



> LEADING DUBAI UNIVERSITY EMPOWERED TO DELIVER CUTTING-EDGE LEARNING ENVIRONMENT

NORTEL



Case Study

American University in Dubai

"Thanks to Nortel's highly reliable, robust equipment, students can access the learning tools they need today, and we can give them a path towards even more advanced collaboration tools tomorrow."

> **Frank Seifae,**
IT Services Manager,
American University
in Dubai



Customer: American University in Dubai

Country: UAE

Industry: Education

Challenge: For this world-class teaching institution in Dubai to deliver a cutting-edge learning environment through reliable technology.

Solution: A robust data network upgrade programme for the University based on the Nortel Ethernet Routing Switch 8600. This supports forty-five Ethernet Routing Switch 5520s located around the University campus, to extend connectivity to the desktop and power devices over Ethernet. In addition to this, the Nortel Enterprise Switch Manager provides for streamlined network management.

- Benefits:**
- **Faster, more reliable and responsive connectivity** – allowing students, teachers and other staff to make the most of the University's existing web-based tools
 - **Improved access security** – allowing only authorised users and clean devices to access the network
 - **A path to more collaborative learning** – the new network can be used to enhance learning through streaming video, online e-classrooms and more.



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The scenario

In accordance with its mission statement, the American University in Dubai (AUD) is a firm believer in providing 'academic programmes, services, facilities and technologies that support team-based learning'. And with its campus located in the heart of Internet City – Dubai's business district housing many of the world's largest IT companies – it's no wonder that technology has such a critical role to play in creating this collaborative learning experience for its students.

Technology, however, is always evolving and improving. And as an establishment that takes pride in its technical abilities, AUD decided it was time for a network upgrade. Frank Seifae, IT Services Manager for the University, explains: "The University is definitely committed to teaching via the most cutting-edge means. For example, we use a network-based e-learning tool through which students can communicate, share learning resources and submit assignments, and from which teachers can deliver classes," he describes. "We felt that access to this critical resource could be even more effective for students and teachers alike, so we decided to upgrade the network."

Alongside these drivers for an upgrade, AUD was keen to explore the latest technology-based teaching methods – such as online e-classrooms and live lecture streaming. What's more, an increasing number of students are applying to attend the University year-on-year, and all will require network access. Consequently, it was vital the new network could enable a growing user base to access advanced, often high-bandwidth applications.

Following a complete internal systems evaluation to confirm these challenges, AUD approached Nortel in order to carry out a complete data network upgrade. "We looked at other vendors on the market, but Nortel offered us significantly better value for money. We also trusted that Nortel's technology would perform very well – and that its staff would understand our requirements – as we already used Nortel equipment across the University."

The solution

Nortel designed a robust data network upgrade programme for the University based on the Nortel Ethernet Routing Switch (ERS) 8600. Located at the core of the network, this modular switch has helped the University overcome its problem of network bottlenecks, expanding the network capacity without overcrowding its server room. Through resilient terabit clustering, the core switches rapidly re-route data in the unlikely event of a network failure, to ensure optimal network uptime.

The ERS 8600 also features several layers of built-in security, such as security management, access policies and deep packet filtering. This ensures the network remains protected from external threats, and will help the University reduce the risk to its network when unknown devices are connected.

The core is connected to forty-five ERS 5520s located around the University campus, to extend Gigabit connectivity to the desktop. Supporting Power over Ethernet, these switches will – in the future – enable the University to adopt new working practices, such as IP telephony and IP CCTV, powering the handsets, cameras and any other devices over Ethernet to avoid excess, costly cabling and systems.

In addition to this, Nortel provided the Nortel Enterprise Switch Manager, a management application that allows the University's IT team to configure and monitor the performance of its network with ease. Through a simple Graphical User Interface, administrators have a real-time view of all network components, rapidly configuring and troubleshooting from a centralised point – giving the IT team more time to focus on other activities.

The results

Implementation of the new network was carried out during the University's least busy period, when students were away during the summer break. Transition to the new infrastructure has been happily uneventful – but users have noticed a definite change for the better: "The overall network design hasn't really changed significantly, but performance is definitely much better than before. The network is now far more responsive," confirms Frank.

Teachers, students and other staff are all benefiting from this change. Data within all key operational systems – including the web-based learning tool, the library, administrative tools, the registrar's office, financial systems and of course student information systems – can now be accessed much faster, thanks to the network's load balancing, filtering and Quality of Service capabilities. "This means all users can work more efficiently. What's more, the added capacity of the network will allow the University to add new applications, data and users, without affecting the level of service delivered," says Frank.

From a security perspective, the new network can be segregated into virtual LANs, allowing only authorised user groups to access certain tools and applications through password access. Students in the dormitories, for instance, can now access all the personal and educational information on their network drives, something they couldn't do before. The existing wireless network has also been separated from the core network onto a virtual LAN, coupled with password access for additional security.

Importantly, the new, more robust network will underpin all manner of innovative learning tools, supporting the University's plans to enhance study through collaborative technology. Streaming video may be used to enable students to attend classes delivered in other rooms – or even from other learning institutions. These could be delivered online, in 'e-classrooms', allowing them to be accessed remotely and stored for future reference.

Frank concludes: "As one of the most respected educational institutions in Dubai, our objective is to provide an excellent learning environment for our students. And when purchasing something as critical as new networking technology, we need tools we can trust. Thanks to Nortel's highly reliable, robust equipment, students can access the learning tools they need today, and we can give them a path towards even more advanced collaboration tools tomorrow."

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