OPEN NETWORKING

The Key to Future-Proofing ISP Infrastructure

EXECUTIVE SUMMARY

Internet service providers (ISPs) face growing demands for faster, more scalable networks while grappling with rising operational costs and rapidly evolving technologies. Traditional, vendor-locked infrastructure can limit flexibility and stifle innovation, forcing ISPs into costly, slow-moving upgrade cycles. Open networking offers a transformative solution—allowing ISPs to decouple hardware from software, reducing costs, driving innovation, and preparing their networks for future demands.

This white paper explores the key concepts of open networking, its benefits over traditional models, and how RocNet Supply plays a critical role in helping ISPs deploy and manage open networking solutions with certified equipment and expert support.

WHAT IS OPEN NETWORKING

Open networking refers to the practice of using disaggregated network architecture where software and hardware are treated as separate entities. This model contrasts with traditional network infrastructure, where vendors supply both hardware and proprietary software bundled together, locking customers into specific ecosystems. Open networking instead allows ISPs to choose best-in-class hardware and open-source or commercial software independently, creating more flexible and scalable networks.

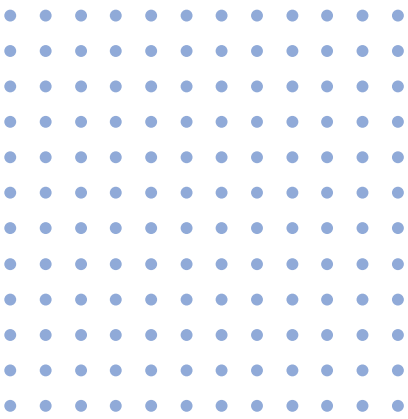
The key components of open networking include:

- White-box hardware: Non-proprietary hardware that can run a variety of network operating systems (NOS).
- Open-source software or commercial NOS: Software platforms that can run on different hardware vendors' devices, enabling customization and rapid innovation.
- Interoperability: Open networking promotes the seamless integration of new technologies, allowing ISPs to deploy upgrades without relying on a single vendor’s timeline or product roadmap.

HOW OPEN NETWORKING DIFFERS FROM TRADITIONAL VENDOR-LOCKED MODELS

TRADITIONAL NETWORKING	OPEN NETWORKING
Proprietary software tied to hardware	Hardware and software decoupled
Limited flexibility and customization	Greater flexibility with best-fit solutions
High CAPEX due to vendor bundling	Lower CAPEX by choosing cost-effective options
Slow innovation tied to vendor's product cycle	Faster innovation through open standards

Traditional network solutions force ISPs to rely on a single vendor, often locking them into high-cost, proprietary hardware with limited ability to customize or innovate. In contrast, open networking empowers ISPs to select software and hardware independently, driving cost savings and enabling quicker technology adoption.



KEY BENEFITS OF OPEN NETWORKING

Lower CAPEX and OPEX

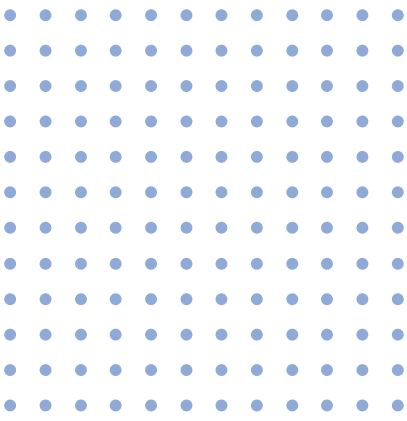
With open networking, ISPs can deploy white-box hardware and open-source NOS platforms, resulting in significantly lower capital expenditures (CAPEX) compared to traditional vendor-locked solutions. Additionally, operational costs (OPEX) are reduced as maintenance and support are decoupled from vendor service contracts, allowing ISPs to negotiate more favorable terms or handle support internally.

Example: A Tier Two ISP can replace expensive proprietary routers with white-box switches that run commercial NOS, achieving the same functionality at a fraction of the cost.

Faster Innovation and Scalability

By separating hardware and software, ISPs can introduce new features faster without waiting for vendors to update their proprietary systems. Open networking supports rapid scaling by allowing providers to expand their networks with best-in-class technology from multiple vendors.

Example: Open-source SDN platforms let ISPs deploy new virtualized services or expand bandwidth capacity as needed, reducing time-to-market for new offerings.



KEY BENEFITS OF OPEN NETWORKING

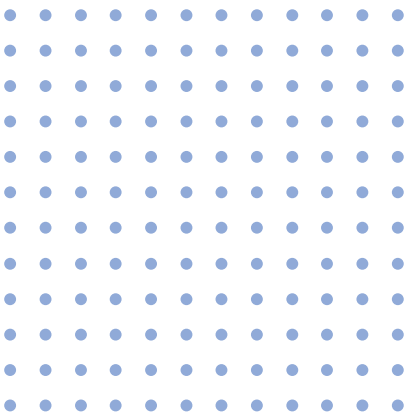
Reduced Vendor Lock-In

Vendor lock-in limits ISP agility, tying infrastructure decisions to a single vendor's roadmap. Open networking eliminates these dependencies by enabling ISPs to choose from a variety of vendors for hardware, software, and support, fostering greater negotiation power and flexibility.

Example: A network operating system (NOS) running on white-box routers allows ISPs to switch hardware vendors seamlessly without disrupting network operations.

Enhanced Flexibility and Control

Open networking provides ISPs with greater control over their infrastructure by enabling them to customize software configurations based on their specific needs. This results in a network that adapts to customer demand and new technologies without costly overhauls.



WHY CHOOSE ROCNET FOR YOUR OPEN NETWORKING DEPLOYMENTS

RocNet Supply offers expert guidance, certified hardware, and engineering support to ensuree that ISPs get the most from their open networking deployments.

Certified Hardware for Open Networking

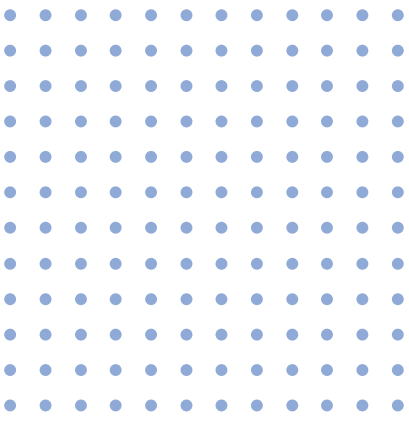
- Access to White-Box Equipment: RocNet sources certified pre-owned and new white-box equipment from trusted vendors, offering significant cost savings without compromising quality.
- Thorough Testing and Quality Assurance: All equipment undergoes rigorous testing and certification to ensure seamless integration and optimal performance.

Engineering Expertise for Smooth Deployment

- Pre-Deployment Testing: RocNet's engineering team conducts extensive tests to ensure that selected hardware and software combinations work efficiently before deployment.
- Custom Network Solutions: RocNet collaborates with ISPs to create tailored solutions that address unique challenges, such as scalability, interoperability, and budget constraints.

Ongoing Support for Network Success

- Post-Deployment Troubleshooting: RocNet engineers provide ongoing support to resolve any issues that arise during or after deployment.
- Flexible Logistics Services: RocNet offers warehousing, consignment programs, and asset recovery to ensure that ISPs can manage their network inventory efficiently.



READY FOR SUCCESS

Success in Action: Faster Scaling with Open Networking

A Tier Three ISP needed to upgrade its core network to support higher speeds and additional subscribers but faced long lead times and high prices for proprietary equipment. RocNet Supply helped the ISP deploy white-box routers running open-source NOS, achieving the same performance at half the cost.

With pre-deployment testing from RocNet's engineering team, the ISP avoided potential integration issues, ensuring a smooth rollout. The ISP was able to expand coverage and improve customer satisfaction without exceeding its budget.

Conclusion

For ISPs looking to future-proof their networks, open networking offers an unmatched combination of flexibility, cost savings, and scalability. By decoupling software from hardware, ISPs gain the freedom to adopt new technologies faster, avoid vendor lock-in, and build more resilient networks.

With RocNet Supply's certified equipment and expert engineering support, ISPs can implement open networking with confidence, knowing that their infrastructure is optimized for today's demands and ready for tomorrow's innovations.

Start Your Open Networking Journey Today

Contact RocNet Supply to learn how we can help your ISP deploy high-quality open networking solutions with proven hardware and expert engineering support. Whether you need white-box hardware, pre-deployment testing, or logistics services, we've got you covered—helping you build a faster, more scalable, and more cost-effective network.

www.rocnetsupply.com
sales@rocnetsupply.com
844.742.1016