Ascend

San Francisco State University

User Profile

SFSU At-A-Glance

Challenge

Improve remote access to Internet services for nearly 27,000 students and 3,000 faculty/staff members. Solution must be cost-effective and scalable for the growing university and must meet stringent authentication needs.

The Ascend Solution

Provide reliable multiprotocol WAN access switching to expand the faculty and student modem pools.

Benefits

Improved access and performance, expanded number of simultaneous sessions, reduced need for staff resources.

Ascend Products

MAX TNT™ WAN access switch
MAX™ 4004 WAN access switch



Like many colleges and universities today, San Francisco State University (SFSU) faces a complex challenge: preparing students to succeed in an increasingly information and electronic-based society within a limited budget. Access to the Internet, intranet applications and other on-line instructional and administrative services are an important part of the students' academic experience at SFSU. Most of the students reside off campus, however, and require remote access to these services. To improve access services for students and faculty, SFSU's Computing Support Services team incorporated Ascend's MAX TNT and MAX 4004 WAN access switches to handle dial-in modem calls.

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The Ascend Solution



MAX TNT

The MAX TNT is a powerful multiprotocol WAN access switch that lets network service providers and organizations build high-density networks. This scalable, carrier-class switch manages up to 720 concurrent calls over a dynamic mix of access lines such as DSL, analog, ISDN, T1/E1, T3 and Frame Relay.



MAX 4004

The MAX 4004 is a high-powered, multiprotocol WAN access switch that allows enterprises, carriers and service providers to extend their backbone networks to support remote office access, telecommuting and Internet access. By consolidating analog and digital trunks, the MAX 4004 enhances call performance by maximizing line utilization and minimizing equipment problems.

A Test of Strength

Prior to installing the MAX TNT and MAX 4004, SFSU relied on terminal servers and 100 significantly oversubscribed dial-in modems for remote access. SFSU's Computing Support Services group was overwhelmed with student and faculty complaints about busy signals and limited access to the university's academic computing systems, Web servers and network services.

"With the existing modem pool, software and hardware upgrades were a hassle, and we had too much wiring. Because the system wasn't all in one box, there were multiple points of failure," explains Heidi Schmidt, director of Computing Support Services at SFSU.

SFSU looked at solutions from several leading vendors but ultimately chose Ascend based on features, functionality and because Ascend offered everything in one package. Anixter, a value-added provider of networking and cabling solutions, reinforced SFSU's decision to go with Ascend and assisted the university in acquiring the MAX TNT and MAX 4004.

"We wanted to bring high-speed Internet access to our students and faculty, and at the same time, eliminate the need for numerous terminal servers, modem racks, routers and excessive wiring," says Schmidt. "We serve thousands of people 24 hours a day, seven days a week with a small budget and only a few staff. We needed equipment that we could plug in, get up and running, and forget about."

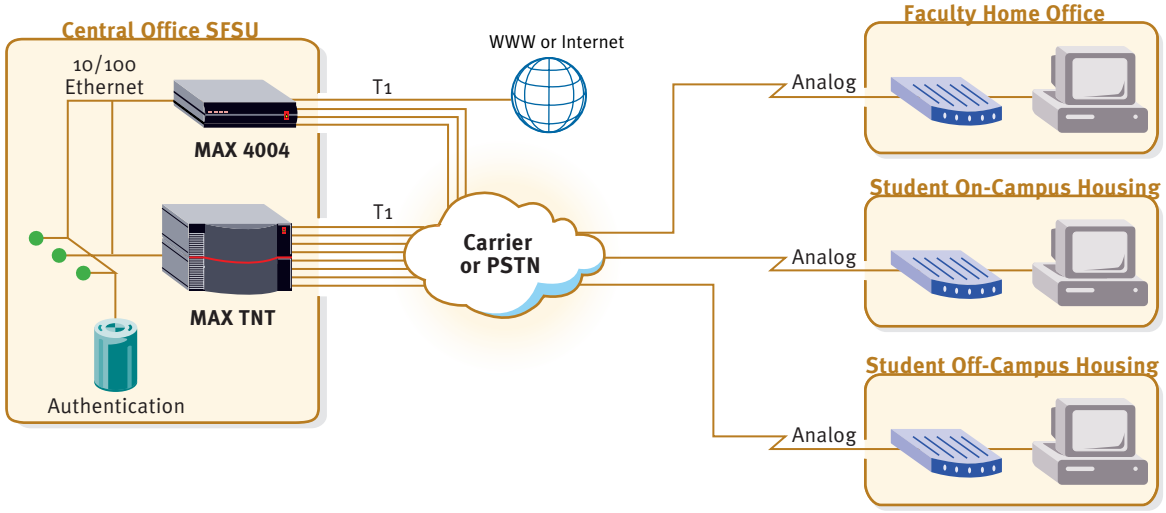
Making the Grade

The first phase of SFSU's implementation was installing the university's first exclusive faculty modem pool. The MAX 4004 provides SFSU faculty 72 concurrent sessions via three T1 interfaces. SFSU also installed a MAX TNT WAN access switch to expand the existing modem pool for students. The MAX TNT integrates eight T1 interfaces supporting 192 simultaneous sessions.

"The MAX products meet our needs because they provide the reliable access our students and faculty need and the capacity to meet our future requirements," explains Schmidt. "And they work for us—they're bulletproof. We installed them, and we haven't had to fuss with them since."

User authentication was also a big issue for SFSU. The university already had a Kerberos authentication system installed for its central network, so it needed a compatible protocol with its new WAN access switches. Because the MAX TNT provides TACACS authentication capabilities that are compatible with the Kerberos system, SFSU was able to customize its authentication system to allow remote access to only authorized students and faculty. "That's really important for a university," says Schmidt, "because everyone knows our phone number. We have to make sure only authorized people connect to our network."

SFSU's Ascend Based Remote Access Network



Ascend's MAX and MAX TNT allows SFSU to provide faculty members and students reliable and secure access to campus resources as well as the Internet

Graduating to More Sophisticated Applications

In the future, Schmidt says SFSU will continue to consider Ascend for its remote access needs as the campus continues to improve its network infrastructure.

"We are aware that Ascend has a wide range of products that span far beyond remote access, and we will certainly consider Ascend products in the future," says Schmidt. "We have had great success with the MAX TNT and the MAX 4004 and would highly recommend the MAX product line for remote access." She adds, "Ascend is a strong technology company, and we look forward to working with them in the future."

University Overview

SFSU is a part of The California State University (CSU), the largest system of higher education in the country granting bachelors and masters degrees. Within its 83 academic departments and programs, SFSU enrolls almost 27,000 students and employs nearly 3,000 faculty and staff. Its mission: to create and maintain an environment for learning that promotes respect for and appreciation of scholarship, freedom, human diversity, and the cultural mosaic of the City of San Francisco and the Bay Area; to promote excellence in instruction and intellectual accomplishment; and to provide broadly accessible higher education for residents of the region and state, as well as the nation and world.

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