

在 Cisco GSR 上配置 POS、SRP 及 ATM 上的 VPN MPLS

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简介

本文为在ATM的多协议标签交换(MPLS)在SONET/SDH (POS)的虚拟专用网络(VPN)，数据包和部分复用协议(SRP)提供一配置示例在Cisco 12000千兆位交换路由器(GSR)。

这些缩略语用于本文。

- CE —用户边缘路由器
- PE —供应商边缘路由器
- P - 提供商核心路由器
- VRF —虚拟路由和转发

先决条件

要求

在您尝试此配置前，请保证这些需求满足：

- MPLS和MPLS VPN功能基础知识。

使用的组件

本文档中的信息基于以下软件和硬件版本：

- P和PE路由器在所有路由器的Cisco IOS软件版本12.0(28)SCisco GSR 12000系列路由器
- CE路由器在所有路由器的Cisco IOS软件版本12.0(28)SCisco 7200VXR路由器

本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原始（默认）配置。如果您使用的是真实网络，请确保您已经了解所有命令的潜在影响。

[相关产品](#)

此配置可能也与支持的这些路由器平台一起使用在供应商(p)核心：

- Cisco7200
- Cisco 7500
- Cisco 7600
- 思科8500
- Cisco 10000
- Cisco 10700
- Cisco 12000

此配置可能也与支持的这些路由器平台一起使用在服务商边缘：

- Cisco 3600
- Cisco 3700
- Cisco7200
- Cisco 7500
- Cisco 7600
- 思科8500
- Cisco 10000
- Cisco 10700
- Cisco 12000

注意： 思科3700/3600路由器没有POS和SRP模块的支持。任何平台在3600之下不支持MPLS配置。

[规则](#)

有关文档规则的详细信息，请参阅 [Cisco 技术提示规则](#)。

[背景信息](#)

MPLS安排可用于支持多个物理接口。这些接口包括ATM、POS和SRP。这些接口典型地使用骨干网连接由于他们的高带宽支持。MPLS VPN功能允许服务提供商互联多个站点，不用对ATM、POS或者SRP的需要用户在用户侧。

有ATM上的MPLS的两个实施。一个是作为亦称是“基本存储单元的”ATM上的MPLS的标签识别的(VCI)使用虚拟路径标识符(VPI)和虚拟信道。此实施描述在[RFC 3035](#)下。[第二个ATM实施是亦称是基于信息包的ATM上的MPLS的使用MPLS“小报头”。此小报头插入在Layer2和第3层报头之间。小报头的格式描述在RFC 3032下。此配置示例根据ATM接口的“小报头”实施。](#)

同步光网络上传的信息包/Synchronous数字体系(SONET/SDH)，是放置IP层直接地面上

SONET层的技术。它排除顶上需要运行在SONET的IP over ATM。POS支持多个封装格式。这些是PPP、HDLC和帧中继。小报头用于提供MPLS支持。此配置示例使用在Cisco POS接口的默认的HDLC封装。

部分复用协议(SRP)是提供弹性在级的Layer2的第2层技术。它也运行在它上面SONET/SDH。小报头实施提供MPLS支持。

配置

本部分提供有关如何配置本文档所述功能的信息。

注意：要查找本文档所用命令的其他信息，请使用[命令查找工具](#)（[仅限注册用户](#)）。

网络图

本文档使用以下网络设置：

配置

这列出在配置示例做的一些考虑事项：

- 从CES的MPLS VPN配置示例服务EIGRP路由。Cisco Bug ID [CSCds09932](#) ([仅限注册用户](#))介绍MPLS VPN的EIGRP支持与Cisco IOS软件版本12.0(22)S。这被移植对Cisco IOS软件版本12.2T通过开始在Cisco IOS软件版本12.2(15)T的Cisco Bug ID [CSCdx26186](#) ([仅限注册用户](#))。不支持同样VRF的应用程序对多个EIGRP实例的并且能失败路由器。关于此论点的一检查是最新集成与Cisco Bug ID [CSCdz40426](#) ([仅限注册用户](#))。EIGRP的参考的[MPLS VPN支持在得知更多的运营商边缘和用户边缘之间EIGRP的MPLS VPN支持](#)。
- EIGRP自治系统是相同的在两个CE路由器。BGP自治系统是相同的在两个PE路由器。
- MPLS骨干网根据POS、ATM和SRP接口并且配置与开放最短路径优先(OSPF)和MP-BGP。PE和CE之间的连接是快速以太网。

本文档使用以下配置：

- [CE\(1\)](#)
- [PE\(1\)](#)
- [P\(1\)](#)
- [P\(2\)](#)
- [PE\(2\)](#)
- [CE\(2\)](#)

```
CE(1)
!
version 12.0
!
ip cef

!--- CEF is not required on the CE because there is no
MPLS configuration. !--- CEF is the fastest switching
algorithm on Cisco routers !--- and it is best to leave
it enabled. !! interface Loopback0 ip address 11.1.1.1
```

```
255.255.255.0 ! interface Loopback1 ip address 11.2.1.1
255.255.255.0 ! interface Loopback2 ip address 11.3.1.1
255.255.255.0 ! interface FastEthernet2/0 ip address
192.168.2.2 255.255.255.252 ! router eigrp 100 network
11.0.0.0 network 192.168.2.0 no auto-summary ! ip
classless
```

PE(1)

```
!
version 12.0
!

!--- CEF is enabled by default on GSR. . ! ip vrf
Customer_A rd 100:1 route-target export 100:1 route-
target import 100:1 !--- Enables the VPN routing and
forwarding (VRF) routing table. ! interface Loopback0 ip
address 1.1.1.1 255.255.255.255 ! interface
FastEthernet0/0 ip vrf forwarding Customer_A !---
Associates a VRF instance with an interface or
subinterface. ip address 192.168.2.1 255.255.255.252 !
interface POS4/0 ip address 10.0.0.1 255.255.255.252
tag-switching ip !--- Enables dynamic Label Switching of
IPv4 packets on an interface. !--- At minimum, this is
all you need to configure MPLS over POS. !--- Note the
default encapsulation of POS interfaces is HDLC. !--- An
mpls ip command can also be used instead of tag-
switching ip. crc 32 clock source internal ! ! router
eigrp 1 ! address-family ipv4 vrf Customer_A
redistribute bgp 100 metric 10000 1 255 1 1500 network
192.168.2.0 no auto-summary autonomous-system 100 !---
The autonomous-system 100 must match the AS used on the
CE. !--- The bgp must be redistributed with metric. The
default-metric !--- command can also be used. exit-
address-family ! router ospf 1 log-adjacency-changes
network 1.1.1.1 0.0.0.0 area 0 network 10.0.0.1 0.0.0.0
area 0 ! router bgp 100 bgp log-neighbor-changes
neighbor 4.4.4.4 remote-as 100 neighbor 4.4.4.4 update-
source Loopback0 ! address-family vpnv4 neighbor 4.4.4.4
activate neighbor 4.4.4.4 send-community both exit-
address-family ! address-family ipv4 vrf Customer_A
redistribute eigrp 100 !--- The EIGRP AS 100 must be
redistributed to the BGP vrf instance. no auto-summary
no synchronization exit-address-family ! ip classless
```

P(1)

```
!
version 12.0
!
!
interface Loopback0
 ip address 2.2.2.2 255.255.255.255
!
interface POS2/0
 ip address 10.0.0.2 255.255.255.252
 tag-switching ip !--- This enables MPLS over POS. crc
32 ! ! interface ATM6/0 no ip address ! interface
ATM6/0.100 point-to-point ip address 10.1.1.1
255.255.255.252 tag-switching ip pvc 0/100 ! !--- This
enables "packet-based" MPLS over ATM. ! router ospf 1
log-adjacency-changes network 2.2.2.2 0.0.0.0 area 0
network 10.0.0.2 0.0.0.0 area 0 network 10.1.1.1 0.0.0.0
area 0 ! ip classless
```

P(2)

```

!
version 12.0
!
!
interface Loopback0
 ip address 3.3.3.3 255.255.255.255
!
interface ATM4/0
 no ip address
!
interface ATM4/0.100 point-to-point
 ip address 10.1.1.2 255.255.255.252
 tag-switching ip pvc 0/100 !--- This enables "packet-
based" MPLS over ATM. ! ! interface SRP5/0 ip address
10.2.2.1 255.255.255.252 no ip directed-broadcast tag-
switching ip !--- This enables MPLS over SRP. ! router
ospf 1 log-adjacency-changes network 3.3.3.3 0.0.0.0
area 0 network 10.1.1.2 0.0.0.0 area 0 network 10.2.2.1
0.0.0.0 area 0 ! ip classless

```

PE(2)

```

!
version 12.0
!
!
ip vrf Customer_A
 rd 100:1
 route-target export 100:1
 route-target import 100:1
!
!
interface Loopback0
 ip address 4.4.4.4 255.255.255.255
!
interface SRP4/0
 ip address 10.2.2.2 255.255.255.252
 tag-switching ip !--- This enables MPLS over SRP. !
interface FastEthernet6/0 ip vrf forwarding Customer_A
!--- Associates a VRF instance with an interface or
subinterface. ip address 192.168.1.1 255.255.255.252 ! !
router eigrp 1 ! address-family ipv4 vrf Customer_A
redistribute bgp 100 metric 10000 1 255 1 1500 network
192.168.1.0 no auto-summary autonomous-system 100 exit-
address-family !--- The autonomous-system 100 must match
the AS used on the CE. !--- The bgp must be
redistributed with metric. The default-metric !---
command can also be used. ! router ospf 1 log-adjacency-
changes network 4.4.4.4 0.0.0.0 area 0 network 10.2.2.2
0.0.0.0 area 0 ! router bgp 100 bgp log-neighbor-changes
neighbor 1.1.1.1 remote-as 100 neighbor 1.1.1.1 update-
source Loopback0 ! address-family vpv4 neighbor 1.1.1.1
activate neighbor 1.1.1.1 send-community both exit-
address-family ! address-family ipv4 vrf Customer_A
redistribute eigrp 100 !--- The EIGRP AS 100 must be
redistributed to the BGP vrf instance. no auto-summary
no synchronization exit-address-family ! ip classless

```

CE(2)

```

!
version 12.0
!
ip cef !--- CEF is not required on the CE because there
is no MPLS configuration. !--- CEF is the fastest

```

```
switching algorithm on Cisco routers so it is !--- best
to leave it enabled. !! interface Loopback0 ip address
22.1.1.1 255.255.255.0 ! interface Loopback1 ip address
22.2.1.1 255.255.255.0 ! interface Loopback2 ip address
22.3.1.1 255.255.255.0 ! interface FastEthernet2/0 ip
address 192.168.1.2 255.255.255.252 !! router eigrp 100
network 22.0.0.0 network 192.168.1.0 no auto-summary !
```

验证

本部分所提供的信息可用于确认您的配置是否正常工作。

[命令输出解释程序工具 \(仅限注册用户 \)](#) 支持某些 **show** 命令，使用此工具可以查看对 **show** 命令输出的分析。

- **show ip vrf** — 验证是否存在正确的 VRF。
- **show ip route vrf Customer_A** — 验证关于 PE 路由器的路由信息。
- **ping vrf Customer_a < IP地址>** — 通过发送 ICMP 数据包验证连接。
- **traceroute vrf Customer_A < IP地址>** — 验证关于 PE 路由器的路由信息。
- **show ip eigrp vrf Customer_A 邻居** — 验证 EIGRP 邻居在 VRF 实例里面。
- **show ip eigrp vrf Customer_A 拓扑** — 验证 EIGRP 拓扑在 VRF 实例里面。
- **show ip bgp vpnv4 vrf Customer_a** — 验证 BGP 表在 VRF 实例里面。
- **show ip cef vrf Customer_a < IP地址> 详细信息** — 验证 CEF 表在 VRF 实例里面。
- **show tag-switching forwarding-table** — ，如果有一路由/标记目的地前缀的，验证。
- **show ip route** — 验证 CES 交换路由。

PE(1)

```
PE(1)#show ip vrf Name Default RD Interfaces Customer_A 100:1 FastEthernet0/0 PE(1)#show ip
route vrf Customer_A Routing Table: Customer_A Codes: C - connected, S - static, I - IGRP, R -
RIP, M - mobile, B - BGP D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area N1 -
OSPF NSSA external type 1, N2 - OSPF NSSA external type 2 E1 - OSPF external type 1, E2 - OSPF
external type 2, E - EGP i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
ia - IS-IS inter area, * - candidate default, U - per-user static route o - ODR Gateway of last
resort is not set 22.0.0.0/24 is subnetted, 3 subnets B 22.3.1.0 [200/156160] via 4.4.4.4,
01:12:28 B 22.2.1.0 [200/156160] via 4.4.4.4, 01:12:28 B 22.1.1.0 [200/156160] via 4.4.4.4,
01:12:28 11.0.0.0/24 is subnetted, 3 subnets D 11.2.1.0 [90/156160] via 192.168.2.2, 01:12:50,
FastEthernet0/0 D 11.3.1.0 [90/156160] via 192.168.2.2, 01:12:50, FastEthernet0/0 D 11.1.1.0
[90/156160] via 192.168.2.2, 01:12:50, FastEthernet0/0 192.168.1.0/30 is subnetted, 1 subnets B
192.168.1.0 [200/0] via 4.4.4.4, 01:16:14 192.168.2.0/30 is subnetted, 1 subnets C 192.168.2.0
is directly connected, FastEthernet0/0 PE(1)#ping vrf Customer_A 192.168.1.2 Type escape
sequence to abort. Sending 5, 100-byte ICMP Echos to 192.168.1.2, timeout is 2 seconds: !!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/2/4 ms D-GSR-12012-2A#ping vrf
Customer_A ip ? WORD Ping destination address or hostname <cr> PE(1)#ping vrf Customer_A ip
Target IP address: 192.168.1.2 Repeat count [5]: 100 Datagram size [100]: 1500 Timeout in
seconds [2]: Extended commands [n]: Sweep range of sizes [n]: Type escape sequence to abort.
Sending 100, 1500-byte ICMP Echos to 192.168.1.2, timeout is 2 seconds:
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
Success rate is 100 percent (100/100), round-trip min/avg/max =
1/2/4 ms PE(1)#traceroute vrf Customer_A 192.168.1.2 Type escape sequence to abort. Tracing the
route to 192.168.1.2 1 10.0.0.2 [MPLS: Labels 18/28 Exp 0] 0 msec 0 msec 0 msec 2 10.1.1.2
[MPLS: Labels 19/28 Exp 0] 0 msec 0 msec 0 msec 3 192.168.1.1 4 msec 0 msec 0 msec 4 192.168.1.2
4 msec 0 msec * PE(1)#show ip eigrp vrf Customer_A neighbors IP-EIGRP neighbors for process 100
H Address Interface Hold Uptime SRTT RTO Q Seq Type (sec) (ms) Cnt Num 0 192.168.2.2 Fa0/0 11
10:51:41 10 200 0 8 PE(1)#show ip eigrp vrf Customer_A topology IP-EIGRP Topology Table for
AS(100)/ID(192.168.2.1) Routing Table: Customer_A Codes: P - Passive, A - Active, U - Update, Q
- Query, R - Reply, r - Reply status P 11.2.1.0/24, 1 successors, FD is 156160 via 192.168.2.2
(156160/128256), FastEthernet0/0 P 11.3.1.0/24, 1 successors, FD is 156160 via 192.168.2.2
```

```
(156160/128256), FastEthernet0/0 P 11.1.1.0/24, 1 successors, FD is 156160 via 192.168.2.2
(156160/128256), FastEthernet0/0 P 22.3.1.0/24, 1 successors, FD is 156160 via VPNv4 Sourced
(156160/0) P 22.2.1.0/24, 1 successors, FD is 156160 via VPNv4 Sourced (156160/0) P 22.1.1.0/24,
1 successors, FD is 156160 via VPNv4 Sourced (156160/0) P 192.168.1.0/30, 1 successors, FD is
28160 via VPNv4 Sourced (28160/0) P 192.168.2.0/30, 1 successors, FD is 28160 via Connected,
FastEthernet0/0 PE(1)#show ip bgp vpnv4 vrf Customer_A BGP table version is 17, local router ID
is 1.1.1.1 Status codes: s suppressed, d damped, h history, * valid, > best, i - internal, r
RIB-failure, S Stale Origin codes: i - IGP, e - EGP, ? - incomplete Network Next Hop Metric
LocPrf Weight Path Route Distinguisher: 100:1 (default for vrf Customer_A) *> 11.1.1.0/24
192.168.2.2 156160 32768 ? *> 11.2.1.0/24 192.168.2.2 156160 32768 ? *> 11.3.1.0/24 192.168.2.2
156160 32768 ? *>i22.1.1.0/24 4.4.4.4 156160 100 0 ? *>i22.2.1.0/24 4.4.4.4 156160 100 0 ?
*>i22.3.1.0/24 4.4.4.4 156160 100 0 ? *>i192.168.1.0/30 4.4.4.4 0 100 0 ? *> 192.168.2.0/30
0.0.0.0 0 32768 ? PE(1)#show ip cef vrf Customer_A Prefix Next Hop Interface 0.0.0.0/0 drop
Null0 (default route handler entry) 0.0.0.0/32 receive 11.1.1.0/24 192.168.2.2 FastEthernet0/0
11.2.1.0/24 192.168.2.2 FastEthernet0/0 11.3.1.0/24 192.168.2.2 FastEthernet0/0 22.1.1.0/24
10.0.0.2 POS4/0 22.2.1.0/24 10.0.0.2 POS4/0 22.3.1.0/24 10.0.0.2 POS4/0 192.168.1.0/30 10.0.0.2
POS4/0 192.168.2.0/30 attached FastEthernet0/0 192.168.2.0/32 receive 192.168.2.1/32 receive
192.168.2.2/32 192.168.2.2 FastEthernet0/0 192.168.2.3/32 receive 224.0.0.0/4 drop 224.0.0.0/24
receive 255.255.255.255/32 receive PE(1)#show ip cef vrf Customer_A 11.1.1.0 detail 11.1.1.0/24,
version 16, epoch 0, cached adjacency 192.168.2.2 0 packets, 0 bytes tag information set, all
rewrites owned local tag: 27 via 192.168.2.2, FastEthernet0/0, 0 dependencies next hop
192.168.2.2, FastEthernet0/0 valid cached adjacency tag rewrite with Fa0/0, 192.168.2.2, tags
imposed {} PE(1)#show tag-switching forwarding-table Local Outgoing Prefix Bytes tag Outgoing
Next Hop tag tag or VC or Tunnel Id switched interface 16 Pop tag 2.2.2.2/32 0 PO4/0 point2point
17 17 3.3.3.3/32 0 PO4/0 point2point 18 18 4.4.4.4/32 0 PO4/0 point2point 19 19 10.2.2.0/30 0
PO4/0 point2point 20 Pop tag 10.1.1.0/30 0 PO4/0 point2point 22 Untagged 11.2.1.0/24[V] 0 Fa0/0
192.168.2.2 26 Untagged 11.3.1.0/24[V] 0 Fa0/0 192.168.2.2 27 Untagged 11.1.1.0/24[V] 0 Fa0/0
192.168.2.2 28 Aggregate 192.168.2.0/30[V] 255132 PE(1)#show tag-switching forwarding-table vrf
Customer_A Local Outgoing Prefix Bytes tag Outgoing Next Hop tag tag or VC or Tunnel Id switched
interface 22 Untagged 11.2.1.0/24[V] 0 Fa0/0 192.168.2.2 26 Untagged 11.3.1.0/24[V] 0 Fa0/0
192.168.2.2 27 Untagged 11.1.1.0/24[V] 0 Fa0/0 192.168.2.2 28 Aggregate 192.168.2.0/30[V] 255132
```

P(1)

```
P(1)#show tag-switching forwarding-table Local Outgoing Prefix Bytes tag Outgoing Next Hop tag
tag or VC or Tunnel Id switched interface 16 Pop tag 1.1.1.1/32 260843 PO2/0 point2point 17 Pop
tag 3.3.3.3/32 0 AT6/0.100 point2point 18 19 4.4.4.4/32 269131 AT6/0.100 point2point 19 Pop tag
10.2.2.0/30 0 AT6/0.100 point2point
```

P(2)

```
P(2)#show tag-switching forwarding-table Local Outgoing Prefix Bytes tag Outgoing Next Hop tag
tag or VC or Tunnel Id switched interface 16 Pop tag 10.0.0.0/30 0 AT4/0.100 point2point 17 Pop
tag 2.2.2.2/32 0 AT4/0.100 point2point 18 16 1.1.1.1/32 269930 AT4/0.100 point2point 19 Pop tag
4.4.4.4/32 276490 SR5/0 10.2.2.2
```

PE(2)

```
PE(2)#show tag-switching forwarding-table Local Outgoing Prefix Bytes tag Outgoing Next Hop tag
tag or VC or Tunnel Id switched interface 16 18 1.1.1.1/32 0 SR4/0 10.2.2.1 17 17 2.2.2.2/32 0
SR4/0 10.2.2.1 18 Pop tag 3.3.3.3/32 0 SR4/0 10.2.2.1 19 16 10.0.0.0/30 0 SR4/0 10.2.2.1 20 Pop
tag 10.1.1.0/30 0 SR4/0 10.2.2.1 25 Untagged 22.1.1.0/24[V] 2280 Fa6/0 192.168.1.2 26 Untagged
22.2.1.0/24[V] 570 Fa6/0 192.168.1.2 27 Untagged 22.3.1.0/24[V] 570 Fa6/0 192.168.1.2 28
Aggregate 192.168.1.0/30[V] 251808
```

CE(1)

```
CE(1)#show ip route Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP D -
EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area N1 - OSPF NSSA external type 1, N2 -
OSPF NSSA external type 2 E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP i - IS-
IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2 ia - IS-IS inter area, * -
candidate default, U - per-user static route o - ODR Gateway of last resort is not set
22.0.0.0/24 is subnetted, 3 subnets D 22.3.1.0 [90/158720] via 192.168.2.1, 00:35:45,
FastEthernet2/0 D 22.2.1.0 [90/158720] via 192.168.2.1, 00:35:45, FastEthernet2/0 D 22.1.1.0
[90/158720] via 192.168.2.1, 00:35:45, FastEthernet2/0 11.0.0.0/24 is subnetted, 3 subnets C
11.2.1.0 is directly connected, Loopback1 C 11.3.1.0 is directly connected, Loopback2 C 11.1.1.0
```

is directly connected, Loopback0 192.168.1.0/30 is subnetted, 1 subnets D 192.168.1.0 [90/30720] via 192.168.2.1, 00:35:46, FastEthernet2/0 192.168.2.0/30 is subnetted, 1 subnets C 192.168.2.0 is directly connected, FastEthernet2/0 CE(1)#**ping 22.1.1.1** Type escape sequence to abort. Sending 5, 100-byte ICMP Echos to 22.1.1.1, timeout is 2 seconds: !!!!! Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/4 ms

CE(2)

D-R7206-5A#**show ip route** Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2 E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2 ia - IS-IS inter area, * - candidate default, U - per-user static route o - ODR Gateway of last resort is not set
22.0.0.0/24 is subnetted, 3 subnets C 22.3.1.0 is directly connected, Loopback2 C 22.2.1.0 is directly connected, Loopback1 C 22.1.1.0 is directly connected, Loopback0 11.0.0.0/24 is subnetted, 3 subnets D 11.2.1.0 [90/158720] via 192.168.1.1, 00:36:32, FastEthernet2/0 D 11.3.1.0 [90/158720] via 192.168.1.1, 00:36:32, FastEthernet2/0 D 11.1.1.0 [90/158720] via 192.168.1.1, 00:36:32, FastEthernet2/0 192.168.1.0/30 is subnetted, 1 subnets C 192.168.1.0 is directly connected, FastEthernet2/0 192.168.2.0/30 is subnetted, 1 subnets D 192.168.2.0 [90/30720] via 192.168.1.1, 00:36:33, FastEthernet2/0 CE(2)#**ping 11.1.1.1** Type escape sequence to abort. Sending 5, 100-byte ICMP Echos to 11.1.1.1, timeout is 2 seconds: !!!!! Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/4 ms

故障排除

目前没有针对此配置的故障排除信息。

相关信息

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- [配置基本 MPLS VPN](#)
- [MPLS VPN 环境里中的信息包流](#)
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