

The University of Arkansas Achieves the Fastest Internet Connection in the State

Summary

Company:

The University of Arkansas and ARE-ON

Industry:

Research and Education

Business Challenge:

After receiving a National Science Foundation grant to upgrade to a 100GbE Internet connection, the University of Arkansas and the Arkansas Research and Education Optical Network (ARE-ON) needed to move quickly.

Technology Solution:

- MX960 and MX480 3D Universal Edge Routers

Business Results:

- Deployed fastest Internet in Arkansas
- Protected infrastructure investment by upgrading six-year-old routers to 100GbE
- Enabled cutting-edge research going on at the school



UNIVERSITY OF
ARKANSAS

ARE-ON
Arkansas Research and Education Optical Network

The University of Arkansas is among the nation's top public research institutes, with a student-first philosophy that creates plenty of room for personal attention and mentoring. The Carnegie Foundation classifies the university as having "the highest possible level of research," placing it among the top two percent of colleges and universities nationwide. Research areas include health, nanotechnology, energy and environment, architecture, food safety, and supply chain, retail, and transportation.

The state's research and education network, Arkansas Research and Education Optical Network (ARE-ON), works in collaboration with the University of Arkansas and other state higher education institutions to serve their network needs for research and education. ARE-ON is a high-speed fiber backbone that connects members, affiliates, national research and education networks, regional optical networks, and commercial service providers.

Business Challenge

Attracting researchers and grants is critical to maintaining the university's premier reputation, while still serving the everyday needs of students, faculty, and staff. And researchers expect the latest technology, fast connections, and easy collaboration with peers across the nation and world. To ensure that researchers have blazing fast Internet access, the U of A and ARE-ON received a National Science Foundation grant from the Advanced Cyberinfrastructure Division.

"The Internet is a critical utility for the campus students, faculty, and staff. The demand is even more intense now as the cloud technology trend accelerates."

Elon Turner, Director of Infrastructure, The University of Arkansas

The next step was tapping the right provider. As two satisfied, long-time Juniper customers, the choice was clear for the U of A and ARE-ON.

Technology Solution

Upgrading the Juniper Networks® MX Series 3D Universal Edge Routers from 10GbE to 100GbE was quick and easy, but all the more impressive considering that the routers were first installed in 2010. The engineers replaced the switch control boards and the line cards in the MX960 and MX480 routers, and the network was up and running at 100GbE the same day. MX Series routers are designed to deliver industry-leading system capacity, density, and performance—and that affords powerful investment protection.



Business Results

With the fastest Internet connection in the state, the University of Arkansas can now better provide the resources needed for students, faculty, and staff to stay connected and engage in learning and research.

"This project is a significant expansion of the campus network connectivity. The Internet is a critical utility for the campus students, faculty, and staff," says Elon Turner, director of infrastructure at the U of A. "We're fortunate as an institution to have been able to stay ahead of the campus demand for bandwidth as other schools struggle to keep up. The demand is even more intense now as the cloud technology trend accelerates. With this 100GbE Internet connection, no one is in competition for this critical resource."

That's great news for the cutting-edge work going on at the school. The ability to maximize the institution's use of Internet2 supports research advances. For instance, the U of A's computer scientist Matt Patitz was recently awarded a \$500,000 career grant from the NSF. His research, related to theoretical and computational modeling of molecular self-assembling systems, is in its infancy. "The NSF's support for high-risk, high-reward research is imperative, and such forward-thinking investment in areas like this one are what make it possible for researchers like me to broaden new avenues of research," says Patitz. His research is supported and facilitated through the university's fast Internet connection.

"I am extremely excited as 100 gigabit advanced networking capabilities now puts Arkansas on a level playing field with other states to better attract top-notch researchers."

Steven Fulkerson, Executive Director, ARE-ON

"The Internet2 network will not only support advancements in research opportunities in Arkansas, but it will also create and foster an environment of collaboration with colleagues and other researchers both nationally and globally," says Steven Fulkerson, executive director of ARE-ON. "I am extremely excited as 100 gigabit advanced networking capabilities now put Arkansas on a level playing field with other states to better attract top-notch researchers."

Next Steps

The U of A and ARE-ON are extremely pleased with the new, lightning fast Internet and are excited about how it will move research forward and appeal to researchers in the future.

For More Information

To find out more about Juniper Networks products and solutions, please visit www.juniper.net.

About Juniper Networks

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