was installed, Black says, the rise in demand for wireless networking was presenting a challenge for the college – which has roughly 3–4,000 students and around 450 staff.

“All of a sudden, learners expected that everywhere they went they would get wireless,” he says. “There was a massive upturn in student usage of wireless – and our infrastructure wasn’t designed for it.”
That infrastructure included a 100Mb commercial link which, for security reasons, was kept separate from the college’s Janet link. Users connected via 90 access points, which didn’t cover the entire site and the IT team had to set up user accounts manually – which soon became unwieldy to manage.

Although CRC ran apprenticeship schemes with major employers such as the University of Cambridge and Addenbrooke’s, there was no integrated way to allow students wireless access across multiple sites.

**Enter eduroam: toward wireless internet in open spaces**

Then, in 2014, Black attended a meeting with Cambridge City Council, the University of Cambridge and Anglia Ruskin University – where he learned of their plans to invest in wireless network access points in open spaces across the city, expanding the reach of eduroam.

It meant that any eduroam-registered organisation could allow staff and learners to access wireless at access points such as parks and green spaces – using a single set of authentication credentials.

This was the moment that led Black to embrace eduroam – with the backing of his senior management team. Within four months, the college had installed and deployed the technology.

There was the inevitable learning curve – including miles spent on foot testing connections. But in time for the 2014–15 academic year, CRC staff and students were able to access wireless internet at other organisations in Cambridge and, of course, other eduroam member institutions around the world.

The deployment also meant a change in approach at the college’s own campus. CRC increased the number of access points from 90 to 340, moved student wireless across to the 1Gb Janet link, and invested in content filtering to help mitigate risks to vulnerable learners. As part of the process, it used Active Directory to store user credentials.

There are now up to 3,500 concurrent connections to CRC’s network at any one time – putting wireless networking at the heart of CRC’s connectivity strategy.
Benefits to students and staff

Deploying eduroam has brought benefits to staff and students at CRC. It helps promote independent learning – because, whether at CRC’s campus or beyond, students can work more easily outside the traditional classroom.

It helps support collaborations with employers: apprenticeship assessors, for example, can seamlessly access wireless internet at Addenbrooke’s or the University of Cambridge.

And it helps integrate learners into a wider academic environment. Students attending university interviews can access internet at their host campus – which, as Black points out, helps them feel more at home: “It’s something that’s familiar to them,” he says.

Benefits to CRC

There are also benefits to CRC as a business, says Black. CRC has gained value by making the most of other organisations’ investment. From an IT point of view, meanwhile, administrators no longer have to commit time to a large number of manual processes as they did before. “It’s not technically onerous to keep going,” Black says.

Black does warn that investment is needed in firewalls and networking if eduroam is to work smoothly. “As an FE college, make sure content filtering is in place,” he says, “and look at the link before you do it. We were surprised how much capacity we consumed very quickly.”

Yet the changes, he says, have improved CRC’s reputation.

“The ability for students to roam and authenticate a connection where historically they wouldn’t be able to – I don’t think we can underestimate the value of that.”