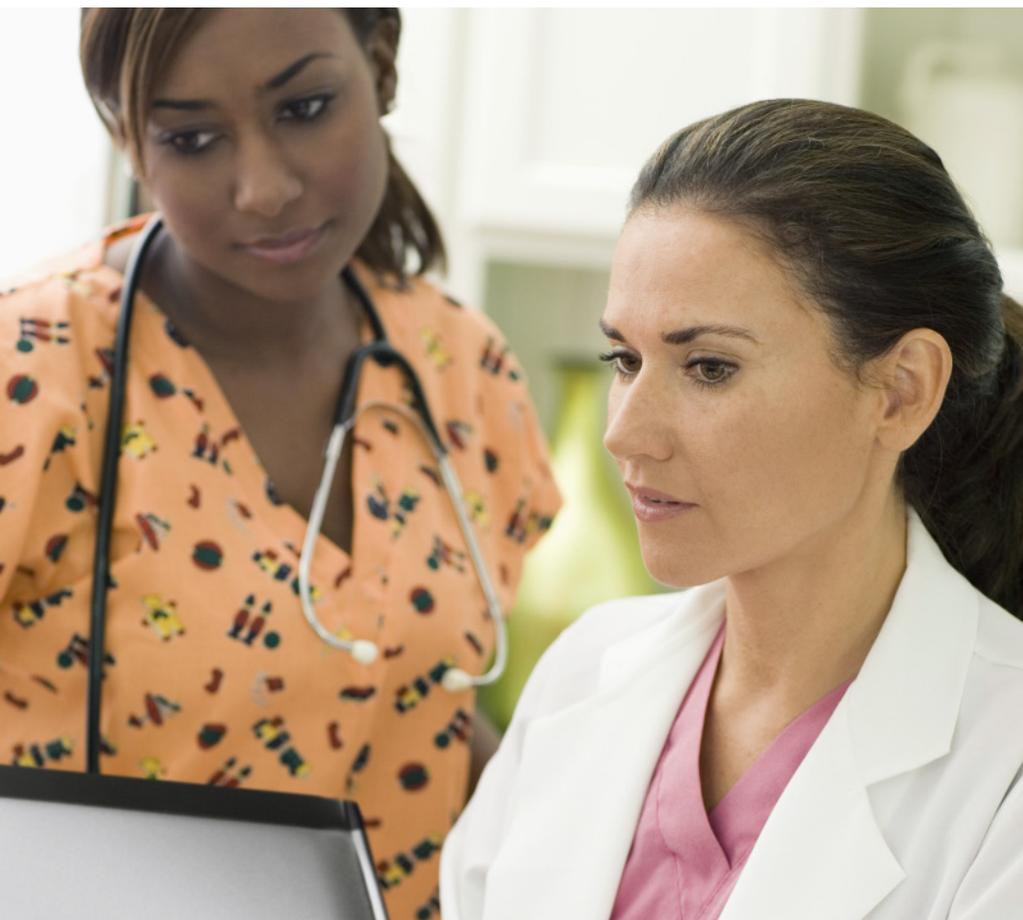




University of South Florida secures big data with Dell SonicWALL

USF Pediatric Epidemiology Center boosts network security performance 10-fold, while saving \$100,000 with SuperMassive Next-Gen Firewall



“Our performance has increased 10-fold.”

Pablo Ruiz
IT Manager
University of South Florida

Customer profile



Company University of South Florida

Industry Higher Education

Country United States

Users 1,000

Website
www.health.usf.edu/medicine/pediatrics/epidemiology.com

Institutional need

The USF Pediatric Epidemiology Center analyzes information from a growing volume of biomedical and patient data. In order to secure the corresponding increase in network traffic, the center needed to upgrade the processing capacity of its firewall. In addition, it needed an effective anti-spam solution.

Solution

By deploying a Dell SonicWALL SuperMassive 10200 Next-Generation Firewall solution, the center has increased performance 10-fold, while saving \$100,000 in acquisition, consulting and maintenance costs. In addition, USF-PEC reduced spam 2 to 3 times more effectively than the previous Barracuda appliances after deploying a Dell SonicWALL ESA 3300 solution.

Benefits

- 10-fold increase in security performance
- Two-thirds reduction in spam
- Savings of \$100,000 in costs
- Ease-of-deployment
- Greater user satisfaction

Solutions featured

- Backup and Recovery
- Network Security

The University of South Florida's Pediatric Epidemiology Center is comprised of a diverse team with expertise in biostatistics, epidemiology, health informatics, computer science, genetics, nutrition, public health, clinical trials and health services research. The center facilitates interaction and contributions in knowledge between physicians and patients throughout the US and international communities. The center has effectively deployed Dell SonicWALL SuperMassive Next-Generation Firewalls, as well as Email Security and Secure Remote Access solutions to securely enhance performance, productivity and global communications.

"We needed increased capacity and bandwidth to support a new research initiative, which will add approximately 30 terabytes of clinical data to what we already have."

*Joe Gomes
Director Systems and
Technology
University of South Florida*

"The department drives research on Type 1 Diabetes, as well as rare diseases and clinical oncology," says Joe Gomes, director systems and technology at the Pediatric Epidemiology Center, University of South Florida. "There are 106 employees in the department itself, but we have well over 100 research protocols, about 250 clinics, with several hundred researchers, physicians and coordinators all over the world who access our web-hosted systems online. We provide the entire back-end support for collection of the data and development that is done in-house for all the applications. We also support the outside users who actually gather the data for us and input it into our system."

For Gomes, the challenge is in keeping the network secure.

"We do not want anyone to have access to sensitive clinical data except the researchers who will actually be working on it," says Gomes. "We not only have to protect ourselves from malware, but also make sure that the researchers accessing it do not infect us nor do we infect anybody else."

The center processes large volumes of big data.

"We collect a lot of very large data sets," says Gomes. "We needed increased

capacity and bandwidth to support a new research initiative, which will add approximately 30 terabytes of clinical data to what we already have."

The center identified a need to upgrade their prior Dell SonicWALL E-Class Network Security Appliance (NSA) E6500 firewall to effectively secure the higher volume of traffic.

"To get these data sets in-house for analysis, we required much higher processing power," says Gomes.

Technology at work

Software

Dell SonicWALL SuperMassive 10200 HA

Dell SonicWALL NSA E6500 HA

Dell SonicWALL ESA 3300 HA

Dell SonicWALL SRA 4200 HA

Dell SonicWALL TZ 210

Dell SonicWALL SonicPoint wireless access points

Dell SonicWALL Comprehensive Gateway Security Service

Dell SonicWALL Web Application Firewall Service

Dell AppAssure for SQL

Dell AppAssure for Exchange



Spam had been another major issue for the center.

"We get a ton of spam," says Gomes. "On average we receive up to 20,000 emails a day."

To address its spam problem, the center replaced its previous Barracuda® Networks device with a more effective email security solution.

"The number of signatures that Barracuda could hold was not optimal, and made it harder to filter," says Pablo Ruiz, IT manager at the Pediatric Epidemiology Center, University of South Florida. "The ESA 3300 gave us more bang for the buck. The difference was night and day."

They also needed reliable solutions for secure remote access and application backup and recovery. To assist in selecting and implementing their solutions, the center enlisted the IT consulting services of All Covered.

"They have always been there for us and we get a very quick response to questions that we have. They are a very good value-added partner," says Gomes.

Securing big data without impacting performance

"The speed at which the firewall processes data is important to us," says Ruiz. "That was one of the key drivers for our decision."

"We also deal with a lot of imaging files, so we had to be able to scan files of any size without impacting performance," says Gomes.

"In addition, we had thought about splitting off intrusion prevention services (IPS) from the firewall because we didn't have enough processing power with the volumes we were adding," says Ruiz. "So, we carefully considered the amount of processing power of the replacement solution."

The center evaluated Check Point® before selecting a Dell SonicWALL SuperMassive E10200 solution in High Availability (HA). The SuperMassive Series, Dell SonicWALL's flagship Next-Generation Firewall platform offered the center the scalability, reliability and deep security at multi-gigabit speeds it required for its big data demands.

"Our good experience with the E6500, the Dell SonicWALL track record, and the UI integration that Dell SonicWALL provides, were all critical factors in our decision," says Ruiz.

Featuring massively scalable multi-core architecture engineered for 10/40/120 Gbps infrastructure, the SuperMassive E10000 Series delivers superior granular application intelligence, control and visualization, high-performance intrusion prevention, low-latency malware protection, and full inspection of SSL-encrypted traffic without overhead, latency or memory thrashing.

"Price performance was another consideration," says Ruiz. "Overall, in choosing Dell SonicWALL over Check Point, our cost-savings approximated \$100,000."

Much of these savings resulted from the center's familiarity and experience with the Dell SonicWALL platform.

"We have been using SonicWALL firewalls for eight years, and the protection and interface has always been consistent," says Ruiz. "Acquisition cost alone was a big differentiator from Check Point, but maintenance was another factor, as we would have to engage consultants and retrain staff on the new platform. Also, we were able to utilize existing infrastructure and repurpose our original E6500 firewalls for our disaster recovery facility."

The center deployed paired SuperMassive 10200 Next-Generation Firewalls in HA.

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"Currently, we have the SuperMassive firewalls in Active/Passive mode," says Ruiz. "Our future plan is to have both of them running simultaneously in Active/Active mode. That's a big ROI for us. We'll be able to use one SuperMassive for all the threat management and the other one for serving web sites, analyzing logs or other purposes."

Deployment went smoothly.

"The best benefit we get from staying with the Dell SonicWALL family is that upgrades are seamless," says Ruiz. "It just works. We implemented the SuperMassive one night and the next morning users didn't even realize that we made such a major change on the back end."

"We had absolutely zero down time," confirmed Gomes.

The benefits to our department have been significant.

"Our performance has increased 10-fold," says Ruiz. "The network is currently at one gig and we needed to bring it up to 10 gigs because of the larger file transfers. With the SuperMassive, we are now able to take advantage of the 10 gig backbone that the university currently runs. The firewall effectively lets us use the Dell SonicWALL Comprehensive Gateway Security Services for intrusion prevention, anti-virus and anti-spam, without taxing processing power. It has enough power to do more."

"We had some denial-of-service attacks in the past, and they have been completely mitigated by the SuperMassive firewall," says Gomes.

Reducing spam by two-thirds

In addition, the center replaced its Barracuda device with a Dell SonicWALL Email Security solution.

The Dell SonicWALL Email Security Appliance (ESA) 3300 protects the center from spam, phishing attacks and malware, with optimal performance, scalability, reliability and value. Stopping spam attacks with over 99% effectiveness, the ESA 3300 combines best-in-class spam filtering with an email attack monitoring system.

"We have cut about two-thirds of the spam we used to get with Barracuda," says Gomes. "Our users noticed. A few days after we implemented Email Security, people said they noticed they were not receiving as much email—all of the spam was being blocked."

The ESA 3300 collaborates with the Dell SonicWALL Global Response Intelligent Defense (GRID) Network™, the SonicWALL Threat Center and Dell SonicWALL Labs to apply continuous updates on worldwide threats over multiple vectors. This integrated system uses predictive behavioral analysis and innovative malware identification signatures to deliver proactive, self-correcting defenses that block both malware and their carrier channels in advance of many malicious cyberattacks.

"One of the main benefits of the ESA 3300 is its high availability capability," says Ruiz. "As our environment has grown, our users basically expect everything to run 24/7, so having that HA capability is a big plus."

The center has also deployed Dell SonicWALL Secure Remote Access (SRA) 4200 appliances in HA.

Dell SonicWALL Web Application Firewall enables the center to control social media traffic.

"It will be nice to have a way to limit people accessing Facebook and other sites in case that becomes an issue," says Ruiz.



Moreover, the center uses Dell SonicWALL TZ Series firewalls and SonicPoint wireless access points at multiple distributed locations. In addition, it uses Dell AppAssure to backup its Microsoft Exchange and SQL databases, ensuring server and item-level recovery for email and critical data.

"Dell AppAssure is a very easy-to-use product, and we take advantage of it," says Ruiz.

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