

CASE STUDY



OVERVIEW

Founded by King Henry VI in 1440, Eton College has been one of the leading independent schools in the U.K. throughout its history. No stranger to innovation, Eton is always looking forward to anticipate new learning demands. As Eton has moved from a completely wired network environment to primarily wireless connectivity, it relies on RivaNET and its Ruckus solutions to keep it at the forefront of education.

REQUIREMENTS

- Deliver reliable wireless coverage in a variety of challenging environments
- Increase network capacity to support new cloud applications
- Enable students to use multiple devices on campus
- Support online and physical security measures

SOLUTION

- Ruckus ICX Switches
- Ruckus Cloudpath
- Ruckus Access Points
- RivaNET Managed Service, Provisioning and Support
- iboss Cybersecurity

BENEFITS

- Elevated the student experience by providing a home-from-home mobile environment
- Increased network capacity to match growing wireless demands and support iboss and Cloudpath applications
- Gained invaluable expertise to help inform and guide technology decision-making
- Increased budget predictability through strategic purchases and agreements
- Created a secure mobile working environment for staff and students

SUPPORTING A WIRELESS CAMPUS AND EDUCATION MISSION

As a boys' boarding school, Eton is home to 1,300 students who join at age 13 and continue until age 18. Teaching staff also lives on campus, so school operations never stop. As Eton has moved from a completely wired network environment to wireless infrastructure and applications over the past five years, the infrastructure continually changes to stay ahead of usage demands.

THE CHALLENGES

"As an independent boarding school, you have some unique demands on networks and equipment," said John Sainthouse, Head of Information Technology at Eton College. "We have an unusually large network for a school."

Four hundred buildings, all major facilities systems, and school-provided desktop computers, laptops, and audio-visual equipment are connected over the core network. The core network also powers Eton's Ruckus® wireless network, which started with 100 access points. In the past three years, boys have increasingly arrived at Eton with multiple devices—at least a laptop, tablet, and smartphone—and they expect a robust wireless network. Students' Wi-Fi requirements, coupled with a cloud-based Virtual Learning Environment, use of video in classrooms, online access to college systems, wireless classroom technology, and the IP phone system require a high-performance wireless infrastructure.

Delivering high-quality Wi-Fi across many different environments on campus is challenging. Students and teaching staff need reliable connections in the boarding houses. Because each boy has his own room, the number of rooms, walls, and doors make it difficult to deliver uniformly good coverage and high capacity.

Wireless classrooms need high capacity and reliability. Eton uses Firefly for its virtual learning environment, as well as Microsoft OneNote for teacher-student collaboration. Teachers share materials with students, and students upload homework wirelessly from anywhere on campus. Digital classrooms have at least 20 students simultaneously using a variety of personal wireless devices and school-owned systems.



Eton also has rigorous privacy, security, and online safety policies. Its robust physical security network includes networked video surveillance cameras. It recently enhanced already-strong online safety measures in accordance with recent government requirements to protect children from harm online—including cyber bullying, pornography, and the risk of radicalization.

THE SOLUTION

As the wireless network grew from 100 to 700 access points, growing volumes of high-speed wireless traffic taxed the existing wired infrastructure, creating a bottleneck. Eton also enhanced online security by deploying Ruckus Cloudpath software for online security and policy management and iboss Cybersecurity for ensuring uniform protection across its network and cloud deployments. These new applications made it imperative to gain more capacity in the underlying wired network.

To recommend a solution, Eton turned to education technology specialists, RivaNET. Based on their extensive experience working with the independent sector, the RivaNET team used a combination of Ruckus ICX® Switches to gain additional 10 GbE capacity, relieving the bottleneck and ensuring high-speed connectivity for wireless traffic across campus. Ruckus ICX Switches are fixed form-factor switches that work together to deliver a scalable, reliable network solution. Their low-latency, non-blocking architecture ensures excellent throughput for Eton's wireless classroom video, IP telephony, security, and coverage needs.

THE BENEFITS

"RivaNET understood the unique demands of our network right from the start," said Sainthouse. "They are proactive, creative problem-solvers, and no matter what we run into, they come up with a solution. They take ownership of issues and are very easy to work with. RivaNET adds huge value to our IT environment."

Today Ruckus ICX Switches are deployed across the campus to support the Ruckus wireless network. Having a strong, reliable Wi-Fi network means boys can quickly connect to Office 365 and work. Faculty and staff can work without being slowed by their network.

"RivaNET has helped us maintain budget predictability while enabling us to move forward on IT projects that are instrumental to delivering a high-quality education," said Sainthouse. "It's fantastic."

Multiple 10 Gbps and 40 Gbps ports offer Eton flexibility to configure services with higher resilience and performance, and Ruckus ICX Switches are stacked in high-demand areas. Eton gained pay-as-you-grow scalability, easily adding switches to gain capacity when needed.

"We rely on RivaNET's real-world experience with technology to help us make good decisions," said Sainthouse. "That's invaluable as we pursue our mission to provide a broadly-based education designed to enable all boys to discover their strengths, and to make the most of their talents within Eton and beyond."

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JOHN SAINTHOUSE

Eton College, Head of Information Technology

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