

Case Study:



Extreme Networks plays key role in UNE's 'freedom learning'

When the University of New England (UNE), in Australia, chose to renew its ICT infrastructure, the IT team sought to build a strategic asset that would give students a more flexible online learning experience.

After careful review, UNE chose an integrated solution based on Microsoft Lync video-conferencing, supported by network infrastructure from Extreme Networks, and secured by Palo Alto firewall, preparing their online education to achieve exciting new levels. Already students are using X-Box consoles, or other preferred devices, to 'attend' lectures remotely rather than physically present in the classroom or using their laptops.



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The Challenge:

UNE, located in northern New South Wales (NSW) in Armidale, has been an innovator of flexible study for over 60 years, helping students to balance their studies with other commitments. Almost every degree offered is available for online study.

In 2012, the Federal Government issued grants to help regional universities restructure and become more competitive, and UNE earmarked \$6.6 million of its share for ICT. The university sought to replace its aging, low-bandwidth network core with a holistic ecosystem encompassing network solutions, VoIP, wireless, network security, a new website and more.

ICT staff, advised and assisted by Computer Systems Australia (CSA), wanted to use Microsoft Lync as a core-teaching platform, replacing existing solutions such as Adobe Connect. Implementing Lync's video-conferencing would allow students to choose how and where they learn to best fit their independent needs on their preferred devices. To implement an advanced solution supporting 3,000 staff and 22,000 students (18,000 off-campus) at 10 access centres, UNE needed to upgrade the network from 10G to 40G and ensure secured access with the best available firewall solution.



Case Study:

The Solution:

Tight integration was viewed as a critical element in developing a holistic network solution, encompassing communications technology and security. "It was essential that we made certain our environment is rock solid and reliable, to give our users the best experience," said Robert Irving, UNE Director of Information Technology. The university reviewed technology from all relevant vendors and integrators, and chose a solution based on Extreme Networks, Microsoft Lync and Palo Alto.

"We went to the market with an open mind and a key factor in selecting Extreme Networks was its top value in core switching and tight integration with Palo Alto's firewall and MS Lync video-conferencing. It made sense on several layers," said Irving. To enable a faster network, a link was established from UNE's Armidale campus to the national fibre optic grid 330km distant at Narrabri.

Infrastructure rejuvenation began in 2012. UNE's legacy 10GbE backbone (core and distribution) network was upgraded with Extreme's S-Series flow-based switches, delivering a redundant 80Gbps backbone network via aggregated 40GbE trunks and enough 10GbE port capacity to allow UNE to upgrade from 1Gbs to 10Gbs between the backbone and access layers, for user access.

Increased capacity supports UNE's transition to Lync unified communications and Polycom high definition video conferencing solution (supplied by CSA), and also allows the university to take advantage of an AAnet Internet link (upgraded from 1 Gbps to 40Gbps).

Extreme Networks' software-defined network (SDN) solution enabled the triple integration by providing centralized visibility, control and security. At present Extreme's solution includes: eight S-Series S4 chassis with 40GbE modules for core and distribution switching; some 500 C-Series stackable switches; and Extreme Networks' Netsight and Network Access Control for network management.

By architecting a fully integrated Lync solution, CSA were able to provide more for less against other competitive options. This allowed CSA to offer UNE a next-generation strategy, anchored not on telephony, but on collaboration, social media and mobility, with both Skype, Yammer playing major roles.

By adopting a hybrid model, CSA were also able to satisfy the requirements of both staff and students with a single system. Including the wider ecosystem enables UNE to capture and deliver location-independent learning to students/staff on many device types, including ultrabooks, tablets and smartphones.

The Results:

The integration of Extreme's core networks, Palo Alto next-generation firewall, and Lync has given UNE unique levels of identity-based network access control. The ability to identify and authenticate users and give them access to appropriate resources – all via a single pane of glass - is invaluable in an educational environment. Extreme Networks' SDN solution underpins the network access control solution and integrates with Palo Alto's firewall to provide end-to-end user visibility and application level control.

"Having a solid and reliable network with ample capacity has opened up our architecture for adding client services," said Irving. "Making sure that Lync is effective was a key objective, the network now meets our users' needs, and that had been a major problem long term. Today we have far more flexibility and control over our network."

"It all means that UNE is no longer limited by the classroom walls– we can teach online, face-to-face with anyone, anywhere in the world," said Robert Irving. "The integrated solution will enable us to teach people using Lync, which allows students to learn the way they want to learn, in the environment they learn best, and on their preferred learning devices."

"Lync is a core platform, an enabler for using face-to-face tools for teaching that is also allowing staff to provision meetings and conferences among themselves, while reducing their reliance on the IT department. It gives our staff a lot more control."

Irving said that creating an architecture to support Lync has allowed UNE to build for the future. Already the network extends to UNE's second campus at Parramatta, and now a move to Sydney will be possible. Network availability has been consistently over 99 per cent and hit a high of 99.98%. Cloud computing will be a next step.

Case Study:

The Bottom Line:

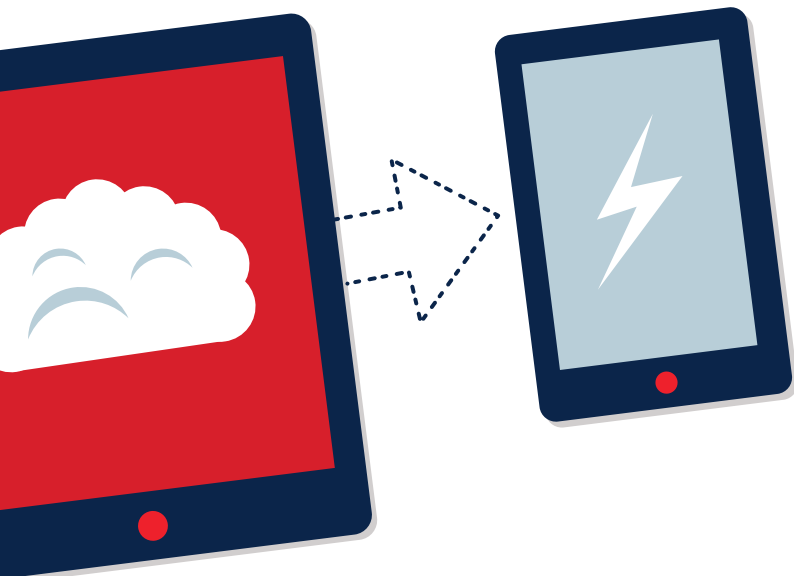
"The SDN-based Extreme Networks/Lync/Palo Alto ecosystem has given us a solution that is greater than the sum of its parts, utilising the visibility and control provided through Extreme's SDN and policy capabilities. The insights this delivers ensure that our core communications platform always performs at its peak, and Lync call quality supports teaching and learning across the globe," said Robert Irving.

By providing students with an online tool for learning using their device of choice, the integrated solution is allowing UNE to grow its online capabilities, which is substantially increasing revenue stream potential in a competitive education environment.

"We see Lync as a really great enabler for our students," said Rob Irving. "It can be accessed on a browser or students can download the software to their Windows, Apple or (Google) Android smartphone."

He says Lync is UNE's core teaching platform, while Skype is a recruitment tool that allows prospective students, particularly those overseas, to interact with the university without incurring hefty call charges. Skype will be embedded into the university's contacts list so students merely have to click the icon and activate a call.

"The ability to market to people using Skype and they then click on a button and get connected straight to our call centres and we enrol them into a course is an exciting opportunity," says Irving.



Case Study

- University of New England (UNE)

UNE Statistics

- 3,000 staff
- 22,000 students – 18,000 off-campus
- 2 campuses and 10 access centres

Industry

- Education

Challenges

- Replace aging, low-bandwidth network
- Implement MS Lync video conferencing for online learning
- Upgrade 10G network to 40G
- Integrate Extreme Networks, Lync and Palo Alto

Products Utilised

- x8 eight S-Series S4 chassis with 40GbE modules
- x500-plus C-Series stackable switches
- Netsight
- Network Access Control
- Extreme Networks SDN for Lync/Palo Alto integration

Results

- +99% uptime
- 10G upgraded to 40G
- High levels of identity-based access control
- Anywhere, any-device online learning

"Having a solid and reliable network with ample capacity has opened up our architecture for adding client services. Making sure that Lync is effective was a key objective, but the wireless network now meets our users' needs, and that had been a major problem long term. Today we have a lot more flexibility and control over our network." Said Robert Irving