

MSSV: 19127102

Họ tên: Võ Hoàng Gia Bảo

MSSV: 191271426

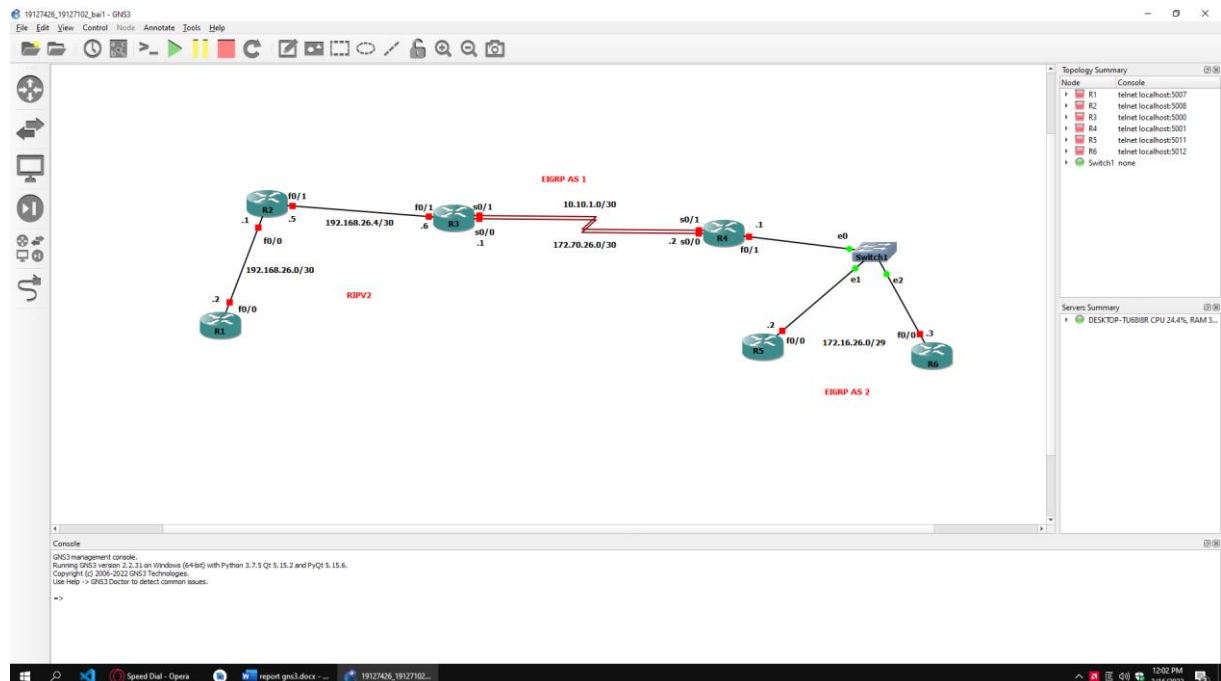
Họ tên: Vũ Đức Quang Huy

IOS: c3660-jk9o3s-mz.124-25d.bin, c3745-advipservicesk9-mz.124-25d.bin

GNS3: 2.2.31

I. Bài 1

1. Câu 1



2. Câu 2a, 2b, 2c

Router 1

```
interface FastEthernet0/0
ip address 192.168.26.2 255.255.255.252
duplex auto
speed auto
!
interface FastEthernet0/1
no ip address
shutdown
duplex auto
speed auto
!
router rip
version 2
network 192.168.26.0
no auto-summary
!
```

Router 2

```
interface FastEthernet0/0
ip address 192.168.26.1 255.255.255.252
duplex auto
speed auto
!
interface FastEthernet0/1
ip address 192.168.26.5 255.255.255.252
duplex auto
speed auto
!
router rip
version 2
network 192.168.26.0
no auto-summary
!
```

solarwinds | Solar-PuTTY *free tool*

© 2019 SolarWinds Worldwide, LLC. All rights reserved.

12:05 PM
3/16/2022

Router 3

```
interface FastEthernet0/0
no ip address
shutdown
duplex auto
speed auto
!
interface Serial0/0
ip address 172.70.26.1 255.255.255.252
clock rate 2000000
!
interface FastEthernet0/1
ip address 192.168.26.6 255.255.255.252
duplex auto
speed auto
!
interface Serial0/1
ip address 10.10.1.1 255.255.255.252
clock rate 2000000
!
interface Serial0/2
no ip address
shutdown
clock rate 2000000
!
router eigrp 1
redistribute rip metric 10000 100 255 1 1500
network 10.10.1.0 0.0.0.3
network 172.70.26.0 0.0.0.3
no auto-summary
!
router rip
version 2
redistribute eigrp 1 metric 3
network 192.168.26.0
no auto-summary
```

solarwinds | Solar-PuTTY *free tool*

© 2019 SolarWinds Worldwide, LLC. All rights reserved.

12:05 PM
3/16/2022

Router 4

```

interface FastEthernet0/0
no ip address
shutdown
duplex auto
speed auto
!
interface Serial0/0
ip address 172.70.26.2 255.255.255.252
clock rate 2000000
!
interface FastEthernet0/1
ip address 172.16.26.1 255.255.255.248
duplex auto
speed auto
!
interface Serial0/1
ip address 10.10.1.2 255.255.255.252
clock rate 2000000
!
interface Serial0/2
no ip address
shutdown
clock rate 2000000
!
router eigrp 1
 redistribute eigrp 2
 network 10.10.1.0 0.0.0.3
 network 172.70.26.0 0.0.0.3
no auto-summary
!
router eigrp 2
 redistribute eigrp 1
 network 172.16.26.0 0.0.0.7
no auto-summary

```

solarwinds | Solar-PuTTY *free tool*

© 2019 SolarWinds Worldwide, LLC. All rights reserved.

12:06 PM
3/16/2022

Router 5

```

interface FastEthernet0/0
ip address 172.16.26.2 255.255.255.248
duplex auto
speed auto
!
interface FastEthernet0/1
no ip address
shutdown
duplex auto
speed auto
!
router eigrp 2
 network 172.16.26.0 0.0.0.7
no auto-summary

```

solarwinds | Solar-PuTTY *free tool*

© 2019 SolarWinds Worldwide, LLC. All rights reserved.

12:07 PM
3/16/2022

Router 6

```

interface FastEthernet0/0
ip address 172.16.26.3 255.255.255.248
duplex auto
speed auto
!
interface FastEthernet0/1
no ip address
shutdown
duplex auto
speed auto
!
router eigrp 2
 network 172.16.26.0 0.0.0.7
no auto-summary
!

```

solarwinds | Solar-PuTTY *free tool*

© 2019 SolarWinds Worldwide, LLC. All rights reserved.

12:08 PM
3/16/2022

- Giải thích các lệnh:
 - conf ter: vào cấu hình router
 - int f0/0 / f0/1: vào cấu hình interface
 - ip add <địa chỉ ip> <subnet mask>: cấu hình ip cho interface
 - no shut: bật interface
 - router rip: vào cấu hình định tuyến rip
 - ver 2: cấu hình ripv2
 - net <subnet>: chỉ định subnet
 - no auto: tắt tính năng tổng hợp để nhận biết class chính xác
 - redi eigrp <AS> metric 3: redistribute từ eigrp vào rip với metric là 3
 - router eigrp <AS>: vào cấu hình định tuyến eigrp
 - net <subnet> <wildcard mask>: chỉ định subnet
 - no auto: tắt tính năng tổng hợp để nhận biết class chính xác
 - redi rip metric <bandwidth> <delay> <reliable metric> <effective bandwidth metric> <pathMTU>: redistribute rip vào eigrp
 - redi eigrp <AS>: redistribute giữa các eigrp khác AS
- Bảng định tuyến:
 - Router 1

```

172.70.0.0/30 is subnetted, 1 subnets
R    172.70.26.0 [120/4] via 192.168.26.1, 00:00:27, FastEthernet0/0
172.16.0.0/29 is subnetted, 1 subnets
R    172.16.26.0 [120/4] via 192.168.26.1, 00:00:27, FastEthernet0/0
192.168.26.0/30 is subnetted, 2 subnets
C    192.168.26.0 is directly connected, FastEthernet0/0
R    192.168.26.4 [120/1] via 192.168.26.1, 00:00:27, FastEthernet0/0
10.0.0.0/30 is subnetted, 1 subnets
R    10.10.1.0 [120/4] via 192.168.26.1, 00:00:27, FastEthernet0/0
R1#
  
```

The screenshot shows a terminal window with a dark background and yellow text. The output of the 'show ip route' command is displayed. At the bottom of the terminal window, there is a status bar with the SolarWinds logo, the text 'Solar-PuTTY free tool', a copyright notice '© 2019 SolarWinds Worldwide, LLC. All rights reserved.', and a system tray area showing the time '12:09 PM' and date '3/16/2022'.

- Router 2

```
172.70.0.0/30 is subnetted, 1 subnets
R 172.70.26.0 [120/3] via 192.168.26.6, 00:00:24, FastEthernet0/1
172.16.0.0/29 is subnetted, 1 subnets
R 172.16.26.0 [120/3] via 192.168.26.6, 00:00:24, FastEthernet0/1
192.168.26.0/30 is subnetted, 2 subnets
C 192.168.26.0 is directly connected, FastEthernet0/0
C 192.168.26.4 is directly connected, FastEthernet0/1
10.0.0.0/30 is subnetted, 1 subnets
R 10.10.1.0 [120/3] via 192.168.26.6, 00:00:24, FastEthernet0/1
R2#
```

solarwinds | Solar-PuTTY free tool © 2019 SolarWinds Worldwide, LLC. All rights reserved.

12:09 PM 3/16/2022

○ Router 3

```
172.70.0.0/30 is subnetted, 1 subnets
C 172.70.26.0 is directly connected, Serial0/0
172.16.0.0/29 is subnetted, 1 subnets
D EX 172.16.26.0 [170/2195456] via 172.70.26.2, 00:07:18, Serial0/0
[170/2195456] via 10.10.1.2, 00:07:18, Serial0/1
192.168.26.0/30 is subnetted, 2 subnets
R 192.168.26.0 [120/1] via 192.168.26.5, 00:00:06, FastEthernet0/1
C 192.168.26.4 is directly connected, FastEthernet0/1
10.0.0.0/30 is subnetted, 1 subnets
C 10.10.1.0 is directly connected, Serial0/1
R3#
```

solarwinds | Solar-PuTTY free tool © 2019 SolarWinds Worldwide, LLC. All rights reserved.

12:10 PM 3/16/2022

○ Router 4

```
172.70.0.0/30 is subnetted, 1 subnets
C 172.70.26.0 is directly connected, Serial0/0
172.16.0.0/29 is subnetted, 1 subnets
C 172.16.26.0 is directly connected, FastEthernet0/1
192.168.26.0/30 is subnetted, 2 subnets
D EX 192.168.26.0 [170/2195456] via 172.70.26.1, 00:07:29, Serial0/0
[170/2195456] via 10.10.1.1, 00:07:29, Serial0/1
D EX 192.168.26.4 [170/2195456] via 172.70.26.1, 00:07:49, Serial0/0
[170/2195456] via 10.10.1.1, 00:07:49, Serial0/1
10.0.0.0/30 is subnetted, 1 subnets
C 10.10.1.0 is directly connected, Serial0/1
R4#
```

solarwinds | Solar-PuTTY free tool © 2019 SolarWinds Worldwide, LLC. All rights reserved.

12:10 PM 3/16/2022

○ Router 5

```
172.70.0.0/30 is subnetted, 1 subnets
D EX 172.70.26.0 [170/2172416] via 172.16.26.1, 00:07:53, FastEthernet0/0
172.16.0.0/29 is subnetted, 1 subnets
C 172.16.26.0 is directly connected, FastEthernet0/0
192.168.26.0/30 is subnetted, 2 subnets
D EX 192.168.26.0 [170/2198016] via 172.16.26.1, 00:07:35, FastEthernet0/0
D EX 192.168.26.4 [170/2198016] via 172.16.26.1, 00:07:54, FastEthernet0/0
10.0.0.0/30 is subnetted, 1 subnets
D EX 10.10.1.0 [170/2172416] via 172.16.26.1, 00:07:58, FastEthernet0/0
R5#
```

solarwinds | Solar-PuTTY free tool © 2019 SolarWinds Worldwide, LLC. All rights reserved.

12:11 PM 3/16/2022

○ Router 6

```

172.70.0.0/30 is subnetted, 1 subnets
D EX 172.70.26.0 [170/2172416] via 172.16.26.1, 00:07:58, FastEthernet0/0
172.16.0.0/29 is subnetted, 1 subnets
C 172.16.26.0 is directly connected, FastEthernet0/0
192.168.26.0/30 is subnetted, 2 subnets
D EX 192.168.26.0 [170/2198016] via 172.16.26.1, 00:07:39, FastEthernet0/0
D EX 192.168.26.4 [170/2198016] via 172.16.26.1, 00:07:58, FastEthernet0/0
10.0.0.0/30 is subnetted, 1 subnets
D EX 10.10.1.0 [170/2172416] via 172.16.26.1, 00:08:03, FastEthernet0/0
R6#

```

solarwinds | Solar-PuTTY free tool © 2019 SolarWinds Worldwide, LLC. All rights reserved. 12:12 PM 3/16/2022

3. Câu 2d

- Successor: 172.16.26.1
- Feasible successor: Không có
- Feasible distance: 2172416
- Reported distance: (2172416/2169856)

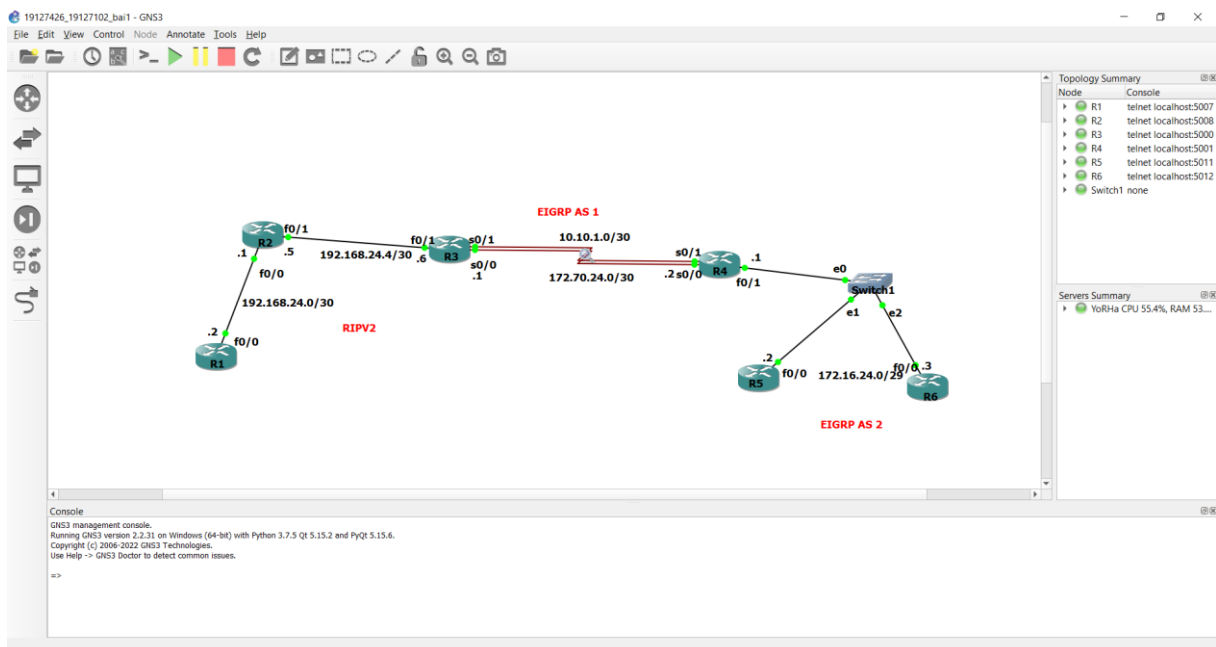
```

P 172.70.26.0/30, 1 successors, FD is 2172416
via 172.16.26.1 (2172416/2169856), FastEthernet0/0
R5#

```

solarwinds | Solar-PuTTY free tool © 2019 SolarWinds Worldwide, LLC. All rights reserved. 12:08 PM 3/16/2022

2e.



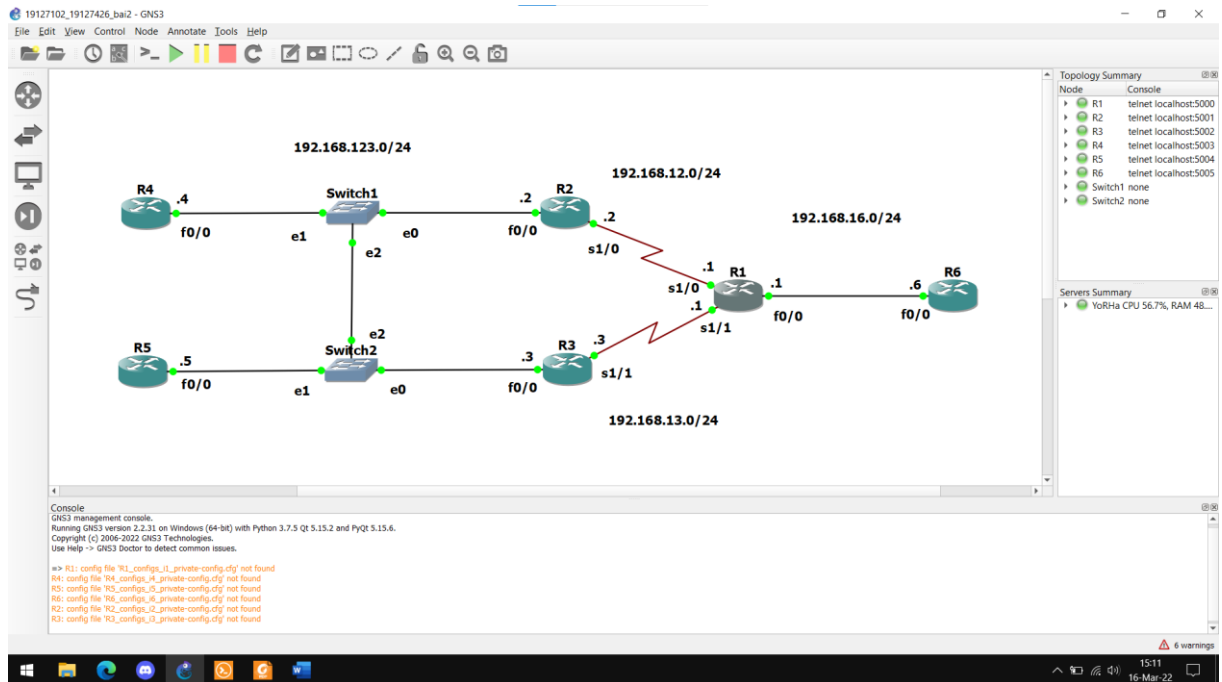
R3 có nhận được gói update

II. Bài 2

* Do các file configs của router bị đặt sai tên nên phải đặt tên lại theo cú pháp: **[device name]_configs_i[x]_startup-config.cfg**

VD: R1_configs_i1_startup-config.cfg

1.



2.

R6:

```
R6
astEthernet0/0 is down: Interface Goodbye received
*Mar 1 00:00:05.847: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
*Mar 1 00:00:05.855: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to down
*Mar 1 00:00:06.035: %LINEPROTO-5-UPDOWN: Line protocol on Interface Loopback0, changed state to up
*Mar 1 00:00:07.135: %LINK-5-CHANGED: Interface FastEthernet0/1, changed state to administratively down
*Mar 1 00:00:10.063: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.1 (FastEthernet0/0) is down: K-value mismatch
*Mar 1 00:00:14.375: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.1 (FastEthernet0/0) is down: Interface Goodbye received
*Mar 1 00:00:19.015: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.1 (FastEthernet0/0) is down: K-value mismatch
*Mar 1 00:00:23.279: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.1 (FastEthernet0/0) is down: K-value mismatch
*Mar 1 00:00:27.887: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.1 (FastEthernet0/0) is down: Interface Goodbye received
*Mar 1 00:00:32.871: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.1 (FastEthernet0/0) is down: Interface Goodbye received
*Mar 1 00:00:37.663: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.1 (FastEthernet0/0) is down: K-value mismatch
*Mar 1 00:00:42.279: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.1 (FastEthernet0/0) is down: K-value mismatch
*Mar 1 00:00:46.715: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.1 (FastEthernet0/0) is down: Interface Goodbye received
R6#
R6#
R6#
R6#show int ip
*Mar 1 00:00:51.475: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.1 (FastEthernet0/0) is down: K-value mismatch
R6#show ip
*Mar 1 00:00:55.911: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.1 (FastEthernet0/0) is down: K-value mismatch
R6#show ip ro
Codes: C - connected, S - static, 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
       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, P - periodic downloaded static route

Gateway of last resort is not set

  10.0.0.0/32 is subnetted, 1 subnets
C      10.6.6.6 is directly connected, Loopback0
C      192.168.16.0/24 is directly connected, FastEthernet0/0
R6#
*Mar 1 00:01:00.243: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.1 (FastEthernet0/0) is down: K-value mismatch
R6#
```

R5:


```
SOFTWARE (fcl)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2010 by Cisco Systems, Inc.
Compiled Wed 18-Aug-10 07:31 by prod_rel_team
*Mar 1 00:00:05.635: %SNMP-5-COLDSTART: SNMP agent on host R5 is undergoing a c
old start
*Mar 1 00:00:05.763: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.123.4 (
FastEthernet0/0) is up: new adjacency
*Mar 1 00:00:05.819: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthern
et0/0, changed state to up
*Mar 1 00:00:06.003: %LINEPROTO-5-UPDOWN: Line protocol on Interface Loopback0,
changed state to up
*Mar 1 00:00:06.047: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthern
et0/1, changed state to down
*Mar 1 00:00:06.087: %LINEPROTO-5-UPDOWN: Line protocol on Interface Loopback1,
changed state to up
*Mar 1 00:00:06.147: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.123.3 (
FastEthernet0/0) is up: new adjacency
*Mar 1 00:00:06.155: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.123.2 (
FastEthernet0/0) is up: new adjacency
*Mar 1 00:00:07.135: %LINK-5-CHANGED: Interface FastEthernet0/1, changed state
to administratively down
R5#
R5#
R5#show ip ro
Codes: C - connected, S - static, 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
       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, P - periodic downloaded static route

Gateway of last resort is not set

C    192.168.123.0/24 is directly connected, FastEthernet0/0
D    192.168.12.0/24 [90/2172416] via 192.168.123.2, 00:08:59, FastEthernet0/0
D    192.168.13.0/24 [90/2172416] via 192.168.123.3, 00:08:59, FastEthernet0/0
    10.0.0.0/32 is subnetted, 5 subnets
D    10.2.2.2 [90/156160] via 192.168.123.2, 00:08:59, FastEthernet0/0
D    10.3.3.3 [90/156160] via 192.168.123.3, 00:08:59, FastEthernet0/0
D    10.1.1.1 [90/2300416] via 192.168.123.3, 00:08:59, FastEthernet0/0
    [90/2300416] via 192.168.123.2, 00:08:59, FastEthernet0/0
C    10.5.5.5 is directly connected, Loopback0
C    10.5.5.55 is directly connected, Loopback1
D    192.168.16.0/24 [90/2174976] via 192.168.123.3, 00:09:01, FastEthernet0/0
    [90/2174976] via 192.168.123.2, 00:09:01, FastEthernet0/0
R5#
```

R4:

```
old start
*Mar 1 00:00:05.659: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.123.5 (
FastEthernet0/0) is up: new adjacency
*Mar 1 00:00:05.771: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthern
et0/0, changed state to up
*Mar 1 00:00:05.771: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthern
et0/1, changed state to down
*Mar 1 00:00:05.955: %LINEPROTO-5-UPDOWN: Line protocol on Interface Loopback0,
changed state to up
*Mar 1 00:00:06.023: %LINEPROTO-5-UPDOWN: Line protocol on Interface Loopback1,
changed state to up
*Mar 1 00:00:06.023: %LINEPROTO-5-UPDOWN: Line protocol on Interface Loopback2,
changed state to up
*Mar 1 00:00:06.067: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.123.3 (
FastEthernet0/0) is up: new adjacency
*Mar 1 00:00:06.075: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.123.2 (
FastEthernet0/0) is up: new adjacency
*Mar 1 00:00:07.071: %LINK-5-CHANGED: Interface FastEthernet0/1, changed state
to administratively down
R4#
R4#
R4#sho ip ro
Codes: C - connected, S - static, 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
        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, P - periodic downloaded static route

Gateway of last resort is not set

C    192.168.123.0/24 is directly connected, FastEthernet0/0
D    192.168.12.0/24 [90/2172416] via 192.168.123.2, 00:10:04, FastEthernet0/0
D    192.168.13.0/24 [90/2172416] via 192.168.123.3, 00:10:04, FastEthernet0/0
D    10.0.0.0/32 is subnetted, 7 subnets
D    10.2.2.2 [90/156160] via 192.168.123.2, 00:10:04, FastEthernet0/0
D    10.3.3.3 [90/156160] via 192.168.123.3, 00:10:04, FastEthernet0/0
D    10.1.1.1 [90/2300416] via 192.168.123.3, 00:10:04, FastEthernet0/0
D    [90/2300416] via 192.168.123.2, 00:10:06, FastEthernet0/0
C    10.4.4.6 is directly connected, Loopback2
C    10.4.4.4 is directly connected, Loopback0
D    10.5.5.5 [90/156160] via 192.168.123.5, 00:10:07, FastEthernet0/0
C    10.4.4.5 is directly connected, Loopback1
D    192.168.16.0/24 [90/2174976] via 192.168.123.3, 00:10:06, FastEthernet0/0
D    [90/2174976] via 192.168.123.2, 00:10:06, FastEthernet0/0
R4#
```

R3:

R6
R5
R4
R3

```

*Mar 1 00:00:05.867: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.13.1 (S
erial1/1) is up: new adjacency
*Mar 1 00:00:05.899: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthern
et0/0, changed state to up
*Mar 1 00:00:05.903: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthern
et0/1, changed state to down
*Mar 1 00:00:05.911: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial1/0,
changed state to down
*Mar 1 00:00:05.935: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial1/1,
changed state to up
*Mar 1 00:00:06.095: %LINEPROTO-5-UPDOWN: Line protocol on Interface Loopback0,
changed state to up
*Mar 1 00:00:06.143: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial1/2,
changed state to down
*Mar 1 00:00:06.147: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial1/3,
changed state to down
*Mar 1 00:00:07.227: %LINK-5-CHANGED: Interface FastEthernet0/1, changed state
to administratively down
*Mar 1 00:00:07.255: %LINK-5-CHANGED: Interface Serial1/0, changed state to adm
inistratively down
*Mar 1 00:00:07.271: %LINK-5-CHANGED: Interface Serial1/2, changed state to adm
inistratively down
*Mar 1 00:00:07.271: %LINK-5-CHANGED: Interface Serial1/3, changed state to adm
inistratively down
R3#
R3#
R3#
R3#show ip ro
Codes: C - connected, S - static, 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
       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, P - periodic downloaded static route

Gateway of last resort is not set

C    192.168.123.0/24 is directly connected, FastEthernet0/0
D    192.168.12.0/24 [90/2172416] via 192.168.123.2, 00:11:33, FastEthernet0/0
C    192.168.13.0/24 is directly connected, Serial1/1
D    10.0.0.0/32 is subnetted, 4 subnets
D    10.2.2.2 [90/156160] via 192.168.123.2, 00:11:33, FastEthernet0/0
C    10.3.3.3 is directly connected, Loopback0
D    10.1.1.1 [90/2297856] via 192.168.13.1, 00:11:33, Serial1/1
D    10.5.5.5 [90/156160] via 192.168.123.5, 00:11:34, FastEthernet0/0
D    192.168.16.0/24 [90/2172416] via 192.168.13.1, 00:11:35, Serial1/1
R3#

```

solarwinds
Solar-PuTTY free tool
© 2019 SolarWinds Worldwide, LLC. All rights reserved.

24 warnings

17:36
16-Mar-22

R2:

FastEthernet0/0 is up: new adjacency
*Mar 1 00:00:05.887: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.12.1 (Serial1/0) is up: new adjacency
*Mar 1 00:00:05.923: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
*Mar 1 00:00:05.927: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to down
*Mar 1 00:00:05.939: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial1/0, changed state to up
*Mar 1 00:00:05.947: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial1/1, changed state to down
*Mar 1 00:00:06.107: %LINEPROTO-5-UPDOWN: Line protocol on Interface Loopback0, changed state to up
*Mar 1 00:00:06.163: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial1/2, changed state to down
*Mar 1 00:00:06.167: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial1/3, changed state to down
*Mar 1 00:00:07.239: %LINK-5-CHANGED: Interface FastEthernet0/1, changed state to administratively down
*Mar 1 00:00:07.283: %LINK-5-CHANGED: Interface Serial1/1, changed state to administratively down
*Mar 1 00:00:07.283: %LINK-5-CHANGED: Interface Serial1/2, changed state to administratively down
*Mar 1 00:00:07.295: %LINK-5-CHANGED: Interface Serial1/3, changed state to administratively down
R2#
R2#
R2#sho ip ro
Codes: C - connected, S - static, 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
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, P - periodic downloaded static route
Gateway of last resort is not set
C 192.168.123.0/24 is directly connected, FastEthernet0/0
C 192.168.12.0/24 is directly connected, Serial1/0
D 192.168.13.0/24 [90/2172416] via 192.168.123.3, 00:12:54, FastEthernet0/0
10.0.0.0/32 is subnetted, 4 subnets
C 10.2.2.2 is directly connected, Loopback0
D 10.3.3.3 [90/156160] via 192.168.123.3, 00:12:54, FastEthernet0/0
D 10.1.1.1 [90/2297856] via 192.168.12.1, 00:12:54, Serial1/0
D 10.5.5.5 [90/156160] via 192.168.123.5, 00:12:54, FastEthernet0/0
D 192.168.16.0/24 [90/2172416] via 192.168.12.1, 00:12:56, Serial1/0
R2#

solarwinds | Solar-PuTTY free tool © 2019 SolarWinds Worldwide, LLC. All rights reserved.

24 warnings 17:38 16-Mar-22

R1:

```

D 192.168.123.0/24 [90/2172416] via 192.168.13.3, 00:14:17, Serial1/1
   [90/2172416] via 192.168.12.2, 00:14:17, Serial1/0
C 192.168.12.0/24 is directly connected, Serial1/0
C 192.168.13.0/24 is directly connected, Serial1/1
  10.0.0.0/32 is subnetted, 4 subnets
D 10.2.2.2 [90/2297856] via 192.168.12.2, 00:14:15, Serial1/0
D 10.3.3.3 [90/2297856] via 192.168.13.3, 00:14:15, Serial1/1
C 10.1.1.1 is directly connected, Lo
*Mar 1 00:14:23.503: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.6 (FastEthernet0/0) is down: K-value mismatchchopback0
D 10.5.5.5 [90/2300416] via 192.168.13.3, 00:14:17, Serial1/1
   [90/2300416] via 192.168.12.2, 00:14:17, Serial1/0
C 192.168.16.0/24 is directly connected, FastEthernet0/0
R1#
*Mar 1 00:14:28.275: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.6 (FastEthernet0/0) is down: K-value mismatch
R1#
*Mar 1 00:14:32.735: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.6 (FastEthernet0/0) is down: K-value mismatch
R1#
*Mar 1 00:14:37.171: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.6 (FastEthernet0/0) is down: Interface Goodbye received
R1#
*Mar 1 00:14:41.611: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.6 (FastEthernet0/0) is down: K-value mismatch
R1#show ip eigrp
*Mar 1 00:14:46.279: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.6 (FastEthernet0/0) is down: K-value mismatch
R1#show ip eigrp topology
IP-EIGRP Topology Table for AS(1)/ID(10.1.1.1)
Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,
       r - reply Status, s - sia Status

P 10.2.2.2/32, 1 successors, FD is 2297856
   via 192.168.12.2 (2297856/128256), Serial1/0
   via 192.168.13.3 (2300416/156160), Serial1/1
P 10.3.3.3/32, 1 successors, FD is 2297856
   via 192.168.13.3 (2297856/128256), Serial1/1
   via 192.168.12.2 (2300416/156160), Serial1/0
P 10.1.1.1/32, 1 successors, FD is 128256
   via Connected, Loopback0
P 10.5.5.5/32, 2 successors, FD is 2300416
   via 192.168.12.2 (2300416/156160), Serial1/0
   via 192.168.13.3 (2300416/156160), Serial1/1
P 192.168.123.0/24, 2 successors, FD is 2172416
   via 192.168.12.2 (2172416/28160), Serial1/0
   via 192.168.13.3 (2172416/28160), Serial1/1
P 192.168.12.0/24, 1 successors, FD is 2169856
   via Connected, Serial1/0
P 192.168.13.0/24, 1 successors, FD is 2169856
   via Connected, Serial1/1
P 192.168.16.0/24, 1 successors, FD is 28160
--More--
*Mar 1 00:14:50.747: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.6 (FastEthernet0/0) is down: K-value mismatch
--More--
*Mar 1 00:14:55.487: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.6 (FastEthernet0/0) is down: K-value mismatch
--More--
*Mar 1 00:15:00.047: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.6 (FastEthernet0/0) is down: Interface Goodbye received
   via Connected, FastEthernet0/0

```

Giao thức định tuyến sử dụng: EIGRP (AS1)

3.

Sự cố: R2, R3, R4, R5 không thể ping đến R6 do R1 không cấu hình định tuyến đến R6 và ngược lại

R5:

```
R6 R5 R4 R3 R2 R1
R5#ping 192.168.123.4
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.123.4, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 20/29/40 ms
R5#ping 192.168.123.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.123.3, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 16/29/40 ms
R5#ping 192.168.123.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.123.2, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 28/29/32 ms
R5#ping 192.168.12.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.12.1, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 56/61/68 ms
R5#ping 192.168.12.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.12.2, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 16/28/44 ms
R5#ping 192.168.13.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.13.1, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 56/60/64 ms
R5#ping 192.168.13.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.13.3, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 16/26/44 ms
R5#ping 192.168.16.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.16.1, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 60/60/64 ms
R5#ping 192.168.16.6
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.16.6, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R5#
```

solarwinds | Solar-PuTTY free tool © 2019 SolarWinds Worldwide, LLC. All rights reserved.

Focus 17:47 16-Mar-22 130%

R4:

```
R4#ping 192.168.123.5
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.123.5, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 28/32/40 ms
R4#ping 192.168.123.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.123.3, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 28/30/32 ms
R4#ping 192.168.123.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.123.2, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 28/30/40 ms
R4#ping 192.168.12.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.12.1, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 60/60/64 ms
R4#ping 192.168.12.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.12.2, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 20/27/32 ms
R4#ping 192.168.13.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.13.1, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 60/60/64 ms
R4#ping 192.168.13.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.13.3, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 24/29/32 ms
R4#ping 192.168.16.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.16.1, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 48/56/60 ms
R4#ping 192.168.16.6
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.16.6, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R4#
```

solarwinds | Solar-PuTTY free tool © 2019 SolarWinds Worldwide, LLC. All rights reserved.

© 2019 SolarWinds Worldwide, LLC. All rights reserved.

Focus 18:29 16-Mar-22

R3:

```
R6 R5 R4 R3 R2 R1
R3#
R3#
R3#ping 192.168.12.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.12.1, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 40/52/68 ms
R3#ping 192.168.12.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.12.2, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 28/33/40 ms
R3#ping 192.168.16.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.16.1, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 24/31/40 ms
R3#ping 192.168.16.6
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.16.6, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R3#
```

solarwinds | Solar-PuTTY free tool © 2019 SolarWinds Worldwide, LLC. All rights reserved.

Focus 17:50 16-Mar-22

R2:

```
R2#
R2#ping 192.168.13.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.13.1, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 44/48/56 ms
R2#ping 192.168.13.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.13.3, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 28/31/36 ms
R2#ping 192.168.16.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.16.1, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 24/28/40 ms
R2#ping 192.168.16.6
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.16.6, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R2#
```

solarwinds | Solar-PuTTY free tool © 2019 SolarWinds Worldwide, LLC. All rights reserved.

Focus 18:31 16-Mar-22

R6:

```
R6#
*Mar 1 00:26:23.467: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.1 (FastEthernet0/0) is down: K-value mismatch
R6#
*Mar 1 00:26:23.491: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.1 (FastEthernet0/0) is down: Interface Goodbye received
R6#
*Mar 1 00:26:27.783: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.1 (FastEthernet0/0) is down: K-value mismatch
R6#
*Mar 1 00:26:32.091: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.1 (FastEthernet0/0) is down: Interface Goodbye received
R6#
*Mar 1 00:26:36.519: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.1 (FastEthernet0/0) is down: Interface Goodbye received
R6#sho
R6#sho ip ro
Codes: C - connected, S - static, 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
        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, P - periodic downloaded static route

Gateway of last resort is not set

    10.0.0.0/32 is subnetted, 1 subnets
C       10.6.6.6 is directly connected, Loopback0
C    192.168.16.0/24 is directly connected, FastEthernet0/0
R6#
*Mar 1 00:26:45.515: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.1 (FastEthernet0/0) is down: Interface Goodbye received
R6#
```

solarwinds | Solar-PuTTY free tool © 2019 SolarWinds Worldwide, LLC. All rights reserved.

Focus 17:51 16-Mar-22

Giải pháp: Static Route và Redistribute

R6:


```
R6#
R6#
R6#
R6#c
*Mar 1 00:27:12.883: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.1 (FastEthernet0/0) is down: Interface Goodbye received
R6#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R6(config)#ip
*Mar 1 00:27:17.535: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.1 (FastEthernet0/0) is down: K-value mismatch
R6(config)#ip route 0.
*Mar 1 00:27:22.323: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.1 (FastEthernet0/0) is down: K-value mismatch
R6(config)#ip route 0.0.0.0 0.0.0.0
*Mar 1 00:27:27.123: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.1 (FastEthernet0/0) is down: K-value mismatch
R6(config)#ip route 0.0.0.0 0.0.0.0 192.168.
*Mar 1 00:27:32.035: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.1 (FastEthernet0/0) is down: Interface Goodbye received
R6(config)#ip route 0.0.0.0 0.0.0.0 192.168.
*Mar 1 00:27:36.470: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.1 (FastEthernet0/0) is down: K-value mismatch
R6(config)#ip route 0.0.0.0 0.0.0.0 192.168.16.1
R6(config)#
*Mar 1 00:27:40.867: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.1 (FastEthernet0/0) is down: Interface Goodbye received
R6(config)#
*Mar 1 00:27:45.511: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.1 (FastEthernet0/0) is down: K-value mismatch
R6(config)#
*Mar 1 00:27:50.083: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.1 (FastEthernet0/0) is down: Interface Goodbye received
R6(config)#
```

Giải thích:

ip route 0.0.0.0 0.0.0.0 192.168.16.1: cấu hình Routing tĩnh Default Route để R6 thông với toàn bộ mạng AS 1

R1:

```
R1#
R1#
R1#
R1#
*Mar 1 00:30:57.823: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.6 (FastEthernet0/0) is down: K-value mismatch
R1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R1(config)#router eigrp
*Mar 1 00:31:02.311: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.6 (FastEthernet0/0) is down: Interface Goodbye received
R1(config-router)#router eigrp 1
R1(config-router)#
*Mar 1 00:31:06.523: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.6 (FastEthernet0/0) is down: Interface Goodbye received
R1(config-router)#network 10.1.
*Mar 1 00:31:11.191: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.6 (FastEthernet0/0) is down: Interface Goodbye received
R1(config-router)#network 10.1.1.1 0.0.0.0
*Mar 1 00:31:15.983: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.6 (FastEthernet0/0) is down: K-value mismatch
R1(config-router)#network 10.1.1.1 0.0.0.0
R1(config-router)#
*Mar 1 00:31:20.263: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.6 (FastEthernet0/0) is down: K-value mismatch
R1(config-router)#exit
R1(config)#
*Mar 1 00:31:24.671: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.6 (FastEthernet0/0) is down: K-value mismatch
R1(config)#ip route 10.6
*Mar 1 00:31:28.995: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.6 (FastEthernet0/0) is down: Interface Goodbye received
R1(config)#ip route 10.6.6.6 255.255.255.255
*Mar 1 00:31:33.527: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.6 (FastEthernet0/0) is down: K-value mismatch
R1(config)#ip route 10.6.6.6 255.255.255.255 192.168.
*Mar 1 00:31:37.943: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.6 (FastEthernet0/0) is down: Interface Goodbye received
R1(config)#ip route 10.6.6.6 255.255.255.255 192.168.
*Mar 1 00:31:42.439: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.6 (FastEthernet0/0) is down: K-value mismatch
R1(config)#ip route 10.6.6.6 255.255.255.255 192.168.16.6
*Mar 1 00:31:46.815: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.6 (FastEthernet0/0) is down: K-value mismatch
R1(config)#ip route 10.6.6.6 255.255.255.255 192.168.16.6
R1(config)#router
*Mar 1 00:31:51.323: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.6 (FastEthernet0/0) is down: K-value mismatch
*Mar 1 00:31:51.339: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.6 (FastEthernet0/0) is down: Interface Goodbye received
R1(config)#router eigrp 1
R1(config-router)#
*Mar 1 00:31:55.775: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.6 (FastEthernet0/0) is down: K-value mismatch
R1(config-router)#redistr
R1(config-router)#redistribute static metric 1
*Mar 1 00:32:00.099: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.6 (FastEthernet0/0) is down: Interface Goodbye received
R1(config-router)#redistribute static metric 10000
*Mar 1 00:32:08.943: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.6 (FastEthernet0/0) is down: Interface Goodbye received
R1(config-router)#redistribute static metric 10000 1 255 1 1500
*Mar 1 00:32:13.643: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.6 (FastEthernet0/0) is down: K-value mismatch
R1(config-router)#redistribute static metric 10000 1 255 1 1500
R1(config-router)#
*Mar 1 00:32:18.175: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.6 (FastEthernet0/0) is down: K-value mismatch
R1(config-router)#
```

Giải thích:

network 10.1.1.1 0.0.0.0: cấu hình routing cho đường mạng loopback R1

ip route 10.6.6.6 255.255.255.255 192.158.16.6: Cấu hình static route đến R6

redistribute static metric 10000 1 255 1 1500: redistribute static route vào eigrp

Kết quả:

R6:



```
R6#
R6#
R6#
R6#
R6#
R6#
R6#
R6#s
*Mar 1 00:38:52.583: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.1 (FastEthernet0/0) is down: Interface Goodbye received
R6#sho ip ro
Codes: C - connected, S - static, 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
        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, P - periodic downloaded static route

Gateway of last resort is 192.168.16.1 to network 0.0.0.0

    10.0.0.0/32 is subnetted, 1 subnets
C       10.6.6.6 is directly connected, Loopback0
C       192.168.16.0/24 is directly connected, FastEthernet0/0
S*      0.0.0.0/0 [1/0] via 192.168.16.1
R6#
```

R1:



```
R1#sho ip ro
Codes: C - connected, S - static, 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
        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, P - periodic downloaded static route

Gateway of last resort is not set

D       192.168.123.0/24 [90/2172416] via 192.168.13.3, 00:43:28, Serial1/1
        [90/2172416] via 192.168.12.2, 00:43:28, Serial1/0
C       192.168.12.0/24 is directly connected, Serial1/0
C       192.168.13.0/24 is directly connected, Serial1/1
    10.0.0.0/32 is subnetted, 5 subnets
D       10.2.2.2 [90/2297856] via 192.168.12.2, 00:43:26, Serial1/0
D       10.3.3.3 [90/2297856] via 192.168.13.3, 00:43:26, Serial1/1
C       10.1.1.1 is directly connected, Loopback0
S
*Mar 1 00:43:33.739: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.6 (FastEthernet0/0) is down: Interface Goodbye received 10.6.6.6 [1/0] via 192.168.16.6
D       10.5.5.5 [90/2300416] via 192.168.13.3, 00:43:28, Serial1/1
        [90/2300416] via 192.168.12.2, 00:43:28, Serial1/0
C       192.168.16.0/24 is directly connected, FastEthernet0/0
R1#
*Mar 1 00:43:38.351: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 1: Neighbor 192.168.16.6 (FastEthernet0/0) is down: Interface Goodbye received
R1#
```

R4:

```

R6 R5 R4 x R3 R2 R1
D 192.168.16.0/24 [90/2174976] via 192.168.123.3, 00:10:06, FastEthernet0/0
[90/2174976] via 192.168.123.2, 00:10:06, FastEthernet0/0
R4#sho ip ro
Codes: C - connected, S - static, 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
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, P - periodic downloaded static route

Gateway of last resort is not set

C 192.168.123.0/24 is directly connected, FastEthernet0/0
D 192.168.12.0/24 [90/2172416] via 192.168.123.2, 00:44:28, FastEthernet0/0
D 192.168.13.0/24 [90/2172416] via 192.168.123.3, 00:44:28, FastEthernet0/0
10.0.0.0/32 is subnetted, 8 subnets
D 10.2.2.2 [90/156160] via 192.168.123.2, 00:44:28, FastEthernet0/0
D 10.3.3.3 [90/156160] via 192.168.123.3, 00:44:28, FastEthernet0/0
D 10.1.1.1 [90/2300416] via 192.168.123.3, 00:44:28, FastEthernet0/0
[90/2300416] via 192.168.123.2, 00:44:30, FastEthernet0/0
D EX 10.6.6.6 [170/2172672] via 192.168.123.3, 00:12:21, FastEthernet0/0
[170/2172672] via 192.168.123.2, 00:12:21, FastEthernet0/0
C 10.4.4.6 is directly connected, Loopback2
C 10.4.4.4 is directly connected, Loopback0
D 10.5.5.5 [90/156160] via 192.168.123.5, 00:44:30, FastEthernet0/0
C 10.4.4.5 is directly connected, Loopback1
D 192.168.16.0/24 [90/2174976] via 192.168.123.3, 00:44:33, FastEthernet0/0
[90/2174976] via 192.168.123.2, 00:44:33, FastEthernet0/0
R4#
R4#ping 192.168.16.6

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.16.6, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 80/89/100 ms
R4#
```

solarwinds | Solar-PuTTY free tool © 2019 SolarWinds Worldwide, LLC. All rights reserved.

Focus 18:09 16-Mar-22 130%

R5:

```

R6 R5 x R4 R3 R2 R1
R5#show ip ro
Codes: C - connected, S - static, 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
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, P - periodic downloaded static route

Gateway of last resort is not set

C 192.168.123.0/24 is directly connected, FastEthernet0/0
D 192.168.12.0/24 [90/2172416] via 192.168.123.2, 00:46:02, FastEthernet0/0
D 192.168.13.0/24 [90/2172416] via 192.168.123.3, 00:46:03, FastEthernet0/0
10.0.0.0/32 is subnetted, 6 subnets
D 10.2.2.2 [90/156160] via 192.168.123.2, 00:46:02, FastEthernet0/0
D 10.3.3.3 [90/156160] via 192.168.123.3, 00:46:03, FastEthernet0/0
D 10.1.1.1 [90/2300416] via 192.168.123.3, 00:46:02, FastEthernet0/0
[90/2300416] via 192.168.123.2, 00:46:04, FastEthernet0/0
D EX 10.6.6.6 [170/2172672] via 192.168.123.3, 00:13:56, FastEthernet0/0
[170/2172672] via 192.168.123.2, 00:13:56, FastEthernet0/0
C 10.5.5.5 is directly connected, Loopback0
C 10.5.5.55 is directly connected, Loopback1
D 192.168.16.0/24 [90/2174976] via 192.168.123.3, 00:46:04, FastEthernet0/0
[90/2174976] via 192.168.123.2, 00:46:04, FastEthernet0/0
R5#ping 192.168.16.6

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.16.6, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 84/88/100 ms
R5#
```

solarwinds | Solar-PuTTY free tool © 2019 SolarWinds Worldwide, LLC. All rights reserved.

Focus 18:11 16-Mar-22 130%

R3:

```
R3#
R3#
R3#
R3#
R3#show ip ro
Codes: C - connected, S - static, 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
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, P - periodic downloaded static route

Gateway of last resort is not set

C 192.168.123.0/24 is directly connected, FastEthernet0/0
D 192.168.12.0/24 [90/2172416] via 192.168.123.2, 00:50:15, FastEthernet0/0
C 192.168.13.0/24 is directly connected, Serial1/1
D 10.0.0.0/32 is subnetted, 5 subnets
C 10.2.2.2 [90/156160] via 192.168.123.2, 00:50:15, FastEthernet0/0
D 10.3.3.3 is directly connected, Loopback0
D 10.1.1.1 [90/2297856] via 192.168.13.1, 00:50:15, Serial1/1
D EX 10.6.6.6 [170/2170112] via 192.168.13.1, 00:18:06, Serial1/1
D 10.5.5.5 [90/156160] via 192.168.123.5, 00:50:17, FastEthernet0/0
D 192.168.16.0/24 [90/2172416] via 192.168.13.1, 00:50:17, Serial1/1
R3#ping 192.168.16.6
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.16.6, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 56/60/64 ms
R3#
```

R2:

```
R2#
R2#
R2#
R2#
R2#sho ip ro
Codes: C - connected, S - static, 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
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, P - periodic downloaded static route

Gateway of last resort is not set

C 192.168.123.0/24 is directly connected, FastEthernet0/0
D 192.168.12.0/24 is directly connected, Serial1/0
D 192.168.13.0/24 [90/2172416] via 192.168.123.3, 00:50:52, FastEthernet0/0
D 10.0.0.0/32 is subnetted, 5 subnets
C 10.2.2.2 is directly connected, Loopback0
D 10.3.3.3 [90/156160] via 192.168.123.3, 00:50:52, FastEthernet0/0
D 10.1.1.1 [90/2297856] via 192.168.12.1, 00:50:51, Serial1/0
D EX 10.6.6.6 [170/2170112] via 192.168.12.1, 00:18:43, Serial1/0
D 10.5.5.5 [90/156160] via 192.168.123.5, 00:50:53, FastEthernet0/0
D 192.168.16.0/24 [90/2172416] via 192.168.12.1, 00:50:53, Serial1/0
R2#ping 192.168.16.6
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.16.6, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 48/61/76 ms
R2#
```

Tài liệu tham khảo

Bộ môn MMT&VT, Khoa CNTT (November 2013). *EIGRP*. ĐH KHTN TP HCM

Bài	Phân công	Điểm đánh giá
1.1	19127426	0.5
1.2a	19127426	0.5
1.2b	19127426	2
1.2c	19127426	1
1.2d	19127426	0.5
1.2e	19127102	0.5
1.2f	19127102	0
2.1	19127102	0.5
2.2	19127102	0.5
2.3	19127102	2
Tài liệu tham khảo		0.5
Phân công đánh giá		0.5
Tổng		9