

UNIVERSITE LARBI BEN M'HIDI OUM EL BOUAGHI

DEPARTEMENT DE MATHÉMATIQUES ET INFORMATIQUE

Filière : INFORMATIQUE

2^{ème} année Licence

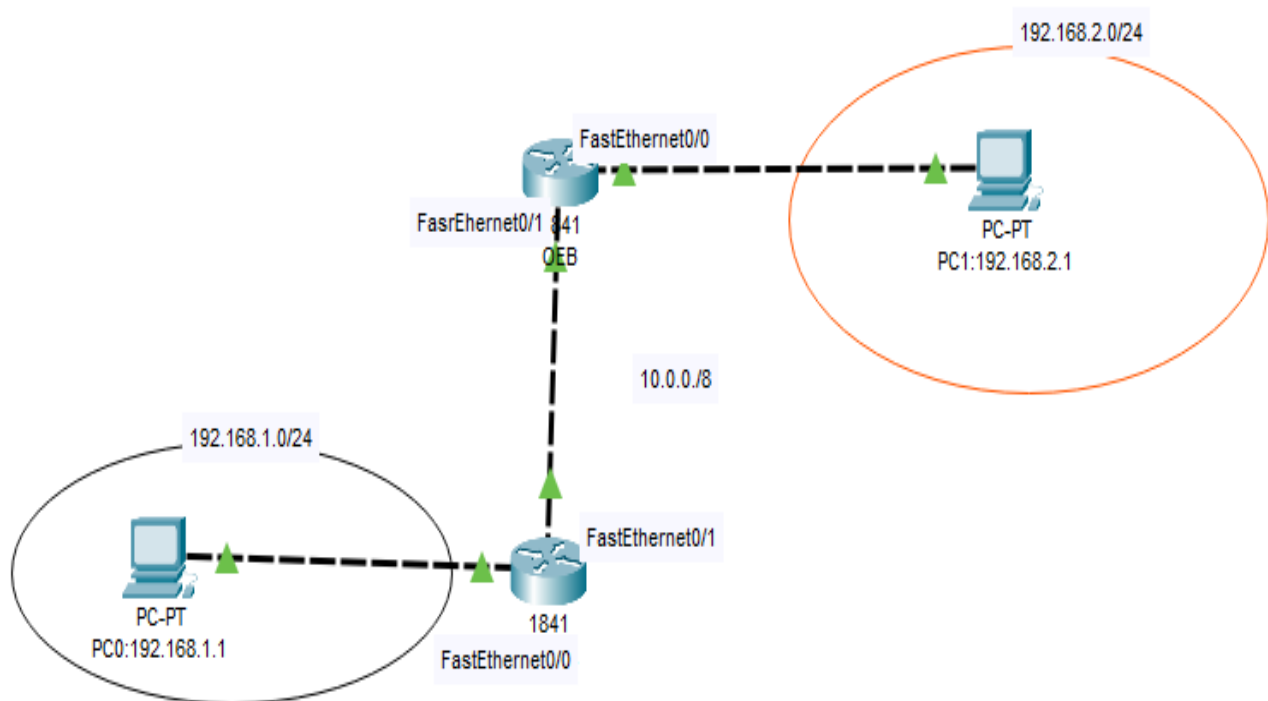
Module : Réseaux de communication

TP.6 Mise en œuvre du logiciel Packet Tracer

Objectifs

- Comprendre le fonctionnement des différents équipements d'interconnexion du réseau (interconnexion entre deux Routeurs).

1/Ouvrir le logiciel Packet Tracer et Réalisez le schéma suivant :



2/ Configurez les PCs comme suit :

PC0 :

PC0

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address 192.168.1.1

Subnet Mask 255.255.255.0

Default Gateway 192.168.1.254

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::250:FFF:FED8:7B35

IPv6 Gateway

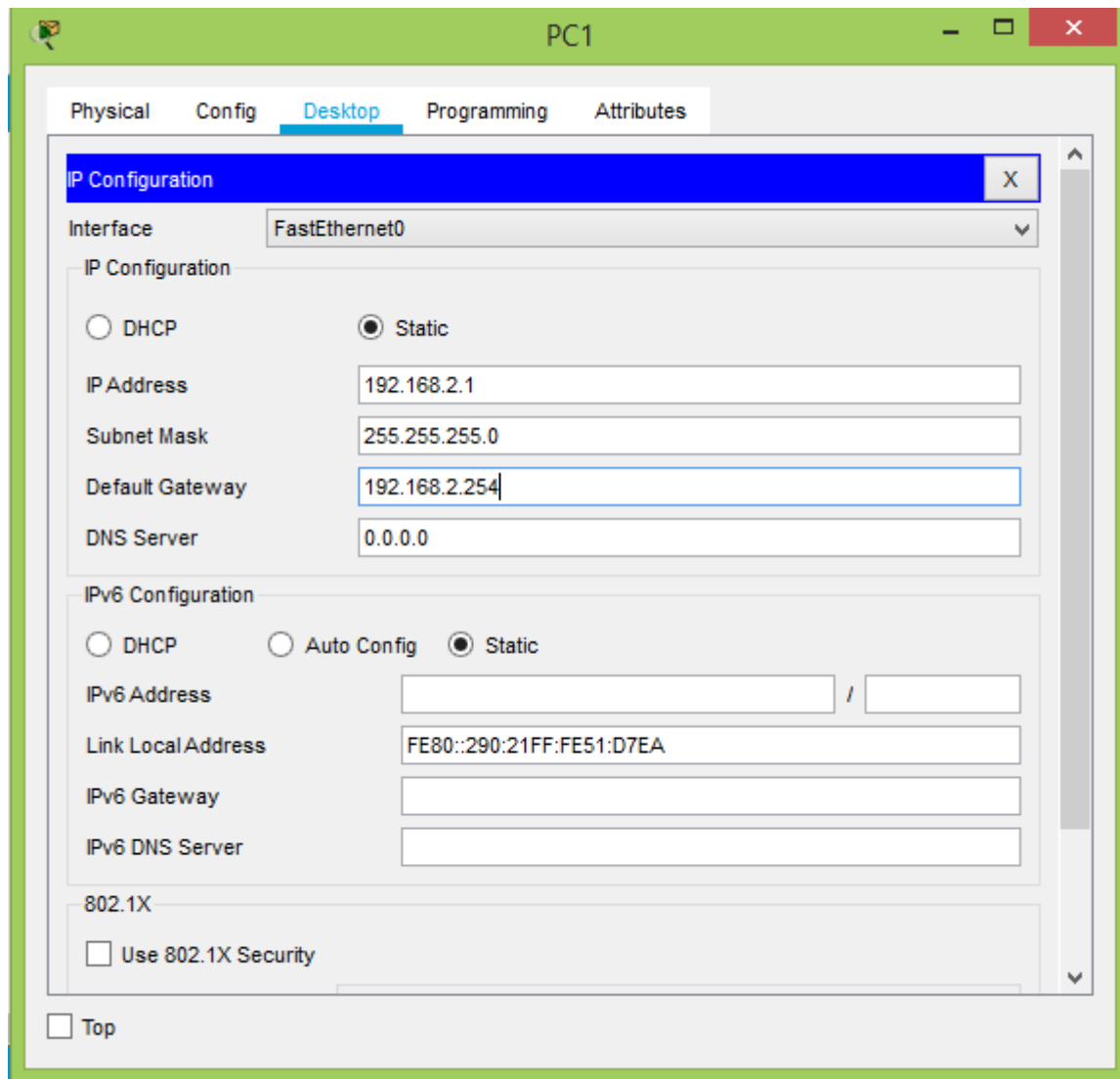
IPv6 DNS Server

802.1X

☐ Use 802.1X Security

☐ Top

PC01



3/ Configurez les Routeurs comme suit :

Routeur 1

Continue with configuration? [yes/no]: no

Router>enable

Router#configure terminal

Router#hostname ALGER

ALGER(config)#interface fastEthernet 0/0

ALGER(config)#ip address 192.168.1.254 255.255.255.0

ALGER(config)#no shutdown

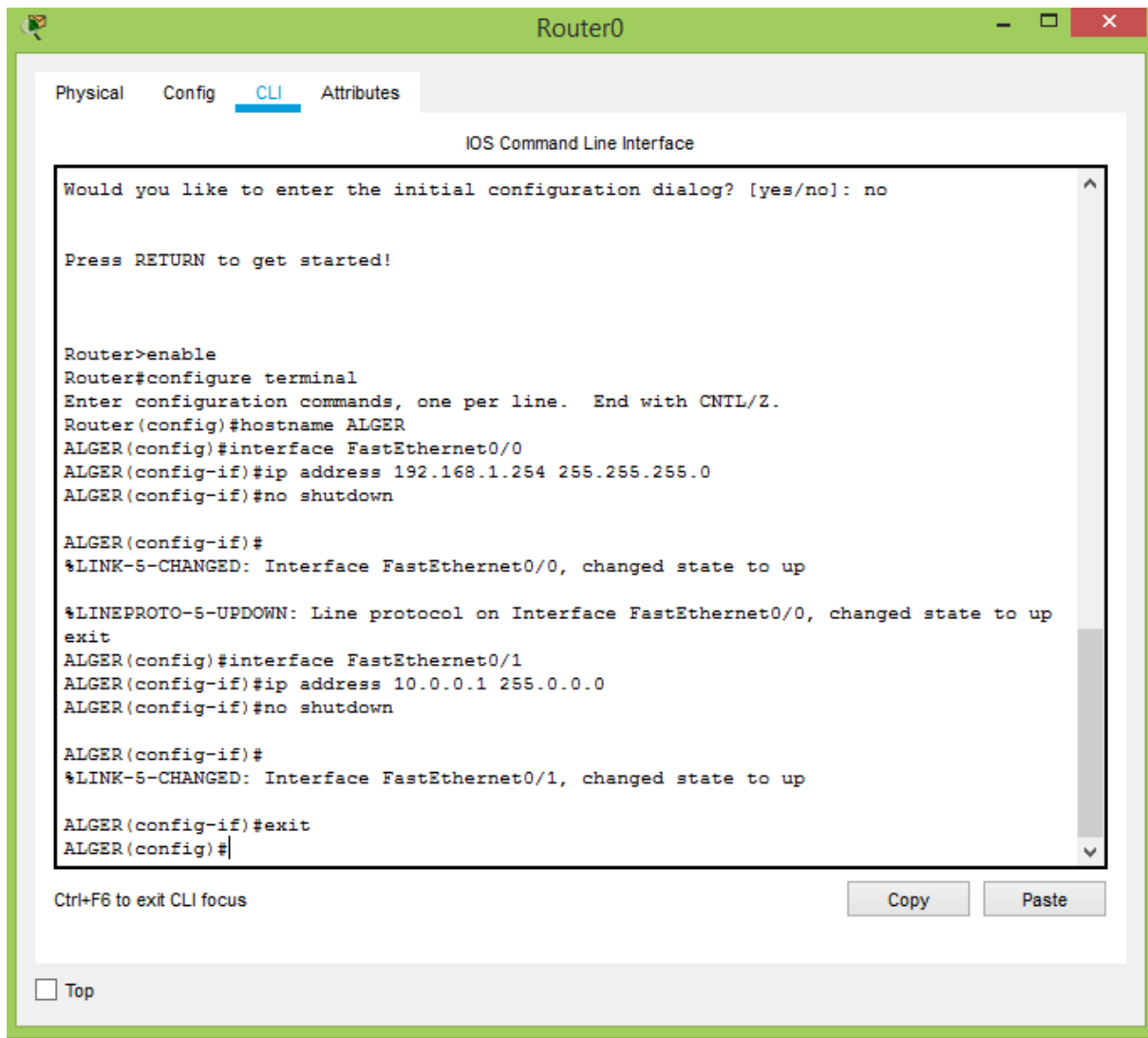
ALGER(config)#exit

ALGER(config)#interface FastEthernet 0/1

ALGER(config)#ip address 10.0.0.1 255.0.0.0

ALGER(config)#no shutdown

ALGER(config)#exit



Routeur 2

Continue with configuration? [yes/no]: no

Router>enable

Router#configure terminal

OEB(config)#interface fastEthernet 0/0

OEB(config)#ip address 192.168.2 .254 255.255.255.0

OEB(config)#no shutdown

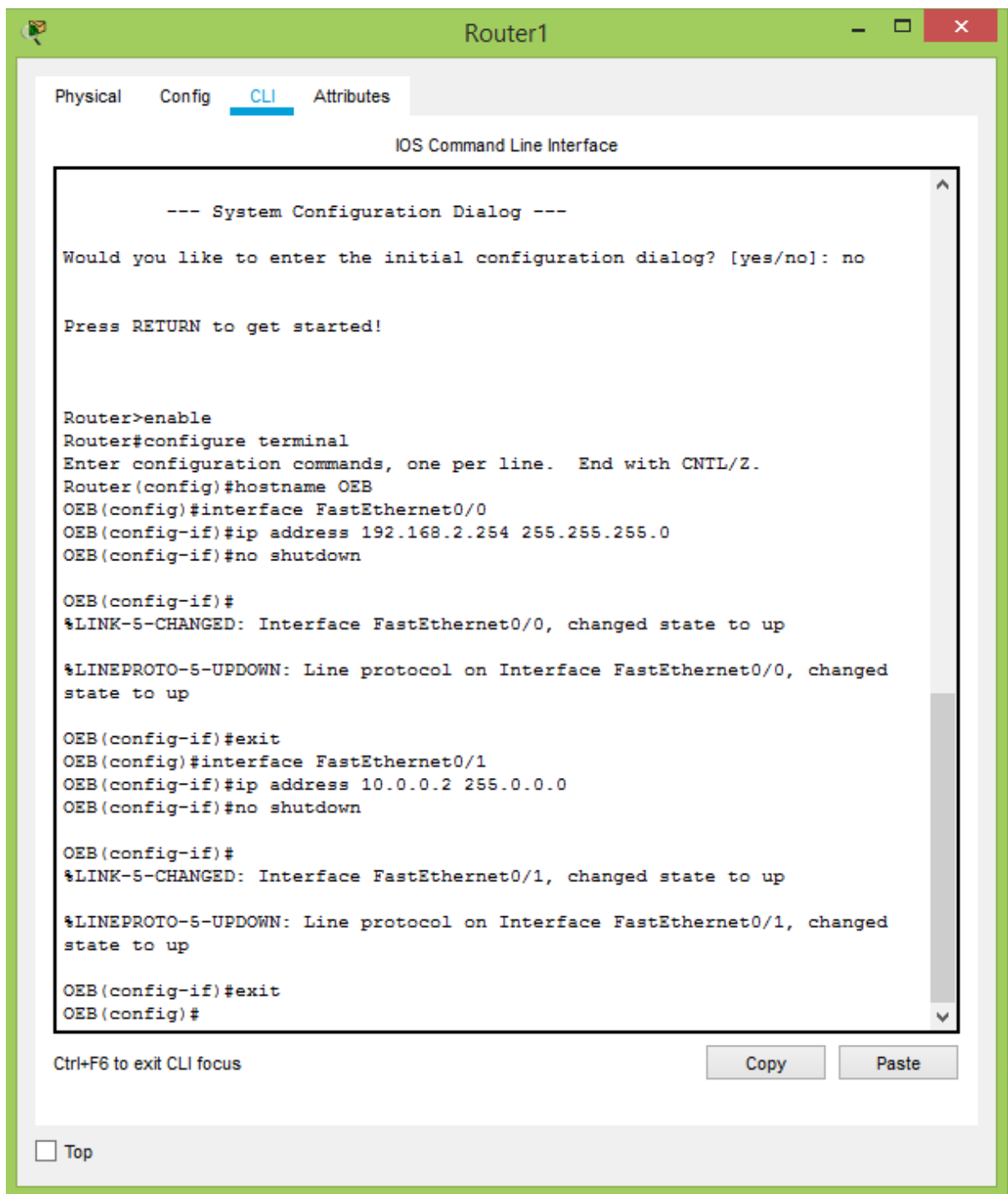
OEB(config)#exit

ALGER(config)#interface fastEthernet 0/1

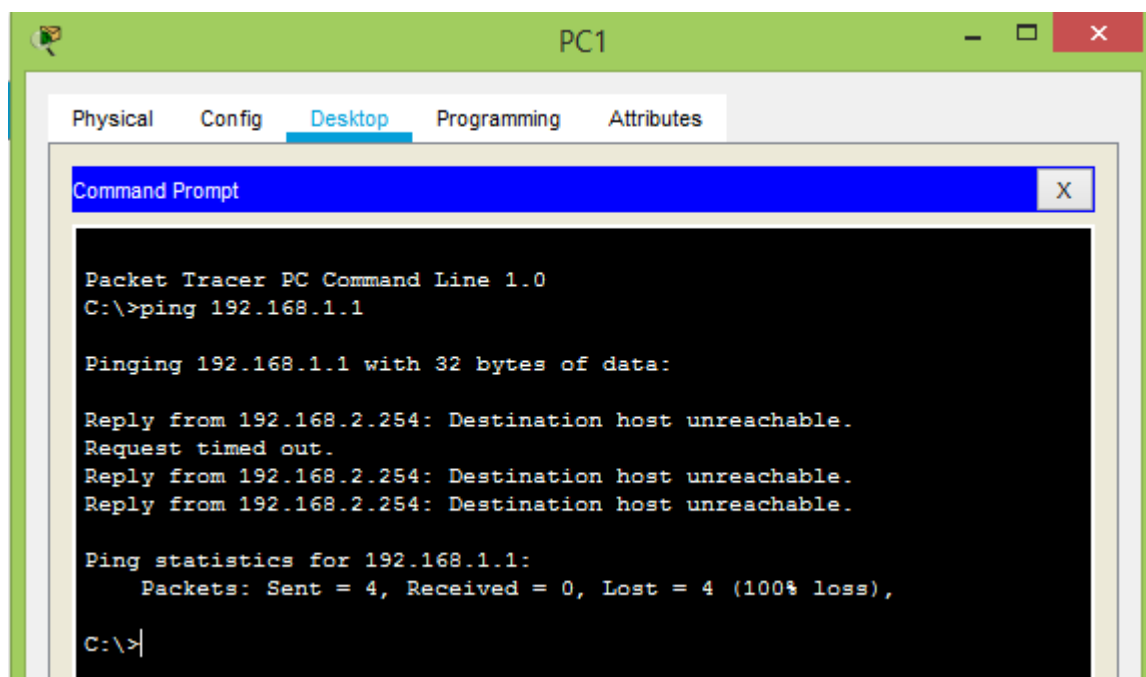
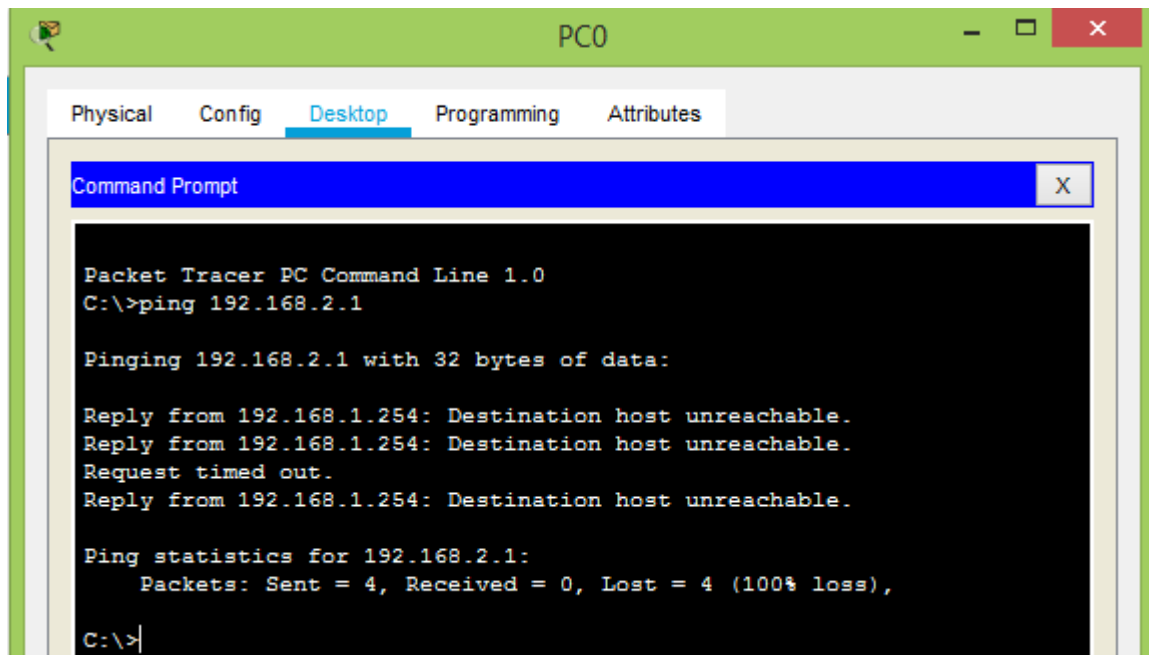
ALGER(config)#ip address 10.0.0.2 255.0.0.0

ALGER(config)#no shutdown

ALGER(config)#exit



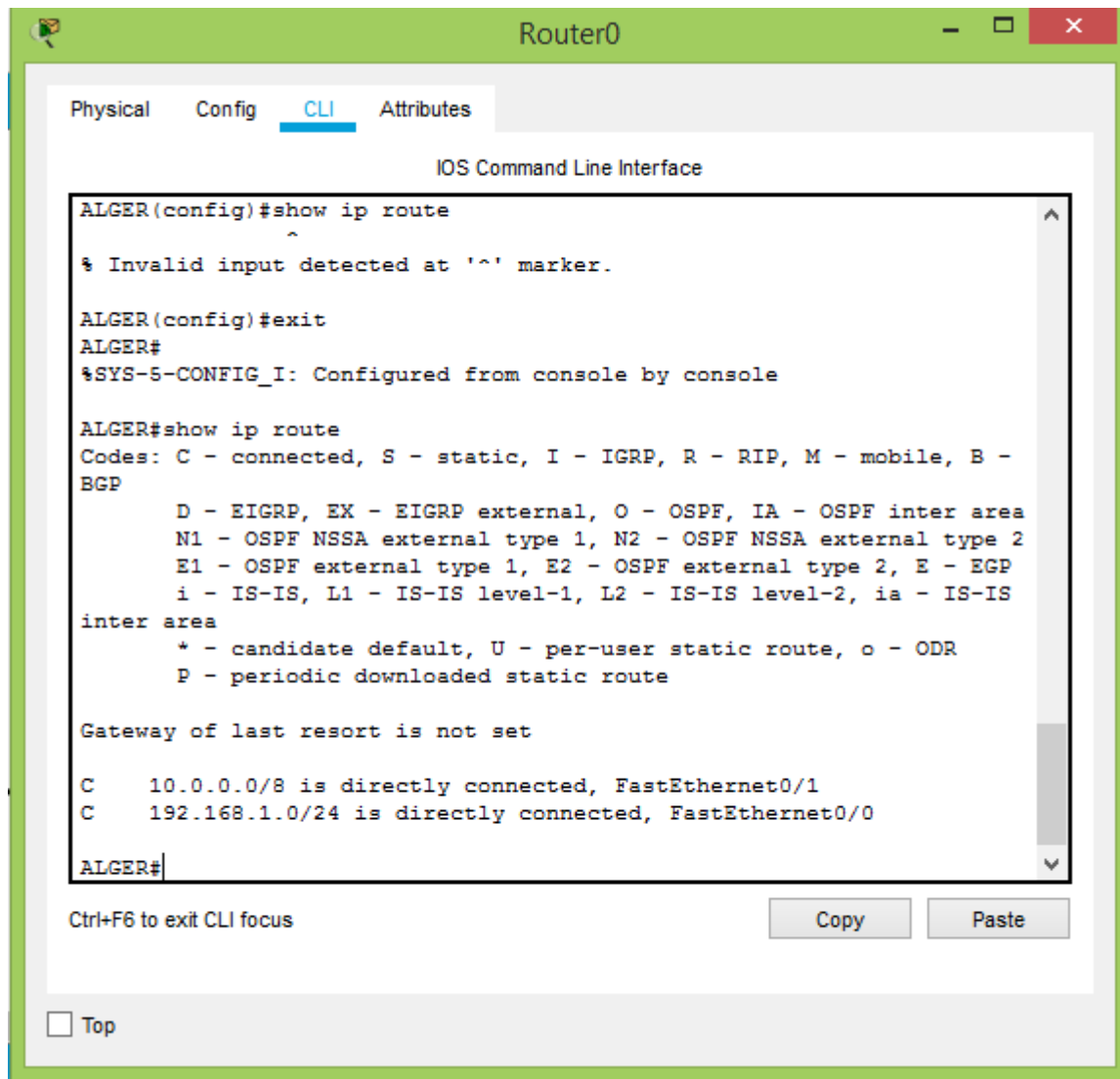
4/ Testez la connectivite entre PC0 et PC01 avec la commande 'ping' :



La machine n'arrive pas à rejoindre puisque le Routeur ne connaît pas le réseau 192.168.2.0/24

4/ Affichez la table de routage de ce routeur (ALGER) :

ALGER(config)#show ip route



5/configurez la route au réseau 192.168.2.0/24 :

ALGER(config)#ip route 192.168.2.0 255.255.255.0 FastEthernet 0/1

6/faire un test de ping : le message d'erreur est changé

```
C:\>ping 192.168.2.1

Pinging 192.168.2.1 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.2.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>
```

7/ Affichez la table de routage de ce routeur (ALGER) :

```

ALGER#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B -
BGP
        D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
        N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
        E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
        i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS
inter area
        * - candidate default, U - per-user static route, o - ODR
        P - periodic downloaded static route

Gateway of last resort is not set

C    10.0.0.0/8 is directly connected, FastEthernet0/1
C    192.168.1.0/24 is directly connected, FastEthernet0/0
S    192.168.2.0/24 is directly connected, FastEthernet0/1

ALGER#

```

Une route statique est ajouté a ce routeur

8/ même chose (questions : 4, 5, et 7) pour le routeur (OEB)

9/ testez l'interconnexion entre les deux PC :

```

C:\>ping 192.168.2.1

Pinging 192.168.2.1 with 32 bytes of data:

Reply from 192.168.2.1: bytes=32 time=1ms TTL=126
Reply from 192.168.2.1: bytes=32 time<1ms TTL=126
Reply from 192.168.2.1: bytes=32 time<1ms TTL=126
Reply from 192.168.2.1: bytes=32 time=14ms TTL=126

Ping statistics for 192.168.2.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 14ms, Average = 3ms

C:\>

```


Cisco Packet Tracer - C:\Users\KHALED\Cisco Packet Tracer 7.3.0\saves\tp.pkt

File Edit Options View Tools Extensions Help

Logical
Physical x: 473, y: 438

[Root]

Simulation Panel

Event List

Vis	Time(sec)	Last Device	At Device	Type
	0.000	--	PC1	ICMP
	0.001	PC1	Router1	ICMP
	0.002	Router1	Router0	ICMP
	0.003	Router0	PC0	ICMP
	0.004	PC0	Router0	ICMP
	0.005	Router0	Router1	ICMP
	0.006	Router1	PC1	ICMP

Reset Simulation
☒ Constant Delay
Captured to: 0.006 s

Play Controls

Event List Filters - Visible Events

ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, IoT, IoT TCP, LACP, LLDP, NDP, NETFLOW, NTP, OSPF, OSPFv6, PaGP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters
Show AllNone

Time: 00:08:04.508
PLAY CONTROLS:

4331 4321 1941 2901 2911 8191OX 8191GW 829 1240 PFRouter PFREmpty 1841 2620XM 2621XM 2811

2901

Active Windows

Accédez aux paramètres de l'ordinateur pour activer Windows.