

Australian State Deploys Centralized Public School Network

Victoria Department of Education and Early Childhood Development lays foundation for rich online learning environment.

EXECUTIVE SUMMARY

Customer Name: Department of Education and Early Childhood Development (DEECD)

Industry: Education

Location: Victoria, Australia

Number of Users: 450,000 and up to 400,000 devices by end of deployment

BUSINESS CHALLENGE

- Provide enterprise-grade, centralized, and standardized network infrastructure to support DEECD online learning environment
- Meet increasing demands for rich digital content and video over the network
- Identify efficiency improvements in climate of operational budget pressure

NETWORK SOLUTION

- Updated, centralized Cisco network for wired and wireless access in 1000 DEECD schools
- Cisco wireless LAN controllers, Cisco Catalyst 3560-X Switches, and Cisco Catalyst 2960-S Switches

BUSINESS RESULTS

- Enhanced learning and collaboration experience by supporting DEECD learning management system
- Reduced complexity and total cost of ownership through smarter, standardized network
- Improved data security

INTEGRATOR PARTNER

- IBM

Challenge

To bolster its future economy, the state government of Victoria, Australia set out to transform the IT infrastructure supporting teachers and students at more than 1000 schools. The Victorian Department of Education and Early Childhood Development (DEECD) wanted to standardize the school network under its School Technology Architecture and Resources (eduSTAR) platform to provide an enhanced, consistent, and more secure online experience for all students and educators. This framework was to play a key role in providing access from schools to the DEECD's secure web portal to enhance learning and collaboration opportunities for 50,000 Victorian teachers, 400,000 students, and parents.

The plans required best-in-class technology to help youth build the skills to succeed in the 21st century, including the ability to use a wide range of technology and collaborate effortlessly across geographic and technical boundaries. The network had become a critical platform to support connecting students and teachers to the available rich educational content. Increasingly, this content is delivered as powerful multimedia and video, requiring networks to support more traffic and enhanced service capabilities.

In Victoria, a 1:1 computing model in secondary schools is poised to create massive network loads, with over 170,000 wireless devices simultaneously accessing school networks across the state. A

crucial element for successful implementation of the program is an appropriately designed wireless network, which would help ensure efficient utilization of the significant investment in devices and new models of teaching and learning across Victoria.

Solution

The DEECD completed an exercise with Cisco to define a centralized 802.11n-based wireless solution for its network to enable high-bandwidth applications such as high-definition video and voice. This new network would form the foundation of a broad technology platform designed to improve educational opportunities, boost outcomes, and energize the learning experience in schools statewide.

The state of Victoria opted to allocate approximately \$25 million toward deploying an updated, centralized Cisco network for wired and wireless access in over 1000 DEECD schools. This deployment included Cisco® wireless LAN controllers, supporting approximately 20,000 additional wireless access points by the end of 2011, plus Cisco Catalyst® 3560-X Switches at the network core, and Catalyst 2960-S Switches at the edge to support more than 1000 schools. With the goal of providing a reliable platform to enable staff and student access to learning resources, the DEECD selected an enterprise-grade Cisco solution to leverage the proven performance and reliability of Cisco technology, as well as the longer lifecycle and reduced ongoing maintenance.

“The Cisco network infrastructure enables optimized access to rich learning resources for academic excellence to propel Victoria’s government schools to a premiere level. This opens up a new world of learning and teaching opportunities in the classrooms and beyond.”

— John Waddington, Assistant General Manager, Information Technology Division, DEECD

IBM served as the system integrator and deployed the enterprise wireless network to support eduSTAR. IBM's role included installation of Cisco wireless LAN controllers and switches to cater for the increased number of student devices. The solution was designed for enhanced wireless density and coverage across learning spaces, as well as improved access and control through the implementation of network policy server devices at each school.

Results

The standardized Cisco network architecture reduces the complexity of administering disparate environments across Victorian school campuses, helping reduce the total cost of ownership for Information and Communication Technology (ICT) while leveraging previous ICT investments. At the same time, advanced technologies integrated into the Cisco solution extend the same level of security, reliability, and robust services provided by the wired network across the wireless environments at schools as well.

The new network helps support the eduSTAR platform, which provides schools with standardized models, patterns, management practice, and tools to deliver an effective mix of educational software and curriculum resources. Over 80 software applications and 24 video tutorials are available to teachers and students via eduSTAR, covering mathematics, 3D modeling, multimedia presentations, typing tutorials, web authoring, and more.

Greater access at schools helps enhance the value of the learning management tools, encouraging an enthusiasm for learning and collaboration that grows each time a teacher or student logs in and interacts with the online resources. As more teachers and students use laptops and other devices on campus, the Cisco wired and wireless environment supports improved access to learning tools, whether from a classroom, the cafeteria, or a bench by the playground.

Students can create an online learning portfolio to keep track of their progress throughout their school career. They can also collaborate with other students and teachers from across the district using digital video and web 2.0 tools, access their personalized Learning Tasks, view teacher feedback, find quality-assured online resources and reviewed websites to support their studies, and access community spaces for the latest school news and activities.

Teachers can access learning spaces and online tools that extend the classroom, plan and share learning ideas and activities with colleagues across Victoria, and access quality-assured curriculum resources. They can also

plan, deliver, and assess learning tasks for students, as well as view a rich source of information about each student they teach so they can more easily tailor learning activities to student needs.

“The Cisco network infrastructure enables optimized access to rich learning resources for academic excellence to propel Victoria’s government schools to a premiere level. This opens up a new world of learning and teaching opportunities in the classrooms and beyond,” says John Waddington, assistant general manager for the Information Technology Division at the DEECD.

PRODUCT LIST
Edge and Core Switching • Cisco Catalyst 2960-S Series Switches • Cisco Catalyst 3560-X Series Switches
Network Management • WCS and LMS Management Software
Wireless • Cisco Aironet® 1260 Series Access Points • Cisco Wireless 5508 LAN Controllers

With more than 20,000 wireless access points operational by the end of 2011, the schools are embracing more flexible learning opportunities beyond traditional classroom boundaries. With this foundation in place, DEECD is moving toward a goal for one-to-one computing, so each student has access to a device. By investing in a high-performance network to support teaching and learning, the

DEECD is establishing Victorian public schools as a leader in technology innovation and preparing today’s students to meet the demands of a fast-paced, global economy.

For More Information

To find out more about the Cisco Service Ready Architecture for Schools, go to:
<http://www.cisco.com/en/US/docs/solutions/Verticals/Education/educationsraoverview.html>.

To learn more about the DEECD, visit: <http://www.education.vic.gov.au>.



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