

CASE STUDY

ARUBA WIRELESS PLATFORM INSPIRES INDIVIDUAL APPROACH TO LEARNING.



CREATING A THOROUGHLY-MODERN TEACHING ENVIRONMENT

Godolphin School is an independent girls' school in Wiltshire, England. The school, which dates back to 1726, teaches 480 girls, from the ages of 3 to 18, half of them as boarders. Heritage aside, Godolphin aims to create a thoroughly modern teaching environment.

A campus-wide network is critical. "We had a network in place for a number of years," says Godolphin's Head of ICT Services, Edward Gillies, "but performance-wise, certainly across the entire estate, it was in need of updating."



Performance gaps were becoming increasingly evident, says Gillies, as the school looked to develop a coherent BYOD policy, both for staff and pupils. The school also planned to improve on their use of their management information system, alongside Microsoft Office 365, together with increased use of virtual learning environments.

Technology to empower the individual

Any investment, technology or otherwise, has to fit with the school's broader ethos. "We want an environment where girls can develop as individuals, where doors open for them," says Nigel Everett, Deputy Head. "IT has to support that ideology."

This means allowing the girls to use a device of their choosing, to be able to work from anywhere, and to try new ways of learning. "We want to be as open as possible, and allow our pupils to choose the appropriate device for each task," Everett continues. "Where possible, the technology choices have to be led by the girls. They have to be self-motivated, whilst at the same time developing that sense of responsibility that comes with independent use of technology."

Accordingly, the network upgrade had to allow the easy on-boarding of different devices. We need it to have enough bandwidth to support growth in video content, and provide broad coverage to serve the school playing fields and dormitories.

REQUIREMENTS

- Foster innovative new, mobile learning behaviours, underpinned by consistent connectivity across the school
- Support high-density of concurrent devices
- Simplify IT management to reduce strain on resources, with single view of network
- Minimise any disruption to students and staff with an end-to-end solution, clear innovation roadmap and simplified implementation

SOLUTION

- Aruba Core and Access Switches
- High-density 802.11ac indoor and outdoor APs
- Mobility controller
- ClearPass Policy Manager
- ClearPass Onboard and Guest modules

BENEFITS

- Seamless wireless connectivity across the school campus, both indoor and outdoor
- Robust guest portal, along with secure ID- and device-based access, supporting BYOD agenda
- Centralised management including network traffic analytics
- Underpins e-learning strategy, connecting 30+ tablets per class and supporting Microsoft Office 365, Firefly and Planet eStream platforms
- Enables development of online teaching resources and administration
- Provides a platform innovation, enabling the testing of new applications and features

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NIGEL EVERETT

DEPUTY HEAD COMMUNICATION AND INNOVATION,
GODOLPHIN

Solution mapped and implemented with minimum disruption

The architecture was mapped, planned and implemented in collaboration with Medhurst Communications, a long-term supplier of IT solutions to the school – and a valued Aruba partner. It comprises a fully refreshed 10Gbps network based on an Aruba 5412R Switch at the core, 16 Aruba 2920F switches at the edge, and 138 high-density Aruba APs: 70x IAP-335, 65x IAP315 indoors, and 3x IAP275 outdoors. The APs are managed by an Aruba 7205

Mobility Controller. Network access policies are now defined and enforced through Aruba ClearPass Policy Manager. Both Onboard and Guest modules have been deployed in order to implement a BYOD and guest access service around the school.

“Medhurst were brilliant,” says Gillies. “There was no disruption to the school during the implementation. All the cabling work was planned in detail and work on the switches and access points was done out of hours. We had enough time to test the upgrades. Everyone’s been very happy. Users have connected to the network with very little involvement from us.”

Gillies says Aruba AirWave Network Management was not part of the upgrade, but is a future possibility: “We’re keen to trial it in 2018 as we need more real-time monitoring and visibility.”



INSPIRING MOBILITY

With the Aruba wireless solution in place, Godolphin students are free to use a favourite device and connect anywhere on campus. “Laptops or iPads, Microsoft, Apple or Android, they’re free to decide,” says Everett. “We have that device-agnostic environment we wanted.”

In practical terms this means students are now collaborating on school projects using video, or Facetime, or chat. They’re studying more effectively outside of the classroom. With the ability to connect to school resources anywhere anytime, the girls are able to learn when they want, where they want. “In the future I think teachers will view the classroom as the place everyone congregates to discuss what students have learned outside of class,” says Everett. “Teaching will focus on context and reinforcement.”

It is, he admits, early days. The full impact of mobility and device freedom will take a while to trickle down. It will alter the way students approach lessons, and the way teachers prepare them. “Teaching and learning approaches are evolving, and we now have a system where we can explore what works best for us as a community. Teachers are just as excited about the possibilities of the new network as the students. We want to support teachers and students as they explore the possibilities.”

A network to support smart hardware and applications

According to Nigel Everett, the wireless network is already supporting new hardware and applications: “A powerful network enables innovation.”

Interactive projectors are going into classrooms, allowing teachers and students to collaborate more effectively. The focus of the classrooms is changing, with the ability to be able to connect to the projector from any device in the room, opening up limitless possibilities.

With enhanced and uninterrupted connectivity, new ideas can be tested and new features enabled. Wi-Fi coverage around the sports pitches and seamless roaming around the entire campus is now possible. Sudden spikes in network usage can be accommodated, enabling the school to support activities such as open days or literature festivals. Displaying information around the school on digital signage is being considered, with a test setup already in place.

The use of VoIP on a suitable platform is now a possibility. Pupils are already using Facetime, Skype, WhatsApp or other tools for keeping in touch with families and friends, a particularly useful feature for boarders.

“We’ve expanded our virtual learning environment based on the Firefly Learning platform and Office 365, where students can access lesson material,” says Gillies. “We’ve also started using Planet eStream as a secure video platform. So, overall, it is possible to upload and distribute class notes, presentations and documentation. It’s a very good interface to hold and share education material, and will only grow over time.”

The school has also moved to Microsoft Office 365. “We’re putting a lot more into the cloud,” says Gillies. “And Aruba ClearPass Policy Manager gives the right level of network access control. We can control access, who sees what, and what information is restricted, through intelligent policies. Given many of our students are international, we have to be thinking in terms of apps that can be accessed from anywhere in the world.”

IoT and increased mobility may well drive the need for specific schools app. This can potentially be extended to the use of a cloud-based facilities management tool. The possibilities are endless, safe in the knowledge that the network will not be a bottleneck.

Technology enhances the learning experience

Inevitably, Gillies says, simplified network management means greater efficiency: “If there is an issue with an access point, I can see exactly where it is. In management terms, I’m extremely pleased with the traffic analysis.” This feature allows the identification of the most bandwidth-consuming workloads and any problems with specific applications or devices.

The IT team have more time to focus on examining new applications and features. In the future, Godolphin expects to explore collaboration with education providers elsewhere in the UK, and beyond.

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