Case Study



St. Leo University Proudly Educates American Forces Serving their Country

About St. Leo University

St. Leo University is a private liberal arts university founded in 1889. It offers more than 41 academic programs that meet the academic, spiritual and professional goals of its 14,000 on-campus and online students. St. Leo is a leading educator of working adults, including thousands on active duty in the U.S. armed forces. The Center for Online Learning at Saint Leo University offers the best attributes of traditional classroom education in conjunction with innovative computer technology. Saint Leo uses the Internet to give students the opportunity to advance their education without having to travel to campus.

Situation

Delivering mission-critical online learning for 27 military bases from Key West to San Diego required a robust network with little tolerance for losses. The popularity of its online classes stressed St. Leo's network, which was often congested. As the university made plans to grow its online curriculum, officials were concerned that the network would be unable to handle the increased operational demands. St. Leo University needed a way to migrate from its legacy infrastructure to a reliable, high performing network without interrupting its year-round class schedule.

Solution

AT&T MPLS Private Network Transport (PNT) gives St. Leo University a converged network that easily handles demanding applications like video. The network-based IP VPN solution uses Multiprotocol Label Switching (MPLS), an advanced switching technology, to provide online education to thousands of St. Leo students on military bases across the U.S.

A Choice of Educational Environments

St. Leo is a small Catholic college with about 1,500 students in residence, but its influence is felt far beyond its Gulf Coast campus. Ellen Sheridan, the university's Director of Network Services, says St. Leo's deep commitment to sharing its core values – excellence, community, respect, personal development, responsible stewardship and integrity – led to the creation of an outstanding distance education program.

Saint Leo University ranks as one of the nation's 10 leading providers of higher education to the military and is a nationally recognized leader in online education. "We are an integral part of serving the educational needs of the military," Sheridan said. "We make college degrees and courses available to thousands of students at remote sites, most of them military bases, to make it convenient for active duty personnel and their families to get an education without having to attend traditional classes." The university has been honored by Military Advanced Education magazine as a top military-friendly college.

The university has a contract with the U.S. Naval Service, which provides continuing education for all branches of the military. To make education easily available for its students on active duty, the university offers a number of degrees that students can earn online or by viewing CDs without ever entering a classroom. However, St. Leo also recognizes the importance of giving students on military bases the option of learning with other students.

St. Leo University Facts

- Business Needs A way to offer classes to U.S. military personnel on bases across the U.S.
- Networking Solution Converged IP network handles demanding video applications to support online classes
- Business Value Expanded educational opportunities for all St. Leo students, including thousands serving in the military
- Industry Focus
 Higher education
- Size 14,000 students, majority of which are distance learners



"Not everybody wants to learn online," Sheridan said. "So we have come up with a superb video classroom to give active military the traditional classroom experience with an instructor teaching in real time. Our video classes use our network to tie together multiple locations so students get the real classroom experience. We can offer a military student whatever type of educational environment that that person requires."

Even though most of its students in the armed forces will never set foot on St. Leo's Florida campus, the university recently commissioned a sculpture that shows its commitment to its military students. "The sculpture communicates the fact that they're a vital part of the university," Sheridan said. "It depicts members of the five branches of the U.S. military holding up a professor, striving to learn while they're serving their country. We're very proud of our ability to serve the people that are serving in our military."

Conquering the Last Mile

Video classes are arranged for the convenience of St. Leo's military students but open to civilians. Most often, a teacher in one location presents the class in real time by video for students at several remote locations.

Presenting these classes requires a robust network to deliver highquality video. St. Leo initiated its video education program with a frame relay network, but the network was often congested, leading to problems with video transmissions. The university upgraded to an MPLS solution, but was disappointed in the quality of the service and the customer care it received.

"The customer service we got was minimal to none, and the quality of the MPLS service sometimes made it very difficult to ensure that classes would actually go forward," Sheridan said. If bandwidth problems made the video quality unacceptable, St. Leo sometimes had to cancel a class; the university's CIO instructed Sheridan to find another network carrier. "We understood that our remote sites were all very unhappy with the carrier and so we started doing the due diligence of putting an RFP together to replace it," Sheridan said.

The process involved talking with numerous networking providers. "We knew that switching vendors was not going to be easy," she said. "The MPLS circuit wasn't the problem. The problem was the last mile, and when the last mile is on a military base, it takes a huge amount of coordination." Further complicating the situation was the fact that military classes are offered constantly throughout the year. The longest break in any term is a week, and the university would not tolerate any down time.

The logistical challenges led St. Leo to believe that it was too risky to switch vendors, even though no one was happy with the existing provider. However, working with Lynx Telecommunications, an AT&T Solution Provider, helped the university to select the networking vendor with the service and experience to manage the complex logistics. "Lynx Telecommunications came in and worked with AT&T on pricing and what they could deliver, and we felt like it really minimized our risk," Sheridan said. Lynx Telecommunications also coordinated the difficult last mile connectivity. "AT&T's pricing was significantly lower than any other provider," she added, "so with a lot of our risk being contained and the price being lower it seemed like a no-brainer."

More Classes for More Students

St. Leo University uses AT&T MPLS Private Network Transport to provide reliable connectivity for its remote classroom sites. The solution lets St. Leo integrate voice, data and video on a single IP-based network with the bandwidth to add new sites and applications as the university's online learning program grows. It handles multiple classes-of-service necessary to help ensure uninterrupted video transmission and features automatic disaster recovery.

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- Ellen Sheridan, Director of Network Services, St. Leo University

The university ran its old network in parallel with the AT&T MPLS network while it installed new circuits all the way to its cameras, Sheridan said. "We had to do that because each classroom includes multiple sites that had to be on the same network and had to be transitioned at the same time. We knew it was going to be very difficult."

The university moved its sites to the AT&T network by time zone. It took a couple of days to get the nationwide quality of service required for optimal video transmission, said Derek Hess, Assistant Director of Network Services. "We worked with AT&T to get it sorted out and ever since then we've been good to go."

The converged network provides reliable any-to-any connectivity with the bandwidth the university needs to give its online students the best possible learning environment at a cost that is lower than the university's old network. As a bonus, Hess said, the network's strength and reliability allow the university to offer more classes to more students, thereby increasing revenue.

St. Leo's IT and financial officials are pleased with the network and with AT&T BusinessDirect[®], an online portal that lets them manage their services and billing. Access to reports on performance and utilization allows the IT team to monitor the network and make informed decisions on traffic allocation and network usage. "BusinessDirect is good, especially from a technical standpoint, because we can go in and see bandwidth graphs to each site," Hess said. "We use it for trending; it lets us see the busy and slow times on the network." The university's accounts payable department finds the online billing makes it easier to bill the appropriate cost centers.

Expanded Opportunities

St. Leo University has plans to expand student opportunities for both traditional and online learning. "The goal is to make every class available online," Sheridan said. At the same time, the university is expanding its Florida campus. Last year it opened a \$15 million student community center and is currently constructing a new building for its school of business. University officials are also looking to open new satellite offices and add classrooms at some existing sites to make the university more accessible to the communities it serves.

"This is only going to grow," Sheridan said. "We're constantly working with the military to take whatever opportunity we can to increase our presence on military bases." As its online programming increases, the university may add bandwidth that will enable it to run several classes simultaneously from some locations, as well as support an executive teleconferencing solution to enable students to use their individual Web cams to participate more fully in online classes.

The university is also considering ways to expand its influence globally. There's talk of establishing a presence in South America and the Caribbean, and St. Leo is working on ways to make it easier for military people serving outside the U.S. to continue their education. "We have a large number of international students on our Florida campus," Sheridan said. "There is a big push to become even more international and to continue to try to find delivery methods that will work for military people who are deployed overseas."

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05/03/10 AB-1876

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