Prácticas IRC

1º PARTE: Conexionado y direccionamiento

1. Observa la topología. Conecta la maqueta 2 tal y como se encuentra la maqueta 1

2. Asigna el direccionamiento: (X=1, 2 según maqueta):

    - Para la RED 1: 192.168.1X.0/24
    - Para la RED 2: 192.168.2X.0/24
    - Para la red entre los dos routers R1R2: 192.168.12X.0/30

3. Configura las interfaces de los routers R1 y R2 conectadas a la red del aula para que el router del armario le asigne la configuración de red mediante DHCP.

R(config)# interface g0/1
R(config-if)# ip address dhcp
R(config-if)# no shutdown

Configuración del router R1G2. La configuración de los demás routers debe ser exactamente igual pero con la ip correspondiente de cada uno. En la configuración también se encuentra el router rip porque hemos copiado el running-config después de configurarlo:

```
R1G2#show running-config
Building configuration...

Current configuration : 977 bytes
!
version 15.1
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname R1G2
!
!
no ip cef
no ipv6 cef
!
license udi pid CISCO1941/K9 sn FTX152438E9
!
!
spanning-tree mode pvst
!
!
interface GigabitEthernet0/0
ip address 192.168.12.1 255.255.255.0
duplex auto
speed auto
!
interface GigabitEthernet0/1
ip address dhcp
duplex auto
speed auto
!
interface Serial0/0/0
ip address 192.168.122.1 255.255.255.252
clock rate 2000000
```

```
!
interface Serial0/0/1
no ip address
clock rate 2000000
shutdown
!
interface Vlan1
no ip address
shutdown
!
router rip
version 2
passive-interface GigabitEthernet0/0
passive-interface GigabitEthernet0/1
network 192.168.12.0
network 192.168.122.0
default-information originate
no auto-summary
!
ip classless
!
ip flow-export version 9
!
!
no cdp run
!
!
line con 0
!
line aux 0
!
line vty 0 4
login
!
!
end
```

4. Observa y comenta la información contenida en la tabla de rutas con el comando show ip route. ¿Qué redes conoce cada router?.

```
R1G2#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 10.0.0.1 to network 0.0.0.0

10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C 10.0.0.0/24 is directly connected, GigabitEthernet0/1
L 10.0.0.3/32 is directly connected, GigabitEthernet0/1
192.168.12.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.12.0/24 is directly connected, GigabitEthernet0/0
L 192.168.12.1/32 is directly connected, GigabitEthernet0/0
```

También aparece la configuración RIP por el mismo motivo de antes (imaginamos que no está). Los routers solo conocen las redes a las que están conectadas directamente.

5. ¿Qué ocurre si enviamos un ping desde LAN1 hacia LAN2, o viceversa? ¿Por qué?

No funciona ya que los routers no saben dónde mandar el paquete, hace falta que se enrouten.

Vamos a solucionarlo….

2º PARTE: RIP

6. Configura RIP v2 en los todos routers. ¿Qué rutas aprende R1G1 y R2G1? ¿y Trajano?

R1G1:

R 192.168.12.0/24 [120/1] via 10.0.0.3, 00:00:09, GigabitEthernet0/1
R 192.168.21.0/24 [120/1] via 192.168.121.2, 00:00:00, Serial0/0/0
R 192.168.22.0/24 [120/1] via 10.0.0.2, 00:00:01, GigabitEthernet0/1
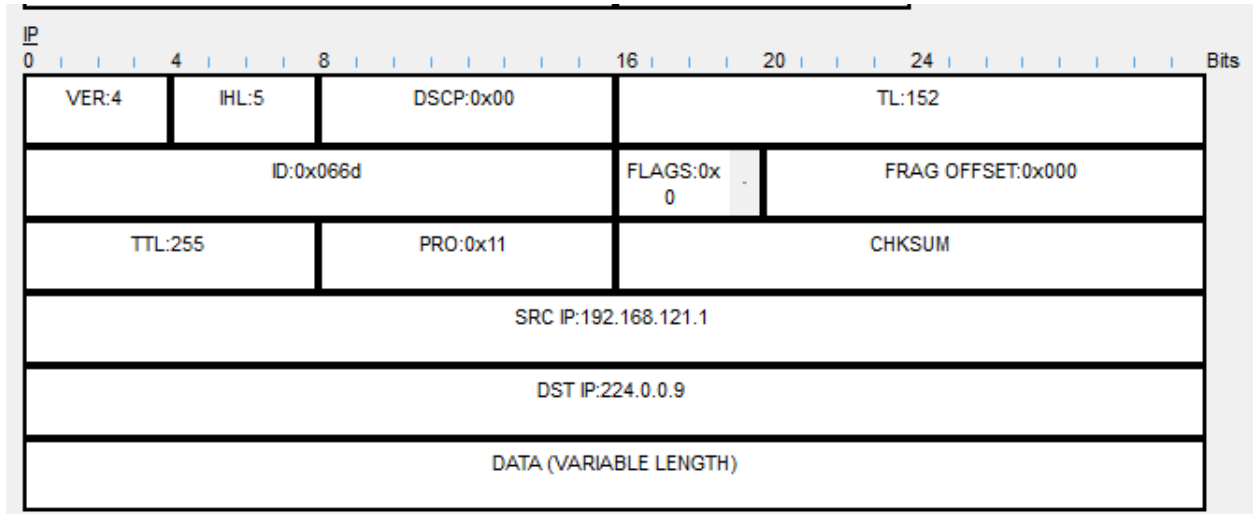R 192.168.122.0 [120/1] via 10.0.0.3, 00:00:09, GigabitEthernet0/1

R2G1:
R 192.168.11.0/24 [120/1] via 192.168.121.1, 00:00:09, Serial0/0/0
R 192.168.12.0/24 [120/1] via 10.0.0.3, 00:00:06, GigabitEthernet0/1
R 192.168.22.0/24 [120/1] via 10.0.0.2, 00:00:25, GigabitEthernet0/1
R 192.168.122.0 [120/1] via 10.0.0.3, 00:00:06, GigabitEthernet0/1

Trajano:

R 192.168.11.0/24 [120/1] via 10.0.0.5, 00:00:11, GigabitEthernet0/0
R 192.168.12.0/24 [120/1] via 10.0.0.3, 00:00:04, GigabitEthernet0/0
R 192.168.21.0/24 [120/1] via 10.0.0.6, 00:00:22, GigabitEthernet0/0
R 192.168.22.0/24 [120/1] via 10.0.0.2, 00:00:24, GigabitEthernet0/0
R 192.168.121.0 [120/1] via 10.0.0.5, 00:00:11, GigabitEthernet0/0
R 192.168.122.0 [120/1] via 10.0.0.3, 00:00:04, GigabitEthernet0/0
R 198.3.2.0/24 [120/1] via 150.214.163.254, 00:00:13, GigabitEthernet0/1

7. Ayudándote de la herramienta de simulación, averigua a qué dirección envían los routers los mensajes RIP v2?. ¿Qué tipo de dirección es?

```
IP
0        4           8                16      20        24              Bits
|  VER:4  |  IHL:5  |  DSCP:0x00      |         TL:152                   |
|        ID:0x066d                    | FLAGS:0x | FRAG OFFSET:0x000     |
|                                     |    0     |                       |
|   TTL:255      |    PRO:0x11        |          CHKSUM                  |
|              SRC IP:192.168.121.1                                      |
|              DST IP:224.0.0.9                                          |
|              DATA (VARIABLE LENGTH)                                    |
```

<mark>Es una destination ip de tipo multicast.</mark>

8. Comprueba que los routers envían las redes junto con su máscara correspondiente en el vector distancia.

<mark>Si la envían</mark>

<mark>Router#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</mark>

<mark>Gateway of last resort is 10.0.0.1 to network 0.0.0.0</mark>

<mark>10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C 10.0.0.0/24 is directly connected, GigabitEthernet0/1
L 10.0.0.2/32 is directly connected, GigabitEthernet0/1
192.168.11.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.11.0/24 is directly connected, GigabitEthernet0/0
L 192.168.11.1/32 is directly connected, GigabitEthernet0/0
R 192.168.12.0/24 [120/1] via 10.0.0.4, 00:00:16, GigabitEthernet0/1
R 192.168.21.0/24 [120/1] via 192.168.121.2, 00:00:09, Serial0/0/0
[120/1] via 10.0.0.3, 00:00:09, GigabitEthernet0/1
R 192.168.22.0/24 [120/1] via 10.0.0.5, 00:00:13, GigabitEthernet0/1
192.168.121.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.121.0/30 is directly connected, Serial0/0/0
L 192.168.121.1/32 is directly connected, Serial0/0/0
192.168.122.0/30 is subnetted, 1 subnets
R 192.168.122.0/30 [120/1] via 10.0.0.4, 00:00:16, GigabitEthernet0/1
[120/1] via 10.0.0.5, 00:00:13, GigabitEthernet0/1
S* 0.0.0.0/0 [254/0] via 10.0.0.1</mark>

9. Revisa las tablas de rutas. Comenta los cambios que encuentres.

Podemos observar como en las tablas ARP el "camino" dentro del RIP es directo, no tiene que pasar por TRAJANO.

Router#show arp
Protocol Address Age (min) Hardware Addr Type Interface
Internet 10.0.0.1 26 0002.1675.B101 ARPA GigabitEthernet0/1
Internet 10.0.0.2 - 0040.0BA8.1102 ARPA GigabitEthernet0/1
Internet 10.0.0.3 26 0001.9664.5B02 ARPA GigabitEthernet0/1
Internet 10.0.0.4 26 0007.EC67.EA3D ARPA GigabitEthernet0/1
Internet 10.0.0.5 26 000A.F35D.B6DE ARPA GigabitEthernet0/1
Internet 192.168.11.1 - 0040.0BA8.1101 ARPA GigabitEthernet0/0
Internet 192.168.11.2 26 00D0.FF86.EBE3 ARPA GigabitEthernet0/0

10. ¿Hay conectividad entre cualquier punto de la topología? ¿Y hacia Internet?

Hay conectividad en cualquier punto de la topología.
Los ping con los dispositivos conectados al router inalámbrico siempre fallan debido a que no hemos configurado una NAT, eso no corresponde a esta práctica.

3º PARTE: EIGRP

11. Basándonos en la misma topología y direccionamiento, configura EIGRP en los routers.

TRAJANO:

TRAJANO#conf t
TRAJANO(config)#router eigrp 100
TRAJANO(config-router)#network 192.168.11.0
TRAJANO(config-router)#network 192.168.12.0
TRAJANO(config-router)#network 192.168.21.0
TRAJANO(config-router)#network 192.168.22.0
TRAJANO(config-router)#network 10.0.0.0

%DUAL-5-NBRCHANGE: IP-EIGRP 100: Neighbor 10.0.0.4 (GigabitEthernet0/0) is up: new adjacency

%DUAL-5-NBRCHANGE: IP-EIGRP 100: Neighbor 10.0.0.2 (GigabitEthernet0/0) is up: new adjacency

%DUAL-5-NBRCHANGE: IP-EIGRP 100: Neighbor 10.0.0.5 (GigabitEthernet0/0) is up: new adjacency

%DUAL-5-NBRCHANGE: IP-EIGRP 100: Neighbor 10.0.0.3 (GigabitEthernet0/0) is up: new adjacency

TRAJANO(config-router)#no auto-summary
TRAJANO(config-router)#eigrp router-id 1.1.1.1

Cualquiera de los otros routers:

R2G2#conf t
R2G2(config)#router eigrp 100
R2G2(config-router)#network 192.168.11.0
R2G2(config-router)#network 192.168.12.0
R2G2(config-router)#network 192.168.21.0
R2G2(config-router)#network 192.168.22.0
R2G2(config-router)#network 10.0.0.0

%DUAL-5-NBRCHANGE: IP-EIGRP 100: Neighbor 10.0.0.2 (GigabitEthernet0/1) is up: new adjacency

%DUAL-5-NBRCHANGE: IP-EIGRP 100: Neighbor 10.0.0.4 (GigabitEthernet0/1) is up: new adjacency

%DUAL-5-NBRCHANGE: IP-EIGRP 100: Neighbor 10.0.0.5 (GigabitEthernet0/1) is up: new adjacency

R2G2(config-router)#no auto-summary
R2G2(config-router)#passive-interface g0/0
R2G2(config-router)#eigrp router-id 1.1.1.1

Router(config)#ipv6 unicast-routing
Router(config)#ipv6 router ei
Router(config)#ipv6 router eigrp 2
Router(config-rtr)#eig
Router(config-rtr)#eigrp rou
Router(config-rtr)#eigrp router-id 3.0.0.0
Router(config-rtr)#no shutdown
Router(config-rtr)#

12. Observa que DUAL, el algoritmo de actualización de EIGRP, envía un mensaje de notificación a la consola informando que se ha establecido una relación vecina con otro router EIGRP.

%DUAL-5-NBRCHANGE: IP-EIGRP 100: Neighbor 10.0.0.4 (GigabitEthernet0/0) is up: new adjacency

13. Probar la conectividad a cualquier punto de la topología y a Internet.

Paso 1: Visualice la información del protocolo de enrutamiento.

14. En uno de los routers utiliza los comandos:
   - show ip protocols para ver información sobre las operaciones del protocolo de enrutamiento.
   - show ip eigrp neighbors para ver la tabla de vecinos y verificar que EIGRP haya establecido una adyacencia con los routers vecinos.
   - show ip route para examinar las rutas EIGRP en las tablas de enrutamiento.
   - show ip eigrp topology para visualizar la tabla de topología EIGRP en los routers.
   - show interface para ver la información de la métrica de EIGRP

show ip protocols:

Routing Protocol is "eigrp 100 "
Outgoing update filter list for all interfaces is not set
Incoming update filter list for all interfaces is not set
Default networks flagged in outgoing updates
Default networks accepted from incoming updates
Redistributing: eigrp 100
EIGRP-IPv4 Protocol for AS(100)
Metric weight K1=1, K2=0, K3=1, K4=0, K5=0
NSF-aware route hold timer is 240
Router-ID: 1.1.1.1
Topology : 0 (base)
Active Timer: 3 min
Distance: internal 90 external 170

Maximum path: 4
Maximum hopcount 100
Maximum metric variance 1

Automatic Summarization: disabled
Automatic address summarization:
Maximum path: 4
Routing for Networks:
192.168.11.0
192.168.12.0
192.168.21.0
192.168.22.0
10.0.0.0
Routing Information Sources:
Gateway Distance Last Update
10.0.0.4 90 4940843
10.0.0.2 90 4940843
10.0.0.5 90 4940843
10.0.0.3 90 4940843
Distance: internal 90 external 170

show ip eigrp neighbours:

TRAJANO#show ip eigrp neighbors
IP-EIGRP neighbors for process 1

IP-EIGRP neighbors for process 100
H Address Interface Hold Uptime SRTT RTO Q Seq
(sec) (ms) Cnt Num
0 10.0.0.4 Gig0/0 14 00:43:56 40 1000 0 23
1 10.0.0.2 Gig0/0 13 00:43:56 40 1000 0 22
2 10.0.0.5 Gig0/0 11 00:43:56 40 1000 0 23
3 10.0.0.3 Gig0/0 13 00:43:56 40 1000 0 21

show ip route:

D 192.168.11.0/24 [90/5376] via 10.0.0.4, 00:43:57, GigabitEthernet0/0
D 192.168.12.0/24 [90/5376] via 10.0.0.2, 00:43:57, GigabitEthernet0/0
D 192.168.21.0/24 [90/5376] via 10.0.0.5, 00:43:57, GigabitEthernet0/0
D 192.168.22.0/24 [90/5376] via 10.0.0.3, 00:43:57, GigabitEthernet0/0
192.168.121.0/30 is subnetted, 1 subnets

show ip eirgp topology:

TRAJANO#show ip eigrp topology
IP-EIGRP Topology Table for AS 1/ID(150.214.163.145)

Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,
r - Reply status

P 0.0.0.0/0, 1 successors, FD is 5120
via Rstatic (5120/0)
P 10.0.0.0/24, 1 successors, FD is 2816
via Connected, GigabitEthernet0/0
P 150.214.0.0/16, 1 successors, FD is 2816
via Connected, GigabitEthernet0/1

IP-EIGRP Topology Table for AS 100/ID(1.1.1.1)

Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,
r - Reply status

P 10.0.0.0/24, 1 successors, FD is 2816
via Connected, GigabitEthernet0/0
P 192.168.11.0/24, 1 successors, FD is 5376
via 10.0.0.4 (5376/5120), GigabitEthernet0/0
P 192.168.12.0/24, 1 successors, FD is 5376
via 10.0.0.2 (5376/5120), GigabitEthernet0/0
P 192.168.21.0/24, 1 successors, FD is 5376
via 10.0.0.5 (5376/5120), GigabitEthernet0/0
P 192.168.22.0/24, 1 successors, FD is 5376
via 10.0.0.3 (5376/5120), GigabitEthernet0/0

show interface:

TRAJANO#show interface
GigabitEthernet0/0 is up, line protocol is up (connected)
Hardware is CN Gigabit Ethernet, address is 0002.1675.b101 (bia 0002.1675.b101)
Internet address is 10.0.0.1/24
MTU 1500 bytes, BW 1000000 Kbit, DLY 10 usec,
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
Full-duplex, 100Mb/s, media type is RJ45
output flow-control is unsupported, input flow-control is unsupported
ARP type: ARPA, ARP Timeout 04:00:00,
Last input 00:00:08, output 00:00:05, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0 (size/max/drops); Total output drops: 0
Queueing strategy: fifo
Output queue :0/40 (size/max)
5 minute input rate 377 bits/sec, 1 packets/sec
5 minute output rate 237 bits/sec, 0 packets/sec
5234 packets input, 346824 bytes, 0 no buffer
Received 10 broadcasts, 0 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
0 watchdog, 1017 multicast, 0 pause input
0 input packets with dribble condition detected
3411 packets output, 207676 bytes, 0 underruns
0 output errors, 0 collisions, 1 interface resets
0 unknown protocol drops
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier
0 output buffer failures, 0 output buffers swapped out
GigabitEthernet0/1 is up, line protocol is up (connected)
Hardware is CN Gigabit Ethernet, address is 0002.1675.b102 (bia 0002.1675.b102)
Internet address is 150.214.163.145/16
MTU 1500 bytes, BW 1000000 Kbit, DLY 10 usec,
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
Full-duplex, 100Mb/s, media type is RJ45
output flow-control is unsupported, input flow-control is unsupported
ARP type: ARPA, ARP Timeout 04:00:00,

Last input 00:00:08, output 00:00:05, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0 (size/max/drops); Total output drops: 0
Queueing strategy: fifo
Output queue :0/40 (size/max)
5 minute input rate 13 bits/sec, 0 packets/sec
5 minute output rate 195 bits/sec, 0 packets/sec
1453 packets input, 47536 bytes, 0 no buffer
Received 0 broadcasts, 0 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
0 watchdog, 1017 multicast, 0 pause input
0 input packets with dribble condition detected
3844 packets output, 231780 bytes, 0 underruns
0 output errors, 0 collisions, 1 interface resets
0 unknown protocol drops
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier
0 output buffer failures, 0 output buffers swapped out

Comenta los resultados.

15. ¿Qué camino seguiría un datagrama con origen el PC1 y destino el PC2?

PC1 ➔ R1 ➔ SW ➔ R2 ➔ PC2

4º PARTE: OSPF

Elimina la configuración de EIGRP.

TRAJANO(config)#no router eigrp 100

16. Configura OSPF en todos routers

TRAJANO(config)#router ospf 10
TRAJANO(config-router)#router-id 1.1.1.1
TRAJANO(config-router)#auto-cost reference-bandwidth 1000
% OSPF: Reference bandwidth is changed.
Please ensure reference bandwidth is consistent across all routers.
TRAJANO(config-router)#network 10.0.0.0
TRAJANO(config-router)#network 10.0.0.0 0.0.0.255 area 0
TRAJANO(config-router)#network 192.168.11.0 0.0.0.255 area 0
TRAJANO(config-router)#network 192.168.12.0 0.0.0.255 area 0
TRAJANO(config-router)#network 192.168.21.0 0.0.0.255 area 0
TRAJANO(config-router)#network 192.168.22.0 0.0.0.255 area 0

R2G2(config)#router ospf 10
R2G2(config-router)#router-id 1.1.1.1
R2G2(config-router)#auto-cost reference-bandwidth 1000
% OSPF: Reference bandwidth is changed.
Please ensure reference bandwidth is consistent across all routers.
R2G2(config-router)#network 10.0.0.0 0.0.0.255 area 0
R2G2(config-router)#192.168.11.0 0.0.0.255 area 0
R2G2(config-router)#network 192.168.11.0 0.0.0.255 area 0

R2G2(config-router)#network 192.168.12.0 0.0.0.255 area 0
R2G2(config-router)#network 192.168.21.0 0.0.0.255 area 0
R2G2(config-router)#network 192.168.22.0 0.0.0.255 area 0
R2G2(config-router)#passive-interface g0/0

17. Probar la conectividad a cualquier punto de la topología y a Internet.

Hay conectividad para toda la topología y para internet excepto para el Wireless Router debido a la NAT.

18. En uno de los routers, verifica el funcionamiento de OSPF:
    ● show ip protocols para ver información sobre las operaciones del protocolo de enrutamiento

Routing Protocol is "ospf 10"
 Outgoing update filter list for all interfaces is not set
 Incoming update filter list for all interfaces is not set
 Router ID 1.1.1.1
 Number of areas in this router is 1. 1 normal 0 stub 0 nssa
 Maximum path: 4
 Routing for Networks:
   10.0.0.0 0.0.0.255 area 0
   192.168.11.0 0.0.0.255 area 0
   192.168.12.0 0.0.0.255 area 0
   192.168.21.0 0.0.0.255 area 0
   192.168.22.0 0.0.0.255 area 0
 Passive Interface(s):
   GigabitEthernet0/0
 Routing Information Sources:
   Gateway   Distance   Last Update
   1.1.1.1   110   00:03:11
   200.200.200.200   110   00:06:23
 Distance: (default is 110)

    ● show ip route para examinar las rutas OSPF en las tablas de enrutamiento.

O*E2 0.0.0.0/0 [110/1] via 10.0.0.1, 00:03:44, GigabitEthernet0/1

    ● show ip ospf neighbor para visualizar la información acerca de los vecinos.

Neighbor ID Pri State Dead Time Address Interface
1.1.1.1 1 FULL/BDR 00:00:30 10.0.0.2 GigabitEthernet0/0
1.1.1.1 1 FULL/DROTHER 00:00:33 10.0.0.3 GigabitEthernet0/0
1.1.1.1 1 FULL/DROTHER 00:00:36 10.0.0.6 GigabitEthernet0/0
1.1.1.1 1 FULL/DROTHER 00:00:32 10.0.0.4 GigabitEthernet0/0

    ● show ip ospf interface para ver la información de la métrica OSPF

R2G1#show ip ospf
Routing Process "ospf 10" with ID 1.1.1.1
Supports only single TOS(TOS0) routes
Supports opaque LSA

SPF schedule delay 5 secs, Hold time between two SPFs 10 secs
Minimum LSA interval 5 secs. Minimum LSA arrival 1 secs
Number of external LSA 1. Checksum Sum 0x00951a
Number of opaque AS LSA 0. Checksum Sum 0x000000
Number of DCbitless external and opaque AS LSA 0
Number of DoNotAge external and opaque AS LSA 0
Number of areas in this router is 1. 1 normal 0 stub 0 nssa
External flood list length 0
Area BACKBONE(0)
Number of interfaces in this area is 2
Area has no authentication
SPF algorithm executed 4 times
Area ranges are
Number of LSA 3. Checksum Sum 0x01caa9
Number of opaque link LSA 0. Checksum Sum 0x000000
Number of DCbitless LSA 0
Number of indication LSA 0
Number of DoNotAge LSA 0
Flood list length 0

19. ¿Cuál sería la ruta seguida para enviar un datagrama desde del PC1 al PC2 y viceversa?. ¿Por qué OSPF elije dicha ruta en lugar de otra?

La ruta que sigue: PC1G1 ➔ R1G1 ➔ SW ➔ R2G1 ➔ PC2G1 a través de la red 10.0.0.0 y el retorno hacia el PC1G1.

En este caso hace uso de la métrica 110, que es igual para las otras, no hace uso de las redes seriales, puede deberse a ajustes de ancho de banda

20. Identifica el Router Designado (DR) y el Router Designado de Backup (BDR).

Se deben ver la ID y la dirección IP del vecino de cada router adyacente y la interfaz que utiliza vuestro router para alcanzar a ese vecino OSPF. Identifica el router Designado (DR) y el Router Designado de Backup (BDR).