Wesley College Unites Campuses, Improves Educational Experience with Cisco Unified Communications and Wireless Network

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John McAlister, College Head of Information Management and Technology Services, Wesley College

Founded in 1866 as a boys' school, Wesley College has grown to become a coeducational, multi-campus primary and secondary school with more than 3,000 students from ages three to 18. The College has four campuses in Melbourne, Australia, two at St Kilda Road, and one each at Elsternwick and Glen Waverley. It also has a country campus at Clunes in regional Victoria.

Wesley College prides itself on providing world-class education and exciting learning opportunities for students. The College places great importance on technology as an integral part of the education process, believing that information and communications technology encourages new ways of thinking, provides new learning opportunities and connects students and teachers to a global community.

Wesley College operates Australia's largest school notebook PC program. Every full-time staff member and student from Year 5 to Year 12 has his or her own laptop, and these are used as an integral part of the curriculum.

Business challenge
Wesley College was running aged PABX telephone systems at its four Melbourne campuses. Each PABX came with its own set of equipment and number range. The systems regularly required repairs due to faults and it was often difficult to find parts.

The PABX systems were disconnected, meaning receptionists at each campus could not transfer calls across campuses.

"We had to ask callers to make another call, which was hardly ideal," explained John McAlister, College Head of Information Management and Technology Services, Wesley College. "Maintaining separate telephony systems across four campuses also meant managing separate directories. If a staff member wanted to contact a colleague, they had to know at which campus they worked before they could look up their number in the correct directory."

As well as internal inefficiencies, these issues were making it difficult for the College to deliver the high levels of service its customers expected.

In addition, teachers did not have individual phones and messages were often lost or delayed, with Post-It notes stuck to desks used in place of voicemail.

Solution

Wesley College went to tender and reviewed a number of options, before deciding on a Unified Communications solution from a Cisco Gold Partner.

"It was clear that if we wanted a system that would last us for the next 10 years, unified communications was the way of the future," said McAlister. "It also presented a good opportunity to replace and update our switching infrastructure."

Wesley College rolled out 650 Cisco Unified 7900 Series IP handsets and 500 Cisco IP SoftPhones.

"We worked out that the best way of providing telephony for the teaching staff was to use Cisco IP SoftPhones to provide a telephony interface on each teacher's notebook PC," said McAlister. "With 10 or more teachers at a time in the staffroom, and with relatively small workspaces, it was impractical to install individual desk phones."

Staff can use Cisco Unity Unified Messaging to listen to email over the telephone, check voice messages from their notebooks and send, receive or forward faxes from any location on the four Melbourne campuses. They can easily make and return calls using their notebooks and Cisco IP SoftPhones.

The College was also keen to reduce the reliance on mobile phones by staff working across the grounds, such as security staff and grounds keepers. It decided that the best way to do this was to establish a wireless network so these staff could use wireless IP handsets to communicate.

"We originally wanted to implement a wireless network so we could use wireless phones," said McAlister. "However, we quickly extended this to providing wireless access to all our network resources for staff and students at all campuses and integrating the wireless network with the unified communications system."

The scale of the rollout was immense. The network needed to cater for simultaneous access for more than 100 classes of 25 students. To make things worse, many of Wesley College's buildings are close to 150 years old with very thick masonry.

The College installed an average of three Cisco Aironet 1130 Series wireless access points in each classroom to cater for brief periods of intense use, such as the beginning of class. As a result, staff and students benefit from a dense wireless network that allows them to access the school portal or complete teaching duties whenever or wherever they need.

With a total of 375 wireless access points, the network covers classrooms and administration areas as well as shared spaces such as libraries, corridors, gardens and playing fields.

The College is also using the wireless network to provide other cost-effective ways for staff to work more efficiently. It has issued 50 wireless IP phones to security, healthcare and maintenance staff. For example, health centre nurses can use the phones to call the parents of sick students, while remaining at the bedside and avoiding the cost of a mobile phone call.

Wesley College also deployed three Cisco VG248 Analogue Gateways to support the delivery of video conferencing services for staff to collaborate across campuses.

The unified communications implementation was completed in November 2005, and the wireless network was implemented in June 2006.

In June 2007, Wesley College joined its Year 9 residential campus at Clunes, north of Ballarat in regional Victoria, to the rest of the network and the unified communications system over a secure Cisco virtual private network. This ensures a seamless experience for students staying at Clunes, as they can now use the same login details and connect to the wireless network as they would while at school in Melbourne. For staff, the use of reliable wireless phones is essential on campus as local mobile phone coverage is poor in the area.

Results

Running unified communications and wireless access over a single converged network means Wesley College can now take advantage of intelligent technology solutions and benefit from economies of scale.

Improved educational experience for students

The wireless network across Wesley College campuses ensures students can access critical learning tools such as study resources and the internet whether they are in class or working in other areas.

"The network complements how students wish to learn; they can access resources anywhere and at a time that suits them," said McAlister. "We don't have computer labs full of desktops that need to be locked at lunchtime; the technology is always available to our students. We're using technology to improve the educational experience for students and the skills they learn will be incredibly valuable for life after school.

"The Cisco solution has given us a really powerful wireless network. In any given hour we can have more than 1,500 users on the wireless network and it performs as a wired network does."

Seamless contacts with a unified communications solution

Moving to unified communications has also brought all campuses, including Clunes, together on the one phone system with a single phone number range and a comprehensive directory. External callers can now ring any reception desk and be directed to the appropriate person, regardless of location. Call queues are managed so that receptionists at different campuses can pick up calls if another campus is busy, which has significantly improved the College's ability to answer all calls in a timely manner.

In addition, joining the regional Clunes campus to the unified communications network means callers can dial the main school reception and be diverted to this campus without incurring long-distance call rates.

"Although implementing a single number range may seem like just a bit of housekeeping, it has really contributed to creating a sense of a whole college, rather than five different entities," said McAlister.

Individual voicemail for teachers

Using Cisco IP SoftPhones for teachers has ensured they are connected and up to date with messages, no matter where they are.

"When teachers are on the network, whether wireless or physically connected, they can now have their phone with them and receive voicemail through their mailboxes," said McAlister.

"In one day, teachers went from having a shared phone in the corner of the staffroom and using Post-It notes to voicemail for the 21st Century. The 'ooohs' and 'aaahs' we received at the demonstration were heartening – teachers were really amazed at how this would change the way they worked."

With campuses so far apart, Wesley College has also saved time and money by holding inter-campus meetings by video conference.

Stable, easy-to-manage network

Managing one converged network – rather than several separate PABX systems – has dramatically reduced the amount of time the College's IT team spends administering phone and network systems.

"To manage 375 wireless access points and a unified communications system across five sites, I only need one full-time network administrator, with the core switches and Cisco Unified Communications Manager monitored remotely by our Cisco partner," said McAlister. "The system requires minimal monitoring. Most of the network administrator's time is spent on new work and projects to improve the services we provide to staff and students. He's not wasting his time troubleshooting, configuring or tuning the system.

"The Cisco Unified Communications solution is a highly reliable installation and we couldn't be more impressed."