

Exercise 1

1. Parameters of my TCP/IP connection configuration

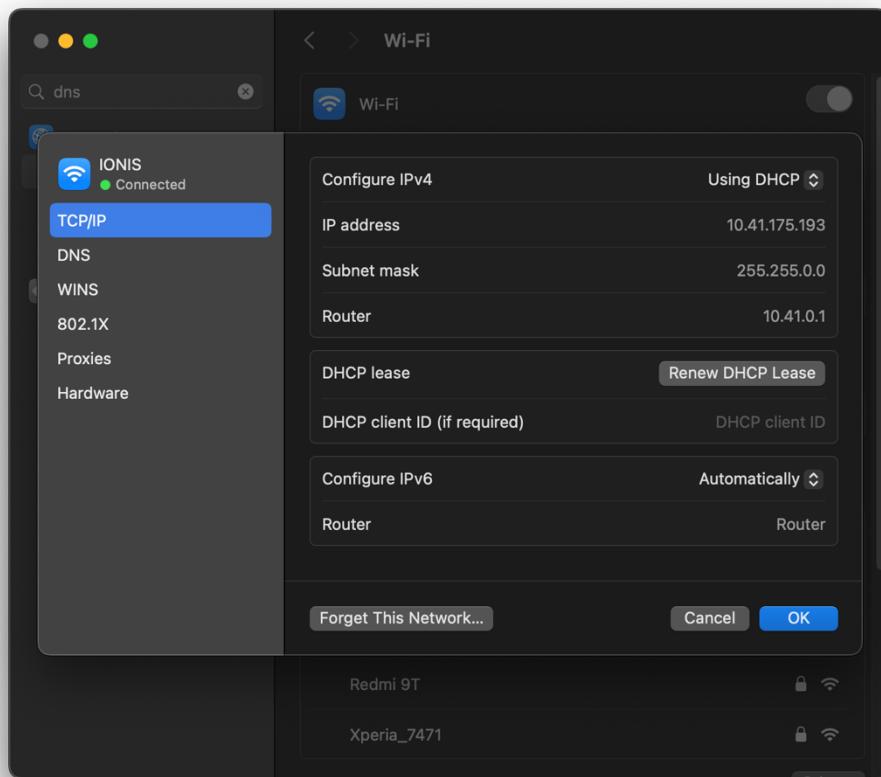
IP Address: 10.41.175.193

Subnet Mask: 255.255.0.0

Router: 10.41.0.1

DNS Server: 8.8.8.8

Default Gateway: 10.41.0.1 (obtained from terminal using 'route -n get default')



2. Multiple IP assignments

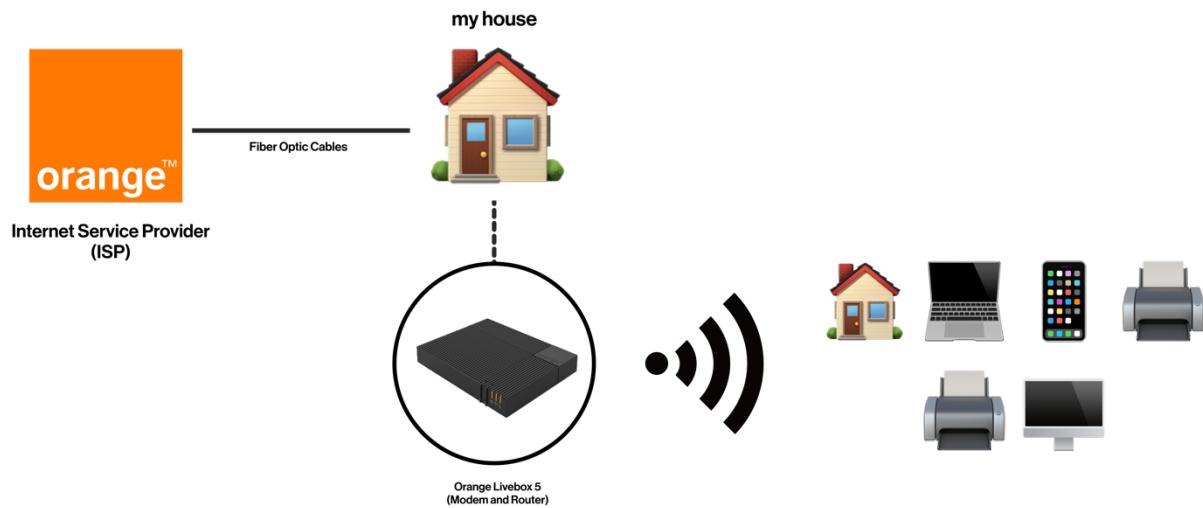
No, my computer does not have multiple IP assignments.

3. DNS Server

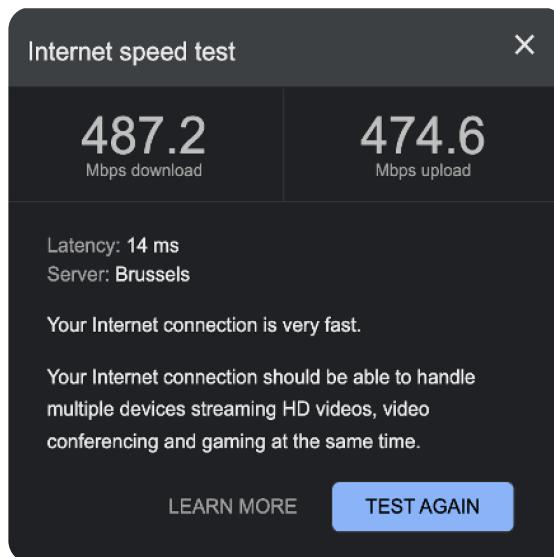
- i) DNS Server: 8.8.8.8
- ii) It is preferable to protect DNS traffic to ensure that the address mapped to an IP address is legitimate and safe to connect to

4. Connection setup and Visualization.

I am connected to A Digital Subscriber Line (DSL) setup.



No, I would not change to another connection setup as my current connection setup provides excellent connection speeds (as shown below) and offers the advantage of mobility (not possible with an Ethernet cable)



Exercise 2

1. I am using TCP/IP to connect to the internet
2. My connection most likely has a star topology

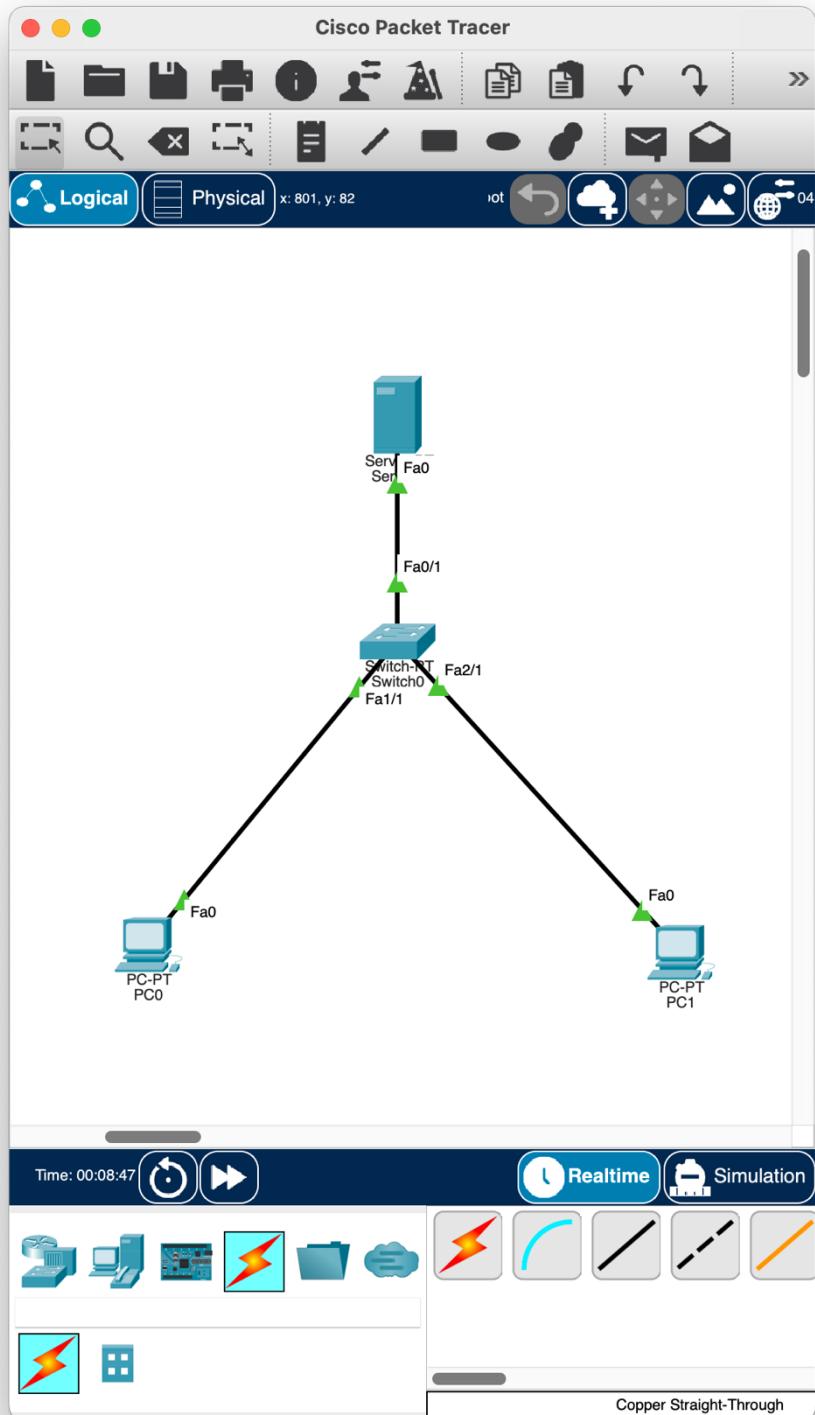
Reasoning:

I have a central router (the Orange Livebox 5) located in my living room and all devices (Phones, Laptops, TVs connect to it via Wi-Fi) so I most likely have a star topology

3. The logical network architecture of my internet connection is a 'client-server' architecture

Exercise 3

The setup:



Transferring an example document (hello.txt in this case) from a PC (PC0) to a PT-Server (Server0) using the command prompt on the PC.

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ftp 192.168.0.1
Trying to connect...192.168.0.1
Connected to 192.168.0.1
220- Welcome to PT Ftp server
Username:cisco
331- Username ok, need password
Password:
230- Logged in
(passive mode On)
ftp>put hello.txt

Writing file hello.txt to 192.168.0.1:
File transfer in progress...

[Transfer complete - 13 bytes]

13 bytes copied in 0.077 secs (168 bytes/sec)
ftp>dir

Listing /ftp directory from 192.168.0.1:
0   : asa842-k8.bin                               5571584
1   : asa923-k8.bin                               30468096
2   : c1841-adviservicesk9-mz.124-15.T1.bin    33591768
3   : c1841-ipbase-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-adviservicesk9-mz.124-15.T1.bin    33591768
7   : c2600-i-mz.122-28.bin                      5571584
8   : c2600-ipbasek9-mz.124-8.bin              13169700
9   : c2800nm-adviservicesk9-mz.124-15.T1.bin  50938004
10  : c2800nm-adviservicesk9-mz.151-4.M4.bin   33591768
11  : c2800nm-ipbase-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-i6q4l2-mz.121-22.EA4.bin           3058048
15  : c2950-i6q4l2-mz.121-22.EA8.bin           3117390
16  : c2960-lanbase-mz.122-25.FX.bin          4414921
17  : c2960-lanbase-mz.122-25.SEE1.bin         4670455
18  : c2960-lanbasek9-mz.150-2.SE4.bin         4670455
19  : c3560-adviservicesk9-mz.122-37.SEE1.bin  8662192
20  : c3560-adviservicesk9-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  : hello.txt → hello.txt in server          13
27  : ir800-universalk9-bundle.SPA.156-3.M.bin 160968869
28  : ir800-universalk9-mz.SPA.155-3.M        61750062
29  : ir800-universalk9-mz.SPA.156-3.M        63753767
30  : ir800_yocto-1.7.2.tar                  2877440
31  : ir800_yocto-1.7.2_python-2.7.3.tar    6912000
32  : pt1000-i-mz.122-28.bin                 5571584
33  : pt3000-i6q4l2-mz.121-22.EA4.bin       3117390
ftp>
```

Mapping each connection with the respective TCP/IP layer

PC0

Physical Config Desktop **Programming** Attributes

Command Prompt X

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ftp 192.168.0.1
Trying to connect...192.168.0.1 ]→ Transport layer (TCP)
Connected to 192.168.0.1
220- Welcome to PT Ftp server
Username:cisco
331- Username ok, need password
Password:
230- Logged in
(passive mode On)
ftp>put hello.txt

Writing file hello.txt to 192.168.0.1:
File transfer in progress...
[Transfer complete - 13 bytes]
13 bytes copied in 0.077 secs (168 bytes/sec)
ftp>dir

Listing /ftp directory from 192.168.0.1:
0   : asa842-k8.bin          5571584
1   : asa923-k8.bin          30468096
2   : c1841-advipservicesk9-mz.124-15.T1.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.T1.bin 33591768
7   : c2600-i-mz.122-28.bin      5571584
8   : c2600-ipbasek9-mz.124-8.bin   13169700
9   : c2800nm-advipservicesk9-mz.124-15.T1.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  : hello.txt                  13
27  : ir800-universalk9-bundle.SPA.156-3.M.bin 160968869
28  : ir800-universalk9-mz.SPA.155-3.M       61750062
29  : ir800-universalk9-mz.SPA.156-3.M       63753767
30  : ir800_yocto-1.7.2.tar                 2877440
31  : ir800_yocto-1.7.2_python-2.7.3.tar   6912000
32  : pt1000-i-mz.122-28.bin                5571584
33  : pt3000-i6q412-mz.121-22.EA4.bin     3117390
ftp>]
```

Transport layer (TCP)

Application layer

Application layer

Top