

# STAMINUS PROTECTS CUSTOMERS FROM CYBERATTACKS WITH A TERABIT SCALE NETWORK

## Summary

**Company:** Staminus

**Industry:** Security

**Challenges:** Create a scalable, high-performance infrastructure to connect customers to security systems and protect them from 100-Gigabit scale DDoS attacks

**Selection Criteria:** High-performance, scalable, ultra-high-density data center switching and routing that is simple to deploy and maintain

**Network Solution:**

- QFX3500 Switch
- EX4200 and EX3200 Ethernet Switches
- MX480 3D Universal Edge Router

**Results:**

- Ensured always-on, high-performance network with 99.99% uptime guarantee
- Built a scalable network with an easy evolution to terabit capacity to deliver DDoS mitigation service to customers

Distributed denial of service (DDoS) attacks have become a favorite tactic of cybercriminals, and attacks on the scale of hundreds of gigabits are commonplace. For many banks, media and entertainment companies, retailers, and data center providers, defending against cyberattacks is a routine part of business, and organizations are increasingly turning to companies like Staminus for cyber-protection. Staminus was founded in 1998 by two childhood friends, Matt Mahvi and Arad Mahdavi. Since 2001, Mahvi, the company's president, and Mahdavi, the COO, have focused the company on the development of SecurePort for DDoS mitigation.

## Challenge

To protect its customers, Staminus operates DDoS mitigation centers in Los Angeles, New York, and Amsterdam. Having a global network allows Staminus to incapacitate even the largest DDoS attacks quickly and efficiently, so customers can focus on their business.

## Selection Criteria

To meet the growing challenge of thwarting DDoS attacks, Staminus wanted to increase the performance and capacity of its global mitigation centers. Staminus sought a high-performance, 10GbE and 100GbE data center network that would support a high-density virtual server environment. The company also needed high-performance routers that would support a 200 Gbps WAN among its mitigation centers, with an anticipated move to terabit speeds in six months. "We have one of the largest Internet-facing backbones in the world, and we need it to mitigate such large attacks," says Mahvi.

**"The Juniper QFX Series switch with the Junos operating system is a phenomenal platform."**

- Matt Mahvi,  
President, Staminus

## Solution

To deliver DDoS protection to its customers, Staminus turned to Juniper Networks to achieve network performance at scale, operational simplicity through automation, and easy integration at its global mitigation centers. Because high-speed, low-latency performance is essential to delivering an effective service to customers, Staminus uses the Juniper Networks® MX480 3D Universal Edge Router to interconnect its mitigation centers. Within those data centers, the Juniper Networks QFX3500 Switch acts as a high-performance forwarding plane, and the Juniper Networks EX4200 Ethernet Switch and EX3200 Ethernet Switch are used for aggregation.

Customers' traffic is received by the MX Series routers at the edge of the Staminus mitigation centers, where it is then cleaned. The MX Series routers—powered by Juniper Networks Junos® operating system and the programmable Junos Trio chipset—deliver unprecedented scaling in bandwidth, subscribers, and services to ensure investment protection.



Staminus can create flexible MPLS VPNs using the Junos OS and MX480 routers. “Juniper’s ultra-flexible MPLS L3VPN technology allows us to provide automated redundancy between our SecurePort DDoS mitigation clusters with no operator intervention or loss of Internet capacity,” says Mahvi. “Other company’s routers have similar features, but they’re not as simple or easy to configure.”

Staminus uses the QFX3500 switch in its data centers. QFX Series 10GbE/40GbE switches are high-performance, low-latency edge devices that can be installed as top-of-rack or end-of-row switches. “The Juniper QFX Series switch with the Junos operating system is a phenomenal platform,” says Mahvi. “Using QFX3500 gave us 48 10GbE ports in one rack unit with low power requirements. The QFX3500 was really simple to integrate into our network.”

Staminus uses EX4200 and EX3200 Ethernet switches for ultra-high-density aggregation. “We’re running thousands of servers through the EX4200 switches,” says Mahvi. The high-performance, highly available EX Series Ethernet Switches improve performance and operational efficiency. Juniper’s Virtual Chassis technology allows multiple interconnected EX4200 switches to operate and be managed as a single, logical device, which reduces operational overhead.

Mahvi appreciates the operational efficiency that results from Juniper’s hallmark network simplicity and automation. “Juniper makes it easy to spin up a new switch, then copy and paste the configuration to the next switch, and it just works,” says Mahvi. “We can configure additional EX4200 switches painlessly, allowing us to focus less on network logistics and focus more on DDoS mitigation.”

Staminus uses Junos Stylesheet Language Alternative Syntax (SLAX) for automation. SLAX is a language for writing Junos OS commit scripts, op scripts, and event scripts, and it has a simple syntax that follows the style of C or PERL, which makes it easier to create scripts. “Through the Junos OS SLAX on-router scripting platform, we’re able to ease provisioning and management through tools developed by the Staminus team,” says Mahvi.

**“Working with Juniper helps us build a simple-to-operate network backbone, and that allows us to focus our resources on core intellectual property development, which is DDoS mitigation.”**

- Matt Mahvi,  
President, Staminus

## Results

The performance, reliability, and scalability of a Juniper network gives Staminus the infrastructure it needs to mitigate thousands of DDoS attacks each week and still guarantee customers 99.99% uptime. “Because of the massive capacity of the network, which is powered by Junos OS, we not only protect our customers, but also pass along savings to them,” says Mahvi.

Offering customers attractive pricing plans is one benefit, but perhaps the more strategic advantage of having a high-performance, highly automated global infrastructure is that Staminus has the headroom to stay one step ahead of cybercriminals. “Working with Juniper helps us build a simple-to-operate network backbone, and that allows us to focus our resources on core intellectual property development, which is DDoS mitigation,” says Mahvi.

## Next Steps and Lessons Learned

With Juniper routing and switching solutions, Staminus is prepared to protect customers against increasingly malevolent—and massive—attacks.

## For More Information

To find out more about Juniper Networks products, solutions, and services, please visit [www.juniper.net](http://www.juniper.net).

## About Juniper Networks

Juniper Networks is in the business of network innovation. From devices to data centers, from consumers to cloud providers, Juniper Networks delivers the software, silicon and systems that transform the experience and economics of networking. The company serves customers and partners worldwide. Additional information can be found at [www.juniper.net](http://www.juniper.net).

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