



Oakham School

Next-Generation Cloud Networking from Aerohive Gives Oakham School Advanced Mobility

Challenges

- Upgrading to a controller-less wireless solution with significant network expansion in a large campus environment
- Ability to support all school-managed devices and BYOD, and granular guest access
- Ability to set up dynamically-assigned user profiles, mirroring those already in place on wired network
- Capability to easily monitor, control and troubleshoot the network

Results

- Deployed HiveManager NG, a cloud-based network management solution with superior monitoring capability and elegant user interface
- Enabled comprehensive mobility network across the entire campus to promote digital learning
- Saved time and expense for the IT team with an advanced network management solution with simplified troubleshooting

About Oakham School

Oakham School was founded in 1584 and is an independent boarding and day school for boys and girls aged 10 to 18. Located in the county of Rutland in the East Midlands of England, the school is one of the top International Baccalaureate schools in the UK.

Situated less than three hours from London, the school has approximately 1,050 students, with an equal student population of boarders and day pupils. The school offers a broad range of activities and learning opportunities, and has been recognized for its excellence in student achievement and learning; 99 percent of

students go on to a university of their choice. The School is also proud to have been the first British independent school to go online back in 1995, demonstrating the importance of technology as an integral part of its academic and social life.

The Challenge

Several years ago, Oakham School had a partial 802.11g wireless network from 3Com in limited areas of its campus. As their technology initiatives evolved, Wi-Fi connectivity transitioned from being a 'nice to have' to an essential and crucial part of the overall technology infrastructure of the school. At the time, Oakham did not have Wi-Fi in its boarding houses and most classrooms were not equipped for wireless. Oakham made use of its 40 kilometers of fiber optic cabling across the entire campus to facilitate the comprehensive wireless upgrade across more than 40 physical buildings.

The wireless needs of the school and the use cases for students and staff had changed due to an increased appetite for BYOD and advanced digital learning initiatives. Students were no longer primarily using school-owned desktops, but rather a suite of personal devices such as a laptop, a tablet and a phone. With only a wired connection in each dorm room and most devices now shipping without a physical port, the School needed to significantly expand its wireless networking provision. In addition, teachers and support staff

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—Jeremy Pole

Head of Information Systems, Oakham School

were using more wireless devices, laptops, tablets and Apple TVs, requiring ubiquitous wireless coverage.

When evaluating network solutions, an essential requirement was for the wireless network to integrate seamlessly with the existing wired network, mirroring and applying user profiles that behaved in the same way via the dynamic assignment of firewall rules and VLANs. Remote network management was also highly beneficial as the network is managed in part by an outside consultant.

The Solution

Aside from Aerohive, Oakham considered solutions from Aruba and Ruckus. Aerohive was chosen for its superior feature set, simplified cloud-based network management, and Aerohive's reputation as a nimble company, open to Oakham providing feedback to influence product direction in future software updates.

The School initially deployed Aerohive's AP330 access points, more recently adding AP230 802.11ac access points, with plans in place to look at deploying outdoor APs. At the beginning of the network replacement project, Oakham implemented HiveManager Online for cloud-based network management, easily recreating past configuration within the new wireless network. Oakham has since upgraded to HiveManager NG, Aerohive's next-generation network management solution, seamlessly transitioning to the new platform in just two weekends.

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In the past, if a client device was misconfigured for 802.1X, with errors such as an incorrect user name, a missing domain, or the system clock was inaccurate, isolating the issue would often take numerous tedious and time-consuming steps. Now, with HiveManager NG, client events are proactively logged without the need for administrative investigation, and a solution can easily be narrowed down to get back to full connection as quickly as possible. The School appreciates the granular configuration capabilities that are offered in HiveManager NG, providing feature rich options, guided configuration and advanced networking tools through an intuitive interface.

Oakham has leveraged numerous enterprise features from Aerohive. Simplified guest access and support for non-802.1X capable devices are attained through Aerohive's Private Pre-Shared Key (PPSK) feature, allowing unique connections via a single SSID to restricted VLANs. Aerohive's Bonjour Gateway is used extensively for providing

cross-VLAN discovery of Apple TVs that are present in many classrooms. Oakham has also added firewall technology from Aerohive solution partner Palo Alto Networks to most effectively leverage the Application Visibility and Control features for enhanced security and oversight.

Results

Oakham School has realized significant changes since deploying Aerohive across its entire campus. While classrooms previously had access to mobile carts with laptops in select areas, now students often carry their own technology and can connect to Wi-Fi everywhere on campus, including in the boarding houses.

Every device can be identified on the network and the IT staff have been able to segment various groups of users, to ensure different sets of restrictions and filters. This is especially important to separate school-managed devices from personal devices, to separate the lower school students from those in the upper school, and to separate students from staff. With Aerohive, Oakham has insight into what apps students are using most frequently, and troubleshooting has been greatly simplified.

"Aerohive has enabled our entire campus to reap the benefits of a 'mobile first' approach. No longer are students and teachers tethered to a particular device or location. This has created efficiencies both in academic and social settings. The support Oakham School receives from Aerohive is first class and the simplified cloud management with HiveManager NG is a game changer," adds Pole, Head of Information Systems.

Administrative functions have been transitioned to digital functionality, with registration at boarding houses taken via iPads. Oakham uses Moodle for its online learning environment, which students can access easily over Wi-Fi. Students can also access the school's streaming media service, Oakham TV, and Design and Technology students use Wi-Fi to run the CAD/CAM for product design and manufacturing instruction.

Instead of being tied to the desk, in their dorm rooms or elsewhere, students can work in communal work areas for collaborative projects or in the house common rooms. Teachers can also take advantage of connectivity with a variety of mobile devices in the classroom, using a phone to look up a resource or fact more quickly than having to retrieve a laptop.

Scaling for Mobility

Having a solid wireless infrastructure in place has positioned Oakham for future growth and expansion, and the exceptional cloud-based network management system in place has not only freed up IT resources, but paves the way for leveraging enterprise features and enhancements to provide the optimum user experience. Oakham School is well positioned to meet the mobility demands of students and staff alike, helping to further the legacy of educational distinction.



Contact us today to learn how your organization can benefit from Aerohive wireless LAN architecture.

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