Configure mVPN Profiles for IPv6 Within Cisco IOS

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Contents

Introduction

This document describes how to configure each Multicast VPN (mVPN) profile within the Cisco IOS® for IPv6 only.

Note: The configurations that are described in this document apply to the Provider Edge (PE) routers.

Prerequisites

Requirements

Before you proceed with the configuration that is described in this document, verify whether there is support for an mVPN profile on the specific platform that runs Cisco IOS.

Components Used

The information in this document is based on all versions of Cisco IOS.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Background Information

Note: The VRF that is used throughout this document is ***VRF one***.

An mVPN profile is configured for the global context or per Virtual Routing/Forwarding (VRF). Only the newer way to define a VRF (VRF definition) can be used in order to enable IPv6 for mVPN profiles. Here is an example:

```
vrf definition one
 rd 1:1
 vpn id 1000:2000
 !
 address-family ipv4
  mdt auto-discovery mldp
  mdt default mpls mldp 10.100.1.3
  route-target export 123:456
  route-target import 123:456
 exit-address-family
 !
 address-family ipv6
  mdt default mpls mldp 10.100.1.3
  route-target export 123:456
  route-target import 123:456
 exit-address-family
```

Multicast−routing for IPv6 must be enabled for the profiles in the global context. Additionally, the Protocol Independent Multicast Version 6 (PIMv6) must be enabled on the global loopback interface. This is true if the ***ipv6 multicast−routing*** command is enabled, and if the loopback interface has an IPv6 address or the ***ipv6 enable*** command is configured on the loopback interface.

```
ipv6 multicast-routing
```

Multicast routing for IPv6 must be enabled on the VRF for the profiles in the VRF context.

```
ipv6 multicast-routing vrf one
```

It is a good practice to enable the logging of Multipoint Label Distribution Protocol (MLDP) with this global command for the profiles with MLDP:

```
mpls mldp logging notifications
```

The PIM for IPv6 is enabled by default on the interfaces in the global or VRF context if the respective ***ipv6 multicast−routing*** or ***ipv6 multicast−routing vrf one*** command is configured.

```
interface Ethernet0/0
 vrf forwarding one
 ip address 10.2.1.1 255.255.255.0
 ip pim sparse−mode
 ipv6 address 2001:DB8:1::1/64
```

This means that the ***ipv6 pim*** command is enabled by default on the interfaces. For the profiles with VRF, 6 Virtual Provider Edge (6VPE) must be fully operational for the unicast traffic. For the profile 7, 6 Provider Edge (6PE) must be fully operational for the unicast traffic.

Note: In order for multicast to work, unicast must be fully operational.

Configure

This section describes how to configure the mVPN profiles within the Cisco IOS.

Note: Use the Command Lookup Tool (registered customers only) in order to obtain more information on the commands used in this section.

VPN−ID

The VPN−ID that is configured for the VRF is only required for the profiles that use MLDP as the core tree protocol and Default Multicast Distribution Tree (MDT).

```
vrf definition one
 rd 1:1
 vpn id 1000:2000
```

IPv4 and IPv6 Enabled for mVPN

For the profiles with Default MDT and Generic Routing Encapsulation (GRE), if mVPN is enabled for IPv4 and IPv6, then the same Default MDT must be used for both of the Address Families (AFs).

You cannot mix different profiles for the different AFs.

For the profiles with Partitioned MDT with MLDP, if mVPN is enabled for IPv4 and IPv6, a different Partitioned MDT is signaled for each AF for the same root PE router. The MLDP tree will have a different Global Identifier (GID) in the *Opaque* value. The same Label Switched Path Virtual Interface (LSPVIF) interface is used for both AFs.

Here is an example where profile 14 is used for both AFs IPv4 and IPv6:

```
vrf definition one
 rd 1:1
 vpn id 1000:2000
 !
 address−family ipv4
  mdt auto−discovery mldp
  mdt partitioned mldp p2mp
  mdt overlay use−bgp
  route−target export 123:456
```

```
  route-target import 123:456
 exit-address-family
 !
 address-family ipv6
  mdt auto-discovery mldp
  mdt partitioned mldp p2mp
  mdt overlay use-bgp
  route-target export 123:456
  route-target import 123:456
 exit-address-family
```

The Source ***10.100.1.6*** and ***2001:DB8:2::6*** are behind the same Source PE router ***PE2***. The Multicast Routing Information Database (MRIB) entry for the IPv4 Multicast Group and the IPv6 Multicast Group uses a different Label Switched Multicast (LSM) entry or MLDP entry in the database on the ingress PE router, so both groups are forwarded on different MLDP trees.

```
PE2#show mpls mldp database opaque_type gid
LSM ID : 5   Type: P2MP   Uptime : 02:18:54
  FEC Root           : 10.100.1.2 (we are the root)
  Opaque decoded     : [gid 65536 (0x00010000)]
  Opaque length      : 4 bytes
  Opaque value       : 01 0004 00010000
  Upstream client(s) :
    None
      Expires        : N/A           Path Set ID  : 5
  Replication client(s):
    MDT  (VRF one)
      Uptime         : 02:18:54      Path Set ID  : None
      Interface      : Lspvif1
    10.100.1.4:0
      Uptime         : 00:32:50      Path Set ID  : None
      Out label (D)  : 20            Interface    : Ethernet2/0*
      Local label (U): None          Next Hop     : 10.1.2.4

LSM ID : 6   Type: P2MP   Uptime : 00:37:06
  FEC Root           : 10.100.1.2 (we are the root)
  Opaque decoded     : [gid 131072 (0x00020000)]
  Opaque length      : 4 bytes
  Opaque value       : 01 0004 00020000
  Upstream client(s) :
    None
      Expires        : N/A           Path Set ID  : 6
  Replication client(s):
    MDT  (VRF one)
      Uptime         : 00:37:06      Path Set ID  : None
      Interface      : Lspvif1
    10.100.1.4:0
      Uptime         : 00:18:38      Path Set ID  : None
      Out label (D)  : 22            Interface    : Ethernet2/0*
      Local label (U): None          Next Hop     : 10.1.2.4

PE2#show ip mfib vrf one 232.1.1.1
Entry Flags:    C - Directly Connected, S - Signal, IA - Inherit A flag,
                ET - Data Rate Exceeds Threshold, K - Keepalive
                DDE - Data Driven Event, HW - Hardware Installed
                ME - MoFRR ECMP entry, MNE - MoFRR Non-ECMP entry, MP - MFIB
                MoFRR Primary, RP - MRIB MoFRR Primary, P - MoFRR Primary
                MS  - MoFRR  Entry in Sync, MC - MoFRR entry in MoFRR Client.
I/O Item Flags: IC - Internal Copy, NP - Not platform switched,
                NS - Negate Signalling, SP - Signal Present,
                A - Accept, F - Forward, RA - MRIB Accept, RF - MRIB Forward,
                MA - MFIB Accept, A2 - Accept backup,
                RA2 - MRIB Accept backup, MA2 - MFIB Accept backup

Forwarding Counts: Pkt Count/Pkts per second/Avg Pkt Size/Kbits per second
```

```
Other counts:      Total/RPF failed/Other drops
I/O Item Counts:   FS Pkt Count/PS Pkt Count
VRF one
 (10.100.1.6,232.1.1.1) Flags:
   SW Forwarding: 374/0/100/0, Other: 122/0/122
   Ethernet0/0 Flags: A
   Lspvif1, LSM/6 Flags: F
     Pkts: 374/0

PE2#show ipv6 mfib vrf one route FF3E::4000:1
Entry Flags:    C - Directly Connected, S - Signal, IA - Inherit A flag,
                ET - Data Rate Exceeds Threshold, K - Keepalive
                DDE - Data Driven Event, HW - Hardware Installed
                ME - MoFRR ECMP entry, MNE - MoFRR Non-ECMP entry, MP - MFIB
                MoFRR Primary, RP - MRIB MoFRR Primary, P - MoFRR Primary
                MS  - MoFRR  Entry in Sync, MC - MoFRR entry in MoFRR Client.
I/O Item Flags: IC - Internal Copy, NP - Not platform switched,
                NS - Negate Signalling, SP - Signal Present,
                A - Accept, F - Forward, RA - MRIB Accept, RF - MRIB Forward,
                MA - MFIB Accept, A2 - Accept backup,
                RA2 - MRIB Accept backup, MA2 - MFIB Accept backup

Forwarding Counts: Pkt Count/Pkts per second/Avg Pkt Size/Kbits per second
Other counts:      Total/RPF failed/Other drops
I/O Item Counts:   FS Pkt Count/PS Pkt Count
VRF one
 (2001:DB8:2::6,FF3E::4000:1)
   Ethernet0/0 A
   Lspvif1, LSM/5 F
```

mVPN Profiles

This section describes the required configurations for each profile.

Profile 0 Default MDT - GRE - PIM C-mcast Signaling

Use this configuration for profile 0:

```
interface Loopback0
 ipv6 address 2001:DB8:100::2/128
!

vrf definition one
 rd 1:1
!
 address-family ipv6
  mdt default 232.1.1.1
  route-target export 123:456
  route-target import 123:456
 exit-address-family

!
interface Ethernet0/0
 vrf forwarding one
 ipv6 address 2001:DB8:2::2/64
!

router bgp 1
 bgp log-neighbor-changes
 neighbor 10.2.2.6 remote-as 65002
 neighbor 10.100.1.4 remote-as 1
 neighbor 10.100.1.4 update-source Loopback0
 neighbor 10.100.1.4 next-hop-self
 !
```

```
!
 address-family ipv4 mdt
  neighbor 10.100.1.4 activate
  neighbor 10.100.1.4 send-community both
 exit-address-family
!
 address-family vpnv6
  neighbor 10.100.1.4 activate
  neighbor 10.100.1.4 send-community both
 exit-address-family
 !
 address-family ipv6 vrf one
  redistribute connected
  neighbor 2001:DB8:2::6 remote-as 65002
  neighbor 2001:DB8:2::6 activate
 exit-address-family
!
```

Note: The ***address-family ipv4 mdt*** is required for the Default MDT that is built for IPv6 PIM/IP Multicast. You must have IPv6 enabled on the loopback interface, which means that there must be an IPv6 address or ***ipv6 enable*** command configured on the loopback interface. If multicast is enabled for IPv4 in the VRF as well, then IPv6 and IPv4 use the same Default MDT (same multicast group in the global context) and the same tunnel interface on the PE router.

Profile 1 Default MDT - MLDP MP2MP - PIM C-mcast Signaling

Use this configuration for profile 1:

```
vrf definition one
 rd 1:1
 vpn id 1000:2000
!
 address-family ipv6
  mdt default mpls mldp 10.100.1.3
  route-target export 123:456
  route-target import 123:456
 exit-address-family

ipv6 multicast-routing vrf one

!
interface Ethernet0/0
 vrf forwarding one
 ipv6 address 2001:DB8:2::2/64
!

router bgp 1
 bgp log-neighbor-changes
 neighbor 10.2.2.6 remote-as 65002
 neighbor 10.100.1.4 remote-as 1
 neighbor 10.100.1.4 update-source Loopback0
 neighbor 10.100.1.4 next-hop-self
 !
 address-family vpnv6
  neighbor 10.100.1.4 activate
  neighbor 10.100.1.4 send-community both
 exit-address-family
 !
 address-family ipv6 vrf one
  redistribute connected
  neighbor 2001:DB8:2::6 remote-as 65002
  neighbor 2001:DB8:2::6 activate
 exit-address-family
!
```

Profile 2 Partitioned MDT − MLDP MP2MP − PIM C−mcast Signaling

Profile 2 is not currently supported in the Cisco IOS, and the MLDP does not support Partitioned MDT with Multipoint−to−Multipoint (MP2MP).

Profile 3 Default MDT − GRE − BGP−AD − PIM C−mcast Signaling

Use this configuration for profile 3:

```
interface Loopback0
 ipv6 address 2001:DB8:100::2/128
!

vrf definition one
 rd 1:1
!
 address−family ipv6
  mdt auto−discovery pim
  mdt default 232.1.1.1
  route−target export 123:456
  route−target import 123:456
 exit−address−family

interface Ethernet0/0
 vrf forwarding one
 ipv6 address 2001:DB8:2::2/64

router bgp 1
 bgp log−neighbor−changes
 neighbor 10.2.2.6 remote−as 65002
 neighbor 10.100.1.4 remote−as 1
 neighbor 10.100.1.4 update−source Loopback0
 neighbor 10.100.1.4 next−hop−self
 !
!
 address−family ipv6 mvpn
  neighbor 10.100.1.4 activate
  neighbor 10.100.1.4 send−community both
 exit−address−family
!
 address−family vpnv6
  neighbor 10.100.1.4 activate
  neighbor 10.100.1.4 send−community both
 exit−address−family
 !
 address−family ipv6 vrf one
  redistribute connected
  neighbor 2001:DB8:2::6 remote−as 65002
  neighbor 2001:DB8:2::6 activate
 exit−address−family
!
```

Note: Because Border Gateway Protocol−Auto Discovery (BGP−AD) for PIM is used, there is no longer a need for AF IPv4 MDT, which was needed for profile 0. You must have IPv6 enabled on the loopback interface, which means that there must be an IPv6 address or ***ipv6 enable*** command configured on the loopback interface. If multicast is enabled for IPv6 in the VRF as well, then IPv6 and IPv4 use the same Default MDT (same multicast group in the global context) and the same tunnel interface on the PE router.

Profile 4 Partitioned MDT − MLDP MP2MP − BGP−AD − PIM C−mcast Signaling

Profile 4 is not currently supported in the Cisco IOS, and MLDP does not support Partitioned MDT with MP2MP.

Profile 5 Partitioned MDT − MLDP P2MP − BGP−AD − PIM C−mcast Signaling

Profile 5 is not currently supported in the Cisco IOS, and PIM signaling is not supported over Partitioned MDT.

Profile 6 VRF MLDP − In−band Signaling

Use this configuration for profile 6:

```
vrf definition one
 rd 1:1
 !
 address−family ipv6
  route−target export 123:456
  route−target import 123:456
 exit−address−family
!

interface Ethernet0/0
 vrf forwarding one
 ipv6 address 2001:DB8:2::2/64

ipv6 multicast−routing vrf one
ipv6 multicast vrf one mpls source Loopback0
ipv6 multicast vrf one mpls mldp

router bgp 1
 bgp log−neighbor−changes
 neighbor 10.2.2.6 remote−as 65002
 neighbor 10.100.1.4 remote−as 1
 neighbor 10.100.1.4 update−source Loopback0
!
 address−family vpnv6
  neighbor 10.100.1.4 activate
  neighbor 10.100.1.4 send−community both
 exit−address−family
!
 address−family ipv6 vrf one
  redistribute connected
  neighbor 2001:DB8:2::6 remote−as 65002
  neighbor 2001:DB8:2::6 activate
 exit−address−family
!
```

Profile 7 Global MLDP In−band Signaling

Use this configuration for profile 7:

```
ipv6 multicast−routing
ipv6 multicast mpls source Loopback0
ipv6 multicast mpls mldp

interface Ethernet0/0
 ip address 10.2.2.2 255.255.255.0
 ipv6 address 2001:DB8:2::2/64
!

router bgp 1
 bgp log−neighbor−changes
 neighbor 10.2.2.6 remote−as 65002
 neighbor 10.100.1.4 remote−as 1
 neighbor 10.100.1.4 update−source Loopback0
 neighbor 2001:DB8:2::6 remote−as 65002
```

```
 !
!
 address-family ipv6
  redistribute connected
  neighbor 10.100.1.4 activate
  neighbor 10.100.1.4 send-label
  neighbor 2001:DB8:2::6 activate
 exit-address-family
!
```

Profile 8 Global Static − P2MP−TE

Profile 8 is not currently supported in the Cisco IOS.

Profile 9 Default MDT − MLDP − MP2MP − BGP−AD − PIM C−mcast Signaling

Use this configuration for profile 9:

```
vrf definition one
 rd 1:1
 vpn id 1000:2000
!
 address-family ipv6
  mdt auto-discovery mldp
  mdt default mpls mldp 10.100.1.3
  route-target export 123:456
  route-target import 123:456
 exit-address-family

ipv6 multicast-routing vrf one

!
interface Ethernet0/0
 vrf forwarding one
 ipv6 address 2001:DB8:2::2/64
!

router bgp 1
 bgp log-neighbor-changes
 neighbor 10.2.2.6 remote-as 65002
 neighbor 10.100.1.4 remote-as 1
 neighbor 10.100.1.4 update-source Loopback0
 neighbor 10.100.1.4 next-hop-self
 !
 address-family ipv6 mvpn
  neighbor 10.100.1.4 activate
  neighbor 10.100.1.4 send-community both
 exit-address-family
 !
 address-family vpnv6
  neighbor 10.100.1.4 activate
  neighbor 10.100.1.4 send-community both
 exit-address-family
 !
 address-family ipv6 vrf one
  redistribute connected
  neighbor 2001:DB8:2::6 remote-as 65002
  neighbor 2001:DB8:2::6 activate
 exit-address-family
!
```

Profile 10 VRF Static − P2MP TE − BGP−AD

Profile 10 is not currently supported in the Cisco IOS, and BGP−AD is not supported for Point−to−Multipoint Traffic Engineering (P2MP TE).

Profile 11 Default MDT − GRE − BGP−AD − BGP C−mcast Signaling

Use this configuration for profile 11:

```
interface Loopback0
 ipv6 address 2001:DB8:100::2/128
!

vrf definition one
 rd 1:1
!
 address−family ipv6
  mdt auto−discovery pim
  mdt default 232.1.1.1
  mdt overlay use−bgp
  route−target export 123:456
  route−target import 123:456
 exit−address−family

!
interface Ethernet0/0
 vrf forwarding one
 ipv6 address 2001:DB8:2::2/64
!

router bgp 1
 bgp log−neighbor−changes
 neighbor 10.2.2.6 remote−as 65002
 neighbor 10.100.1.4 remote−as 1
 neighbor 10.100.1.4 update−source Loopback0
 neighbor 10.100.1.4 next−hop−self
 !
!
 address−family ipv6 mvpn
  neighbor 10.100.1.4 activate
  neighbor 10.100.1.4 send−community both
 exit−address−family
!
 address−family vpnv6
  neighbor 10.100.1.4 activate
  neighbor 10.100.1.4 send−community both
 exit−address−family
 !
 address−family ipv6 vrf one
  redistribute connected
  neighbor 2001:DB8:2::6 remote−as 65002
  neighbor 2001:DB8:2::6 activate
 exit−address−family
!
```

Note: Because BGP−AD for PIM is used, there is no longer a need for AF IPv4 MDT, which was needed for profile 0. You must have IPv6 enabled on the loopback interface, which means that there must be an IPv6 address or ***ipv6 enable*** command configured on the loopback interface. If multicast is enabled for IPv6 in the VRF as well, then IPv6 and IPv4 use the same Default MDT (same multicast group in the global context) and the same tunnel interface on the PE router.

Profile 12 Default MDT − MLDP − P2MP − BGP−AD − BGP C−mcast Signaling

Use this configuration for profile 12:

```
vrf definition one
 rd 1:1
 vpn id 1000:2000
 !
 address−family ipv6
  mdt auto−discovery mldp
  mdt default mpls mldp p2mp
  mdt overlay use−bgp
  route−target export 123:456
  route−target import 123:456
 exit−address−family

!
interface Ethernet0/0
 vrf forwarding one
 ipv6 address 2001:DB8:2::2/64
!

router bgp 1
 bgp log−neighbor−changes
 neighbor 10.2.2.6 remote−as 65002
 neighbor 10.100.1.4 remote−as 1
 neighbor 10.100.1.4 update−source Loopback0
 neighbor 10.100.1.4 next−hop−self
 !
 address−family ipv6 mvpn
  neighbor 10.100.1.4 activate
  neighbor 10.100.1.4 send−community both
 exit−address−family
 !
 address−family vpnv6
  neighbor 10.100.1.4 activate
  neighbor 10.100.1.4 send−community both
 exit−address−family
!
 address−family ipv6 vrf one
  redistribute connected
  neighbor 2001:DB8:2::6 remote−as 65002
  neighbor 2001:DB8:2::6 activate
 exit−address−family
```

Profile 13 Default MDT − MLDP − MP2MP − BGP−AD − BGP C−mcast Signaling

Use this configuration for profile 13:

```
vrf definition one
 rd 1:1
 vpn id 1000:2000
!
 address−family ipv6
  mdt auto−discovery mldp
  mdt default mpls mldp 10.100.1.3
  mdt overlay use−bgp
  route−target export 123:456
  route−target import 123:456
 exit−address−family

ipv6 multicast−routing vrf one

!
```

```
interface Ethernet0/0
 vrf forwarding one
 ipv6 address 2001:DB8:2::2/64
!

router bgp 1
 bgp log-neighbor-changes
 neighbor 10.2.2.6 remote-as 65002
 neighbor 10.100.1.4 remote-as 1
 neighbor 10.100.1.4 update-source Loopback0
 neighbor 10.100.1.4 next-hop-self
 !
 address-family ipv6 mvpn
  neighbor 10.100.1.4 activate
  neighbor 10.100.1.4 send-community both
 exit-address-family
 !
 address-family vpnv6
  neighbor 10.100.1.4 activate
  neighbor 10.100.1.4 send-community both
 exit-address-family
 !
 address-family ipv6 vrf one
  redistribute connected
  neighbor 2001:DB8:2::6 remote-as 65002
  neighbor 2001:DB8:2::6 activate
 exit-address-family
!
```

Profile 14 Partitioned MDT − MLDP P2MP − BGP−AD − BGP C−mast Signaling

Use this configuration for profile 14:

```
vrf definition one
 rd 1:1
!
 address-family ipv6
  mdt auto-discovery mldp
  mdt strict-rpf interface
  mdt partitioned mldp p2mp
  mdt overlay use-bgp
  route-target export 123:456
  route-target import 123:456
 exit-address-family

!
interface Ethernet0/0
 vrf forwarding one
 ipv6 address 2001:DB8:2::2/64
!

router bgp 1
 bgp log-neighbor-changes
 neighbor 10.2.2.6 remote-as 65002
 neighbor 10.100.1.4 remote-as 1
 neighbor 10.100.1.4 update-source Loopback0
 neighbor 2001:DB8:2::6 remote-as 65002
 !
!
 address-family ipv6 mvpn
  neighbor 10.100.1.4 activate
  neighbor 10.100.1.4 send-community both
 exit-address-family
 !
 address-family vpnv6
```

```
  neighbor 10.100.1.4 activate
  neighbor 10.100.1.4 send-community both
 exit-address-family
!
 address-family ipv6 vrf one
  redistribute connected
  neighbor 2001:DB8:2::6 remote-as 65002
  neighbor 2001:DB8:2::6 activate exit-address-family
```

Profile 15 Partitioned MDT − MLDP MP2MP − BGP−AD − BGP C−mast Signaling

Profile 15 is not currently supported in the Cisco IOS, and MLDP does not support Partitioned MDT with MP2MP.

Profile 16 Default MDT Static − P2MP TE − BGP−AD − BGP C−mcast Signaling

Profile 16 is not currently supported in the Cisco IOS.

Profile 17 Default MDT − MLDP − P2MP − BGP−AD − PIM C−mcast Signaling

Use this configuration for profile 17:

```
vrf definition one
 rd 1:1
 vpn id 1000:2000
 !
 address-family ipv6
  mdt auto-discovery mldp
  mdt default mpls mldp p2mp
  route-target export 123:456
  route-target import 123:456
 exit-address-family

!
interface Ethernet0/0
 vrf forwarding one
 ipv6 address 2001:DB8:2::2/64
!

router bgp 1
 bgp log-neighbor-changes
 neighbor 10.2.2.6 remote-as 65002
 neighbor 10.100.1.4 remote-as 1
 neighbor 10.100.1.4 update-source Loopback0
 neighbor 10.100.1.4 next-hop-self
 !
 address-family ipv6 mvpn
  neighbor 10.100.1.4 activate
  neighbor 10.100.1.4 send-community both
 exit-address-family
 !
 address-family vpnv6
  neighbor 10.100.1.4 activate
  neighbor 10.100.1.4 send-community both
 exit-address-family
!
 address-family ipv6 vrf one
  redistribute connected
  neighbor 2001:DB8:2::6 remote-as 65002
  neighbor 2001:DB8:2::6 activate
 exit-address-family
```

Profile 18 Default MDT Static − P2MP TE − BGP−AD − PIM C−mcast Signaling

Profile 18 is not currently supported in the Cisco IOS.

Profile 19 Default MDT − IR − BGP−AD − PIM C−mcast Signaling

Profile 19 and Ingress Replication (IR) are not currently supported in the Cisco IOS.

Profile 20 Default MDT − P2MP−TE − BGP−AD − PIM − C−mcast Signaling

Profile 20 and P2MP Auto−Tunnels TE are not currently supported in the Cisco IOS.

Profile 21 Default MDT − IR − BGP−AD − BGP − C−mcast Signaling

Profile 21 and IR are not currently supported in the Cisco IOS.

Profile 22 Default MDT − P2MP−TE − BGP−AD BGP − C−mcast Signaling

Profile 22 and P2MP Auto−Tunnels TE are not currently supported in the Cisco IOS.

Profile 23 Partitioned MDT − IR − BGP−AD − PIM C−mcast Signaling

Profile 23 and IR are not currently supported in the Cisco IOS.

Profile 24 Partitioned MDT − P2MP−TE − BGP−AD − PIM C−mcast Signaling

Profile 24 and P2MP Auto−Tunnels TE are not currently supported in the Cisco IOS.

Profile 25 Partitioned MDT − IR − BGP−AD − BGP C−mcast Signaling

Profile 25 and IR are not currently supported in the Cisco IOS.

Profile 26 Partitioned MDT − P2MP TE − BGP−AD − BGP C−mcast Signaling

Profile 26 and P2MP Auto−Tunnels TE are not currently supported in the Cisco IOS.

Verify

There is currently no verification procedure available for these configurations.

Troubleshoot

There is currently no specific troubleshooting information available for these configurations.

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