

in a nutshell...

Industry

Education

Network Environment

Northwest Tri-County Intermediate Unit (IU5) has a multi-server data center that handles a wide array of systems including IP phones, video conferencing, as well as myriad of web, application, database, and virtual servers. Complicating the environment are numerous wireless networks – some of which are secured for internal use, while others are open to the general public.

The Challenge

As IT helpdesk for 19 school districts and career centers within Pennsylvania, IU5 supports thousands of students, teachers, and administrators, across roughly 180 building in its service area. While district employees typically handle day-to-day IT activities and problems, the technology experts at IU5 are called in to resolve serious network issues quickly and needed campus-wide network management and optimization that provided deep visibility across all their infrastructures. They couldn't afford to fly blind and needed advanced monitoring, analysis, network forensics, and pinpoint problem resolution to maintain network health.

The Solution

IU5 implemented EtherPeek in 2002 and now has WildPackets OmniPeek Enterprise for campus-wide network management and optimization. With OmniPeek Enterprise, network engineers no longer guess at problems, resulting in less downtime and happy users. They can monitor the entire network and quickly analyze faults from multiple network segments, drill down through multiple layers of analysis, and pinpoint problems that need correction.

OmniPeek Goes Back to School with the Northwest Tri-County Intermediate Unit

The Opportunity

The mission of the Northwest Tri-County Intermediate Unit (IU5) is to support school districts by creating and implementing quality services to meet students' needs. That includes providing high-quality IT network support for its 19 school districts and career centers within Pennsylvania. From superintendent and administration offices to individual school computer labs, roughly 180 buildings fall within the IU5 service area. While district employees typically handle day-to-day IT activities and problems, the technology experts at IU5 are called upon to resolve serious network issues quickly.

IU5 has a multi-server data center that handles a wide array of systems including IP phones, video conferencing, web application servers, database servers, and so on. The organization supports numerous wireless networks – some of which are secured for internal use, while others are open to the general public. Over time, IU5

has also incorporated more virtualization instances into its data centers, creating increased network complexities in its environment.

IU5 networks experience heavy traffic loads. It is not uncommon for simultaneous videoconferences to have up to 15 attendees each at one time. With traditional telephone services' reputation of providing excellent voice quality and superior reliability, users naturally take for granted that their IP phone and video conferencing systems will provide the same high quality with virtually no downtime. Video over IP applications are very sensitive to latency, packet loss, jitter, and other similar performance factors. Regardless, if there are performance issues with video conferencing, you can be certain IT support services at IU5 hear about it right away.

“ You don't have to be a networking genius to use OmniPeek Enterprise, it allows all of us to pinpoint performance issues quickly in an automated fashion, eliminating a significant amount of time required with manual network troubleshooting exercises. — Vince Humes, Director of Technology Solutions ”

About WildPackets

WildPackets, Inc., founded in 1990, develops network and application analysis solutions that enable organizations of all sizes to analyze, troubleshoot, optimize, and secure their wired and wireless networks. WildPackets has amassed more than 6,000 customers and its products are sold in over 60 countries in all industrial sectors. Customers include Safeway, Boeing, Siemens, AT&T, Motorola and over 80% of the Fortune 1000. For further information, please visit www.wildpackets.com.

WildPackets Training

WildPackets Training offers comprehensive network analysis instruction, meeting the professional requirements of network managers at all levels. All course offerings are available in public venues and as customizable on-site programs. For complete course outlines and schedules, visit www.wildpackets.com/academy

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As the IT help desk for thousands of students, teachers, and administrators, IU5 found itself frustrated when troubleshooting network problems, such as jitter in video conferences, as they did not have the tools for advanced analysis, network forensics, and pinpoint problem resolution.

“Repeatedly, we were in situations where we had networking failures and couldn’t put our finger on the root cause. All this translated into an unacceptable amount of downtime, not to mention very unhappy users,” said Vince Humes, Director of Technology Solutions at IU5. “We needed desperately to stop flying blind and get deep visibility across all our infrastructures so we could maintain network health. Guessing was no longer an option.”

IU5 turned to WildPackets for help, initially implementing EtherPeek in 2002 and later upgrading to OmniPeek Enterprise for campus-wide network management and optimization. OmniPeek Enterprise offers an intuitive graphical dashboard to promptly analyze and troubleshoot networks, providing centralized expert analysis for all networks under management. With OmniPeek Enterprise, network engineers can monitor the entire network and quickly analyze faults from multiple network segments, drill down through multiple layers of analysis, and pinpoint problems that need correction.

The Solution at Work

In an educational environment that spans 19 districts and multiple schools within each district, it can be difficult to solve each network problem quickly. Given the wide coverage area and IU5’s small IT staff, they needed a sophisticated level of visibility into the various networks in order to diagnose problems and get the network performing optimally as quickly as possible.

At one school in particular, an unknown virus literally brought the network to a halt. No one knew what was going on at first – and since the school is in a distributed environment, it could have taken hours to go through each network switch and port counter to eventually pinpoint where the problem arose. Fortunately, WildPackets’ OmniPeek Enterprise lived up to its reputation and within five minutes, identified two machines in the library that had something wrong. OmniPeek Enterprise could instantly see the broadcast traffic and helped identify exactly where it was coming from. As a result, local school IT staff turned off the problem machines and the school’s network came right back online. Within a few minutes of IU5’s arrival, the network was up and running again.

Humes applauds OmniPeek Enterprise for its comprehensive monitoring and powerful analysis capabilities that solve even the most complex network problems quickly.

“You don’t have to be a networking genius to use OmniPeek Enterprise,” said Humes. “It allows all of us to pinpoint performance issues quickly in an automated fashion, eliminating a significant amount of time required with manual network troubleshooting exercises.”