

Service Assurance Visibility at Scale

Take advantage of advanced packet conditioning at line rate

SERVICE ASSURANCE VISIBILITY AT A GLANCE

- Gain full visibility to support business assurance initiatives
 - Reduce operational costs and complexity
 - Easily scale the monitoring plane without hidden costs and risks
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The Solution

nGenius® packet flow switches (PFS) 4200 and PFS 6010 packet flow switches

Customer Requirements

- Aggregate traffic from multiple 1G, 10G and 40G network segments
- Reduce the load on the network and the monitoring infrastructure
- Mitigate microbursts to avoid visibility blind spots

Enable Digital Transformation

When you need pervasive coverage of the physical and virtual infrastructure, continuous monitoring and real-time analytics, choose NETSCOUT. With nGeniusONE® Service Assurance platform and nGenius® packet flow switches, you get complete network and packet visibility. Quickly identify the source of performance problems and reduce mean time to resolution. Gain real-time, actionable traffic based intelligence and 100% visibility from a single solution, elevating service assurance to business assurance.

And NETSCOUT does it at scale. Typical customer deployments for service assurance include multiple locations world-wide, with deployment of both security and performance monitoring systems and packet flow switches. Locations may be distributed regional sites and one or several centralized network operations center (NOC). Some tools are supported locally, such as passive security devices and packet capture appliances (InfiniStream® probes, an integral component of nGeniusONE), while select traffic is copied and sent to the NOC for centralized analysis by higher capacity tools, that may have interfaces up to 100G. Or, tools are often centralized to simplify management and operations.



Optimize monitoring infrastructure at scale

NETSCOUT provides line-rate performance and advanced packet processing capabilities in a compact form factor for distributed locations via its nGenius PFS 4200 appliances. For large data centers, customers often deploy nGenius PFS 6010, the industry leader in density and throughput. Alternatively, they take advantage of the self-organizing mesh architecture available with several nGenius PFS 4204 appliances to create a modular, seamless packet flow switching. This provides redundancy and automatic failover capabilities, and the visibility fabric can be easily expanded as traffic demands grow. A typical deployment scenario is presented in Figure 1, with nGenius PFS 4204 aggregating traffic from multiple locations to the data center.

nGenius PFS Advantages

Reliable, hardware-accelerated performance: nGenius packet flow switches are equipped with programmable hardware, enabling them to perform at line rate with no bottlenecks. This high-performance packet processing resource provides hardware acceleration, where the advanced functions are performed, rather than on a CPU, which limits throughput and introduces variable latency. Other products under-perform, when compared to the 4-slot nGenius PFS 4204. The advanced card on other vendor's products is limited at 60 Gbps throughput, creating a performance bottleneck.

Likewise, the other vendor's blade-and-chassis system requires advanced cards for functions such as de-duplication, stripping and slicing. More and more of the advanced line cards would be needed as the network expands, challenging the solution architecture and creating yet unpredictable demands, both on the infrastructure and the budget.

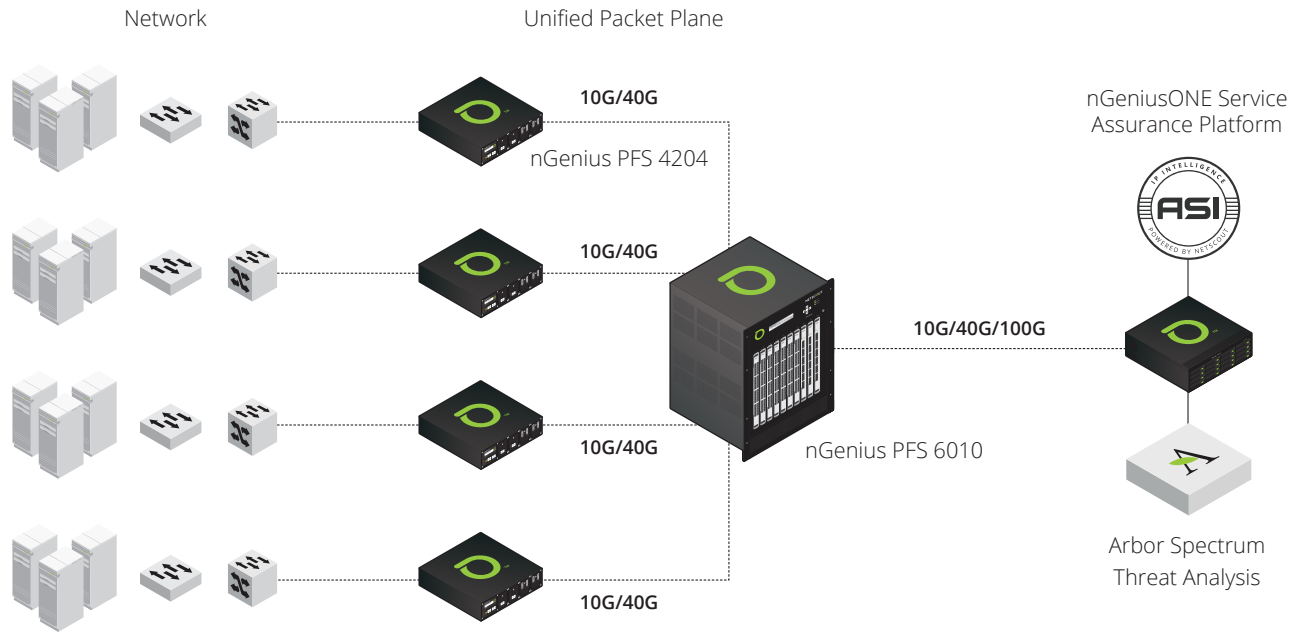


Figure 1: Visibility and business assurance at scale, delivered by nGenius PFS, nGeniusONE and Arbor Spectrum

In contrast, the nGenius PFS has no such limitations on its backplane, reliably providing 640 Gbps per chassis at line rate with the 4204 model and up to 6 Tbps in the blade-and-chassis model, the nGenius PFS 6010.

Increased monitoring efficiency with de-duplication: With advanced packet conditioning performed on-site, the traffic is groomed and the unnecessary payload discarded, prior to sending packet flows to the remote data center. This greatly reduces the bandwidth requirements on the backhaul links. Simultaneously, the on-site monitoring devices only receive the traffic they are designed to analyze, which increases their efficiency and longevity. nGenius PFS can perform de-duplication across the board—whether in the appliance or the blade-and-chassis based solution.

No dropped packets, even during microburst: Few competing solutions provide micro-burst detection or mitigation. This results in blind spots and is especially detrimental when monitoring systems

can only see one part of the conversation or miss the critical packets that makes the entire frame or session unavailable for analysis. The nGenius PFS product family delivers micro-burst mitigation at line rate and without performance limitations of competing solutions. This means that no packets are dropped, ever, and the monitoring tools always get a true copy of the traffic.

Conclusion

Packet visibility underlies any effort to deliver real-time, actionable traffic-based intelligence. nGenius PFS provides the highest line-rate performance and advanced packet conditioning capabilities, regardless of the scale of the solution. With NETSCOUT, you remove concerns about performance limitations or any worry about exceeding budget when it comes to evolving your visibility infrastructure. Reduce operational costs and complexity and enable business assurance while minimizing risks with NETSCOUT.



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