

CASE STUDY

Ecuadorian University Securely Connects Its Sites and Optimizes Its Network With Fortinet Secure SD-WAN

The Universidad Regional Autónoma de los Andes (UNIANDES) is a leading higher education institute in Ecuador with seven campuses distributed across the country. The institution was founded in 1997 in the central city of Ambato and has successfully grown throughout the years to nearly 12,000 undergraduate and graduate students, and around 1,200 faculty and administrative staff.

A recent evaluation ranked UNIANDES among the 10 best universities in the country. As part of its expansion strategy, the institution is about to receive the educational authorities' approval to open new centers in Ecuador's major cities of Quito, Guayaquil, and Cuenca.

This rapid growth brought with it an imperative to implement appropriate technologies to protect the university's network data. Five years ago, UNIANDES had almost no IT security protection, so several cybersecurity incidents affected their operations and jeopardized their data. The first steps led the institution to implement a firewall at its headquarters in Ambato. However, the team soon realized it was necessary to expand this protection to secure electronic payments through partner banks and provide a safe connectivity service for the students and academic staff.

Secured Network for Multiple Locations

UNIANDES' main challenge was to provide security to its seven unprotected remote campuses. It was possible to threaten the main campus through these remote campuses, and indeed many of them were experiencing attacks, along with virus and malware threats. The university also had to secure the network to protect its online payment system. The institution analyzed several solutions on the market and chose Fortinet for its product functionality, cost, and comprehensive security approach. "Fortinet offered us a performance level that's three times better than other brands. Moreover, we were able to install more secure advanced technology with the same budget, giving us a complete security architecture," says Victor Manuel Proaño, network administrator at UNIANDES.

UNIANDES had a data center at its main headquarters. It was connected to the other sites through a dedicated internet link and a virtual private network (VPN) service provided by a different supplier. This network infrastructure required some improvements, as the dedicated internet provider lowered its service level in recent years, which affected the institution's connectivity.

The entity solved the issue through the Fortinet Secure software-defined wide-area networking (SD-WAN) solution supported by a FortiGate next-generation firewall (NGFW) at each location. The solution automatically chooses the working connection and ensures permanent network connectivity. The network traffic enters only through Ambato's main office; later, it is distributed to the other locations seamlessly and reliably. Thanks to such positive results and the confidence in Fortinet's solutions, the university is considering foregoing the legacy internet connection altogether and thus saving even more on costs, integrating a secure SD-Branch solution with FortiSwitch.



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Details

Customer: Universidad Regional Autónoma de los Andes (UNIANDES)

Industry: Education

Location: Ecuador

Business Impact

- Centralized network management and analytics
- Optimization of team and time resources for security management
- Increased network capabilities by prioritizing resource consumption

Fast and Optimized Network Management

The centralized management of the UNIANDES network is one of the most important benefits obtained with the Fortinet platform, emphasizes Proaño. Currently, security is managed from a single location through the FortiManager tool. There, the institution generates security policies, implements new functionalities, and defines tasks for each campus. "With the previous solution, it could take up to 20 minutes to implement a security policy. Fortinet's solutions enable optimized management, allowing immediate replication of the changes in the other locations," Proaño states.

The IT team's work has been simplified since only two people are responsible for overseeing the communications network at UNIANDES' eight locations. "I save a lot of time in terms of management. I receive reports whenever something happens, and I can decide how to solve an error or a specific attack," explains Proaño. Moreover, FortiAnalyzer helps them keep a detailed record of each event to quickly find problems and determine possible solutions. "There are always attacks. What is important is to be sure that the solution is working. With Fortinet, we are not worried because we know that all our locations and university headquarters are protected by an integrated solution," Proaño adds.

Technology That's Braced for a Challenge

Two years ago, given the positive results achieved with Fortinet tools, UNIANDES added the FortiMail solution to its security infrastructure. The university received multiple attacks via email, so it was necessary to control these incidents and optimize the email user experience. This deployment, integrated to the other installed Fortinet solutions, enabled the institution to deal with the shift to remote work due to the pandemic.

The institution did not require additional investments. The IT team configured the users' computers so that they could communicate securely through the protected VPN. Likewise, email service had its security solution, considering it is the most used communication tool. The institution was also able to segment and prioritize browsing traffic, and optimize the use and consumption of internet resources during these challenging times. "We confirmed Fortinet was a very reliable and flexible solution and were able to immediately configure the network to enable teleworking capabilities and re-route networks and security environments for all users," says Proaño.

In the coming months, based on growth projections extended to new cities in Ecuador, UNIANDES aims to implement Fortinet products in each of its new campuses. This way, they will be able to operate securely and integrate into the existing network. The university also recently began implementing the FortiWeb solution (web application firewall) to protect banking interconnection, online payment services, the institutional portal, and the intranet. The entity handles an average of 1,000 concurrent connections on its website. Almost all services, such as online payments, invoice viewing, or application to academic programs and scholarships, are concentrated there. "We had the FortiGate protection, but we were looking to implement a specialized solution for this purpose. FortiWeb has been a very good addition," concludes Proaño.

Business Impact (contd.)

- Increased communication availability through optimized management of network providers
- Enablement of teleworking capabilities in record time

Solutions

- FortiGate
- Fortinet Secure SD-WAN
- Fortinet Secure SD-Branch
- FortiSwitch
- FortiManager
- FortiAnalyzer
- FortiMail
- FortiWeb

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