



Industry: Education

Installation: 7 locations, 9 ShoreGear IP voice switches, 150 ShorePhone IP telephones

Date of Install: July 2004

CLAREMORE PUBLIC SCHOOLS LOOKS TO LEADING VENDORS FOR HIGH PERFORMANCE NETWORK AND VOIP

Extreme Networks and ShoreTel Supply Infrastructure and IP telephony Equipment so District Can Enjoy Savings, Features, and Scalability

Challenge:

Claremore Public Schools, with nine schools, needed a network that would be available 24 hours a day so that students and teachers would be able to access homework and grades and so that administrators could access financial applications. The network also needed to support the real-time application, Voice over IP, and the district had to choose its VoIP vendor. This new phone system had to be cost-effective, easy to manage, scalable, and flexible enough to support numerous moves, adds, and changes (MACs).

Solution:

Extreme Networks provided an end-to-end switching solution based on BlackDiamond, Alpine and Summit switches, and ShoreTel® provided ShoreGear® IP voice switches, ShorePhone™ IP telephones and ShoreWare® Director for comprehensive system management.

Benefits:

- The high performance and reliable Extreme Networks infrastructure provides the Quality of Service necessary to support VoIP while also supporting demanding financial and educational applications.
- Extreme Network switches share a common interface, simplifying the management and lowering the total cost of network ownership for the district.
- The ShoreTel IP telephony system provides a powerful feature set that improves employee productivity.
- ShoreTel's ShoreWare Director simplifies administration so that the IP phone system can be managed from in-house, saving the district thousands in outsourcing fees, and minimizing the time to implement moves, adds and changes.

ORGANIZATION

Claremore Independent School District is a K-12 school district in Oklahoma. The district comprises four elementary schools, one junior high school, a performing arts center, Project CEEP (Cooperative Exceptional Education Program), and an alternative education center. With 11 sites in all, the organization serves over 4,000 students and employs 470 teachers and staff.

CUSTOMER CHALLENGES

In 1998, the school district started looking at ways to connect all of its buildings together. At first, the district decided to use T1s and connect using routers and hubs. Terry Simpson, Director of Technology with the Claremore Public Schools, began work on a five-year plan that included sharing applications across buildings, including a student management package, so he started looking at new infrastructure solutions. At the same time, Simpson was considering replacing the T1 connections with fiber to all of the buildings, which would be more cost-effective.

Simpson researched a variety of switching products and narrowed down the choices to solutions from Extreme Networks and Alcatel. He had a list of priorities for the district, including the need for a common interface for ease of use and management, as well as Quality of Service (QoS) for Voice over IP (VoIP), cost-effectiveness, and support from the vendor. After seeing product demonstrations and speaking with numerous customer references for Extreme Networks and Alcatel, Simpson chose Extreme Networks.

Shortly after implementing the Extreme Networks solution, Claremore Public Schools began its search for a VoIP solution to replace an outdated phone system that would not scale and was built with a variety of PBX-based solutions. Simpson envisioned a VoIP system that would be manageable from anywhere on the district-wide network and one that would easily scale as the district added new schools. Simpson gathered information and price quotes from Cisco, Nortel and Sphere, as well as ShoreTel®. Simpson was on a tight budget, as is the case in most public schools, so again he ranked cost-effectiveness, ease of management, feature robustness, and scalability as top priorities.

After careful consideration, seeing demonstrations, working with each system for awhile, and speaking with customer references, Simpson made his choice. ShoreTel was the new IP telephony system for Claremore Public Schools. "The



“Both ShoreTel and Extreme Networks have been there for us and reliable since day one.”

– Terry Simpson
*Director of Technology,
Claremore Public Schools*

interface for configuring the ShoreTel system is intuitive and easy to learn, and it enabled the IT team to install and maintain the new ShoreTel phone system themselves,” said Simpson. “It is a clean and full-featured system that’s scalable, and one port on the ShoreTel switch supports up to 254 voice mail users. That’s amazing.”

EXTREME NETWORKS SOLUTION

Claremore Public Schools has deployed an Extreme Networks BlackDiamond 8810 switch at its core in administration, as well as Alpine and Summit switches in each school. The Extreme Networks switches are connected between sites via fiber. The district has also implemented Extreme Networks WM100 wireless routers in seven of its buildings for wireless connectivity for student and teacher laptops, mainly for presentation services.

EXTREME NETWORKS BENEFITS

Performance and reliability are key for the 24/7 applications Claremore Public Schools offers its staff and students, from grading packages to financial applications. Within each Extreme Networks switch is a non-blocking switch fabric that provides full wire-speed Layer 3 and Layer 2 performance at all times. In each instance, the backplane capacity is greater than the aggregation of all its ports, so data is never lost—even when the network load requires all ports to deliver full gigabit bandwidth.

“A network isn’t a luxury anymore, you have to have a robust network in place to do business,” said Simpson. “We’ve gradually centralized a lot of our applications with the Extreme Networks infrastructure in place. All financial activities are done on the central server and this doesn’t bog down the network. The library application is centralized. It’s now to the point where the network is required for us to do business 24/7. Extreme Networks is so reliable, it just doesn’t go down. And since it doesn’t go down, we’re doing all of our time clocks through a centralized IP. Employees can clock in from any points in the building.”

Extreme Networks provides eight levels of quality of service (QoS) to further meet performance requirements for voice traffic. With Extreme Networks, QoS policies are easy to define and assign to specific traffic groups, and the range of profiles includes minimum bandwidth, maximum bandwidth and relative priority, which is vital when it comes to optimizing bandwidth management effectiveness. QoS protects latency-sensitive voice traffic from bandwidth-intensive applications, such as file transfers or data backups, while helping to ensure critical traffic, like voice, gets through.

“We initially wanted Extreme Networks because of its QoS capabilities, so we could support VoIP,” said Simpson. “But we’ve benefited from the reliability and high performance of the switches more than we could have imagined. Bandwidth is just not an issue anymore.”

By sharing a common operating system and management platform between Extreme Networks switches, this simplifies management and eases the learning cycle for the district’s information system administrators. The result is a



lower overall Total Cost of Ownership (TCO). In addition, EPICenter® allows Claremore Public Schools to easily configure, troubleshoot, and monitor its network, and helps generate comprehensive status reports for planning purposes.

SHORETEL SOLUTION

ShoreTel provided Claremore Public Schools with nine of its ShoreGear 120 IP voice switches for seven of its sites, as well as a PRI switch. The school district also has over 150 ShorePhone™ IP telephones and 75 licenses for voice mail extensions for teachers who do not need an actual handset. Those teachers receive an e-mail if they have a voice mail and they can check it from their desktop or any available handset or telephone.

SHORETEL BENEFITS

ShoreTel IP telephony systems are easy to use, flexible, and reliable. With the ShoreTel system in place, all district employees are on a centralized phone and voice mail system, using 4-digit dialing to reach employees at any location. The ShoreTel system also gives each employee a graphical interface on their computer, ShoreWare® Personal Call Manager, which provides directory dialing, contact screen pops, and calendar integration. Personal Call Manager gives users a powerful, all-purpose tool for managing voice communications. With it, employees can quickly type in a name, bring up a number, and make their calls from local online directories—all with the click of a mouse, right from the desktop.

With ShoreTel's e-mail integration, employees centrally manage their e-mail and voice mail. Voice mail messages are stored in the industry-standard WAV Audio for Windows format, allowing users to play them on multimedia PCs, attach them to e-mail messages or embed them in other documents.

In addition to Personal Call Manager, Claremore Public Schools is also utilizing ShoreWare Operator Call Manager, which provides receptionists with in-depth information necessary for exceptional call handling. For example, when the phone rings, a call-routing log displays the caller's entire experience within the system. Before transferring callers, the call-transfer screen displays information about who is available and who is already on the phone. With this detailed level of information, receptionists connect callers faster than ever.

The district also utilizes ShoreTel's hunt groups capability, which allows multiple call routing options to ensure that calls to each building are answered by having primary and backup operators. With hunt groups, when the operator is on the phone or unavailable, calls are routed to another extension, preventing caller from unnecessarily reaching voice mail. It's also easy to add a new person to the hunt group if someone is out sick to ensure that incoming calls are answered, and these changes can be made from any location where a browser is accessible.

ShoreTel's ShoreWare Director is used for system management, troubleshooting and planning. From anywhere on the network, Simpson or a colleague can launch ShoreWare Director to gain access and manage any site and feature, including voice mail, the automated attendant and desktop

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applications. When a new user is added, the centralized database is automatically updated and every voice switch is notified. After the user information is entered, a mailbox is created and the automated attendant, dial-by name and number feature, and online directories are updated within seconds. Changes are just as quick and easy.

“The school district environment requires that many moves, adds, and changes be made to the phone system on a continual basis,” said Simpson. “The ShoreTel system allows us to handle MACs efficiently and cost-effectively with minimum support staff. This results in significant savings for us—up to \$2,000 per year because we had to have someone come in at the beginning of each year to make changes with the old system. I can even make these changes from home anytime, including changes to the auto attendant message. We recently had a snow day where I can implement a weather alert message from home that school was not in session. This enhances community communications instantly.”

With the ShoreTel system, Claremore Public Schools is also able to update the community in a more dynamic manner beyond school closures. For instance, the school has set up a hotline system using ShoreTel’s flexible voice mail capabilities for its athletic department. Whenever a team is out of town for a game, the coach calls in when the game ends and leaves a recorded message with the time the team is anticipated to return to the school. This allows parents to call in to find out exactly when they should go to the school to pick up their children. The messages are up to the minute, and the coach can choose whether or not to record whether or not the team won or lost the game, creating curiosity or excitement for the team.

COMBINED BENEFITS— EXTREME NETWORKS AND SHORETEL

Claremore Public Schools has benefited greatly from the partnership between Extreme Networks and ShoreTel. Because of the high-performance, reliable infrastructure created by Extreme Networks, the district is able to enjoy crisp, clear voice quality over the ShoreTel IP telephony system and a robust feature set including 4-digit dialing between locations, toll bypass, unified messaging, point-and-click dialing, enhanced productivity, improved call handling, and optimal scalability and organizational flexibility.

“We strive to find the best solution on the market and one that is the most efficient. For example, the ShoreTel system is the easiest thing I’ve ever configured. I went to a half day class and was able to configure the entire phone system. Not to mention, we probably use less than 5% of the user features available on the ShoreTel IP telephony system because the feature set is so robust. The features are easy to learn, though, and users are discovering them quickly. As far as Extreme Networks goes, I know we don’t come close to using all of the bandwidth available to us on the infrastructure, and EPICenter makes it a breeze to make changes and troubleshoot. Both ShoreTel and Extreme Networks have been there for us and reliable since day one. And we haven’t had any outages in the last seven years. That’s saying a lot. Extreme Networks and ShoreTel have delivered on all they’ve promised us and more.”

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