

Location: Seoul, Korea

SITES: 30 campus colleges/facilities
NETWORK USERS: 20,000 students,
590 faculty/staff
INDUSTRY: Higher education
VALUE-ADDED RESELLER:
Zungwon Engineering and Systems
APPLICATIONS: administrative and
course registration services; web-
based and multimedia learning



Konkuk University Makes “Dream Konkuk 2011” a Reality With Powerful Core Switching From 3Com



CASE STUDY

IN BRIEF

GOALS

- › Build an infrastructure able to promote the University's goal of taking a leadership position in training IT professionals
- › Support the increasing use of web-based and multimedia educational programs
- › Boost security as expanded network-based activities increase vulnerabilities
- › Implement a network upgrade that leverages existing equipment and ensures practical scalability to easily meet future needs

SOLUTIONS

- › 3Com Switch 8810
- › 3Com Switch 5500G-EI 48-Port
- › 3Com Switch 5500G-EI 24-Port

RESULTS

- › An advanced network to support robust technology education
- › Fast and reliable network access with improved bandwidth management and speed
- › Secure networking that avoids time- and budget-consuming service interruptions
- › Economical and forward-looking solution, providing advanced capabilities, easily integrated with legacy infrastructure

SNAPSHOT

Konkuk University, one of the most prestigious universities in Korea, consists of 15 colleges and 11 graduate schools. It was founded by Dr. Yoo Seok-Chang, a pro-independence activist under the Japanese colonial rule, who was renowned for his medical and educational activities. Based on Dr. Seok-Chang's belief that cultural, scientific and technological competencies are essential to a nation's prosperity, the university fosters a forward-looking curricula taught by experts in each of the school's academic disciplines. As an indication of its educational excellence, the university seeks to be one of the five most prominent private universities in Korea. Realizing the role of technology in achieving this status, the University initiated in 2003 a master plan, Dream Konkuk 2011, for optimizing utilization of the entire campus and establishing exemplary network communications. To transform the dream into reality—becoming a leader in nurturing IT talent and ensuring that the Konkuk community had fast, secure and reliable access to networked resources and advanced solutions—the University chose to deploy 3Com® systems because of their uniquely high value.

CHALLENGES

Konkuk University was faced with not only meeting the immediate network demands of its 20,000 students and 590 staff members, but also ensuring that the school's infrastructure would be able to support future needs. In addition, to support its technology leadership goals that required a state-of-the-art, multimedia-based educational environment, the university realized that an upgraded infrastructure would have to interoperate with its network components, protect resources and users from a growing number of hackers and other cyber threats originating from within and beyond the University's communications network, as well as ensure delivery of services—regardless of the number of simultaneous network users and file sizes.

WHY 3COM

Konkuk University staff compared systems from 3Com and Cisco. The 3Com solution was clearly the school's best option based on an evaluation of relative cost, performance and investment protection. The University knew from its previous deployment of 3Com Switch 4005, 3Com Switch 4007 and 3Com Switch 4400 solutions that it could depend on a 3Com infrastructure. It also recognized the value delivered by 3Com switches in terms of ease of deployment, management and scalability. "After a comprehensive evaluation of the two solutions using criteria such as price-to-performance, future scalability and support of new technologies, 3Com switches were selected as our optimal solution. We confidently chose a 3Com network again because of our satisfaction with the performance and reliability that our existing 3Com equipment had demonstrated," said Incheon Lee, IT Manager, Office of the Infrastructure at Konkuk University.

ENHANCED NETWORK SPEED AND BANDWIDTH SUPPORTS ADVANCED SERVICES

With dual load-sharing switch fabrics and a future-proof architecture that can be scaled up to 1.44 Terabits per second capacity, the 3Com Switch 8800 system connects students and faculty with ease. Bandwidth management and network speed consistently support reliable, fast access to educational services, including online course registration and administrative activities, as well as web-based learning programs and a comprehensive multimedia-based education environment. Students and faculty no longer complain about bottlenecks and network failure. "We secured Gigabit bandwidth and broadband-speed connectivity by adopting the 3Com Switch 8800," said Mr. Lee. "And with the installation in our Sang-Huh Research Center and Liberal Arts buildings of 3Com Switch 5500Gs, our new network delivers a switching capacity of up to 232 Gbps and has the ability to extend and improve connectivity as our needs increase."

NETWORK SECURITY PROTECTS DIVERSE USERS AND DEVICES

The 3Com Switch 8800 provides powerful, enterprise-class security that can cope with the university's ever-changing and diverse community of users and devices. Advanced security capabilities include user and device authentication, policy-based access controls, encrypted system management access and quarantine enforcement for containment of vulnerabilities and deliberate attacks. The switch provides secure network access using standard IEEE 802.1X network login, along with user- and device-based access control capabilities. RADIUS support enables authentication of users as well as attached devices, such as printers and PDAs, via their MAC address for an additional level of endpoint security. The switch lets Konkuk University staff use port and Virtual LAN (VLAN)-based Access Control Lists (ACLs) and dynamic traffic filtering capabilities for a particularly granular control of network access resources. And, as with performance, the Switch 5500Gs extend the value of the 3Com solution, safeguarding network access and resources with integrated and distributed security enforcement that can be managed from a central location.

INTEROPERABILITY, PERFORMANCE AND COST ADVANTAGES MAXIMIZE SAVINGS

The 3Com switching solutions interoperate with the university's legacy and third-party networking equipment, allowing deployment of the most cost-effective systems. Network managers efficiently maintain high system performance, freed from the time and expense of having to troubleshoot compatibility issues. And since the Switch 5500Gs and Switch 8800s run on the same operating system, IT staff can be especially efficient. Without having to adopt additional solutions, the University was also able to meet its security requirements. Because of the exceptional value of a very competitively priced implementation, Konkuk University can invest in its future, while ensuring that its current requirements are fully satisfied.

LOOKING AHEAD

Since the University was able to improve its network performance and security so cost-effectively, it can extend deployment of its 3Com solutions to two new sites, the Research Center of Medicine and Biology and the College of Arts and Culture Science buildings. As the advanced technology environment enabled by 3Com continues to support evolving needs, Konkuk University can enhance its competitive edge in attracting students and training the next generation of IT experts.

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