



Merced Union High School District

- 10,300 Students
- 1100+ Faculty & Staff Members
- 7 (10 Schools) Campuses: Grades 9-12
- 11,000 Chromebooks
- 88% of Students are Eligible for Free & Reduced Lunch
- 92.8% Graduation Rate
- 1 IT Network Engineer
- 1 IT Manager
- Merced, California

Merced Union High School District's Consolidated Approach To Network Security: Driving Dollars Into The Classroom, Not Into The Datacenter

Merced Union High School District, a school district of 10,300 students spanning ten campuses, embarked on a three-year journey to prepare the community for one of the state of California's largest and most successful digital learning deployments of 10,000+ Chromebooks. However, prior to placing a device in the hands of each student in grades 9-12, the district's administration coupled with teachers, parents, students, and community members carefully evaluated the multitude of devices on the market resulting in "One to Web" initiative.

Three years of ongoing professional development for teachers, building out the infrastructure, and selection of devices defined the educational landscape that Google now uses as a model Google Apps for Education (GAPE) campus.

As devices were added to the network, the incumbent firewall and webfilter was strained due to the number of concurrent sessions each device was running. The firewall and webfilter became crippled leaving the District's Information Technology (IT) team to consider a new solution. Mr. Anthony Thomas, IT Manager, made a fiscally responsible decision to assess the costs of the numerous security point solutions renewed annually and invited two security manufacturers to the table to present their best solution for the district to provide the safest and most secure

Fortinet Solution

- 2 x FortiGate 3700D
- 1 x FortiAnalyzer 1000D

Replaced

- Firewall and web content filtering appliances with \$30K in annual subscription services
- HA Pair Firewalls unable to sustain necessary throughput and provide redundancy

Operational Impact

- Proactive compliance with CIPA, HIPAA, and FERPA
- Dramatic cost reduction via consolidated security point solutions
- Scalable solution to meet the needs of today and several years from now
- Ease of use with intuitive GUI
- Solution that addressed the needs of millions of concurrent sessions
- Provided growth for the next 4+ years

learning environment. Mr. Thomas and his network engineer Jon Watry evaluated six security manufacturers and identified two out of the six security manufacturers to enter into a proof of concept. The most heavily weighted variables for consideration included: 1. Cost, 2. Consolidation, 3. Ease of management, and 4. Scalability for growth.

The district provides a 20 Gb connection from schools to the district and a 10gb internet connection; the district built and owns its own fiber. Following a three month proof of concept, Mr. Thomas alerted Fortinet that he had elected to move forward with a high availability solution of two FortiGate 3700Ds and a FortiAnalyzer VM for rich and robust reporting. The FortiGate solution was able to sustain the number of required concurrent sessions coupled with the FortiGate's robust web content filtering and the granular nature of reporting. It also supported the district's needs for site-to-site IPSec VPN and provided future bandwidth growth. With the capacity to do an amazing 40 GB of throughput. "The FortiGate is just that simple to manage. I set it and forget it," echoed Mr. Thomas.

"We were seeking to bridge social and geographic boundaries and provide a college-like learning environment to personalize instruction for each student. To be able to do so, we had to invest in our students by building a state of the art infrastructure to support 10,000+ chromebooks being on at the same time. The school board, teachers, parents, and community members committed to the success of this One to Web initiative from the onset. It was the IT Department's goal to provide a solution that was fast, reliable and kept our students safe. With Fortinet we were able to do that and save money in the process."

-Anthony Thomas, IT Manager

"Everything we do is about kids. We are providing our students more than technology we are providing them opportunity. In this day of age that is what we need more opportunity and versatility for our students. With that we have taken the proactive measures necessary to invest in our infrastructure to ensure that students and staff are provided with uninterrupted digital learning experiences."

-Allan Peterson, Chief Business Officer

In selecting the Fortinet solution, Mr. Thomas was able to remove his aging content filter and firewall and consolidated those point solutions into one Fortinet appliance with additional security features and provide redundancy.

This eliminated the need for the suggested ten web content filtering appliances and purchase a new firewall as the FortiGate 3700D provided the necessary web content filtering, Intrusion Prevention (IPS), Data Loss Prevention (DLP), application control, and firewall functions to ensure Children's Internet Protection Act (CIPA) and Family Education Rights and Privacy Act (FERPA) compliance as addressed by Fortinet's Unified Threat Management bundle. Mr. Thomas was able to reduce heating and cooling costs as well as save the district \$30K in annual subscription costs associated with the per user licensing model of the web content filtering solution in combining the two appliances into one while providing redundancy. Recognizing the great investment that the School Board of Trustees committed to the students of Merced Union High School District, the IT Department found ways to reduce costs via Fortinet's consolidated approach to high performance network security.



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