Security

Helping schools secure their networks

Challenges and opportunities

Educators are increasingly relying on technology to help transform the learning experience from traditional, one-size-fits-all instruction to flexible, on-demand approaches that are designed to support individual learning styles beyond the classroom walls.

At the same time, education IT budgets are tighter. Districts' technology infrastructures are caught in the middle, requiring K–12 IT administrators to literally do more with less.

Providing access to digital content and network resources gives teachers an array of actionable data and tools to design personalized experiences that support individual learning styles. It gives students the information and resources needed to collaborate, self-direct and produce authentic work, helping them develop needed skills to successfully transition into the college and / or career of their choice.

This reliance on the internet brings new challenges. As the user population grows to include on- and off-campus students, faculty, administrators, contractors and parents, so do the threats to the network's security. This situation is further compounded by the ever-changing threat landscape. What K–12 IT administrators need is a network and information security solution that is effective, high performing, flexible and easy to manage. These are the types of solutions that only Dell™ SonicWALL™ delivers.

Leveraging your connections

The use of networks to deliver instructional content cuts materials costs and improves the uniform availability of top-tier curricula. But many of these programs — such as those using video content — require unimpeded high-speed connections. When those connections are slowed by extraneous use, some of that value is lost. Increasing bandwidth just shifts the costs and sets the stage for more problems down the road.

Online administrative tools simplify implementation of district-wide programs and policies. They enable anytime, anywhere access to resources and communications for faculty, administrators and students. But the proliferation of mobile endpoints and the management of access levels can quickly present a challenge. Since so much of this functionality is browser- and internet-based, the traffic can seem like one giant stream. But blocking ports to address threats can seriously impact productive use of the systems.

Wireless access has become a lifeline to faculty members and their students. But wireless connections — intended to allow quick and easy access to the network — are vulnerable to intrusion and, because access points are physically distributed, management can be difficult.

The letters of the law

Overlaid on the security concerns of K–12 IT administrators is an extensive regime of regulations. Central to this is the Children's Internet Protection Act (CIPA), designed to protect minors from inappropriate content. Many states further regulate internet access and the types of content available for students. The private sector weighs in with liability issues regarding the transfer of copyrighted content.

Districts must take all reasonable steps to satisfy these regulations. More important, they must be able to demonstrate their compliance, which requires management tools that allow for deep visibility into network activity and detailed record-keeping.

Budgetary restraints

For all the importance associated with K–12 IT security, districts do not have the financial resources to make it their first priority. This is not just a matter of buying new equipment or services. Any new equipment requires deployment and ongoing management.

Solutions for K–12 education

Smarter security appliances protect networks and budgets

Dell SonicWALL next-generation firewalls (NGFWs) with patented[1] Reassembly-Free Deep Packet Inspection® deliver superior malware protection, intrusion prevention and application control. Dell SonicWALL NGFWs scan every byte of every packet for the deepest level of protection. These award-winning security appliances combine content filtering, anti-malware, anti-spyware, intrusion prevention, anti-spam, application control and real-time visualization.

Dell SonicWALL firewalls scan all flows across all protocols and ports without file-size limitations, meaning all inbound and outbound traffic is scanned every time. This level of security is essential for protection against modern attacks that can hide threats in the application layer. Dell SonicWALL NGFWs achieve this with industry-leading throughput for uncompromised network performance. The Dell SonicWALL performance advantage ensures that schools get full value from their new, faster broadband connections, which would be lost to a legacy firewall even just a few years old.

More refined content filtering for easier compliance

Content filtering can be integrated into every Dell SonicWALL Unified Threat Management and NGFWs, eliminate the need to buy and manage stand-alone products. Unlike less-sophisticated content filtering solutions, Dell SonicWALL Content Filtering Service and Dell SonicWALL Content Filtering Client apply deep packet application-layer filtering to distinguish good traffic from bad using a variety of industry-leading methods. In addition, Dell SonicWALL content filtering solutions integrate "proxy avoidance" countermeasures to prevent students from circumventing associated controls and engaging in potentially unlawful web-based activities. Dell SonicWALL enables utilization of YouTube for Schools, offering students structured access to YouTube's educational content while blocking recreational access and content. As a contributor to the federal government's National Institute of Standards and Technology (NIST), Dell SonicWALL is uniquely qualified to meet the requirements of CIPA and other relevant regulations.

[1] *U.S. Patents 7,310,815; 7,600,257; 7,738,380; 7,835,361; 7,991,723*

"Dell SonicWALL has saved us up to 50 percent in costs. Our savings have been twofold, both in consolidating appliance costs and in reducing overhead of network administration."

C. J. Daab
Technology Support Coordinator
Hall County Schools

Easy-to-manage mobile access extends resource availability.

Dell SonicWALL secure mobile access solutions speed and simplify connections between campuses, district offices and home-based users. Dell SonicWALL Clean VPN enables secure home study and 24/7 faculty and administrator access to school resources by encrypting all session traffic and stopping malware from entering the network. Dell SonicWALL Smart Tunneling™ technology enables the segmentation of networks, prioritization of traffic and layering of security managed by centrally administered policies. The ease of configuration reduces the time and expense of implementations, while the browser-based management simplifies administration.

Dell SonicWALL secure mobile access solutions provide secure access from every possible endpoint, regardless of OS, including mobile devices such as smartphones and tablets. SonicWALL Mobile Connect™, a single unified client app, provides users of devices running iOS, Android™ and Windows 8.1 with full network-level access to resources over encrypted SSL VPN connections.

Wireless Network Security protects your high-speed wireless network

Dell SonicPoint AC Series wireless access points allow you to deploy seamless 802.11a/b/g/n/ac wireless networks, protected by Dell SonicWALL next-generation firewall technology including intrusion prevention, anti-malware, SSL decryption and inspection, application control and content filtering. Dell SonicPoints are automatically detected, provisioned and updated by the firewall for ease of deployment and management.

Dell SonicWALL Wireless Network Security defeats wireless intrusions and decontaminates traffic of threats, enabling students and staff to safely access school resources. Dell SonicWALL Virtual Access Points (VAPs) create secure segmentation between trusted and un-trusted wireless users, so student traffic never seeps into administrative sessions.

Central management simplifies administration

Dell SonicWALL Global Management System (GMS) provides a centralized policy-enforcement console enabling administrators to quickly, precisely and thoroughly create security policies, even accounting for contextual variables such as user and device identity, type of content involved, and time of day, week or month. Dell SonicWALL Application Intelligence, Control and Visualization gives IT administrators granular control over network activity from a single point. This setup is essential for targeted policy enforcement and network resource management that will not impact productive activities and flows. Automatic updates of signatures for threats and applications are pushed to Dell SonicWALL appliances to relieve school IT staff of that routine maintenance function.

Dell SonicWALL Analyzer reporting delivers real-time analysis of network utilization to immediately identify and isolate performance issues. This level of detail is crucial during operational and budget reviews. The browser-based dashboard simplifies help desk tasks and mitigates the impact they have on IT administrators' other responsibilities. Advanced reporting capabilities available in Dell SonicWALL Analyzer

and Scrutinizer enable forensic analysis of web-use data to simplify regulatory audits for compliance purposes.

Integrated, cost-effective network security solutions

The Dell SonicWALL family of NGFWs combines robust security services with high-speed deep packet inspection to provide small, mid-size and large academic environments with the best protection possible. Dell SonicWALL appliances reduce cost, risk and complexity by integrating automated and dynamic security capabilities for comprehensive protection and maximum performance while enabling ease of deployment and management.

Dell SonicWALL SuperMassive Series

The flagship of the Dell SonicWALL NGFW platform, the Dell SonicWALL SuperMassive™ Series is designed for large networks to deliver scalability, reliability, deep security and application control at multigigabit speeds.

Dell SonicWALL NSA Series

With advanced routing, stateful high availability and high-speed VPN technology, the NSA Series provides security, reliability, functionality and productivity for geographically distributed campuses, central offices and large distributed environments, while minimizing cost and complexity.

Dell SonicWALL TZ Series

Dell SonicWALL TZ Series firewalls integrate gateway anti-virus, anti-spyware, intrusion prevention, content filtering, anti-spam and application control, offering high performance, multilayered network protection at a tremendous value for small organizations and branch offices.

Dell SonicWALL Wireless Network Security

Dell SonicWALL Wireless Network Security solutions combine high-performance IEEE 802.11ac wireless technology with industry-leading NGFWs. As a result, they deliver enterprise-class wireless performance and security while dramatically simplifying network setup and management.

Dell SonicWALL Content Filtering Service

Dell SonicWALL CFS is ideal for school districts seeking a cost-effective, integrated filtering solution. This subscription- based service runs on all Dell SonicWALL firewalls and provides schools with the tools to control the websites students can access using their IT-issued device behind the firewall.

Dell SonicWALL Content Filtering Client

The Dell SonicWALL Content Filtering Client extends internet use policies to block harmful web content on IT-issued devices that are used outside a school's firewall perimeter.

Scalable integrated solutions for comprehensive protection

Dell SonicWALL complements its network security appliance line with a fully scalable range of secure mobile access and email security solutions.

Dell SonicWALL secure mobile access solutions

A variety of customizable features in Dell SonicWALL's SSL VPN technology platforms ensure that both appliance series deliver the consistent, reliable access experience remote users want, as well as the control and ease of use administrators require. The robust platform offers secure mobile access to mission-critical applications and resources, an in-office remote access experience for end users, and unsurpassed levels of granular access control.

Dell SonicWALL Email Security

Dell SonicWALL Email Security solutions deliver powerful protection against inbound spam, phishing, viruses, denial-of-service, directory harvest and zombie attacks, while preventing outbound leaks of confidential information and violations of laws or regulations. Easy to use and manage, the self-running and self-updating email security solution is ideal for any size academic environment.

Dell Security for your school districts, colleges and universities

From kindergarten through graduate school, information technology has profoundly changed how we teach and how we learn. Students, faculty and administration have a world of information at their fingertips. The explosion in mobile devices, the growth of BYOD and the growing use of cloud computing have expanded learning far beyond the classroom, and have made lifelong learning far more practical and accessible than ever.

For more information on Dell SonicWALL solutions for education, please visit our website at **www.sonicwall.com.**

For More Information

About Dell Security

Dell Security solutions help you create and maintain a strong security foundation with interconnected solutions that span the enterprise. From endpoints and users to networks, data and identity, Dell Security solutions mitigate risk and reduce complexity so you can drive your business forward.
www.dell.com/security

If you have any questions regarding your potential use of this material, contact:

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