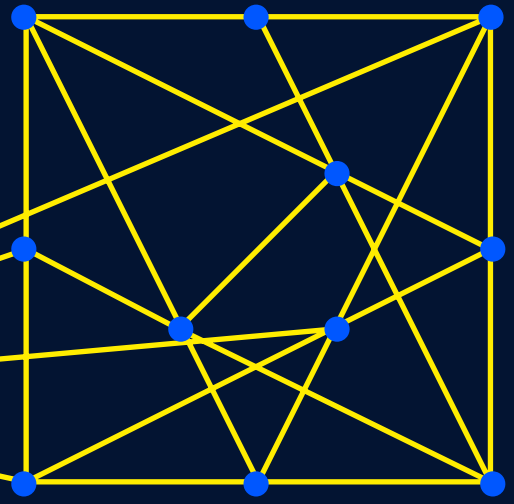


# Elastic MPLS

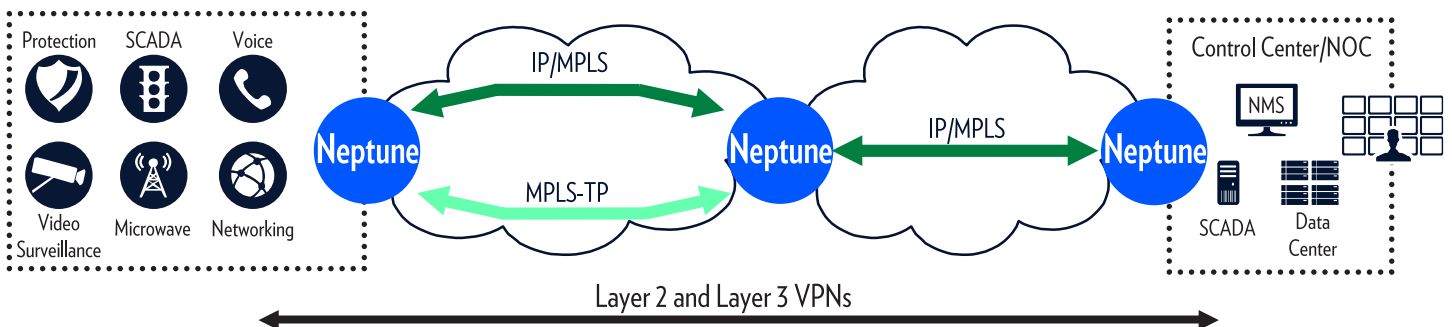
## BENEFITS FOR MISSION-CRITICAL BUSINESSES



### MAKING MPLS WORK FOR MISSION-CRITICAL APPLICATIONS

Utilities and infrastructure providers are under ever-increasing pressure from regulators, customers, and governments to improve the performance of their networks. They are expected to improve the safety and security of their networks, make use of the opportunities offered by IoT, provide improved customer satisfaction, and provide increased network efficiency to reduce carbon footprint. This is best achieved by migrating to a secure, always-up packet network, able to deliver the best of both worlds. Core and IT services require a fully-flexible packet network for efficient communications, which is best supported by IP/MPLS technology. However, mission-critical operations technologies (OT), like SCADA and teleprotection, require deterministic behavior from the telecoms network to operate correctly, and are best supported by MPLS-TP. ECI developed Elastic MPLS to allow operators to support both of these technologies, providing MPLS-TP and IP/MPLS on the same network element, with gateway functionality between them.

<b>Converged network</b> supporting both IT and OT services	<b>Risk-free transition</b> tailor made evolution for legacy services	<b>Optimized multiservice</b> optimizes cost and performance	<b>Centralized control</b> for integrated, intuitive control of the network
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# Elastic MPLS - THE BEST OF BOTH WORLDS

## YOUR CHALLENGES

## OUR SOLUTIONS

### Supporting IT and OT services from a converged packet network

Elastic MPLS makes a **converged packet network** for IT and OT services a reality. A **dual stack** implementation allows IP/MPLS and MPLS-TP to operate in the same network, and an **MPLS gateway** provides a simple transition between them.

### Risk-free transition to packet

Elastic MPLS allows **risk-free transition to packet**. For example:

- IT services, like corporate voice and data, can be mapped directly to IP/MPLS.
- Mission-critical OT services, like teleprotection and SCADA, can be mapped to packet, using Circuit Emulation Services (CES). MPLS-TP is used to provide the determinism and OAM, which is essential for these services to operate.

### Optimized support for all service types

Elastic MPLS provides an **optimized multiservice platform**, allowing the network engineer to choose the optimal technology to maximize performance while minimizing costs for each service and network region:

- MPLS-TP is strictly connection-orientated and hence provides the predictability essential for error-free operation of OT services like teleprotection and SCADA.
- IP/MPLS provides optimized, dynamic support for IT services. It is the ubiquitous standard for transporting Layer 3 services and supports all MEF-certified services. Its multicast capabilities make it widely used for video delivery and IP CCTV connectivity.
- The IP/MPLS capabilities provided by elastic MPLS also allow easy introduction of commercial services for those companies wishing to evolve to become UTelcos

### Controlling the network

A single management platform provides integrated, **intuitive, and centralized control** of the entire network. This integrated platform allows services to be easily set up and monitored across both IP/MPLS and MPLS-TP network segments with intuitive support for the different OAM, QoS, and protection mechanisms used by IP/MPLS and MPLS-TP:

- IP/MPLS guarantees QoS per application, regardless of the traffic being transported, and rate control and load balancing allow traffic to be prioritized and/or steered away from congested links.
- IP/MPLS uses fast reroute (FRR) mechanisms, allowing traffic to be rerouted in the event of single and multiple failures.
- MPLS-TP embeds OAM functionality in the data plane, allowing OAM similar to that provided by SDH/SONET. This allows MPLS-TP to enforce the same strict SLAs as those used in SDH/SONET.
- MPLS-TP uses predetermined alternative paths for protection, giving sub-50ms protection switching for all network topologies. For services like SCADA and tele-protection to continue to operate correctly, these predetermined paths must meet the same strict requirements for low latency, jitter, and delay as the primary paths.

Contact us to discover how ECI ensures risk-free and future-proof transition to packet



## ABOUT ECI TELECOM

ECI is a global provider of ELASTIC network solutions to CSPs, utilities as well as data center operators. Along with its long-standing, industry-proven packet-optical transport, ECI offers a variety of SDN/NFV applications, end-to-end network management, a comprehensive cyber security solution, and a range of professional services. ECI's ELASTIC solutions ensure open, future-proof, and secure communications. With ECI, customers have the luxury of choosing a network that can be tailor-made to their needs today – while being flexible enough to evolve with the changing needs of tomorrow. For more information, visit us at [www.ecitele.com](http://www.ecitele.com)