Case Study

Johns Hopkins Medical Institution Improves Network Health with Gigamon Deep Observability

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ALAN SHACKELFORD
Senior Software Systems Engineer,
Johns Hopkins Medical Institution

Challenges

- Insufficient number of network taps is a significant challenge for security and network monitoring
- Difficulty with sharing network traffic among its various IT groups

Customer Benefits

- Multiple ports for network and security groups across the organization
- Feeds can be configured and customized to view specific traffic
- Improved performance of firewall tools with tailored feeds

Solution

- GigaVUE® HC Series
- GigaVUE-FM
- GigaSMART
- GigaVUE TA Series
- Gigamon G-TAP®

About Customer

Johns Hopkins Medical Institution features hospital management, healthcare consulting and clinical education services through strategic alliances and affiliations in North America, Latin America, Europe, the Middle East, and Asia. Johns Hopkins Medicine operates six academic and community hospitals, four suburban healthcare and surgery centers, and more than 30 primary healthcare outpatient sites, and the organization has more than 2.6 million outpatient encounters.

Crucial Network Monitoring and Security Needs

Johns Hopkins Medical Institution's network supports such mission-critical applications as medical record management, patient order entry, thousands of websites, and university and hospital email. Monitoring, troubleshooting, and security are crucial elements for managing these applications. Johns Hopkins Medical Institution was struggling with dozens of network taps gathering information for these purposes across its network.

According to Alan Shackelford, Senior Software Systems Engineer for the organization, several groups needed access to the traffic captured by these taps for their own purposes and ports were prime real estate. "We were unplugging taps when another group needed the ports for monitoring," he said. "We were literally fighting over available ports. It was standing room only." In addition, each group needed different information, so feeds were being configured and reconfigured over and over again.

Because Johns Hopkins Medical Institution is a university and a medical institution, reliability is a critical necessity. "Network changes are seldom made and when they are, they're done carefully because, on the hospital side, it's a matter of life and death if a mistake is made," said Shackelford. "When we look at new purchases, primary consideration is put on uptime, reliability and the least exposure to risk."

All the right qualities for a healthcare network Johns Hopkins Medical Institution was cautious in its search for network visibility tools. However, the choice soon became clear when only one could meet all of the organization's requirements: Gigamon.

"We selected Gigamon for a great number of reasons," said Shackelford. "First, we chose its solution for the number of taps you can create; second, because of the sheer tonnage of traffic we needed it to support; and finally, it allows us to go port by port and separate out what we want to watch and configure the feeds accordingly. Gigamon keeps the signal to noise ratio manageable and we can tailor the feed to fit our needs."

Gigamon has supplied Johns Hopkins Medical Institution with GigaVUE-FM mid-density Visibility Fabric nodes for 10Gb networks. These devices filter and replicate traffic flows across the organization's security and monitoring tools, including its Intrusion Detection System (IDS). Each group is able to configure its own feed to extract the traffic needed based on what the group is watching for in the traffic stream.

In addition, the modular design of the Gigamon solution allows Johns Hopkins Medical Institution's different groups to utilize the exact number of ports necessary to fit their requirements. The base chassis houses eight 10Gb ports and four 1Gb ports and scales to a maximum of 24 10Gb ports. Furthermore, multiple GigaVUE-FM fabric nodes can be stacked together into a bigger virtual Gigamon Deep Observability Pipeline of over 200 ports, running in a leader/member or star configuration.

Security and Monitoring Benefits

The Gigamon solution physically spans two locations, and Johns Hopkins Medical Institution will eventually offer its satellite sites the same monitoring and security benefits that the sites physically connected to the network are enjoying. "One thing you have to appreciate with Gigamon is the ability to pop a tap anytime you need one," said Shackelford. "I'm camped on a port and it would have been quite a luxury in the past to have my own, but today, I'm not taking up a port someone else needs."

The GigaVUE-FM fabric node enables secure access and complete network visibility, as well as providing aggregation and filtering of incoming 10Gb traffic and ensuring that relevant traffic is sent to lower speed 1Gb monitoring interfaces. The solution allows continuous monitoring, which, according to Shackelford, just wasn't happening before. "The monitoring being done by the network security tools and firewall is much improved because of the tailored feed and makes sense out of something that was once hodgepodge."

Gigamon gives Johns Hopkins Medical Institution the ability to put the solution where it needs it—inline or out-of-band.

"Our Gigamon solution is off to the side, it's not part of the circuit, so the traffic into the proxy servers can be looked at through the GigaVUE-FM nodes," said Shackelford. This flexibility allows the organization to move the Gigamon solution around as needs change.

Service and Support

"Regarding service and support, I can't really comment about Gigamon because I don't think we've ever needed to call them," said Shackelford. "The Gigamon solution's been up nonstop for two and a half years. If there'd ever been an issue, I'd have heard about it. As far as BAI Federal, our integrator, we've always had great service from them, never had to wait. It's not unusual for us to look up and there they are just hours after a call from us. We have no complaints at all there."

When asked about his overall thoughts on the solution, Shackelford said, "I think the most important thing about Gigamon is its configurability and the customization you can do to the feed. You don't have to take a white noise feed; you can pare it down and the app you're feeding it into can take extra time to do a proper job, so it gives you another layer of configuring until you get to your final destination. That and the sheer number of ports you get and the traffic it can support is just not available anywhere else. The Gigamon solution was money well spent."

About Gigamon

Gigamon® offers a deep observability pipeline that efficiently delivers network-derived intelligence to cloud, security, and observability tools. This helps eliminate security blind spots and reduce tool costs, enabling you to better secure and manage your hybrid cloud infrastructure. Gigamon has served more than 4,000 customers worldwide, including over 80 percent of Fortune 100 enterprises, 9 of the 10 largest mobile network providers, and hundreds of governments and educational organizations. To learn more, please visit gigamon.com.

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