

LINGNAN UNIVERSITY IMPLEMENTS SECURE MULTISERVICE NETWORK WITH M SERIES MULTISERVICE EDGE ROUTERS

Summary

Industry: Education

Challenge: Deploy a secure routing solution that would provide faculty and students with fast, reliable, secure, and cost-effective access to the Internet and campus resources

Selection Criteria: Performance, scalability, multiservice support, security

Network Solution: M Series Multiservice Edge Routers

Results: Reduction in communication costs and enhancement in network performance; prevention of abuse of network resources; the ability to filter content and control data rates; reduction in the cost and complexity of network management

Lingnan University is Hong Kong’s only liberal arts university. Established in 1999, its roots can be traced back to the Christian College, which was set up on Guangzhou, China, in 1888. Today, Lingnan University has built up a strong reputation for its excellence in teaching, close teacher supervision, and rich campus life. In 2006, its research index was ranked fourth among Hong Kong’s eight public-funded universities.

Challenges

To support learning, teaching, and research, the university wanted to provide its faculty and students with fast, reliable, and secure access to the Internet and campus resources. According to Dr. Jeff McDonell, Director of Lingnan University’s Information Technology Services Centre, the students and teaching staff frequently used computers and the Internet for learning, preparing teaching materials, and doing research. Furthermore, students living in hostels also used the Internet for their personal needs.

One of the challenges faced by the university was to provide enough bandwidth to handle the huge amounts of network traffic to and from local and overseas websites. Lingnan also had to be vigilant against the abuse of network resources, such as illegal peer-to-peer (P2P) file sharing.

In addition, the university had to find a way to contain communication costs. Overseas network traffic was much more expensive than local network traffic. However, the school’s old routing system could not distinguish between local and overseas Internet traffic.

Selection Criteria

Given the bandwidth requirements, performance and scalability were key considerations in the selection of a routing solution for the university. Lingnan also needed a solution that would enable it to reduce costs and increase network performance by allowing more bandwidth to be set aside for local Internet traffic, while reducing the capacity allotted for overseas traffic. Security was another consideration—the university needed a solution that could do content filtering and prevent illegal file sharing. After a thorough review of the proposals received, Lingnan University selected the Juniper Networks® M Series Multiservice Edge Routers.

Solution

The Juniper Networks M Series Multiservice Edge Router combines best-in-class IP/MPLS capabilities with unmatched reliability, stability, security, and service richness. Services supported include a broad array of VPNs, network-based security, real-time voice and video, bandwidth on demand, rich multicast of premium content, IPv6 services, granular accounting, and much more. Using a hardware-based approach combined with the highly scalable, secure, and reliable Juniper Networks Junos® operating system, the M Series allows organizations to consolidate multiple networks into a single IP/MPLS infrastructure. The scalable and production-hardened Junos OS ensures that a consistent set of capabilities is available at all network locations.

Before implementing the M Series solution, Lingnan University leveraged Juniper Networks Professional Services for detailed technical advice on the network design. During the deployment phase, the Juniper Networks team helped the university to integrate the M Series router into its heterogeneous network environment, adjusting the platform settings to maximize capacity and performance.

The Juniper Networks M Series router deployed by Lingnan University distinguishes between local and overseas Internet traffic and routes all local traffic directly to the Hong Kong Internet eXchange (HKIX). The routing platform also features excellent performance and reliability in addition to traffic filtering, rate control, operational versatility, and low overheads, thanks to Junos OS.

“Junos OS is the key to addressing our network requirements,” said Dr. McDonnell. “It enables our IT team to filter traffic and control rates at the core of our network with greater ease and flexibility.”

Results

With the high-performance network infrastructure, faculty and students now have fast, reliable, and secure access to the Internet and campus resources including coursework materials and administrative functions. The M Series router has also enhanced the capacity of the network and allows the university to scale up its infrastructure to handle a wide range of IP services.

In addition, Lingnan University is able to optimize the utilization of local Internet bandwidth by routing local Internet traffic directly to the HKIX, reducing the use of more expensive overseas Internet bandwidth. This has led to a reduction in communication costs while improving network performance.

Security issues have also been addressed. With the M Series router, Lingnan is able to filter content and avoid the abuse of network resources, for example, for illegal P2P file sharing. This not only improves network performance, but also avoids thorny legal issues resulting from students downloading copyrighted materials.

The M Series is also easy to manage, allowing Lingnan to reduce the cost and complexity involved in network management.

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Dr. Jeff McDonnell.

Director of Information Technology Services Centre,
Lingnan University

For More Information

To find out more about Juniper Networks products and solutions, visit www.juniper.net.

About Juniper Networks

Juniper Networks, Inc. is the leader in high-performance networking. Juniper offers a high-performance network infrastructure that creates a responsive and trusted environment for accelerating the deployment of services and applications over a single network. This fuels high-performance businesses. Additional information can be found at www.juniper.net.

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