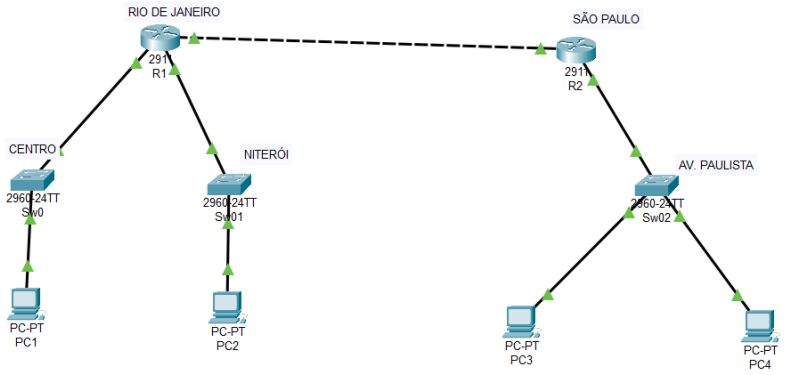
Parte 1. TOPOLOGIA:



Parte 2:

Subrede	Endereçamento	Endereços válidos
192.168.1.0/26	192.168.1.0 - 192.168.1.63	192.168.1.1 - 192.168.1.62
192.168.1.64/26	192.168.1.64 - 192.168.1.127	192.168.1.65 - 192.168.1.126
192.168.1.128./26	192.168.1.128 - 192.168.1.191	192.168.1.129 - 192.168.1.190
192.168.1.192/30	192.168.1.192 - 192.168.1.195	192.168.1.193 - 192.168.1.194

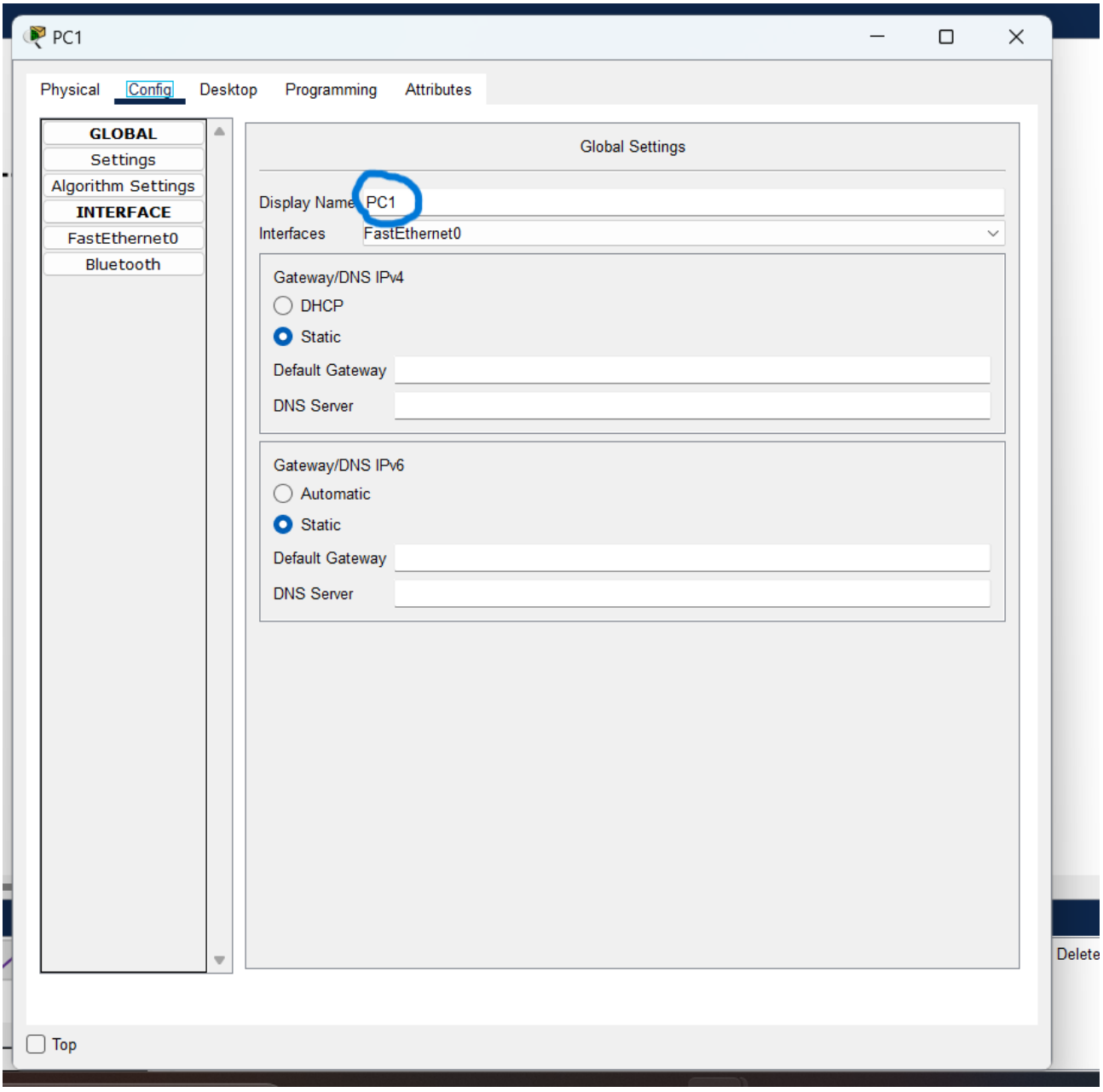
Parte 3: *Endereçamento*:

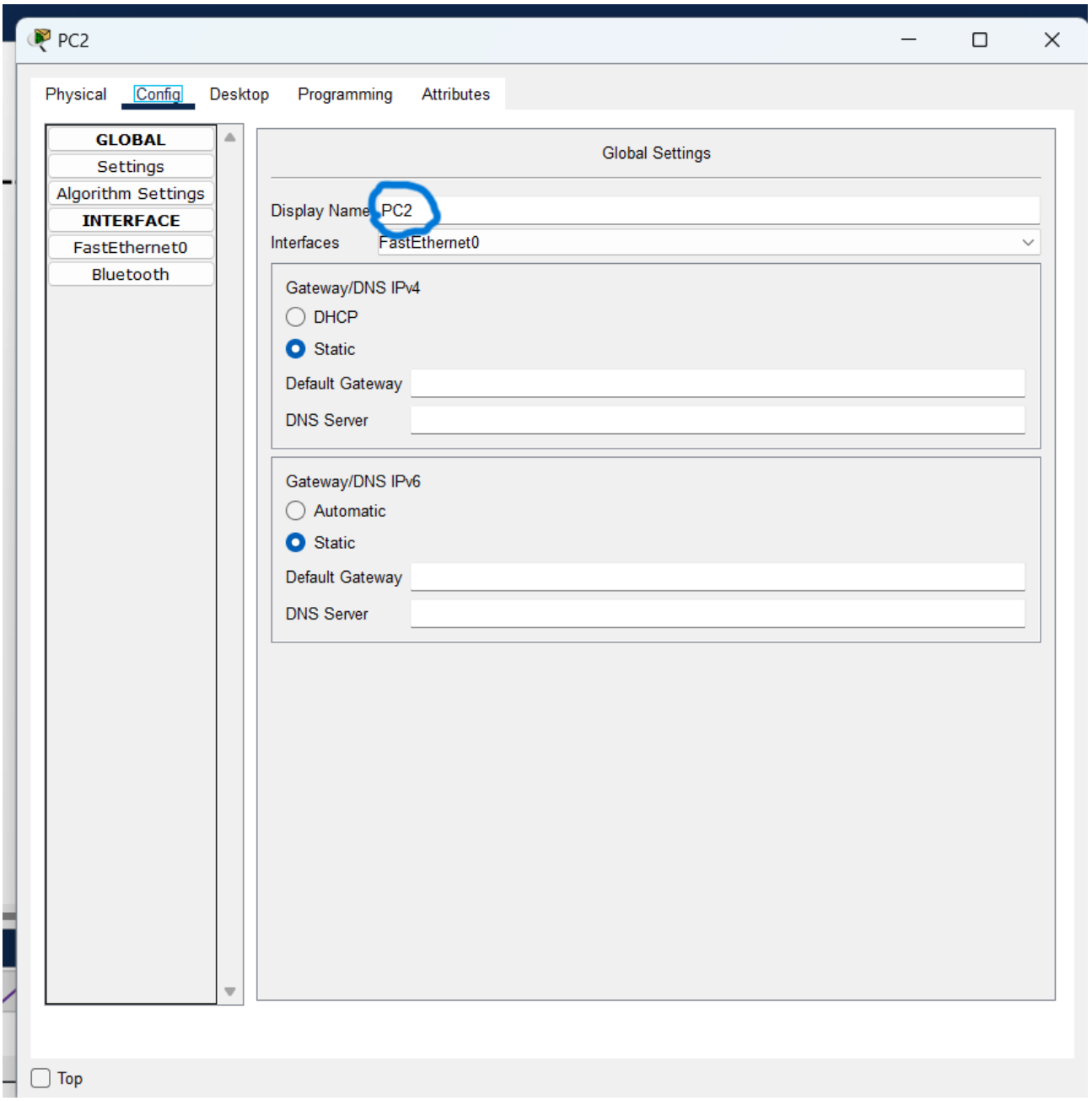
Dispositivo	Interface	Endereço IP	Máscara de Rede	Gateway Padrão
R1	*gig0/0*	192.168.1.3	255.255.255.192	-
R1	*gig0/1*	192.168.1.67	255.255.255.192	-
R1	*gig0/2*	192.168.1.193	255.255.255.252	-
R2	*gig0/0*	192.168.1.132	255.255.255.192	-
R2	*gig0/2*	192.168.1.194	255.255.255.252	-
Pc1	*FA0*	192.168.1.1	255.255.255.192	192.168.1.3
Pc2	*FA0*	192.168.1.65	255.255.255.192	192.168.1.67
Pc3	*FA0*	192.168.1.129	255.255.255.192	192.168.1.132
Pc4	*FA0*	192.168.1.130	255.255.255.192	192.168.1.132
Sw0	*vlan1*	192.168.1.2	255.255.255.192	-

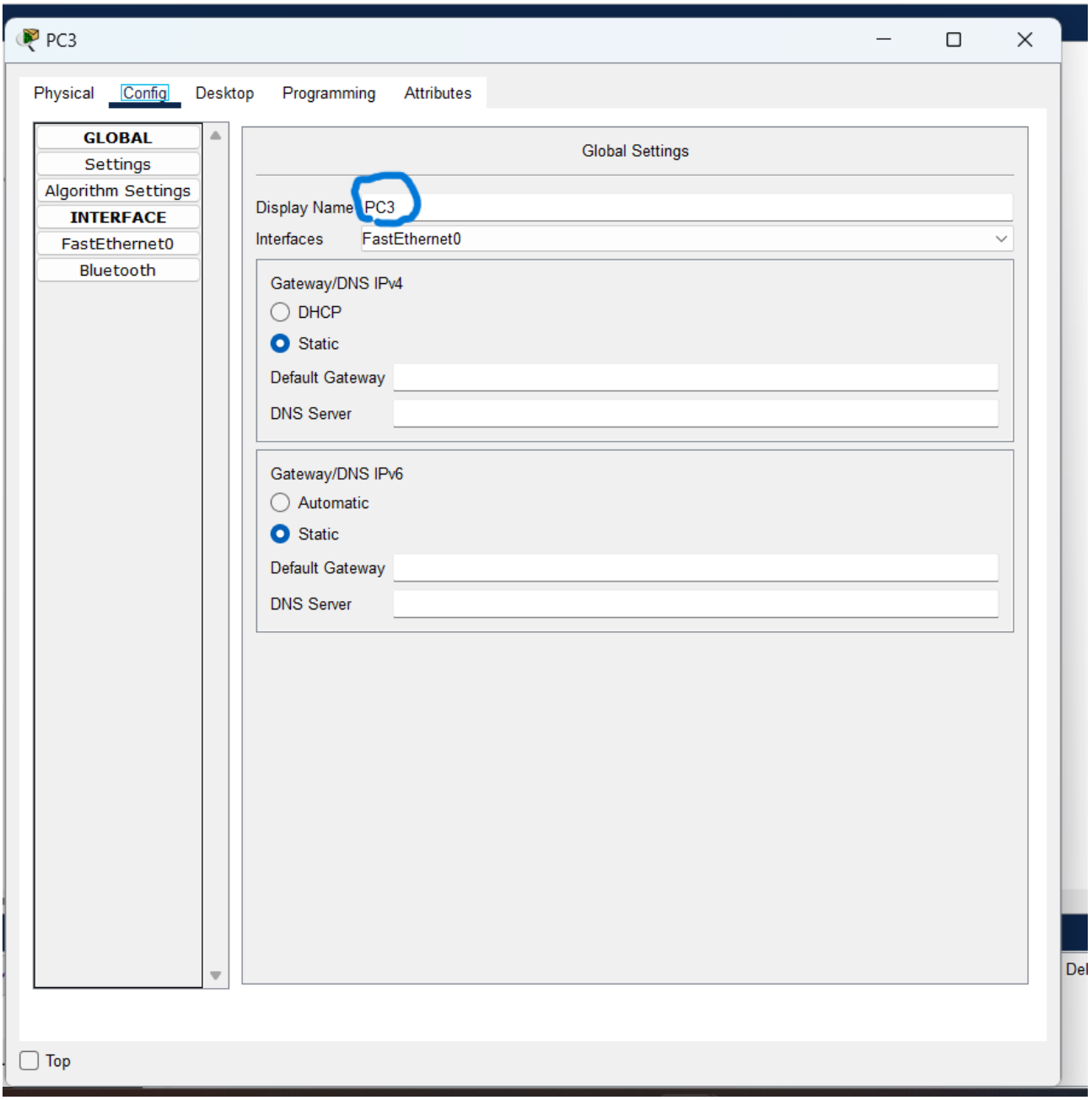
Sw01	*vlan1*	192.168.1.66	255.255.255.192	-
Sw02	*vlan1*	192.168.1.13 1	255.255.255.192	-

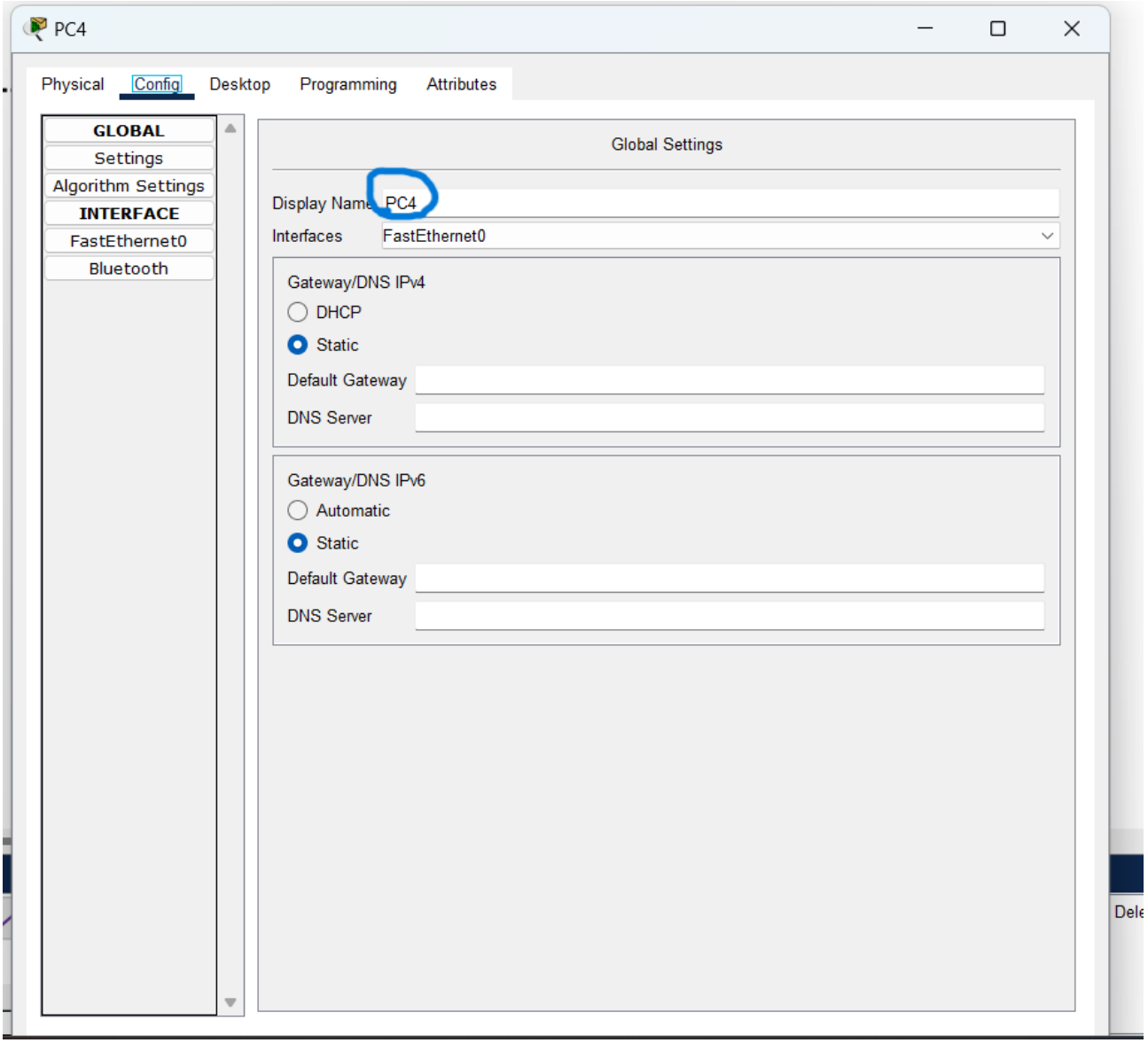
Parte 4: Configuração dos PCs:

a. Nome dos PCs:

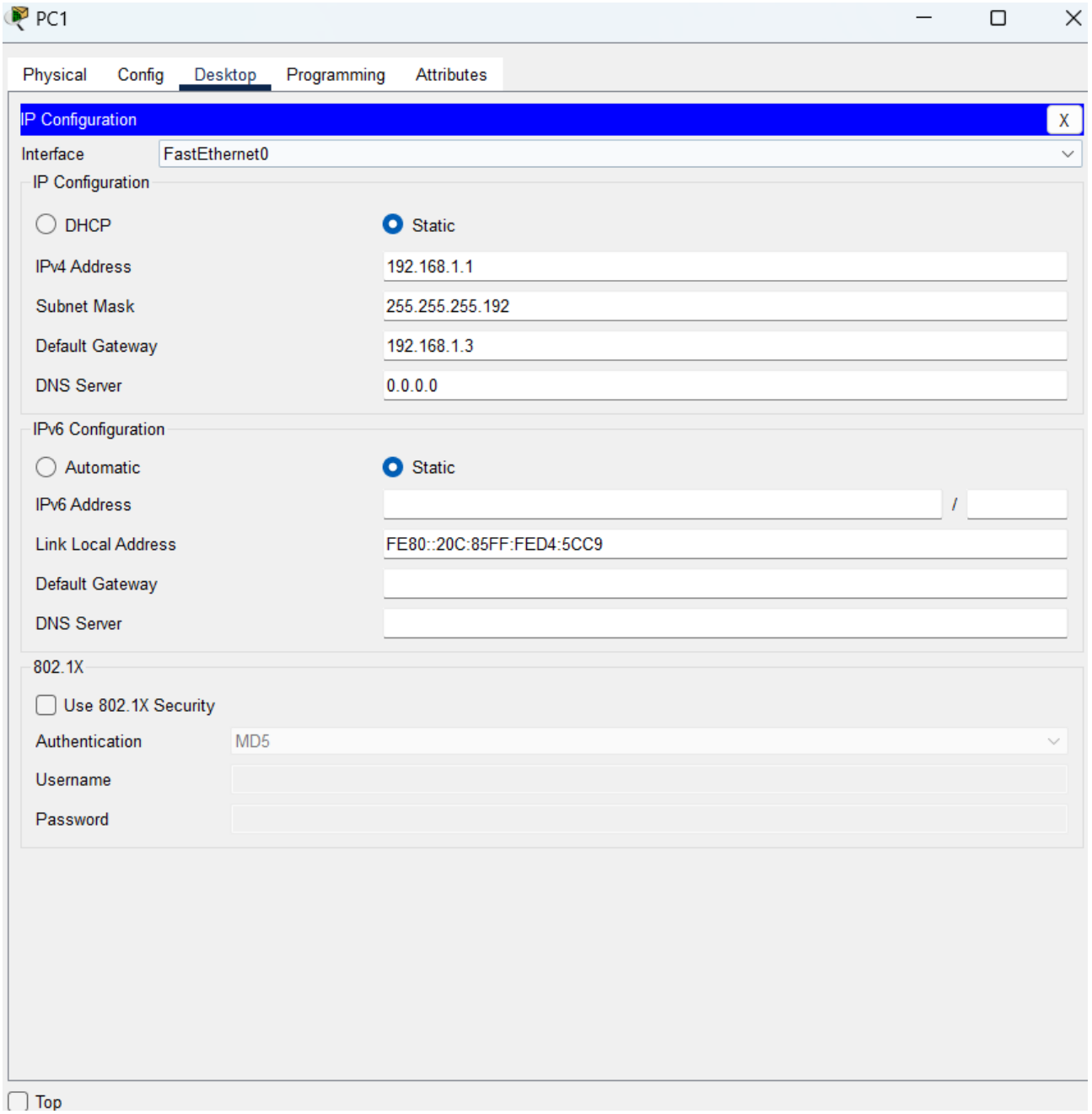


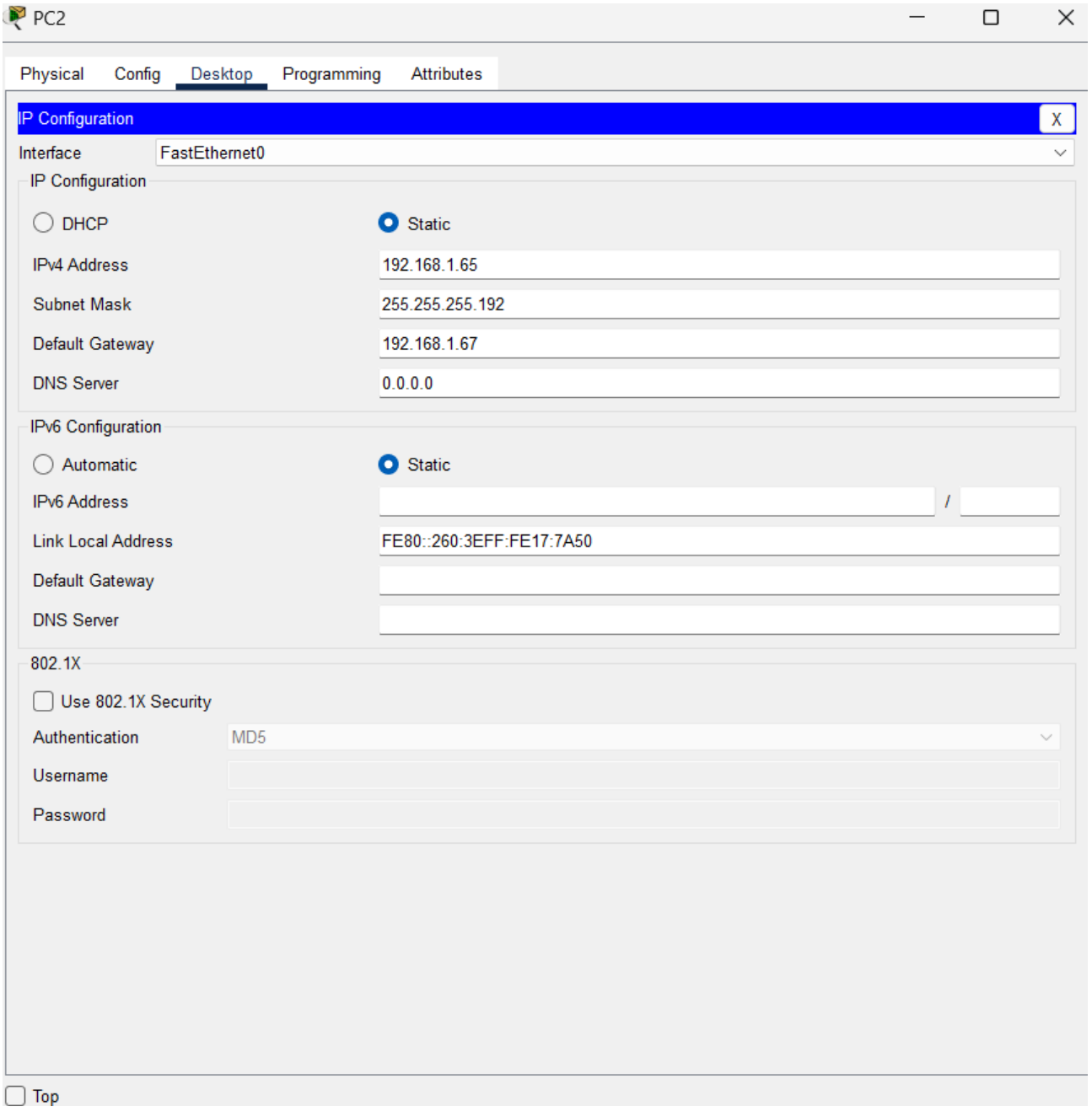

PC2
Physical
Config
Desktop
Programming
Attributes
GLOBAL
Settings
Algorithm Settings
INTERFACE
FastEthernet0
Bluetooth
Global Settings
Display Name
PC2
Interfaces
FastEthernet0
Gateway/DNS IPv4
DHCP
Static
Default Gateway
DNS Server
Gateway/DNS IPv6
Automatic
Static
Default Gateway
DNS Server
Top

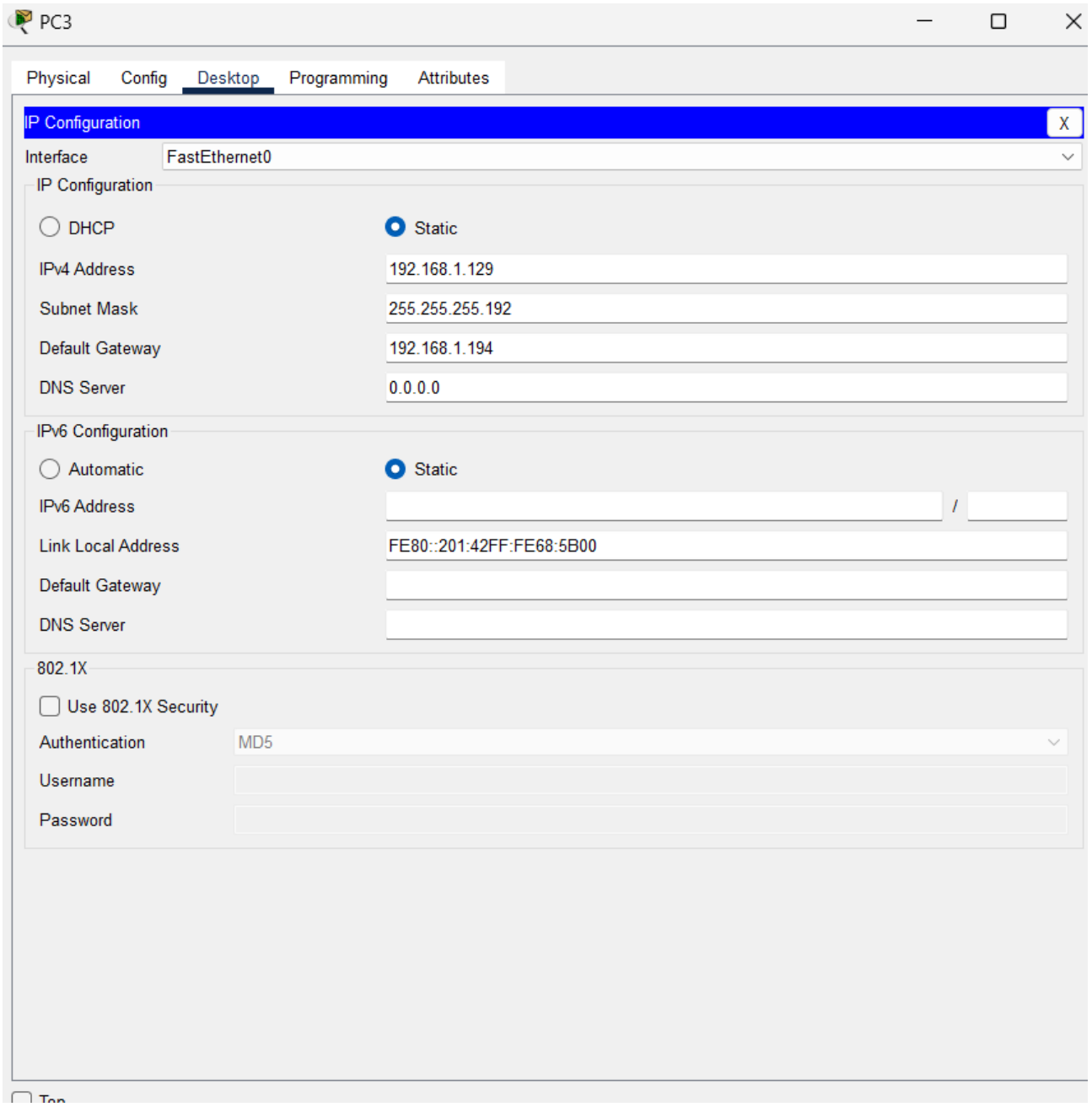

PC3
Physical
Config
Desktop
Programming
Attributes
GLOBAL
Settings
Algorithm Settings
INTERFACE
FastEthernet0
Bluetooth
Global Settings
Display Name
PC3
Interfaces
FastEthernet0
Gateway/DNS IPv4
DHCP
Static
Default Gateway
DNS Server
Gateway/DNS IPv6
Automatic
Static
Default Gateway
DNS Server
Top

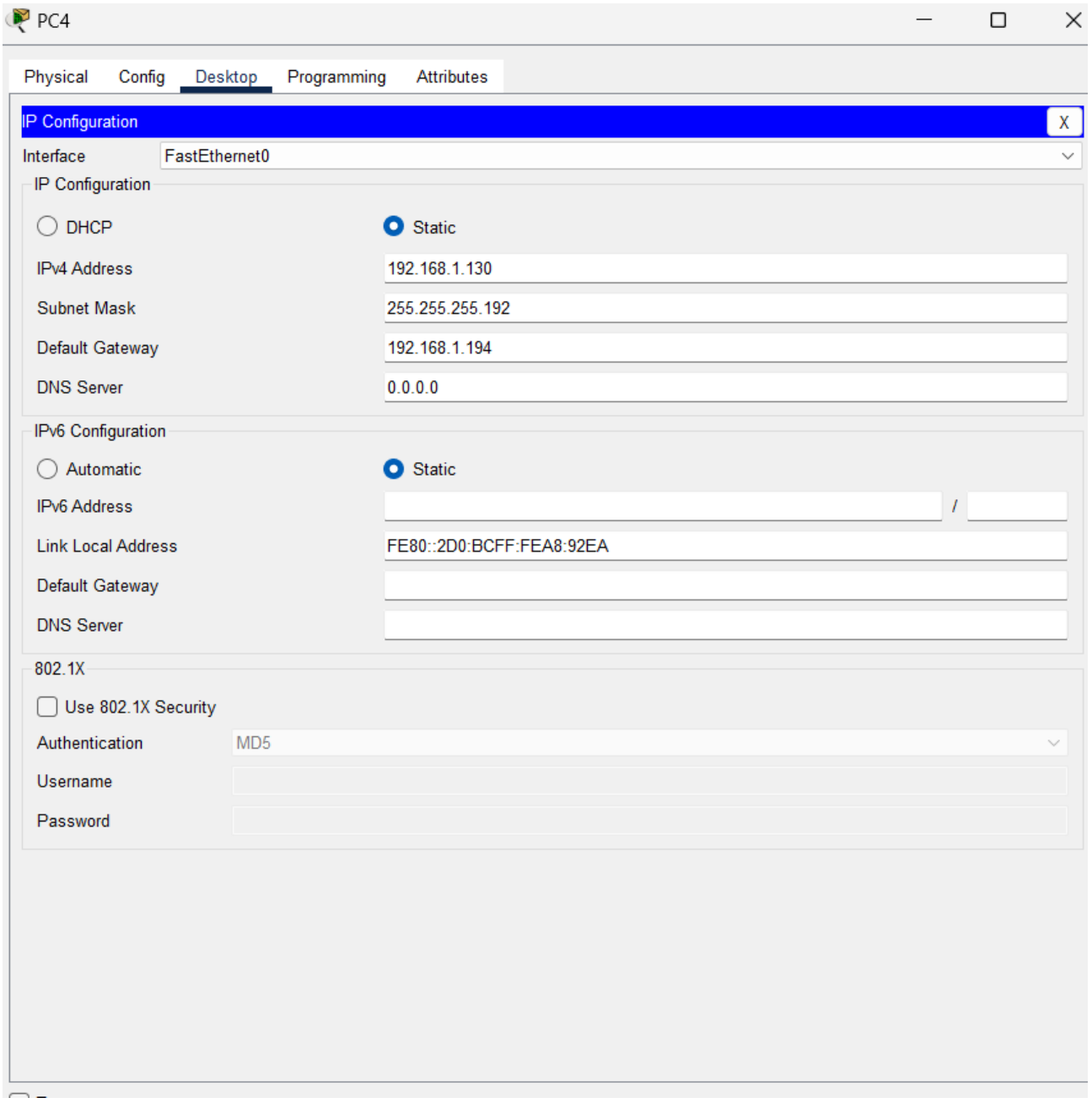

PC4
Physical
Config
Desktop
Programming
Attributes
GLOBAL
Settings
Algorithm Settings
INTERFACE
FastEthernet0
Bluetooth
Global Settings
Display Name
PC4
Interfaces
FastEthernet0
Gateway/DNS IPv4
DHCP
Static
Default Gateway
DNS Server
Gateway/DNS IPv6
Automatic
Static
Default Gateway
DNS Server

B e C: Configuração dos endereços IP e Gateway padrão dos PCs:




PC2
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
192.168.1.65
Subnet Mask
255.255.255.192
Default Gateway
192.168.1.67
DNS Server
0.0.0.0
IPv6 Configuration
Automatic
Static
IPv6 Address
/
Link Local Address
FE80::260:3EFF:FE17:7A50
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication
MD5
Username
Password
Top

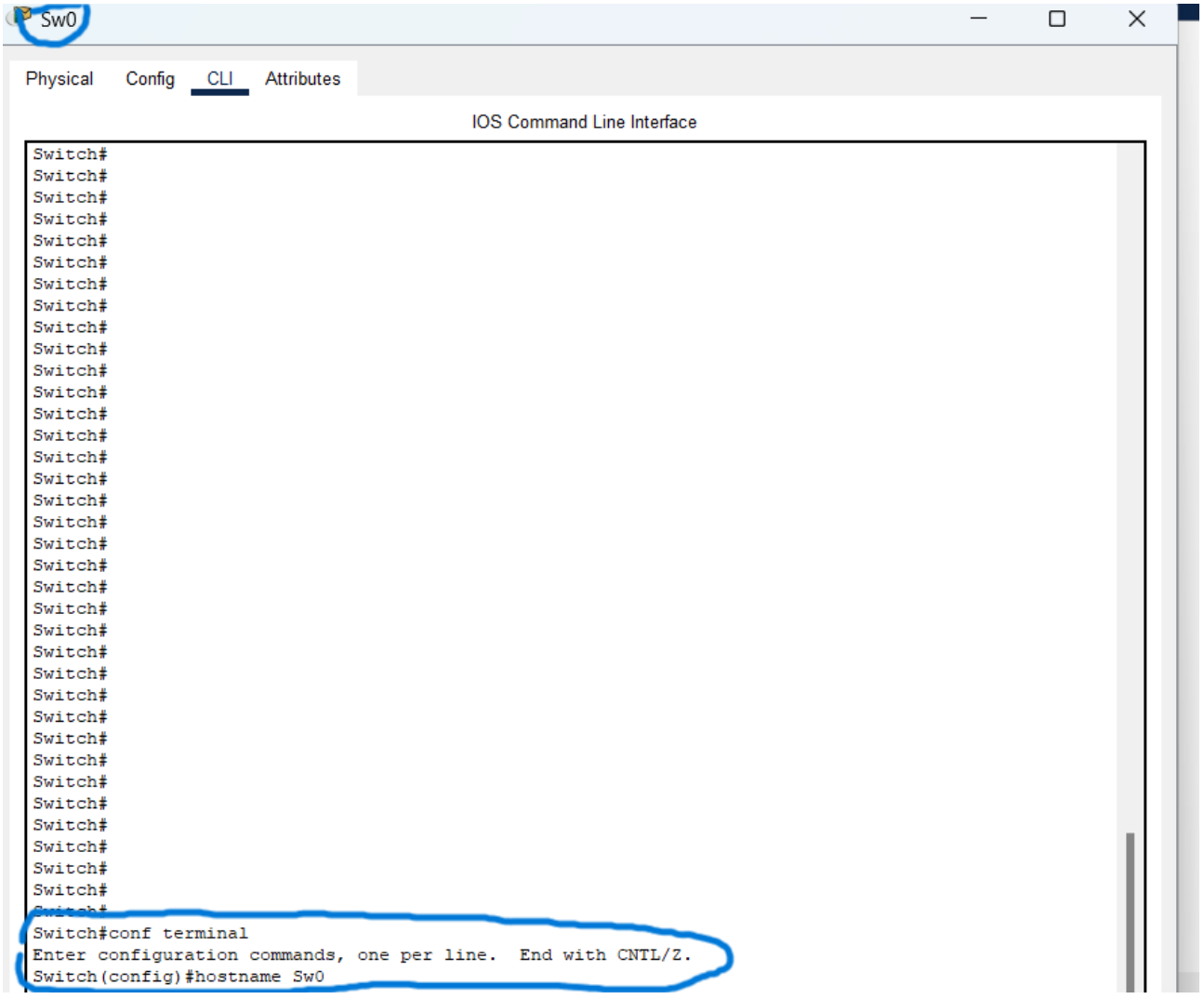

PC3
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
192.168.1.129
Subnet Mask
255.255.255.192
Default Gateway
192.168.1.194
DNS Server
0.0.0.0
IPv6 Configuration
Automatic
Static
IPv6 Address
/
Link Local Address
FE80::201:42FF:FE68:5B00
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication
MD5
Username
Password
Top

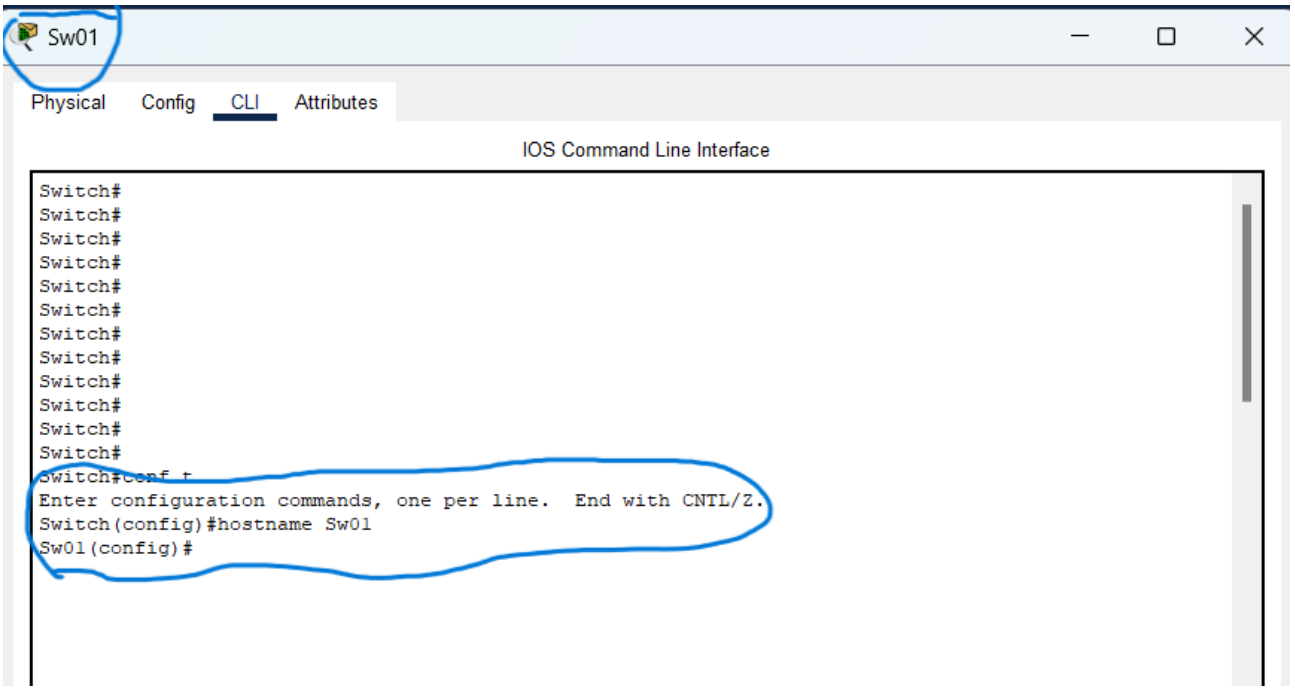

PC4
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
192.168.1.130
Subnet Mask
255.255.255.192
Default Gateway
192.168.1.194
DNS Server
0.0.0.0
IPv6 Configuration
Automatic
Static
IPv6 Address
/
Link Local Address
FE80::2D0:BCFF:FEA8:92EA
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication
MD5
Username
Password

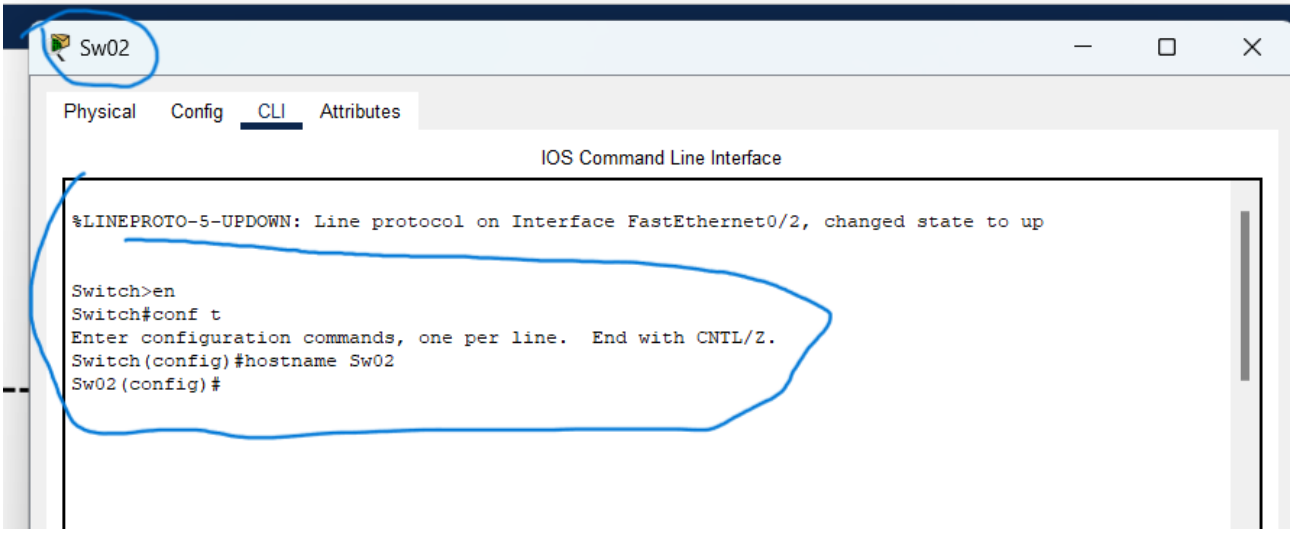
Parte 5: Configuração dos Switches:

a. Nome dos switches:

Observação: O “Sw0” corresponde ao switch no Centro do Rio de Janeiro. O “Sw01” corresponde ao switch em Niterói. O “Sw02” corresponde ao switch na Av. Paulista, em São Paulo.




Sw01
Physical
Config
CLI
Attributes
IOS Command Line Interface
Switch#
Switch#
Switch#
Switch#
Switch#
Switch#
Switch#
Switch#
Switch#
Switch#
Switch#
Switch#
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname Sw01
Sw01(config)#


Sw02
Physical
Config
CLI
Attributes
IOS Command Line Interface
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to up
Switch>en
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname Sw02
Sw02(config)#

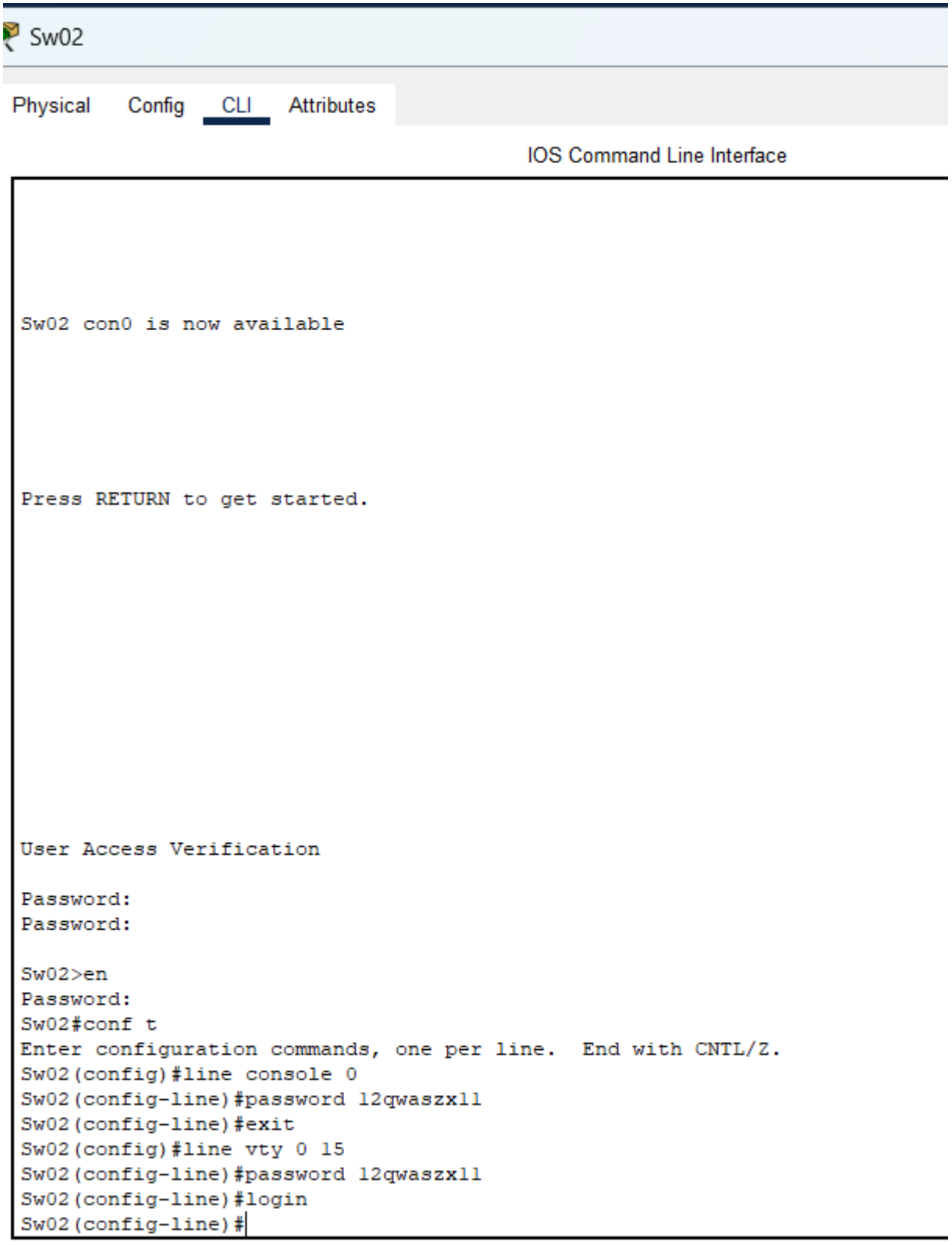
b. senha para o acesso console e senhas vty:

Sw01

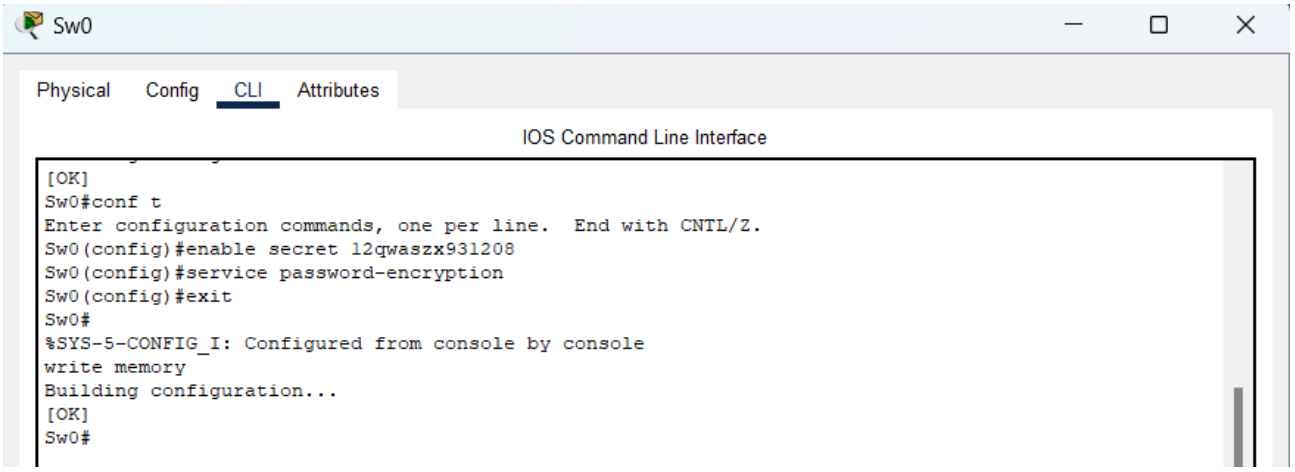
Physical Config CLI Attributes

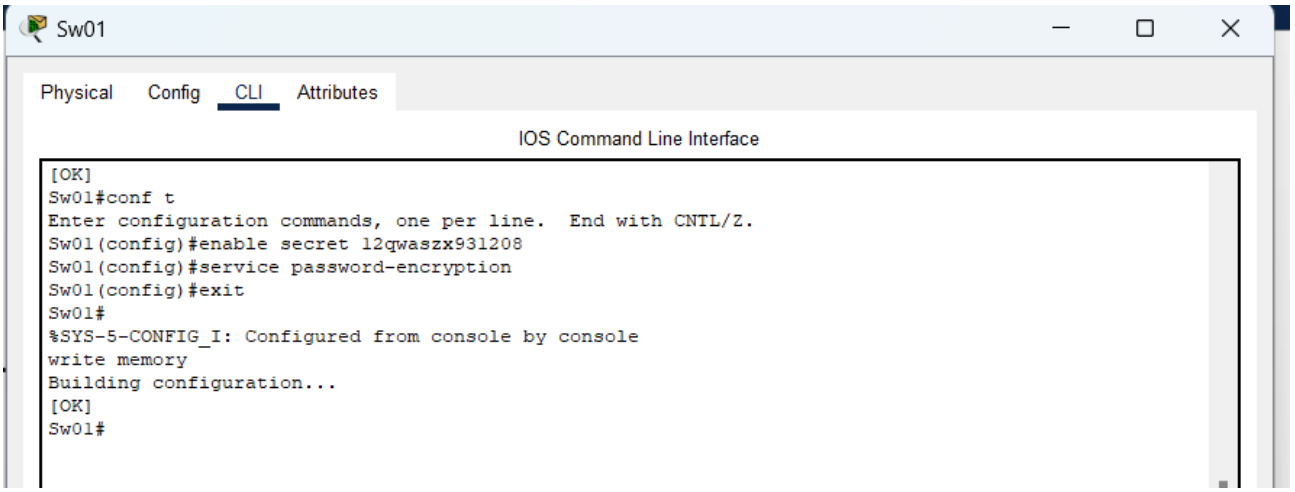
IOS Command Line Interface

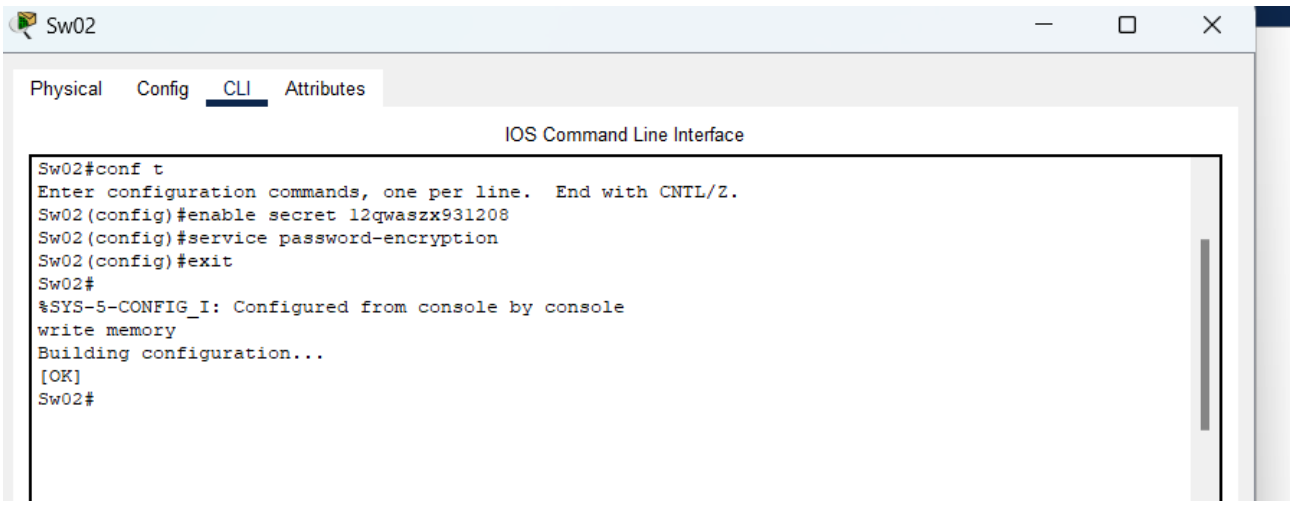
```
Press RETURN to get started.



User Access Verification

Password:

Sw01>
Sw01>en
Password:
Sw01#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Sw01(config)#line 0 console
                    ^
% Invalid input detected at '^' marker.

Sw01(config)#line console 0
Sw01(config-line)#password 12qwaszx11
Sw01(config-line)#exit
Sw01(config)#line vty 0 15
Sw01(config-line)#paassword 12qwaszx931208
                    ^
% Invalid input detected at '^' marker.

Sw01(config-line)#password 12qwaszx931208
Sw01(config-line)#login
```


Sw02
Physical
Config
CLI
Attributes
IOS Command Line Interface
Sw02 con0 is now available
Press RETURN to get started.
User Access Verification
Password:
Password:
Sw02>en
Password:
Sw02#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Sw02(config)#line console 0
Sw02(config-line)#password 12qwaszx11
Sw02(config-line)#exit
Sw02(config)#line vty 0 15
Sw02(config-line)#password 12qwaszx11
Sw02(config-line)#login
Sw02(config-line)#

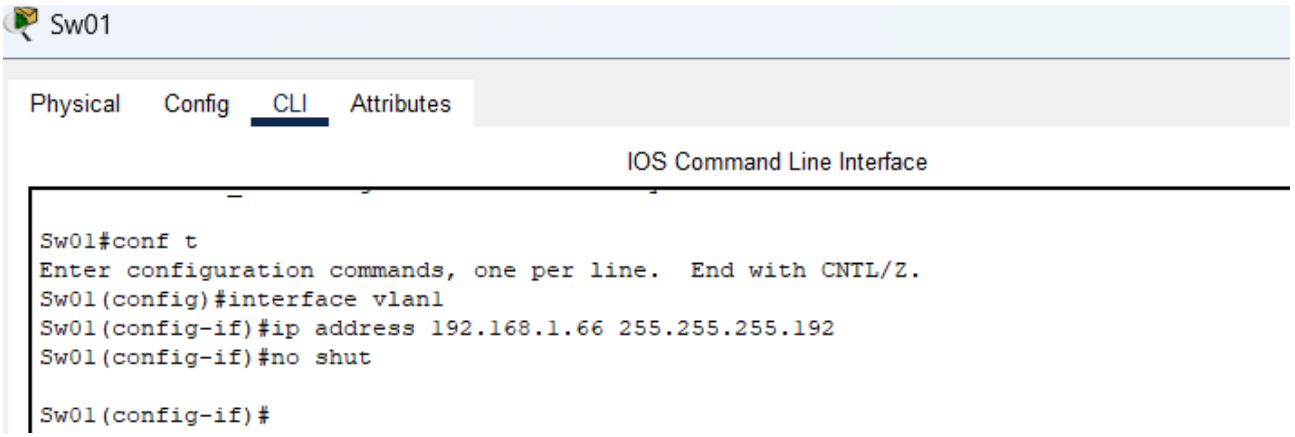
C, D, e F: Senha para o acesso EXEC privilegiado, senhas criptografadas e configurações salvas:



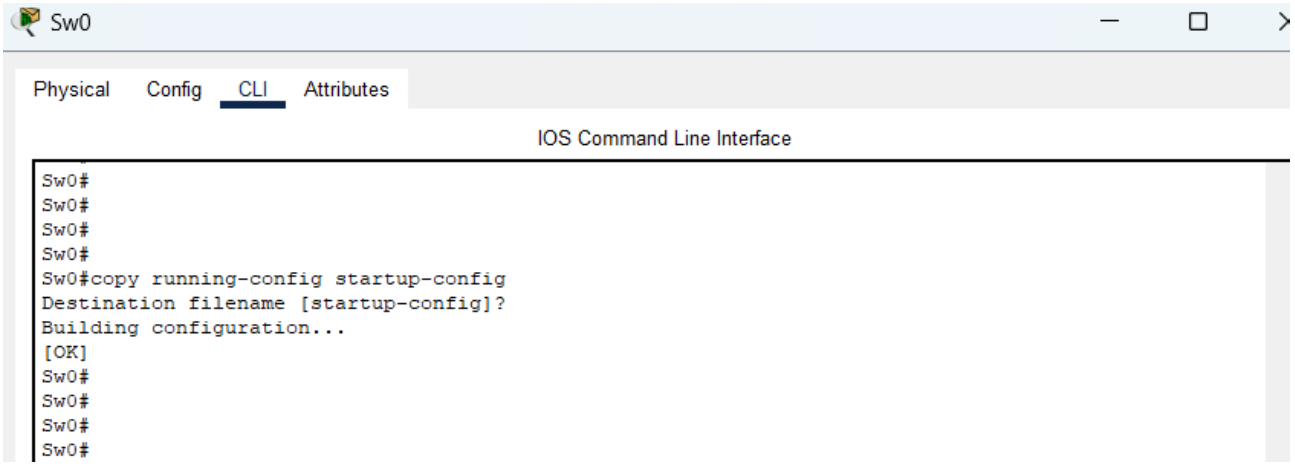


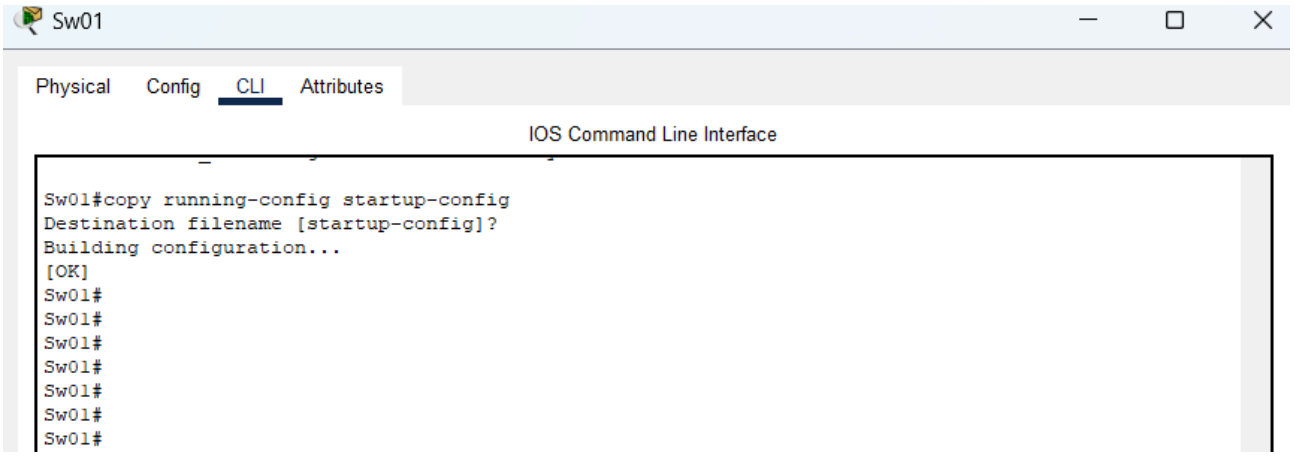


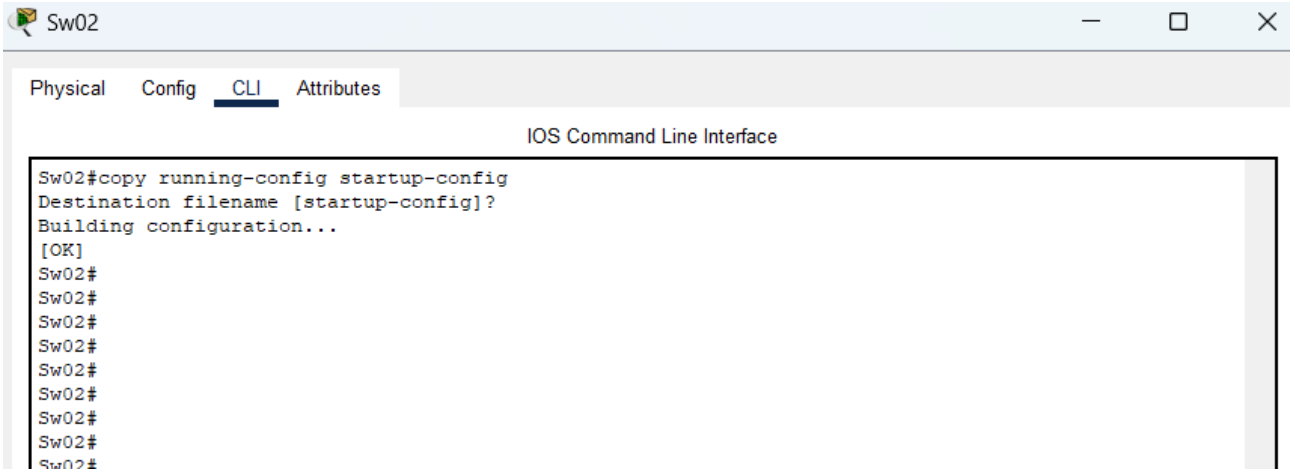
e. IP das VLANS:



f. Salvando as configs:

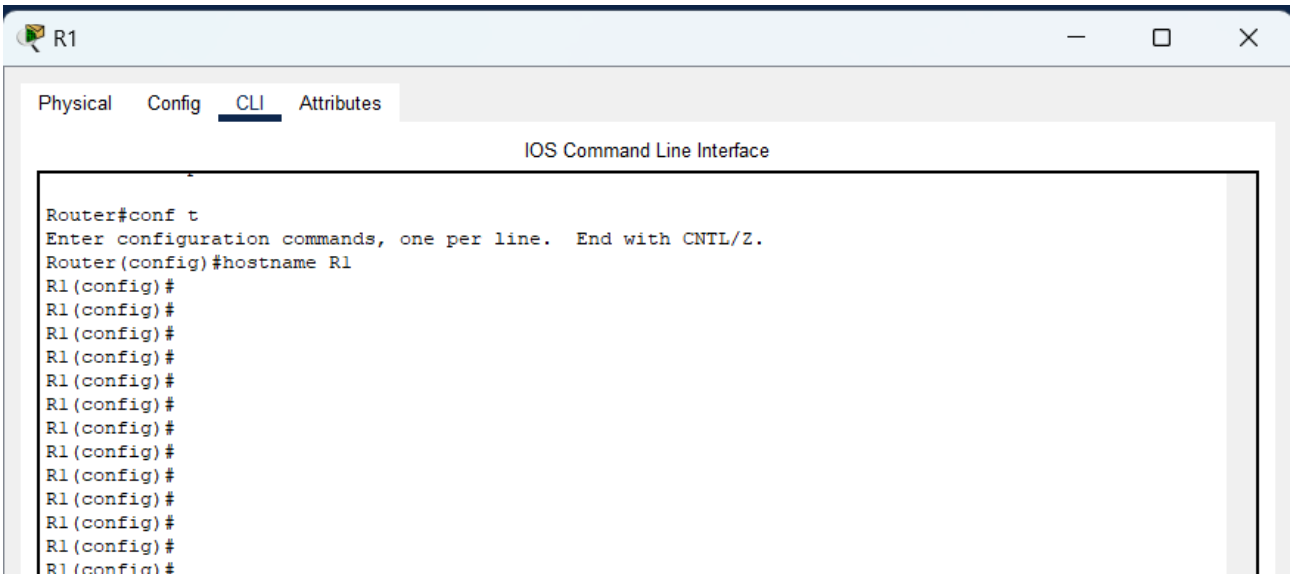


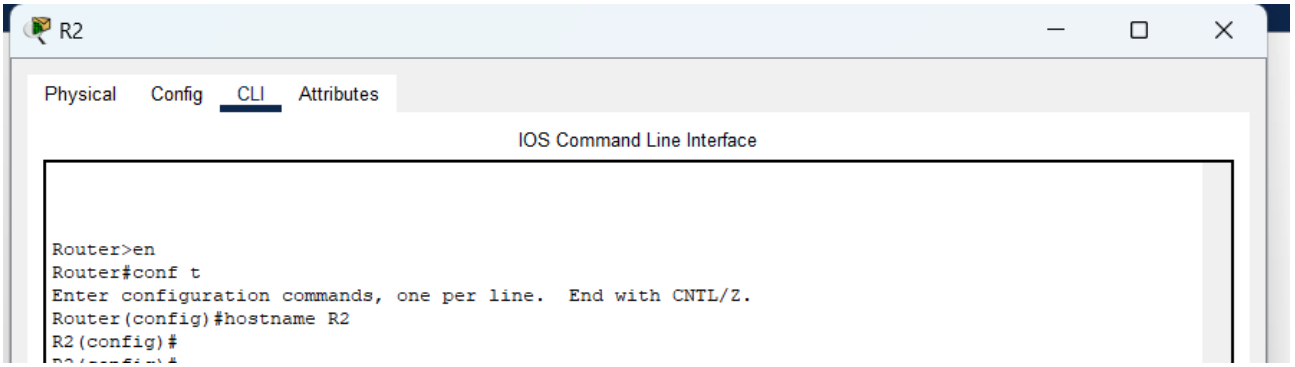




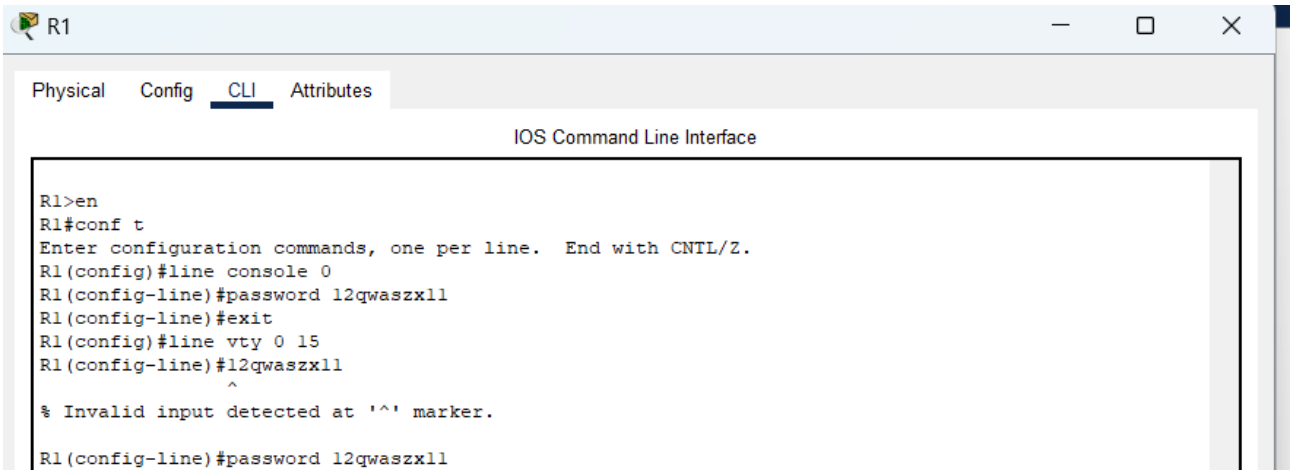
Parte 6: Configuração dos roteadores:

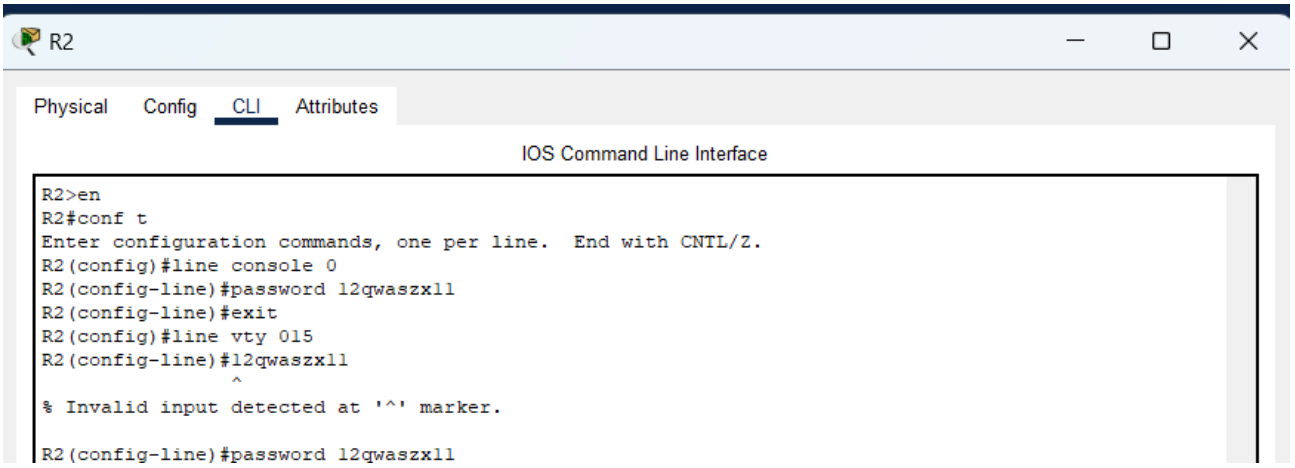
a. Nome dos roteadores:



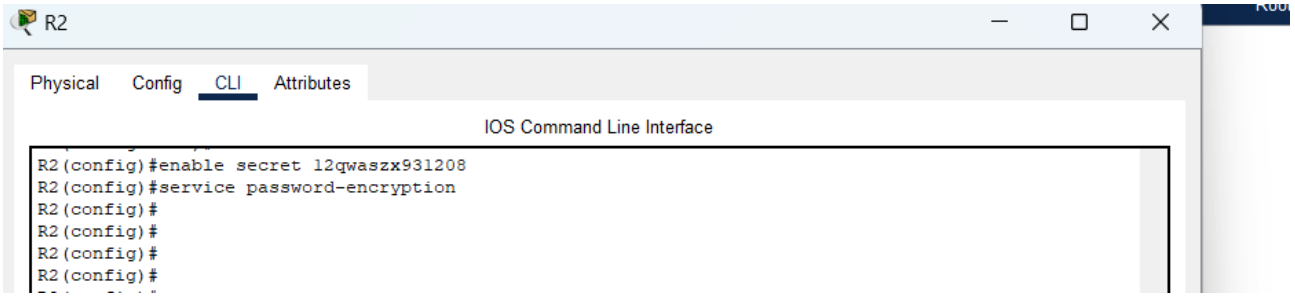


b. Senhas para o acesso console e senhas vty:

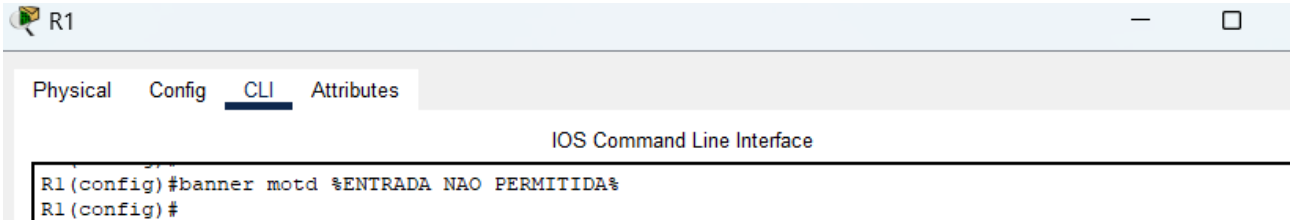


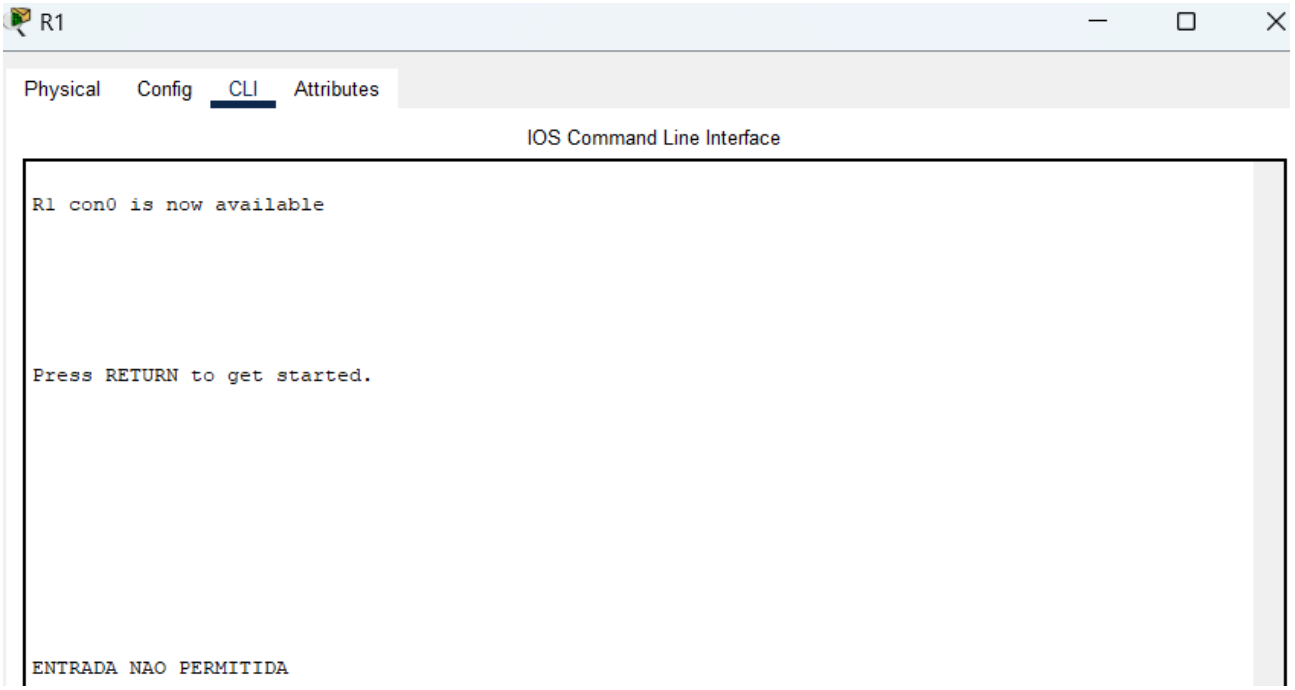


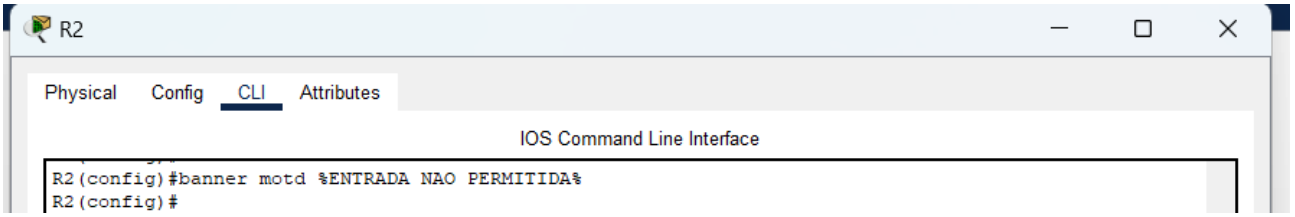
C e D: Senha para o acesso EXEC privilegiado e senhas criptografadas:

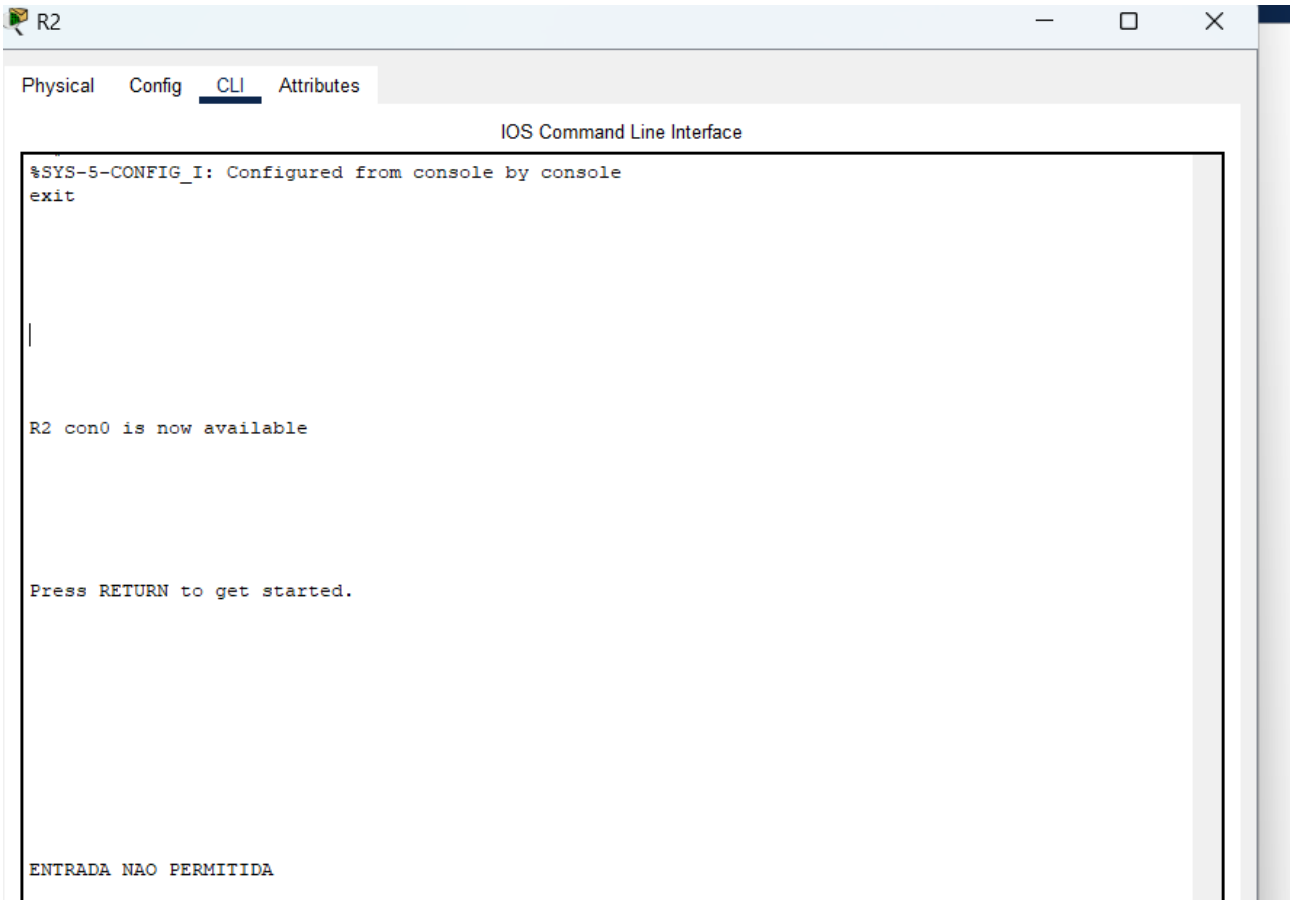


e. Banner:


R1
Physical
Config
CLI
Attributes
IOS Command Line Interface
R1(config)#banner motd %ENTRADA NAO PERMITIDA%
R1(config)#

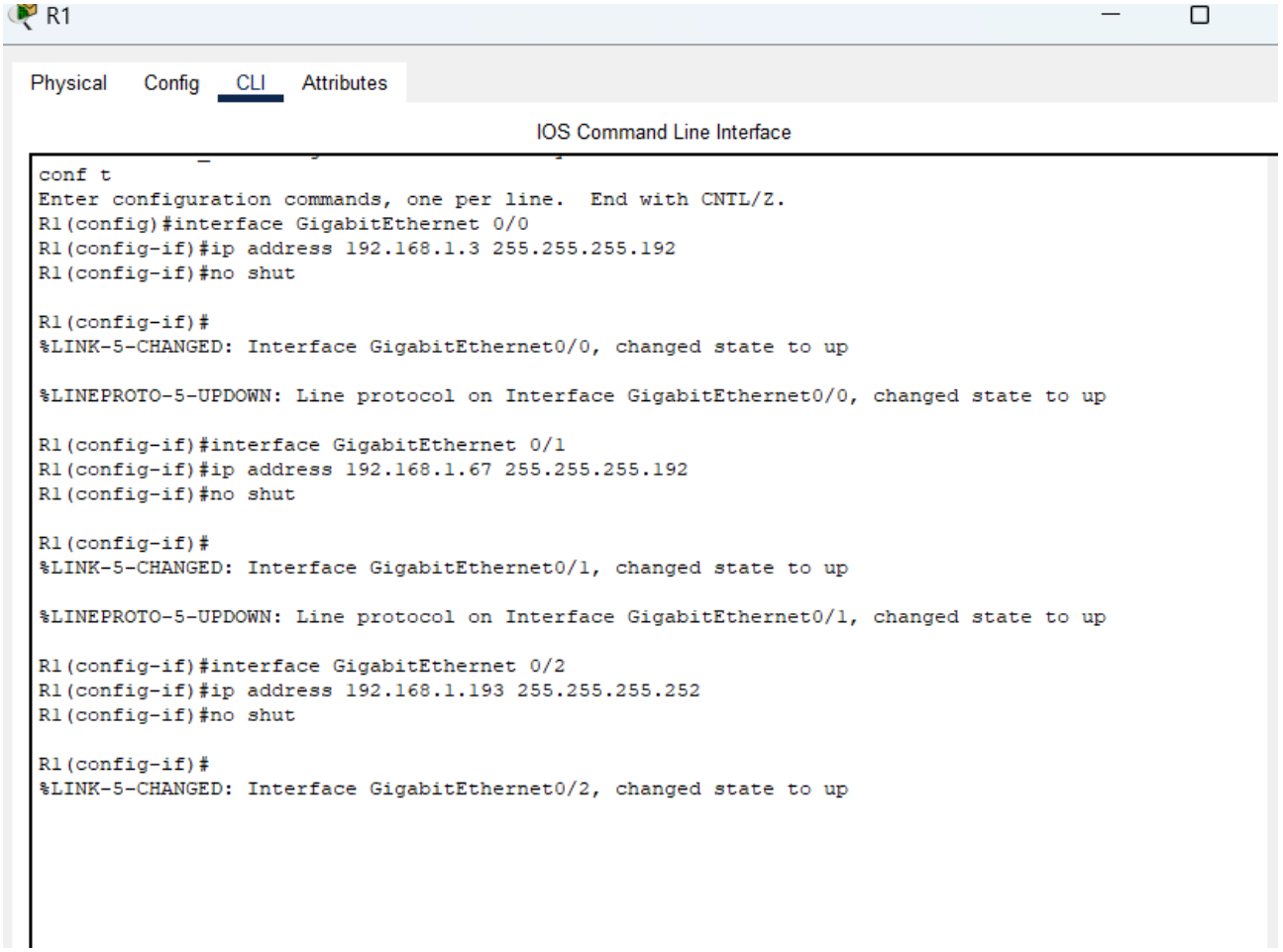

R1
Physical
Config
CLI
Attributes
IOS Command Line Interface
R1 con0 is now available
Press RETURN to get started.
ENTRADA NAO PERMITIDA

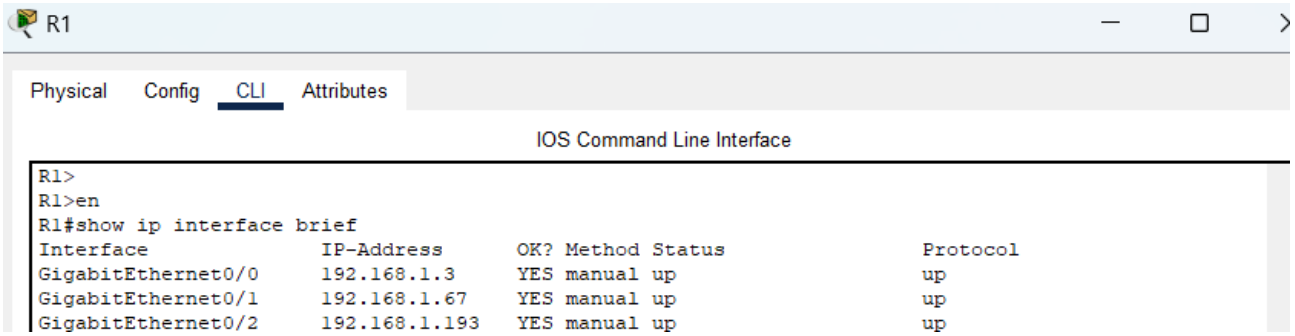

R2
Physical
Config
CLI
Attributes
IOS Command Line Interface
R2(config)#banner motd %ENTRADA NAO PERMITIDA%
R2(config)#


R2
Physical
Config
CLI
Attributes
IOS Command Line Interface
%SYS-5-CONFIG_I: Configured from console by console
exit
R2 con0 is now available
Press RETURN to get started.
ENTRADA NAO PERMITIDA

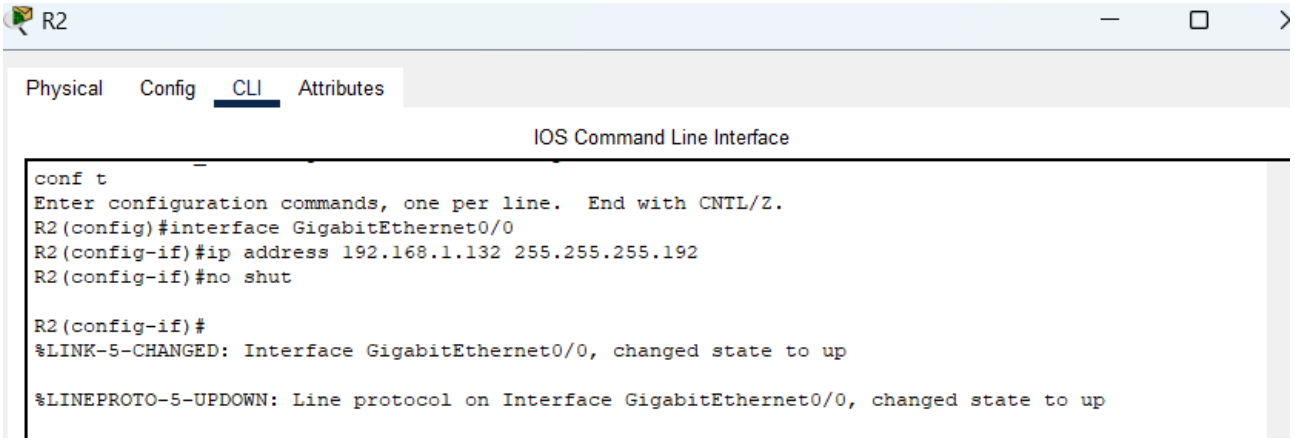
f. configurando o endereçamento IP para os roteadores:

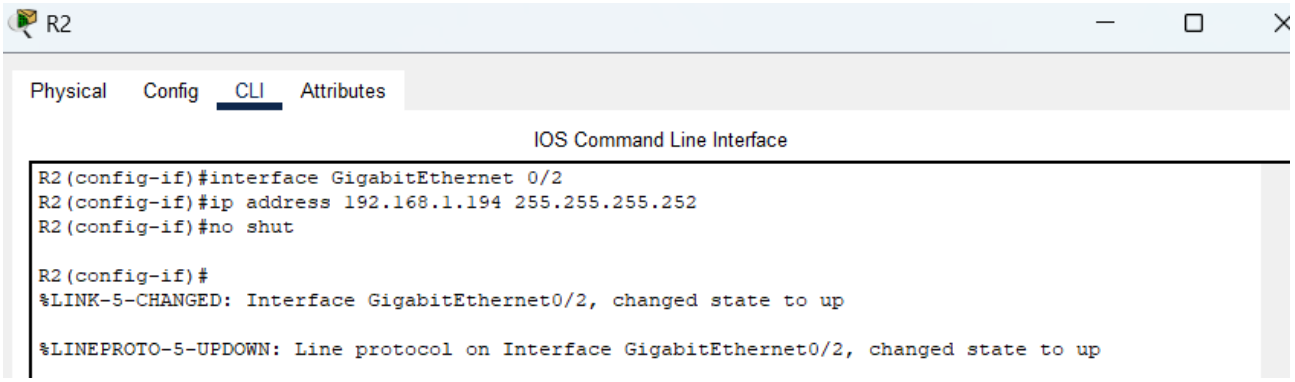
Roteador 1:

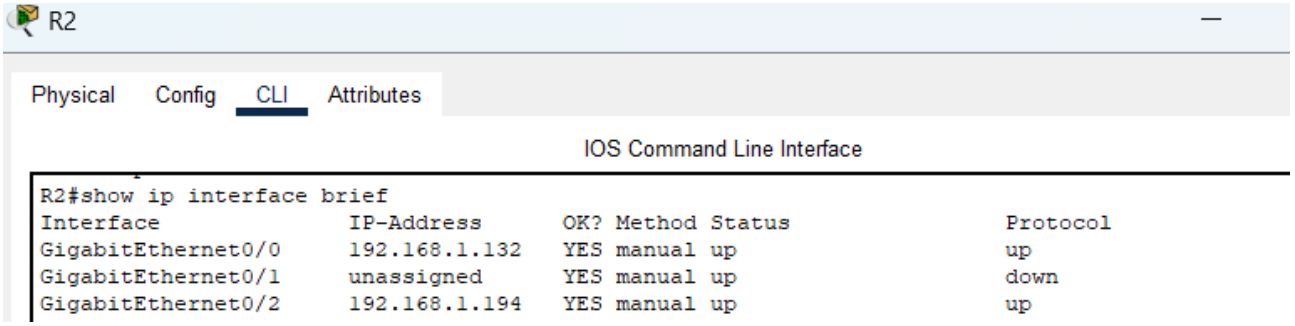




Roteador 2:


R2
Physical
Config
CLI
Attributes
IOS Command Line Interface
conf t
Enter configuration commands, one per line. End with CNTL/Z.
R2(config)#interface GigabitEthernet0/0
R2(config-if)#ip address 192.168.1.132 255.255.255.192
R2(config-if)#no shut
R2(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0, changed state to up


R2
Physical
Config
CLI
Attributes
IOS Command Line Interface
R2(config-if)#interface GigabitEthernet 0/2
R2(config-if)#ip address 192.168.1.194 255.255.255.252
R2(config-if)#no shut
R2(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/2, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/2, changed state to up

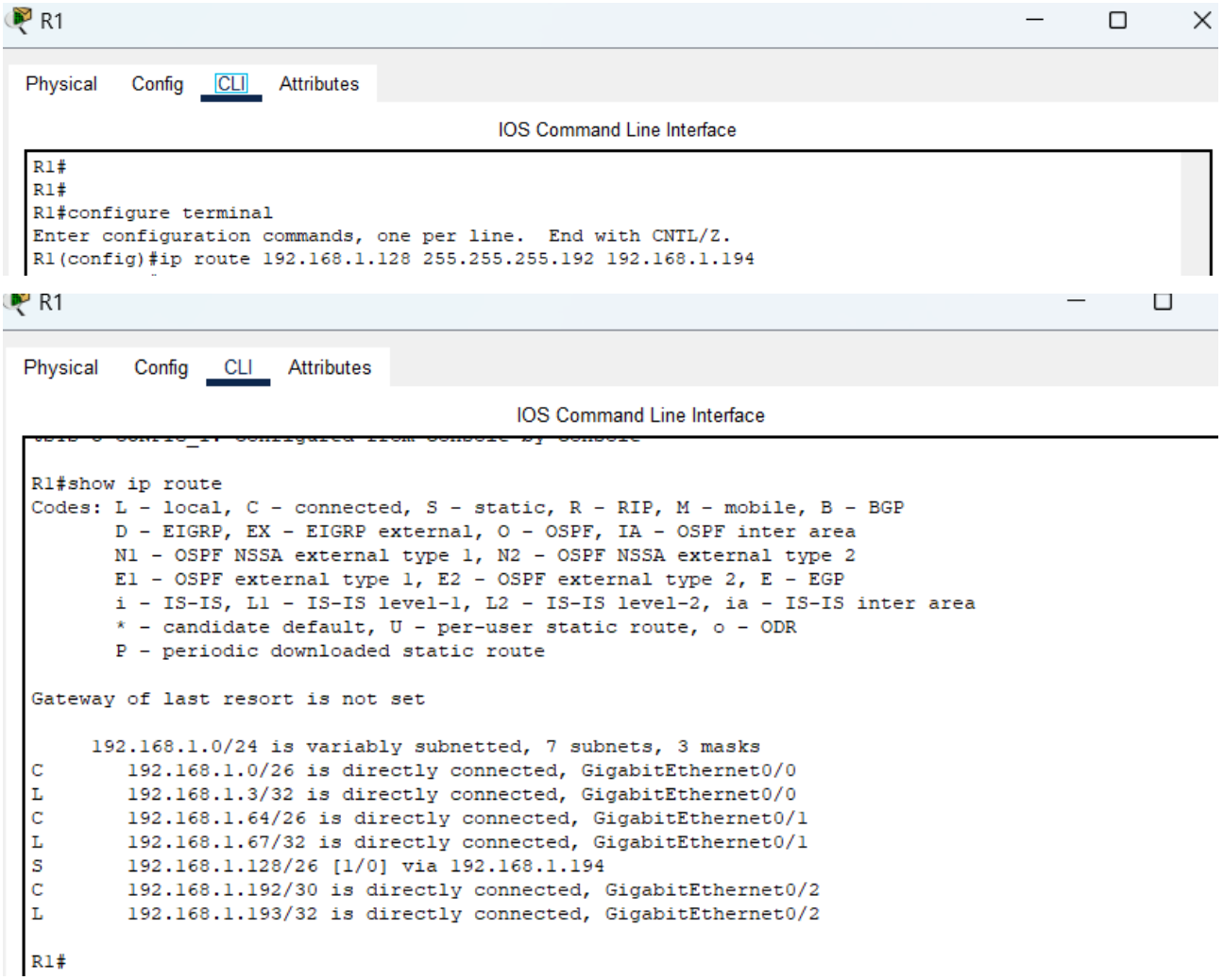

R2
Physical
Config
CLI
Attributes
IOS Command Line Interface
R2#show ip interface brief
Interface IP-Address OK? Method Status Protocol
GigabitEthernet0/0 192.168.1.132 YES manual up up
GigabitEthernet0/1 unassigned YES manual up down
GigabitEthernet0/2 192.168.1.194 YES manual up up

g. Salvando:

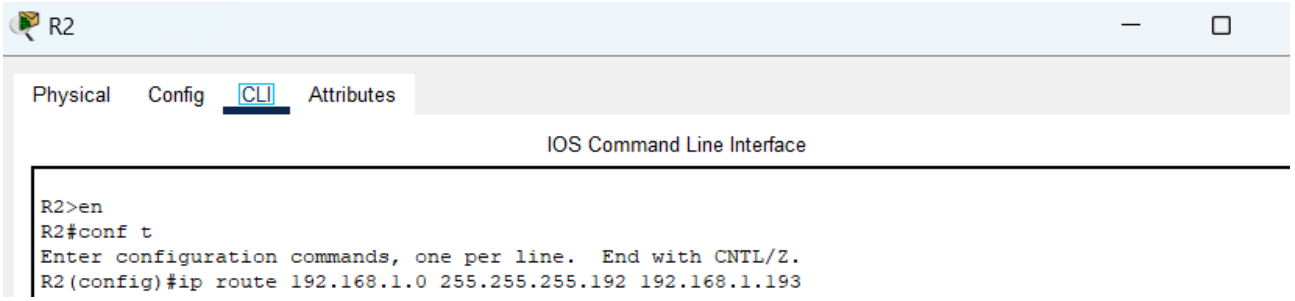

R1
Physical
Config
CLI
Attributes
IOS Command Line Interface
R1>en
R1#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
R1#
R1#
R1#
R1#
R2
Physical
Config
CLI
Attributes
IOS Command Line Interface
en
R2#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
R2#
R2#

Parte 7:

a. Rota estática do roteador do RJ pro roteador de SP criada:



b. Rota estática do roteador de SP pro roteador de RJ criada:




```
R2#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R2(config)#ip route 192.168.1.64 255.255.255.192 192.168.1.193
R2(config)#exit
R2#
```

```
show ip route
Codes: L - local, C - connected, S - static, 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

     192.168.1.0/24 is variably subnetted, 6 subnets, 3 masks
S       192.168.1.0/26 [1/0] via 192.168.1.193
S       192.168.1.64/26 [1/0] via 192.168.1.193
C       192.168.1.128/26 is directly connected, GigabitEthernet0/0
L       192.168.1.132/32 is directly connected, GigabitEthernet0/0
C       192.168.1.192/30 is directly connected, GigabitEthernet0/2
L       192.168.1.194/32 is directly connected, GigabitEthernet0/2

R2#
```

c. Tabela de roteamento:

R1

Physical Config CLI Attributes

IOS Command Line Interface

```
R1>en
R1#show ip route
Codes: L - local, C - connected, S - static, 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

     192.168.1.0/24 is variably subnetted, 7 subnets, 3 masks
C       192.168.1.0/26 is directly connected, GigabitEthernet0/0
L       192.168.1.3/32 is directly connected, GigabitEthernet0/0
C       192.168.1.64/26 is directly connected, GigabitEthernet0/1
L       192.168.1.67/32 is directly connected, GigabitEthernet0/1
S       192.168.1.128/26 [1/0] via 192.168.1.194
C       192.168.1.192/30 is directly connected, GigabitEthernet0/2
L       192.168.1.193/32 is directly connected, GigabitEthernet0/2

R1#
```

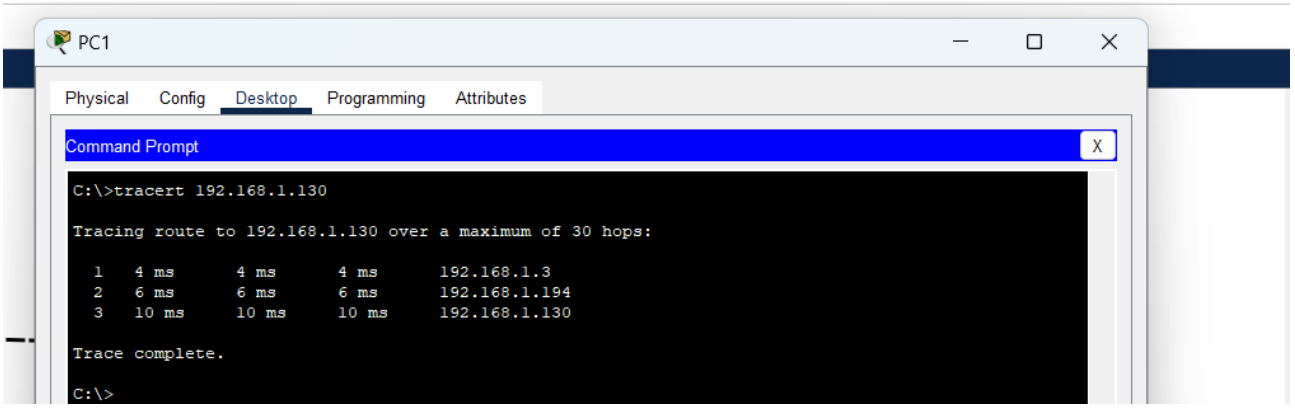
R2

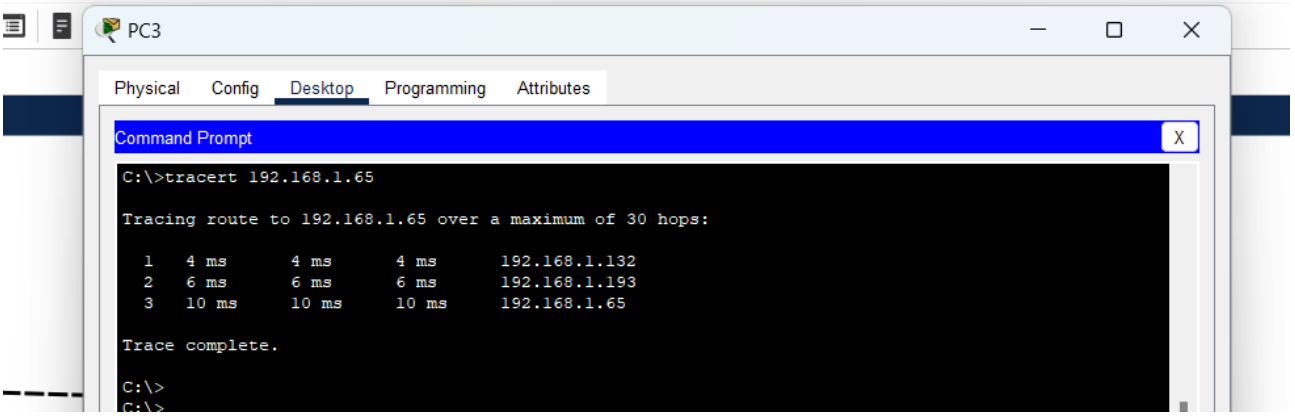
Physical Config CLI Attributes

IOS Command Line Interface

```
R2>en
R2#show ip route
Codes: L - local, C - connected, S - static, 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

     192.168.1.0/24 is variably subnetted, 6 subnets, 3 masks
S       192.168.1.0/26 [1/0] via 192.168.1.193
S       192.168.1.64/26 [1/0] via 192.168.1.193
C       192.168.1.128/26 is directly connected, GigabitEthernet0/0
L       192.168.1.132/32 is directly connected, GigabitEthernet0/0
C       192.168.1.192/30 is directly connected, GigabitEthernet0/2
L       192.168.1.194/32 is directly connected, GigabitEthernet0/2

R2#
```

d. conectividade entre as redes do RJ e de SP:





e. Captura de pacotes de um ping entre os PCs 1 e 4: