PPPoE over BDI

The PPPoE over BDI feature terminates PPPoE subscribers through a VXLAN L2 overlay network onto a Cisco Bride Domain Interface (BDI).

Restrictions for PPPoE over BDI

- Service-policy queuing feature is not supported on BDI interface.

- If there is a Qos policy with queuing feature configured on the virtual template then the policy will not be applied to the session.

Information About PPPoE over BDI

PPPoE

PPPoE is a commonly used application in the deployment of digital subscriber lines (DSLs). PPPoE supports PPPoE on the client and the server.

Bridge Domain Interface

Bridge domain interface (BDI) is a logical interface that allows bidirectional flow of traffic between a Layer 2 bridged network and a Layer 3 routed network traffic. Bridge domain interfaces are identified by the same index as the bridge domain. Each bridge domain represents a Layer 2 broadcast domain. Only one bridge domain interface can be associated with a bridge domain.

Bridge domain interface supports:

- IP termination

- Layer 3 VPN termination

- Address Resolution Protocol (ARP), G-ARP, and P-ARP handling

- MAC address assignment

PPPoE over BDI

PPPoE session request from PPPoE subscriber is terminated on CSR1000v through a VxLAN tunnel. The VxLAN tunnel between Edge Router and CSR1000v provides a layer2 connection for PPPoE packets.

How to Configure PPPoE over BDI

Enabling PPPoE over BDI

```
configure terminal
interface BDI10
 no ip address
 vlan-id dot1q 10
  pppoe enable group global
exit
```

Disabling PPPoE over BDI

```
configure terminal
interface BDI10
 no ip address
 vlan-id dot1q 10
  no pppoe enable group global
exit
```

Configuration Examples for PPPoE over BDI

Configuring PPPoE over BDI

```
configure terminal
aaa new-model
aaa authentication ppp default local
username c password 0 c
!
bba-group pppoe global1
virtual-template 1
!
interface virtual-template 1
ppp ipcp address required
ip unnumbered loopback0
peer default ip address pool pool1
ppp authentication pap chap
ppp timeout retry 3
ppp timeout ncp 60
!
interface BDI10
```

```
vlan-id dot1q 10
pppoe enable group global1
!
exit
```

Additional References for PPPoE over BDI

MIBs

MIB	MIBs Link
• CISCO-MIB	To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use Cisco MIB Locator found at the following URL: http://www.cisco.com/go/mibs

Technical Assistance

Description	Link
The Cisco Support website provides extensive online resources, including documentation and tools for troubleshooting and resolving technical issues with Cisco products and technologies. To receive security and technical information about your products, you can subscribe to various services, such as the Product Alert Tool (accessed from Field Notices), the Cisco Technical Services Newsletter, and Really Simple Syndication (RSS) Feeds. Access to most tools on the Cisco Support website requires a Cisco.com user ID and password.	http://www.cisco.com/cisco/web/support/index.html

Feature Information for PPPoE over BDI

The following table provides release information about the feature or features described in this module. This table lists only the software release that introduced support for a given feature in a given software release train. Unless noted otherwise, subsequent releases of that software release train also support that feature.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to www.cisco.com/go/cfn. An account on Cisco.com is not required.

Table 1: Feature Information for PPPoE over BDI