

Sprawozdanie

2. Konfiguracja i weryfikacja protokołu RIPv2

C. Skonfiguruj RIPv2 na routerze R2. Nie rozgłaszaj sieci 209.165.201.0.

Wyjaśnij dlaczego w przypadku konfiguracji routera R2 nie dodano wymagania użycia polecenia `passive-interface` w odniesieniu do G0/0

Ponieważ mamy nie rozgłaszać sieci 209.165.201.0.

E. Bazując na informacjach uzyskanych poleceniem `debug ip rip` na routerze R2, zaznacz na zrzucie ekranowym te fragmenty, które potwierdzają, że protokół RIPv2 działa.

```
Router#debug ip rip
RIP protocol debugging is on
Router#RIP: received v2 update from 10.2.2.1 on Serial0/0/1
      172.30.0.0/16 via 0.0.0.0 in 1 hops
RIP: received v2 update from 10.1.1.1 on Serial0/0/0
      172.30.0.0/16 via 0.0.0.0 in 1 hops
RIP: sending v2 update to 224.0.0.9 via Serial0/0/1 (10.2.2.2)
RIP: build update entries
      10.1.1.0/30 via 0.0.0.0, metric 1, tag 0
RIP: sending v2 update to 224.0.0.9 via Serial0/0/0 (10.1.1.2)
RIP: build update entries
      10.2.2.0/30 via 0.0.0.0, metric 1, tag 0
RIP: received v2 update from 10.2.2.1 on Serial0/0/1
      172.30.0.0/16 via 0.0.0.0 in 1 hops
RIP: received v2 update from 10.1.1.1 on Serial0/0/0
      172.30.0.0/16 via 0.0.0.0 in 1 hops
RIP: sending v2 update to 224.0.0.9 via Serial0/0/1 (10.2.2.2)
RIP: build update entries
      10.1.1.0/30 via 0.0.0.0, metric 1, tag 0
RIP: sending v2 update to 224.0.0.9 via Serial0/0/0 (10.1.1.2)
RIP: build update entries
      10.2.2.0/30 via 0.0.0.0, metric 1, tag 0
```

F. Bazując na informacjach uzyskanych poleceniem show run na routerze R3, zaznacz na zrzucie ekranowym te fragmenty, które potwierdzają, że protokół RIPv2 działa.

```
interface Serial0/0/0
  no ip address
  clock rate 2000000
  shutdown
!
interface Serial0/0/1
  ip address 10.2.2.1 255.255.255.252
!
interface Vlan1
  no ip address
  shutdown
!
router rip
  version 2
  passive-interface GigabitEthernet0/1
  network 10.0.0.0
  network 172.30.0.0
!
ip classless
!
ip flow-export version 9
!
!
!
!
!
!
line con 0
--More-- |
```

2. Automatyczna sumaryzacja tras

A. W sprawozdaniu umieść wynik działania polecenia `debug ip rip` na routerze R2 i zaznacz fragmenty, które potwierdzają, że router R3 nie wysyła rozgłoszeń o podsieciach w sieci 172.30.0.0 a wyłącznie o zsumaryzowanej trasie do sieci 172.30.0.0/16.

```
RIP: sending v2 update to 224.0.0.9 via Serial0/0/0 (10.1.1.2)
RIP: build update entries
      10.2.2.0/30 via 0.0.0.0, metric 1, tag 0
RIP: received v2 update from 10.2.2.1 on Serial0/0/1
      172.30.0.0/16 via 0.0.0.0 in 1 hops
RIP: received v2 update from 10.1.1.1 on Serial0/0/0
      172.30.0.0/16 via 0.0.0.0 in 1 hops
RIP: sending v2 update to 224.0.0.9 via Serial0/0/1 (10.2.2.2)
RIP: build update entries
      10.1.1.0/30 via 0.0.0.0, metric 1, tag 0
RIP: sending v2 update to 224.0.0.9 via Serial0/0/0 (10.1.1.2)
RIP: build update entries
      10.2.2.0/30 via 0.0.0.0, metric 1, tag 0
RIP: received v2 update from 10.2.2.1 on Serial0/0/1
      172.30.0.0/16 via 0.0.0.0 in 1 hops
RIP: received v2 update from 10.1.1.1 on Serial0/0/0
      172.30.0.0/16 via 0.0.0.0 in 1 hops
RIP: sending v2 update to 224.0.0.9 via Serial0/0/1 (10.2.2.2)
RIP: build update entries
      10.1.1.0/30 via 0.0.0.0, metric 1, tag 0
RIP: sending v2 update to 224.0.0.9 via Serial0/0/0 (10.1.1.2)
RIP: build update entries
      10.2.2.0/30 via 0.0.0.0, metric 1, tag 0
RIP: received v2 update from 10.2.2.1 on Serial0/0/1
      172.30.0.0/16 via 0.0.0.0 in 1 hops
RIP: received v2 update from 10.1.1.1 on Serial0/0/0
      172.30.0.0/16 via 0.0.0.0 in 1 hops
RIP: sending v2 update to 224.0.0.9 via Serial0/0/1 (10.2.2.2)
RIP: build update entries
      10.1.1.0/30 via 0.0.0.0, metric 1, tag 0
RIP: sending v2 update to 224.0.0.9 via Serial0/0/0 (10.1.1.2)
RIP: build update entries
      10.2.2.0/30 via 0.0.0.0, metric 1, tag 0
RIP: received v2 update from 10.2.2.1 on Serial0/0/1
      172.30.0.0/16 via 0.0.0.0 in 1 hops
RIP: received v2 update from 10.1.1.1 on Serial0/0/0
      172.30.0.0/16 via 0.0.0.0 in 1 hops
```

B. W sprawozdaniu umieść te tablice routingu i zaznacz miejsca potwierdzające, że podsieci w sieci 172.30.0.0 są rozgłaszana poprawnie (tj. bez automatycznej sumaryzacji).

Gateway of last resort is not set

```
10.0.0.0/8 is variably subnetted, 3 subnets, 2 masks
C    10.1.1.0/30 is directly connected, Serial0/0/0
L    10.1.1.1/32 is directly connected, Serial0/0/0
R    10.2.2.0/30 [120/1] via 10.1.1.2, 00:00:00, Serial0/0/0
172.30.0.0/16 is variably subnetted, 4 subnets, 3 masks
R    172.30.0.0/16 [120/2] via 10.1.1.2, 00:00:00, Serial0/0/0
C    172.30.10.0/24 is directly connected, GigabitEthernet0/1
L    172.30.10.1/32 is directly connected, GigabitEthernet0/1
R    172.30.30.0/24 [120/2] via 10.1.1.2, 00:00:00, Serial0/0/0
```

Gateway of last resort is not set

```
10.0.0.0/8 is variably subnetted, 4 subnets, 2 masks
C    10.1.1.0/30 is directly connected, Serial0/0/0
L    10.1.1.2/32 is directly connected, Serial0/0/0
C    10.2.2.0/30 is directly connected, Serial0/0/1
L    10.2.2.2/32 is directly connected, Serial0/0/1
172.30.0.0/16 is variably subnetted, 3 subnets, 2 masks
R    172.30.0.0/16 [120/1] via 10.2.2.1, 00:00:48, Serial0/0/1
R    172.30.10.0/24 [120/1] via 10.1.1.1, 00:00:11, Serial0/0/0
R    172.30.30.0/24 [120/1] via 10.2.2.1, 00:00:21, Serial0/0/1
209.165.201.0/24 is variably subnetted, 2 subnets, 2 masks
C    209.165.201.0/24 is directly connected, GigabitEthernet0/0
L    209.165.201.1/32 is directly connected, GigabitEthernet0/0
```

Gateway of last resort is not set

```
10.0.0.0/8 is variably subnetted, 3 subnets, 2 masks
R    10.1.1.0/30 [120/1] via 10.2.2.2, 00:00:04, Serial0/0/1
C    10.2.2.0/30 is directly connected, Serial0/0/1
L    10.2.2.1/32 is directly connected, Serial0/0/1
172.30.0.0/16 is variably subnetted, 3 subnets, 2 masks
R    172.30.10.0/24 [120/2] via 10.2.2.2, 00:00:04, Serial0/0/1
C    172.30.30.0/24 is directly connected, GigabitEthernet0/1
L    172.30.30.1/32 is directly connected, GigabitEthernet0/1
```

3. Konfiguracja i rozgłaszanie tras domyślnych w protokole RIPv2.

Umieść w sprawozdaniu tablicę routingu dla R1 potwierdzająca propagację trasy domyślnej.

* - candidate default, U - per-user static route, o - ODR
P - periodic downloaded static route

Gateway of last resort is 10.1.1.2 to network 0.0.0.0

```
10.0.0.0/8 is variably subnetted, 3 subnets, 2 masks
C    10.1.1.0/30 is directly connected, Serial0/0/0
L    10.1.1.1/32 is directly connected, Serial0/0/0
R    10.2.2.0/30 [120/1] via 10.1.1.2, 00:00:03, Serial0/0/0
172.30.0.0/16 is variably subnetted, 4 subnets, 3 masks
R    172.30.0.0/16 is possibly down, routing via 10.1.1.2, Serial0/0/0
C    172.30.10.0/24 is directly connected, GigabitEthernet0/1
L    172.30.10.1/32 is directly connected, GigabitEthernet0/1
R    172.30.30.0/24 [120/2] via 10.1.1.2, 00:00:03, Serial0/0/0
R*   0.0.0.0/0 [120/1] via 10.1.1.2, 00:00:03, Serial0/0/0
```

Czy w tak skonfigurowanej sieci wszystkie pingi kończą się sukcesem?

Tak