# ACTIVIDAD 2.7.1. SINGLE ÁREA OSPFV2 CONFIGURATION

Memoria Técnica

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7 A IELC

# CONTENIDO

# 1. ANTECEDENTES

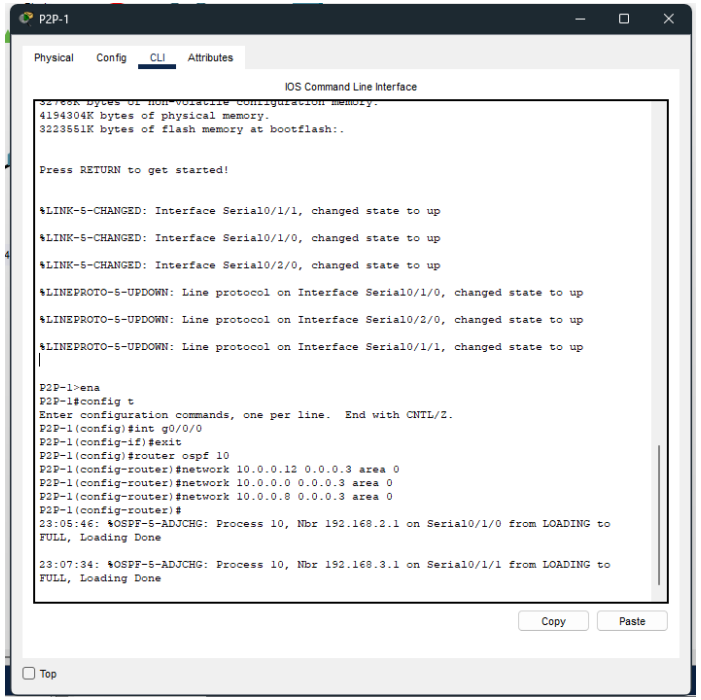
- **1.1. Objetivos**
- Implemente el OSPFv2 de área única en redes de multiacceso de punto a punto y de difusión.

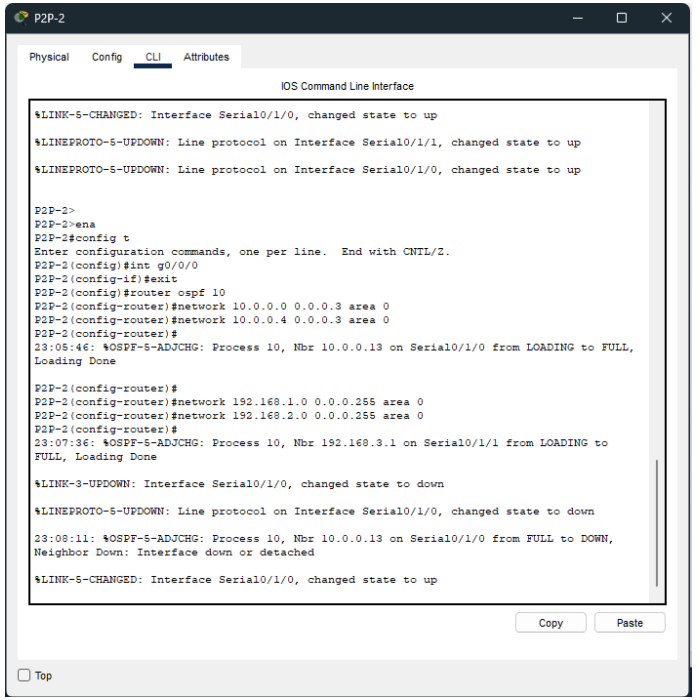
**1.2. Alcance**

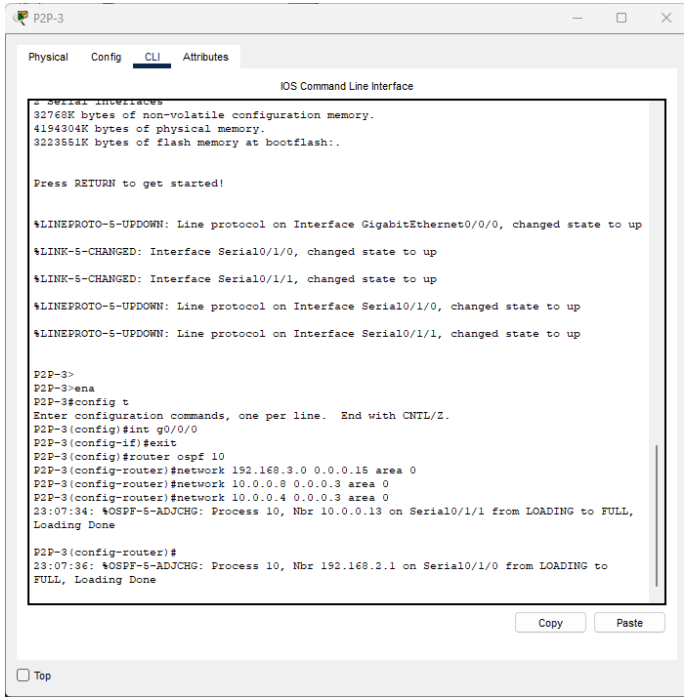
- Está ayudando a un ingeniero de red a probar una configuración de OSPF mediante la creación de la red en el laboratorio donde trabaja. Ha interconectado los dispositivos y configurado las interfaces y tiene conectividad dentro de las LAN locales. Su trabajo consiste en completar la configuración OSPF de acuerdo con los requisitos dejados por el ingeniero.
- Utilice la información proporcionada y la lista de requisitos para configurar la red de prueba. Cuando la tarea se haya completado correctamente, todos los hosts deberían poder hacer ping al servidor de Internet.

# 2. DESCRIPCIÓN TÉCNICA DE LA SOLUCIÓN

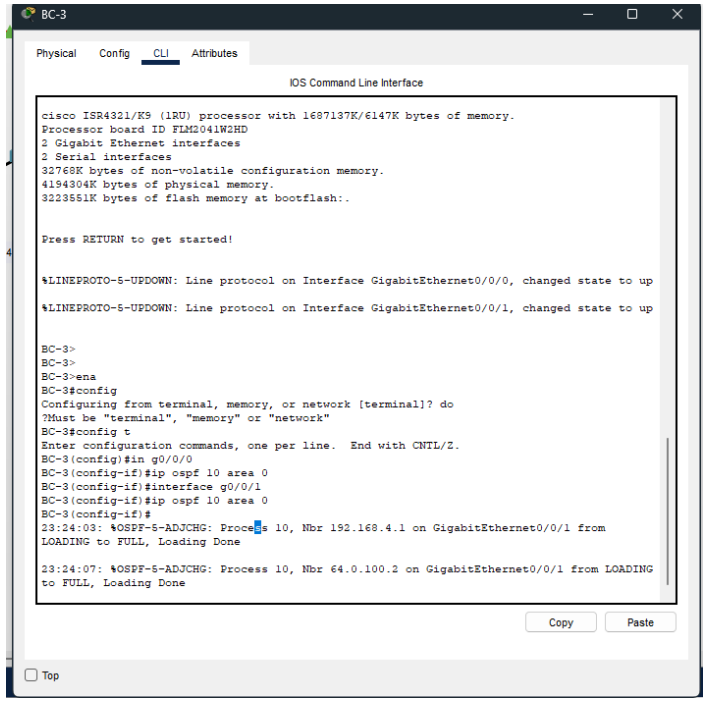
**Parte 1: Propague una ruta predeterminada**

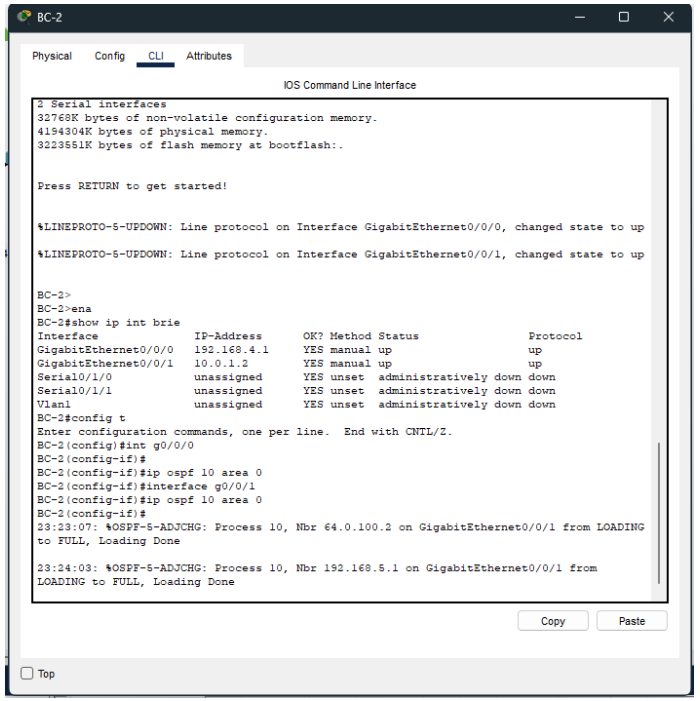


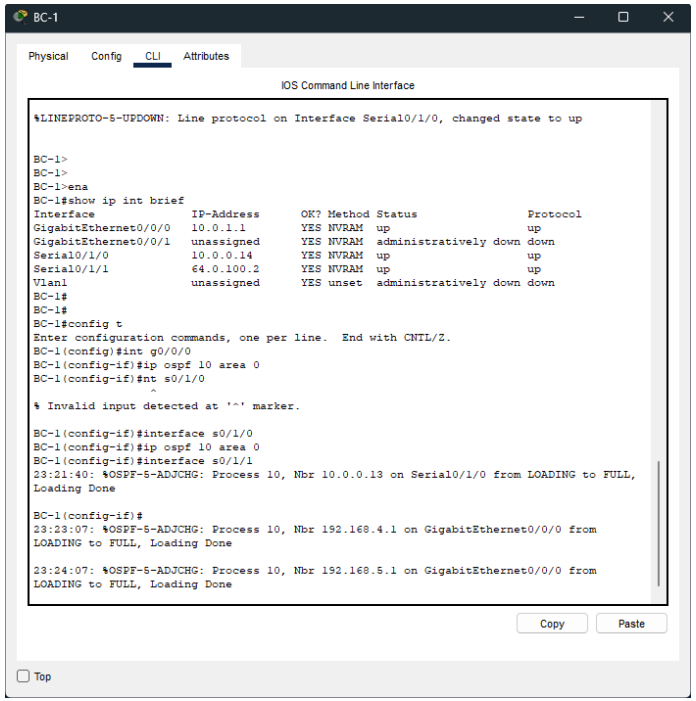




# ACTIVAR OSPF UTILIZANDO INSTRUCCIONES DE RED Y MÁSCARAS INVERSAS EN LOS ROUTERS DE LA RED DE LA SEDE.




# ACTIVAR OSPF CONFIGURANDO LAS INTERFACES DE LOS DISPOSITIVOS DE RED EN LA RED DEL SERVICIO DE DATOS, CUANDO SEA NECESARIO.

## CONFIGURE LOS ID DE ROUTER EN LOS ROUTERS DE RED MULTIACCESO DE LA SIGUIENTE MANERA:

- O BC-1:6.6.6.6
- O BC-2:5.5.5.5
- O BC-3:4.4.4.4

```
BC-1(config-if)#exit
BC-1(config)#router ospf 10
BC-1(config-router)#router-id 6.6.6.6
BC-1(config-router)#
```

```
BC-2(config-if)#exit
BC-2(config)#router ospf 10
BC-2(config-router)#router-id 5.5.5.5
BC-2(config-router)#
23:19:47: %OSPF-5-ADJCHG: Process 10, Nbr 6.6.6.6 on GigabitEthernet0/0/1 from LOADING to
FULL, Loading Done
```

```
BC-3(config)#
BC-3(config)#router ospf 10
BC-3(config-router)#router-id 4.4.4.4
BC-3(config-router)#
23:20:31: %OSPF-5-ADJCHG: Process 10, Nbr 5.5.5.5 on GigabitEthernet0/0/1 from LOADING to
FULL, Loading Done
```

**CONFIGURE OSPF PARA QUE LAS ACTUALIZACIONES DE ENRUTAMIENTO NO SE ENVÍEN A LAS REDES DONDE NO SEAN NECESARIAS.**

```
P2P-2(config)#router ospf 10
P2P-2(config-router)#passive-interface g0/0/0
P2P-2(config-router)#passive-interface g0/0/1
P2P-2(config-router)#
```

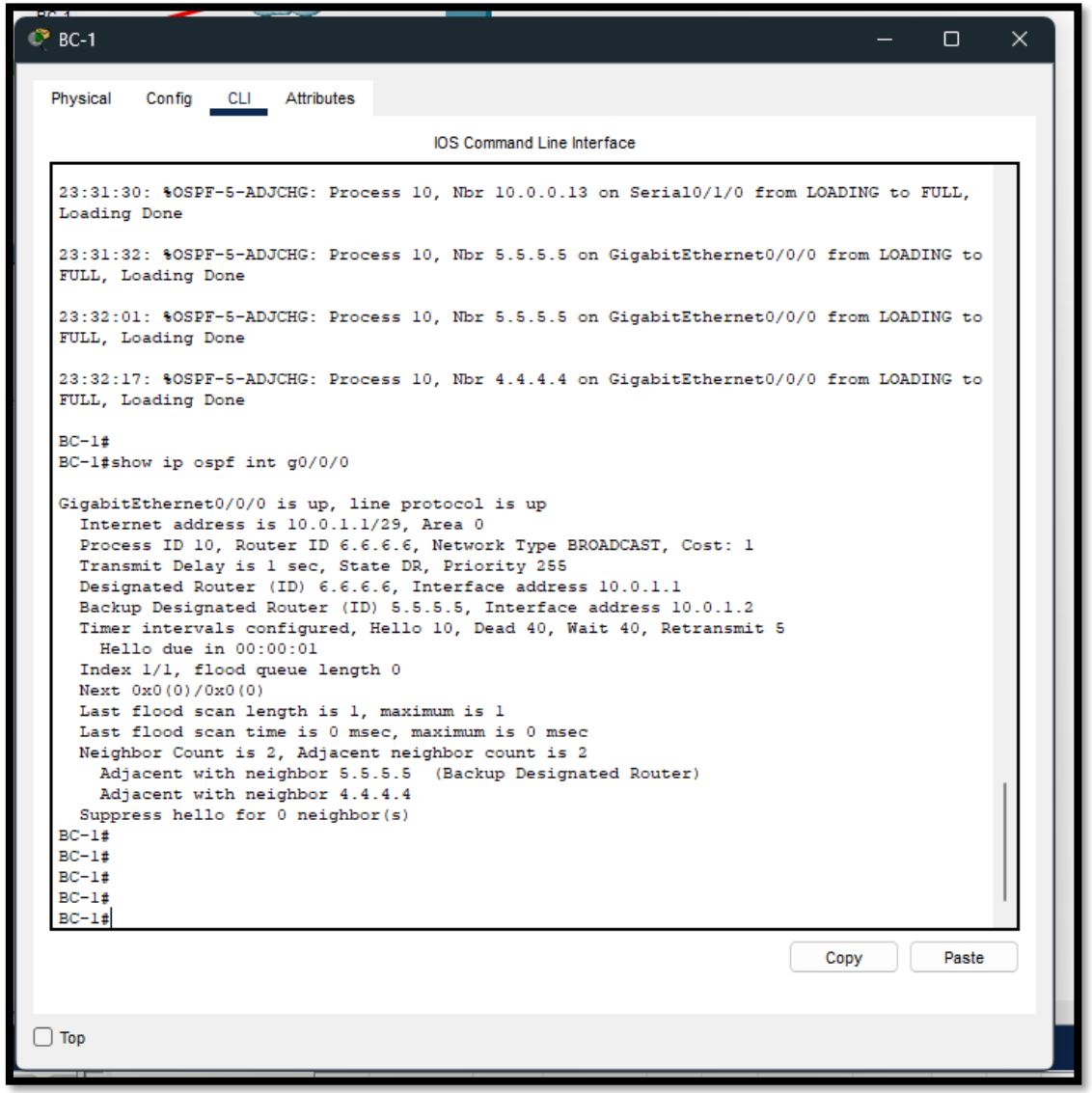
```
P2P-3#config t
Enter configuration commands, one per line.  End with CNTL/Z.
P2P-3(config)#router ospf 10
P2P-3(config-router)#passive-interface g0/0/0
P2P-3(config-router)#
```

```
BC-1(config-router)#passive-int s0/1/1
BC-1(config-router)#
```

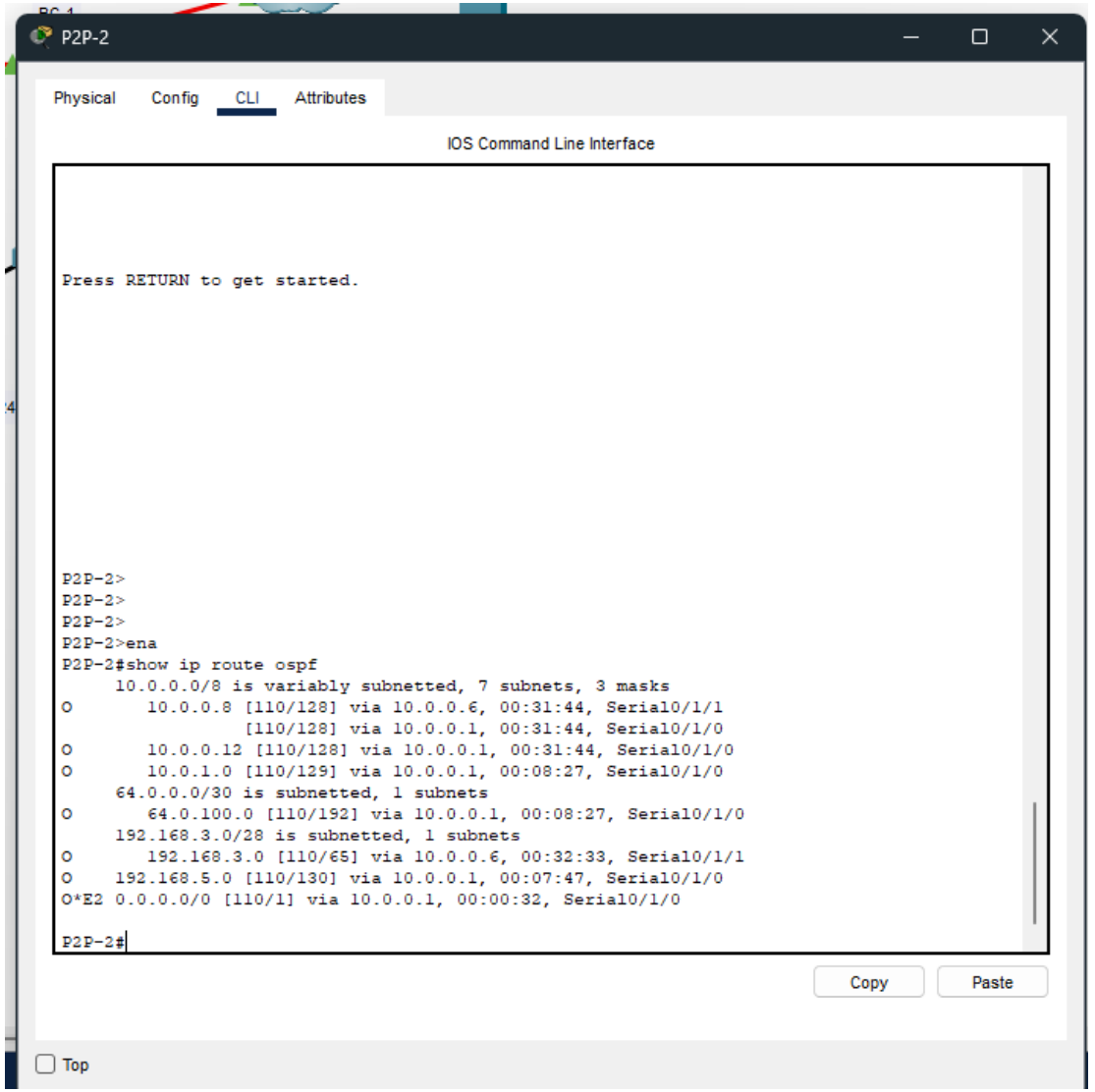
```
BC-2(config-router)#
BC-2(config-router)#passive-int g0/0/0
BC-2(config-router)#
```

```
BC-1(config-router)#passive-int s0/1/1
BC-1(config-router)#
```

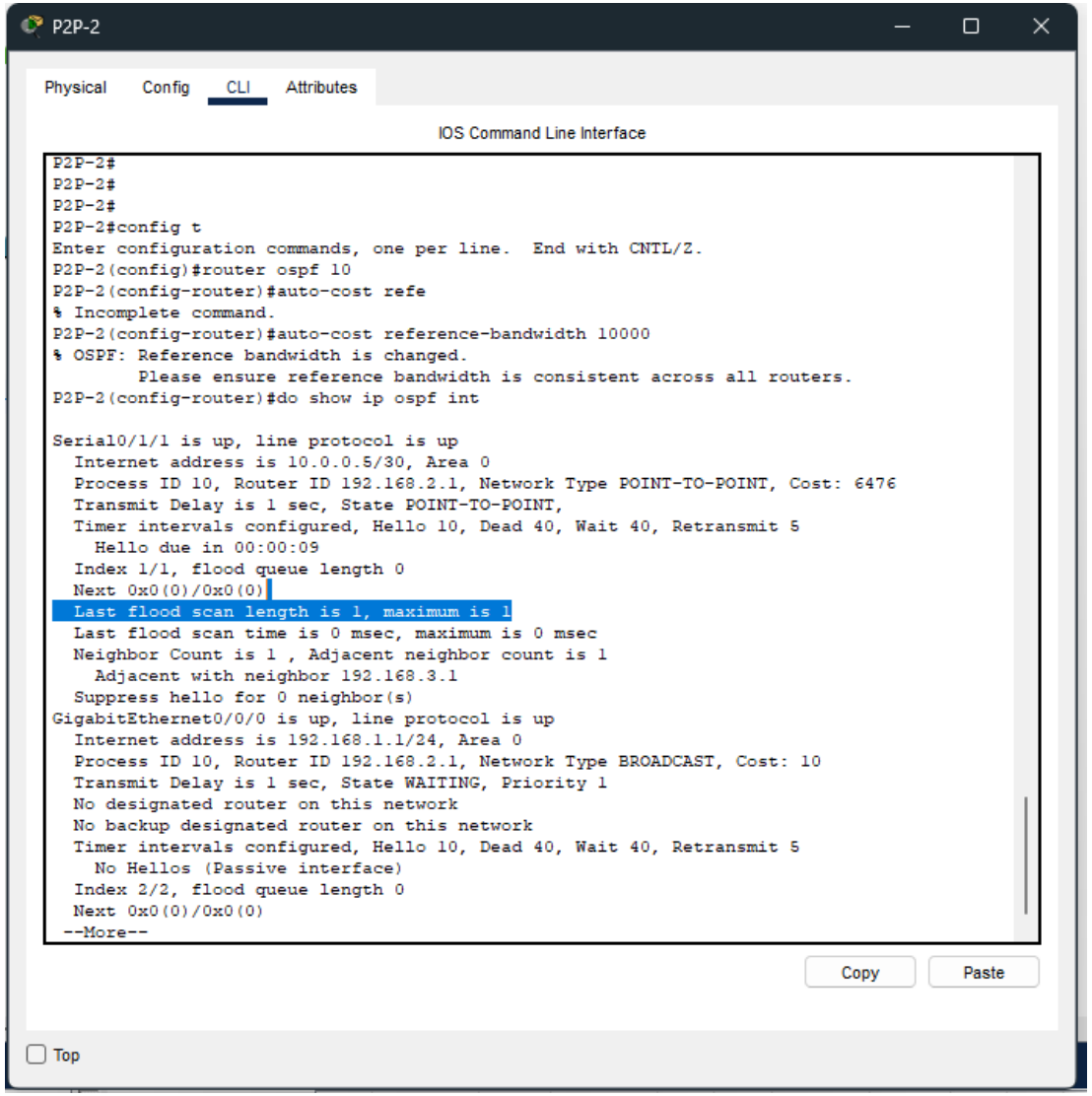
**CONFIGURE EL ROUTER BC-1 CON LA PRIORIDAD DE INTERFAZ OSPF MÁS ALTA PARA QUE SEA SIEMPRE EL ROUTER DESIGNADO DE LA RED MULTIACCESO.**



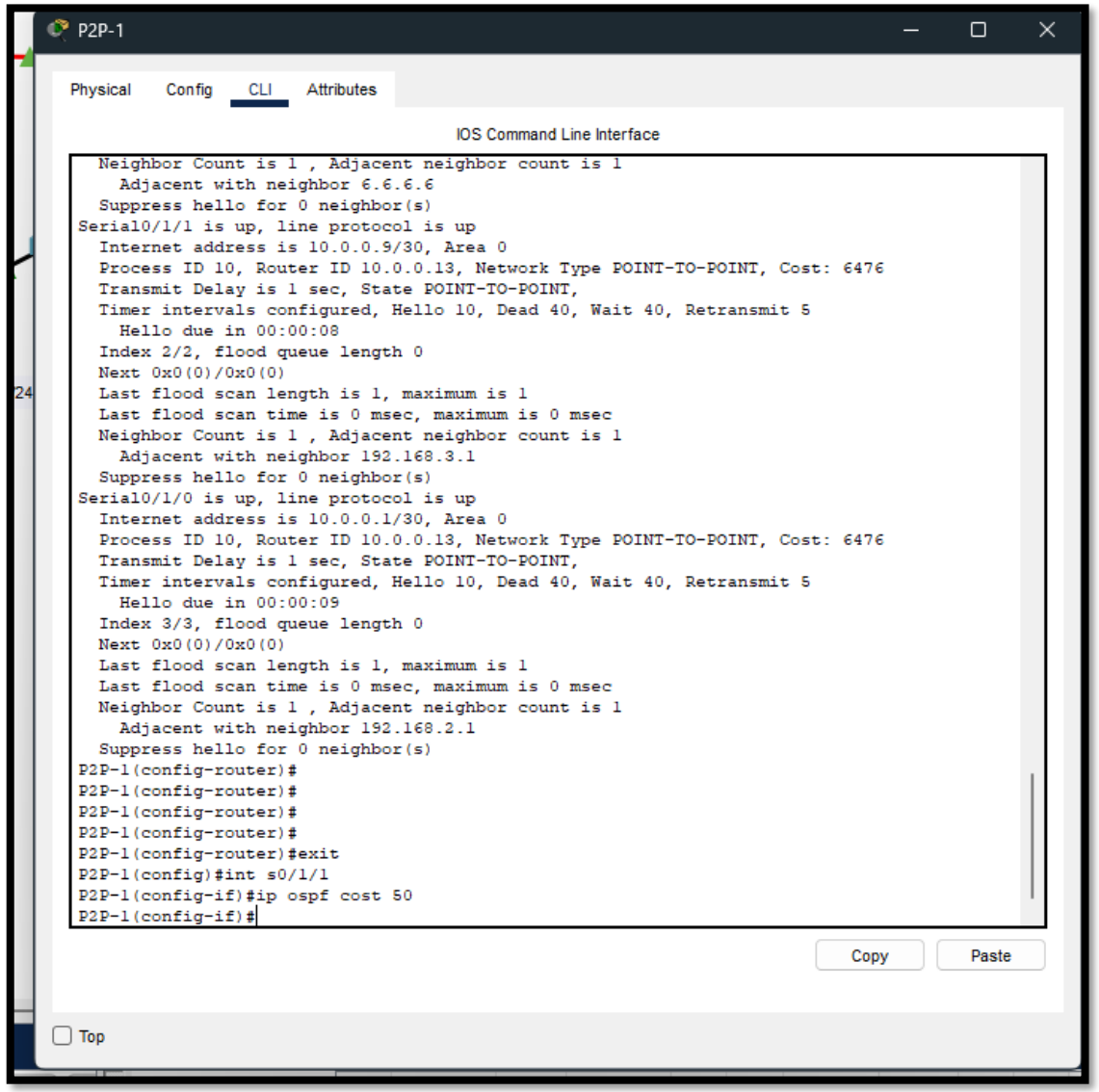
# CONFIGURE UNA RUTA PREDETERMINADA A LA NUBE ISP USANDO EL ARGUMENTO DE COMANDO EXIT INTERFACE.

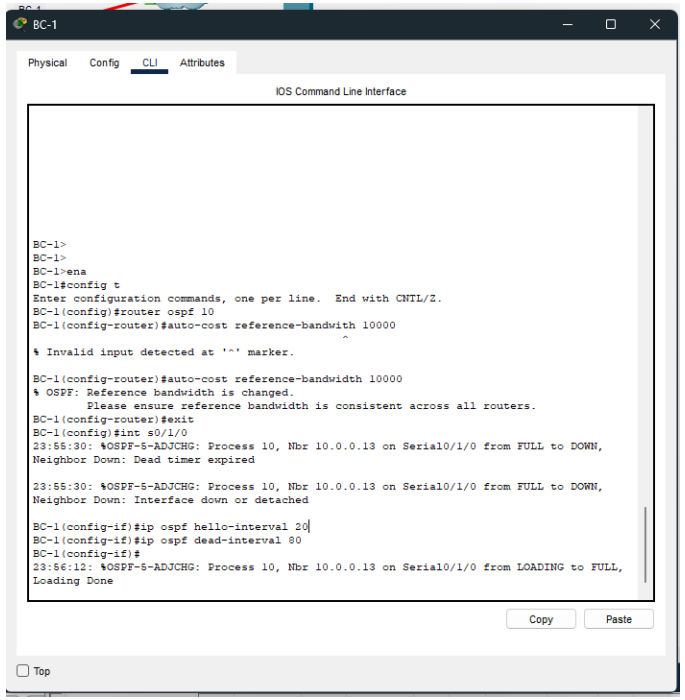


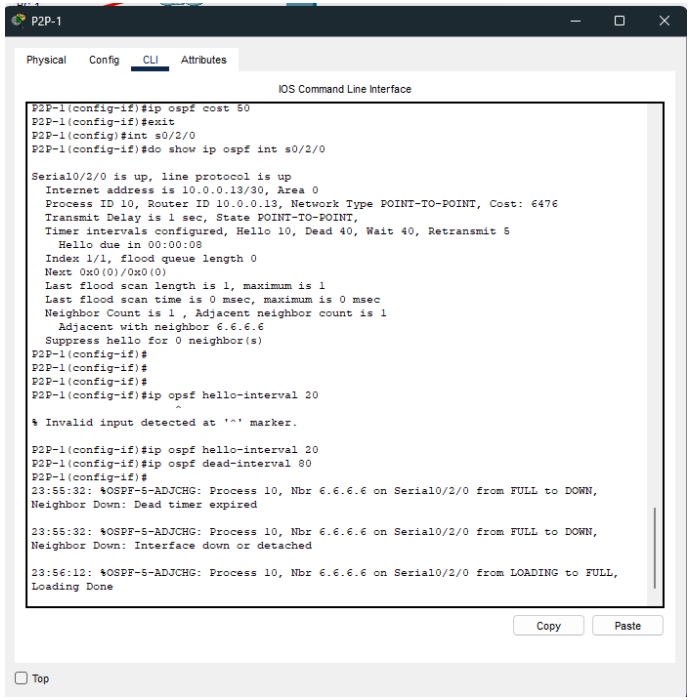
**CONFIGURE LOS ROUTERS OSPF PARA QUE EL COSTO DE LA INTERFAZ GIGABIT ETHERNET SEA 10 Y EL COSTO FAST ETHERNET SEA 100.**



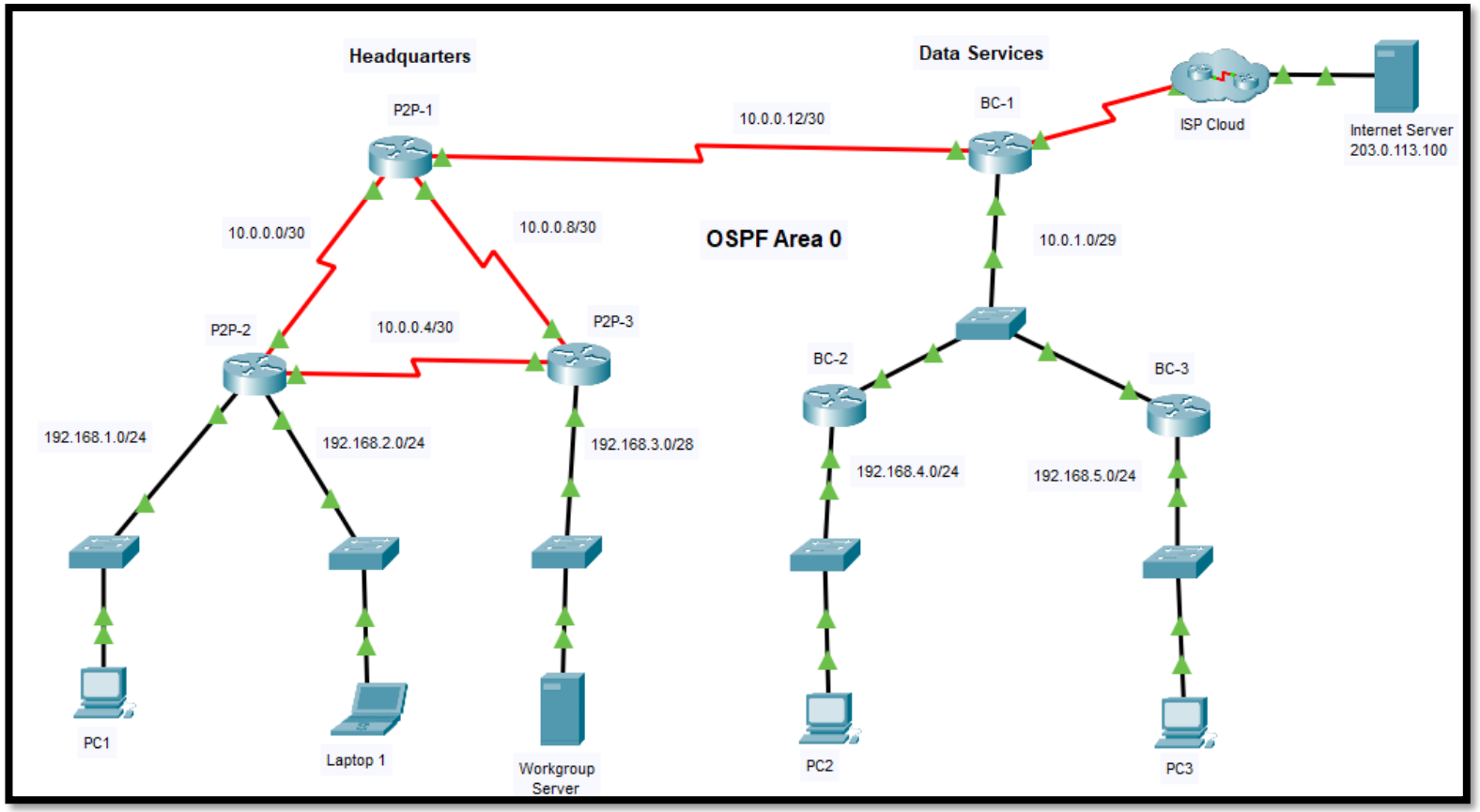
# CONFIGURAR EL VALOR DE COSTO OSPF DE LA INTERFAZ P2P-1 SERIAL0/1/1 A 50.






# CONFIGURE LOS VALORES DE TIEMPO SALUDO Y MUERTE EN LAS INTERFACES QUE CONECTAN P2P-1 Y BC-1 PARA QUE SEAN EL DOBLE DE LOS VALORES PREDETERMINADOS.

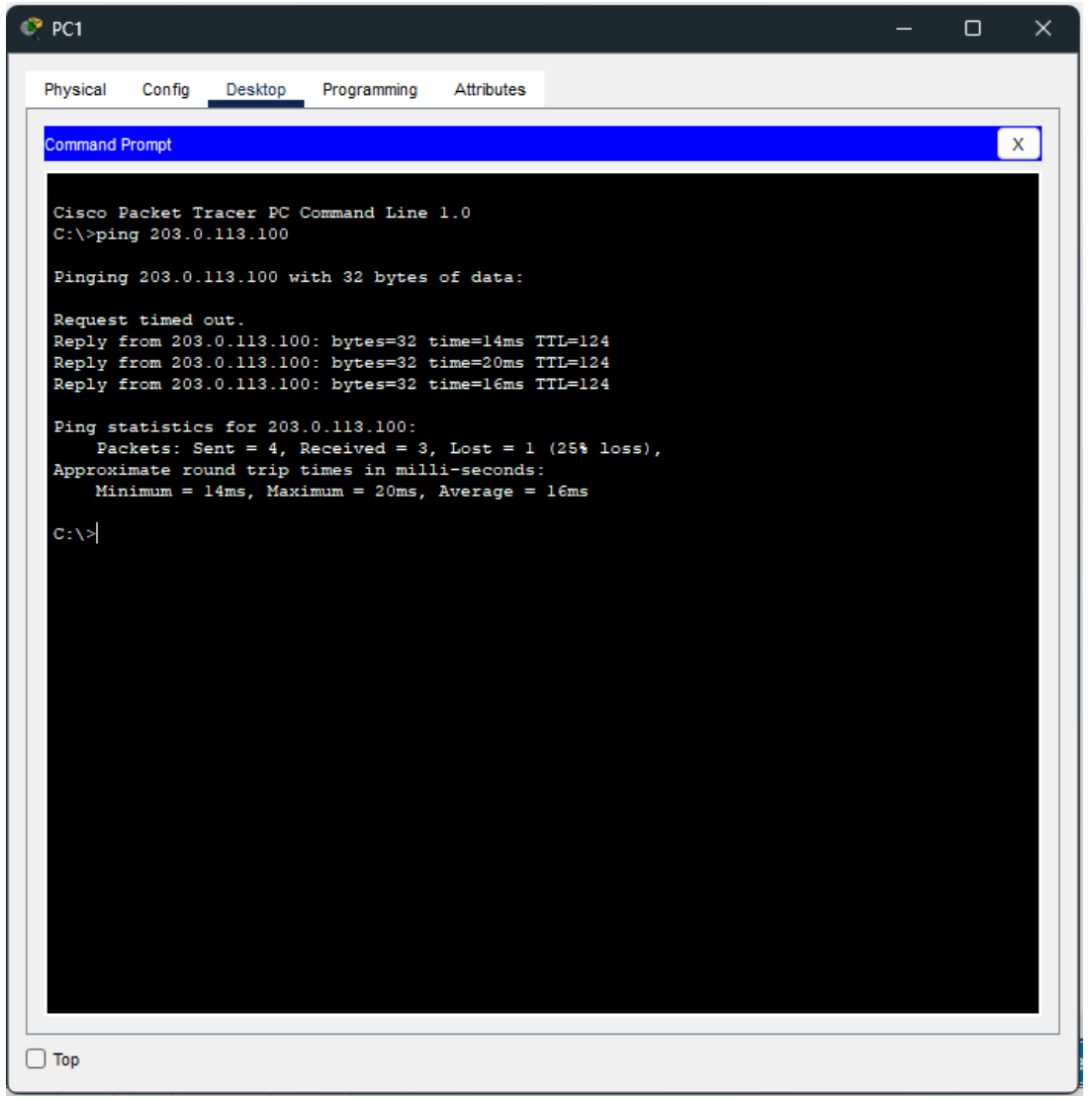



# 3.ESQUEMA GENERAL

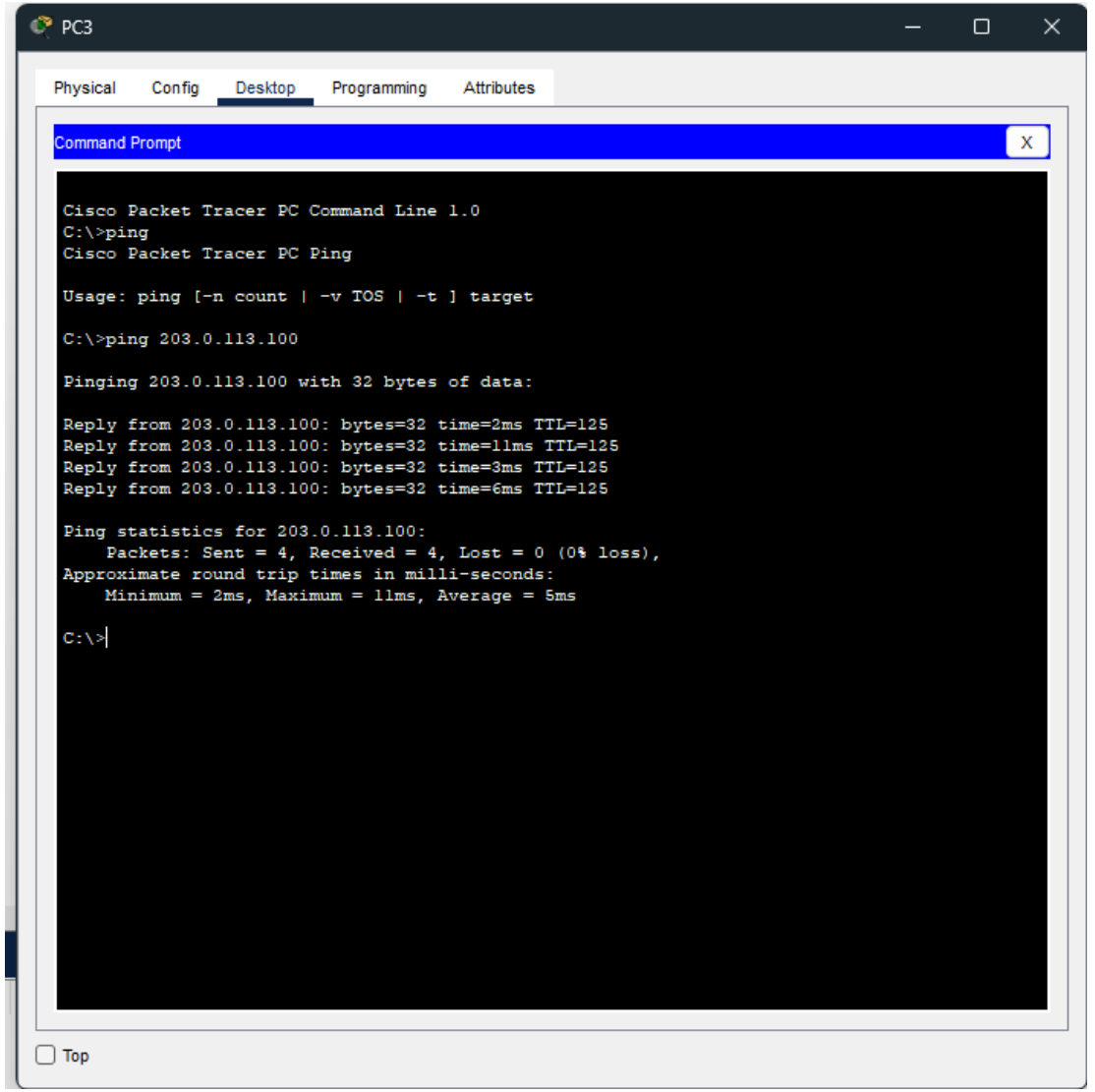
# 4.SCRIPT CTC

| Dispositivo | Interfaz | Dirección IP / Prefijo |
|---|---|---|
| P2P-1 | S0/1/0 | 10.0.0.1/30 |
| | /1/1 | 10.0.0.9/30 |
| | S0/2/0 | 10.0.0.13/30 |
| P2P-2 | S0/1/0 | 10.0.0.2/30 |
| | /1/1 | 10.0.0.5/30 |
| | G0/0/0 | 192.168.1.1/24 |
| | G0/0/1 | 192.168.2.1/24 |
| P2P-3 | S0/1/0 | 10.0.0.6/30 |
| | /1/1 | 10.0.0.10/30 |
| | G0/0/0 | 192.168.3.1/28 |
| BC-1 | S0/1/0 | 10.0.0.14/30 |
| | /1/1 | 64.0.100.2/30 |
| | G0/0/0 | 10.0.1.1/29 |
| BC-2 | G0/0/0 | 192.168.4.1/30 |
| | G0/0/1 | 10.0.1.2/29 |
| BC-3 | G0/0/0 | 192.168.5.1/24 |
| | G0/0/1 | 10.0.1.3/29 |
| Servidor de Internet | NIC | 203.0.113.100/24 |
| PC 1 | NIC | 192.168.1.10/24 |
| Laptop 1 | NIC | 192.168.2.20/24 |
| Servidor Workgroup | NIC | 192.168.3.14/28 |
| PC 2 | NIC | 192.168.4.40/24 |
| PC 3 | NIC | 192.168.5.50/24 |

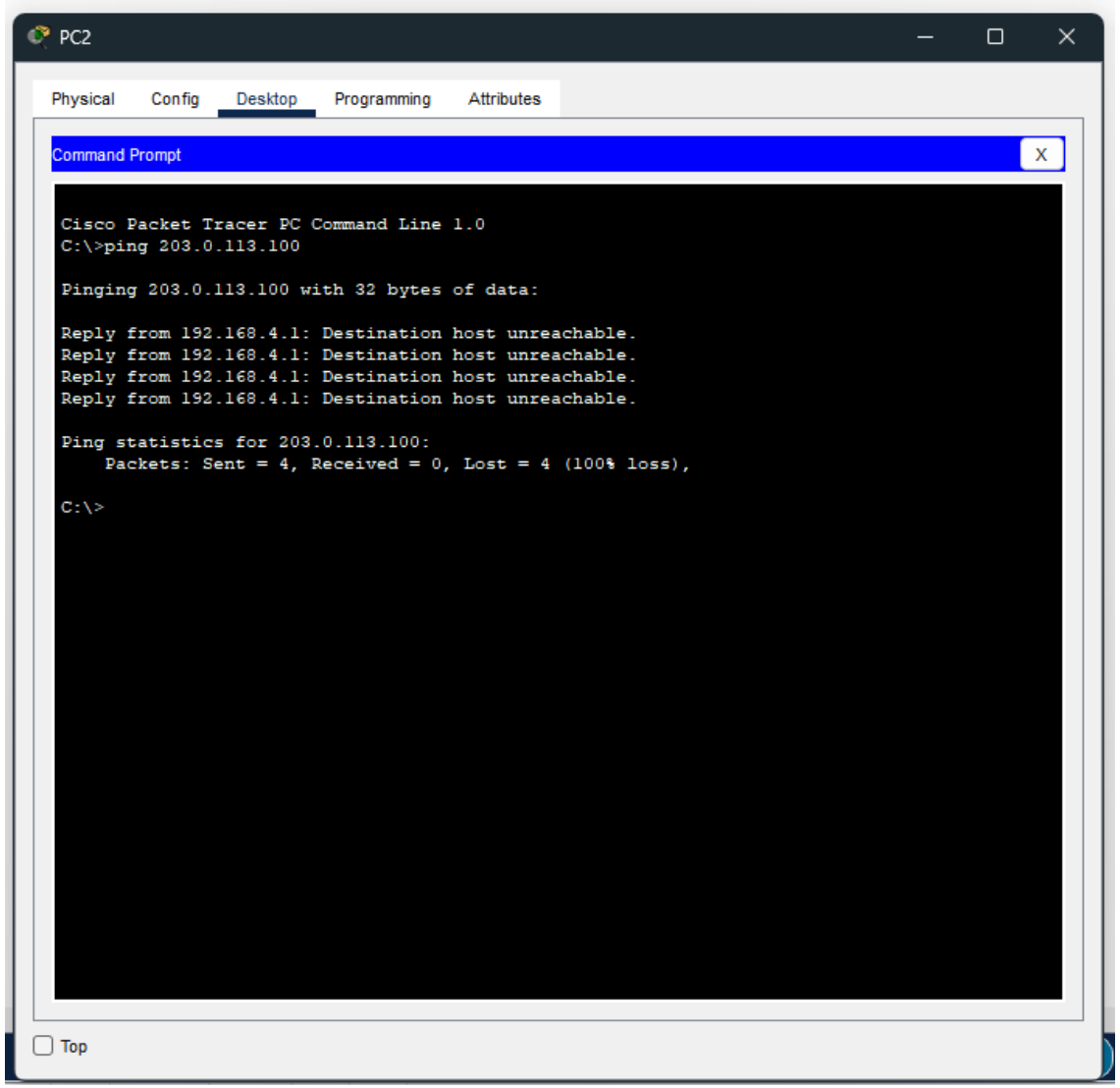
# 5. PRUEBAS


PC1
Physical
Config
Desktop
Programming
Attributes
Command Prompt
X
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 203.0.113.100
Pinging 203.0.113.100 with 32 bytes of data:
Request timed out.
Reply from 203.0.113.100: bytes=32 time=14ms TTL=124
Reply from 203.0.113.100: bytes=32 time=20ms TTL=124
Reply from 203.0.113.100: bytes=32 time=16ms TTL=124
Ping statistics for 203.0.113.100:
Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
Minimum = 14ms, Maximum = 20ms, Average = 16ms
C:\>
Top

# 5. PRUEBAS


PC3
Physical
Config
Desktop
Programming
Attributes
Command Prompt
X
Cisco Packet Tracer PC Command Line 1.0
C:\>ping
Cisco Packet Tracer PC Ping
Usage: ping [-n count | -v TOS | -t ] target
C:\>ping 203.0.113.100
Pinging 203.0.113.100 with 32 bytes of data:
Reply from 203.0.113.100: bytes=32 time=2ms TTL=125
Reply from 203.0.113.100: bytes=32 time=11ms TTL=125
Reply from 203.0.113.100: bytes=32 time=3ms TTL=125
Reply from 203.0.113.100: bytes=32 time=6ms TTL=125
Ping statistics for 203.0.113.100:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 2ms, Maximum = 11ms, Average = 5ms
C:\>
Top

# 5. PRUEBAS


PC2
Physical
Config
Desktop
Programming
Attributes
Command Prompt
X
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 203.0.113.100
Pinging 203.0.113.100 with 32 bytes of data:
Reply from 192.168.4.1: Destination host unreachable.
Reply from 192.168.4.1: Destination host unreachable.
Reply from 192.168.4.1: Destination host unreachable.
Reply from 192.168.4.1: Destination host unreachable.
Ping statistics for 203.0.113.100:
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\>
Top