



**VyOS**

The universal networking platform



***Stream IT***  
Networks LLC

**/** VYOS SUCCESS STORY

# Empowering Connectivity: How Stream IT Networks Achieved Stability and Scalability with VyOS

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## Background

Stream IT Networks, a growing wireless internet service provider (WISP), has been delivering internet services to remote and rural areas for over a decade. Founded in 2012, the company has been navigating the complexities of network infrastructure with a keen focus on stability, affordability, and efficiency.

## Challenges

Before adopting VyOS, Stream IT Networks operated using Ubiquiti's EdgeOS with around 50 routed sites. However, they encountered several issues:

- **Network Instability:** As the network grew, the OSPF routing protocol became unstable, complicating network management during a critical time when the COVID-19 pandemic hit.
- **Hardware Limitations and Stock Shortages:** The pandemic led to a severe stock shortage, leaving Stream IT without necessary hardware to expand or maintain their network. The available Ubiquiti models either lacked the required features or were too expensive and physically too large for the company's existing infrastructure.



## Solution

Stream IT Networks discovered VyOS through discussions in online forums and moved to adopt it nearly two years ago. VyOS, being a software-centric solution, offered the flexibility to be installed on any hardware. This capability came as a significant advantage during the hardware stock shortages.

## Implementation

VyOS was seamlessly integrated into Stream IT's network, replacing unstable OSPF routing with eBGP. This transition was initiated when only 1 or 2 VyOS routers were in the network, resolving the OSPF issues that EdgeOS had. The software's compatibility with various hardware types allowed Stream IT to utilize cost-effective solutions like Lanner Electronics FW 7525s purchased from the used market, significantly reducing costs while maintaining performance.

### Benefits:

- **Enhanced Network Stability:** Switching tower sites to VyOS has shown a complete change in stability. Even running used hardware in higher than recommended temperatures, Stream IT has not had one single outage that was router related.



- **Cost Efficiency:** The stability of VyOS and the fact that Stream IT doesn't have to send technicians out to troubleshoot at tower sites accounts for 90% of the cost efficiency gained.
- **Scalability and Flexibility:** VyOS's decoupled software and hardware approach allows Stream IT Networks to deploy on various devices, ensuring they can expand or modify their network without being tied to specific hardware solutions.
- **Ease of Use and Technical Support:** The syntax and operational familiarity between EdgeOS and VyOS eased the transition for technical staff. Moreover, the open nature of VyOS and its supportive community have been beneficial for troubleshooting and learning.

## Future Plans

Looking ahead, Stream IT Networks plans to maintain its current network setup with VyOS while staying open to integrating more advanced features as their network demands evolve. The company appreciates VyOS's ongoing improvements and looks forward to potentially leveraging new functionalities like VPP (Vector Packet Processing) as their infrastructure grows into data center environments.

## Testimonial

*"VyOS has not only reduced our hardware costs but also significantly decreased the stress and operational headaches associated with managing a rural ISP network. It's a stable, cost-effective solution that just works, allowing us to focus more on service delivery and less on network issues."* – Trendal Toews, Stream IT Networks

## Conclusion

Stream IT Networks' adoption of VyOS showcases the power of flexible, open-source solutions in overcoming significant networking challenges faced by ISPs, particularly those serving remote areas. The success of VyOS at Stream IT highlights the importance of adaptability and community support in the ever-evolving world of network management.

