NETWORK SECURITY

Berry College Case Study

The Organization

Berry College
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The Challenge

Optimizing and managing use of existing bandwidth

The SonicWALL Solution

SonicWALL E-Class Network Security Appliance (NSA) E6500 Next-Generation Firewall

The Results

- Greater insight into application traffic
- Granular bandwidth control
- Savings through consolidation

Founded in 1902 near Rome, Georgia, Berry College is an independent, coeducational college that provides approximately 1,850 students with undergraduate degree programs in the sciences, humanities, arts and social sciences, as well as undergraduate and master's level opportunities in business and teacher education. The college employs approximately 600 faculty and staff members.

The challenge: optimizing and managing use of existing bandwidth

Over the past three years, the college went from one ISP and 40 MB connectivity to two ISPs and 200 MB connectivity. Simultaneously, the college experienced an upsurge in streaming video, game consoles, DVD players, smartphones and tablets. The corresponding bandwidth consumption is especially problematic during classes and peak study hours. As bandwidth and usage grew exponentially, the college began to consider a consolidated enterprise-class solution.

"There's a point at which simply adding more bandwidth isn't the answer. You need to implement smart tools to intelligently manage what you have," said Dan Boyd, senior network architect at Berry College.

Previously, the college had to check and maintain a separate IPS, traffic shaper and firewall, which increased administrative costs, and required additional monitoring. Berry College wanted to optimize existing bandwidth, simplify troubleshooting, boost performance, and gain the firewall capability to connect multiple ISPs to the WAN.

"We need to control applications, not just for legal reasons, but for prioritizing bandwidth," said Boyd. "Streaming content like Netflix and Hulu steals a lot of bandwidth from other applications, especially during class time when students are trying to get legitimate work done."

Boyd decided against selecting a WatchGuard® XTM 1050, noting, "WatchGuard had a hard time dealing with our mix of traffic."

Instead, Boyd selected a SonicWALL® E-Class Network Security Appliance (NSA) E6500 Next-Generation Firewall from reseller Carolina Advanced Digital, Inc.

In addition, the NSA E6500 offered multiple ports and High Availability (HA) configuration for greater connectivity and reliability. Boyd could also offload features onto the secondary device to keep CPU cycles down on the primary device. Boyd had experience deploying SonicWALL products for over 10 years.

"SonicWALL has consistently offered a better value for the money than similar solutions we've looked at," reported Boyd.

The solution: SonicWALL E-Class NSA E6500 Next-Generation Firewall

SonicWALL E-Class Network Security Appliance (NSA) E6500 Next-Generation Firewalls scale to the needs of expanding enterprises, featuring Application Intelligence and Control with real-time Visualization. Combining SonicWALL Reassembly-Free Deep Packet Inspection™ (RFDPI) with a multi-core platform, it is configurable to analyze and control thousands of unique applications, whether unencrypted or encrypted with SSL.

"SonicWALL lets me see all the way down to whether someone is watching a show on Hulu or a viral YouTube video, or transferring a lot of files over IM. That's a huge improvement over the visibility we used to have."

– Dan Boyd
Senior Network Architect
Berry College

SonicWALL Benefits

- Granular application intelligence, control, and visualization
- Gateway anti-virus, anti-spyware, intrusion prevention, anti-spam and content filtering
- Deep Packet Inspection of encrypted SSL traffic

The result: greater bandwidth control and application visualization

Migration to the new NSA E6500 appliances went smoothly, with only five minutes of downtime.

The consolidated SonicWALL solution has saved the college several thousand dollars a year in licensing by eliminating two additional IPS appliances, two additional traffic shapers, and four Cisco® routers. It has also considerably eased administration.

While Boyd uses SonicWALL ViewPoint reporting for historical trends, visualization enables him to identify and troubleshoot application issues in real time, even with full security measures in place.

"We have no direct control over student computers, but with SonicWALL's real-time visibility, we can see exactly what is going through port 80 regardless of whether it is web surfing, file transfers traffic or streaming video," said Boyd. "It spreads the troubleshooting load and lets everyone see what's going on from the central console and deal with it."

Boyd has prioritized bandwidth for core services including the college web site, student information system, student web interface, web-based student publications, and e-mail services. In addition, about 18 months ago, the college shifted from primarily being a consumer of inbound content to also being a provider of outbound media content (including web-based streaming video), which relies on prioritization.

"It's not a dramatic amount but we have to guarantee it goes out," said Boyd.

Boyd's team uses the SonicWALL Application Flow Monitor to visualize the network traffic on a daily basis to see not only who is using up bandwidth, but also how they are using it. If there is a network problem, Boyd can see precisely what is going on.

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The future: granular application control and high availability

Boyd plans to configure the two NSA E6500 devices in an HA pair to ensure ongoing reliability.

"Unless we triple our bandwidth in the next couple years, I don't see us growing out of them," reflected Boyd. "But the next time we evaluate new networking solutions, we'll look at SonicWALL first."

Boyd also sees great potential for policy-based and time-based control over social media traffic, not only in the classroom, but also for staff members who manage the college's Facebook and Twitter accounts. Going forward, Boyd will be incorporating Single Sign-On (SSO) functionality and establishing policy enforcement based on users and groups.

"We look forward to being able to identify and control policy based on detailed traffic information. This will let us determine, for example, whether a bandwidth spike is originating from a faculty member or a student working for a faculty member," concluded Boyd.

SonicWALL's line-up of dynamic security solutions

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