Mexican University Improves Security and Speeds Access to Learning with Wireless Network

Universidad Panamericana

Size: 40,000 students, staff, and faculty

Industry: Education

Location: Mexico

Solutions

- Improving access to learning resources with Cisco wireless

- Making it easier for students and teachers to meet virtually through Cisco Collaboration technology

- Reducing complexity of IT management through Cisco Prime® Infrastructure

Results

- Students have faster, safer access to learning resources

- Teachers can extend education beyond the classroom

- IT teams have more time for innovation

Multi-Campus Demand for Wireless Soars

With some 12,000 students and 33 degree programs, Universidad Panamericana is one of Mexico's top private institutions. Spread out over four campuses, the connected school acts as one university. Recently, it experienced a 50 percent rise in the number of devices on its main Mixcoac campus in Mexico City.

The wireless network, pulled together with legacy products from various vendors, was burdened further with this increase in demand. Disparate systems struggled to cope with the sheer volume of devices seeking access, while connectivity would drop due to coverage issues.

"Users were finding it took longer to get online as the network became clogged up," says Carlos Chávez Paz, head of networks and servers at the Universidad Panamericana Mexico City campus.

The IT team decided a fast and reliable Wi-Fi network solution was required to improve access to cloud and video-based learning resources, while also attracting new students.

Virtual Collaboration Supports Cost Effective Ways of Working

The university had experienced the benefits of Cisco® technology for some time, having deployed Cisco Unified Communications to improve telephony and reduce costs. When it came to the Wi-Fi network upgrade, Cisco again offered the best value for the money.

"Cisco was at least 50 percent cheaper once running costs were factored in. Plus, there was no learning curve," says Luis Enrique Gómez Sutti, IT infrastructure manager at the Universidad Panamericana Mexico City campus.

The university reduced the need to buy new hardware by simply upgrading software for 70 percent of existing access points, cutting project costs even more.

Working with Cisco partners SONDA, Grupo Telecomo, and Grupo Eclipse, networks at the Mixcoac, Guadalajara, and Aguascalientes campuses were modernized with Cisco access points, switches, and voice gateways. Unlimited IPv6 address space means the university can deliver more apps and services with improved user experiences and increased security.

With Cisco solutions Universidad Panamericana is helping ensure:

Students have faster, safer, consistent access to learning resources

Teachers can confidently extend education beyond the classroom

IT teams are more efficient and have more time for innovation

This digital foundation provides a collaborative learning environment where teachers and students interact effectively over videophones and Cisco WebEx® and Cisco Jabber® solutions.

High-Speed Access to Educational Resources

Now, students, teachers, and visitors across the multiple campuses intuitively use Wi-Fi. When connecting their mobile devices, they feel like they're on one campus, receiving the same consistent experience. The connectivity experience is quick regardless of where the user is.

Dealing with demand spikes is no longer a problem. Wireless traffic at Aguascalientes has risen by about 30 percent.

"Average device numbers per user have gone up from 0.5 to three in the last 10 years," says Ernesto Jonnatan Arroyo Pilatowsky, IT director at the Aguascalientes campus. "With Cisco, we've overcome this device growth, while increasing Wi-Fi coverage from 80 to 100 percent."

It's a similar picture in Mexico City. Here, coverage is up from 60 to 98 percent and users enjoy 400 percent faster Wi-Fi. At Guadalajara, which had 100 percent coverage before, the jump in speed is even more startling, up 2900 percent compared to five years ago.

The Wi-Fi network links to secure, reliable Cisco routers and switches, which are connected to fast-to-provision, easy-to-manage Cisco servers. The combined network performance gains have seen a significant rise in online teaching, with students enjoying superior access to educational resources. They also find it easier to stay in touch with friends and family through social media.

User Experience Gets Better and Safer

A key concern for the university was not just upgrading the network, but also protecting students and staff.

"Another advantage of choosing Cisco is that its products have cast-iron security built in from the ground up," says Miguel Velázquez, head of IT infrastructure. "In today's world of growing cyber-threats, that's a great reassurance."

Cisco Prime® Infrastructure simplifies IT management for proactive supervision of network usage and allocation. With a single view and point of control, the IT team can quickly locate and fix any issue. That has significantly reduced connectivity-related complaints as a direct result.

improving Outcomes with Virtualized Learning and Teaching

Cisco WebEx and Jabber give teachers a range of virtual learning and digital platforms to help improve learning outcomes: for example, allowing students to access a classroom session remotely or replay a key lecture after the event. Similarly, MBA graduates can work virtually in groups and pool knowledge and learning.

"New ways of working offer possibilities for teachers and students to collaborate on a more personal level via video," says César Hernández Reynoso, IT director at Guadalajara. "We couldn't have done this without a solid wireless network."

The network also playing a part in bring-your-own-device-based learning.

"Students can supplement what they've learned in the classroom with video content streamed directly to their mobile devices," says Antonio Cueto Tirado, Guadalajara campus network engineer. "This wasn't possible with the previous network."

"Cisco was at least 50 percent cheaper once running costs were factored in. Plus, there was no learning curve."

Luis Enrique Gómez Sutti
IT Infrastructure Manager
Universidad Panamericana Mexico City
Campus

It's the same in Mexico City. Teachers used to be wary of using Wi-Fi in class for fear of a poor experience. Now, the leading majority have adopted it. That may be because the network is more stable, having gone from 99.5 to 99.99 percent uptime. Such reliability gives teachers the confidence to incorporate digital media, like video and animations, into classroom activities.

The university's IT teams are finding their day jobs are changing for the better, too.

"Previously, configuration changes had to be done manually, which could take up to three days," concludes Luis Enrique Gómez Sutti. "Now, it takes barely an hour to carry out such routine tasks."

Today, technology has afforded new and expanded opportunities as teaching and learning is transformed at Universidad Panamericana.

For More Information

To learn more about the Cisco solutions featured in this case study, visit:

www.cisco.com/go/customerstories

www.cisco.com/go/wireless

www.cisco.com/go/collaboration

www.cisco.com/go/prime.

Products and Services

Routing and switching

- Cisco Catalyst 4500 Series Switches
- Cisco Catalyst 3750 Series Switches
- Cisco Catalyst 3650 Series Switches
- Cisco Catalyst 3560 Series Switches
- Cisco 3800 Series Integrated Services Routers
- Cisco 2900 Series Integrated Services Routers
- Cisco 2800 Series Integrated Services Routers

Wireless

- Cisco 8500 Series Wireless Controllers
- Cisco 5500 Series Wireless Controllers

- Cisco Aironet® 3700 Series Access Points
- Cisco Aironet 3600 Series Access Points
- Cisco Aironet 2700 Series Access Point

Collaboration

- Cisco Unified IP Phone 8900 Series
- Cisco Unified IP Phone 7900 Series
- Cisco Unified IP Phone 6900 Series
- Cisco WebEx
- Cisco Jabber

Computing

- Cisco UCS® C-Series Rack Servers

Services

- Cisco Prime Infrastructure

ES/0417