The merger of Angus College and Dundee College in November 2013 saw the creation of Dundee and Angus College. With over 1,100 members of staff and 20,000 students, it’s a sizeable institution which prides itself on the range of courses, opportunities and facilities on offer. With the College’s large number of students, three campuses and numerous outreach centres, comes the need for a unified, reliable and seamless wireless network. As Head of ICT, Kris Getchell knew the solution, and set about deploying eduroam in the summer of 2014.

“I’ve been at the College for just over a year,” says Kris. “The merger was part of the Scottish Government’s regionalisation agenda for FE, and the College restructured at the same time. ICT was identified as an area that should be represented on the Senior Leadership Team, to make sure our student experience is as good as it can possibly be.”

Problematic access

“Before we deployed eduroam we had two separate wireless networks that students would connect to and neither was great at providing access. Anyone could connect to the Angus network at Arbroath, with a password, but we had no wireless networks for students in the Dundee campuses – they had to connect to the guest wireless network! This was a significant problem, as after 15 minutes of inactivity their internet connection would time out and they were redirected to a login page where they had to re-enter the guest password.”

“When the colleges merged, the two approaches caused lots of problems, and it quickly became obvious that the user experience was pretty poor. With staff moving between campuses we had to educate them to do things differently across the campuses, and we had so many calls for help, it was eating up huge amounts of time and was really frustrating for them. When we started looking into eduroam we decided to simply deploy it across both, so it seems like a single system to the user.”
A unified system

Kris was familiar with eduroam from his previous role as Infrastructure Manager at the University of Bedfordshire. Straight away he saw this as the ideal solution. Not only could it be used as a single wireless network for both staff and students, but it would happily work with the Juniper wireless infrastructure in place in the Arbroath campus and the Cisco wireless infrastructure in the Dundee campuses.

"We needed something quick and easy that gave the impression of a single unified system," he says. "Both wireless network systems had only been put in 18 months or so before the merger and, financially, it didn't make sense to replace them. When we started looking into eduroam we decided to simply deploy it at both Dundee and Arbroath so it seems like a single system to the user."

The project was a quick, simple process, managed completely in house and, with no need for any support or new software, the only cost to the College was time.

"After a bit of research, our Networking team told me it would be straightforward and only take a couple of weeks," says Kris. "As it turned out, they built the authentication part of the system on virtual machines within a couple of days. A week after having the conversation we had a working eduroam implementation in one office, as a test system!"

Increased efficiency

Prior to the deployment of eduroam, the idea of providing a unified wireless network had been well received by the Executive and Senior Leadership Team. Naturally there had been some concerns about disruption, however these were quickly dispelled by pointing out that the new eduroam wireless network would run in parallel to the existing wireless networks for a transition period.

Given the low risk nature of the project and the fact that no financial outlay would be required, the College Executive felt comfortable in approving the project on the basis of a single presentation and technical Q&A session that convincingly made the business case for eduroam.

Just six months after Kris first suggested the move, eduroam was successfully deployed. "It was completely seamless, with zero down time and zero problems," he says. "We had great support from the Executive and Senior Leadership Team, and it's had a really big impact in terms of a unified feel across the campus, with no disruption or cost, which is exactly what we wanted."
"It’s hugely beneficial that users can now connect wherever they are and, from the College’s perspective, that’s good financially, because in situations where students or staff are internationally roaming and eduroam is available, their devices will automatically connect. This increased efficiency has already drastically reduced the number of support calls we take.

"But the biggest thing is our students now have a wireless network designed for them. We’re here for our students and we should be making things straightforward for them. We now have a seamless browsing and web environment. People expect this, and it’s not up to us to decide if that expectation is right or wrong, it’s up to us to meet it."

As part of its eduroam deployment, the College is taking full advantage of the advanced capabilities of 802.1X. Having staff and students use the same Wi-Fi SSID, whilst after authentication being connected to different IP network environments, has provided further benefits. “Prior to deploying eduroam we had to treat all wireless users the same, but now that users connect to eduroam with their College ID and password, we can be selective in how we apply policies and filtering rules, allowing us to give users more freedoms whilst keeping our systems secure. This has allowed the College to reduce the filtering carried out on staff web browsing whilst maintaining existing filtering arrangements for students. It has also allowed us to open up wireless access for staff to some of our MIS systems that were previously not accessible from the wireless networks whilst still restricting access to students.”

Testing is key

So, does Kris have any tips for other colleges looking at eduroam as a solution?

"Test and keep on testing after deployment. If you can, work with another institution that’s on eduroam, this is a huge time saver – it might take you five minutes to make a tweak but then you have to get in the car and go somewhere else to check it! Also, get the message out to staff and students. We have pop-up shops to set up students’ devices for them; it just takes a few minutes and makes it so simple for them.

"I really can’t emphasise enough how easy it was to deploy eduroam and how quickly you benefit. Many IT projects take months to deploy and years to see any real tangible benefits, but we saw a huge uptake and significant drop in support calls within a matter of weeks."