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Peru's Largest University Securely Integrates Its National Network With Fortinet Secure SD-WAN and SD-Branch

César Vallejo University is the largest higher education institution in Peru. It currently has 107,000 students on its 13 campuses throughout the country. The main campus is Los Olivos, where nearly 40,000 people study and work.

For the university's Technological Innovation area, managing the communications, security, and technological infrastructure of an entity of this size is a constant challenge, especially since it must deliver on the university's vision of being recognized as an innovative institution. Therefore, over the last few years the university has been committed to providing technological tools that allow it to offer internet connectivity in a secure and safe environment to students, professors, and employees.

Before the COVID-19 pandemic, César Vallejo University's purpose was to connect the entire university population with its different Peruvian locations. As such, its goal has always been to supply easy and unrestricted access to academic and research content. Thus, the entity began the implementation of various Fortinet solutions on all campuses in the country.

Due to new regulations because to the pandemic, the connectivity rules changed, but the IT security challenges remained. The institution migrated many of its services online, so now students and professors connect remotely and securely to the university's proprietary virtual platform. They not only have their classes on the platform but also use multiple web applications and access virtual laboratories.

Multipoint Connectivity With Unified Security

César Vallejo University has campuses spread out in distant geographical areas with very different conditions. Some locations have poor connectivity due to limited bandwidth. A few years ago, the institution implemented single internet access to link all campuses and operate in a centralized manner with a single output channel to overcome these limitations. However, given the mentioned scenarios and the need to guarantee connectivity, the institution installed dedicated links for each campus and a redundant connection with different service providers to reduce any potential contingency.

The university implemented Fortinet Secure software-defined wide-area networking (SD-WAN) appliances in each campus to manage the entire communications network. Additionally, they have extended their solution to Fortinet Secure SD-Branch, integrating the FortiGate next-generation firewalls (NGFWs) with FortiSwitch secure access switches and FortiAP access points. The technology significantly improved the connectivity of each university's location, while allowing the users to avoid service disruptions on campus. Emerson Anibal

UNIVERSIDAD CÉSAR VALLEJO

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Details

Customer: César Vallejo University

Industry: Education

Location: Peru

Business Impact

- Unified network management platform

- Secure and redundant connectivity for 13 campuses in Peru

- Complete network visibility and simple reporting throughout the country

Cajahuanca, infrastructure and academic innovation coordinator at César Vallejo University, highlighting the SD-WAN and SD-Branch capabilities as distinct elements of Fortinet's solution, explains, "If a service provider has any problem, our community is not impacted because the Fortinet platform works seamlessly to ensure that all navigation is routed to the other ISP."

By integrating Secure SD-WAN and Secure SD-Branch solutions, the university gains a most efficient and secure architecture of its wide-area and local-area networks (WANs and LANs), allowing it to improve service levels, as well as availability and experience for students. Likewise, the platform is managed from the main console of the FortiManager solution. "Fortinet's comprehensive solution gives us greater visibility over what happens on our network. We now know who is connected to the network, and we can apply security policies and the required controls to make their experience safer. With Fortinet we have control over the entire network in an easy, intuitive and most importantly, centralized way through a single console," says Cajahuanca.

The university benefits from an improved security posture by integrating FortiSandbox zero-day threat protection with the Secure SD-WAN and Secure SD-Branch solution, as this enhances the robustness with an automated breach protection approach against zero-day attacks over WAN connectivity. In addition, with the FortiAnalyzer centralized logging and reporting solution, the university's IT team receives performance indicators and reports, which gives visibility over all events and provides technical and management reports that are ready to use.

An Efficient and Cost-saving Solution

As a university, César Vallejo has open applications connected to the internet and is thus exposed to security breaches. The main challenge was to have an integrated solution to protect its LAN and WAN networks. It would also have to be easy to deploy—regardless of the complexity of a large network—and managed with a single administration panel.

Before implementing the FortiManager solution, the university configured its FortiGate firewall, its switches, and its access points individually. In the same way, security policies were explicitly generated for each device. As a result, the institution demanded a considerable effort from IT staff. There was also the additional risk of overlooking a specific location or forgetting to implement a particular policy.

With FortiManager, the process was carried out with a single configuration and then automatically deployed to each of the campuses. This task is now performed only once, saving personnel time, avoiding human error, and making remote equipment management more efficient. "We chose Fortinet not only for its technical performance but for its integration, easy implementation, and more importantly, for having everything in a unique console that offers simple management," says Cajahuanca.

From the network connectivity perspective, there has also been a significant impact on the institution. Previously, the university had MPLS links to connect the different campus locations, with an expensive model in bandwidth and service provider support. Moreover, a campus could become isolated if the internet provider had problems with its connection. Now, Fortinet Secure SD-WAN integration gives the benefits of excellent performance with a high security level at a much lower cost. "Today, with two different internet providers, we can make

Business Impact (contd.)

- Savings by replacing expensive multiprotocol label switching (MPLS) links with Fortinet Secure SD-WAN solution

- Automated implementation of security policies

Solutions

- FortiGate
- Fortinet Secure SD-WAN
- Fortinet Secure SD-Branch
- FortiAP
- FortiSwitch
- FortiManager
- FortiAnalyzer
- FortiSandbox

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sure all our critical applications that should be connected to our data center are always up and running. Also, with Fortinet Secure SD-WAN, we not only know which link is active but also prioritize to ensure certain applications have the appropriate importance within the network to guarantee their communication."

Support as a Key to Success

Another key aspect highlighted by the customer has been the support of Fortinet's team throughout the process: "This is something I really liked about Fortinet," Cajahuanca says. "The integration level between the commercial and the technical part has been crucial, that gives us confidence on what we are thinking of doing will work. Not only will it work, but it will also allow me to go further and obtain more."

Today, César Vallejo University is considering the next level of its implemented technology and evaluating improvements to the solution. "We are going to continue adding Fortinet solutions to keep offering the highest security to our users in the whole connectivity environments," concludes Cajahuanca.

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