Verificar a Conectividade de Ponta a Ponta em um SP de Roteamento de Segmento

Contents

Introduction

Este documento descreve o processo para verificar a conectividade fim-a-fim através de um provedor de serviços (SP) de roteamento de segmento com o software Cisco IOS®XR.

Prerequisites

Requirements

A Cisco recomenda que você tenha conhecimento destes tópicos:

- Conhecimento de roteamento IP básico
- Conhecimento da linha de comando Cisco IOS e Cisco IOS XR

Componentes Utilizados

As informações neste documento são baseadas nestas versões de software e hardware:

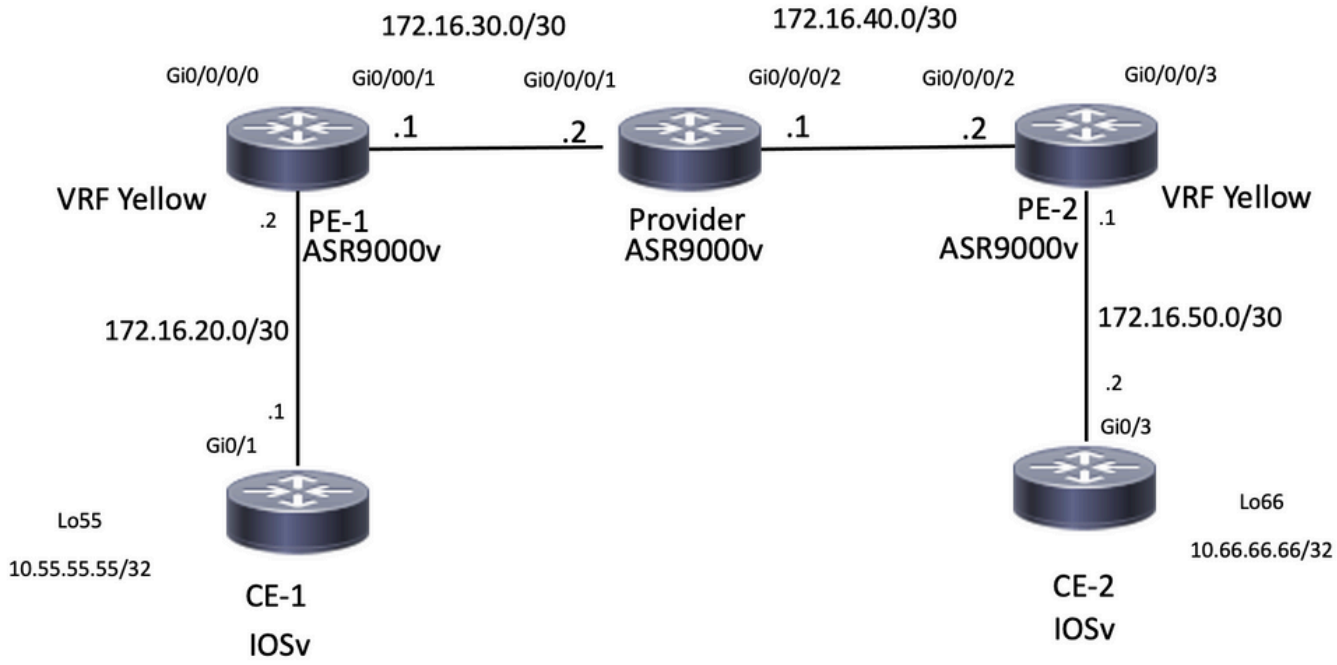
- Roteador com software Cisco IOS XR
- Roteador com software Cisco IOS

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. Se a rede estiver ativa, certifique-se de que você entenda o impacto potencial de qualquer comando.

Informações de Apoio

A finalidade deste documento é demonstrar a configuração básica para criar uma nuvem de roteamento de segmento e como verificar a conectividade fim-a-fim nos roteadores Cisco IOS XR.

Topologia



Topologia de rede

Verificação inicial

Configuração de BGP

CE-1

O loopback55 simula o lado da LAN do roteador CE-1. Você pode anunciar esse prefixo por meio do eBGP ao vizinho PE-1:

```
CE-1#show run | section r b
router bgp 65535
 bgp router-id 10.1.1.1
 bgp log-neighbor-changes
 redistribute connected
 redistribute eigrp 10
 neighbor 172.16.20.2 remote-as 8181

CE-1#show ip bgp neighbors 172.16.20.2 advertised-routes
BGP table version is 25, local router ID is 10.1.1.1
Status codes: s suppressed, d damped, h history, * valid, > best, i - internal,
              r RIB-failure, S Stale, m multipath, b backup-path, f RT-Filter,
              x best-external, a additional-path, c RIB-compressed,
              t secondary path,
Origin codes: i - IGP, e - EGP, ? - incomplete
RPKI validation codes: V valid, I invalid, N Not found

     Network          Next Hop            Metric LocPrf Weight Path
 *>   10.1.1.1/32      0.0.0.0                  0         32768 ?
 *>   10.11.11.11/32   192.168.1.1          10880         32768 ?
 *> 10.55.55.55/32 0.0.0.0 0 32768 ?
```

```
 *>   172.16.20.0/30   0.0.0.0                  0         32768 ?
 *>   192.168.1.0      0.0.0.0                  0         32768 ?

Total number of prefixes 5
```

PE-1

Esse roteador recebeu o prefixo 10.55.55.55/32 e, com conectividade, agora pode anunciá-lo na nuvem do provedor de serviços:

```
RP/0/RP0/CPU0:PE-1#show run vrf
Fri Jan 27 15:07:10.465 UTC
vrf Yellow
address-family ipv4 unicast
import route-target
200:200
!
export route-target
200:200
!

RP/0/RP0/CPU0:PE-1#show run router bgp
Fri Jan 27 14:54:33.488 UTC
router bgp 8181
 bgp router-id 10.2.2.2
 address-family ipv4 unicast
 !
 address-family vpnv4 unicast
 !
 neighbor 10.3.3.3
  remote-as 8181
  update-source Loopback0
  address-family vpnv4 unicast
   route-policy PASS in
   route-policy PASS out
  !
 !
 vrf Yellow
  rd 200:200
  address-family ipv4 unicast
  !
  neighbor 172.16.20.1
   remote-as 65535
   address-family ipv4 unicast
    route-policy PASS in
    route-policy PASS out
    as-override
   !

RP/0/RP0/CPU0:PE-1#show bgp vrf Yellow ipv4 unicast neighbors 172.16.20.1 routes
Fri Jan 27 14:54:48.433 UTC
BGP VRF Yellow, state: Active
BGP Route Distinguisher: 200:200
VRF ID: 0x60000001
BGP router identifier 10.2.2.2, local AS number 8181
Non-stop routing is enabled
BGP table state: Active
Table ID: 0xe0000001   RD version: 73
BGP main routing table version 73
BGP NSR Initial initsync version 2 (Reached)
BGP NSR/ISSU Sync-Group versions 0/0
```

```
Status codes: s suppressed, d damped, h history, * valid, > best
              i - internal, r RIB-failure, S stale, N Nexthop-discard
Origin codes: i - IGP, e - EGP, ? - incomplete
   Network            Next Hop            Metric LocPrf Weight Path
Route Distinguisher: 200:200 (default for vrf Yellow)
*> 10.1.1.1/32        172.16.20.1              0             0 65535 ?
*> 10.11.11.11/32     172.16.20.1          10880             0 65535 ?
*> 10.55.55.55/32 172.16.20.1 0 0 65535 ?
*> 172.16.20.0/30     172.16.20.1              0             0 65535 ?
*> 192.168.1.0/24     172.16.20.1              0             0 65535 ?
Processed 5 prefixes, 5 paths

RP/0/RP0/CPU0:PE-1#ping vrf Yellow 10.55.55.55
Fri Jan 27 14:55:06.077 UTC
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.55.55.55, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 4/5/7 ms
```

CE-2

O loopback66 simula o lado da LAN do roteador CE-2. Da mesma forma que o CE-1, este roteador anuncia o prefixo via eBGP ao roteador vizinho PE-2.

```
CE-2#show run | section r b
router bgp 65535
 bgp router-id 10.5.5.5
 bgp log-neighbor-changes
 redistribute connected
 redistribute eigrp 10
 neighbor 172.16.50.1 remote-as 8181

CE-2#show ip bgp neighbors 172.16.50.1 advertised-routes
BGP table version is 15, local router ID is 10.5.5.5
Status codes: s suppressed, d damped, h history, * valid, > best, i - internal,
              r RIB-failure, S Stale, m multipath, b backup-path, f RT-Filter,
              x best-external, a additional-path, c RIB-compressed,
              t secondary path,
Origin codes: i - IGP, e - EGP, ? - incomplete
RPKI validation codes: V valid, I invalid, N Not found

     Network          Next Hop            Metric LocPrf Weight Path
 *>   10.5.5.5/32      0.0.0.0                  0         32768 ?
 *>   10.22.22.22/32   192.168.4.1          10880         32768 ?
 *>   10.66.66.66/32   0.0.0.0                  0         32768 ?
 *>   172.16.50.0/30   0.0.0.0                  0         32768 ?
 *>   192.168.4.0      0.0.0.0                  0         32768 ?

Total number of prefixes 5
```

PE-2

Este roteador recebeu o prefixo 10.66.66.66/32 e agora pode anunciar para a nuvem do provedor de serviços:

```
RP/0/RP0/CPU0:PE-2#show run vrf
Fri Jan 27 15:07:51.117 UTC
vrf Yellow
address-family ipv4 unicast
import route-target
200:200
```

```
!
export route-target
200:200
!

RP/0/RP0/CPU0:PE-2#show run router bgp
Fri Jan 27 14:59:56.957 UTC
router bgp 8181
 bgp router-id 10.4.4.4
 address-family ipv4 unicast
 !
 address-family vpnv4 unicast
 !
 neighbor 10.3.3.3
  remote-as 8181
  update-source Loopback0
  address-family vpnv4 unicast
   route-policy PASS in
   route-policy PASS out
  !
 !
 vrf Yellow
  rd 200:200
  address-family ipv4 unicast
  !
  neighbor 172.16.50.2
   remote-as 65535
   address-family ipv4 unicast
    route-policy PASS in
    route-policy PASS out
    as-override
   !

RP/0/RP0/CPU0:PE-2#show bgp vrf Yellow ipv4 unicast neighbors 172.16.50.2 routes
Fri Jan 27 15:00:10.383 UTC
BGP VRF Yellow, state: Active
BGP Route Distinguisher: 200:200
VRF ID: 0x60000001
BGP router identifier 10.4.4.4, local AS number 8181
Non-stop routing is enabled
BGP table state: Active
Table ID: 0xe0000001   RD version: 64
BGP main routing table version 64
BGP NSR Initial initsync version 2 (Reached)
BGP NSR/ISSU Sync-Group versions 0/0

Status codes: s suppressed, d damped, h history, * valid, > best
              i - internal, r RIB-failure, S stale, N Nexthop-discard
Origin codes: i - IGP, e - EGP, ? - incomplete
   Network            Next Hop            Metric LocPrf Weight Path
Route Distinguisher: 200:200 (default for vrf Yellow)
*> 10.5.5.5/32        172.16.50.2              0             0 65535 ?
*> 10.22.22.22/32     172.16.50.2          10880             0 65535 ?
*> 10.66.66.66/32     172.16.50.2              0             0 65535 ?
*> 172.16.50.0/30     172.16.50.2              0             0 65535 ?
*> 192.168.4.0/24     172.16.50.2              0             0 65535 ?

Processed 5 prefixes, 5 paths

RP/0/RP0/CPU0:PE-2#ping vrf Yellow 10.66.66.66
Fri Jan 27 15:00:26.020 UTC
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.66.66.66, timeout is 2 seconds:
!!!!!
```

```
Success rate is 100 percent (5/5), round-trip min/avg/max = 3/26/120 ms
```

Status das Informações de Roteamento de PE-1,Provider e PE-2

Para esta demonstração, o OSPF é configurado como IGP e iBGP.

PE-1

O vizinho OSPF é UP e a sessão iBGP para 10.3.3.3 que é o Refletor de Rota.

```
RP/0/RP0/CPU0:PE-1#show run router ospf
Fri Jan 27 15:09:23.910 UTC
router ospf 1
 router-id 10.2.2.2
 area 0
  !
  interface GigabitEthernet0/0/0/1
  !
 !
!

RP/0/RP0/CPU0:PE-1#show ospf neighbor
Fri Jan 27 15:09:31.435 UTC

* Indicates MADJ interface
# Indicates Neighbor awaiting BFD session up

Neighbors for OSPF 1

Neighbor ID     Pri   State           Dead Time   Address         Interface
10.3.3.3        1     FULL/BDR        00:00:37    172.16.30.2     GigabitEthernet0/0/0/1
    Neighbor is up for 16:59:30
Total neighbor count: 1
RP/0/RP0/CPU0:PE-1#show bgp vpnv4 unicast summary
Fri Jan 27 15:09:37.760 UTC
BGP router identifier 10.2.2.2, local AS number 8181
BGP generic scan interval 60 secs
Non-stop routing is enabled
BGP table state: Active
Table ID: 0x0   RD version: 0
BGP main routing table version 73
BGP NSR Initial initsync version 2 (Reached)
BGP NSR/ISSU Sync-Group versions 0/0
BGP scan interval 60 secs
BGP is operating in STANDALONE mode.
Process       RcvTblVer   bRIB/RIB   LabelVer  ImportVer  SendTblVer  StandbyVer
Speaker              73         73         73         73          73           0

Neighbor        Spk    AS MsgRcvd MsgSent   TblVer  InQ OutQ  Up/Down  St/PfxRcd
10.3.3.3          0  8181    1010     997       73    0    0 16:24:45          5
```

Roteador do provedor

Neste dispositivo, podemos confirmar que atua como refletor de rota e que a sessão IBGP é estabelecida com os vizinhos 10.2.2.2 e 10.4.4.4

```
RP/0/RP0/CPU0:Provider#show run router ospf
Fri Jan 27 15:19:33.250 UTC
router ospf 1
router-id 10.3.3.3
```

```
area 0
!
interface GigabitEthernet0/0/0/1
!
interface GigabitEthernet0/0/0/2
!

RP/0/RP0/CPU0:Provider#show run router bgp
Fri Jan 27 15:11:08.321 UTC
router bgp 8181
 bgp router-id 10.3.3.3
 address-family ipv4 unicast
 !
 address-family vpnv4 unicast
 !
 neighbor-group IBGP
  remote-as 8181
  update-source Loopback0
 !
 neighbor 10.2.2.2
  use neighbor-group IBGP
  address-family vpnv4 unicast
   route-policy PASS in
   route-reflector-client
   route-policy PASS out
   next-hop-self
  !
 !
 neighbor 10.4.4.4
  use neighbor-group IBGP
  address-family vpnv4 unicast
   route-policy PASS in
   route-reflector-client
   route-policy PASS out
   next-hop-self
  !

RP/0/RP0/CPU0:Provider#show bgp vpnv4 unicast summary
Fri Jan 27 15:11:19.263 UTC
BGP router identifier 10.3.3.3, local AS number 8181
BGP generic scan interval 60 secs
Non-stop routing is enabled
BGP table state: Active
Table ID: 0x0   RD version: 0
BGP main routing table version 25
BGP NSR Initial initsync version 1 (Reached)
BGP NSR/ISSU Sync-Group versions 0/0
BGP scan interval 60 secs
BGP is operating in STANDALONE mode.
Process       RcvTblVer   bRIB/RIB   LabelVer  ImportVer  SendTblVer  StandbyVer
Speaker              25         25         25         25          25           0

Neighbor        Spk    AS MsgRcvd MsgSent   TblVer  InQ OutQ  Up/Down  St/PfxRcd
10.2.2.2          0  8181     998    1011       25    0    0 16:26:27          5
10.4.4.4          0  8181     997    1009       25    0    0 16:24:25          5
```

PE-2

O vizinho OSPF está ativo e a sessão IBGP para 10.3.3.3 é o Refletor de Rota.

```
RP/0/RP0/CPU0:PE-2#show run router ospf
Fri Jan 27 15:12:47.741 UTC
router ospf 1
```

```
 router-id 10.4.4.4
 area 0
  !
  interface GigabitEthernet0/0/0/2
  !

RP/0/RP0/CPU0:PE-2#show ospf neighbor
Fri Jan 27 15:12:55.229 UTC
* Indicates MADJ interface
# Indicates Neighbor awaiting BFD session up
Neighbors for OSPF 1
Neighbor ID     Pri   State           Dead Time   Address         Interface
10.3.3.3        1     FULL/DR         00:00:35    172.16.40.1     GigabitEthernet0/0/0/2
    Neighbor is up for 17:01:21
Total neighbor count: 1

RP/0/RP0/CPU0:PE-2#show bgp vpnv4 unicast summary
Fri Jan 27 15:13:01.911 UTC
BGP router identifier 10.4.4.4, local AS number 8181
BGP generic scan interval 60 secs
Non-stop routing is enabled
BGP table state: Active
Table ID: 0x0   RD version: 0
BGP main routing table version 64
BGP NSR Initial initsync version 2 (Reached)
BGP NSR/ISSU Sync-Group versions 0/0
BGP scan interval 60 secs
BGP is operating in STANDALONE mode.
Process       RcvTblVer   bRIB/RIB   LabelVer  ImportVer  SendTblVer  StandbyVer
Speaker              64         64         64         64          64           0

Neighbor        Spk    AS MsgRcvd MsgSent   TblVer  InQ OutQ  Up/Down  St/PfxRcd
10.3.3.3          0  8181    1011     998       64    0    0 16:26:08          5

RP/0/RP0/CPU0:PE-2#ping 10.2.2.2 source loopback0
Fri Jan 27 15:13:09.728 UTC
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.2.2.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 9/21/67 ms

RP/0/RP0/CPU0:PE-2#ping 10.3.3.3 source loopback0
Fri Jan 27 15:13:16.696 UTC
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.3.3.3, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 5/6/7 ms
```

Configuração de roteamento de segmento

PE-1

```
RP/0/RP0/CPU0:PE-1#show run router ospf
Fri Jan 27 16:15:56.479 UTC
router ospf 1
 router-id 10.2.2.2
 segment-routing mpls
 area 0
  segment-routing mpls
  interface Loopback0
   prefix-sid index 15
  !
```

Provedor

```
RP/0/RP0/CPU0:Provider#show run router ospf
Fri Jan 27 16:17:09.471 UTC
router ospf 1
 router-id 10.3.3.3
 segment-routing mpls
 area 0
  segment-routing mpls
  interface Loopback0
   prefix-sid index 16
  !
```

PE-2

```
RP/0/RP0/CPU0:PE-2#show run router ospf
Fri Jan 27 16:18:11.090 UTC
router ospf 1
 router-id 10.4.4.4
 segment-routing mpls
 area 0
  segment-routing mpls
  interface Loopback0
   prefix-sid index 17
  !
```

Verificações finais

O CE-1 pode acessar o loopback da interface66 localizado no roteador CE-2. A próxima saída do Traceroute mostra que o pacote assume o caminho do switch de rótulo quando destinado ao prefixo 10.66.66.66. Também pode ser observado que o rótulo usa o prefix-sid 160**17** enquanto passa pelo roteador PE-2:

```
CE-1#ping 10.66.66.66 source loopback0
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.66.66.66, timeout is 2 seconds:
Packet sent with a source address of 10.1.1.1
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 9/13/32 ms

CE-1#traceroute 10.66.66.66 source loopback0
Type escape sequence to abort.
Tracing the route to 10.66.66.66
VRF info: (vrf in name/id, vrf out name/id)
  1 172.16.20.2 6 msec 5 msec 5 msec
  2 172.16.30.2 [MPLS: Labels 16017/24003 Exp 0] 12 msec 13 msec 16 msec 3 172.16.40.2 [MPLS:
Label 24003 Exp 0] 15 msec 13 msec 12 msec
  4 172.16.50.2 [AS 8181] 13 msec 11 msec *
```

Como a configuração não usou a opção absoluta, os rótulos começaram com valores 16000 e anexaram o prefix-sid que foi configurado para o roteamento de segmento.

```
RP/0/RP0/CPU0:PE-1#show cef 10.3.3.3/32
Fri Jan 27 21:32:42.813 UTC
```

```
10.3.3.3/32, version 43, labeled SR, internal 0x1000001 0x8110 (ptr 0xe3f6a00) [1], 0x600
(0xe593918), 0xa20 (0xee6e4b8)
 Updated Jan 26 23:21:30.314
 remote adjacency to GigabitEthernet0/0/0/1
 Prefix Len 32, traffic index 0, precedence n/a, priority 1
  gateway array (0xe3fbda8) reference count 3, flags 0x68, source rib (7), 0 backups
                [3 type 4 flags 0x8401 (0xeeb1648) ext 0x0 (0x0)]
  LW-LDI[type=1, refc=1, ptr=0xe593918, sh-ldi=0xeeb1648]
  gateway array update type-time 1 Jan 26 23:21:30.314
 LDI Update time Jan 26 23:21:30.315
 LW-LDI-TS Jan 26 23:21:30.315
   via 172.16.30.2/32, GigabitEthernet0/0/0/1, 8 dependencies, weight 0, class 0 [flags 0x0]
    path-idx 0 NHID 0x0 [0xf427148 0xf4271e0]
    next hop 172.16.30.2/32
    remote adjacency
     local label 16016      labels imposed {ImplNull}

    Load distribution: 0 (refcount 3)

    Hash  OK  Interface                 Address
    0     Y   GigabitEthernet0/0/0/1    remote

RP/0/RP0/CPU0:PE-1#show cef 10.4.4.4/32
Fri Jan 27 21:29:36.990 UTC
10.4.4.4/32, version 45, labeled SR, internal 0x1000001 0x8110 (ptr 0xe3f65c0) [1], 0x600
(0xe593e70), 0xa28 (0xee6e508)
 Updated Jan 26 23:21:47.181
 remote adjacency to GigabitEthernet0/0/0/1
 Prefix Len 32, traffic index 0, precedence n/a, priority 1
  gateway array (0xe3fbe90) reference count 3, flags 0x68, source rib (7), 0 backups
                [2 type 5 flags 0x8401 (0xeeb16a8) ext 0x0 (0x0)]
  LW-LDI[type=5, refc=3, ptr=0xe593e70, sh-ldi=0xeeb16a8]
  gateway array update type-time 1 Jan 26 23:21:47.182
 LDI Update time Jan 26 23:21:47.182
 LW-LDI-TS Jan 26 23:21:47.182
   via 172.16.30.2/32, GigabitEthernet0/0/0/1, 6 dependencies, weight 0, class 0 [flags 0x0]
    path-idx 0 NHID 0x0 [0xf4271e0 0x0]
    next hop 172.16.30.2/32
    remote adjacency
     local label 16017      labels imposed {16017}

    Load distribution: 0 (refcount 2)

    Hash  OK  Interface                 Address
    0     Y   GigabitEthernet0/0/0/1    remote
```

Do outro lado, o CE-2 também pode acessar o loopback55 localizado no roteador CE-1:

```
CE-2#ping 10.55.55.55 source loopback66
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.55.55.55, timeout is 2 seconds:
Packet sent with a source address of 10.66.66.66
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 11/12/15 ms

CE-2#traceroute 10.55.55.55 source loopback66
Type escape sequence to abort.
Tracing the route to 10.55.55.55
VRF info: (vrf in name/id, vrf out name/id)
  1 172.16.50.1 6 msec 5 msec 4 msec
  2 172.16.40.1 [MPLS: Labels 16015/24003 Exp 0] 9 msec 16 msec 10 msec
  3 172.16.30.1 [MPLS: Label 24003 Exp 0] 10 msec 13 msec 8 msec
  4 172.16.20.1 [AS 8181] 11 msec 7 msec *
```

Rótulos de MPLS

Na próxima saída, podemos confirmar que os rótulos de roteamento de segmento são usados para comutar o tráfego fim-a-fim.

```
RP/0/RP0/CPU0:PE-1#show mpls forwarding
Fri Jan 27 20:32:13.697 UTC
Local  Outgoing    Prefix             Outgoing     Next Hop        Bytes
Label  Label       or ID              Interface                    Switched
------ ----------- ------------------ ------------ --------------- ------------
16016  Pop         SR Pfx (idx 16)    Gi0/0/0/1    172.16.30.2     126880
16017  16017       SR Pfx (idx 17)    Gi0/0/0/1    172.16.30.2     17292
24000  Pop         SR Adj (idx 0)     Gi0/0/0/1    172.16.30.2     0
24001  Aggregate   172.16.20.0/30[V]  Yellow                       11384
24002  Unlabelled  192.168.1.0/24[V]  Gi0/0/0/0    172.16.20.1     0
24003  Unlabelled  10.55.55.55/32[V]  Gi0/0/0/0    172.16.20.1     0
24004  Unlabelled  10.11.11.11/32[V]  Gi0/0/0/0    172.16.20.1     0
24005  Unlabelled  10.1.1.1/32[V]     Gi0/0/0/0    172.16.20.1     0

RP/0/RP0/CPU0:Provider#show mpls forwarding
Fri Jan 27 20:33:14.878 UTC
Local  Outgoing    Prefix             Outgoing     Next Hop        Bytes
Label  Label       or ID              Interface                    Switched
------ ----------- ------------------ ------------ --------------- ------------
16015  Pop         SR Pfx (idx 15)    Gi0/0/0/1    172.16.30.1     151687
16017  Pop         SR Pfx (idx 17)    Gi0/0/0/2    172.16.40.2     147701
24000  Pop         SR Adj (idx 0)     Gi0/0/0/1    172.16.30.1     0
24001  Pop         SR Adj (idx 0)     Gi0/0/0/2    172.16.40.2     0


RP/0/RP0/CPU0:PE-2#show mpls forwarding
Fri Jan 27 20:33:49.201 UTC
Local  Outgoing    Prefix             Outgoing     Next Hop        Bytes
Label  Label       or ID              Interface                    Switched
------ ----------- ------------------ ------------ --------------- ------------
16015  16015       SR Pfx (idx 15)    Gi0/0/0/2    172.16.40.1     25304
16016  Pop         SR Pfx (idx 16)    Gi0/0/0/2    172.16.40.1     128619
24000  Pop         SR Adj (idx 0)     Gi0/0/0/2    172.16.40.1     0
24001  Aggregate   172.16.50.0/30[V]  Yellow                       1200
24002  Unlabelled  192.168.4.0/24[V]  Gi0/0/0/3    172.16.50.2     0
24003  Unlabelled  10.66.66.66/32[V]  Gi0/0/0/3    172.16.50.2     0
24004  Unlabelled  10.5.5.5/32[V]     Gi0/0/0/3    172.16.50.2     0
24005  Unlabelled  10.22.22.22/32[V]  Gi0/0/0/3    172.16.50.2     0

CE-2#show ip bgp neighbors 172.16.50.1 advertised-routes BGP table version is 5, local router ID
is 5.5.5.5 Status codes: s suppressed, d damped, h history, * valid, > best, i - internal, r
RIB-failure, S Stale, m multipath, b backup-path, f RT-Filter, x best-external, a additional-
path, c RIB-compressed, t secondary path, Origin codes: i - IGP, e - EGP, ? - incomplete RPKI
validation codes: V valid, I invalid, N Not found Network Next Hop Metric LocPrf Weight Path *>
5.5.5.5/32 0.0.0.0 0 32768 ? *> 22.22.22.22/32 192.168.4.1 10880 32768 ? *> 172.16.50.0/30
0.0.0.0 0 32768 ? *> 192.168.4.0 0.0.0.0 0 32768 ? Total number of prefixes 4
```

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