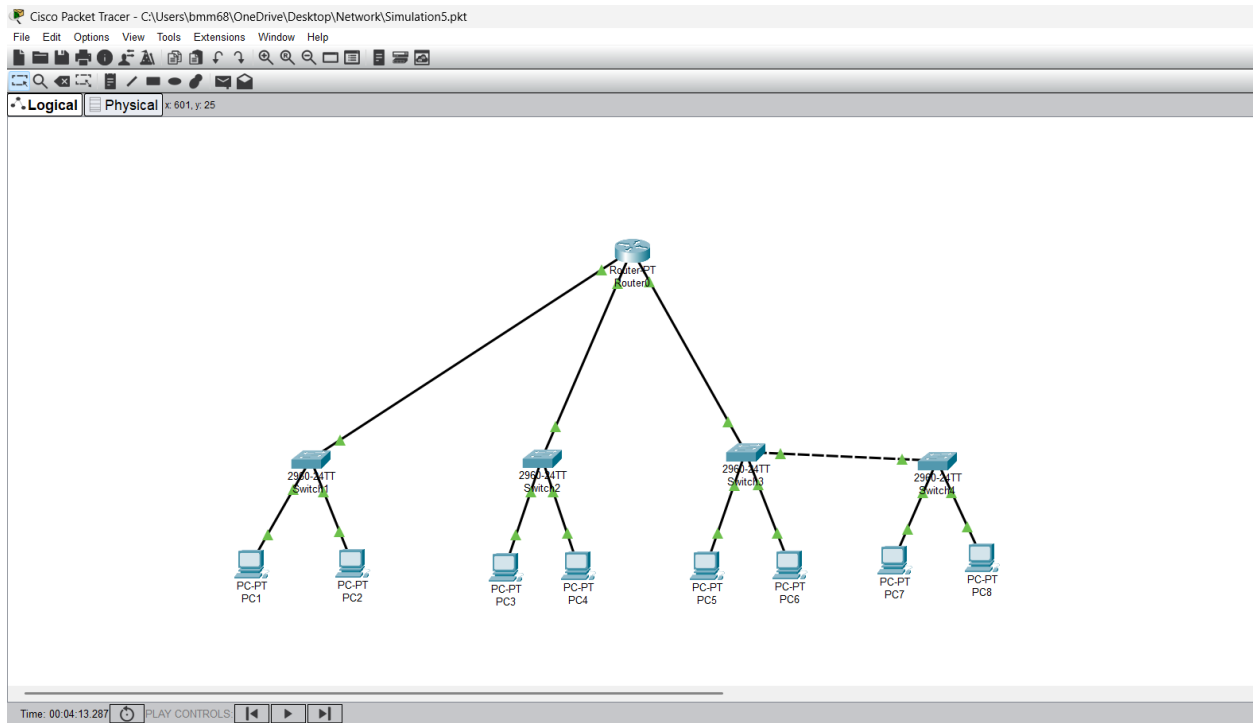


Actividad 9 – Modulo 2 – Lección 9:

1. Configura una red con 4 switches, 8 PCs y un router en Cisco Packet Tracer.
2. Divide la red en 3 dominios de broadcast utilizando el router. 2. Envía mensajes de broadcast desde una de las computadoras y observa cómo se propagan solo dentro de su subred.
3. Entrega de la actividad:
 - a. Desarrolla un informe en formato PDF con todas las respuestas e ilustraciones solicitadas en esta actividad. Entrega la actividad en el lugar designado por el profesor para esta actividad.

Parte 1: Diseño de la red



- División de las direcciones de IP, switches y PC's.

Switch 1:

PC 1 - 192.168.1.1

PC 2 - 192.168.1.2

Switch 2:

PC 3 – 192.168.2.1

PC 4 – 192.168.2.2

Switch 3:

PC 5 – 192.168.3.1

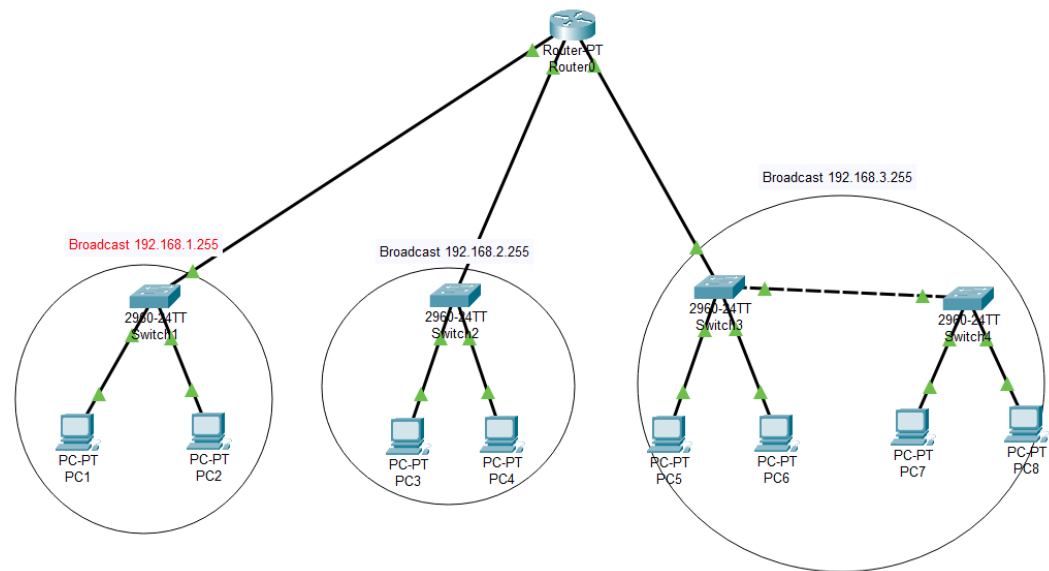
PC 6 – 192.168.3.2

Switch 4:

PC 7 – 192.168.3.3

PC 8 – 192.168.3.4

Parte 2: División de broadcast



- Configuración de las interfaces del router.

Router0

Physical Config CLI Attributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

INTERFACE

FastEthernet0/0

FastEthernet1/0

FastEthernet2/0

FastEthernet3/0

FastEthernet0/0

Port Status ☐ 100 Mbps ☐ 10 Mbps ☒ On

Bandwidth ☐ Half Duplex ☒ Full Duplex ☒ Auto

Duplex

MAC Address 0000.0C46.D95B

IP Configuration

IPv4 Address 192.168.1.254

Subnet Mask 255.255.255.0

Tx Ring Limit 10

Equivalent IOS Commands

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet2/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
```

☐ Top

Router0

Physical Config CLI Attributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

INTERFACE

FastEthernet0/0

FastEthernet1/0

FastEthernet2/0

FastEthernet3/0

FastEthernet1/0

Port Status ☐ 100 Mbps ☐ 10 Mbps ☒ On

Bandwidth ☐ Half Duplex ☒ Full Duplex ☒ Auto

Duplex

MAC Address 0006.2A70.029D

IP Configuration

IPv4 Address 192.168.2.254

Subnet Mask 255.255.255.0

Tx Ring Limit 10

Equivalent IOS Commands

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet1/0
Router(config-if)#
```

☐ Top

Router0

Physical

Config

CLI

Attributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

INTERFACE

FastEthernet0/0

FastEthernet1/0

FastEthernet2/0

FastEthernet3/0

FastEthernet2/0

Port Status

Bandwidth

Duplex

MAC Address

IP Configuration

IPv4 Address

Subnet Mask

Tx Ring Limit

On

Auto

100 Mbps

10 Mbps

Half Duplex

Full Duplex

0060.474D.2EB1

192.168.3.254

255.255.255.0

10

Equivalent IOS Commands

Router>enable

Router#

Router#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#interface FastEthernet0/0

Router(config-if)#

Router(config-if)#exit

Router(config)#interface FastEthernet1/0

Router(config-if)#

Router(config-if)#exit

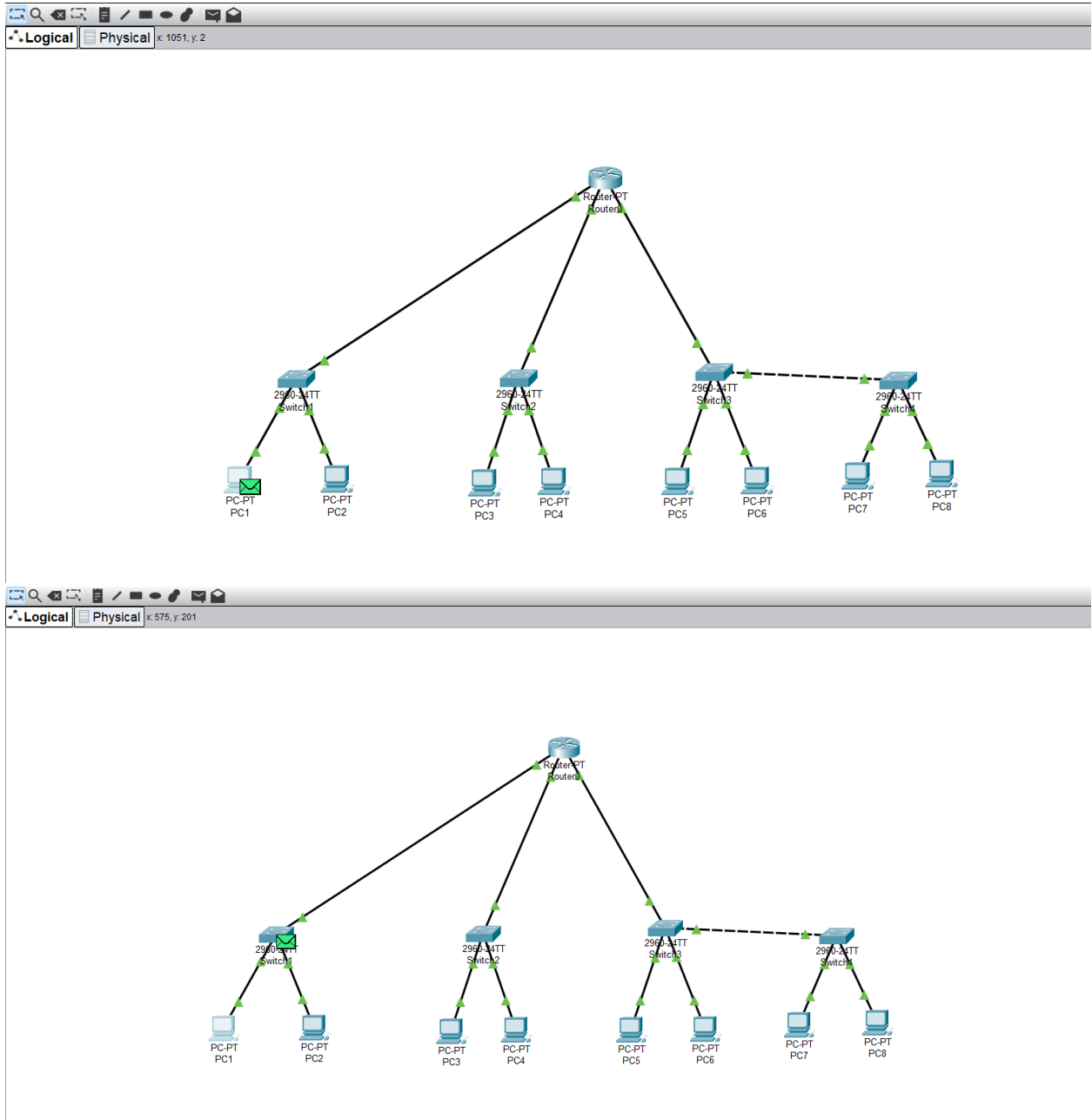
Router(config)#interface FastEthernet2/0

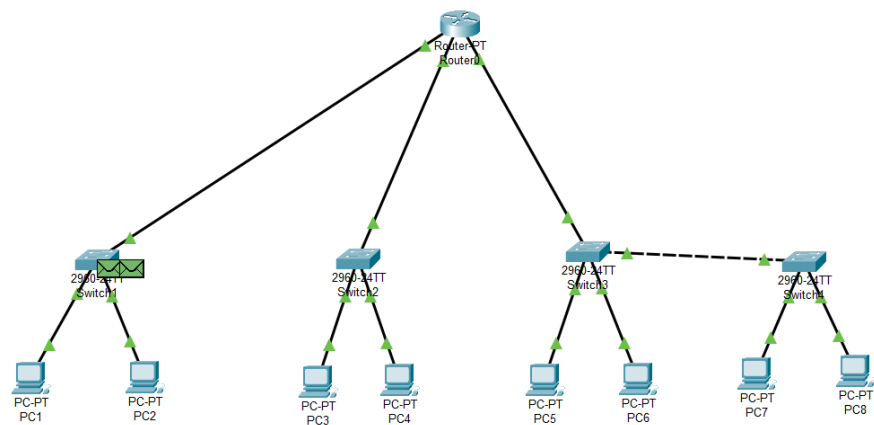
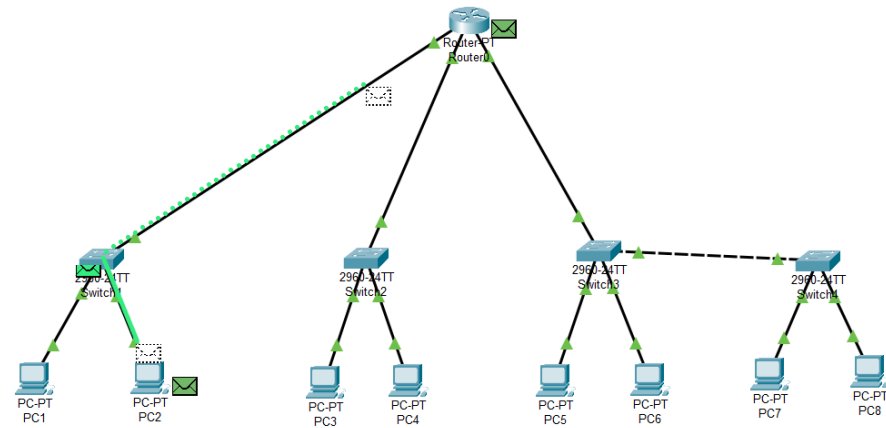
Router(config-if)#

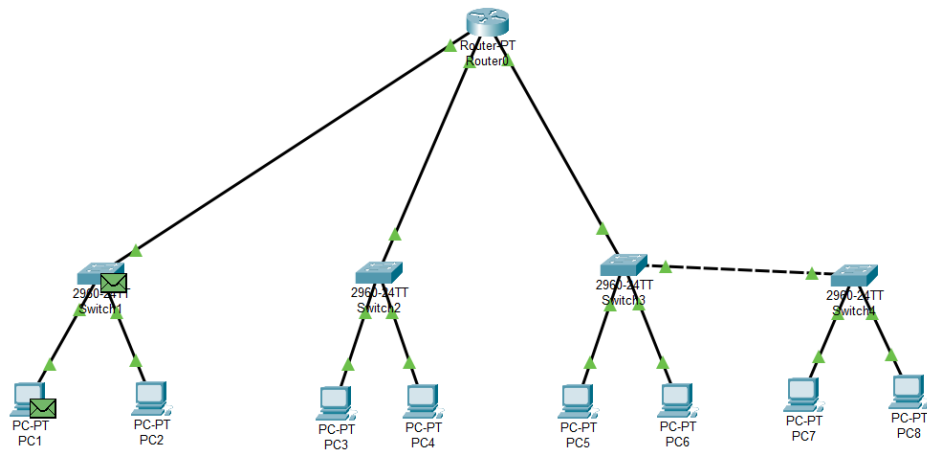
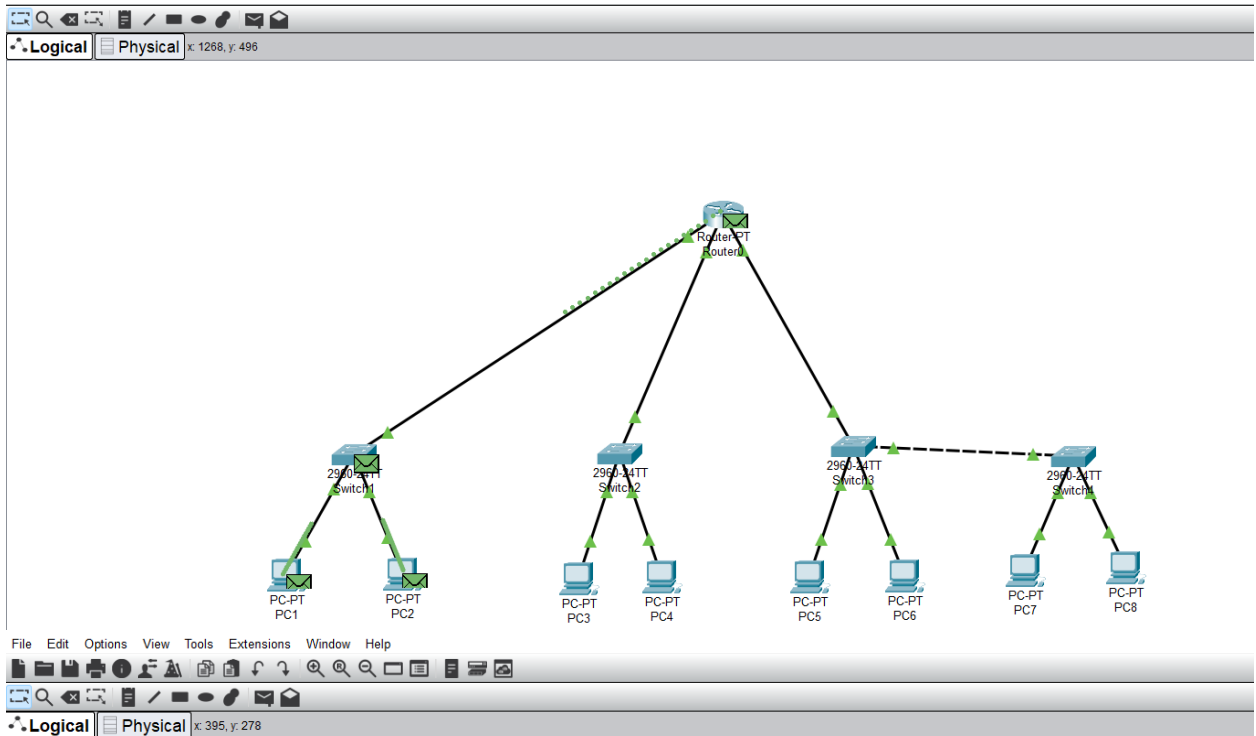
Top

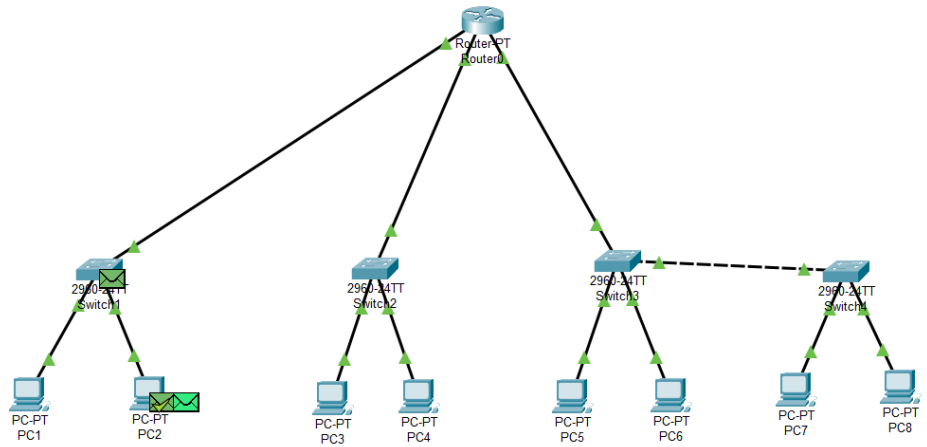
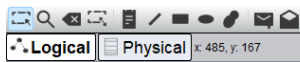
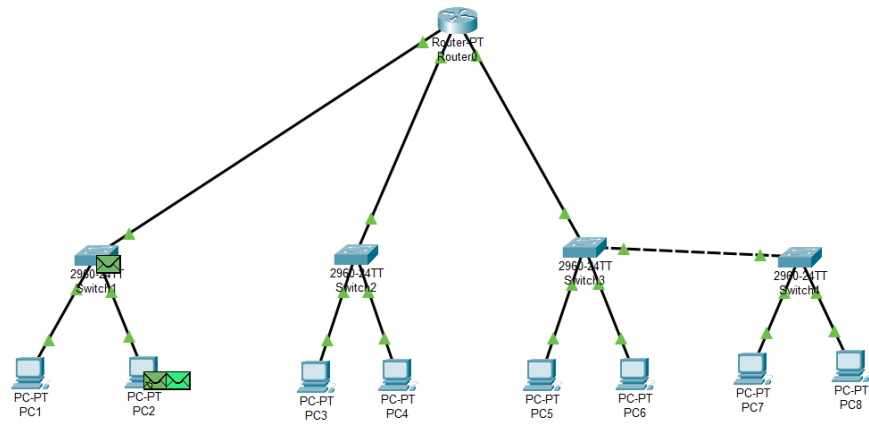
Parte 3: Envió de mensajes

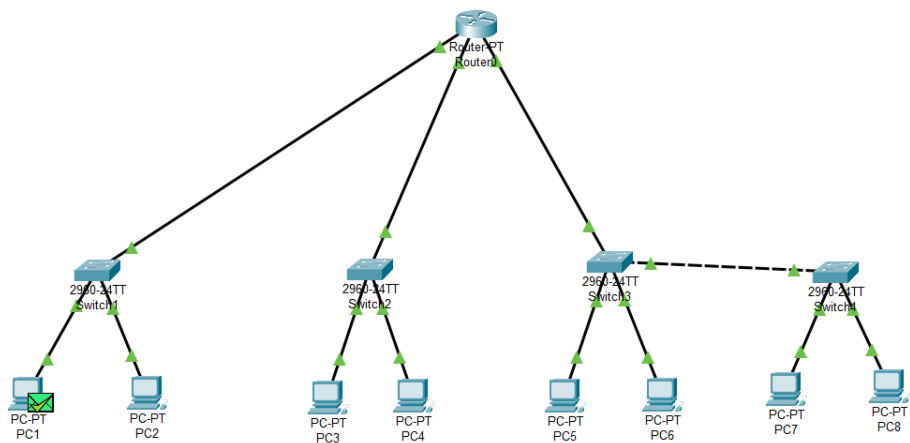
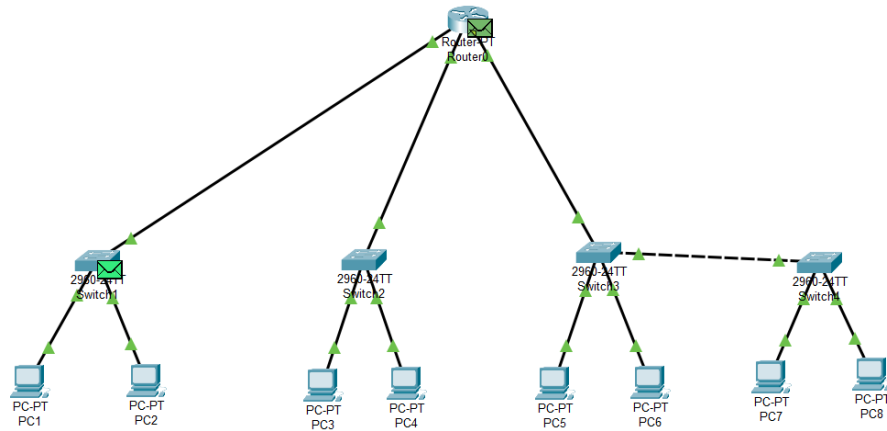
Broadcast 1: subred 192.168.1.255



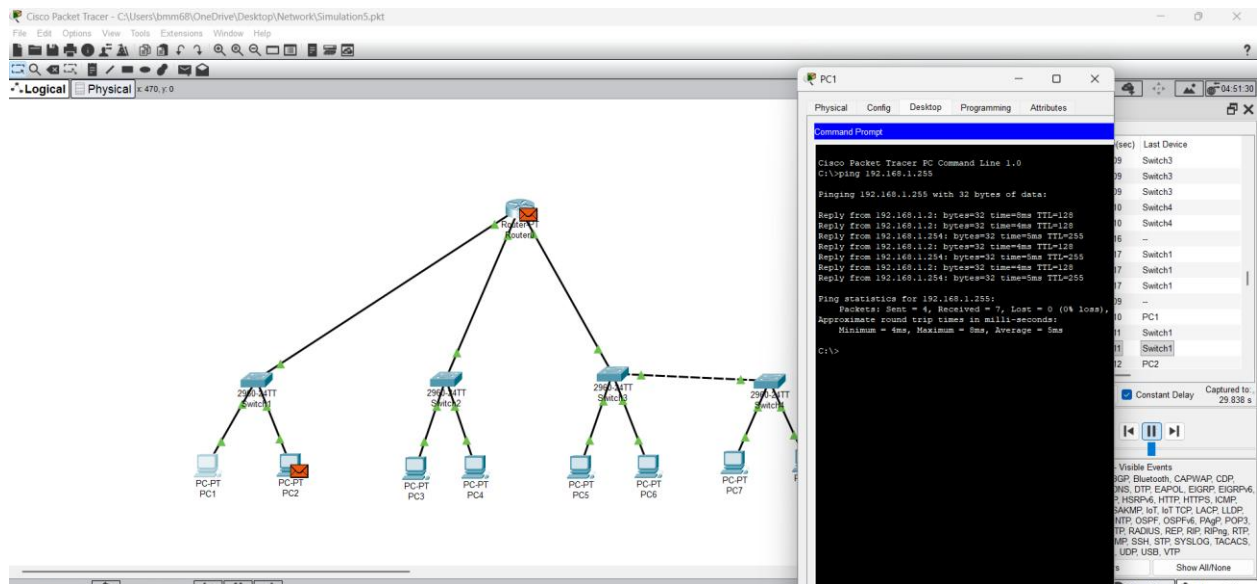




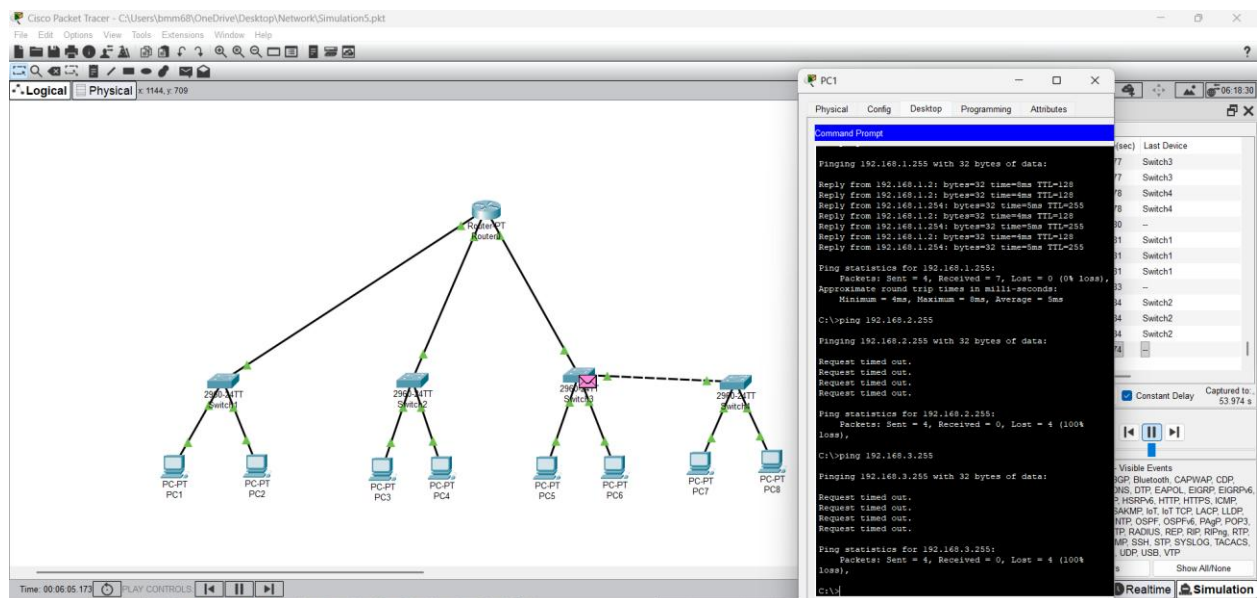




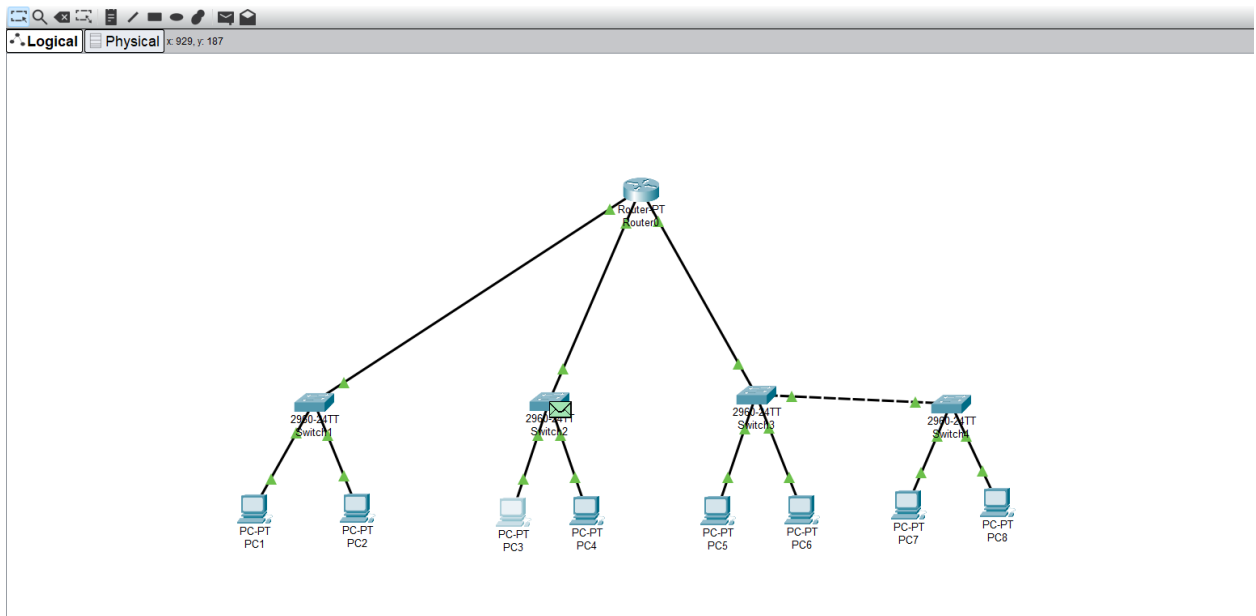
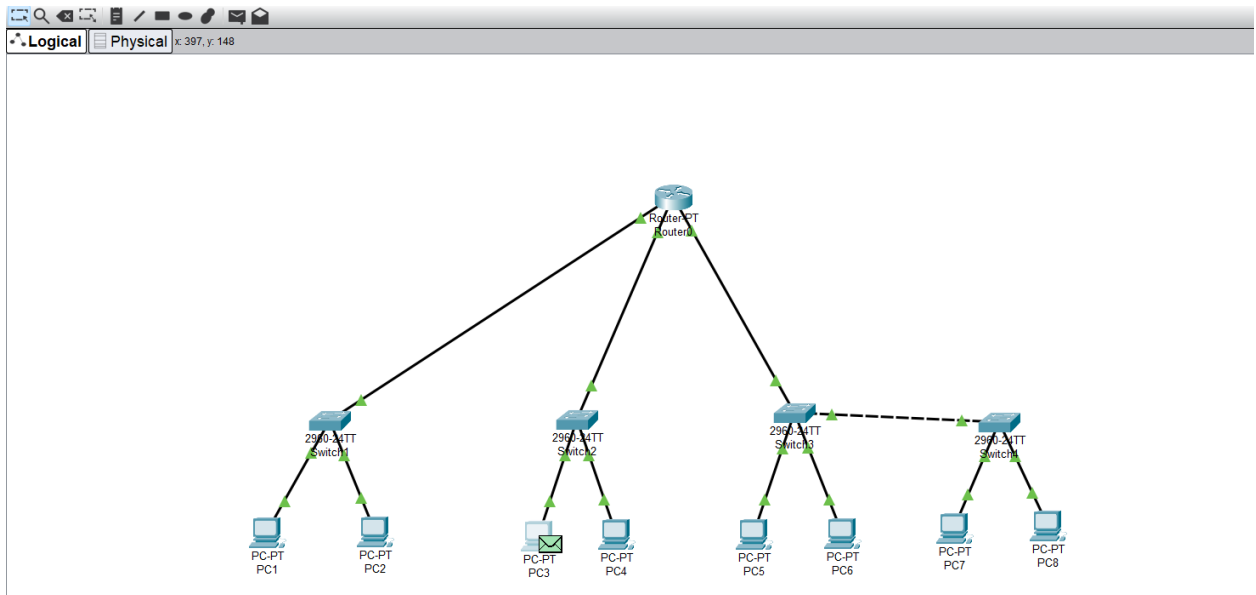
Fotos del command prompt

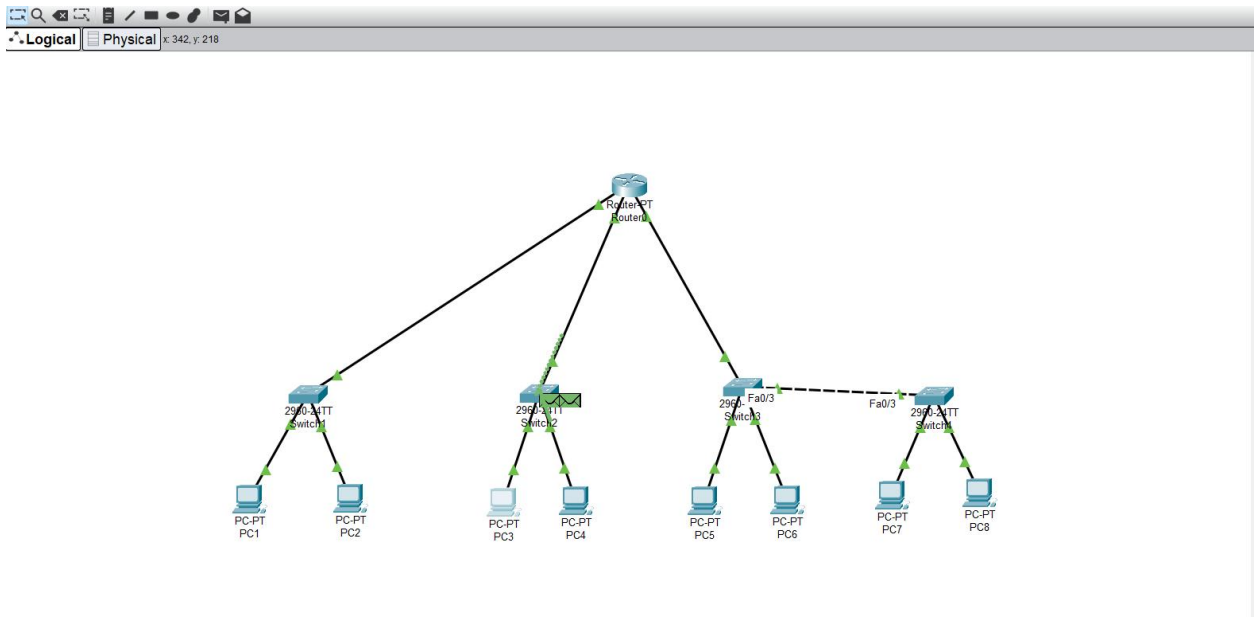
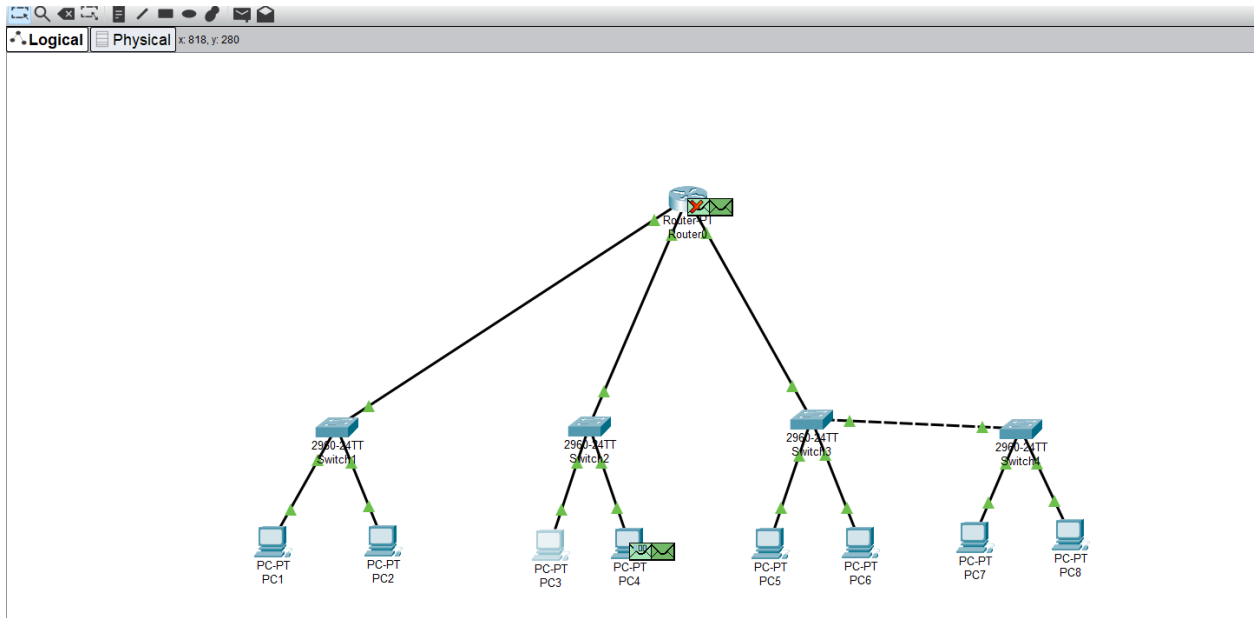


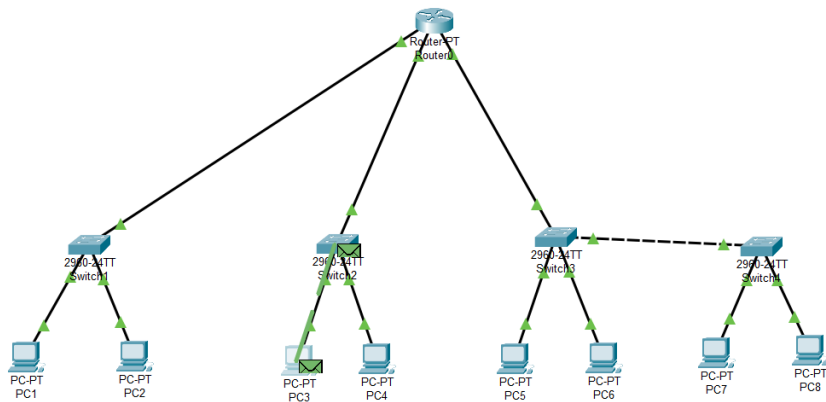
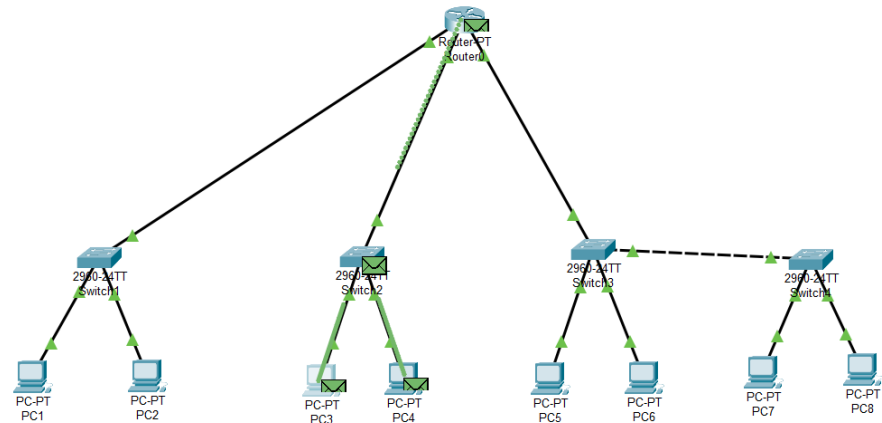
Desde PC 1 hacia las otras subredes

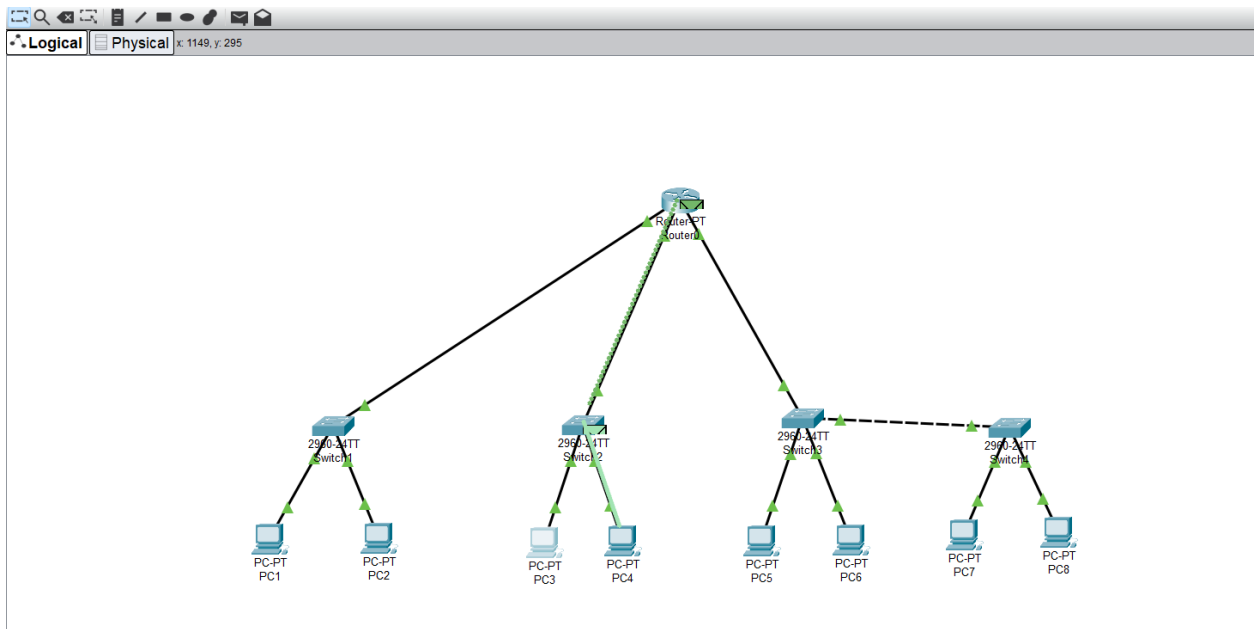
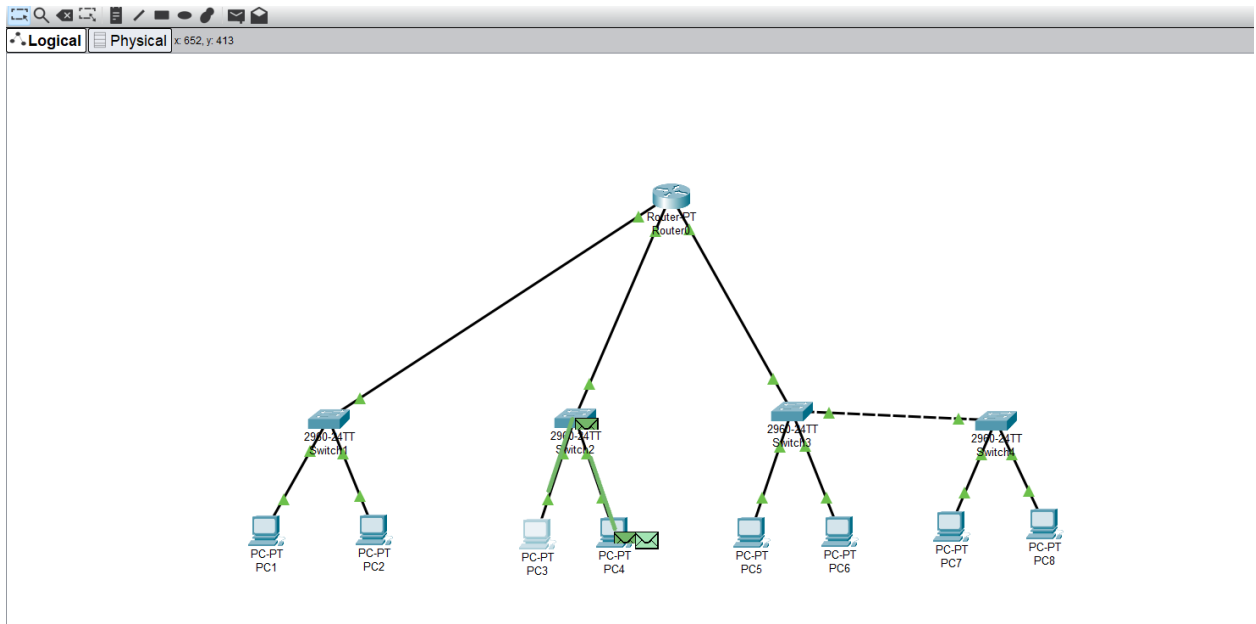


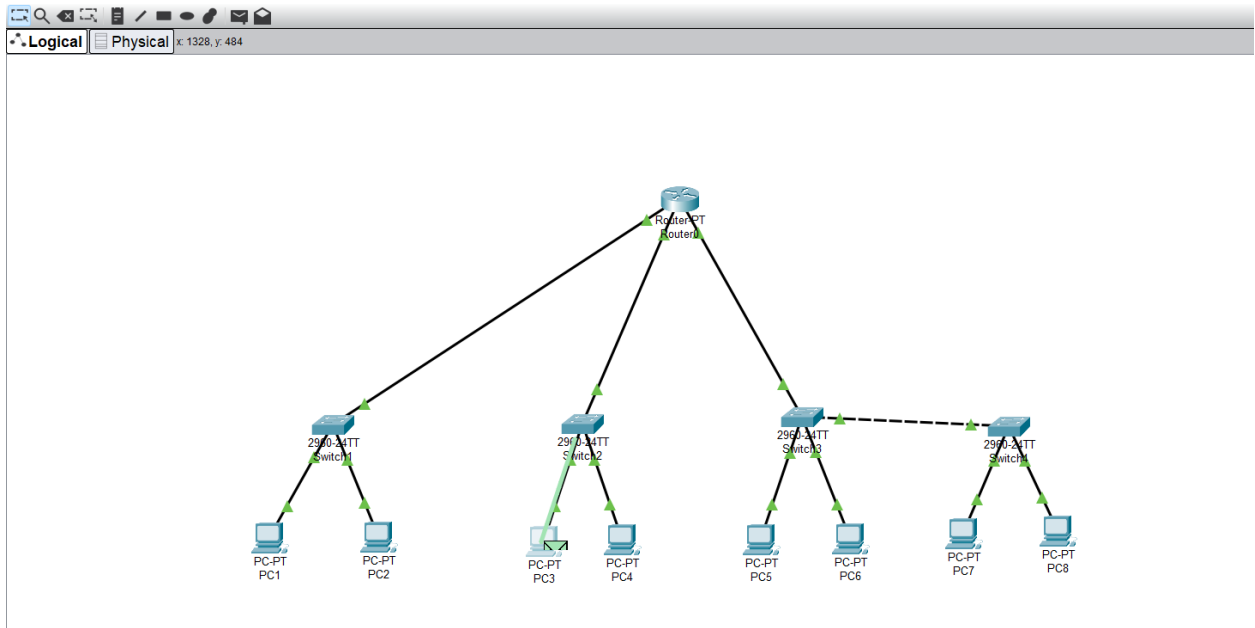
Broadcast 2: subred 192.168.2.255











Fotos del command prompt

Cisco Packet Tracer - C:\Users\bmm68\OneDrive\Desktop\Network\Simulation5.pkt

File Edit Options View Tools Extensions Window Help

Logical Physical x 1618, y 533

PC3

Physical Config Desktop Programming Attributes

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.2.255

Pinging 192.168.2.255 with 32 bytes of data:

Reply from 192.168.2.2: bytes=32 time=5ms TTL=120
Reply from 192.168.2.2: bytes=32 time=5ms TTL=120
Reply from 192.168.2.254: bytes=32 time=5ms TTL=255
Reply from 192.168.2.2: bytes=32 time=5ms TTL=120
Reply from 192.168.2.254: bytes=32 time=5ms TTL=255
Reply from 192.168.2.2: bytes=32 time=5ms TTL=120
Reply from 192.168.2.254: bytes=32 time=5ms TTL=255
Reply from 192.168.2.2: bytes=32 time=5ms TTL=120
Reply from 192.168.2.254: bytes=32 time=5ms TTL=255

Ping statistics for 192.168.2.255:
    Packets: Sent = 8, Received = 7, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 4ms, Maximum = 5ms, Average = 5ms

C:\>
```

Simulation Panel

Vis.	Time(sec)	Last Device
	17.983	--
	17.984	Switch3
	17.984	Switch3
	17.984	Switch3
	17.984	Switch3
	17.985	Switch4
	17.985	Switch4
	17.988	--
	17.989	Switch1
	17.989	Switch1
	17.989	Switch1
Visible	18.011	PC3
	18.012	Switch2

Reset Simulation ☒ Constant Delay Captured to: 23.977 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, IRT, IRT, LACP, LLDP, NTP, NETFLOW, NTP, OSPF, OSPFv6, RADIUS, PPP, PPPoE, PPTP, RADIUS, REP, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

Desde PC 3 hacia las otras subredes

The network diagram shows a central Router connected to three switches: Switch1, Switch2, and Switch3. Switch1 is connected to PC1 and PC2. Switch2 is connected to PC3 and PC4. Switch3 is connected to PC5, PC6, and PC7. The Router is connected to all three switches.

The Command Prompt on PC3 shows the following output:

```
PC3
-----
Command Prompt

C:\>ping 192.168.2.255 with 32 bytes of data:

Reply from 192.168.2.2: bytes=32 time=4ms TTL=128
Reply from 192.168.2.2: bytes=32 time=4ms TTL=128
Reply from 192.168.2.254: bytes=32 time=4ms TTL=255
Reply from 192.168.2.2: bytes=32 time=4ms TTL=128
Reply from 192.168.2.254: bytes=32 time=4ms TTL=255
Reply from 192.168.2.2: bytes=32 time=4ms TTL=128
Reply from 192.168.2.254: bytes=32 time=4ms TTL=255

Ping statistics for 192.168.2.255:
    Packets: Sent = 4, Received = 7, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 4ms, Maximum = 5ms, Average = 5ms

C:\>ping 192.168.1.225

Pinging 192.168.1.225 with 32 bytes of data:

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

Ping statistics for 192.168.1.225:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>ping 192.168.3.255

Pinging 192.168.3.255 with 32 bytes of data:

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

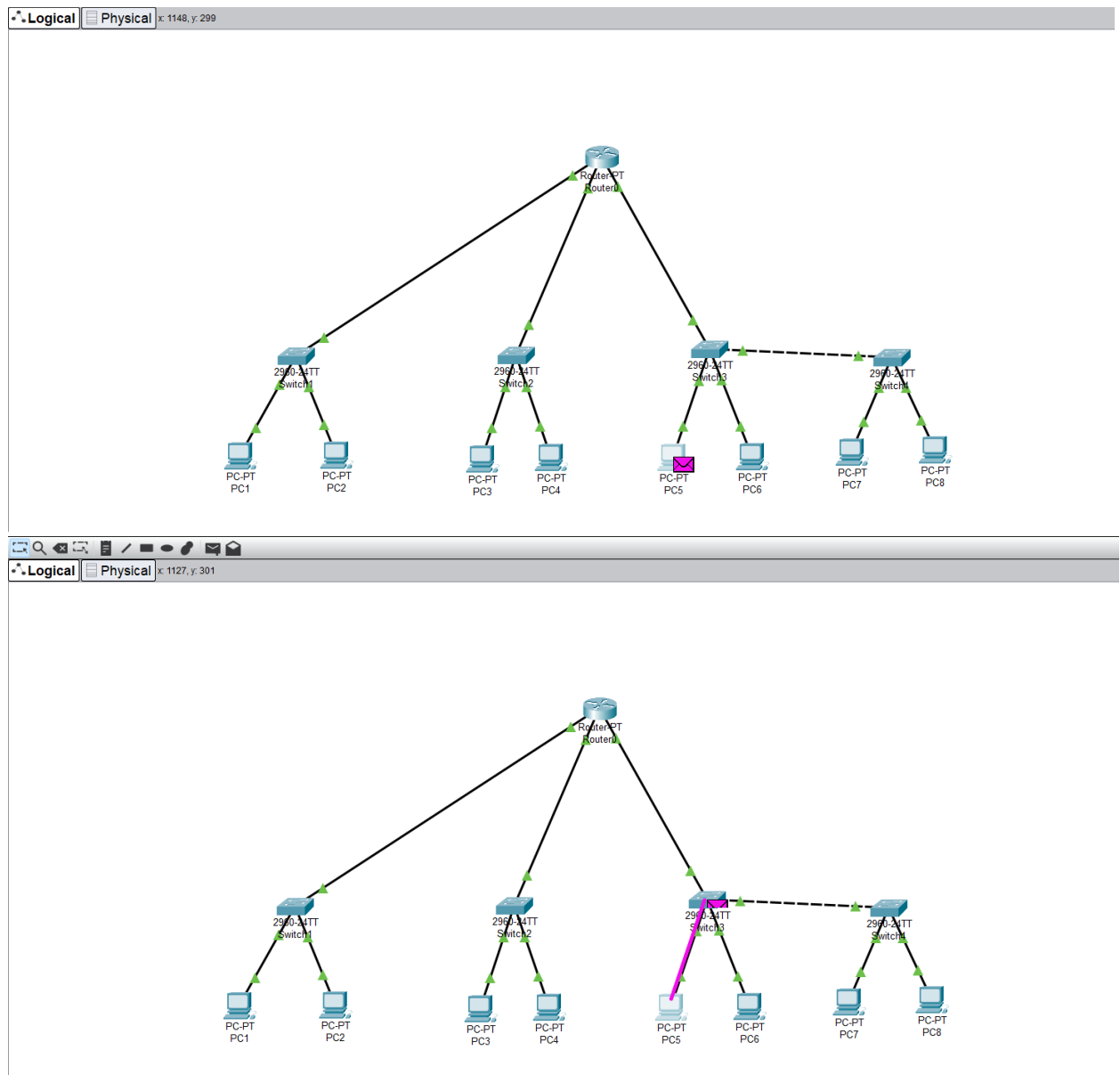
Ping statistics for 192.168.3.255:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

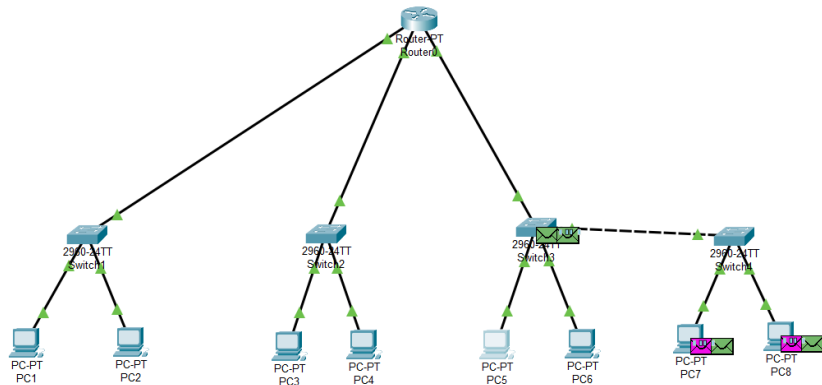
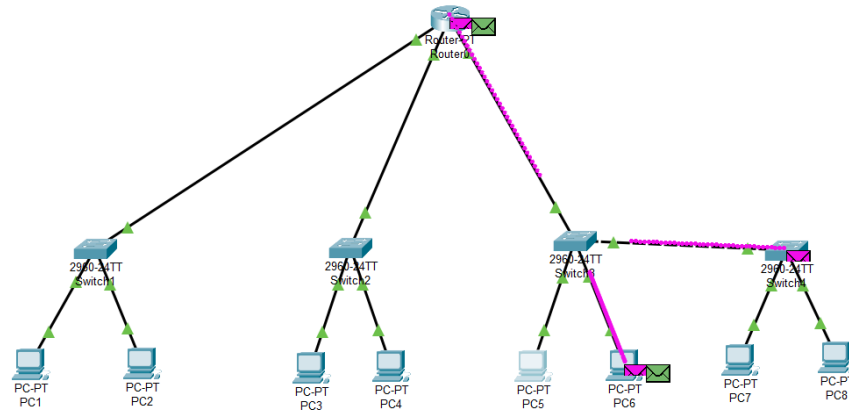
C:\>
```

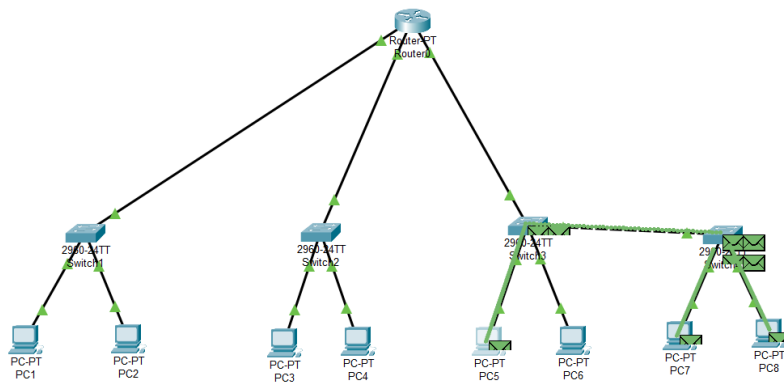
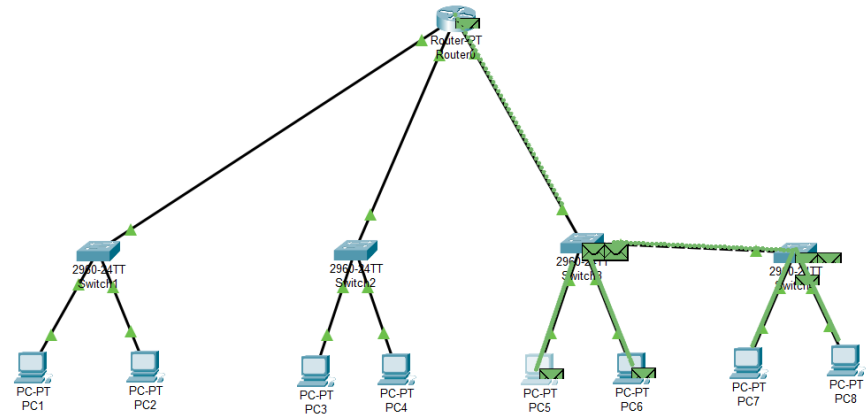
The Event List Panel shows the following events:

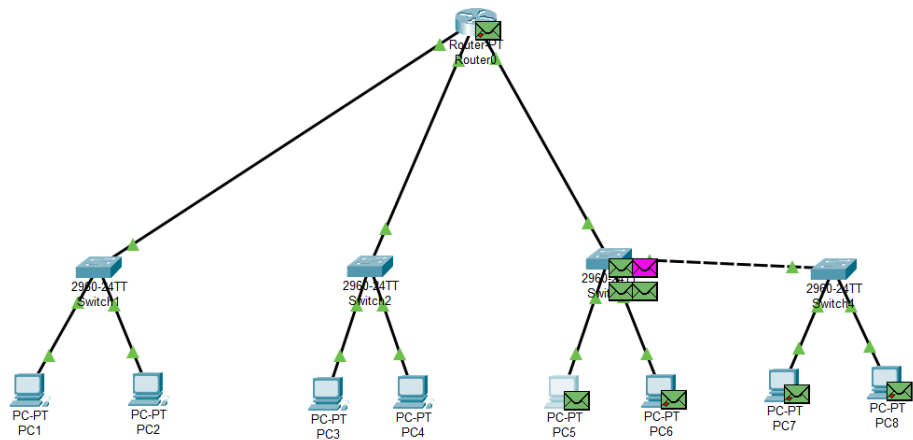
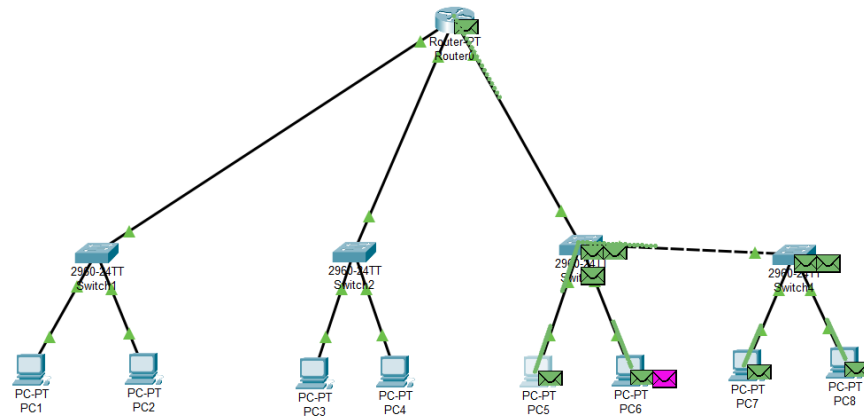
Vis.	Time(sec)	Last Device
	25.620	-
	25.621	Switch1
	25.621	Switch1
	25.621	Switch1
	27.556	-
	27.557	Switch2
	27.557	Switch2
	27.557	Switch2
	27.590	-
Visible	27.591	Switch3
Visible	27.591	Switch3
Visible	27.591	Switch3
Visible	27.591	Switch3

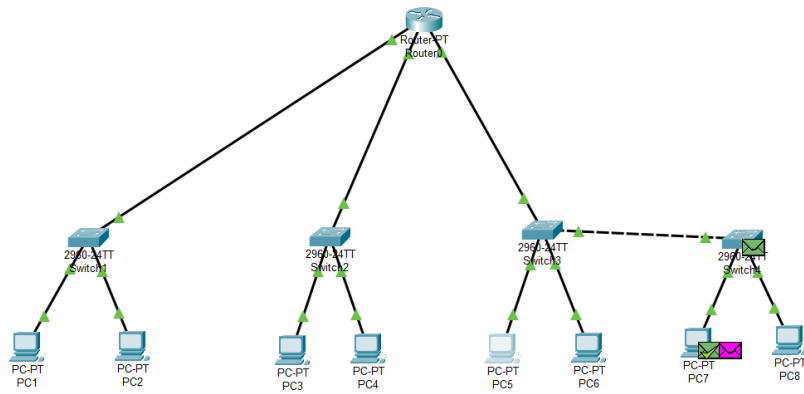
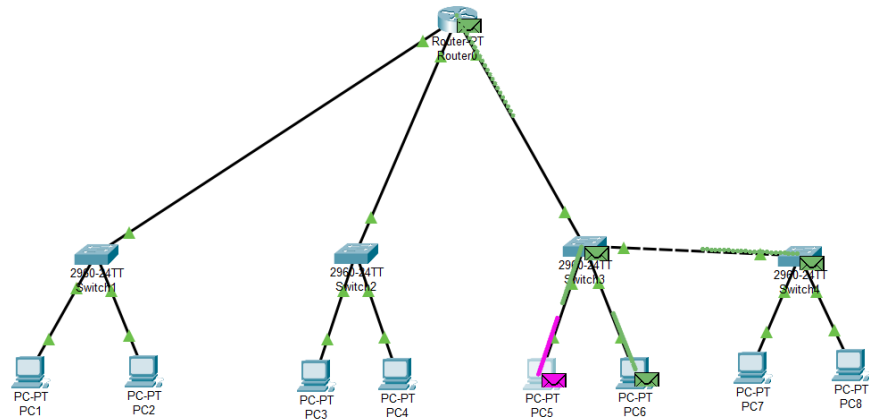
Broadcast 3: subred 192.168.3.255

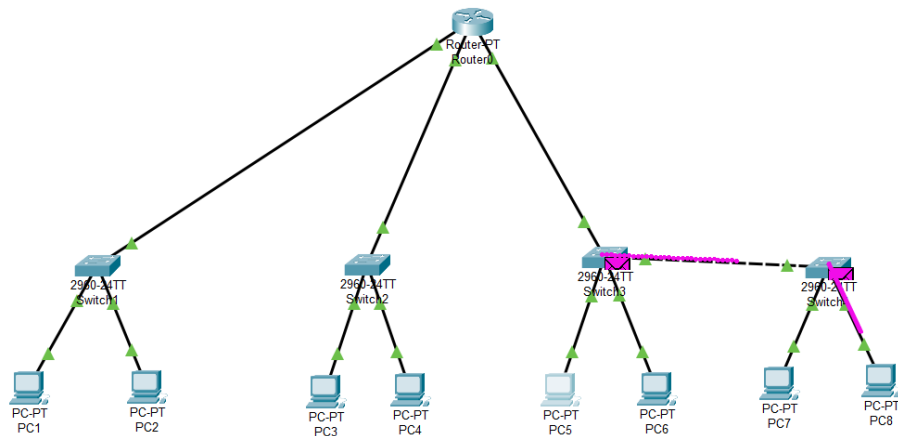
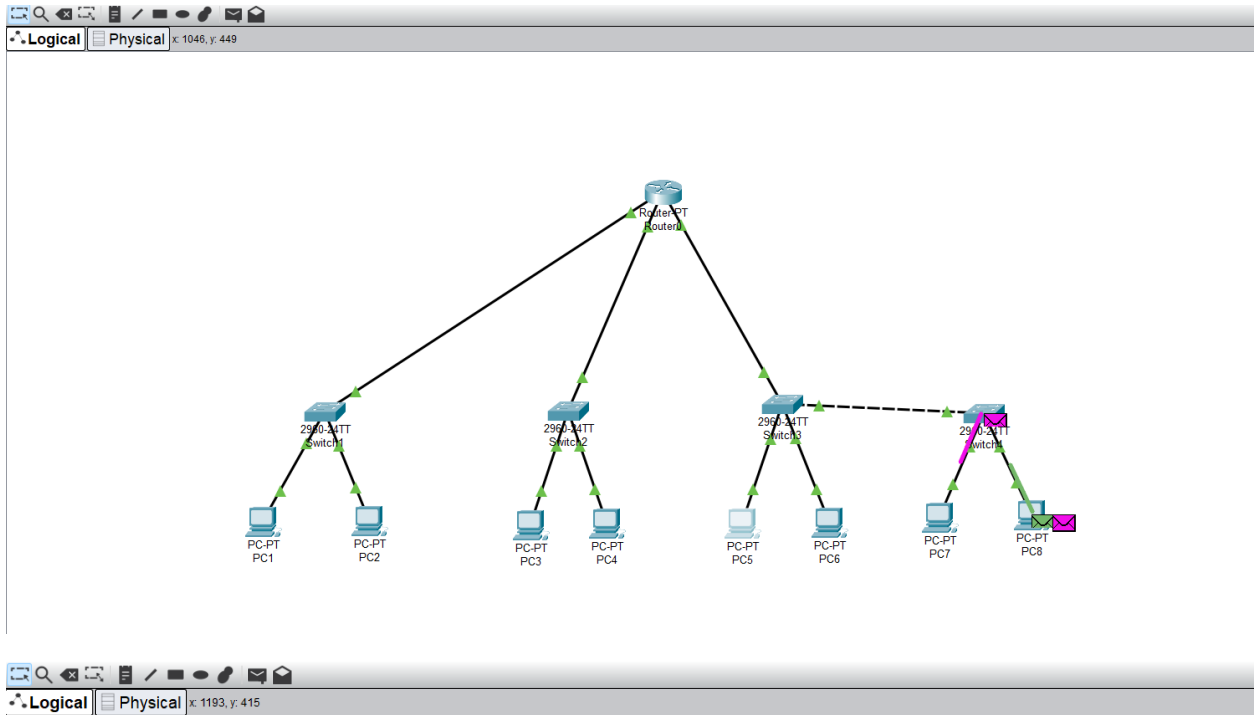












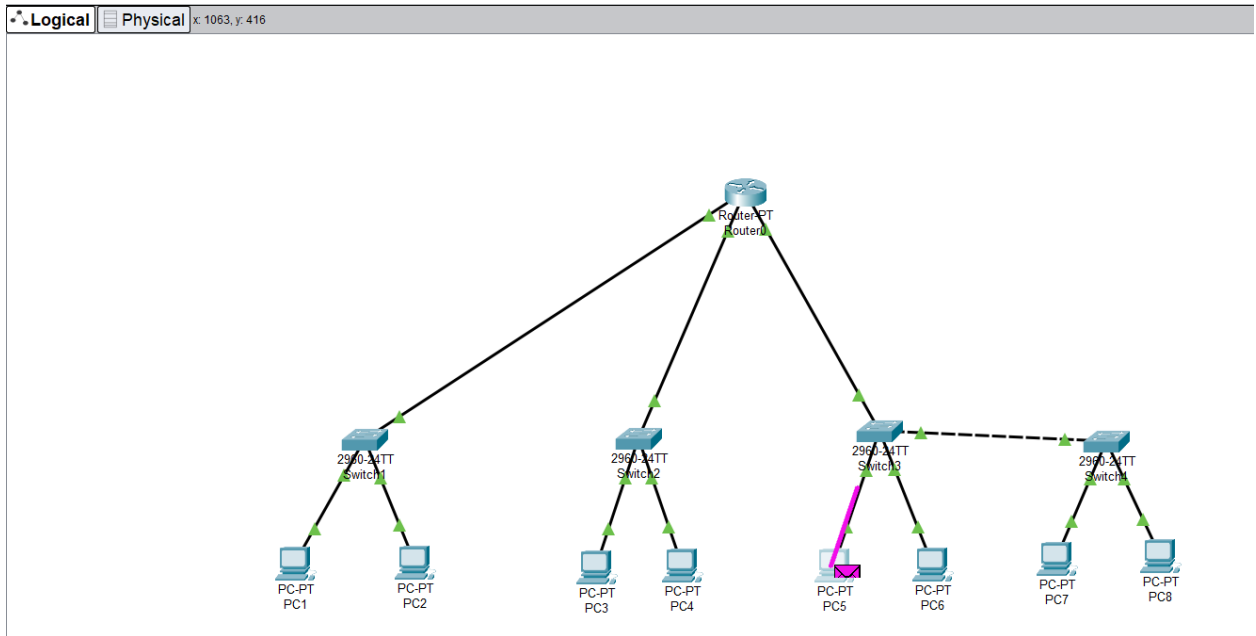
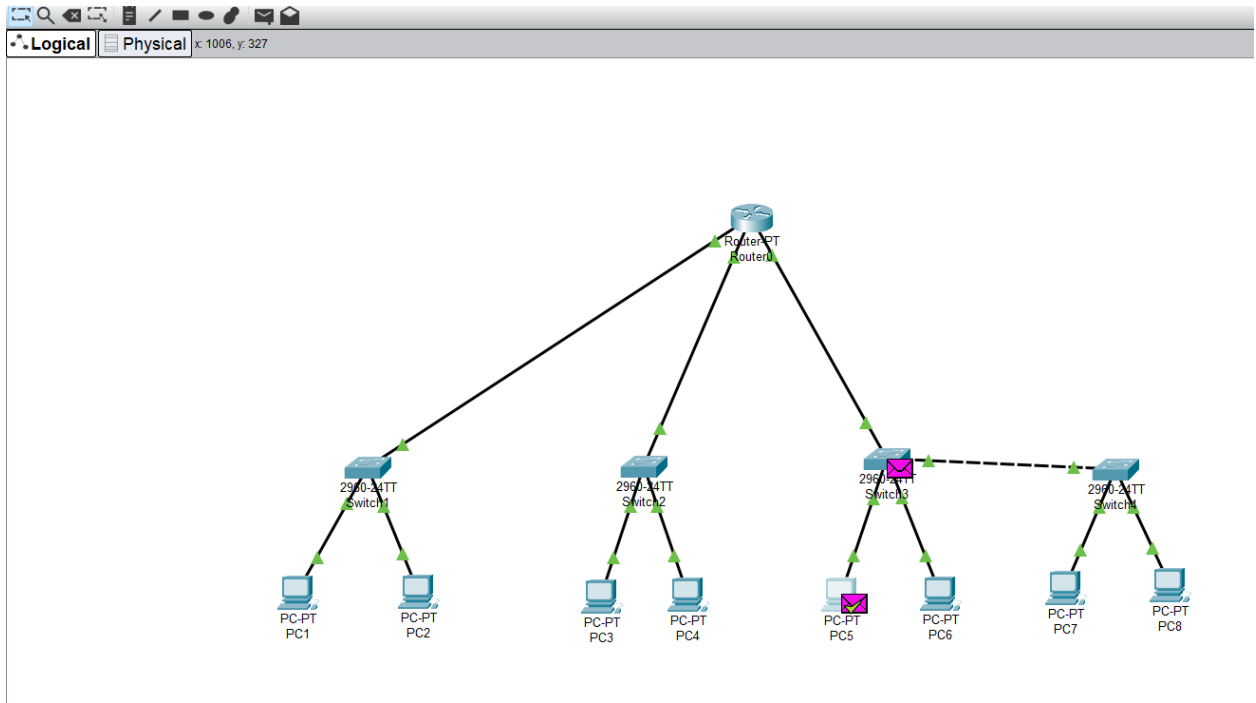
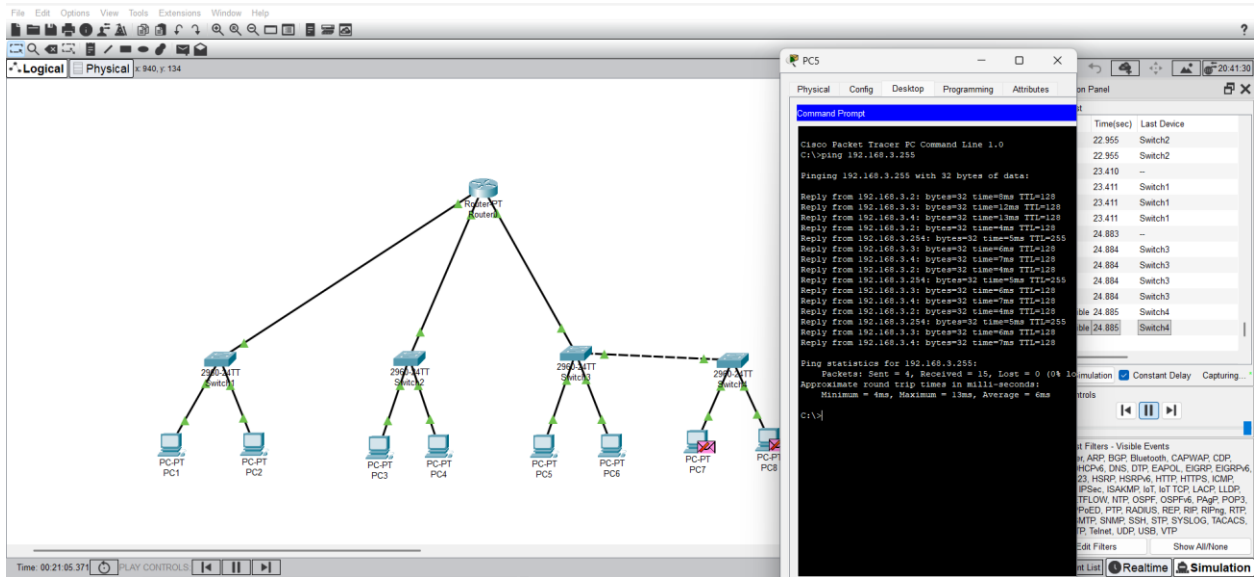


Foto del command prompt



Desde PC 5 hacia las otras subredes

