고객 측 컨피그레이션의 EIGRP를 사용하는 MPLS/VPN 예

목차

소개

이 문서에서는 EIGRP(Enhanced Interior Gateway Routing Protocol)가 고객 측에 있는 경우 MPLS(Multiprotocol Label Switching) VPN(Virtual Private Network)의 샘플 컨피그레이션을 제공합니다.

이 문서에서는 MPLS/VPN 환경의 고객 측에서 EIGRP에 대한 샘플 컨피그레이션을 제공합니다.이러한 시나리오는 다음과 같습니다.

- 동일한 EIGRP 자동 시스템에 속하는 2개의 연결 엔드포인트(CE).
- 서로 다른 EIGRP 자동 시스템에 속하는 2개의 CE입니다.

두 시나리오 모두 구성 및 확인 단계가 표시됩니다.관련된 두 프로토콜(BGP(Border Gateway Protocol) 및 EIGRP에 대한 라우팅 교환 샘플도 제공됩니다.

MPLS와 함께 사용할 경우 VPN 기능을 사용하면 여러 사이트가 서비스 공급자 네트워크를 통해 투명하게 상호 연결할 수 있습니다.한 통신 사업자 네트워크는 여러 개의 다른 IP VPN을 지원할 수 있습니다.이러한 각 네트워크는 다른 모든 네트워크와 별도로 사용자에게 사설 네트워크로 나타납니다.VPN 내에서 각 사이트는 동일한 VPN의 다른 사이트로 IP 패킷을 전송할 수 있습니다.

각 VPN은 하나 이상의 VPN 라우팅/포워딩 인스턴스(VRF)와 연결됩니다.VRF는 IP 라우팅 테이블,

파생된 CEF(Cisco Express Forwarding) 테이블 및 이 포워딩 테이블을 사용하는 인터페이스 집합으로 구성됩니다.

라우터는 각 VRF에 대해 별도의 라우팅 및 CEF 테이블을 유지합니다.이렇게 하면 VPN 외부로 정보가 전송되지 않으며 중복된 IP 주소 문제를 일으키지 않고 여러 VPN에서 동일한 서브넷을 사용할 수 있습니다.

MP-BGP(Multiprotocol BGP)를 사용하는 라우터는 MP-BGP 확장 커뮤니티를 사용하여 VPN 라우팅 정보를 배포합니다.

VPN을 통한 업데이트 전파에 대한 자세한 내용은 다음 문서를 참조하십시오.

- [MPLS Virtual Private Networks 컨피그레이션](#)
- [MPLS VPN 환경의 패킷 흐름](#)
- [OSPF를 사용하여 기본 MPLS 구성](#)

사전 요구 사항

요구 사항

이 문서에 대한 특정 요건이 없습니다.

사용되는 구성 요소

이 문서는 특정 소프트웨어 및 하드웨어 버전으로 한정되지 않습니다.

MPLS/VPN 환경의 PE와 CE 간 EIGRP는 Cisco IOS® Software 릴리스 12.0(22)S 및 12.2(15)T에서 도입되었습니다.

관련 제품

이 컨피그레이션은 다음 라우터 시리즈에서도 사용할 수 있습니다.

- Cisco 7200
- Cisco 7500
- Cisco 10000
- Cisco 10700
- Cisco 12000
- Cisco 12000 Series PRP(Performance Route Processor)

표기 규칙

문서 규칙에 대한 자세한 내용은 [Cisco 기술 팁 표기 규칙을 참고하십시오.](#)

배경 정보

EIGRP 경로는 새로운 EIGRP 특정 확장 커뮤니티 특성에 의해 서비스 공급자 백본의 BGP 경로로 변환됩니다.PE(Provider Edge) 라우터는 BGP를 사용하여 BGP 경로에 추가된 EIGRP 특정 확장

커뮤니티 특성을 사용하여 VPN 라우팅 정보를 배포합니다.BGP 경로는 EIGRP 특정 확장 커뮤니티 특성이 대상 고객 에지(CE) 라우터에 연결된 PE 라우터에 도달하면 EIGRP 특성으로 다시 변환됩니다.

이 표에서는 BGP 경로에 추가되고 서비스 공급자 백본 전반에 EIGRP 정보를 전달하는 데 사용되는 확장 커뮤니티 특성에 대해 설명합니다.

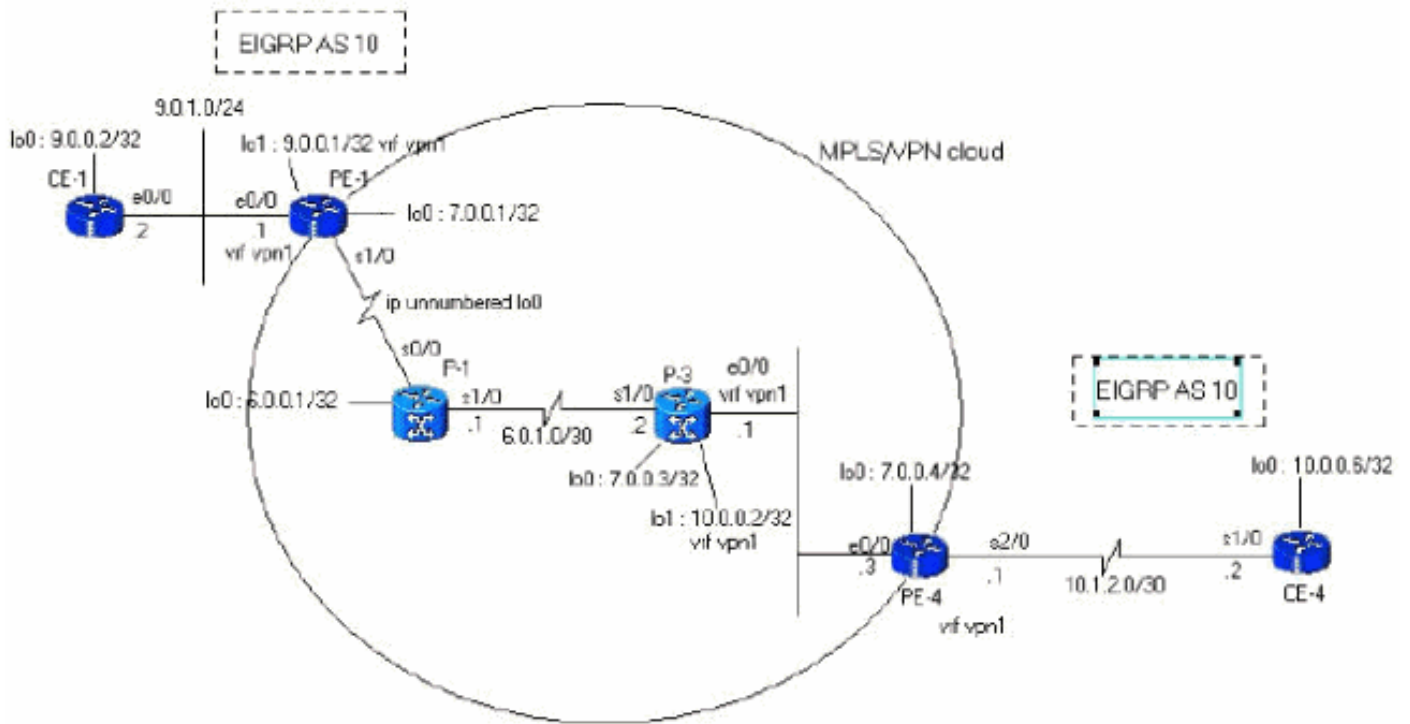| EIGRP 특성	유형	사용	가치
일반	0x8800	EIGRP 일반 경로 정보	경로 플래그 및 태그
메트릭	0x8801	EIGRP 경로 메트릭 정보 및 자동 시스템	자동 시스템 및 지연
	0x8802	EIGRP 경로 메트릭 정보	신뢰성, Next Hop, 대역폭
	0x8803	EIGRP 경로 메트릭 정보	예약, 로드 및 최대 전송 단위(MTU)
외부	0x8804	EIGRP 외부 경로 정보	원격 자동 시스템 및 원격 ID
	0x8805	EIGRP 외부 경로 정보	원격 프로토콜 및 원격 메트릭

시나리오 1:단일 EIGRP 자동 시스템 구성

이 섹션에는 이 문서에서 설명하는 기능을 구성하기 위한 정보가 표시됩니다.

참고: 명령 조회 도구(등록된 고객만 해당)를 사용하여 이 섹션에 사용된 명령에 대한 자세한 내용을 확인하십시오.

네트워크 다이어그램

이 섹션에서는 다음 네트워크 설정을 사용합니다.

구성

이 섹션에서는 다음 컨피그레이션을 사용합니다.

PE-1

```
PE-1#show run
Building configuration...
ip cef
!--- vpn1 commands. ip vrf vpn1 !--- Enables the VPN
routing and forwarding (VRF) routing table. !--- This
command can be used in global or !--- router
configuration mode. rd 100:1 !--- Route distinguisher
creates routing and forwarding !--- tables for a VRF.
route-target export 100:1 !--- Creates lists of import
and export route-target extended !--- communities for
the specified VRF. route-target import 100:1 ! interface
Loopback0 ip address 7.0.0.1 255.255.255.255 no ip
directed-broadcast ! interface Ethernet0/0 ip vrf
forwarding vpn1 !--- Associates a VRF instance with an
interface or subinterface. ip address 9.0.1.1
255.255.255.0 no ip directed-broadcast ! router eigrp 1
! address-family ipv4 vrf vpn1
!--- To enter address family configuration mode !--- for
configuring EIGRP routing sessions, !--- that use
standard VPN version 4 address prefixes. redistribute
bgp 1
!--- Enables redistribution of bgp into this specific
instance of EIGRP. network 9.0.0.0 default-metric 10000
1 255 1 1500
 no auto-summary
 autonomous-system 10
!--- Defines the autonomous system number for this
specific instance of EIGRP. exit-address-family ! router
bgp 1 no bgp default ipv4-unicast bgp log-neighbor-
changes neighbor 7.0.0.4 remote-as 1 !--- Adds an entry
to the BGP or multiprotocol BGP neighbor table. neighbor
```

```
7.0.0.4 update-source Loopback0 !--- Enables BGP
sessions to use a specific operational !--- interface
for TCP connections. ! address-family vpnv4 !--- To
enter address family configuration mode !--- for
configuring routing sessions, such as BGP, !--- that use
standard VPN version 4 address prefixes. neighbor
7.0.0.4 activate neighbor 7.0.0.4 send-community both !-
-- Sends the community attribute to a BGP neighbor. no
auto-summary exit-address-family ! address-family ipv4
neighbor 7.0.0.4 activate exit-address-family ! address-
family ipv4 vrf vpn1 redistribute eigrp 10
!--- Enables redistribution of EIGRP AS 10 into BGP. no
auto-summary no synchronization exit-address-family !
end
```

PE-4

```
PE-4#show running-config
Building configuration...
Current configuration : 2439 bytes
!
ip cef
ip vrf vpn1
 rd 100:1
 route-target export 100:1
 route-target import 100:1
!
!
interface Loopback0
 ip address 7.0.0.4 255.255.255.255
 no ip directed-broadcast
!
interface Ethernet0/0
 ip address 6.0.2.3 255.255.255.0
 no ip directed-broadcast
 tag-switching ip
!
!
interface Serial2/0
 ip vrf forwarding vpn1
 ip address 10.1.2.1 255.255.255.252
 no ip directed-broadcast
!
router eigrp 1
 !
 address-family ipv4 vrf vpn1
 redistribute bgp 1
 network 10.0.0.0
 default-metric 10000 1 255 1 1500
 no auto-summary
 autonomous-system 10
 exit-address-family
!
 router bgp 1
 no bgp default ipv4-unicast
 bgp log-neighbor-changes
 neighbor 7.0.0.1 remote-as 1
 neighbor 7.0.0.1 update-source Loopback0
 no auto-summary
 !
 address-family vpnv4
 neighbor 7.0.0.1 activate
 neighbor 7.0.0.1 send-community extended
```

```
 no auto-summary
 exit-address-family
 !
 address-family ipv4
 redistribute connected
 neighbor 7.0.0.1 activate
 no auto-summary
 no synchronization
 exit-address-family
 !
 address-family ipv4 vrf vpn1
 redistribute eigrp 10
 no auto-summary
 no synchronization
 network 13.0.0.1 mask 255.255.255.255
 exit-address-family
!
end
```

<u>다음을 확인합니다.</u>

컨피그레이션을 확인하려면 단계별 접근 방식을 사용하고 순서대로 이 점을 확인합니다.다음 단계를 완료하십시오.

1. EIGRP 인스턴스가 원하는 인터페이스에 구성되었는지 확인합니다. 올바른 주소군 아래에서 **vrf** 명령 및 eigrp network 명령을 확인합니다.이 예에서는 VRF를 vpn1이라고 합니다.

```
PE-1#show ip vrf vpn1
  Name                           Default RD          Interfaces
  vpn1                           100:1               Ethernet0/0

PE-1#show ip eigrp vrf vpn1 interfaces
 IP-EIGRP interfaces for process 10
                    Xmit Queue   Mean   Pacing Time   Multicast    Pending
Interface    Peers  Un/Reliable  SRTT   Un/Reliable   Flow Timer   Routes
Et0/0          1       0/0       103       0/10          416           0
PE-1#
```

2. EIGRP 인접 디바이스가 설정되었는지 확인합니다.이 예에서는 9.0.1.2(CE-1)이 네이버임을 확인할 수 있습니다.

```
PE-1#show ip eigrp vrf vpn1 neighbors
 IP-EIGRP neighbors for process 10
H   Address            Interface      Hold Uptime    SRTT   RTO  Q  Seq Type
                                      (sec)          (ms)        Cnt Num
0   9.0.1.2            Et0/0          13 00:30:19    103    618  0  9
    PE-1#
```

3. EIGRP 토폴로지 테이블에 EIGRP(9.0.0.2/32)을 통해 학습된 로컬 서브넷이 포함되어 있는지 확인합니다.

이 예에서는 EIGRP 토폴로지 테이블에 MPLS/VPN 백본(10.1.2.0/30)에서 학습한 서브넷도 포함되어 있음을 확인할 수 있습니다.서브넷은 Redistributed를 통해 학습된 것으로 표시되며 보고된 거리는 0입니다.

```
PE-1#show ip eigrp vrf vpn1 topology
 IP-EIGRP Topology Table for AS(10)/ID(9.0.0.1) Routing Table: vpn1
Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,
       r - Reply status
P 10.1.3.0/24, 1 successors, FD is 2195456
         via Redistributed (2195456/0)
P 9.0.1.0/24, 1 successors, FD is 281600
         via Connected, Ethernet0/0
```

```
P 9.0.0.1/32, 1 successors, FD is 128256
        via Connected, Loopback1
P 10.1.2.0/30, 1 successors, FD is 2169856
        via Redistributed (2169856/0)
P 9.1.0.2/32, 1 successors, FD is 45867776
        via 9.0.1.2 (45867776/45842176), Ethernet0/0
P 9.0.0.2/32, 1 successors, FD is 409600
        via 9.0.1.2 (409600/128256), Ethernet0/0
P 10.0.0.6/32, 1 successors, FD is 2297856
        via Redistributed (2297856/0)
P 13.0.0.1/32, 1 successors, FD is 256256
        via Redistributed (256256/0)
PE-1#
```

4. 서브넷이 없는 경우 특정 VRF에 대해 이러한 **show** 명령과 함께 BGP 테이블에 있는지 확인합니다.BGP와 EIRGP 간의 재배포가 올바르게 구성되지 않은 경우 한 테이블에서 서브넷을 볼수 있으며 다른 테이블에서는 볼 수 없습니다.

```
PE-1#show ip bgp vpnv4 vrf vpn1
BGP table version is 45, local router ID is 7.0.0.1
Status codes: s suppressed, d damped, h history, * valid, > best, i - internal,
              S Stale
Origin codes: i - IGP, e - EGP, ? - incomplete
   Network          Next Hop          Metric LocPrf Weight Path
Route Distinguisher: 100:1 (default for vrf vpn1)
*> 9.0.0.1/32       0.0.0.0               0          32768 ?
*> 9.0.0.2/32       9.0.1.2          409600         32768 ?
*> 9.0.1.0/24       0.0.0.0               0          32768 ?
*> 9.1.0.2/32       9.0.1.2        45867776         32768 ?
*>i10.0.0.6/32      7.0.0.4         2297856    100      0 ?
*>i10.1.2.0/30      7.0.0.4               0    100      0 ?
*>i10.1.3.0/24      7.0.0.4         2195456    100      0 ?
*>i13.0.0.1/32      7.0.0.4               0    100      0 i
PE-1#
```

```
PE-1#show ip bgp vpnv4 vrf vpn1 9.0.0.1 255.255.255.255
BGP routing table entry for 100:1:9.0.0.1/32, version 12
Paths: (1 available, best #1, table vpn1)
  Advertised to update-groups:
     1
         Local
    0.0.0.0 (via vpn1) from 0.0.0.0 (7.0.0.1)
      Origin incomplete, metric 0, localpref 100, weight 32768,
valid, sourced, best
      Extended Community: RT:100:1 0x8800:32768:0 0x8801:10:128000
 0x8802:65280:256 0x8803:65281:1514
PE-1#
```

```
PE-1# show ip bgp vpnv4 vrf vpn1 10.1.2.0 255.255.255.252
BGP routing table entry for 100:1:10.1.2.0/30, version 40
Paths: (1 available, best #1, table vpn1)
  Not advertised to any peer
  Local
    7.0.0.4 (metric 139) from 7.0.0.4 (7.0.0.4)
      Origin incomplete, metric 0, localpref 100, valid, internal,
 best
      Extended Community: RT:100:1 0x8800:32768:0 0x8801:10:512000
 0x8802:65280:1657856 0x8803:65281:1500
```

원격 PE에서 동일한 **show** 명령을 사용해야 합니다.이 예에서는 원격 PE가 PE-4입니다.

```
PE-4#show ip eigrp vrf vpn1 interfaces
 IP-EIGRP interfaces for process 10
                  Xmit Queue   Mean   Pacing Time   Multicast    Pending
Interface   Peers Un/Reliable  SRTT   Un/Reliable   Flow Timer   Routes
```

```
Se1/0              0        0/0        0        0/10          0               0
Se2/0              1        0/0      100        0/15        415               0


PE-4#show ip eigrp vrf vpn1 neighbors
 IP-EIGRP neighbors for process 10
H   Address           Interface       Hold Uptime   SRTT   RTO  Q  Seq Type
                                      (sec)         (ms)        Cnt Num
0   10.1.2.2          Se2/0            10 00:18:57  100    600  0  2


PE-4#show ip eigrp vrf vpn1 topology
 IP-EIGRP Topology Table for AS(10)/ID(13.0.0.1) Routing Table: vpn1
Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,
       r - Reply status
P 10.1.3.0/24, 1 successors, FD is 2195456
         via 10.1.2.2 (2195456/281600), Serial2/0
P 9.0.0.1/32, 1 successors, FD is 128256
         via Redistributed (128256/0)
P 9.0.1.0/24, 1 successors, FD is 281600
         via Redistributed (281600/0)
P 10.1.2.0/30, 1 successors, FD is 2169856
         via Connected, Serial2/0
P 9.1.0.2/32, 1 successors, FD is 45867776
         via Redistributed (45867776/0)
P 9.0.0.2/32, 1 successors, FD is 409600
         via Redistributed (409600/0)
P 10.0.0.6/32, 1 successors, FD is 2297856
         via 10.1.2.2 (2297856/128256), Serial2/0
P 13.0.0.1/32, 1 successors, FD is 256256
         via Redistributed (256256/0)


PE-4#show ip bgp vpnv4 vrf vpn1
 BGP table version is 61, local router ID is 7.0.0.4
Status codes: s suppressed, d damped, h history, * valid, > best, i - internal,
              S Stale
Origin codes: i - IGP, e - EGP, ? - incomplete
   Network          Next Hop          Metric LocPrf Weight Path
Route Distinguisher: 100:1 (default for vrf vpn1)
*>i9.0.0.1/32       7.0.0.1                0    100      0 ?
*>i9.0.0.2/32       7.0.0.1           409600    100      0 ?
*>i9.0.1.0/24       7.0.0.1                0    100      0 ?
*>i9.1.0.2/32       7.0.0.1         45867776    100      0 ?
*> 10.0.0.6/32      10.1.2.2         2297856         32768 ?
*> 10.1.2.0/30      0.0.0.0                0         32768 ?
*> 10.1.3.0/24      10.1.2.2         2195456         32768 ?
*> 13.0.0.1/32      0.0.0.0                0         32768 i


PE-4#show ip bgp vpnv4 vrf vpn1 9.0.0.1 255.255.255.255
BGP routing table entry for 100:1:9.0.0.1/32, version 45
Paths: (1 available, best #1, table vpn1)
  Not advertised to any peer
  Local
    7.0.0.1 (metric 139) from 7.0.0.1 (7.0.0.1)
      Origin incomplete, metric 0, localpref 100, valid, internal,
 best
      Extended Community: RT:100:1 0x8800:32768:0 0x8801:10:128000
 0x8802:65280:
256 0x8803:65281:1514


PE-4#show ip bgp vpnv4 vrf vpn1 10.1.2.0 255.255.255.252
BGP routing table entry for 100:1:10.1.2.0/30, version 56
Paths: (1 available, best #1, table vpn1)
  Advertised to update-groups:
     1
          Local
```

```
          0.0.0.0 (via vpn1) from 0.0.0.0 (7.0.0.4)
             Origin incomplete, metric 0, localpref 100, weight 32768,
      valid, sourced,
       best
             Extended Community: RT:100:1 0x8800:32768:0 0x8801:10:512000
       0x8802:65280:
      1657856 0x8803:65281:1500

      PE-4#
      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, 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
           9.0.0.0/8 is variably subnetted, 4 subnets, 2 masks
      C       9.0.1.0/24 is directly connected, Ethernet0/0
      D       9.0.0.1/32 [90/409600] via 9.0.1.1, 1d02h, Ethernet0/0
      C       9.1.0.2/32 is directly connected, Loopback1
      C       9.0.0.2/32 is directly connected, Loopback0
          10.0.0.0/8 is variably subnetted, 3 subnets, 3 masks
      D       10.1.3.0/24 [90/2221056] via 9.0.1.1, 1d02h, Ethernet0/0
      D       10.1.2.0/30 [90/2195456] via 9.0.1.1, 1d02h, Ethernet0/0
      D       10.0.0.6/32 [90/2323456] via 9.0.1.1, 1d02h, Ethernet0/0
          13.0.0.0/32 is subnetted, 1 subnets
      D EX    13.0.0.1 [170/281856] via 9.0.1.1, 1d02h, Ethernet0/0
```

문제 해결

이 섹션에서는 PE에서 받은 eigrp 쿼리 및 MPLS/VPN 클라우드를 통해 전송되는 해당 BGP 업데이트에 대한 정보를 제공합니다.다이어그램 오른쪽의 라우터 CE-4에 직접 연결된 서브넷 10.0.0.6/32에 대해 수행됩니다.적절한 debug 명령과 함께 CE-4의 루프백 인터페이스에서 'shut' 및 'no shut'을 수행하면 타이거를 이해하는 데 도움이 됩니다.

단일 자동 시스템에서 전달 업데이트

이러한 **debug** 명령은 서브넷 10.0.0.6/32(CE-4의 루프백 주소) 업데이트를 추적하는 데 사용됩니다.

- 디버그 eigrp fsm
- 디버그 eigrp 패킷 쿼리 응답 요청 업데이트
- 디버그 ip eigrp 10 10.0.0.6 255.255.255.255
- 디버그 ip bgp vpnv4
- 디버그 ip bgp 업데이트

다음 예에서는 CE-4의 loopback0 인터페이스에서 **shut** 명령을 수행한 후 EIGRP 엔트리를 철회하는 것을 보여줍니다.

```
PE-4
*Apr 30 08:36:59.913: DUAL: dual_rcvquery():10.0.0.6/32 via 10.1.2.2
metric 4294967295/4294967295, RD is 2297856
*Apr 30 08:36:59.913: DUAL: Find FS for dest 10.0.0.6/32. FD is 2297856,
RD is 2297856
*Apr 30 08:36:59.913: DUAL:     10.1.2.2 metric 4294967295/4294967295 not
 found Dmin is 4294967295
```

```
*Apr 30 08:36:59.913: DUAL: Dest 10.0.0.6/32 (Split Horizon) not entering
 active state.
*Apr 30 08:36:59.913: DUAL: Send reply about 10.0.0.6/32 to 10.1.2.2
*Apr 30 08:36:59.965: vpn: bgp_router, vpn ipv4 redistQ len = 1
*Apr 30 08:36:59.965: BGP(2): route 100:1:10.0.0.6/32 down
*Apr 30 08:36:59.965: BGP(2): no valid path for 100:1:10.0.0.6/32
*Apr 30 08:36:59.965: BGP(2): nettable_walker 100:1:10.0.0.6/32 no best path
*Apr 30 08:37:00.085: DUAL: Removing dest 10.0.0.6/32, nexthop 10.1.2.2
*Apr 30 08:37:00.085: DUAL: No routes.  Flushing dest 10.0.0.6/32
*Apr 30 08:37:00.961: vpn: bgp_router, vpn ipv4 redistQ len = 1
*Apr 30 08:37:00.961: BGP(2): route 100:1:10.0.0.6/32 down
*Apr 30 08:37:01.993: BGP(2): 7.0.0.1 computing updates, afi 2, neighbor
version 73, table version 74, starting at 0.0.0.0
*Apr 30 08:37:01.993: BGP(2): 7.0.0.1 send unreachable 100:1:10.0.0.6/32
*Apr 30 08:37:01.993: BGP(2): 7.0.0.1 send UPDATE 100:1:10.0.0.6/32 --
unreachable
*Apr 30 08:37:01.993: BGP(2): 1 updates (average = 45, maximum = 45)
*Apr 30 08:37:01.993: BGP(2): 7.0.0.1 updates replicated for neighbors:
*Apr 30 08:37:01.993: BGP(2): 7.0.0.1 update run completed, afi 2, ran for
 0ms, neighbor version 74, start version 74, throttled to 74
*Apr 30 08:37:05.925: BGP: Import walker start version 73, end version
74*Apr 30 08:37:05.925: BGP: ... start import cfg version = 0


PE-1
*Apr 30 08:35:04.069: BGP(2): 7.0.0.4 rcv UPDATE about 100:1:10.0.0.6/32
 -- withdrawn
*Apr 30 08:35:04.069: BGP: Withdraw path from 7.0.0.4
*Apr 30 08:35:04.069: BGP(2): no valid path for 100:1:10.0.0.6/32
*Apr 30 08:35:04.089: BGP(2): nettable_walker 100:1:10.0.0.6/32 no best path
*Apr 30 08:35:04.109: DUAL: dual_rcvupdate(): 10.0.0.6/32 via Redistributed
metric 4294967295/4294967295
*Apr 30 08:35:04.109: DUAL: Find FS for dest 10.0.0.6/32. FD is 2297856,
 RD is 2297856
*Apr 30 08:35:04.109: DUAL:     0.0.0.0 metric 4294967295/4294967295 not
 found Dmin is 4294967295
*Apr 30 08:35:04.109: DUAL: Dest 10.0.0.6/32 entering active state.
*Apr 30 08:35:04.109: DUAL: Set reply-status table. Count is 1.
*Apr 30 08:35:04.109: DUAL: Not doing split horizon
*Apr 30 08:35:04.137: EIGRP: Enqueueing QUERY on Ethernet0/0 iidbQ un/rely
 0/1 serno 35-35
*Apr 30 08:35:04.169: EIGRP: Sending QUERY on Ethernet0/0
*Apr 30 08:35:04.169:   AS 10, Flags 0x0, Seq 17/0 idbQ 0/0 iidbQ un/rely
 0/0 serno 35-35
*Apr 30 08:35:04.349: EIGRP: Received REPLY on Ethernet0/0 nbr 9.0.1.2
*Apr 30 08:35:04.349:   AS 10, Flags 0x0, Seq 16/17 idbQ 0/0 iidbQ un/rely
 0/0 peerQ un/rely 0/0
*Apr 30 08:35:04.349: DUAL: dest(10.0.0.6/32) active
*Apr 30 08:35:04.349: DUAL: dual_rcvreply(): 10.0.0.6/32 via 9.0.1.2 metric
 4294967295/4294967295
*Apr 30 08:35:04.349: DUAL: Count is 1*Apr 30 08:35:04.349: DUAL: Clearing
 handle 0, count is now 0
*Apr 30 08:35:04.349: DUAL: Freeing reply status table
*Apr 30 08:35:04.349: DUAL: Find FS for dest 10.0.0.6/32. FD is 4294967295,
 RD is 4294967295 found
*Apr 30 08:35:04.349: DUAL: Removing dest 10.0.0.6/32, nexthop 0.0.0.0
*Apr 30 08:35:04.349: DUAL: Removing dest 10.0.0.6/32, nexthop 9.0.1.2
*Apr 30 08:35:04.349: DUAL: No routes.  Flushing dest 10.0.0.6/32


PE-1#
CE-1
*Apr 30 08:26:30.813: EIGRP: Received QUERY on Ethernet0/0 nbr 9.0.1.1
*Apr 30 08:26:30.813:   AS 10, Flags 0x0, Seq 13/0 idbQ 0/0 iidbQ un/rely
 0/0 peerQ un/rely 0/0
*Apr 30 08:26:30.813: DUAL: dual_rcvquery():10.0.0.6/32 via 9.0.1.1 metric
```

```
       4294967295/4294967295, RD is 2323456
*Apr 30 08:26:30.813: DUAL: Find FS for dest 10.0.0.6/32. FD is 2323456,
 RD is 2323456
*Apr 30 08:26:30.813: DUAL:      9.0.1.1 metric 4294967295/4294967295 not
 found Dmin is 4294967295
*Apr 30 08:26:30.813: DUAL: Dest 10.0.0.6/32 (Split Horizon) not entering
 active state.
*Apr 30 08:26:30.813: DUAL: Send reply about 10.0.0.6/32 to 9.0.1.1
*Apr 30 08:26:30.849: EIGRP: Enqueueing REPLY on Ethernet0/0 nbr 9.0.1.1
iidbQ un/rely 0/1 peerQ un/rely 0/0 serno 31-31
*Apr 30 08:26:30.877: EIGRP: Sending REPLY on Ethernet0/0 nbr 9.0.1.1
*Apr 30 08:26:30.877:   AS 10, Flags 0x0, Seq 12/13 idbQ 0/0 iidbQ un/rely
 0/0 peerQ un/rely 0/1 serno 31-31
*Apr 30 08:26:30.989: DUAL: Removing dest 10.0.0.6/32, nexthop 9.0.1.1
*Apr 30 08:26:30.989: DUAL: No routes.  Flushing dest 10.0.0.6/32
```

다음 예에서는 CE-4의 loopback0 인터페이스에서 no shut 명령을 수행한 후 EIGRP 항목을 생성하는 방법을 보여 줍니다.

```
PE-4
*Apr 30 08:38:53.685: DUAL: dest(10.0.0.6/32) not active
*Apr 30 08:38:53.685: DUAL: dual_rcvupdate(): 10.0.0.6/32 via 10.1.2.2
 metric 2297856/128256
*Apr 30 08:38:53.685: DUAL: Find FS for dest 10.0.0.6/32. FD is 4294967295,
 RD is 4294967295 found
*Apr 30 08:38:53.685: vpn: tag_vpn_find_route_tags: 100:1:10.0.0.6
*Apr 30 08:38:53.685: DUAL: RT installed 10.0.0.6/32 via 10.1.2.2
*Apr 30 08:38:53.685: DUAL: Send update about 10.0.0.6/32.  Reason: metric chg
*Apr 30 08:38:53.685: DUAL: Send update about 10.0.0.6/32.  Reason: new if
*Apr 30 08:38:53.745: vpn: bgp_router, vpn ipv4 redistQ len = 1
*Apr 30 08:38:53.745: BGP(2): route 100:1:10.0.0.6/32 up
*Apr 30 08:38:53.745: vpn: bgp allocate label: route_tag_change for
vpn1:10.0.0.6/255.255.255.255
*Apr 30 08:38:53.745: vpn: tag_vpn_find_route_tags: 100:1:10.0.0.6
*Apr 30 08:38:53.745: vpn: intag=21, outtag=unknown, outtag owner=BGP
*Apr 30 08:38:53.745: BGP(2): nettable_walker 100:1:10.0.0.6/32 route
sourced locally
*Apr 30 08:38:55.813: BGP(2): 7.0.0.1 computing updates, afi 2, neighbor
 version 77, table version 78, starting at 0.0.0.0
*Apr 30 08:38:55.813: BGP(2): 7.0.0.1 send UPDATE (format) 100:1:10.0.0.6/32,
 next 7.0.0.4, metric 2297856, path , extended community RT:100:1 0x8800:32768:0
 0x8801:10:640000 0x8802:65281:1657856 0x8803:65281:1500
*Apr 30 08:38:55.813: BGP(2): 1 updates (average = 123, maximum = 123)
*Apr 30 08:38:55.813: BGP(2): 7.0.0.1 updates replicated for neighbors:
*Apr 30 08:38:55.813: BGP(2): 7.0.0.1 update run completed, afi 2, ran
for 0ms, neighbor version 78, start version 78, throttled to 78
*Apr 30 08:39:07.053: BGP: Import walker start version 77, end version 78
*Apr 30 08:39:07.053: BGP: ... start import cfg version = 0
*Apr 30 08:39:07.053: vpn: vpn1 same RD import, do best path
*Apr 30 08:39:07.053: vpn: bgp allocate label: route_tag_change for
vpn1:10.0.0.6/255.255.255.255
*Apr 30 08:39:07.053: vpn: tag_vpn_find_route_tags: 100:1:10.0.0.6
*Apr 30 08:39:07.053: vpn: intag=21, outtag=unknown, outtag owner=BGP
*Apr 30 08:39:07.305: BGP(2): nettable_walker 100:1:10.0.0.6/32 route
sourced locally
*Apr 30 08:39:09.413: BGP(2): 7.0.0.1 computing updates, afi 2, neighbor
 version 78, table version 79, starting at 0.0.0.0
*Apr 30 08:39:09.413: BGP(2): 7.0.0.1 send UPDATE (format) 100:1:10.0.0.6/32,
 next 7.0.0.4, metric 2297856, path , extended community RT:100:1 0x8800:32768:0
 0x8801:10:640000 0x8802:65281:1657856 0x8803:65281:1500
*Apr 30 08:39:09.413: BGP(2): 1 updates (average = 123, maximum = 123)
```

```
*Apr 30 08:39:09.413: BGP(2): 7.0.0.1 updates replicated for neighbors:
*Apr 30 08:39:09.413: BGP(2): 7.0.0.1 update run completed, afi 2, ran for
0ms, neighbor version 79, start version 79, throttled to 79


PE-1
*Apr 30 08:35:36.409: BGP: 7.0.0.3 multihop open delayed 15100ms (no route)
*Apr 30 08:35:37.981: BGP: Incoming path from 7.0.0.4
*Apr 30 08:35:37.981: BGP(2): 7.0.0.4 rcvd UPDATE w/ attr: nexthop 7.0.0.4,
 origin ?, localpref 100, metric 2297856, extended community RT:100:1
0x8800:32768:0 0x8801:10:640000 0x8802:65281:1657856 0x8803:65281:1500
*Apr 30 08:35:37.981: BGP(2): 7.0.0.4 rcvd 100:1:10.0.0.6/32
*Apr 30 08:35:37.981: vpn: bgp_vpnv4_bnetinit: 100:1:10.0.0.6/32
*Apr 30 08:35:37.981: BGP: Accepted path from 7.0.0.4
*Apr 30 08:35:38.001: BGP(2): nettable_walker 100:1:10.0.0.6/32 no RIB
*Apr 30 08:35:38.189: BGP(2): 7.0.0.4 computing updates, afi 2, neighbor
 version 55, table version 56, starting at 0.0.0.0
*Apr 30 08:35:38.189: BGP(2): 7.0.0.4 update run completed, afi 2,
ran for 0ms, neighbor version 56, start version 56, throttled to 56
*Apr 30 08:35:39.081: BGP: 7.0.0.2 multihop open delayed 16412ms (no route)
*Apr 30 08:35:50.437: BGP: Import walker start version 55, end version 56
*Apr 30 08:35:50.437: BGP: ... start import cfg version = 0
*Apr 30 08:35:50.437: vpn: vpn1 same RD import, do best path
*Apr 30 08:35:50.869: BGP(2): Revise route installing 1 of 1 route
for10.0.0.6/32 -> 7.0.0.4(main) to vpn1 IP table
*Apr 30 08:35:50.889: DUAL: dest(10.0.0.6/32) not active
*Apr 30 08:35:50.889: DUAL: dual_rcvupdate(): 10.0.0.6/32 via Redistributed
 metric 2297856/0
*Apr 30 08:35:50.889: DUAL: Find FS for dest 10.0.0.6/32. FD is 4294967295,
 RD is 4294967295 found
*Apr 30 08:35:50.889: DUAL: RT installed 10.0.0.6/32 via 0.0.0.0
*Apr 30 08:35:50.889: DUAL: Send update about 10.0.0.6/32.  Reason:
metric chg
*Apr 30 08:35:50.889: DUAL: Send update about 10.0.0.6/32.  Reason:
new if
*Apr 30 08:35:50.929: EIGRP: Enqueueing UPDATE on Ethernet0/0 iidbQ
un/rely 0/1 serno 36-36
*Apr 30 08:35:50.957: EIGRP: Sending UPDATE on Ethernet0/0
*Apr 30 08:35:50.957:   AS 10, Flags 0x0, Seq 18/0 idbQ 0/0 iidbQ un/rely
 0/0 serno 36-36
*Apr 30 08:35:51.149: EIGRP: Received UPDATE on Ethernet0/0 nbr 9.0.1.2
*Apr 30 08:35:51.149:   AS 10, Flags 0x0, Seq 17/0 idbQ 0/0 iidbQ un/rely
 0/0 peerQ un/rely 0/0
*Apr 30 08:35:51.417: vpn: tag_vpn_find_route_tags: 100:1:10.0.0.6
*Apr 30 08:35:51.417: vpn: intag=vpn-route, outtag=20, outtag owner=BGPCE-1
*Apr 30 08:28:17.669: EIGRP: Received UPDATE on Ethernet0/0 nbr 9.0.1.1
*Apr 30 08:28:17.669:   AS 10, Flags 0x0, Seq 14/0 idbQ 0/0 iidbQ un/rely
 0/0 peerQ un/rely 0/0
*Apr 30 08:28:17.669: DUAL: dest(10.0.0.6/32) not active
*Apr 30 08:28:17.669: DUAL: dual_rcvupdate(): 10.0.0.6/32 via 9.0.1.1
metric 2323456/2297856
*Apr 30 08:28:17.669: DUAL: Find FS for dest 10.0.0.6/32. FD is 4294967295,
 RD is 4294967295 found
*Apr 30 08:28:17.669: DUAL: RT installed 10.0.0.6/32 via 9.0.1.1
*Apr 30 08:28:17.669: DUAL: Send update about 10.0.0.6/32.  Reason:
 metric chg
*Apr 30 08:28:17.669: DUAL: Send update about 10.0.0.6/32.  Reason:
 new if
*Apr 30 08:28:17.709: EIGRP: Enqueueing UPDATE on Ethernet0/0 iidbQ
un/rely 0/1 serno 32-32
*Apr 30 08:28:17.737: EIGRP: Sending UPDATE on Ethernet0/0
*Apr 30 08:28:17.737:   AS 10, Flags 0x0, Seq 13/0 idbQ 0/0 iidbQ un/rely
 0/0 serno 32-32
```
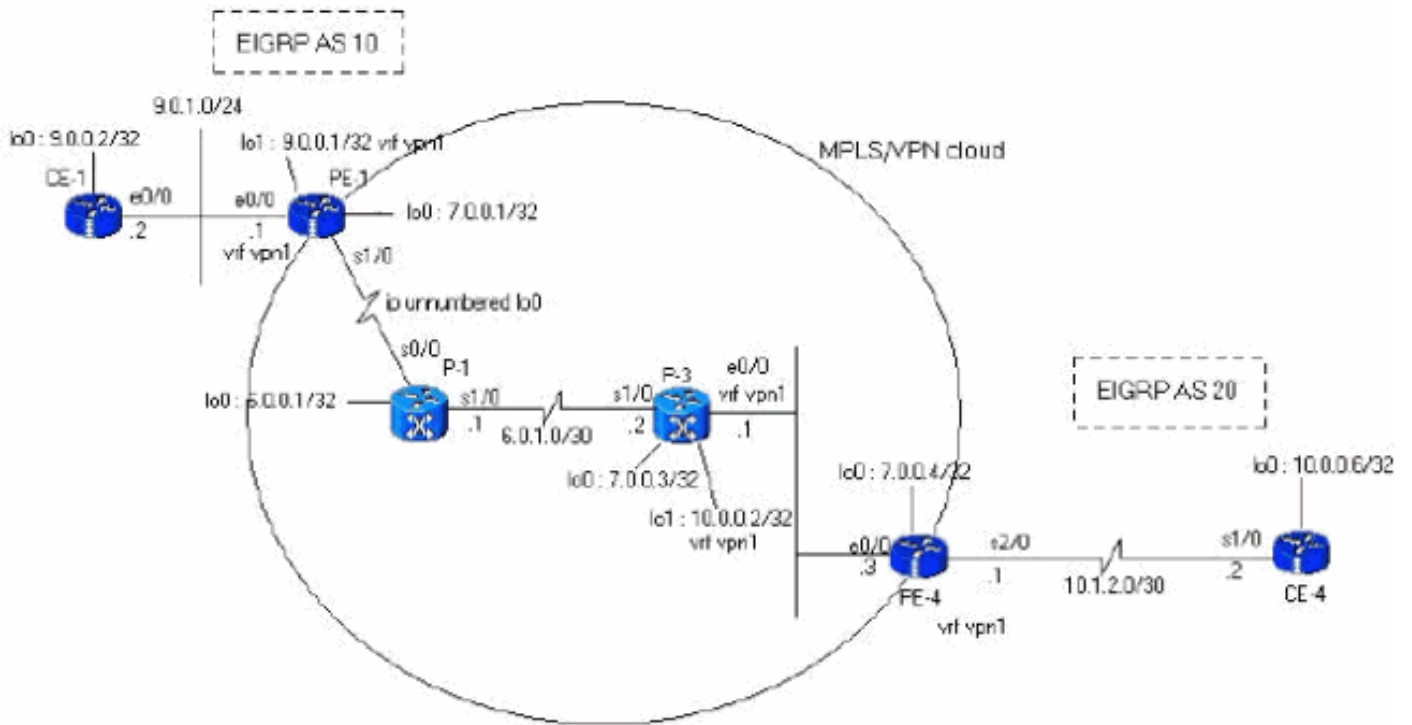
시나리오 2:다중 EIGRP 자동 시스템 구성

네트워크 다이어그램

이 섹션에서는 다음 네트워크 설정을 사용합니다.

구성

이 섹션에서는 다음 컨피그레이션을 사용합니다.

PE-1

```
PE-1#show run
Building configuration...
ip cef
ip vrf vpn1
 rd 100:1
 route-target export 100:1
 route-target import 100:1
!
interface Loopback0
 ip address 7.0.0.1 255.255.255.255
 no ip directed-broadcast
!
interface Ethernet0/0
 ip vrf forwarding vpn1
 ip address 9.0.1.1 255.255.255.0
 no ip directed-broadcast
!
router eigrp 1
 !
 address-family ipv4 vrf vpn1
 redistribute bgp 1
 network 9.0.0.0
 default-metric 10000 1 255 1 1500
 no auto-summary
 autonomous-system 10
 exit-address-family
```

```
!
router bgp 1
 no bgp default ipv4-unicast
 bgp log-neighbor-changes
 neighbor 7.0.0.4 remote-as 1
 neighbor 7.0.0.4 update-source Loopback0
!
 address-family vpnv4
 neighbor 7.0.0.4 activate
 neighbor 7.0.0.4 send-community both
 no auto-summary exit-address-family
!
 address-family ipv4
 neighbor 7.0.0.4 activate
 exit-address-family
!
 address-family ipv4 vrf vpn1
 redistribute eigrp 10
 no auto-summary
 no synchronization
 exit-address-family
!
end
```

PE-4

```
PE-4#show running-config
Building configuration...
Current configuration : 2439 bytes
!
ip cef
ip vrf vpn1
 rd 100:1
 route-target export 100:1
 route-target import 100:1
!
!
interface Loopback0
 ip address 7.0.0.4 255.255.255.255
 no ip directed-broadcast
!
interface Ethernet0/0
 ip address 6.0.2.3 255.255.255.0
 no ip directed-broadcast
 tag-switching ip
!
!
interface Serial2/0
 ip vrf forwarding vpn1
 ip address 10.1.2.1 255.255.255.252
 no ip directed-broadcast
!
router eigrp 1
 !
 address-family
 ipv4 vrf vpn1
 redistribute bgp 1
 network 10.0.0.0
 default-metric 10000 1 255 1 1500
 no auto-summary
 autonomous-system 20
!--- The autonomous system is different from Scenario 1.
exit-address-family ! router bgp 1 no bgp default ipv4-
```

```
unicast bgp log-neighbor-changes neighbor 7.0.0.1
remote-as 1 neighbor 7.0.0.1 update-source Loopback0 no
auto-summary ! address-family vpnv4 neighbor 7.0.0.1
activate neighbor 7.0.0.1 send-community extended no
auto-summary exit-address-family ! address-family ipv4
redistribute connected neighbor 7.0.0.1 activate no
auto-summary no synchronization exit-address-family !
address-family ipv4 vrf vpn1 redistribute eigrp 20
!--- The autonomous system is different from Scenario 1.
no auto-summary no synchronization network 13.0.0.1 mask
255.255.255.255 exit-address-family ! end
```

다음을 확인합니다.

다음 명령을 사용하여 컨피그레이션을 확인합니다.

- ip eigrp vrf vpn1 인터페이스 표시
- ip eigrp vrf vpn1 neighbors
- ip eigrp vrf vpn1 토폴로지 표시

```
IP-EIGRP Topology Table for AS(10)/ID(9.0.0.1) Routing Table: vpn1
Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,
       r - Reply status
P 10.1.3.0/24, 1 successors, FD is 256256
        via Redistributed (256256/0)
P 9.0.1.0/24, 1 successors, FD is 281600
        via Connected, Ethernet0/0
P 9.0.0.1/32, 1 successors, FD is 128256
        via Connected, Loopback1
P 10.1.2.0/30, 1 successors, FD is 256256
        via Redistributed (256256/0)
P 9.1.0.2/32, 1 successors, FD is 45867776
        via 9.0.1.2 (45867776/45842176), Ethernet0/0
P 9.0.0.2/32, 1 successors, FD is 409600
        via 9.0.1.2 (409600/128256), Ethernet0/0
P 13.0.0.1/32, 1 successors, FD is 256256
        via Redistributed (256256/0)
P 10.0.0.6/32, 1 successors, FD is 256256
        via Redistributed (256256/0)
P 10.0.0.7/32, 1 successors, FD is 256256
        via Redistributed (256256/0)

PE-1#show ip bgp vpnv4 vrf vpn1
 BGP table version is 99, local router ID is 7.0.0.1
Status codes: s suppressed, d damped, h history, * valid, > best,
 i - internal,

            S Stale
Origin codes: i - IGP, e - EGP, ? - incomplete
   Network          Next Hop         Metric LocPrf Weight Path
Route Distinguisher: 100:1 (default for vrf vpn1)
*> 9.0.0.1/32       0.0.0.0                0         32768 ?
*> 9.0.0.2/32       9.0.1.2           409600         32768 ?
*> 9.0.1.0/24       0.0.0.0                0         32768 ?
*> 9.1.0.2/32       9.0.1.2         45867776         32768 ?
*>i10.0.0.6/32      7.0.0.4          2297856    100      0 ?
*>i10.0.0.7/32      7.0.0.4          2323456    100      0 ?
*>i10.1.2.0/30      7.0.0.4                0    100      0 ?
*>i10.1.3.0/24      7.0.0.4          2195456    100      0 ?
*>i13.0.0.1/32      7.0.0.4                0    100      0 i
```

```
PE-1#show ip bgp vpnv4 vrf vpn1 9.0.0.1 255.255.255.255
BGP routing table entry for 100:1:9.0.0.1/32, version 12
Paths: (1 available, best #1, table vpn1)
  Advertised to update-groups:
     1
          Local
    0.0.0.0 (via vpn1) from 0.0.0.0 (7.0.0.1)
      Origin incomplete, metric 0, localpref 100, weight 32768, valid,
 sourced, best
      Extended Community: RT:100:1 0x8800:32768:0 0x8801:10:128000
 0x8802:65280:256 0x8803:65281:1514

PE-1#show ip bgp vpnv4 vrf vpn1 10.1.2.0 255.255.255.252
BGP routing table entry for 100:1:10.1.2.0/30, version 95
Paths: (1 available, best #1, table vpn1)
  Not advertised to any peer
  Local
    7.0.0.4 (metric 139) from 7.0.0.4 (7.0.0.4)
      Origin incomplete, metric 0, localpref 100, valid, internal, best
      Extended Community: RT:100:1 0x8800:32768:0 0x8801:20:512000
 0x8802:65280:1657856 0x8803:65281:1500


PE-1#
PE-4#show ip eigrp vrf vpn1 interfaces <output removed>
PE-4#show ip eigrp vrf vpn1 neighbors <output removed>
PE-4#show ip eigrp vrf vpn1 topology
IP-EIGRP Topology Table for AS(20)/ID(13.0.0.1) Routing Table: vpn1
Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,
       r - Reply status
P 9.0.1.0/24, 1 successors, FD is 256256
        via Redistributed (256256/0)
P 9.0.0.1/32, 1 successors, FD is 256256
        via Redistributed (256256/0)
P 10.1.3.0/24, 1 successors, FD is 2195456
        via 10.1.2.2 (2195456/281600), Serial2/0
P 10.1.2.0/30, 1 successors, FD is 2169856
        via Connected, Serial2/0
P 9.1.0.2/32, 1 successors, FD is 256256
        via Redistributed (256256/0)
P 9.0.0.2/32, 1 successors, FD is 256256
        via Redistributed (256256/0)
P 13.0.0.1/32, 1 successors, FD is 256256
        via Redistributed (256256/0)
P 10.0.0.6/32, 1 successors, FD is 2297856
        via 10.1.2.2 (2297856/128256), Serial2/0
P 10.0.0.7/32, 1 successors, FD is 2323456
        via 10.1.2.2 (2323456/409600), Serial2/0


PE-4#show ip bgp vpnv4 vrf vpn1
BGP table version is 23, local router ID is 7.0.0.4
Status codes: s suppressed, d damped, h history, * valid, > best,
 i - internal,
            S Stale
Origin codes: i - IGP, e - EGP, ? - incomplete
   Network          Next Hop          Metric LocPrf Weight Path
Route Distinguisher: 100:1 (default for vrf vpn1)
*>i9.0.0.1/32       7.0.0.1                0    100      0 ?
*>i9.0.0.2/32       7.0.0.1           409600    100      0 ?
*>i9.0.1.0/24       7.0.0.1                0    100      0 ?
*>i9.1.0.2/32       7.0.0.1         45867776    100      0 ?
*> 10.0.0.6/32      10.1.2.2         2297856         32768 ?
*> 10.0.0.7/32      10.1.2.2         2323456         32768 ?
*> 10.1.2.0/30      0.0.0.0                0         32768 ?
```

```
*> 10.1.3.0/24      10.1.2.2            2195456        32768 ?
*> 13.0.0.1/32      0.0.0.0                  0         32768 i

PE-4#show ip bgp vpnv4 vrf vpn1 9.0.0.1 255.255.255.255
BGP routing table entry for 100:1:9.0.0.1/32, version 13
Paths: (1 available, best #1, table vpn1)
  Not advertised to any peer
  Local
    7.0.0.1 (metric 139) from 7.0.0.1 (7.0.0.1)
      Origin incomplete, metric 0, localpref 100, valid, internal, best
      Extended Community: RT:100:1 0x8800:32768:0 0x8801:10:128000
 0x8802:65280:256 0x8803:65281:1514

PE-4#show ip bgp vpnv4 vrf vpn1 10.1.2.0 255.255.255.252
BGP routing table entry for 100:1:10.1.2.0/30, version 19
Paths: (1 available, best #1, table vpn1)
  Advertised to update-groups:
    1
         Local
    0.0.0.0 (via vpn1) from 0.0.0.0 (7.0.0.4)
      Origin incomplete, metric 0, localpref 100, weight 32768, valid,
 sourced, best
      Extended Community: RT:100:1 0x8800:32768:0 0x8801:20:512000
 0x8802:65280:1657856 0x8803:65281:1500


PE-4#
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, 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
     9.0.0.0/8 is variably subnetted, 4 subnets, 2 masks
C       9.0.1.0/24 is directly connected, Ethernet0/0
D       9.0.0.1/32 [90/409600] via 9.0.1.1, 1d06h, Ethernet0/0
C       9.1.0.2/32 is directly connected, Loopback1
C       9.0.0.2/32 is directly connected, Loopback0
     10.0.0.0/8 is variably subnetted, 4 subnets, 3 masks
D EX    10.1.3.0/24 [170/281856] via 9.0.1.1, 00:27:15, Ethernet0/0
D EX    10.1.2.0/30 [170/281856] via 9.0.1.1, 00:27:15, Ethernet0/0
D EX    10.0.0.6/32 [170/281856] via 9.0.1.1, 00:27:15, Ethernet0/0
D EX    10.0.0.7/32 [170/281856] via 9.0.1.1, 00:27:15, Ethernet0/0
     13.0.0.0/32 is subnetted, 1 subnets
D EX    13.0.0.1 [170/281856] via 9.0.1.1, 00:27:15, Ethernet0/0

CE-1#show ip eigrp topology 10 10.1.2.0 255.255.255.252
IP-EIGRP topology entry for 10.1.2.0/30
  State is Passive, Query origin flag is 1, 1 Successor(s), FD is 281856
  Routing Descriptor Blocks:
  9.0.1.1 (Ethernet0/0), from 9.0.1.1, Send flag is 0x0
      Composite metric is (281856/256256), Route is External
      Vector metric:
        Minimum bandwidth is 10000 Kbit
        Total delay is 1010 microseconds
        Reliability is 255/255
        Load is 1/255
        Minimum MTU is 1500
        Hop count is 1
      External data:
        Originating router is 9.0.0.1
        AS number of route is 1
        External protocol is BGP, external metric is 0
```

```
     Administrator tag is 0 (0x00000000)
CE-1#
```

관련 정보

- EIGRP 지원 페이지
- MPLS 지원 페이지
- 기술 지원 및 문서 – Cisco Systems