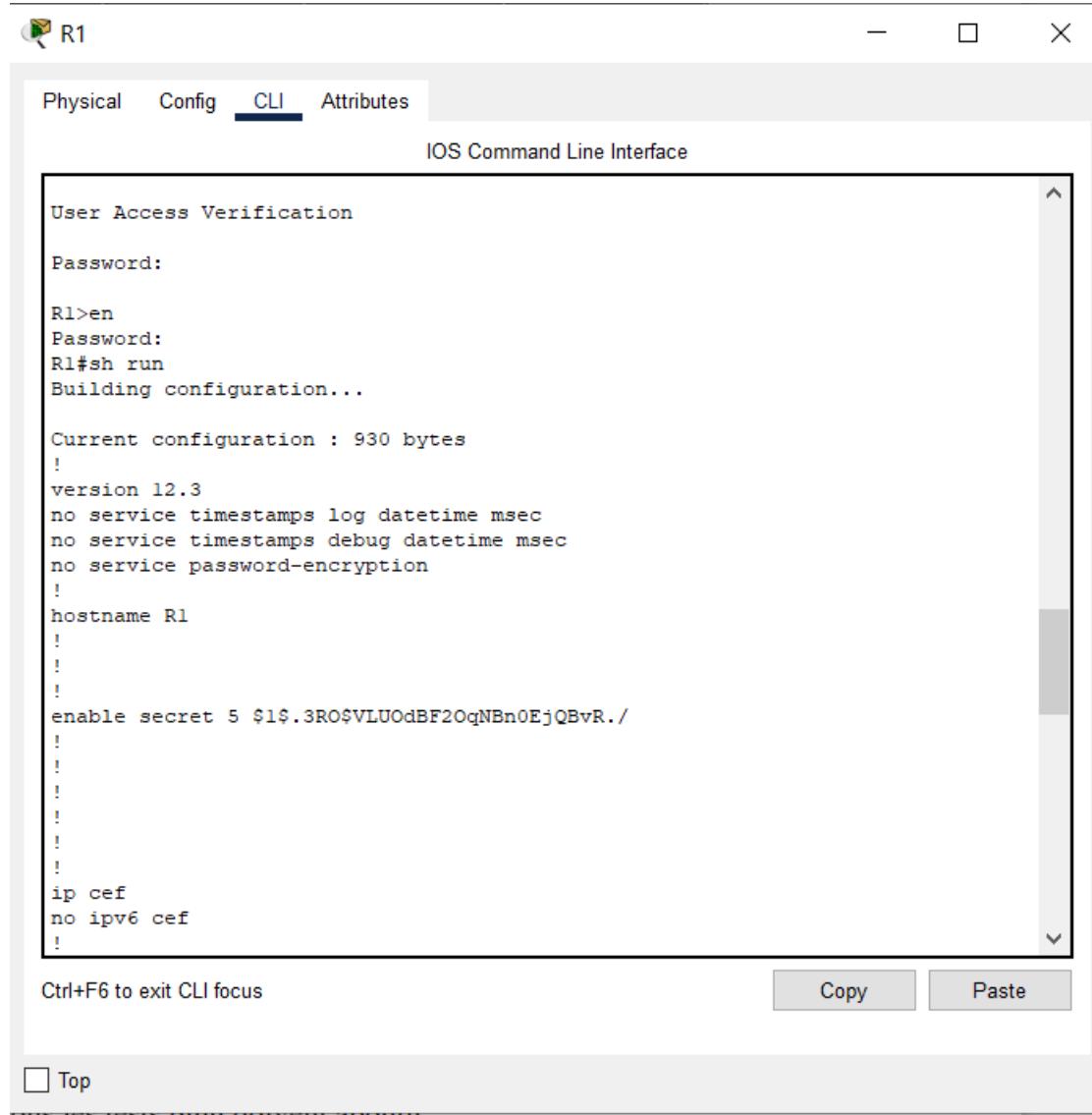


## TP10 : Route statique résumée et route par défaut

### 1. Examen des routes statiques.



```
User Access Verification

Password:

R1>en
Password:
R1#sh run
Building configuration...

Current configuration : 930 bytes
!
version 12.3
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname R1
!
!
!
enable secret 5 $1$.3RO$VLUOdBF2OqNBn0EjQBvR./
!
!
!
!
!
ip cef
no ipv6 cef
!
```

Ctrl+F6 to exit CLI focus     

Top

**1ère étape :** Depuis R1 nous utilisons la commande « sh run » afin de connaître le mode de configuration actuel du routage statique.

```
ip classless
ip route 172.16.1.0 255.255.255.0 Serial0/0/0
ip route 192.168.1.0 255.255.255.0 Serial0/0/0
ip route 192.168.2.0 255.255.255.0 Serial0/0/0
```

```

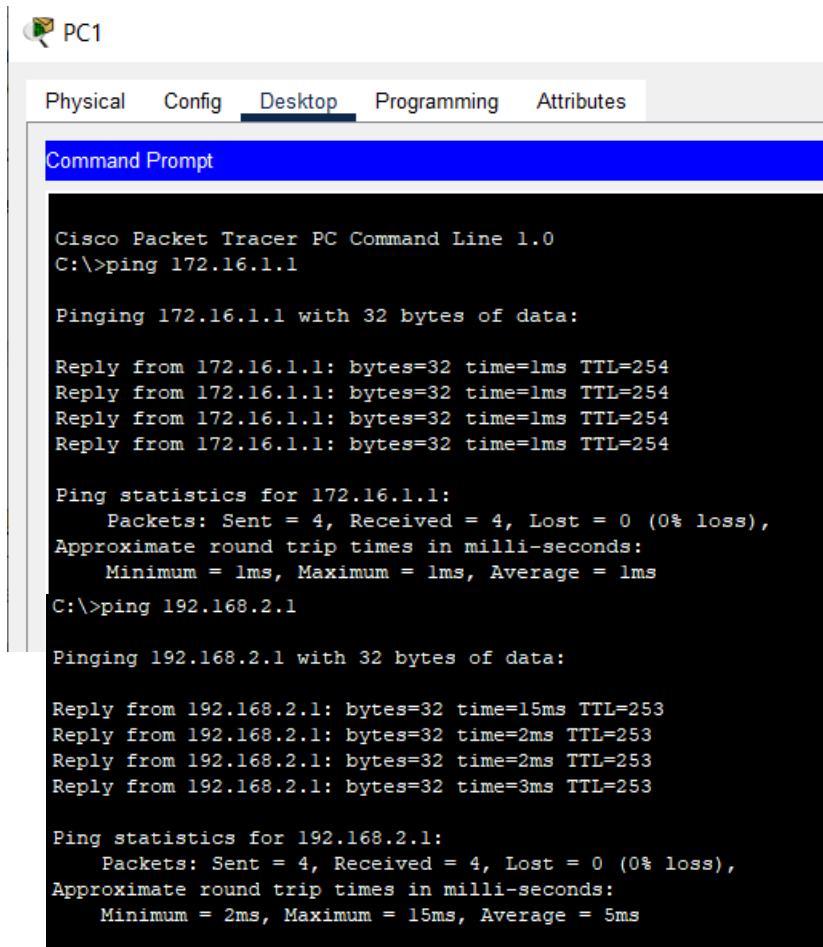
R1#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
      D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
      N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
      E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
      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

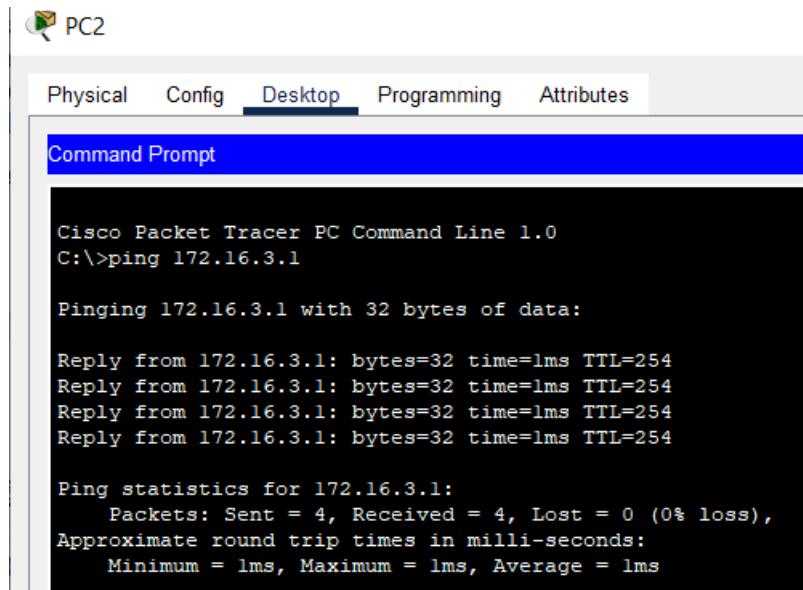
      172.16.0.0/24 is subnetted, 3 subnets
S        172.16.1.0 is directly connected, Serial0/0/0
C        172.16.2.0 is directly connected, Serial0/0/0
C        172.16.3.0 is directly connected, FastEthernet0/0
S        192.168.1.0/24 is directly connected, Serial0/0/0
S        192.168.2.0/24 is directly connected, Serial0/0/0

```

**2ème étape :** La commande « **show ip route** » permet de constater l'effet de cette configuration.



**3ème étape :** Depuis PC1 nous effectuons un ping vers les deux autres pc.



PC2

Physical Config Desktop Programming Attributes

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 172.16.3.1

Pinging 172.16.3.1 with 32 bytes of data:

Reply from 172.16.3.1: bytes=32 time=1ms TTL=254

Ping statistics for 172.16.3.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 1ms, Average = 1ms
```

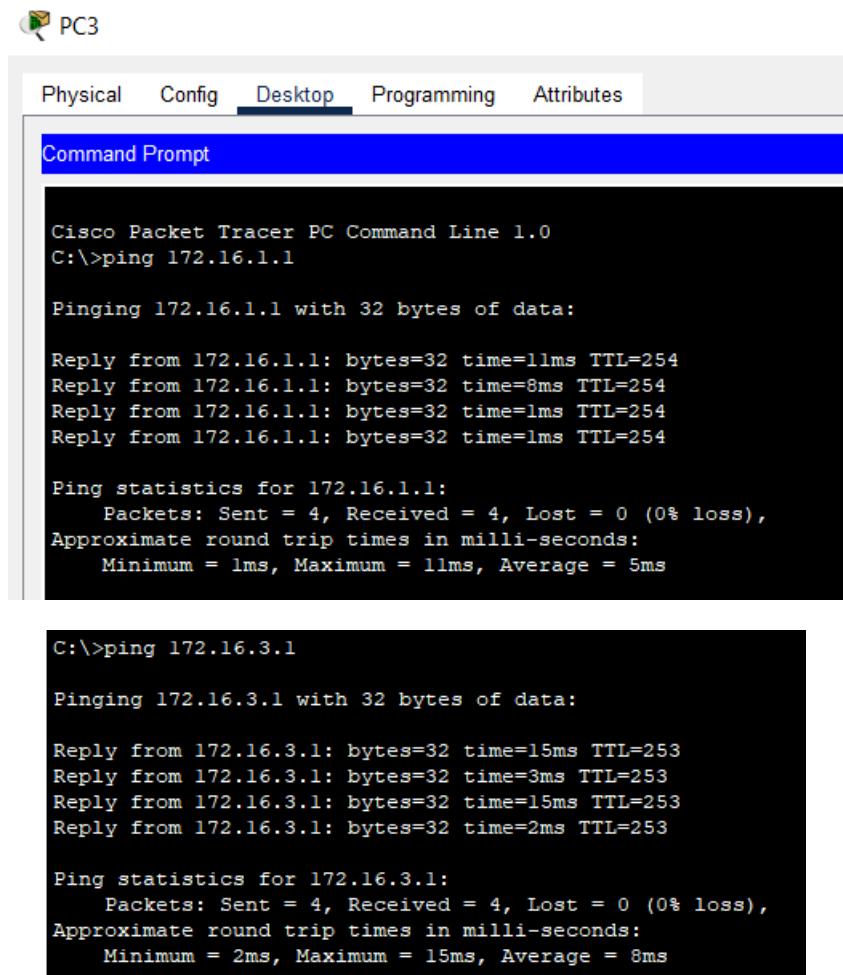
```
C:\>ping 192.168.2.1

Pinging 192.168.2.1 with 32 bytes of data:

Reply from 192.168.2.1: bytes=32 time=11ms TTL=254
Reply from 192.168.2.1: bytes=32 time=8ms TTL=254
Reply from 192.168.2.1: bytes=32 time=1ms TTL=254
Reply from 192.168.2.1: bytes=32 time=1ms TTL=254

Ping statistics for 192.168.2.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 11ms, Average = 5ms
```

**4ème étape :** Depuis PC2 nous effectuons un ping vers les deux autres pc.



The image shows the Cisco Packet Tracer PC Command Line interface. It has a menu bar with tabs: Physical, Config, Desktop, Programming, and Attributes. The 'Desktop' tab is currently selected. Below the menu is a blue header bar labeled 'Command Prompt'. The main window displays two separate ping sessions.

```

Cisco Packet Tracer PC Command Line 1.0
C:\>ping 172.16.1.1

Pinging 172.16.1.1 with 32 bytes of data:

Reply from 172.16.1.1: bytes=32 time=11ms TTL=254
Reply from 172.16.1.1: bytes=32 time=8ms TTL=254
Reply from 172.16.1.1: bytes=32 time=1ms TTL=254
Reply from 172.16.1.1: bytes=32 time=1ms TTL=254

Ping statistics for 172.16.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 11ms, Average = 5ms

C:\>ping 172.16.3.1

Pinging 172.16.3.1 with 32 bytes of data:

Reply from 172.16.3.1: bytes=32 time=15ms TTL=253
Reply from 172.16.3.1: bytes=32 time=3ms TTL=253
Reply from 172.16.3.1: bytes=32 time=15ms TTL=253
Reply from 172.16.3.1: bytes=32 time=2ms TTL=253

Ping statistics for 172.16.3.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 2ms, Maximum = 15ms, Average = 8ms

```

**5ème étape :** Depuis PC3 nous effectuons un ping vers les deux autres pc.

## 2. Résumé des routes statiques.

```

R3>en
Password:
R3#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R3(config)#no ip route 172.16.1.0 255.255.255.0 s0/0/1
R3(config)#no ip route 172.16.2.0 255.255.255.0 s0/0/1
R3(config)#no ip route 172.16.3.0 255.255.255.0 s0/0/1
R3(config)#ip route 172.16.0.0 255.255.255.0 192.168.1.2
R3(config)#

```

**1ère étape :** Après être entré en mode configuration globale nous entrons les commandes ci-dessus.

```
R3(config)#^Z
R3#
%SYS-5-CONFIG_I: Configured from console by console

R3#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
R3#
```

**2ème étape :** Ici nous quittons le mode configuration afin d'exécuter la commande « **copy run start** » pour enregistrer celle-ci.

```
R3#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
S        172.16.0.0 [1/0] via 192.168.1.2
C        192.168.1.0/24 is directly connected, Serial0/0/1
C        192.168.2.0/24 is directly connected, FastEthernet0/0
```

**3ème étape :** Depuis R3 nous effectuons la commande « **show ip route** » pour examiner l'effet de la configuration une fois modifiée.

```
C:\>ping 172.16.1.1

Pinging 172.16.1.1 with 32 bytes of data:

Reply from 192.168.2.1: Destination host unreachable.

Ping statistics for 172.16.1.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

```
C:\>ping 172.16.3.1

Pinging 172.16.3.1 with 32 bytes of data:

Reply from 192.168.2.1: Destination host unreachable.

Ping statistics for 172.16.3.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

**4ème étape :** Nous effectuons un ping depuis PC3 vers les deux autres pc.

### **3. Configuration d'un réseau d'extrémité.**

```
R1(config)#no ip route 172.16.1.0 255.255.255.0 s0/0/0
R1(config)#no ip route 192.168.1.0 255.255.255.0 s0/0/0
R1(config)#no ip route 192.168.2.0 255.255.255.0 s0/0/0

R1(config)#ip route 0.0.0.0 0.0.0.0 172.16.2.2
R1(config)#[
```

**1ère étape :** Sur R1 en mode configuration nous entrons les commandes ci-dessus.

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

**2ème étape :** Nous enregistrons les modifications avec la commande « copy run start ».

```

R1#
R1#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 172.16.2.2 to network 0.0.0.0

      172.16.0.0/24 is subnetted, 3 subnets
S        172.16.1.0 is directly connected, Serial0/0/0
C        172.16.2.0 is directly connected, Serial0/0/0
C        172.16.3.0 is directly connected, FastEthernet0/0
S        192.168.1.0/24 is directly connected, Serial0/0/0
S        192.168.2.0/24 is directly connected, Serial0/0/0
S*       0.0.0.0/0 [1/0] via 172.16.2.2

```

**3ème étape :** Sur R1 avec la commande « **show ip route** » nous examinons l'effet des modifications de la configuration.

```

C:\>ping 172.16.1.1

Pinging 172.16.1.1 with 32 bytes of data:

Reply from 172.16.1.1: bytes=32 time=1ms TTL=254
Reply from 172.16.1.1: bytes=32 time=1ms TTL=254
Reply from 172.16.1.1: bytes=32 time=1ms TTL=254
Reply from 172.16.1.1: bytes=32 time=9ms TTL=254

Ping statistics for 172.16.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 9ms, Average = 3ms

C:\>ping 192.168.2.1

Pinging 192.168.2.1 with 32 bytes of data:

Reply from 192.168.2.1: bytes=32 time=25ms TTL=253
Reply from 192.168.2.1: bytes=32 time=38ms TTL=253
Reply from 192.168.2.1: bytes=32 time=2ms TTL=253
Reply from 192.168.2.1: bytes=32 time=2ms TTL=253

Ping statistics for 192.168.2.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 2ms, Maximum = 38ms, Average = 16ms

```

**4ème étape :** Depuis PC1 nous effectuons un ping vers les deux autres pc, nous remarquons qu'ils ont tous aboutis.