

CASE STUDY

ARUBA DELIVERS ROBUST PLATFORM FOR EDUCATIONAL EXCELLENCE.



Ayrshire College aims to serve the people, communities and employers in Ayrshire. The College plays a key role in helping to develop the economy of Ayrshire, by ensuring that students develop the right skills and positive attitudes to support the local, regional and national workforce needs.

There are three main campuses in Ayr, Kilmarnock and Kilwinning and two smaller campuses in Irvine and Nethermains. The vision is to raise aspirations, inspire achievement and increase opportunities. In 2016/17 there were 12,350 students and 980 staff.



In 2015, the College revealed plans to rebuild the Kilmarnock campus. "We saw this as an opportunity to rethink how traditional education was consumed," says Brad Johnstone, Head of ICT, Ayrshire College. "We wanted to bring down some of the structural, location-based barriers to learning. From an IT perspective, we explored what students need to be successful in their studies."

REMOVING THE BARRIERS TO LEARNING

Johnstone is clear this wasn't a BYOD-driven project. The College wanted to 'own' the teaching devices, but make them more accessible and more mobile: "Being realistic, you can't rely on students to bring their own device, or for that device to be fully functional all the time. Plus, we have to recognise that not everyone in the community can afford the latest and greatest device. As an education provider, I firmly believe we have to control and supply the end-point device."

REQUIREMENTS

- Smart, collaborative environment for modern teaching
- Bring down structural, location-based barriers to learning
- Supply and control the end-point learning devices
- Provide a platform for innovation across multiple sites
- Be seen as a sector leader

SOLUTION

- 802.11 ac Wave 2 Aruba APs
- Aruba Campus Switches
- Aruba ClearPass Policy Manager
- Aruba AirWave Network Management
- HPE Moonshot Server
- HPE 3PAR Storage
- Citrix Virtual Desktop solution

BENEFITS

- Data protection and security
- Seamless wireless connectivity across the school campus, both indoors and outdoors
- Single-pane visibility and efficient management for the wired and wireless network
- Centralised access control for guests, students, staff and eduroam users
- Half the time to diagnose and resolve issues

“ We want the traditional ‘chalk-and-talk’ environments but have the ability to turn them into ‘smart classrooms’ when required. We also want students to be able to study away from the classroom, wherever they are across the campus. Aruba ensures we have a very stable, very secure, high performance wireless network. ”

BRAD JOHNSTONE
HEAD OF ICT, AYRSHIRE COLLEGE

Ayrshire wanted a blended network approach to the new Kilmarnock campus. There would be thin-client desk-tops in 12 classrooms, plus 400 laptops to support mobile learning. Students can take a laptop and work from the classroom, the library, the cafeteria or the specialist Learning Resource Centre.

"We want to have the traditional ‘chalk-and-talk’ environments," says Johnstone, "but have the ability to turn them into ‘smart classrooms’ when required. We also want students to be able

to study away from the classroom, wherever they are across the campus. That means we need a very stable, very secure, high performance wireless network throughout."

Solving the problems of a complex new-build

Johnstone had already selected the Citrix Virtual Desktop solution. He says HPE, Aruba and DTP, the partner, impressed him with the comprehensive nature of their solution, and the willingness to whiteboard ideas and allow Johnstone's team to demo kit.



"They understood where we wanted to get to, but also the immediate complexities of the build," explains Johnstone. "This was a greenfield site and, while that gives us a blank slate to work from, we couldn't test the building until it was built. To an extent it was a leap of faith, albeit backed by evidence of Aruba solutions in place elsewhere."

The solution comprises an HPE Moonshot Server, HPE 3PAR Storage, 89 Wave 2 802.11ac Aruba 320 Series access points and Aruba 2930F Campus switches. Security policies have been implemented by Aruba ClearPass Policy Manager and Aruba AirWave Network Management is used for visibility and control. The network backbone runs at 10Gbps as a minimum, with two 10Gb uplinks from the stacked edge devices to be configured as a logical uplink via 802.3ad link aggregation, to the core. All edge stacks have this 20Gb bonded, resilient uplink.

"The DTP and Aruba teams asked all the right questions to create the ideal solution for us," says James Barnes, ICT team leader, Ayrshire College. "They saw this as an individual project, not just another sale."

MORE SECURE, EASIER TO MANAGE

The implementation was completed over the 2016 summer break, in time for the start of the new term.

"We had seven weeks to do this in – and we needed only two," says Johnstone. "The timing aspect was important. Disrupting term time is unacceptable, and any time we can save over the summer is more time for staff to take their holidays. Clearly, time saved here can be spent on other projects."

With two active-active comms rooms, the new network is more resilient and more secure, and it means there are more resources. "All the ports are secure," says Barnes. "People can't just stand outside the College and access the network, not even curious students."

Barnes can segment network access, with different usage rights, for different user groups – including staff, students, partners and eduroam guests.

"I have a single pane of glass to manage the entire network," he says. "Network management is now so simple it no longer requires a high-level of resources to oversee it. It takes half the time to diagnose and resolve issues."

Positioning the College as a sector leader

The Aruba network was in place and fully operational from day one of the new term. "Where the old desktops were taking five minutes to power up, the new clients were up and running – with the AutoCAD software, in a minute," says Johnstone. "It is a vastly different user experience."

Ayrshire College is now using Aruba Airwave Network Management and Aruba ClearPass Policy Manager to authenticate access to both wired and wireless networks at its other sites. The plan is to upgrade the Kilwinning campus with Aruba access points and switches in 2018, budgets allowing.

The College has met its objective to be seen as a sector leader. Already it has had visits from other universities and colleges, keen to see the new network in action. More importantly, in the new Kilmarnock campus, Ayrshire College has created an environment fit for modern teaching.

"No-one notices when the network works," says Barnes, "but that's how it should be. Given our budgets, we want to invest in the best technology available. We want to give students the best resources that work every time, and are quick to access."

Johnstone says of Kilmarnock: "This is a £53m new building. It's given us the chance to create something that students – and other colleges, can aspire to. I believe we've given students the best possible tools, from an IT perspective, to make the best of themselves, whether that's as a stepping stone into university or employment."