MUTLAB

Environnement : Cisco IOS
Matériel : Cisoc Catalyst 2690

Configuration des VLANS

```
MUTLAB#sh vlan

VLAN Name                             Status     Ports
---- -------------------------------- ---------  --------------------------------
1    default                          active
10   Reseaux                          active     Fa0/2, Fa0/3, Fa0/4
20   DSI                              active     Fa0/5, Fa0/6
30   RH                               active     Fa0/7, Fa0/8, Fa0/9, Fa0/10
                                                 Fa0/11, Fa0/12
40   autres                           active     Fa0/13, Fa0/14, Fa0/15, Fa0/16
                                                 Fa0/17, Fa0/18, Fa0/19, Fa0/20
150  visiteurs                        active     Fa0/21, Fa0/22, Fa0/23, Fa0/24
300  serveur                          active     Gi0/1
400  sortie                           active     Gi0/2
500  Management                       active     Fa0/1
1002 fddi-default                     act/unsup
1003 token-ring-default               act/unsup
1004 fddinet-default                  act/unsup
1005 trnet-default                    act/unsup
```

Assignation d'une IP par interface de vlan pour le routage inter vlan.

```
MUTLAB#sh ip interface brief
Interface              IP-Address      OK? Method Status                Protocol
Vlan1                  unassigned      YES NVRAM  up                    down
Vlan10                 192.168.10.254  YES NVRAM  up                    down
Vlan20                 192.168.20.254  YES NVRAM  up                    down
Vlan30                 192.168.30.254  YES NVRAM  up                    down
Vlan40                 192.168.40.254  YES NVRAM  up                    up
Vlan150                192.168.150.254 YES NVRAM  up                    up
Vlan300                172.16.1.254    YES NVRAM  up                    up
Vlan400                172.31.0.1      YES NVRAM  up                    up
Vlan500                192.168.0.1     YES NVRAM  up                    down
```

Configuration du routage

Changement du template SDM (Switching Database Manager) et activation du routage.

mutlab(config)#sdm prefer lanbase-routing

```
MUTLAB#sh sdm prefer
 The current template is "lanbase-routing" template.
 The selected template optimizes the resources in
 the switch to support this level of features for
 8 routed interfaces and 255 VLANs.
```

Mutlab(config)#ip routing

Configuration de la route par default

Multab(config)#ip route 0.0.0.0 0.0.0.0 172.31.0.2

```
MUTLAB#sh route
              ^
% Invalid input detected at '^' marker.

MUTLAB#sh ip route
Codes: C - connected, S - static, 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
       i - IS-IS, su - IS-IS summary, 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 172.31.0.2 to network 0.0.0.0

C    192.168.150.0/24 is directly connected, Vlan150
C    192.168.40.0/24 is directly connected, Vlan40
     172.16.0.0/24 is subnetted, 1 subnets
C       172.16.1.0 is directly connected, Vlan300
     172.31.0.0/30 is subnetted, 1 subnets
C       172.31.0.0 is directly connected, Vlan400
S*   0.0.0.0/0 [1/0] via 172.31.0.2
MUTLAB#
```

Création des ACLs

```
access-list 101 permit ip 192.168.150.0 0.0.0.255 192.168.150.0 0.0.0.255 log
access-list 101 permit ip 192.168.150.0 0.0.0.255 192.168.0.0 0.0.255.255 log
access-list 101 permit udp 192.168.150.0 0.0.0.255 172.16.1.0 0.0.0.255 eq bootps log
access-list 101 permit udp 192.168.150.0 0.0.0.255 172.16.1.0 0.0.0.255 eq domain log
access-list 101 deny   ip 192.168.150.0 0.0.0.255 172.16.1.0 0.0.0.255 log
access-list 101 permit ip any any log
access-list 102 permit ip 192.168.40.0 0.0.0.255 192.168.40.0 0.0.0.255 log
access-list 102 deny   ip 192.168.40.0 0.0.0.255 192.168.0.0 0.0.255.255 log
access-list 102 permit ip any any log
access-list 103 permit ip 192.168.30.0 0.0.0.255 192.168.30.0 0.0.0.255 log
access-list 103 deny   ip 192.168.30.0 0.0.0.255 192.168.0.0 0.0.255.255 log
access-list 103 permit ip any any log
access-list 104 permit ip 192.168.20.0 0.0.0.255 192.168.20.0 0.0.0.255 log
access-list 104 deny   ip 192.168.20.0 0.0.0.255 192.168.0.0 0.0.255.255 log
access-list 104 permit ip any any log
access-list 105 permit ip 192.168.10.0 0.0.0.255 192.168.10.0 0.0.0.255 log
access-list 105 deny   ip 192.168.10.0 0.0.0.255 192.168.0.0 0.0.255.255 log
access-list 105 permit ip any any log
```

Ajout ACLs et DHCP Relay au interfaces

Acl : access-group

Relay DHCP : helper-address

```
interface Vlan10
 ip address 192.168.10.254 255.255.255.0
 ip access-group 105 in
 ip helper-address 172.16.1.30
!
interface Vlan20
 ip address 192.168.20.254 255.255.255.0
 ip access-group 104 in
 ip helper-address 172.16.1.30
!
interface Vlan30
 ip address 192.168.30.254 255.255.255.0
 ip access-group 103 in
 ip helper-address 172.16.1.30
!
interface Vlan40
 ip address 192.168.40.254 255.255.255.0
 ip access-group 102 in
 ip helper-address 172.16.1.30
!
interface Vlan150
 ip address 192.168.150.254 255.255.255.0
 ip access-group 101 in
 ip access-group 101 out
 ip helper-address 172.16.1.30
!
interface Vlan300
 ip address 172.16.1.254 255.255.255.0
 ip access-group 10 in
 ip helper-address 172.16.1.30
!
interface Vlan400
 ip address 172.31.0.1 255.255.255.252
!
interface Vlan500
 ip address 192.168.0.1 255.255.255.252
```