

# CREATING THE PERFECT ENVIRONMENT TO LEARN: SAFELY, SECURELY AND WITHOUT INTERRUPTION



Trenton Public Schools is a comprehensive community public school district educating 11,500 students in pre-kindergarten through twelfth grade from Trenton, in Mercer County, New Jersey. With 25 buildings serving thirteen elementary schools, four middle schools, and three high schools, the district is dedicated to helping all students graduate with a vision for their future, motivated to learn continually and prepared to succeed in their choice of college or career.

Over a multi-project, multi-year timeline, the Trenton IT team has worked with Fortinet and its technology partner, Advanced Computer Solutions Group (ACSG), to meet the district's evolving network infrastructure needs. From standardized testing to internet use and the related risks of a cyber world, educating students in a secure and protected environment is of paramount importance for Trenton school district.

## ELECTRONIC TESTING REQUIRES GREATER SPEED

The Partnership for Assessment of Readiness for College and Careers (PARCC) is a consortium of six states that includes New Jersey, working to collaboratively develop a common set of examinations to measure student achievement of the Common Core State Standards and preparedness for college and careers.

Firewalls became pertinent when the PARCC electronic assessments replaced the existing statewide testing, and the Trenton legacy network was unable to handle the demands. Dennis Morgan, director of IT for Trenton Public Schools recalled, "We needed to invest in our wide area network and internet feeds as our environment was no longer capable of supporting the speed and bandwidth that were required. On any given day, the infrastructure needs to be able to support almost 12,000 endpoints and we just weren't able to handle all the traffic."

*"Fortinet is the brand I know I can trust to deliver what we need."*

– Dennis Morgan,  
Director of IT, Trenton Public Schools



## DETAILS

**CUSTOMER:** Trenton Public Schools

**INDUSTRY:** Education

**LOCATION:** New Jersey

**PARTNER:** Advanced Computer Solutions Group

## SOLUTION

- FortiGate 1500D HA
- FortiDDoS
- FortiVoice (Dual PBX HA) with over 500 handsets

## BUSINESS IMPACT

- Enhanced, infrastructure-wide protection and visibility
- Cost- and resource-savings
- Maximized uptime with high-availability firewalls and removing single-points of failure
- State-of-the-art protection against DDoS attacks ensures services are uninterrupted

## NETWORK SECURITY WITH VISIBILITY

Led by Morgan, the Trenton technical team sought a robust firewall replacement. With a recommendation from its technology partner ACSG, the Fortinet FortiGate quickly became the top candidate because of its industry-leading threat protection and performance. Morgan recounted, “We did a lot of research and the FortiGate always has excellent reviews and an extremely competitive price point. Ease-of-use and low operational overhead are two additional factors of the FortiGate that seem to be consistently highlighted by reviewers and existing users.”

An onsite proof of concept was conducted to verify the suitability of the FortiGates in the Trenton environment. Morgan and his colleagues had multiple conversations with the technical staff of other Fortinet deployments that were similar to the proposed Trenton implementation. At the successful conclusion of the evaluation phase, a decision was made to partner with Fortinet.

A pair of FortiGate 1500D next generation firewalls were deployed in a high availability configuration to support the newly acquired 10 Gig bandwidth internet connection. The solution provided built in redundancy and included comprehensive threat protection and web filtering. “We were able to consolidate multiple systems and functions onto the pair of FortiGates,” Morgan stated. “Having no single points of failure and the refreshing ease of having one location to review logs and complete daily audits are huge benefits for us.”

The implementation went well thanks to a solid product and a trusted implementation team. Morgan commented, “Working with Fortinet and ACSG was excellent – with full support through the whole deployment process – the expertise and work-ethic are amazing. During the initial setup, the FortiGate’s intuitive interface made it very easy to audit the network and decide which rules were valid and which could be easily omitted.”

## ADDING DDOS PROTECTION

Distributed denial of service (DDoS) attacks have become more prevalent with colleges and high schools seeing an escalating number of attempted breaches. While Trenton had not experienced any issues, several other school districts and colleges in New Jersey had been impacted.

To proactively address the increasing risk, and based on the success of the FortiGate implementation, Morgan consulted with ACSG and

the recommendation once again was Fortinet. He described, “We tested and then bought a FortiDDoS appliance: We wanted to get ahead of the risk before Trenton became another statistic.”

The FortiDDoS provides 100% heuristic/behavior-based detection that is completely transparent to would-be attackers. The massively parallel architecture simultaneously monitors hundreds of thousands of parameters to alleviate the possibility of throughput interruptions caused by flawed analysis. The appliance is equipped with comprehensive reporting and analysis tools that are administered sharing the same console used for the district’s FortiGates.

## FORTIVOICE: QUALITY AND SAVINGS

As with many IT teams in the education sector, in addition to multiple other duties, Morgan and his colleagues also are responsible for managing and maintaining the district’s extensive phone system. When the Trenton team began looking for a replacement for the district’s aging legacy VoIP phone system, options ranged from the poorly-made to the outrageously expensive.

After discussions with ACSG, a recommendation was made to evaluate Fortinet’s business phone system, FortiVoice. “We thoroughly tested all the components – the handsets are well made, and the service quality is excellent – and it was an easy sell to our School Board,” said Morgan, “Not only was this deployment the smoothest phone cutover that I have been a part of but with 500 extensions in place, we are able to lower our phone costs by close to 60%.”

## VALUE FOR MONEY

Education costs are rising, school budgets are tighter, and everyone is expected to do more with less. Sophisticated protection from Fortinet, and the ACSG/Fortinet partnership, have made it easier for Trenton Public Schools to offer a safe and adaptable infrastructure to its students and staff.

Morgan summarized, “Today with Fortinet, our infrastructure is significantly more secure and has a greatly improved cost efficiency. We’ve been able to put advanced security measures in place to ensure that our students are not exposed to the massive number of negative elements that are out on the web. This is critically important to everyone in the district and Fortinet is the brand I know I can I trust to deliver what we need.”



GLOBAL HEADQUARTERS  
Fortinet Inc.  
899 Kifer Road  
Sunnyvale, CA 94086  
United States  
Tel: +1.408.235.7700  
www.fortinet.com/sales

EMEA SALES OFFICE  
905 rue Albert Einstein  
06560 Valbonne  
France  
Tel: +33.4.8987.0500

APAC SALES OFFICE  
8 Temasek Boulevard #12-01  
Suntec Tower Three  
Singapore 038988  
Tel: +65-6395-7899  
Fax: +65-6295-0015

LATIN AMERICA HEADQUARTERS  
Sawgrass Lakes Center  
13450 W. Sunrise Blvd., Suite 430  
Sunrise, FL 33323  
Tel: +1.954.368.9990