

KILGORE COLLEGE

CAMPUS NETWORK

Kilgore College Scores Mobile Win with Integrated Network

EXECUTIVE SUMMARY

Challenge

Provide constant wireless connectivity for the phones, tablets, and laptops of a digital-centric student body.

Solution

- Brocade ICX 6610 and 6450 stackable platforms for access and aggregation
- Brocade integration with Aruba wireless network

Results

- Simplified network configuration and management
- Monitoring and visibility into integrated wired and wireless network
- Saves an hour per day of network administration
- Provides price and performance that dramatically outshines the competition

Located in East Texas, Kilgore College has thrived since it first opened its doors in 1935, now serving more than 6,500 students and 350 faculty and administration. The school's success has led to expansion in remote locations across a 30-mile span, with classrooms in Longview and Overton.

Students can choose from over 130 degrees and certification programs that help prepare them for a four-year university or launch their professional career. The school has embraced digital learning and offers online classes, eBooks, and high-definition videos of lectures. However, the increase in traffic was straining the campus network.

Wireless connectivity and performance was sporadic, causing constant complaints from students. The old Cisco technology was ready for an upgrade, and the college wanted to compare options for a new network solution. They sought advanced technology in an integrated wired and wireless solution set that combined exceptional performance with ease of management. The solution also needed to be compatible with the school's budget.

"Everyone is waking up to the high costs of Cisco networks and the fact that better options are available. Since we moved to Brocade and Aruba, we haven't looked back, and everyone is extremely happy," said Luke Saintignan, Systems and Network Administrator at Kilgore College.

A POWERFUL PARTNERSHIP

During its search, Kilgore College compared solutions from Aerohive, Cisco, Aruba, and Brocade. "We wanted an integrated solution that would give us visibility into the wired and wireless networks. Brocade and Aruba provided best-of-breed products that worked as well or better than single-vendor solutions," said Saintignan. "It was also significantly less expensive than the competition."

Cost-efficiency was only one of many benefits. The Brocade equipment also proved its mettle during testing. "I sent a lot of data through the Brocade switch during the evaluation," said Saintignan. "I tried and tried, but I couldn't break it."

Kilgore is replacing its entire wired and wireless network with Brocade and Aruba in phases, starting in buildings where it will have the biggest impact. In the Health Science Center, students have access to the same wireless healthcare technologies they will use after graduation. Liberal Arts students and students finishing their core curriculum are experiencing much better performance with the new wired and wireless network in the Old Main Building.

CROSS-NETWORKS VISIBILITY

Drawn to the built-in ease and combined power of stackable switches, Kilgore deployed Brocade® ICX® Switches for both access and aggregation layers. The Brocade ICX 6450 Switches have been deployed throughout the buildings for access connectivity for computers, VoIP phones and wireless Access Points (APs). Brocade ICX 6610 Switches are being used for aggregation of the access switches, connected to the college's central core.

Both the Brocade ICX 6450 and ICX 6610 Switches are configured together in stacks to simplify management. Mixed stacking is a unique feature of the Brocade HyperEdge® Architecture that enables consolidation of aggregation and access switches to streamline management and provides premium switching features and services to be extended to entry-level switches. At Kilgore, this allows the network administrators to save a significant amount of time that had been previously spent configuring the switches, stacks, quality of service, LAN connections, and vLANs. The Brocade ICX 6450 and Brocade ICX 6610 are stacked together today using 10 GbE links. "I like knowing that if I add more

Brocade ICX 6610 Switches, I'll be able to upgrade the stacking to 40 GbE," adds Saintignan.

"As someone familiar with Cisco, transitioning to Brocade was no problem. The Brocade interface is about 95 percent similar to Cisco's, so it was very easy to learn. Configuration, such as a vLAN or LAG, is much simpler and more efficient than with Cisco. It saves me about an hour a day," Saintignan said.

The Brocade switches easily handle the wireless traffic, as well as the VoIP and wired requirements. APs and surveillance cameras are powered by the PoE+ ports on the Brocade switches.

Thousands of students access the network daily, and they constantly challenge its performance. A normal traffic day can quickly become impacted if students start overusing DropBox, Netflix, or other applications. "We don't want to block these apps, but we do want to be able to throttle usage with the right management tools," said Saintignan. "Aruba AirWave gives me visibility into the wired and wireless network so one person won't impact everyone else's experience."

With AirWave, Saintignan can locate a user and see the SSID, AP connection, controller, and the Brocade switch. He can set triggers to monitor both networks and the connection to the colocation area, as well as track in/out usage, overall traffic, maximum usage for days, weeks, years, and more. "We've never had any tool like this before," said Saintignan, "Now I have visibility into both the wired and wireless networks. AirWave is a powerful resource

WHY BROCADE

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that helps us understand traffic loads and diagnose problems across the network." The interoperability development and testing between Brocade and Aruba assured Kilgore that their respective products would perform well together—and they did.

A THREE-YEAR PLAN

Kilgore expects to continue the upgrade of its wired and wireless network during the next three years. The student union, library, dorms, and remote campuses in Longview and Overton are on the roadmap for a faster, more advanced integrated network.

"We are working hard to keep up with needs of a highly active, mobile population. As mobile apps and eBooks become more popular, students will demand even more from the wireless network," said Saintignan. "We made a wise decision in moving to Brocade and Aruba, and the transition from our older Cisco equipment is saving us valuable time and money to better serve our users."

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