bluesocket

A Bluesocket Customer Profile

Cisco and Bluesocket Power and Protect New Zealand's First and Largest Wireless Campus

Before building its campus wide Cisco-based wireless network in 2001, consistent access was a problem at Saint Kentigern. With its original wired system, it was difficult for everyone who wanted to browse the College's intranet or do research on the Internet to get online at the same time. "That's the main reason we wanted wireless," said Walter Chieng, Director of Information Technology. "It allows everyone access when they need it. Additionally, it allows for easy and virtually unlimited expandability."

Boundless Access—Powered by Cisco

Cisco was an important partner in building Saint Kentigern College's wireless system. The range, quality of data transfer, unobtrusive installation, and tiered security features in Cisco's Aironet access point systems were judged superior in bench tests against two competitive products. According to Chieng, "The Cisco Aironet was our product of choice because we believe that it is the best product on the market for delivering wireless to the students on the campus. Reliability and security were two major factors considered in making this decision."

More than sixty Cisco Aironet Access Points have been deployed among the College's 12 main buildings. The access points are the wireless transceivers that connect to the College's cabled backbone infrastructure. While Cisco Aironet products are fully 802.11b and WiFi-compliant, they also provide superior tiered security from wireless encryption to the dynamic 802.1x security framework developed in conjunction with Microsoft.

Since the initial installation of the campus wireless network in May 2001, staff and students now connect to the Local Area Network and its "First Class" intranet application from anywhere on the campus without the need for a physical connection. Additionally, by using Cisco switching in the core, this ensures that Saint Kentigern's LAN is capable of supporting future voice and video requirements such as IP telephony.

The Need for Effective Wireless Management

In order to prevent ever-inquisitive students from accessing parts of the network where they shouldn't be (e.g. servers that contain grades, examinations and confidential records) the College recognized the need to install a wireless gateway solution to secure the WLAN. The interest in a wireless gateway was also driven by a desire to provide separate but appropriate access to students, faculty, staff, and network administrators.

SAINT KENTIGERN

St. Kent's at a glance

Saint Kentigern College is the first and largest wireless campus in New Zealand.

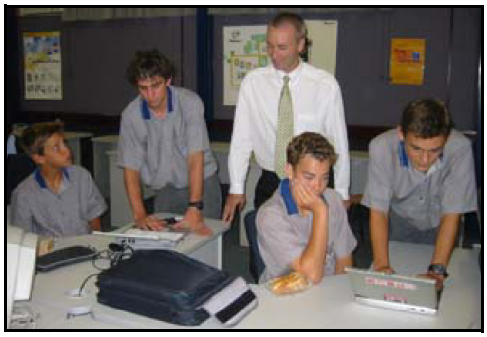
The independent secondary school in Auckland, the nation's largest city, has approximately 1,450 students, ages 12 to 18.

Saint Kentigern College's strong Information Communications and Technologies (ICT) programme is integrated across the curriculum.

All departments have consistently been encouraged to adopt new strategies to include ICT tools in their delivery to the students to make learning more exciting, relevant and without boundaries.

Wireless today and tomorrow: home, school, and the workplace

Saint Kentigern College participates in SNAP (Schools Notebook Access Programme—a Toshiba notebook programme that supports more than 80 schools in Australasia), which gives parents the opportunity to purchase Toshiba notebooks through the college at best pricing possible.



Most of Saint Kentigern's students live at home and commute daily to the college. Where home access to the college's LAN and the Internet is needed, families can install a "Wireless Home Option." This option includes a Cisco Aironet 340 Series Base Station installed in the student's home.

With access to state of the art technology, on campus and at home throughout their secondary education, Saint Kentigern College graduates tend to be innovative users of technology in business and further studies.

In evaluating wireless gateway solutions, the College defined the following key requirements:

- **Superior Cisco Interoperability.** The wireless gateway solution would have to work smoothly with the College's legacy Cisco infrastructure. It would have to interoperate with their existing installed Access Points and scale with College's anticipated expansion.
- **Effective Bandwidth Management.** Wireless is a shared medium. The College wanted to make sure that they could provision appropriate bandwidth-enabling a classroom of students to surf the Internet while other staff could simultaneously run administrative applications on the same WLAN.
- **Teenager-proof Access Control.** Saint Kentigern College offers network engineering courses that are recognised internationally through their Cisco Academy.

In consequence, students in the Senior School of the college are particularly well equipped with the networking knowledge that could make the network unusually vulnerable to probing by these inquisitive teenagers.

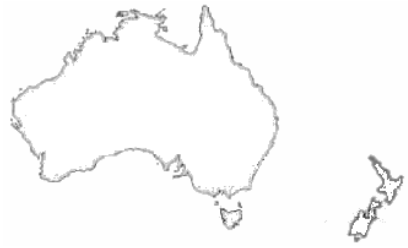
Secure Access—Protected by Bluesocket

Ultimately, Bluesocket Wireless Gateways were selected for deployment at the college because of their confirmed Cisco interoperability and support for easy but controlled access, bandwidth management and simple administration—in a single solution.

Because Cisco is a strategic technology partner of the college, their input was particularly important. Cisco-New Zealand's wireless experts recommended Bluesocket to Saint Kentigern after they confirmed the interoperability of Bluesocket with the existing Cisco WLAN infrastructure, and agreed that the Bluesocket solution would deliver WLAN management features that no other product could provide so cost-effectively.

Largest WLAN Campus Down Under

Saint Kentigern College is the largest Cisco-wireless campus across any sector—education or business—in Australia and New Zealand.



Bluesocket's distribution partner in New Zealand, wireless integrator Kalooma (www.kalooma.com), worked with Cisco to optimize the design of the entire College network to accommodate Bluesocket Wireless Gateways at the core. Running since 2001, the WLAN now incorporates a new Cisco switching infrastructure and four Bluesocket Wireless Gateways.

Bluesocket Wireless Gateways went beyond Saint Kentigern's initial requirements for wireless security and management by delivering:

- **Universal WLAN Authentication.** Through its Bluesocket Wireless Gateways students and staff log into a Windows Domain and are authenticated to the WLAN seamlessly with Bluesocket's unique "Transparent Windows Domain Login." A single sign-on is all that is required to access the network from anywhere on campus.
- **Access Control.** Bluesocket's easy-to-manage "role-based access control" enables the college's system administrators to limit students' access to only those network resources for which they should have access. In fact, the College decided to put a number of workstations that were in locations that were not physically secure under Bluesocket management. This allowed them to enforce the same access control and authentication policies on both wireless and wired-workstation users.
- **Secure Mobility™**. Bluesocket's Secure Mobility™ technology allows the College's highly mobile student body to roam freely across the campus without losing their network connection or requiring them to log-in again each time they moved from one subnet to another.
- **Bandwidth Management.** Bluesocket "Traffic Engineering," allows the College's network administrators to assign an appropriate maximum bandwidth to each role or to each individual student for incoming and outgoing wireless traffic. Thus the College doesn't have to worry that students accessing the Internet for bandwidth intensive applications might adversely affect network performance for users running critical administrative applications.
- **Simplified WLAN Management.** With its Bluesocket Wireless Gateways built into the WLAN the College's system administrators can review, modify and monitor all activity including which students and staff are connected, when they connect, and how much bandwidth they are using. Built-in logging and reporting functionalities give the College's system administrator a real-time view of activity as well as delivering historical session audits of WLAN usage–helpful in planning for future network growth.

Learning Made More Exciting, Relevant And Without Boundaries

According to Chieng, "Every student has a wireless notebook computer that is used extensively for class work, research and homework. Thanks to Cisco, Bluesocket, and Kalooma—Saint Kentigern can now provide our students with Internet and intranet access to resources for learning anytime, anywhere—without compromising network security or performance."