



CASE STUDY

Largest Technical College in Peru Uses Secure SD-WAN to Connect 83 Locations



SENATI is the largest technical college in Peru. For 58 years, it has served as the institution of choice for young people seeking careers in industrial and technology professions. Its impact is crucial, considering Peru's predominantly industrial and mining-based economy, where the demand for skilled technical professionals is high. This has led to the institution's expansion into 83 locations across all 24 Peruvian states.

SENATI, which serves approximately 90,000 students, relies on its 5,000-member teaching and administrative staff for the institution's nationwide operation. The wide geographical distribution of campuses and the demanding needs of such a large institution present a challenge for SENATI's IT department. Connecting all of the campuses securely and efficiently is key to ensure that operations run smoothly.

"Catering solely to students pursuing technical and technology careers, and with administrative staff scattered across the country, SENATI's network architecture is fairly complex," says Information Technology (IT) Manager Willy Zamudio Núñez. "Students and staff need to be able to connect and run applications securely from any of our locations, so we need to route all our wide-area traffic through next-generation firewalls at our data center in Lima. At the same time, everyone wants their applications to run smoothly, regardless of where they are connecting from."

Seeking Simple Management of Complex Processes

To meet these complex demands, SENATI tested several software and hardware solutions that they hoped would allow them to secure their wide-area network (WAN) traffic while maintaining the same quality of connectivity and throughput across the country, even in areas with significant bandwidth constraints.

Initially, the IT team was disappointed. "Most of the solutions we tested had separate software and hardware," Zamudio recalls. "That was our main concern, having two pieces of equipment or teams controlling the bandwidth optimization." Looking for more efficient alternatives, they tested and finally selected FortiGate Secure SD-WAN. "One of the reasons we chose the FortiGate Secure SD-WAN solution is that the SD-WAN function is embedded in the firewall hardware and did not need to be deployed separately. This made it easier for us to integrate those functions and migrate to SD-WAN." Zamudio adds.

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Details

Customer: SENATI

Industry: Education

Location: Lima, Peru

With this solution, SENATI was able to achieve both the security and the performance it needed. In addition, the experience has led Zamudio to rethink his approach to selecting technology for networking challenges, because ultimately, networking involves security. “While other providers offer security but are not necessarily dedicated to it, Fortinet is a native security company,” Zamudio says. “It is a definite advantage to work with a company that specializes in this area.”

Since the implementation of FortiGate Secure SD-WAN across all SENATI campuses, all of the institution’s operational processes have maintained high-performance connectivity. “This solution allows us to control students’ network access and egress, communications between local and headquarters administrative areas, and the security of egress through Wi-Fi access points,” Zamudio says. “Additionally, we have a FortiManager network management system, which controls all the communications between the security teams and our network analysts. Our cross-team processes can be highly complex, but the integrated [FortiManager] management system makes them simpler. This capability, along with the high throughput enabled by FortiGate Secure SD-WAN, is critical for SENATI.

Security-driven Bandwidth Optimization Offers Peace of Mind

By using FortiGate Secure SD-WAN, SENATI’s IT team immediately recognized the added value of combining optimization and security. On one hand, they managed to improve connectivity at SENATI’s locations in the interior of the country, where the quality of regular WAN connectivity was not ideal.

“We face greater challenges in certain provinces,” Zamudio explains. “Without good WAN connectivity, we cannot enroll students, teachers are unable to take attendance, and students cannot use the system. Therefore, our product requirement included the ability to automatically redirect traffic to another channel in the event of a drop in the service through one channel, without the user knowing an issue has occurred. This is what we have now achieved with FortiGate Secure SD-WAN.”

On the other hand, Zamudio also notes that, with FortiGate Secure SD-WAN, they have improved bandwidth optimization at a national level by 60%, thanks to the correct bandwidth reallocation to places where it is needed. “When we didn’t have FortiGate Secure SD-WAN nationwide, our bandwidth consumption was quite high. This was the case because we didn’t optimize the internet service and because we had no visibility into what was happening. Now, having these variables controlled, we can allocate bandwidth to specific routes. It is essential for us to know the behavior of our students while navigating so we can best reroute the bandwidth to the sites they need,” he continues.

Having a security-driven SD-WAN solution gives SENATI peace of mind by allowing monitoring and reducing the impact of possible security incidents. “Every day, students create various challenges, because they usually try to bypass safety barriers,” Zamudio says. “In the IT administration area, we strive to ensure our students are not exposed to threats or attacks from any source. To better control these risks, we have found an ally in Fortinet.”

Business Impact

- 60% improvement in bandwidth optimization and better visibility into WAN bandwidth usage
- Greater control of WAN connectivity across network of campuses nationwide
- Integrated security and network management processes

Solutions

- FortiGate Secure SD-WAN
- FortiManager

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