Thông tin sinh viên nhóm 6

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Bài làm

Yêu cầu 1, 2, 3 đã báo cáo trên lớp

Số host	Network	Subnet mask	Dải IP	Broadcast
200	172.6.0.0/24	255.255.255.0	6.0.1 - 6.0.254	172.6.0.255
32	172.6.1.0/26	255.255.255.192	6.1.1 - 6.1.62	172.6.1.63
30	172.6.1.64/27	255.255.255.224	6.1.65 - 6.1.94	172.6.1.95
10	172.6.1.96/28	255.255.255.240	6.1.97 - 6.1.110	172.6.1.111
7	172.6.1.112/28	255.255.255.240	6.1.113 - 6.1.126	172.6.1.127
2	172.6.1.128/30	255.255.255.252	6.1.129 - 6.1.130	172.6.1.131
2	172.6.1.132/30	255.255.255.252	6.1.133 - 6.1.134	172.6.1.135
2	172.6.1.136/30	255.255.255.252	6.1.137 - 6.1.138	172.6.1.139

Thiết bị	Interface	Địa chỉ IP	Subnet Mask	Default Gateway
HN-R1	G0/1	172.6.1.133	255.255.255.252	N/A
	G0/0.20	172.6.1.1	255.255.255.192	N/A
	G0/0.21	172.6.1.113	255.255.255.240	N/A
HCM-R1	G0/0	172.6.1.129	255.255.255.252	N/A
	G0/1	172.6.1.134	255.255.255.252	N/A
	G0/2	172.6.1.137	255.255.255.252	N/A

HCM-R2	G0/0	172.6.1.130	255.255.255.252	N/A
	G0/1.10	172.6.1.97	255.255.255.240	N/A
	G0/1.11	172.6.0.1	255.255.255.0	N/A
CT-R1	G0/0.30	172.6.1.65	255.255.255.224	N/A
	G0/2	172.6.1.138	255.255.255.252	N/A
HN-S1	VLAN 20	172.6.1.2	255.255.255.192	N/A
	VLAN 21	172.6.1.114	255.255.255.240	N/A
HCM-S1	VLAN 10	172.6.1.98	255.255.255.240	N/A
HCM-S2	VLAN 11	172.6.0.2	255.255.255.0	N/A
CT-S1	VLAN 30	172.6.1.66	255.255.255.224	N/A
HN-PC-A	NIC	172.6.1.62	255.255.255.0	172.6.1.1
HN-PC-B	NIC	172.6.1.126	255.255.255.240	172.6.1.113
HCM-PC-A	NIC	172.6.0.254	255.255.255.0	172.6.0.1
CT-PC-A	NIC	172.6.1.94	255.255.255.224	172.6.1.65
HCM-SeverA	NIC	172.6.1.110	255.255.255.240	172.6.1.97

Yêu cầu 1, 2, 3 đã báo cáo trên lớp
Yêu cầu 4:
CT-R1

```
CT-R1#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
CT-R1(config)#router ospf 1
CT-R1(config-router)#network 172.6.1.65 0.0.0.0 area 0
CT-R1(config-router)#network 172.6.1.138 0.0.0.0 area 0
CT-R1(config-router)#
```

HN-R1

```
HN-R1(config)#router ospf 1
HN-R1(config-router)#network 172.6.1.133 0.0.0.0 area 0
HN-R1(config-router)#network 172.6.1.1 0.0.0.0 area 0
HN-R1(config-router)#network 172.6.1.113 0.0.0.0 area 0
```

HCM-R1

```
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#router ospf 1
Router(config-router)#network 172.6.1.129 0.0.0.0 area 0
Router(config-router)#network 172.6.1.134 0.0.0.0 area 0
Router(config-router)#network 172.6.1.137 0.0.0.0 area 0
Router(config-router)#
```

HCM-R2

```
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#router ospf 1
Router(config-router)#network 172.6.1.130 0.0.0.0 area 0
Router(config-router)#network 172.6.1.97 0.0.0.0 area 0
Router(config-router)#network 172.6.0.1 0.0.0.0 area 0
```

Ping từ HN-PC-A đến HCM-Server-A

```
C:\>ping 172.6.1.110

Pinging 172.6.1.110 with 32 bytes of data:

Reply from 172.6.1.110: bytes=32 time<1ms TTL=125
Reply from 172.6.1.110: bytes=32 time<1ms TTL=125
Reply from 172.6.1.110: bytes=32 time<1ms TTL=125
Reply from 172.6.1.110: bytes=32 time<1ms TTL=125

Ping statistics for 172.6.1.110:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

Ping từ HCM-PC-A đến HN-PC-B

```
C:\>ping 172.6.1.126

Pinging 172.6.1.126 with 32 bytes of data:

Reply from 172.6.1.126: bytes=32 time=8ms TTL=125
Reply from 172.6.1.126: bytes=32 time<1ms TTL=125
Reply from 172.6.1.126: bytes=32 time<1ms TTL=125
Reply from 172.6.1.126: bytes=32 time<1ms TTL=125

Ping statistics for 172.6.1.126:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 8ms, Average = 2ms

C:\>
```

Ping từ HCM-Server-A đến CT-PC-A

```
C:\>ping 172.6.1.94

Pinging 172.6.1.94 with 32 bytes of data:

Reply from 172.6.1.94: bytes=32 time<1ms TTL=125
Reply from 172.6.1.94: bytes=32 time<1ms TTL=125
Reply from 172.6.1.94: bytes=32 time<1ms TTL=125
Reply from 172.6.1.94: bytes=32 time<1ms TTL=125

Ping statistics for 172.6.1.94:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

Ping từ CT-PC-A đến HN-PC-B

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 172.6.1.126

Pinging 172.6.1.126 with 32 bytes of data:

Reply from 172.6.1.126: bytes=32 time<1ms TTL=125
Reply from 172.6.1.126: bytes=32 time<1ms TTL=125
Reply from 172.6.1.126: bytes=32 time<1ms TTL=125
Reply from 172.6.1.126: bytes=32 time<1ms TTL=125

Ping statistics for 172.6.1.126:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

Quảng bá default static route cho các router khác bằng OSPF

Tạo cổng loopback 0 trên HCM-R1
interface loopback 0
ip address 8.8.8.8 255.255.255.255

Tạo default static route
ip route 0.0.0.0 0.0.0.0 Loopback0

Quảng bá default static route
router ospf 1
default-information originate
Thực hiện như hình bên dưới

```
HCM-R1#
%SYS-5-CONFIG_I: Configured from console by console

HCM-R1#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
HCM-R1(config)#interface loopback 0

HCM-R1(config-if)#ip address 8.8.8.8 255.255.255.255
HCM-R1(config-if)#ip route 0.0.0.0 0.0.0.0 Loopback0
%Default route without gateway, if not a point-to-point interface, may impact
performance
HCM-R1(config)#router ospf 1
HCM-R1(config-router)#default-information originate
%LINK-5-CHANGED: Interface Loopback0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Loopback0, changed state to
up

HCM-R1(config-router)#^Z
HCM-R1#
```

Sau đó ta sẽ kiểm tra lại kết quả

```
HCM-R1#show ip interface brief
Interface              IP-Address      OK? Method Status
Protocol
GigabitEthernet0/0     172.6.1.129     YES manual up                    up
GigabitEthernet0/1     172.6.1.134     YES manual up                    up
GigabitEthernet0/2     172.6.1.137     YES manual up                    up
Loopback0              8.8.8.8         YES manual up                    up
Vlan1                  unassigned      YES unset  administratively down down
HCM-R1#
```

```
HCM-R1#show ip route
Codes: L - local, 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, 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
       P - periodic downloaded static route

Gateway of last resort is 0.0.0.0 to network 0.0.0.0

     8.0.0.0/32 is subnetted, 1 subnets
C       8.8.8.8/32 is directly connected, Loopback0
     172.6.0.0/16 is variably subnetted, 11 subnets, 6 masks
O       172.6.0.0/24 [110/2] via 172.6.1.130, 00:53:03, GigabitEthernet0/0
O       172.6.1.0/26 [110/2] via 172.6.1.133, 00:53:57, GigabitEthernet0/1
O       172.6.1.64/27 [110/2] via 172.6.1.138, 00:53:57, GigabitEthernet0/2
O       172.6.1.96/28 [110/2] via 172.6.1.130, 00:53:03, GigabitEthernet0/0
O       172.6.1.112/28 [110/2] via 172.6.1.133, 00:18:15, GigabitEthernet0/1
C       172.6.1.128/30 is directly connected, GigabitEthernet0/0
L       172.6.1.129/32 is directly connected, GigabitEthernet0/0
C       172.6.1.132/30 is directly connected, GigabitEthernet0/1
L       172.6.1.134/32 is directly connected, GigabitEthernet0/1
C       172.6.1.136/30 is directly connected, GigabitEthernet0/2
L       172.6.1.137/32 is directly connected, GigabitEthernet0/2
S*   0.0.0.0/0 is directly connected, Loopback0
```

Ta sẽ tiếp tục kiểm tra ở các router khác

HN-R1

```
HN-R1#show ip route
Codes: L - local, 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, 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
       P - periodic downloaded static route

Gateway of last resort is 172.6.1.134 to network 0.0.0.0

     172.6.0.0/16 is variably subnetted, 11 subnets, 6 masks
O       172.6.0.0/24 [110/3] via 172.6.1.134, 00:54:15, GigabitEthernet0/1
C       172.6.1.0/26 is directly connected, GigabitEthernet0/0.20
L       172.6.1.1/32 is directly connected, GigabitEthernet0/0.20
O       172.6.1.64/27 [110/3] via 172.6.1.134, 00:55:16, GigabitEthernet0/1
O       172.6.1.96/28 [110/3] via 172.6.1.134, 00:54:15, GigabitEthernet0/1
C       172.6.1.112/28 is directly connected, GigabitEthernet0/0.21
L       172.6.1.113/32 is directly connected, GigabitEthernet0/0.21
O       172.6.1.128/30 [110/2] via 172.6.1.134, 00:54:25, GigabitEthernet0/1
C       172.6.1.132/30 is directly connected, GigabitEthernet0/1
L       172.6.1.133/32 is directly connected, GigabitEthernet0/1
O       172.6.1.136/30 [110/2] via 172.6.1.134, 00:55:16, GigabitEthernet0/1
O*E2 0.0.0.0/0 [110/1] via 172.6.1.134, 00:01:27, GigabitEthernet0/1
```

CT-R1

```
CT-R1>enable
CT-R1#show ip route
Codes: L - local, 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, 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
       P - periodic downloaded static route

Gateway of last resort is 172.6.1.137 to network 0.0.0.0

     172.6.0.0/16 is variably subnetted, 10 subnets, 6 masks
O       172.6.0.0/24 [110/3] via 172.6.1.137, 00:54:57, GigabitEthernet0/2
O       172.6.1.0/26 [110/3] via 172.6.1.137, 00:56:03, GigabitEthernet0/2
C       172.6.1.64/27 is directly connected, GigabitEthernet0/0.30
L       172.6.1.65/32 is directly connected, GigabitEthernet0/0.30
O       172.6.1.96/28 [110/3] via 172.6.1.137, 00:54:57, GigabitEthernet0/2
O       172.6.1.112/28 [110/3] via 172.6.1.137, 00:20:19, GigabitEthernet0/2
O       172.6.1.128/30 [110/2] via 172.6.1.137, 00:55:07, GigabitEthernet0/2
O       172.6.1.132/30 [110/2] via 172.6.1.137, 00:56:03, GigabitEthernet0/2
C       172.6.1.136/30 is directly connected, GigabitEthernet0/2
L       172.6.1.138/32 is directly connected, GigabitEthernet0/2
O*E2 0.0.0.0/0 [110/1] via 172.6.1.137, 00:02:09, GigabitEthernet0/2
```

HCM R2

IOS Command Line Interface

```
HCM-R2#
%SYS-5-CONFIG_I: Configured from console by console

HCM-R2#show ip route
Codes: L - local, 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, 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
       P - periodic downloaded static route

Gateway of last resort is 172.6.1.129 to network 0.0.0.0

     172.6.0.0/16 is variably subnetted, 11 subnets, 6 masks
C       172.6.0.0/24 is directly connected, GigabitEthernet0/1.11
L       172.6.0.1/32 is directly connected, GigabitEthernet0/1.11
O       172.6.1.0/26 [110/3] via 172.6.1.129, 00:55:33, GigabitEthernet0/0
O       172.6.1.64/27 [110/3] via 172.6.1.129, 00:55:33, GigabitEthernet0/0
C       172.6.1.96/28 is directly connected, GigabitEthernet0/1.10
L       172.6.1.97/32 is directly connected, GigabitEthernet0/1.10
O       172.6.1.112/28 [110/3] via 172.6.1.129, 00:20:45, GigabitEthernet0/0
C       172.6.1.128/30 is directly connected, GigabitEthernet0/0
L       172.6.1.130/32 is directly connected, GigabitEthernet0/0
O       172.6.1.132/30 [110/2] via 172.6.1.129, 00:55:33, GigabitEthernet0/0
O       172.6.1.136/30 [110/2] via 172.6.1.129, 00:55:33, GigabitEthernet0/0
O*E2 0.0.0.0/0 [110/1] via 172.6.1.129, 00:02:35, GigabitEthernet0/0

HCM-R2#
```