TP8 – Routage dynamique RIP

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Table des matières

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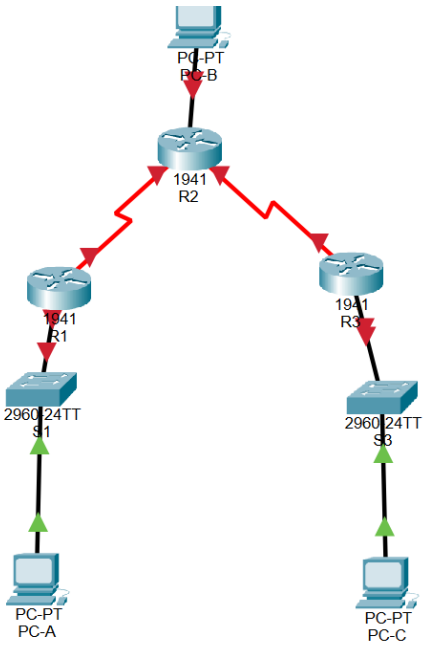
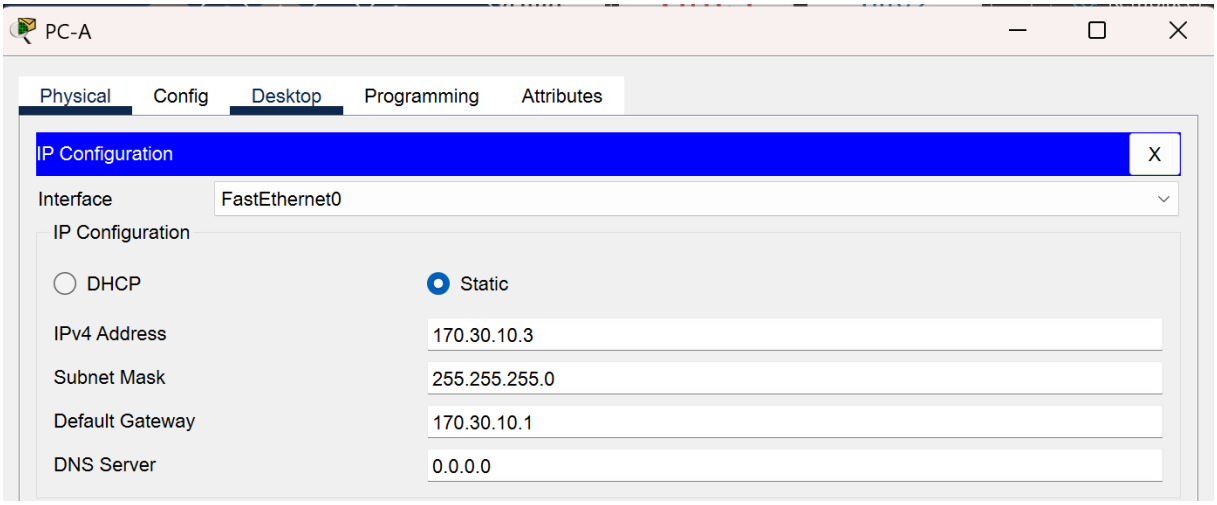
1. Installation et respect de la topologie

Nous installons chaque équipement puis et nous les relions en respectant la topologie :

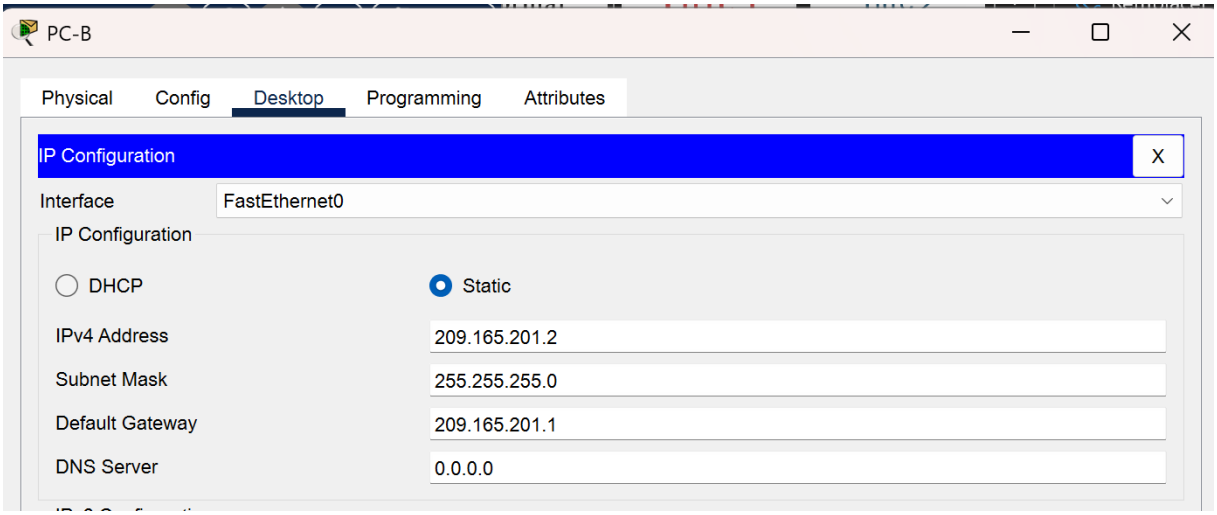


Ensuite, pour chaque équipement nous mettons la bonne configuration IP

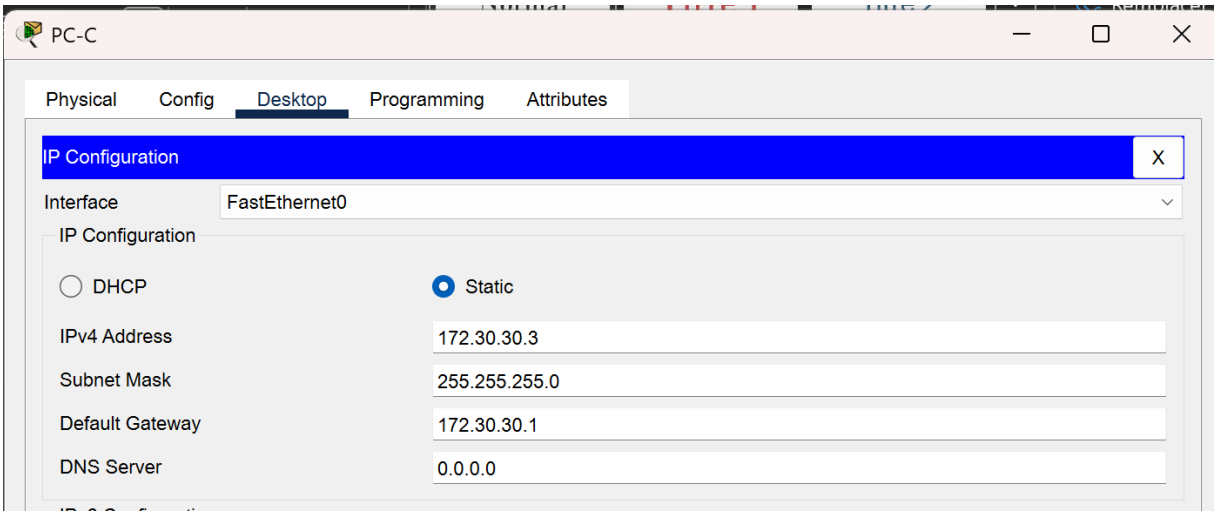
PC-A :



PC-B :



PC-C :



Ensuite les routeurs :

R1 :

R2 :

```
Router(config-if)#int S0/0/0
Router(config-if)#ip address 10.1.1.2 255.255.255.252
Router(config-if)#int S0/0/1
Router(config-if)#ip address 10.2.2.2 255.255.255.252
Router(config-if)#
```

R3 :

```
Router(config-if)#int g0/1
Router(config-if)#ip address 170.30.30.1 255.255.255.0
Router(config-if)#int s0/0/1
Router(config-if)#ip address 10.2.2.1 255.255.255.252
Router(config-if)#
```

Et sur chaque routeur nous n'oublions pas de désactiver la recherche DNS, d'activer le chiffrement de mot de passe, attribuer **cisco** en mot de passe privilégié, **console et vty**, créer une bannière **MOTD**, et de leur donner un **hostname**, ainsi que le **logging synchronous** comme ceci :

```
R1(config)#hostname R1
R1(config)#no ip domain-lookup
R1(config)#service password-encryption

R1(config)#enable secret class
R1(config)#banner motd #Acces interdit aux personnes non autorisees#
R1(config)#line con 0
R1(config-line)#password cisco
R1(config-line)#login



R1(config-line)#logging synchronous
R1(config-line)#line vty 0 3
R1(config-line)#line vty 0 4
R1(config-line)#password cisco
R1(config-line)#login
R1(config-line)#logging synchronous
R1(config-line)#
```

Et nous n'oublions pas d'ajouter une description pour chaque interface, de configurer la ***fréquence d'horloge en DCE*** et de copier la config en cours vers le start :

```
R1(config-if)#int g0/0
R1(config-if)#description adresse IP R1
R1(config-if)#int s0/0/0
R1(config-if)#clock rate 64000
R1(config-if)#^Z
R1#
%SYS-5-CONFIG_I: Configured from console by console

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

Si nous faisons la commande ***sh ip int br*** pour afficher le récapitulatif des interfaces, nous avons donc :

R1 :

```
R1#sh ip int br
Interface              IP-Address      OK? Method Status                Protocol
GigabitEthernet0/0     unassigned      YES unset  administratively down down
GigabitEthernet0/1     170.30.10.1     YES manual up                    up
Serial0/0/0            10.1.1.1        YES manual up                    up
Serial0/0/1            unassigned      YES unset  administratively down down
Vlan1                  unassigned      YES unset  administratively down down
R1#
```

R2 :

```
R2#sh ip int br
Interface              IP-Address      OK? Method Status                Protocol
GigabitEthernet0/0     209.165.201.1   YES manual up                    up
GigabitEthernet0/1     unassigned      YES unset  administratively down down
Serial0/0/0            10.1.1.2        YES manual up                    up
Serial0/0/1            10.2.2.2        YES manual up                    up
Vlan1                  unassigned      YES unset  administratively down down
R2#
```

R3 :

```
%SYS-5-CONFIG_I: Configured from console by console
sh ip int br
Interface              IP-Address      OK? Method Status                Protocol
GigabitEthernet0/0     unassigned      YES manual administratively down down
GigabitEthernet0/1     172.30.30.1     YES manual up                    up
Serial0/0/0            unassigned      YES unset  administratively down down
Serial0/0/1            10.2.2.1        YES manual up                    up
Vlan1                  unassigned      YES unset  administratively down down
R3#
```

Nous testons la connectivité entre les PC et les routeurs auquel il est connecté en faisant des commande **ping** :

PCA vers R1 :

```
C:\>ping 172.30.10.1

Pinging 172.30.10.1 with 32 bytes of data:

Reply from 172.30.10.1: bytes=32 time<1ms TTL=255
Reply from 172.30.10.1: bytes=32 time<1ms TTL=255

Ping statistics for 172.30.10.1:
    Packets: Sent = 2, Received = 2, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

Control-C
^C
C:\>
```

PCB vers R2 :

```
C:\>ping 209.165.201.1

Pinging 209.165.201.1 with 32 bytes of data:

Reply from 209.165.201.1: bytes=32 time<1ms TTL=255
Reply from 209.165.201.1: bytes=32 time<1ms TTL=255

Ping statistics for 209.165.201.1:
    Packets: Sent = 2, Received = 2, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

Control-C
^C
C:\>
```

PCC vers R3 :

```
C:\>ping 172.30.30.1

Pinging 172.30.30.1 with 32 bytes of data:

Reply from 172.30.30.1: bytes=32 time<1ms TTL=255
Reply from 172.30.30.1: bytes=32 time<1ms TTL=255
```

Et les routeurs peuvent se ping entre eux :

R1 vers R2 :

```
R1#ping 10.1.1.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.1.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 8/19/35 ms

R1#ping 10.1.1.2
```

R2 vers R3 :

```
Password:
R2#ping 10.2.2.1

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.2.2.1, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 8/18/22 ı

R2#
```

2. Configuration et vérification du routage RIPv2

Nous allons configurer **RIPv2** en tant que protocole de routage, commençons par R1 :

```
R1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#router rip
R1(config-router)#version 2
R1(config-router)#passive-interface g0/1
R1(config-router)#network 172.30.0.0
R1(config-router)#network 10.0.0.0
R1(config-router)#
```

Nous activons le protocole **RIP** en version 2 puis nous déclarons les réseaux de R1

Nous faisons pareil sur R3 :

```
R3(config-router)#version 2
R3(config-router)#p
R3(config-router)#passive-interface g0/1
R3(config-router)#network 172.30.0.0
R3(config-router)#network 10.0.0.0
R3(config-router)#
```

Puis sur R2, mais nous n'annonçons pas le réseau **209.165.201.0** :

```
R2(config)#router rip
R2(config-router)#version 2
R2(config-router)#passive-interface g0/0
R2(config-router)#etwork 10.0.0.0
                     ^
% Invalid input detected at '^' marker.

R2(config-router)#network 10.0.0.0
R2(config-router)#
```

Nous faisons la commande ***sh ip int br*** pour vérifier l'état des liaisons séries :

```
R2#sh ip inr br
          ^
% Invalid input detected at '^' marker.

R2#sh ip int br
Interface              IP-Address      OK? Method Status                Protocol
GigabitEthernet0/0     209.165.201.1   YES manual up                    up
GigabitEthernet0/1     unassigned      YES unset  administratively down down
Serial0/0/0            10.1.1.2        YES manual up                    up
Serial0/0/1            10.2.2.2        YES manual up                    up
Vlan1                  unassigned      YES unset  administratively down down
R2#
```

Nous testons la connectivité entre les PC :

PCA vers PCB et PCC :

```
^C
C:\>ping 209.165.201.2

Pinging 209.165.201.2 with 32 bytes of data:

Reply from 172.30.10.1: Destination host unreachable.
Request timed out.
Reply from 172.30.10.1: Destination host unreachable.

Ping statistics for 209.165.201.2:
    Packets: Sent = 3, Received = 0, Lost = 3 (100% loss),

Control-C
^C
```

X

Puis de PC-C vers PC-A et PC-B :

```
C:\>ping 209.165.201.2

Pinging 209.165.201.2 with 32 bytes of data:

Reply from 172.30.30.1: Destination host unreachable.

Ping statistics for 209.165.201.2:
    Packets: Sent = 2, Received = 0, Lost = 2 (100% loss),

Control-C
^C
C:\>ping 170.30.10.3

Pinging 170.30.10.3 with 32 bytes of data:

Reply from 172.30.30.1: Destination host unreachable.
Reply from 172.30.30.1: Destination host unreachable.
Reply from 172.30.30.1: Destination host unreachable.

Ping statistics for 170.30.10.3:
    Packets: Sent = 3, Received = 0, Lost = 3 (100% loss),

Control-C
^C
```

Puis nous vérifions que nos routeurs utilisent bien le protocole **RIP** :

```
R1#sh ip protocols
Routing Protocol is "rip"
Sending updates every 30 seconds, next due in 0 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 2, receive 2
```

```
R2#sh ip protocols
Routing Protocol is "rip"
Sending updates every 30 seconds, next due in 20 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 2, receive 2
```

```
R3#sh ip protocols
Routing Protocol is "rip"
Sending updates every 30 seconds, next due in 13 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 2, receive 2
```

Tous les routeurs utilisent le protocole **RIPv2.**

Quand nous utilisons la commande ***debug ip rip*** sur R2, nous voyons bien que RIPv2 est en cours d'exécution (car mise à jour toute les 30s) :

```
R2#RIP: sending  v2 update to 224.0.0.9 via Serial0/0/0 (10.1.1.2)
RIP: build update entries
      10.2.2.0/30 via 0.0.0.0, metric 1, tag 0
RIP: sending  v2 update to 224.0.0.9 via Serial0/0/1 (10.2.2.2)
RIP: build update entries
      10.1.1.0/30 via 0.0.0.0, metric 1, tag 0

R2#RIP: received v2 update from 10.1.1.1 on Serial0/0/0
      172.30.0.0/16 via 0.0.0.0 in 1 hops
```

Et sur R3, en utilisant la commande sh run, nous pouvons déduire que RIPv2 est en cours d'exécution :

```
 shutdown
!
router rip
 version 2
 passive-interface GigabitEthernet0/1
 network 10.0.0.0
 network 172.30.0.0
!
```

Nous affichons la table de routage de R2 :

```
R2#sh 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 not set

     10.0.0.0/8 is variably subnetted, 4 subnets, 2 masks
C       10.1.1.0/30 is directly connected, Serial0/0/0
L       10.1.1.2/32 is directly connected, Serial0/0/0
C       10.2.2.0/30 is directly connected, Serial0/0/1
L       10.2.2.2/32 is directly connected, Serial0/0/1
R    172.30.0.0/16 [120/1] via 10.1.1.1, 00:00:05, Serial0/0/0
                   [120/1] via 10.2.2.1, 00:00:26, Serial0/0/1
     209.165.201.0/24 is variably subnetted, 2 subnets, 2 masks
C       209.165.201.0/24 is directly connected, GigabitEthernet0/0
L       209.165.201.1/32 is directly connected, GigabitEthernet0/0
```

R2 affiche 2 routes en même temps, car ils ont un coût égal.

Alors que R1 n'affiche que ses propres réseaux **172.30.0.0** :

```
R1#sh 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 not set

     10.0.0.0/8 is variably subnetted, 3 subnets, 2 masks
C       10.1.1.0/30 is directly connected, Serial0/0/0
L       10.1.1.1/32 is directly connected, Serial0/0/0
R       10.2.2.0/30 [120/1] via 10.1.1.2, 00:00:24, Serial0/0/0
     172.30.0.0/16 is variably subnetted, 2 subnets, 2 masks
C       172.30.10.0/24 is directly connected, GigabitEthernet0/1
L       172.30.10.1/32 is directly connected, GigabitEthernet0/1

R1#
```

Et R3 affiche aussi uniquement ses propres sous réseaux :

```
R3#sh 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 a
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

     10.0.0.0/8 is variably subnetted, 3 subnets, 2 masks
R       10.1.1.0/30 [120/1] via 10.2.2.2, 00:00:08, Serial0/0/1
C       10.2.2.0/30 is directly connected, Serial0/0/1
L       10.2.2.1/32 is directly connected, Serial0/0/1
     172.30.0.0/16 is variably subnetted, 2 subnets, 2 masks
C       172.30.30.0/24 is directly connected, GigabitEthernet0/1
L       172.30.30.1/32 is directly connected, GigabitEthernet0/1

R3#
```

Sur R2 nous utilisons la commande ***debug ip rip*** pour déterminer les routes reçues dans les mises à jour RIP :

```
R2#debug ip rip
RIP protocol debugging is on
R2#RIP: received v2 update from 10.2.2.1 on Serial0/0/1
      172.30.0.0/16 via 0.0.0.0 in 1 hops

R2#RIP: sending  v2 update to 224.0.0.9 via Serial0/0/0 (10.1.1.2)
RIP: build update entries
      10.2.2.0/30 via 0.0.0.0, metric 1, tag 0
RIP: sending  v2 update to 224.0.0.9 via Serial0/0/1 (10.2.2.2)
RIP: build update entries
      10.1.1.0/30 via 0.0.0.0, metric 1, tag 0

R2#RIP: received v2 update from 10.1.1.1 on Serial0/0/0
      172.30.0.0/16 via 0.0.0.0 in 1 hops
```

Nous pouvons déterminer que les routes reçues sont **172.30.0.0/16**

Nous allons donc désactiver la récapitulation automatique de chaque routeur :

```
R1(config)#router rip
R1(config-router)#no auto-summary
```

Puis nous effaçons la table de routage :

```
R1#clear ip route *
```

Après avoir tapé les commandes nous examinons les tables de routages et observer la convergence des tables de routage :

```
R2#clear ip route *
R2#sh 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 not set

     10.0.0.0/8 is variably subnetted, 4 subnets, 2 masks
C       10.1.1.0/30 is directly connected, Serial0/0/0
L       10.1.1.2/32 is directly connected, Serial0/0/0
C       10.2.2.0/30 is directly connected, Serial0/0/1
L       10.2.2.2/32 is directly connected, Serial0/0/1
     172.30.0.0/16 is variably subnetted, 3 subnets, 2 masks
R       172.30.0.0/16 is possibly down, routing via 10.2.2.1, Serial0/0/1
R       172.30.10.0/24 [120/1] via 10.1.1.1, 00:00:01, Serial0/0/0
R       172.30.30.0/24 [120/1] via 10.2.2.1, 00:00:16, Serial0/0/1
     209.165.201.0/24 is variably subnetted, 2 subnets, 2 masks
C       209.165.201.0/24 is directly connected, GigabitEthernet0/0
L       209.165.201.1/32 is directly connected, GigabitEthernet0/0

R2#
```

```
R3#sh 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 not set

     10.0.0.0/8 is variably subnetted, 3 subnets, 2 masks
R       10.1.1.0/30 [120/1] via 10.2.2.2, 00:00:16, Serial0/0/1
C       10.2.2.0/30 is directly connected, Serial0/0/1
L       10.2.2.1/32 is directly connected, Serial0/0/1
     172.30.0.0/16 is variably subnetted, 3 subnets, 2 masks
R       172.30.10.0/24 [120/2] via 10.2.2.2, 00:00:16, Serial0/0/1
C       172.30.30.0/24 is directly connected, GigabitEthernet0/1
L       172.30.30.1/32 is directly connected, GigabitEthernet0/1

R3#
```

```
R1#sh 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 not set

     10.0.0.0/8 is variably subnetted, 3 subnets, 2 masks
C       10.1.1.0/30 is directly connected, Serial0/0/0
L       10.1.1.1/32 is directly connected, Serial0/0/0
R       10.2.2.0/30 [120/1] via 10.1.1.2, 00:00:15, Serial0/0/0
     172.30.0.0/16 is variably subnetted, 4 subnets, 3 masks
R       172.30.0.0/16 is possibly down, routing via 10.1.1.2, Serial0/0/0
C       172.30.10.0/24 is directly connected, GigabitEthernet0/1
L       172.30.10.1/32 is directly connected, GigabitEthernet0/1
R       172.30.30.0/24 [120/2] via 10.1.1.2, 00:00:15, Serial0/0/0

R1#
```

Ensuite, nous observons les mises à jour depuis R2 :

```
R2#debug ip rip
RIP protocol debugging is on
R2#RIP: received v2 update from 10.1.1.1 on Serial0/0/0
      172.30.10.0/24 via 0.0.0.0 in 1 hops

R2#RIP: received v2 update from 10.2.2.1 on Serial0/0/1
      172.30.30.0/24 via 0.0.0.0 in 1 hops

R2#RIP: sending  v2 update to 224.0.0.9 via Serial0/0/0 (10.1.1.2)
RIP: build update entries
      10.2.2.0/30 via 0.0.0.0, metric 1, tag 0
      172.30.0.0/16 via 0.0.0.0, metric 16, tag 0
      172.30.30.0/24 via 0.0.0.0, metric 2, tag 0
RIP: sending  v2 update to 224.0.0.9 via Serial0/0/1 (10.2.2.2)
RIP: build update entries
      10.1.1.0/30 via 0.0.0.0, metric 1, tag 0
      172.30.10.0/24 via 0.0.0.0, metric 2, tag 0

R2#
```

Nous pouvons voir que le réseau 172.30.30.0/24 est présent avec les masques précisés.

Nous ajoutons une route par défaut à R2 :

```
R2#CONF T
Enter configuration commands, one per line.  End with CNTL/Z.
R2(config)#ip route 0.0.0.0 0.0.0.0 209.165.201.2
R2(config)#
```

Ensuite, nous faisons annoncer R2 une route aux autres routeurs grâce à la commande ***default-information originate***

```
R2(config)#router rip
R2(config-router)#default-information originate
R2(config-router)#
```

Et nous regardons la table de routage de R1 :

```
R1#sh 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 ar
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is 10.1.1.2 to network 0.0.0.0

     10.0.0.0/8 is variably subnetted, 3 subnets, 2 masks
C       10.1.1.0/30 is directly connected, Serial0/0/0
L       10.1.1.1/32 is directly connected, Serial0/0/0
R       10.2.2.0/30 [120/1] via 10.1.1.2, 00:00:19, Serial0/0/0
     172.30.0.0/16 is variably subnetted, 3 subnets, 2 masks
C       172.30.10.0/24 is directly connected, GigabitEthernet0/1
L       172.30.10.1/32 is directly connected, GigabitEthernet0/1
R       172.30.30.0/24 [120/2] via 10.1.1.2, 00:00:19, Serial0/0/0
R*   0.0.0.0/0 [120/1] via 10.1.1.2, 00:00:19, Serial0/0/0
```

La route apparaît bien.

Il s'agit d'une passerelle de derniers recours, et apparaît comme route par défaut dans la table via le protocole RIP.

Nous affichons la table de routage de R2 :

```
R2#sh 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 209.165.201.2 to network 0.0.0.0

     10.0.0.0/8 is variably subnetted, 4 subnets, 2 masks
C       10.1.1.0/30 is directly connected, Serial0/0/0
L       10.1.1.2/32 is directly connected, Serial0/0/0
C       10.2.2.0/30 is directly connected, Serial0/0/1
L       10.2.2.2/32 is directly connected, Serial0/0/1
     172.30.0.0/24 is subnetted, 2 subnets
R       172.30.10.0/24 [120/1] via 10.1.1.1, 00:00:15, Serial0/0/0
R       172.30.30.0/24 [120/1] via 10.2.2.1, 00:00:23, Serial0/0/1
     209.165.201.0/24 is variably subnetted, 2 subnets, 2 masks
C       209.165.201.0/24 is directly connected, GigabitEthernet0/0
L       209.165.201.1/32 is directly connected, GigabitEthernet0/0
S*   0.0.0.0/0 [1/0] via 209.165.201.2

R2#
```

R2 dispose d'une route par défaut 0.0.0.0 via 209.165.201.2 directement connecté à G0/0.

Nous allons donc envoyer du trafic vers 209.165.201.2 avec PCA et PCB :

```
C:\>ping 209.165.201.2

Pinging 209.165.201.2 with 32 bytes of data:

Reply from 209.165.201.2: bytes=32 time=1ms TTL=126
Reply from 209.165.201.2: bytes=32 time=32ms TTL=126
Reply from 209.165.201.2: bytes=32 time=59ms TTL=126
Reply from 209.165.201.2: bytes=32 time=36ms TTL=126

Ping statistics for 209.165.201.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 59ms, Average = 32ms

C:\>
```

```
C:\>ping 209.165.201.2

Pinging 209.165.201.2 with 32 bytes of data:

Reply from 209.165.201.2: bytes=32 time=54ms TTL=126
Reply from 209.165.201.2: bytes=32 time=36ms TTL=126
Reply from 209.165.201.2: bytes=32 time=1ms TTL=126
Reply from 209.165.201.2: bytes=32 time=32ms TTL=126

Ping statistics for 209.165.201.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss)
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 54ms, Average = 30ms

C:\>
```

Les requêtes ont abouties.