

Australian Educators Deploy Robust Wireless Network



Northern Territory Department of Education and Training implements network to support student achievement and reduce costs.

EXECUTIVE SUMMARY

Customer Name: Northern Territory Department of Education and Training
Industry: Education
Location: Australia
Number of Employees: 4,500

BUSINESS CHALLENGE

- Reduce user reliance on expensive cellular networks in remote schools, while providing secure access via mobile devices to online applications
- Address need for standard wireless network access at schools and department corporate sites
- Expand wireless coverage to remote campuses through a centralized solution and enable easier network management for efficient trouble shooting

NETWORK SOLUTION

- Standardize on Cisco solutions for secure wireless networking access for students

BUSINESS RESULTS

- Improved network maintenance and administration productivity
- Reduced network support costs
- Enabled reliable, secure access to wireless connections for students and faculty

Business Challenge

A swath of land spanning central Australia to the country's northern border with the Timor Sea, the Northern Territory is home to more than 225,000 residents, who live among the Territory's 520,000 square miles. Like all federal territories and provinces, the Northern Territory provides its residents with primary and secondary education opportunities through an expansive network of more than 150 public schools, 80 of which are located in remote areas, serving nearly 30,000 students. The school system is managed and operated by the Northern Territory Department of Education and Training (NT DET).

Managing such a widespread system of schools presents unique challenges, especially when it comes to providing technology solutions and dealing with a complex network infrastructure. With many of the remote schools lacking a viable wireless network, students and staff were often forced to connect to network services via their own expensive 3G cellular networks or through the LAN. Students using the LAN were unable to use their mobile devices within a campus, limiting the flexibility of how they accessed online applications.

In the past, school computer network components were purchased individually as needed, and networks were managed locally at each school. In the schools that had a wireless network, no integration was available with any directory services to provide authentication, and the nonstandard configurations were difficult to maintain and support through the organization's Help Desk. NT DET needed to standardize on a high-capacity enterprise wireless network service that would span all government schools and business locations. Critical to the success was finding a solution to deliver a reliable, secure wireless network that could be centrally managed on a strict budget.

“The Cisco network makes learning in remote schools more convenient and flexible as students can now use their mobile devices and easily access our wireless network to tap into the wealth of rich, dynamic learning options available through the department.”

— Gregory Moo, CIO, Northern Territory Department of Education and Training

“We wanted a different approach to providing students and staff the technology and educational resources to keep up with the demands of 21st century education,” says Gregory Moo, CIO for the Northern Territory Department of Education and Training. “Cisco offers cost-effective, secure, and efficient network solutions to help faculty collaborate more frequently and improve student learning experiences inside and outside of the classroom.”

Network Solution

The Northern Territory Department of Education deployed a comprehensive Cisco wireless network throughout the Territory to provide students and staff with cohesive and secure access to educational resources from approved mobile devices, anywhere on campus, at any time.

After evaluating other solutions and negotiating within its budgetary constraints, NT DET deployed a Cisco[®] Flex 7500 Series Cloud Controller, the first commercial deployment of these controllers in Australia, to extend wireless services to all the schools and manage the network from a central point. The department also deployed 80 Cisco 2504 Wireless Controllers, also the first commercial deployment in Australia, connected via a 4 MB satellite link to provide wireless to the remote mid-sized schools. The smaller schools are provisioned to connect directly to the 7500 Cloud Controllers for wireless access.

Wireless access in school buildings is delivered through more than 2500 Cisco Aironet[®] 1042 and 3502 access points with CleanAir technology, which provide automatic adjustments to access points to optimize wireless coverage by overcoming issues with radio frequency interference and school floor plans.

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“The Cisco Wireless Control System (WCS) provides us with centralized network management, which streamlines network setup and reduces the number of support resources needed for troubleshooting,” Moo says. The department is also currently in the process of migrating to the Cisco Prime Network Control System, a comprehensive management platform that delivers converged user, access, and identity management, with complete visibility into network endpoint activity regardless of device, network, or location.

The department’s limited budget means that purchasing new machines for each faculty member and student is not feasible. A comprehensive Cisco wireless network enables students, faculty, and staff to securely access school networks from virtually any device (laptops, tablets, iPads, and smart phones) whether it is a personal device or school-issued.

“The bring-your-own-device capability is a critical service for us, because we can extend the reach of our network without having to invest in additional devices,” says Moo. “Students and faculty are free to access the network from the device most convenient for them for greater flexibility and a better learning experience while automatically adhering to security policies and rules to protect the network.”

PRODUCT LIST
Routing and Switching
<ul style="list-style-type: none">• Cisco Flex 7500 Series Cloud controllers
Wireless Access
<ul style="list-style-type: none">• Cisco Aironet 3502 and 1042 access points with CleanAir technology• Cisco 2504 Wireless Controllers• Cisco Wireless Control System• Cisco Prime Network Control System
Security and VPN

Business Results

Standardizing on Cisco technology gives the NT DET an enterprise-grade, robust borderless network that enables students and faculty to easily access collaborative and educational tools. With Cisco network components, employees, staff, and students can connect to the network from anywhere on campus, at any time, using personal mobile devices, laptops, or desktop PCs. Unlike in the past, when access was extremely limited, a borderless network provides additional flexibility in how students learn on campus.

“The ability to connect with a range of devices and the flexibility mobile connectivity offers in the classroom makes learning more engaging for students and teachers,” Moo says. “The Cisco network makes learning in remote schools more convenient and flexible as students can now use their mobile devices and easily access our wireless network to tap into the wealth of rich, dynamic learning options available at that campus.

The wireless Cisco network has also had a profound impact on the department’s bottom line and operations. In addition to enhancing the services provided to students, faculty, and staff, the new network has helped achieve significant cost savings and improved productivity due to network standardization and centralized management, as opposed to the individually managed disparate networks of the past that required a larger staff and more staff hours.

Just as students and faculty members can use the device of their choice to access online coursework, administrators can use their personal devices as well as department-issued ones to manage the network. This flexibility, together with a centrally managed network, gives employees better network visibility, enabling them to streamline operations, and allowing the department to reduce staff in remote schools.

“The Cisco Wireless Control system, gives us a real-time, comprehensive view into network activity, including any issues at remote schools,” Moo says. “Identifying these concerns remotely and deploying a fix eliminates travel costs associated with having to send support staff to troubleshoot issues. We’ve seen a significant decrease in our support-related costs, improved reliability, and a boost in overall productivity.

Cisco has helped transform student learning and business operations at Northern Territory schools. With support for multiple platforms and devices, as well as ongoing, automatic deployment of security protocols in the cloud, the department has a powerful, flexible, and stable platform to provide widespread wireless access to students and faculty across the region.

“Our Cisco network has completely revolutionized the learning experience in our schools for both students and teachers, while helping us get the maximum value from a limited investment,” says Gregory Moo.

Next Steps

NT DET is presently deploying Cisco Prime Network Control System.

For More Information

To find out more about the Cisco Unified Wireless Network and 802.11n technology, visit:

<http://www.cisco.com/go/nextgen-wireless>.



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