

Compte-rendu

Contexte :

La société Amine nous a demandé de mettre en place trois sous réseaux différents séparés par un routeur pour les faire communiquer par le biais de quatre switch qui relie les trois réseaux, un serveur dhcp se trouvera sur un routeur avec trois pool qui permettra de fournir une adresse ip, un masque, une passerelle et un dns pour chaque PC. Il y a également trois VLAN qui permettent de faire communiquer certains PC entre eux.

Sommaire:

- 1 - Mise en place de la configuration des interfaces sur les routeurs
- 2 - Configuration du protocole VTP sur chaque switch
- 3 - Configuration des VLAN sur chaque switch
- 4 - Installation et configuration des stations en DHCP
- 5 - Vérification de la communication entre les sous réseaux.

Prérequis :

- Un routeur Cisco 1811 (avec DHCP)
- Sept stations
- Quatre switch 2950t-24

Explication :

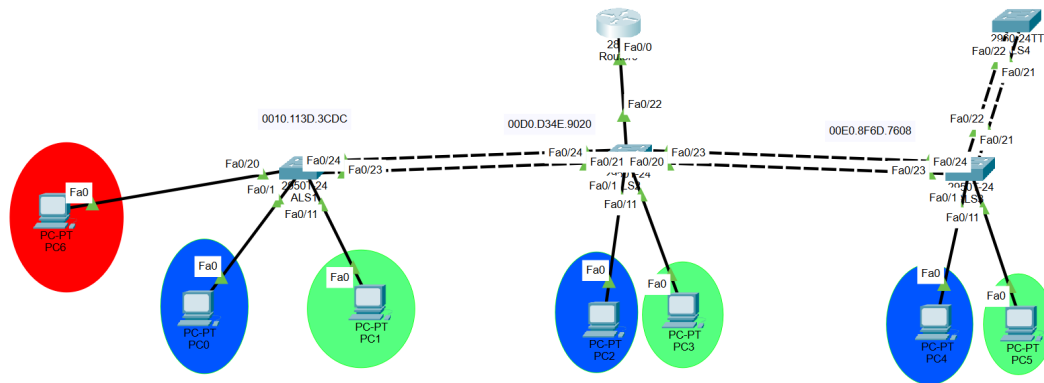
Tout d'abord, nous allons configurer les interfaces des routeurs.

Ensuite, on mettra en place le protocole VTP sur chaque switch.

Sur les switches, on configure les différents vlans.

Enfin, on met nos stations en DHCP et on vérifie que celles-ci ont récupéré une carte réseau et on fait des pings entre chaque machine.

Schéma de la mission :



Tutoriel :

1 - Mise en place de la configuration des interfaces sur les routeurs

ROUTER 0

```
interface FastEthernet0/0
no ip address
no sh
```

```
interface FastEthernet0/0.10
encapsulation dot1Q 10
ip address 192.168.10.17 255.255.255.240
```

```
interface FastEthernet0/0.20
encapsulation dot1Q 20
ip address 192.168.10.49 255.255.255.240
```

```
interface FastEthernet0/0.99
encapsulation dot1Q 99
ip address 192.168.10.225 255.255.255.240
```

```
ip dhcp pool COMPTA
network 192.168.10.48 255.255.255.240
default-router 192.168.10.49
```

```
ip dhcp pool ADMIN
network 192.168.10.224 255.255.255.240
default-router 192.168.10.225
```

```
ip dhcp pool USERS
network 192.168.10.16 255.255.255.240
default-router 192.168.10.17
```

2 - Configuration du protocole VTP sur chaque switch

ALS1

```
vtp mode client
(récupere tous les vlans du switch qui est en vtp server)
vtp version 2
vtp domain AIS
vtp password AIS (soit identique à celui du vtp server)
```

ALS2

```
vtp mode server
vtp version 2
vtp domain AIS
vtp password AIS
```

ALS3

```
vtp mode client (mettre en mode transparent par la suite, cela sert à ne
plus synchroniser les vlans du vtp server)
vtp domain AIS
vtp password AIS
vtp version 2
```

3 - Configuration des VLAN sur chaque switch

ALS1

```
interface range fa0/17-fa0/23  
switchport access vlan 100
```

```
int fa0/20  
switchport mode access  
switchport access vlan 99
```

```
interface range gig0/1-gig0/2  
switchport access vlan 100
```

```
interface range fa0/1-fa0/10  
switchport mode access  
switchport access 10
```

```
interface range fa0/11-fa0/16  
switchport mode access  
switchport access 20
```

ALS2

```
VLAN 10  
name USERS  
VLAN 20  
name COMPTA  
VLAN 99  
name ADMIN  
VLAN 100  
name POUBELLE  
VLAN 66  
name NATIVE
```

```
interface range fa0/17-fa0/23  
switchport access vlan 100
```

```
interface range gig0/1-gig0/2
switchport access vlan 100
```

```
interface range fa0/1-fa0/10
switchport mode access
switchport access 10
```

```
interface range fa0/11-fa0/16
switchport mode access
switchport access 20
```

```
interface FastEthernet0/22
switchport access vlan 100
switchport trunk native vlan 66
switchport trunk allowed vlan 10,20,66,99
switchport mode trunk
```

```
interface FastEthernet0/23
switchport access vlan 100
switchport trunk native vlan 66
switchport trunk allowed vlan 10,20,66,99
switchport mode trunk
```

```
interface FastEthernet0/24
switchport access vlan 100
switchport trunk native vlan 66
switchport trunk allowed vlan 10,20,66,99
switchport mode trunk
```

ALS3

```
interface range fa0/17-fa0/23
switchport access vlan 100
```

```
interface range gig0/1-gig0/2
switchport access vlan 100
```

```
interface range fa0/1-fa0/10
switchport mode access
switchport access 10
```

```
interface range fa0/11-fa0/16
switchport mode access
switchport access 20
```

4 - Installation et configuration des stations en DHCP

ROUTER 0

```
ip dhcp pool COMPTA
network 192.168.10.48 255.255.255.240
default-router 192.168.10.49
```

```
ip dhcp pool ADMIN
network 192.168.10.224 255.255.255.240
default-router 192.168.10.225
```

```
ip dhcp pool USERS
network 192.168.10.16 255.255.255.240
default-router 192.168.10.17
```

PC6

Physical Config Desktop Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

☒ DHCP ☐ Static

IPv4 Address 192.168.10.226

Subnet Mask 255.255.255.240

Default Gateway 192.168.10.225

DNS Server 0.0.0.0

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address /

Link Local Address FE80::290:CFF:FE4D:AE91

Default Gateway

DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

Username

Password

PC0

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

☒ DHCP ☐ Static

IPv4 Address 192.168.10.18

Subnet Mask 255.255.255.240

Default Gateway 192.168.10.17

DNS Server 0.0.0.0

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address /

Link Local Address FE80::260:47FF:FE0A:7CD3

Default Gateway

DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

Username

Password

PC1

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

☒ DHCP ☐ Static

IPv4 Address 192.168.10.51

Subnet Mask 255.255.255.240

Default Gateway 192.168.10.49

DNS Server 0.0.0.0

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address /

Link Local Address FE80::2E0:F9FF:FE18:40B4

Default Gateway

DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

Username

Password

PC2

Physical Config Desktop Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

☒ DHCP ☐ Static

IPv4 Address 192.168.10.20

Subnet Mask 255.255.255.240

Default Gateway 192.168.10.17

DNS Server 0.0.0.0

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address /

Link Local Address FE80::209:7CFF:FEAA:7941

Default Gateway

DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

Username

Password

PC3

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

☒ DHCP ☐ Static

IPv4 Address 192.168.10.50

Subnet Mask 255.255.255.240

Default Gateway 192.168.10.49

DNS Server 0.0.0.0

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address /

Link Local Address FE80::260:47FF:FE20:16D0

Default Gateway

DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

Username

Password

PC4

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

☒ DHCP ☐ Static

IPv4 Address 192.168.10.19

Subnet Mask 255.255.255.240

Default Gateway 192.168.10.17

DNS Server 0.0.0.0

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address /

Link Local Address FE80::2E0:F9FF:FE14:AC8C

Default Gateway

DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

Username

Password

PC5

PhysicalConfigDesktopProgrammingAttributes

IP ConfigurationX

InterfaceFastEthernet0

IP Configuration

☒ DHCP

☐ Static

IPv4 Address192.168.10.52

Subnet Mask255.255.255.240

Default Gateway192.168.10.49

DNS Server0.0.0.0

IPv6 Configuration

☐ Automatic

☒ Static

IPv6 Address

Link Local AddressFE80::260:3EFF:FEC3:30E5

Default Gateway

DNS Server

802.1X

☐ Use 802.1X Security

AuthenticationMD5

Username

Password

5 - Vérification de la communication entre les sous réseaux.

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	De
	Successful	PC0	PC2	IC...		0.000	N	0	(e...	(d
	Successful	PC1	PC3	IC...		0.000	N	1	(e...	(d
	Successful	PC3	PC5	IC...		0.000	N	2	(e...	(d