

Switch Multilayer:

!

version 12.2(37)SE1

no service timestamps log datetime msec

no service timestamps debug datetime msec

no service password-encryption

!

hostname Switch

!

!

!

!

!

!

ip routing

!

!

!

!

!

!

!

!

!

!

!

!

!

Bouras adel

```
!  
spanning-tree mode pvst  
!  
!  
!  
!  
!  
!  
interface FastEthernet0/1  
switchport trunk allowed vlan 10,20  
switchport trunk encapsulation dot1q  
switchport mode trunk  
!  
interface FastEthernet0/2  
switchport trunk allowed vlan 10,20  
switchport trunk encapsulation dot1q  
switchport mode trunk  
!  
interface FastEthernet0/3  
switchport trunk allowed vlan 10,20  
switchport trunk encapsulation dot1q  
switchport mode trunk  
!  
interface FastEthernet0/4  
!  
interface FastEthernet0/5  
!  
interface FastEthernet0/6  
!
```

Bouras adel

```
interface FastEthernet0/7
!
interface FastEthernet0/8
!
interface FastEthernet0/9
!
interface FastEthernet0/10
!
interface FastEthernet0/11
!
interface FastEthernet0/12
!
interface FastEthernet0/13
!
interface FastEthernet0/14
!
interface FastEthernet0/15
!
interface FastEthernet0/16
!
interface FastEthernet0/17
!
interface FastEthernet0/18
!
interface FastEthernet0/19
!
interface FastEthernet0/20
!
interface FastEthernet0/21
```

Bouras adel

```
!  
interface FastEthernet0/22  
!  
interface FastEthernet0/23  
!  
interface FastEthernet0/24  
!  
interface GigabitEthernet0/1  
!  
interface GigabitEthernet0/2  
!  
interface Vlan1  
no ip address  
shutdown  
!  
interface Vlan10  
mac-address 00e0.f7c1.e701  
ip address 192.168.10.4 255.255.255.0  
!  
interface Vlan20  
mac-address 00e0.f7c1.e702  
ip address 192.168.20.4 255.255.255.0  
!  
ip classless  
!  
ip flow-export version 9  
!  
!
```

Bouras adel

```
!  
!  
!  
!  
!  
line con 0  
!  
line aux 0  
!  
line vty 0 4  
login  
!  
!  
!  
!  
end
```

Switch 1:

```
!  
version 15.0  
no service timestamps log datetime msec  
no service timestamps debug datetime msec  
no service password-encryption  
!  
hostname Switch  
!  
!  
!  
!
```

Bouras adel

```
!  
spanning-tree mode pvst  
spanning-tree extend system-id  
!  
interface FastEthernet0/1  
switchport mode trunk  
!  
interface FastEthernet0/2  
switchport access vlan 10  
switchport mode access  
!  
interface FastEthernet0/3  
switchport access vlan 20  
switchport mode access  
!  
interface FastEthernet0/4  
!  
interface FastEthernet0/5  
!  
interface FastEthernet0/6  
!  
interface FastEthernet0/7  
!  
interface FastEthernet0/8  
!  
interface FastEthernet0/9  
!  
interface FastEthernet0/10  
!
```

Bouras adel

```
interface FastEthernet0/11
!
interface FastEthernet0/12
!
interface FastEthernet0/13
!
interface FastEthernet0/14
!
interface FastEthernet0/15
!
interface FastEthernet0/16
!
interface FastEthernet0/17
!
interface FastEthernet0/18
!
interface FastEthernet0/19
!
interface FastEthernet0/20
!
interface FastEthernet0/21
!
interface FastEthernet0/22
!
interface FastEthernet0/23
!
interface FastEthernet0/24
!
interface GigabitEthernet0/1
```

Bouras adel

```
!  
interface GigabitEthernet0/2  
!  
interface Vlan1  
no ip address  
shutdown  
!  
!  
!  
!  
line con 0  
!  
line vty 0 4  
login  
line vty 5 15  
login  
!  
!  
!  
!  
end
```

Switch 2 :

```
!  
version 15.0  
no service timestamps log datetime msec  
no service timestamps debug datetime msec  
no service password-encryption  
!
```

Bouras adel

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

Bouras adel

```
interface FastEthernet0/8
```

```
!
```

```
interface FastEthernet0/9
```

```
!
```

```
interface FastEthernet0/10
```

```
!
```

```
interface FastEthernet0/11
```

```
!
```

```
interface FastEthernet0/12
```

```
!
```

```
interface FastEthernet0/13
```

```
!
```

```
interface FastEthernet0/14
```

```
!
```

```
interface FastEthernet0/15
```

```
!
```

```
interface FastEthernet0/16
```

```
!
```

```
interface FastEthernet0/17
```

```
!
```

```
interface FastEthernet0/18
```

```
!
```

```
interface FastEthernet0/19
```

```
!
```

```
interface FastEthernet0/20
```

```
!
```

```
interface FastEthernet0/21
```

```
!
```

```
interface FastEthernet0/22
```

Bouras adel

```
!  
interface FastEthernet0/23  
!  
interface FastEthernet0/24  
!  
interface GigabitEthernet0/1  
!  
interface GigabitEthernet0/2  
!  
interface Vlan1  
no ip address  
shutdown  
!  
!  
!  
!  
line con 0  
!  
line vty 0 4  
login  
line vty 5 15  
login  
!  
!  
!  
!  
end
```

Switch 3 :

```
!
```

Bouras adel

```
version 15.0
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Switch
!
!
!
!
!
!
!
!
!
!
!
spanning-tree mode pvst
spanning-tree extend system-id
!
interface FastEthernet0/1
switchport mode trunk
!
interface FastEthernet0/2
switchport access vlan 10
switchport mode access
!
interface FastEthernet0/3
switchport access vlan 20
switchport mode access
!
interface FastEthernet0/4
!
interface FastEthernet0/5
```

Bouras adel

```
!  
interface FastEthernet0/6  
!  
interface FastEthernet0/7  
!  
interface FastEthernet0/8  
!  
interface FastEthernet0/9  
!  
interface FastEthernet0/10  
!  
interface FastEthernet0/11  
!  
interface FastEthernet0/12  
!  
interface FastEthernet0/13  
!  
interface FastEthernet0/14  
!  
interface FastEthernet0/15  
!  
interface FastEthernet0/16  
!  
interface FastEthernet0/17  
!  
interface FastEthernet0/18  
!  
interface FastEthernet0/19  
!
```

Bouras adel

```
interface FastEthernet0/20
```

```
!
```

```
interface FastEthernet0/21
```

```
!
```

```
interface FastEthernet0/22
```

```
!
```

```
interface FastEthernet0/23
```

```
!
```

```
interface FastEthernet0/24
```

```
!
```

```
interface GigabitEthernet0/1
```

```
!
```

```
interface GigabitEthernet0/2
```

```
!
```

```
interface Vlan1
```

```
no ip address
```

```
shutdown
```

```
!
```

```
!
```

```
!
```

```
!
```

```
line con 0
```

```
!
```

```
line vty 0 4
```

```
login
```

```
line vty 5 15
```

```
login
```

```
!
```

```
!
```

Bouras adel

!

!

End

Table de routage

```
Switch>show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
      D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
      N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
      E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
      i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
      * - candidate default, U - per-user static route, o - ODR
      P - periodic downloaded static route

Gateway of last resort is not set

C    192.168.10.0/24 is directly connected, Vlan10
C    192.168.20.0/24 is directly connected, Vlan20
```

Résultat de la commande ping entre 2 machines de 2 VLAN différents :

```
C:\>ping 192.168.20.1

Pinging 192.168.20.1 with 32 bytes of data:

Reply from 192.168.20.1: bytes=32 time<1ms TTL=127

Ping statistics for 192.168.20.1:
  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
  Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```