

# Global Gaming Company Leverages NETSCOUT's PFS Technology to Secure and Monitor Gamers' On-Line Experience

High-Performance nGenius PFXs Provide NetFlow Metrics for Security Tools and Monitoring in an Extremely High-Traffic Environment

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## OVERVIEW

### The Challenge

- Data centers need to support tens of millions of users
- NetFlow metrics required from all traffic
- The recent pandemic has resulted in increased on-line gaming traffic
- Continuous application availability and securing customer information are critical to a gamer's experience

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### The Solution

- nGenius® Packet Flow eXtender (PFX)
- nGenius packet flow switch (PFS) appliance
- NETSCOUT® Premium Support Services

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### The Results

- Achieved access to all data center traffic during a period of fast growth
  - Distributed traffic to the existing security and monitoring tools to ensure applications are continuously available
  - Reduced business risk and protected revenue-generating services by generating customer-preferred NetFlow metrics for multiple security tools
  - The solution is scalable, cost-effective and future proof for transition to 100 GbE
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### Customer Profile

This publicly held entertainment company operates a gaming platform that serves many millions of online players around the world. The company focuses on developing and delivering the newest, most-popular, high-quality graphics games, including some renowned multi-player games that have fans all over the world. With data centers in a half-dozen cities around the globe, this company has been offering their customers a top-tier gaming platform, focused on the player's experience, for many years.

### The Challenge

The gaming company has experienced an increase in business during the current pandemic crisis, on top of their natural growth. Some of their data centers generate tens of millions of packets per second that need to be monitored by generating NetFlow data, and forwarding it to multiple security tools, as well as the custom network and application performance tools that have been developed in house. Current monitoring solutions did not provide complete visibility into all traffic.

Appliances with much higher traffic capacity than the existing solution were required for NetFlow generation. High-volume participation in multi-player games can draw millions of unique customers. They also have intensive live support from their IT team on the customer facing network, so the packet broker solution needed to scale for many simultaneous staff users as well as with the different data center locations experiencing different growth rates on the customer side.

One of the challenges of running a network which has the high performance and security requirements of a gaming network, is that network security and network/application performance are tightly integrated. Obviously, both must be monitored closely to ensure continuous application availability, since many security threats, such as DDOS, operate by compromising or overwhelming some network resource. When network resources are overwhelmed, the IT staff needs clear information separating a security threat from an infrastructure or application performance issue.

Any changes in the company's infrastructure needed to be seamless to their users and IT staff. A secondary requirement would be to ready the data centers for a 100 GbE infrastructure upgrade in the future.

Finally, the network monitoring structure needed to be completely independent of the gaming infrastructure so that even in the highly unlikely event of any failure, no gaming traffic would be affected.

## Solution in Action

By deploying multiple nGenius PFXs and tapping and spanning at the appropriate places in the data centers, the entire multi-terabit flow of traffic in each direction can be copied to the monitoring network. Then Packet Flow eXtender software (PFXs) can generate the NetFlow data which the IT staff and tools at the company were already expert at interpreting. The gaming company deployed multiple units of PFX which generate NetFlow data from over 50 million packets per second of traffic from a single data center.

The PFS switches used load balancing to share the traffic load with multiple security tools, enabling these tools to be used to capacity and cost-effectively, but never oversubscribed. The PFSs also used a function called "Session Aware load-balancing" to keep all packets flowing in each direction of a single user's session together.

Each port of nGenius 5100 series PFS devices can tap or span the links in the network to acquire the traffic on that link, or as in this case when a passive monitoring mode is chosen, an exact copy of the traffic on that link. That traffic is then aggregated and distributed to multiple PFX devices, security tools or other monitoring devices as required. By using these switches and choosing the passive mode, essentially an entirely separate monitoring network is created, assuring that no additional point of failure is created for the gaming infrastructure.

In addition, the PFX devices were deployed in this solution; they can also connect to the network directly or through PFSs using TAP or SPAN ports. The devices are capable of expert packet conditioning before forwarding desired traffic to whatever monitoring tools are required, in this case sometimes to existing NetFlow collectors, and sometimes to the built-in NetFlow data generation capability of PFX. The PFX also easily interconnects with all families of nGenius Packet Flow Switches, for both operational and management purposes. This function is used by the gaming company to send only the traffic of interest to a particular security device, for example.

## The Results

With the nGenius PFS solution in place, the gaming company can provide their users a continuously available, secure environment which is essential for a high-quality gaming experience. The IT staff has complete NetFlow coverage, and the ability to load balance between multiple NetFlow data generators or security tools without separating user session traffic. Additionally, their traffic monitoring infrastructure is ready for the move to 100 GbE in the future.

IT now can proactively identify issues, whether they are detected by security tools or their in-house application performance tools, and isolate and resolve these problems quickly to protect millions of paying customers.

As IT continues to grow the infrastructure to meet the needs of their players, NETSCOUT is a premier partner in assuring delivery of the top-quality environment which users have come to expect from this gaming platform. As new customers are added, growing the monitoring network with the actual gaming network can be done incrementally and is a straightforward and cost-effective process.

For this IT group, as their business continues to experience rapid growth, they are confident in their ability to keep pace and maintain the availability and quality needed, thanks to NETSCOUT.

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## LEARN MORE

For more information about NETSCOUT Service Assurance solutions and the PFX and PFS products visit us at:

<https://www.netscout.com/pfs/packet-flow-extender-software>

<https://www.netscout.com/product/ngenius-5000-series-packet-flow-switch>

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