



3COM HELPS INSTRUMENTATION LABORATORY IMPROVE NETWORK RELIABILITY AND PERFORMANCE

Overview

Getting it right is something Instrumentation Laboratory has been doing for the past 50 years, which is why it is no surprise that the market leader in critical care and hemostasis diagnostic instruments is a dedicated 3Com customer. The firm, headquartered in Bedford, Massachusetts, has operations worldwide and is part of Werfen Group, a global healthcare corporation, also dedicated to delivering the highest quality in its vitro diagnostic products, medical devices, and scientific instruments.

The Challenge

Instrumentation Laboratory has had to ensure that its existing 3Com® network keeps pace with the firm's rapidly expanding workforce and remote site needs. Network Supervisor Carlos Fernandes has managed the required upgrades and network enhancements since he first assumed the IT position nine years ago. "We were running out of IP ranges and adding a lot of nodes to the network," he states. "We had to find high performance, high capacity core switches that could handle the number of VLANs that we needed."

The Solution

Today, seven 3Com Switch 8814 modular core switches located at the company's Bedford location and two more Switch 8814s at a remote site in Orangeburg, New York, support 550 network users and some 800 nodes in the United States and Europe. The five Instrumentation Laboratories' Massachusetts buildings—all located in Bedford—are connected by fiber optic cable linked to the 3Com equipment. The firm's New York, Florida and Barcelona, Spain, sites are linked via a four-megabit, Multi-Protocol Label Switching WAN backbone and the company runs a Gigabit Ethernet LAN to user desktops. The entire 3Com network is managed by five people in Massachusetts and two in Florida.

CUSTOMER NAME/LOCATION

Instrumentation Laboratory,
Bedford, MA, USA

SITES/USERS

550 users among 10 locations
worldwide

INDUSTRY

Healthcare

3COM SOLUTION COMPONENTS

3Com Switch 8800 and 3Com
Switch 7750 modular switches

Key Benefits

SCALABLE, HIGH PERFORMANCE NETWORKING

Fernandes speaks enthusiastically of the high capacity 3Com Switch 8814s, lauding their robustness, wide range of functionality, and throughput. “We do a lot of research and development, so we need a high-performing switch that will allow us to grow,” he states. He calls the network’s performance “unbelievable,” adding that the switch fabric operates at 720 gigabits per second.

“With 3Com we were able to perform VLAN trunking and different sub addresses between our switches,” Fernandes comments. This has really improved the overall performance of the network. “Many users have told me how happy they are with the increased speed enabled by 3Com gigabit desktop connectivity and 10GE fiber optic links on the back end.”

In addition, Fernandes says Instrumentation Laboratory set up multicasting domains on the 3Com Switch 8800s and affiliated VLANs that maintain relevant data within local domains instead of needlessly traversing the entire network needlessly.

RELIABILITY

Fernandes is quick to point out the virtues of the 3Com Switch 8814 support of two independent switch fabrics. If one fabric goes down, the second replaces it instantly. This always-on reliability has helped Instrumentation Laboratory expand its network operations without having to add more network administrators.

POWERFUL PORTFOLIO OPTIONS

In addition to the Switch 8814s, one 3Com Switch 7754 and one 3Com Switch 7758 are deployed at Bolton Medical, Instrumentation Laboratory’s sister company in Sunrise, Florida. According to Fernandes, “We didn’t require as much port density in the remote location, but wanted all the functionality of the 3Com Switch 8800 family, including VLAN trunking, ACLs and Power Over Ethernet (PoE). The Switch 7700 series met all of our requirements.

PRICE/PERFORMANCE VALUE

Fernandes also cites the high performance and value of 3Com products compared to competing devices from Cisco Systems, noting the clear-cut superiority of 3Com when it comes to what he refers to as “performance per dollar.”

According to Fernandes, 3Com is able to compete equally on quality with any large vendor, while providing products for significantly less money. “When we were going through the purchase process, we compared Cisco and Extreme Networks side by side with 3Com, and the 3Com savings were approximately 35% over its competitors,” he says. “3Com really puts out a product that’s priced reasonably for the performance, but Cisco seems a little overpriced to me.”

INTEROPERABILITY

Fernandes is wary of Cisco based on past experience. He recalls using several stackable Cisco switches in a mixed mode environment that were known for system-wide transmission errors, port errors and input errors. In addition to resolving those errors, the 3Com Switch 8814s enabled the cost-savings and deployment flexibility of Power over Ethernet to desktops, seamless interoperability with third-party network devices—including those based on Cisco wireless access points—as well as support for Voice over IP communications.

Looking Ahead

3Com networking solutions play a prominent role in the busy networking future that Fernandes is mapping out, including an evaluation of 3Com wireless products and further deployment of 3Com Switch 8800s in a new building that the Laboratory is in the process of occupying.

“We haven’t had any major issues so far with our 3Com Switch 8800 and Switch 7700 chassis-built systems,” he states. “We’re happy with the performance, we’re happy with the support, and we’re happy with the product.”

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