

Tawa Intermediate School Goes Wireless with NETGEAR

Overview

A forward thinking New Zealand school wanting to provide its students with innovative integrated learning methods has installed a NETGEAR wireless network to give students and staff the freedom to access internal and external educational resources from anywhere on the campus.

Tawa Intermediate School has more than 500 students and staff that would rely on the wireless network for their learning so it was important to create a network with multiple integrated access points for seamless roaming. Due to the volume of personal information the school holds, such as student records, network security was a high priority.

Additionally the network needed to be user friendly so the school did not have to spend a lot of time training staff to use it.

The Client

Tawa Intermediate School is located in the suburb of Tawa, just north of Wellington, New Zealand. It is an Intermediate School catering specifically for students in Years seven and eight, between the ages of 10 and 13.

The school has 16 classes with a comprehensive specialist program that includes information and communications technology. It recognises the importance of challenging pupils academically, physically, socially and culturally.

<http://www.tawaint.school.nz/>

The Challenge

Tawa required a cost-effective network solution that was user friendly and built to last. The expectation was that every student should experience seamless roaming so learning was not interrupted - they could traverse the campus with their laptop computer without ever losing connection to the network. Dual band access points were also a necessity to give staff and students their own dedicated network, which helped balance the network's load.

Though most of the staff and students at the school are IT competent, ease-of-use was a definite requirement as any time spent learning complex systems would be valuable time taken away from learning.

A double storey building also presented a potential challenge. Preliminary tests showed its concrete lining severely impaired wireless signal strength meaning that any system deployed would need a strong signal or a specially configured design to overcome the problem.



The Solution

Reseller Norrcom installed 18 NETGEAR access points (APs) and two ProSafe Smart Wireless Controllers to provide the school with a single integrated wireless network with campus-wide coverage that was easy to manage on-site and remotely.

Each AP is able to support a classroom of 30 students and their teacher.

Norrcom Director, Paul Norris, recommended the NETGEAR solution given the school's particular requirements. In addition, the NETGEAR ProSafe Smart Wireless Controller solution was also the most feature-rich, reliable, value for money unit out of the solutions tested.

Norris recommended the school install two wireless controllers given the large number of access points needed to provide campus-wide coverage -- the wireless controllers centralise control of the network and allow for seamless roaming between APs.

"The Wireless Controller is an essential part of the school's network as we can monitor the system and its users from a single point," said Norris. "We can access the server remotely and see the whole wireless network through the controller. This means we can monitor things such as signal strength and user loads, as well as identify technical and maintenance issues such as the exact location of interference, security breaches or damage to hardware."

The NETGEAR equipment also handled the concrete building well, with the APs in every room able to maintain strong signal strengths and provide instant connectivity.

The Outcome

The NETGEAR ProSafe Smart Wireless Controller has allowed staff and students alike to easily access the school's wireless network without a costly overhaul or time-consuming reconfigurations of existing hardware.

With Norrcom providing full onsite technical support, the staff is free to concentrate on the more important matter of educating their students. "Students and staff alike simply need to lift the lid of their laptop computer anywhere in the school and they are connected," said Norris.

The APs support two separate bands simultaneously enabling system administrators to immediately identify pupils who use the 802.11g band, and teachers who are on the 802.11a frequency. Staff can send sensitive information wirelessly, confident the features of the Wireless Controller prohibit any unauthorised access to the network.

Principal Carolyn Stuart recommends NETGEAR to other educational institutions. "Our students have the freedom to learn without being restricted to the confines of a classroom, while teachers now have the ability to interact and collaborate with their pupils in a more open forum," she said. "I believe this allows us to provide an educational environment that is relevant to 21st century students."

In line with New Zealand Education Minister Chris Carter's vision for real-time management of education and assessment information, the NETGEAR network will facilitate the school's ongoing transition to a modern integrated educational centre.



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