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COMMSCOPE

Ministry of Education (New Zealand) showcases a student-focused network that offers schools reliable and secure connections with CommScope

Since 2013 the New Zealand Ministry of Education and Crown company Network for Learning have been providing managed ICT support for the country's 2,000+ state primary and secondary schools. The Ministry of Education's Te Mana Tūhono ("the power of connection") programme aims to give every student the opportunity to learn and thrive in a safer and more secure online environments.

MINISTRY OF EDUCATION
TE TĀHUHU O TE MĀTAURANGA

Customer
New Zealand Ministry of Education

Location
New Zealand

Challenges

Reliance on network connectivity has been soaring: New Zealand state schools consume more than 5.2 million gigabytes of data each month. Whilst bandwidth demand is growing by an estimated 30 percent each year. More administrators, teachers and students want to connect to school networks using mobile devices. As demand increases, some schools are facing aging and increasingly unreliable Wi-Fi and switched networks.

Solution

As part of the Te Mana Tūhono programme, the Ministry of Education is standardizing school ICT networks using new CommScope RUCKUS equipment.

All participating schools will have the same advanced technology, including Wi-Fi 6 access points (APs), high-performance core, edge and access switches, and secure enrollment software to help schools support BYOD while increasing cybersecurity protection. Network for Learning (N4L) is responsible for the design, deployment,

and support of the new networks, which will use approximately 30,000 RUCKUS APs and 12,000 ICX switches. When the migration is complete, Te Mana Tūhono will reach approximately 850,000 students and teachers.

An epic undertaking creates equitable access to a digital future

This multi-million dollar project to replace aging school network infrastructure is a testament to their efforts.

But this isn't just an upgrade: it's a leap forward in advanced technology. And the scope is breathtaking: When complete, it will span up to 2,000+ state and state-integrated schools across the country. Each school will have a modern, fit-for-purpose ICT network to enable a walk in and work environment for teachers and students.

CommScope RUCKUS won a competitive procurement process to provide modern network equipment for all state and state-integrated schools that opt into the Te Mana Tūhono programme. The RUCKUS equipment met a long list of requirements, including Wi-Fi 6 technology; 10 Gbps backbone switching; reliability; high-density coverage; scalability; port-level security; extended coverage, speed and capacity; converged Wi-Fi and switching; and a simple licensing model.

Standardizing on RUCKUS equipment is also giving the Ministry of Education better economies of scale, which will translate to delivering more capabilities to schools.

Schools support students. N4L supports schools.

Educators should be focused on student performance, not network performance. Which is one reason that N4L and the Ministry of Education has taken a holistic approach to Te Mana Tūhono, making managed network services part of the modernization project.

N4L is contracted by the Ministry of Education to design and deploy upgrades in schools. RUCKUS worked with N4L engineers on the design. Together, they helped create templates for the APs and switches, so equipment doesn't have to be preconfigured.

Once a certified technician installs the equipment on-site, it automatically connects to the N4L's managed services, Technical Assistance Center (TAC), and downloads its configuration file.

The templates have helped accelerate deployment—more than 500 schools have already been upgraded—as well as a reduction in migration costs.

Post-deployment, N4L provides remote support for network equipment performance issues and cybersecurity. "Once the equipment is installed, we can manage the Wi-Fi APs and switches through a single dashboard using RUCKUS Virtual SmartZone. We have visibility across all of the networks, down to the device level, from our TAC," says Hubbard. "The RUCKUS management software provides extensive diagnostics and troubleshooting capabilities. We can drill deep into the network to identify and resolve problems, often before users are aware of them.

The management reporting and analytics will help us with optimization and long-term planning."

"The concept of digital equality is central to N4L. It's about ensuring all schools and kura in Aotearoa New Zealand have access to a reliable, fast and secure network."

Larrie Moore
CEO for N4L

Supporting BYOD while facilitating a safe learning environment

As teachers and students bring more personal mobile devices to access school networks, this introduces new security challenges.

The Te Mana Tūhono programme includes RUCKUS Cloudpath Enrollment System licenses for approximately 800,000 users. Cloudpath is a software/SaaS solution that enables secure wired and wireless network access for BYOD, guest users and IT-owned devices.

The Commscope technology adds identity-aware capability to N4L's reporting app. Schools that choose to use the app have greater visibility over how their students are using the internet, supporting student wellbeing and facilitating a safer online learning environment. In addition, schools become able to create customized firewall filtering profiles for different cohorts and class types.

The power of connectivity builds across New Zealand

The high capacity of the new RUCKUS ICX switched network, combined with the Wi-Fi 6 supports high-density requirements, including online exams.

Schools will have the capacity and speed to support Google Suite, Microsoft Office 365, video streaming and a range of other online resources.

"The amount of R&D that we've done over the last year has been significant. We've got CommScope engineers working in our offices several days a week. We also have access to engineers in the U.S. CommScope not only understands the technology, but they're also a leader in the education market. The partnership has been invaluable to the planning and execution of such a large-scale project."

Clayton Hubbard
Enterprise Architect for N4L

About RUCKUS Networks

RUCKUS Networks builds and delivers purpose-driven networks that perform in the demanding environments of the industries we serve. Together with our network of trusted go-to-market partners, we empower our customers to deliver exceptional experiences to the guests, students, residents, citizens and employees who count on them.

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