CASE STUDY

From Network Bottlenecks to Site-Wide Confidence

Trinity School's

Network Transformation

1700	200+	Site-Wide
Pupils	Staff	Refresh

About Trinity School

Based in Carlisle, Trinity School is one of the largest schools in Cumbria. The school has grown from three separate schools, a boys school, a girls school and a grammar school.

Today, Trinity School supports around 1,700 pupils and more than 200 staff. Its size and layout mean that technology has to work reliably across a broad footprint, supporting teaching rooms, offices, shared spaces and the day to day operations of a busy school environment. For the IT Services team, led by Sutherland Smith, the network is not simply an IT system, it's the foundation on which digital learning, staff productivity and effective school management depend.

With the continued growth of digital tools, cloud services, wireless devices and connected classroom technologies, the school needs infrastructure that is stable, managed and capable of supporting increasing demand. Trinity School therefore presents the kind of challenging environment where careful network design, strong project management and education sector experience are essential.

The Problem

The school's existing switching infrastructure had originally been installed in 2010. It had served the school well for many years, but changing technology expectations placed demands on the network that it had not been designed to carry. More wireless use, more client devices and greater dependency on fast, reliable connectivity had exposed the limitations of equipment that was reaching the end of its operational life.

As demand grew, performance across the school slowed and bottlenecks appeared, particularly where wireless access points connected back into the wider network.

The complexity of the estate meant that the network was not only ageing, but also difficult to streamline. Traffic had to move across a large site with multiple switch stacks and several linked areas. This created pressure points in the network and made it harder for the IT team to provide the consistent experience that staff and pupils required.

"We've found over the last few years, especially with more use of Wi-Fi, there was too much demand on the network and it's really slowed down."

By the time Trinity School approached Virtue Technologies, the infrastructure had become increasingly unsuitable for the future needs of the school. It was no longer enough for the network simply to function. The school needed a stronger foundation that could support reliable wireless performance, modern classroom use and improved visibility for the IT Services team.

The Solution

Trinity School had worked with Virtue Technologies for a long time and turned to the team for advice on the best way forward. Virtue began by completing a full survey of the site, taking account of the school's layout, the existing switching infrastructure and the need to design a solution that would work across all areas of the estate.

Following the survey, Virtue developed a detailed plan and design for the network refresh. This included pricing and a review process that allowed Trinity School to confirm that the proposed approach met both its technical and financial requirements. Once the design and costings were agreed, the project moved into implementation.

"Virtue came in, completed a full survey of the site and came back with a plan."

The project was delivered during the school holidays to minimise disruption to teaching and learning. Over a period of less than two weeks, Virtue Technologies replaced the entire switching infrastructure across the whole site. The work was carried out by Virtue engineers Mike Cassidy and Ryan Williams, supported by careful planning that had already been completed before the main installation began.

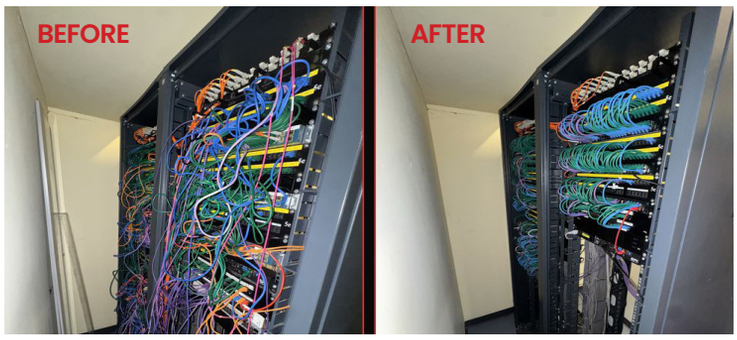
Mike had been on site for several days before the main work started, designing the network refresh and preparing the topology. This meant that when the installation started, the design was ready, the structure was understood and the engineers could focus on delivery. For a school estate of Trinity's scale, this preparation was essential.

"In less than two weeks, we had a complete network refresh done, which was really a big task, but really done really well."

The solution was based on HP Aruba switching, aligned with the school's existing Aruba wireless environment. In addition to replacing the switching infrastructure, new fibre cabling was installed from all areas of the site directly back to the server room. This removed the need for traffic to 'hop around' the school before reaching the core infrastructure and helped create a cleaner, faster and more resilient network design.

Sutherland, the IT Services team leader, is particularly positive about the professionalism of the engineers. Their experience in school environments showed in the way the project was approached, planned and delivered. The result was a major infrastructure replacement completed in a tight window, with the care and attention needed for a busy education setting.

"I just can't fault the professionalism of both the guys. You can just see the way they work, that they are proud of what they're doing."



Benefits to the School

Trinity School now has a stronger switching infrastructure that provides a more stable foundation for teaching, learning and operational technology. The new HP Aruba based network gives the IT Services team improved performance, a modern platform and a more manageable infrastructure. This helps the team understand performance more clearly and respond with greater confidence when supporting the school.

The direct fibre links back to the server room improve the speed and availability of the whole network. By removing unnecessary routes around the campus, the school benefits from a cleaner network path and reduced bottlenecks. This supports stronger wireless performance across the site and creates a better platform for the growing number of devices used by pupils and staff.

"There's no hopping around the school to get to the main server room. The speed and the availability of the wireless network is massively increased."

The refreshed infrastructure also gives Trinity School a better basis for future digital development. As education continues to depend more heavily on cloud platforms, wireless access and connected classroom tools, the school now has a network that is better suited to current and future expectations. Staff and pupils benefit from a more reliable experience, while the IT team benefits from a system that is easier to manage and more stable in everyday use.

For Sutherland and the school, the project has delivered more than a technical upgrade. It has restored confidence in the infrastructure that underpins school life. Trinity School is now better placed to support digital learning, reduce network related frustration and provide the dependable connectivity expected in a large modern school.

"We are so pleased with Mike, Ryan and the end result from Virtue."

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