UNIVERSIDAD PERUANA UNIÓN (UPEU)

Higher Education Without Interference

Universidad Peruana Unión (UPEU) (Peru Union University) is a Seventh-Day Adventist university in Lima, Peru and was originally founded in 1919 as the Industrial Institute. In 1995 the university's name was changed and is known to this day under its current name (UPEU). The university offers undergraduate and graduate programs and has two additional campuses in the cities of Juliaca and Tarapoto. The university serves 11,981 students in undergraduate and graduate programs. 2,538 students are enrolled in the university's distance education program UPeU Virtual, and has 2,800 employees. Two K-12 schools are also part of UPeU: Colegio Union located in Lima and Colegio Adventista del Titicaca located in Juliaca.

REQUIREMENTS:

- Provide wireless networking coverage for all three campus locations
- Consistent Wi-Fi connectivity that ensures quality connection at all times
- Meet high-density needs for students and faculty
- Agile and centralized network management
- Capability to segment per user group
- Seamless student authentication

SOLUTION:

- Ruckus' R300, R600, H500 indoor access points (APs)
- Ruckus' T300 outdoor APs
- ZoneDirector 3000 controller
- SmartZone software platform

BENEFITS:

- UPEU has 802.11ac wireless technology to serve students and teachers
- Wi-Fi network is centrally managed
- Scalable wireless infrastructure
- High capacity network without interference

STUDENTS AND TEACHERS STAY CONNECTED TO ACCESS DIGITAL CONTENT IN THE CLASSROOM

Many classrooms are using high definition video content and collaboration applications. In addition, students are bringing new and ever evolving devices capable of downloading, uploading and streaming via wireless connections. That takes more bandwidth which demands a high capacity wireless infrastructure. Higher education institutions must be ready to support the technological needs of their users with a scalable wireless solution that can keep pace with future demand.

CHALLENGE

The Universidad Peruana Unión (UPEU) serves more than 11,000 students in Peru. UPEU is surrounded on one side by buildings and on the other side there is a populous neighborhood. As a result, the university was experiencing interference problems that made it impossible to provide wireless connections throughout the campus.

The university had some wireless equipment with autonomous management but these were stand alone. They had an access point (AP) for 50 users wanting to connect but it could only support 15 users. This caused many complaints. UPEU couldn't provide quality wireless service and teachers couldn't use Internet applications in their classes.

"There was a lot of interference. We couldn't provide wireless connection for students. In addition, the wireless solution couldn't support a high density of users, 15 to 20 users at the most and the network would collapse," explained Elias Cuellar, General IT Director of Universidad Peruana Unión.

In 2012, UPEU contacted the Ruckus partner Solnet, who offered UPEU the opportunity to test Ruckus technology during the summer months of January and February when the university receives graduate students. It was a good time to see how Ruckus could deal with high density and interference issues.

SOLUTION

Three Ruckus wireless APs and a controller were deployed for testing. "It wasn't complicated. It didn't take us more than a day to physically install and configure the equipment. Right away we were very glad to see no interference in the Ruckus APs. In addition, the APs had the capacity for the many users we needed (100, 200, and 500). We had found a technology that enabled us to provide a better service to students, teachers and staff," said Cuellar.

The trial solution from Solnet was so good they purchased the equipment on the spot. UPEU has been using Ruckus for five years and currently has 98 APs managed by Ruckus' SmartZone software. The university also has a ZoneDirector 3000 controller to manage older Ruckus APs.

"We feel protected, supported and we trust the Ruckus equipment meets specifications and our expectations. We no longer have to worry about network performance. We now have 11ac technology and can now improve service for our students and staff."

ELIAS CUELLAR
Universidad Peruana Unión, General IT Director

"We have updated our Ruckus network four or five times. We started with the basic version, we moved to the SmartZone 1125 controller, then we updated to the ZoneDirector 3000, and now we have SmartZone software," added Cuellar.

The Ruckus controller opened possibilities for the university. It enables students to connect to the network with the same username and password they currently use to access the university's portal. They use that same password to get authenticated in the captive portal.

In order to ensure reliable wireless coverage and high density, UPEU deployed Ruckus' R300, H500 and T300 APs along with the Ruckus ZoneDirector 3000 controller, and Ruckus SmartZone software distributed around the three campuses.

The Ruckus' T300 outdoor APs are designed for high density venues. The T300 series leverages a predictive model for channel selection (ChannelFly™) that uses actual activity to learn what channels will yield the most capacity to provide the highest client speeds and reduced interference.

The Ruckus SmartZone software platform provides unified software architecture across wireless LAN (WLAN) controllers, for appliance, virtualized and cloud environments offering the ultimate in deployment flexibility. This Wi-Fi software offers a tremendous level of flexibility: scaling up to 300,000 devices, offering single and multi-tenancy, as well as 'WiFi-as-you-grow'—the capability for the network to expand with and adapt to the changing needs of the business.

After deployment of the Ruckus wireless' technology, UPEU has been able to centralize the network on each campus. They can reach a high number of connections and students, teachers, and staff can easily connect.

Ruckus partner Solnet has maintained a close relationship with the university and from the beginning they were so confident in the equipment they had no concerns of providing UPEU with a free test kit. After the trials were completed, UPEU kept the APs to continue using them. Solnet has always been available to help with warranties and technical support.

"We have 802.11ac APs and we are adopting this standard to improve service quality. By the end of last year we expanded the network with 30 more APs and this semester we ordered 28 more APs to deploy them in a classroom pavilion in the Lima campus," concluded Cuellar.

ruckus™