



Netscout achieves high performance and integration cost effectively and efficiently

NETSCOUT

At a glance:

- Netscout
- Location: California, USA
- Industry: ISP

Challenge:

- Replace VyOS without sacrificing usability

Solution:

- 6WIND Virtual Router

Results:

- High Performance
- End to End Security
- Cost Effective
- Efficiency

NETSCOUT SYSTEMS, INC. assures digital business services against disruptions in availability, performance, and security. Their market and technology leadership stems from combining their patented smart data technology with smart analytics. Netscout provides real-time, pervasive visibility, and insights customers need to accelerate, and secure their digital transformation. Their approach transforms the way organizations plan, deliver, integrate, test, and deploy services and applications.

Their mission is protecting the global leaders of industry from the risks of disruption, allowing them to solve their most challenging network performance and security problems, ensuring the connected world runs safely and smoothly.

Challenge

Replace existing VyOS whilst sustaining high performance and usability

Netscout was an innovator to deploy nearly 100 VyOS virtual routers for its training network several years ago, instead of deploying hardware routers. However, feature, performance and support requirements led them to seek a replacement that could handle multiple networking techniques at the same time with sustained performance between 1 and 5 Gbps throughput.

“6WIND’s vRouters have the best virtual packet processing engine we’ve seen on any virtual routing platform. No other products we’ve looked at perform anywhere close to 6WIND.”

Rick Janssen, Senior Director of Consulting Systems Engineering

Requirements

Netscout was looking for a solution to replace their VyOS virtual routers on their existing servers, running in VMs on top of Linux KVM hypervisors with Proxmox enterprise virtualization to improve performance and support with ease of integration with best cost to performance ratio.

Solution

6WIND Virtual Router: High Performance Testing For Netscout Security

6WIND Virtual Router met Netscout's requirements to replace the VyOS virtual routers directly on its existing servers. Based on DPDK (Data Plane Development Kit) for performance, 6WIND Virtual Router separates its full featured data plane and control plane for use case flexibility and ease-of-migration.

6WIND Virtual Router works in conjunction with Netscout's Threat Management System (TMS) devices in the training network to simulate the attacks. Virtual Router operates in three different roles:

1. Route traffic from attackers
2. Serve as core routers, which send traffic to victims and
3. As the victims' routers, which distribute incoming attacks to the end users' systems.

BGP routes are used for diversion as attacks materialize and GRE tunnels are established to Netscout's Advanced Protection System (APS) devices for the re-injection of routes. The core routers leverage sFlow to provide traffic information to Netscout's APS devices. When an attack is detected, BGP routes are reconfigured and divert traffic to Netscout's TMS devices to eliminate the attacks. Operational control and visibility into the network remains functional throughout.

Results

6WIND Virtual Router met the challenge through its responsiveness under the stresses of heavy DDoS attacks. Success was measured according to the following requirements:

- Sustain a high number of 64-byte packets per second over multiple interfaces under normal network conditions.
- Support flow monitoring, traffic conditioning, rate limiting and SNMP operations regardless of traffic load.
- Protocol stability during performance tests including GRE tunnels and OSPF and BGP protocols.
- Linux management tools and CLI for ease of configuration and deployment.

Upon replacement of its previous VyOS vRouters, Netscout receive the following advantages with 6WIND Virtual Router:

- Performance: 12 Mpps per core of IP Forwarding, standard 1/10/40/100GE NIC support and scaling up to 1 million routes on Intel-based servers.
- Support: Available today with options for subscription or perpetual licenses from 1G to 100G.