

“Service Requirements for Optical VPNs”

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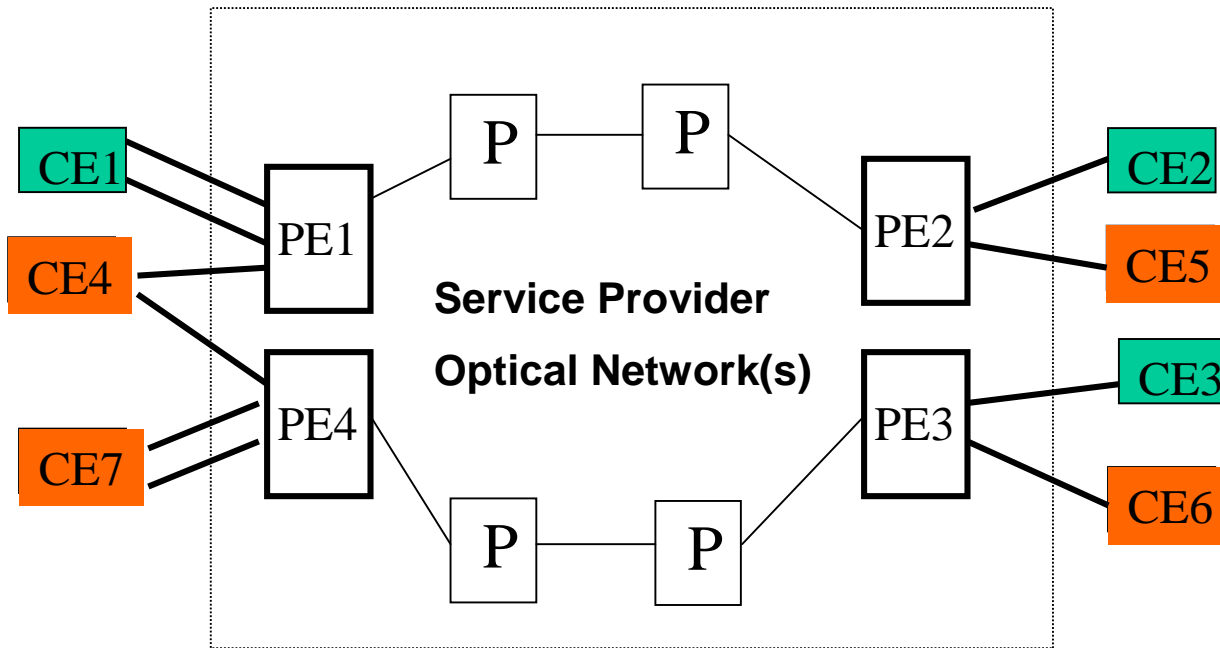
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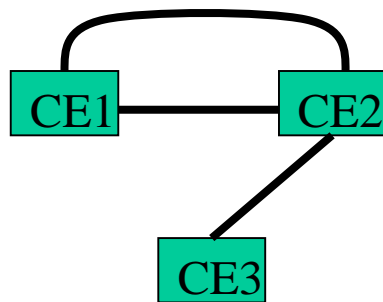
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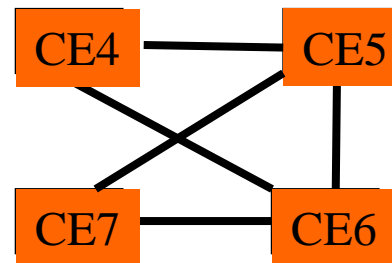
OVPN Reference Model



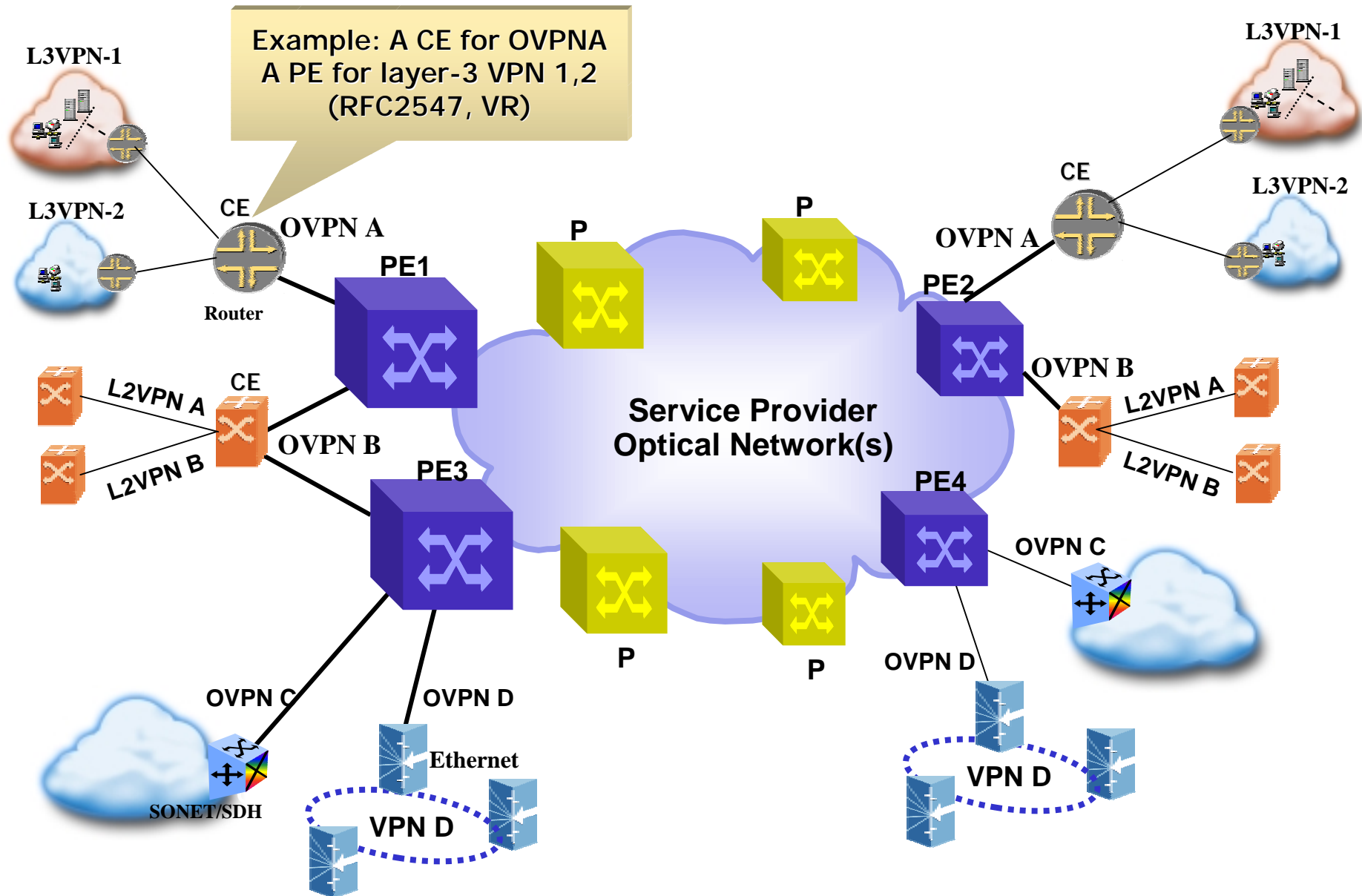
OVPN A



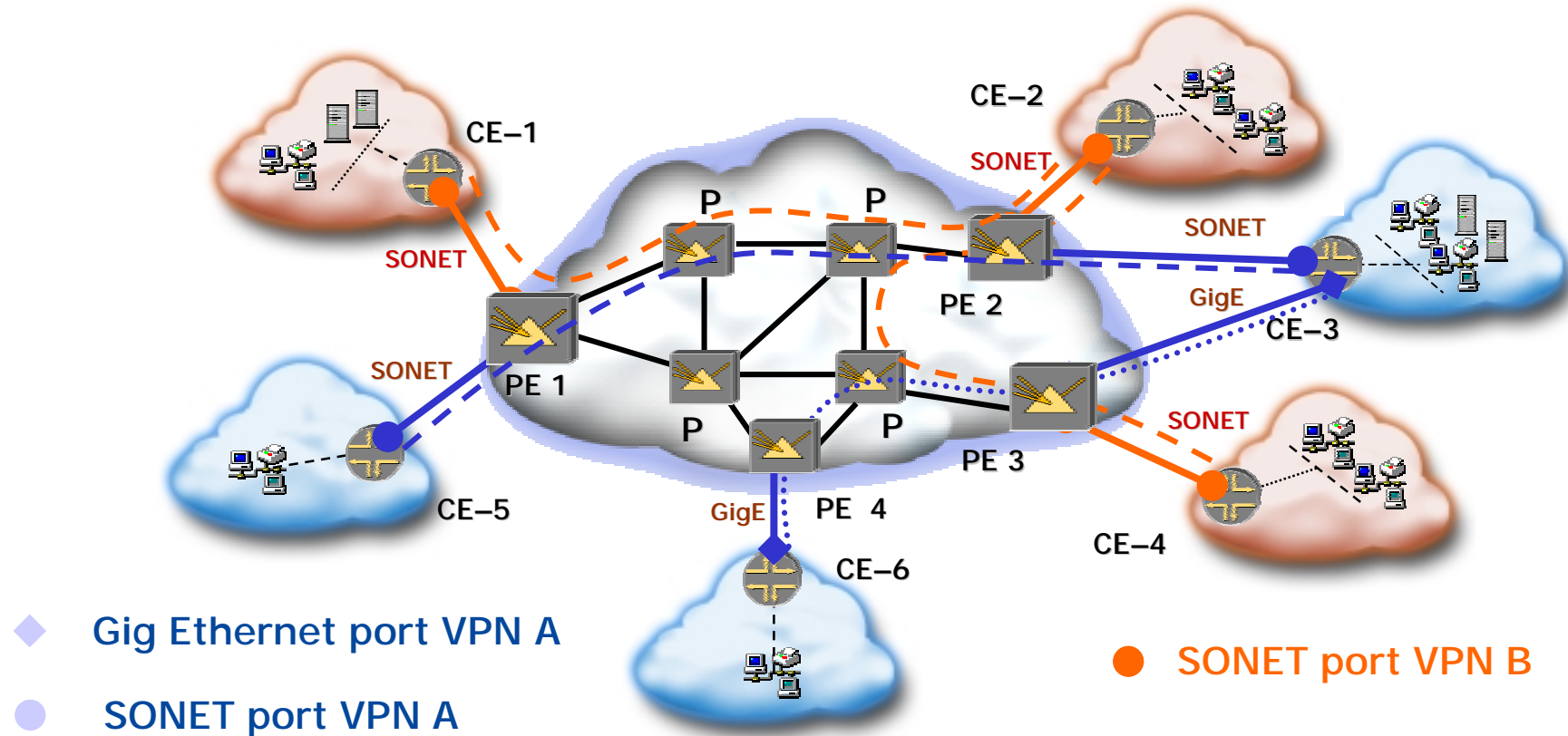
OVPN B



Optical VPN Network Reference Model

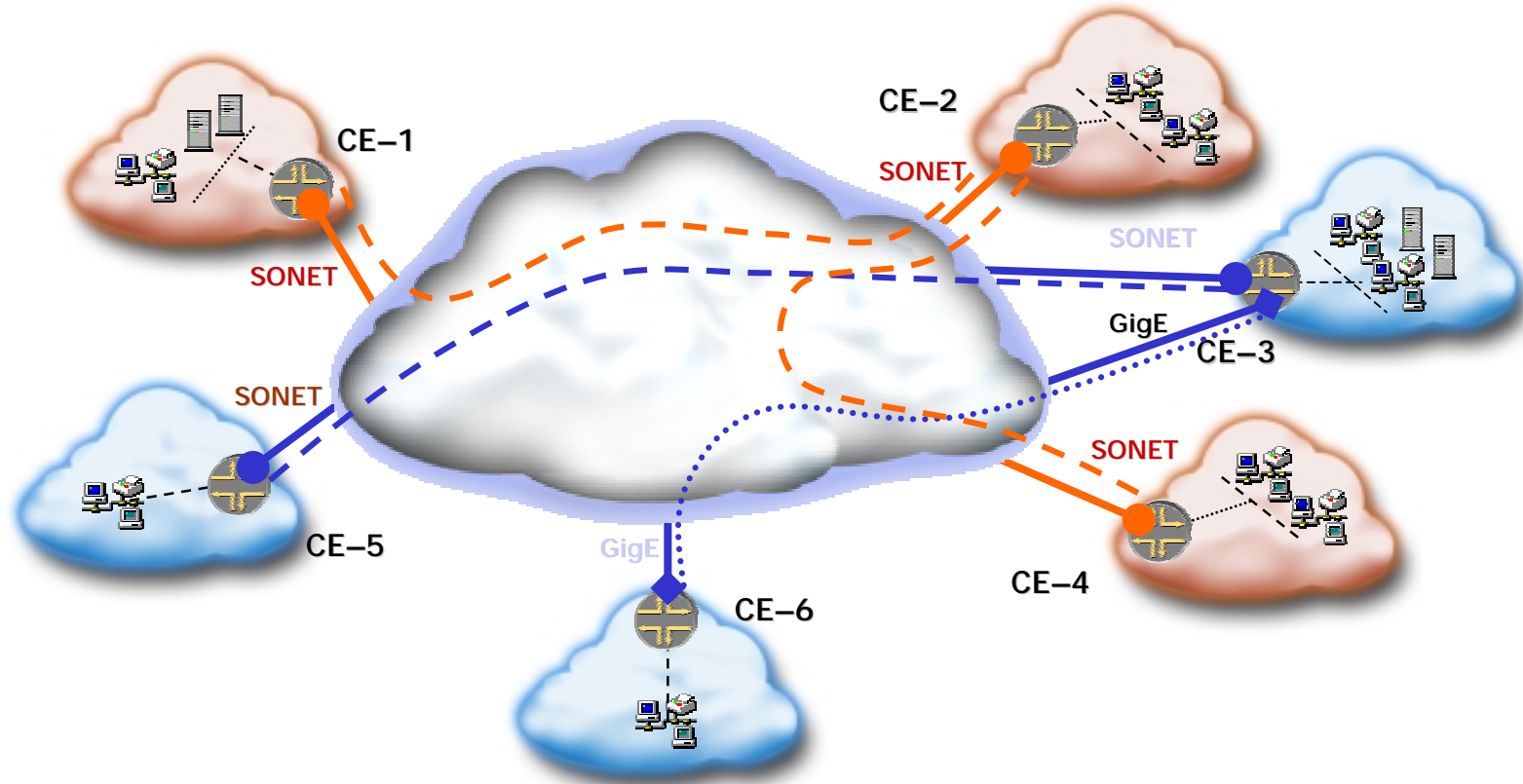


Optical VPN Service - Example



The basic unit of the OVPN service is an optical or TDM connection between a pair of CEs, or to be more precise, between a port on one CE and a port on another CE.

OVPN - Customer's view



- ◆ Gig Ethernet port VPN A (CE-6 and CE-3)
- SONET port VPN A (CE-5 and CE-3)
- SONET port VPN B (CE-1 and CE-2, CE2 and CE-4)

- Port-based scope.
- Some similarities between OVPNs and layer-3/2 VPNs with respect to VPN constructs.
- OVPN architectures should be built from IP related building blocks.
- General Requirements (some requirements)
 - The OVPN service SHOULD provide support for a broad spectrum of OVPN topologies, such as hub-and-spoke, full mesh, arbitrary, etc.
- Service Provider Network Requirements
 - To provide OVPN service that scales to a large number of customers, no single component of the service provider networks should be required to maintain all the information about all the OVPNs.
 - Simplified provisioning (e.g., when adding/deleting a port to/from a given OVPN).
- Customer Requirements
 - Overlapping addresses
 - Constrained/restricted connectivity.
 - Privacy/independence with respect to addressing and routing.

See the draft for more requirements

Goal

Optical VPNs to be part of PPVPN charter.