

Prominent Brisbane school upgrades to Layer 3 switching & Power over Ethernet

Overview

When St Joseph's College, Gregory Terrace (The Terrace) in Brisbane completed the new year 10 facilities, they had a decision to make: install an IT framework in the new buildings and leave the old school IT framework intact, or upgrade the entire school with the latest technology to better support a flexible learning environment.

The Terrace's Network Systems Manager, Martin Humphreys, made the decision to carry out a complete refresh of the existing IT infrastructure to ensure consistency across both campuses, while taking the opportunity to upgrade to Layer 3 switching and Power over Ethernet (PoE).

Humphreys' runs the network, which services 1,226 students and 167 staff, with the help of two other IT technicians. The students, which range from year 5 to 12 inclusive, have a variety of technology support requirements. Subsequently, the IT team already had their hands full and needed to ensure the new infrastructure was going to be easy to manage. Refreshing the school's old network gave them the chance to re-design the entire network so it was easier to manage and troubleshoot.

About the Client

St Joseph's College is a private catholic school in Brisbane, which was established in 1875. The Terrace has a strong academic tradition and counts seventeen Rhodes Scholars among its past students. The college also has a wide-ranging sporting curriculum and 61 past students have represented Australia in international sporting competitions.

www.terrace.qld.edu.au

The Challenge

Martin Humphreys' explains the school network was running off older style switches. "The network was in need of a refresh. The older switches were low on network management features, which made it hard for us to head off issues before they disrupted the teaching environment.

"The new campus gave us the opportunity to really think about the types of technology that could be used to support our teachers and which would open up new ways of learning for our students. We sat down and thought about how we wanted the school as a whole to function and how we could use IT to support the day-to-day running of the school.

"We decided we wanted a wireless network which covered the entire campus with wireless data projectors and students working from laptops. We wanted the environment to be as cable-free as possible, not just for aesthetic reasons, but also for mobility."

The Solution

The Terrace has installed the following NETGEAR products:

- Eight x GSM7312 ProSafe 12-Port Gigabit Layer 3 Managed Switches.
- 48 x WG302 ProSafe 802.11g Wireless Access Points.

Humphreys' explains, "we have found Layer 3 switches far more flexible than Layer 2 and the in-built management features enables us to easily administer assets and users.

"Flexibility and ease of management were top of our list of priorities when we were considering if and how to upgrade the old network. Layer 3 switching delivered on both of these criteria."

The Terrace also took advantage of the upgrade to install NETGEAR's Network Management Software which enables Humphreys' and his team to instantly manipulate every aspect of the network without getting up from the help desk.

The team also uses the software to monitor activities of every host online and manage the printers and NETGEAR switches and access points. This enables the IT team to identify problems and solve them quickly. "The Network Management Software is central to our network management strategy," explained Humphreys'.

The Terrace also installed a Voice over IP (VoIP) network and despite being advised of expected difficulties with integration, had no problems during installation. "Integrating the products from different vendors actually required us to do very little configuration. Initially, we just powered the devices up and did some minor tweaking."

In all, The Terrace spent almost \$76,000 upgrading their network.

"The Terrace's network had been running off Layer 2 switches from NETGEAR. This equipment was still functioning but the school's IT requirements had changed and PoE was a better solution for the growing number of Access Points needed to support the changing learning environment," said NETGEAR's northern regional manager, Thomas Leggett.

"Layer 2 switches do not support VoIP or PoE applications. The Layer 3 GSM7312 and FSM7326P switches do, while creating a more robust and flexible network and giving users a wider array of tools to control the environment."

The Results

"Once we had made a decision about the type of network we were after, what products we needed to deliver that and which vendors we were comfortable with, it only took around five days work in total from conception to going live."

"NETGEAR provided several products for us to trial before we made the final decision about which switches and access points to go with. This helped us work out the ideal network configuration for our environment.

"NETGEAR has worked very closely with us for three years and keeps a close eye on how the network is running. We would absolutely recommend NETGEAR to other educational institutions.

“Layer 3 switching enabled us to easily integrate a voice and data network and delivered better routing. Apart from using QoS and VLAN, we can now actually do some network tweaking using layer 3 protocols,” said Humphreys’.

The Terrace is using PoE to power all access points, which has delivered considerable savings as the school has not had to install additional electrical wiring and does not require the mains to power the access points. The college is also using PoE to link call manager phones to the network.

The access points are being used to run the wireless computer network and other terminal equipment such as printers.

“PoE and wireless dissolves the boundaries of the classroom wall, which benefits both teachers and students. Wireless has expanded the possibilities of the learning environment,” said Humphreys’.