

INSTITUTO TECNOLÓGICO DE SALINA CRUZ

REDES DE COMPUTADORAS

PRACTICA No.2.

UNIDAD 5.

REALIZADA POR: SANCHEZ SANTIAGO NOE

LUGAR Y FECHA: SALINA CRUZ OAXACA A 24 DE MAYO DE 2015.

DOCENTE: ROMÁN NÁJERA SUSANA MÓNICA.

SEMESTRE Y GRUPO: 6E.

CARRERA: ING. EN TECNOLOGÍAS DE LA INFORMACIÓN Y DE LAS
COMUNICACIONES

OBJETIVO: reconstruir la tabla de enrutamiento y realizar la configuración pertinente a partir de pantallazos que se nos fueron proporcionados de una red previamente configurada con el protocolo de enrutamiento RIP.

INSTRUCCIONES: a partir de la información proporcionada en la práctica reconstruir la red y realizar su configuración pertinente.

MATERIALES:

Software packet tracer.

Computadora

DISPOSITIVO	INTERFAZ	DIRECCION IP	MASCARA DE SUBRED
HQ	Fa0/0	192.168.4.1	255.255.239.0
	Fa1/0	192.169.5.1	255.255.239.0
	S2/0	10.10.10.252	255.0.0.0
	S3/0	172.16.100.5	255.255.0.0
BRANCH1	Fa0/0	192.170.1.1	255.255.239.0
	Fa1/0	192.171.2.1	255.255.239.0
	S2/0	10.10.10.252	255.255.0.0
BRANCH2	Fa0/0	192.172.7.1	255.255.239.0
	Fa1/0	192.173.8.1	255.255.239.0
	S2/0	172.16.100.5	255.255.0.0

Realizamos la configuración básica de los router.

```

Router>enable
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname HQ
HQ(config)#enable password 123
HQ(config)#banner motd '***bienvenido noe ***'
HQ(config)#interface fa0/0
HQ(config-if)#ip address 192.168.4.1
% Incomplete command.
HQ(config-if)#ip address 192.168.4.1 255.255.255.0
HQ(config-if)#no shut

HQ(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

HQ(config-if)#exit
HQ(config)#interface fa1/0
HQ(config-if)#ip address 192.169.5.1 255.255.255.0
HQ(config-if)#no shut

HQ(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0, changed state to up

HQ(config-if)#exit
HQ(config)#interface s2/0
HQ(config-if)#ip address 10.10.10.5 255.0.0.0
HQ(config-if)#no shut

%LINK-5-CHANGED: Interface Serial2/0, changed state to down
HQ(config-if)#exit
HQ(config)#interface s3/0
HQ(config-if)#ip address 172.16.100.5 255.255.255.0
HQ(config-if)#no shut

%LINK-5-CHANGED: Interface Serial3/0, changed state to down
HQ(config-if)#exit
HQ(config)#

```

BRANCH1

FísicoConfigCLI

Interfaz de Línea de Comandos IOS

```
Router#enable
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname BRANCH1
BRANCH1(config)#enable password 234
BRANCH1(config)#banner motd '"bienvenido noe"'
BRANCH1(config)#interface fa0/0
BRANCH1(config-if)#ip address 192.170.1.1 255.255.255.0
BRANCH1(config-if)#no shut

BRANCH1(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

BRANCH1(config-if)#exit
BRANCH1(config)#interface fa1/0
BRANCH1(config-if)#ip address 192.171.2.1 255.255.255.0
BRANCH1(config-if)#no shut

BRANCH1(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0, changed state to up
```

```
BRANCH1(config-if)#exit
BRANCH1(config)#interface s2/0
BRANCH1(config-if)#10.10.10.11
^
% Invalid input detected at '^' marker.

BRANCH1(config-if)#ip address 10.10.10.11 255.0.0.0
BRANCH1(config-if)#no shut

BRANCH1(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up
```

```
Router>enable
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname BRANCH2
BRANCH2(config)#enable password 345
BRANCH2(config)#banner motd ''*** bienvenido noe ***'
BRANCH2(config)#interface fa0/0
BRANCH2(config-if)#ip address 192.172.7.1 255.255.255.0
BRANCH2(config-if)#no shut

BRANCH2(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

BRANCH2(config-if)#interface fa1/0
BRANCH2(config-if)#ip address 192.173.8.1 255.255.255.0
BRANCH2(config-if)#no shut

BRANCH2(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0, changed state to up

BRANCH2(config-if)#exit
BRANCH2(config)#interface s2/0
BRANCH2(config-if)#ip address 172.16.100.5 255.255.255.0
BRANCH2(config-if)#no shut

BRANCH2(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up

BRANCH2(config-if)#exit
BRANCH2(config)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up
```

Configuración del protocolo RIP.

```
HQ>enable
Password:
HQ#config t
Enter configuration commands, one per line. End with CNTL/Z.
HQ(config)#router rip
HQ(config-router)#network 10.10.10.252
HQ(config-router)#network 172.16.100.5
HQ(config-router)#end
HQ#
%SYS-5-CONFIG_I: Configured from console by console

HQ#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
HQ#exit
```

```

BRANCH1>enable
Password:
BRANCH1#config t
Enter configuration commands, one per line. End with CNTL/Z.
BRANCH1(config)#router rip
BRANCH1(config-router)#network 10.10.10.252
BRANCH1(config-router)#end
BRANCH1#
%SYS-5-CONFIG_I: Configured from console by console

BRANCH1#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
BRANCH1#

```

```

BRANCH2>enable
Password:
BRANCH2#config t
Enter configuration commands, one per line. End with CNTL/Z.
BRANCH2(config)#router rip
BRANCH2(config-router)#network 172.16.100.5
BRANCH2(config-router)#end
BRANCH2#
%SYS-5-CONFIG_I: Configured from console by console

BRANCH2#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
BRANCH2#

```

Verificación de la tabla de ruteo

```

***bienvenido noe ***

HQ>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
       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

C    10.0.0.0/8 is directly connected, Serial2/0
     172.16.0.0/24 is subnetted, 1 subnets
C      172.16.100.0 is directly connected, Serial3/0
C    192.168.4.0/24 is directly connected, FastEthernet0/0
C    192.169.5.0/24 is directly connected, FastEthernet1/0
R    192.170.1.0/24 [120/1] via 10.10.10.11, 00:00:13, Serial2/0
R    192.171.2.0/24 [120/1] via 10.10.10.11, 00:00:13, Serial2/0
HQ>

```

```

"bienvenido noe"

BRANCH1>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
       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

C    10.0.0.0/8 is directly connected, Serial2/0
R    172.16.0.0/16 [120/1] via 10.10.10.5, 00:00:21, Serial2/0
C    192.170.1.0/24 is directly connected, FastEthernet0/0
C    192.171.2.0/24 is directly connected, FastEthernet1/0
BRANCH1>

```

```

*** bienvenida noe ***

BRANCH2>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
       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

      172.16.0.0/24 is subnetted, 1 subnets
C      172.16.100.0 is directly connected, Serial2/0
C      192.172.7.0/24 is directly connected, FastEthernet0/0
C      192.173.8.0/24 is directly connected, FastEthernet1/0
BRANCH2>

```

Resultado: lo primero que hicimos fue construir nuestra tabla de enrutamiento en base a los datos que se nos fueron proporcionados, en lo personal me causo confusiones, pero después de tanto checar y volver a checar la información me permití construir mi tabla de enrutamiento y después procedí al levantamiento de puertos y seriales al termino de esto se realizó la configuración del protocolo de enrutamiento cuando termine con esto verifique la tabla de enrutamiento de cada dispositivo de interconexión(router).