ONWARD'S 100G AND EVPN-MPLS NETWORK UPGRADE WITH OCNOS

Onward, a fast-growing, full-fiber broadband provider in Rancho Cucamonga, California, serves both business and residential customers. With the rapid expansion of its customer base, the company faced increasing pressure to upgrade its networking infrastructure. The existing system was struggling to keep pace with the growing demand for high-speed, reliable services, prompting Onward to seek a next-generation solution. Their aim was to ensure network scalability, seamless integration with legacy systems, and enhanced performance to meet the expectations of their diverse clientele.

Challenges

As Onward continued to expand its customer base, several challenges emerged that called for a more advanced solution:

1. Rapid Growth: Onward's impressive growth in business and residential subscribers required a network that could scale efficiently to meet increasing demand.

2. Network Optimization: The existing infrastructure, while reliable in the past, was approaching its capacity limits, making it harder to keep pace with the heightened performance expectations of its customers.

3. Evolving Support Needs: With a growing, more complex network, Onward needed more responsive vendor support and solutions that could accommodate quick upgrades and troubleshooting.

4.Cost Efficiency: Onward aimed to optimize operational costs by investing in solutions that would reduce long-term maintenance and increase overall efficiency.
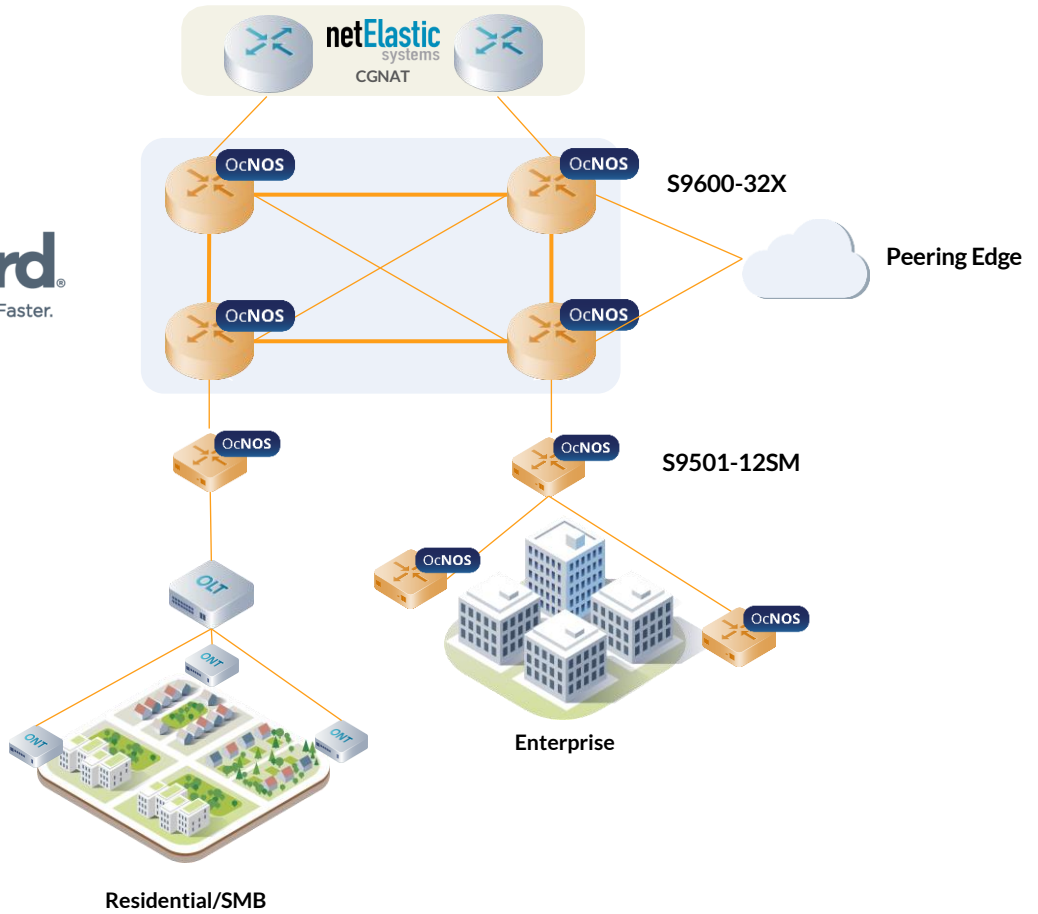
Solution

Onward chose IP Infusion's OcNOS-SP-MPLS software suite to modernize and future-proof its network infrastructure. At the heart of their new system, Onward implemented **EVPN-MPLS on OcNOS** to drive their core and aggregation layers, significantly enhancing the efficiency and stability of traffic management. The hardware infrastructure consisted of UfiSpace S9600-32X for high-capacity 100 Gbps core services, complemented by the UfiSpace S9502-12SM, a fanless, temperature-hardened platform ideal for edge connections.

Deployment spanned multiple key locations across Rancho Cucamonga, where these switches integrated seamlessly with Onward's existing fiber network. OcNOS also enabled smooth integration with netElastic for Carrier Grade NAT (CGNAT), optimizing edge performance and IP address management.

The key aspect of Onward's upgrade was its commitment to **flexibility and avoiding vendor lock-in**. By leveraging an open networking solution, Onward retained the freedom to choose the best hardware and optics for each aspect of its network. This open approach ensured that the network could evolve with Onward's needs while maintaining high reliability and scalability.

IP Infusion's engagement throughout the project was another highlight, with robust pre- and post-sales support. This close collaboration ensured a successful deployment and ongoing operational confidence.

netElastic systems   **ip** infusion™

Deployed Solutions

MPLS PE Routers:

- NOS: IP Infusion OCNOS-SP-MPLS-2400
- Whitebox: UfiSpace S9600-32X | 100G Open Switch

Fanless Routers:

- NOS: IP Infusion OcNOS SP MPLS 32
- Whitebox: UfiSpace S9502-12SM, 8x 100M/1G SFP, 4x 1/10G SFP+ Open Access Router

CGNAT Routers:

- NOS: netElastic CGNAT
- Whitebox: 2x100G x86 Server

Summary

Onward's network transformation, powered by IP Infusion's OcNOS and netElastic CGNAT, has enabled the company to scale seamlessly and serve the increasing demand for high-speed broadband services. By adopting a flexible, open networking architecture, Onward has optimized performance, enhanced network stability, and gained the ability to choose the best hardware without being locked into a single vendor. netElastic CGNAT allowed them to conserve and manage IPv4 addresses while maintaining high network performance. The use of EVPN-MPLS on OcNOS for the core network and the robust pre- and post-sales support from IP Infusion have positioned Onward for continued success as it grows.

> "We needed a scalable, flexible solution to support our rapid growth and ensure the highest quality of service for our customers. IP Infusion's OcNOS delivered exactly that. By leveraging open networking, we've not only improved our network's performance but also retained the freedom to choose the best technology for our evolving needs,"

Nick Keeler, CEO of Onward

> "At IP Infusion, we are committed to providing innovative, flexible solutions that help service providers like Onward break free from vendor constraints. Our collaboration with Onward has showcased how open networking can transform network operations, providing scalability, flexibility, and stability to meet today's demands and tomorrow's growth,"

Atsushi Ogata, President and CEO of IP Infusion.

Contact for More Information:
For more information on the OcNOS software, please contact sales@ipinfusion.com

ABOUT IP INFUSION

IP Infusion is a leading provider of open network software and solutions for carriers, service providers and data center operators. Our solutions enable network operators to disaggregate their networks to accelerate innovation, streamline operations, and reduce Total Cost of Ownership (TCO). Network OEMs may also disaggregate network devices to expedite time to market, offer comprehensive services, and achieve carrier grade robustness. IP Infusion network software platforms have a proven track record in carrier-grade open networking with over 500 customers and over 10,000 deployments. IP Infusion is headquartered in Santa Clara, Calif., and is a wholly owned and independently operated subsidiary of ACCESS CO., LTD. Additional information can be found at http://www.ipinfusion.com

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