

SAÉ 21 rapport

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Configuration du switch Vlan 1 et 2 :

```
hostname Switch
```

```
!
```

```
spanning-tree mode pvst
```

```
spanning-tree extend system-id
```

```
!
```

```
interface FastEthernet0/1
```

```
switchport access vlan 10
```

```
switchport mode access
```

```
!
```

```
interface FastEthernet0/2
```

```
switchport access vlan 20
```

```
switchport mode access
```

```
!
```

```
interface FastEthernet0/24
```

```
switchport trunk allowed vlan 10-20
```

```
switchport mode trunk // Mise de l'interface en mode trunk
```

Configuration du switch Vlan 2 :

```
hostname Switch
```

```
!
```

```
spanning-tree mode pvst
```

```
spanning-tree extend system-id
```

```
spanning-tree vlan 1 priority 40960
```

```
!
```

```
interface FastEthernet0/1
```

```
switchport access vlan 20
```

```
switchport mode access
```

```
!
```

```
interface FastEthernet0/2
```

```
switchport access vlan 20
```

```
switchport mode access
```

```
!
```

```
interface FastEthernet0/24
```

```
switchport trunk allowed vlan 10-20
```

```
switchport mode trunk // Mise de l'interface en mode trunk
```

Configuration du switch Vlan 30 :

```
hostname Switch
```

```
!
```

```
spanning-tree mode pvst
```

```
spanning-tree extend system-id
```

```
!
```

```
interface FastEthernet0/1
```

```
switchport access vlan 30
```

```
switchport mode access
```

```
!
```

```
interface FastEthernet0/2
```

```
switchport access vlan 30
```

```
switchport mode access
```

```
!
```

```
interface FastEthernet0/24
switchport trunk allowed vlan 30
switchport mode trunk          // Mise de l'interface en mode trunk
```

Configuration du MLS :

```
hostname Switch
!
ip routing
!
spanning-tree mode pvst
spanning-tree vlan 1,10,20,30 priority 4096
!
interface FastEthernet0/1
switchport trunk encapsulation dot1q
switchport mode trunk          // Mise de l'interface en mode trunk
!
interface FastEthernet0/2
switchport trunk encapsulation dot1q
switchport mode trunk          // Mise de l'interface en mode trunk
!
interface FastEthernet0/3
switchport trunk allowed vlan 30
switchport trunk encapsulation dot1q
switchport mode trunk          // Mise de l'interface en mode trunk
!
interface FastEthernet0/4
no switchport
ip address 192.168.10.1 255.255.255.252
```

```
duplex auto
speed auto
!
interface Vlan10
mac-address 00d0.970a.8a01
ip address 172.16.10.1 255.255.255.0
ip helper-address 10.0.0.10
!
interface Vlan20
mac-address 00d0.970a.8a02
ip address 172.16.20.1 255.255.255.0
ip helper-address 10.0.0.10
!
interface Vlan30
mac-address 00d0.970a.8a03
ip address 10.0.0.1 255.255.255.0
!
ip classless
ip route 0.0.0.0 0.0.0.0 192.168.10.2
!
ip flow-export version 9
```

Configuration de l'ASA :

```
hostname ciscoasa
names
name 8.8.8.1 www.test.com
!
```

```
interface Ethernet0/0
switchport access vlan 10
!
interface Ethernet0/1
switchport access vlan 40
!
interface Ethernet0/3
switchport access vlan 110
!
interface Vlan10
nameif inside
security-level 100
ip address 192.168.10.2 255.255.255.252
!
interface Vlan40
no forward interface Vlan10
nameif dmz
security-level 50
ip address 192.168.1.1 255.255.255.0
!
interface Vlan110
nameif outside
security-level 0
ip address 192.168.11.253 255.255.255.252
!
route outside 0.0.0.0 0.0.0.0 192.168.11.254 1
route inside 172.16.10.0 255.255.255.0 192.168.10.1 1
route inside 172.16.20.0 255.255.255.0 192.168.10.1 1
```

!

access-list outside extended permit tcp any host 192.168.1.10 eq www

access-list outside extended permit tcp any host 192.168.1.10 eq 443

access-list outside extended permit udp any host 192.168.1.11 eq domain

access-list outside extended permit icmp any any echo-reply

!

access-group outside in interface outside

!

class-map inspection_default

match default-inspection-traffic

!

policy-map global_policy

class inspection_default

inspect http

policy-map dmz-policy

class inspection_default

inspect http

inspect icmp

!

service-policy global_policy interface inside

service-policy dmz-policy interface dmz

!

telnet timeout 5

ssh timeout 5

!

dhcpd auto_config outside

!

dhcpd enable

On a configuré un pare-feu avec trois interfaces : inside, dmz, et outside. L'interface inside représente le réseau interne de l'entreprise, avec une IP de 192.168.10.2. La dmz sert pour les serveurs accessibles depuis Internet, comme un serveur web en 192.168.1.10. L'interface outside est la sortie vers Internet, avec une IP de 192.168.11.253.

On a aussi mis en place des routes pour que le pare-feu sache comment atteindre les autres réseaux internes et externe. Les règles d'accès permettent aux gens d'Internet d'accéder au serveur web et DNS, tout en bloquant le reste.

Ensuite, on a activé des politiques de sécurité pour inspecter les protocoles comme HTTP et ICMP afin de sécuriser les communications.

Configuration du switch 4 :

```
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
```

```
switchport mode access
```

```
!
```

```
interface FastEthernet0/3
```

```
switchport access vlan 40
```

```
switchport mode access
```

Configuration du router entreprise :

```
hostname RouterENTREPRISE
```

```
!
```

```
ip cef
no ipv6 cef

!

license udi pid CISCO2901/K9 sn FTX15243VJ6-

!

spanning-tree mode pvst

!

interface GigabitEthernet0/0
ip address 192.168.11.254 255.255.255.252
ip nat inside
duplex auto
speed auto

!

interface GigabitEthernet0/1
ip address 1.1.1.1 255.255.255.0
ip access-group 1 in
ip nat outside
duplex auto
speed auto

!

router eigrp 100
network 1.1.1.0 0.0.0.255
network 192.168.11.252 0.0.0.3

!

ip nat pool ent 1.1.1.2 1.1.1.251 netmask 255.255.255.0
ip nat inside source list 2 pool ent
ip nat inside source static 192.168.1.10 1.1.1.253
ip nat inside source static 192.168.1.11 1.1.1.252
```



```
ip classless
ip route 192.168.1.0 255.255.255.0 192.168.11.253
ip route 192.168.10.0 255.255.255.0 192.168.11.253
ip route 172.16.10.0 255.255.255.0 192.168.11.253
ip route 172.16.20.0 255.255.255.0 192.168.11.253
!
ip flow-export version 9
!
access-list 1 permit 172.16.10.0 0.0.0.255
access-list 1 permit 172.16.20.0 0.0.0.255
access-list 1 deny 10.0.0.0 0.255.255.255
access-list 1 deny 172.16.0.0 0.15.255.255
access-list 1 deny 192.168.0.0 0.0.255.255
access-list 1 permit any
```

On a configuré deux interfaces : une vers le réseau interne (192.168.11.254) et une vers Internet (1.1.1.1). On a activé le NAT pour que les PC internes puissent sortir sur Internet, et on a fait deux NAT statiques pour que les serveurs soient accessibles de l'extérieur.

On a aussi utilisé EIGRP pour le routage avec l'ASA et j'ai ajouté des routes statiques pour les réseaux internes. Enfin, on a mis une access-list pour filtrer le trafic qui arrive d'Internet.

Configuration du router FAI :

```
hostname RouterFAI
!
ip cef
no ipv6 cef
!
```

```
license udi pid CISCO2901/K9 sn FTX1524H45L-
```

```
!
```

```
spanning-tree mode pvst
```

```
!
```

```
interface GigabitEthernet0/0
```

```
ip address 1.1.2.129 255.255.255.252
```

```
duplex auto
```

```
speed auto
```

```
!
```

```
interface GigabitEthernet0/1
```

```
ip address 1.1.1.2 255.255.255.0
```

```
duplex auto
```

```
speed auto
```

```
!
```

```
router eigrp 100
```

```
redistribute static
```

```
network 1.1.1.0 0.0.0.255
```

```
network 1.1.2.128 0.0.0.3
```

```
!
```

```
ip classless
```

```
ip route 8.8.0.0 255.255.0.0 1.1.2.130
```

```
ip route 0.0.0.0 0.0.0.0 1.1.1.1
```

Configuration du router TEST :

```
hostname Router
```

```
!
```

```
ip cef
```

```
no ipv6 cef
```

```

!
license udi pid CISCO2901/K9 sn FTX1524QA28-
!
spanning-tree mode pvst
!
interface GigabitEthernet0/0
ip address 8.8.8.254 255.255.0.0
duplex auto
speed auto
!
interface GigabitEthernet0/1
ip address 1.1.2.130 255.255.255.252
duplex auto
speed auto
!
ip classless
ip route 0.0.0.0 0.0.0.0 1.1.2.129

```

Configuration IP des PC Vlan 10 et 20 :

Fourni par le serveur DHCP interne

Configuration de l'IP et du SERVICE du serveur DHCP interne :

IPv4 Address	10.0.0.10
Subnet Mask	255.255.255.0
Default Gateway	10.0.0.1
DNS Server	10.0.0.11

DHCP

Interface FastEthernet0 Service ☒ On ☐ Off

Pool Name vlan10

Default Gateway 172.16.10.1

DNS Server 10.0.0.11

Start IP Address : 172 16 10 100

Subnet Mask: 255 255 255 0

Maximum Number of Users : 156

TFTP Server: 0.0.0.0

WLC Address: 0.0.0.0

DHCP

Interface FastEthernet0 Service ☒ On ☐ Off

Pool Name vlan20

Default Gateway 172.16.20.1

DNS Server 10.0.0.11

Start IP Address : 172 16 20 100

Subnet Mask: 255 255 255 0

Maximum Number of Users : 156

TFTP Server: 0.0.0.0

WLC Address: 0.0.0.0

Configuration de l'IP et du SERVICE du serveur DNS interne :

IPv4 Address	10.0.0.11
Subnet Mask	255.255.255.0
Default Gateway	10.0.0.1
DNS Server	10.0.0.11

No.	Name	Type	Detail
0	www.entreprise.com	A Record	192.168.1.10
1	www.test.com	A Record	8.8.8.1

Configuration de l'IP du serveur WEB DMZ :

IPv4 Address	192.168.1.10
Subnet Mask	255.255.255.0
Default Gateway	192.168.1.1
DNS Server	0.0.0.0

Configuration de l'IP et du SERVICE du serveur DNS DMZ :

IPv4 Address	192.168.1.11
Subnet Mask	255.255.255.0
Default Gateway	192.168.1.1
DNS Server	0.0.0.0

No.	Name	Type	Detail
0	www.entreprise.com	A Record	1.1.1.253
1	www.test.com	A Record	8.8.8.1

Configuration de l'IP et du SERVICE du serveur externe :

IPv4 Address	8.8.8.1
Subnet Mask	255.255.0.0
Default Gateway	8.8.8.254
DNS Server	8.8.8.1

No.	Name	Type	Detail
0	www.entreprise.com	A Record	1.1.1.253
1	www.test.com	A Record	8.8.8.1

Configuration de l'IP du PC externe :

IPv4 Address	8.8.8.2
Subnet Mask	255.255.0.0
Default Gateway	8.8.8.254
DNS Server	8.8.8.1

Plan d'adressage IP complet :

