

New NETGEAR wireless network allows teachers to concentrate on teaching, rather than managing technology

The Guardian Angels Primary School in Ashmore Queensland has replaced their existing network with an advanced network from NETGEAR, which easily enables notebooks to be used in different classrooms and gives greater control to the IT administrator.

Guardian Angels Primary School has deployed NETGEAR's WFS709TP ProSafe Smart Wireless Controller, which delivers seamless roaming between access points (APs), centrally and securely manages up to 16 access points and 256 user, identifying unknown access points and technical problems.

ICT administrator for Guardian Angels Primary School, Brett Coad, explains, "This is our second go at deploying a wireless network at the school. We tried access points from another vendor earlier this year and three days after deployment everything started going wrong.



Guardian Angels ICT administrator, Brett Coad, keeps an eye on the wireless network.

"Teachers were having a lot of difficulty connecting to the network and the Internet with laptops during class. We purchased more APs thinking it was a coverage issue, but the signal was still dropping-out."

Guardian Angels Primary School has several trolleys called pods, containing 10 notebooks, which are rotated around the school. The old wireless network required teachers to authenticate each of the notebooks in a pod with the nearest AP before the start of a lesson. If one or more of the notebooks couldn't be authenticated, teachers had to call on ICT support to resolve the issue or else continue the lesson without the required number of laptops.

The NETGEAR Smart Wireless Controller views the wireless network as one AP rather than multiple APs which have unique identification. This means teachers do not have to authenticate their pods as they move classrooms and therefore APs, which has simplified lesson setup and significantly reduced the number of calls to ICT support.

"The NETGEAR equipment was up and running on the first day and we haven't had any problems with signal strength or coverage since, meaning classes are no longer being interrupted and teachers don't have to manage roaming between APs -- it just works," said Coad.

The combination of 12 NETGEAR APs and the Smart Wireless Controller delivers one integrated wireless network extending across 300 metres long by 150 metres wide, covering most of Guardian Angels Primary School.



Students enjoy learning in the great outdoors.

“The signal strength and coverage of the NETGEAR access points is very impressive. I can walk around the entire school with a laptop, check emails, access the network and surf the Internet. We’ve also tested coverage walking around the school while talking on a Skype WiFi phone to a mobile phone and didn’t lose the connection once,” said Coad.

“Two adjacent classes can be using the wireless network at the same time, and the network will direct each user to whichever AP will give them the strongest signal. This means we don’t have problems with the network connection dropping out and interrupting classes or study time and I’m not getting frustrated phonecalls from teachers anymore.”

Reseller David Bray of Brayworth Computer Services, worked with NETGEAR’s Thomas Leggett to deploy the wireless network. “We rolled out the first few access points to get things up and running, then we uploaded an aerial image of the school and its buildings to the Wireless Controller, which we were able to get from Google Maps,” said Bray.

Using the map, Bray, Coad and Leggett marked the placement of each AP and the coverage area so dead-spots could be easily identified. The map is also integrated with the network security system -- when the Smart Wireless Controller picks up a rouge or unknown device within the wireless network (such as a neighbourhood access point or a hack attempt), the event is easily identified and the location of the breach is indicated, allowing the school to take action.

Bray explains, “To roll-out the NETGEAR wireless network, we installed the Smart Wireless Controller in the switch cabinet, turned on the first AP and we had a network. It then took only four hours to install the remaining 11 APs around the school.

“The school spent around eight months battling with the old wireless network and the teaching staff had lost confidence in the technology. The NETGEAR wireless network, by comparison, is so easy for the teachers to access, that, with a bit of user education, classes are running smoothly again.”

Coad has configured the Smart Wireless Controller in master mode, which means the configuration and security parameters are standardised for the entire wireless network.

“I’m still reviewing all the capabilities within the Smart Wireless Controller,” said Coad. “The device allows me to log onto any AP and analyse loading, signal strength or interference issues. I can reboot individual APs if needed from where I’m sitting, which means I don’t have to interrupt classes -- it’s all so easy to use and the device will alert me straight away if something is wrong. Its an extremely intelligent device.”

The APs supports 120 laptops, around 50 PCs and 20 printers.

Coad will deploy four more access points and 1-2 9Dbi antennas during the next few months to extend wireless coverage to the sports area and new school buildings which are under construction. This will increase the footprint of the wireless network to 400 metres by 250 metres.

“Because the wireless network will cover the entire playground, teachers will be able to take photos during athletics and swimming carnivals, load them onto a laptop and post them to the website without having to go back to the office. This means that parents who weren’t able to make it along to the carnival can log on during the day and see pictures of their kids competing,” said Coad.



The wireless network completely frees up the students to roam around campus with their laptops.



Principal Terry Gimpel looks over student's work.

About Guardian Angels Primary School

Guardian Angels Primary School has around 700 students from prep to year seven and 53 full-time and casual teaching and administration staff. The school is located in Ashmore, on the Gold Coast of Queensland.

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