

Routing
Switching
Tigers
Forum



L2VPN



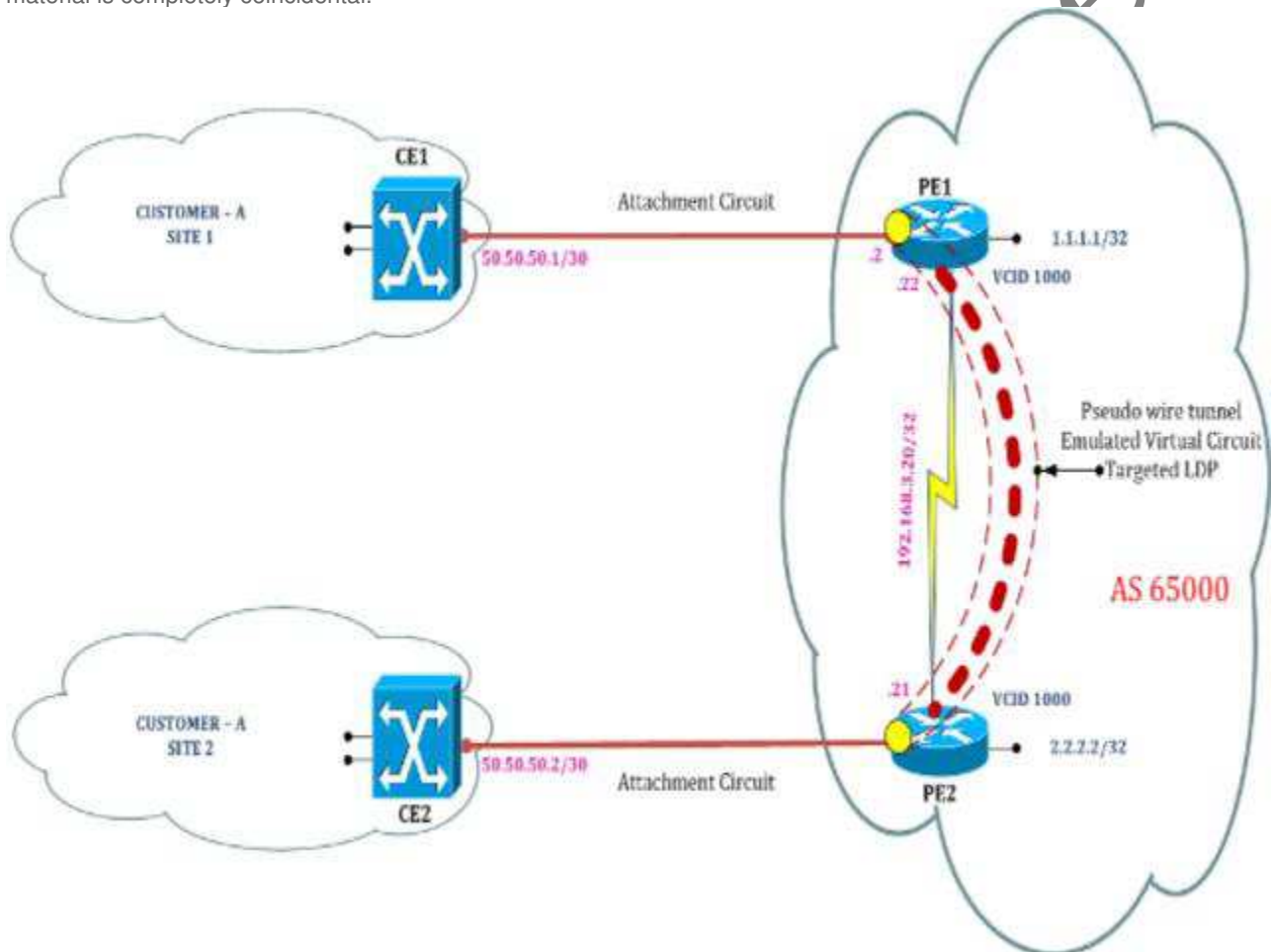
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EoMPLS – Pseudowire Tunnel (Ethernet Port Mode)

Disclaimer

This Configuration Guide is designed to assist members to enhance their skills in particular technology area. While every effort has been made to ensure that all material is as complete and accurate as possible, the enclosed material is presented on an “as is” basis. Neither the authors nor Forum assume any liability or responsibility to any person or entity with respect to loss or damages incurred from the information contained in this guide. This configuration guide was developed by Forum. Any similarities between material presented in this configuration guide and any other material is completely coincidental.



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CE1 Router:

```
ip cef
!  
interface FastEthernet0/0  
description Connected to PE1  
ip address 50.50.50.1 255.255.255.252  
!  
end
```

CE2 Router:

```
ip cef
!  
interface FastEthernet0/0  
description Connected to PE2  
ip address 50.50.50.2 255.255.255.252  
!  
end
```

PE1 Router:

```
ip cef
!  
mpls label protocol ldp  
pseudowire-class MPLS_Encapsulation  
encapsulation mpls  
!  
interface Loopback0  
ip address 1.1.1.1 255.255.255.255  
ip ospf 1 area 0  
!  
interface FastEthernet0/0  
description Connected to CE1  
xconnect 2.2.2.2 1000 pw-class  
MPLS_Encapsulation  
!  
interface Serial2/0  
ip address 192.168.3.22 255.255.255.252  
ip ospf 1 area 0  
tag-switching ip  
!  
router ospf 1  
!  
tag-switching tdp router-id Loopback0 force  
!  
end
```

PE2 Router:

```
ip cef
!  
mpls label protocol ldp  
!  
interface Loopback0  
ip address 2.2.2.2 255.255.255.255  
ip ospf 1 area 0  
!  
interface FastEthernet0/0  
description Connected to CE2  
xconnect 1.1.1.1 1000 encapsulation  
mpls  
!  
interface Serial2/0  
ip address 192.168.3.21  
255.255.255.252  
ip ospf 1 area 0  
tag-switching ip  
!  
router ospf 1  
!  
tag-switching tdp router-id Loopback0  
force  
!  
end
```

Verification:

CE1#ping 50.50.50.2

Type escape sequence to abort.

Sending 5, 100-byte ICMP Echos to 50.50.50.2, timeout is 2 seconds:

!!!!!

Success rate is 100 percent (5/5), round-trip min/avg/max = 64/118/236 ms

CE2#ping 50.50.50.1

Type escape sequence to abort.

Sending 5, 100-byte ICMP Echos to 50.50.50.1, timeout is 2 seconds:

!!!!!

Success rate is 100 percent (5/5), round-trip min/avg/max = 104/172/248 ms

PE1#show mpls l2transport vc

Local intf	Local circuit	Dest address	VC ID	Status
------------	---------------	--------------	-------	--------

Fa0/0	Ethernet	2.2.2.2	1000	UP
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PE2#show mpls l2transport vc

Local intf	Local circuit	Dest address	VC ID	Status
------------	---------------	--------------	-------	--------

Fa0/0	Ethernet	1.1.1.1	1000	UP
-------	----------	---------	------	----

PE1#debug mpls l2transport signaling message

AToM LDP message debugging is on

00:01:14: AToM LDP [2.2.2.2]: Sending label mapping msg

vc type 5, cbit 1, vc id 1000, group id 0, vc label 16, status 0, mtu 1500

00:01:14: AToM LDP [2.2.2.2]: Received label mapping msg, id 8, graceful restart instance 1

vc type 5, cbit 1, vc id 1000, group id 0, vc label 16, status 0, mtu 1500

NOTE: As seen above VC labels are exchanged between PE routers after the targeted-LDP session is established. It also shows each peer sends a Label Mapping message which contains FEC TLV, Label TLV and optional interface parameters. VC Type 5 indicates Ethernet Port mode.

PE1#show mpls l2transport vc detail

Local interface: Fa0/0 up, line protocol up, Ethernet up
Destination address: 2.2.2.2, VC ID: 1000, VC status: up
Next hop: point2point
Output interface: Se2/0, imposed label stack {18}
Create time: 00:12:43, last status change time: 00:12:15
Signaling protocol: LDP, peer 2.2.2.2:0 up
MPLS VC labels: local 18, remote 18
Group ID: local 0, remote 0
MTU: local 1500, remote 1500
Remote interface description: Connected to CE2
Sequencing: receive disabled, send disabled

VC statistics:

packet totals: receive 97, send 98

byte totals: receive 10984, send 11106

packet drops: receive 0, seq error 0, send 0

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