



▶ A Wise Choice

Emtec proves to be a valuable technology partner for Paterson School District.

It's a simple equation, really. Take a school district in need of a complete network overhaul. Add state-of-the-art technology from Cisco and the unmatched service and expertise of Emtec. The result: one very happy customer.

Facing end-of-service issues with much of its existing network gear, Paterson School District began exploring options for an upgrade. From the beginning, it was clear this would be a considerable undertaking. The district serves the third-largest city in New Jersey, and its network connects 61 school and administrative buildings. The network project would impact some 27,000 students and more than 6,000 employees.

"It was a very large project, but we had no choice except to upgrade since our existing network gear was reaching end-of-life," said Ralph Barca, Director of the district's Department of Technology. *"We had to upgrade to a platform that would bring the district to where it needed to be."*

Education Experts:

The district decided to transition to an all-Cisco network in a nearly \$7 million project that would involve the replacement of approximately 600 network switches.

The next step was to find a Cisco Partner to assist with the implementation. Emtec proved to be the logical choice.

As a Cisco Premier Partner, Emtec is among very few solution providers that have a long history of providing IT services to NJ school districts. Emtec has a wealth of Cisco engineering expertise and a long track record of implementing network infrastructure projects for the education market — a combination few providers can equal. Emtec also had a long history with Paterson, having installed the bulk of the original switches that were being replaced in this project.

"We knew what we wanted, and Emtec knew how to get there," said Barca. *"It was a true collaboration between Emtec and Paterson from the start — from the design through the implementation. Emtec definitely stepped up to work with us and was quite flexible to get the project done with almost zero interruptions to the daily function of the network."*

Emtec's extensive experience with education projects gives them an uncommon insight into the unique needs of educators.

"It's not just about putting computers in classrooms or linking classrooms to the Internet," said Larry Fondacaro, Senior Solutions Architect for Emtec. *"We recognize the unique confines that school districts have to work with- fixed budgets, classroom schedules and tight time frames. Our extensive understanding of the educational environment allows us to deliver the solutions that best support a district's scholastic and administrative requirements within these confines."*

Agility is Key:

Emtec's commitment to collaboration and flexibility proved essential to bringing the project in on time and within budget. The project was financed with a combination of local and federal funds through an E-Rate grant.

"Winning the E-Rate award is what allowed us to take on this initiative," said Barca. *"It was really a feather in our cap."*

Approved by Congress as part of the Telecommunications Act of 1996, E-Rate provides deep discounts on telecommunications, Internet access and internal networking to America's public and private schools and public libraries. As with all federal grant money, there are some strings attached. While E-Rate funding is a boon to school networking projects, the program's long lead times for getting contracts in place and then subsequent tight deadlines for installation can create financial and management challenges.

Emtec understands that E-Rate funding creates limits on how a school district can respond to changes in the scope of a project. Fondacaro and Chris Mallazzo, Emtec's Director of Project Engineering, knew that their team would have to be flexible in dealing with any unexpected challenges that were sure to arise in a project of this magnitude.

Once work began, engineers discovered approximately 35 undocumented network switches that had to be replaced. These were switches that had been added since the previous network gear was installed eight years earlier. In addition, Emtec installed backup power devices throughout the district and removed all the old gear — all while remaining within the boundaries of its original service budget.

"It turned out to be a fairly dynamic project," said Mallazzo. "It was a bit of a moving target because of the new discoveries. Even though some of these things were beyond the original scope, we were able to overcome all the obstacles and remain within budget and on time, switch configuration, and diagrams of the entire network layout," said Fondacaro.

A Team Effort:

In addition to budget limitations, time is always a significant issue with school technology projects. Mallazzo and Fondacaro knew they would have to limit downtime during school hours when students, faculty and staff would require network access. Gear was prepped and configured offsite so that Emtec engineers were able to wait until the school day ended at 3:30 to bring the network down, make the connections and bring everything back up. Core switches at the district's three high schools required a bit more work, so those locations were serviced at night.

"Sites that were upgraded during the day were done in a manner where there was minimal interruption," said Barca. *"And critical sites were done after hours so there was no interruption of service."*

Barca was impressed with the transfer of knowledge between the Emtec team and the district's IT staff. Barca's team worked side-by-side with Emtec engineers on much of the project. Upon completion, Emtec also provided highly detailed documentation of the new network, "right down to every switch, serial number, IP address, switch configuration, and diagrams of the entire network layout," said Fondacaro.

"Some vendors come in and want to do things their way, and that's it. They'd just as soon have the customer stay out of the way," said Barca. *"But Emtec really worked with us. Our people were side-by-side with them working as a team."*

"The result is that we now have a network with much greater performance and bandwidth than we had before, and intelligence and security is greatly enhanced. Everything hit within budget and on time, even down to the details of the documentation."

About Emtec: Established in 1964, Emtec, Inc. is a systems integrator that provides IT services and products to the federal, state, local, education and commercial markets. Our market leading value-based management methods, coupled with best-in-class IT technology, consulting and development services, address a wide range of specific client needs, as well as support broader IT transformation initiatives. Emtec's service capabilities span the United States, Canada and countries around the globe.