



BROADLINC

BRIDGING KENTUCKY DIGITAL DIVIDE WITH OPEN NETWORKING BROADLINC POWERS 5G-READY RURAL BROADBAND WITH IP INFUSION OcNOS

Executive Brief

Kentucky-based ISP Broadlinc modernized its Fixed Wireless Access (FWA) network to meet escalating bandwidth demands, choosing an open networking architecture over traditional solutions from Cisco and Juniper for its superior performance, scalability, and Total Cost of Ownership (TCO).

The core of this transformation is IP Infusion's OcNOS® Network Operating System running on UfiSpace whitebox routers. This software-defined solution provides the carrier-grade intelligence for Broadlinc's 5G Core environment, creating a 5G-ready network that delivers an exceptional end-user experience and future-proofs their investment.

Challenges

As part of a grant-funded rural expansion, Broadlinc required a network that could deliver **carrier-grade performance** to meet stringent SLAs, **optimize CapEx/OpEx** by avoiding costly feature licensing, and provide a **future-proof path to 5G**.

Advised by their integration partner RocNet, Broadlinc selected a disaggregated solution powered by IP Infusion's OcNOS. The solution combines the power of OcNOS with UfiSpace S9500-30XS cell site gateways, creating a full-featured routing platform that provided a powerful and cost-effective alternative to monolithic systems.

Key OcNOS Advantages for Broadlinc

- **Robust Feature Set:** Provided futureproof 100G backhaul capacity and crucial protocols including a full

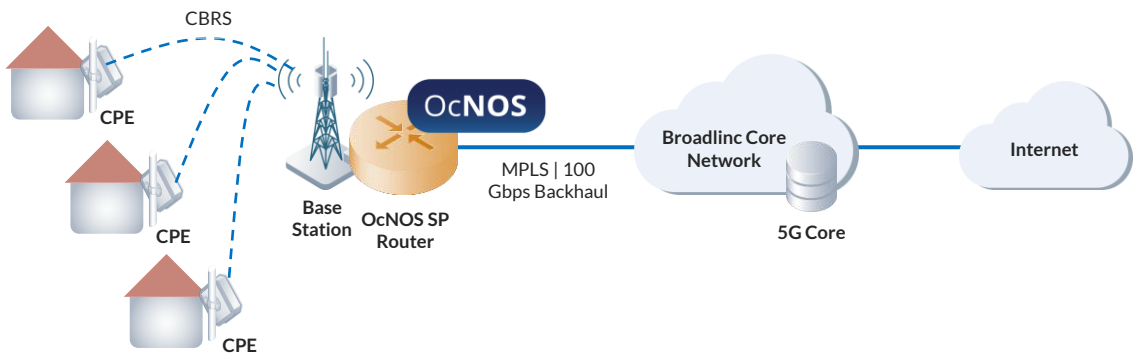
MPLS stack (LDP, RSVP-TE), BGP, and OSPF for traffic engineering, load balancing, and carrier-grade resilience.

- **Operational Efficiency:** A familiar industry-standard CLI and quality documentation enabled rapid deployment with a minimal learning curve for Broadlinc's engineers.
- **Lower TCO:** The disaggregated model eliminated expensive, feature-based licensing and significantly reduced CapEx compared to traditional vendors.

Architecture

The data flow in Broadlinc's disaggregated FWA network is a multi-vendor integration orchestrated by OcNOS:

1. **RAN:** Subscriber traffic originates from a Massive-MIMO LTE/5G-ready RAN operating on licensed CBRS spectrum.
2. **Cell Site Aggregation:** Traffic is backhauled to the OcNOS router, which provides the control and data plane intelligence. OcNOS router is comprised of OcNOS-SP-MPLS network operating system (NOS) hosted on UfiSpace S9500-30XS disaggregated cell site gateway (DCSG), a Broadcom QAX powered whitebox router with 300 Gbps switching capacity, 20x 10G SFP+, 8x 25G SFP28, 2x 100G QSFP28 ports, and Class C PTP/SyncE timing synchronization. OcNOS aggregates traffic from multiple cell sites, applies QoS policies, and routes traffic toward the core network via MPLS.
3. **Core Transport & Packet Core:** The aggregated traffic traverses a resilient MPLS core to Broadlinc's 5G Core, which handles subscriber management, authentication, and connectivity to the public internet.



Broadlinc's Reference Network Topology with OcNOS Routers

Key Partnership and Integration

The successful deployment was facilitated by Broadlinc's long-standing systems integration partner, **RocNet**. RocNet recommended the IP Infusion disaggregated solution and provided crucial pre-deployment validation in their test lab. Their hands-on support and expertise in multi-vendor integration were instrumental in de-risking the transition to an open networking model and ensuring a seamless implementation.

Summary

The OcNOS-powered network delivered an exponential improvement in throughput, capacity, and reliability. Broadlinc successfully deployed a high-performance, cost-effective network that meets current SLAs and provides a scalable foundation for future 5G services.

“IP Infusion's OcNOS provided the perfect balance of price, performance, and features we needed for our rural broadband expansion. Compared to traditional vendors, the disaggregated model gave us carrier-grade MPLS capabilities without the costly feature licensing.

The familiar CLI and excellent documentation made the transition seamless for our engineering team, allowing us to deploy quickly and confidently.” - TJ Scott, Chief Operating Officer of Broadlinc.

“We're thrilled to help Broadlinc deploy IP Infusion's OcNOS on UfiSpace hardware. The lab demo showcased the solution's power and ease of use, and we're excited to support Broadlinc's mission to connect rural Kentucky.” – Mike Baker, CEO of RocNet.

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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