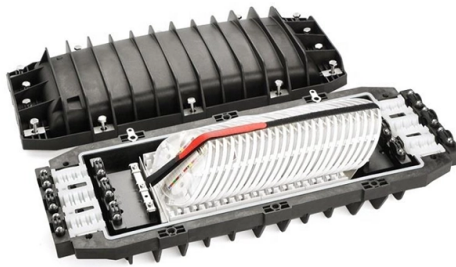


PE Routers and Core Switches



Summary of Content

PE routers act as the gateway between customer networks and the provider's core, while core switches or P routers handle high-speed packet forwarding within the network backbone.

PE Routers

Provider Edge (PE) routers are positioned at the edge of a service provider's network and serve as the direct interface to customer networks via Customer Edge (CE) routers . They perform several critical functions:

- **Traffic Management:** PE routers manage incoming and outgoing traffic, applying policies such as Quality of Service (QoS) and VPN segmentation .
- **MPLS Label Handling:** They add MPLS labels to packets from the customer network for efficient forwarding through the core and remove labels for traffic returning to the customer .
- **Redundancy and Reliability:** PE routers often operate in dual-homed configurations with ICCP (Inter-Chassis Communication Protocol) to provide active/standby failover, ensuring minimal disruption during link or device failures .
- **Virtualization Support:** They can implement Multichassis Link Aggregation (MC-LAG) and Virtual Routing and Forwarding (VRF) to isolate multiple customer networks on a single physical device .

Core Switches and P Routers

Article Content

Provider router

In Multiprotocol Label Switching (MPLS), a P router or provider router is a label switch router (LSR) that functions as a transit router

The Role of PE Routers in Networking | NSC

A Provider Edge (PE) router serves as a crucial junction in network communications, marking the interface between a

Multi Protocol Label Switching (MPLS)

Multi-Protocol Label Switching (MPLS) is an advanced packet-forwarding technique used in modern networks. Instead

P Router vs PE Router: Differences Explained

P routers are dedicated to high-speed core switching, while PE routers manage complex customer services. Combining them would

MPLS Labels and Devices

This lesson explains the MPLS header and devices that we use (P, PE, CE). We also explain the label push, swap and pop operation.

Understanding PE Routers in Modern Networks

PE routers and CE routers are key to connecting businesses with service provider networks. Each router has a

Provider edge router

PE routers do not need to be aware of what kind of traffic is coming from the provider's network, as opposed to a P router that

Chapter 4

While the domain creating the MPLS L3 service consisting of P and PE routers remains the same regardless of access

Chapter 3

This Cisco Validated Design (CVD) focuses on the role of Cisco ASR 9000 Series Aggregation Services Routers (ASR

MPLS Label Switching | MPLS Operation | Push, Swap, Push * IPCisco

P Routers are the Service Provider backbone routers. It is the network that the main MPLS Label swapping takes place. Key Point:

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