

Faculdade Espírito-Santense de Administração (FAESA)

Situation

[Faculdade Espírito-Santense de Administração](#) (FAESA) is among Brazil's largest educational institutions. Located in Espírito Santo (southeastern state in Brazil), it offers 36 courses and has more than 7,600 students enrolled in its four campuses. Recognized by Brazil's Ministry of Education as a resource in the educational sector, it ranks among the best colleges in the country.

Solution

As part of its ongoing desire to improve and keep up with technology's constant evolution, the Faculdades Integradas São Pedro (known as AEV/FAESA, through a joint venture between the Associação Educacional de Vitória and FAESA) was in search of a high-performing wireless network that could provide students and faculty with stable and secure access to internal systems and broadband internet. Their objective was to offer, through their wireless network, future growth to support additional applications, including voice.

The institution no longer wanted to work with isolated access points (AP) because managing them is quite expensive and options are limited. They needed to find a professional wireless network solution that could guarantee fast implementation and an environment that was easy to manage.

Additionally, the network needed to cover the entire unit and support a large number of individuals trying to access it. AEV/FAESA worked with Fortinet partner [BRASILINE](#) to determine the best solution to meet their critical requirements:

- Centralized management of all AP in a single console, with policy enforcement and centralized configuration of all radio AP
- Technology 802.11 a, b, g e n (11mbps to 300mbps) with 2.4 GHz radio frequency and 5.0 GHz
- Ability to create multiple service set identifiers (SSIDs), each with network segmentation and separate routing
- Power over Ethernet (POE) technology built into the AP and Ethernet 10/100/1000 MBPS
- Layer 7 application control with complete integration to the Unified Threat Management (UTM) technology already implemented by BRASILINE
- Unique wireless cloud allowing the exchange between AP without losing connection; Resource required for VoIP applications in wireless networks
- At least two radios in every AP, one dedicated to the AP and the other dedicated to monitoring the wireless network
- Several international standards and certifications

After a site survey, BRASILINE identified the locations for installing each AP in the two buildings that were part of the project. Each building has four floors with a total area averaging 5,000 square meters. It required the construction of the wired infrastructure to connect to the AP, which was installed at strategic points to offer complete coverage and signal reception throughout the campus. To accomplish this, 14 APs were required for complete coverage of the entire area. All equipment was integrated into the UTM central controller, managing the entire network in a single console.

Challenges

- Previous access points were expensive and had limited functionality

Objectives

- Deploy a high-performing wireless network
- Prepare for future growth needs

Deployment

12 x FortiAP-220B
FortiGate-111C
FortiGate-110C

Industry

Education

Acquiring different equipment would not have been a simple solution because that would have resulted in a highly complex environment, making its management totally unfeasible. Moreover, purchasing reporting equipment connected to the central controller is very expensive. Therefore, this project integrated both needs – a professional network adhering to our needs with the ability to meet future projects, including VoIP over wireless and a fixed cost. Today, we have total control of my network, centrally and at a cost that matches expectations."

- Victor Loss Bosa
Director of IT

AEV/FAESA

The full implementation of the system was completed in only 10 days, since the client needed to have the entire project completed before the beginning of 2011. AEV/FAESA installed one 12 [FortiAP-220B](#) appliances, one [FortiGate-111C](#) and one FortiGate-110C. BRASILINE and Fortinet were able to meet the deadline and successfully implement the entire project's infrastructure and equipment. AEV/FAESA plans to install 15 more FortiAPs to cover its second campus during the summer of 2011.

Success

AEV/FAESA has been able to focus on its business, while BRASILINE takes care of managing the network. Additionally, AEV/FAESA knew ahead of time the exact final cost to maintain this solution without any fine print surprises. In other words, there was a 50 percent cost reduction in procurement. The client did not need to purchase any additional equipment or software. The entire solution was implemented based on a Management of Information Security contract, where the client has a single fixed cost for maintenance of the entire wireless network. Additionally, the client did not need to be concerned about direct or indirect costs involved in building and/or maintaining a network of this size.

There was also another great benefit provided through the improvement in performance and administration, as well as the ease

of work and creation of security rules without having to connect to each appliance individually. Through a single management console, it is possible to see in real-time any safety rule or track user connections. Moreover, with a single WLAN, administrators manage a single controller that is integrated to the UTM technology, which was implemented one year ago.

"With a large number of users in the network, we needed a reliable network with extensive coverage and high performance. Acquiring different equipment would not have been a simple solution because that would have resulted in a highly complex environment, making its management totally unfeasible," said Victor Loss Bosa, director of IT for AEV/FAESA. "Moreover, purchasing reporting equipment connected to the central controller is very expensive. Therefore, this project integrated both needs – a professional network adhering to our needs with the ability to meet future projects, including VoIP over wireless and a fixed cost. Today, we have total control of my network, centrally and at a cost that matches expectations."

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