

Healthcare Organization Enables Visibility at Scale

The NETSCOUT 100G packet flow solution ensures smooth rollout of critical EHR application

OVERVIEW

Industry

Healthcare – treatment and research

Business Challenge

Ensure continuous network performance as part of the multi-million dollar rollout of new electronic health record (EHR) management system

NETSCOUT Solution

- NETSCOUT nGenius® packet flow switch (PFS) 6010 with 100G and 10G line cards

Business Value

- Enabled a strategic approach to application performance management during a critical EHR rollout
 - Provided deep packet visibility to a new service assurance platform
 - Achieved a solid foundation for long-term development of a unified packet plane – for future expansion of service assurance and security monitoring
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Challenges

Any treatment and research facility depends on accuracy, availability and security of its healthcare records. To maintain its high standards in patient care, the organization recently embarked on a multi-million-dollar rollout of a new electronic health record (EHR) management system. When life depends on the network (literally), guaranteeing its high availability and performance is critical. The center's IT team was tasked with ensuring a flawless introduction of the new system.

Strategic approach to network architecture with packet visibility

The team designed a comprehensive network readiness program, in their mission to successfully manage such a critical project. As part of the EHR rollout, they upgraded the service assurance platform, which would monitor and triage network performance issues, helping the team to mitigate any potential impact on the EHR application. This required achieving deep packet visibility, so everything would be visible on the network. From the initial planning phases,

"NETSCOUT was a natural choice for us, due to its reputation for customer commitment and high-performance products. Our network had to perform flawlessly – any hiccups in the center-wide EHR rollout were not really an option. With nGenius PFS 6010 providing critical packet visibility, we ensured the success of the current project and will continue to leverage the platform well into the future."

- IT Director

the IT team took a strategic approach and specified a high-performance visibility layer as part of the project plan.

The IT leadership needed to be confident that any visibility solution would deliver true copies of the traffic to the monitoring tools, to guarantee a seamless rollout of the new EHR application. The organization turned to NETSCOUT to help increase visibility for its expanding monitoring infrastructure.

The packet visibility solution

Having evaluated various approaches, the IT team chose to deploy NETSCOUT nGenius packet flow switches to aggregate and deliver the traffic to the service assurance system. The team chose NETSCOUT's flagship product, the nGenius Packet Flow Switch (PFS) 6010 series model. Two units each are deployed, 1 in each of the two data centers, both providing 100G and 10G interfaces, with 100G on the network side and 10G on the monitoring tool side.

The internal high-speed network aggregates the traffic into 100G links in the data center, thus 100G interfaces were needed on the visibility appliance. Another key requirement presented to NETSCOUT was the ability to perform traffic aggregation and speed conversion at line rate, without any lost packets. Surprisingly, many visibility appliances lack this seemingly basic functionality, the cornerstone of any packet visibility project, since they are not able to mitigate microbursts.

Microbursts (the uneven, "bursty" arrival of packets to the visibility appliance) create the conditions under which typical appliances would drop packets, resulting in critical packet flows missing when it reaches the application performance management tools. nGenius PFS 6010 proved itself to be up to the task, maintaining critical visibility for the service assurance platform, and giving the IT team the confidence that the traffic the application monitoring tools are processing represents a true and complete picture of what is happening on the network. If critical packets are lost, then the monitoring tool

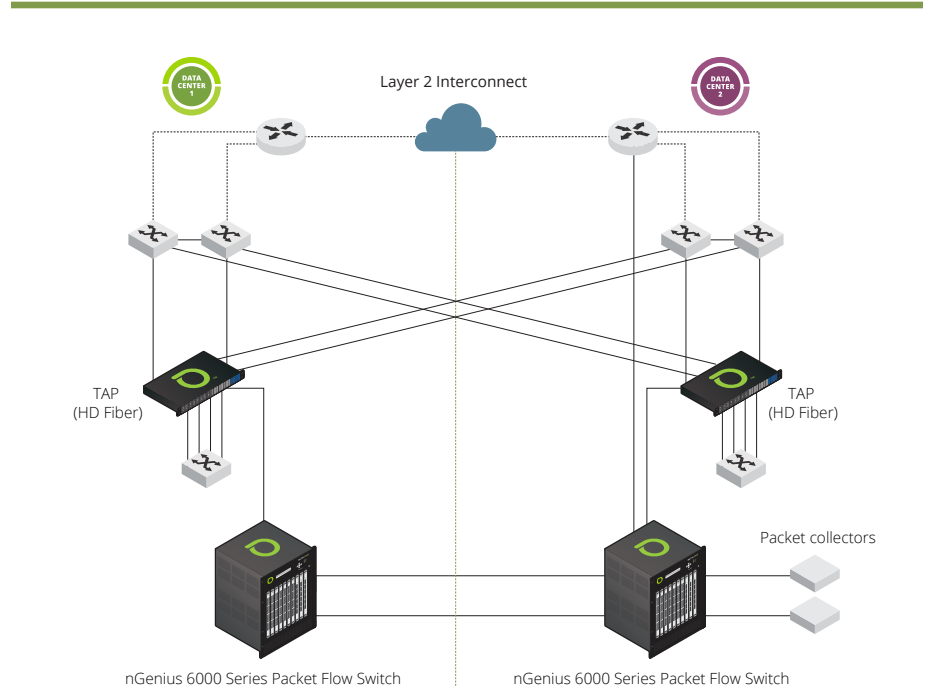


Figure 1: NETSCOUT packet flow switch deployment provided pervasive packet visibility at 100G to ensure a smooth rollout of the critical EHR application.

can't properly perform its job, which creates critical application issues. nGenius PFS 6010 mitigates microbursts with high data burst buffering. The PFS 6010, with its 6Tbps non-blocking architecture, ensures high-performance packet flow management and traffic grooming, leaving plenty of room for monitoring infrastructure expansion.

Strategic planning

The team opted for the blade-and-chassis design of nGenius PFS 6010 with a view to the future. The current setup can be easily expanded with the addition of line cards, both standard and advanced. The IT organization is planning a large-scale rollout of virtualized data center technologies, and the nGenius PFS platform will be used to monitor the traffic exiting the virtual

environment. This would require advanced packet manipulation, such as protocol header stripping, which the nGenius PFS 6010 devices are well prepared to support – at line rate and without any performance bottlenecks, due to built-in hardware acceleration available on the advanced line cards.

nGenius PFS are deployed world-wide for the most demanding service assurance and security applications, creating a strategic unified packet plan for service assurance and security. When performance and value really matter, enterprises and service providers alike select NETSCOUT. The need for service assurance visibility at scale made the choice of nGenius PFS 6010 an easy decision for this healthcare organization.



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