



SUCCESS STORY

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Cisco-trained Students Upgrade Rural Telecommunications Network

The “capstone” project is a tradition in university-level technical education. It’s a no-nonsense performance and assessment tool, designed to show what students can actually *do* after years of classroom and laboratory work. At Ft. Hays State University—where the Cisco Networking Academy Program is an integral part of the curriculum—every Information Networking and Telecommunications senior is required to participate in a capstone project.

The “Intelligent Solutions Consulting” team of Marie Jones, Laurie Rollins, Justin Tuttle, Preston Trilck, and Bryan Dreiling undertook an unusually ambitious project: to upgrade the frame relay switched topology at Nex-Tech—a rural telecommunications provider in Northwest Kansas—to a newer and more powerful asynchronous transfer protocol (ATM) switched topology.

“Some of the students were working part time at Nex-Tech,” recalls Mark Bannister, Information Networking and Telecommunications department chair. “They knew that several upgrades were planned in the network that served Internet traffic, so they went to a manager and asked to be in charge of a portion of the upgrade. After performing the router configuration and IP route statements, they successfully made the conversion. Then they analyzed performance and traffic on the completed network to confirm its operation. Finally, they developed documentation for the network.”

The Cisco Networking Academy courses were extremely valuable to the project team. Ft. Hayes State University provides both the Cisco Certified Network Associate (CCNA) and Cisco Certified Network Professional (CCNP) courses as part of its Information Networking and Telecommunications degree program. Several of the students involved in the Nex-Tech project had achieved CCNA certification, and some had also taken advanced CCNP courses and exams.

“The Cisco courses not only teach networking theory in depth, but they also require students to participate in labs using actual equipment,” explains Marie Jones, a member of the Nex-Tech project team. “You can read all you want from a book, but until you actually get to configure and test the equipment, you lack the hands-on experience to be successful. Things don’t always work out the way they should in theory. By combining both learning processes, the Cisco curriculum lays a solid foundation for success in the networking industry.”

“A good share of the knowledge the students needed in order to do this project came from the Cisco classes they had taken, supplemented by other courses,” notes Bannister. “Our university was very excited to adopt the Cisco Networking Academy curriculum in the fall of 1998. The academy curriculum is excellent, and our faculty has been very pleased with the quality, content, and delivery tools the program has provided us.”





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The Nex-Tech project delivered real benefit to the community, according to Bannister. “This particular involvement helped move a small independent telephone company and its networking subsidiary forward in the level of technology that it provides the region,” he says. “The feedback from Nex-Tech was very positive. The president was delighted, and several of the students were offered full time jobs with the company.”

Bannister is proud of Intelligent Solutions Consulting’s accomplishment. “This was an incredible project for students to tackle as undergraduates,” he concludes. “These seniors worked together in a very professional manner. They took the theoretical information they had learned from the Cisco curriculum and other courses, and they used it in a way that really demonstrated their capabilities. They now have a marketable accomplishment on their resumes—something that not many 21 to 23 year olds can claim in today’s job market. This certainly could not have happened without our involvement with the Cisco Networking Academy system.”



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