

## CASE STUDY

# ARUBA LAYS PLATFORM FOR EDUCATIONAL EXCELLENCE AT LEADING UK INDEPENDENT SCHOOL



Set in 400-acres of beautiful Dorset countryside, Bryanston is a picture-perfect English boarding school. Its motto is Et nova et vetera – both the new and the old. However, its rural location and mix of Grade 1- listed, protected buildings and contemporary architecture, presents a challenge when building a modern teaching environment.

“The independent education sector is extremely competitive. It is vital we deliver educational excellence, and provide a point of difference,” says Andy Barnes, director of technology, Bryanston School. “Pupils, and their fee-paying parents, expect to be connected all the time. They expect the connection to be immediate and to be invisible. With 30-plus buildings and a mix of social and education spaces, that creates a challenge.”

### A STRONG NETWORK TO SUPPORT MODERN TEACHING

Bryanston is one of the UK's leading independent schools, home to 680 students and 180 teaching staff. The school's aim is that ‘Bryanstonians will leave as well-balanced 18-year-olds, ready to go out into the wider world’. Pupils are encouraged to experience a wide range of academic subjects and extra-curricular activities; each pupil benefits from one-to-one tutoring throughout their time at Bryanston.

The school was founded on the principle that pupils would be recognised as individuals, not as one of many in a cohort, says Sarah Thomas, head, Bryanston: “There is a focus on developing an academic and pastoral relationship between pupil and teacher. For a parent, I think the appeal of Bryanston is the fact there really are no anonymous pupils here. Their child will be recognised and carefully looked after and allowed to grow as they should, rather than into a pre-decided form.”



In teaching terms, Bryanston wants pupils to be able to work at their own speed, in their own time, accessing materials and teaching resources wherever, but recognises pupils will want to collaborate. “We knew we needed a strong wireless network, and we knew any solution would have to scale. Demand was only going to grow,” says Barnes. “But we also knew we needed a partner that wouldn't be

### REQUIREMENTS

- Apply technology to improve individual learning experience
- Create platform supporting long-term innovation, e.g. digital exams
- Build a network to accommodate critical academic and pastoral applications
- Structured, secure network access policies & tracking of usage
- Simplified management and accommodation of spikes in network demand

### SOLUTION

- 802.11ac Indoor & Outdoor APs
- 7000 Series Mobility Controllers
- Aruba Campus Access Switches
- Aruba ClearPass for access control
- Aruba Beacons
- Aruba AirWave for network management

### BENEFITS

- Comprehensive network coverage across entire campus
- Load balancing to soften spikes in demand
- Secure pupil access based upon appropriate privileges
- Supports three critical Bryanston applications
- Elevates learning and pastoral experience for pupils

“Bryanston is famous for welcoming pupils who are varied in their talents and interests. We regard it as very important that pupils learn, grow, develop and work hard at things they enjoy.”

**SARAH THOMAS**  
HEAD, BRYANSTON

fazed by the installation challenges, and had the breadth of resource to overcome issues now and in the future. That led us to Aruba.”

### Coverage, redundancy and full visibility

Today, the Bryanston campus is covered by 400-plus Aruba 802.11ac wireless access points, managed by two 7000 Series Mobility Controllers. “We have a mix of 225, 205, and 315 APs depending on where in the school they're deployed,” explains Barnes. “The two controllers are a redundant pair, which helps me sleep at night. We're using 802.11ac technology, which is exactly what we need.

“One additional element that shouldn't be downplayed, is that the Aruba devices look the part. We have some stunning buildings, and the Aruba AP's blend well and are unobtrusive.”

### Seamless load balancing smooths spikes in demand

Another benefit of the Aruba solution, he continues, is the load balancing: “A school is a very spiky environment – there are times in the day when certain locations have lots of people accessing the

network, then they leave. It's cyclical, so you have to design your network to work seamlessly during these peaks in demand.

"With Aruba we've managed the load balancing very successfully. We've designed it so the first 10 pupils associate to one access point and then we automatically load balance the next 10 to a different access point, and so on. It's all automated, freeing up our technical support resources for other projects."

Barnes says further access points will be governed by density of use: "I'm expecting it to grow into areas which traditionally haven't needed wireless access – sports, pastoral areas, outdoor space and examinations. We expect exams to be moving to digital, and that will require wireless access."

### **AIRWAVE DELIVERS MANAGEMENT INSIGHT**

It is vital Barnes' team gain the insights they need to support the school's teaching and social care duties. Aruba AirWave provides granular visibility of mobile device and app use, proactively monitoring the health and performance of all things connected across the network.

"The campus is a mile from end to end, and it's really important for us to know where our assets are," says Barnes. "Within AirWave we have a series of schematics of our buildings. On those schematics we can see the devices literally moving around. If a device has been lost, we can find it. Or, if we want to look at things like density of use, we can see how many devices are clustered around certain locations."

### **ClearPass simplifies access management**

Finally, yet fundamentally, Bryanston must provide a safe and secure learning. Aruba ClearPass Policy Manager allows Bryanston to set and manage consistent network access policies. "We have the ability to onboard pupils and visitors quickly and simply, on any device, and to set appropriate network access. It's important this doesn't require lots of technical support, lots of hassle. The Aruba solution is a one-stop shop."

ClearPass allows the school to block access to certain sites, and to close down network access for certain age groups at certain times. "We want pupils to go to bed, not stay up all night online," says Barnes.

### **Easy to manage, simple to scale**

The Aruba solution has created a campus-wide network that is easy to manage, simple to scale, and supports Bryanston's educational and pastoral requirements. The network makes for a more engaging teaching environment, more consistent pupil assessment and improved care for boarders. Specifically, the network supports three critical applications.

"In 2013 just about 70% of our content was delivered over WiFi and we spent roughly 40% of our time on management and maintenance. In 2016, thanks to AirWave, we're managing almost 4 times as many devices, over 3,000. Over 90% of our content is now delivered on WiFi while we spend around 5% our time on management. This gives us a lot more time to dedicate to trying new ideas and designing new solutions for enriching the pupils' learning experience," says Barnes.

### **Encouraging accountability**

Boardingware is a software program which allows the school to know the whereabouts of pupils, essential for any boarding school. The system supports the school in accounting for its pupils during

prep and other free time. Wireless iPad terminals are used to allow pupils to sign in and out of various locations around the campus.

"The onus is on the pupils. The interesting thing with Boardingware is that we're able to see if a pupil is spending too much time in the gym, or too much in the library. We want pupils to have a balanced and productive time at Bryanston. Boardingware won't fix that, but it will allow us to have an informed conversation."

### **INSPIRING TEACHING**

eLockers has been used by Bryanston for a number of years, but is growing in relevance as network strength and access builds. It works as a drop folder where teachers and pupils can upload resources (including video clips or PowerPoints). Pupils can upload assignments and take group feedback.

"eLockers is a lovely idea, but it would be nothing without the power in the back-end," says Barnes. "If you couldn't deliver the content immediately it would be nonsense. Again, the Aruba solution is critical. It enables pupils and teachers to use eLockers across the school, without a glitch."

### **Engaging feedback**

eChart is a Bryanston-built app. It allows teachers to mark pupils' work, and for this assessment to be shared with parents – a significant service given Bryanston's fees. For pupils, the eChart delivers a more consistent, more immediate and engaging feedback loop. Tutors can leave audio or visual annotations to work, progress can be reviewed over time.

"It is the glue that joins our learning here at Bryanston," says Barnes. "It encourages a conversation. It's not about the letter of the grade, it's about the adults and the pupils talking about what's happening."

### **A platform for future innovation**

Barnes also needed a platform on which to build. The school is looking at ways to improve student learning, particularly the balance between individual and collaborative learning.

"We're looking to build on eLockers with the use of Aruba Beacons – pinning teaching resources to a physical location," says Barnes. "Pupils activate the resources when they move close to the Beacon. They then complete the task and move to the next Beacon. It encourages self-paced learning where pupils work at their own speed. It also allows teachers to work more closely with individuals."

Again, the Aruba solution will allow Barnes to monitor which Beacons are being used the most, and to accommodate spikes.

### **Cultural and technological shift**

This is as much a cultural as it is a technological shift. Barnes admits some teachers and pupils will be quicker to realise the potential, and has created a team of Digital Pioneers within the faculty.

"We have a group of staff who are prepared to look at how they use technology, to push the boundaries, be prepared to fail, and to share their good practice. With pupils, it's more informal. We tend to find clusters of students interested in certain features. We want to encourage them to build the resources they need."

Longer term, this is likely to include collaboration beyond Bryanston. "The real power of technology is sharing," says Barnes. "We have to recognise that maybe the best results lie outside Bryanston. One of the things we're investigating is bringing other resources into Bryanston virtually, and possibly sharing the best Bryanston resources with the outside world. The network will be the enabler."



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