



NETWORK SECURITY FOR THE CALIFORNIA INSTITUTE OF TECHNOLOGY - CALTECH

OBJECTIVE Caltech is a prestigious private university, elected to the Association of American Universities and the founders of NASA's Jet Propulsion Laboratory. Caltech is considered one of the world's best universities—its graduates have earned 34 Nobel Prizes. Though Caltech had a wireless network in place, it did not provide adequate coverage throughout the entirety of the campus. With the growing demand for Network Access from the campus' 2,220 students, 1,000 faculty employees, 4,000 staff members and guests, Caltech needed to upgrade its wireless network. To provide better Network Access, Caltech needed to upgrade the entire campus, including dorms, classrooms, labs, libraries and other facilities. VectorUSA designed and is in the process of implementing and maintaining an 802.11ac wireless network.

SOLUTION VectorUSA engineers and Caltech IT executives chose the HPE Aruba 7000 series controllers along with HPE Aruba's 300 series Access Points that support 802.11ac Wave 2. This solution incorporates the ClearPass Policy Management Platform already in use at Caltech to leverage Caltech's investment and maximize its ROI in that platform. From a network management standpoint, the AirWave Management Platform will provide granular visibility into the wired and wireless network. AirWave is the only management platform designed with mobile devices and applications in mind. VectorUSA engineers are now in the process of installing more than 2,290 Aruba AP-315 Wireless Access Points, 220 Aruba Outdoor WAPs along with the supporting architecture. VectorUSA is also recommending an Open SSID solution. The SSID will serve guest users that do not have secure network credentials. This will also allow network access for devices that do not support WPA2. VectorUSA is the Lead Service Provider on this Wireless/LAN project; designing, managing, implementing, and executing the full delivery of all products and services.

Due to the size of the project, work is scheduled over a three-year time frame. Currently, the collaboration, building, testing, and feedback are in full rotation. At the completion of the project, VectorUSA will provide training, management and trouble-shoot training of the complete solution. The campus' wireless upgrade will provide Caltech with a robust wireless network capable of meeting the growing demands for Network Access.