DEL MAR COLLEGE

RUCKUS® Cloud helps deliver on promise of digital learning and BYOD

Customer
Del Mar College

Country
United States

Overview

Del Mar College (DMC), a community college located in Corpus Christi, Texas, embraces innovative education models, including its nationally recognized nursing program's clinical simulation lab. Unfortunately, the previous Wi-Fi network couldn't support the live stream video-based instruction used by the nursing program. The Wi-Fi didn't even make the grade for enabling consistent connections in high-density environments like the college's Center for Economic Development (CED). Or for enabling BYOD so that students could access the Wi-Fi network with any device across the DMC campus. The CIO mandated a modernization of the Wi-Fi infrastructure and turned to RUCKUS Cloud to address these challenges as well as to reduce infrastructure and management costs.

Challenges

- The existing Wi-Fi network couldn't support new digital learning models that incorporated video, which requires high bandwidth and reliable quality of service

- The college often hosted large events where up to 250 users would congregate in a single room—they had to deploy additional APs to meet spikes in demand, and even this approach yielded poor results.

- Each student could only access the secure campus network through a single personal device on campus, even though the school was committed to supporting BYOD

Solution

- 350 RUCKUS access points

- RUCKUS Cloud for simplified management of a campus-wide Wi-Fi network covering 45 buildings and 25,000 users

Benefits

- One RUCKUS AP supports many more concurrent users (up to 4X more) compared to their legacy APs

- The superior performance and coverage of the RUCKUS APs provides high quality Wi-Fi to students, faculty and visitors across their two campuses and satellite locations.

- The IT team now spends much less time monitoring, managing, and troubleshooting; just two network specialists manage the rapidly-growing Wi-Fi network.

> "By providing high-performance, stable coverage across the campus, our wireless network is helping to break down some of the constraints of traditional classrooms. That's one of the most important things we could have imagined accomplishing with our new Wi-Fi infrastructure."

August Alfonso
VP of Facilities Operations and Chief Information Officer
Del Mar College

Del Mar College modernizes instruction with cloud-managed Wi-Fi

Del Mar College (DMC) is located in the beautiful port city of Corpus Christi, Texas. DMC is a growing, forward-looking community college that serves up to 25,000 students and over 700 faculty members and staff. While the school's education programs were at the leading edge of digital learning, the existing Wi-Fi network was trailing behind in performance. August Alfonso, VP of Facilities Operations and Chief Information Officer, set a new bar for his network team. "Our students shouldn't be doing their assignments off-campus just to find a better Wi-Fi signal. Our faculty shouldn't give up on introducing new learning models because the Wi-Fi network can't support bandwidth-intensive applications. Students should be able to register multiple mobile devices on the campus network. And we shouldn't have to overspend on APs or IT resources to build a high-performance network."

With that mandate, Alfonso had his IT team put together a comprehensive "mobile roadmap" for modernizing DMC's Wi-Fi network.

Vince Villarreal, network specialist, says the existing wireless network from HPE Aruba was at its limit. A prime example is the nursing department's clinical simulation lab, one of the largest in the state. The learning environment approximates real hospital conditions as closely as possible.

"The existing APs couldn't handle the bandwidth-intensive video streaming at the heart of the clinical simulations. Over 100 students would be assembled in the lab to access video-based instruction and tests on their iPads. Even with four Aruba APs deployed in the space, we were getting constant complaints about poor video quality and dropped connections. It was extremely frustrating for the faculty and students."

Alfonso's team undertook an extensive vendor evaluation. They had a long list of requirements, including better range, faster access, better coverage for high-density environments, the ability to support the most demanding digital learning applications, easy onboarding of students (particularly BYOD), and rock-solid stability under any circumstances. "For us, it was a clear choice. No other vendor could touch CommScope for AP performance. The RF technology is outstanding. Their economics is also unmatched—including the investment costs and total cost of ownership."

CommScope earns high scores for Wi-Fi performance and efficiency

The first phase of the Wi-Fi network update covered the existing 45 buildings (with over 900 classrooms) across two campuses. The next phase will cover the new buildings currently under construction. The network also extends to two off-campus Centers. In particular, the Center for Economic Development (CED) is rented out to community and business organizations for large meetings, so great Wi-Fi coverage for guests is expected.

The Aruba APs previously installed were capable of supporting a maximum of 25 concurrent users. The RUCKUS APs, on the other hand, have demonstrated support for up to 4X as many concurrent users on single AP. "We're deploying

far fewer APs per classroom and building, which saves on APs and all the associated costs like cabling and electrical," says Villarreal.

The RUCKUS network also supports the BYOD trend with the ability to allow students to access the Wi-Fi network using multiple devices. "With our existing wireless network, a student could only register one personal mobile device on the campus network. This isn't a realistic policy for a modern college. It isn't even consistent with mobile computing in the business world, where our students are headed," says Alfonso.

Powering cutting-edge instructional models

Not surprisingly, the building that houses the nursing program was the first one scheduled for the new RUCKUS APs. "Originally we had four APs in the simulation lab and performance was still poor. Now we have just two RUCKUS APs in the lab and we've had zero complaints about connectivity, download speeds, or stability," says Villarreal. "They love the new RUCKUS network."

The nursing program just received a grant to improve student learning which the nursing department chose to put towards building out another 14 patients stations equipped with high tech cameras and audio systems. That means more users and connected devices and even more data for the Wi-Fi network to support. "In the past, we would have been scrambling to figure out how to handle that extra load. With our RUCKUS network, we're confident that we can handle the expansion without even adding another AP."

Alfonso also points out that high-performance Wi-Fi is enabling faculty to experiment with new teaching models. In the nursing program, faculty can now send video to any classroom in the building. They can break students into smaller groups and watch a live video feed from anywhere on campus. "By providing high-performance, stable coverage across the campus, our wireless network is helping to break down some of the constraints of traditional classrooms. That's one of the most important things we could have imagined accomplishing with our new Wi-Fi infrastructure."

Cloud-managed Wi-Fi enables IT to stay lean

Moving strategic applications such as learning management and ERP systems to the cloud is another IT initiative. "CommScope not only ranked high for AP performance and economics, the company offered cloud management for distributed Wi-Fi locations. That checked an important box for us," says Alfonso.

"When we evaluated RUCKUS Cloud, we were impressed at how easy it is to use," says Villarreal. "It's a very well designed, well thought-out management application. And absolutely suited to the mobile era." In fact, Villarreal uses the RUCKUS Cloud mobile app on his smartphone extensively. "We're rarely sitting at our desks. I can just check my phone to see the status of all of the locations in the network."

Another feature that Villarreal likes is the ability to scan in the registration numbers of the APs using his smartphone camera. "I can register a batch of APs before they're installed. As soon as they're plugged in on site, they automatically find the controller in the

cloud for authentication and assignment to the right venue."

RUCKUS APs handle high-density use with ease, and cloud-managed Wi-Fi makes it easy to set up guest networks. An example is in the off-campus Center for Economic Development. When larger groups rented the big meeting room at the CED, Villarreal used to drive to the center to install an additional AP with a new SSID to accommodate the temporary burst in connections and traffic. After the meeting, he'd drive back and take out the AP. Now, just two RUCKUS APs are needed to accommodate the Wi-Fi needs of up to

250 people. Vince can assign a new SSID for each event through the RUCKUS Cloud dashboard in less than a minute, right from his mobile phone.

"There was so much manual overhead with the old network. In comparison, so many management processes are

automated with RUCKUS," says Villarreal. "We have campus-wide Wi-Fi coverage, which we didn't have before. We're supporting more devices. There are three new buildings under construction and several more in the planning stages. But it's still a two-person network team and we're handling it all quite easily. The time we save is remarkable—and invaluable."

In the future, Alfonso hopes that the stellar performance of the RUCKUS network will help convince the City of Corpus Christi to allow the college to deploy RUCKUS APs on street lamps in the adjacent neighborhoods where most of its students live. "We'd love to give our students the same level of performance in their homes that they enjoy on campus. We don't want to limit the reach of a DMC education."

"The RUCKUS Cloud dashboard is a very well designed, well thought-out management application. And absolutely suited to the mobile era. We're rarely sitting at our desks. I can just check my phone to see the status of all of the locations in the network."

Vince Villarreal
Network Specialist
Del Mar College

About RUCKUS Networks

RUCKUS Networks builds and delivers purpose-driven networks that perform in the demanding environments of the industries we serve. Together with our network of trusted go-to-market partners, we empower our customers to deliver exceptional experiences to the guests, students, residents, citizens and employees who count on them.

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