TP – Architecture réseau pour une usine de voitures

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Lien du git : https://github.com/abwii/TP-Cisco-Usine

Switchs :

Show run du SW1

```
!
!
!
!
spanning-tree mode pvst
spanning-tree extend system-id
!
interface FastEthernet0/1
 switchport access vlan 10
!
interface FastEthernet0/2
 switchport access vlan 20
!
interface FastEthernet0/3
 switchport access vlan 30
!
interface FastEthernet0/4
 switchport mode trunk
!
interface FastEthernet0/5
!
interface FastEthernet0/6
!
interface FastEthernet0/7
```

[...]

```
!
interface Vlan1
 no ip address
 shutdown
!
interface Vlan10
 ip address 10.20.10.100 255.255.255.0
!
interface Vlan20
 ip address 10.20.20.100 255.255.255.0
!
interface Vlan30
 ip address 10.20.30.100 255.255.255.0
!
!
!
```

Show run du SW2

```
!
spanning-tree mode pvst
spanning-tree extend system-id
!
interface FastEthernet0/1
 switchport access vlan 40
 switchport mode access
!
interface FastEthernet0/2
 switchport access vlan 40
!
interface FastEthernet0/3
 switchport access vlan 40
!
interface FastEthernet0/4
 switchport access vlan 40
!
interface FastEthernet0/5
 switchport access vlan 40
!
interface FastEthernet0/6
 switchport access vlan 40
!
interface FastEthernet0/7
!
```

Show run SW3

```
!
spanning-tree mode pvst
spanning-tree extend system-id
!
interface FastEthernet0/1
 switchport mode trunk
!
interface FastEthernet0/2
 switchport access vlan 50
!
interface FastEthernet0/3
 switchport access vlan 60
!
interface FastEthernet0/4
```

[...]

```
interface GigabitEthernet0/1
!
interface GigabitEthernet0/2
!
interface Vlan1
 no ip address
 shutdown
!
interface Vlan50
 ip address 172.20.50.100 255.255.255.0
!
interface Vlan60
 ip address 172.20.60.100 255.255.255.0
!
!
!
```

Show run SW4

```
!
spanning-tree mode pvst
spanning-tree extend system-id
!
interface FastEthernet0/1
 switchport mode trunk
!
interface FastEthernet0/2
 switchport access vlan 70
!
interface FastEthernet0/3
 switchport access vlan 80
!
interface FastEthernet0/4
!
```

[...]

```
interface GigabitEthernet0/2
!
interface Vlan1
 no ip address
 shutdown
!
interface Vlan70
 ip address 192.168.70.100 255.255.255.0
!
interface Vlan80
 ip address 192.168.80.100 255.255.255.0
!
!
```

Show run du SW5

```
!
!
!
!
spanning-tree mode pvst
spanning-tree extend system-id
!
interface FastEthernet0/1
!
interface FastEthernet0/2
!
interface FastEthernet0/3
!
interface FastEthernet0/4
!
interface FastEthernet0/5
!
```

[...]

```
interface FastEthernet0/23
!
interface FastEthernet0/24
!
interface GigabitEthernet0/1
!
interface GigabitEthernet0/2
!
interface Vlan1
 no ip address
 shutdown
!
!
!
!
line con 0
!
```

Routeurs :

Show run du R1

```
!
interface GigabitEthernet0/0
 no ip address
 duplex auto
 speed auto
!
interface GigabitEthernet0/0.1
 encapsulation dot1Q 10
 ip address 10.20.10.254 255.255.255.0
!
interface GigabitEthernet0/0.2
 encapsulation dot1Q 20
 ip address 10.20.20.254 255.255.255.0
!
interface GigabitEthernet0/0.3
 encapsulation dot1Q 30
 ip address 10.20.30.254 255.255.255.0
!
interface GigabitEthernet0/1
 ip address 13.13.13.1 255.255.255.252
 duplex auto
 speed auto
!
interface GigabitEthernet0/2
 no ip address
 duplex auto
 speed auto
 shutdown
!
interface Vlan1
 no ip address
 shutdown
!
ip classless
ip route 172.20.40.0 255.255.255.0 13.13.13.2
ip route 172.20.50.0 255.255.255.0 13.13.13.2
ip route 172.20.60.0 255.255.255.0 13.13.13.2
ip route 192.168.70.0 255.255.255.0 13.13.13.2
ip route 192.168.80.0 255.255.255.0 13.13.13.2
!
ip flow-export version 9
```

Show run du R2

```
!
interface GigabitEthernet0/0
 ip address 172.20.40.254 255.255.255.0
 duplex auto
 speed auto
!
interface GigabitEthernet0/1
 ip address 13.13.13.2 255.255.255.252
 duplex auto
 speed auto
!
interface GigabitEthernet0/2
 ip address 14.14.14.1 255.255.255.252
 duplex auto
 speed auto
!
interface Vlan1
 no ip address
 shutdown
!
ip classless
ip route 10.20.10.0 255.255.255.0 13.13.13.1
ip route 10.20.20.0 255.255.255.0 13.13.13.1
ip route 10.20.30.0 255.255.255.0 13.13.13.1
ip route 172.20.50.0 255.255.255.0 14.14.14.2
ip route 172.20.60.0 255.255.255.0 14.14.14.2
ip route 192.168.70.0 255.255.255.0 14.14.14.2
ip route 192.168.80.0 255.255.255.0 14.14.14.2
!
ip flow-export version 9
!
```

Show run du R3

```
!
interface GigabitEthernet0/0
 no ip address
 duplex auto
 speed auto
!
interface GigabitEthernet0/0.1
 encapsulation dot1Q 50
 ip address 172.20.50.254 255.255.255.0
!
interface GigabitEthernet0/0.2
 encapsulation dot1Q 60
 ip address 172.20.60.254 255.255.255.0
!
interface GigabitEthernet0/0.3
 encapsulation dot1Q 70
 ip address 192.168.70.254 255.255.255.0
!
interface GigabitEthernet0/0.4
 encapsulation dot1Q 80
 ip address 192.168.80.254 255.255.255.0
!
interface GigabitEthernet0/1
 no ip address
 duplex auto
 speed auto
!
interface GigabitEthernet0/2
 ip address 14.14.14.2 255.255.255.252
 duplex auto
 speed auto
!
interface Vlan1
 no ip address
 shutdown
!
ip classless
ip route 172.20.40.0 255.255.255.0 14.14.14.1
ip route 10.20.10.0 255.255.255.0 14.14.14.1
ip route 10.20.20.0 255.255.255.0 14.14.14.1
ip route 10.20.30.0 255.255.255.0 14.14.14.1
!
ip flow-export version 9
!
```

Ping du PC0 (RH) aux autres PC :

SW1 :

```
Pinging 10.20.10.1 with 32 bytes of data:

Reply from 10.20.10.1: bytes=32 time=19ms TTL=128
Reply from 10.20.10.1: bytes=32 time=18ms TTL=128
Reply from 10.20.10.1: bytes=32 time=5ms TTL=128
Reply from 10.20.10.1: bytes=32 time=16ms TTL=128

Ping statistics for 10.20.10.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 5ms, Maximum = 19ms, Average = 14ms
```

```
C:\>ping 10.20.20.1

Pinging 10.20.20.1 with 32 bytes of data:

Request timed out.
Reply from 10.20.20.1: bytes=32 time<1ms TTL=127
Reply from 10.20.20.1: bytes=32 time<1ms TTL=127
Reply from 10.20.20.1: bytes=32 time<1ms TTL=127

Ping statistics for 10.20.20.1:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

```
C:\>ping 10.20.30.1

Pinging 10.20.30.1 with 32 bytes of data:

Request timed out.
Reply from 10.20.30.1: bytes=32 time<1ms TTL=127
Reply from 10.20.30.1: bytes=32 time<1ms TTL=127
Reply from 10.20.30.1: bytes=32 time<1ms TTL=127

Ping statistics for 10.20.30.1:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

SW2 :

```
C:\>ping 172.20.40.2

Pinging 172.20.40.2 with 32 bytes of data:

Reply from 172.20.40.2: bytes=32 time<1ms TTL=126
Reply from 172.20.40.2: bytes=32 time<1ms TTL=126
Reply from 172.20.40.2: bytes=32 time<1ms TTL=126
Reply from 172.20.40.2: bytes=32 time<1ms TTL=126

Ping statistics for 172.20.40.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

```
C:\>ping 172.20.40.3

Pinging 172.20.40.3 with 32 bytes of data:

Request timed out.
Reply from 172.20.40.3: bytes=32 time<1ms TTL=126
Reply from 172.20.40.3: bytes=32 time<1ms TTL=126
Reply from 172.20.40.3: bytes=32 time<1ms TTL=126

Ping statistics for 172.20.40.3:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

```
C:\>ping 172.20.40.4

Pinging 172.20.40.4 with 32 bytes of data:

Request timed out.
Reply from 172.20.40.4: bytes=32 time<1ms TTL=126
Reply from 172.20.40.4: bytes=32 time=1ms TTL=126
Reply from 172.20.40.4: bytes=32 time<1ms TTL=126

Ping statistics for 172.20.40.4:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

```
C:\>ping 172.20.40.5

Pinging 172.20.40.5 with 32 bytes of data:

Request timed out.
Reply from 172.20.40.5: bytes=32 time<1ms TTL=126
Reply from 172.20.40.5: bytes=32 time<1ms TTL=126
Reply from 172.20.40.5: bytes=32 time<1ms TTL=126

Ping statistics for 172.20.40.5:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

SW3

```
C:\>ping 172.20.50.1

Pinging 172.20.50.1 with 32 bytes of data:

Request timed out.
Request timed out.
Reply from 172.20.50.1: bytes=32 time<1ms TTL=125
Reply from 172.20.50.1: bytes=32 time<1ms TTL=125

Ping statistics for 172.20.50.1:
    Packets: Sent = 4, Received = 2, Lost = 2 (50% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

```
C:\>ping 172.20.60.1

Pinging 172.20.60.1 with 32 bytes of data:

Request timed out.
Reply from 172.20.60.1: bytes=32 time<1ms TTL=125
Reply from 172.20.60.1: bytes=32 time=10ms TTL=125
Reply from 172.20.60.1: bytes=32 time<1ms TTL=125

Ping statistics for 172.20.60.1:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 10ms, Average = 3ms
```

SW4

```
C:\>ping 192.168.70.1

Pinging 192.168.70.1 with 32 bytes of data:

Reply from 192.168.70.1: bytes=32 time<1ms TTL=125
Reply from 192.168.70.1: bytes=32 time<1ms TTL=125
Reply from 192.168.70.1: bytes=32 time<1ms TTL=125
Reply from 192.168.70.1: bytes=32 time=1ms TTL=125

Ping statistics for 192.168.70.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

```
C:\>ping 192.168.80.1

Pinging 192.168.80.1 with 32 bytes of data:

Request timed out.
Reply from 192.168.80.1: bytes=32 time<1ms TTL=125
Reply from 192.168.80.1: bytes=32 time<1ms TTL=125
Reply from 192.168.80.1: bytes=32 time=1ms TTL=125

Ping statistics for 192.168.80.1:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

Ping du PC10(Logistique) aux autres :

SW4

```
C:\>ping 192.168.70.1

Pinging 192.168.70.1 with 32 bytes of data:

Reply from 192.168.70.1: bytes=32 time=1ms TTL=127
Reply from 192.168.70.1: bytes=32 time=22ms TTL=127
Reply from 192.168.70.1: bytes=32 time<1ms TTL=127
Reply from 192.168.70.1: bytes=32 time<1ms TTL=127

Ping statistics for 192.168.70.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 22ms, Average = 5ms
```

SW3

```
Pinging 192.168.70.1 with 32 bytes of data:

Reply from 192.168.70.1: bytes=32 time=1ms TTL=127
Reply from 192.168.70.1: bytes=32 time=2ms TTL=127
Reply from 192.168.70.1: bytes=32 time<1ms TTL=127
Reply from 192.168.70.1: bytes=32 time<1ms TTL=127

Ping statistics for 192.168.70.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 2ms, Average = 0ms

C:\>ping 172.20.40.4
```

SW2

```
C:\>ping 172.20.40.4

Pinging 172.20.40.4 with 32 bytes of data:

Request timed out.
Reply from 172.20.40.4: bytes=32 time=1ms TTL=126
Reply from 172.20.40.4: bytes=32 time<1ms TTL=126
Reply from 172.20.40.4: bytes=32 time=1ms TTL=126

Ping statistics for 172.20.40.4:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

SW1

```
C:\>ping 10.20.10.1

Pinging 10.20.10.1 with 32 bytes of data:

Reply from 10.20.10.1: bytes=32 time<1ms TTL=125
Reply from 10.20.10.1: bytes=32 time<1ms TTL=125
Reply from 10.20.10.1: bytes=32 time=1ms TTL=125
Reply from 10.20.10.1: bytes=32 time<1ms TTL=125

Ping statistics for 10.20.10.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

Ping du PC4 (DHCP - DG) aux autres :

SW1

```
C:\>ping 10.20.10.1

Pinging 10.20.10.1 with 32 bytes of data:

Reply from 10.20.10.1: bytes=32 time<1ms TTL=126
Reply from 10.20.10.1: bytes=32 time<1ms TTL=126
Reply from 10.20.10.1: bytes=32 time<1ms TTL=126
Reply from 10.20.10.1: bytes=32 time<1ms TTL=126

Ping statistics for 10.20.10.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

SW2

```
C:\>ping 172.20.40.4

Pinging 172.20.40.4 with 32 bytes of data:

Reply from 172.20.40.4: bytes=32 time<1ms TTL=128
Reply from 172.20.40.4: bytes=32 time<1ms TTL=128
Reply from 172.20.40.4: bytes=32 time<1ms TTL=128
Reply from 172.20.40.4: bytes=32 time<1ms TTL=128

Ping statistics for 172.20.40.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

SW3

```
C:\>ping 172.20.60.1

Pinging 172.20.60.1 with 32 bytes of data:

Request timed out.
Reply from 172.20.60.1: bytes=32 time<1ms TTL=126
Reply from 172.20.60.1: bytes=32 time<1ms TTL=126
Reply from 172.20.60.1: bytes=32 time=1ms TTL=126

Ping statistics for 172.20.60.1:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

SW4

```
C:\>ping 192.168.70.1

Pinging 192.168.70.1 with 32 bytes of data:

Reply from 192.168.70.1: bytes=32 time<1ms TTL=126
Reply from 192.168.70.1: bytes=32 time<1ms TTL=126
Reply from 192.168.70.1: bytes=32 time<1ms TTL=126
Reply from 192.168.70.1: bytes=32 time<1ms TTL=126

Ping statistics for 192.168.70.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

Version finale du PKT :