

Routing
Switching
Tigers
Forum



MPLS

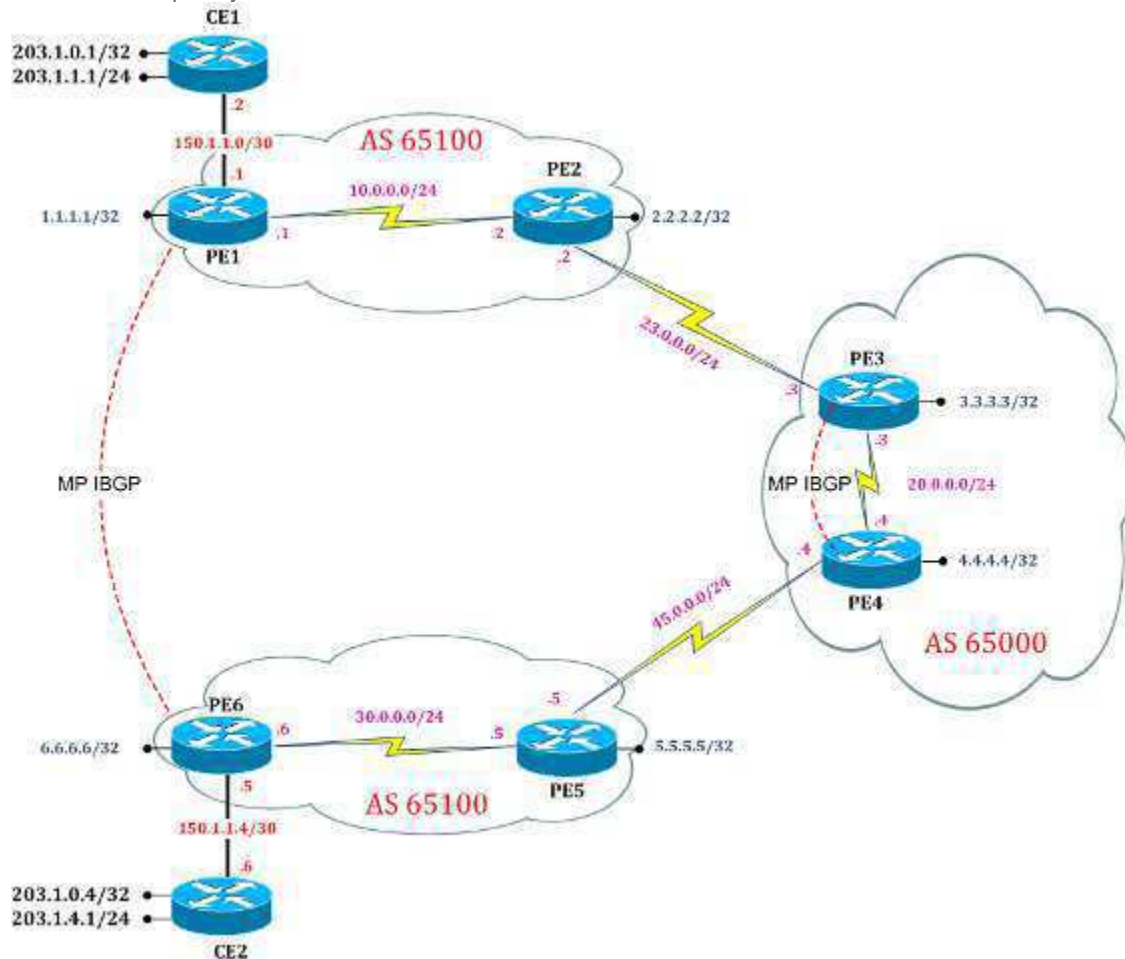
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CE1 Router:ip cef!

```
interface Loopback1
ip address 203.1.0.1 255.255.255.255
!
interface Loopback2
```

CE2 Router:ip cef

```
!
interface Loopback1
ip address 203.1.0.4 255.255.255.255
!
```

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```
ip address 203.1.1.1 255.255.255.0
!
interface FastEthernet0/0
ip address 150.1.1.2 255.255.255.252
!
ip route 0.0.0.0 0.0.0.0 150.1.1.1
!
end
```

```
interface Loopback2
ip address 203.1.4.1 255.255.255.0
!
interface FastEthernet0/0
ip address 150.1.1.6 255.255.255.252
!
ip route 0.0.0.0 0.0.0.0 150.1.1.5
!
end
```

PE1 Router:ip cef!

```
ip vrf vpna
rd 3:1
route-target export 3:1
route-target import 3:1
!
mpls label protocol ldp
!
interface Loopback1
ip address 1.1.1.1 255.255.255.255
!
interface FastEthernet0/0
ip vrf forwarding vpna
ip address 150.1.1.1 255.255.255.252
!
interface Serial2/0
ip address 10.0.0.1 255.255.255.0
mpls ip
!
router ospf 1
network 1.1.1.0 0.0.0.0 area 0
network 10.0.0.0 0.0.0.255 area 0
!
router bgp 65100
no synchronization
neighbor 6.6.6.6 remote-as 65100
neighbor 6.6.6.6 update-source Loopback1
no auto-summary
```

PE6 Router:ip cef!ip vrf vpna

```
rd 3:1
route-target export 3:1
route-target import 3:1
!
mpls label protocol ldp
!
interface Loopback1
ip address 6.6.6.6 255.255.255.255
!
interface FastEthernet0/0
ip vrf forwarding vpna
ip address 150.1.1.5 255.255.255.252
!
interface Serial2/0
ip address 30.0.0.6 255.255.255.0
mpls ip
!
router ospf 1
network 6.6.6.6 0.0.0.0 area 0
network 30.0.0.6 0.0.0.0 area 0
!
router bgp 65100
no synchronization
neighbor 1.1.1.1 remote-as 65100
neighbor 1.1.1.1 update-source Loopback1
no auto-summary
!
```

```

!
address-family vpnv4
neighbor 6.6.6.6 activate
neighbor 6.6.6.6 send-community extended
exit-address-family
!
address-family ipv4 vrf vpna
redistribute connected
redistribute static
no synchronization
exit-address-family
!
ip route vrf vpna 203.1.0.1 255.255.255.255
150.1.1.2
ip route vrf vpna 203.1.1.0 255.255.255.0 150.1.1.2
!
mpls ldp router-id Loopback1
!
end

```

```

address-family vpnv4
neighbor 1.1.1.1 activate
neighbor 1.1.1.1 send-community extended
exit-address-family
!
address-family ipv4 vrf vpna
redistribute connected
redistribute static
no synchronization
exit-address-family
!
ip route vrf vpna 203.1.0.4 255.255.255.255
150.1.1.6
ip route vrf vpna 203.1.4.0 255.255.255.0 150.1.1.6
!
mpls ldp router-id Loopback1
!
end

```

PE2 Router:ip cef!mpls label protocol ldp

```

!
interface Loopback1
ip address 2.2.2.2 255.255.255.255
!
interface Serial2/0
ip address 10.0.0.2 255.255.255.0
mpls ip
!
interface Serial2/1
ip address 23.0.0.2 255.255.255.0
!
router ospf 1
redistribute bgp 65100 metric 10 subnets
network 2.2.2.2 0.0.0.0 area 0
network 10.0.0.0 0.255.255.255 area 0
network 23.0.0.0 0.255.255.255 area 0
!

```

PE5 Router:ip cef!mpls label protocol ldp

```

!
interface Loopback1
ip address 5.5.5.5 255.255.255.255
!
interface Serial2/0
ip address 30.0.0.5 255.255.255.0
mpls ip
!
interface Serial2/1
ip address 45.0.0.5 255.255.255.0
!
router ospf 1
redistribute bgp 65100 metric 10 subnets
network 5.5.5.5 0.0.0.0 area 0
network 30.0.0.0 0.255.255.255 area 0
network 45.0.0.0 0.255.255.255 area 0
!

```

```
router bgp 65100
no synchronization
redistribute ospf 1 metric 10 match internal external 1
external 2
neighbor 23.0.0.3 remote-as 65000
neighbor 23.0.0.3 send-label
no auto-summary
!
mpls ldp router-id Loopback1
!
end
```

```
router bgp 65100
no synchronization
redistribute ospf 1 metric 10 match internal external 1
external 2
neighbor 45.0.0.4 remote-as 65000
neighbor 45.0.0.4 send-label
no auto-summary
!
mpls ldp router-id Loopback1
!
end
```

PE3 Router:ip cef!ip vrf SP1-vpna

```
rd 3:11
route-target export 3:11
route-target import 3:11
!
mpls label protocol ldp
!
interface Loopback1
ip address 3.3.3.3 255.255.255.255
!
interface Serial2/0
ip address 20.0.0.3 255.255.255.0
mpls ip
!
interface Serial2/1
ip vrf forwarding SP1-vpna
ip address 23.0.0.3 255.255.255.0
!
router ospf 64
network 3.3.3.0 0.0.0.0 area 0
network 20.0.0.0 0.255.255.255 area 0
!
router bgp 65000
no synchronization
neighbor 4.4.4.4 remote-as 65000
neighbor 4.4.4.4 update-source Loopback1
```

PE4 Router:ip cef!ip vrf SP1-vpna

```
rd 3:11
route-target export 3:11
route-target import 3:11
!
mpls label protocol ldp
!
interface Loopback1
ip address 4.4.4.4 255.255.255.255
!
interface Serial2/0
ip address 20.0.0.4 255.255.255.0
mpls ip
!
interface Serial2/1
ip vrf forwarding SP1-vpna
ip address 45.0.0.4 255.255.255.0
!
router ospf 64
network 4.4.4.4 0.0.0.0 area 0
network 20.0.0.0 0.255.255.255 area 0
!
router bgp 65000
no synchronization
neighbor 3.3.3.3 remote-as 65000
neighbor 3.3.3.3 update-source Loopback1
```

```
no auto-summary
!
address-family vpnv4
neighbor 4.4.4.4 activate
neighbor 4.4.4.4 send-community extended
exit-address-family
!
address-family ipv4 vrf SP1-vpna
redistribute connected
neighbor 23.0.0.2 remote-as 65100
neighbor 23.0.0.2 activate
neighbor 23.0.0.2 as-override
neighbor 23.0.0.2 send-label
no synchronization
exit-address-family
!
mpls ldp router-id Loopback1 force
!
end
```

```
no auto-summary
!
address-family vpnv4
neighbor 3.3.3.3 activate
neighbor 3.3.3.3 send-community extended
exit-address-family
!
address-family ipv4 vrf SP1-vpna
redistribute connected
neighbor 45.0.0.5 remote-as 65100
neighbor 45.0.0.5 activate
neighbor 45.0.0.5 as-override
neighbor 45.0.0.5 send-label
no synchronization
exit-address-family
!
mpls ldp router-id Loopback1 force
!
end
```

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