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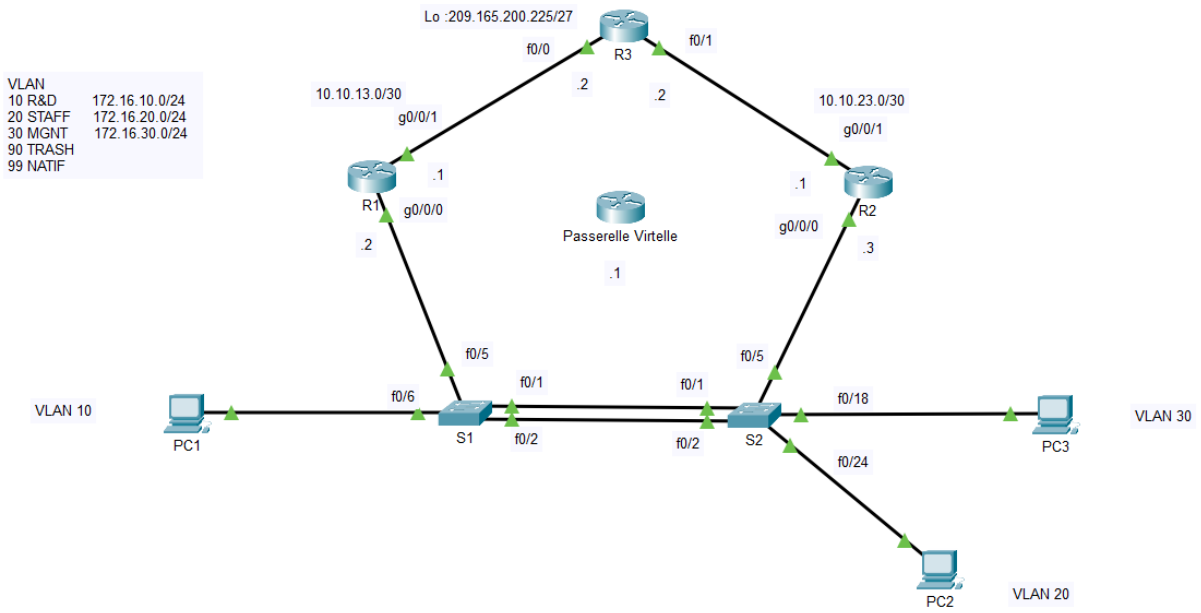


ping depuis PC1 vers PC2

```
root@podd-1:~# ping 172.16.20.32
PING 172.16.20.32 (172.16.20.32) 56(84) bytes of data.
64 bytes from 172.16.20.32: icmp_seq=1 ttl=63 time=2.40 ms
64 bytes from 172.16.20.32: icmp_seq=2 ttl=63 time=0.543 ms
64 bytes from 172.16.20.32: icmp_seq=3 ttl=63 time=0.622 ms
64 bytes from 172.16.20.32: icmp_seq=4 ttl=63 time=0.563 ms
64 bytes from 172.16.20.32: icmp_seq=5 ttl=63 time=0.569 ms
64 bytes from 172.16.20.32: icmp_seq=6 ttl=63 time=0.692 ms
^C
--- 172.16.20.32 ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5101ms
rtt min/avg/max/mdev = 0.543/0.897/2.396/0.671 ms
root@podd-1:~#
```

ping depuis PC1 vers PC3

```
root@podd-1:~# ping 172.16.30.32
PING 172.16.30.32 (172.16.30.32) 56(84) bytes of data.
64 bytes from 172.16.30.32: icmp_seq=1 ttl=63 time=1.67 ms
64 bytes from 172.16.30.32: icmp_seq=2 ttl=63 time=0.604 ms
64 bytes from 172.16.30.32: icmp_seq=3 ttl=63 time=0.536 ms
64 bytes from 172.16.30.32: icmp_seq=4 ttl=63 time=0.538 ms
64 bytes from 172.16.30.32: icmp_seq=5 ttl=63 time=0.532 ms
64 bytes from 172.16.30.32: icmp_seq=6 ttl=63 time=0.597 ms
^C
--- 172.16.30.32 ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5100ms
rtt min/avg/max/mdev = 0.532/0.745/1.666/0.412 ms
root@podd-1:~#
```

ping depuis PC1 vers S1

```
root@podd-1:~# ping 172.16.30.11
PING 172.16.30.11 (172.16.30.11) 56(84) bytes of data.
64 bytes from 172.16.30.11: icmp_seq=3 ttl=254 time=2.95 ms
64 bytes from 172.16.30.11: icmp_seq=4 ttl=254 time=2.69 ms
64 bytes from 172.16.30.11: icmp_seq=5 ttl=254 time=2.12 ms
64 bytes from 172.16.30.11: icmp_seq=6 ttl=254 time=1.73 ms
64 bytes from 172.16.30.11: icmp_seq=7 ttl=254 time=1.01 ms
64 bytes from 172.16.30.11: icmp_seq=8 ttl=254 time=1.13 ms
^C
--- 172.16.30.11 ping statistics ---
8 packets transmitted, 6 received, 25% packet loss, time 7060ms
rtt min/avg/max/mdev = 1.006/1.937/2.949/0.727 ms
root@podd-1:~#
```

ping depuis PC1 vers S2 :

```
root@podd-1:~# ping 172.16.30.12
PING 172.16.30.12 (172.16.30.12) 56(84) bytes of data.
64 bytes from 172.16.30.12: icmp_seq=3 ttl=254 time=2.74 ms
64 bytes from 172.16.30.12: icmp_seq=4 ttl=254 time=1.03 ms
64 bytes from 172.16.30.12: icmp_seq=5 ttl=254 time=0.929 ms
64 bytes from 172.16.30.12: icmp_seq=6 ttl=254 time=1.08 ms
64 bytes from 172.16.30.12: icmp_seq=7 ttl=254 time=0.896 ms
64 bytes from 172.16.30.12: icmp_seq=8 ttl=254 time=0.914 ms
64 bytes from 172.16.30.12: icmp_seq=9 ttl=254 time=0.985 ms
^C
--- 172.16.30.12 ping statistics ---
9 packets transmitted, 7 received, 22.2222% packet loss, time 8059ms
rtt min/avg/max/mdev = 0.896/1.224/2.737/0.620 ms
root@podd-1:~#
```

ping depuis PC1 vers R1

```
root@podd-1:~# ping 172.16.10.2
PING 172.16.10.2 (172.16.10.2) 56(84) bytes of data.
64 bytes from 172.16.10.2: icmp_seq=1 ttl=255 time=18.1 ms
64 bytes from 172.16.10.2: icmp_seq=2 ttl=255 time=0.326 ms
64 bytes from 172.16.10.2: icmp_seq=3 ttl=255 time=0.376 ms
64 bytes from 172.16.10.2: icmp_seq=4 ttl=255 time=0.609 ms
64 bytes from 172.16.10.2: icmp_seq=5 ttl=255 time=0.369 ms
64 bytes from 172.16.10.2: icmp_seq=6 ttl=255 time=0.335 ms
^V64 bytes from 172.16.10.2: icmp_seq=7 ttl=255 time=0.345 ms
64 bytes from 172.16.10.2: icmp_seq=8 ttl=255 time=0.366 ms
^C
--- 172.16.10.2 ping statistics ---
8 packets transmitted, 8 received, 0% packet loss, time 7135ms
rtt min/avg/max/mdev = 0.326/2.602/18.095/5.856 ms
root@podd-1:~#
```

ping depuis PC1 vers R2

```
root@podd-1:~# ping 172.16.10.3
PING 172.16.10.3 (172.16.10.3) 56(84) bytes of data.
64 bytes from 172.16.10.3: icmp_seq=1 ttl=255 time=0.747 ms
64 bytes from 172.16.10.3: icmp_seq=2 ttl=255 time=0.885 ms
64 bytes from 172.16.10.3: icmp_seq=3 ttl=255 time=0.697 ms
64 bytes from 172.16.10.3: icmp_seq=4 ttl=255 time=0.955 ms
64 bytes from 172.16.10.3: icmp_seq=5 ttl=255 time=0.875 ms
64 bytes from 172.16.10.3: icmp_seq=6 ttl=255 time=0.688 ms
^C
--- 172.16.10.3 ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5086ms
rtt min/avg/max/mdev = 0.688/0.807/0.955/0.102 ms
root@podd-1:~#
```

ping depuis PC1 vers Loopback de R3 :

```
root@podd-1:~# ping 209.165.200.225
PING 209.165.200.225 (209.165.200.225) 56(84) bytes of data.
64 bytes from 209.165.200.225: icmp_seq=1 ttl=254 time=2.11 ms
64 bytes from 209.165.200.225: icmp_seq=2 ttl=254 time=1.17 ms
64 bytes from 209.165.200.225: icmp_seq=3 ttl=254 time=1.16 ms
64 bytes from 209.165.200.225: icmp_seq=4 ttl=254 time=1.15 ms
64 bytes from 209.165.200.225: icmp_seq=5 ttl=254 time=1.29 ms
64 bytes from 209.165.200.225: icmp_seq=6 ttl=254 time=1.10 ms
^C
--- 209.165.200.225 ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5005ms
rtt min/avg/max/mdev = 1.104/1.329/2.105/0.351 ms
root@podd-1:~#
```

ping depuis PC1 vers l'interface WAN de R3 :

```
root@podd-1:~# ping 10.10.13.2
PING 10.10.13.2 (10.10.13.2) 56(84) bytes of data.
64 bytes from 10.10.13.2: icmp_seq=1 ttl=254 time=1.08 ms
64 bytes from 10.10.13.2: icmp_seq=2 ttl=254 time=1.06 ms
64 bytes from 10.10.13.2: icmp_seq=3 ttl=254 time=1.06 ms
64 bytes from 10.10.13.2: icmp_seq=4 ttl=254 time=1.24 ms
64 bytes from 10.10.13.2: icmp_seq=5 ttl=254 time=1.07 ms
64 bytes from 10.10.13.2: icmp_seq=6 ttl=254 time=1.11 ms
^C
--- 10.10.13.2 ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5006ms
rtt min/avg/max/mdev = 1.057/1.103/1.239/0.063 ms
root@podd-1:~#
```

ping depuis PC1 vers la passerelle virtuelle

```
root@podd-1:~# ping 172.16.10.1
PING 172.16.10.1 (172.16.10.1) 56(84) bytes of data.
64 bytes from 172.16.10.1: icmp_seq=1 ttl=255 time=1.08 ms
64 bytes from 172.16.10.1: icmp_seq=2 ttl=255 time=1.07 ms
64 bytes from 172.16.10.1: icmp_seq=3 ttl=255 time=1.00 ms
64 bytes from 172.16.10.1: icmp_seq=4 ttl=255 time=1.02 ms
64 bytes from 172.16.10.1: icmp_seq=5 ttl=255 time=0.990 ms
64 bytes from 172.16.10.1: icmp_seq=6 ttl=255 time=1.06 ms
^C
--- 172.16.10.1 ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5006ms
rtt min/avg/max/mdev = 0.990/1.037/1.080/0.034 ms
root@podd-1:~#
```

ping depuis PC2 vers PC1

```
root@podd-2:~# ping 172.16.10.32
PING 172.16.10.32 (172.16.10.32) 56(84) bytes of data.
64 bytes from 172.16.10.32: icmp_seq=1 ttl=63 time=0.536 ms
64 bytes from 172.16.10.32: icmp_seq=2 ttl=63 time=0.581 ms
64 bytes from 172.16.10.32: icmp_seq=3 ttl=63 time=0.575 ms
64 bytes from 172.16.10.32: icmp_seq=4 ttl=63 time=0.606 ms
64 bytes from 172.16.10.32: icmp_seq=5 ttl=63 time=0.597 ms
^C
--- 172.16.10.32 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4085ms
rtt min/avg/max/mdev = 0.536/0.579/0.606/0.024 ms
root@podd-2:~#
```

ping depuis PC2 vers PC3

```
root@podd-2:~# ping 172.16.30.32
PING 172.16.30.32 (172.16.30.32) 56(84) bytes of data.
64 bytes from 172.16.30.32: icmp_seq=1 ttl=63 time=0.800 ms
64 bytes from 172.16.30.32: icmp_seq=2 ttl=63 time=0.779 ms
64 bytes from 172.16.30.32: icmp_seq=3 ttl=63 time=0.542 ms
64 bytes from 172.16.30.32: icmp_seq=4 ttl=63 time=0.569 ms
64 bytes from 172.16.30.32: icmp_seq=5 ttl=63 time=0.596 ms
64 bytes from 172.16.30.32: icmp_seq=6 ttl=63 time=0.591 ms
^C
--- 172.16.30.32 ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5115ms
rtt min/avg/max/mdev = 0.542/0.646/0.800/0.103 ms
root@podd-2:~#
```

ping depuis PC2 vers S1

```
root@podd-2:~# ping 172.16.30.11
PING 172.16.30.11 (172.16.30.11) 56(84) bytes of data.
64 bytes from 172.16.30.11: icmp_seq=1 ttl=254 time=2.16 ms
64 bytes from 172.16.30.11: icmp_seq=2 ttl=254 time=2.34 ms
64 bytes from 172.16.30.11: icmp_seq=3 ttl=254 time=2.32 ms
64 bytes from 172.16.30.11: icmp_seq=4 ttl=254 time=3.01 ms
64 bytes from 172.16.30.11: icmp_seq=5 ttl=254 time=1.73 ms
64 bytes from 172.16.30.11: icmp_seq=6 ttl=254 time=2.31 ms
^C
--- 172.16.30.11 ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5007ms
rtt min/avg/max/mdev = 1.727/2.308/3.005/0.375 ms
root@podd-2:~#
```

ping depuis PC2 vers S2

```
root@podd-2:~# ping 172.16.30.12
PING 172.16.30.12 (172.16.30.12) 56(84) bytes of data.
64 bytes from 172.16.30.12: icmp_seq=1 ttl=254 time=0.968 ms
64 bytes from 172.16.30.12: icmp_seq=2 ttl=254 time=1.05 ms
64 bytes from 172.16.30.12: icmp_seq=3 ttl=254 time=1.01 ms
64 bytes from 172.16.30.12: icmp_seq=4 ttl=254 time=0.901 ms
64 bytes from 172.16.30.12: icmp_seq=5 ttl=254 time=0.929 ms
64 bytes from 172.16.30.12: icmp_seq=6 ttl=254 time=1.02 ms
^C
--- 172.16.30.12 ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5009ms
rtt min/avg/max/mdev = 0.901/0.979/1.046/0.051 ms
root@podd-2:~#
```

ping depuis PC2 vers R1

```
root@podd-2:~# ping 172.16.20.2
PING 172.16.20.2 (172.16.20.2) 56(84) bytes of data.
64 bytes from 172.16.20.2: icmp_seq=1 ttl=255 time=1.45 ms
64 bytes from 172.16.20.2: icmp_seq=2 ttl=255 time=0.388 ms
64 bytes from 172.16.20.2: icmp_seq=3 ttl=255 time=0.503 ms
64 bytes from 172.16.20.2: icmp_seq=4 ttl=255 time=0.450 ms
64 bytes from 172.16.20.2: icmp_seq=5 ttl=255 time=0.315 ms
64 bytes from 172.16.20.2: icmp_seq=6 ttl=255 time=0.436 ms
^C
--- 172.16.20.2 ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5093ms
rtt min/avg/max/mdev = 0.315/0.591/1.454/0.390 ms
root@podd-2:~#
```

ping depuis PC2 vers R2

```
root@podd-2:~# ping 172.16.20.3
PING 172.16.20.3 (172.16.20.3) 56(84) bytes of data.
64 bytes from 172.16.20.3: icmp_seq=2 ttl=255 time=0.982 ms
64 bytes from 172.16.20.3: icmp_seq=3 ttl=255 time=0.853 ms
64 bytes from 172.16.20.3: icmp_seq=4 ttl=255 time=0.666 ms
64 bytes from 172.16.20.3: icmp_seq=5 ttl=255 time=1.00 ms
64 bytes from 172.16.20.3: icmp_seq=6 ttl=255 time=0.662 ms
64 bytes from 172.16.20.3: icmp_seq=7 ttl=255 time=1.01 ms
^C
--- 172.16.20.3 ping statistics ---
7 packets transmitted, 6 received, 14.2857% packet loss, time 6083ms
rtt min/avg/max/mdev = 0.662/0.861/1.006/0.148 ms
root@podd-2:~#
```

ping depuis PC2 Loopback de R3 :

```
root@podd-2:~# ping 209.165.200.225
PING 209.165.200.225 (209.165.200.225) 56(84) bytes of data.
64 bytes from 209.165.200.225: icmp_seq=1 ttl=254 time=1.14 ms
64 bytes from 209.165.200.225: icmp_seq=2 ttl=254 time=1.06 ms
64 bytes from 209.165.200.225: icmp_seq=3 ttl=254 time=1.17 ms
64 bytes from 209.165.200.225: icmp_seq=4 ttl=254 time=1.08 ms
64 bytes from 209.165.200.225: icmp_seq=5 ttl=254 time=1.14 ms
64 bytes from 209.165.200.225: icmp_seq=6 ttl=254 time=1.14 ms
64 bytes from 209.165.200.225: icmp_seq=7 ttl=254 time=1.14 ms
^C
--- 209.165.200.225 ping statistics ---
7 packets transmitted, 7 received, 0% packet loss, time 6007ms
rtt min/avg/max/mdev = 1.056/1.124/1.172/0.037 ms
root@podd-2:~#
```

ping depuis PC2 vers l'interface WAN de R3 :

```
root@podd-2:~# ping 10.10.23.2
PING 10.10.23.2 (10.10.23.2) 56(84) bytes of data.
64 bytes from 10.10.23.2: icmp_seq=1 ttl=254 time=1.26 ms
64 bytes from 10.10.23.2: icmp_seq=2 ttl=254 time=1.31 ms
64 bytes from 10.10.23.2: icmp_seq=3 ttl=254 time=1.22 ms
64 bytes from 10.10.23.2: icmp_seq=4 ttl=254 time=1.17 ms
64 bytes from 10.10.23.2: icmp_seq=5 ttl=254 time=1.10 ms
64 bytes from 10.10.23.2: icmp_seq=6 ttl=254 time=1.24 ms
64 bytes from 10.10.23.2: icmp_seq=7 ttl=254 time=1.21 ms
^C
--- 10.10.23.2 ping statistics ---
7 packets transmitted, 7 received, 0% packet loss, time 6008ms
rtt min/avg/max/mdev = 1.097/1.215/1.314/0.063 ms
root@podd-2:~#
```

ping depuis PC2 vers la passerelle virtuelle

```
root@podd-2:~# ping 172.16.20.1
PING 172.16.20.1 (172.16.20.1) 56(84) bytes of data.
64 bytes from 172.16.20.1: icmp_seq=1 ttl=255 time=0.922 ms
64 bytes from 172.16.20.1: icmp_seq=2 ttl=255 time=1.08 ms
64 bytes from 172.16.20.1: icmp_seq=3 ttl=255 time=1.01 ms
64 bytes from 172.16.20.1: icmp_seq=4 ttl=255 time=1.12 ms
64 bytes from 172.16.20.1: icmp_seq=5 ttl=255 time=1.05 ms
64 bytes from 172.16.20.1: icmp_seq=6 ttl=255 time=0.941 ms
^C
--- 172.16.20.1 ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5006ms
rtt min/avg/max/mdev = 0.922/1.020/1.116/0.070 ms
root@podd-2:~#
```

ping depuis PC3 vers PC1

```
root@podd-3:~# ping 172.16.10.32
PING 172.16.10.32 (172.16.10.32) 56(84) bytes of data.
64 bytes from 172.16.10.32: icmp_seq=1 ttl=63 time=0.761 ms
64 bytes from 172.16.10.32: icmp_seq=2 ttl=63 time=0.726 ms
64 bytes from 172.16.10.32: icmp_seq=3 ttl=63 time=0.569 ms
64 bytes from 172.16.10.32: icmp_seq=4 ttl=63 time=0.557 ms
64 bytes from 172.16.10.32: icmp_seq=5 ttl=63 time=0.604 ms
64 bytes from 172.16.10.32: icmp_seq=6 ttl=63 time=0.582 ms
^C
--- 172.16.10.32 ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5103ms
rtt min/avg/max/mdev = 0.557/0.633/0.761/0.079 ms
root@podd-3:~#
```

ping depuis PC3 vers PC2

```
root@podd-3:~# ping 172.16.20.32
PING 172.16.20.32 (172.16.20.32) 56(84) bytes of data.
64 bytes from 172.16.20.32: icmp_seq=1 ttl=63 time=0.588 ms
64 bytes from 172.16.20.32: icmp_seq=2 ttl=63 time=0.587 ms
64 bytes from 172.16.20.32: icmp_seq=3 ttl=63 time=0.543 ms
64 bytes from 172.16.20.32: icmp_seq=4 ttl=63 time=0.669 ms
64 bytes from 172.16.20.32: icmp_seq=5 ttl=63 time=0.562 ms
64 bytes from 172.16.20.32: icmp_seq=6 ttl=63 time=0.504 ms
^C
--- 172.16.20.32 ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5109ms
rtt min/avg/max/mdev = 0.504/0.575/0.669/0.050 ms
root@podd-3:~#
```

ping depuis PC3 vers s1

```
root@podd-3:~# ping 172.16.30.11
PING 172.16.30.11 (172.16.30.11) 56(84) bytes of data.
64 bytes from 172.16.30.11: icmp_seq=2 ttl=255 time=0.935 ms
64 bytes from 172.16.30.11: icmp_seq=3 ttl=255 time=1.54 ms
64 bytes from 172.16.30.11: icmp_seq=4 ttl=255 time=1.72 ms
64 bytes from 172.16.30.11: icmp_seq=5 ttl=255 time=1.11 ms
64 bytes from 172.16.30.11: icmp_seq=6 ttl=255 time=2.39 ms
64 bytes from 172.16.30.11: icmp_seq=7 ttl=255 time=0.934 ms
^C
--- 172.16.30.11 ping statistics ---
7 packets transmitted, 6 received, 14.2857% packet loss, time 6029ms
rtt min/avg/max/mdev = 0.934/1.438/2.389/0.517 ms
root@podd-3:~#
```

ping depuis PC3 vers s2

```
root@podd-3:~# ping 172.16.30.12
PING 172.16.30.12 (172.16.30.12) 56(84) bytes of data.
64 bytes from 172.16.30.12: icmp_seq=2 ttl=255 time=0.617 ms
64 bytes from 172.16.30.12: icmp_seq=3 ttl=255 time=0.602 ms
64 bytes from 172.16.30.12: icmp_seq=4 ttl=255 time=0.621 ms
64 bytes from 172.16.30.12: icmp_seq=5 ttl=255 time=0.592 ms
64 bytes from 172.16.30.12: icmp_seq=6 ttl=255 time=0.577 ms
^C
--- 172.16.30.12 ping statistics ---
6 packets transmitted, 5 received, 16.6667% packet loss, time 5100ms
rtt min/avg/max/mdev = 0.577/0.601/0.621/0.016 ms
root@podd-3:~#
```

ping depuis PC3 vers R1

```
root@podd-3:~# ping 172.16.30.2
PING 172.16.30.2 (172.16.30.2) 56(84) bytes of data.
64 bytes from 172.16.30.2: icmp_seq=1 ttl=255 time=1.34 ms
64 bytes from 172.16.30.2: icmp_seq=2 ttl=255 time=0.435 ms
64 bytes from 172.16.30.2: icmp_seq=3 ttl=255 time=0.386 ms
64 bytes from 172.16.30.2: icmp_seq=4 ttl=255 time=0.444 ms
64 bytes from 172.16.30.2: icmp_seq=5 ttl=255 time=0.396 ms
64 bytes from 172.16.30.2: icmp_seq=6 ttl=255 time=0.440 ms
^C
--- 172.16.30.2 ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5096ms
rtt min/avg/max/mdev = 0.386/0.573/1.339/0.343 ms
root@podd-3:~#
```

ping depuis PC3 vers R2

```
root@podd-3:~# ping 172.16.30.3
PING 172.16.30.3 (172.16.30.3) 56(84) bytes of data.
64 bytes from 172.16.30.3: icmp_seq=2 ttl=255 time=0.912 ms
64 bytes from 172.16.30.3: icmp_seq=3 ttl=255 time=0.660 ms
64 bytes from 172.16.30.3: icmp_seq=4 ttl=255 time=0.979 ms
64 bytes from 172.16.30.3: icmp_seq=5 ttl=255 time=0.987 ms
64 bytes from 172.16.30.3: icmp_seq=6 ttl=255 time=0.796 ms
64 bytes from 172.16.30.3: icmp_seq=7 ttl=255 time=0.958 ms
64 bytes from 172.16.30.3: icmp_seq=8 ttl=255 time=0.970 ms
^C
--- 172.16.30.3 ping statistics ---
8 packets transmitted, 7 received, 12.5% packet loss, time 7032ms
rtt min/avg/max/mdev = 0.660/0.894/0.987/0.113 ms
root@podd-3:~#
```

ping depuis PC3 Loopback de R3

```
root@podd-3:~# ping 209.165.200.225
PING 209.165.200.225 (209.165.200.225) 56(84) bytes of data.
64 bytes from 209.165.200.225: icmp_seq=1 ttl=254 time=1.17 ms
64 bytes from 209.165.200.225: icmp_seq=2 ttl=254 time=1.13 ms
64 bytes from 209.165.200.225: icmp_seq=3 ttl=254 time=1.14 ms
64 bytes from 209.165.200.225: icmp_seq=4 ttl=254 time=1.12 ms
64 bytes from 209.165.200.225: icmp_seq=5 ttl=254 time=1.05 ms
64 bytes from 209.165.200.225: icmp_seq=6 ttl=254 time=1.07 ms
^C
--- 209.165.200.225 ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5006ms
rtt min/avg/max/mdev = 1.046/1.113/1.174/0.042 ms
root@podd-3:~#
```

ping depuis PC3 vers l'interface WAN de R3 :

```
root@podd-3:~# ping 10.10.23.2
PING 10.10.23.2 (10.10.23.2) 56(84) bytes of data.
64 bytes from 10.10.23.2: icmp_seq=1 ttl=254 time=1.36 ms
64 bytes from 10.10.23.2: icmp_seq=2 ttl=254 time=1.30 ms
64 bytes from 10.10.23.2: icmp_seq=3 ttl=254 time=1.16 ms
64 bytes from 10.10.23.2: icmp_seq=4 ttl=254 time=1.30 ms
64 bytes from 10.10.23.2: icmp_seq=5 ttl=254 time=1.14 ms
64 bytes from 10.10.23.2: icmp_seq=6 ttl=254 time=1.27 ms
^C
--- 10.10.23.2 ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5007ms
rtt min/avg/max/mdev = 1.144/1.254/1.360/0.078 ms
root@podd-3:~#
```

ping depuis PC3 vers la passerelle virtuelle

```
root@podd-3:~# ping 172.16.30.1
PING 172.16.30.1 (172.16.30.1) 56(84) bytes of data.
64 bytes from 172.16.30.1: icmp_seq=1 ttl=255 time=0.884 ms
64 bytes from 172.16.30.1: icmp_seq=2 ttl=255 time=0.902 ms
64 bytes from 172.16.30.1: icmp_seq=3 ttl=255 time=0.969 ms
64 bytes from 172.16.30.1: icmp_seq=4 ttl=255 time=1.06 ms
64 bytes from 172.16.30.1: icmp_seq=5 ttl=255 time=0.944 ms
64 bytes from 172.16.30.1: icmp_seq=6 ttl=255 time=0.909 ms
^C
--- 172.16.30.1 ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5036ms
rtt min/avg/max/mdev = 0.884/0.945/1.063/0.059 ms
root@podd-3:~#
```

show etherchannel summary sur S1 :

```
S1#sh eth sum
Flags:  D - down        P - bundled in port-channel
        I - stand-alone s - suspended
        H - Hot-standby (LACP only)
        R - Layer3      S - Layer2
        U - in use      f - failed to allocate aggregator

        M - not in use, minimum links not met
        u - unsuitable for bundling
        w - waiting to be aggregated
        d - default port


Number of channel-groups in use: 1
Number of aggregators:           1

Group  Port-channel  Protocol    Ports
------+-------------+-----------+-----------------------------------------------
1      Po1(SU)         LACP      Fa0/1(P)    Fa0/2(P)

S1#
```

show etherchannel summary sur S2 :

```
S2#sh eth sum
Flags:  D - down        P - bundled in port-channel
        I - stand-alone s - suspended
        H - Hot-standby (LACP only)
        R - Layer3      S - Layer2
        U - in use      f - failed to allocate aggregator

        M - not in use, minimum links not met
        u - unsuitable for bundling
        w - waiting to be aggregated
        d - default port


Number of channel-groups in use: 1
Number of aggregators:           1

Group  Port-channel  Protocol    Ports
------+-------------+-----------+-----------------------------------------------
1      Po1(SU)         LACP      Fa0/1(P)    Fa0/2(P)

S2#
```

show interfaces trunk sur S1 :

```
S1#show interfaces trunk

Port        Mode             Encapsulation  Status        Native vlan
Fa0/5       on               802.1q         trunking      99
Po1         on               802.1q         trunking      99

Port        Vlans allowed on trunk
Fa0/5       1-4094
Po1         1-4094

Port        Vlans allowed and active in management domain
Fa0/5       1,10,20,30,90,99
Po1         1,10,20,30,90,99

Port        Vlans in spanning tree forwarding state and not pruned
Fa0/5       1,10,20,30,90,99
Po1         1,10,20,30,90,99
S1#
```

show interfaces trunk sur S2 :

```
S2#show interfaces trunk

Port        Mode             Encapsulation  Status        Native vlan
Fa0/5       on               802.1q         trunking      99
Po1         on               802.1q         trunking      99

Port        Vlans allowed on trunk
Fa0/5       1-4094
Po1         1-4094

Port        Vlans allowed and active in management domain
Fa0/5       1,10,20,30,90,99
Po1         1,10,20,30,90,99

Port        Vlans in spanning tree forwarding state and not pruned
Fa0/5       1,10,20,30,90,99
Po1         1,10,20,30,90,99
S2#
```

show vlan brief sur S1 :

```
S1#sh vlan br

VLAN Name                              Status    Ports
---- --------------------------------- --------- -------------------------------
1    default                           active
10   RD                                active    Fa0/6
20   STAFF                             active
30   MGNT                              active
90   TRASH                             active    Fa0/3, Fa0/4, Fa0/7, Fa0/8
                                                 Fa0/9, Fa0/10, Fa0/11, Fa0/12
                                                 Fa0/13, Fa0/14, Fa0/15, Fa0/16
                                                 Fa0/17, Fa0/18, Fa0/19, Fa0/20
                                                 Fa0/21, Fa0/22, Fa0/23, Fa0/24
                                                 Gi0/1, Gi0/2
99   NATIF                             active
1002 fddi-default                      act/unsup
1003 token-ring-default                act/unsup
1004 fddinet-default                   act/unsup
1005 trnet-default                     act/unsup
S1#
```

show vlan brief sur S2 :

```
S2#sh vlan br

VLAN Name                              Status    Ports
---- --------------------------------- --------- -------------------------------
1    default                           active
10   RD                                active
20   STAFF                             active    Fa0/24
30   MGNT                              active    Fa0/18
90   TRASH                             active    Fa0/3, Fa0/4, Fa0/6, Fa0/7
                                                 Fa0/8, Fa0/9, Fa0/10, Fa0/11
                                                 Fa0/12, Fa0/13, Fa0/14, Fa0/15
                                                 Fa0/16, Fa0/17, Fa0/19, Fa0/20
                                                 Fa0/21, Fa0/22, Fa0/23, Gi0/1
                                                 Gi0/2
99   NATIF                             active
1002 fddi-default                      act/unsup
1003 token-ring-default                act/unsup
1004 fddinet-default                   act/unsup
1005 trnet-default                     act/unsup
S2#
```

sh ip int br sur S1 :

```
S1#sh ip inter br
Interface              IP-Address      OK? Method Status                Protocol
Vlan1                  unassigned      YES unset  up                    up
Vlan30                 172.16.30.11    YES manual up                    up
FastEthernet0/1        unassigned      YES unset  up                    up
FastEthernet0/2        unassigned      YES unset  up                    up
FastEthernet0/3        unassigned      YES unset  administratively down down
FastEthernet0/4        unassigned      YES unset  administratively down down
FastEthernet0/5        unassigned      YES unset  up                    up
FastEthernet0/6        unassigned      YES unset  up                    up
FastEthernet0/7        unassigned      YES unset  administratively down down
FastEthernet0/8        unassigned      YES unset  administratively down down
FastEthernet0/9        unassigned      YES unset  administratively down down
FastEthernet0/10       unassigned      YES unset  administratively down down
FastEthernet0/11       unassigned      YES unset  administratively down down
FastEthernet0/12       unassigned      YES unset  administratively down down
FastEthernet0/13       unassigned      YES unset  administratively down down
FastEthernet0/14       unassigned      YES unset  administratively down down
FastEthernet0/15       unassigned      YES unset  administratively down down
FastEthernet0/16       unassigned      YES unset  administratively down down
FastEthernet0/17       unassigned      YES unset  administratively down down
FastEthernet0/18       unassigned      YES unset  administratively down down
FastEthernet0/19       unassigned      YES unset  administratively down down
FastEthernet0/20       unassigned      YES unset  administratively down down
FastEthernet0/21       unassigned      YES unset  administratively down down
FastEthernet0/22       unassigned      YES unset  administratively down down
FastEthernet0/23       unassigned      YES unset  administratively down down
FastEthernet0/24       unassigned      YES unset  administratively down down
GigabitEthernet0/1     unassigned      YES unset  administratively down down
GigabitEthernet0/2     unassigned      YES unset  administratively down down
Port-channel1          unassigned      YES unset  up                    up
S1#
```

sh ip int br sur S2:

```
S2#sh ip inter br
Interface              IP-Address      OK? Method Status                Protocol
Vlan1                  unassigned      YES unset  administratively down down
Vlan30                 172.16.30.12    YES manual up                    up
FastEthernet0/1        unassigned      YES unset  up                    up
FastEthernet0/2        unassigned      YES unset  up                    up
FastEthernet0/3        unassigned      YES unset  administratively down down
FastEthernet0/4        unassigned      YES unset  administratively down down
FastEthernet0/5        unassigned      YES unset  up                    up
FastEthernet0/6        unassigned      YES unset  administratively down down
FastEthernet0/7        unassigned      YES unset  administratively down down
FastEthernet0/8        unassigned      YES unset  administratively down down
FastEthernet0/9        unassigned      YES unset  administratively down down
FastEthernet0/10       unassigned      YES unset  administratively down down
FastEthernet0/11       unassigned      YES unset  administratively down down
FastEthernet0/12       unassigned      YES unset  administratively down down
FastEthernet0/13       unassigned      YES unset  administratively down down
FastEthernet0/14       unassigned      YES unset  administratively down down
FastEthernet0/15       unassigned      YES unset  administratively down down
FastEthernet0/16       unassigned      YES unset  administratively down down
FastEthernet0/17       unassigned      YES unset  administratively down down
FastEthernet0/18       unassigned      YES unset  up                    up
FastEthernet0/19       unassigned      YES unset  administratively down down
FastEthernet0/20       unassigned      YES unset  administratively down down
FastEthernet0/21       unassigned      YES unset  administratively down down
FastEthernet0/22       unassigned      YES unset  administratively down down
FastEthernet0/23       unassigned      YES unset  administratively down down
FastEthernet0/24       unassigned      YES unset  up                    up
GigabitEthernet0/1     unassigned      YES unset  administratively down down
GigabitEthernet0/2     unassigned      YES unset  administratively down down
Port-channel1          unassigned      YES unset  up                    up
S2#
```

ip r sur pc1 :

```
root@podd-1:~# ip r
default via 172.16.10.1 dev eth0
172.16.10.0/24 dev eth0 proto kernel scope link src 172.16.10.32
root@podd-1:~#
```

ip a sur pc1 :

```
root@podd-1:~# ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host noprefixroute
       valid_lft forever preferred_lft forever
2: eth0@if48: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc noqueue state UP group default qlen 1000
    link/ether a6:cc:b1:3f:e9:e6 brd ff:ff:ff:ff:ff:ff link-netnsid 0
    inet 172.16.10.32/24 brd 172.16.10.255 scope global dynamic eth0
       valid_lft 81585sec preferred_lft 81585sec
    inet6 fe80::a4cc:b1ff:fe3f:e9e6/64 scope link
       valid_lft forever preferred_lft forever
root@podd-1:~#
```

ip r sur pc2 :

```
root@podd-2:~# ip r
default via 172.16.20.1 dev eth0
172.16.20.0/24 dev eth0 proto kernel scope link src 172.16.20.32
root@podd-2:~#
```

ip a sur pc2 :

```
root@podd-2:~# ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1
000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host noprefixroute
       valid_lft forever preferred_lft forever
2: eth0@if52: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc noqueue state UP group de
fault qlen 1000
    link/ether 1a:1a:a2:55:da:90 brd ff:ff:ff:ff:ff:ff link-netnsid 0
    inet 172.16.20.32/24 brd 172.16.20.255 scope global dynamic eth0
       valid_lft 81634sec preferred_lft 81634sec
    inet6 fe80::181a:a2ff:fe55:da90/64 scope link
       valid_lft forever preferred_lft forever
root@podd-2:~#
```

ip r sur pc3 :

```
root@podd-3:~# ip r
default via 172.16.30.1 dev eth0
172.16.30.0/24 dev eth0 proto kernel scope link src 172.16.30.32
root@podd-3:~#
```

ip a sur pc3:

```
root@podd-2:~# ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1
000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host noprefixroute
       valid_lft forever preferred_lft forever
2: eth0@if52: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc noqueue state UP group de
fault qlen 1000
    link/ether 1a:1a:a2:55:da:90 brd ff:ff:ff:ff:ff:ff link-netnsid 0
    inet 172.16.20.32/24 brd 172.16.20.255 scope global dynamic eth0
       valid_lft 81566sec preferred_lft 81566sec
    inet6 fe80::181a:a2ff:fe55:da90/64 scope link
       valid_lft forever preferred_lft forever
root@podd-2:~#
```

sh ip inter br sur R1

```
R1#sh ip inter br
Interface              IP-Address      OK? Method Status                Protocol
GigabitEthernet0/0/0   unassigned      YES unset  up                    up
Gi0/0/0.10             172.16.10.2     YES manual up                    up
Gi0/0/0.20             172.16.20.2     YES manual up                    up
Gi0/0/0.30             172.16.30.2     YES manual up                    up
Gi0/0/0.99             unassigned      YES unset  up                    up
GigabitEthernet0/0/1   10.10.13.1      YES manual up                    up
GigabitEthernet0/0/2   unassigned      YES unset  administratively down down
GigabitEthernet0       unassigned      YES unset  administratively down down
R1#
```

sh ip route sur 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, m - OMP
       n - NAT, Ni - NAT inside, No - NAT outside, Nd - NAT DIA
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       H - NHRP, G - NHRP registered, g - NHRP registration summary
       o - ODR, P - periodic downloaded static route, l - LISP
       a - application route
       + - replicated route, % - next hop override, p - overrides from PfR
       & - replicated local route overrides by connected

Gateway of last resort is not set

      10.0.0.0/8 is variably subnetted, 3 subnets, 2 masks
C        10.10.13.0/30 is directly connected, GigabitEthernet0/0/1
L        10.10.13.1/32 is directly connected, GigabitEthernet0/0/1
O        10.10.23.0/30
           [110/2] via 172.16.30.3, 00:48:49, GigabitEthernet0/0/0.30
           [110/2] via 172.16.20.3, 00:48:48, GigabitEthernet0/0/0.20
           [110/2] via 172.16.10.3, 00:48:48, GigabitEthernet0/0/0.10
           [110/2] via 10.10.13.2, 01:41:47, GigabitEthernet0/0/1
      172.16.0.0/16 is variably subnetted, 6 subnets, 2 masks
C        172.16.10.0/24 is directly connected, GigabitEthernet0/0/0.10
L        172.16.10.2/32 is directly connected, GigabitEthernet0/0/0.10
C        172.16.20.0/24 is directly connected, GigabitEthernet0/0/0.20
L        172.16.20.2/32 is directly connected, GigabitEthernet0/0/0.20
C        172.16.30.0/24 is directly connected, GigabitEthernet0/0/0.30
L        172.16.30.2/32 is directly connected, GigabitEthernet0/0/0.30
      209.165.200.0/32 is subnetted, 1 subnets
O        209.165.200.225
           [110/2] via 10.10.13.2, 01:41:47, GigabitEthernet0/0/1
R1#
```

sh standby brief sur R1

```
R1#sh standby brief
                     P indicates configured to preempt.
                     |
Interface   Grp  Pri P State   Active          Standby         Virtual IP
Gi0/0/0.10  10   110 P Active  local           172.16.10.3     172.16.10.1
Gi0/0/0.20  20   110 P Active  local           172.16.20.3     172.16.20.1
Gi0/0/0.30  30   110 P Active  local           172.16.30.3     172.16.30.1
R1#
```

sh ip inter br sur R2

```
R2#sh ip inter br
Interface              IP-Address      OK? Method Status                Protocol
GigabitEthernet0/0/0   unassigned      YES unset  up                    up
Gi0/0/0.10             172.16.10.3     YES manual up                    up
Gi0/0/0.20             172.16.20.3     YES manual up                    up
Gi0/0/0.30             172.16.30.3     YES manual up                    up
Gi0/0/0.99             unassigned      YES unset  up                    up
GigabitEthernet0/0/1   10.10.23.1      YES manual up                    up
GigabitEthernet0/0/2   unassigned      YES unset  administratively down down
GigabitEthernet0       unassigned      YES unset  administratively down down
R2#
```

sh ip route sur 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
       i - IS-IS, su - IS-IS summary, 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, H - NHRP, l - LISP
       a - application route
       + - replicated route, % - next hop override, p - overrides from PfR

Gateway of last resort is not set

      10.0.0.0/8 is variably subnetted, 3 subnets, 2 masks
O        10.10.13.0/30
           [110/2] via 172.16.30.2, 00:52:06, GigabitEthernet0/0/0.30
           [110/2] via 172.16.20.2, 00:52:04, GigabitEthernet0/0/0.20
           [110/2] via 172.16.10.2, 00:52:04, GigabitEthernet0/0/0.10
           [110/2] via 10.10.23.2, 01:44:59, GigabitEthernet0/0/1
C        10.10.23.0/30 is directly connected, GigabitEthernet0/0/1
L        10.10.23.1/32 is directly connected, GigabitEthernet0/0/1
      172.16.0.0/16 is variably subnetted, 6 subnets, 2 masks
C        172.16.10.0/24 is directly connected, GigabitEthernet0/0/0.10
L        172.16.10.3/32 is directly connected, GigabitEthernet0/0/0.10
C        172.16.20.0/24 is directly connected, GigabitEthernet0/0/0.20
L        172.16.20.3/32 is directly connected, GigabitEthernet0/0/0.20
C        172.16.30.0/24 is directly connected, GigabitEthernet0/0/0.30
L        172.16.30.3/32 is directly connected, GigabitEthernet0/0/0.30
      209.165.200.0/32 is subnetted, 1 subnets
O        209.165.200.225
           [110/2] via 10.10.23.2, 01:44:59, GigabitEthernet0/0/1
R2#
R2#
```

sh ip dhcp binding sur R2

c'est R3 qui gère l'attribution des adresses IP pour tout mon réseau, et non R1 ou R2. Alors ce résultat est normal

```
R2#sh ip dhcp binding
Bindings from all pools not associated with VRF:
IP address      Client-ID/              Lease expiration        Type       State      Interface
                Hardware address/
                User name
R2#
```

sh standby brief sur R2

```
R2#sh standby brief
                     P indicates configured to preempt.
                     |
Interface   Grp  Pri P State   Active          Standby         Virtual IP
Gi0/0/0.10  10   100 P Standby 172.16.10.2     local           172.16.10.1
Gi0/0/0.20  20   100 P Standby 172.16.20.2     local           172.16.20.1
Gi0/0/0.30  30   100 P Standby 172.16.30.2     local           172.16.30.1
R2#
```

sh ip dhcp binding sur R3

```
R3#sh ip dhcp binding
Bindings from all pools not associated with VRF:
IP address          Client-ID/              Lease expiration        Type
                    Hardware address/
                    User name
172.16.10.32        a6cc.b13f.e9e6          Jan 16 1970 12:42 AM    Automatic
172.16.20.32        1a1a.a255.da90          Jan 16 1970 12:44 AM    Automatic
172.16.30.32        2e2f.f93c.19e2          Jan 16 1970 12:44 AM    Automatic
R3#
```

sh ip inter br sur R3

```
R3#sh ip inter br
Interface                  IP-Address      OK? Method Status                Protocol
FastEthernet0/0            10.10.13.2      YES manual up                    up
FastEthernet0/1            10.10.23.2      YES manual up                    up
Serial0/0/0                unassigned      YES unset  administratively down down
Serial0/0/1                unassigned      YES unset  administratively down down
Loopback0                  209.165.200.225 YES manual up                    up
R3#
```

sh ip interface sur R3 :

```
R3#sh ip interface
FastEthernet0/0 is up, line protocol is up
  Internet address is 10.10.13.2/30
  Broadcast address is 255.255.255.255
  Address determined by setup command
  MTU is 1500 bytes
  Helper address is not set
  Directed broadcast forwarding is disabled
  Multicast reserved groups joined: 224.0.0.5 224.0.0.6
  Outgoing access list is not set
  Inbound  access list is not set
  Proxy ARP is enabled
  Local Proxy ARP is disabled
  Security level is default
  Split horizon is enabled
  ICMP redirects are always sent
  ICMP unreachables are always sent
  ICMP mask replies are never sent
  IP fast switching is enabled
  IP fast switching on the same interface is disabled
  IP Flow switching is disabled
  IP CEF switching is enabled
  IP CEF switching turbo vector
  IP multicast fast switching is enabled
  IP multicast distributed fast switching is disabled
  IP route-cache flags are Fast, CEF
  Router Discovery is disabled
  IP output packet accounting is disabled
  IP access violation accounting is disabled
  TCP/IP header compression is disabled
  RTP/IP header compression is disabled
  Policy routing is disabled
  Network address translation is disabled
  BGP Policy Mapping is disabled
  Input features: MCI Check
  WCCP Redirect outbound is disabled
  WCCP Redirect inbound is disabled
  WCCP Redirect exclude is disabled
FastEthernet0/1 is up, line protocol is up
  Internet address is 10.10.23.2/30
  Broadcast address is 255.255.255.255
```


RTP/IP header compression is disabled
Policy routing is disabled
Network address translation is disabled
BGP Policy Mapping is disabled
Input features: MCI Check
WCCP Redirect outbound is disabled
WCCP Redirect inbound is disabled
WCCP Redirect exclude is disabled
FastEthernet0/1 is up, line protocol is up
Internet address is 10.10.23.2/30
Broadcast address is 255.255.255.255
Address determined by setup command
MTU is 1500 bytes
Helper address is not set
Directed broadcast forwarding is disabled
Multicast reserved groups joined: 224.0.0.5 224.0.0.6
Outgoing access list is not set
Inbound access list is not set
Proxy ARP is enabled
Local Proxy ARP is disabled
Security level is default
Split horizon is enabled
ICMP redirects are always sent
ICMP unreachables are always sent
ICMP mask replies are never sent
IP fast switching is enabled
IP fast switching on the same interface is disabled
IP Flow switching is disabled
IP CEF switching is enabled
IP CEF switching turbo vector
IP multicast fast switching is enabled
IP multicast distributed fast switching is disabled
IP route-cache flags are Fast, CEF
Router Discovery is disabled
IP output packet accounting is disabled
IP access violation accounting is disabled
TCP/IP header compression is disabled
RTP/IP header compression is disabled
Policy routing is disabled
Network address translation is disabled
BGP Policy Mapping is disabled
Input features: MCI Check
R3#

sh ip route sur R3 :

```
R3#sh ip route
Codes: 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
       i - IS-IS, su - IS-IS summary, 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
O       172.16.30.0 [110/2] via 10.10.23.1, 00:58:26, FastEthernet0/1
                    [110/2] via 10.10.13.1, 01:51:29, FastEthernet0/0
O       172.16.20.0 [110/2] via 10.10.23.1, 00:58:26, FastEthernet0/1
                    [110/2] via 10.10.13.1, 01:51:29, FastEthernet0/0
O       172.16.10.0 [110/2] via 10.10.23.1, 00:58:26, FastEthernet0/1
                    [110/2] via 10.10.13.1, 01:51:29, FastEthernet0/0
     209.165.200.0/27 is subnetted, 1 subnets
C       209.165.200.224 is directly connected, Loopback0
     10.0.0.0/30 is subnetted, 2 subnets
C       10.10.13.0 is directly connected, FastEthernet0/0
C       10.10.23.0 is directly connected, FastEthernet0/1
R3#
```

sh ip route | begin Gateway sur R1 :

```
R1#sh ip route | begin Gateway
Gateway of last resort is not set

      10.0.0.0/8 is variably subnetted, 3 subnets, 2 masks
C        10.10.13.0/30 is directly connected, GigabitEthernet0/0/1
L        10.10.13.1/32 is directly connected, GigabitEthernet0/0/1
O        10.10.23.0/30
           [110/2] via 172.16.30.3, 00:59:20, GigabitEthernet0/0/0.30
           [110/2] via 172.16.20.3, 00:59:19, GigabitEthernet0/0/0.20
           [110/2] via 172.16.10.3, 00:59:19, GigabitEthernet0/0/0.10
           [110/2] via 10.10.13.2, 01:52:18, GigabitEthernet0/0/1
      172.16.0.0/16 is variably subnetted, 6 subnets, 2 masks
C        172.16.10.0/24 is directly connected, GigabitEthernet0/0/0.10
L        172.16.10.2/32 is directly connected, GigabitEthernet0/0/0.10
C        172.16.20.0/24 is directly connected, GigabitEthernet0/0/0.20
L        172.16.20.2/32 is directly connected, GigabitEthernet0/0/0.20
C        172.16.30.0/24 is directly connected, GigabitEthernet0/0/0.30
L        172.16.30.2/32 is directly connected, GigabitEthernet0/0/0.30
      209.165.200.0/32 is subnetted, 1 subnets
O        209.165.200.225
           [110/2] via 10.10.13.2, 01:52:18, GigabitEthernet0/0/1
R1#
```

sh ip route | begin Gateway sur R2 :

```
R2#sh ip route | begin Gateway
Gateway of last resort is not set

      10.0.0.0/8 is variably subnetted, 3 subnets, 2 masks
O        10.10.13.0/30
           [110/2] via 172.16.30.2, 00:59:56, GigabitEthernet0/0/0.30
           [110/2] via 172.16.20.2, 00:59:54, GigabitEthernet0/0/0.20
           [110/2] via 172.16.10.2, 00:59:54, GigabitEthernet0/0/0.10
           [110/2] via 10.10.23.2, 01:52:49, GigabitEthernet0/0/1
C        10.10.23.0/30 is directly connected, GigabitEthernet0/0/1
L        10.10.23.1/32 is directly connected, GigabitEthernet0/0/1
      172.16.0.0/16 is variably subnetted, 6 subnets, 2 masks
C        172.16.10.0/24 is directly connected, GigabitEthernet0/0/0.10
L        172.16.10.3/32 is directly connected, GigabitEthernet0/0/0.10
C        172.16.20.0/24 is directly connected, GigabitEthernet0/0/0.20
L        172.16.20.3/32 is directly connected, GigabitEthernet0/0/0.20
C        172.16.30.0/24 is directly connected, GigabitEthernet0/0/0.30
L        172.16.30.3/32 is directly connected, GigabitEthernet0/0/0.30
      209.165.200.0/32 is subnetted, 1 subnets
O        209.165.200.225
           [110/2] via 10.10.23.2, 01:52:49, GigabitEthernet0/0/1
R2#
```

sh ip route | begin Gateway sur R3 :

```
R3#sh ip route | begin Gateway
Gateway of last resort is not set

     172.16.0.0/24 is subnetted, 3 subnets
O       172.16.30.0 [110/2] via 10.10.23.1, 01:00:17, FastEthernet0/1
                    [110/2] via 10.10.13.1, 01:53:20, FastEthernet0/0
O       172.16.20.0 [110/2] via 10.10.23.1, 01:00:17, FastEthernet0/1
                    [110/2] via 10.10.13.1, 01:53:20, FastEthernet0/0
O       172.16.10.0 [110/2] via 10.10.23.1, 01:00:17, FastEthernet0/1
                    [110/2] via 10.10.13.1, 01:53:20, FastEthernet0/0
     209.165.200.0/27 is subnetted, 1 subnets
C       209.165.200.224 is directly connected, Loopback0
     10.0.0.0/30 is subnetted, 2 subnets
C       10.10.13.0 is directly connected, FastEthernet0/0
C       10.10.23.0 is directly connected, FastEthernet0/1
R3#
```

sh ipv6 route | begin C sur R1 :

```
R1#sh ipv6 route | begin C
Codes: C - Connected, L - Local, S - Static, U - Per-user Static route
       B - BGP, R - RIP, H - NHRP, I1 - ISIS L1
       I2 - ISIS L2, IA - ISIS interarea, IS - ISIS summary, D - EIGRP
       EX - EIGRP external, ND - ND Default, NDp - ND Prefix, DCE - Destination
       NDr - Redirect, RL - RPL, O - OSPF Intra, OI - OSPF Inter
       OE1 - OSPF ext 1, OE2 - OSPF ext 2, ON1 - OSPF NSSA ext 1
       ON2 - OSPF NSSA ext 2, a - Application, m - OMP
L   FF00::/8 [0/0]
     via Null0, receive
R1#
```

sh ip route static sur R1 :

```
R1#sh ip route static
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, m - OMP
       n - NAT, Ni - NAT inside, No - NAT outside, Nd - NAT DIA
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       H - NHRP, G - NHRP registered, g - NHRP registration summary
       o - ODR, P - periodic downloaded static route, l - LISP
       a - application route
       + - replicated route, % - next hop override, p - overrides from PfR
       & - replicated local route overrides by connected

Gateway of last resort is not set

R1#
```

sh ip route static sur R2 :

```
          [110/2] via 10.10.23.2, 01:52:49, GigabitEthernet0/0/1
R2#sh ip route static
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
       i - IS-IS, su - IS-IS summary, 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, H - NHRP, l - LISP
       a - application route
       + - replicated route, % - next hop override, p - overrides from PfR

Gateway of last resort is not set

R2#
```

show ip protocols sur R1

```
R1#show ip protocols
*** IP Routing is NSF aware ***

Routing Protocol is "application"
  Sending updates every 0 seconds
  Invalid after 0 seconds, hold down 0, flushed after 0
  Outgoing update filter list for all interfaces is not set
  Incoming update filter list for all interfaces is not set
  Maximum path: 32
  Routing for Networks:
  Routing Information Sources:
    Gateway         Distance      Last Update
  Distance: (default is 4)

Routing Protocol is "ospf 1"
  Outgoing update filter list for all interfaces is not set
  Incoming update filter list for all interfaces is not set
  Router ID 1.1.1.1
  Number of areas in this router is 1. 1 normal 0 stub 0 nssa
  Maximum path: 4
  Routing for Networks:
    10.10.13.0 0.0.0.3 area 0
    172.16.10.0 0.0.0.255 area 0
    172.16.20.0 0.0.0.255 area 0
    172.16.30.0 0.0.0.255 area 0
  Routing Information Sources:
    Gateway         Distance      Last Update
    3.3.3.3              110      01:02:17
  Distance: (default is 110)

R1#
```

show ip ospf neighbor sur R1

```
R1#show ip ospf neighbor

Neighbor ID     Pri   State           Dead Time   Address         Interface
3.3.3.3           1   FULL/DR         00:00:39    10.10.13.2      GigabitEthernet0/0/1
2.2.2.2           1   FULL/BDR        00:00:39    172.16.30.3     GigabitEthernet0/0/0.30
2.2.2.2           1   FULL/BDR        00:00:34    172.16.20.3     GigabitEthernet0/0/0.20
2.2.2.2           1   FULL/BDR        00:00:34    172.16.10.3     GigabitEthernet0/0/0.10
R1#
```

show ip route ospf sur R1

```
R1#show ip route ospf
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, m - OMP
       n - NAT, Ni - NAT inside, No - NAT outside, Nd - NAT DIA
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       H - NHRP, G - NHRP registered, g - NHRP registration summary
       o - ODR, P - periodic downloaded static route, l - LISP
       a - application route
       + - replicated route, % - next hop override, p - overrides from PfR
       & - replicated local route overrides by connected

Gateway of last resort is not set

      10.0.0.0/8 is variably subnetted, 3 subnets, 2 masks
O        10.10.23.0/30
           [110/2] via 172.16.30.3, 01:03:19, GigabitEthernet0/0/0.30
           [110/2] via 172.16.20.3, 01:03:18, GigabitEthernet0/0/0.20
           [110/2] via 172.16.10.3, 01:03:18, GigabitEthernet0/0/0.10
           [110/2] via 10.10.13.2, 01:56:17, GigabitEthernet0/0/1
      209.165.200.0/32 is subnetted, 1 subnets
O        209.165.200.225
           [110/2] via 10.10.13.2, 01:56:17, GigabitEthernet0/0/1
R1#
```

show ip ospf interface sur R1

```
R1#show ip ospf interface
GigabitEthernet0/0/1 is up, line protocol is up
  Internet Address 10.10.13.1/30, Interface ID 7, Area 0
  Attached via Network Statement
  Process ID 1, Router ID 1.1.1.1, Network Type BROADCAST, Cost: 1
  Topology-MTID    Cost    Disabled    Shutdown      Topology Name
        0           1         no          no            Base
  Transmit Delay is 1 sec, State BDR, Priority 1
  Designated Router (ID) 3.3.3.3, Interface address 10.10.13.2
  Backup Designated router (ID) 1.1.1.1, Interface address 10.10.13.1
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
    oob-resync timeout 40
    Hello due in 00:00:07
  Supports Link-local Signaling (LLS)
  Cisco NSF helper support enabled
  IETF NSF helper support enabled
  Index 1/4/4, flood queue length 0
  Next 0x0(0)/0x0(0)/0x0(0)
  Last flood scan length is 1, maximum is 4
  Last flood scan time is 0 msec, maximum is 1 msec
  Neighbor Count is 1, Adjacent neighbor count is 1
    Adjacent with neighbor 3.3.3.3  (Designated Router)
  Suppress hello for 0 neighbor(s)
GigabitEthernet0/0/0.30 is up, line protocol is up
  Internet Address 172.16.30.2/24, Interface ID 12, Area 0
  Attached via Network Statement
  Process ID 1, Router ID 1.1.1.1, Network Type BROADCAST, Cost: 1
  Topology-MTID    Cost    Disabled    Shutdown      Topology Name
        0           1         no          no            Base
  Transmit Delay is 1 sec, State DR, Priority 1
  Designated Router (ID) 1.1.1.1, Interface address 172.16.30.2
  Backup Designated router (ID) 2.2.2.2, Interface address 172.16.30.3
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
    oob-resync timeout 40
    Hello due in 00:00:05
  Supports Link-local Signaling (LLS)
  Cisco NSF helper support enabled
  IETF NSF helper support enabled
  Index 1/3/3, flood queue length 0
  Next 0x0(0)/0x0(0)/0x0(0)
  Last flood scan length is 2, maximum is 4
  Last flood scan time is 0 msec, maximum is 0 msec
  Neighbor Count is 1, Adjacent neighbor count is 1
    Adjacent with neighbor 2.2.2.2  (Backup Designated Router)
  Suppress hello for 0 neighbor(s)
GigabitEthernet0/0/0.20 is up, line protocol is up
  Internet Address 172.16.20.2/24, Interface ID 11, Area 0
  Attached via Network Statement
  Process ID 1, Router ID 1.1.1.1, Network Type BROADCAST, Cost: 1
  Topology-MTID    Cost    Disabled    Shutdown      Topology Name
        0           1         no          no            Base
  Transmit Delay is 1 sec, State DR, Priority 1
```

```
  Suppress hello for 0 neighbor(s)
GigabitEthernet0/0/0.20 is up, line protocol is up
  Internet Address 172.16.20.2/24, Interface ID 11, Area 0
  Attached via Network Statement
  Process ID 1, Router ID 1.1.1.1, Network Type BROADCAST, Cost: 1
  Topology-MTID    Cost    Disabled    Shutdown      Topology Name
        0           1         no          no            Base
  Transmit Delay is 1 sec, State DR, Priority 1
  Designated Router (ID) 1.1.1.1, Interface address 172.16.20.2
  Backup Designated router (ID) 2.2.2.2, Interface address 172.16.20.3
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
    oob-resync timeout 40
    Hello due in 00:00:07
  Supports Link-local Signaling (LLS)
  Cisco NSF helper support enabled
  IETF NSF helper support enabled
  Index 1/2/2, flood queue length 0
  Next 0x0(0)/0x0(0)/0x0(0)
  Last flood scan length is 2, maximum is 4
  Last flood scan time is 0 msec, maximum is 1 msec
  Neighbor Count is 1, Adjacent neighbor count is 1
    Adjacent with neighbor 2.2.2.2  (Backup Designated Router)
  Suppress hello for 0 neighbor(s)
GigabitEthernet0/0/0.10 is up, line protocol is up
  Internet Address 172.16.10.2/24, Interface ID 10, Area 0
  Attached via Network Statement
  Process ID 1, Router ID 1.1.1.1, Network Type BROADCAST, Cost: 1
  Topology-MTID    Cost    Disabled    Shutdown      Topology Name
        0           1         no          no            Base
  Transmit Delay is 1 sec, State DR, Priority 1
  Designated Router (ID) 1.1.1.1, Interface address 172.16.10.2
  Backup Designated router (ID) 2.2.2.2, Interface address 172.16.10.3
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
    oob-resync timeout 40
    Hello due in 00:00:09
  Supports Link-local Signaling (LLS)
  Cisco NSF helper support enabled
  IETF NSF helper support enabled
  Index 1/1/1, flood queue length 0
  Next 0x0(0)/0x0(0)/0x0(0)
  Last flood scan length is 2, maximum is 4
  Last flood scan time is 0 msec, maximum is 0 msec
  Neighbor Count is 1, Adjacent neighbor count is 1
    Adjacent with neighbor 2.2.2.2  (Backup Designated Router)
  Suppress hello for 0 neighbor(s)
R1#
R1#
```

show ip ospf interface brief sur R1

```
R1#show ip ospf interface brief
Interface    PID   Area            IP Address/Mask    Cost  State Nbrs F/C
Gi0/0/1      1     0               10.10.13.1/30      1     BDR   1/1
Gi0/0/0.30   1     0               172.16.30.2/24     1     DR    1/1
Gi0/0/0.20   1     0               172.16.20.2/24     1     DR    1/1
Gi0/0/0.10   1     0               172.16.10.2/24     1     DR    1/1
R1#
```

show ip route ospf | begin 10 sur R1

```
R1#show ip route ospf | begin 10
      10.0.0.0/8 is variably subnetted, 3 subnets, 2 masks
O        10.10.23.0/30
           [110/2] via 172.16.30.3, 01:05:49, GigabitEthernet0/0/0.30
           [110/2] via 172.16.20.3, 01:05:48, GigabitEthernet0/0/0.20
           [110/2] via 172.16.10.3, 01:05:48, GigabitEthernet0/0/0.10
           [110/2] via 10.10.13.2, 01:58:47, GigabitEthernet0/0/1
      209.165.200.0/32 is subnetted, 1 subnets
O        209.165.200.225
           [110/2] via 10.10.13.2, 01:58:47, GigabitEthernet0/0/1
R1#
```

show ip route ospf sur R3

```
R1#show ip route ospf
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, m - OMP
       n - NAT, Ni - NAT inside, No - NAT outside, Nd - NAT DIA
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       H - NHRP, G - NHRP registered, g - NHRP registration summary
       o - ODR, P - periodic downloaded static route, l - LISP
       a - application route
       + - replicated route, % - next hop override, p - overrides from PfR
       & - replicated local route overrides by connected

Gateway of last resort is not set

      10.0.0.0/8 is variably subnetted, 3 subnets, 2 masks
O        10.10.23.0/30
           [110/2] via 172.16.30.3, 01:06:42, GigabitEthernet0/0/0.30
           [110/2] via 172.16.20.3, 01:06:41, GigabitEthernet0/0/0.20
           [110/2] via 172.16.10.3, 01:06:41, GigabitEthernet0/0/0.10
           [110/2] via 10.10.13.2, 01:59:40, GigabitEthernet0/0/1
      209.165.200.0/32 is subnetted, 1 subnets
O        209.165.200.225
           [110/2] via 10.10.13.2, 01:59:40, GigabitEthernet0/0/1
R1#
```

traceroute 172.16.10.1 depuis pc1 :

```
root@podd-1:~# traceroute 172.16.10.1
traceroute to 172.16.10.1 (172.16.10.1), 30 hops max, 60 byte packets
 1  172.16.10.2 (172.16.10.2)  17.028 ms * *
root@podd-1:~#
```

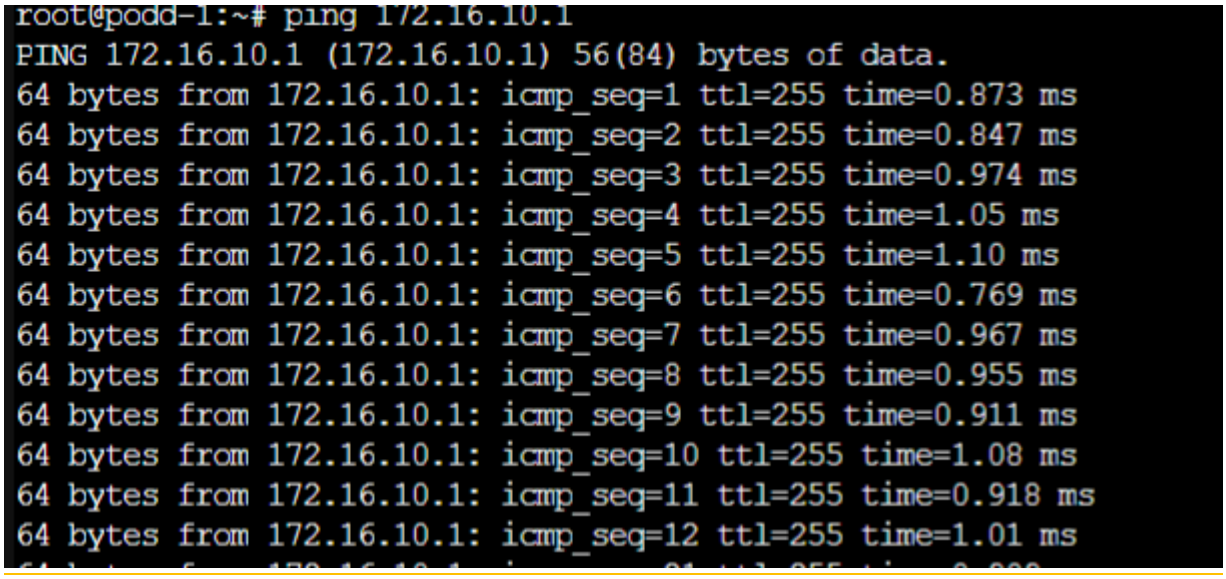
traceroute 209.165.200.225 depuis pc1 :

```
root@podd-1:~# traceroute 209.165.200.225
traceroute to 209.165.200.225 (209.165.200.225), 30 hops max, 60 byte packets
 1  172.16.10.2 (172.16.10.2)  0.380 ms  0.307 ms  0.273 ms
 2  10.10.13.2 (10.10.13.2)  1.527 ms * *
root@podd-1:~#
```

traceroute 172.16.20.3 depuis pc1 :

```
root@podd-1:~# traceroute 172.16.20.3
traceroute to 172.16.20.3 (172.16.20.3), 30 hops max, 60 byte packets
 1  172.16.10.2 (172.16.10.2)  0.389 ms  0.319 ms  0.287 ms
 2  172.16.20.3 (172.16.20.3)  1.171 ms * *
root@podd-1:~#
```

ping depuis PC1 vers la passerelle virtuelle avant enlever le câble



ping depuis PC1 vers la passerelle virtuelle avant et après enlever le câble

```
root@podd-1:~# ping 172.16.10.1
PING 172.16.10.1 (172.16.10.1) 56(84) bytes of data.
64 bytes from 172.16.10.1: icmp_seq=1 ttl=255 time=0.873 ms
64 bytes from 172.16.10.1: icmp_seq=2 ttl=255 time=0.847 ms
64 bytes from 172.16.10.1: icmp_seq=3 ttl=255 time=0.974 ms
64 bytes from 172.16.10.1: icmp_seq=4 ttl=255 time=1.05 ms
64 bytes from 172.16.10.1: icmp_seq=5 ttl=255 time=1.10 ms
64 bytes from 172.16.10.1: icmp_seq=6 ttl=255 time=0.769 ms
64 bytes from 172.16.10.1: icmp_seq=7 ttl=255 time=0.967 ms
64 bytes from 172.16.10.1: icmp_seq=8 ttl=255 time=0.955 ms
64 bytes from 172.16.10.1: icmp_seq=9 ttl=255 time=0.911 ms
64 bytes from 172.16.10.1: icmp_seq=10 ttl=255 time=1.08 ms
64 bytes from 172.16.10.1: icmp_seq=11 ttl=255 time=0.918 ms
64 bytes from 172.16.10.1: icmp_seq=12 ttl=255 time=1.01 ms
64 bytes from 172.16.10.1: icmp_seq=21 ttl=255 time=0.909 ms
64 bytes from 172.16.10.1: icmp_seq=22 ttl=255 time=1.00 ms
64 bytes from 172.16.10.1: icmp_seq=23 ttl=255 time=0.966 ms
64 bytes from 172.16.10.1: icmp_seq=24 ttl=255 time=0.922 ms
64 bytes from 172.16.10.1: icmp_seq=25 ttl=255 time=1.05 ms
64 bytes from 172.16.10.1: icmp_seq=26 ttl=255 time=1.15 ms
64 bytes from 172.16.10.1: icmp_seq=27 ttl=255 time=1.01 ms
64 bytes from 172.16.10.1: icmp_seq=28 ttl=255 time=0.976 ms
64 bytes from 172.16.10.1: icmp_seq=29 ttl=255 time=1.16 ms
64 bytes from 172.16.10.1: icmp_seq=30 ttl=255 time=1.16 ms
64 bytes from 172.16.10.1: icmp_seq=31 ttl=255 time=1.03 ms
64 bytes from 172.16.10.1: icmp_seq=32 ttl=255 time=1.14 ms
64 bytes from 172.16.10.1: icmp_seq=33 ttl=255 time=1.13 ms
64 bytes from 172.16.10.1: icmp_seq=34 ttl=255 time=0.975 ms
64 bytes from 172.16.10.1: icmp_seq=35 ttl=255 time=1.11 ms
64 bytes from 172.16.10.1: icmp_seq=36 ttl=255 time=1.05 ms
64 bytes from 172.16.10.1: icmp_seq=37 ttl=255 time=0.979 ms
64 bytes from 172.16.10.1: icmp_seq=38 ttl=255 time=1.14 ms
64 bytes from 172.16.10.1: icmp_seq=39 ttl=255 time=1.17 ms
64 bytes from 172.16.10.1: icmp_seq=40 ttl=255 time=0.947 ms
64 bytes from 172.16.10.1: icmp_seq=41 ttl=255 time=1.08 ms
64 bytes from 172.16.10.1: icmp_seq=42 ttl=255 time=1.19 ms
64 bytes from 172.16.10.1: icmp_seq=43 ttl=255 time=1.08 ms
64 bytes from 172.16.10.1: icmp_seq=44 ttl=255 time=1.07 ms
64 bytes from 172.16.10.1: icmp_seq=45 ttl=255 time=1.09 ms
64 bytes from 172.16.10.1: icmp_seq=46 ttl=255 time=1.04 ms
64 bytes from 172.16.10.1: icmp_seq=47 ttl=255 time=1.03 ms
64 bytes from 172.16.10.1: icmp_seq=48 ttl=255 time=1.09 ms
```

traceroute 172.16.10.1 sur pc1 qui passe par R2 après reconnecter le câble

```
root@podd-1:~# traceroute 172.16.10.1
traceroute to 172.16.10.1 (172.16.10.1), 30 hops max, 60 byte packets
 1  172.16.10.2 (172.16.10.2)  1.236 ms * *
root@podd-1:~#
```