

case study

Southwestern University

Southwestern is a selective, four-year, independent, undergraduate national liberal arts college. Based in Georgetown, Texas, Southwestern has been consistently ranked academically among the leading private, 4-year colleges in the nation. Approximately 1,100 students live on campus in the residence halls. Southwestern is a member of the Associated Colleges of the South and the Annapolis Group, a consortium of the nation's leading liberal arts institutions.



The Increasing Challenge: Entertainment vs. Academics

When Southwestern first deployed and began maintaining its ResNet infrastructure in the mid-1990s, the university's ITS (Information Technology Services) department allowed reasonable access to academic resources, both on its own network and on the Internet. Students were able to access email services and surf the then limited, information-based Internet. As additional online content became available, Southwestern students found new uses for the Internet and their computers, such as downloading rich media (audio, and now video) and exchanging large files (pictures, digital home video, etc.).

Increasingly, ResNet became heavily used as a conduit for entertainment, rather than as the academic tool it was originally designed to be.

The University estimated that prior to outsourcing 90 percent of its network traffic was entertainment related. Like many other institutions experiencing this problem, Southwestern turned to packet shaping hardware to limit the P2P (peer-to-peer) applications that were overrunning its network. Initially, this approach yielded positive results, while still allowing web surfing and email to continue unimpeded.

However, as peer-to-peer applications continued to evolve, and student use of the Internet for entertainment increased, Southwestern, like many schools, was forced to extend restrictions on services and applications. By the Spring of 2002, students' activities on the ResNet had been reduced to restricted web surfing and email access. "We spent a significant amount of time identifying and monitoring an ever-changing number of P2P applications -- a process which felt like chasing our own tails," said Todd Watson, the Associate Director of Systems and Networking.

The impact on bandwidth availability, and the constant administrative pressure to stay ahead of the newest programs and services drew significant time from ITS staff, and diverted staff and funds from support services and application development. Bob Paver, Chief Information Officer of Southwestern University notes, "The natural question is, are we [Southwestern ITS] focusing on our strategic mission to the university of supporting academics and research, or simply being an Internet access provider for entertainment to students?"

The Solution: Re-evaluating Priorities

Southwestern decided outsourcing its ResNet would best solve the increasing issues. Ultimately, the University selected Apogee based upon the company's focus and experience in higher education, and its willingness to craft a solution that would adapt to the University's specific needs.

Apogee's initial steps were to (1) implement important network hardware upgrades to ResNet and (2) facilitate additional bandwidth. The original ResNet network was completely replaced by Apogee at no cost to the University or ITS. The upgrade included the installation of new Cisco core routing and switching equipment. Additionally, hubs in the dormitories were replaced with new 10/100 switches, while building links were upgraded from 10 Mbps to 1000Mbps.

A full DS3 Internet connection was utilized to replace Southwestern's 3 megabits of Internet bandwidth for the entire campus. The DS3 delivers 10 megabits dedicated to the administrative network, and 35 megabits available for ResNet. This implementation gave the University a 12-fold increase in bandwidth.

In addition, Apogee provided move-in and setup assistance both on campus and by toll-free phone at the Apogee call center. This assistance acted as the first line of support for network issues and student questions, dramatically reducing the number of calls to the Southwestern Help Desk for the past three years - both during and after move-in.

