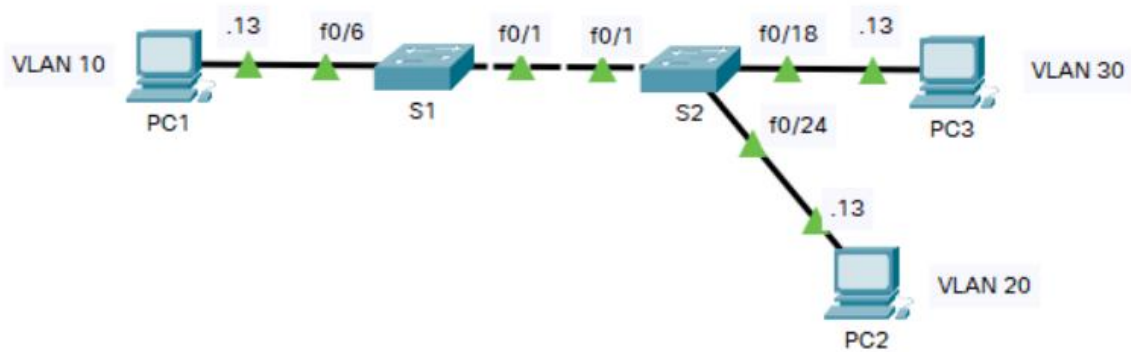**Labo VLAN**

VLAN
10 R&D   172.16.10.0/24
20 STAFF 172.16.20.0/24
30 MGNT 172.16.30.0/24
90 TRASH
99 NATIF

ping depuis PC1 vers PC2

```
root@PC1-A:~# ping 172.16.20.13
PING 172.16.20.13 (172.16.20.13) 56(84) bytes of data.
From 172.16.10.13 icmp_seq=1 Destination Host Unreachable
From 172.16.10.13 icmp_seq=2 Destination Host Unreachable
From 172.16.10.13 icmp_seq=3 Destination Host Unreachable
From 172.16.10.13 icmp_seq=4 Destination Host Unreachable
From 172.16.10.13 icmp_seq=5 Destination Host Unreachable
From 172.16.10.13 icmp_seq=6 Destination Host Unreachable
From 172.16.10.13 icmp_seq=7 Destination Host Unreachable
From 172.16.10.13 icmp_seq=8 Destination Host Unreachable
From 172.16.10.13 icmp_seq=9 Destination Host Unreachable
From 172.16.10.13 icmp_seq=10 Destination Host Unreachable
From 172.16.10.13 icmp_seq=11 Destination Host Unreachable
From 172.16.10.13 icmp_seq=12 Destination Host Unreachable
From 172.16.10.13 icmp_seq=13 Destination Host Unreachable
From 172.16.10.13 icmp_seq=14 Destination Host Unreachable
From 172.16.10.13 icmp_seq=15 Destination Host Unreachable
From 172.16.10.13 icmp_seq=16 Destination Host Unreachable
From 172.16.10.13 icmp_seq=17 Destination Host Unreachable
From 172.16.10.13 icmp_seq=18 Destination Host Unreachable
From 172.16.10.13 icmp_seq=19 Destination Host Unreachable
From 172.16.10.13 icmp_seq=20 Destination Host Unreachable
From 172.16.10.13 icmp_seq=21 Destination Host Unreachable
```

ping depuis PC1 vers PC3

```
root@PC1-A:~# ping 172.16.30.13
PING 172.16.30.13 (172.16.30.13) 56(84) bytes of data.
From 172.16.10.13 icmp_seq=1 Destination Host Unreachable
From 172.16.10.13 icmp_seq=2 Destination Host Unreachable
From 172.16.10.13 icmp_seq=3 Destination Host Unreachable
From 172.16.10.13 icmp_seq=4 Destination Host Unreachable
From 172.16.10.13 icmp_seq=5 Destination Host Unreachable
From 172.16.10.13 icmp_seq=6 Destination Host Unreachable
From 172.16.10.13 icmp_seq=7 Destination Host Unreachable
From 172.16.10.13 icmp_seq=8 Destination Host Unreachable
From 172.16.10.13 icmp_seq=9 Destination Host Unreachable
^C
--- 172.16.30.13 ping statistics ---
11 packets transmitted, 0 received, +9 errors, 100% packet loss, time 10227m
s
pipe 4
root@PC1-A:~#
```

ping depuis PC1 vers s1

```
root@PC1-A:~# ping 172.16.30.1
PING 172.16.30.1 (172.16.30.1) 56(84) bytes of data.
From 172.16.10.13 icmp_seq=1 Destination Host Unreachable
From 172.16.10.13 icmp_seq=2 Destination Host Unreachable
From 172.16.10.13 icmp_seq=3 Destination Host Unreachable
From 172.16.10.13 icmp_seq=4 Destination Host Unreachable
From 172.16.10.13 icmp_seq=5 Destination Host Unreachable
From 172.16.10.13 icmp_seq=6 Destination Host Unreachable
^C
--- 172.16.30.1 ping statistics ---
7 packets transmitted, 0 received, +6 errors, 100% packet loss, time 6138ms
pipe 4
root@PC1-A:~#
```

ping depuis PC1 vers s2

```
root@PC1-A:~# ping 172.16.30.2
PING 172.16.30.2 (172.16.30.2) 56(84) bytes of data.
From 172.16.10.13 icmp_seq=1 Destination Host Unreachable
From 172.16.10.13 icmp_seq=2 Destination Host Unreachable
From 172.16.10.13 icmp_seq=3 Destination Host Unreachable
^C
--- 172.16.30.2 ping statistics ---
6 packets transmitted, 0 received, +3 errors, 100% packet loss, time 5124ms
pipe 4
root@PC1-A:~#
```

ping depuis PC2 vers PC1

```
root@PC-2-A:~# ping 172.16.10.13
PING 172.16.10.13 (172.16.10.13) 56(84) bytes of data.
From 172.16.20.13 icmp_seq=1 Destination Host Unreachable
From 172.16.20.13 icmp_seq=2 Destination Host Unreachable
From 172.16.20.13 icmp_seq=3 Destination Host Unreachable
From 172.16.20.13 icmp_seq=4 Destination Host Unreachable
From 172.16.20.13 icmp_seq=5 Destination Host Unreachable
From 172.16.20.13 icmp_seq=6 Destination Host Unreachable
From 172.16.20.13 icmp_seq=7 Destination Host Unreachable
From 172.16.20.13 icmp_seq=8 Destination Host Unreachable
From 172.16.20.13 icmp_seq=9 Destination Host Unreachable
^C
--- 172.16.10.13 ping statistics ---
10 packets transmitted, 0 received, +9 errors, 100% packet loss, time 9210ms
pipe 4
root@PC-2-A:~#
```

ping depuis PC2 vers S1

```
root@PC-2-A:~# ping 172.16.30.1
PING 172.16.30.1 (172.16.30.1) 56(84) bytes of data.
From 172.16.20.13 icmp_seq=1 Destination Host Unreachable
From 172.16.20.13 icmp_seq=2 Destination Host Unreachable
From 172.16.20.13 icmp_seq=3 Destination Host Unreachable
From 172.16.20.13 icmp_seq=4 Destination Host Unreachable
From 172.16.20.13 icmp_seq=5 Destination Host Unreachable
From 172.16.20.13 icmp_seq=6 Destination Host Unreachable
^C
--- 172.16.30.1 ping statistics ---
7 packets transmitted, 0 received, +6 errors, 100% packet loss, time 6121ms
pipe 4
```

ping depuis PC2 vers S2

```
root@PC-2-A:~# ping 172.16.30.2
PING 172.16.30.2 (172.16.30.2) 56(84) bytes of data.
From 172.16.20.13 icmp_seq=1 Destination Host Unreachable
From 172.16.20.13 icmp_seq=2 Destination Host Unreachable
From 172.16.20.13 icmp_seq=3 Destination Host Unreachable
From 172.16.20.13 icmp_seq=4 Destination Host Unreachable
From 172.16.20.13 icmp_seq=5 Destination Host Unreachable
From 172.16.20.13 icmp_seq=6 Destination Host Unreachable
^C
--- 172.16.30.2 ping statistics ---
7 packets transmitted, 0 received, +6 errors, 100% packet loss, time 6137ms
pipe 4
root@PC-2-A:~#
```

ping depuis PC2 geteway 30

```
root@PC-2-A:~# ping 172.16.30.254
PING 172.16.30.254 (172.16.30.254) 56(84) bytes of data.
From 172.16.20.13 icmp_seq=1 Destination Host Unreachable
From 172.16.20.13 icmp_seq=2 Destination Host Unreachable
From 172.16.20.13 icmp_seq=3 Destination Host Unreachable
From 172.16.20.13 icmp_seq=4 Destination Host Unreachable
From 172.16.20.13 icmp_seq=5 Destination Host Unreachable
From 172.16.20.13 icmp_seq=6 Destination Host Unreachable
From 172.16.20.13 icmp_seq=7 Destination Host Unreachable
From 172.16.20.13 icmp_seq=8 Destination Host Unreachable
From 172.16.20.13 icmp_seq=9 Destination Host Unreachable
^C
--- 172.16.30.254 ping statistics ---
10 packets transmitted, 0 received, +9 errors, 100% packet loss, time 9192ms
pipe 4
root@PC-2-A:~#
```

ping depuis PC3 vers s1

```
root@PC-3-A:~# 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=1.43 ms
64 bytes from 172.16.30.1: icmp_seq=2 ttl=255 time=2.33 ms
64 bytes from 172.16.30.1: icmp_seq=3 ttl=255 time=1.51 ms
64 bytes from 172.16.30.1: icmp_seq=4 ttl=255 time=2.23 ms
64 bytes from 172.16.30.1: icmp_seq=5 ttl=255 time=1.72 ms
64 bytes from 172.16.30.1: icmp_seq=6 ttl=255 time=2.25 ms
^C
--- 172.16.30.1 ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5007ms
rtt min/avg/max/mdev = 1.438/1.915/2.331/0.368 ms
root@PC-3-A:~#
```

ping depuis PC3 vers s2

```
root@PC-3-A:~# 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=1.05 ms
64 bytes from 172.16.30.2: icmp_seq=2 ttl=255 time=1.01 ms
64 bytes from 172.16.30.2: icmp_seq=3 ttl=255 time=1.03 ms
64 bytes from 172.16.30.2: icmp_seq=4 ttl=255 time=1.16 ms
^C
--- 172.16.30.2 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3002ms
rtt min/avg/max/mdev = 1.013/1.068/1.166/0.062 ms
root@PC-3-A:~#
```

ping depuis PC3 vers gateway 10

```
root@PC-3-A:~# ping 172.16.10.254
PING 172.16.10.254 (172.16.10.254) 56(84) bytes of data.
From 172.16.30.13 icmp_seq=1 Destination Host Unreachable
From 172.16.30.13 icmp_seq=2 Destination Host Unreachable
From 172.16.30.13 icmp_seq=3 Destination Host Unreachable
From 172.16.30.13 icmp_seq=4 Destination Host Unreachable
From 172.16.30.13 icmp_seq=5 Destination Host Unreachable
From 172.16.30.13 icmp_seq=6 Destination Host Unreachable
From 172.16.30.13 icmp_seq=7 Destination Host Unreachable
From 172.16.30.13 icmp_seq=8 Destination Host Unreachable
From 172.16.30.13 icmp_seq=9 Destination Host Unreachable
^C
--- 172.16.10.254 ping statistics ---
10 packets transmitted, 0 received, +9 errors, 100% packet loss, time 9216ms
pipe 4
root@PC-3-A:~#
```

ping depuis PC3 vers PC2

```
root@PC-3-A:~# ping 172.16.20.13
PING 172.16.20.13 (172.16.20.13) 56(84) bytes of data.
From 172.16.30.13 icmp_seq=1 Destination Host Unreachable
From 172.16.30.13 icmp_seq=2 Destination Host Unreachable
From 172.16.30.13 icmp_seq=3 Destination Host Unreachable
From 172.16.30.13 icmp_seq=4 Destination Host Unreachable
From 172.16.30.13 icmp_seq=5 Destination Host Unreachable
From 172.16.30.13 icmp_seq=6 Destination Host Unreachable
^C
--- 172.16.20.13 ping statistics ---
7 packets transmitted, 0 received, +6 errors, 100% packet loss, time 6146ms
pipe 4
root@PC-3-A:~#
```

sh ip int br sur S1 :

```
S1#sh ip int br
Interface              IP-Address      OK? Method Status                Protocol
Vlan1                  unassigned      YES unset  up                    up
Vlan30                 172.16.30.1     YES manual up                    up
FastEthernet0/1        unassigned      YES unset  up                    up
FastEthernet0/2        unassigned      YES unset  administratively down down
FastEthernet0/3        unassigned      YES unset  administratively down down
FastEthernet0/4        unassigned      YES unset  administratively down down
FastEthernet0/5        unassigned      YES unset  down                  down
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

S1#
```

sh ip int br sur S2:

```
S2#sh ip int br
Interface              IP-Address      OK? Method Status                Protocol
Vlan1                  unassigned      YES unset  up                    up
Vlan30                 172.16.30.2     YES manual up                    up
FastEthernet0/1        unassigned      YES unset  up                    up
FastEthernet0/2        unassigned      YES unset  administratively down down
FastEthernet0/3        unassigned      YES unset  administratively down down
FastEthernet0/4        unassigned      YES unset  administratively down down
FastEthernet0/5        unassigned      YES unset  administratively down down
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

S2#
```

Sh inter trunk sur S1 :

```
S1#sh inter trunk

Port           Mode                  Encapsulation  Status        Native vlan
Fa0/1          on                    802.1q         trunking      99

Port           Vlans allowed on trunk
Fa0/1          1-4094

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

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

```
S2#sh inter trunk

Port           Mode                  Encapsulation  Status        Native vlan
Fa0/1          on                    802.1q         trunking      99

Port           Vlans allowed on trunk
Fa0/1          1-4094

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

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

ifconfig sur pc1 :

```
root@PC1-A:~# ifconfig
eth0      Link encap:Ethernet  HWaddr d6:15:20:fb:7e:b0
          inet addr:172.16.10.13  Bcast:172.16.10.255  Mask:255.255.255.0
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:904 errors:0 dropped:0 overruns:0 frame:0
          TX packets:76144 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:58482 (58.4 KB)  TX bytes:26020044 (26.0 MB)

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:65536  Metric:1
          RX packets:71 errors:0 dropped:0 overruns:0 frame:0
          TX packets:71 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:7576 (7.5 KB)  TX bytes:7576 (7.5 KB)

root@PC1-A:~#
```

ifconfig sur pc2 :

```
root@PC-2-A:~# ifconfig
eth0      Link encap:Ethernet  HWaddr a6:08:dc:bf:e8:6e
          inet addr:172.16.20.13  Bcast:172.16.20.255  Mask:255.255.255.0
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:929 errors:0 dropped:0 overruns:0 frame:0
          TX packets:76163 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:60124 (60.1 KB)  TX bytes:26031942 (26.0 MB)

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:65536  Metric:1
          RX packets:47 errors:0 dropped:0 overruns:0 frame:0
          TX packets:47 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:5160 (5.1 KB)  TX bytes:5160 (5.1 KB)

root@PC-2-A:~#
```

ifconfig sur pc3 :

```
root@PC-3-A:~# ifconfig
eth0      Link encap:Ethernet  HWaddr 96:08:70:4e:37:7f
          inet addr:172.16.30.13  Bcast:172.16.30.255  Mask:255.255.255.0
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:995 errors:0 dropped:0 overruns:0 frame:0
          TX packets:76289 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:65974 (65.9 KB)  TX bytes:26054301 (26.0 MB)

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:65536  Metric:1
          RX packets:84 errors:0 dropped:0 overruns:0 frame:0
          TX packets:84 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:8608 (8.6 KB)  TX bytes:8608 (8.6 KB)

root@PC-3-A:~#
```