

Fail-proof Inline Security

Reduce uncertainty, complexity and risk

SECURITY VISIBILITY SOLUTION AT-A-GLANCE

- Deploy complex security scenarios with confidence
- Enable active (inline) monitoring without network risk

The Challenge

- **Security systems introduce single points of failure:** The higher the number of different security solutions and systems deployed, the higher the number of potential points of failure. Monitoring multiple active (inline) security systems, which inspect traffic in real time and have the ability to block it, is challenging. Adding, testing, or changing security systems may impact the network. The security team needs to enable active protection without increasing the risk of failure.
- **Upgrades strain overburdened teams and limited budgets:** Many organizations are upgrading network capacity to cope with skyrocketing volumes of traffic. As they move from 1G switches and routers to 10G devices, the security monitoring infrastructure can become overwhelmed. This may lead to costly security system upgrades. And if security devices cannot be replaced to accommodate higher throughput, then the team needs more devices. But how will traffic be load-balanced between them? If more devices introduce latency and complexity, the overall performance is jeopardized. In addition, every new security system rollout, software upgrade or tool maintenance risk network disruptions.
- **Complex security scenarios lead to management headaches:** Centralized security tool farms offer the potential of cost reductions and single point of management, but they create their own challenges. How do you aggregate traffic from multiple segments, process it real-time, and then send it to its destination – all while preventing single points of failure inherent in active inline security solutions?

The Solution

nGenius® packet flow switch (PFS)2200 series packet flow switches (1G and 10G)



Value

- Proven line-rate performance with no bottlenecks
- Reduction in monitoring ports required
- Comprehensive security system diagnostic with negative and positive health checks

Customer Requirements

- Aggregate traffic from multiple 1G and 10G network segments
- Ensure high availability of inline security systems
- Handle frequent software upgrades without risk of network disruptions

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NETSCOUT provides the winning formula of line-rate performance and security-optimized features that ensure a smooth rollout and continued reliable performance of security infrastructure.

- **Avoid interruptions in an event of a power loss:** nGenius PFS is designed to protect network operations in the event of a power loss to the appliance via the network bypass feature (PowerSafe). Users can decide whether the device should fail open (let the traffic through) or fail closed (block traffic). For highly sensitive environments, we recommend a redundant deployment, as shown in the diagram. Should the power fail to one of the PFS appliances, it can be set to fail closed, so that the traffic would be sent to the stand-by appliance, which will continue to support the security infrastructure as designed.
- **Identify security system malfunctions and avoid false negatives:** nGenius packet flow switches provide an application health check lacking in other products. The nGenius approach

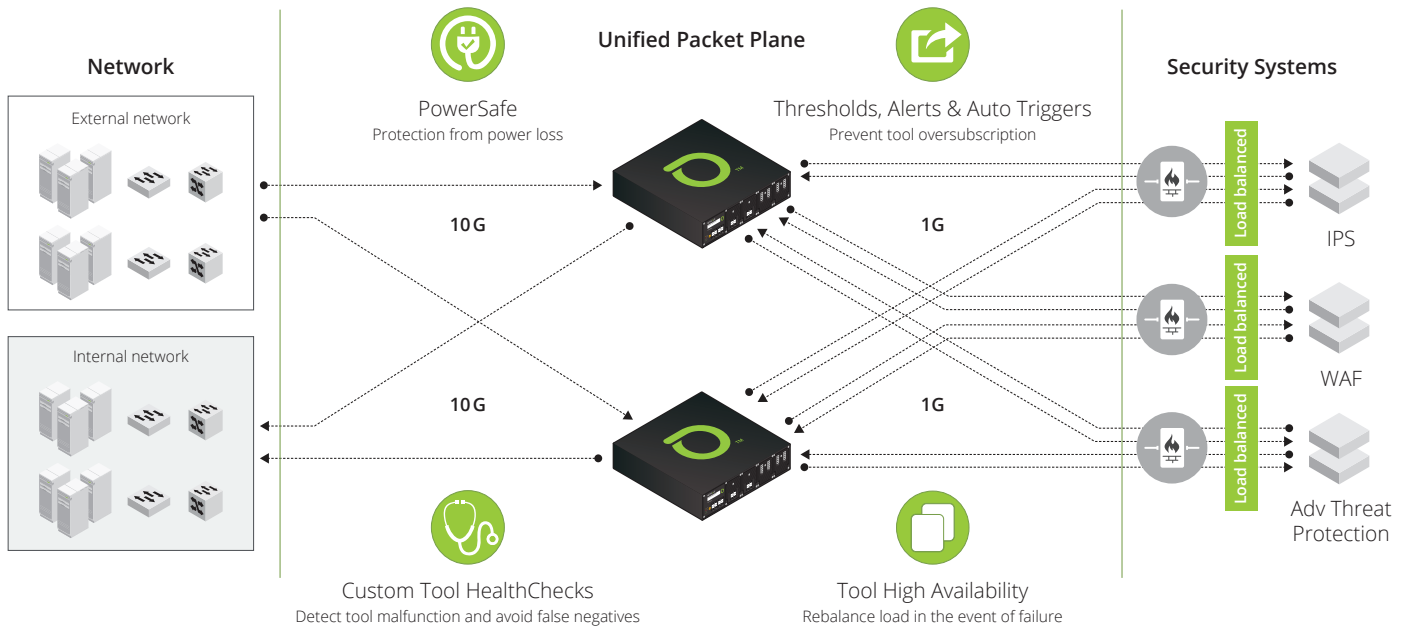


Figure 1: Deploy active (inline) security with confidence: redundancy at the security system and the PFS level ensure uninterrupted service.

delivers a full systems diagnostic to ensure the application functions as designed. Using both “negative” and “positive” health checks, the nGenius packet flow switch injects a test packet to see if the system responds as expected. In contrast, the other products provide only a simple on/off response. This creates the danger of returning a false negative when testing for application (rather than hardware) failure.

- **Existing systems can be leveraged with minimal incremental upgrades:** with nGenius packet flow switches, load-balancing prevents security system oversubscription, without added latency. In addition, the nGenius solution allows users to specify event policies that trigger certain actions such as providing alerts via SNMP and Syslog, allowing you to customize the performance of the visibility fabric in the event of a security system failure or overload by redirecting traffic to backup devices. Most solutions on the market provide only the basic triggers, which limits automation options and requires manual intervention on the part of IT teams, costing time and precious human resources.
- **Increase security system efficiency with service chaining:** nGenius packet flow switches enable deployment of inline security

infrastructure in a virtual chain, rather than connecting each system to the visibility appliances physically. Each device gets exactly the traffic it required, at the speed and in the form that it is designed to accommodate, improving monitoring efficiency. Another advantage of this approach is the 50 percent reduction of ports needed and the elimination of complex physical cabling configurations. Other products lack this capability, requiring many more ports to be utilized for tool interconnect, rather than being dedicated to receiving and sending monitoring traffic.

Bottom line

Deploy inline security with confidence. nGenius packet flow switches from NETSCOUT solve the problem of limited network visibility, eliminate failure points, and protect the network infrastructure during security system rollouts or upgrades. With nGenius packet flow switches, you don't have to worry about active security systems disrupting the network or returning false negatives. Unlike competing solutions, NETSCOUT nGenius packet flow switches are equipped with programmable hardware, enabling them to perform at line rate with no bottlenecks.

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