



PROOF POINTS

APPLICATION TRAFFIC FLOW ANALYTICS

Mannheim School District 83 Case Study



The Organization

Mannheim School District 83
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Franklin Park, IL 60131
www.d83.org

The Challenge

- Bandwidth saturation
- Usage spikes
- CIPA compliance

The SonicWALL Solution

- Scrutinizer
- NSA E6500
- Application Intelligence, Control and Visualization
- Intrusion prevention and content filtering

The Results

- Deep application visibility and control
- Better bandwidth management
- Faster, easier troubleshooting
- Deferred bandwidth upgrade expenses

The SonicWALL Benefits

- Supports a wide range of routers, switches, firewalls, and data-flow reporting protocols
- Unparalleled traffic and application analysis of IPFIX/NetFlow data from SonicWALL firewalls
- Deep packet analysis, jitter/latency monitoring, automated reports and customizable dashboards
- Advanced analysis, historical and advanced reporting, role-based administration, threshold-based alerts

Mannheim School District 83 supports 2,800 students in pre-kindergarten through eighth grade in Franklin Park, Melrose Park and Northlake, Illinois. The district uses SonicWALL Scrutinizer to visualize and analyze application traffic flowing over its SonicWALL E-Class Network Security Appliance (NSA) E6500 Next-Generation Firewall.

The challenge: network bandwidth saturation and lack of visibility

The district has seen an exponential increase in Internet bandwidth on its network.

"Ten years ago, we started with a T1, then we went to 8 Mbps and then two 10 Mbps connections," said Jay Duff, network administrator, Mannheim School District. "The network became saturated every minute our school was open."

Mannheim's traffic volume was impacted by the influx and heavy usage of web-based curricula applications.

"Online learning sites such as Quaver, ALEKS and United Streaming just crushed our bandwidth," said Duff.

The district required an application traffic flow analytics solution in order to identify, control, and manage certain types of traffic on the network. At the same time, Mannheim required a comprehensive content filtering solution to maintain compliance with the Children's Internet Protection Act (CIPA). After considering solutions from Websense® and F5®, the district implemented a SonicWALL NSA E6500 appliance running SonicWALL Content Filtering Service, in conjunction with Scrutinizer.

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

The Scrutinizer application traffic flow analytics visualization and reporting tool enables the district to measure and troubleshoot network performance and utilization while increasing productivity. Scrutinizer supports a wide range of routers, switches, firewalls and data-flow reporting protocols. It gives the district unparalleled insight into application traffic analysis from IPFIX/NetFlow data exported by SonicWALL firewalls. The solution easily identifies top applications, conversations, flows, protocols, domains, countries, subnets and alerts on suspicious behavior. Scrutinizer features deep packet application traffic analysis, proactive jitter/latency monitoring, automated reporting and customizable dashboards. Historical and advanced reporting, role-based administration, advanced analysis, as well as threshold-based alerts is also available in the retail version of Scrutinizer.

The district runs content filtering for CIPA compliance over the NSA E6500. Deployable as either a next-generation firewall or UTM firewall, the NSA E6500 scales to the expanding needs of the district, featuring Application Intelligence, Control and Visualization. Combining SonicWALL Reassembly-Free Deep Packet Inspection® (RFDPI) with a multi-core platform, the NSA E6500 is configurable to analyze and control thousands of unique applications, whether unencrypted or encrypted with SSL.

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The results: administration and operational cost and time savings

"I couldn't do my job without the E6500 or Scrutinizer," said Duff. "The E6500 tells me when bandwidth is congested. Scrutinizer tells me who is congesting it and with what applications, so I can determine if I need to have the principal tell the user to stop."

The solution eases administrative overhead.

"Scrutinizer is a huge time-saver," said Duff. "Of the application traffic flow analytics tools on the market, I think that Scrutinizer is the easiest one to use. The only other way to do it would be for me to put some sort of a packet sniffer in place and analyze the packets myself."

Duff was able to produce results immediately.

"We had some really big spikes in Internet usage. The whole network would just drop to its knees and cry," said Duff. "It turns out we had thirty lab computers each downloading hundreds of megabytes of updates from Google Earth every time they booted up, because of a complication caused by security software. Thanks to Scrutinizer, we were able to track down what was going on, address and resolve this issue immediately."

By helping defer the purchase of additional bandwidth by a year, the solution also helped the district save money.

"Scrutinizer really drove the timing and size of growing our Internet bandwidth," said Duff. "We had implemented a policy prohibiting the streaming of high definition video. Scrutinizer let us identify who violated the policy so the principal could correct the behavior."

With exponential growth in Internet bandwidth demand, the district has expanded to 250 Mbps connectivity and plans on 1 Gbps connectivity in five years.

"We will be looking at the SonicWALL SuperMassive Series to accommodate our growth and need for scalability," said Duff. "It has the raw horsepower, plus the same features and interface as the E6500, so the learning curve will be minimal and intuitive. Plus, the Secure Upgrade program lets us recoup investment in the E6500 when we are ready to move up to the SonicWALL SuperMassive series."

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Jay Duff
Network Administrator
Mannheim School District 83

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