VERNet and Melbourne Polytechnic enter into a long-term partnership to provide a minimum of 10Gbps to seven campuses for 14 years

Recognised as one of the leading Vocational and Higher Education institutions in Australia, Melbourne Polytechnic has been a provider of hands-on, industry-linked education to Victorians for over 100 years. Priding itself on providing students with a contemporary learning environment, Melbourne Polytechnic produces highly skilled, work-ready graduates who are eager to make a difference. In 2018, the ITS Team commenced a network infrastructure overhaul that will take it to the next tier of IT capability.

With education delivery becoming increasingly reliant on network-based technologies, Melbourne Polytechnic's modest network of sub-1Gbps services was limiting its ability to take full advantage of technological advancements within the sector. Changing teaching methods and cloud-based service offerings, combined with bandwidth-heavy technologies such as virtual reality, video content and collaboration applications; were driving increasing demand for bandwidth.

A robust new solution was needed – a high capacity, scalable network that will adapt to the evolving needs of its users over time.

Following a highly competitive tendering process, Melbourne Polytechnic selected VERNet to design and build a fully diverse Wide Area Network (WAN) connecting all seven of its campuses. With a fourteen-year service term, this crucial foundation will enable the ITS Team to provide uninterrupted, highly available services and leading-edge technologies to students and staff well into the future.

The services provided by VERNet for our high capacity WAN lay the foundation for some very complex and in some cases effort-based changes to the pedagogy, to provide more learner-centric courses rather than teaching-centric courses.

Devendra Nambiar

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Stage One

- Greensborough Campus
- Epping Campus
- Prahran Campus

Stage Two

- Preston Campus
- Collingwood Campus
- Heidelberg Campus
- Fairfield Campus

Interconnect Locations

- NEXTDC M1 - Port Melbourne
- Metronode (Equinix)
  Walsh St, West Melbourne

Challenges

- Capacity increase required to support future functions and applications
- Ageing infrastructure, over wide geographic spread
- Modest network capacity limited ability to provide resources to students

Challenges

The existing sub-1Gbps network was no longer sufficient to meet the evolving needs of users. A significant increase in capacity was required to support new applications, and to accommodate technologies such as artificial intelligence, virtual reality and machine learning effectively and without disruption.

The seven campuses are located over a very wide geographic area, with bandwidth coverage varying between locations. The ageing infrastructure needed upgrading in order to keep pace with emerging technologies and cater to increases in demand over time.

Limited network capacity was in some cases preventing Melbourne Polytechnic from providing valuable resources to students. For example, Microsoft Teams has been used by staff for some time but could not be provided to students on the current network. Insufficient capacity to host lab applications in the cloud limited students to onsite access.

Solution

- Design a fully diverse 10Gbps WAN across all campuses.

Solution

VERNet custom designed a diverse 10Gbps WAN ring connecting all seven Melbourne Polytechnic campuses, made fully redundant using dual lead-ins at each site. VERNet also provides 10Gbps connectivity to cloud service providers at NEXTDC Melbourne Data Centre (M1) and Equinix Data Centre in West Melbourne; and internet services.

Benefits

- Futureproof
- Efficient roll-out of collaborative tools across student body
- Virtual learning environments

Benefits

Melbourne Polytechnic now has the foundation for a futureproof, agile network that the ITS Team can build out as new technologies and applications become available. The scalability will enable granular capacity increases to meet future demand in a cost-effective manner.

With the boosted network capacity, plans are in place to deploy Microsoft Teams across the student body; and to relocate approximately 245 lab applications to the cloud, enabling remote access through cloud-streaming. Lecture Capture is currently in the pilot phase, and once rolled out will enable students to view lectures anytime, anywhere.

The new network will also make virtual reality, X-Reality and artificial intelligence technologies much more accessible. Virtual learning environments are just one example of countless innovations setting Melbourne Polytechnic apart, cementing its position at the forefront of vocational education.

ABOUT MELBOURNE POLYTECHNIC: *Melbourne Polytechnic has been delivering vocational training since 1912 and today offers a diverse range of innovative, hands-on TAFE (VET) and Higher Education (Degree) programs to equip students with the knowledge and skills to excel in an evolving and challenging marketplace.* ***www.melbournepolytechnic.edu.au***

ABOUT VERNET PTY LTD: *VERNet designs, builds, operates and manages a network that enables educators, researchers, students, and health professionals to exchange ideas and communicate faster. VERNet is the preferred supplier of high bandwidth connectivity to the research and education sector in Victoria providing customers leading edge technology and services for the best value for money. See more information by visiting* ***www.vernet.com.au***