Laidlaw Schools Trust Transforms WiFi Provision with TP-Link Omada to Support Strategic Move to Google Classroom

Every Child Matters

The Laidlaw Schools Trust family of academies is a growing success story serving children and families in the west of Newcastle and Pennywell in Sunderland. The Trust comprises 7 academies with 875 staff providing a supportive and nurturing learning environment for 5,300+ students.

Google Classroom

To provide the best quality teaching and learning environment for its 5,300+ pupils and staff, the Laidlaw Schools Trust took the strategic decision to standardise on the Google Classroom platform accessed via Chrome books. Cloud-based teaching, of course, relies on exceptional WiFi across the Trust's estate. Fully aware of the existing network's limits, IT Infrastructure Manager Rob Atkins was in the process of investigating and evaluating alternative WLAN solutions when the existing network controller at Excelsior Academy broke. Halfway through a term, the faulty controller left 50% of the campus without wireless coverage. "We had an average of 45Mbps download speeds across the school and patchy coverage which was not ideal for online learning. Because the access points had to connect to the network controller to work, as soon as it broke, we needed to find a solution and fast," commented Rob.

Rapid Response

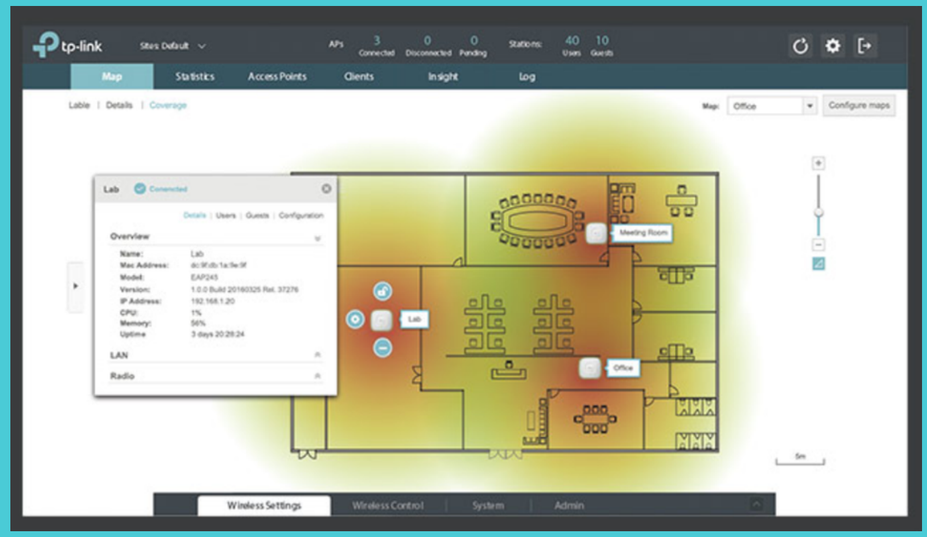
Unable to leave ½ the Excelsior Academy campus without WiFi and therefore disrupt pupils' learning, Rob and his team had to move fast to get the school back online again. Having previously worked with local TP-Link Partner Castle Grange Technologies, Rob was confident that MD Mike Preece and his team of engineers would have a suitable solution to fit the Academy’s budget and time scales.

Network Site Survey

In partnership with Castle Grange Technologies, TP-Link carried out a network site survey to audit the current network. The site survey provided a heat map of the campus and the data to accurately quantify the hardware required to deliver a seamless, high-speed and secure wireless network across the site. “Without the site survey, we would have massively over-provisioned. Before the survey, we planned to buy 127 access points to cover the Academy. It turns out we only needed 99 to get complete coverage,” commented Rob. “The site survey mapped the position of the existing access points – something that didn’t already exist as they were above the ceiling tiles. It also showed us exactly where to put the new access points for the best possible coverage without causing wireless congestion issues.”

Omada Cloud Control

While the site survey was underway, one of the TP-Link Technical Engineers provided Rob and the team with a live demo of the Omada cloud controller. Remote management via the cloud controller enables them to manage each individual network across the Trust from the office and avoids unnecessary visits to each site. The team demonstrated how heat map data from the site survey can be uploaded into the controller to help resolve issues with individual or groups of access points. “Adding the heat map to the Omada controller is fabulous, it adds an extra dimension to the data we get on each access point. It means we can diagnose and fix issues faster,” observed Rob.



Power Over Ethernet

The combination of features within the Omada range, the support provided during the demos and site survey convinced Rob that it was an ideal fit for the whole Trust. In just 3 weeks the Castle Grange Technologies team of engineers installed and configured 105 access points at Excelsior Academy. Because it was still term time, the team had to work nights and weekends to avoid disrupting lessons. 35 access points were considered critical and therefore prioritised to bring the wireless dead zones back online so lessons could continue using Google Classroom.

[1]Power over Ethernet.

Blazing Fast WiFi

Since installing Omada access points, the school’s network performance has been revolutionised. Average data speeds have jumped from a patchy 45Mbps to 645Mbps across the campus without any wireless dead zones. The Omada Cloud Controller's management tools enable Rob and his team to apply sophisticated network management protocols maximising security and ensuring the quality of service across the network.

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Rob Atkins, IT Infrastructure Manager
Laidlaw Schools Trust

Bandwidth Hungry

Five SSID on different VLAN controllers, each with Access Control Lists provide a secure environment for staff, and pupils to access the best quality learning assets plus provide high-quality WiFi for visitors via the guest network. Having observed network usage behaviour, Rob and the team created a separate SSID for the College students (Yr12 and Yr 13). They restricted bandwidth to prevent excessive YouTube streaming disrupting learning provision for the rest of the school. “You can’t stop 16-year-olds from streaming. However, we can provide them with a ring-fenced network ensuring there is plenty of bandwidth for the rest of the school,” observed Rob.

Seamless WiFi

Using the same configuration across multiple sites ensures that subject specialists and digital leaders who need to move from one site to another, experience a seamless infrastructure at all sites. They can use the same log in details to access the same resources no matter where they are in the Trust. “Like any organisation this size, there are subject specialists responsible for all 7 sites, people like the Health and Safety team, Human Resources, the CFO and CEO as well as the IT Team. They have a job to do and don’t have time to think about the infrastructure that enables them. Like any other multi-site organisation, staff can now move freely, accessing the same services no matter where they are,” commented Rob.

Rapid Site Roll Out

Rolling out new sites using the Cloud Controller takes seconds. Using the batch management features, the team rolled out the existing Excelsior Academy settings to Aceademy 360. The Cloud Controller provides Rob and the team with real-time alerts if there is a problem with an individual access point. Using the desktop or mobile app, they can interrogate the device, make changes or simply reboot it without leaving their office or home office. “The dashboard is so easy to use. We can dip into any sites to check network usage and traffic distribution even the split between upload and download speeds by access point. It means we can be proactive and minimise network outages rather than relying on crisis management when a call comes in from one of the Trusts,” said Rob.

Enterprise WLAN

With the installations complete at two sites and clear quantitative and qualitative evidence, the budget has been approved for Castle Grange to install the Omada solution across the remaining Trusts to support the rollout. “Mike, the MD at Castle Grange Technologies introduced us to the Omada solution. He had successfully worked with the brand before and was confident that it would deliver everything it promised for less than the competition and without ongoing annual license fees, so our budget stretches further. The Castle Grange Technologies team did a fantastic job delivering an enterprise network across multiple sites in less than a month.”