TP 02 ADVANCED NETWORK

DYNAMIC ROUTING IGRP,RIP,OSPF
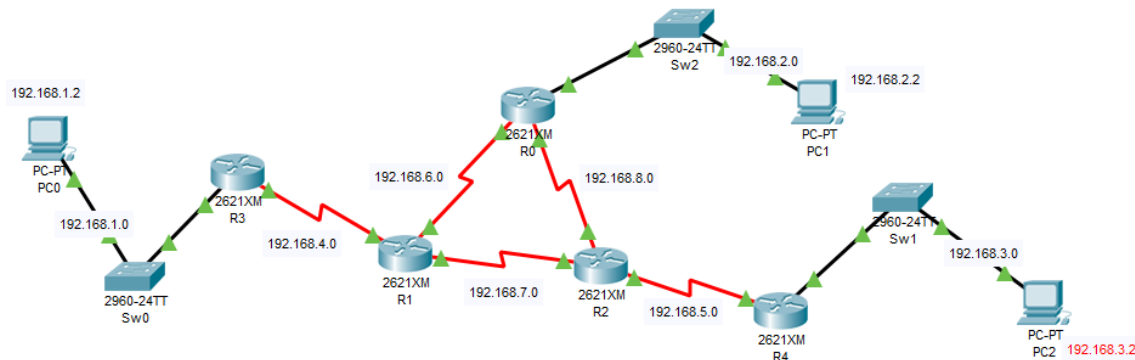
Made by : ASSOUL Khedidja G01.

TP 02 ADVANCED NETWORK

DYNAMIC ROUTING IGRP,RIP,OSPF

1st part : OSPF Routing :

01- Configuration of the network with the OSPF protocole:
On the jointed file "2nd 1st part".

02- The path token from PC0 to PC2 is:
PC0- Sw0 – R3 – R1 – R2 – R4 – Sw3 – PC2

- Yes, it is the same path to go and to come back.

03- a- Using the command (copy run start) we save the configurations..

b- By clicking on(power Cycle Devices) we restart the routers.

c- From "a" and "b" we will be able to show the exchange of the topologic data bases between the different routers in the first of the connexion than they exchange only the hello packets until a router detect the absence of of his nighbors so they will exchange the topologic modified data bases.

04- Due the convergence of the network the routers exchange the toplogic data bases between them .

05- After that they exchange the hello packets

06- .a- Show ip OSPFf interface

```
Router>en
Router#show ip ospf interface

Serial0/2 is up, line protocol is up
  Internet address is 192.168.6.1/24, Area 1
  Process ID 1, Router ID 192.168.7.1, Network Type POINT-TO-POINT, Cost: 64
  Transmit Delay is 1 sec, State POINT-TO-POINT, Priority 0
  No designated router on this network
  No backup designated router on this network
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
    Hello due in 00:00:06
  Index 1/1, flood queue length 0
  Next 0x0(0)/0x0(0)
  Last flood scan length is 1, maximum is 1
  Last flood scan time is 0 msec, maximum is 0 msec
  Neighbor Count is 1 , Adjacent neighbor count is 1
    Adjacent with neighbor 192.168.8.2
  Suppress hello for 0 neighbor(s)
Serial0/3 is up, line protocol is up
  Internet address is 192.168.7.1/24, Area 1
  Process ID 1, Router ID 192.168.7.1, Network Type POINT-TO-POINT, Cost: 64
  Transmit Delay is 1 sec, State POINT-TO-POINT, Priority 0
  No designated router on this network
  No backup designated router on this network
 --More--
```

- b- Show ip OSPF database

```
Router#show ip ospf database
          OSPF Router with ID (192.168.7.1) (Process ID 1)

              Router Link States (Area 1)

Link ID          ADV Router       Age         Seq#       Checksum Link count
192.168.7.1      192.168.7.1      94          0x80000007 0x008627 6
192.168.4.1      192.168.4.1      94          0x80000004 0x000717 3
192.168.8.2      192.168.8.2      94          0x80000006 0x001303 5
192.168.8.1      192.168.8.1      94          0x80000007 0x00277d 6
192.168.5.2      192.168.5.2      94          0x80000004 0x0060b3 3
Router#
```

- Show ip OSPF neighbor

```
Router#show ip ospf neighbor


Neighbor ID      Pri   State          Dead Time   Address       Interface
192.168.4.1      0     FULL/  -       00:00:34    192.168.4.1   Serial0/0
192.168.8.2      0     FULL/  -       00:00:37    192.168.6.2   Serial0/2
192.168.8.1      0     FULL/  -       00:00:33    192.168.7.2   Serial0/3
Router#
```

07- The time made from the information to reach the router R1 after desactivating (R4/Sw1) is 3.509 sec
   - The exchange packets are the topologic data bases

08- The time made from the information to reach the router R1 after resactivating (R4/Sw1) is 2.624 sec
   - The exchange packets are the topologic data bases

2nd part : OSPF , EIGRP ,RIP :