

ALCORN STATE UNIVERSITY SEES DRAMATIC IMPROVEMENTS IN INFRASTRUCTURE RELIABILITY AND FUNCTIONALITY

ALCATEL-LUCENT ENTERPRISE TEAM SPENT TIME ON SITE TO FULLY UNDERSTAND THE UNIVERSITY'S REQUIREMENTS AND TO DEFINE THE PERFECT CONFIGURATION



CASE STUDY

MARKET: **EDUCATION**

REGION: **NORTH AMERICA**



Alcorn State University was the U.S.'s first state-supported establishment for the higher education of African Americans. Since its founding in 1871, the University has grown to occupy three separate campuses, all located on the western border of Mississippi. Continual expansion took a toll on an aging legacy network infrastructure that was unable to provide the flexibility and scalability needed to support the University's growing population and increasingly sophisticated application portfolio. Selection and implementation of an Alcatel-Lucent Converged Network and IP Telephony solution provided the necessary foundation for future growth and enhanced capabilities.

CHALLENGES

- Update aging multi-campus network and communications infrastructure
- Identify solution provider willing to truly understand Alcorn's needs
- Facilitate improved efficiencies and proactive network and IT administration across three campuses
- Construct reliable platform to facilitate deployment of innovative technology-based education applications including data, voice and video services
- Improve communication and decrease TCO with IP Telephony

SOLUTIONS

- Alcatel-Lucent OmniSwitch 6850 & 6855 Stackable LAN Switch
- Alcatel-Lucent OmniSwitch 9700 Modular LAN Switch
- Alcatel-Lucent OmniVista network management application
- OmniPCX Enterprise IP telephony with Alcatel-Lucent 8 Series IP Touch phones (including Alcatel 4028, 4038, and 4068)

BENEFITS

- Highly reliable solution – allows network support team to focus on delivering proactive improvements across the campus
- Comprehensive product range provides ability to optimally configure each component to match any specific deployment location or requirement
- Ease of use and enhanced functionality of Alcatel-Lucent OmniPCX enterprise and IP Touch phones provides users with improved capabilities
- Network management now conducted from a centralized location, facilitating large gains in efficiency and proactive fault correction
- Network infrastructure provides foundation to build and showcase a compelling suite of online capabilities, making the University attractive to current and prospective current and prospective students and staff

“THERE IS SO MUCH COMPETITION IN THE EDUCATION MARKETPLACE THAT HAVING THIS LEVEL OF TECHNOLOGY SO VISIBLE THROUGHOUT THE CAMPUS IS A DEFINITE PLUS.”

Desmond Stewart, Enterprise Architect, Alcorn State University

“KNOWING THAT WE CAN RELY ON ALCATEL-LUCENT ALLOWS US TO PUSH THE BOUNDARIES OF WHAT WE’RE DOING WITH TECHNOLOGY IN OTHER AREAS. THE PRODUCTS ARE SO GOOD THAT THEY MAKE US LOOK LIKE ROCK-STARS ON CAMPUS.”

DESMOND STEWART, ENTERPRISE ARCHITECT,
ALCORN STATE UNIVERSITY

THE CHALLENGES

Alcorn State University is the United State’s oldest public historically black land-grant institution, one of only 105 in the country to officially receive the designation of being a Historically Black College and University (HBCU). Starting with three modest buildings in 1871, and now consisting of more than 80, the continued expansion is typical of its ambitions and vision. However, with growth came a set of new challenges, Desmond Stewart, Enterprise Architect at Alcorn, elaborates: “Our aging network infrastructure and telephone equipment just couldn’t meet the escalating demands of our users. We habitually change how we use our campus buildings and are constantly introducing new programs that leverage technology. Our legacy network didn’t have the flexibility or scalability we needed.”

Reliability was a pressing issue, as Alcorn’s Senior Network Engineer, Zikomo Turner, describes: “The old equipment had reached end-of-life for support, and components were failing repeatedly. Frequently it would take a whole day to recover from an outage. We try to be very efficient with our staffing model, so having to dedicate that amount of time to an unplanned event created a major impact.”

Any new solution also needed to flexibly accommodate the growing number of applications, revolutionizing the education sector. Stewart expands: “We’re continually looking for new ways to make our courses more accessible and more effective. We needed a platform that would allow us to leverage the latest innovations without imposing unnecessary constraints.”

After assessing the needs of all key stakeholders a Request for Proposal (RFP) was issued to address the optimal deployment of voice, video and data services across the three campuses, as well as a solution to replace an aging telephone system and handsets.

The University received bids from all of the communications industry's leading vendors, but there was a major disparity in the quality of the proposals received. Stewart explains: "A number of vendors didn't even bother to come on site, they just submitted generic quotes that marginally addressed our needs. Several bids were interesting because of one or two aspects of their solution, but the one submittal that really stood out as being impressive across our full set of evaluation criteria was the response from Alcatel-Lucent."

THE SOLUTION

The Alcatel-Lucent team spent time on the campus to fully understand the University's requirements and to define the perfect configuration to meet those needs. A trip was made to the Alcatel-Lucent executive briefing center where engineers demonstrated the functionality of the specific products under consideration. Turner comments: "We saw the obvious quality of the equipment and were able to easily visualize how it could be effectively deployed in the Alcorn environment."

He continues: "We really liked the wide range of options across the whole Alcatel-Lucent product line. This allowed us to select a model of the exact specification required by any given deployment location. Other vendors don't provide this level of granularity and we would have been forced to over-configure many devices because the appropriately sized unit did not exist in their range."

By taking the time to comprehend exactly what was needed, the Alcatel-Lucent quotation was very detailed and comprehensive. Stewart recalls, "The quote contained absolutely everything we needed to complete the implementation. It was obvious that Alcatel-Lucent clearly understood

that we couldn't go back and ask for more money once the award had been made. But by taking the effort to really understand our needs and finely tune the configuration to match our specific requirements, the bid was exactly in line with our expectations. It was an easy decision."

The winning configuration consisted of over 350 switches, including the Alcatel-Lucent OmniSwitch™ 6850 series of Layer 3 Gigabit Ethernet fixed configuration stackable LAN switches, the Alcatel-Lucent OmniSwitch 6855 Layer 3 Gigabit Ethernet Hardened LAN Switch, the OmniPCX Enterprise IP telephony platform and the Alcatel-Lucent OmniSwitch 9700 Modular LAN Switch to provide high availability, wire-speed performance with dramatically improved network response time. Network management responsibilities were addressed by the Alcatel-Lucent OmniVista™ suite of tools.

THE BENEFITS

After winning the contract, the task of deploying the solution across the three campuses began. Stewart reflects: "Because the Alcatel-Lucent solution is fully integrated, the implementation was definitely one of the more pleasant experiences of my professional career. We were able to use the OmniVista application to propagate configurations down to all the switches – this would have taken us many weeks to have completed manually. When this was finished, everything worked perfectly."

The powerful management capabilities provided by OmniVista offer a detailed perspective of the complete network from a centralized location. Turner comments: "We frequently only knew of an issue when a user called to report a problem. But with OmniVista, we can proactively see what's going on with the network and catch things before they even become a concern.

"Prior to deploying the OmniSwitch and OmniVista solution, the more technically astute students would create their own unauthorized wireless access point (WAP) using dorm room wired drops; when we first brought the switches online we immediately saw all of these unsanctioned WAPs spread throughout campus. We can now see what is occurring and manage the situation in a far more controlled manner."

CUSTOMER SUMMARY

Customer Name: Alcorn State University

URL: www.alcorn.edu

Industry: Education

Number of Students: 3,250

“WE’VE HAD SOME REALLY INVENTIVE TESTS OF THE INFRASTRUCTURE. BUT THE OMNISWITCH SWITCHES SEEM ABLE TO HANDLE WHATEVER GETS THROWN AT THEM: THE ALCATEL-LUCENT PRODUCTS ARE ‘BULLET-PROOF’.”

Zikomo Turner, Senior Network Engineer, Alcorn State University

The configuration also incorporated several hundred Alcatel-Lucent 8 Series IP Touch™ phones (installed models included the Alcatel 4028, 4038, and 4068 with color display) to provide full-featured units integrating comprehensive data and voice over IP convergence capabilities. The phones, all with alphanumeric keyboards, support a broad range of functions including web-based XML business applications. Quality of service and security policies are automatically configured for each phone as soon as it is connected to the network.

Stewart remarks, “We can do so much with these devices. One especially useful feature is the ability to search the University’s directory from your own handset; that’s huge for us. When the phone-based directory access capability became available the workload on our sole onsite operator decreased dramatically. Our users have become a lot more self-sufficient and this has enabled us to become more efficient ourselves.”

Being able to showcase a state-of-the-art infrastructure is significant for the University. Stewart explains: “There is so much competition in the education marketplace that having this level of technology so visible throughout the campus is a definite plus. The caliber of online services we offer is very attractive to prospective students and staff. Having a network that is fast and reliable is a great advantage in delivering what we feel is a compelling suite of capabilities to our users.”

One of the very few downsides of having a creative and energetic student body is the unique nature of challenges that can sometimes be directed at the IT team. Turner muses: “We’ve had some really inventive tests of the infrastructure. But the OmniSwitch switches seem able to handle whatever gets thrown at them: The Alcatel-Lucent products are ‘bullet-proof.’”

Stewart adds: “We have a modest sized network team to manage in excess of 350 switches across the three campuses; OmniSwitch reliability is just not an issue they ever have to worry about. Having this confidence enables the team to focus on other areas and to be more effective overall. Everybody at Alcorn knows that the network is reliable; it always works.

“The network infrastructure is the foundation of everything we do, so having this level of performance is monumental for us. We view providing campus IT services as a pyramid and at its foundation is the Alcatel-Lucent network; everything we offer, campus services, distance learning, video conferencing, our Website, is all built on the network.”

Future plans include utilizing the campus-wide phone system for security alerts and general broadcasts. The power and flexibility of the new infrastructure have opened up the possibilities of deploying several highly innovative applications specifically focused on the higher education sector that are currently being researched by Stewart and his colleagues.

He concluded: “Knowing that we can rely on Alcatel-Lucent allows us to push the boundaries of what we’re doing with technology in other areas. The products are so good that they make us look like rock-stars on campus.”

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