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Compte Rendu TP Routage RIP, OSPF et BGP

Routage RIP :

Voici ci-dessous mon réseau complet composé de :

- 6 routeurs => de LAB_A jusqu'à LAB_F
- 2 switch => Switch_A et Switch_B
- 6 PC => de PC_A à PC_F
- Câbles => Consoles, Ethernet (croisé), Lien série

Le screen du schéma ci-dessous a été pris après la configuration du réseau, c'est pour cela que les connections sont afficher comme établie.

Routage RIP :
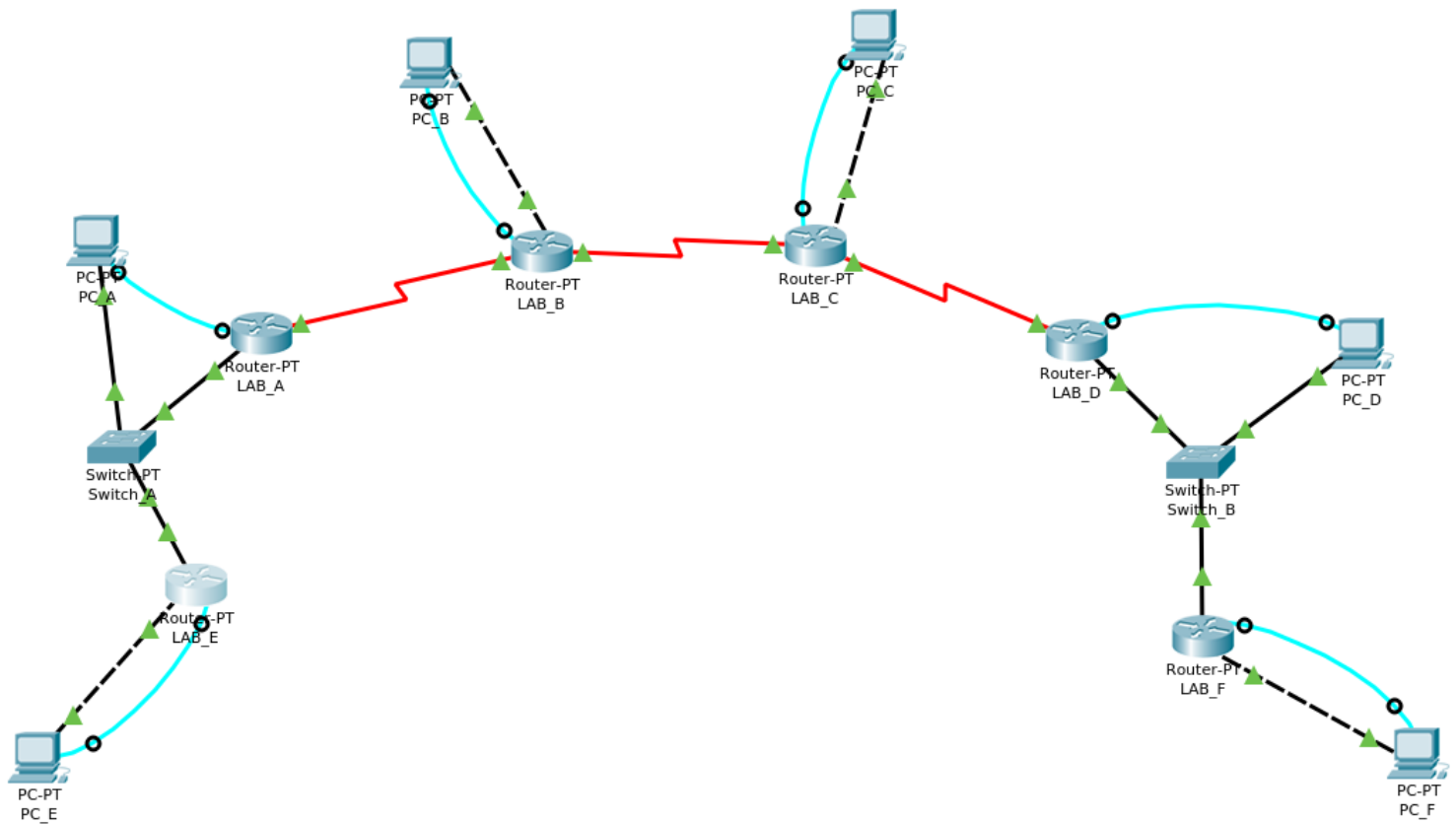
Pour les exemples de configuration des routeurs et des PC, les screen seront basé sur le routeur **LAB_B** et sur le PC **PC_E**, les autres routeurs et PC ont été configuré du même principe.

- Exemple de configuration de la carte fastEthernet0/0 de LAB_B

```
LAB_B>enable
LAB_B#config
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line.  End with CNTL/Z.
LAB_B(config)#int
LAB_B(config)#interface f
LAB_B(config)#interface fastEthernet 0/0
LAB_B(config-if)#ip ad
LAB_B(config-if)#ip address 192.168.11.1 255.255.255.0
LAB_B(config-if)#no sh
LAB_B(config-if)#no shutdown

LAB_B(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

LAB_B(config-if)#exit
```

- Exemple de configuration de la carte serial2/0 de LAB_B

```
LAB_B(config)#in
LAB_B(config)#interface fa
LAB_B(config)#interface se
LAB_B(config)#interface serial 2/0
LAB_B(config-if)#ip ad
LAB_B(config-if)#ip address 192.168.30.2 255.255.255.0
LAB_B(config-if)#no s
LAB_B(config-if)#no sh
LAB_B(config-if)#no shutdown

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

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

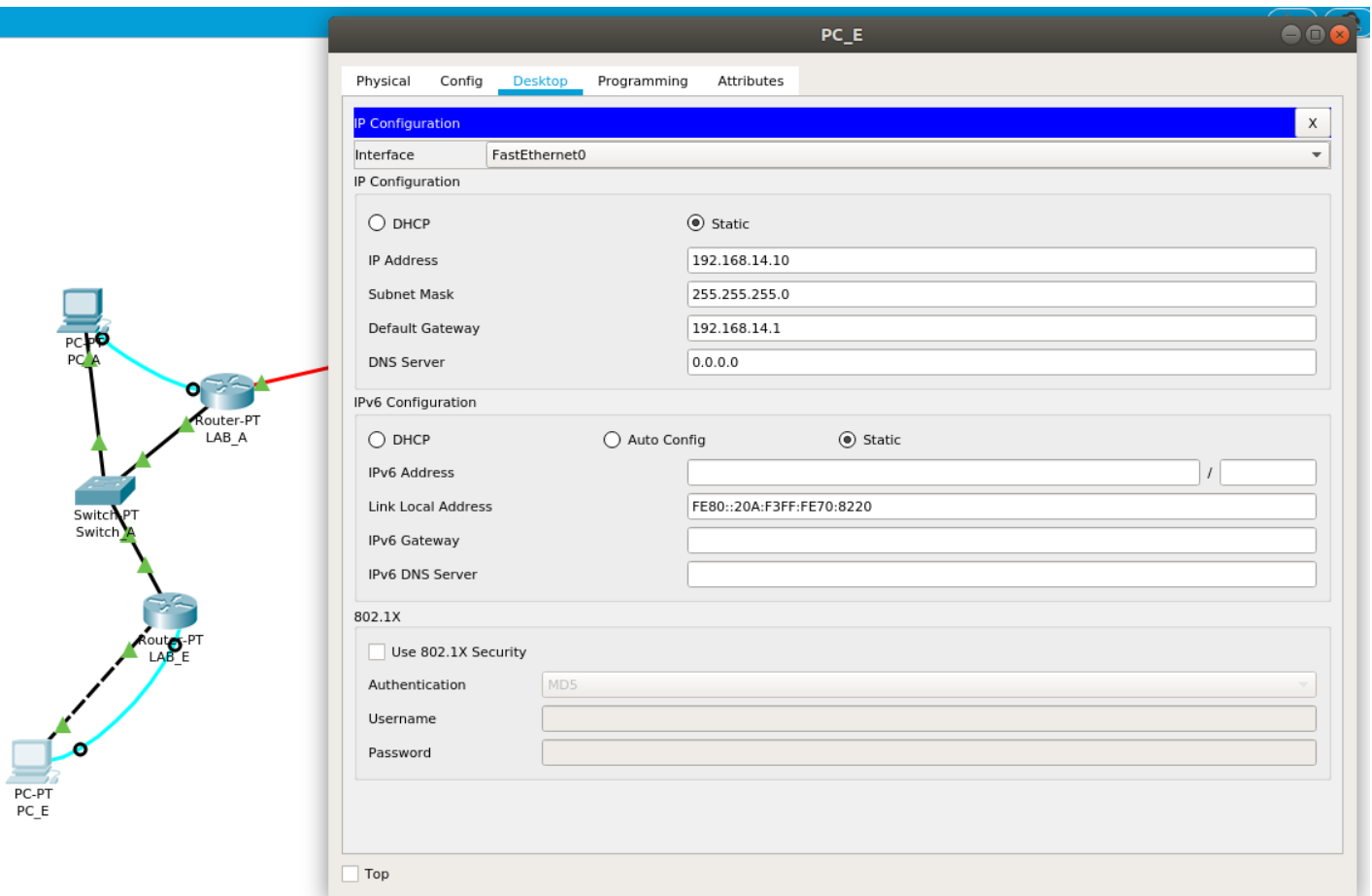- Exemple de configuration des routes => utilisation du protocole RIP sur LAB_B

```
LAB_B(config)#rou
LAB_B(config)#router R
LAB_B(config)#router Rip
LAB_B(config-router)#net
LAB_B(config-router)#network 192.168.11.0
LAB_B(config-router)#network 192.168.40.0
LAB_B(config-router)#network 192.168.30.0
LAB_B(config-router)#exit
LAB_B(config)#exit
LAB_B#
%SYS-5-CONFIG_I: Configured from console by console

LAB_B#cop
LAB_B#copy ru
LAB_B#copy running-config st
LAB_B#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
LAB_B#exit
```

- Exemple de configuration de l'adresse IP, le Mask et de la Default Gateway pour le PC_E

TP Routage RIP, OSPF et BGP

Pour les différents tests de ping, ils seront effectués depuis de router **LAB_E** pour les ping entre routeur et depuis le **PC_F** pour les ping entre PC.

- Exemple de test de ping depuis de routeur LAB_E vers le routeur LAB_F
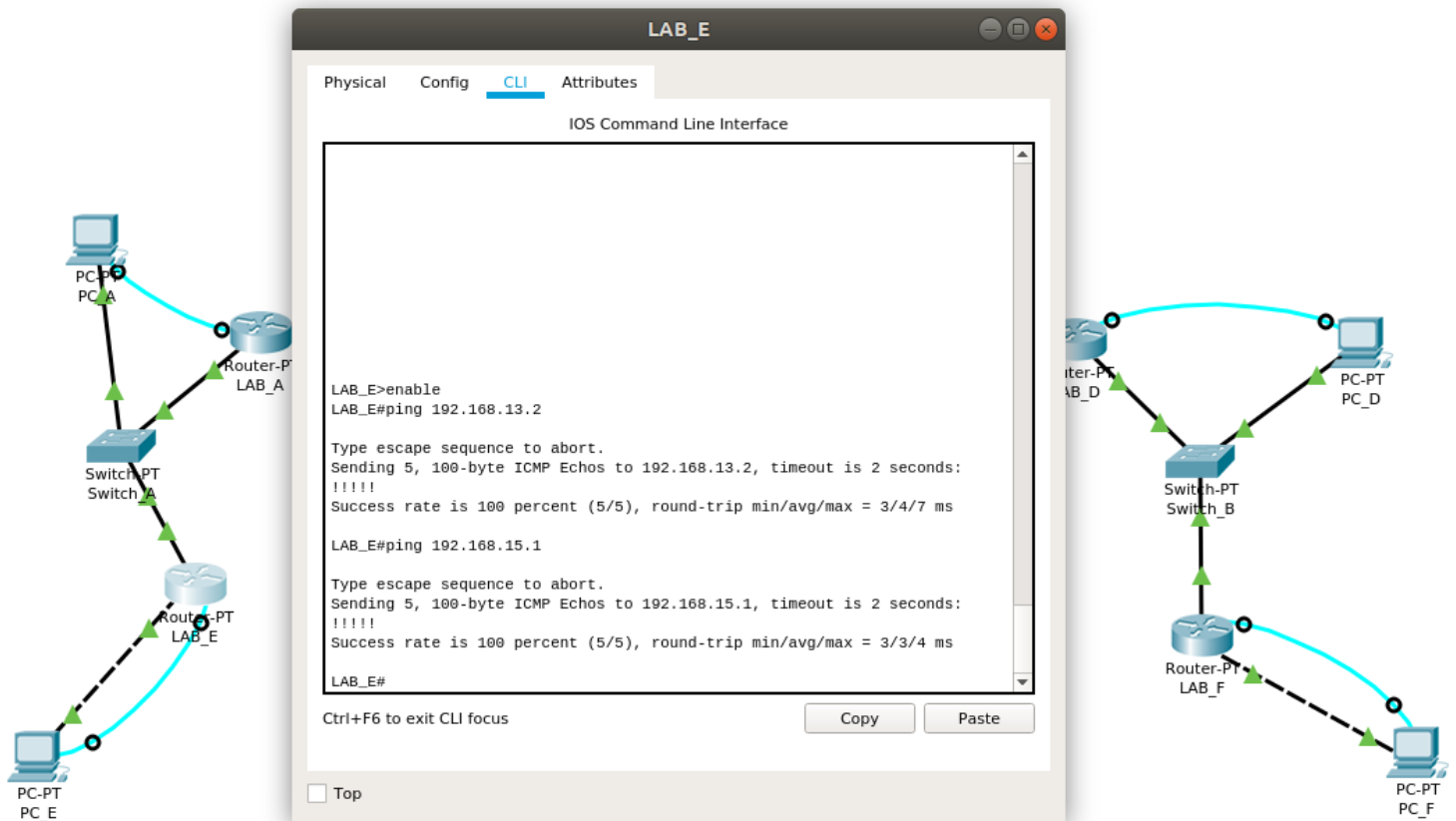
- <u>Exemple de test de ping depuis le PC_F (IP=192.168.15.10) vers tous les autres PC</u>

- Ping vers LAB_A et LAB_B

```
C:\>ping 192.168.10.10

Pinging 192.168.10.10 with 32 bytes of data:

Reply from 192.168.10.10: bytes=32 time=3ms TTL=123
Reply from 192.168.10.10: bytes=32 time=3ms TTL=123
Reply from 192.168.10.10: bytes=32 time=4ms TTL=123
Reply from 192.168.10.10: bytes=32 time=4ms TTL=123

Ping statistics for 192.168.10.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 3ms, Maximum = 4ms, Average = 3ms

C:\>ping 192.168.11.10

Pinging 192.168.11.10 with 32 bytes of data:

Reply from 192.168.11.10: bytes=32 time=2ms TTL=124
Reply from 192.168.11.10: bytes=32 time=2ms TTL=124
Reply from 192.168.11.10: bytes=32 time=2ms TTL=124
Reply from 192.168.11.10: bytes=32 time=2ms TTL=124

Ping statistics for 192.168.11.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 2ms, Maximum = 2ms, Average = 2ms
```

- Ping vers LAB_C et LAB_D

```
C:\>ping 192.168.12.10

Pinging 192.168.12.10 with 32 bytes of data:

Reply from 192.168.12.10: bytes=32 time=1ms TTL=125
Reply from 192.168.12.10: bytes=32 time=1ms TTL=125
Reply from 192.168.12.10: bytes=32 time=1ms TTL=125
Reply from 192.168.12.10: bytes=32 time=1ms TTL=125

Ping statistics for 192.168.12.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 1ms, Average = 1ms

C:\>ping 192.168.13.10

Pinging 192.168.13.10 with 32 bytes of data:

Reply from 192.168.13.10: bytes=32 time=1ms TTL=126
Reply from 192.168.13.10: bytes=32 time<1ms TTL=126
Reply from 192.168.13.10: bytes=32 time<1ms TTL=126
Reply from 192.168.13.10: bytes=32 time<1ms TTL=126

Ping statistics for 192.168.13.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

- Ping vers LAB_E et LAB_F (lui-même)

```
C:\>ping 192.168.14.10

Pinging 192.168.14.10 with 32 bytes of data:

Reply from 192.168.14.10: bytes=32 time=4ms TTL=122
Reply from 192.168.14.10: bytes=32 time=3ms TTL=122
Reply from 192.168.14.10: bytes=32 time=5ms TTL=122
Reply from 192.168.14.10: bytes=32 time=3ms TTL=122

Ping statistics for 192.168.14.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 3ms, Maximum = 5ms, Average = 3ms

C:\>ping 192.168.15.10

Pinging 192.168.15.10 with 32 bytes of data:

Reply from 192.168.15.10: bytes=32 time=5ms TTL=128
Reply from 192.168.15.10: bytes=32 time=4ms TTL=128
Reply from 192.168.15.10: bytes=32 time=1ms TTL=128
Reply from 192.168.15.10: bytes=32 time=4ms TTL=128

Ping statistics for 192.168.15.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 5ms, Average = 3ms

C:\>
```
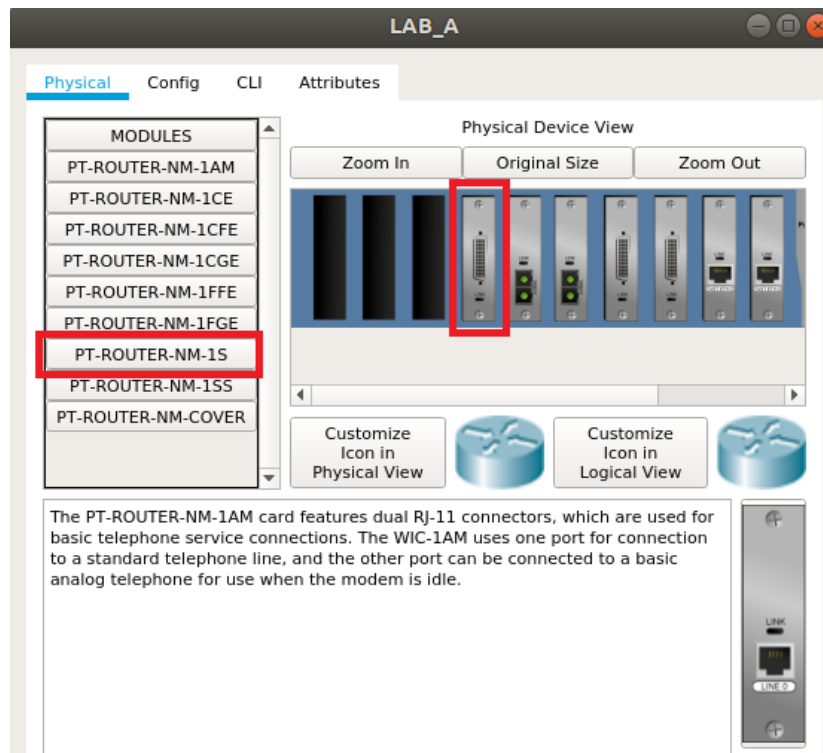
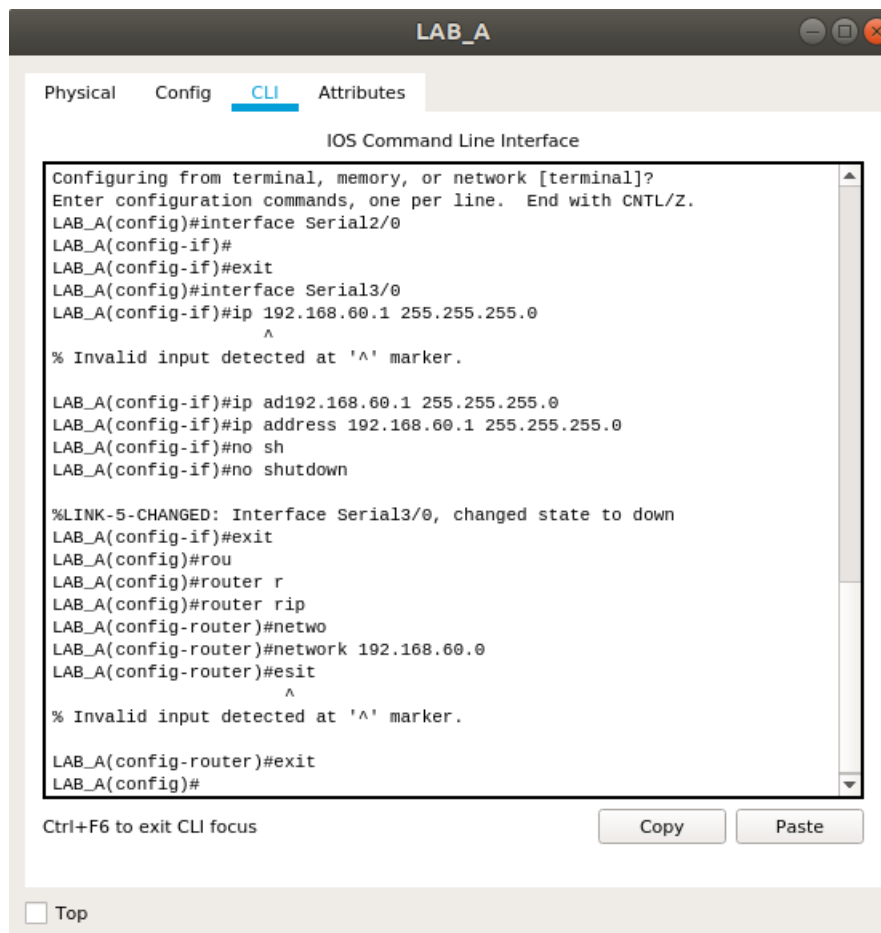# Routage RIP avec ajout de routeurs et lien série coupé :

Voici ci-dessous mon réseau complet :

TP Routage RIP, OSPF et BGP
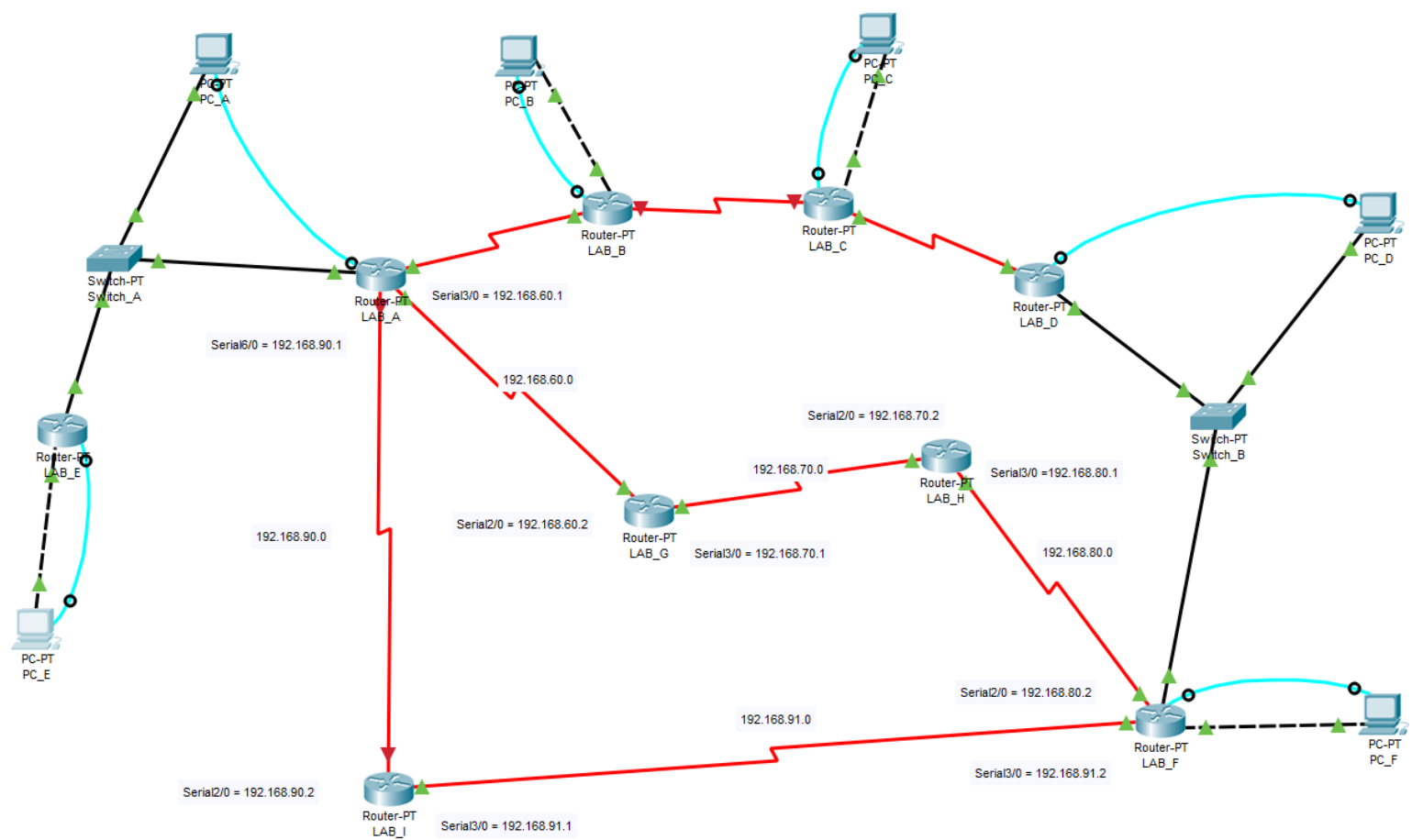
Afin de connecter les routeurs LAB_A et LAB_I j'ai due rajouter un port série au niveau du routeur LAB_A :

Exemple de configuration du port « Serial3/0 » de LAB_A vers LAB_G avec routage Rip :

Exemple de configuration d'un des 3 nouveaux routeur ajouté, ici LAB_G :

```
                           IOS Command Line Interface

LAB_G>enable
LAB_G#con
LAB_G#conf
LAB_G#configure
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line.  End with CNTL/Z.
LAB_G(config)#ip c
LAB_G(config)#ip
% Incomplete command.
LAB_G(config)#interface Serial2/0
LAB_G(config-if)#ip ad
LAB_G(config-if)#ip address 192.168.60.2 255.255.255.0
LAB_G(config-if)#no
LAB_G(config-if)#no s
LAB_G(config-if)#no sh
LAB_G(config-if)#no shutdown

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

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

LAB_G(config)#int
LAB_G(config)#interface s
LAB_G(config)#interface serial3
LAB_G(config)#interface serial3/0
LAB_G(config)#interface serial3/0
LAB_G(config-if)#ip ad
LAB_G(config-if)#ip address 192.168.70.1 255.255.255.0
LAB_G(config-if)#no sh
LAB_G(config-if)#no shutdown

%LINK-5-CHANGED: Interface Serial3/0, changed state to down
LAB_G(config-if)#exit
LAB_G(config)#rou
LAB_G(config)#router r
LAB_G(config)#router rip
LAB_G(config-router)#ne
LAB_G(config-router)#network 192.168.60.0
LAB_G(config-router)#net
LAB_G(config-router)#network 192.168.70.0
LAB_G(config-router)#exit
LAB_G(config)#exit
LAB_G#
%SYS-5-CONFIG_I: Configured from console by console

LAB_G#cop
LAB_G#copy ru
LAB_G#copy running-config st
LAB_G#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
LAB_G#
```
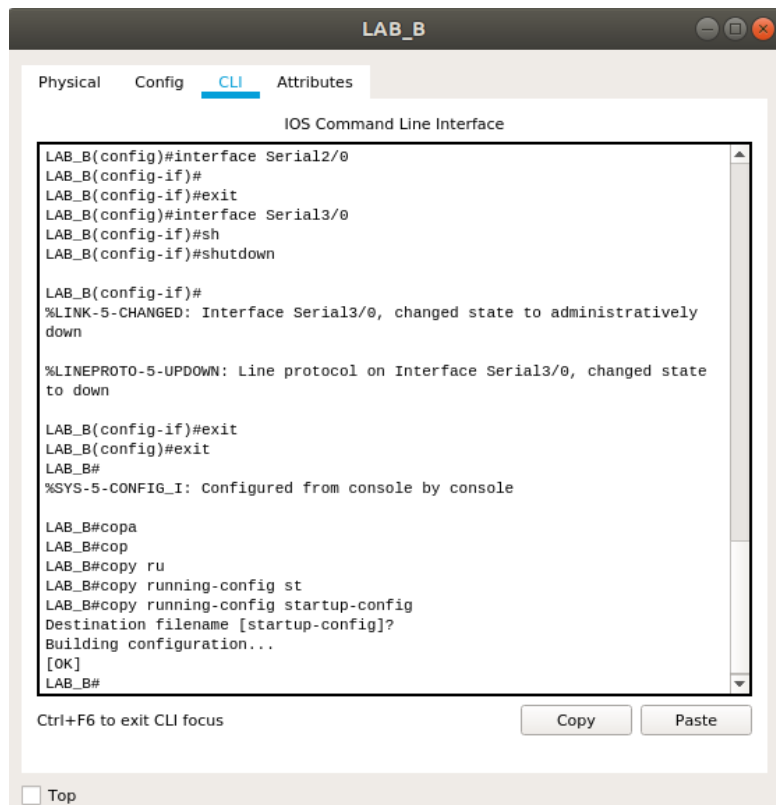
Exemple de coupure des connections directe entre 2 routeur, ici LAB_B et LAB_C :

Test de Ping depuis PC_E (192.168.14.10) vers routeur LAB_I (192.168.91.1), LAB_H (192.168.70.2) et PC_F (192.168.15.10) :

TP Routage RIP, OSPF et BGP

Routage OSPF :

Voici ci-dessous mon sous-réseau OSPF :

Ainsi que le réseau complet raccordé :

TP Routage RIP, OSPF et BGP
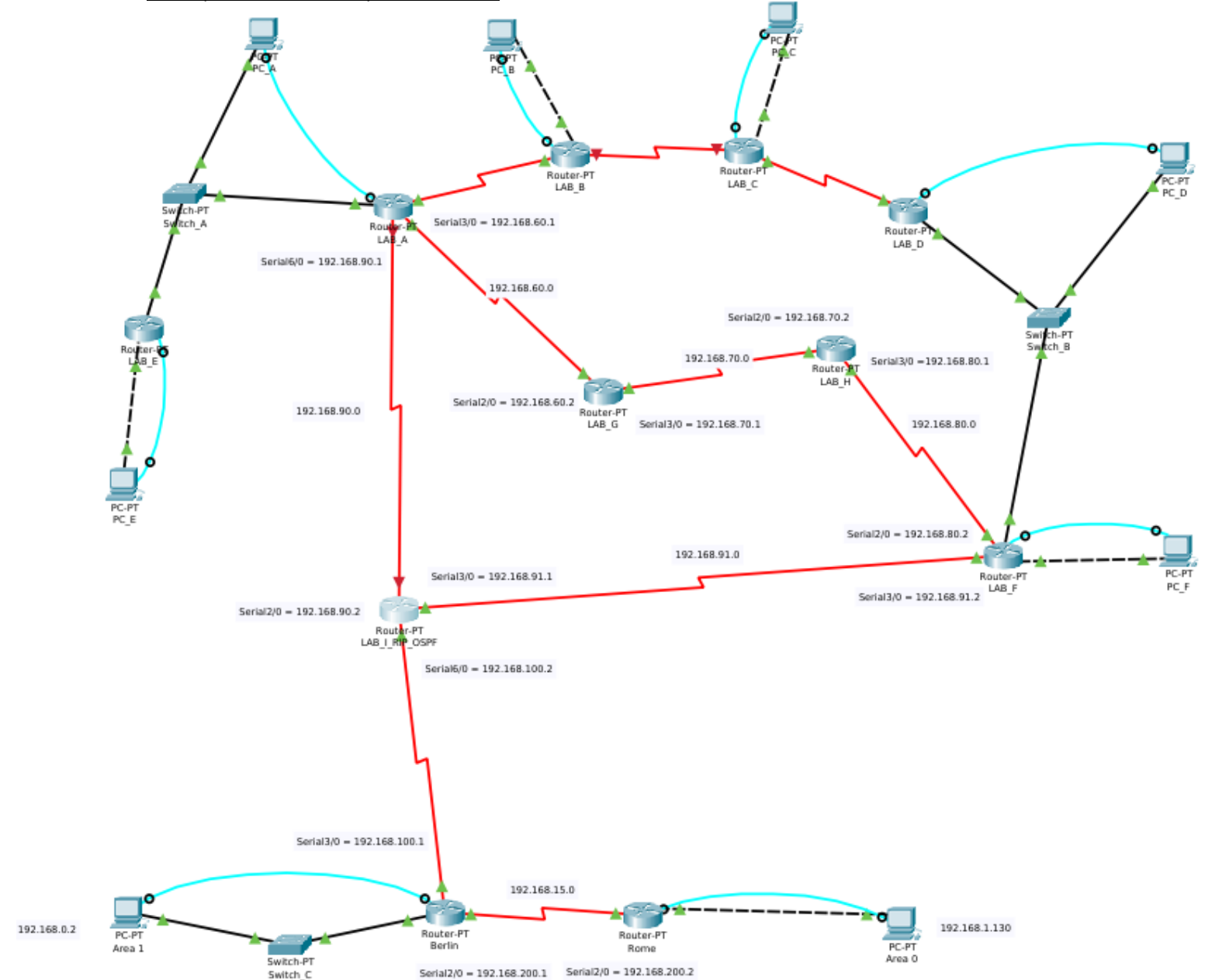
Exemple de configuration d'un routeur en OSPF ici Rome :

```
                          IOS Command Line Interface
          Number of DoNotAge LSA 0
          Flood list length 0

Rome#
Rome#
Rome#configure
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line.  End with CNTL/Z.
Rome(config)#router ospf 1
Rome(config-router)#network 192.168.1.0 0.0.0.255 ar
Rome(config-router)#network 192.168.1.0 0.0.0.255 area 0
Rome(config-router)#net
Rome(config-router)#network 192.168.15.0 0.0.0.255 ar
Rome(config-router)#network 192.168.15.0 0.0.0.255 area 0
Rome(config-router)#exit
Rome(config)#exit
Rome#
%SYS-5-CONFIG_I: Configured from console by console

Rome#co
Rome#cop
Rome#copy run
Rome#copy running-config st
Rome#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
Rome#
```

TP Routage RIP, OSPF et BGP

Test de ping depuis Rome vers Berlin et PC du sous-réseau en OSPF :

```
Rome#ping 192.168.0.1

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.0.1, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/3 ms

Rome#ping 192.168.15.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.15.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/2/7 ms

Rome#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

O    192.168.0.0/24 [110/65] via 192.168.15.2, 00:10:39, Serial2/0
     192.168.1.0/26 is subnetted, 1 subnets
C       192.168.1.128 is directly connected, FastEthernet0/0
     192.168.15.0/30 is subnetted, 1 subnets
C       192.168.15.0 is directly connected, Serial2/0

Rome#show ip route o
O    192.168.0.0 [110/65] via 192.168.15.2, 00:11:14, Serial2/0

Rome#show ip route ospf
Rome#show ip route ospf
O    192.168.0.0 [110/65] via 192.168.15.2, 00:11:33, Serial2/0

Rome#ping 192.168.15.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.15.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/3 ms

Rome#ping 192.168.0.1

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.0.1, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/3/9 ms
```

Exemple de Test de configuration de routeur avec Ip cost et Bandwidth sur routeur Rome :

```
Rome#con
Rome#conf
Rome#configure
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line.  End with CNTL/Z.
Rome(config)#int
Rome(config)#interface f
Rome(config)#interface fastEthernet0/0
Rome(config-if)#ip
Rome(config-if)#ip os
Rome(config-if)#ip ospf cos
Rome(config-if)#b
Rome(config-if)#bandwidth 2000
Rome(config-if)#
Rome#
%SYS-5-CONFIG_I: Configured from console by console

Rome#show ip ospf interface

FastEthernet0/0 is up, line protocol is up
  Internet address is 192.168.1.129/26, Area 0
  Process ID 1, Router ID 2.2.2.2, Network Type BROADCAST, Cost: 50
  Transmit Delay is 1 sec, State DR, Priority 1
  Designated Router (ID) 2.2.2.2, Interface address 192.168.1.129
  No backup designated router on this network
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
    Hello due in 00:00:01
  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 0, Adjacent neighbor count is 0
  Suppress hello for 0 neighbor(s)
Serial2/0 is up, line protocol is up
  Internet address is 192.168.15.1/30, Area 0
  Process ID 1, Router ID 2.2.2.2, Network Type POINT-TO-POINT, Cost: 50
  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

Rome#
```

Ctrl+F6 to exit CLI focus   Copy   Paste

```
Rome(config)#interface serial2/0
Rome(config-if)#ip
Rome(config-if)#ip o
Rome(config-if)#ip ospf cos
Rome(config-if)#ip ospf cost 1562
Rome(config-if)#
Rome#
%SYS-5-CONFIG_I: Configured from console by console

Rome#sh
Rome#show ip os
Rome#show ip ospf in
Rome#show ip ospf interface

FastEthernet0/0 is up, line protocol is up
  Internet address is 192.168.1.129/26, Area 0
  Process ID 1, Router ID 2.2.2.2, Network Type BROADCAST, Cost: 1
  Transmit Delay is 1 sec, State DR, Priority 1
  Designated Router (ID) 2.2.2.2, Interface address 192.168.1.129
  No backup designated router on this network
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
    Hello due in 00:00:07
  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 0, Adjacent neighbor count is 0
  Suppress hello for 0 neighbor(s)
Serial2/0 is up, line protocol is up
  Internet address is 192.168.15.1/30, Area 0
  Process ID 1, Router ID 2.2.2.2, Network Type POINT-TO-POINT, Cost: 1562
  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 00:00:05
 --More--
```

```
Rome#configure
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line.  End with CNTL/Z.
Rome(config)#interface fastEthernet0/0
Rome(config-if)#no b
Rome(config-if)#no bandwidth
Rome(config-if)#no i
Rome(config-if)#no ip os
Rome(config-if)#no ip ospf co
Rome(config-if)#no ip ospf cost
Rome(config-if)#exit
Rome(config)#exit
Rome#
%SYS-5-CONFIG_I: Configured from console by console

Rome#show ip ospf interface

FastEthernet0/0 is up, line protocol is up
  Internet address is 192.168.1.129/26, Area 0
  Process ID 1, Router ID 2.2.2.2, Network Type BROADCAST, Cost: 1
  Transmit Delay is 1 sec, State DR, Priority 1
  Designated Router (ID) 2.2.2.2, Interface address 192.168.1.129
  No backup designated router on this network
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
    Hello due in 00:00:09
  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 0, Adjacent neighbor count is 0
  Suppress hello for 0 neighbor(s)
Serial2/0 is up, line protocol is up
  Internet address is 192.168.15.1/30, Area 0
  Process ID 1, Router ID 2.2.2.2, Network Type POINT-TO-POINT, Cost: 50
  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

Rome#
```
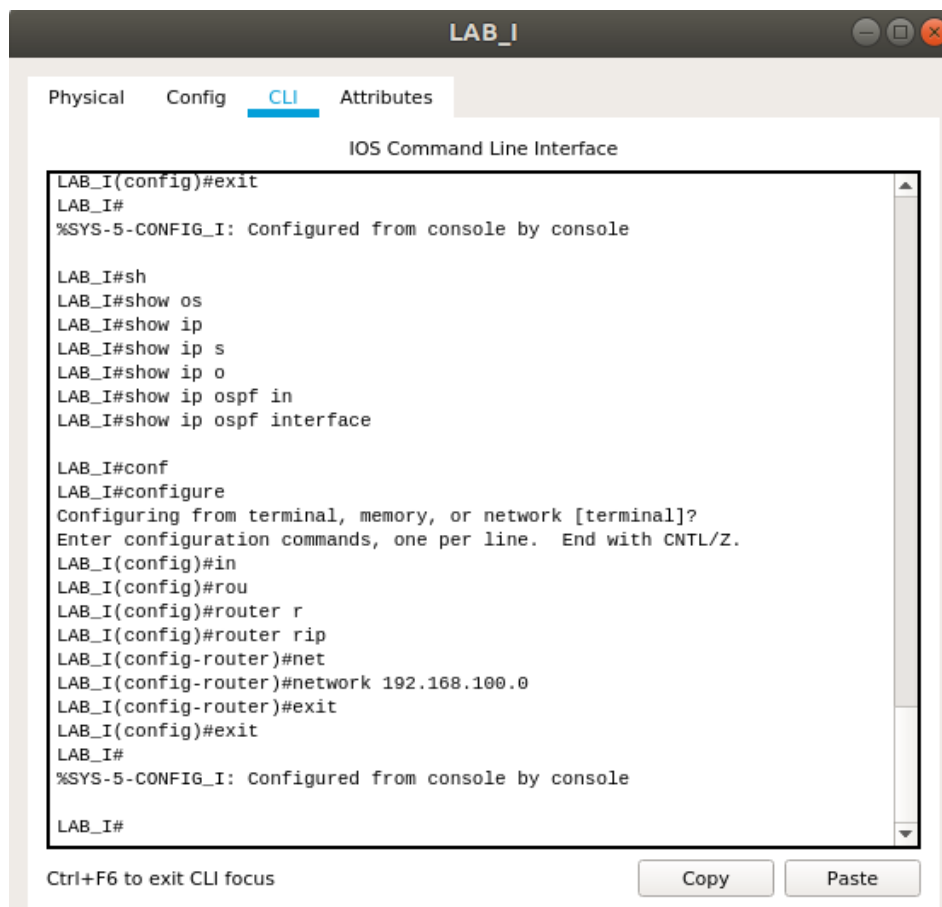
Configuration de LAB_I pour route RIP vers le sous-réseau en configuration OSPF :

Configuration de LAB_I pour la redistribution des routes RIP et OSPF pour connections des deux réseaux :

Test de ping depuis le PC_E vers le sous-réseau en OSPF :

```
C:\>ping 192.168.200.2

Pinging 192.168.200.2 with 32 bytes of data:

Reply from 192.168.200.2: bytes=32 time=6ms TTL=248
Reply from 192.168.200.2: bytes=32 time=10ms TTL=248
Reply from 192.168.200.2: bytes=32 time=7ms TTL=248
Reply from 192.168.200.2: bytes=32 time=10ms TTL=248

Ping statistics for 192.168.200.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 6ms, Maximum = 10ms, Average = 8ms

C:\>
C:\>
C:\>ping 192.168.100.2

Pinging 192.168.100.2 with 32 bytes of data:

Reply from 192.168.100.2: bytes=32 time=4ms TTL=250
Reply from 192.168.100.2: bytes=32 time=4ms TTL=250
Reply from 192.168.100.2: bytes=32 time=4ms TTL=250
Reply from 192.168.100.2: bytes=32 time=4ms TTL=250

Ping statistics for 192.168.100.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 4ms, Maximum = 4ms, Average = 4ms

C:\>ping 192.168.1.130

Pinging 192.168.1.130 with 32 bytes of data:

Reply from 192.168.1.130: bytes=32 time=6ms TTL=120
Reply from 192.168.1.130: bytes=32 time=7ms TTL=120
Reply from 192.168.1.130: bytes=32 time=11ms TTL=120
Reply from 192.168.1.130: bytes=32 time=7ms TTL=120

Ping statistics for 192.168.1.130:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 6ms, Maximum = 11ms, Average = 7ms

C:\>ping 192.168.0.2

Pinging 192.168.0.2 with 32 bytes of data:

Reply from 192.168.0.2: bytes=32 time=5ms TTL=121
Reply from 192.168.0.2: bytes=32 time=5ms TTL=121
Reply from 192.168.0.2: bytes=32 time=5ms TTL=121
Reply from 192.168.0.2: bytes=32 time=12ms TTL=121

Ping statistics for 192.168.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 5ms, Maximum = 12ms, Average = 6ms

C:\>
```
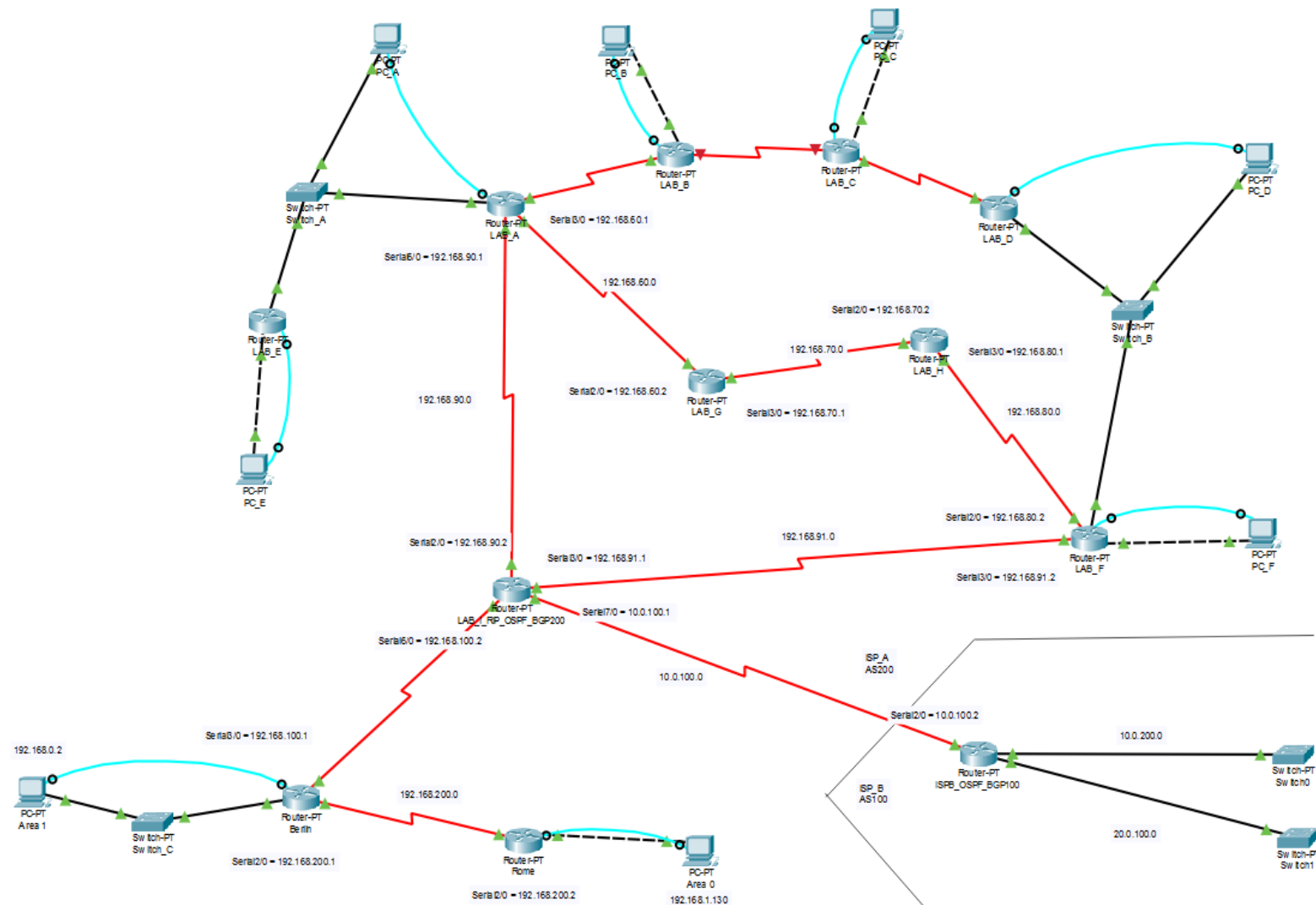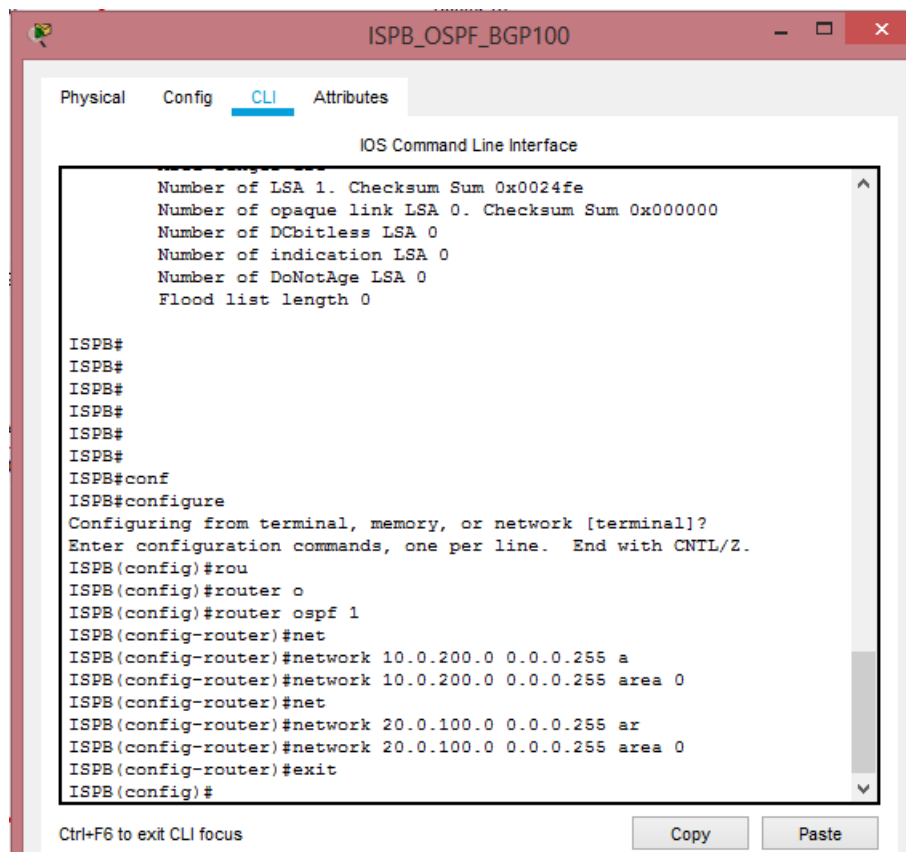
Routage BGP :

Voici ci-dessous mon réseau complet :

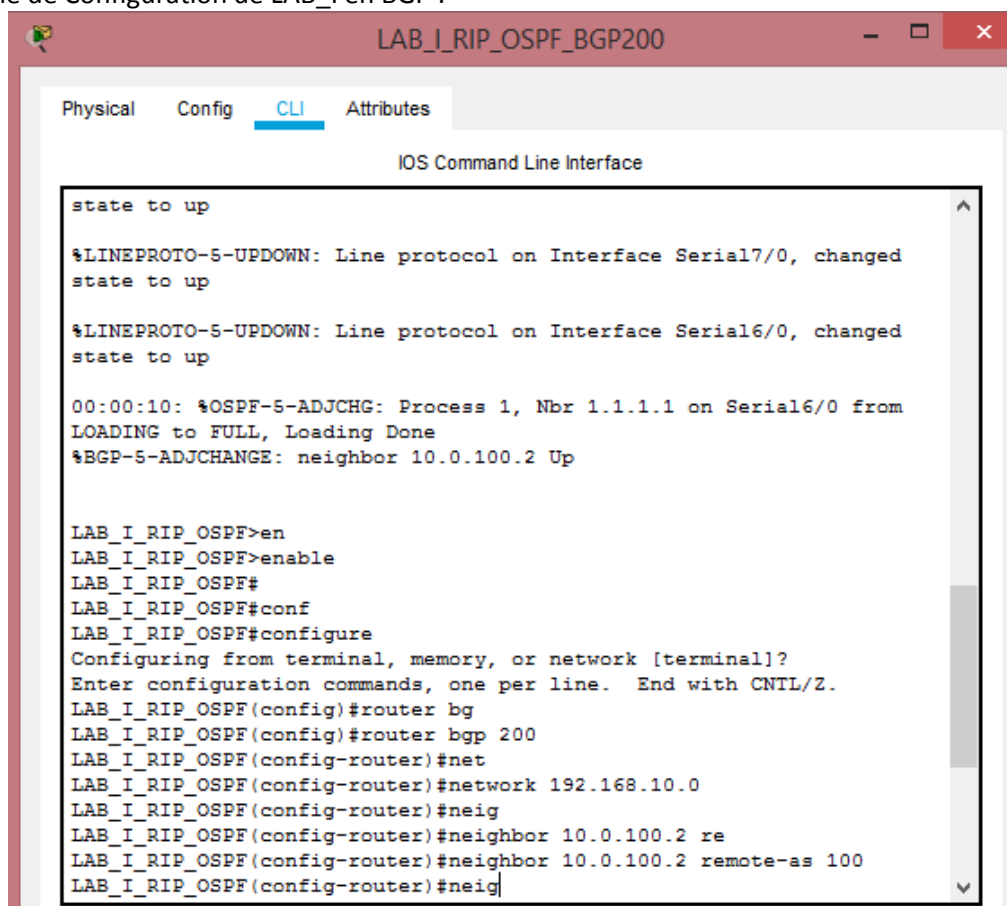Configuration du routeur ISPB en OSPF pour 10.0.200.0 et 20.0.100.0 :

Exemple de Configuration de LAB_I en BGP :

TP Routage RIP, OSPF et BGP

La redirection pour le réseau en BGP passant par l'adresse 0.0.0.0 quelques modifications doivent être effectuer au niveau du routeur LAB_I et LAB_A :
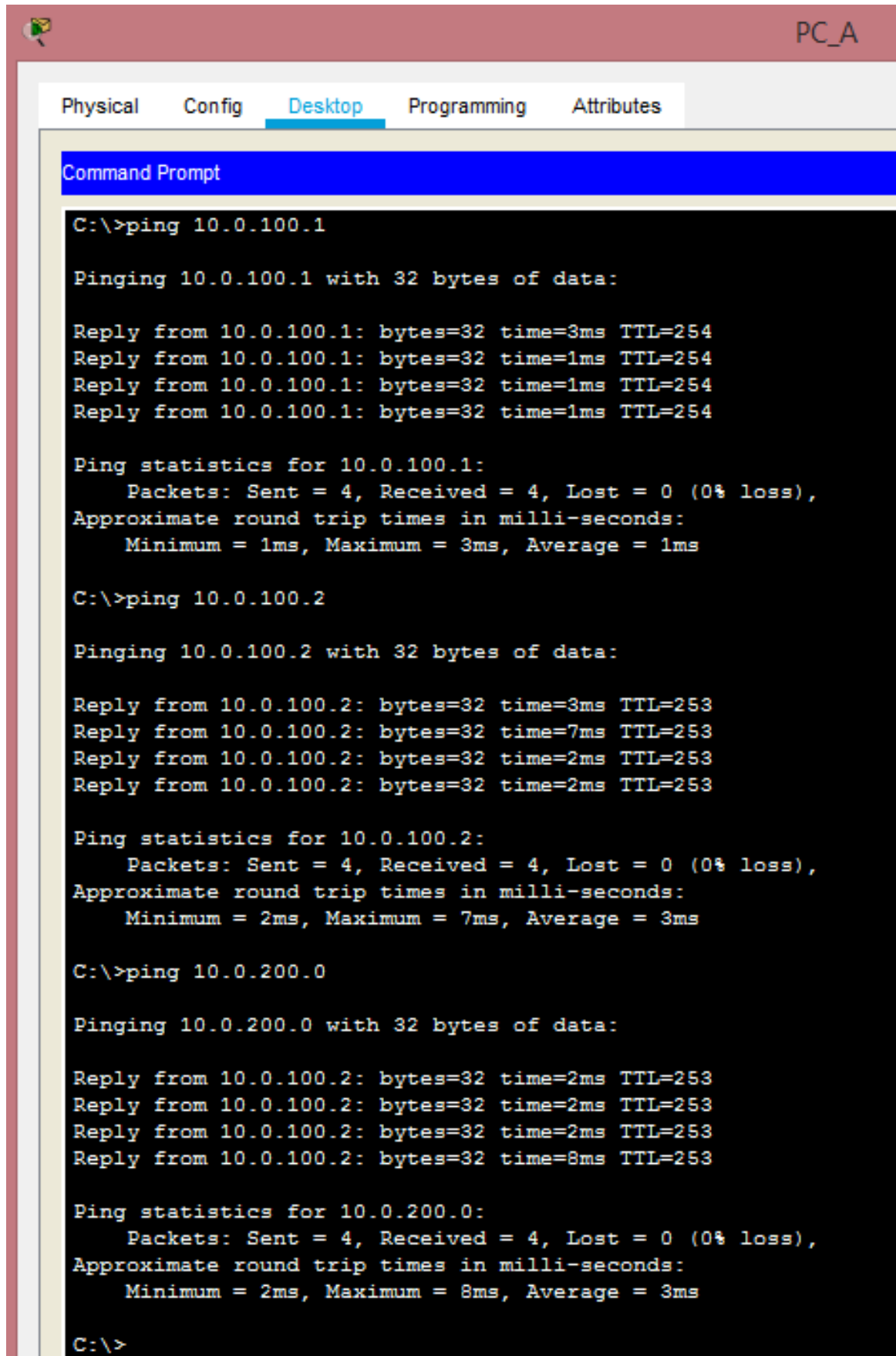
Ajout d'une route statique sur LAB_I pour que les paquets en provenance de 192.168.10.0 puisse être envoyer via le protocole BGP :

```
LAB_I_RIP_OSPF>en
LAB_I_RIP_OSPF>enable
LAB_I_RIP_OSPF#conf
LAB_I_RIP_OSPF#configure
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line.  End with CNTL/Z.
LAB_I_RIP_OSPF(config)#ip rou
LAB_I_RIP_OSPF(config)#ip route 0.0.0.0 0.0.0.0 192.168.91.2
LAB_I_RIP_OSPF(config)#
LAB_I_RIP_OSPF(config)#
```

Ajout d'une route statique sur LAB_A pour que les paquets en direction de 10.0.100.0 puisse être envoyer au routeur LAB_I en utilisant la bonne adresse, pour que les paquets puissent être envoyer via le protocole BGP :

```
LAB_A>en
LAB_A>enable
LAB_A#conf
LAB_A#configure
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line.  End with CNTL/Z.
LAB_A(config)#ip rou
LAB_A(config)#ip route 0.0.0.0 0.0.0.0 192.168.90.2
LAB_A(config)#
```

TP Routage RIP, OSPF et BGP

Test de Ping depuis le PC_A (192.168.10.10) vers les différents réseaux utilisant le protocole BGP :

Différents tests de redistribution des routes au niveau des routeur LAB_I et ISPB en BGP :

LAB_I_RIP_OSPF_BGP200 — IOS Command Line Interface

```
LAB_I_RIP_OSPF(config-router)#exit
LAB_I_RIP_OSPF(config)#rou
LAB_I_RIP_OSPF(config)#router bg
LAB_I_RIP_OSPF(config)#router bgp 200
LAB_I_RIP_OSPF(config-router)#ne
LAB_I_RIP_OSPF(config-router)#nei
LAB_I_RIP_OSPF(config-router)#neighbor 10.0.100.2 re
LAB_I_RIP_OSPF(config-router)#neighbor 10.0.100.2 remote-as 100
LAB_I_RIP_OSPF(config-router)#re
LAB_I_RIP_OSPF(config-router)#redistribute os
LAB_I_RIP_OSPF(config-router)#redistribute ospf 1
LAB_I_RIP_OSPF(config-router)#exit
LAB_I_RIP_OSPF(config)#r
LAB_I_RIP_OSPF(config)#rou
LAB_I_RIP_OSPF(config)#router bg
LAB_I_RIP_OSPF(config)#router bgp 200
LAB_I_RIP_OSPF(config-router)#red
LAB_I_RIP_OSPF(config-router)#redistribute os
LAB_I_RIP_OSPF(config-router)#redistribute ospf 1 m
LAB_I_RIP_OSPF(config-router)#redistribute ospf 1 match ex
LAB_I_RIP_OSPF(config-router)#redistribute ospf 1 match external
LAB_I_RIP_OSPF(config-router)#
LAB_I_RIP_OSPF(config-router)#
LAB_I_RIP_OSPF#
%SYS-5-CONFIG_I: Configured from console by console

LAB_I_RIP_OSPF#sh
LAB_I_RIP_OSPF#show ip
LAB_I_RIP_OSPF#show ip bg
LAB_I_RIP_OSPF#show ip bgp
BGP table version is 30, local router ID is 192.168.100.2
Status codes: s suppressed, d damped, h history, * valid, > best, i -
internal,
           r RIB-failure, S Stale
Origin codes: i - IGP, e - EGP, ? - incomplete

   Network          Next Hop         Metric LocPrf Weight Path
*  10.0.100.0/24    10.0.100.2            0      0      0 100 ?
*                   10.0.100.2            0      0      0 100 ?
*> 10.0.200.0/24    10.0.100.2            0      0      0 100 ?
*> 20.0.100.0/24    10.0.100.2            0      0      0 100 ?
*> 192.168.0.0/24   192.168.100.1         0      0      0 200 ?
*> 192.168.1.128/26 192.168.100.1         0      0      0 200 ?
*> 192.168.10.0/24  0.0.0.0               0      0      0 200 i
*> 192.168.100.0/24 0.0.0.0               0      0  32768 i
*                   192.168.100.0         0      0      0 200 ?
*> 192.168.200.0/24 192.168.100.1         0      0      0 200 ?

LAB_I_RIP_OSPF#ip
LAB_I_RIP_OSPF#ip r
LAB_I_RIP_OSPF#sh
LAB_I_RIP_OSPF#show ip rou
LAB_I_RIP_OSPF#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
```

ISPB_OSPF_BGP100 — IOS Command Line Interface

```
ISPB(config)#id
ISPB(config)#rout
ISPB(config)#router bg
ISPB(config)#router bgp 100
ISPB(config-router)#re
ISPB(config-router)#redistribute ois
ISPB(config-router)#redistribute os
ISPB(config-router)#redistribute ospf 1
ISPB(config-router)#ac
ISPB(config-router)#acce
ISPB(config-router)#acces
ISPB(config-router)#exit
ISPB(config)#rou
ISPB(config)#router bg
ISPB(config)#router bgp 100
ISPB(config-router)#red
ISPB(config-router)#redistribute os
ISPB(config-router)#redistribute ospf 1 m
ISPB(config-router)#redistribute ospf 1 match ex
ISPB(config-router)#redistribute ospf 1 match external
ISPB(config-router)#red
ISPB(config-router)#redistribute os
ISPB(config-router)#redistribute ospf 1 ma
ISPB(config-router)#redistribute ospf 1 match ex
ISPB(config-router)#redistribute ospf 1 match external 1
ISPB(config-router)#redistribute ospf 1 match external 1 ex
ISPB(config-router)#redistribute ospf 1 match external 1 external 2
ISPB(config-router)#nei
ISPB(config-router)#neighbor 10.0.100.1 re
ISPB(config-router)#neighbor 10.0.100.1 remote-as 200
ISPB(config-router)#
ISPB#
%SYS-5-CONFIG_I: Configured from console by console

ISPB#sh
ISPB#show ip bg
ISPB#show ip bgp
BGP table version is 36, local router ID is 20.0.100.1
Status codes: s suppressed, d damped, h history, * valid, > best, i -
internal,
           r RIB-failure, S Stale
Origin codes: i - IGP, e - EGP, ? - incomplete

   Network          Next Hop         Metric LocPrf Weight Path
*> 10.0.100.0/24    0.0.0.0               0      0  32768 i
*                   10.0.100.0            0      0      0 100 ?
*> 10.0.200.0/24    0.0.0.0               0      0  32768 i
*                   10.0.200.0            0      0      0 100 ?
*> 20.0.100.0/24    0.0.0.0               0      0  32768 i
*                   20.0.100.0            0      0      0 100 ?
*> 192.168.0.0/24   10.0.100.1            0      0      0 200 ?
*> 192.168.1.128/26 10.0.100.1            0      0      0 200 ?
*> 192.168.10.0/24  10.0.100.1            0      0      0 200 i
*> 192.168.100.0/24 10.0.100.1            0      0      0 200 ?
*> 192.168.200.0/24 10.0.100.1            0      0      0 200 ?

ISPB#
```

TP Routage RIP, OSPF et BGP

Affichage des routes avec show ip route et show ip bgp :

```
LAB_I_RIP_OSPF#show ip bgp
BGP table version is 30, local router ID is 192.168.100.2
Status codes: s suppressed, d damped, h history, * valid, > best, i -
internal,
            r RIB-failure, S Stale
Origin codes: i - IGP, e - EGP, ? - incomplete

   Network          Next Hop         Metric LocPrf Weight Path
*  10.0.100.0/24    10.0.100.2            0      0      0 100 ?
*                   10.0.100.2            0      0      0 100 ?
*> 10.0.200.0/24    10.0.100.2            0      0      0 100 ?
*> 20.0.100.0/24    10.0.100.2            0      0      0 100 ?
*> 192.168.0.0/24   192.168.100.1         0      0      0 200 ?
*> 192.168.1.128/26 192.168.100.1         0      0      0 200 ?
*> 192.168.10.0/24  0.0.0.0               0      0      0 200 i
*> 192.168.100.0/24 0.0.0.0               0      0  32768 i
*                   192.168.100.0         0      0      0 200 ?
*> 192.168.200.0/24 192.168.100.1         0      0      0 200 ?

LAB_I_RIP_OSPF#
```

```
ISPB#sh
ISPB#show ip rou
ISPB#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

     10.0.0.0/24 is subnetted, 2 subnets
C       10.0.100.0 is directly connected, Serial2/0
C       10.0.200.0 is directly connected, FastEthernet1/0
     20.0.0.0/24 is subnetted, 1 subnets
C       20.0.100.0 is directly connected, FastEthernet0/0
B    192.168.0.0/24 [20/65] via 10.0.100.1, 00:00:00
     192.168.1.0/26 is subnetted, 1 subnets
B       192.168.1.128 [20/129] via 10.0.100.1, 00:00:00
B    192.168.10.0/24 [20/0] via 10.0.100.1, 00:00:00
B    192.168.100.0/24 [20/20] via 10.0.100.1, 00:00:00
B    192.168.200.0/24 [20/128] via 10.0.100.1, 00:00:00

ISPB#
```

Conclusion :

Je m'excuse, car je ne suis pas sûr d'avoir utilisé la meilleure méthode pour la configuration du réseau connecté en BGP, après recherche sur le site de Cisco j'avais trouvé d'autres façon de faire avec de l'internal BGP (iBGP) mais celui-ci n'était pas autorisé dans la version de « packettracer » les autres ne respectait pas la consigne demandé dans le TP.

Si cela est possible, pourriez-vous nous faire parvenir ultérieurement une explication de la configuration à mettre en place pour permettre une bonne redistribution des routes en BGP ?

TP Routage RIP, OSPF et BGP