

5 seconden vertraging wanneer afstandsontvanger de aansluiting voor mLDP-boom probeert te overschrijden

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Inleiding

Dit document beschrijft een vertraging van 5 seconden in het doorsturen van multicast verkeer via de Multipoint Label Distribution Protocol (mLDP)-boom wanneer een afstandsontvanger toetst tot de multicast Group en wanneer de IP-router van het toegangsapparaat Cisco IOS® XR uitvoert.

Achtergrondinformatie

Een afstandsontvanger is een ontvanger over de mLDP backbone vanuit het gezichtspunt van de bron.

De vertraging van 5 seconden is expres geïntroduceerd door Cisco bug-id [CSCvb50266](#) 5 seconden MLDP transportvertraging naar lokale ontvanger wanneer er een bestaande MVPN-ontvanger is

Deze CDETS is gemaakt om rond de kwestie van Cisco bug-ID [CSC68851](#) te werken Overzetten van standaard naar MDT's in data is niet historisch voor LC multipath

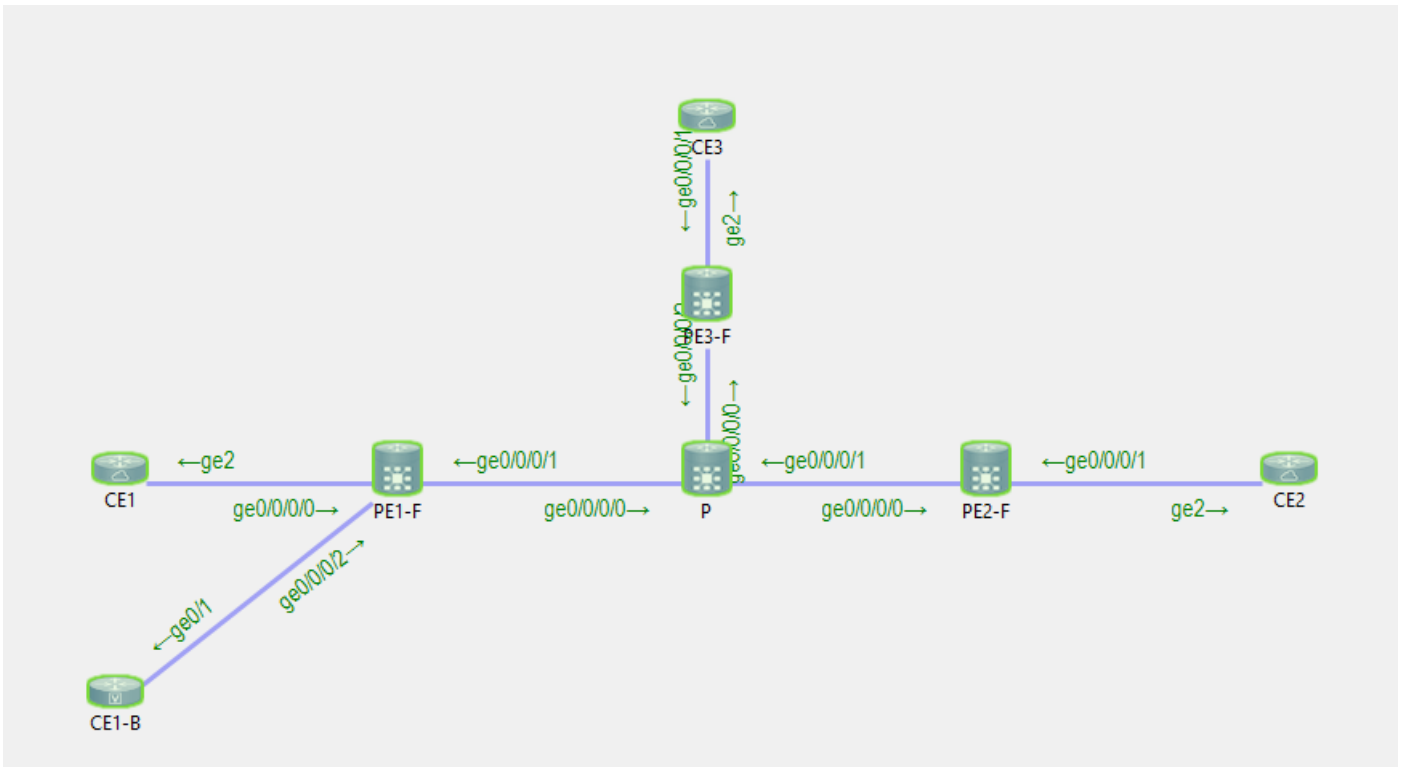
Wijzigingen

- Als de IP-router een IOS®-XR versie na Cisco bug ID [CSC68851](#) uitvoert En nu is er nog 5 seconden.
- Als de IP-router een IOS®-XR versie na Cisco bug ID [CSCvb50266](#) uitvoert Maar 5 seconden vertraging is er standaard.

Als dit niet wordt gewild, kan het verzenden van de multicast stream worden versneld door een verborgen configuratie opdracht.

Hierna volgt een voorbeeld.

Kijk naar afbeelding 1 voor een testtopologie.



CE1 is de Bron 10.100.1.5 voor de multicast stream 232.1.1.1.

CE2 en CE1-B zijn de ontvangers voor de multicast stream 232.1.1.1.

Test 1. Remote-ontvanger werkt zonder lokale ontvanger

Debug ingeschakeld:

```
RP/0/0/CPU0:PE1#debug mrib vrf one route
RP/0/0/CPU0:PE1#debug mfib vrf one ipv4 encap
RP/0/0/CPU0:PE1#show debug
```

```
#### debug flags set from tty 'con0_0_CPU0' ####
ipv4 mfwf encap flag is ON with value '0x1##one'
ipv4 mrib route flag is ON with value 'one#'
```

Er is geen lokale ontvanger op de PE-router in het vuur:

```
RP/0/0/CPU0:PE1#sh mrib vrf one route 232.1.1.1 10.100.1.5
No matching route in MRIB route-DB
RP/0/0/CPU0:PE1#
```

De ontvanger van CE1 op afstand komt online:

```
RP/0/0/CPU0:PE1#RP/0/0/CPU0:Feb 13 10:26:33.280 : mrib[1149]: [ 6] TID: 0xe0000010
(10.100.1.5,232.1.1.1) Added RPF* EID*, #A=1, #F=1, #MDT_A=0, RPF=10.2.1.5 [Lm F* LMI* TR*]
[Gi0/0/0/0 A*], Route Ver = 0x7ca
RP/0/0/CPU0:Feb 13 10:26:33.290 : ipv4_mfwf_partner[263]: Encap: encap id set eid: 1
(10.100.1.5,232.1.1.1)
RP/0/0/CPU0:Feb 13 10:26:33.300 : mrib[1149]: [ 6] TID: 0xe0000010 (10.100.1.5,232.1.1.1)
```

```

Updated RPF EID*, #A=1, #F=1, #MDT_A=0 [Lm F LMI* MA* TR], Route Ver = 0x7cc
RP/0/0/CPU0:Feb 13 10:26:33.310 : ipv4_mfwd_partner[263]: Encap:
ip_mfwd_mrrib_pre_process_encap_id_update: encap_id: 2, te_ole_cnt: 0, lsmid_ole_cnt: 1,
gre_ole_cnt: 0 ti_mofrr_ole_cnt: 0 flags: 0x0
RP/0/0/CPU0:Feb 13 10:26:33.310 : ipv4_mfwd_partner[263]: Encap: [2482] Encap entry created
(0xa10cb414) for eid 2 (stale N) flags 0x0
RP/0/0/CPU0:Feb 13 10:26:33.310 : ipv4_mfwd_partner[263]: Encap: [3039] RegDB entry 0xa08fd084
for LSMID 0x1d turnaround TRUE(new: Y ifh_changed N) ifhandle: b0
RP/0/0/CPU0:Feb 13 10:26:33.310 : ipv4_mfwd_partner[263]: Encap: [3533] Encap entry for eid 2
(0xa10cb414) proc done
RP/0/0/CPU0:Feb 13 10:26:33.310 : ipv4_mfwd_partner[263]: Encap: encap id update eid: 2
(10.100.1.5,232.1.1.1)

```

Er is geen vertraging om de encap-ID op de IP-router in te stellen.

Dit is de multicast verzendingang die op de IP-router van het signaal wordt gemaakt:

```
RP/0/0/CPU0:PE1#show mrrib vrf one route 232.1.1.1 10.100.1.5
```

```

IP Multicast Routing Information Base
Entry flags: L - Domain-Local Source, E - External Source to the Domain,
C - Directly-Connected Check, S - Signal, IA - Inherit Accept,
IF - Inherit From, D - Drop, ME - MDT Encap, EID - Encap ID,
MD - MDT Decap, MT - MDT Threshold Crossed, MH - MDT interface handle
CD - Conditional Decap, MPLS - MPLS Decap, EX - Extranet
MoFE - MoFRR Enabled, MoFS - MoFRR State, MoFP - MoFRR Primary
MoFB - MoFRR Backup, RPFID - RPF ID Set, X - VXLAN
Interface flags: F - Forward, A - Accept, IC - Internal Copy,
NS - Negate Signal, DP - Don't Preserve, SP - Signal Present,
II - Internal Interest, ID - Internal Disinterest, LI - Local Interest,
LD - Local Disinterest, DI - Decapsulation Interface
EI - Encapsulation Interface, MI - MDT Interface, LVIF - MPLS Encap,
EX - Extranet, A2 - Secondary Accept, MT - MDT Threshold Crossed,
MA - Data MDT Assigned, LMI - mLDP MDT Interface, TMI - P2MP-TE MDT Interface
IRMI - IR MDT Interface

```

```

(10.100.1.5,232.1.1.1) RPF nbr: 10.2.1.5 Flags: RPF
Up: 00:02:29
Incoming Interface List
GigabitEthernet0/0/0/0 Flags: A, Up: 00:02:2
Outgoing Interface List
Lmdtone Flags: F LMI MA TR, Up: 00:02:29

```

```
RP/0/0/CPU0:PE1#show mfib vrf one route 232.1.1.1 10.100.1.5 detail
```

```

IP Multicast Forwarding Information Base
Entry flags: C - Directly-Connected Check, S - Signal, D - Drop,
IA - Inherit Accept, IF - Inherit From, EID - Encap ID,
ME - MDT Encap, MD - MDT Decap, MT - MDT Threshold Crossed,
MH - MDT interface handle, CD - Conditional Decap,
DT - MDT Decap True, EX - Extranet, RPFID - RPF ID Set,
MoFE - MoFRR Enabled, MoFS - MoFRR State, X - VXLAN
Interface flags: F - Forward, A - Accept, IC - Internal Copy,
NS - Negate Signal, DP - Don't Preserve, SP - Signal Present,
EG - Egress, EI - Encapsulation Interface, MI - MDT Interface,
EX - Extranet, A2 - Secondary Accept
Forwarding/Replication Counts: Packets in/Packets out/Bytes out
Failure Counts: RPF / TTL / Empty Olist / Encap RL / Other

```

```

(10.100.1.5,232.1.1.1), Flags: EID , FMA: 0x10000 ,
Up: 00:02:48
Last Used: 00:00:01

```

```
SW Forwarding Counts: 168/168/16800
SW Replication Counts: 168/0/0
SW Failure Counts: 0/0/0/0/0
Route ver: 0x7d0
MVPN Info :-
  Associated Table ID : 0xe0000000
  MDT Handle: 0x0, MDT Probe:Y [Y], Rate:Y, Acc:Y
  MDT SW Ingress Encap V4/V6, Egress decap: 0 / 0, 0
  Encap ID: 2, RPF ID: 0
  Local Receiver: False, Turnaround: False
Lmdtone Flags: F LMI TR, Up:00:02:48
GigabitEthernet0/0/0/0 Flags: A, Up:00:02:48
```

Test 2. Remote-ontvanger ondersteunt lokale ontvanger

Er is een lokale ontvanger bij het binnendringen van PE1:

```
RP/0/0/CPU0:PE1#show mrib vrf one route 232.1.1.1 10.100.1.5
```

```
IP Multicast Routing Information Base
Entry flags: L - Domain-Local Source, E - External Source to the Domain,
  C - Directly-Connected Check, S - Signal, IA - Inherit Accept,
  IF - Inherit From, D - Drop, ME - MDT Encap, EID - Encap ID,
  MD - MDT Decap, MT - MDT Threshold Crossed, MH - MDT interface handle
  CD - Conditional Decap, MPLS - MPLS Decap, EX - Extranet
  MoFE - MoFRR Enabled, MoFS - MoFRR State, MoFP - MoFRR Primary
  MoFB - MoFRR Backup, RPFID - RPF ID Set, X - VXLAN
Interface flags: F - Forward, A - Accept, IC - Internal Copy,
  NS - Negate Signal, DP - Don't Preserve, SP - Signal Present,
  II - Internal Interest, ID - Internal Disinterest, LI - Local Interest,
  LD - Local Disinterest, DI - Decapsulation Interface
  EI - Encapsulation Interface, MI - MDT Interface, LVIF - MPLS Encap,
  EX - Extranet, A2 - Secondary Accept, MT - MDT Threshold Crossed,
  MA - Data MDT Assigned, LMI - mLDP MDT Interface, TMI - P2MP-TE MDT Interface
  IRMI - IR MDT Interface
```

```
(10.100.1.5,232.1.1.1) RPF nbr: 10.2.1.5 Flags: RPF
Up: 00:57:15
Incoming Interface List
  GigabitEthernet0/0/0/0 Flags: A, Up: 00:57:15
Outgoing Interface List
  GigabitEthernet0/0/0/2 Flags: F NS, Up: 00:57:15
```

Debugs ingeschakeld:

```
RP/0/0/CPU0:PE1#debug mrib vrf one route
RP/0/0/CPU0:PE1#debug mfib vrf one ipv4 encap
```

```
RP/0/0/CPU0:PE1#show debug
```

```
#### debug flags set from tty 'con0_0_CPU0' ####
ipv4 mfwd encap flag is ON with value '0x1##one'
ipv4 mrib route flag is ON with value 'one#'
```

```
RP/0/0/CPU0:PE1#show mfib vrf one route 232.1.1.1 10.100.1.5 detail
```

```
IP Multicast Forwarding Information Base
Entry flags: C - Directly-Connected Check, S - Signal, D - Drop,
  IA - Inherit Accept, IF - Inherit From, EID - Encap ID,
```

ME - MDT Encap, MD - MDT Decap, MT - MDT Threshold Crossed,
MH - MDT interface handle, CD - Conditional Decap,
DT - MDT Decap True, EX - Extranet, RPFID - RPF ID Set,
MoFE - MoFRR Enabled, MoFS - MoFRR State, X - VXLAN
Interface flags: F - Forward, A - Accept, IC - Internal Copy,
NS - Negate Signal, DP - Don't Preserve, SP - Signal Present,
EG - Egress, EI - Encapsulation Interface, MI - MDT Interface,
EX - Extranet, A2 - Secondary Accept
Forwarding/Replication Counts: Packets in/Packets out/Bytes out
Failure Counts: RPF / TTL / Empty Olist / Encap RL / Other

```
(10.100.1.5,232.1.1.1),  Flags:  , FMA: 0x10001 ,  
Up: 00:59:35  
Last Used: 00:00:01  
SW Forwarding Counts: 3566/3566/356600  
SW Replication Counts: 3566/3566/356600  
SW Failure Counts: 0/0/0/0/0  
Route ver: 0x3410  
MVPN Info :-  
  MDT Handle: 0x0, MDT Probe:N [N], Rate:Y, Acc:Y  
  MDT SW Ingress Encap V4/V6, Egress decap: 0 / 0, 0  
  EG count: 1  
  Encap ID: 0, RPF ID: 0  
  Local Receiver: True, Turnaround: False  
GigabitEthernet0/0/0/0 Flags:  A, Up:00:59:35  
GigabitEthernet0/0/0/2 Flags:  NS EG, Up:00:59:35
```

De encap-ID is 0 omdat er nog geen ontvanger is.

CE2, de afstandsontvanger komt online:

```
RP/0/0/CPU0:PE1#RP/0/0/CPU0:Feb 13 09:13:34.390 : mrib[1149]:  [ 6] TID: 0xe0000010  
(10.100.1.5,232.1.1.1) Updated RPF EID*, #A=1, #F=2, #MDT_A=0 [Lm F* LMI* TR*], Route Ver =  
0x3412  
RP/0/0/CPU0:Feb 13 09:13:34.390 : mrib[1149]:  [ 22] Redistributed  
RP/0/0/CPU0:Feb 13 09:13:34.390 : ipv4_mfwd_partner[263]: Encap:  
ip_mfwd_mrib_pre_process_encap_id_update: encap_id: 6, te_ole_cnt: 0, lsmid_ole_cnt: 1,  
gre_ole_cnt: 0 ti_mofrr_ole_cnt: 0 flags: 0x1  
RP/0/0/CPU0:Feb 13 09:13:34.390 : ipv4_mfwd_partner[263]: Encap: [2482] Encap entry created  
(0xa08fd9d0) for eid 6 (stale N) flags 0x1  
RP/0/0/CPU0:Feb 13 09:13:34.390 : ipv4_mfwd_partner[263]: Encap: [3039] RegDB entry 0xa10b5404  
for LSMID 0x1 turnaround TRUE(new: N ifh_changed N) ifhandle: b0  
RP/0/0/CPU0:Feb 13 09:13:34.390 : ipv4_mfwd_partner[263]: Encap: [3533] Encap entry for eid 6  
(0xa08fd9d0) proc done  
RP/0/0/CPU0:Feb 13 09:13:34.410 : mrib[1149]:  [ 6] TID: 0xe0000010 (10.100.1.5,232.1.1.1)  
Updated RPF EID*, #A=1, #F=2, #MDT_A=0 [Lm F LMI* MA* TR], Route Ver = 0x3414  
RP/0/0/CPU0:Feb 13 09:13:34.410 : mrib[1149]:  [ 6] TID: 0xe0000010 (10.100.1.5,232.1.1.1)  
Updated RPF EID, #A=1, #F=2, #MDT_A=0 [Lm F LMI* MA TR], Route Ver = 0x3415  
RP/0/0/CPU0:Feb 13 09:13:34.410 : ipv4_mfwd_partner[263]: Encap:  
ip_mfwd_mrib_pre_process_encap_id_update: encap_id: 7, te_ole_cnt: 0, lsmid_ole_cnt: 1,  
gre_ole_cnt: 0 ti_mofrr_ole_cnt: 0 flags: 0x1  
RP/0/0/CPU0:Feb 13 09:13:34.410 : ipv4_mfwd_partner[263]: Encap: [2482] Encap entry created  
(0xa08fd8a8) for eid 7 (stale N) flags 0x1  
RP/0/0/CPU0:Feb 13 09:13:34.410 : ipv4_mfwd_partner[263]: Encap: [3039] RegDB entry 0xa08fd824  
for LSMID 0xc turnaround TRUE(new: Y ifh_changed N) ifhandle: b0  
RP/0/0/CPU0:Feb 13 09:13:34.410 : ipv4_mfwd_partner[263]: Encap: [3533] Encap entry for eid 7  
(0xa08fd8a8) proc done  
RP/0/0/CPU0:Feb 13 09:13:34.500 : mrib[1149]:  [ 6] TID: 0xe0000010 (10.100.1.5,232.1.1.1)  
Updated RPF EID, #A=1, #F=2, #MDT_A=0 [Lm F LMI* MA TR], Route Ver = 0x3416  
RP/0/0/CPU0:Feb 13 09:13:34.620 : mrib[1149]:  [ 22] Redistributed  
RP/0/0/CPU0:Feb 13 09:13:34.620 : mrib[1149]:  [ 6] TID: 0xe0000010 (10.100.1.5,232.1.1.1)  
Updated RPF EID, #A=1, #F=2, #MDT_A=0 [Lm F LMI* MA TR], Route Ver = 0x3417  
RP/0/0/CPU0:Feb 13 09:13:34.620 : ipv4_mfwd_partner[263]: Encap:
```

```
ip_mfwd_mrrib_pre_process_encapid_update: encapid: 7, te_ole_cnt: 0, lsmid_ole_cnt: 1,
gre_ole_cnt: 0 ti_mofrr_ole_cnt: 0 flags: 0x1
RP/0/0/CPU0:Feb 13 09:13:34.620 : ipv4_mfwd_partner[263]: Encap: [2482] Encap entry existing
(0xa08fd8a8) for eid 7 (stale N) flags 0x1
RP/0/0/CPU0:Feb 13 09:13:34.620 : ipv4_mfwd_partner[263]: Encap: [3533] Encap entry for eid 7
(0xa08fd8a8) proc done
RP/0/0/CPU0:Feb 13 09:13:39.570 : ipv4_mfwd_partner[263]: Encap: encap id set eid: 7
(10.100.1.5,232.1.1.1)
```

De encap-ID wordt ingesteld op 7,5 seconden nadat de encap-ID werd gecreëerd en de Multicast Routing Information Base (MRIB) werd bijgewerkt met de LMDT-interface (LMDT) voor Virtual Routing en Forwarding (VRF) in de vertrekkende interfacekaart (OIL).

```
RP/0/0/CPU0:PE1#show mrrib vrf one route 232.1.1.1 10.100.1.5
```

```
IP Multicast Routing Information Base
Entry flags: L - Domain-Local Source, E - External Source to the Domain,
C - Directly-Connected Check, S - Signal, IA - Inherit Accept,
IF - Inherit From, D - Drop, ME - MDT Encap, EID - Encap ID,
MD - MDT Decap, MT - MDT Threshold Crossed, MH - MDT interface handle
CD - Conditional Decap, MPLS - MPLS Decap, EX - Extranet
MoFE - MoFRR Enabled, MoFS - MoFRR State, MoFP - MoFRR Primary
MoFB - MoFRR Backup, RPFID - RPF ID Set, X - VXLAN
Interface flags: F - Forward, A - Accept, IC - Internal Copy,
NS - Negate Signal, DP - Don't Preserve, SP - Signal Present,
II - Internal Interest, ID - Internal Disinterest, LI - Local Interest,
LD - Local Disinterest, DI - Decapsulation Interface
EI - Encapsulation Interface, MI - MDT Interface, LVIF - MPLS Encap,
EX - Extranet, A2 - Secondary Accept, MT - MDT Threshold Crossed,
MA - Data MDT Assigned, LMI - mLDP MDT Interface, TMI - P2MP-TE MDT Interface
IRMI - IR MDT Interface
```

```
(10.100.1.5,232.1.1.1) RPF nbr: 10.2.1.5 Flags: RPF
Up: 01:04:11
Incoming Interface List
GigabitEthernet0/0/0/0 Flags: A, Up: 01:04:11
Outgoing Interface List
Lmdtone Flags: F LMI MA TR, Up: 00:03:33
GigabitEthernet0/0/0/2 Flags: F NS, Up: 01:04:11
```

```
RP/0/0/CPU0:PE1#show mfib vrf one route 232.1.1.1 10.100.1.5 detail
```

```
IP Multicast Forwarding Information Base
Entry flags: C - Directly-Connected Check, S - Signal, D - Drop,
IA - Inherit Accept, IF - Inherit From, EID - Encap ID,
ME - MDT Encap, MD - MDT Decap, MT - MDT Threshold Crossed,
MH - MDT interface handle, CD - Conditional Decap,
DT - MDT Decap True, EX - Extranet, RPFID - RPF ID Set,
MoFE - MoFRR Enabled, MoFS - MoFRR State, X - VXLAN
Interface flags: F - Forward, A - Accept, IC - Internal Copy,
NS - Negate Signal, DP - Don't Preserve, SP - Signal Present,
EG - Egress, EI - Encapsulation Interface, MI - MDT Interface,
EX - Extranet, A2 - Secondary Accept
Forwarding/Replication Counts: Packets in/Packets out/Bytes out
Failure Counts: RPF / TTL / Empty Olist / Encap RL / Other
```

```
(10.100.1.5,232.1.1.1), Flags: EID , FMA: 0x10001 ,
Up: 01:04:25
Last Used: 00:00:00
SW Forwarding Counts: 3856/3856/385600
SW Replication Counts: 3856/3856/385600
SW Failure Counts: 0/0/0/0/0
```

```
Route ver: 0x3417
MVPN Info :-
  Associated Table ID : 0xe0000000
  MDT Handle: 0x0, MDT Probe:Y [Y], Rate:Y, Acc:Y
  MDT SW Ingress Encap V4/V6, Egress decap: 0 / 0, 0
  EG count: 1
  Encap ID: 7, RPF ID: 0
  Local Receiver: True, Turnaround: False
Lmdtone Flags: F LMI TR, Up:00:03:47
GigabitEthernet0/0/0/0 Flags: A, Up:01:04:25
GigabitEthernet0/0/0/2 Flags: NS EG, Up:01:04:25
```

De afstandsontvanger heeft dus een extra vertraging van 5 seconden bij het ontvangen van deze multicast stream.

Opmerking: De LMDT-interface werd direct in het MRIB toegevoegd en de LMDT-interface werd direct in de MFIB-markering toegevoegd, maar zonder de encap-ID in te stellen.

De invoer-ID in de MFIB is na de vertraging van 5 seconden ingesteld.

Na Cisco bug-id [CSCvb50266](#) , de vertraging is 5 seconden voor het programmeren van de **encap-ID** wanneer een ontvanger op afstand toetreedt. Dit is het nieuwe standaardgedrag.

Start de opdracht om de context van pim vrf <> te tonen om het gedrag te verifiëren:

```
RP/0/0/CPU0:PE1#show pim vrf one context
```

```
PIM context information for VRF one (0x12b70184)
```

```
VRF ID: 0x60000001
Table ID: 0xe0000010
Remote Table ID: 0xe0800010
MDT Default Group : 0.0.0.0
MDT Source : (10.100.1.1, Loopback0) Per-VRF
MDT Immediate Switch Not Configured
MDT handle: 0x0(Null)
Context Active, ITAL Active
Routing Enabled
Registered with MRIB
Not owner of MDT Interface
Raw socket req: T, act: T, LPTS filter req: T, act: T
UDP socket req: T, act: T, UDP vbind req: T, act: T
Reg Inj socket req: T, act: T, Reg Inj LPTS filter req: T, act: T
Mhost Default Interface : GigabitEthernet0/0/0/0 (publish pending: F)
Remote MDT Default Group : 0.0.0.0
Backup MLC virtual interface: Null
Neighbor-filter: -
MDT Neighbor-filter: -
```

Draai deze verborgen opdracht **mdt onmiddellijk-switch** om de vertraging van 5 seconden te verwijderen.

```
RP/0/0/CPU0:PE1#conf t
RP/0/0/CPU0:PE1(config)#multicast-routing vrf one
RP/0/0/CPU0:PE1(config-mcast-one)#address-family ipv4
RP/0/0/CPU0:PE1(config-mcast-one-ipv4)#mdt immediate-switch
RP/0/0/CPU0:PE1(config-mcast-one-ipv4)#commit
```

Opmerking: Vanaf 7.4.1 is de opdracht niet langer verborgen.

```
RP/0/0/CPU0:PE1#show pim vrf one context
```

```
PIM context information for VRF one (0x12b70184)

VRF ID: 0x60000001
Table ID: 0xe0000010
Remote Table ID: 0xe0800010
MDT Default Group : 0.0.0.0
MDT Source : (10.100.1.1, Loopback0) Per-VRF
MDT Immediate Switch Configured
MDT handle: 0x0(Null)
Context Active, ITAL Active
Routing Enabled
Registered with MRIB
Not owner of MDT Interface
Raw socket req: T, act: T, LPTS filter req: T, act: T
UDP socket req: T, act: T, UDP vbind req: T, act: T
Reg Inj socket req: T, act: T, Reg Inj LPTS filter req: T, act: T
Mhost Default Interface : GigabitEthernet0/0/0/0 (publish pending: F)
Remote MDT Default Group : 0.0.0.0
Backup MLC virtual interface: Null
Neighbor-filter: -
MDT Neighbor-filter: -
```

Deze opdracht verschijnt niet in de actieve configuratie:

```
RP/0/0/CPU0:PE1#show running-config multicast-routing vrf one
```

```
multicast-routing
vrf one
address-family ipv4
interface GigabitEthernet0/0/0/0
enable
!
interface GigabitEthernet0/0/0/2
enable
!
mdt source Loopback0
rate-per-route
accounting per-prefix
bgp auto-discovery mldp
!
mdt partitioned mldp ipv4 p2mp
mdt data mldp 100 immediate-switch
!
```

Het wordt **niet** ondersteund om zowel de *Mdt direct-switch* als de *Mdt* opdracht van gegevens met het *zeer directe-switch* sleutelwoord te configureren.

Het volgende is een voorbeeld van zo'n configuratie:

```
RP/0/RP0/CPU0:PE1#conf t
RP/0/RP0/CPU0:PE1(config)#multicast-routing
RP/0/RP0/CPU0:PE1(config-mcast)#vrf one
RP/0/RP0/CPU0:PE1(config-mcast-one)#address-family ipv4
RP/0/RP0/CPU0:PE1(config-mcast-one-ipv4)#mdt data mldp 100 immediate-switch
RP/0/RP0/CPU0:PE1(config-mcast-one-ipv4)#mdt immediate-switch
RP/0/RP0/CPU0:PE1(config-mcast-one-ipv4)#commit
RP/0/RP0/CPU0:PE1(config-mcast-one-ipv4)#end
```


RP/0/RP0/CPU0:PE1#