

Institut Universitaire des Sciences (IUS)
FACULTÉ DES SCIENCES ET DES TECHNOLOGIES (FST)

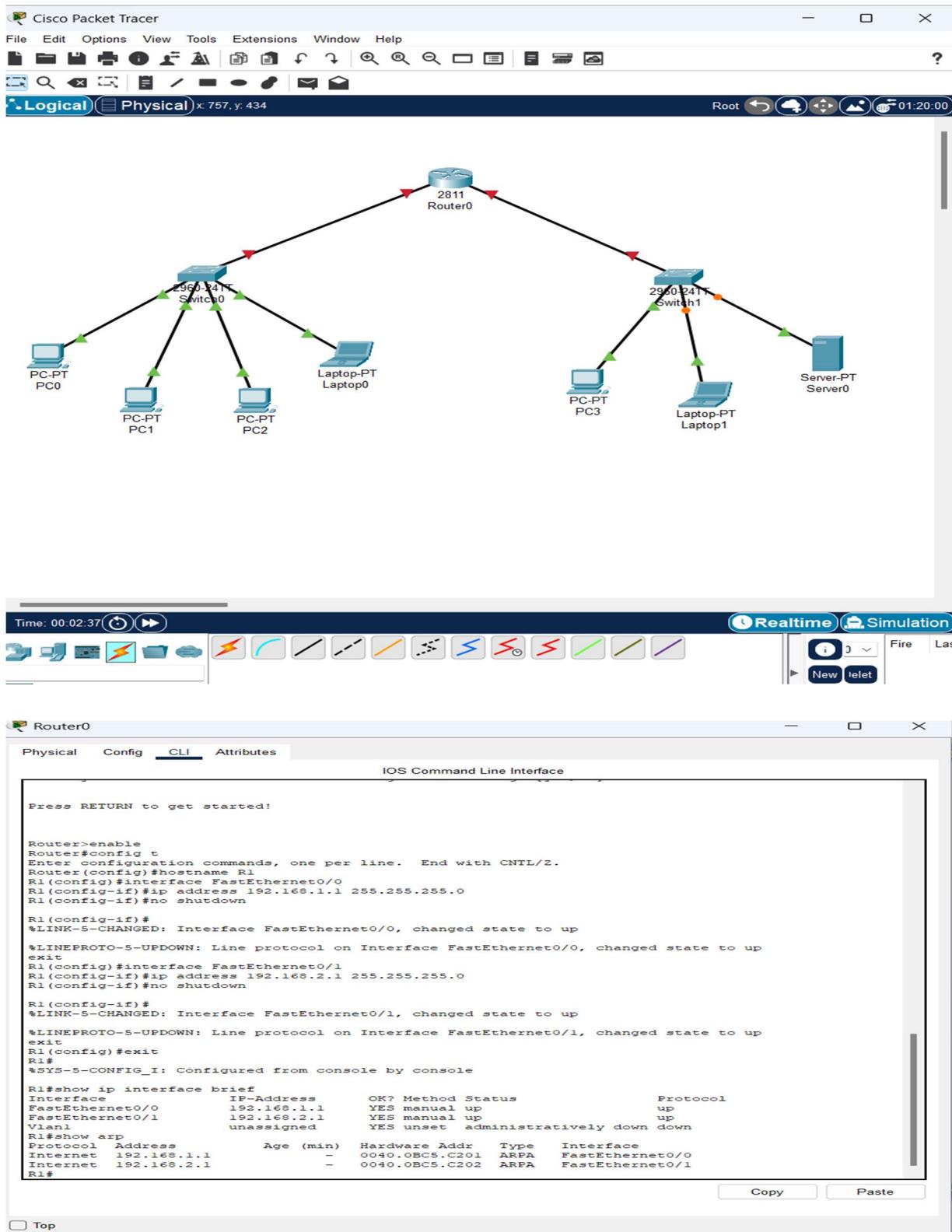
RAPPORT
SUR LE TRAVAIL DE LABORATOIRE № 5

Cours : Réseaux 1

Étudiant : Wendy Colas
Niveau : L3

2024

1. Reproduction de la topologie en configurant le protocole FTP.



Switch0

Physical Config **CLI** Attributes

IOS Command Line Interface

```
*LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/3, changed state to up
*LINK-5-CHANGED: Interface FastEthernet0/4, changed state to up
*LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/4, changed state to up
*LINK-5-CHANGED: Interface FastEthernet0/5, changed state to up
*LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/5, changed state to up
*LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up
*LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up

Switch>enable
Switch#config t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname S1
S1(config)#interface vlan 1
S1(config-if)#ip address 192.168.1.2 255.255.255.0
S1(config-if)#no shutdown

S1(config-if)#
*LINK-5-CHANGED: Interface Vlan1, changed state to up
*LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up
exit
S1(config)#ip default-gateway 192.168.1.1
S1(config)#exit
S1#
%SYS-5-CONFIG_I: Configured from console by console
exit
```

Copy Paste

Switch1

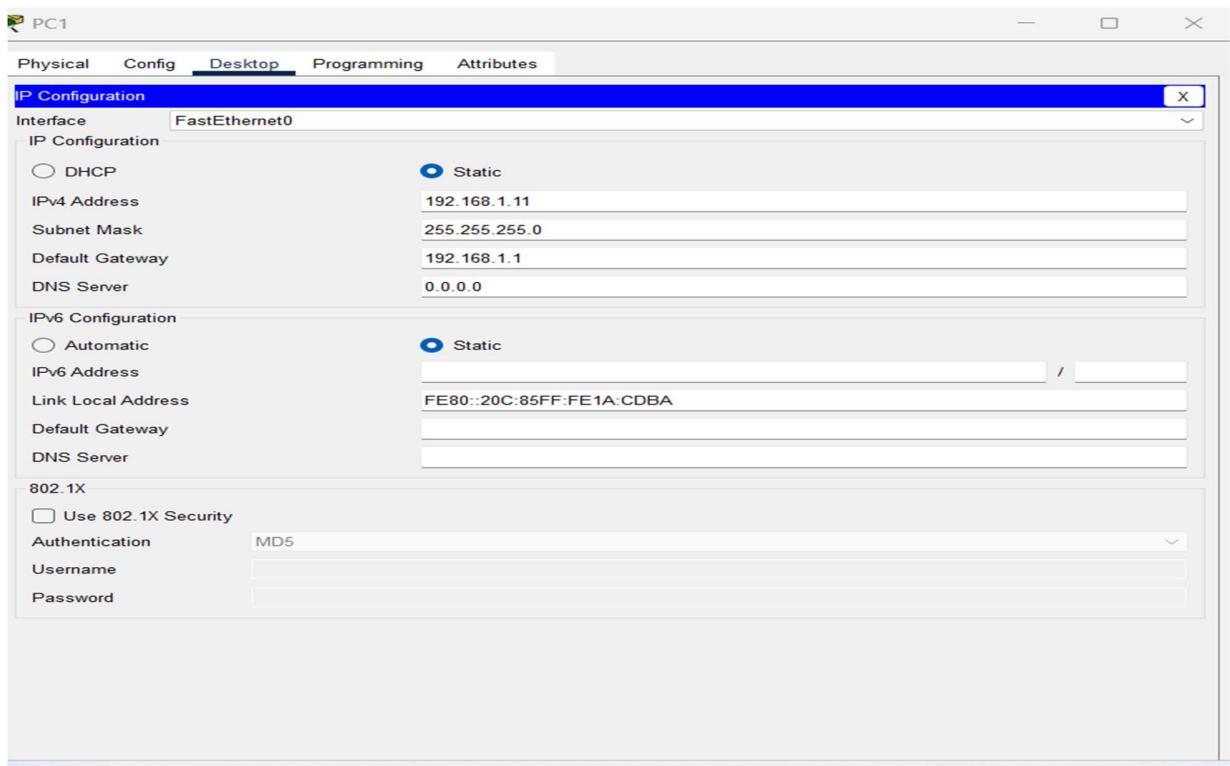
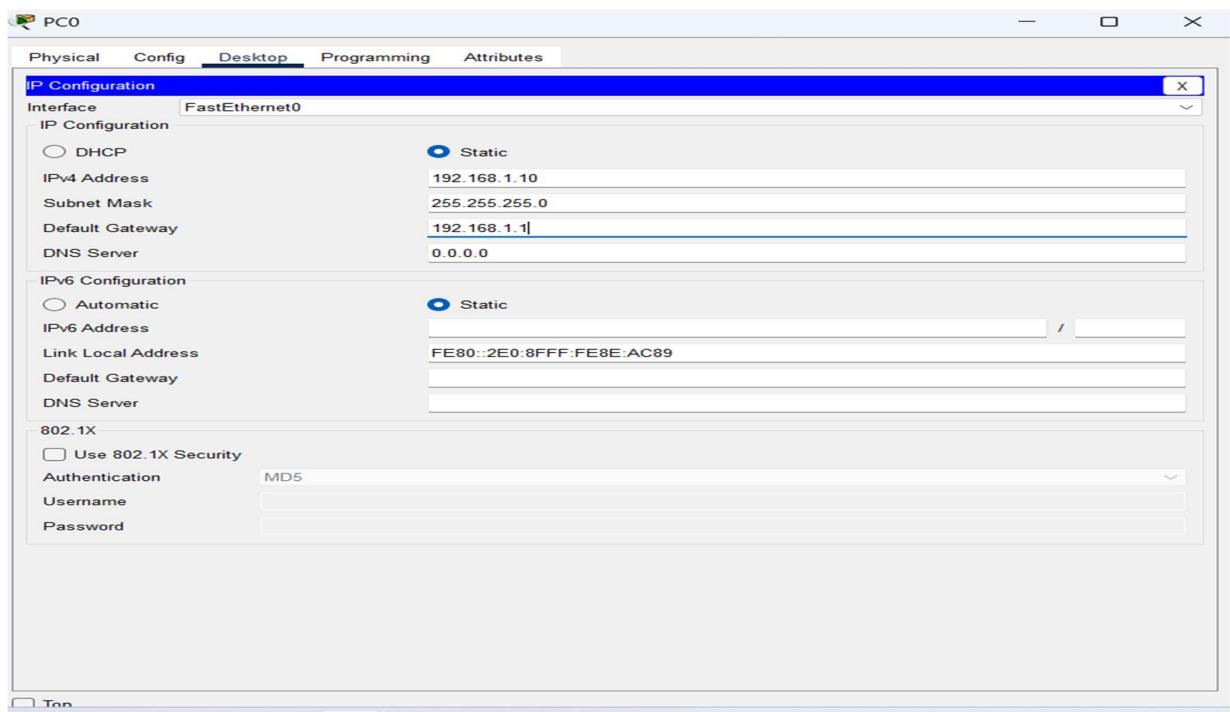
Physical Config **CLI** Attributes

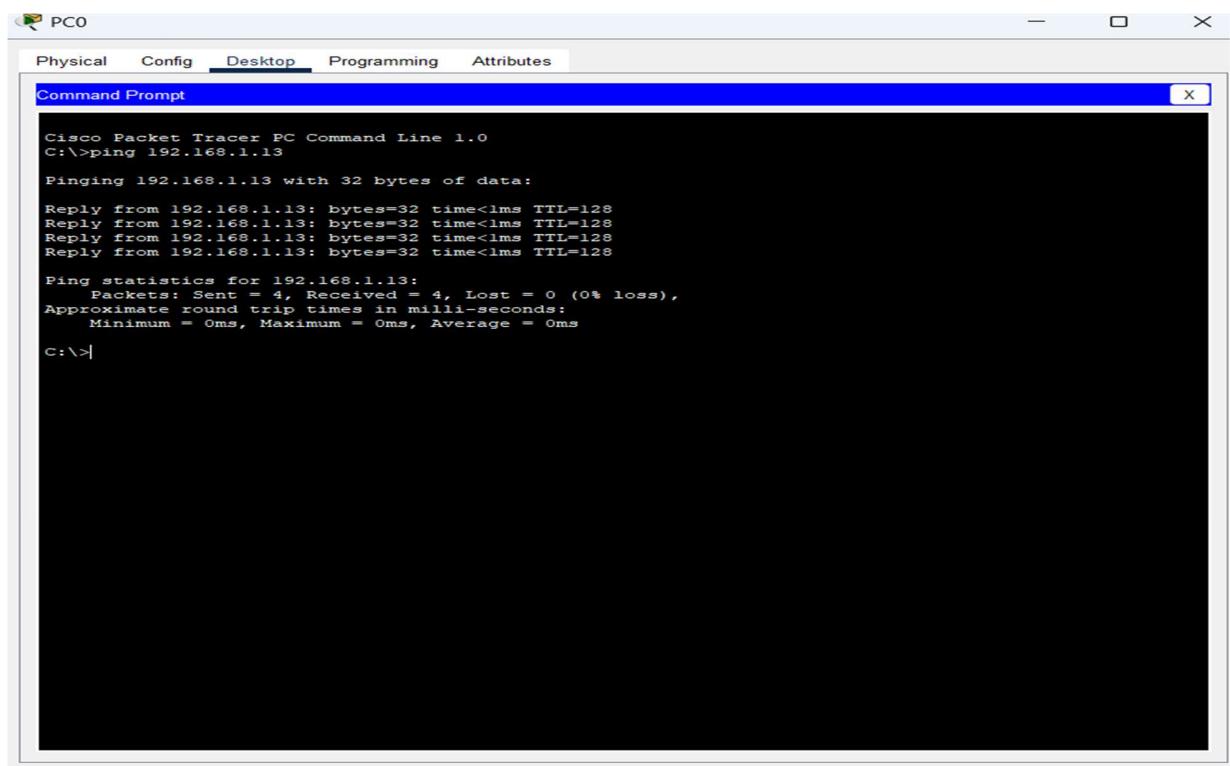
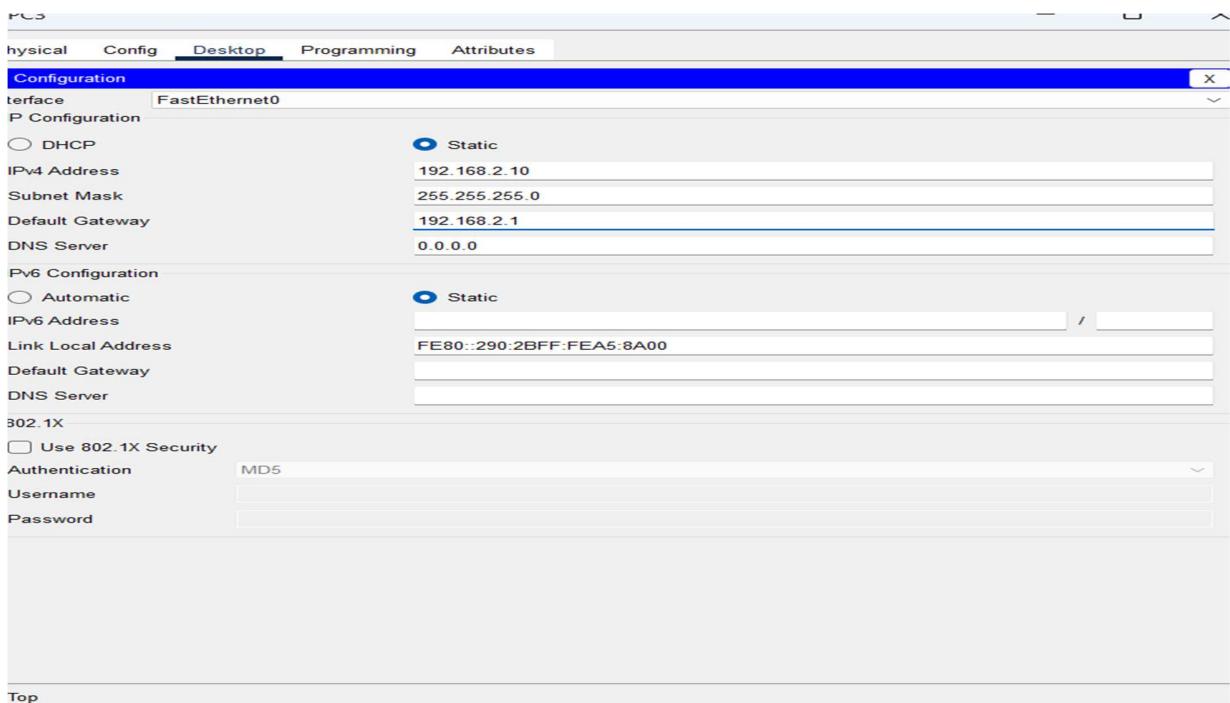
IOS Command Line Interface

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*LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to up
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*LINK-5-CHANGED: Interface FastEthernet0/4, changed state to up
*LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/4, changed state to up
*LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up
*LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up

Switch>enable
Switch#config t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname S2
S2(config)#interface vlan 1
S2(config-if)#ip address 192.168.2.2 255.255.255.0
S2(config-if)#no shutdown

S2(config-if)#
*LINK-5-CHANGED: Interface Vlan1, changed state to up
*LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up
exit
S2(config)#ip default-gateway 192.168.2.1
S2(config)#exit
S2#
%SYS-5-CONFIG_I: Configured from console by console
exit
```





Server0

Physical Config Services Desktop Programming Attributes

SERVICES

- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP**
- IoT
- VM Management
- Radius EAP

FTP

Service On Off

User Setup

| Username | Password | Permission |
|----------|----------|--|
| wendy | cwm10 | <input type="checkbox"/> Write <input type="checkbox"/> Read <input type="checkbox"/> Delete <input type="checkbox"/> Rename <input type="checkbox"/> List |
| 1 cisco | cisco | RWDNL |

Add Save Remove

File

- 1 asa842-k8.bin
- 2 asa923-k8.bin
- 3 c1841-adviservicesk9-mz.124-15.T1.bin
- 4 c1841-ipbase-mz.123-14.T7.bin
- 5 c1841-ipbasek9-mz.124-12.bin
- 6 c1900-universalk9-mz.SPA.155-3.M4a.bin
- 7 c2600-adviservicesk9-mz.124-15.T1.bin

Remove

Top

Server0

Physical Config Services Desktop Programming Attributes

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- HTTP
- DHCP
- DHCPv6
- TFTP
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- 7 c2600-adviservicesk9-mz.124-15.T1.bin

Remove

Top

Server0

Physical Config Services Desktop Programming Attributes

SERVICES

- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP**
- IoT
- VM Management
- Radius EAP

FTP

Service On Off

User Setup

| Username | Password | Permission |
|----------|----------|---|
| wendy | cwm10 | <input checked="" type="checkbox"/> Write <input checked="" type="checkbox"/> Read <input checked="" type="checkbox"/> Delete <input checked="" type="checkbox"/> Rename <input checked="" type="checkbox"/> List |
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Add Save Remove

File

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- 3 c1841-adviservicesk9-mz.124-15.T1.bin
- 4 c1841-ipbase-mz.123-14.T7.bin
- 5 c1841-ipbasek9-mz.124-12.bin
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- 7 c2600-adviservicesk9-mz.124-15.T1.bin

Remove

Top

PC1

Physical Config Desktop Programming Attributes

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.2.12

Pinging 192.168.2.12 with 32 bytes of data:
Reply from 192.168.2.12: bytes=32 time=1ms TTL=127
Reply from 192.168.2.12: bytes=32 time=8ms TTL=127
Reply from 192.168.2.12: bytes=32 time=1ms TTL=127
Reply from 192.168.2.12: bytes=32 time<1ms TTL=127

Ping statistics for 192.168.2.12:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 8ms, Average = 2ms

C:\>ftp 192.168.2.12
Trying to connect...192.168.2.12
Connected to 192.168.2.12
220- Welcome to PT Ftp server
Username:wendy
331- Username ok, need password
Password:
230- Logged in
(passive mode On)
ftp>dir

Listing /ftp directory from 192.168.2.12:
0 : asa842-k8.bin                                5571584
1 : asa923-k8.bin                                30468096
2 : c1841-advipservicesk9-mz.124-15.Tl.bin      33591768
3 : c1841-ipbasek9-mz.123-14.T7.bin              13832032
4 : c1841-ipbasek9-mz.124-12.bin                 16599160
5 : c1900-universalk9-mz.SPA.155-3.M4a.bin       33591768
6 : c2600-advipservicesk9-mz.124-15.Tl.bin      33591768
7 : c2600-i-z.122-28.bin                          5571584
8 : c2600-ipbasek9-mz.124-8.bin                  13169700
9 : c2800nm-advipservicesk9-mz.124-15.Tl.bin     50938004
10 : c2800nm-advipservicesk9-mz.151-4.M4.bin     33591768
11 : c2800nm-ipbasek9-mz.123-14.T7.bin          5571584
12 : c2800nm-ipbasek9-mz.124-8.bin              15522644
13 : c2900-universalk9-mz.SPA.155-3.M4a.bin       33591768
14 : c2950-i6q412-mz.121-22.EA4.bin             3058048
15 : c2950-i6q412-mz.121-22.EA8.bin             3117390
16 : c2960-lanbase-mz.122-25.FX.bin            4414921
17 : c2960-lanbase-mz.122-25.SE1.bin           4670455
18 : c2960-lanbasek9-mz.150-2.SE4.bin          4670455
19 : c3560-advipservicesk9-mz.122-37.SE1.bin     8662192
20 : c3560-advipservicesk9-mz.122-46.SE.bin      10713279
21 : c800-universalk9-mz.SPA.152-4.M4.bin        33591768
22 : c800-universalk9-mz.SPA.154-3.M6a.bin       83029236
23 : cat3k_caa-universalk9.16.03.02.SPA.bin      505532849
24 : cgr1000-universalk9-mz.SPA.154-2.CG         159487552
25 : cgr1000-universalk9-mz.SPA.156-3.CG         184530138
26 : ix800-universalk9-bundle.SPA.156-3.M.bin     160968869
27 : ix800-universalk9-mz.SPA.156-3.M            61750062
28 : ix800-universalk9-mz.SPA.156-3.M            63753767
29 : ix800_yocto-1.7.2.tar                      2877440
30 : ix800_yocto-1.7.2_python-2.7.3.tar        6912000
31 : pt1000-i-mz.122-28.bin                     5571584
32 : pt3000-i6q412-mz.121-22.EA4.bin          3117390

ftp>
```

PC1

Physical Config Desktop Programming Attributes

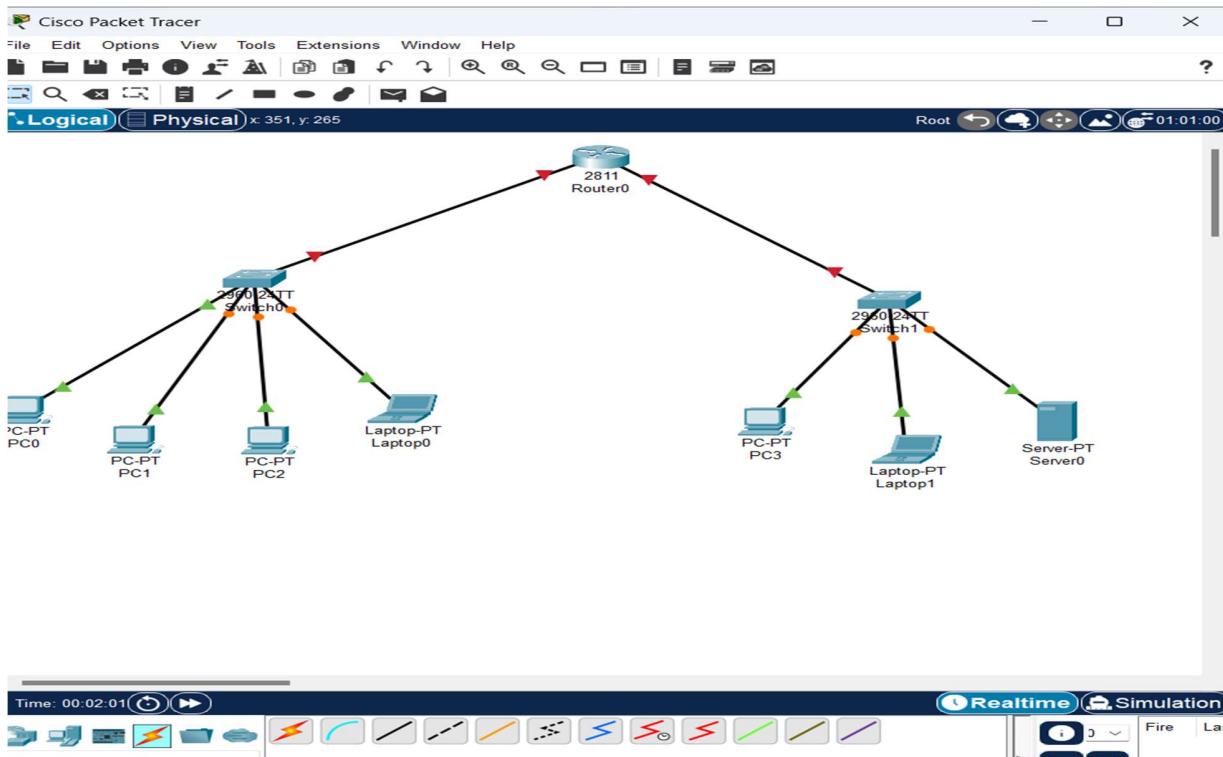
Command Prompt

```
Trying to connect...192.168.2.12
Connected to 192.168.2.12
220- Welcome to PT Ftp server
Username:wendy
331- Username ok, need password
Password:
230- Logged in
(passive mode On)
ftp>dir

Listing /ftp directory from 192.168.2.12:
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1 : asa923-k8.bin                                30468096
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5 : c1900-universalk9-mz.SPA.155-3.M4a.bin       33591768
6 : c2600-advipservicesk9-mz.124-15.Tl.bin      33591768
7 : c2600-i-z.122-28.bin                          5571584
8 : c2600-ipbasek9-mz.124-8.bin                  13169700
9 : c2800nm-advipservicesk9-mz.124-15.Tl.bin     50938004
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11 : c2800nm-ipbasek9-mz.123-14.T7.bin          5571584
12 : c2800nm-ipbasek9-mz.124-8.bin              15522644
13 : c2900-universalk9-mz.SPA.155-3.M4a.bin       33591768
14 : c2950-i6q412-mz.121-22.EA4.bin             3058048
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16 : c2960-lanbase-mz.122-25.FX.bin            4414921
17 : c2960-lanbase-mz.122-25.SE1.bin           4670455
18 : c2960-lanbasek9-mz.150-2.SE4.bin          4670455
19 : c3560-advipservicesk9-mz.122-37.SE1.bin     8662192
20 : c3560-advipservicesk9-mz.122-46.SE.bin      10713279
21 : c800-universalk9-mz.SPA.152-4.M4.bin        33591768
22 : c800-universalk9-mz.SPA.154-3.M6a.bin       83029236
23 : cat3k_caa-universalk9.16.03.02.SPA.bin      505532849
24 : cgr1000-universalk9-mz.SPA.154-2.CG         159487552
25 : cgr1000-universalk9-mz.SPA.156-3.CG         184530138
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31 : pt1000-i-mz.122-28.bin                     5571584
32 : pt3000-i6q412-mz.121-22.EA4.bin          3117390

ftp>
```

2. Reproduction de la topologie en configurant et en testant le protocole TCP.



```

Processor board ID JAD005190MTZ (4292891495)
2 FastEthernet interface(s)
DRAM configuration is 64 bits wide with parity disabled.
255K bytes of non-volatile configuration memory.
249856K bytes of ATA System CompactFlash 0 (Read/Write)

--- System Configuration Dialog ---
Would you like to enter the initial configuration dialog? [yes/no]: no

Press RETURN to get started!

Router>enable
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname R1
R1(config)#interface FastEthernet0/0
R1(config-if)#ip address 192.168.1.1 255.255.255.0
R1(config-if)#no shutdown

R1(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
exit
R1(config)#interface FastEthernet0/1
R1(config-if)#ip address 192.168.2.1 255.255.255.0
R1(config-if)#no shutdown

R1(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up
exit
R1#
%SYS-5-CONFIG_I: Configured from console by console

```

Switch0

Physical Config **CLI** Attributes

IOS Command Line Interface

```
*LINK-S-CHANGED: Interface FastEthernet0/2, changed state to up
*LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to up
*LINK-S-CHANGED: Interface FastEthernet0/3, changed state to up
*LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/3, changed state to up
*LINK-S-CHANGED: Interface FastEthernet0/4, changed state to up
*LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/4, changed state to up
*LINK-S-CHANGED: Interface FastEthernet0/5, changed state to up
*LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/5, changed state to up
*LINK-S-CHANGED: Interface FastEthernet0/1, changed state to up
*LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up

Switch>enable
Switch#config t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname S1
S1(config)#interface vlan 1
S1(config-if)#ip address 192.168.1.2 255.255.255.0
S1(config-if)#no shutdown

S1(config-if)#
*LINK-S-CHANGED: Interface Vlan1, changed state to up
*LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up
exit
S1(config)#ip default-gateway 192.168.1.1
S1(config)#exit
S1#
*SYS-5-CONFIG_I: Configured from console by console
exit
```

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Top

Switch1

Physical Config **CLI** Attributes

IOS Command Line Interface

```
Compiled Wed 26-Jun-13 02:49 by mnguyen

Press RETURN to get started!

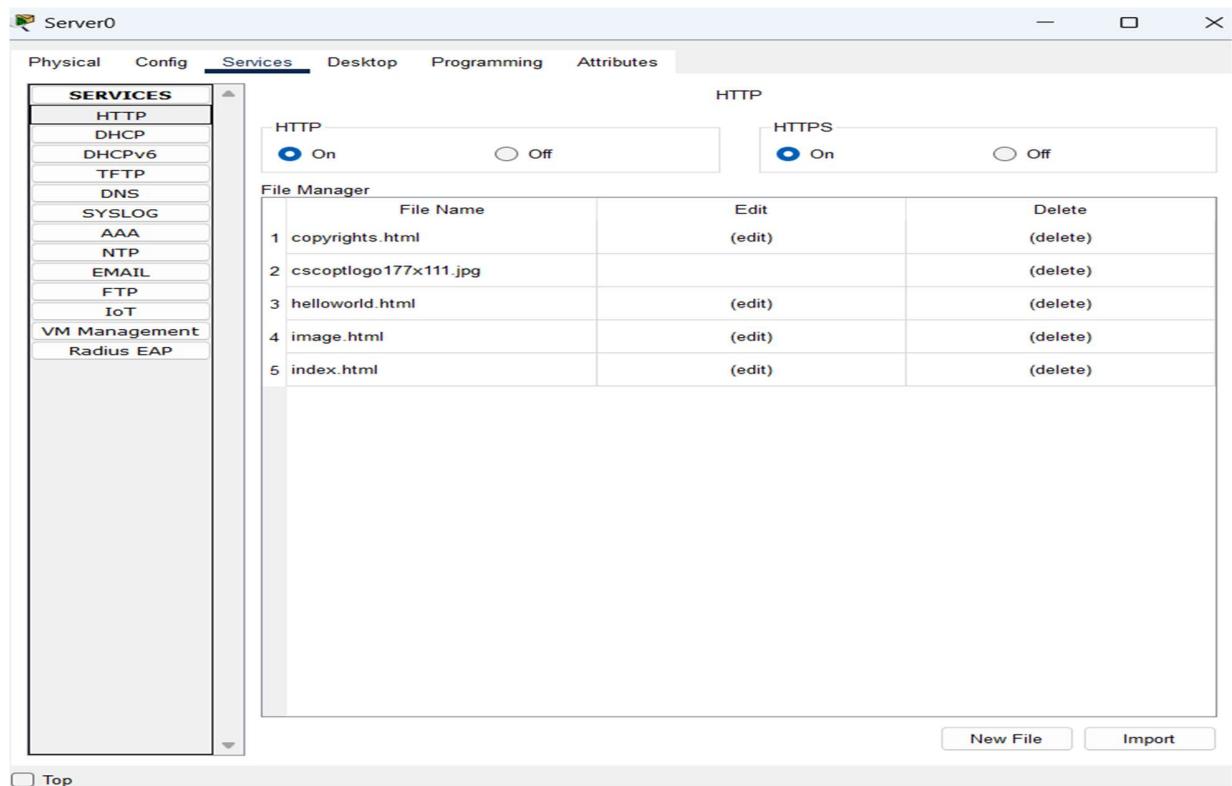
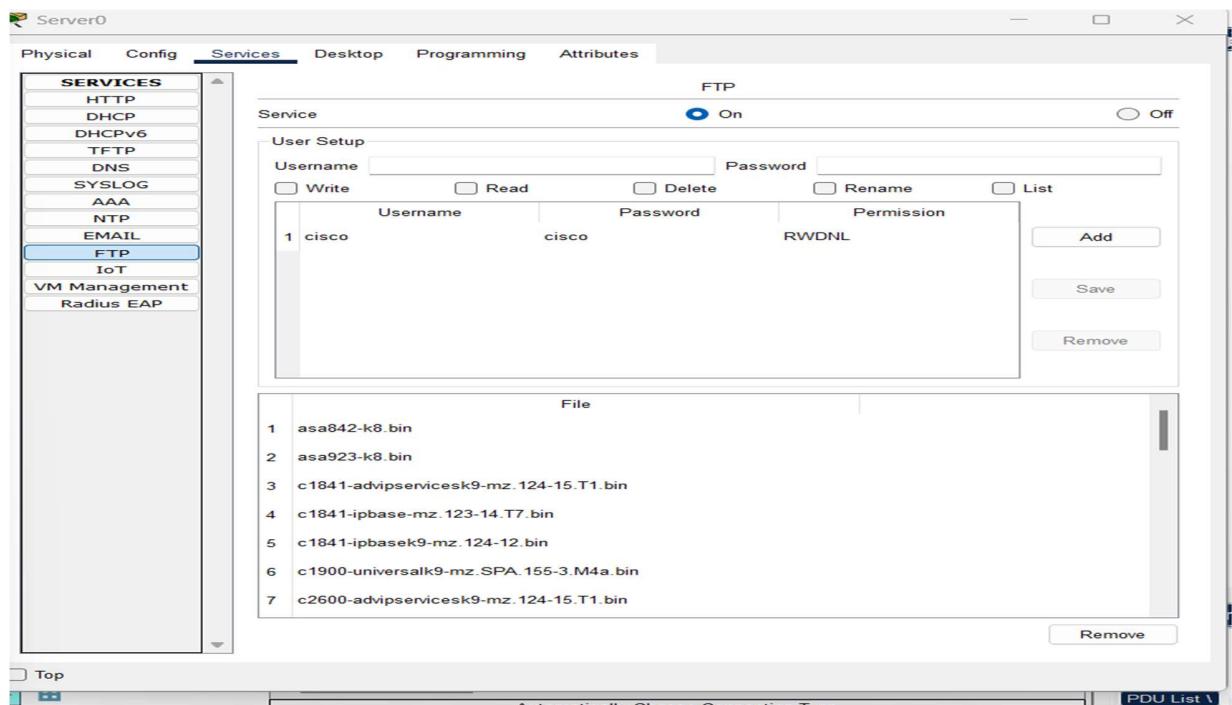
*LINK-S-CHANGED: Interface FastEthernet0/2, changed state to up
*LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to up
*LINK-S-CHANGED: Interface FastEthernet0/3, changed state to up
*LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/3, changed state to up
*LINK-S-CHANGED: Interface FastEthernet0/4, changed state to up
*LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/4, changed state to up
*LINK-S-CHANGED: Interface FastEthernet0/1, changed state to up
*LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up

Switch>enable
Switch#config t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#interface vlan 1
Switch(config-if)#ip address 192.168.2.2 255.255.255.0
Switch(config-if)#no shutdown

Switch(config-if)#
*LINK-S-CHANGED: Interface Vlan1, changed state to up
*LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up
exit
Switch(config)#hostname S2
S2(config)#ip default-gateway 192.168.2.1
S2(config)#exit
S2#
*SYS-5-CONFIG_I: Configured from console by console
```

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Top



Physical Config Services Desktop **Programming** Attributes

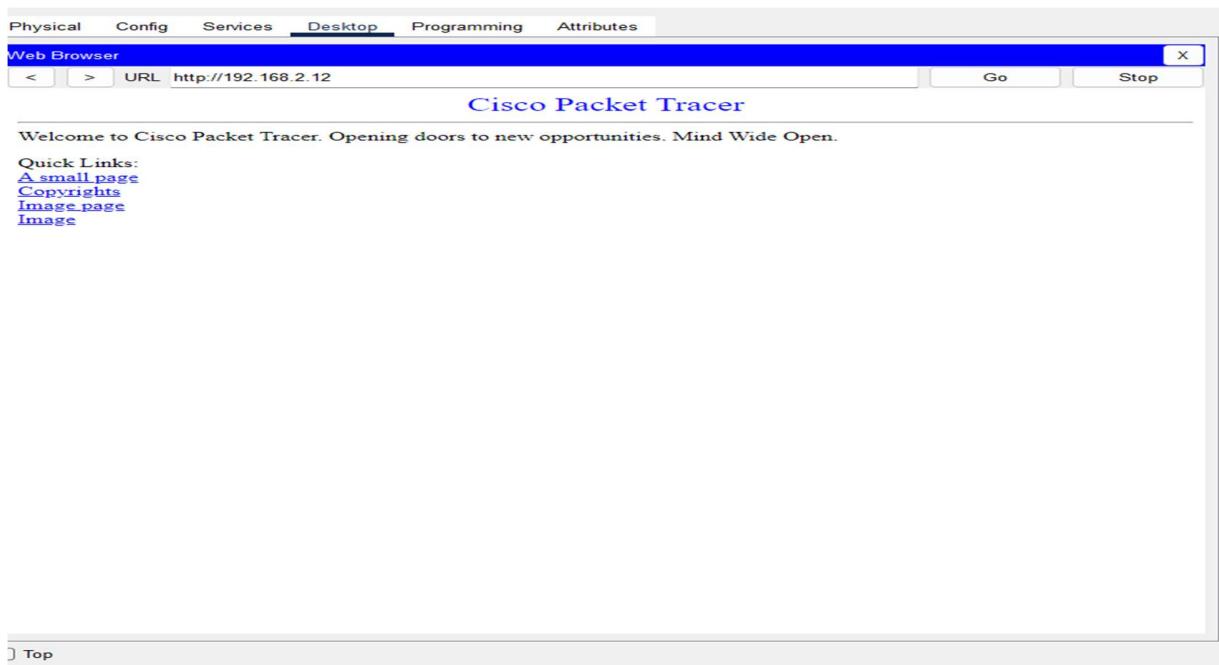
Command Prompt X

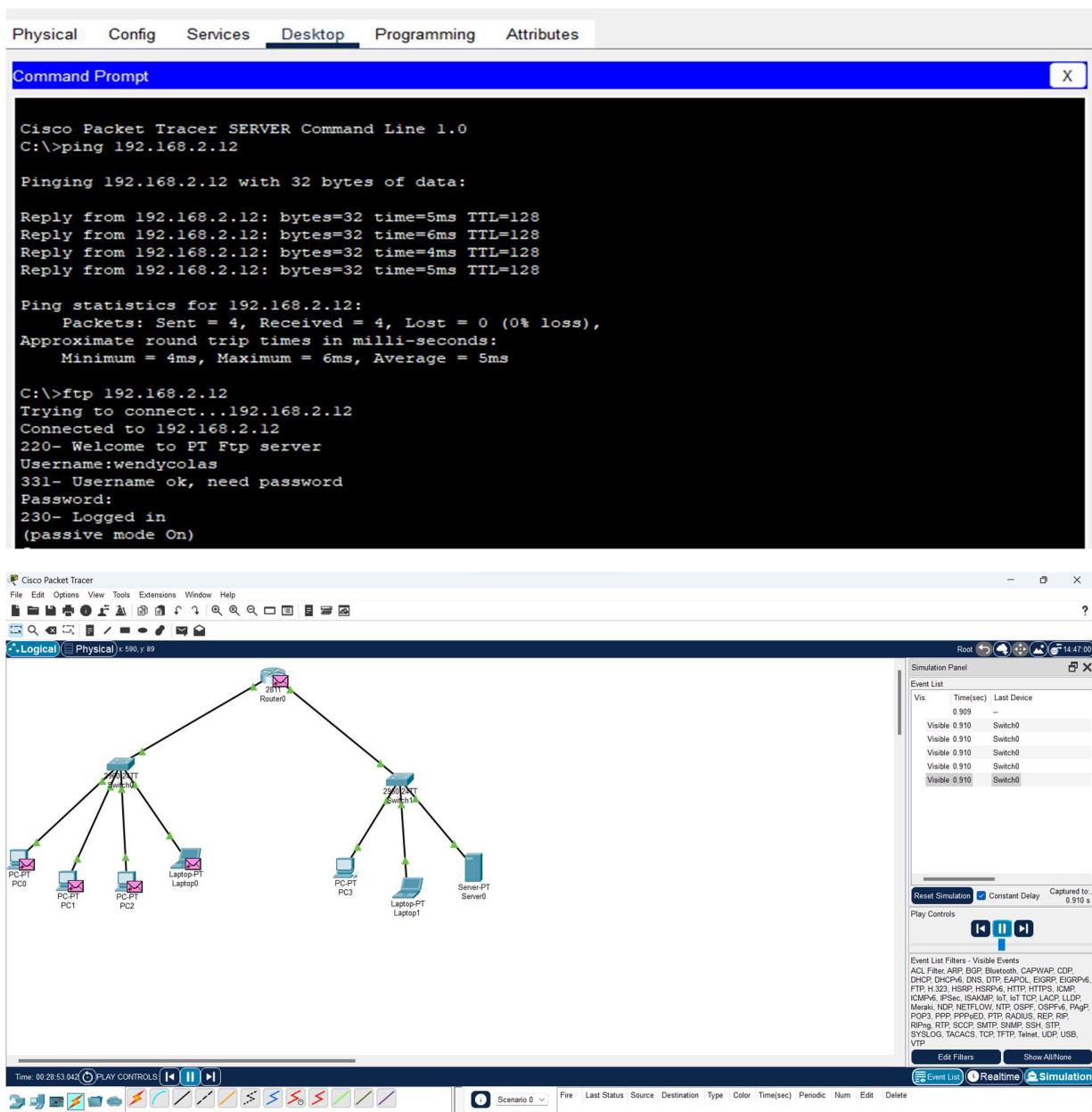
```
Cisco Packet Tracer SERVER Command Line 1.0
C:>ping 192.168.2.12

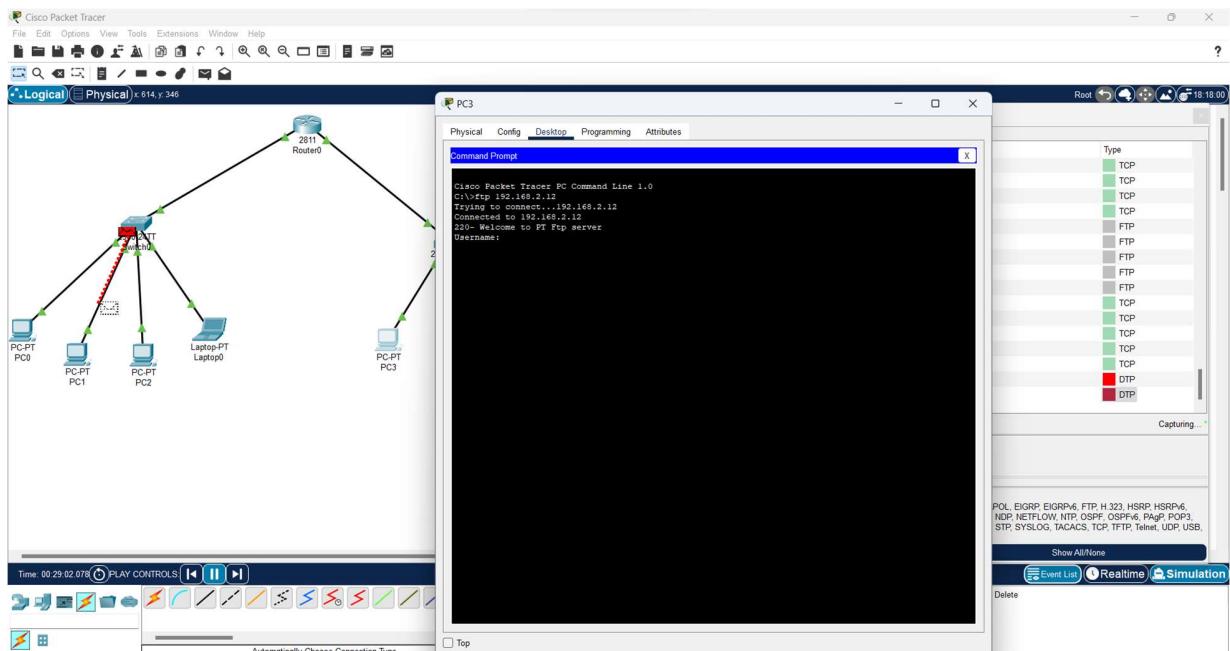
Pinging 192.168.2.12 with 32 bytes of data:
Reply from 192.168.2.12: bytes=32 time=5ms TTL=128
Reply from 192.168.2.12: bytes=32 time=6ms TTL=128
Reply from 192.168.2.12: bytes=32 time=4ms TTL=128
Reply from 192.168.2.12: bytes=32 time=5ms TTL=128

Ping statistics for 192.168.2.12:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 4ms, Maximum = 6ms, Average = 5ms

C:>
```







PDU Information at Device: Server0

OSI Model Inbound PDU Details

At Device: Server0

Source: PC2

Destination: 192.168.2.12

In Layers

Layer7
Layer6
Layer5

Layer 4: TCP Src Port: 1025, Dst Port: 21

Layer 3: IP Header Src. IP: 192.168.1.12,
Dest. IP: 192.168.2.12

Layer 2: Ethernet II Header 0001.97DD.
3B02 >> 000A.41C3.A407

Layer 1: Port FastEthernet0

Out Layers

Layer7
Layer6
Layer5
Layer4
Layer3
Layer2
Layer1

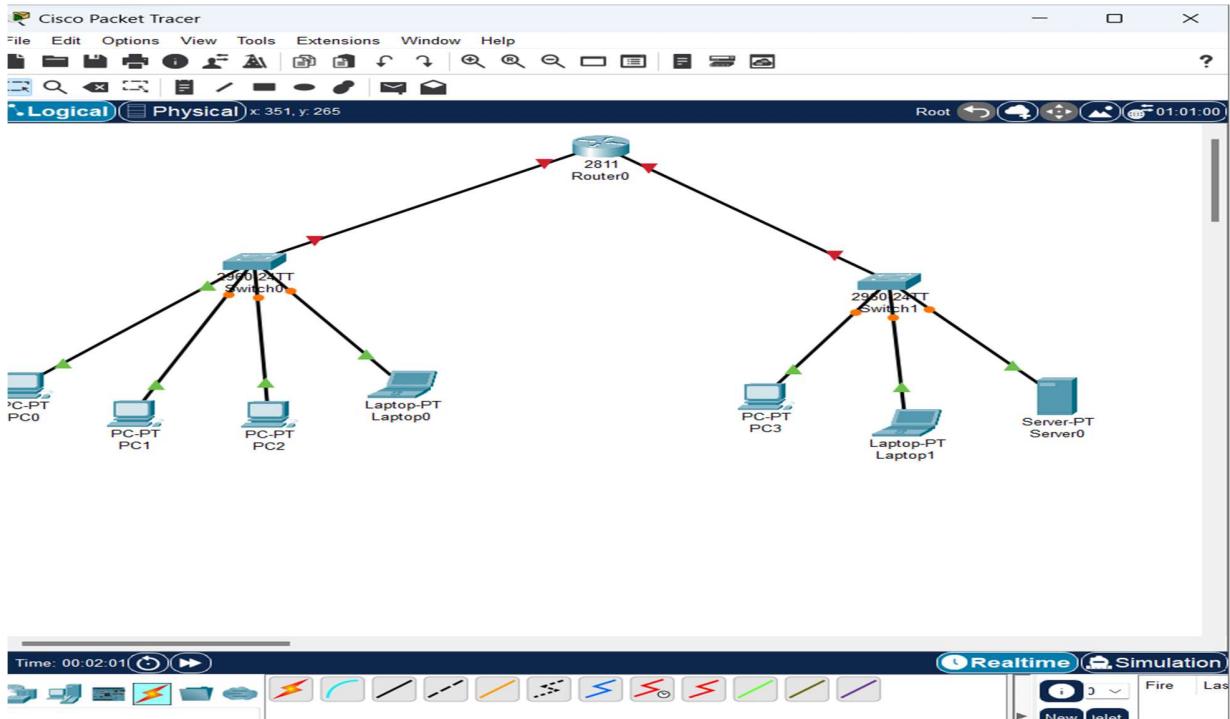
1. The device receives a TCP ACK segment on the connection to 192.168.1.12 on port 1025.
2. Received segment information: the sequence number 1, the ACK number 53, and the data length 20.
3. The TCP segment has the expected peer sequence number.
4. The TCP segment has the expected ACK number. The device pops the last sent segment from the buffer.

Challenge Me

<< Previous Layer

Next Layer >>

3. Reproduction de la topologie en configurant et en testant le protocole UDP.



Switch0

Physical Config **CLI** Attributes

IOS Command Line Interface

```
%LINK-5-CHANGED: Interface FastEthernet0/2, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to up
%LINK-5-CHANGED: Interface FastEthernet0/3, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/3, changed state to up
%LINK-5-CHANGED: Interface FastEthernet0/4, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/4, changed state to up
%LINK-5-CHANGED: Interface FastEthernet0/5, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/5, changed state to up
%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up

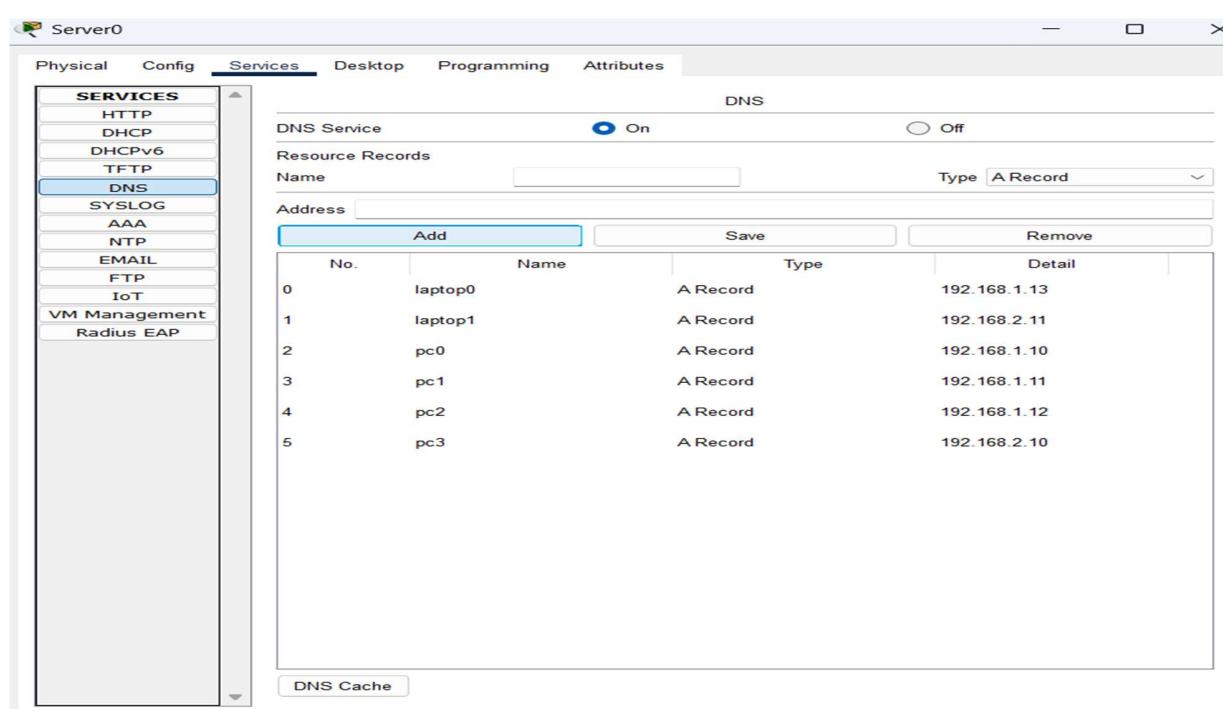
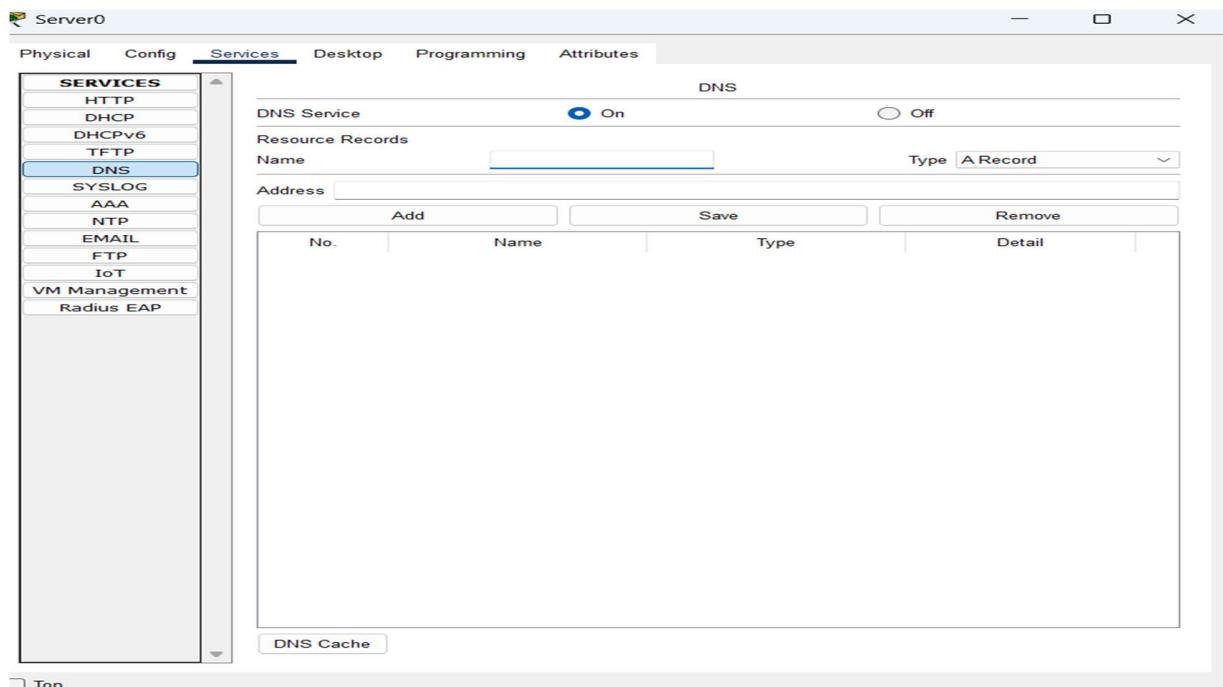
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S1(config-if)#no shutdown

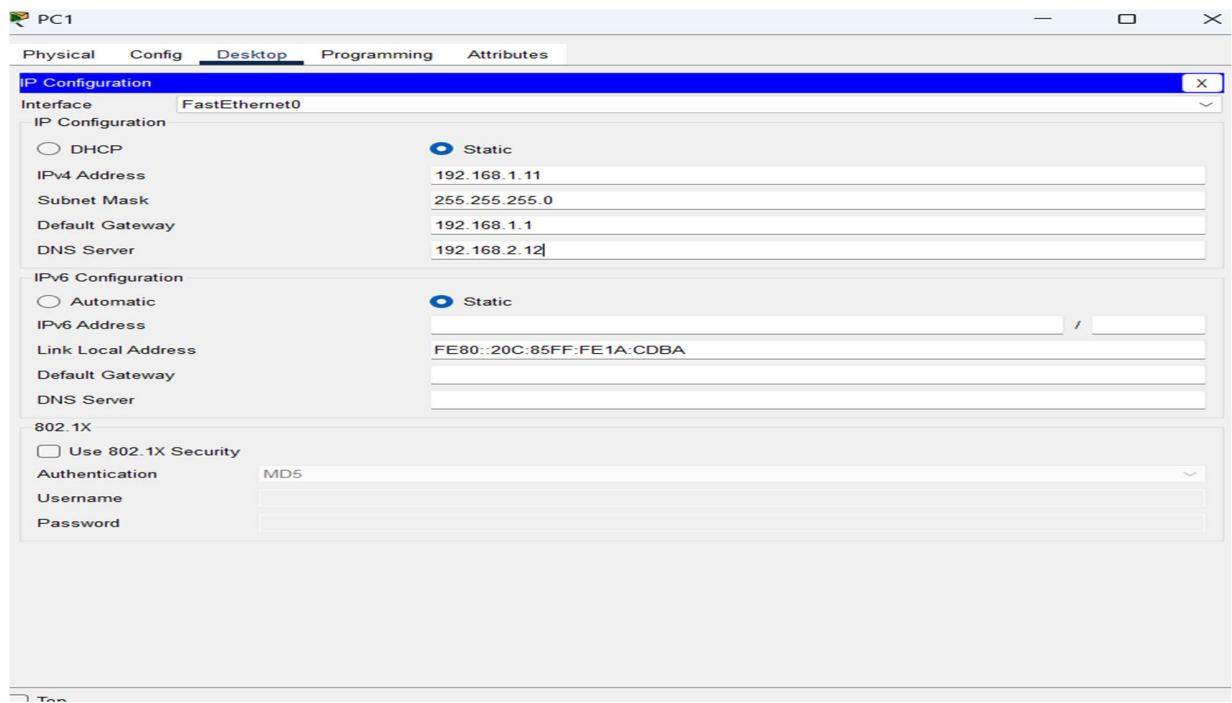
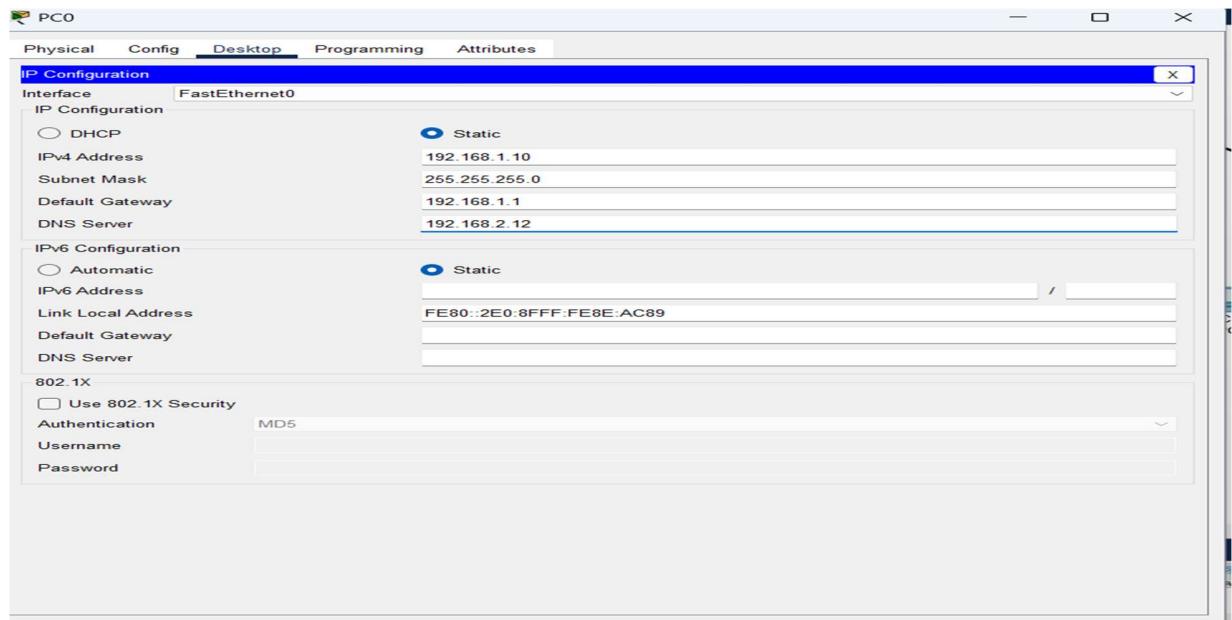
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%LINK-5-CHANGED: Interface Vlan1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up
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S1(config)#ip default-gateway 192.168.1.1
S1(config)#exit
S1#
%SYS-5-CONFIG_I: Configured from console by console
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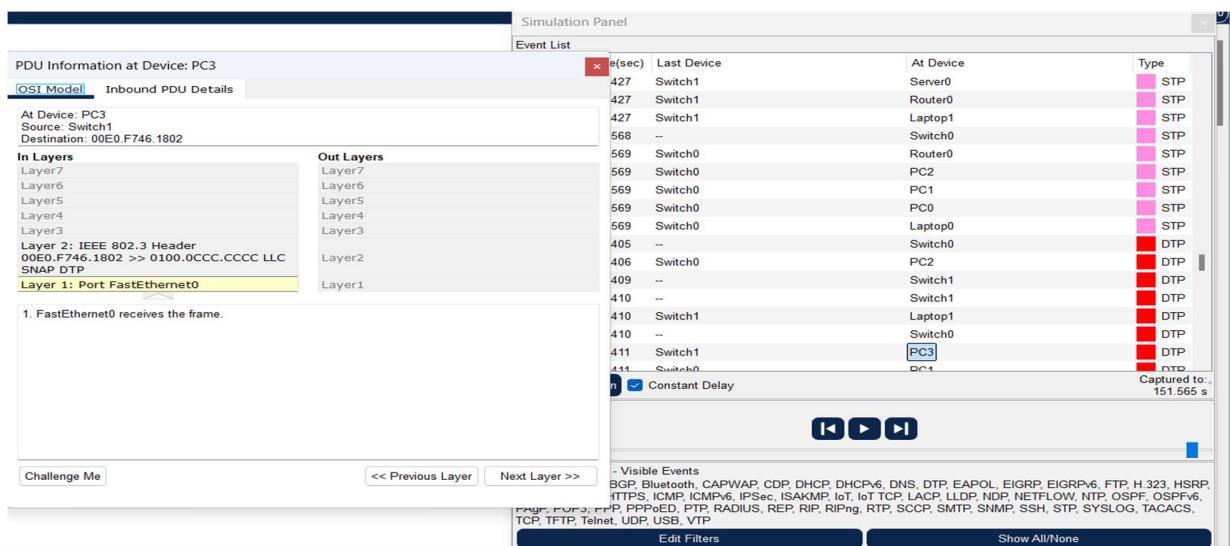
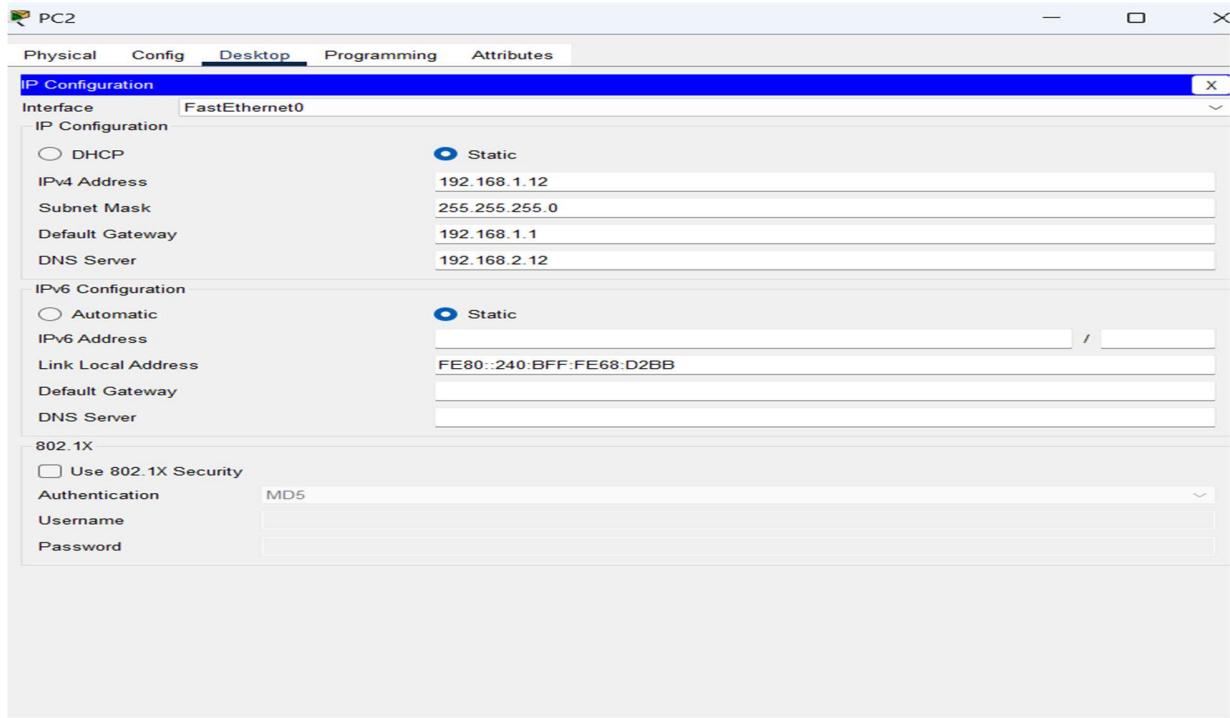
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Top

Top







Conclusion

J'ai maîtrisé les notions relatives à la configuration des protocoles FTP, TCP et UDP après avoir étudié les théories et avoir réalisé les travaux pratiques.