

# ACTIVIDAD 2.7.1. SINGLE ÁREA OSPFV2 CONFIGURATION

Memoria Técnica

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7 A IELC

# CONTENIDO

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# I. ANTECEDENTES

- **I.1. Objetivos**

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

- **I.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**

```
IOS Command Line Interface
32768K bytes of non-volatile configuration memory.
4194304K bytes of physical memory.
3223551K bytes of flash memory at bootflash:.

Press RETURN to get started!

%LINK-5-CHANGED: Interface Serial0/1/1, changed state to up
%LINK-5-CHANGED: Interface Serial0/1/0, changed state to up
%LINK-5-CHANGED: Interface Serial0/2/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/1/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/2/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/1/1, changed state to up

P2P-1>ena
P2P-1#config t
Enter configuration commands, one per line. End with CNTL/Z.
P2P-1(config)#int g0/0/0
P2P-1(config)#router ospf 10
P2P-1(config-router)#network 10.0.0.12 0.0.0.3 area 0
P2P-1(config-router)#network 10.0.0.0 0.0.0.3 area 0
P2P-1(config-router)#network 10.0.0.8 0.0.0.3 area 0
P2P-1(config-router)#
23:05:46: %OSPF-5-ADJCHG: Process 10, Nbr 192.168.2.1 on Serial0/1/0 from LOADING to FULL, Loading Done
23:07:34: %OSPF-5-ADJCHG: Process 10, Nbr 192.168.3.1 on Serial0/1/1 from LOADING to FULL, Loading Done
```

```
IOS Command Line Interface

%LINK-5-CHANGED: Interface Serial0/1/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/1/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/1/0, changed state to up

P2P-2>
P2P-2#ena
P2P-2#config t
Enter configuration commands, one per line. End with CNTL/Z.
P2P-2(config)#int g0/0/0
P2P-2(config-if)#exit
P2P-2(config)#router ospf 10
P2P-2(config-router)#network 10.0.0.0 0.0.0.3 area 0
P2P-2(config-router)#network 10.0.0.4 0.0.0.3 area 0
P2P-2(config-router)#
23:05:46: %OSPF-5-ADJCHG: Process 10, Nbr 10.0.0.13 on Serial0/1/0 from LOADING to FULL, Loading Done
P2P-2(config-router)#
P2P-2(config-router)#network 192.168.1.0 0.0.0.255 area 0
P2P-2(config-router)#network 192.168.2.0 0.0.0.255 area 0
P2P-2(config-router)#
23:07:36: %OSPF-5-ADJCHG: Process 10, Nbr 192.168.3.1 on Serial0/1/1 from LOADING to FULL, Loading Done

%LINK-3-UPDOWN: Interface Serial0/1/0, changed state to down
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/1/0, changed state to down
23:08:11: %OSPF-5-ADJCHG: Process 10, Nbr 10.0.0.13 on Serial0/1/0 from FULL to DOWN, Neighbor Down: Interface down or detached
%LINK-5-CHANGED: Interface Serial0/1/0, changed state to up
```

```
IOS Command Line Interface

% Serial interfaces
32768K bytes of non-volatile configuration memory.
4194304K bytes of physical memory.
3223551K bytes of flash memory at bootflash:.

Press RETURN to get started!

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/0, changed state to up
%LINK-5-CHANGED: Interface Serial0/1/0, changed state to up
%LINK-5-CHANGED: Interface Serial0/1/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/1/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/1/1, changed state to up

P2P-3>
P2P-3#ena
P2P-3#config t
Enter configuration commands, one per line. End with CNTL/Z.
P2P-3(config)#int g0/0/0
P2P-3(config-if)#exit
P2P-3(config)#router ospf 10
P2P-3(config-router)#network 192.168.3.0 0.0.0.15 area 0
P2P-3(config-router)#network 10.0.0.8 0.0.0.3 area 0
P2P-3(config-router)#network 10.0.0.4 0.0.0.3 area 0
23:07:34: %OSPF-5-ADJCHG: Process 10, Nbr 10.0.0.13 on Serial0/1/1 from LOADING to FULL, Loading Done
P2P-3(config-router)#
23:07:36: %OSPF-5-ADJCHG: Process 10, Nbr 192.168.2.1 on Serial0/1/0 from LOADING to FULL, Loading Done
```

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

```
BC-3
Physical Config CLI Attributes
IOS Command Line Interface

cisco ISR4321/KS (1RU) processor with 1687137K/6147K bytes of memory.
Processor board ID F1M2041W2HD
2 Gigabit Ethernet interfaces
2 Serial interfaces
32768K bytes of non-volatile configuration memory.
4194304K bytes of physical memory.
3223551K bytes of flash memory at bootflash:.

Press RETURN to get started!

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/1, changed state to up

BC-3>
BC-3>
BC-3>ena
BC-3#config
Configuring from terminal, memory, or network [terminal]? do
?Must be "terminal", "memory" or "network"
BC-3#config t
Enter configuration commands, one per line. End with CNTL/Z.
BC-3(config)#in g0/0/0
BC-3(config-if)#ip ospf 10 area 0
BC-3(config-if)#interface g0/0/1
BC-3(config-if)#ip ospf 10 area 0
BC-3(config-if)#
23:24:03: %OSPF-5-ADJCHG: Process 10, Nbr 192.168.4.1 on GigabitEthernet0/0/1 from
LOADING to FULL, Loading Done
23:24:07: %OSPF-5-ADJCHG: Process 10, Nbr 64.0.100.2 on GigabitEthernet0/0/1 from LOADING
to FULL, Loading Done

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Top
```

```
BC-2
Physical Config CLI Attributes
IOS Command Line Interface

2 Serial interfaces
32768K bytes of non-volatile configuration memory.
4194304K bytes of physical memory.
3223551K bytes of flash memory at bootflash:.

Press RETURN to get started!

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/1, changed state to up

BC-2>
BC-2>ena
BC-2#show ip int brie
Interface IP-Address OK? Method Status Protocol
GigabitEthernet0/0/0 192.168.4.1 YES manual up up
GigabitEthernet0/0/1 10.0.1.2 YES manual up up
Serial0/1/0 unassigned YES unset administratively down down
Serial0/1/1 unassigned YES unset administratively down down
Vlan1 unassigned YES unset administratively down down
BC-2#config t
Enter configuration commands, one per line. End with CNTL/Z.
BC-2(config)#int g0/0/0
BC-2(config-if)#
BC-2(config-if)#ip ospf 10 area 0
BC-2(config-if)#interface g0/0/1
BC-2(config-if)#ip ospf 10 area 0
BC-2(config-if)#
23:23:07: %OSPF-5-ADJCHG: Process 10, Nbr 64.0.100.2 on GigabitEthernet0/0/1 from LOADING
to FULL, Loading Done
23:24:09: %OSPF-5-ADJCHG: Process 10, Nbr 192.168.5.1 on GigabitEthernet0/0/1 from
LOADING to FULL, Loading Done

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Top
```

```
BC-1
Physical Config CLI Attributes
IOS Command Line Interface

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/1/0, changed state to up

BC-1>
BC-1>
BC-1>ena
BC-1#show ip int brief
Interface IP-Address OK? Method Status Protocol
GigabitEthernet0/0/0 10.0.1.1 YES NVRAM up up
GigabitEthernet0/0/1 unassigned YES NVRAM administratively down down
Serial0/1/0 10.0.0.14 YES NVRAM up up
Serial0/1/1 64.0.100.2 YES NVRAM up up
Vlan1 unassigned YES unset administratively down down
BC-1#
BC-1#
BC-1#config t
Enter configuration commands, one per line. End with CNTL/Z.
BC-1(config)#int g0/0/0
BC-1(config-if)#ip ospf 10 area 0
BC-1(config-if)#int s0/1/0
BC-1(config-if)#
% Invalid input detected at '^' marker.

BC-1(config-if)#interface s0/1/0
BC-1(config-if)#ip ospf 10 area 0
BC-1(config-if)#interface s0/1/1
23:21:40: %OSPF-5-ADJCHG: Process 10, Nbr 10.0.0.13 on Serial0/1/0 from LOADING to FULL,
Loading Done
BC-1(config-if)#
23:23:07: %OSPF-5-ADJCHG: Process 10, Nbr 192.168.4.1 on GigabitEthernet0/0/0 from
LOADING to FULL, Loading Done
23:24:07: %OSPF-5-ADJCHG: Process 10, Nbr 192.168.5.1 on GigabitEthernet0/0/0 from
LOADING to FULL, Loading Done

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```

**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)#
```

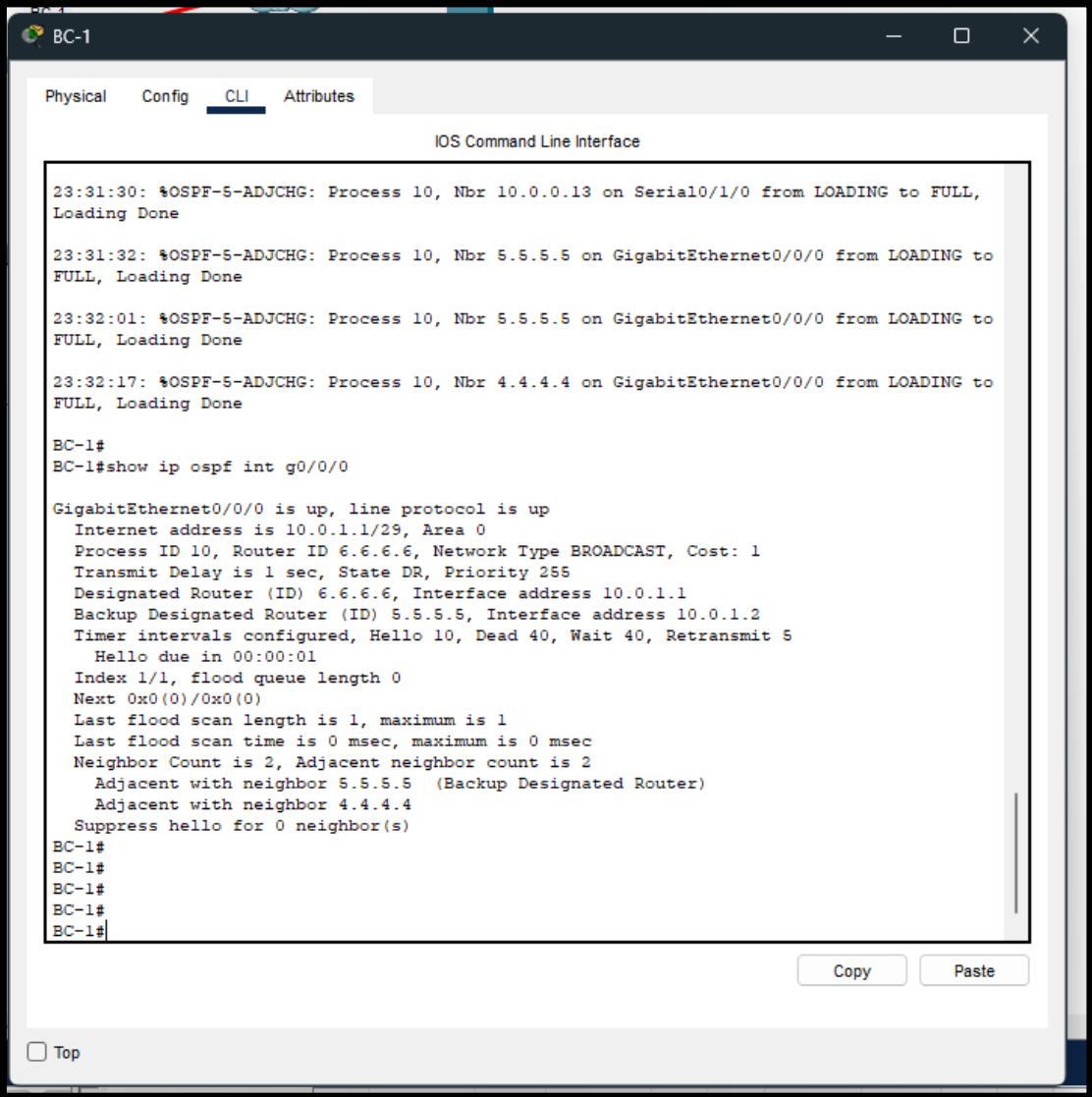
```
BC-1(config-router)#passive-int s0/1/1
BC-1(config-router)#
```

```
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.**



```
BC-1
Physical Config CLI Attributes
IOS Command Line Interface

23:31:30: %OSPF-5-ADJCHG: Process 10, Nbr 10.0.0.13 on Serial0/1/0 from LOADING to FULL, Loading Done
23:31:32: %OSPF-5-ADJCHG: Process 10, Nbr 5.5.5.5 on GigabitEthernet0/0/0 from LOADING to FULL, Loading Done
23:32:01: %OSPF-5-ADJCHG: Process 10, Nbr 5.5.5.5 on GigabitEthernet0/0/0 from LOADING to FULL, Loading Done
23:32:17: %OSPF-5-ADJCHG: Process 10, Nbr 4.4.4.4 on GigabitEthernet0/0/0 from LOADING to FULL, Loading Done

BC-1#
BC-1#show ip ospf int g0/0/0

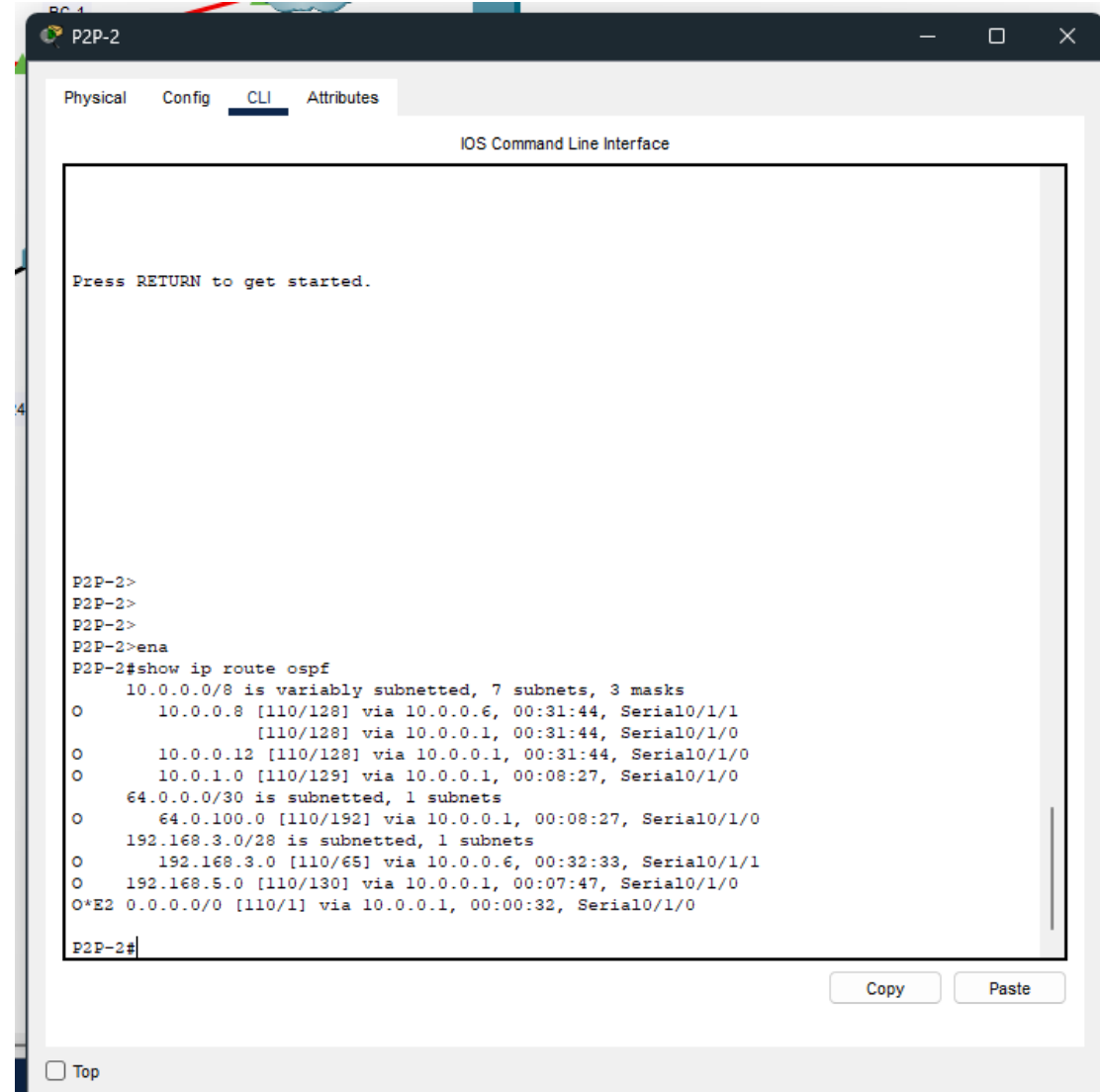
GigabitEthernet0/0/0 is up, line protocol is up
 Internet address is 10.0.1.1/29, Area 0
  Process ID 10, Router ID 6.6.6.6, Network Type BROADCAST, Cost: 1
  Transmit Delay is 1 sec, State DR, Priority 255
  Designated Router (ID) 6.6.6.6, Interface address 10.0.1.1
  Backup Designated Router (ID) 5.5.5.5, Interface address 10.0.1.2
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
    Hello due in 00:00:01
  Index 1/1, flood queue length 0
  Next 0x0(0)/0x0(0)
  Last flood scan length is 1, maximum is 1
  Last flood scan time is 0 msec, maximum is 0 msec
  Neighbor Count is 2, Adjacent neighbor count is 2
    Adjacent with neighbor 5.5.5.5 (Backup Designated Router)
    Adjacent with neighbor 4.4.4.4
  Suppress hello for 0 neighbor(s)

BC-1#
BC-1#
BC-1#
BC-1#
BC-1#

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Top
```

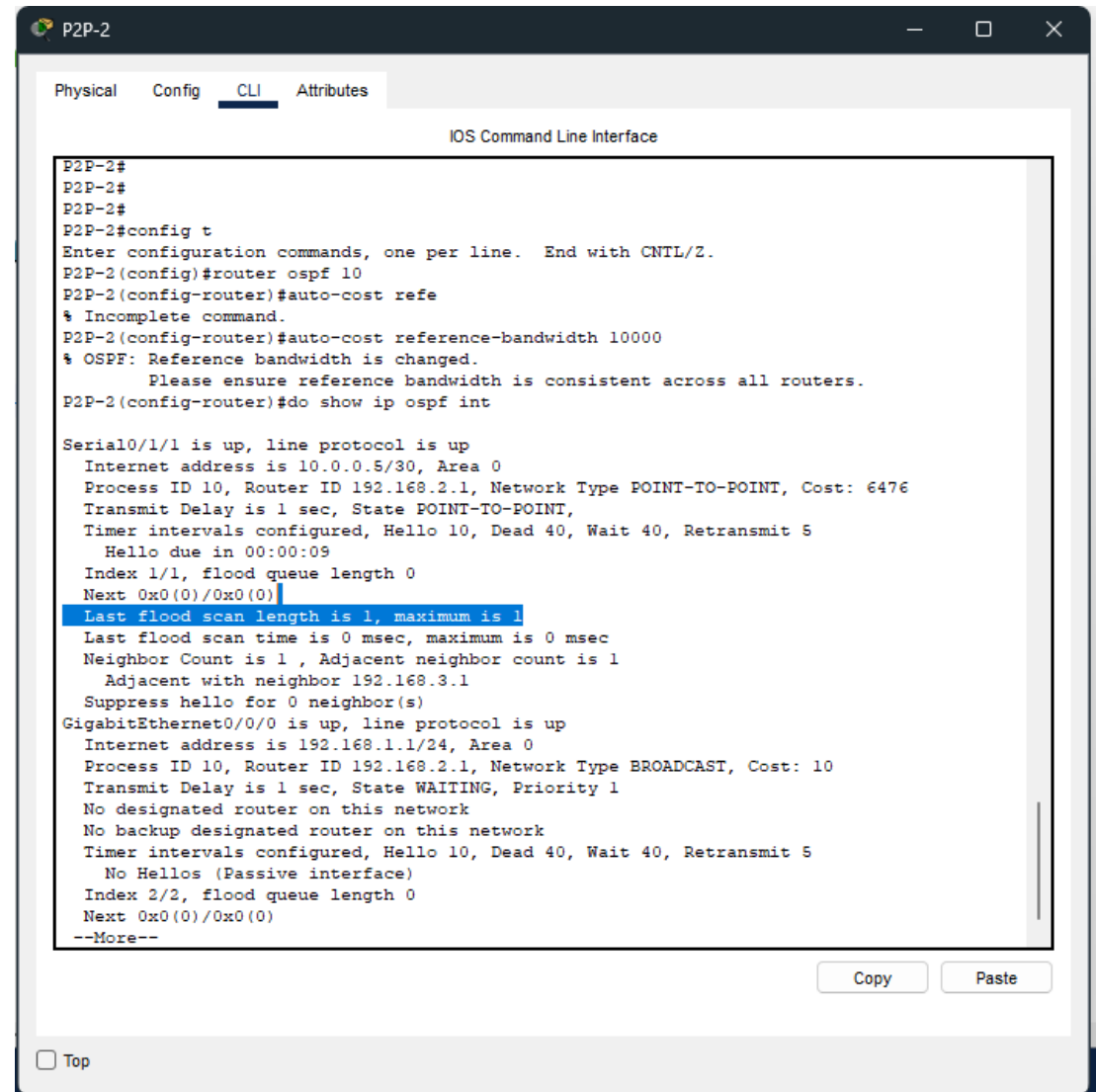
**CONFIGURE UNA RUTA  
PREDETERMINADA A  
LA NUBE ISP USANDO  
EL ARGUMENTO DE  
COMANDO EXIT  
INTERFACE.**



```
P2P-2>
P2P-2>
P2P-2>
P2P-2>ena
P2P-2#show ip route ospf
 10.0.0.0/8 is variably subnetted, 7 subnets, 3 masks
O    10.0.0.8 [110/128] via 10.0.0.6, 00:31:44, Serial0/1/1
      [110/128] via 10.0.0.1, 00:31:44, Serial0/1/0
O    10.0.0.12 [110/128] via 10.0.0.1, 00:31:44, Serial0/1/0
O    10.0.1.0 [110/129] via 10.0.0.1, 00:08:27, Serial0/1/0
 64.0.0.0/30 is subnetted, 1 subnets
O    64.0.100.0 [110/192] via 10.0.0.1, 00:08:27, Serial0/1/0
192.168.3.0/28 is subnetted, 1 subnets
O    192.168.3.0 [110/65] via 10.0.0.6, 00:32:33, Serial0/1/1
O    192.168.5.0 [110/130] via 10.0.0.1, 00:07:47, Serial0/1/0
O*E2 0.0.0.0/0 [110/1] via 10.0.0.1, 00:00:32, Serial0/1/0

P2P-2#
```

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



```
P2P-2#
P2P-2#
P2P-2#
P2P-2#config t
Enter configuration commands, one per line. End with CNTL/Z.
P2P-2(config)#router ospf 10
P2P-2(config-router)#auto-cost refe
% Incomplete command.
P2P-2(config-router)#auto-cost reference-bandwidth 10000
% OSPF: Reference bandwidth is changed.
Please ensure reference bandwidth is consistent across all routers.
P2P-2(config-router)#do show ip ospf int

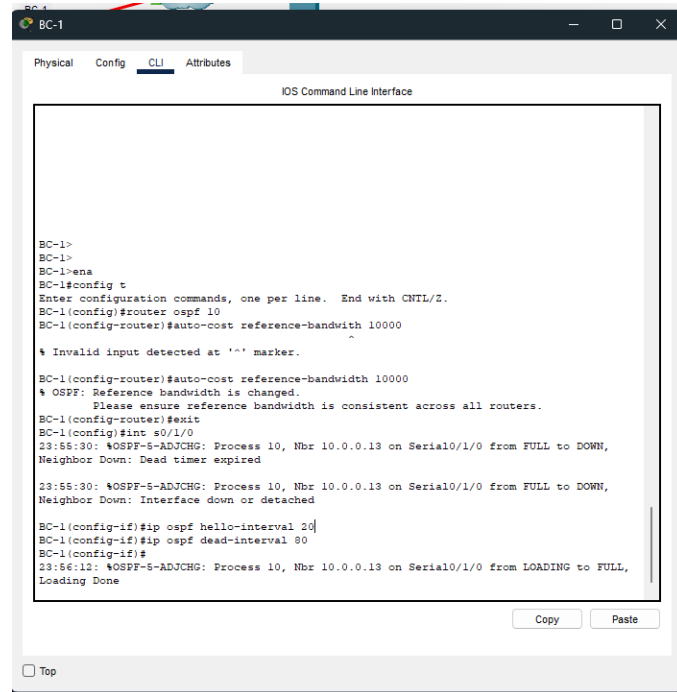
Serial0/1/1 is up, line protocol is up
Internet address is 10.0.0.5/30, Area 0
Process ID 10, Router ID 192.168.2.1, Network Type POINT-TO-POINT, Cost: 6476
Transmit Delay is 1 sec, State POINT-TO-POINT,
Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
Hello due in 00:00:09
Index 1/1, flood queue length 0
Next 0x0(0)/0x0(0)
Last flood scan length is 1, maximum is 1
Last flood scan time is 0 msec, maximum is 0 msec
Neighbor Count is 1, Adjacent neighbor count is 1
Adjacent with neighbor 192.168.3.1
Suppress hello for 0 neighbor(s)
GigabitEthernet0/0/0 is up, line protocol is up
Internet address is 192.168.1.1/24, Area 0
Process ID 10, Router ID 192.168.2.1, Network Type BROADCAST, Cost: 10
Transmit Delay is 1 sec, State WAITING, Priority 1
No designated router on this network
No backup designated router on this network
Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
No Hellos (Passive interface)
Index 2/2, flood queue length 0
Next 0x0(0)/0x0(0)
--More--
```

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

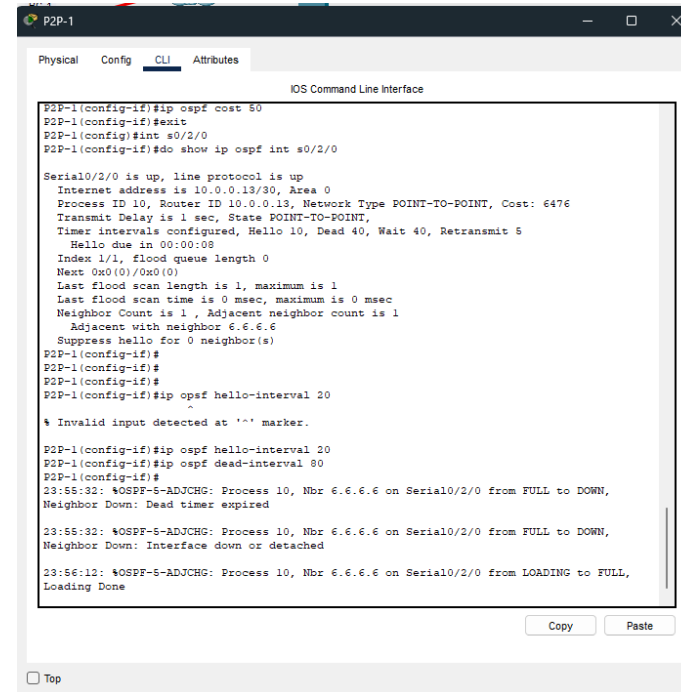
```
P2P-1
Physical Config CLI Attributes
IOS Command Line Interface
Neighbor Count is 1 , Adjacent neighbor count is 1
  Adjacent with neighbor 6.6.6.6
  Suppress hello for 0 neighbor(s)
Serial0/1/1 is up, line protocol is up
  Internet address is 10.0.0.9/30, Area 0
  Process ID 10, Router ID 10.0.0.13, Network Type POINT-TO-POINT, Cost: 6476
  Transmit Delay is 1 sec, State POINT-TO-POINT,
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
    Hello due in 00:00:08
  Index 2/2, flood queue length 0
  Next 0x0(0)/0x0(0)
  Last flood scan length is 1, maximum is 1
  Last flood scan time is 0 msec, maximum is 0 msec
  Neighbor Count is 1 , Adjacent neighbor count is 1
    Adjacent with neighbor 192.168.3.1
    Suppress hello for 0 neighbor(s)
Serial0/1/0 is up, line protocol is up
  Internet address is 10.0.0.1/30, Area 0
  Process ID 10, Router ID 10.0.0.13, Network Type POINT-TO-POINT, Cost: 6476
  Transmit Delay is 1 sec, State POINT-TO-POINT,
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
    Hello due in 00:00:09
  Index 3/3, flood queue length 0
  Next 0x0(0)/0x0(0)
  Last flood scan length is 1, maximum is 1
  Last flood scan time is 0 msec, maximum is 0 msec
  Neighbor Count is 1 , Adjacent neighbor count is 1
    Adjacent with neighbor 192.168.2.1
    Suppress hello for 0 neighbor(s)
P2P-1(config-router)#
P2P-1(config-router)#
P2P-1(config-router)#
P2P-1(config-router)#
P2P-1(config-router)#exit
P2P-1(config)#int s0/1/1
P2P-1(config-if)#ip ospf cost 50
P2P-1(config-if)#
```

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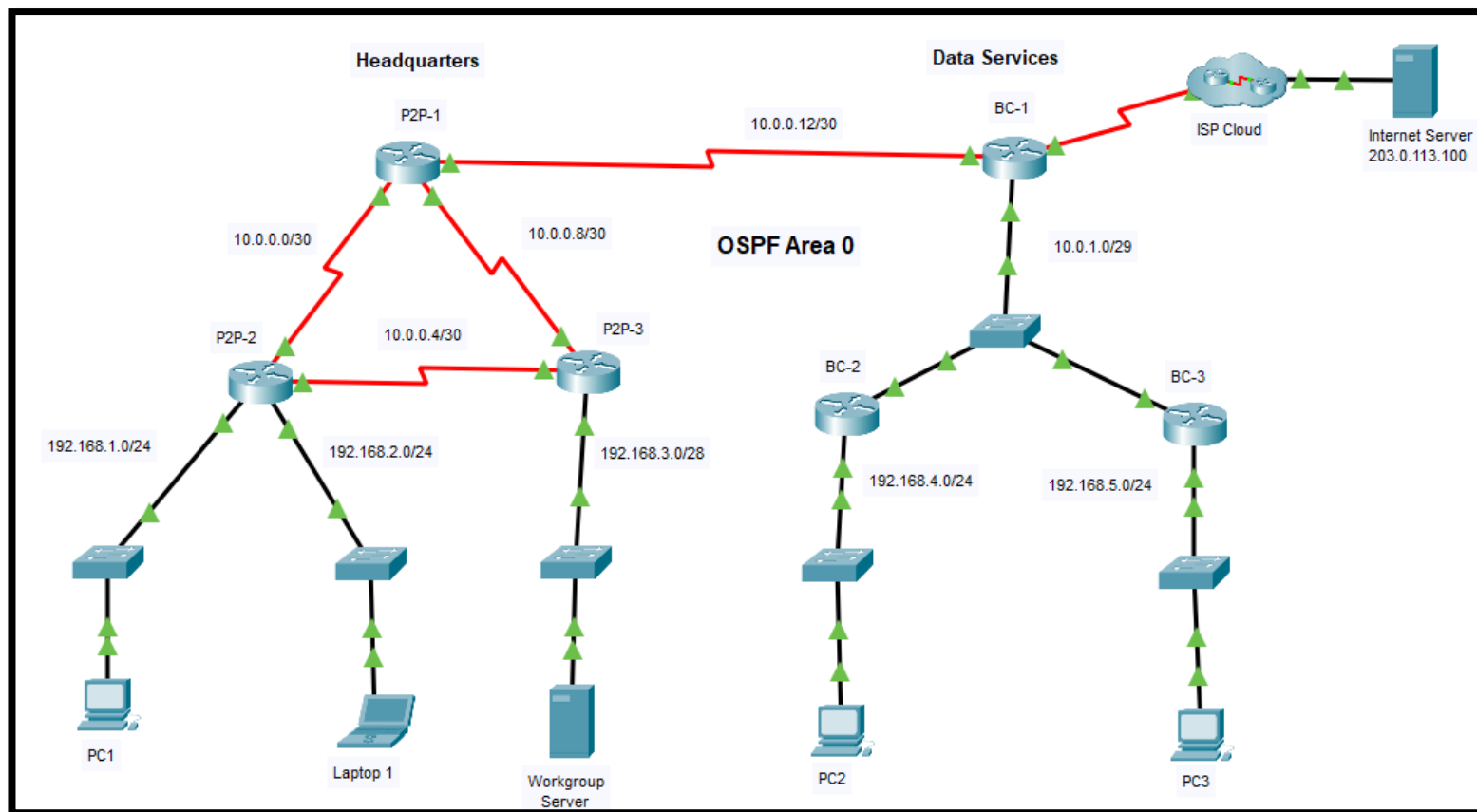
```
BC-1>
BC-1>
BC-1>ena
BC-1#config t
Enter configuration commands, one per line. End with CNTL/Z.
BC-1(config)#router ospf 10
BC-1(config-router)#auto-cost reference-bandwidth 10000
% Invalid input detected at '^' marker.
BC-1(config-router)#auto-cost reference-bandwidth 10000
% OSPF: Reference bandwidth is changed.
Please ensure reference bandwidth is consistent across all routers.
BC-1(config-router)#exit
BC-1(config)#int s0/1/0
23:55:30: %OSPF-5-ADJCHG: Process 10, Nbr 10.0.0.13 on Serial10/1/0 from FULL to DOWN,
Neighbor Down: Dead timer expired
23:55:30: %OSPF-5-ADJCHG: Process 10, Nbr 10.0.0.13 on Serial10/1/0 from FULL to DOWN,
Neighbor Down: Interface down or detached
BC-1(config-if)#ip ospf hello-interval 20
BC-1(config-if)#ip ospf dead-interval 80
BC-1(config-if)#
23:56:12: %OSPF-5-ADJCHG: Process 10, Nbr 10.0.0.13 on Serial10/1/0 from LOADING to FULL,
Loading Done
```



```
P2P-1(config-if)#ip ospf cost 50
P2P-1(config-if)#exit
P2P-1(config)#int s0/2/0
P2P-1(config-if)#do show ip ospf int s0/2/0

Serial10/2/0 is up, line protocol is up
Internet address is 10.0.0.13/30, Area 0
Process ID 10, Router ID 10.0.0.13, Network Type POINT-TO-POINT, Cost: 6476
Transmit Delay is 1 sec, State POINT-TO-POINT,
Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
Hello due in 00:00:08
Index 1/1, flood queue length 0
Next 0x0(0)/0x0(0)
Last flood scan length is 1, maximum is 1
Last flood scan time is 0 msec, maximum is 0 msec
Neighbor Count is 1, Adjacent neighbor count is 1
Adjacent with neighbor 6.6.6.6
Suppress hello for 0 neighbor(s)
P2P-1(config-if)#
P2P-1(config-if)#
P2P-1(config-if)#
P2P-1(config-if)#ip ospf hello-interval 20
% Invalid input detected at '^' marker.
P2P-1(config-if)#ip ospf hello-interval 20
P2P-1(config-if)#ip ospf dead-interval 80
P2P-1(config-if)#
23:55:32: %OSPF-5-ADJCHG: Process 10, Nbr 6.6.6.6 on Serial10/2/0 from FULL to DOWN,
Neighbor Down: Dead timer expired
23:55:32: %OSPF-5-ADJCHG: Process 10, Nbr 6.6.6.6 on Serial10/2/0 from FULL to DOWN,
Neighbor Down: Interface down or detached
23:56:12: %OSPF-5-ADJCHG: Process 10, Nbr 6.6.6.6 on Serial10/2/0 from LOADING to FULL,
Loading Done
```

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

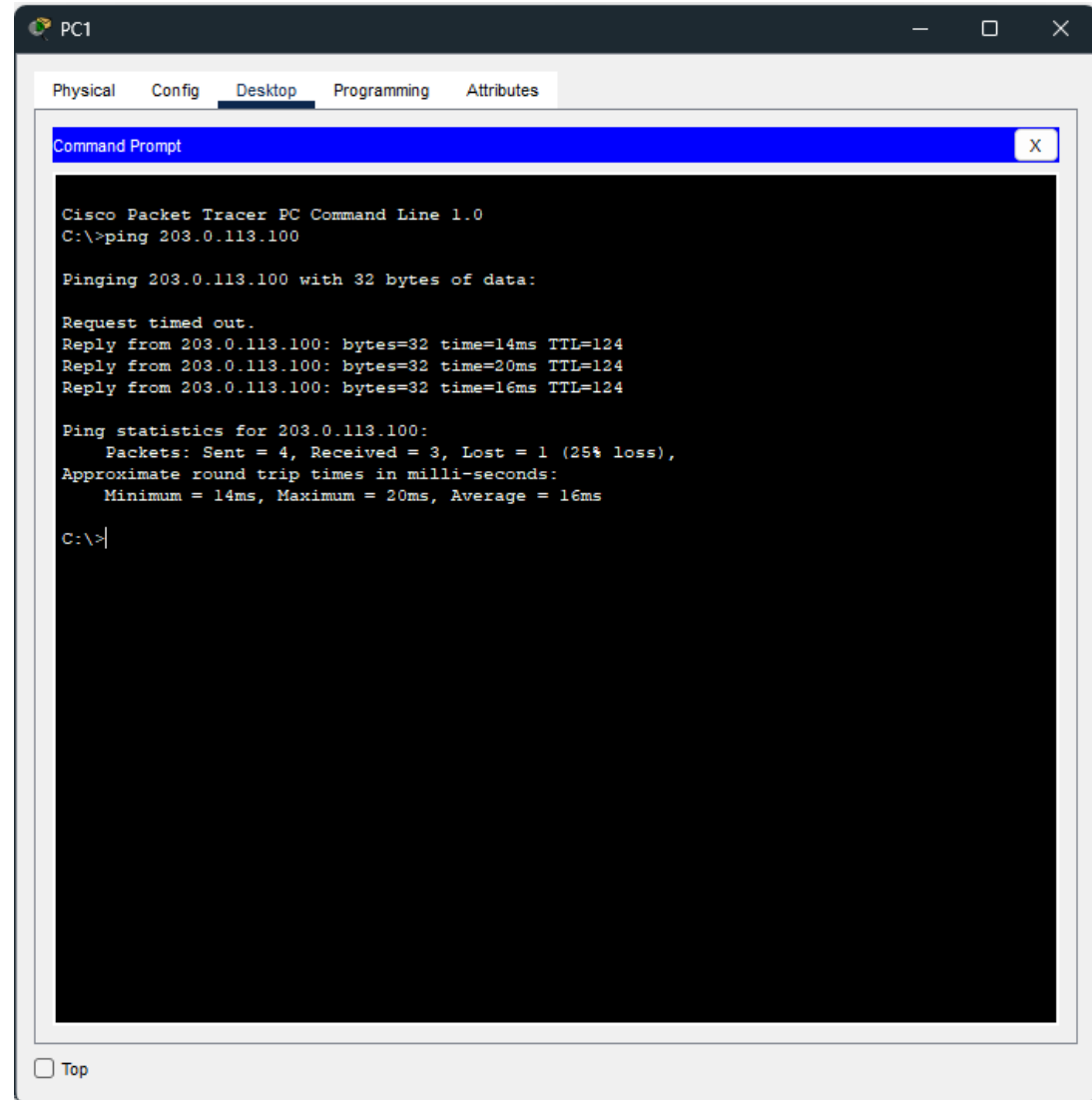


### 3.ESQUEMA GENERAL

## 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



The screenshot shows a Cisco Packet Tracer PC Command Prompt window for PC1. The window has tabs for Physical, Config, Desktop, Programming, and Attributes, with Desktop selected. The Command Prompt displays the output of a ping command to 203.0.113.100. The output shows a request timed out, followed by three successful replies with varying times and TTL values. Ping statistics are also displayed, showing 4 packets sent, 3 received, and 1 lost (25% loss).

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 203.0.113.100

Pinging 203.0.113.100 with 32 bytes of data:

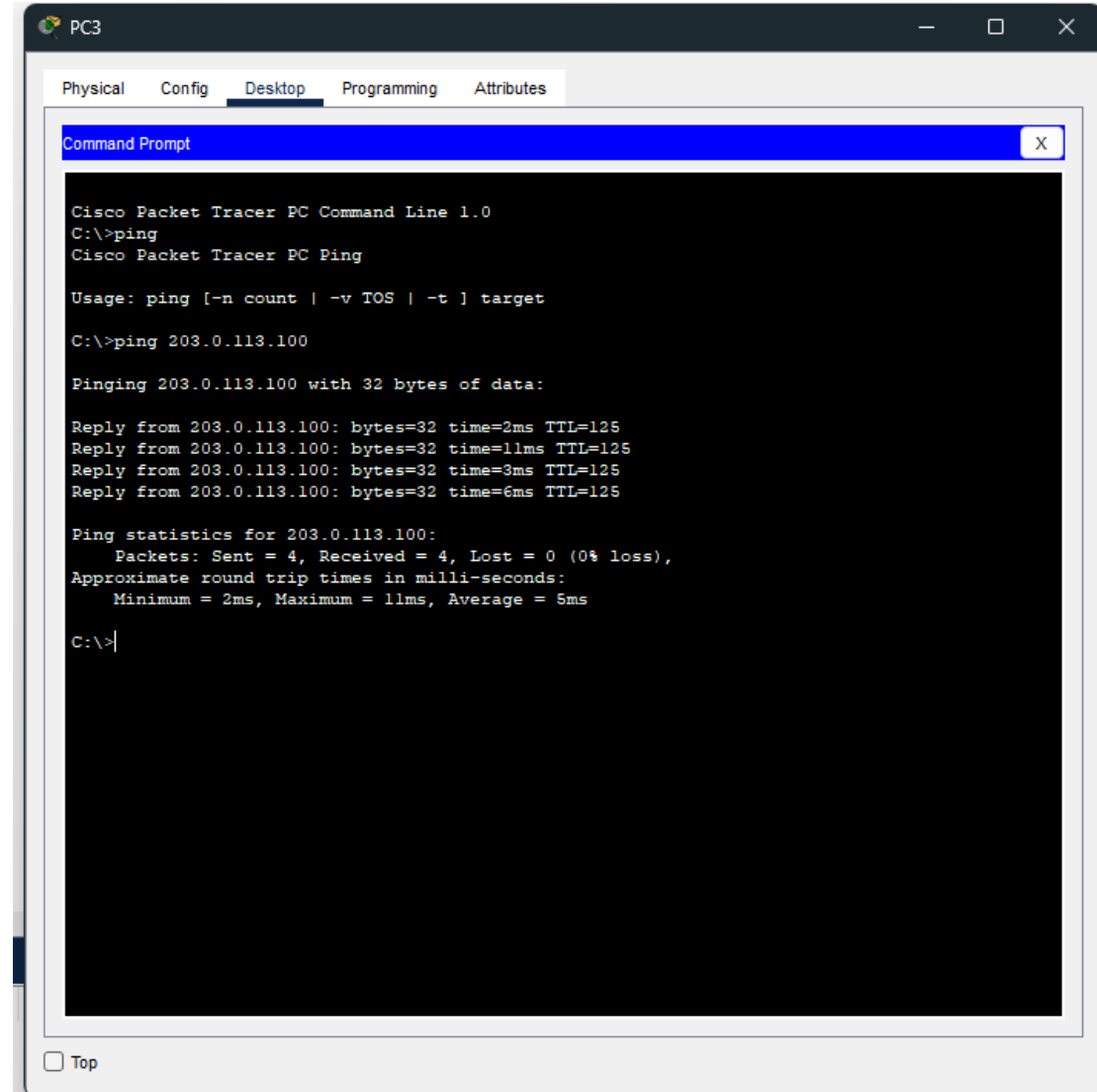
Request timed out.
Reply from 203.0.113.100: bytes=32 time=14ms TTL=124
Reply from 203.0.113.100: bytes=32 time=20ms TTL=124
Reply from 203.0.113.100: bytes=32 time=16ms TTL=124

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:\>|
```



## 5. PRUEBAS



The screenshot shows a window titled "PC3" with tabs for "Physical", "Config", "Desktop", "Programming", and "Attributes". The "Desktop" tab is active, displaying a "Command Prompt" window. The command prompt shows the execution of the "ping" command to the IP address 203.0.113.100. The output indicates that 4 packets were sent and received successfully with 0% loss. The round trip times are listed as 2ms, 11ms, 3ms, and 6ms, with an average of 5ms.

```
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

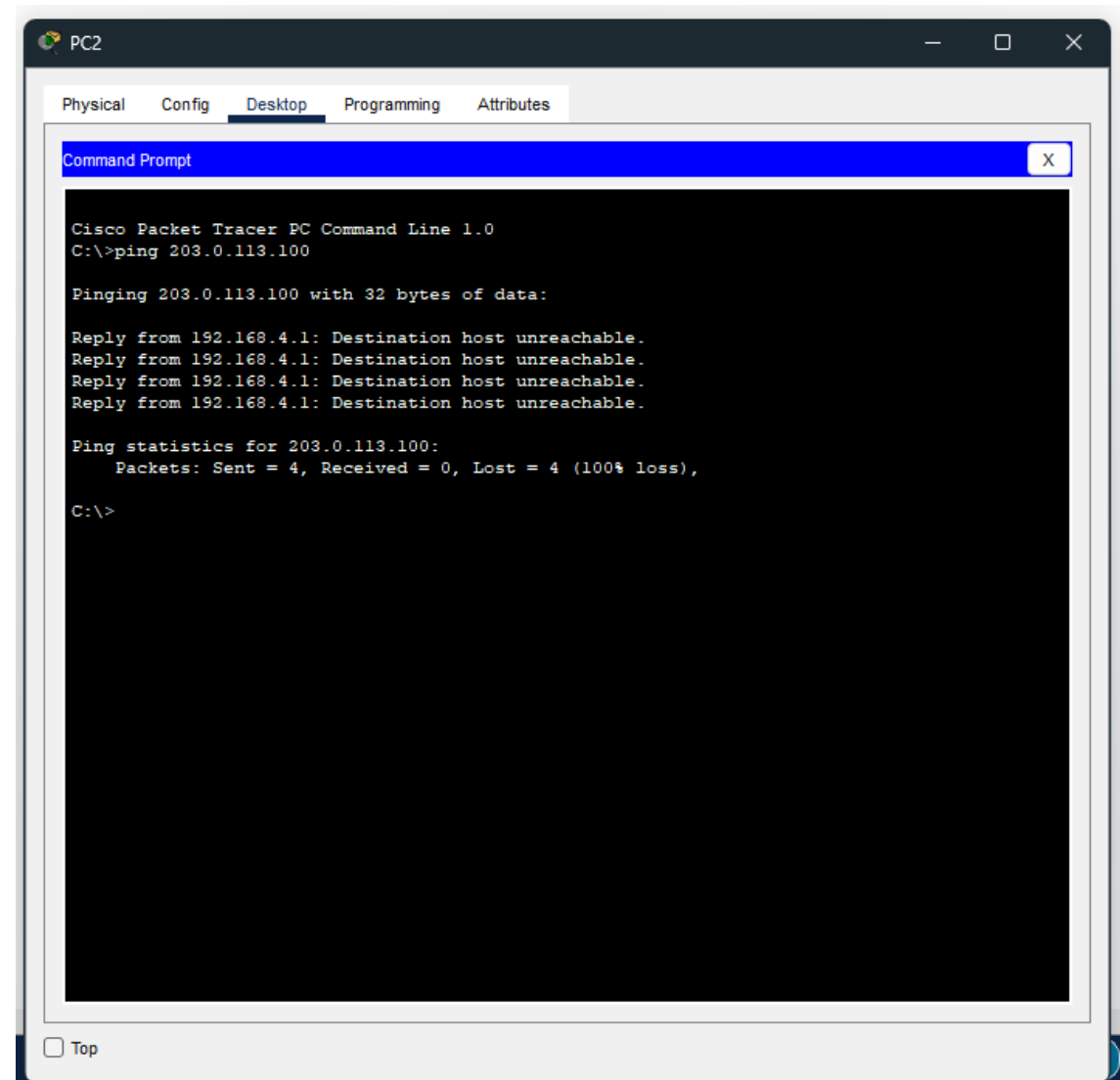
Pinging 203.0.113.100 with 32 bytes of data:

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:\>
```

## 5. PRUEBAS



The screenshot shows a window titled "PC2" with tabs for Physical, Config, Desktop, Programming, and Attributes. The Desktop tab is active, displaying a "Command Prompt" window. The Command Prompt shows the output of a ping command to 203.0.113.100, which failed with 100% loss.

```
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:\>
```

At the bottom left of the Command Prompt window, there is a checkbox labeled "Top".