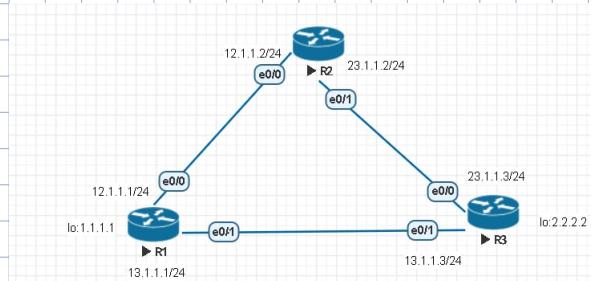


不能路由協定

假設有一條路徑壞了，動態rip能不能找到別條路

1.1.1.1 ping 2.2.2.2



設定rip

R₁

```

# int e0/0
# ip addr 12.1.1.1 255.255.255.0
# no shut
# int e0/1
# ip addr 13.1.1.1 255.255.255.0
# no shut
# int lo 0
# ip addr 1.1.1.1 255.255.255.0
# do show ip int brief

```

R₂

```

# int e0/0
# ip addr 12.1.1.2 255.255.255.0
# no shut
# int e0/1
# ip addr 23.1.1.2 255.255.255.0
# no shut
# do show ip int brief

```

R₃

```

# int e0/0
# ip addr 23.1.1.3 255.255.255.0
# no shut
# int e0/1
# ip addr 13.1.1.3 255.255.255.0
# no shut
# int lo 0
# ip addr 2.2.2.2 255.255.255.0
# do show ip int brief

```

不能路由

R₁

```

# Router rip
# Version 2
# no auto-summary
# network 12.1.1.0
        1.1.1.0
        1.1.1.0

```

R₂

```

# Router rip
# Version 2
# no auto-summary
# network 12.1.1.0
        23.1.1.0
        23.1.1.0

```

R₃

```

# Router rip
# Version 2
# no auto-summary
# network 23.1.1.0
        13.1.1.0
        2.2.2.0

```

R₁

show ip route

R₃ e0/1 打封包

從 1.1.1.1 的介面送出來

R₁ # ping 2.2.2.2 source 1.1.1.1 repeat 100
✓

把這條路徑 shutdown

R₁

int e0/1
shut
do ping 2.2.2.2 source 1.1.1.1 repeat 10000

需要 180 sec 收到

Eigrp

R₁

router eigrp 1
network 12.1.1.0 0.0.0.255
13.1.1.0 0.0.0.255
1.1.1.0 0.0.0.255

R₂

router eigrp 1
network 12.1.1.0 0.0.0.255
23.1.1.0 0.0.0.255

R₃

router eigrp 1
network 23.1.1.0 0.0.0.255
13.1.1.0 0.0.0.255
2.2.2.0 0.0.0.255

R₁ # do show ip route
D

do ping 2.2.2.2 source 1.1.1.1

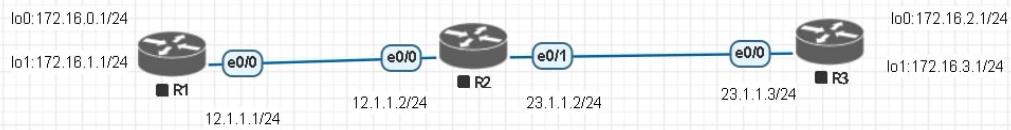
int e0/1

shut

do ping 2.2.2.2 source 1.1.1.1 repeat 100
✓

rip 反毒跳
eigrp 路由

手工匯整



172.16.0.1/24 合併 172.16.0.0/23
172.16.1.1/24

172.16.2.1/24 合併 172.16.2.0/23
172.16.3.1/24

手工合併

合併規則：

- ① 2 的置次序
- ② 連續的網路
- ③ 整除

R₁

```
# int e0/0
# ip addr 12.1.1.1 255.255.255.0
# no shut
# int lo0
# ip addr 172.16.0.1 255.255.255.0
# no shut
# int lo1
# ip addr 172.16.1.1 255.255.255.0
# no shut
# do show ip int br
```

R₂

```
# int e0/0
# ip addr 12.1.1.2 255.255.255.0
# no shut
# int e0/1
# ip addr 23.1.1.2 255.255.255.0
# no shut
# do show ip int br
```

R₃

```
# int e0/0
# ip addr 23.1.1.3 255.255.255.0
# no shut
# int lo0
# ip addr 172.16.2.1 255.255.255.0
# no shut
# int lo1
# ip addr 172.16.3.1 255.255.255.0
# no shut
# do show ip int br
```

R₁

```
# router rip
# version 2
# no auto-summary
# network 12.1.1.0
# network 192.16.0.0
# network 192.16.1.0
```

R₂

```
# router rip
# version 2
# no auto-summary
# network 12.1.1.0
# network 23.1.1.0
# network 192.16.2.0
```

R₃

```
# router rip
# version 2
# no auto-summary
# network 23.1.1.0
# network 192.16.2.0
# network 192.16.3.0
```

R₂

```
# do show ip route
R 192.16.0.0 [120/0] via 12.1.1.1
R 192.16.1.0 [120/0] via 12.1.1.1
R 192.16.2.0 [120/0] via 23.1.1.3
R 192.16.3.0 [120/0] via 23.1.1.3
```

合併
(一定要在e%做)
(出去廣播的介面做)

R₁

```
# int eo/0
# ip summary-address rip 192.16.0.0 255.255.254.0
```

1>3 1

R₃

```
# int eo/0
# ip summary-address rip 192.16.2.0 255.255.254.0
```

1>3 3

R₂

```
# do clear ip route *
```

```
# do show ip route
```

```
R 192.16.0.0 [120/0] via 12.1.1.1
R 192.16.2.0 [120/0] via 23.1.1.3
```

```
# do ping 192.16.0.1
```

✓

```
# do ping 192.16.1.1
```

✓

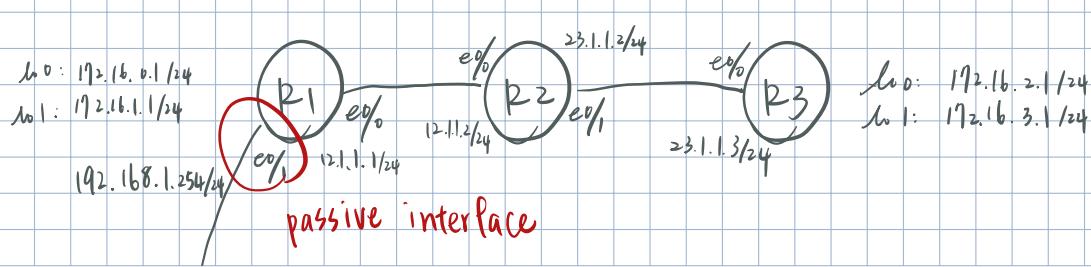
```
# do ping 192.16.2.1
```

✓

```
# do ping 192.16.3.1
```

✓

Passive interface



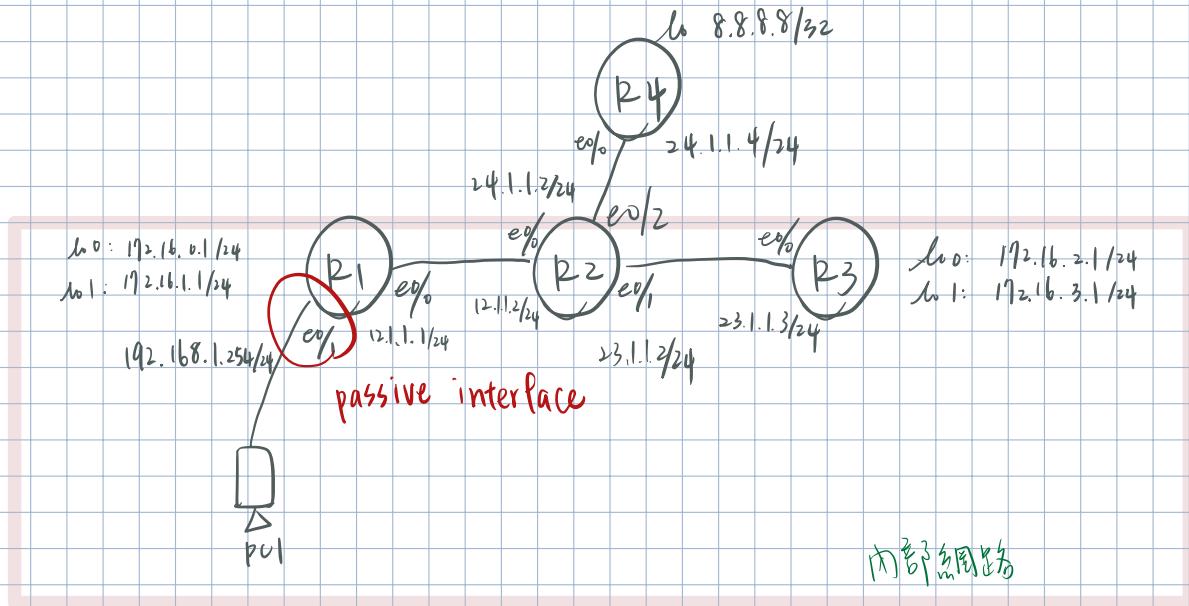


192.168.1.1/24

R1

router rip
passive-interface e0/1

Default-information Originate



R2

ip route 0.0.0.0 0.0.0.0 24.1.1.4

R4

ip route 0.0.0.0 0.0.0.0 24.1.1.2

R2

do ping 8.8.8.8

R1

do ping 8.8.8.8

X

一個一個說太麻煩

R2

router rip
default-interface originate

R1

do sh ip route
R* 0.0.0.0/0 [120/1] via 12.1.1.2

R3

do sh ip route
R* 0.0.0.0/0 [120/1] via 23.1.1.2

Authentication

rip 支援密碼認證，2 個 router password 一樣才可進行動作

R1

```
# key chain [NAME] MyChain
# key 1
# key-string 123 [passwd]
# int e0/0
# ip rip authentication key-chain MyChain
# ip rip authentication mode md5
```

R2

```
# key chain MyChain
# key 1
# key-string 123
# int e0/1
# ip rip authentication key-chain MyChain
# ip rip authentication mode md5
```