California School System Prepares for Common Core

Alum Rock Union Elementary School District installs Cisco network to help at-risk students excel.

Challenge

While every school district in America faces unique challenges, Alum Rock Union Elementary School District (Alum Rock UESD) faces more than most. Teachers, faculty, and staff at Alum Rock UESD serve a community in the San Jose, California area that is chronically below the poverty level. Many students in the area live in shelters, and several families share housing due to monetary issues. With these economic and demographic challenges, the priority for Alum Rock UESD is to keep students engaged; for many learners, the promise of an education is their only long-term opportunity.

Facing different hurdles than other neighboring communities, the students at Alum Rock UESD fight to retain basic services. One of the key issues for the district is the student drop-out rate. Along with other district administrators, Alum Rock UESD’s chief technology officer (CTO), Maribel Guizar-Maita, has a goal to send all district middle school students to high school well-prepared, so that their chance of college acceptance increases and as a result, their likelihood of dropping out of school decreases.

One essential service that many students lack in Alum Rock UESD’s surrounding community is exposure to technology. Most families in the district can’t afford to have technical access to learning tools at home, and many shared residences have access to a single computer screen. “One way of bringing students to the classroom is to offer the tools and technology that will intrigue them, and therefore keep them engaged,” says Guizar-Maita. If schools do not incorporate education technology into the learning experience, students will not build the college and career readiness that they need to continue their education and become competitive in the workforce.

Along with other districts in California, Alum Rock UESD faces impending regulations imposed by the Common Core State Standards, an education initiative in the United States that details what K-12 students should know in English and math at the end of each grade. The initiative is sponsored by the National Governors Association (NGA) and the Council of Chief State School Officers (CCSSO) and seeks to establish consistent education standards across the states. “One of the things we knew two years ago was that upcoming test results had to be aligned with what students were learning, and could not be influenced by a lack of familiarity with technology, or a poor technology product,” says Guizar-Maita.

To prepare for Common Core and meet internal goals for testing, as well as better engage students, Alum Rock UESD decided to look for a new network solution. Due to budgetary issues, Guizar-Maita and her team had to make sure that a new network was both scalable and sustainable. “Our team ran an analysis of our goals: where we want to be five years from now, and even ten years from now,” says Guizar-Maita. “In advance of looking at different solutions, we had to evaluate what was the best fit within those considerations.”

Executive Summary

Alum Rock Union Elementary School District

- **Industry:** K-8 Education
- **Location:** San Jose, California
- **Student Population:** 12,500

**CHALLENGE**

- Create innovative learning environment with limited budget
- Engage students more fully and lower drop-out rate
- Prepare for Common Core State Standards

**SOLUTION**

- Updated network infrastructure with new wireless access points, switches, and data center equipment
- Integrated existing technology tools with new network
- Standardized technology across district

**RESULTS**

- Created ability for students to engage and learn off-campus
- Eliminated need to purchase data center technology annually
- Decreased desktop application installation from 24 hours to roughly 30 minutes
“[Our] upcoming test results had to be aligned with what students were learning and could not be influenced by a lack of familiarity with technology or a poor technology product.”

Maribel Guizar-Maita, Chief Technology Officer, Alum Rock Union Elementary School District

“With Cisco UCS, nearly all of our students have access to applications that they otherwise wouldn’t be able to use. Virtualization allows us to improve our level of service to the community and minimize our downtime.”

Maribel Guizar-Maita, Chief Technology Officer, Alum Rock Union Elementary School District

California School System Prepares for Common Core

Alum Rock Union Elementary School District installs Cisco network to help at-risk students excel.

Solution

When Alum Rock UESD began to evaluate solutions, its chief concern was finding a network that would allow students to use advanced technology tools while also preventing the district’s technical team from making additional investments year after year. Due to concerns about sustainability, Alum Rock UESD decided that virtualization technology was the best answer for today, and the future.

“In order to stay engaged, our students need to be involved in learning all day, not just during their time on school grounds,” says Guizar-Maita. “Extending learning through the afternoon and weekend is important, and so access to education materials is important. Virtualization offered the ability for our students to collaborate in groups and access content outside of classroom walls.”

When it came to a virtualization and Common Core strategy, Alum Rock did a competitive evaluation of all prominent options on the market, but looked the closest at a vendor that it had trusted for over a decade. “We’ve used Cisco for a very long time, though we hadn’t completely standardized on Cisco technology across our district,” says Guizar-Maita. “Cisco had already proven it was a solid partner; their solutions have always delivered on their promises.”

Looking to standardize across the district, Alum Rock UESD evaluated existing solutions that integrate with Cisco networks. The district soon realized that its solutions were operating in isolation and that it could use the IP network to deliver services for other systems, such as public announcements and emergency medical services.

To provide the best student experience possible, Alum Rock UESD chose Cisco as its partner in bolstering its education technology program. “We wanted to make sure our users had a better experience with testing and Common Core; we wanted to ensure our teachers had access to any application or tool they needed from any desktop; and, we wanted all of our staff to focus on curriculum, not troubleshooting,” says Guizar-Maita.

Alum Rock UESD purchased Cisco Unified Computing System™ (UCS®) to unify computing, networking, management, virtualization, and storage access into a single integrated architecture; in addition, the district chose Cisco Nexus® 7000 Series Switches and Cisco® ASA 5585-X Adaptive Security Appliances to offer higher performance and enhanced security within its data center. The district also deployed Cisco Catalyst® 4500-X Series Switches, Cisco Catalyst 3750-X Series Switches, Cisco 5508 Wireless Controllers, and Cisco Aironet® 3600 Series Access Points to increase the district’s wired and wireless coverage for students, teachers, and administrators.
### Results

When it comes to preparing for Common Core, the teachers are the most ecstatic about Alum Rock UESD’s new network. “With Cisco UCS, nearly all of our students have access to applications that they otherwise wouldn’t be able to use,” says Guizar-Maita. “Virtualization allows us to improve our level of service to the community and minimize our downtime.”

With Cisco UCS, students and teachers can now choose an application and have it up and running in 30 minutes; with Alum Rock UESD’s prior network, accessing an application typically took anywhere from 8 to 24 hours. In addition, the district now has the ability to provide applications to 100 virtual desktops at the same time, which increases the level of student engagement at all hours of the day. Issues with virtual desktops can also now be resolved in 45 minutes; in the past, the technical team would spend hours and sometimes days fixing bugs.

“When a laptop goes down or something breaks, we can replace the unit, and students can log into the same desktop on another device,” says Guizar-Maita. “This ability not only minimizes classroom downtime, but allows us to reach our goal of keeping education technology up and running 100 percent of the time.”

One of Alum Rock UESD’s influential courses is a Visual and Performing Arts (VAPA) program. Many of the instructors teaching VAPA use software for fine arts electives. In the past, students only had access to fine arts software on campus, preventing study after hours. However, with virtualization, students can refine their projects from home, which influences them to stay interested and engaged in an otherwise unavailable line of education.

If Alum Rock UESD continues its success with virtualization, and with IT as a service, many of the schools in the district will not face the continued challenge of purchasing new systems. With their new network, faculty and staff can forecast expenditures and eliminate the need to scramble for funding to replace existing technology. The scalability of Cisco UCS provides opportunities for integration and eliminates the need for extended technical costs.

“When you think about the kids in San Jose getting ready for college and careers, and you see all the companies located in our area, the need to be proficient with technology is critical,” says Guizar-Maita. “Giving our students access to the right education materials, and making sure we are prepared to test them under the new Common Core standards, ensures that they will be ready to be employed locally, both in the short-term and in the long-term.”

### Product List

<table>
<thead>
<tr>
<th><strong>Routing and Switching</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Cisco Catalyst 3750-X Series Switching</td>
</tr>
<tr>
<td>• Cisco Catalyst 4500-X Series Switching</td>
</tr>
<tr>
<td>• Cisco Nexus 7000 Series Switching</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Network Management</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Cisco Unified Computing System</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Security and VPN</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Cisco ASA 5585-X Adaptive Security Appliance</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Wireless</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Cisco 5508 Wireless Controller</td>
</tr>
<tr>
<td>• Cisco Aironet 3600 Series Access Point</td>
</tr>
</tbody>
</table>
California School System Prepares for Common Core

Alum Rock Union Elementary School District installs Cisco network to help at-risk students excel.

For More Information

To find out more about Cisco Unified Computing System, go to:
http://www.cisco.com/go/UCS.

To find out more about Cisco switching, go to: