VyOS
The universal networking platform

x-ion GmbH

VYOS SUCCESS STORY

X-ion Elevates Cloud Infrastructure with VyOS: From Complexity to Scalability

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Customer Overview

x-ion, a leading provider of GDPR-compliant cloud infrastructures, has been deploying cutting-edge technology to ensure the highest levels of performance and scalability in their data center operations. They operate cloud setups on their own hardware on 3 continents and can therefore also offer their customers GDPR-compliant solutions internationally. Based in Germany and operating globally, x-ions team has always focused on using open-source solutions to manage their cloud infrastructure.

Challenges

Prior to implementing VyOS, x-ion faced several challenges, particularly in scaling and automating their routing infrastructure. They had been using a combination of Ubuntu and BIRD for routing, but they encountered issues with kernel drivers and network debugging as their bandwidth and operational complexity grew. With nearly 100 routers to reconfigure, x-ion's reliance on Ubuntu, while flexible, lacked the specialized network support needed for high-performance environments, causing delays in troubleshooting and growing concerns as their infrastructure demanded more.

Why VyOS?

Martin Bosner, CEO of x-ion, had long sought an open-source routing solution robust enough for enterprise deployment. After experimenting with various options such as OpenWrt, pfSense, and OPNsense, Martin discovered VyOS. He appreciated VyOS for its professional approach, active community, and rapid fixes. The decision to move to VyOS was driven by its powerful BGP and OSPF support, built-in automation tools, and the added benefit of professional support.

The Solution

Stefan Parzentny and Fabian Thöne, the network team leaders at x-ion, began transitioning their core network infrastructure to VyOS. The migration process was methodical, focusing on incremental updates to minimize risks. Key features like rollback capabilities and automated deployment tools played a crucial role in ensuring smooth transitions. VyOS enabled them to leverage traffic shaping and more sophisticated routing configurations, crucial for handling their growing traffic demands, which reached up to 100 Gbps in some environments. Moreover, VyOS's support for automation and APIs allowed x-ion to scale their network configurations more efficiently, freeing up the team's time to focus on other critical tasks.

Results

Since implementing VyOS, x-ion has seen significant improvements in their network stability, with fewer incidents related to routing or kernel issues. The VyOS rollback feature has been particularly valuable, allowing the team to quickly recover from configuration changes. The professional support provided by VyOS has also been a key factor in x-ion's success. The ability to directly interact with senior network engineers has dramatically reduced the time required to troubleshoot complex issues.

The scalability and reliability of VyOS have made it the go-to solution for x-ion's core infrastructure, and the team is now looking forward to implementing even more advanced features, such as VyOS's support for Vector Packet Processing (VPP), which will further enhance network performance.

Looking Ahead

x-ion plans to continue expanding their use of VyOS across their entire infrastructure. With plans to fully automate their deployments and integrate VyOS's upcoming controller and SaaS-based orchestration tools, x-ion is positioned to further enhance the efficiency and scalability of their network operations.

Conclusion

VyOS has helped x-ion transition from a heterogeneous and fragmented network solution to a streamlined, scalable infrastructure capable of handling large-scale data operations. By choosing VyOS, x-ion has ensured that their network remains robust, reliable, and ready for future growth.