

FACULTÉ DES SCIENCES ET DES TECHNOLOGIES (FST)

Troisième année

RAPPORT

Sur le Projet Nº 6

COURS

Réseaux II

Professeur

Ismaël SAINT AMOUR

PRÉPARÉ PAR

Peterson CHERY

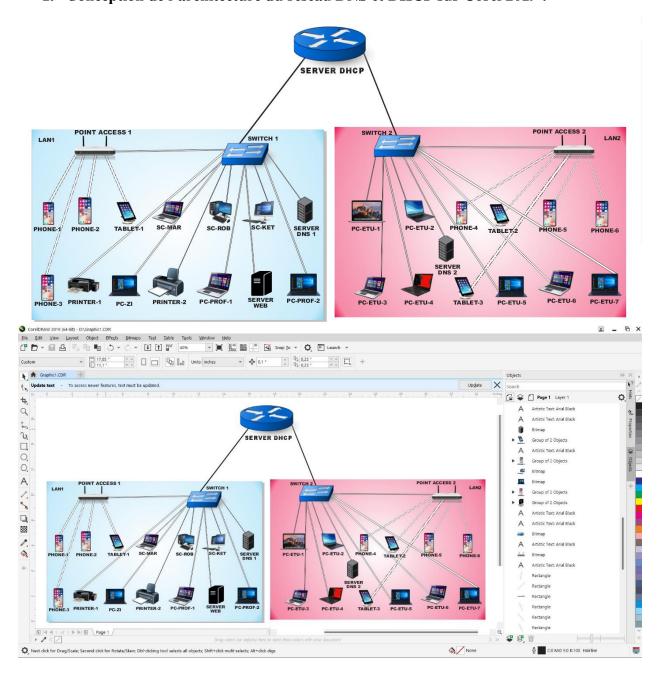
SEMESTRE

Ш

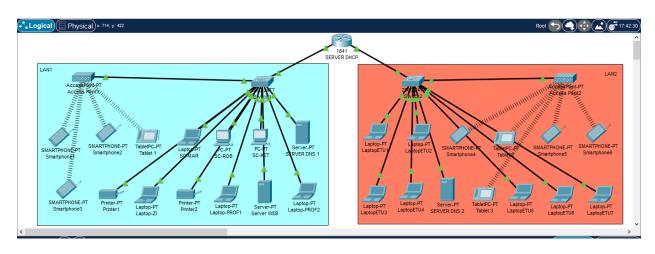
Sujet

Configuration et Étude des Services DNS et DHCP avec
GNS3 et Cisco Packet Tracer

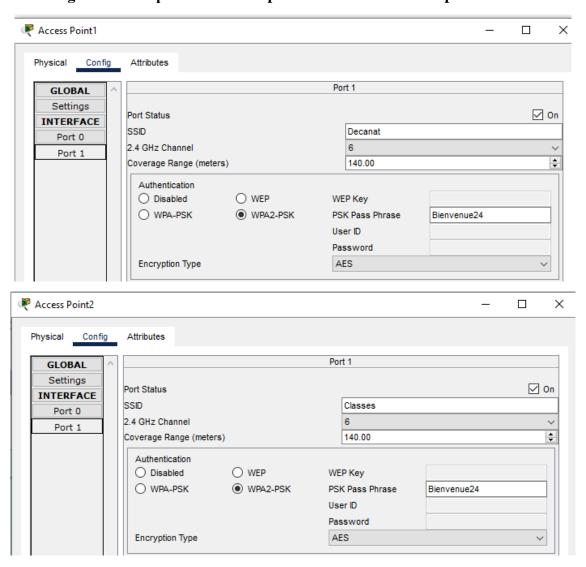
1. Conception de l'architecture du réseau DNS et DHCP sur Corel 2019 :



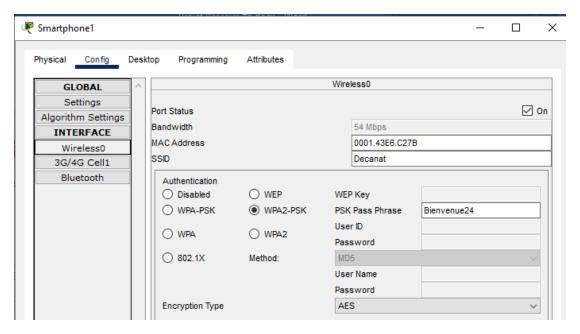
2. L'architecture dans Cisco Tracer:

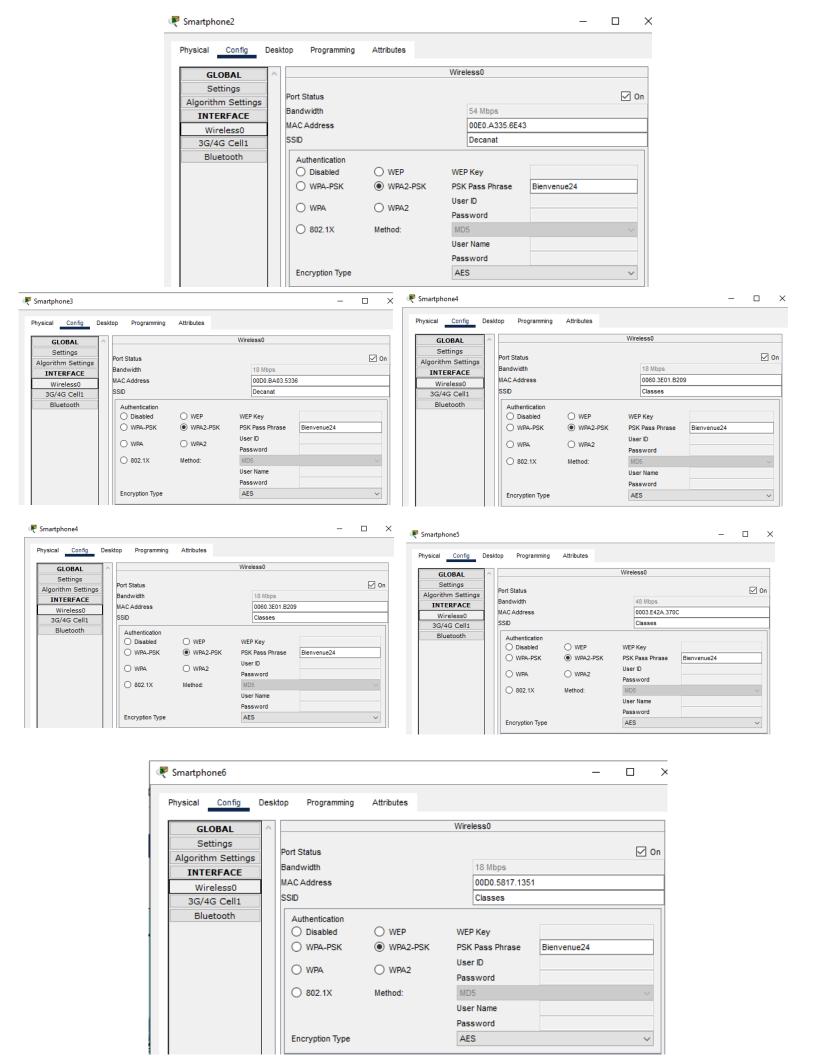


3. Configuration des points D'accès : pour la connexion des téléphones et Tablettes :

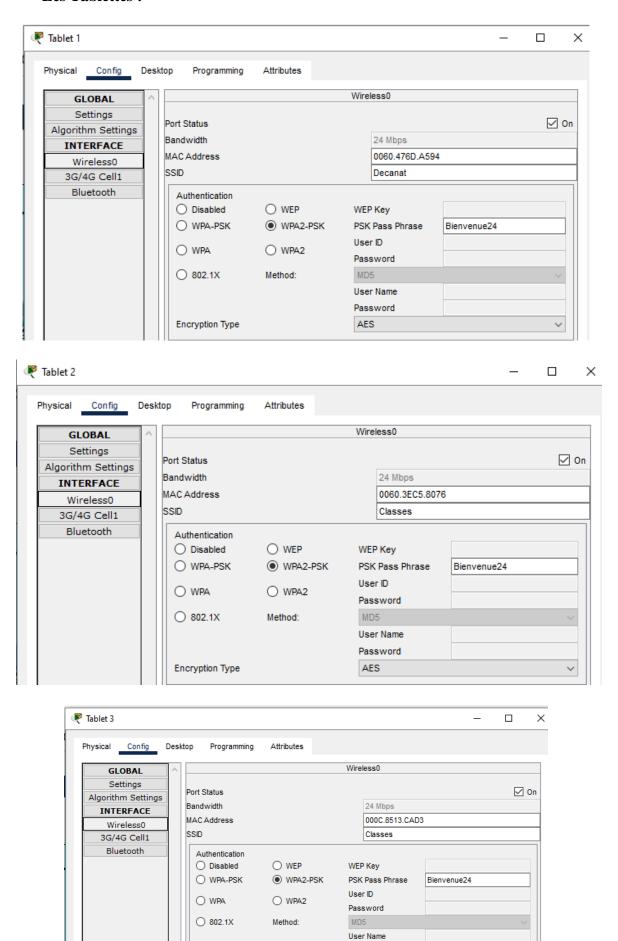


4. Activation de l'interface des Smartphones et Tablettes pour la connexion :





• Les Tablettes :

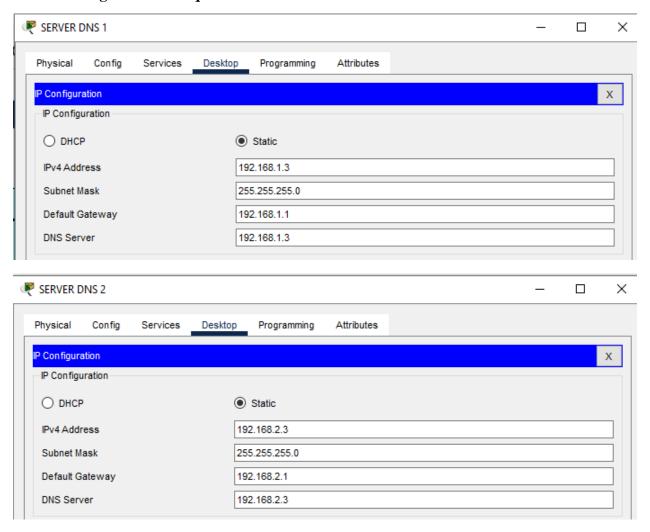


Password

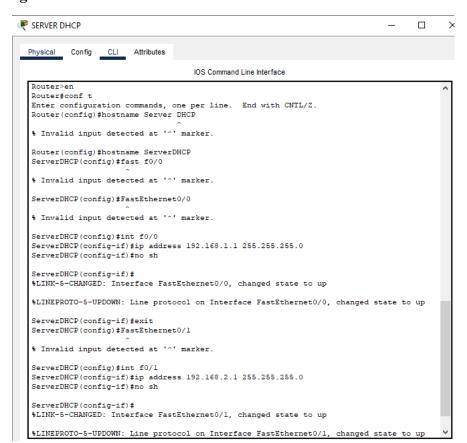
AES

Encryption Type

5. Configuration statique des Server DNS:

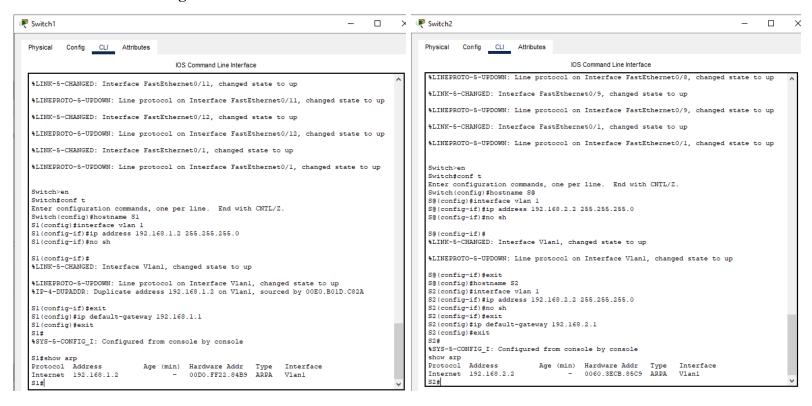


6. Configuration du Router Comme Server DHCP :



```
ServerDHCP#show arp
Protocol Address
                          Age (min) Hardware Addr
                                                     Type
                                                            Interface
Internet 192.168.1.1
                                      0090.2BE7.E401 ARPA
                                                            FastEthernet0/0
Internet 192.168.2.1
                                      0090.2BE7.E402 ARPA
                                                             FastEthernet0/1
ServerDHCP#
          ServerDHCP>ip dhcp pool Pk-LAB
          % Invalid input detected at '^' marker.
          ServerDHCP>en
          ServerDHCP#conf t
          Enter configuration commands, one per line. End with CNTL/Z.
          ServerDHCP(config) #ip dhcp pool Pk-LAB
          ServerDHCP(dhcp-config) #network 192.168.1.0 255.255.255.0
          ServerDHCP(dhcp-config) #default-router 192.168.1.1
          ServerDHCP(dhcp-config) #dns-server 192.168.1.3
          ServerDHCP(dhcp-config) #exit
          ServerDHCP(config) #ip dhcp pool Pk-ADMIN
          ServerDHCP(dhcp-config) #network 192.168.2.0 255.255.255.0
          ServerDHCP(dhcp-config) #default-router 192.168.2.1
          ServerDHCP(dhcp-config) #dns-server 192.168.2.3
          ServerDHCP(dhcp-config) #exit
          ServerDHCP(config)#
```

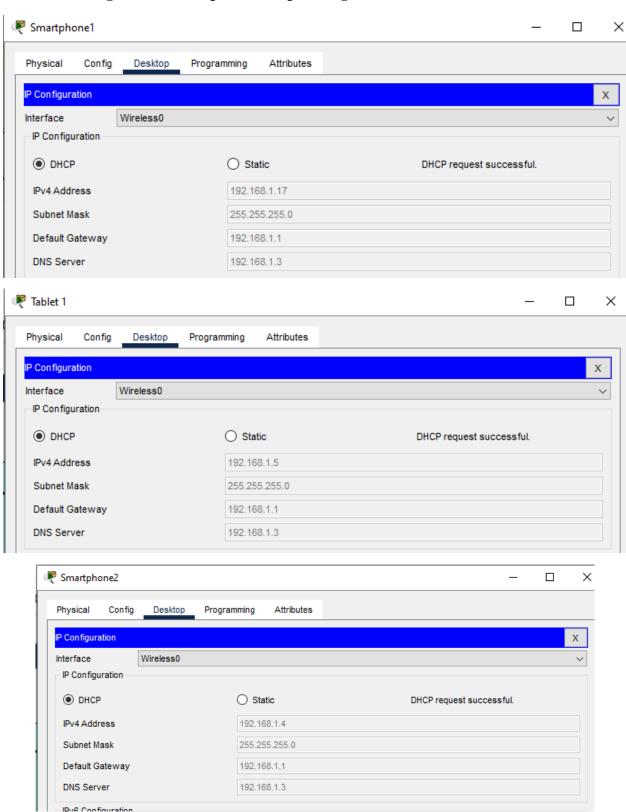
7. Configuration des Switch:

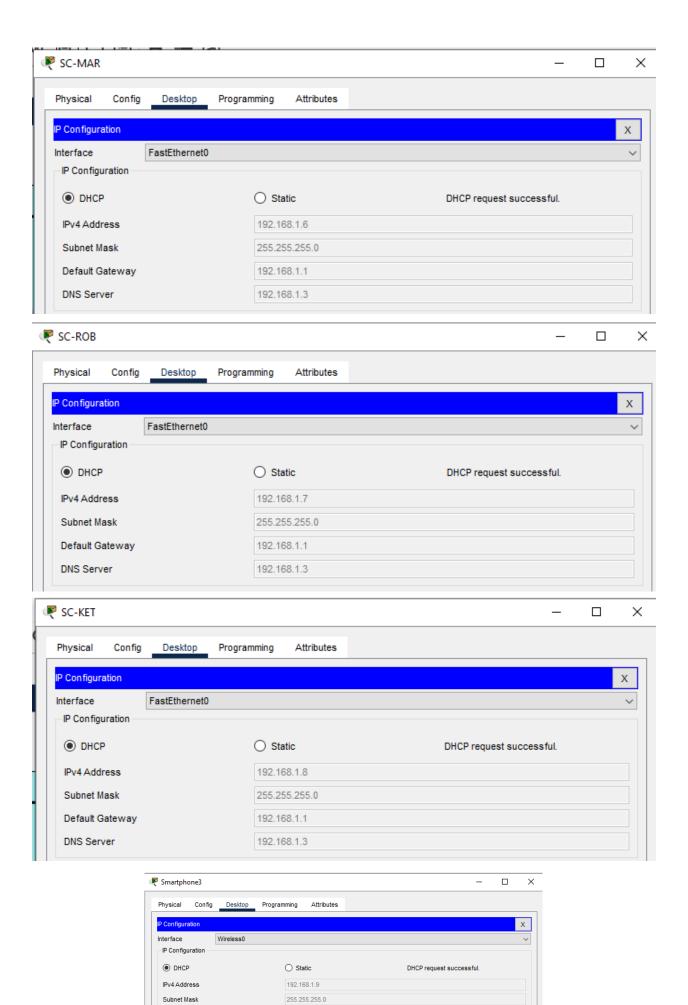


```
S1>en
S1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
S1(config)#ip default-gateway 192.168.1.1
S1(config)#ip dhcp excluded-address 192.168.1.1
S1(config)#ip dhcp excluded-address 192.168.1.2
S1(config)#ip dhcp excluded-address 192.168.1.3
S1(config)#
```

```
S2>en
S2#conf t
Enter configuration commands, one per line. End with CNTL/Z.
S2(config) #ip dhcp excluded-address 192.168.2.2
S2(config) #ip default-gateway 192.168.2.1
S2(config) #ip dhcp excluded-address 192.168.2.1
S2(config) #ip dhcp excluded-address 192.168.2.2
S2(config) #ip dhcp excluded-address 192.168.2.3
S2(config) #
```

8. Adressage IP automatiques des dispositifs grâce au serveur DHCP :



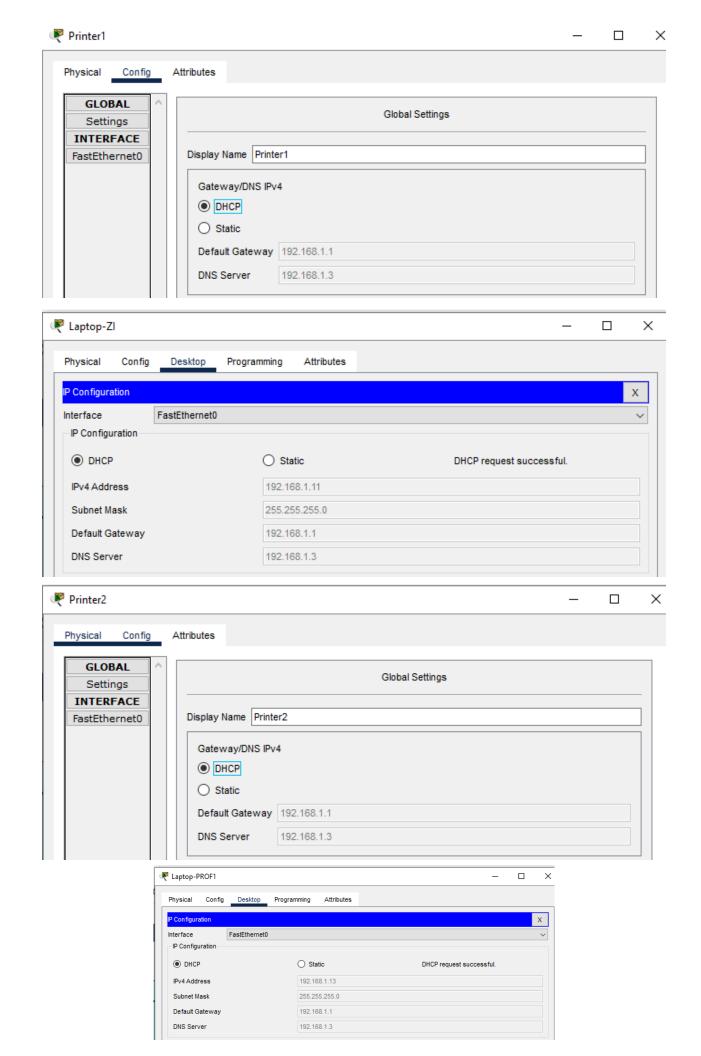


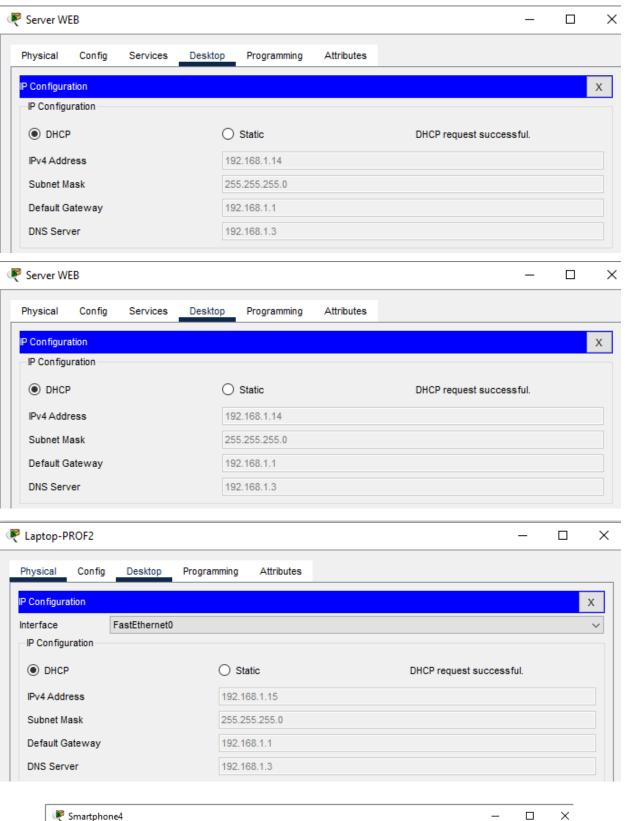
Default Gateway

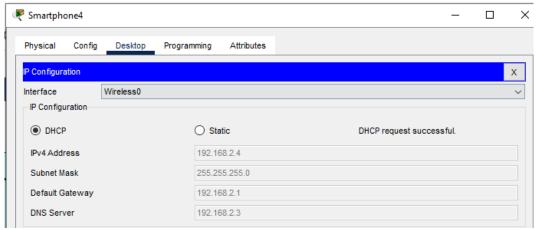
DNS Server

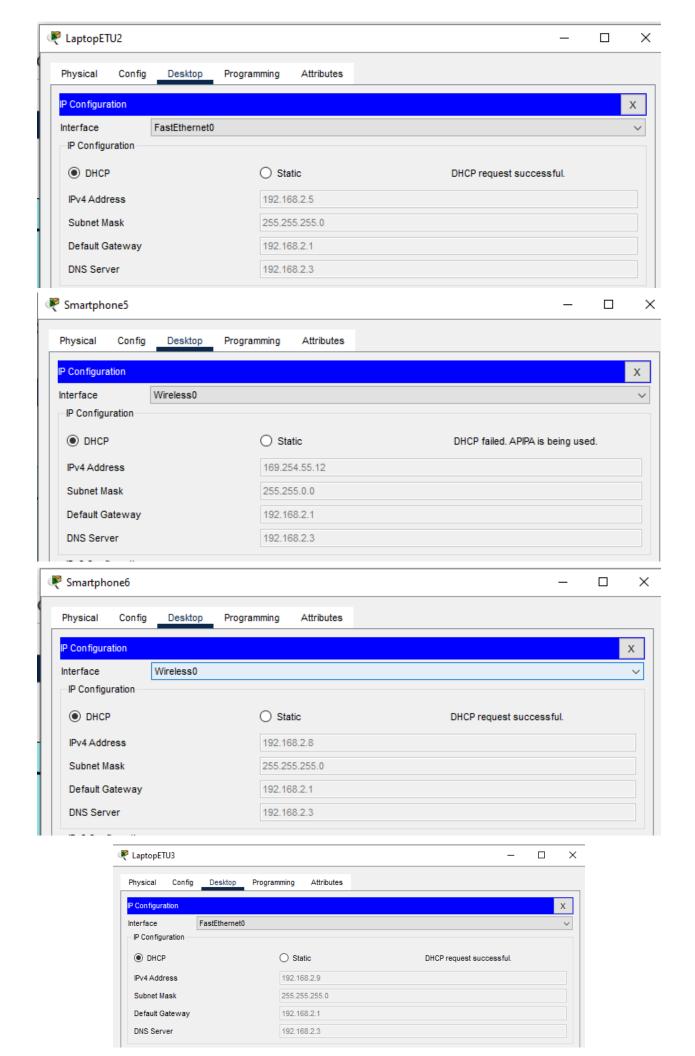
192.168.1.1

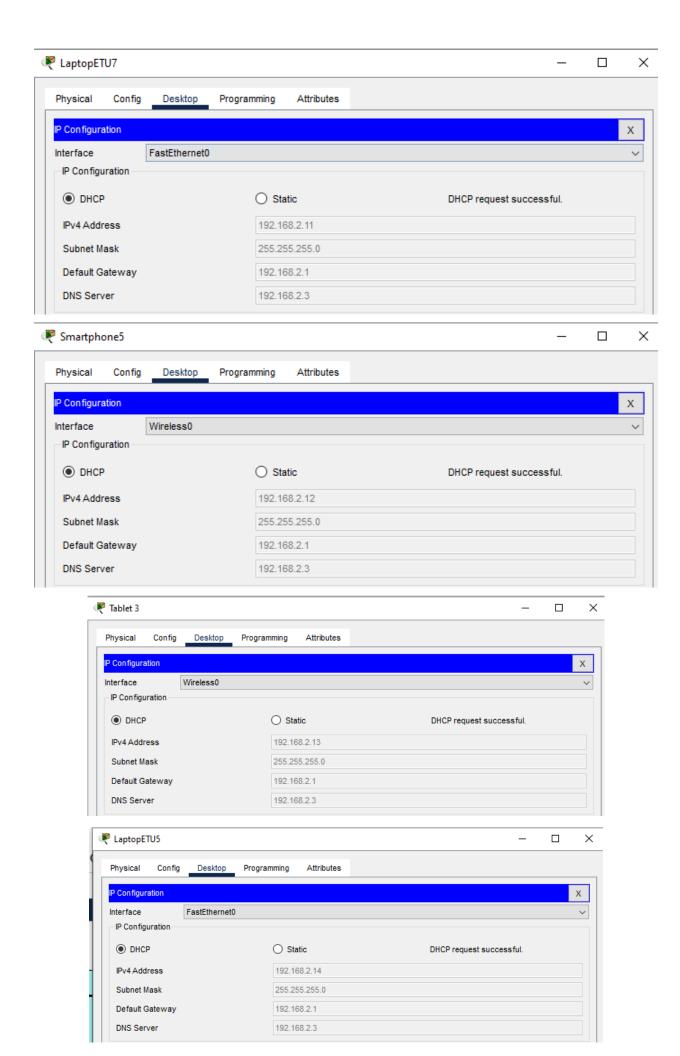
192.168.1.3







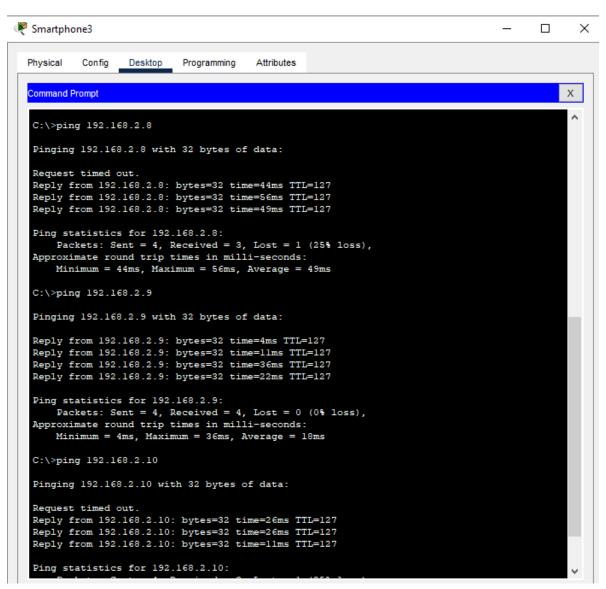




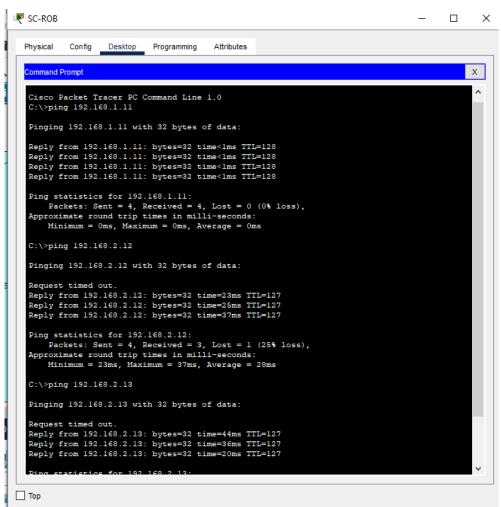
9. Vérification du service DHCP:

IP address	Client-ID/	Lease expiration	Type	
	Hardware address			
192.168.1.8	0001.63DC.E2DC		Automatic	
192.168.1.10	0004.9AAE.46B8		Automatic	
192.168.1.6	0090.2BA1.148B		Automatic	
192.168.1.7	0002.1758.48C9		Automatic	
192.168.1.5	0030.A3DD.A4E4		Automatic	
192.168.1.4	00E0.F939.42C0		Automatic	
192.168.1.2	000B.BE76.805C		Automatic	
192.168.1.9	0004.9A7A.DC9A		Automatic	
192.168.1.11	0002.4A8C.AA32		Automatic	
192.168.1.12	0060.476D.A594		Automatic	
192.168.1.14	00E0.A335.6E43		Automatic	
192.168.1.15	00D0.BA03.5336		Automatic	
192.168.1.13	0001.43E6.C27B		Automatic	
192.168.2.6	0001.6373.4B83		Automatic	
192.168.2.5	00E0.F7BE.2517		Automatic	
192.168.2.2	000C.CF21.B567		Automatic	
192.168.2.8	00D0.971A.215B		Automatic	
192.168.2.4	0030.F2BD.B5E8		Automatic	
192.168.2.7	0010.116C.DD89		Automatic	
192.168.2.9	00D0.973B.98EC		Automatic	
More				

10. Vérification de la connectivité :

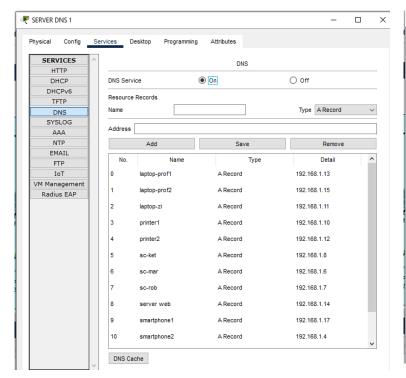


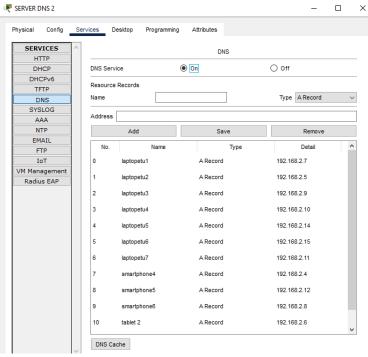
```
Laptop-ZI
                                                                                                            П
                                                                                                                    \times
 Physical Config Desktop Programming
   Command Prompt
                                                                                                                  Х
  Cisco Packet Tracer PC Command Line 1.0
  C:\>ping 192.168.1.4
  Pinging 192,168,1,4 with 32 bytes of data:
  Reply from 192.168.1.4: bytes=32 time=8ms TTL=128
  Reply from 192.168.1.4: bytes=32 time=6ms TTL=128
Reply from 192.168.1.4: bytes=32 time=6ms TTL=128
  Reply from 192.168.1.4: bytes=32 time=7ms TTL=128
  Ping statistics for 192.168.1.4:
  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds:
       Minimum = 6ms, Maximum = 8ms, Average = 6ms
  C:\>ping 192.168.1.2
  Pinging 192.168.1.2 with 32 bytes of data:
  Request timed out.
  Reply from 192.168.1.2: bytes=32 time<lms TTL=255 Reply from 192.168.1.2: bytes=32 time<lms TTL=255
  Reply from 192.168.1.2: bytes=32 time<1ms TTL=255
  Ping statistics for 192.168.1.2:
  Packets: Sent = 4, Received = 3, Lost = 1 (25% loss), Approximate round trip times in milli-seconds:
       Minimum = Oms, Maximum = Oms, Average = Oms
  C:\>ping 192.168.1.7
  Pinging 192.168.1.7 with 32 bytes of data:
  Reply from 192.168.1.7: bytes=32 time<1ms TTL=128
  Reply from 192.168.1.7: bytes=32 time<1ms TTL=128
Reply from 192.168.1.7: bytes=32 time<1ms TTL=128
  Reply from 192.168.1.7: bytes=32 time<1ms TTL=128
```



```
🌹 Tablet 3
                                                                                         ×
 Physical
           Confia
                  Desktop
                            Programming
                                        Attributes
  Command Prompt
                                                                                             Х
  Cisco Packet Tracer PC Command Line 1.0
  C:\>ping 192.168.1.12
  Pinging 192.168.1.12 with 32 bytes of data:
  Request timed out.
  Reply from 192.168.1.12: bytes=32 time=42ms TTL=127
  Reply from 192.168.1.12: bytes=32 time=46ms TTL=127
  Reply from 192.168.1.12: bytes=32 time=38ms TTL=127
  Ping statistics for 192.168.1.12:
      Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
  Approximate round trip times in milli-seconds:
      Minimum = 38ms, Maximum = 46ms, Average = 42ms
  C:\>ping 192.168.1.2
  Pinging 192.168.1.2 with 32 bytes of data:
  Reply from 192.168.1.2: bytes=32 time=16ms TTL=254
  Reply from 192.168.1.2: bytes=32 time=19ms TTL=254
  Reply from 192.168.1.2: bytes=32 time=24ms TTL=254
  Reply from 192.168.1.2: bytes=32 time=40ms TTL=254
  Ping statistics for 192.168.1.2:
      Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
  Approximate round trip times in milli-seconds:
      Minimum = 16ms, Maximum = 40ms, Average = 24ms
  C:\>ping 192.168.1.13
  Pinging 192.168.1.13 with 32 bytes of data:
  Request timed out.
  Reply from 192.168.1.13: bytes=32 time=35ms TTL=127
  Reply from 192.168.1.13: bytes=32 time=44ms TTL=127
  Reply from 192.168.1.13: bytes=32 time=50ms TTL=127
        statistics for 192 168 1
```

11. Ajouter des enregistrements DNS :



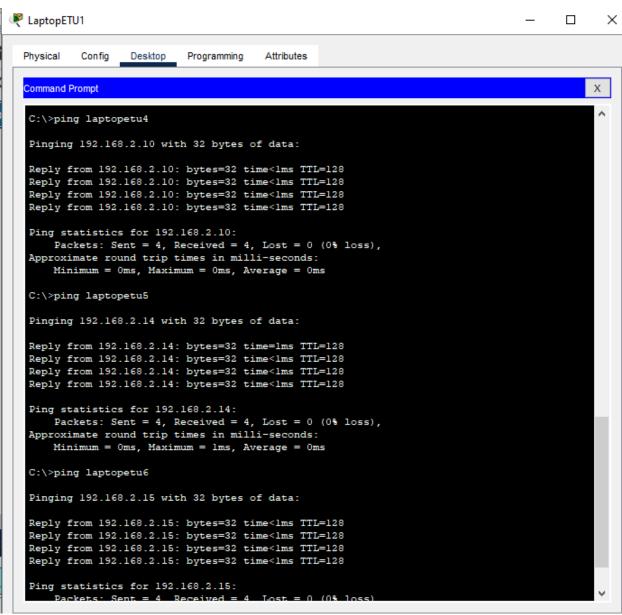


12. Vérification de la Résolution de Noms :

```
🌹 Tablet 1
 Physical Config Desktop Programming
                                      Attributes
 Command Prompt
  Cisco Packet Tracer PC Command Line 1.0
 C:\>ping printerl
  Pinging 192.168.1.10 with 32 bytes of data:
  Reply from 192.168.1.10: bytes=32 time=68ms TTL=128
  Reply from 192.168.1.10: bytes=32 time=26ms TTL=128
  Reply from 192.168.1.10: bytes=32 time=42ms TTL=128
  Reply from 192.168.1.10: bytes=32 time=56ms TTL=128
 Ping statistics for 192.168.1.10:
      Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
  Approximate round trip times in milli-seconds:
      Minimum = 26ms, Maximum = 68ms, Average = 48ms
  C:\>ping printer2
  Pinging 192.168.1.12 with 32 bytes of data:
  Reply from 192.168.1.12: bytes=32 time=106ms TTL=128
  Reply from 192.168.1.12: bytes=32 time=30ms TTL=128
  Reply from 192.168.1.12: bytes=32 time=32ms TTL=128
  Reply from 192.168.1.12: bytes=32 time=27ms TTL=128
 Ping statistics for 192.168.1.12:
     Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
  Approximate round trip times in milli-seconds:
      Minimum = 27ms, Maximum = 106ms, Average = 48ms
  C:\>
```

```
C:\>ping smartphone4
Pinging 192.168.2.4 with 32 bytes of data:
Reply from 192.168.2.4: bytes=32 time=43ms TTL=128
Reply from 192.168.2.4: bytes=32 time=8ms TTL=128
Reply from 192.168.2.4: bytes=32 time=9ms TTL=128
Reply from 192.168.2.4: bytes=32 time=27ms TTL=128
Ping statistics for 192.168.2.4:
   Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
   Minimum = 8ms, Maximum = 43ms, Average = 21ms
C:\>ping smartphone5
Pinging 192.168.2.12 with 32 bytes of data:
Reply from 192.168.2.12: bytes=32 time=13ms TTL=128
Reply from 192.168.2.12: bytes=32 time=33ms TTL=128
Reply from 192.168.2.12: bytes=32 time=29ms TTL=128
Reply from 192.168.2.12: bytes=32 time=28ms TTL=128
Ping statistics for 192.168.2.12:
   Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
   Minimum = 13ms, Maximum = 33ms, Average = 25ms
```

```
C:\>ping laptopetu2
Pinging 192.168.2.5 with 32 bytes of data:
Reply from 192.168.2.5: bytes=32 time<1ms TTL=128
Ping statistics for 192.168.2.5:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = Oms, Maximum = Oms, Average = Oms
C:\>ping laptopetu3
Pinging 192.168.2.9 with 32 bytes of data:
Reply from 192.168.2.9: bytes=32 time<1ms TTL=128
Reply from 192.168.2.9: bytes=32 time<1ms TTL=128
Reply from 192.168.2.9: bytes=32 time<1ms TTL=128
Reply from 192.168.2.9: bytes=32 time=17ms TTL=128
Ping statistics for 192.168.2.9:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 17ms, Average = 4ms
C:\>
```



```
Physical Config Desktop Programming Attributes

Command Prompt

Cisco Packet Tracer PC Command Line 1.0
C:\ping smartphone4

Pinging 192.168.2.4: bytes=32 time=85ms TTL=128
Reply from 192.168.2.4: bytes=32 time=45ms TTL=128

Reply from 192.168.2.4: bytes=32 time=45ms TTL=128
Reply from 192.168.2.12: bytes=32 time=64ms TTL=128
Reply from 192.168.2.12: bytes=32 time=30ms TTL=128

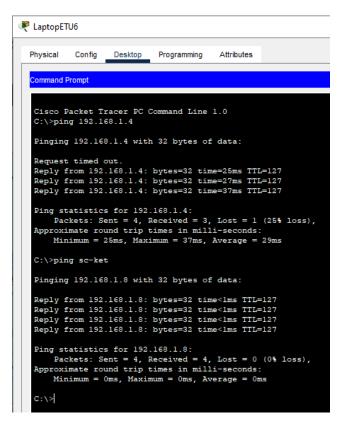
Ping statistics for 192.168.2.12:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:

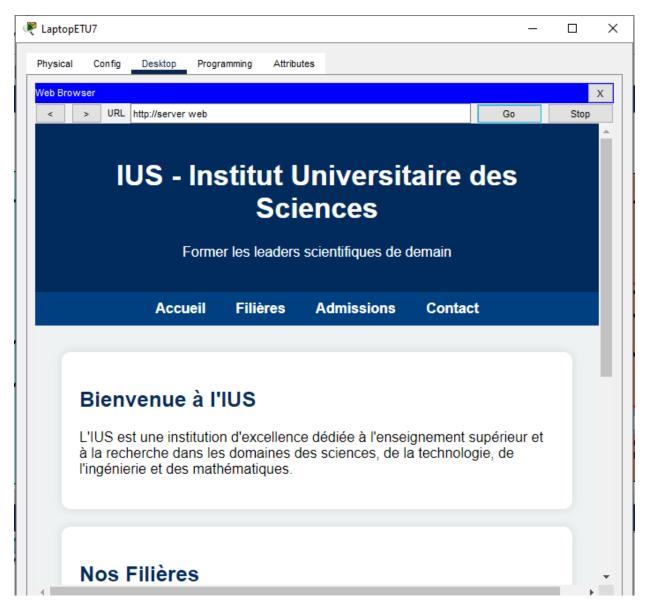
Minimum = 27ms, Maximum = 84ms, Average = 46ms

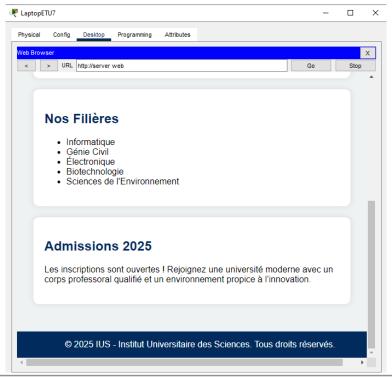
C:\ping smartphone6

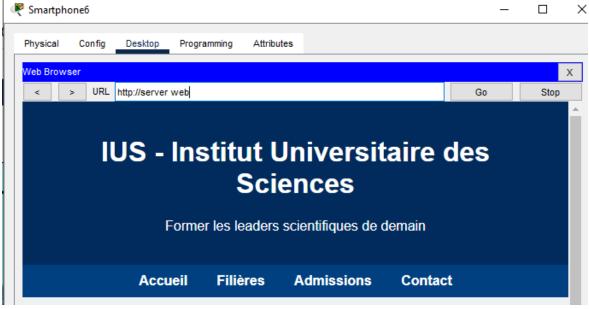
Pinging 192.168.2.8: bytes=32 time=65ms TTL=128
Reply from 192.168.2.8: bytes=32 time=65ms TTL=128
Ping statistics for 192.168.2.8: bytes=32 time=65ms TTL=128
Ping statistics for 192.168.2.8: bytes=32 time=55ms TTL=128
```



13. Vérification du Server Web:



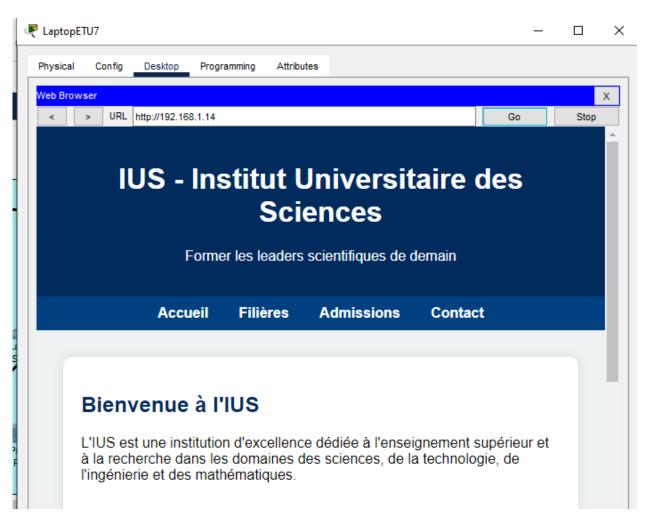






14. Maintenant avec l'adresse IP du Server Web





CONCLUSION:

J'ai appris les compétences nécessaires pour configurer des services DNS et DHCP à l'aide de Cisco Packet. Le service DHCP simplifie considérablement la gestion des adresses IP en les attribuant automatiquement aux hôtes du réseau, tandis que le DNS facilite l'accès aux ressources en traduisant les noms de domaine en adresses IP. Grâce aux simulations pratiques, j'ai acquis une meilleure maîtrise de leur configuration, de leur fonctionnement et de leur interaction dans un environnement réseau.