

# University manages bandwidth growth, speeds performance

Cedarville University ensures network security and eliminates performance problems with SonicWall SuperMassive next-generation firewalls



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*David Rotman, CIO, Cedarville University*

## Customer profile



<b>Company</b>	Cedarville University
<b>Industry</b>	Education
<b>Country</b>	United States
<b>Employees</b>	600
<b>Students</b>	3,400
<b>Website</b>	<a href="http://www.cedarville.edu">www.cedarville.edu</a>

## Business need

With bandwidth consumption growing 30 to 40 percent each year, and students accessing the internet from a wide variety of personal devices, Cedarville University needed a new firewall solution that would ensure network security and improve performance.

## Solution

With SonicWall SuperMassive 9600 next-generation firewalls and the Comprehensive Gateway Security Suite, the university has the security it needs and has achieved 99.99 percent uptime while eliminating its performance issues.

## Benefits

- Blocked infection and intrusion attempts, including malware buried inside SSL packets
- Delivered 99.99 percent availability
- Slashed download times for large files from several minutes to a minute or less
- Provided VPN users with the same high performance as users on campus
- Prevented costly data breaches

## Solutions at a glance

- [Network Security](#)

Located in southwestern Ohio, Cedarville University is a private Baptist institution of arts and sciences with about 3,400 students. The campus's 40 buildings are connected by a fiber network, with dual gigabit links back to the core. An IT staff of 23 supports about 3,000 computers owned by the college — plus more than double that number of student-owned computers, phones, tablets and other devices.

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*Mike Johnson, CEO, Cerdant*

#### Student web use increases both security and bandwidth requirements

To protect its systems and control network traffic, the university had previously used a SonicWall E-Class Network Security Appliance (NSA) E7500. “We need to be careful about potential breaches and make sure we intercept attacks before they hit our vital systems, including our enterprise resource system and our course management system,” explains David Rotman, CIO of Cedarville University. “We also need to ensure the security and availability of our online courses, as well as our web server, ecommerce sites, book source system and health center.”

However, college students everywhere are notorious for gobbling up bandwidth by using media-intensive sites like Netflix, Pandora and YouTube, and Cedarville University is no exception. “Our bandwidth consumption is growing 30 to 40 percent a year,” says Rotman. “In addition to student use of the web, we make heavy use of a state-wide network for library resources.”

This increased demand led to performance issues, including increased download times for large files. The university recognized that it needed an even more robust firewall. “We simply outgrew our previous firewall. We wanted to get new devices that had adequate bandwidth but also could do an effective job on intrusion detection, virus blocking and anti-malware.”

#### Deep security and multi-gigabit speeds

To manage the complexity of its IT infrastructure, Cedarville University turned to Cerdant, a Premier Partner specializing in protecting the security, mobility and reliability of information and networks for organizations worldwide. The university evaluated firewalls from both Palo Alto Networks and . Based on both features and support, the university chose SonicWall SuperMassive 9600 next-generation firewalls with the Comprehensive Gateway Security Suite.

The SonicWall SuperMassive 9000 Series delivers deep security for demanding enterprise networks. SonicWall SuperMassive 9600 provides 20 gigabits per second (Gbps) of high-performance firewall throughput, five Gbps of malware protection and 9.7 Gbps of application inspection with intrusion prevention in a compact, power-efficient appliance. It detects and blocks sophisticated threats before they can enter a network, with minimal latency for every connection on the network. And its patented, Reassembly Free Deep Packet Inspection (RFDPI) technology

#### Technology at work

##### Hardware

SonicWall SuperMassive 9600

##### Software

SonicWall Comprehensive Gateway Security Suite

scans against multiple application types and protocols to protect networks from internal and external attacks, as well as from application vulnerabilities. Unlike other scanning engines, the RFDPI engine is not limited by file size or the amount of concurrent traffic it can scan.

The SonicWall Comprehensive Gateway Security Suite is a powerful security subscription service for businesses of all sizes. It includes gateway security services (gateway anti-virus, anti-spyware, intrusion prevention and application intelligence and control service), content/URL filtering and 24x7 technical support.

### **An easy-to-use interface and excellent support**

Above all, Cedarville University was impressed with the SuperMassive's ease of use. "The other firewalls I've used in the past have all been command-line, which can be pretty difficult, especially if you're not a specialist in security," explains Tim Kelly, network engineer at Cedarville University. "The SuperMassive's interface is very user-friendly. It's easy to quickly get an overview of what's going on, or to look at particular statistics or how the firewall is configured."

In addition, the university knew it could count on support from Cerdant when it needs it. Cerdant manages more than 3,000 firewalls worldwide, and its SonicWall engineers are experts in the field. "We found Cerdant to be an excellent partner in managing our new firewall," notes Rotman. "They've been extremely helpful, and they're available 24/7. They helped us to optimize the firewall, and they also keep up on emerging threats, so they can anticipate things that we wouldn't be aware of."

"Cedarville has been a customer for a very long time and we've seen their bandwidth demands increase dramatically," says Mike Johnson, president and CEO of Cerdant. "SonicWall SuperMassive allowed us to

improve the overall performance of their network and stay within their budget. When comparing the SuperMassive 9600 to a comparable Palo Alto solution, the SuperMassive offered far more value for their needs."

### **Security, even for mobile devices and cloud solutions**

Implementing the SonicWall SuperMassive 9600 firewalls has delivered the security the university needs, even with the thousands of mobile devices students use extensively on campus. "People tend not to be as careful on their phone as they are on a computer — they'll go to websites and click on things that may infect the system," notes Rotman. "With the solutions, we have had no intrusions or infections at all. The firewall is definitely doing its job."

"One of the big benefits of the firewall," adds Kelly, "is that we can block use of particular ports on any particular systems that would allow an intruder to gain entry. And we can easily tell if we're getting probes, if people are trying to get in. The firewall blocks almost all of those attempts. And the deep packet inspection even blocks malware buried inside SSL packets."

Moreover, the firewall gives IT staff the control they need over user activity. "We can also use the firewall to block any particular user from going out onto the internet," says Kelly. "That's very beneficial as well, since it enables us to protect the network from the inside as well as from the outside."

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The SuperMassive 9600 firewall also provides security for cloud solutions. Like many organizations, Cedarville University has outsourced its email and much of its disk storage to Google. "With the 9600s in place, all of our email passes through the firewall, which gives us an extra layer of protection," says Rotman.

### Improved performance and 99.99 percent availability

In addition to securing the network, the SuperMassive 9600 in high availability mode has eliminated the performance problems the university had been experiencing and ensures that the university's network is available around the clock for students.

"With the 9600s, we now have 99.99 percent uptime. Downloads that took several minutes before take only a minute or less now," reports Kelly.

To ensure the same high performance for students and faculty who are working off-campus and using the virtual private network (VPN), Cedarville University leverages SonicWall NetExtender thin client technology that delivers seamless and secure access to any resource on the corporate network. "We use the NetExtender client to provide a secure connection back to campus," explains Rotman. "People get the same experience on the VPN as when they're on campus."

### Reducing the risk and avoiding the cost of breaches

Every organization wants to avoid data breaches, and Cedarville University is no exception. "A data breach would be not only embarrassing public relations-wise, but also expensive to recover from," notes Rotman. "We would be required to notify people affected by the breach, and probably to buy credit protection insurance for them. It could easily run into five or six figures of cost and tie up some valuable staff members for several months. Therefore, putting resources into the firewall to prevent data breaches is a smart investment."

### A scalable solution for accommodating future growth

Cedarville University is looking forward to exploring the breadth of protection offered by its new SonicWall solutions. "The expandability of the solution is a big plus for us," says Kelly. "Moving forward, we plan to explore the application intelligence feature so we can throttle certain applications and allow others to have priority. We will also evaluate how to best use the content filtering service to help with both security and performance."



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