TP ROUTAGE DYNAMIQUE

Questions :
Arrivez-vous à pinguer sa propre passerelle ?
OUI
Arrivez-vous à pinguer le poste pc2 ?
OUI
Pourquoi ?
C'est le même réseau

Question :
-Que manque-t-il dans la table de routage pour que les postes puissent communiquer ?
Il manque un route add

SCREEN DU TP

```
Router(config)#hostname "routeur1"
routeur1(config)#interface fastEthernet 0/0
routeur1(config-if)#ip address 192.168.1.254 255.255.255.0
routeur1(config-if)#no shutdown

routeur1(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

routeur1(config-if)#interface fastEthernet 1/0
routeur1(config-if)#ip address 200.100.100.1 255.255.255.0
routeur1(config-if)#no shutdown

routeur1(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up

routeur1(config-if)#end
routeur1#
%SYS-5-CONFIG_I: Configured from console by console

routeur1#show ip interface brief
Interface              IP-Address      OK? Method Status
Protocol
FastEthernet0/0        192.168.1.254   YES manual up                    down
FastEthernet1/0        200.100.100.1   YES manual up                    down
Serial2/0              unassigned      YES unset  administratively down down
Serial3/0              unassigned      YES unset  administratively down down
FastEthernet4/0        unassigned      YES unset  administratively down down
FastEthernet5/0        unassigned      YES unset  administratively down down
routeur1#



routeur1#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
```

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


routeur1>enable
routeur1#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    200.100.100.0/24 is directly connected, FastEthernet1/0

routeur1#
```

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

routeur2(config-if)#exit
routeur2(config)#interface FastEthernet0/0
routeur2(config-if)#
routeur2(config-if)#exit
routeur2(config)#interface FastEthernet1/0
routeur2(config-if)#
routeur2(config-if)#exit
routeur2(config)#exit
routeur2#
%SYS-5-CONFIG_I: Configured from console by console

routeur2#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    200.100.100.0/24 is directly connected, FastEthernet1/0

routeur2#
```

```
FastEthernet0 Connection:(default port)

   Connection-specific DNS Suffix..:
   Link-local IPv6 Address.....: FE80::20A:F3FF:FE30:2D76
   IPv6 Address.....: ::
   IPv4 Address.....: 192.168.1.1
   Subnet Mask.....: 255.255.255.0
   Default Gateway.....: ::
                                 192.168.1.254

Bluetooth Connection:

   Connection-specific DNS Suffix..:
   Link-local IPv6 Address.....: ::
   IPv6 Address.....: ::
   IPv4 Address.....: 0.0.0.0
   Subnet Mask.....: 0.0.0.0
   Default Gateway.....: ::
                                 0.0.0.0

C:\>ping 192.168.1.254

Pinging 192.168.1.254 with 32 bytes of data:

Reply from 192.168.1.254: bytes=32 time<1ms TTL=255
Reply from 192.168.1.254: bytes=32 time<1ms TTL=255
Reply from 192.168.1.254: bytes=32 time<1ms TTL=255
Reply from 192.168.1.254: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.1.254:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

```
C:\>ping 192.168.1.254

Pinging 192.168.1.254 with 32 bytes of data:

Reply from 192.168.1.254: bytes=32 time<1ms TTL=255
Reply from 192.168.1.254: bytes=32 time<1ms TTL=255
Reply from 192.168.1.254: bytes=32 time<1ms TTL=255
Reply from 192.168.1.254: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.1.254:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 172.16.16.3

Pinging 172.16.16.3 with 32 bytes of data:

Reply from 192.168.1.254: Destination host unreachable.
Reply from 192.168.1.254: Destination host unreachable.
Reply from 192.168.1.254: Destination host unreachable.
Reply from 192.168.1.254: Destination host unreachable.

Ping statistics for 172.16.16.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

```
routeur1>enable
routeur1#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    192.168.1.0/24 is directly connected, FastEthernet0/0
C    200.100.100.0/24 is directly connected, FastEthernet1/0

routeur1#
```

```
routeur2>enable
routeur2#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       172.16.16.0 is directly connected, FastEthernet0/0
C    200.100.100.0/24 is directly connected, FastEthernet1/0

routeur2#
```

```
routeur1#
routeur1#config t
Enter configuration commands, one per line.  End with CNTL/Z.
routeur1(config)#ip route 172.16.16.0 255.255.255.0 200.100.100.2
routeur1(config)#exit
routeur1#
%SYS-5-CONFIG_I: Configured from console by console
show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BG
       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 in
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
S       172.16.16.0 [1/0] via 200.100.100.2
C    192.168.1.0/24 is directly connected, FastEthernet0/0
C    200.100.100.0/24 is directly connected, FastEthernet1/0

routeur1#
```

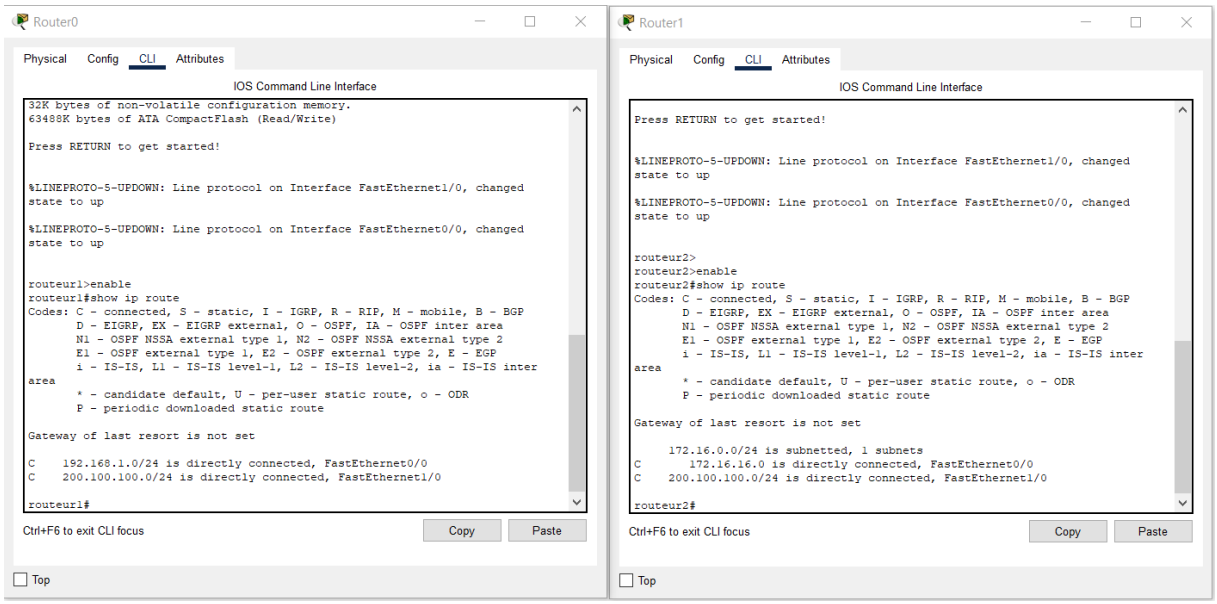
ENSUITE

```
routeur2#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       172.16.16.0 is directly connected, FastEthernet0/0
S    192.168.1.0/24 [1/0] via 200.100.100.1
C    200.100.100.0/24 is directly connected, FastEthernet1/0
```

On ping

```
C:\>ping 172.16.16.3

Pinging 172.16.16.3 with 32 bytes of data:

Reply from 172.16.16.3: bytes=32 time=9ms TTL=126
Reply from 172.16.16.3: bytes=32 time<1ms TTL=126
Reply from 172.16.16.3: bytes=32 time<1ms TTL=126
Reply from 172.16.16.3: bytes=32 time=1ms TTL=126

Ping statistics for 172.16.16.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 9ms, Average = 2ms
```

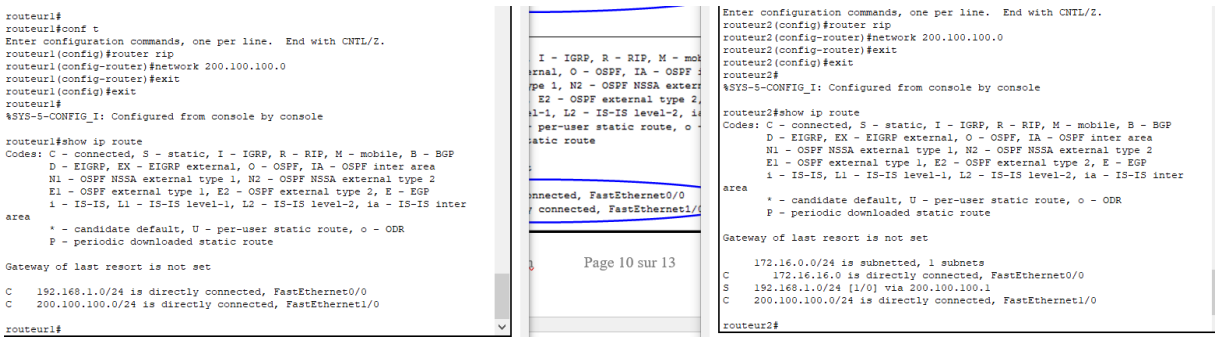
```
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time<1ms TTL=126
Reply from 192.168.1.1: bytes=32 time<1ms TTL=126
Reply from 192.168.1.1: bytes=32 time<1ms TTL=126
Reply from 192.168.1.1: bytes=32 time<1ms TTL=126

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```




```
routeur1#
routeur1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
routeur1(config)#router rip
routeur1(config-router)#network 200.100.100.0
routeur1(config-router)#
routeur1(config-router)#exit
routeur1(config)#
```

```
routeur2#
routeur2#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
routeur2(config)#router rip
routeur2(config-router)#net
% Incomplete command.
routeur2(config-router)#network 200.100.100.0
routeur2(config-router)#exit
routeur2(config)#exit
```

```
routeur2# show ip protocol
Routing Protocol is "rip"
Sending updates every 30 seconds, next due in 19 seconds
Invalid after 180 seconds, hold down 180, flushed after 240
Outgoing update filter list for all interfaces is not set
Incoming update filter list for all interfaces is not set
Redistributing: rip
Default version control: send version 1, receive any version
  Interface              Send  Recv  Triggered RIP  Key-chain
  FastEthernet1/0        12 1
Automatic network summarization is in effect
Maximum path: 4
Routing for Networks:
          200.100.100.0
Passive Interface(s):
Routing Information Sources:
          Gateway         Distance      Last Update
Distance: (default is 120)
```



```
routeur2(config)#no ip route 192.168.1.0 255.255.255.0
routeur2(config)#router rip
routeur2(config-router)#network 172.16.16.0
routeur2(config-router)#exit
routeur2(config)#exit
routeur2#
%SYS-5-CONFIG_I: Configured from console by console

routeur2#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       172.16.16.0 is directly connected, FastEthernet0/0
R    192.168.1.0/24 [120/1] via 200.100.100.1, 00:00:15, FastEthernet1/0
C    200.100.100.0/24 is directly connected, FastEthernet1/0

routeur2#show ip route rip
     172.16.0.0/24 is subnetted, 1 subnets
R    192.168.1.0/24 [120/1] via 200.100.100.1, 00:00:01, FastEthernet1/0

routeur2#
```

```
routeur2#
routeur2#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
routeur2(config)#router rip
routeur2(config-router)#no network 172.16.0.0
routeur2(config-router)#network 192.168.1.0
routeur2(config-router)#exit
routeur2(config)#exit
routeur2#
%SYS-5-CONFIG_I: Configured from console by console

routeur2#
routeur2#
routeur2#show ip route rip
     172.16.0.0/24 is subnetted, 1 subnets
R    192.168.1.0/24 [120/1] via 200.100.100.1, 00:00:11, FastEthernet1/0


routeur1#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

R    172.16.0.0/16 [120/1] via 200.100.100.2, 00:00:19, FastEthernet1/0
C    192.168.1.0/24 is directly connected, FastEthernet0/0
C    200.100.100.0/24 is directly connected, FastEthernet1/0

routeur1#show ip route rip
R    172.16.0.0/16 [120/1] via 200.100.100.2, 00:00:25, FastEthernet1/0

routeur1#
```

VOICI LE SCHEMA FINALE AVEC LE PING DU ¨PC 1 AU PC5 (PC 0 A PC4)