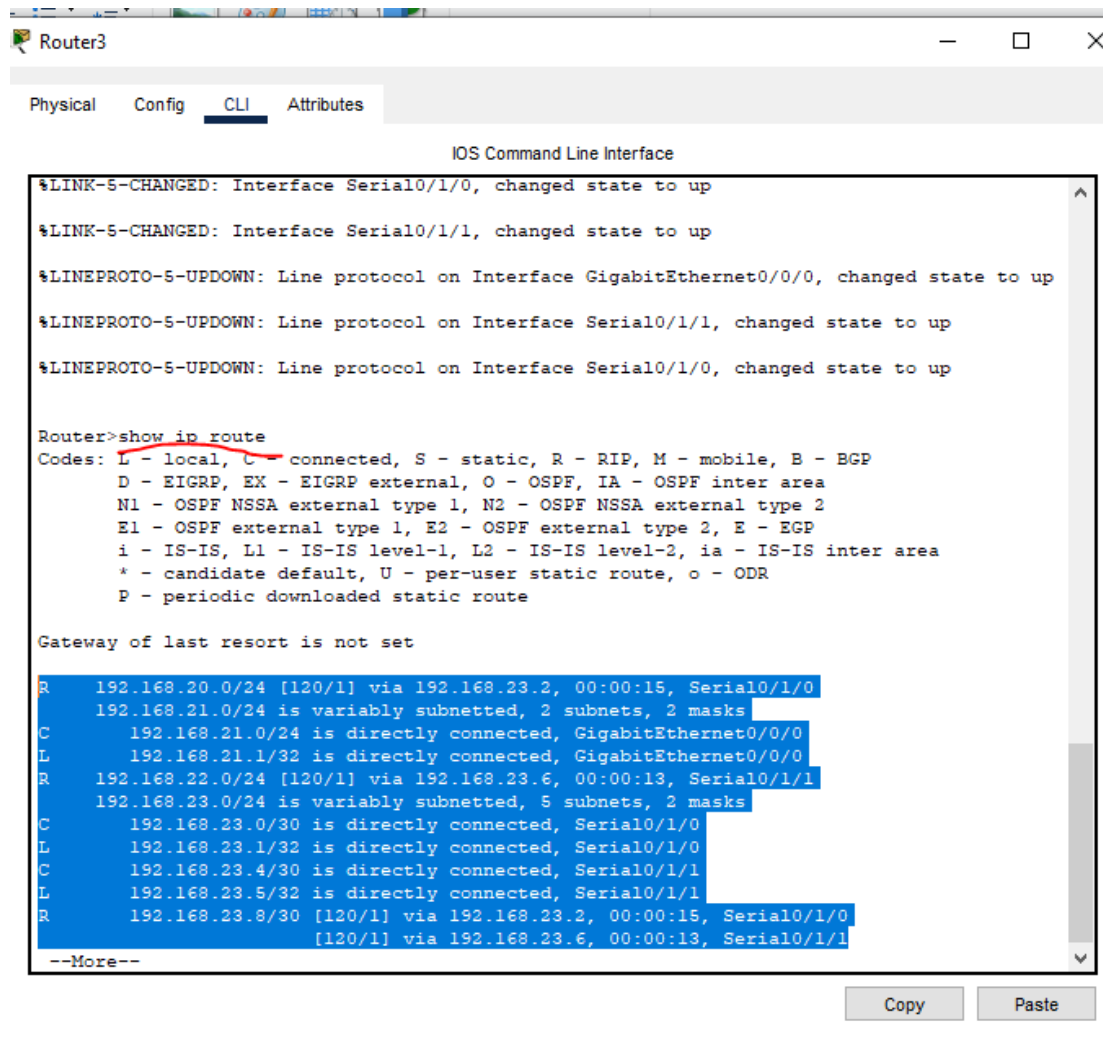


Después de configurar (y verificar que funciona) la red mallada del ejercicio anterior:

1-Usa el comando "show ip route" en cada router para ver las rutas (y la métrica) que ha aprendido cada router.



The screenshot shows the CLI of Router3. At the top, there are tabs for Physical, Config, CLI (selected), and Attributes. Below the tabs, the text "IOS Command Line Interface" is displayed. The main window shows the output of the command "show ip route". The output includes several status messages at the top, followed by a legend for route codes (L, C, R, D, N1, N2, E1, i, *, P). Below the legend, it states "Gateway of last resort is not set". The main part of the output lists the routes learned by the router, including directly connected networks and routes learned via RIPv1. The routes are listed in a table-like format with columns for the route, the interface, and the metric. The routes are: 192.168.20.0/24 [120/1] via 192.168.23.2, 00:00:15, Serial0/1/0; 192.168.21.0/24 is variably subnetted, 2 subnets, 2 masks; 192.168.21.0/24 is directly connected, GigabitEthernet0/0/0; 192.168.21.1/32 is directly connected, GigabitEthernet0/0/0; 192.168.22.0/24 [120/1] via 192.168.23.6, 00:00:13, Serial0/1/1; 192.168.23.0/24 is variably subnetted, 5 subnets, 2 masks; 192.168.23.0/30 is directly connected, Serial0/1/0; 192.168.23.1/32 is directly connected, Serial0/1/0; 192.168.23.4/30 is directly connected, Serial0/1/1; 192.168.23.5/32 is directly connected, Serial0/1/1; 192.168.23.8/30 [120/1] via 192.168.23.2, 00:00:15, Serial0/1/0; [120/1] via 192.168.23.6, 00:00:13, Serial0/1/1. At the bottom of the window, there are "Copy" and "Paste" buttons.

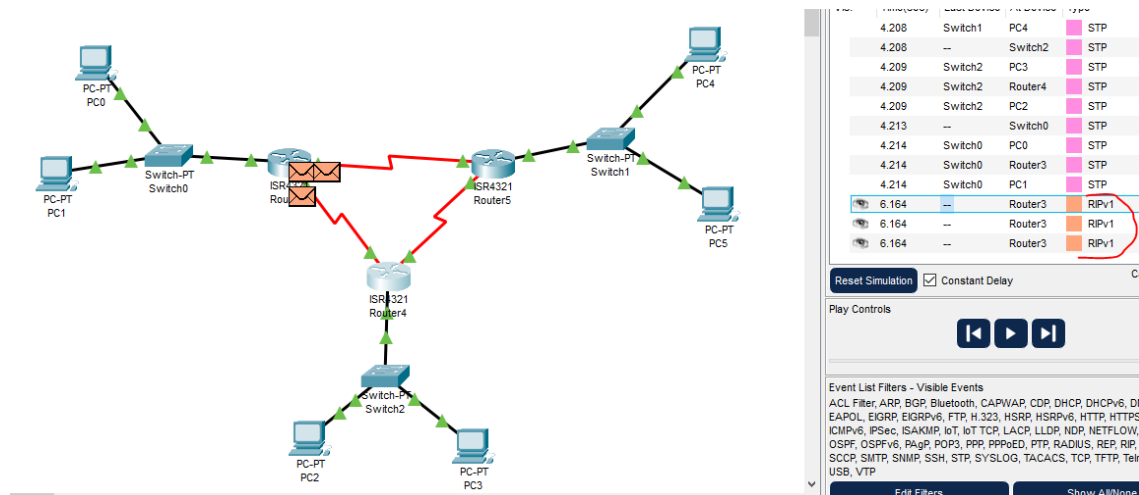
```
Router3>show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, 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 not set

R    192.168.20.0/24 [120/1] via 192.168.23.2, 00:00:15, Serial0/1/0
     192.168.21.0/24 is variably subnetted, 2 subnets, 2 masks
C    192.168.21.0/24 is directly connected, GigabitEthernet0/0/0
L    192.168.21.1/32 is directly connected, GigabitEthernet0/0/0
R    192.168.22.0/24 [120/1] via 192.168.23.6, 00:00:13, Serial0/1/1
     192.168.23.0/24 is variably subnetted, 5 subnets, 2 masks
C    192.168.23.0/30 is directly connected, Serial0/1/0
L    192.168.23.1/32 is directly connected, Serial0/1/0
C    192.168.23.4/30 is directly connected, Serial0/1/1
L    192.168.23.5/32 is directly connected, Serial0/1/1
R    192.168.23.8/30 [120/1] via 192.168.23.2, 00:00:15, Serial0/1/0
     [120/1] via 192.168.23.6, 00:00:13, Serial0/1/1

--More--
```

2-En la ventana de simulación, espera a que los routers se comuniquen (o fuérazlo apagando y volviendo a encender uno), y captura el paquete RIP. Responde:



2.1-¿Qué protocolo de transporte utiliza?

PDU Information at Device: Router3

OSI Model Outbound PDU Details

At Device: Router3
Source: Router3
Destination: 255.255.255.255

In Layers

Layer7
Layer6
Layer5
Layer4
Layer3
Layer2
Layer1

Out Layers

Layer 7: RIP Version: 1, Command: 2
Layer6
Layer5
Layer 4: UDP Src Port: 520, Dst Port: 520
Layer 3: IP Header Src. IP: 192.168.21.1, Dest. IP: 255.255.255.255
Layer 2: Ethernet II Header 000B.BECD.5801 >> FFFF.FFFF.FFFF
Layer 1: Port(s): GigabitEthernet0/0/0

1. The device builds a periodic RIP update packet to send out to GigabitEthernet0/0/0.
2. The device adds an update route 192.168.20.0 to the RIP packet.
3. The device adds an update route 192.168.22.0 to the RIP packet.
4. The device adds an update route 192.168.23.0 to the RIP packet.

Challenge Me

<< Previous Layer

Next Layer >>

2.2-¿Qué información va en ese paquete?

Hemos puesto dos capturas porque en la primera el paquete va a una dirección diferente que en la segunda. Hay tres paquetes RIP.

PDU Information at Device: Router3

OSI Model [Outbound PDU Details](#)

PDU Formats

Rip v.1

0	8	16	Bits
CMD:0x02		VER:0x01	0b0000000000000000
ADDR FAMILY : 0x0		0b0000000000000000	
NETWROK			
0b0000000000000000			
NEXT HOP			
METRIC			

Rip Route Packet

0	16	Bits
ADDRESS FAMILY:2		ROUTE TAG:0
NETWORK ADDRESS:192.168.20.0		
SUBNET MASK :0.0.0.0		
NEXT HOP:0.0.0.0		

PDU Formats

ADDRESS FAMILY:2	ROUTE TAG:0
NETWORK ADDRESS:192.168.22.0	
SUBNET MASK :0.0.0.0	
NEXT HOP:0.0.0.0	
METRIC:2	

Rip Route Packet

0

16

Bits

ADDRESS FAMILY:2	ROUTE TAG:0
NETWORK ADDRESS:192.168.23.0	
SUBNET MASK :0.0.0.0	
NEXT HOP:0.0.0.0	
METRIC:1	

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1º ASIR