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EGYPTIAN UNIVERSITIES ADVANCE LEARNING AND COLLABORATION WITH HIGH-SPEED RESEARCH AND EDUCATION NETWORK

Summary

Customer:
Egyptian Universities Network

Industry:
Education

Business Challenges:
Deliver reliable network services to support essential university, scientific, and government applications, including Internet access, VoIP, e-mail, and more.

Technology Solution:
* *MX104 Universal Routing Platform*

Business Results:
* *Provided reliable, advanced networking to academia, scientific communities, and government in Egypt*
* *Enabled universities to provide Internet access, e-mail, and video conferencing over reliable, stable network*
* *Simplified network operations with a best-in-class network*
* *Empowered universities to add VPN capacity on demand*

Egypt is in the midst of an education resurgence, with the government declaring 2019 as the "Year of Education." Egypt's education system is the largest in the region, and more than three million students are enrolled in Egypt's universities. The Egyptian Universities Network (EUN) connects public universities across the country, providing the applications and services that professors, researchers, students, and staff need. EUN relies on Juniper Networks® MX Series 5G Universal Routing Platforms for its WAN connectivity.

As more students attend university, they rely on digital tools like e-mail, videoconferencing, and Internet access for their academics, collaboration, and communication. The demands of online classes put more stress on the network. Developing skills for the digital world are essential as students take up their roles in advancing the country's prosperity and society.

EUN connects all 27 public Egyptian universities, providing Internet connectivity, applications, and services to keep the campuses, as well as some scientific institutes, running smoothly. Researchers, students, and academics can collaborate with peers in Europe, the Americas, Asia, and Africa with connections to Arab States Research and Education Network (AREN), European Academic and Research Network (EARN), Internet2, and GEANT.

Juniper Networks has been EUN's networking partner of choice for 15 years, and the two have worked together closely to build the best possible network for Egypt's universities.

"For more than a decade, Juniper routers have been incredibly reliable, and Juniper has proved that they are the right choice for our critical WAN upgrade," says engineer Tarek Edris, operations and technical support department head at EUN.

Upgrading the Network Core for More Power and Better Performance

As traffic volumes grew, EUN chose to upgrade its core network to the Juniper Networks MX104 Universal Routing Platform. The modular MX104 platform is ideal for space- and power-constrained environments. Deep-packet inspection detects applications and determines traffic treatment on a per-application basis, enabling highly customized and differentiated services at scale. Powered by the Junos® operating system and the programmable Trio chipset, the MX104 shares the same advanced routing, switching, security, and service features available in the larger MX Series 5G Universal Routing Platforms, including a wide range of L2/L3 VPN services to support the mission-critical research and education network.

EUN upgraded its core with the MX104 routers without experiencing any downtime. "We were able to keep the network running without the users experiencing poor performance or network downtime," says Mahmoud Abdelhafez, senior network engineer.

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- Eng. Tarek Edris, operations and technical support department head, Egyptian Universities Network

Juniper unified in-service software upgrade (unified ISSU) features and the built-in automation of Junos OS minimized the downtime risks associated with implementing new hardware and helped the team deploy the new routers without introducing any errors from manual entry. Overall, the team has been extremely pleased with how easy it is to manage a Juniper-powered network.

Students and professors have fast access to more than 700 digital courses and libraries hosted at the EUN data center. Video lectures can be streamed smoothly, and videoconferences are high quality with reliable connections.

"Our operations group rarely spends time troubleshooting the network, and Junos OS is very stable and easy to manage and operate," Abdelhafez says. "Juniper solutions are incredibly reliable. They keep our network up and running and we rarely have to deal with any problems."

With the upgraded WAN, EUN can add L2/L3 VPNs to accommodate the universities' requests for more capacity for Internet usage. The universities can now make requests for shared applications and fast Internet access that EUN can easily fulfill.

"Our users are incredibly satisfied with the network and the network services," says Dr. Karim Emara, acting director at EUN. "So many students rely on the network for communications, schoolwork, and non-school activities, and the uptime has been phenomenal."

Looking Ahead to Continued Partnership

Today, about 30 percent of Egyptians attend university, and with a youthful population, those numbers will grow. To meet the growing demand for learning and collaboration, EUN plans to invest more in its network so it can continue serving Egyptians who are studying, doing research, and governing.

"We know we can rely on Juniper for after-sales support, deployment, and training," Emara says.

For More Information

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

About Juniper Networks

Juniper Networks brings simplicity to networking with products, solutions and services that connect the world. Through engineering innovation, we remove the constraints and complexities of networking in the cloud era to solve the toughest challenges our customers and partners face daily. At Juniper Networks, we believe that the network is a resource for sharing knowledge and human advancement that changes the world. We are committed to imagining groundbreaking ways to deliver automated, scalable and secure networks to move at the speed of business.

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