

# West Virginia University

## Securing a large university network

### Situation

Founded in 1867, West Virginia University is a public institute of higher learning based in Morgantown, West Virginia. West Virginia University offers 171 different majors in 14 different colleges, including Potomac State in Keyser, with off-site campuses in Parkersburg, Montgomery, and Charleston, West Virginia. The University enrolls over 26,000 students and employs approximately 5,000 faculty and staff. Technical staff for West Virginia University was open to deploying new network security technology as the campus network, including off-site campus networks and Internet users, was constantly under attack from unwanted and malicious network traffic, including Internet viruses and worms. As a result, the University experienced a loss in productivity for the entire technical staff due to a required focus on cleaning computer systems from infections and blocking malicious attacks before they entered the network.

West Virginia University needed a comprehensive, enterprise security platform for its 45,000-50,000 users across its main campus and off-site campuses, ranging from students to employees and staff of the University community. The University also needed a robust security solution that wouldn't compromise the performance of its existing network. Furthermore, West Virginia University required platform independent security tools that could seamlessly protect its multi-platform network environment consisting of Apple, Linux, UNIX and Windows platforms, which run critical applications such as student information systems, financial systems, email, Internet, calendaring and file/print services.

After evaluating Fortinet's FortiGate multi-function security appliances for its distributed campus' network protection needs, West Virginia University discovered that the Fortinet systems provide the performance, security functionality and scalability to accommodate all of its users' needs in convenient all-in-one integrated security appliances.

### Solution

To secure its multi-platform network, West Virginia University deployed an enterprise security platform with Fortinet's flagship ASIC-accelerated enterprise security appliances. Three FortiGate-3600 large enterprise security appliances are deployed at the University's Internet gateway through which all traffic coming into and leaving the campus is filtered and scanned for viruses, intrusions and other unwanted network traffic. The three FortiGate-3600 systems are integrated with Fortinet's FortiGuard Subscription Services for Antivirus and Intrusion Prevention to receive automatic updates for antivirus and intrusion prevention signatures to deliver real-time protection against constantly evolving network threats.

West Virginia University deployed two additional FortiGate-3600 sys-



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- Timothy Williams,  
Director of Telecommunications  
and Network Operations  
West Virginia University

Products:  
FortiGate-3600 systems  
FortiLog-800 system  
FortiGuard Antivirus service  
FortiGuard Intrusion Prevention  
service

Industry: Education

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tems for testing new versions of security policies and updates. The University also deployed Fortinet's FortiLog-800 enterprise logging and reporting appliance to provide centralized log reports across all of its FortiGate systems and its Voice-over-Internet Protocol (VoIP) system. In this capacity, the FortiLog-800 system provides the University with a comprehensive view of network usage and security information across its network security infrastructure and VoIP system.

"We were impressed with the FortiGate-3600 enterprise security appliances' ability to block both incoming and outgoing unwanted network traffic -and the FortiLog system's ability to provide log information across our network security platform - all without any noticeable delays in traffic flow," said Timothy Williams, director for telecommunications and network operations for West Virginia University. "The FortiGate and FortiLog systems were easy to configure, deployed seamlessly into our existing network and perform as promised and to our expectations. The fact that the FortiGate and FortiLog systems are scalable is an added bonus as our Internet bandwidth continues to grow."

*"Before installing the FortiGate-3600 systems, we were blocking access to campus for up to 48 computer systems a day, requiring a lot of time from our campus IT personnel..."*

Timothy Williams,  
Director of Telecommunications

### Success

Since deploying the enterprise network security platform from Fortinet, West Virginia University has saved time and resources through the ability to proactively block unwanted network traffic at the gateway and obtain centralized security log reports - instead of having to reactively locate and clean the individual computers and servers that were constantly under attack. For West Virginia University's network, network attacks vary in degree and size, amid the university's growing campus bandwidth needs, and the FortiGate and FortiLog systems scaled seamlessly to provide appropriate network protection and support.

"Before installing the FortiGate-3600 systems, we were blocking access to campus for up to 48 computer systems a day, requiring a lot of time from our campus IT personnel to locate and clean the individual desktop units. Additionally, we were wasting significant time and money in support costs to not only repair infected units but also in lost productivity from the units being offline," said Williams. "Since deploying the FortiGate-3600 systems, we have reduced the number of systems we are blocking to approximately 5 to 10 systems a week, saving the university significant time and money in support costs and allowing us to better focus our efforts on academic pursuits."

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