

# Práctica 5

## Ejercicio 1 (10 puntos)

Diseñar en packet tracer, la siguiente red con los valores indicados para sus tablas de encaminamiento

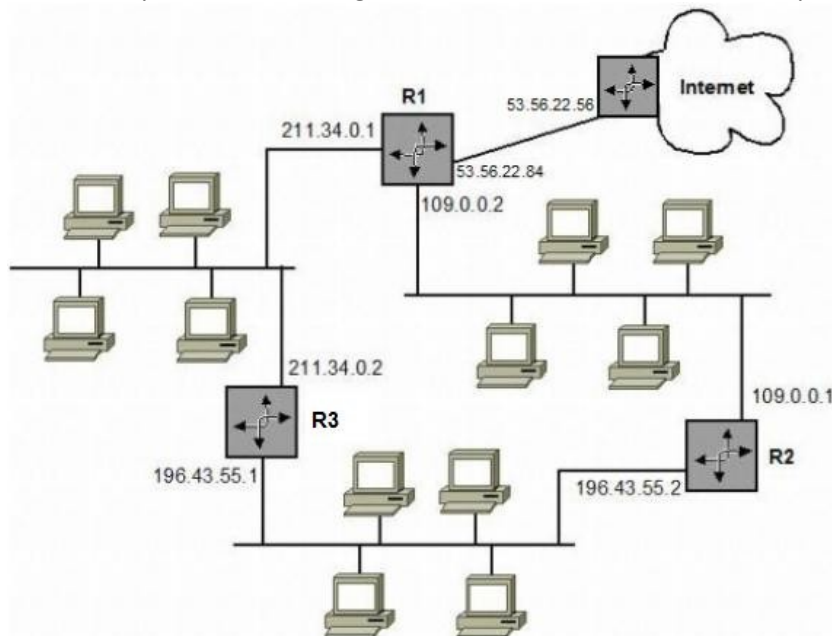


Tabla R1

Rede destino	Máscara	Seguiente	Salto
211.34.0.0	255.255.255.0	211.34.0.1	0
53.0.0.0	255.0.0.0	53.56.22.84	0
109.0.0.0	255.0.0.0	109.0.0.2	0
196.43.55.0	255.255.255.0	211.34.0.2	1
196.43.55.0	255.255.255.0	109.0.0.1	1
default	-	53.56.22.56	-

Tabla R2

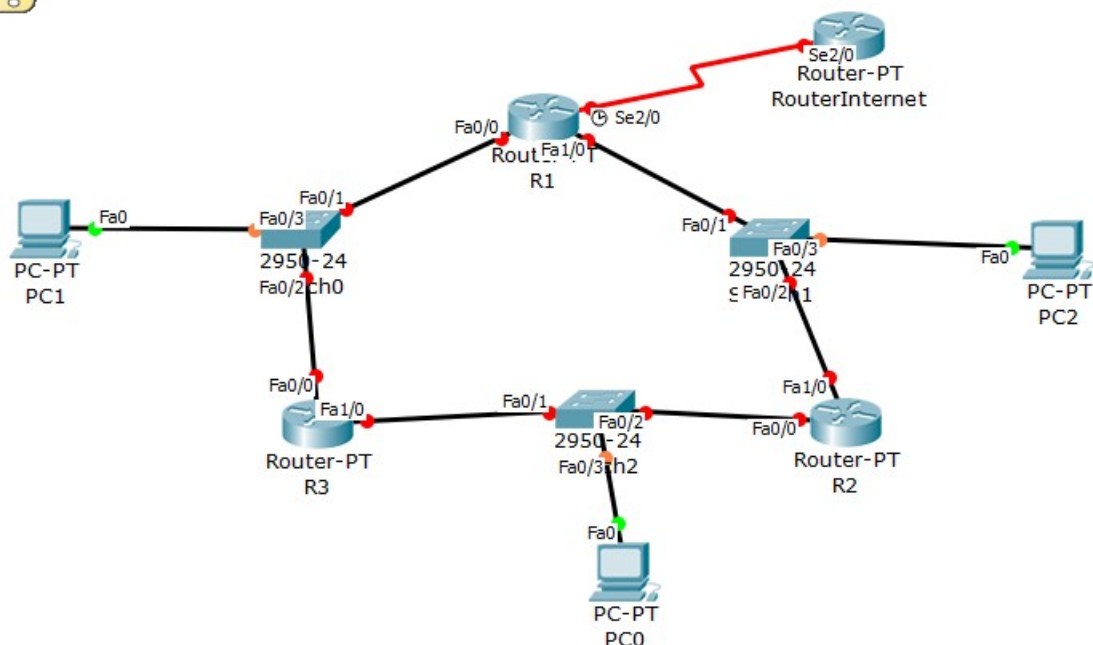
Rede destino	Máscara	Seguiente	Salto
109.0.0.0	255.0.0.0	109.0.0.1	0
196.43.55.0	255.255.255.0	196.43.55.2	0
211.34.0.0	255.255.255.0	196.43.55.1	1
211.34.0.0	255.255.255.0	109.0.0.2	1
default	-	109.0.0.2	-

Tabla R3

Rede destino	Máscara	Seguiente	Salto
211.34.0.0	255.255.255.0	211.34.0.2	0
196.43.55.0	255.255.255.0	196.43.55.1	0
109.0.0.0	255.0.0.0	211.34.0.1	1
109.0.0.0	255.0.0.0	196.43.55.2	1
default	-	211.34.0.1	-

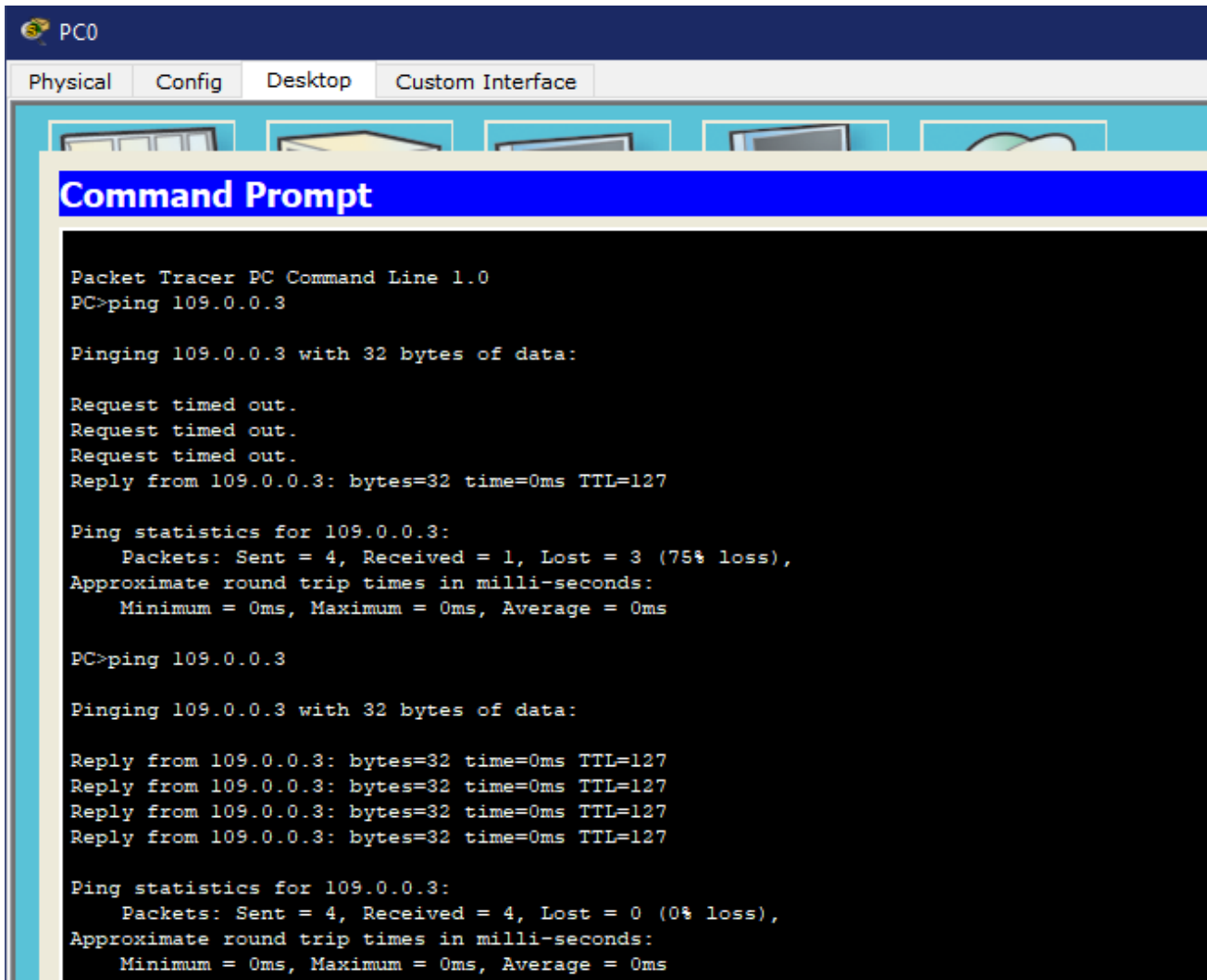
Introducir un único equipo para LAN y simular el intercambio de paquetes entre distintos equipos para comprobar el correcto funcionamiento del enrutamiento.

Realizar la siguiente asignación de conexiones y nombrado de equipos en packet tracer



Mostrar mediante capturas:

- Configuración de todos los parámetros necesarios en cada uno de los routers y cada uno de los hosts
- Simulación empleando los comandos ping y tracer entre algunos equipos (de PC0 a PC2, de PC0 a PC1 y de PC1 a PC2)
- Visualización del envío de paquetes empleando el modo simulación (de PC1 a PC0)



PC0

Physical Config Desktop Custom Interface

### Command Prompt

```
Packet Tracer PC Command Line 1.0
PC>ping 109.0.0.3

Pinging 109.0.0.3 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Reply from 109.0.0.3: bytes=32 time=0ms TTL=127

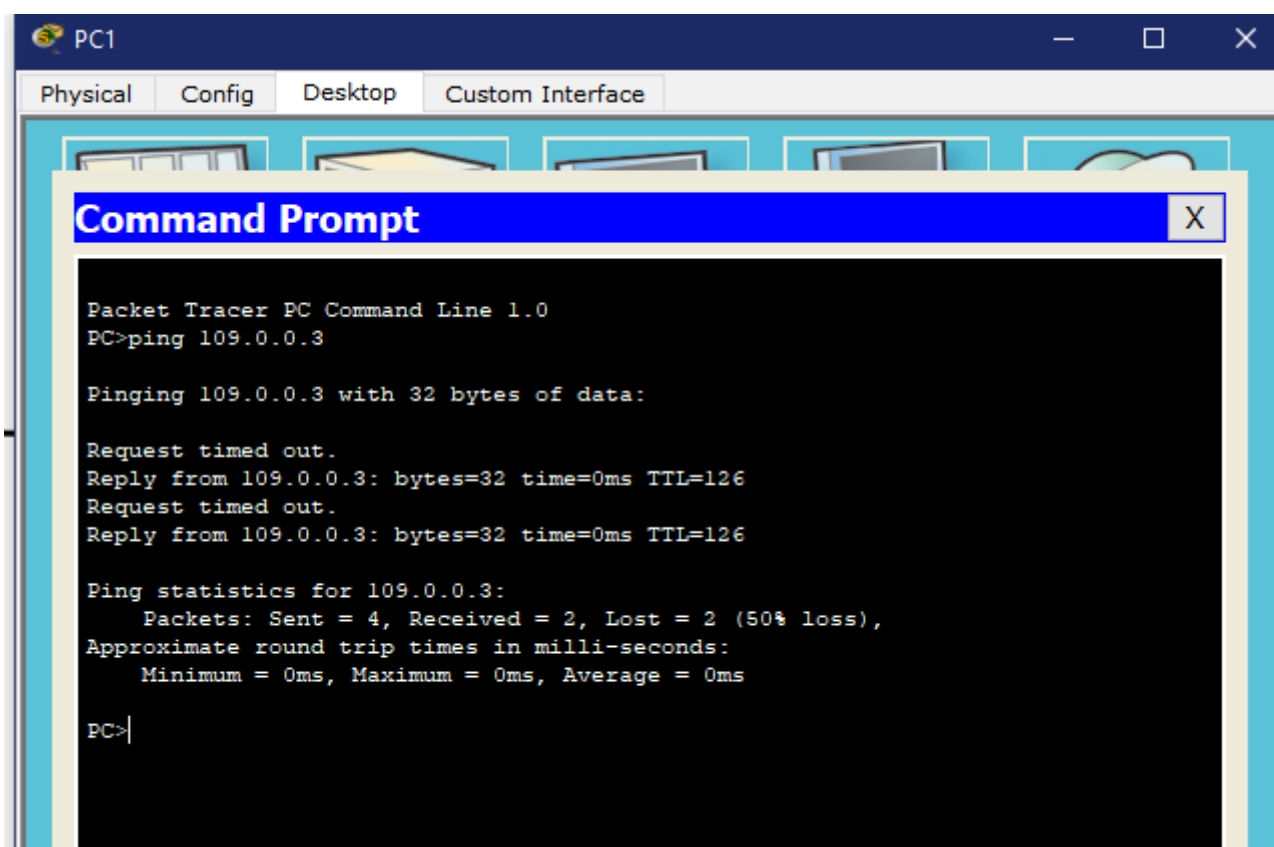
Ping statistics for 109.0.0.3:
    Packets: Sent = 4, Received = 1, Lost = 3 (75% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

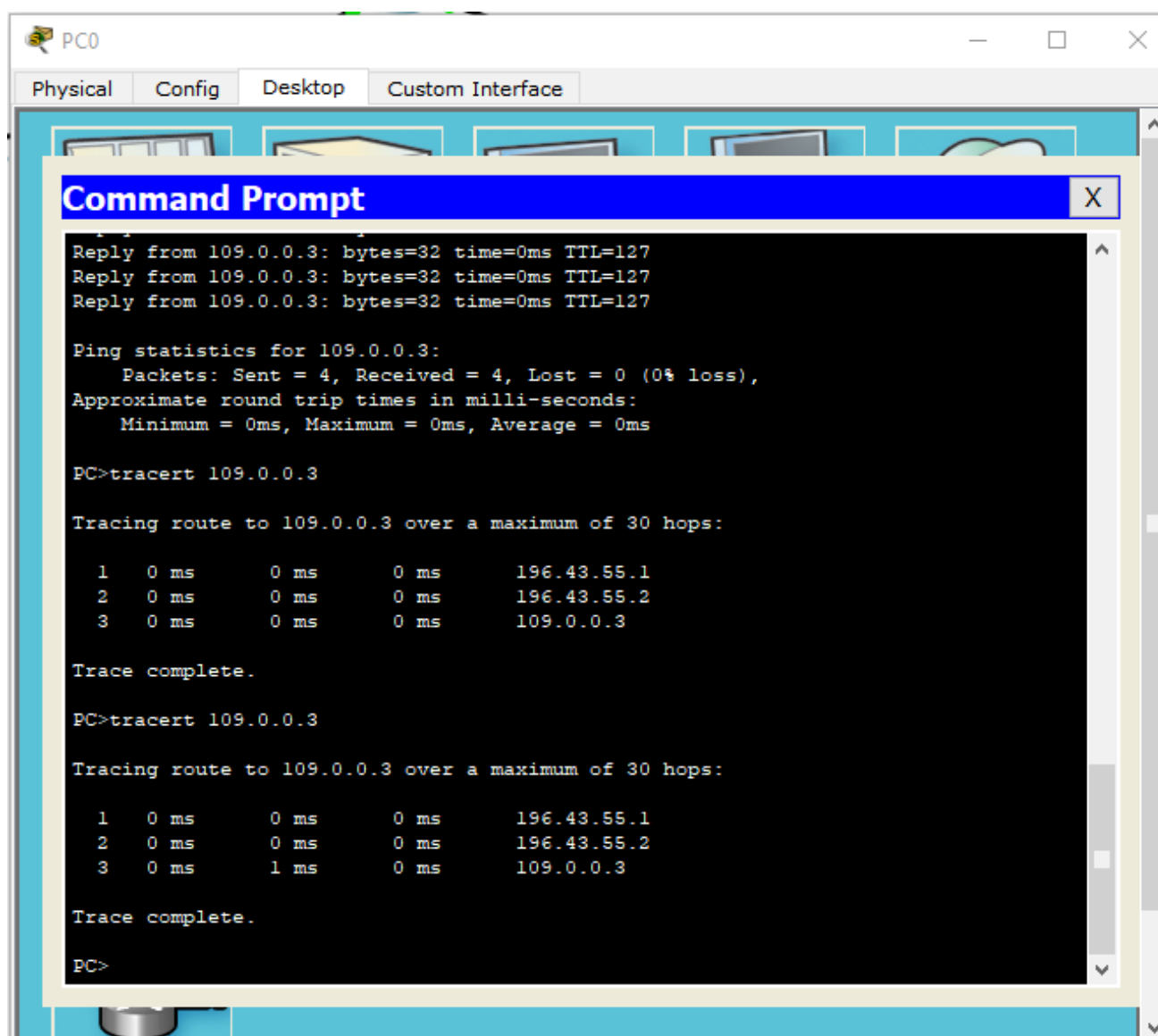
PC>ping 109.0.0.3

Pinging 109.0.0.3 with 32 bytes of data:

Reply from 109.0.0.3: bytes=32 time=0ms TTL=127
Reply from 109.0.0.3: bytes=32 time=0ms TTL=127
Reply from 109.0.0.3: bytes=32 time=0ms TTL=127
Reply from 109.0.0.3: bytes=32 time=0ms TTL=127

Ping statistics for 109.0.0.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```





The screenshot shows a virtual PC0 desktop with a taskbar at the top containing icons for Physical, Config, Desktop, and Custom Interface. A Command Prompt window is open, displaying the results of a ping and a traceroute to the IP address 109.0.0.3.

```
PC0
Physical Config Desktop Custom Interface

Command Prompt

Reply from 109.0.0.3: bytes=32 time=0ms TTL=127
Reply from 109.0.0.3: bytes=32 time=0ms TTL=127
Reply from 109.0.0.3: bytes=32 time=0ms TTL=127

Ping statistics for 109.0.0.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

PC>tracert 109.0.0.3

Tracing route to 109.0.0.3 over a maximum of 30 hops:

  1  0 ms    0 ms    0 ms    196.43.55.1
  2  0 ms    0 ms    0 ms    196.43.55.2
  3  0 ms    0 ms    0 ms    109.0.0.3

Trace complete.

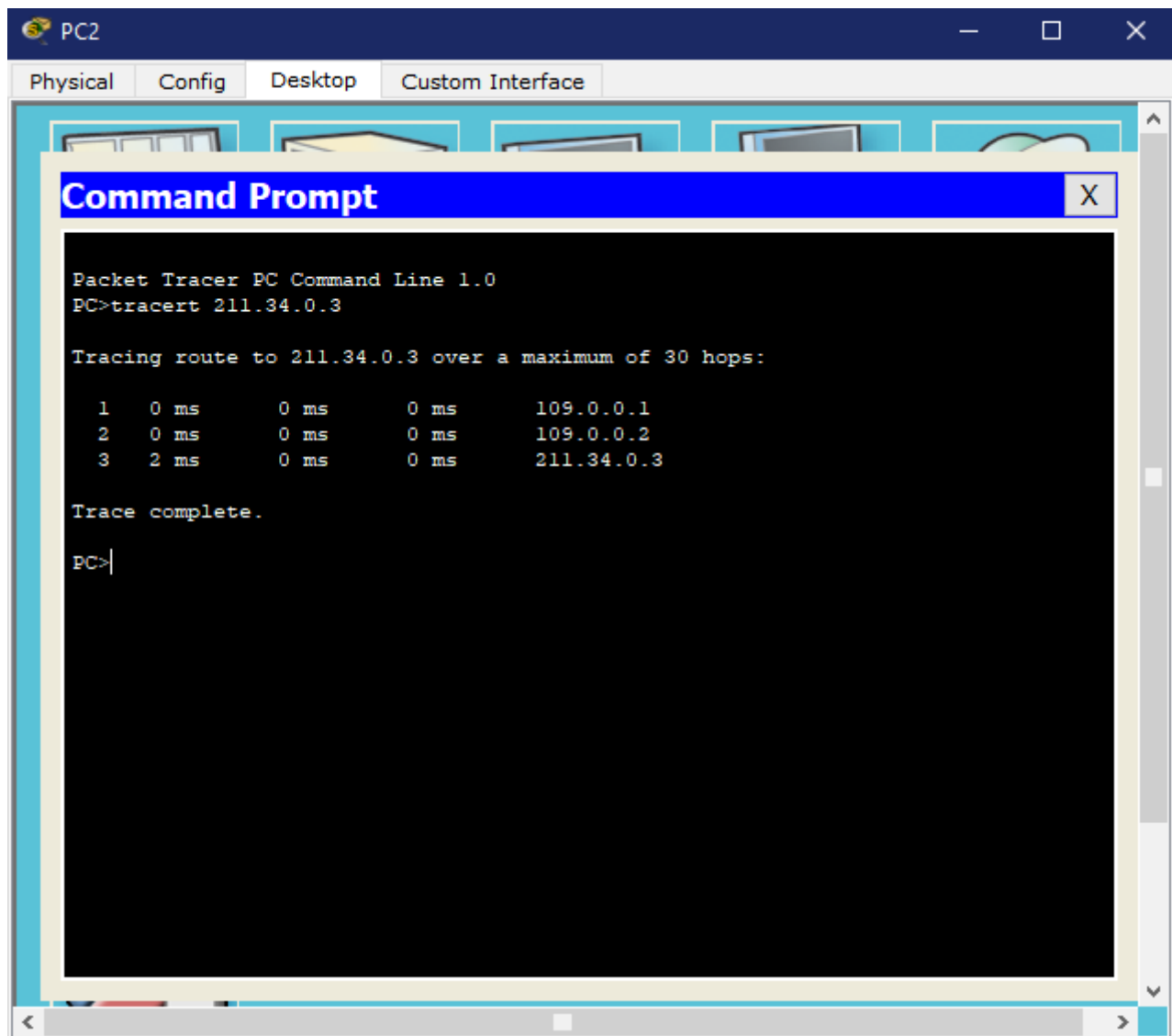
PC>tracert 109.0.0.3

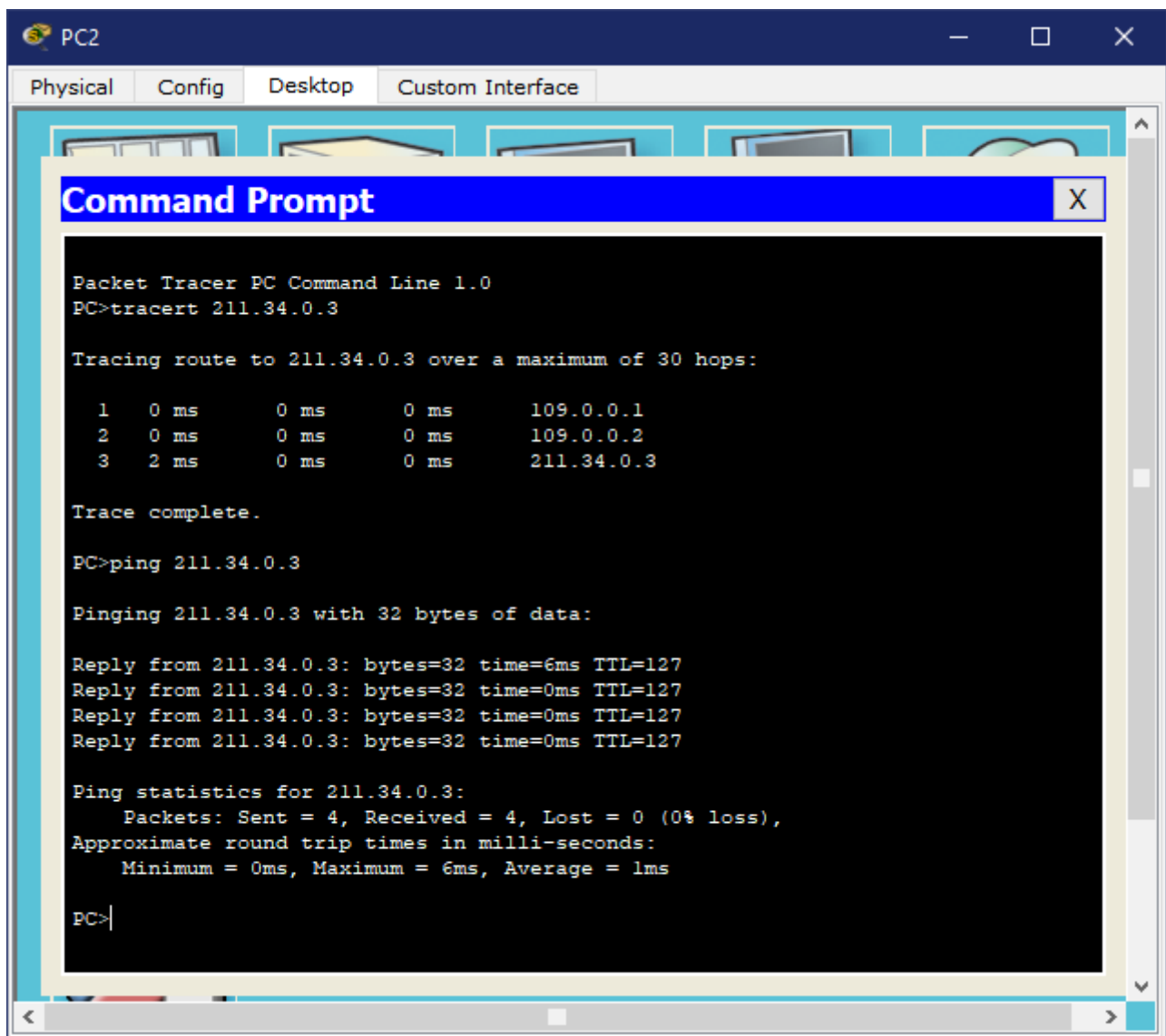
Tracing route to 109.0.0.3 over a maximum of 30 hops:

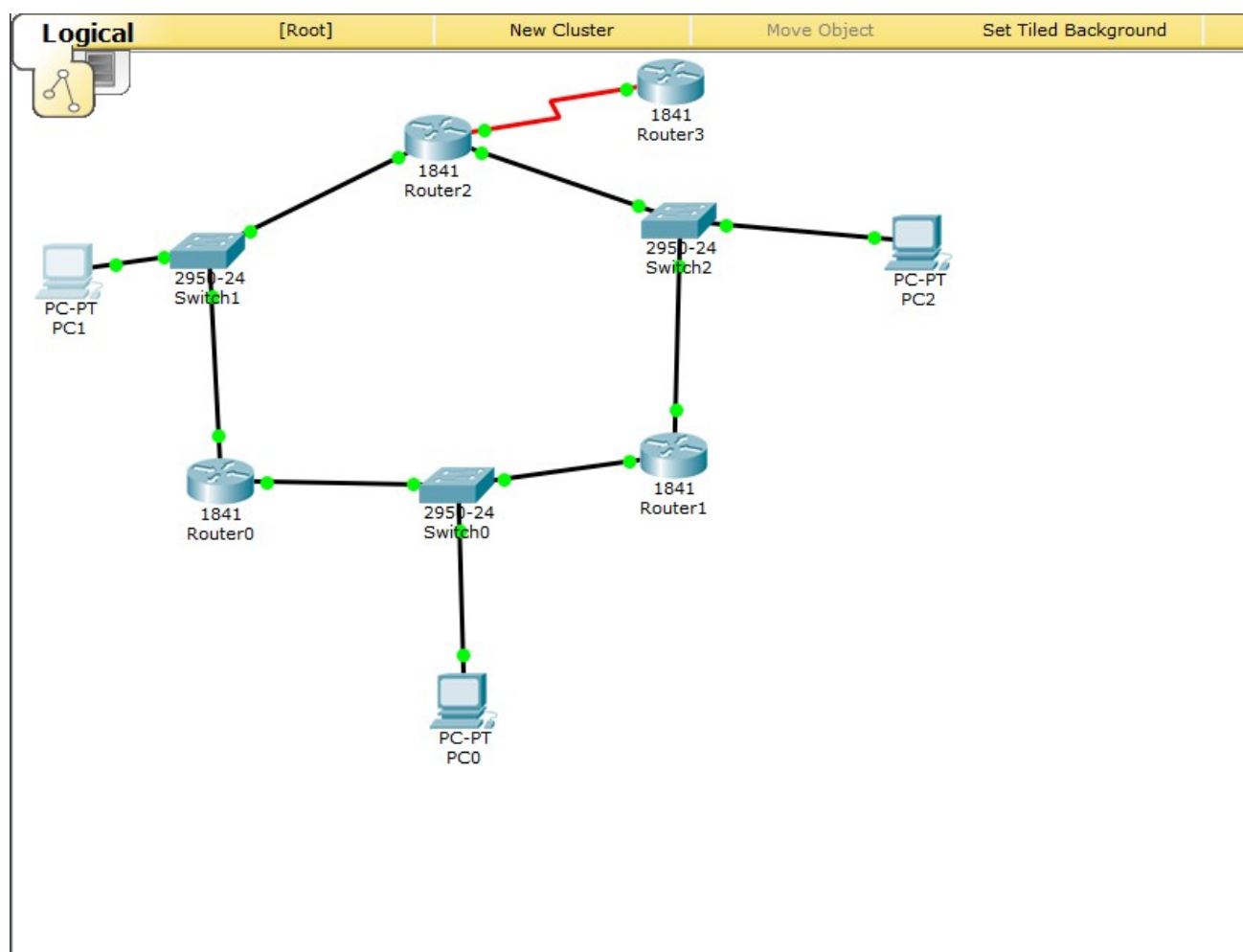
  1  0 ms    0 ms    0 ms    196.43.55.1
  2  0 ms    0 ms    0 ms    196.43.55.2
  3  0 ms    1 ms    0 ms    109.0.0.3

Trace complete.

PC>
```









Router0

PhysicalConfigCLI

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/0

FastEthernet0/1

Static Routes

Network

Mask

Next Hop

Add

Network Address

211.34.0.0/24 via 211.34.0.2

196.43.55.0/24 via 196.43.55.1

109.0.0.0/8 via 211.43.0.1

109.0.0.0/8 via 196.43.55.2

Remove

Router1

PhysicalConfigCLI

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/0

FastEthernet0/1

Static Routes

Network

Mask

Next Hop

Add

Network Address

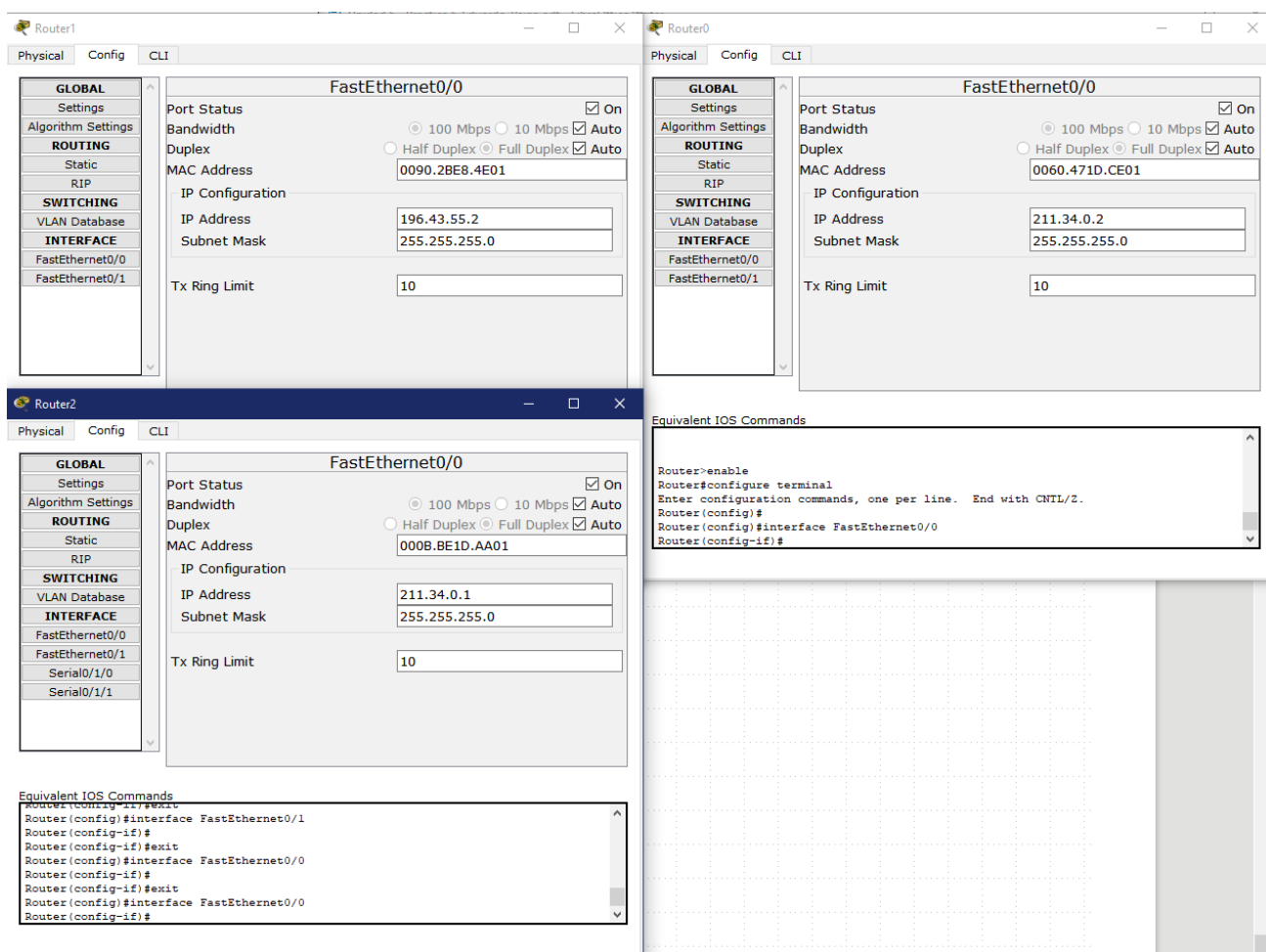
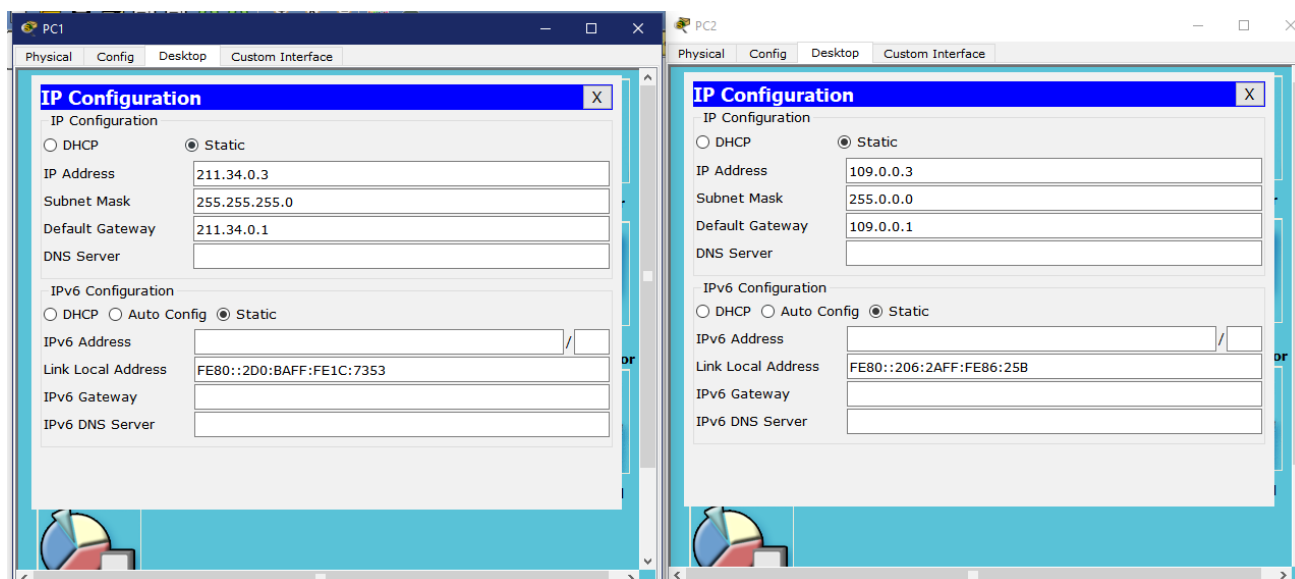
109.0.0.0/8 via 109.0.0.1

196.43.55.0/24 via 196.43.55.2

211.34.0.0/24 via 196.43.55.1

211.34.0.0/24 via 109.0.0.2

Remove



**Router1 Configuration:**

- Port Status: ☒ On
- Bandwidth: ☒ 100 Mbps ☐ 10 Mbps ☒ Auto
- Duplex: ☐ Half Duplex ☒ Full Duplex ☒ Auto
- MAC Address: 0090.2BE8.4E02
- IP Configuration:
  - IP Address: 109.0.0.1
  - Subnet Mask: 255.0.0.0
- Tx Ring Limit: 10

**Router2 Configuration:**

- Port Status: ☒ On
- Bandwidth: ☒ 100 Mbps ☐ 10 Mbps ☒ Auto
- Duplex: ☐ Half Duplex ☒ Full Duplex ☒ Auto
- MAC Address: 000B.BE1D.AA02
- IP Configuration:
  - IP Address: 109.0.0.2
  - Subnet Mask: 255.0.0.0
- Tx Ring Limit: 10

**Router0 Configuration:**

- Port Status: ☒ On
- Bandwidth: ☒ 100 Mbps ☐ 10 Mbps ☒ Auto
- Duplex: ☐ Half Duplex ☒ Full Duplex ☒ Auto
- MAC Address: 0060.471D.CE02
- IP Configuration:
  - IP Address: 196.43.55.1
  - Subnet Mask: 255.255.255.0
- Tx Ring Limit: 10

**Equivalent IOS Commands:**

```
Router1#configure terminal
Router1(config)#interface FastEthernet0/1
Router1(config-if)#
Router1(config-if)#exit
Router1(config)#interface Serial0/1/0
Router1(config-if)#
Router1(config-if)#exit
Router1(config)#interface FastEthernet0/1
```

	Máscara	Seguiente	Salto
0.0	255.0.0.0	109.0.0.1	0
25.0	255.255.255.0	196.43.55.2	0
0.0	255.255.255.0	196.43.55.1	1
0.0	255.255.255.0	109.0.0.2	1
all	-	109.0.0.2	-

	Máscara	Seguiente	Salto
0.0	255.255.255.0	211.34.0.2	0
25.0	255.255.255.0	196.43.55.1	0
0.0	255.0.0.0	211.43.0.1	1
0.0	255.0.0.0	196.43.55.2	1
all	-	211.34.0.1	-

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Router3

Physical Config CLI

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/0

FastEthernet0/1

Serial0/1/0

Serial0/1/1

Serial0/1/0

Port Status ☒ On

Duplex ☐ Full Duplex

Clock Rate 1200

IP Configuration

IP Address 53.56.22.56

Subnet Mask 255.0.0.0

Tx Ring Limit 10

Equivalent IOS Commands

Router>enable  
Router#configure terminal  
Enter configuration commands, one per line. End with CNTL/Z.  
Router(config)#interface Serial0/1/0  
Router(config-if)#

Router2

Physical Config CLI

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/0

FastEthernet0/1

Serial0/1/0

Serial0/1/1

Serial0/1/0

Port Status ☒ On

Duplex ☐ Full Duplex

Clock Rate Not Set

IP Configuration

IP Address 53.56.22.84

Subnet Mask 255.0.0.0

Tx Ring Limit 10

Equivalent IOS Commands

Router(config)#interface Serial0/1/0  
Router(config-if)#  
Router(config-if)#exit  
Router(config)#interface FastEthernet0/1  
Router(config-if)#  
Router(config-if)#exit  
Router(config)#interface Serial0/1/0  
Router(config-if)#