

### **Vance County Schools Chooses Top Layer's IPS 5500 for Three Dimensional Network Protection**

#### **Solution Overview**

##### *Profile:*

Vance County Schools (VCS) is a rural North Carolina public school system headquartered in Henderson, North Carolina, serving 7,956 K-12 students in a county with a population of approximately 42,000. The system includes 15 schools, one administrative facility and a maintenance and transportation facility. As part of a network assessment conducted for the superintendent, Enterprise Network Services, Inc. (ENS), a provider of enterprise networking and security solutions, recognized that the VCS IT staff was supporting 15 schools with nearly 3,500 computers with a technical staff of four technicians – a ratio of 875 computers-to-one technician.

##### *Challenge:*

As a result of the network assessment it was clear that the VCS staff was technically very competent, but they needed a more efficient way to manage their systems and network. The identification and deployment of centralized tools to reduce technician travel and increase mean time-to-problem-resolution was a key ingredient to meeting growing user demands. In conjunction with meeting these challenges, there were concerns pertaining to bandwidth utilization and security, as educational systems utilize the Internet for both research and instruction. Another requirement was to improve the network security without burdening its resource-constrained IT staff.

##### *Solution:*

In concert with the centralization thread, ENS presented a network and security management approach using Top Layer's IPS 5500, offering market-tested network protection, performance and reliability. By combining stateful firewall, content-based intrusion prevention/intrusion detection and attack mitigation algorithms, the IPS 5500 offered VCS three dimensional protection against undesired access, malicious content and rate-based attacks. The Top Layer architecture would enable the VCS IT staff to monitor the network from anywhere, providing that much-needed efficiency component.



##### *Benefits:*

Top Layer's IPS 5500 was viewed as a critical component for the VCS network infrastructure, and also as another centralized tool that would aid the IT staff in the efficient support of the network. Ultimately, VCS deployed an IPS 5500 on the external network as well as an IPS 5500 on its internal network for a myriad of reasons, including: the high-performance protection that the devices provide; the ability to eliminate unauthorized access to the VCS network; remote-management of the device; insightful analysis and reporting of network activity and security threats; as well as helping VCS ensure data protection of the VCS accounting system and student records.

#### **Full Case Study**

Vance County Schools (VCS) is a rural North Carolina public school system headquartered in Henderson, North Carolina, serving 7,956 K-12 students in a county with a population of approximately 42,000. The system includes 15 schools, one administrative facility and a maintenance and transportation facility. As part of a network assessment conducted for the superintendent, Enterprise Network Services, Inc. (ENS), a provider of enterprise networking and security solutions, recognized that the VCS IT staff was supporting 15 schools with nearly 3,500 computers with a technical staff of four technicians – a ratio of 875 computers-to-one technician.



As a result of the network assessment it was clear that the VCS staff was technically competent, but they needed a more efficient way to manage its systems and network. The identification and deployment of centralized tools to reduce technician travel and increase mean time-to-problem-resolution was a key ingredient to meeting growing user demands. In conjunction with meeting these challenges, there were concerns pertaining to bandwidth utilization and security, as educational systems utilize the Internet for both research and instruction. Another requirement was to improve the network security without burdening its resource-constrained IT staff.

ENS and Top Layer had begun its partnership in 2005, and ENS shortly thereafter approached Vance County Schools Superintendent Dr. Norman Shearin, Jr. with the idea of deploying Top Layer's IPS 5500 to provide the desired network protection. In concert with the centralization thread, ENS presented a network and security management approach using Top Layer's IPS 5500, offering market-tested network protection, performance and reliability.

Top Layer's IPS 5500 was viewed as a critical component for the VCS network infrastructure, and also as another centralized tool that would aid the IT staff in the efficient support of the network. School systems like VCS create a unique networking environment that must remain open and easily accessible in nature, but at the same time require a great deal of security to ensure proper use of network bandwidth and responsible use of network resources.

**“Vance County Schools faces the same ‘balance and stewardship’ challenges as most educational systems – how to provide an open, accessible high performance network resource for students, and faculty and staff; while at the same time restricting network use to responsible users performing legitimate tasks. We felt the IPS provided this important balance.”**

**— Ike Bunn**

**President, Enterprise Network Services, Inc. (Top Layer business partner)**

“Vance County Schools faces the same ‘balance and stewardship’ challenges as most educational systems – how to provide an open, accessible high performance network resource for students, and faculty and staff; while at the same time restricting network use to responsible users performing legitimate tasks. We felt the IPS provided this important balance to eliminate questionable network behavior from the outside and underwrite the success of responsible network,” said Ike Bunn, president of Enterprise Network Services, Inc., a Top Layer business partner.

Ultimately, VCS deployed an IPS 5500 on the external network as well as an IPS 5500 on its internal network for a myriad of reasons, including: the high-performance protection that the devices provide; the ability to eliminate unauthorized access to the VCS network; remote-management of the device; insightful analysis and reporting of network activity and security threats; as well as helping VCS ensure data protection of the VCS accounting system and student records.

By combining stateful firewall, content-based intrusion prevention/intrusion detection and attack mitigation algorithms, the IPS 5500 offered VCS three dimensional protection against undesired access, malicious content and rate-based attacks. The Top Layer architecture would enable the VCS IT staff to monitor the network from anywhere, providing that much-needed efficiency component.

“With nearly 3,500 computers spread out across fifteen schools, we wanted to provide our IT team with centralized management of the school networks and systems, so they could effectively provide the security necessary to protect us against the threats that here to fore we could not see and were unaware of,” said Dr. Norman Shearin, Jr., superintendent, Vance County Schools. “Since installing the IPS our user complaints about network speed have dropped dramatically”.

Top Layer’s IPS 5500 provides VCS with the inline intrusion prevention that combines unmatched security and performance with the centralized management; analysis and reporting capabilities that enable VCS’s IT staff to more efficiently manage their network. “We’ve been impressed — the IPS 5500 helps us identify and prevent cyber threats across the public school system and eliminate unauthorized network access, freeing up bandwidth and ensuring our system is both well-protected and available at peak-performance,” added Shearin.

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Superintendent, Vance County Schools*

Reclaiming bandwidth used by unauthorized users on the network was a key reason for VCS to implement Top Layer’s IPS 5500. By preventing unauthorized users from sapping network resources, VCS can be sure that the network is used for its stated intents and purposes of enabling a better educational environment. In addition, with certain state and federal data protection requirements, VCS can be confident that having an IPS 5500 inline will protect its systems from cyber attacks and help ensure the privacy and protection of both VCS’s accounting systems and student records.

### **About Top Layer**

Top Layer is dedicated to its role as leading global provider of Network Intrusion Prevention Systems (IPS), developing and bringing to market network security infrastructure solutions that help commercial and government organizations protect their critical on-line assets from the losses and risks associated with cyber threats. Its family of IPS appliances is designed with “Three Dimensional Protection” that provides the most advanced protection capabilities against known and unknown attacks at the highest performance rates. Top Layer Networks is headquartered in Massachusetts USA with sales and support presence in Canada, Germany, Japan, Korea, The Netherlands and the United Kingdom.

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*perfecting the art of network security*

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