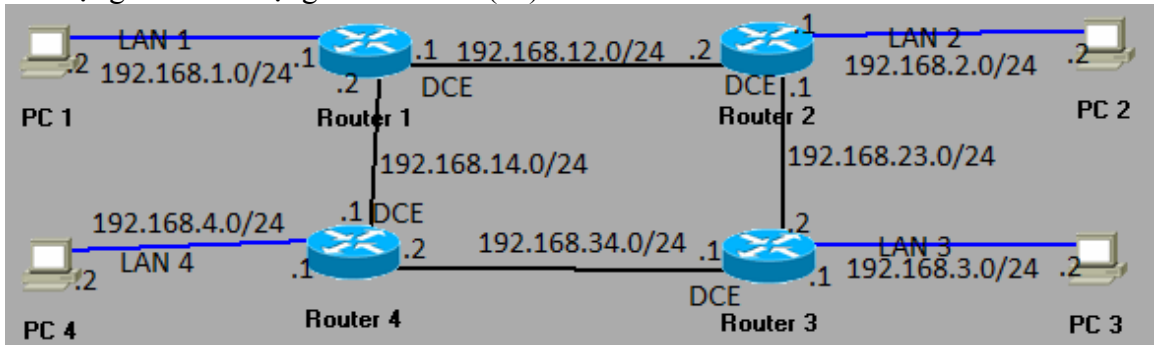


Lưu ý:

- Tạo thư mục C:\TKBMHTM\SCMT08A\”HOVATEN”
- Sau khi thực hiện mỗi câu, lưu lại với tên: CAU_STT trong thư mục đã tạo và copy tất cả các dòng lệnh đã làm trong từng câu và lưu thành files Text_Cau_STT.txt.
- Sau khi hoàn tất bài làm, nén lại thư mục “HOVATEN”, để trong thư mục C:\TKBMHTM\SCMT08A.

1. Dựng mô hình mạng như hình vẽ.(1đ)



2. Cấu hình các thiết bị như hình vẽ.(1đ)
3. Cấu hình định tuyến tĩnh để các LAN 1, LAN 2 ping được với nhau.(1đ)
4. Cấu hình Rip để các LAN 2, LAN 3 ping được với nhau.(1đ)
5. Cấu hình Eigrp để các LAN 3, LAN 4 ping được với nhau.(1đ)
6. Cấu hình Ospf để các LAN 1, LAN 4 ping được với nhau.(1đ)
7. Thiết lập ACLs_standard cấm LAN 1 ping LAN 3(1đ)
8. Thiết lập ACLs_standard cấm PC 1 ping LAN 3(1đ)
9. Thiết lập ACLs_extended cấm LAN 2 ping LAN 4(1đ)
10. Thiết lập ACLs_extended cấm PC 2 ping LAN 4(1đ)

BỘ Môn Tin học

Giáo viên ra đề

Trần Anh Trọng

ĐÁP ÁN

Cau 1

```
router#configure
Router(config)#hostname R1
R1(config)#int s0
R1(config-if)#ip add 192.168.12.1 255.255.255.0
R1(config-if)#clock rate 64000
R1(config-if)#no shutdown
R1(config-if)#exit
R1(config)#int s1
R1(config-if)#ip add 192.168.14.2 255.255.255.0
R1(config-if)#no shutdown
R1(config-if)#exit
R1(config)#int e0
R1(config-if)#ip add 192.168.1.2 255.255.255.0
R1(config-if)#no shutdown
R1(config-if)#exit
R1(config)#int e0
R1(config-if)#ip add 192.168.1.1 255.255.255.0
R1#show ip interface brief
Interface      IP-Address      OK? Method Status      Protocol
Serial0        192.168.12.1    YES unset  up          up
Serial1        192.168.14.2    YES unset  down        down
Ethernet0      192.168.1.1     YES unset  up          up
Router(config)#hostname R2
R2(config)#int s0
R2(config-if)#ip add 192.168.12.2 255.255.255.0
R2(config-if)#no shutdown
R2(config-if)#exit
R2(config)#int s1
R2(config-if)#ip add 192.168.23.1 255.255.255.0
R2(config-if)#clock rate 64000
R2(config-if)#no sh
R2(config-if)#exit
R2(config)#int e0
R2(config-if)#ip add 192.168.2.1 255.255.255.0
R2(config-if)#no shutdown
R2(config-if)#^Z
R2#show ip interface brief
Interface      IP-Address      OK? Method Status      Protocol
Serial0        192.168.12.2    YES unset  up          up
Serial1        192.168.23.1    YES unset  up          up
Ethernet0      192.168.2.1     YES unset  up          up
```

```

Router>en
Router(config)#hostname R3
R3(config)#int s0
R3(config-if)#ip add 192.168.34.1 255.255.255.0
R3(config-if)#clock rate 64000
R3(config-if)#no sh
R3(config-if)#exit
R3(config)#int s1
R3(config-if)#ip add 192.168.23.2 255.255.255.0
R3(config-if)#no shutdown
R3(config-if)#exit
R3(config)#int e0
R3(config-if)#ip add 192.168.3.1 255.255.255.0
R3(config-if)#no shutdown
R3(config-if)#exit
R3(config)#^Z

```

```
R3#show ip interface brief
```

Interface	IP-Address	OK?	Method	Status	Protocol
Serial0	192.168.34.1	YES	unset	up	up
Serial1	192.168.23.2	YES	unset	up	up
Ethernet0	192.168.3.1	YES	unset	up	up

```
R4#hso
```

```
R4#show int
```

```
R4#show controller interface
```

```
C:>ipconfig /ip 192.168.1.2 255.255.255.0
```

```
C:>ipconfig /dg 192.168.1.1
```

```
C:>ipconfig /ip 192.168.1.2 255.255.255.0
```

```
C:>ipconfig /dg 192.168.1.1
```

```
C:>ipconfig /ip 192.168.1.2 255.255.255.0
```

```
C:>ipconfig /dg 192.168.1.1
```

```
C:>ipconfig /ip 192.168.1.2 255.255.255.0
```

```
C:>ipconfig /dg 192.168.1.1
```

Cau 2

```
R1#show ip int brief
```

Interface	IP-Address	OK?	Method	Status	Protocol
Serial0	192.168.12.1	YES	unset	up	up
Serial1	192.168.14.2	YES	unset	up	up
Ethernet0	192.168.1.1	YES	unset	up	up

```
R1#configure
```

```
R1(config)#ip route 192.168.2.0 255.255.255.0 192.168.12.2
```

```
R2#configure
R2(config)#ip route 192.168.1.0 255.255.255.0 192.168.12.1
:>ping 192.168.2.2
Pinging 192.168.2.2 with 32 bytes of data:
```

```
Reply from 192.168.2.2: bytes=32 time=60ms TTL=241
Reply from 192.168.2.2: bytes=32 time=60ms TTL=241
Reply from 192.168.2.2: bytes=32 time=60ms TTL=241
Reply from 192.168.2.2: bytes=32 time=60ms TTL=241
Reply from 192.168.2.2: bytes=32 time=60ms TTL=241
```

```
Ping statistics for 192.168.2.2:  Packets: Sent = 5, Received = 5, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
  Minimum = 50ms, Maximum = 60ms, Average = 55ms
```

```
C:>ping 192.168.1.2
Pinging 192.168.1.2 with 32 bytes of data:
```

```
Reply from 192.168.1.2: bytes=32 time=60ms TTL=241
Reply from 192.168.1.2: bytes=32 time=60ms TTL=241
Reply from 192.168.1.2: bytes=32 time=60ms TTL=241
Reply from 192.168.1.2: bytes=32 time=60ms TTL=241
Reply from 192.168.1.2: bytes=32 time=60ms TTL=241
```

Cau 4

```
#configure
R2(config)#router rip
R2(config-router)#net 192.168.12.0
R2(config-router)#net 192.168.23.0
R2(config-router)#net 192.168.2.0
R2(config-router)#^Z
R2#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
       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, * - candidate default
       U - per-user static route
```

Gateway of last resort is not set

```
C 192.168.2.0 is directly connected, Ethernet0
C 192.168.12.0 is directly connected, Serial0
C 192.168.23.0 is directly connected, Serial1
R 192.168.34.0 [120/1] via 192.168.23.2, 00:02:36, Serial1
R 192.168.3.0 [120/1] via 192.168.23.2, 00:09:21, Serial1
```

R3#configure

```
R3(config)#router rip
R3(config-router)#net 192.168.34.0
R3(config-router)#net 192.168.23.0
R3(config-router)#net 192.168.3.0
R3#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
       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, * - candidate default
       U - per-user static route
Gateway of last resort is not set
```

```
C 192.168.34.0 is directly connected, Serial0
C 192.168.23.0 is directly connected, Serial1
C 192.168.3.0 is directly connected, Ethernet0
R 192.168.2.0 [120/1] via 192.168.23.1, 00:09:30, Serial1
R 192.168.12.0 [120/1] via 192.168.23.1, 00:01:44, Serial1
```

```
Ping statistics for 192.168.3.2:
  Packets: Sent = 5, Received = 0, Lost = 5 (100% loss),
Approximate round trip times in milli-seconds:
  Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

```
C:>ping 192.168.3.2
Pinging 192.168.3.2 with 32 bytes of data:
```

```
Reply from 192.168.3.2: bytes=32 time=60ms TTL=241
Reply from 192.168.3.2: bytes=32 time=60ms TTL=241
Reply from 192.168.3.2: bytes=32 time=60ms TTL=241
Reply from 192.168.3.2: bytes=32 time=60ms TTL=241
Reply from 192.168.3.2: bytes=32 time=60ms TTL=241
```

```
Ping statistics for 192.168.3.2:  Packets: Sent = 5, Received = 5, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
  Minimum = 50ms, Maximum = 60ms, Average = 55ms
```

```
C:>ping 192.168.2.2
Pinging 192.168.2.2 with 32 bytes of data:
```

```
Reply from 192.168.2.2: bytes=32 time=60ms TTL=241
Reply from 192.168.2.2: bytes=32 time=60ms TTL=241
Reply from 192.168.2.2: bytes=32 time=60ms TTL=241
Reply from 192.168.2.2: bytes=32 time=60ms TTL=241
Reply from 192.168.2.2: bytes=32 time=60ms TTL=241
```

```
Ping statistics for 192.168.2.2:  Packets: Sent = 5, Received = 5, Lost = 0 (0% loss),
```

Approximate round trip times in milli-seconds:

Minimum = 50ms, Maximum = 60ms, Average = 55ms

Cau 5

R3#configure

R3(config)#router eigrp 10

R3(config-router)#net 192.168.34.0

R3(config-router)#net 192.168.23.0

R3(config-router)#net 192.168.3.0

R4#configure

R4(config)#router eigrp 10

R4(config-router)#net 192.168.34.0

R4(config-router)#net 192.168.14.0

R4(config-router)#net 192.168.4.0

>ping 192.168.4.2

Pinging 192.168.4.2 with 32 bytes of data:

Reply from 192.168.4.2: bytes=32 time=60ms TTL=241

Reply from 192.168.4.2: bytes=32 time=60ms TTL=241

Reply from 192.168.4.2: bytes=32 time=60ms TTL=241

Reply from 192.168.4.2: bytes=32 time=60ms TTL=241

Reply from 192.168.4.2: bytes=32 time=60ms TTL=241

Ping statistics for 192.168.4.2: Packets: Sent = 5, Received = 5, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 50ms, Maximum = 60ms, Average = 55ms

C:>

C:>ping 192.168.3.2

Pinging 192.168.3.2 with 32 bytes of data:

Reply from 192.168.3.2: bytes=32 time=60ms TTL=241

Reply from 192.168.3.2: bytes=32 time=60ms TTL=241

Reply from 192.168.3.2: bytes=32 time=60ms TTL=241

Reply from 192.168.3.2: bytes=32 time=60ms TTL=241

Reply from 192.168.3.2: bytes=32 time=60ms TTL=241

Ping statistics for 192.168.3.2: Packets: Sent = 5, Received = 5, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 50ms, Maximum = 60ms, Average = 55ms

Cau 6

```
R1#configure
R1(config)#router ospf 10
R1(config-router)#net 192.168.12.0
R1(config-router)#net 192.168.12.0 0.0.0.255 area 0
R1(config-router)#net 192.168.14.0 0.0.0.255 area 0
R1(config-router)#net 192.168.1.0 0.0.0.255 area 0
R1(config-router)#^Z
```

```
R1#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
       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, * - candidate default
       U - per-user static route
```

Gateway of last resort is not set

```
C 192.168.12.0 is directly connected, Serial0
C 192.168.14.0 is directly connected, Serial1
C 192.168.1.0 is directly connected, Ethernet0
O 192.168.34.0 [110/64] via 192.168.14.1, 00:00:01, Serial1
  • 192.168.4.0 [110/64] via 192.168.4.1, 00:00:56, Serial1
```

```
R4(config)#router ospf 20
R4(config-router)#net 192.168.34.0 0.0.0.255 area 0
R4(config-router)#net 192.168.14.0 0.0.0.255 area 0
R4(config-router)#net 192.168.4.0 0.0.0.255 area 0
R4(config-router)#^Z
```

```
R4#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
       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, * - candidate default
       U - per-user static route
```

Gateway of last resort is not set

```
C 192.168.34.0 is directly connected, Serial0
C 192.168.4.0 is directly connected, Ethernet0
C 192.168.14.0 is directly connected, Serial1
O 192.168.12.0 [110/64] via 192.168.14.2, 00:00:22, Serial1
  • 192.168.1.0 [110/64] via 192.168.14.2, 00:00:22, Serial1
```

```
ping 192.168.4.2
```

```
Pinging 192.168.4.2 with 32 bytes of data:
```

```
Reply from 192.168.4.2: bytes=32 time=60ms TTL=241
Reply from 192.168.4.2: bytes=32 time=60ms TTL=241
Reply from 192.168.4.2: bytes=32 time=60ms TTL=241
Reply from 192.168.4.2: bytes=32 time=60ms TTL=241
Reply from 192.168.4.2: bytes=32 time=60ms TTL=241
```

```
Ping statistics for 192.168.4.2:  Packets: Sent = 5, Received = 5, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 50ms, Maximum = 60ms, Average = 55ms
```

```
C:>ping 192.168.1.2
Pinging 192.168.1.2 with 32 bytes of data:
```

```
Reply from 192.168.1.2: bytes=32 time=60ms TTL=241
Reply from 192.168.1.2: bytes=32 time=60ms TTL=241
Reply from 192.168.1.2: bytes=32 time=60ms TTL=241
Reply from 192.168.1.2: bytes=32 time=60ms TTL=241
Reply from 192.168.1.2: bytes=32 time=60ms TTL=241
```

```
Ping statistics for 192.168.1.2:  Packets: Sent = 5, Received = 5, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 50ms, Maximum = 60ms, Average = 55ms
```

Cau 7

```
R3#configure
R3(config)#router rip
R3(config-router)#net 192.168.3.0
R3(config-router)#net 192.168.23.0
R3(config-router)#net 192.168.34.0
R3#configure
R3(config)#access-list 1 deny host 192.168.1.2
R3(config)#int s0
R3(config-if)#ip access-group 1 in
```

```
C:>ping 192.168.1.2
Pinging 192.168.1.2 with 32 bytes of data:
```

```
Reply from 192.168.1.2: bytes=32 time=60ms TTL=241
Reply from 192.168.1.2: bytes=32 time=60ms TTL=241
Reply from 192.168.1.2: bytes=32 time=60ms TTL=241
Reply from 192.168.1.2: bytes=32 time=60ms TTL=241
Reply from 192.168.1.2: bytes=32 time=60ms TTL=241
```

```
Ping statistics for 192.168.1.2:  Packets: Sent = 5, Received = 5, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 50ms, Maximum = 60ms, Average = 55ms
```

C:>ping 192.168.1.2
Pinging 192.168.1.2 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.1.2:
Packets: Sent = 5, Received = 0, Lost = 5 (100% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:>ping 192.168.3.2
Pinging 192.168.3.2 with 32 bytes of data:

Reply from 192.168.3.2: bytes=32 time=60ms TTL=241
Reply from 192.168.3.2: bytes=32 time=60ms TTL=241
Reply from 192.168.3.2: bytes=32 time=60ms TTL=241
Reply from 192.168.3.2: bytes=32 time=60ms TTL=241
Reply from 192.168.3.2: bytes=32 time=60ms TTL=241

Ping statistics for 192.168.3.2: Packets: Sent = 5, Received = 5, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 50ms, Maximum = 60ms, Average = 55ms

C:>ping 192.168.3.2
Pinging 192.168.3.2 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.3.2:
Packets: Sent = 5, Received = 0, Lost = 5 (100% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:>ping 192.168.3.2
Pinging 192.168.3.2 with 32 bytes of data:

```
Reply from 192.168.3.2: bytes=32 time=60ms TTL=241
Reply from 192.168.3.2: bytes=32 time=60ms TTL=241
Reply from 192.168.3.2: bytes=32 time=60ms TTL=241
Reply from 192.168.3.2: bytes=32 time=60ms TTL=241
Reply from 192.168.3.2: bytes=32 time=60ms TTL=241
```

```
Ping statistics for 192.168.3.2:  Packets: Sent = 5, Received = 5, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 50ms, Maximum = 60ms, Average = 55ms
```

```
C:>ping 192.168.3.2
Pinging 192.168.3.2 with 32 bytes of data:
```

```
Request timed out.
Request timed out.
Request timed out.
Request timed out.
Request timed out.
```

```
Ping statistics for 192.168.3.2:
    Packets: Sent = 5, Received = 0, Lost = 5 (100% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

Cau 8

```
R3#configure
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line.  End with CNTL/Z.
```

```
R3(config)#access-list 1 deny host 192.168.1.2
R3(config)#int s0
R3(config-if)#ip access-group 1 in
```

Cau 9

```
#configure
R4(config)#access-list 110 deny host 192.168.2.2 host 192.168.4.2
R4(config)#access-list 110 deny ip host 192.168.2.2 host 192.168.4.2
R4(config)#int s0
R4(config-if)#ip access-group 110 in
```

Cau 10

```
R4#configure
R4(config)#access-list 110 deny ip host 192.168.2.2
R4(config)#access-list 110 deny ip host 192.168.2.2 host 192.168.4.2
R4(config)#int s0
```

R4(config-if)#ip access-group 110 in

ping 192.168.4.4

Pinging 192.168.4.4 with 32 bytes of data:

Request timed out.

Request timed out.

Request timed out.

Request timed out.

Request timed out.

Ping statistics for 192.168.4.4:

Packets: Sent = 5, Received = 0, Lost = 5 (100% loss),

Approximate round trip times in milli-seconds: