MODERNIZING POLAND'S NETWORK INFRASTRUCTURE

EXATEL'S JOURNEY TO OPEN NETWORKING WITH OCNOS

EXATEL, Poland's second-largest optical fiber network operator, partnered with IP Infusion to modernize its network with an open networking platform built on OcNOS®. By adopting open networking principles, EXATEL enhanced flexibility, scalability, and efficiency in delivering advanced services. The deployment spans Poland and extends to interconnection hubs in Germany and the Czech Republic, enabling EXATEL to offer tailor-made solutions to its corporate and governmental clients while promoting vendor diversity and reducing costs.

Challenges

To maintain its competitive edge in Poland's telecommunications market, EXATEL initiated a strategic network modernization to deliver advanced services and enhance customer experiences. This involved a careful evaluation of existing infrastructure and a focus on building a future-proof network capable of meeting evolving customer demands.

- **Service Agility and Customization:** Enabling rapid deployment of tailored services to meet diverse customer needs.
- **High-Capacity Network Evolution:** Upgrading the fiber network to support high-capacity links (100G/400G) for bandwidth-intensive applications.
- **Performance and Cost Efficiency:** Maintaining high performance while optimizing costs for sustainable growth and competitive pricing.
- **Vendor Ecosystem Optimization:** Moving towards a more open, multi-vendor environment for greater control and competitive pricing.

Solution

An Open, Multi-Layered Network Architecture. EXATEL deployed a comprehensive open networking solution centered around IP Infusion's

Highlights

- **Vendor Independence and Supply Chain Optimization:** By disaggregating hardware and software, EXATEL gained the freedom to select best-in-class components for its core, aggregation, and access networks. This ensures optimal value in performance and cost while allowing for a more resilient and flexible supply chain.

- **Accelerated Time-to-Market and Cost Efficiency:** Partnering with IP Infusion provided a centralized source for OcNOS software, hardware, and integrated support services, simplifying procurement and management. This open networking approach significantly reduced infrastructure costs and gave EXATEL the agility to accelerate the deployment of new, customized services.

- **Maximized Performance and Future-Ready Scalability:** The solution leverages Open ZR+ optics for IP-over-DWDM, consolidating network layers to reduce latency and maximize fiber utilization. This modular design supports high-bandwidth 100G and 400G links, ensuring EXATEL's network can seamlessly scale to meet future demands.

OcNOS, covering its entire Polish network and international interconnection hubs in Germany and the Czech Republic. This approach uses carrier-grade L2/L3 switching and routing with MPLS and SDN support on state-of-the-art whitebox hardware to maximize flexibility and vendor independence.
The network is structured in distinct, high-performance layers:

- **Core and Aggregation Layer**

  The foundation is a redundant core network spanning six major regional centers within Poland to minimize latency. In surrounding metro locations, Edgecore routers are deployed for provider edge (PE) and aggregation functions.

  - PE and Aggregation: For core and aggregation layer, Exatel deployed high capacity Edgecore routers running **OcNOS-SP-MPLS-2400** and **OcNOS-SP-PLUS-2400.**

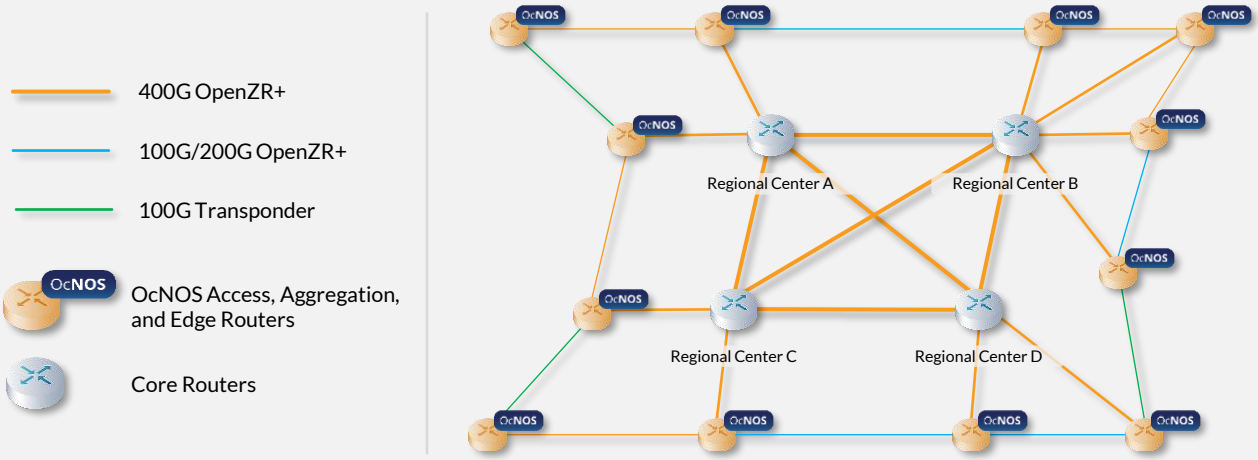
- **Flexible Edge Layer**

  At the network edge, EXATEL uses a dual-vendor model to optimize service delivery based on specific customer needs:

  - High-Density Access: For cost-effective connectivity, EXATEL uses Edgecore whitebox routers with high-density, lower-speed ports. These run on IP Infusion's **OcNOS-SP-MPLS-800** software.
  - High-Bandwidth Access: For bandwidth-intensive deployments, UfiSpace whitebox routers provide 100G/400G interfaces. These serve as access routers or smaller PEs and run on OcNOS-**SP-MPLS-800** and **OCNOS-SP-PLUS-800** software.

- **Enabling Technologies**

  Open ZR+ optics enable IP-over-DWDM interconnections that maximize the utilization of EXATEL's fiber network. The open optics ecosystem, offered by OcNOS, enables Exatel to select their preferred optics suppliers.



EXATEL Reference Network Topology

Summary

EXATEL has successfully transformed its network by deploying a vendor-neutral solution using IP Infusion's OcNOS software on open networking hardware. The strategic modernization has significantly enhanced the network's scalability, flexibility, and overall cost-efficiency. The new platform positions EXATEL as a leader in delivering innovative, customer-centric services.

> "With IP Infusion's OcNOS, we have transformed our network into a modular, programmable platform that delivers unmatched flexibility and resilience." — Jacek Terpiłowski, CTO of EXATEL

> "It is a privilege to support EXATEL in building the future of networking in Poland with our OcNOS software, enabling a future-proof and cost-efficient open network." – Kelly LeBlanc, COO 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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