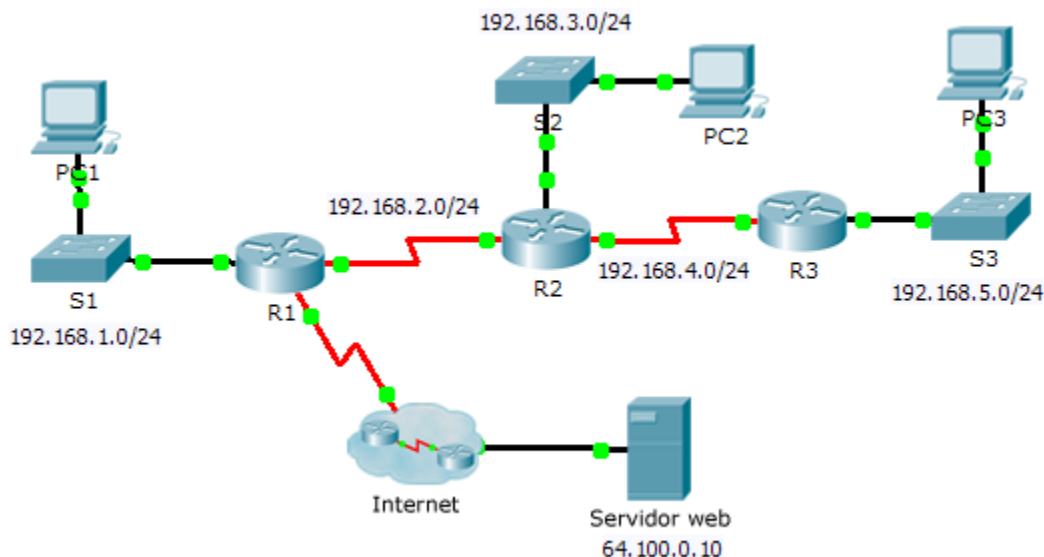


Packet Tracer: Configuración de RIPv2

Topología



Objetivos

Parte 1: configurar RIPv2

Parte 2: verificar las configuraciones

Aspectos básicos

Si bien el protocolo RIP se utiliza con muy poca frecuencia en las redes modernas, es útil como base para comprender el routing de red básico. En esta actividad, configurará una ruta predeterminada y RIP versión 2 con instrucciones network e interfaces pasivas adecuadas, y verificará que haya plena conectividad.

Parte 1. Configurar RIPv2

Paso 1. Configurar RIPv2 en el R1

- Utilice el comando adecuado para crear una ruta predeterminada en el **R1** para que todo el tráfico de Internet salga de la red a través de S0/0/1.

```
R1>ena
R1#config t
Enter configuration commands, one per line.
R1(config)#ip route 0.0.0.0 0.0.0.0 S0/0/1
!Default route without gateway, if not a poi
R1(config)#ip route 0.0.0.0 0.0.0.0 s0/0/1
R1(config)#
```

- b. Ingrese al modo de configuración del protocolo RIP.
- c. Utilice la versión 2 del protocolo RIP y deshabilite la sumarización de redes.

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/0, changed state to up
%LINEPRO
R1>ena
R1#config t
Enter configuration commands, one per line. End with
R1(config)#ip route 0.0.0.0 0.0.0.0 S0/0/1
%Default route without gateway, if not a point-to-point interface, may impact performance
R1(config)#ip route 0.0.0.0 0.0.0.0 S0/0/1
R1(config)#router rip
R1(config-router)#version 2
R1(config-router)#no auto-summary
R1(config-router)#
```

Ingresar a modo configuración del protocolo RIP.

Versión 2

Deshabilitada sumarización de redes

- d. Configure RIP para las redes que se conectan al R1.

```
R1(config-router)#version 2
R1(config-router)#no auto-summary
R1(config-router)#network 192.168.1.0
R1(config-router)#network 192.168.2.0
R1(config-router)#
```

- e. Configure el puerto LAN que no contiene ningún router de modo que no envíe información de routing.

```
R1(config-router)#passive-interface g0/0/0
%Invalid interface type and number
R1(config-router)#passive-interface g0/0
R1(config-router)#
```

- f. Anuncie la ruta predeterminada configurada en el paso 1a a otros routers RIP.

```
%Invalid interface type and number
R1(config-router)#passive-interface g0/0
R1(config-router)#default-information originate
R1(config-router)#
```

- g. Guarde la configuración.

```
R1#copy ru
R1#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
R1#
```

Paso 2. Configurar RIPv2 en el R2

- Ingresa al modo de configuración del protocolo RIP.
- Utilice la versión 2 del protocolo RIP y deshabilite la sumarización de redes.
- Configure RIP para las redes conectadas directamente al **R2**.
- Configure la interfaz que no contiene ningún router de modo que no envíe información de routing.

```
-----
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/0, changed state to up

R2>ena
R2#config t
Enter configuration commands, one per line. End with CTRL-Z
R2(config)#router rip
R2(config-router)#version 2
R2(config-router)#network 192.168.2.0
R2(config-router)#network 192.168.3.0
R2(config-router)#network 192.168.4.0
R2(config-router)#passive-interface 192.168.3.0
% Invalid input detected at '^' marker.

R2(config-router)#passive-interface g0/0
R2(config-router)#

-----
R2(config-router)#no auto-summary
R2(config-router)#
```

ingresar a config rip y poner versión 2

Declarar redes conectadas directamente

No enviar actualizaciones RIP por esa interfaz

- Guarde la configuración.

```
R2#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
R2#
```

Paso 3. Configurar RIPv2 en el R3

Repita el paso 2 en el R3.

```
R3#ena
R3#config t
Enter configuration commands, one per line.
R3(config)#router rip
R3(config-router)#version 2
R3(config-router)#network 192.168.4.0
R3(config-router)#network 192.168.5.0
R3(config-router)#passive-inter
R3(config-router)#passive-interface g0/0
R3(config-router)#

R3(config-router)#no auto
R3(config-router)#no auto-summary
R3(config-router)#

-----
R3#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
R3#
```

Parte 2. Verificar las configuraciones

Paso 1. Ver las tablas de routing de R1, R2 y R3

- Utilice el comando adecuado para mostrar la tabla de routing del **R1**. RIP (R) ahora aparece con rutas conectadas (C) y rutas locales (L) en la tabla de routing. Todas las redes tienen una entrada. También se incluye una ruta predeterminada.

```

192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks
C    192.168.1.0/24 is directly connected, GigabitEthernet0/0
L    192.168.1.1/32 is directly connected, GigabitEthernet0/0
192.168.2.0/24 is variably subnetted, 2 subnets, 2 masks
C    192.168.2.0/24 is directly connected, Serial0/0/0
L    192.168.2.1/32 is directly connected, Serial0/0/0
R    192.168.3.0/24 [120/1] via 192.168.2.2, 00:00:05, Serial0/0/0
R    192.168.4.0/24 [120/1] via 192.168.2.2, 00:00:05, Serial0/0/0
R    192.168.5.0/24 [120/2] via 192.168.2.2, 00:00:05, Serial0/0/0
209.165.200.0/24 is variably subnetted, 2 subnets, 2 masks
C    209.165.200.224/30 is directly connected, Serial0/0/1
L    209.165.200.225/32 is directly connected, Serial0/0/1
S*   0.0.0.0/0 is directly connected, Serial0/0/1

R1#
```

- b. Vea las tablas de routing del **R2** y el **R3**. Observe que cada router tiene una lista completa de todas las redes 192.168.x.0 y una ruta predeterminada.

R2

```
R    192.168.1.0/24 [120/1] via 192.168.2.1, 00:00:10, Serial0/0/0
    192.168.2.0/24 is variably subnetted, 2 subnets, 2 masks
C    192.168.2.0/24 is directly connected, Serial0/0/0
L    192.168.2.2/32 is directly connected, Serial0/0/0
    192.168.3.0/24 is variably subnetted, 2 subnets, 2 masks
C    192.168.3.0/24 is directly connected, GigabitEthernet0/0
L    192.168.3.1/32 is directly connected, GigabitEthernet0/0
    192.168.4.0/24 is variably subnetted, 2 subnets, 2 masks
C    192.168.4.0/24 is directly connected, Serial0/0/1
L    192.168.4.2/32 is directly connected, Serial0/0/1
R    192.168.5.0/24 [120/1] via 192.168.4.1, 00:00:26, Serial0/0/1
R*   0.0.0.0/0 [120/1] via 192.168.2.1, 00:00:10, Serial0/0/0

R2#
```

R3

```
R    192.168.1.0/24 [120/2] via 192.168.4.2, 00:00:08, Serial0/0/1
R    192.168.2.0/24 [120/1] via 192.168.4.2, 00:00:08, Serial0/0/1
R    192.168.3.0/24 [120/1] via 192.168.4.2, 00:00:08, Serial0/0/1
    192.168.4.0/24 is variably subnetted, 2 subnets, 2 masks
C    192.168.4.0/24 is directly connected, Serial0/0/1
L    192.168.4.1/32 is directly connected, Serial0/0/1
    192.168.5.0/24 is variably subnetted, 2 subnets, 2 masks
C    192.168.5.0/24 is directly connected, GigabitEthernet0/0
L    192.168.5.1/32 is directly connected, GigabitEthernet0/0
R*   0.0.0.0/0 [120/2] via 192.168.4.2, 00:00:08, Serial0/0/1

R3#
```

Paso 2. Verificar la plena conectividad a todos los destinos

Cada dispositivo ahora debería poder enviar un comando ping a todos los demás dispositivos que se encuentran dentro de la red. Además, todos los dispositivos deberían poder hacer ping al **servidor web**.

PC1

```
C:\>ping 192.168.3.0

Pinging 192.168.3.0 with 32 bytes of data:

Reply from 192.168.2.2: bytes=32 time=1ms TTL=254
Reply from 192.168.2.2: bytes=32 time=19ms TTL=254
Reply from 192.168.2.2: bytes=32 time=19ms TTL=254
Reply from 192.168.2.2: bytes=32 time=1ms TTL=254

Ping statistics for 192.168.3.0:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 19ms, Average = 10ms

C:\>192.168.2.0
Invalid Command.

C:\>ping 192.168.2.0

Pinging 192.168.2.0 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.2.0:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 192.168.4.0

Pinging 192.168.4.0 with 32 bytes of data:

Reply from 192.168.2.2: bytes=32 time=15ms TTL=254
Reply from 192.168.2.2: bytes=32 time=1ms TTL=254
Reply from 192.168.2.2: bytes=32 time=20ms TTL=254
Reply from 192.168.2.2: bytes=32 time=19ms TTL=254
```

PC1 a diferentes
redes de la topología

```
C:\>ping 192.168.5.0

Pinging 192.168.5.0 with 32 bytes of data:

Reply from 192.168.4.1: bytes=32 time=43ms TTL=253
Reply from 192.168.4.1: bytes=32 time=40ms TTL=253
Reply from 192.168.4.1: bytes=32 time=2ms TTL=253
Reply from 192.168.4.1: bytes=32 time=2ms TTL=253

Ping statistics for 192.168.5.0:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 2ms, Maximum = 43ms, Average = 21ms
```

PC1 a servidor web.

```
C:\>ping 64.100.0.10

Pinging 64.100.0.10 with 32 bytes of data:

Reply from 64.100.0.10: bytes=32 time=9ms TTL=126
Reply from 64.100.0.10: bytes=32 time=1ms TTL=126
Reply from 64.100.0.10: bytes=32 time=1ms TTL=126
Reply from 64.100.0.10: bytes=32 time=3ms TTL=126

Ping statistics for 64.100.0.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 9ms, Average = 3ms
```

PC2

```
Pinging 192.168.1.0 with 32 bytes of data:

Reply from 192.168.2.1: bytes=32 time=1ms TTL=254
Reply from 192.168.2.1: bytes=32 time=1ms TTL=254
Reply from 192.168.2.1: bytes=32 time=1ms TTL=254
Reply from 192.168.2.1: bytes=32 time=1ms TTL=254

Ping statistics for 192.168.1.0:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 1ms, Average = 1ms

C:\>192.168.2.0
Invalid Command.

C:\>ping 192.168.2.0

Pinging 192.168.2.0 with 32 bytes of data:

Reply from 192.168.3.1: bytes=32 time<1ms TTL=255
Reply from 192.168.3.1: bytes=32 time<1ms TTL=255
Reply from 192.168.3.1: bytes=32 time=11ms TTL=255
Reply from 192.168.3.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.2.0:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 11ms, Average = 2ms

C:\>ping 192.168.4.0

Pinging 192.168.4.0 with 32 bytes of data:

Reply from 192.168.3.1: bytes=32 time<1ms TTL=255
Reply from 192.168.3.1: bytes=32 time<1ms TTL=255
Reply from 192.168.3.1: bytes=32 time<1ms TTL=255
Reply from 192.168.3.1: bytes=32 time<1ms TTL=255
```

```
C:\>ping 192.168.5.0

Pinging 192.168.5.0 with 32 bytes of data:

Reply from 192.168.4.1: bytes=32 time=20ms TTL=254
Reply from 192.168.4.1: bytes=32 time=1ms TTL=254
Reply from 192.168.4.1: bytes=32 time=1ms TTL=254
Reply from 192.168.4.1: bytes=32 time=1ms TTL=254

Ping statistics for 192.168.5.0:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 20ms, Average = 5ms

C:\>ping 64.100.0.10

Pinging 64.100.0.10 with 32 bytes of data:

Reply from 64.100.0.10: bytes=32 time=26ms TTL=125
Reply from 64.100.0.10: bytes=32 time=2ms TTL=125
Reply from 64.100.0.10: bytes=32 time=2ms TTL=125
Reply from 64.100.0.10: bytes=32 time=24ms TTL=125

Ping statistics for 64.100.0.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 2ms, Maximum = 26ms, Average = 13ms
```


PC3

```
Pinging 192.168.1.0 with 32 bytes of data:

Reply from 192.168.2.1: bytes=32 time=2ms TTL=253
Reply from 192.168.2.1: bytes=32 time=2ms TTL=253
Reply from 192.168.2.1: bytes=32 time=63ms TTL=253
Reply from 192.168.2.1: bytes=32 time=51ms TTL=253

Ping statistics for 192.168.1.0:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 2ms, Maximum = 63ms, Average = 29ms

C:\>ping 192.168.2.0

Pinging 192.168.2.0 with 32 bytes of data:

Reply from 192.168.4.2: bytes=32 time=22ms TTL=254
Reply from 192.168.4.2: bytes=32 time=1ms TTL=254
Reply from 192.168.4.2: bytes=32 time=1ms TTL=254
Reply from 192.168.4.2: bytes=32 time=1ms TTL=254

Ping statistics for 192.168.2.0:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 22ms, Average = 6ms

C:\>ping 192.168.3.0

Pinging 192.168.3.0 with 32 bytes of data:

Reply from 192.168.4.2: bytes=32 time=21ms TTL=254
Reply from 192.168.4.2: bytes=32 time=21ms TTL=254
Reply from 192.168.4.2: bytes=32 time=1ms TTL=254
Reply from 192.168.4.2: bytes=32 time=1ms TTL=254

Ping statistics for 192.168.3.0:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 21ms, Average = 11ms
```

Packet Tracer: Configuración de RIPv2

```
C:\>ping 192.168.4.0

Pinging 192.168.4.0 with 32 bytes of data:

Reply from 192.168.5.1: bytes=32 time<1ms TTL=255
Reply from 192.168.5.1: bytes=32 time<1ms TTL=255
Reply from 192.168.5.1: bytes=32 time<1ms TTL=255
Reply from 192.168.5.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.4.0:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 64.100.0.10

Pinging 64.100.0.10 with 32 bytes of data:

Reply from 64.100.0.10: bytes=32 time=51ms TTL=124
Reply from 64.100.0.10: bytes=32 time=11ms TTL=124
Reply from 64.100.0.10: bytes=32 time=3ms TTL=124
Reply from 64.100.0.10: bytes=32 time=10ms TTL=124

Ping statistics for 64.100.0.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 3ms, Maximum = 51ms, Average = 18ms
```

Cisco Packet Tracer - C:\Users\cire7\Downloads\Práctica 10. Packet Tracer - Configuring RIPv2.pka

File Edit Options View Tools Extensions Window Help

Time Elapsed: 00:00:00

Activity Results

Congratulations Guest! You completed the activity.

Overall Feedback Assessment Items Connectivity Tests

Expand/Collapse All Show Incorrect Items

Assessment Items	Status	Points	Component(s)	Feedback
Network				
R1				
RIP				
Auto Summary	Correct	5	RIPv2 Routing Co...	
Default Information Originate	Correct	8	RIPv2 Routing Co...	
Networks				
Route0	Correct	5	RIPv2 Routing Co...	
Route1	Correct	5	RIPv2 Routing Co...	
Passive Interface		0	Routing	
GigabitEthernet0/0	Correct	5	RIPv2 Routing Co...	
Version	Correct	5	RIPv2 Routing Co...	
Routes		0	Other	
Static Routes		0	Routing	
Route0	Correct	12	IPv4 Static Route...	
R2				
RIP				
Auto Summary	Correct	5	RIPv2 Routing Co...	
Networks				
Route0	Correct	5	RIPv2 Routing Co...	
Route1	Correct	5	RIPv2 Routing Co...	
Route2	Correct	5	RIPv2 Routing Co...	
Passive Interface		0	Routing	
GigabitEthernet0/0	Correct	5	RIPv2 Routing Co...	
Version	Correct	5	RIPv2 Routing Co...	
R3				
RIP				
Auto Summary	Correct	5	RIPv2 Routing Co...	
Networks				
Route0	Correct	5	RIPv2 Routing Co...	
Route1	Correct	5	RIPv2 Routing Co...	
Passive Interface		0	Routing	
GigabitEthernet0/0	Correct	5	RIPv2 Routing Co...	
Version	Correct	5	RIPv2 Routing Co...	

Component	Items/Total	Score
IPv4 Static Route Configuration	1/1	12/12
RIPv2 Routing Configuration	17/17	88/88

Score : 100/100

Item Count : 18/18

Close