



Togglebox Boosts Cloud Hosting Performance and Security with 6WIND vRouters



At a glance:

- Togglebox
- Location: Pennsylvania, USA
- Industry: IaaS

Challenge:

- The need for a solution to support over 1 million routes and large number of ARP entries

Solution:

- 6WIND Virtual Router

Results:

- High Performance
- End to End Security
- Cost Effective
- Customer Satisfaction

Togglebox, a brand of TekTonic based in Pennsylvania, USA, has a mission to provide “high performance, highly customizable cloud hosting for those seeking the highest level of customer service, and performance, without overpaying for cutting edge server technology.”

It is an Infrastructure as a Service (IaaS) company that competes with cloud computing providers such as Amazon AWS and Microsoft Azure.

At its core Togglebox is powered by the OnApp Cloud and powerful, redundant Storpool SANs. They have taken their proven technologies, ideologies, policies, and staff and combined them with fresh ideas to bring you their next-gen cloud hosting system.

Challenge

Solution to support over 1m routes & large number of ARP entries

As a growing IaaS company with an increasing customer base, Togglebox was unable to deal with the demand on their existing routers to meet the customer requirements. They needed a solution that could support over 1 million routes and a large number of ARP entries to meet the demand.

“6WIND vRouters allowed us to replace our Brocade MLX devices, and upgrade overall performance and security, with software. No other hardware or software solutions were able to achieve these metrics for us previously.”

Matt Ayres, Owner

Requirements

Togglebox was unable to meet their existing customer demands with the existing solution in place and so was looking to replace aging Brocade MLX Layer 3 switches that had reached their maximum routing capacity at 512K routes and had performance challenges with the number of Address Resolution Protocol (ARP) entries.

Togglebox required a solution that could support over 1 million routes and a large number of ARP entries. The company researched alternative hardware devices such as new Brocade MLXe and XMR routers, and incumbent competitors, but discovered its performance requirements could not be met.

They needed a solution that could seamlessly integrate with their current systems without having to completely overhaul their existing infrastructures.

Solution

The 6WIND vRouter - Software Replaces Hardware delivering Performance, Flexibility and DDoS Protection

Upon further research, Togglebox discovered that 6WIND could solve its problem with vRouter software on Intel-based servers.

Togglebox began testing the 6WIND Virtual Router™ software and discovered it met and exceeded its performance requirements to support over 1 million routes at line rate speeds for small packet sizes with a very large number of ARP entries. 6WIND's configuration designs were also simple to ease the transition from hardware to software. This impressed Togglebox as no other software solution was able to achieve these metrics previously.

Togglebox was able to migrate the BGP and Layer 3 routing from its Brocade MLX devices to the 6WIND Virtual Routers running on commercial-off-the-shelf (COTS) server

hardware. This deployment runs on 10G and 100G SuperMicro servers. One configuration includes an Intel® Xeon® E5-2630 v4 processor with Mellanox ConnectX-5 100G NICs and another configuration includes an Intel® Xeon® E5-2630 v2 processor with Intel 10G NICs. By moving the routing configurations to 6WIND Virtual Router, Togglebox was able to keep its existing Brocade MLX devices as Layer 2 switches.

6WIND Virtual Router throughput and features can be added and increased as needed. It can scale from 1G to over 100G on Togglebox's SuperMicro servers, according to requirements. Togglebox is currently using 6WIND Virtual Router in 5G configurations for upstream BGP routing, Layer 3 routing of VLANs, Virtual Router Redundancy Protocol (VRRP) for high availability and as a firewall with security features such as sFlow and filtering. Performance is not only for bandwidth; it is also for the ability to absorb DDoS attacks that would consume bandwidth if a routing solution is not able to absorb them.

6WIND's high performance security software features are important to protect Togglebox's customers from inbound and outbound DDoS attacks by handling bursts of small packets at line rate.

Results

The flexible 6WIND vRouter solution helps Togglebox continue its mission to provide the highest level of customer service, performance, and innovation, at the best cost vs performance ratio with unparalleled functionality and reliability.