



DEMOCRATIZING THE NETWORK: IP Infusion—Open Networking as the Successor to Juniper’s Pioneering Spirit

In the ever-evolving world of networking, Juniper established itself as a formidable force, challenging established vendors and redefining industry expectations. Their focus on high-performance routing solutions and commitment to innovation earned them a loyal following, particularly within the service provider space. However, the landscape continues to shift, and new opportunities for disruption are emerging.

Embracing the Disaggregated Networking Revolution

IP Infusion positions itself as the next wave of disruption, building upon the foundation laid by pioneers like Juniper, introducing faster innovation, cost reduction, network management simplification, and more scalability. While Juniper

primarily focused on proprietary hardware and software integration, IP Infusion takes a bold step forward by fostering a truly open networking ecosystem. This approach decouples the network operating system (NOS) from the underlying hardware, empowering users with the freedom and flexibility to choose the best-fit hardware for their specific needs from a wide range of validated vendors.

Moreover, in an industry where acquisitions and changes in ownership can introduce uncertainties, the consistent track record of IP Infusion for over 25 years, assures users that OcNOS is not just a passing trend but a solution backed by a reputable and enduring company.

IP INFUSION: Your End-to-End Open Networking Solution Provider

IP Infusion goes beyond being just a NOS vendor. We offer a comprehensive end-to-end solution, encompassing:

- **Disaggregated Network Operating System (NOS): OcNOS**, our flagship product, delivers carrier-grade performance, scalability, and a comprehensive feature set comparable to leading closed vendor solutions. It supports a wide range of features including:
 - Layer 2 and Layer 3 switching
 - MPLS and EVPN for traffic engineering
 - Segment Routing (SR) for automated traffic forwarding
 - Quality of Service (QoS) for prioritizing mission-critical applications
 - Precision Timing (PTP) for synchronization in carrier networks
 - VxLAN for overlay networking
 - BGP, ISIS, and OSPF for routing protocols
 - Comprehensive security features including ACLs, firewalling



OcNOS Granularity. To help our customers and partners quickly find needed OcNOS SKUs, IP Infusion offers an OcNOS Granularity Chart, highlighting all key functionality for each SKU.

| OcNOS CSR and SP Service Provider | OCNOS-SP-IP-BASE | OcNOS-SP-MPLS | OCNOS-CSR | OCNOS-SP-PLUS |
|--------------------------------------|------------------|---------------|-----------|---------------|
| Layer 2 / Layer 3 | ● | ● | ● | ● |
| VxLAN w EVPN | ● | ● | ● | ● |
| Carrier Ethernet | | ● | ● | ● |
| MPLS | | ● | ● | ● |
| MPLS w EVPN | | ● | ● | ● |
| Segment Routing | | ● | ● | ● |
| Streaming Telemetry | | ● | ● | ● |
| SRv6 | | | | * |
| Timing Synchronization | | | ● | ● |
| 400G ZR/ZR+ | | | | * |
| | IP | MPLS / SRv6 | | Timing / ZR+ |

** feature support is platform-dependent, refer to the Feature Matrix for details.*

Figure 1. OcNOS SP Granularity Chart

- **One Network, One OS: Effortless Management Across Your Network.** Gone are the days of juggling multiple, complex operating systems for different parts of your network. OcNOS simplifies your life by offering a single, unified management platform for all your network needs. OcNOS comes in SKUs for both wired and wireline transport networks, as well as data center networks. The approach allows to significantly reduce network deployment and management complexity.
- **Validated Hardware Portfolio:** IP Infusion’s platform support already includes an impressive list of white boxes from Edgecore, UfiSpace, and Pegatron, ranging from 100M to 400GE ports speeds, with switching capacities up to 14.4Tbps per router, and with support of multiple unique features, such as fanless configurations, TCAM, and deep buffer options. This allows you to leverage your existing hardware infrastructure or choose from a wider range of cost-effective options based on your specific requirements.
- **Professional Services and Support:** with IP Infusion, you are not losing on the support side. To date, IP Infusion is already offering local support SLAs, and comprehensive pre-sales and post-sales support services.
- **No More Lock-ins for Optics:** IP Infusion enables its customers to fully experience open networking and open ecosystems through offering a wide range of rigorously validated optics: ZR+ and other optical transceivers.

EXPLORING ALTERNATIVES WITH IP INFUSION: A Comparative Analysis

The following table highlights the potential cost savings achievable with IP Infusion solutions compared to Juniper models, using specific use cases:

| SCENARIO | IP Infusion Solution | Juniper Solution |
|---|--|--|
| Mobile Backhaul, Edge Router, CMTS Replacement, Aggregation Router | OcNOS SP with UfiSpace S9510-28DC | Juniper MX204 |
| Features | L2, L3, MPLS, EVPN, SR, QoS, Timing, ZR+ ✓ | L2, L3, MPLS, EVPN, SR, QoS, Timing |
| Network Interfaces | 2x 100/400G QSFP-DD ✓ 2x 40/100GE QSFP28 24x 1/10/25GE SFP28 ✓ | 4x 40/100GE 8x 10GE |
| 5Y TCO Comparison | ✓ Up to 60% Savings with IP Infusion | |
| Mobile Backhaul, Edge Router, CMTS Replacement, Aggregation Router | OcNOS SP with Edgecore AS5916-54XKS | Juniper ACX5448-D |
| Features | L2, L3, MPLS, EVPN, SR, QoS, Timing | L2, L3, MPLS, EVPN, SR, QoS, Timing |
| Network Interfaces | 6x 100GE QSFP28 ✓ 48x 1/10GE SFP28+ ✓ | 35x 10GE 2x 100GE 2x 200G (CFP2-DCO) |
| 5Y TCO Comparison | ✓ Up to 70% Savings with IP Infusion | |

| Scenario | IP Infusion Solution | Juniper Solution |
|---|---|--|
| Data Center Interconnect, Aggregation Router, PE Router | OcNOS SP with UfiSpace S9600-56DX | Juniper ACX7100-32c |
| Features | L2, L3, MPLS, EVPN, SR, QoS, Timing, ZR+ | L2, L3, MPLS, EVPN, SR, QoS, Timing, ZR+ |
| Network Interfaces | 8 x 400GE QSFP-DD ✓ 48 x 100GE SFP28 ✓ | 4 x 400G QSFP-DD 32 x 100G SFP-28 |
| 5Y TCO Comparison | ✓ Up to 60% Savings with IP Infusion | |

Figure 2. OcNOS SP vs. Juniper Reference Cost Estimates

BEYOND COST SAVINGS: The Advantages of Open Networking

While cost savings are a compelling reason to consider IP Infusion, the benefits extend far beyond:

- **Future-Proof Technology:** OcNOS is a networking standards-based NOS, and is backward compatible with most existing networking solutions, and readily integrates with emerging technologies, including 3G, 4G, 5G backhaul, innovative ZR+ powered optical line systems, AI/ML networks in modern data centers, and others, ensuring your network can evolve and adapt to changing demands without costly rip-and-replace cycles.
- **Simplified Licensing:** OcNOS offers a simple, all-inclusive licensing model, eliminating the complexity and hidden costs associated with traditional per-feature licensing schemes.
- **Eliminate Vendor Lock-in:** With IP Infusion, you are not confined to a single vendor for hardware or optics. You have the freedom to choose the solutions that best suit your needs and budget, fostering greater flexibility and control over your network infrastructure. This allows you to:
 - Select cost-effective hardware from a wider range of validated vendors based on your specific performance and budget requirements.
 - Avoid vendor lock-in and the associated risks of limited choices and potentially higher costs in the future.
 - Avoid supply chain uncertainties. OcNOS based solutions have reportedly enabled IP Infusions' customers with much better control and visibility over network upgrade and deployment times.

CONCLUSION: Embrace the Open Future with IP Infusion and Channel Your Disruptive Spirit

If you, like Juniper in its prime, are a system integrator or service provider seeking to disrupt the status quo and redefine industry expectations, then IP Infusion is your ideal partner. At IP Infusion, we believe in the power of open networking to empower and liberate service provider and data center networks. By partnering with us, you can leverage our innovative solutions, extensive experience, and unwavering

commitment to open standards to chart a new course and recapture the spirit of disruption that once defined the industry.

Contact IP Infusion today to learn more about how we can help you unlock the full potential of open networking and transform your business for the future.

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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