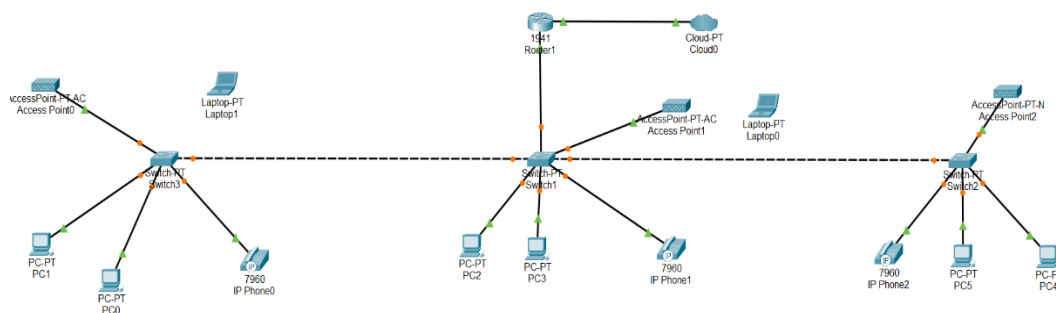


Tests d'admission MSc Cyber

1.Exercice 01 :Packet Tracer

Je commence par donc par configurer le minilab comme définis dans l'exercice :



Ensuite je configure dans un premier temps les différent vlans sur le routeur :

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface GigabitEthernet 0/0.1
Router(config-subif)#description VoIP - VLAN 1
Router(config-subif)#encapsulation dot1Q 1 native ! VLAN natif
% Invalid input detected at '^' marker.

Router(config-subif)#encapsulation dot1Q 1 native ! VLAN natif
% Invalid input detected at '^' marker.

Router(config-subif)#encapsulation dot1Q 1 native
Router(config-subif)#ip address 192.168.0.1 255.255.255.0
Router(config-subif)#exit
Router(config)#interface GigabitEthernet 0/0.10
Router(config-subif)#description PC fixes - VLAN 10
Router(config-subif)#encapsulation dot1Q 10
Router(config-subif)#ip address 192.168.10.1 255.255.255.0
Router(config-subif)#exit
Router(config)#interface GigabitEthernet 0/0.20
Router(config-subif)#de
%LINK-5-CHANGED: Interface GigabitEthernet0/0.20, changed state to up

Router(config-subif)#des
Router(config-subif)#description Wi-Fi - VLAN 20
Router(config-subif)#enc
Router(config-subif)#encapsulation dot1Q 20
Router(config-subif)#ip
Router(config-subif)#ip add
Router(config-subif)#ip address 192.168.20.1 255.255.255.0
Router(config-subif)#exit
Router(config)#interface GigabitEthernet 0/0.30
Router(config-subif)#des
%LINK-5-CHANGED: Interface GigabitEthernet0/0.30, changed state to up
% Ambiguous command: "de"
Router(config-subif)#description Administration - VLAN 30
Router(config-subif)#enca
Router(config-subif)#encapsulation dot1Q 30
```

Puis je permets leur configuration sur leur adresse ip passerelles des vlan sur les réseaux

```
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ip access-list standard NAT_ACL
Router(config-std-nacl)#permit 192.168.0.0 0.0.0.255
Router(config-std-nacl)#permit 192.168.10.0 0.0.0.255
Router(config-std-nacl)#permit 192.168.20.0 0.0.0.255
Router(config-std-nacl)#permit 192.168.30.0 0.0.0.255
Router(config-std-nacl)#exit
```

Et je continue avec la création de la plage dhcp du routeur pour que tous les appareils est leur adresses ip donné de manière automatique :

```
Router(config)#ip dhcp pool VLAN_VOIP
Router(dhcp-config)#network 192?
A.B.C.D
Router(dhcp-config)#network 192.168.0.0 255.255.255.0
Router(dhcp-config)#default-router 192.168.0.1
^
% Invalid input detected at '^' marker.

Router(dhcp-config)#default-router 192.168.0.1
Router(dhcp-config)#dns-server 8.8.8.8
Router(dhcp-config)#exit
Router(config)#ip dhcp pool VLAN_PC_FIXES
Router(dhcp-config)#network 192.168.10.0 255.255.255.0
Router(dhcp-config)#default-router 192.168.10.1
Router(dhcp-config)#dns-server 8.8.8.8
Router(dhcp-config)#exit
Router(config)#ip dhcp pool VLAN_WIFI
Router(dhcp-config)#network 192.168.20.0 255.255.255.0
Router(dhcp-config)#default-router 192.168.20.1
^
% Invalid input detected at '^' marker.

Router(dhcp-config)#default-router 192.168.20.1
Router(dhcp-config)#dns-server 8.8.8.8
Router(dhcp-config)#exit
Router(config)#ip dhcp VLAN_ADMIN
^
% Invalid input detected at '^' marker.

Router(config)#ip dhcp pool VLAN_ADMIN
Router(dhcp-config)#network 192.168.30.0 255.255.255.0
Router(dhcp-config)#default-router 192.168.30.1
Router(dhcp-config)#dns-server 8.8.8.8
```

J'exclue les adresse ip passerelle et de la plage dhcp :

```
Router(config)#ip dhcp excluded-ad
Router(config)#ip dhcp excluded-address 192.168.0.1
Router(config)#ip dh
Router(config)#ip dhcp ex
Router(config)#ip dhcp excluded-address 192.168.10.1
Router(config)#ip dhcp exclu
Router(config)#ip dhcp excluded-address 1
Router(config)#ip dhcp excluded-address 19
Router(config)#ip dhcp excluded-address 192
Router(config)#ip dhcp excluded-address 192.168.20.1
Router(config)#ip dhcp ex
Router(config)#ip dhcp excluded-address 192.168.30.1
Router(config)#ip dhcpex
Router(config)#ip dhcp ex
Router(config)#ip dhcp excluded-address 192.168.0.2 192.168.0.9
Router(config)#ip dhcp ex
Router(config)#ip dhcp excluded-address 192.168.10.2 192.168.10.9
Router(config)#ip dhcp ex
Router(config)#ip dhcp excluded-address 192.168.20.2 192.168.20.9
Router(config)#ip dhcp ex
Router(config)#ip dhcp excluded-address 192.168.30.2 192.168.30.9
```

Je configure les 3 switches :

```
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#vlan 10
Switch(config-vlan)#name PC_FIXES
Switch(config-vlan)#exit
Switch(config)#vlan 20
Switch(config-vlan)#name WIFI
Switch(config-vlan)#exit
Switch(config)#vlan 30
Switch(config-vlan)#name ADMINISTRATION
Switch(config-vlan)#exit
Switch(config)#interface range F4/1-F5/1
Switch(config-if-range)#swi
Switch(config-if-range)#switchport mode
Switch(config-if-range)#switchport mode acc
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#sw
Switch(config-if-range)#switchport ac
Switch(config-if-range)#switchport access vlan 20
Switch(config-if-range)#exit
Switch(config)#interface range F6/1-F7/1
Switch(config-if-range)#swi
Switch(config-if-range)#switchport mode
Switch(config-if-range)#switchport mode ac
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#sw
Switch(config-if-range)#switchport access vlan 10
Switch(config-if-range)#exit
Switch(config)#interface F8/1
Switch(config-if)#switchport mode access
Switch(config-if)#switch
Switch(config-if)#switchport access
Switch(config-if)#switchport access vlan 30
Switch(config-if)#exit
Switch(config)#interface range F2/1-F3/1
Switch(config-if-range)#sw
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#sw
Switch(config-if-range)#switchport access vlan 1
Switch(config-if-range)#exit
```

Voici la configuration de mes switches :

```
Switch>show vlan
```

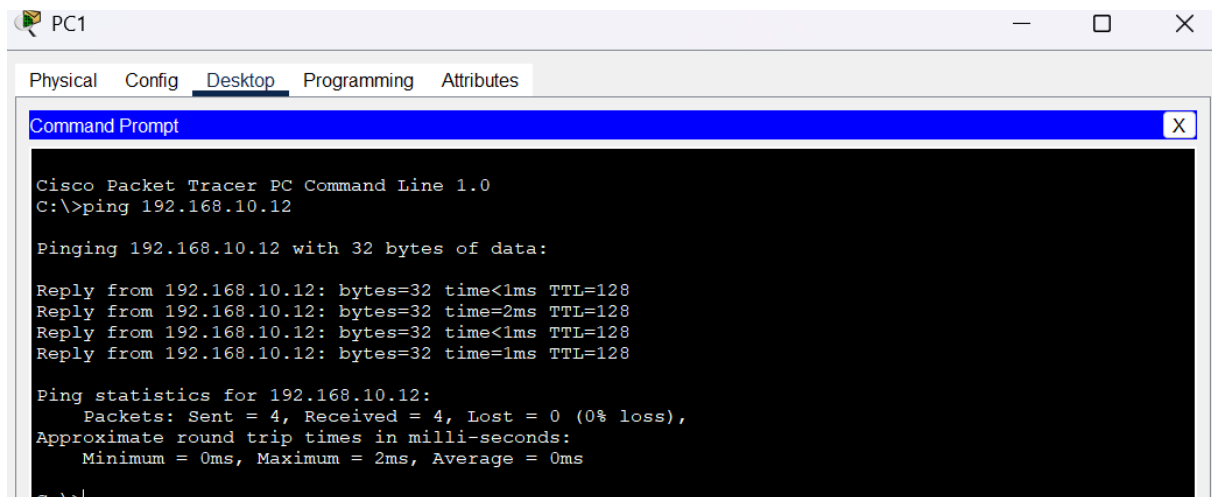
VLAN	Name	Status	Ports
1	default	active	Fa0/1, Fa2/1, Fa3/1
10	PC_FIXES	active	Fa2/1, Fa6/1, Fa7/1, Fa9/1
20	WIFI	active	Fa4/1, Fa5/1
30	ADMINISTRATION	active	Fa8/1
1002	fddi-default	active	
1003	token-ring-default	active	
1004	fddinet-default	active	
1005	trnet-default	active	

VLAN	Type	SAID	MTU	Parent	RingNo	BridgeNo	Stp	BrdgMode	Trans1	Trans2
1	enet	100001	1500	-	-	-	-	-	0	0
10	enet	100010	1500	-	-	-	-	-	0	0
20	enet	100020	1500	-	-	-	-	-	0	0
30	enet	100030	1500	-	-	-	-	-	0	0
1002	fddi	101002	1500	-	-	-	-	-	0	0
1003	tr	101003	1500	-	-	-	-	-	0	0
1004	fdnet	101004	1500	-	-	-	ieee	-	0	0
1005	trnet	101005	1500	-	-	-	ibm	-	0	0

--More--

Je ping le PC4(192.168.10.12) qui est connecté au switch2 depuis le PC1

(192.168.10.15) connecté au switch3 pour voir si mon mode trunk fonctionne :



The screenshot shows a window titled 'PC1' with tabs for 'Physical', 'Config', 'Desktop', 'Programming', and 'Attributes'. The 'Desktop' tab is active, displaying a 'Command Prompt' window. The Command Prompt shows the output of a ping command to 192.168.10.12. The output indicates that the ping was successful with 0% loss and very low round trip times.

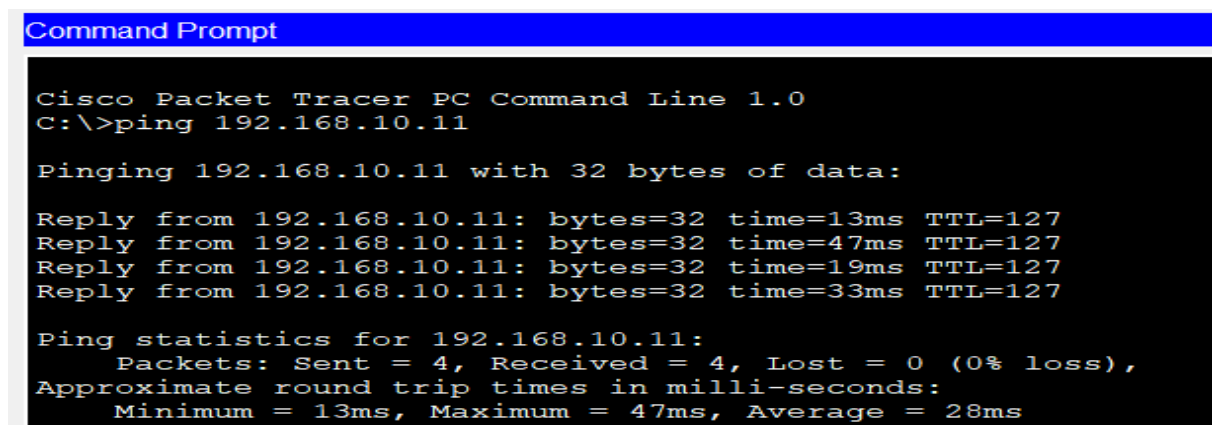
```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.10.12

Pinging 192.168.10.12 with 32 bytes of data:

Reply from 192.168.10.12: bytes=32 time<1ms TTL=128
Reply from 192.168.10.12: bytes=32 time=2ms TTL=128
Reply from 192.168.10.12: bytes=32 time<1ms TTL=128
Reply from 192.168.10.12: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.10.12:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 2ms, Average = 0ms
```

Je ping un pc portable pour voir si mon mode trunk inter vlan fonctionne :



The screenshot shows a 'Command Prompt' window with the output of a ping command to 192.168.10.11. The output shows successful ping results with 0% loss and round trip times ranging from 13ms to 47ms.

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.10.11

Pinging 192.168.10.11 with 32 bytes of data:

Reply from 192.168.10.11: bytes=32 time=13ms TTL=127
Reply from 192.168.10.11: bytes=32 time=47ms TTL=127
Reply from 192.168.10.11: bytes=32 time=19ms TTL=127
Reply from 192.168.10.11: bytes=32 time=33ms TTL=127

Ping statistics for 192.168.10.11:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 13ms, Maximum = 47ms, Average = 28ms
```