Configuring L2TPv3

This chapter describes how to configure the L2TPv3 in Cisco IOS Software Release 15.1(3)S.

Note For complete syntax and usage information for the commands used in this chapter, see the Cisco 7600 Series Router Cisco IOS Command Reference at this URL: http://www.cisco.com/en/US/products/ps6922/prod_command_reference_list.html

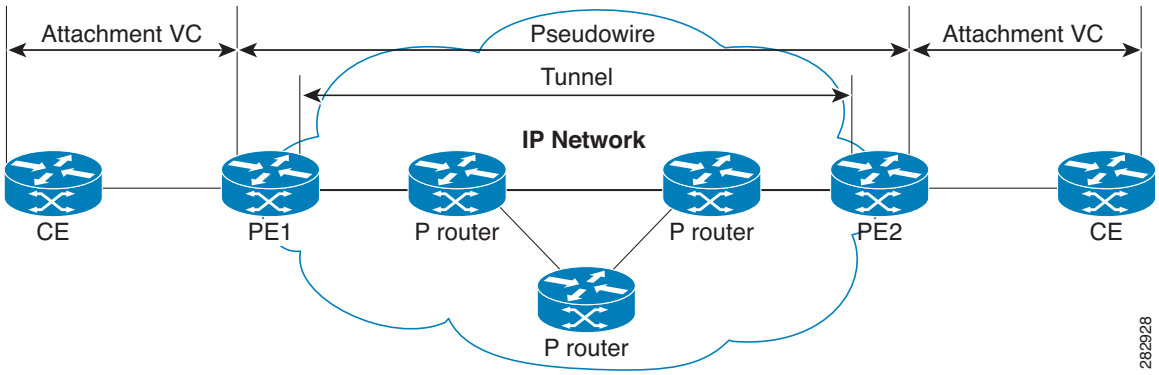
This chapter includes the following sections:

Understanding L2TPv3

The Layer 2 Tunneling Protocol version 3 (L2TPv3) feature employs L2TPv3 and pseudowire (PW) technology to provide tunneling service to Ethernet traffic. The feature is developed for SUP720-3B/3BXL and RSP720 routers, which function as Provider Edge (PE) routers in the network topologies recommended by RFC3985 Pseudowire Emulation Edge-to-Edge (PWE3) architecture. L2TPv3 also supports inter-operability between the Cisco 7600 router and any standard compliant Cisco or non-Cisco device.

A L2TPv3 tunnel is a control connection between two PE routers. One L2TPv3 tunnel can have multiple data connections, and each data connection is termed as an L2TPv3 session. The control connection is used to establish, maintain, and release sessions. Each session is identified by a session ID which is unique across the entire router.

Figure 19-1 Network Topology for L2TPv3



In Figure 19-1, the attachment Virtual Circuit (VC) represents a physical or a logical port that connects a Customer Edge (CE) device to a Provider Edge (PE) device. A pseudowire is defined as a VC connecting two attachment VCs, and it consists of two L2TPv3 tunnel paths, one in each direction.

Restrictions for L2TPv3

Following restrictions apply to L2TPv3:

- Layer 2 facing line card must be an L2TPv3 supporting line card.
- There must be at least one distinct L2TPv3 tunnel per Layer 2 facing linecard.
- The L2TPv3 feature on a Cisco 7600 router is supported on ES+ and SIP 400 line cards.
- The Cisco 7600 router supports only IPv4 tunnelling for the Layer 2 frames.
- The L2TPv3 feature does not support configurations such as EoL2TPv3oMPLS on the encapsulating PE.
- The L2TPv3 feature supports a maximum of 16,000 pseudowires.
- L2TPv3 is not supported in conjunction with EVC features. L2TPv3 coexists with EVC on the same port. That is, while one sub-interface is used to tunnel dot1q tagged traffic over L2TP, another sub-interface is used to perform EVC features.
- Effective with Cisco IOS release 15.1(3)S, 4000 IP tunnels are supported on ES+ line cards.
- The L2TPv3 feature does not support SSO. You must enable cookies for L2TPv3 session on HA setups.

Configuring L2TPv3

For information on configuring the L2TPv3, please see:
http://www.cisco.com/en/US/docs/routers/7600/install_config/ES40_config_guide/es40_chap4.html