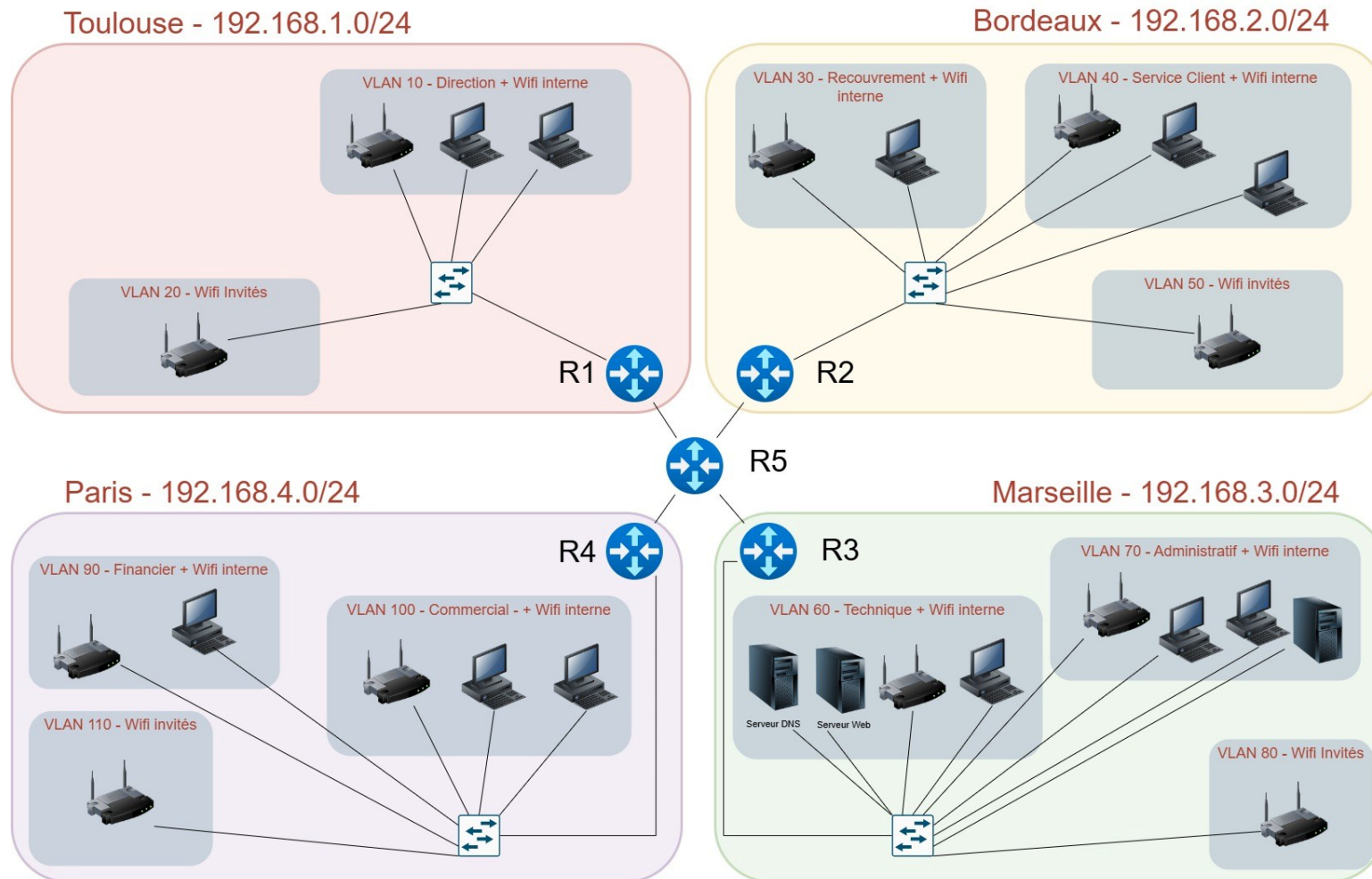


TP Infra Cisco

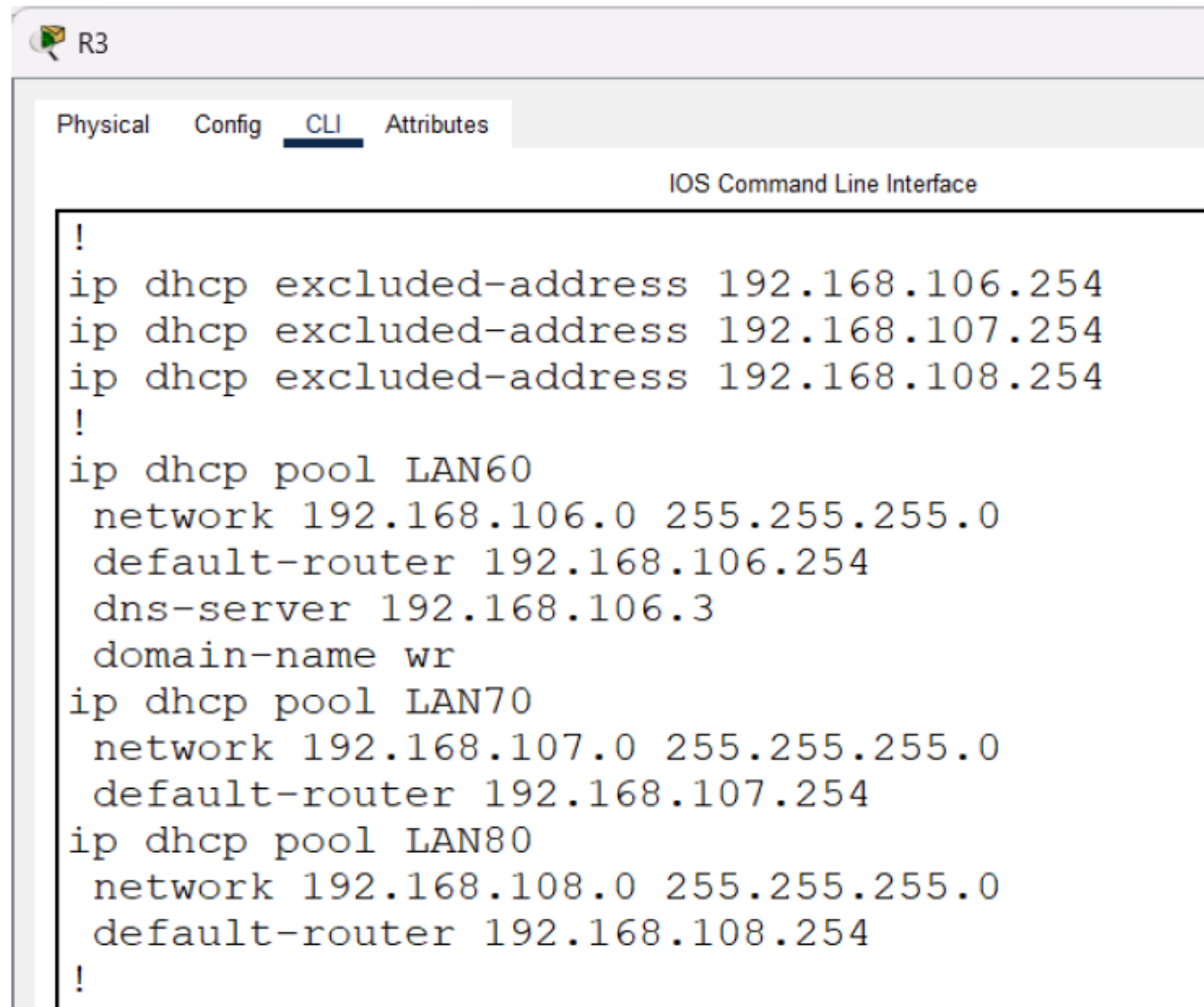
Schéma d'architecture réseau

Schéma d'architecture réseau - sites AssurTech



Documentation technique

Configuration du DHCP sur les VLANs de Marseille :



The screenshot shows a network configuration interface for a device labeled 'R3'. The interface has tabs for 'Physical', 'Config', 'CLI', and 'Attributes', with 'CLI' being the active tab. Below the tabs, the text 'IOS Command Line Interface' is displayed. The main area shows a configuration script for DHCP. It starts with an exclamation mark, followed by three 'ip dhcp excluded-address' commands for the ranges 192.168.106.254, 192.168.107.254, and 192.168.108.254. Another exclamation mark follows. Then, three DHCP pools are defined: 'LAN60' for the 192.168.106.0/24 network, 'LAN70' for the 192.168.107.0/24 network, and 'LAN80' for the 192.168.108.0/24 network. Each pool configuration includes the 'network' command, the 'default-router' command, and the 'dns-server' command. The 'domain-name' is set to 'wr'. The configuration ends with an exclamation mark.

```
!  
ip dhcp excluded-address 192.168.106.254  
ip dhcp excluded-address 192.168.107.254  
ip dhcp excluded-address 192.168.108.254  
!  
ip dhcp pool LAN60  
  network 192.168.106.0 255.255.255.0  
  default-router 192.168.106.254  
  dns-server 192.168.106.3  
  domain-name wr  
ip dhcp pool LAN70  
  network 192.168.107.0 255.255.255.0  
  default-router 192.168.107.254  
ip dhcp pool LAN80  
  network 192.168.108.0 255.255.255.0  
  default-router 192.168.108.254  
!
```

Documentation technique

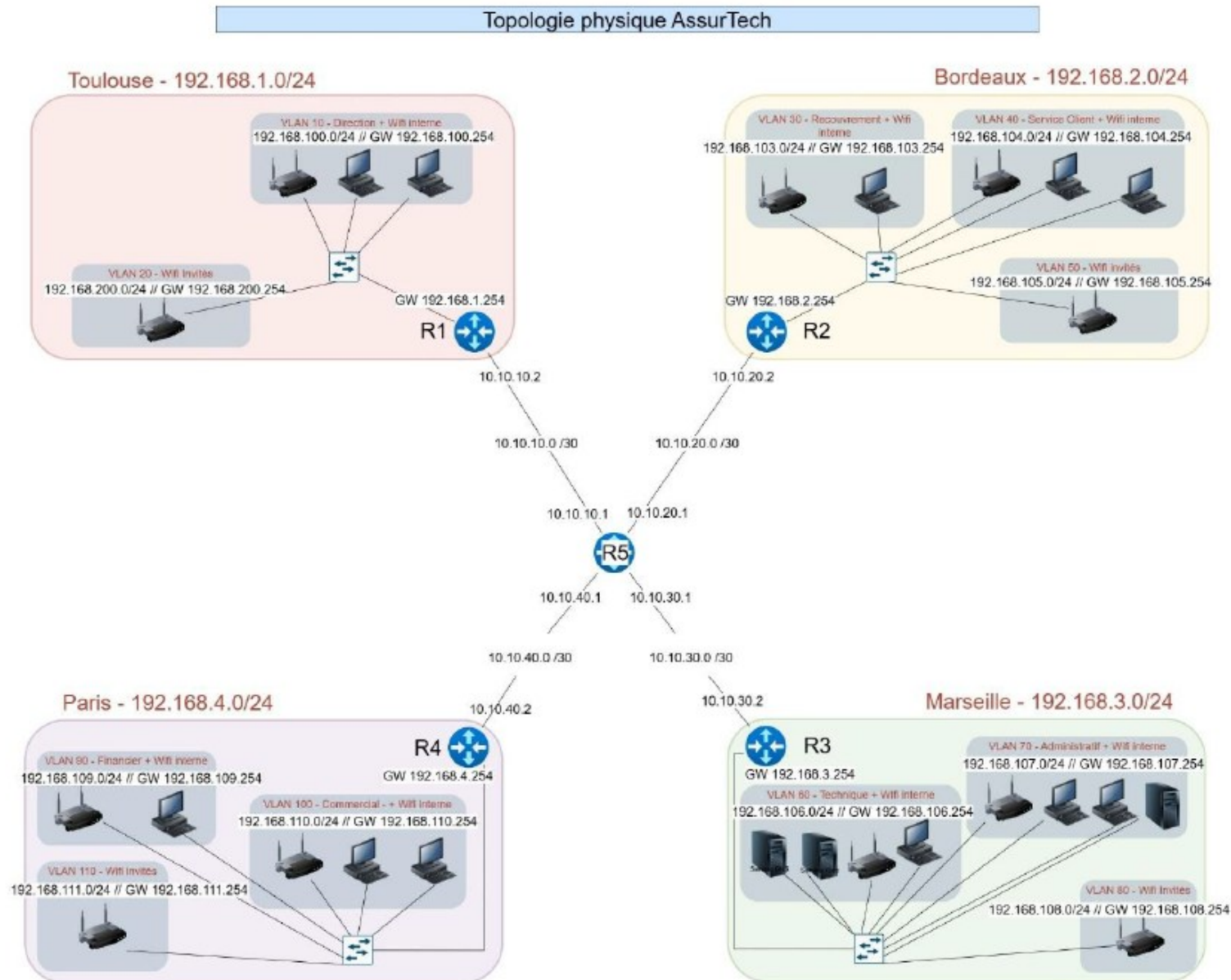
Ville	IP réseau ville et GW	VLANs (usage + réseau)	Routeur local (IP vers R5 / Réseau interco / IP R5)	DHCP (Pool / Plage / GW / Exclusions / DNS)
Toulouse (R1)	IP : 192.168.1.0/24 GW : 192.168.1.254	VLAN 10 – Direction : 192.168.100.0/24 GW : 192.168.100.254 VLAN 20 – WiFi invités : 192.168.200.0/24 GW : 192.168.200.254	10.10.10.2 10.10.10.0/30 10.10.10.1	LAN10 : 192.168.100.0 / GW 192.168.100.254 / exclue : .254 LAN20 : 192.168.200.0 / GW 192.168.200.254 / exclue : .254
Bordeaux (R2)	IP : 192.168.2.0/24 GW : 192.168.2.254	VLAN 30 – Recouvrement : 192.168.103.0/24 GW : 192.168.103.254 VLAN 40 – Service client : 192.168.104.0/24 GW : 192.168.104.254 VLAN 50 – WiFi invités : 192.168.105.0/24 GW : 192.168.105.254	10.10.20.2 10.10.20.0/30 10.10.20.1	LAN30 : 192.168.103.0 / GW 192.168.103.254 / exclue : .254 LAN40 : 192.168.104.0 / GW 192.168.104.254 / exclue : .254 LAN50 : 192.168.105.0 / GW 192.168.105.254 / exclue : .254
Marseille (R3)	IP : 192.168.3.0/24 GW : 192.168.3.254	VLAN 60 – Technique : 192.168.106.0/24 GW : 192.168.106.254 VLAN 70 – Administratif : 192.168.107.0/24 GW : 192.168.107.254 VLAN 80 – WiFi invités : 192.168.108.0/24 GW : 192.168.108.254	10.10.30.2 10.10.30.0/30 10.10.30.1	LAN60 : 192.168.106.0 / GW 192.168.106.254 / exclue : .254 / DNS : 192.168.106.3 LAN70 : 192.168.107.0 / GW 192.168.107.254 / exclue : .254 LAN80 : 192.168.108.0 / GW 192.168.108.254 / exclue : .254
Paris (R4)	IP : 192.168.4.0/24 GW : 192.168.4.254	VLAN 90 – Financier : 192.168.109.0/24 GW : 192.168.109.254 VLAN 100 – Commercial : 192.168.110.0/24 GW : 192.168.110.254 VLAN 110 – WiFi invités : 192.168.111.0/24 GW : 192.168.111.254	10.10.40.2 10.10.40.0/30 10.10.40.1	LAN90 : 192.168.109.0 / GW 192.168.109.254 / exclue : .254 LAN100 : 192.168.110.0 / GW 192.168.110.254 / exclue : .254 LAN110 : 192.168.111.0 / GW 192.168.111.254 / exclue : .254

Documentation technique

Topologie logique

- **Toulouse (R1)**
 - IP réseau du site : **192.168.1.0/24**
 - IP du routeur (GW site) : **192.168.1.254**
 - Connexion avec R5 via **10.10.10.0/30**
 - IP R1 : **10.10.10.2**, IP R5 : **10.10.10.1**
 - VLAN 10 – Direction : **192.168.100.0/24**, GW : **192.168.100.254**
 - VLAN 20 – WiFi invités : **192.168.200.0/24**, GW : **192.168.200.254**

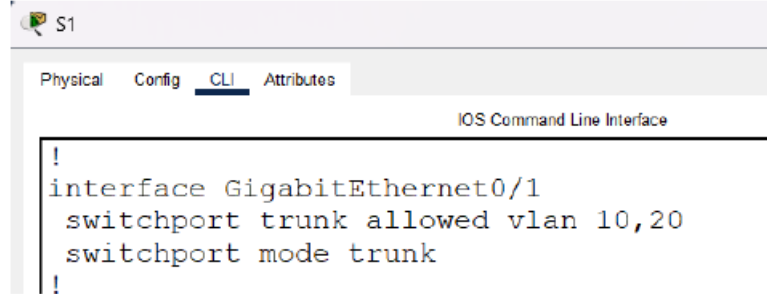
Documentation technique



Documentation technique

Les services d'un même site peuvent communiquer entre eux grâce à :

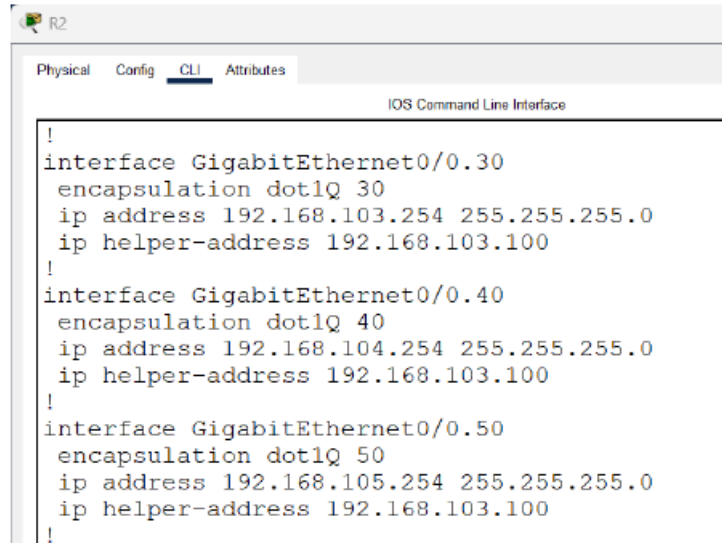
- la configuration trunk sur les switches, autorisant la communication



The screenshot shows the CLI of switch S1. The 'Config' tab is selected. The command prompt is 'S1'. The configuration shows the configuration of interface GigabitEthernet0/1 as a trunk port, allowing VLANs 10 and 20.

```
!
interface GigabitEthernet0/1
 switchport trunk allowed vlan 10,20
 switchport mode trunk
!
```

- la configuration des sous-interfaces sur les routeurs (encapsulation dot1Q)

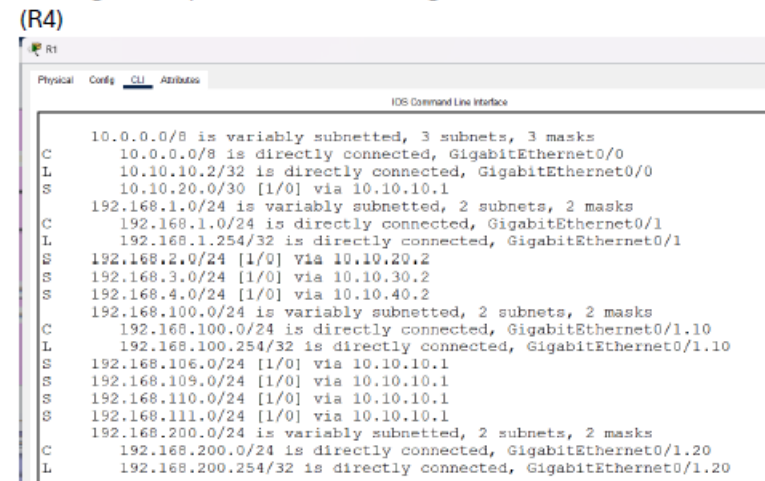


The screenshot shows the CLI of router R2. The 'Config' tab is selected. The command prompt is 'R2'. The configuration shows the configuration of three sub-interfaces on GigabitEthernet0/0: 30, 40, and 50, each with a unique IP address and a helper address for DHCP.

```
!
interface GigabitEthernet0/0.30
 encapsulation dot1Q 30
 ip address 192.168.103.254 255.255.255.0
 ip helper-address 192.168.103.100
!
interface GigabitEthernet0/0.40
 encapsulation dot1Q 40
 ip address 192.168.104.254 255.255.255.0
 ip helper-address 192.168.103.100
!
interface GigabitEthernet0/0.50
 encapsulation dot1Q 50
 ip address 192.168.105.254 255.255.255.0
 ip helper-address 192.168.103.100
!
```

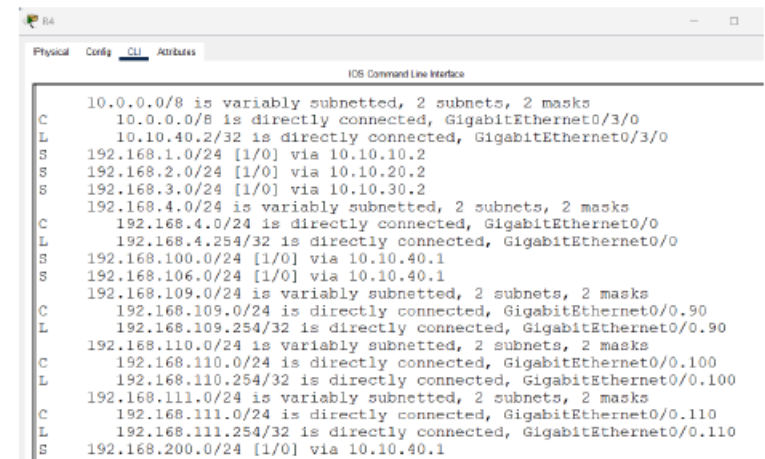
Les services de Toulouse et Paris peuvent communiquer entre eux grâce à :

- la configuration trunk sur les switches, autorisant la communication (vu précédemment)
- la configuration des sous-interfaces sur les routeurs (encapsulation dot1Q) (vu précédemment)
- routages statiques inter-VLANs configurés sur les routeurs de Toulouse (R1) et Paris (R4)



The screenshot shows the CLI of router R1. The 'Config' tab is selected. The command prompt is 'R1'. The configuration shows the configuration of static routes for various subnets, including 10.0.0.0/8, 192.168.1.0/24, 192.168.2.0/24, 192.168.3.0/24, 192.168.4.0/24, 192.168.100.0/24, 192.168.106.0/24, 192.168.109.0/24, 192.168.110.0/24, 192.168.111.0/24, 192.168.200.0/24, and 192.168.200.254/32.

```
10.0.0.0/8 is variably subnetted, 3 subnets, 3 masks
C 10.0.0.0/8 is directly connected, GigabitEthernet0/0
L 10.10.10.2/32 is directly connected, GigabitEthernet0/0
S 10.10.20.0/30 [1/0] via 10.10.10.1
S 192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.1.0/24 is directly connected, GigabitEthernet0/1
L 192.168.1.254/32 is directly connected, GigabitEthernet0/1
S 192.168.2.0/24 [1/0] via 10.10.20.2
S 192.168.3.0/24 [1/0] via 10.10.30.2
S 192.168.4.0/24 [1/0] via 10.10.40.2
S 192.168.100.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.100.0/24 is directly connected, GigabitEthernet0/1.10
L 192.168.100.254/32 is directly connected, GigabitEthernet0/1.10
S 192.168.106.0/24 [1/0] via 10.10.10.1
S 192.168.109.0/24 [1/0] via 10.10.10.1
S 192.168.110.0/24 [1/0] via 10.10.10.1
S 192.168.111.0/24 [1/0] via 10.10.10.1
S 192.168.200.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.200.0/24 is directly connected, GigabitEthernet0/1.20
L 192.168.200.254/32 is directly connected, GigabitEthernet0/1.20
```



The screenshot shows the CLI of router R4. The 'Config' tab is selected. The command prompt is 'R4'. The configuration shows the configuration of static routes for various subnets, including 10.0.0.0/8, 10.10.40.2/32, 192.168.1.0/24, 192.168.2.0/24, 192.168.3.0/24, 192.168.4.0/24, 192.168.100.0/24, 192.168.106.0/24, 192.168.109.0/24, 192.168.109.254/32, 192.168.110.0/24, 192.168.110.254/32, 192.168.111.0/24, 192.168.111.254/32, 192.168.200.0/24, and 192.168.200.110/24.

```
10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C 10.0.0.0/8 is directly connected, GigabitEthernet0/3/0
L 10.10.40.2/32 is directly connected, GigabitEthernet0/3/0
S 192.168.1.0/24 [1/0] via 10.10.10.2
S 192.168.2.0/24 [1/0] via 10.10.20.2
S 192.168.3.0/24 [1/0] via 10.10.30.2
S 192.168.4.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.4.0/24 is directly connected, GigabitEthernet0/0
L 192.168.4.254/32 is directly connected, GigabitEthernet0/0
S 192.168.100.0/24 [1/0] via 10.10.40.1
S 192.168.106.0/24 [1/0] via 10.10.40.1
S 192.168.109.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.109.0/24 is directly connected, GigabitEthernet0/0.90
L 192.168.109.254/32 is directly connected, GigabitEthernet0/0.90
S 192.168.110.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.110.0/24 is directly connected, GigabitEthernet0/0.100
L 192.168.110.254/32 is directly connected, GigabitEthernet0/0.100
S 192.168.111.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.111.0/24 is directly connected, GigabitEthernet0/0.110
L 192.168.111.254/32 is directly connected, GigabitEthernet0/0.110
S 192.168.200.0/24 [1/0] via 10.10.40.1
```