



University of San Diego Avenida eTIPS for Secure Guest Access



About the University of San Diego

The University of San Diego is a Roman Catholic institution dedicated to academic excellence, expanding liberal and professional knowledge, creating a diverse and inclusive community, and preparing leaders dedicated to ethical conduct and compassionate service. The university enrolls more than 7,000 students and is known for its commitment to teaching, the liberal arts, the formation of values and community service. The all-wireless campus spans 180 acres overlooking the city of San Diego, Mission Bay and the Pacific Ocean.

Introduction

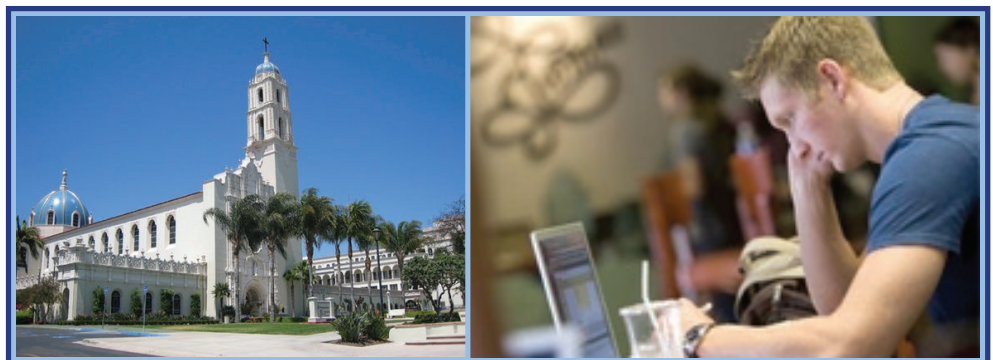
If you've ever felt like you didn't have enough time to prepare for a house full of guests, just think how the IT team at the University of San Diego (USD) felt in early April 2009 when they knew that 12,000 visitors were expected over the summer. With the school year coming to an end, the team had just three months to prepare their guest access network for the visitors planning to attend summertime on-campus events, sports camps and conferences. At that time they were still looking for a solution that would meet all of their wireless network security and temporary account management needs.

The Challenge with their Existing Wireless Guest Access Network

While the issue of finding a solution for easily creating temporary access accounts was looming, the USD IT team also faced a legacy problem that they needed to resolve. USD offers a guest access network, along with a student wireless network for approximately 18,000 registered wireless users to allow students to log in with USD credentials for access to the network and various student resources.

“Our problem was that anyone could anonymously connect to our guest network, and there was no way to confirm their identity,” said Doug Burke, IT Director at USD. “We never knew who was actually on our guest network, and we needed an authentication solution that captured better login data to track for things such as a user's role and connection issues.”

According to Burke, his team also found that half of the users on the guest network were actually students who should have been using the separate student network. By providing differentiated access and receiving better authentication data, the team felt that they could cut down on the amount of time spent on help desk calls by having per user data.



The Search For A New Solution

In late 2008 and in the months leading up to the summer of 2009, the IT team evaluated a number of different products, including those from Eleven Networks, ID Engines and Blue Socket, but none met enough of their requirements. A firm deadline of June 1 was the goal for being fully operational – including product integration, testing and QA, and final deployment – with a week to spare before visitors were due to arrive.

Burke made a point of stressing that the most important thing the team did for this project was to identify the requirements for their secure guest wireless access system up front.

Besides visitor bulk account and self-registration options, these requirements included:

- Compatibility with their Aruba wireless network
- Out-of-band management
- Credit card and promotional code payment options
- Integration with their CASHNet credit card payment system
- Full redundancy/failover
- Ability to host their guest captive portal
- Built-in RADIUS
- And activity and reporting for each user

Charlie Koehler, network systems administrator for USD, added, “We have a three-person team, so having a solution that is very easy to use and requires low maintenance is important.”

A New Approach To Secure Network Access

With about three months to go the team at USD found Avenda Systems, and conversations about its eTIPS 5000 Series platform quickly confirmed that all requirements they had put together could be met. The next step was to put it to the test.

The eTIPS solution consists of a hardened network appliance, a flexible policy platform, and a built-in guest access application. It is the industry’s only solution that centrally manages policies for multi-vendor equipment across all access methods and supports each major operating system, managed and unmanaged endpoints, and existing identity stores.

USD also realized that eTIPS included additional features within a single appliance that would let them expand their network access security plans across the entire campus. These included:

- An intuitive Web 2.0 user interface with 3-Click help-desk navigation
- Built-in AAA – RADIUS, TACACS+
- Endpoint network access control (NAC) health checks
- Policy reporting components
- And Web portal and 802.1X authentication and authorization methods

According to Lois Acker, network systems architect for USD, Avenda’s eTIPS met more requirements than any product they evaluated, and she and the team worked closely with Avenda to fill any gaps required for integration into the standard product.

First Step: Identifying Primary Requirements



“We wanted an authentication server where the wireless traffic doesn’t pass through the device itself,” she explained. “The solution also had to offer self-provisioning that allows users to set up their own accounts without IT support, and Avenda was the only product that we’ve seen that can meet this need. There was no way our team could set up and support the more than 12,000 summer visitors attending camps and conferences.”

According to Koehler, the ability to quickly deploy and integrate the Avenda platform into USD’s existing infrastructure, which includes its Aruba wireless LAN and campus credit card payment system from CASHNet, made choosing eTIPS easy.

“In addition to being the only product to integrate with CASHNet, Avenda is unique in allowing us to create a customized guest access portal which supports both credit card and promotional code options for payment,” said Koehler. “The support from Avenda is amazing, and they were very responsive in helping us implement new features.”

Since students don’t standardize on a single computer, Avenda’s unique ability to support various user platforms was also important, said Acker. She noted that most students and guests use window machines, but there’s a growing Mac population of approximately 25 percent.

Customized Guest Access Portal



Operation Guest Access

With help from Avenda’s eTIPS, USD’s secure guest access system was up and running in time for the summer rush. As campus guests arrived and requested network access, they were pointed to a self-registration portal where they entered credentials of their choice. Depending on their type of activity, they were asked to enter a promotional code or credit card data for payment. USD charges \$5 for a day pass, \$15 for access for a week, and \$30 for a month’s worth of access.

“The system is working out well, and users tell us they are impressed with the functionality and are happy to be able to register themselves on their own,” said Acker.

The Avenda system also supports 802.1X authentication, so that USD can extend the benefits of the eTIPS platform to more secure internal networks for better visibility and an improved user experience.

Summertime Results

“Over the summer and into the new school year, the IT team has realized a number of positive results from the new Avenda-powered guest access system.

Notable to the group is the time saved from having to manually set up guest user accounts. Burke estimates the team will now save approximately 600 hours each year. Besides the day-to-day savings, a large gain in efficiency is also realized over the summer.

The university is also benefiting from improved network security and visibility of traffic pattern usage, and can now respond more quickly to any user issues that come up. Another benefit is that the Avenda solution also serves as USD’s main RADIUS server, now providing the main authentication source for all wireless access.

“All users who come on our campus network must meet our compliance guidelines and are required to have certain things running on their systems,” said Koehler. “Avenda authenticates for all our network services, and ensures those allowed on the network have auto updates enabled, have anti-virus that is less than two weeks old, and other similar requirements. Avenda is also used to check for peer-to-peer applications, which must not be running, and reports any issues back to the enforcers.”



With so many wireless users over the summer, the guests acted as a live test bed for the wireless network before students arrived in September, said Acker.

“We have very good coverage across our campus, but users found a few coverage holes which we were able to fix,” she said. “Our guest users became more vocal concerning needs since they were now paying for the service. It was important to get that feedback because we are in the business of continuous improvement, and we were able to jump on any corrective action.”

Direct integration with USD’s CASHNet payment system enabled the university to also offer a secure method of payment from an existing PCI compliant vendor.

The Future Looks Bright At USD

Looking ahead, Koehler said USD also plans on integrating Avenda into their Cisco switched network later in 2009, as plans include extending guest access to USD’s wired network and implementing end user device-based switch security.

The group is also starting work on expanding the secure guest access network’s support of end user devices. Koehler sees the ability to authenticate and allow guest access for non web-based devices and gaming systems as an important future capability that Avenda can deliver.

Learn More

For further information regarding Avenda eTIPS and guest access solution, visit:

<http://www.avendasys.com/products/>



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