

GLOBAL WIRELESS ARCHITECTURE AND DEPLOYMENT FOR A LARGE SOFTWARE COMPANY

Challenges

The organization was currently unhappy with the performance of their wireless environment because it had a single point of failure due to a massive local deployment. Additionally, the organization had out grown their current wireless infrastructure design.

In the existing environment, the master controller was responsible for updating each of the local controllers that were positioned around the world. One major concern with this setup was that the organization would be unable to execute any updates or changes if the master controller stopped working. Considering this was a global architecture, another issue arose when the organization wanted to upgrade the master controller; if the organization wanted to perform an upgrade they also had to update every one of the local controllers because the current network didn't allow for different OS versions to be running. If the organization wanted to implement a specific upgrade at a single location, they needed to coordinate logistics with the IT team that managed the master controller because it was located at a different site. The master would then have to be upgraded in addition to each specific location controller in order to roll out the desired feature.

This environment posed numerous challenges and threats because if a bug arose in a specific OS upgrade, the whole organization would then be affected. As a result, the organization was reluctant to upgrade to new versions of code because they were afraid something would go wrong and affect their entire environment. This posed numerous difficulties for tech support because they were often dealing with code that wasn't up to date.

These ongoing concerns and complaints led to pressure from their board to implement a consistent, reliable, and highly available global wireless environment. In addition, the organization asked that the new solution contain a security requirement to lock down ports, provide self-registration and allow secure guest access.

Selection Criteria

The customer was ultimately looking for their new environment to have high availability across seven of their main global datacenters. They were strongly focused on security, increased performance, and the ability to scale individual locations as necessary. In addition, a main priority was for each location to run semi independently.

This would allow the organization to make adjustments in certain locations without affecting the other locations in the environment. In order to tie this all together, the organization was looking for a technology that allowed them to simply and easily manage their whole network.

Solution

Working in conjunction with Aruba Networks and the organization, Vandis took the lead in executing the re-architecture and design of the new network to accomplish the organization's objectives.

During the re-architecture process, Vandis recommended the customer go with master controllers for each of its locations worldwide instead of the local controller design. This would enable the organization to upgrade or update a specific region and observe the effects on a smaller scale, acting somewhat like a test environment. After a successful upgrade, the company then had the option to roll it out to other locations.

The customer ultimately decided to purchase Aruba WLAN controllers, Airwave, and Clearpass. These technologies proved to work efficiently in the customer's test environment and Aruba's consolidated approach with WLAN and guest access put them one step ahead of their competitors. The component that tied everything together is the Aruba Airwave product which is their simplified wireless management system that utilizes one platform and enabled them to easily manage their whole network. This technology is used to sync the configurations across all the master controllers so that every time they enable a new feature they do not have to touch every controller. Airwave will be the global master to sync all configurations and provide the customer with the tools to view their history.

Results

By implementing the new architectural environment, the organization now has peace of mind because each region is acting as subset of a global wireless architecture. They now have the ability to grow a region by adding controllers along with users or shrink a region by decreasing the amount of users without affecting their other locations. This has created a high level of flexibility and independence per region.

With the new wireless environment deployed, this organization has accomplished the main goals of this project and is better equipped to manage and implement any future updates to their global wireless deployment.