CISCO Meraki

CASE STUDY

New AR access, APs, and switches increase learning opportunities

47
schools in the district

46,100+
enrolled students

2,000
Cisco Meraki APs deployed

Industry

K-12 Education

Location

El Paso, Texas

Products

Wireless LAN (MR)

Highlights

- District required a robust, flexible, and scalable network for 46,000 students
- Over 3,400 Meraki MR Access Points and Cisco Catalyst Switches deployed
- Increased bandwidth provides more learning opportunities across the district

Overview

Socorro Independent School District is located in the El Paso region of West Texas, close to the border of New Mexico. The district is comprised of 47 schools serving more than 46,100 students. As a high-performing K-12 district, Socorro ISD's focus has always been on student access and achievement. Even though areas of the district house low-income families, the school's leadership is concentrated on providing all of its learners with the same tools as a more affluent district.

Socorro ISD began to focus on 21st Century Learning (C21), a program that enforces core competencies (such as collaboration, digital literacy, critical

thinking and problem solving) to help students thrive in today's digital world. In order to accommodate a C21 instructional model, the school district needed a more robust, flexible, and scalable technology network. Socorro ISD relied on wireless, but the aging access points (APs) in its classrooms did not meet the district's expectations.

" Our goal [is] to make sure we have a solid infrastructure in place to support the most promising and essential educational programs within our district."

HECTOR RAYNA
Chief Technology Officer, Socorro Independent School District

"About five years ago, Dr. José Espinoza, Socorro ISD's superintendent, led the development of our future-ready initiative and committed to curriculum changes and providing devices and laptops to students," says Chief Technology Officer Hector Reyna of Socorro ISD. "These investments proved crucial to the innovative 'WIN Academy,' which Dr. Espinoza introduced to support at-risk youth and students from low-income families to ensure they had the best access to a brighter future." The WIN Academy was created to bring groups of learners together for three years across the district's elementary schools, with one class of learners in the academy at each grade level.

In addition, the district also hoped to grant each student a digital device. "Our goal at that point was the same most promising and essential educatio2,000nal programs within our district," says Reyna. Since Socorro desired a stronger digital curriculum across its schools and needed to prepare for the WIN Academy, its leaders decided to reinvest in the district's infrastructure to support Internet access and mobile learning. In addition to new types of personalized learning, the district also wanted to keep schools open after hours to promote out-of-class learning.

Challenges

An infrastructure upgrade was essential to building new educational programs, so Socorro ISD used E-rate funding and local sources of revenue to help meet its technological needs. Socorro ISD is divided into two areas that encompass a diverse demographic. As a 71-percent free and reduced lunch district, Socorro ISD is eligible for significant E-rate discounts, including those for Internet access and telecommunications services under E-rate Category One and discounts on cabling and switching under E-rate Category Two. As such, the school district's E-rate Administrator Tricia Dominquez worked with the IT team to put together a compelling plan to leverage Category Two funding for the needed technologies at each campus.

Chief areas of concern within the plan were price, reliability, value, scalability, and service. "Socorro ISD is a passionate district, one that cares deeply about the role it plays in a child's education," says

Reyna. "With this upgrade we needed to make sure that every child on campus had access to the Internet on demand with no questions asked." Reyna and Ben Ross, network director at Socorro ISD, issued an RFP for new network solutions. Within the RFP, the priority was connecting the right solutions with the right price. In 2013, Reyna and Ross began reviewing vendors and evaluating competitive solutions.

Solution

During the review process, Cisco stood out among the other solutions—the company was a major player in West Texas and showed a strong ability to meet all of the goals laid out in the RFP. Since Cisco's network came with a reputation of reliability, Reyna and Ross decided to pilot some wireless solutions and quickly found that Cisco was easy to maneuver and competitively priced. "In 2013 our first deployment target was our high schools, and we wanted to hit the ground running," says Reyna. "We needed to provide robust wireless to these campuses at least 10 hours out of every day, without the need for excessive professional development."

After the testing period, Socorro ISD decided to purchase Cisco Meraki — which offers a complete cloud-managed wireless network that's built to simplify the challenges of modern, device-centric networks. "Following our testing, we knew Cisco Meraki would be easy to teach to our instructors, and the claims behind the technology lived up to its performance—both on the power side and the support side." The deployment of more than 2,000 Cisco Meraki APs throughout the district's high schools took one year, ensuring that by the 2014-2015 school year, Socorro ISD was ready to reach its students with a new wireless network intact.

In addition, Cisco and the district worked with partner agency Desert Communications, and account manager Sara Quiroz, to make sure that the plan and funds from E-rate matched the implementation flawlessly. Overall, the deployment timeline was one year, ensuring that by the 2014-2015 school year, Socorro ISD was ready to reach its students with a new wireless network intact. "One year may seem like an extended deployment, but it was critical for our team to spend time troubleshooting and reallocating, especially in such a large district," says Reyna. "We wanted to launch a high-functioning, top-of-the-line network to match

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the potential of our students." Once the school year was underway, Socorro ISD and Reyna also decided to invest in Cisco Catalyst Switching to bolster the school's new 10-gigabyte network.

Results

Since its deployment of Cisco Meraki Access Points and Cisco Catalyst Switching, Socorro ISD has experienced large gains in performance — both technically and academically. In terms of digital curriculum, Socorro ISD is now at the forefront of schools in the nation. Each instructor develops lessons online daily, and students can follow this curriculum page-by-page on mobile devices — a feat that would not be possible without a reliable wireless infrastructure with consistent uptime. "When we look at our teachers and our students, we see that engagement is better, attendance is higher, and discipline is down on nearly every campus," says Reyna. "These types of gains, and the ability to implement new programs that take our students in new directions, are thanks in large part to our new wireless environment."

One of the main reasons Socorro ISD has experienced such success is due to the vision of district Superintendent José Espinoza to treat and educate each student as if they were his own. Espinoza vigorously campaigned for more funds to be poured into technology so that all students would have equal access to technology, regardless of their campus or personal situation. As a result, Socorro ISD students are confident that they get an equal, even superior, global education. "We really want every child to have access to everything they deserve, especially our lower-income students," says Reyna. "We want our students to be well prepared for a global economy, and we want them to launch into a range of diverse industries; that's why C21 skills are so critical, and wireless is the backbone for that type of learning." Specifically, Socorro ISD has experienced better wireless coverage in all schools with new APs.

Cisco Meraki provides the district with access to resources that students might not have otherwise, as well as easy troubleshooting, constant uptime, zero touch provisioning and future-proof technology. The new accessibility for students and increased bandwidth also provide more learning opportunities during off-peak hours. The surrounding community is even able to connect at local parks, ensuring that school resources are available on the playground if needed. Thanks to its new wireless environment, Socorro ISD was also able to stand up the WIN Academy, which expanded to 16 campuses in 2016. The data that evaluates both low-income and at-risk students within this program has shown major gains, which is supported by the network.

Lastly, Socorro ISD launched a one-to-one (1:1) learning environment thanks to its new network. A 1:1 environment is established when a school issues each specified student an electronic device that they may use to access the Internet, digital course materials and digital textbooks. With its new 1:1 environment, the district is able to provide a laptop to every matriculating freshman to prepare them for a digitally-intensive curriculum; 2016 is the third year of this program.

Moving into 2017, Socorro ISD is focused on leveraging E-rate to support digital learning initiatives in K-8 education. "We've made sure that all high school students have, or will have, a mobile device, and we are deploying APs in every elementary classroom," says Reyna. "We want to expose our K-8 learners to digital learning in the same ways we've worked with high school students." In addition to what's happening inside classroom walls, the district is also engaging local business to provide Internet access for students at restaurants and other companies to keep learning top-of-mind.

"Ultimately, this holistic approach — and our focus on technology — puts Socorro ISD on the road to crafting strong global citizens, and ones that can move into higher education without boundaries or limitations," says Reyna.

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