Лабораторная работа №7

по дисциплине «Компьютерные сети»

Вариант IV

Студентка: Ишкова-Запольская О.О.

Группа: ИУ7-63БВ

Преподаватель: Рогозин Н.О.

I. Разделить сеть на подсети в соответствии с системой адресации IPv4. Выделить достаточно адресов для размещения x+20 хостов в подсетях 1 и 2, x+10 в подсети 3, по 2 адреса интерфейса на соединения “точка-точка” между маршрутизаторами, где x - Ваш номер по списку в ЭУ

192.168.x.0/24

192.168.4.0 / 1100 0000.1010 1000.0000 0100.0000 0000

255.255.255.0 / 1111 1111.1111 1111.1111 1111.0000 0000 (маска 24)

Подсеть 1

Положим, n = 5, тогда:

$2^5 - 2 \geq 4 + 20$

$32 - 2 \geq 24$

$30 \geq 24$

Начальный адрес: 192.168.4.0

Новая маска 27: 255.255.255.224

Диапазон адресов: 192.168.4.1 – 192.168.4.30

Широковещательный адрес: 192.168.4.31

Подсеть 2

Положим, n = 5, тогда:

$2^5 - 2 \geq 4 + 20$

$32 - 2 \geq 24$

$30 \geq 24$

Начальный адрес: 192.168.4.32

Новая маска 27: 255.255.255.224

Диапазон адресов: 192.168.4.33 – 192.168.4.62

Широковещательный адрес: 192.168.4.63

Подсеть 3

Положим, n = 4, тогда:

$2^4 - 2 \geq 4 + 10$

$16 - 2 \geq 14$

$16 \geq 14$

Начальный адрес: 192.168.4.64

Новая маска 28: 255.255.255.240

Диапазон адресов: 192.168.4.65 – 192.168.4.78

Широковещательный адрес: 192.168.4.79

Подсеть 4

Начальный адрес: 192.168.4.80

Новая маска 30: 255.255.255.252

Диапазон адресов: 192.168.4.81 – 192.168.4.82

Широковещательный адрес: 192.168.4.83

Подсеть 5

Начальный адрес: 192.168.4.84

Новая маска 30: 255.255.255.252

Диапазон адресов: 192.168.4.85 – 192.168.4.86

Широковещательный адрес: 192.168.4.87

Подсеть 6

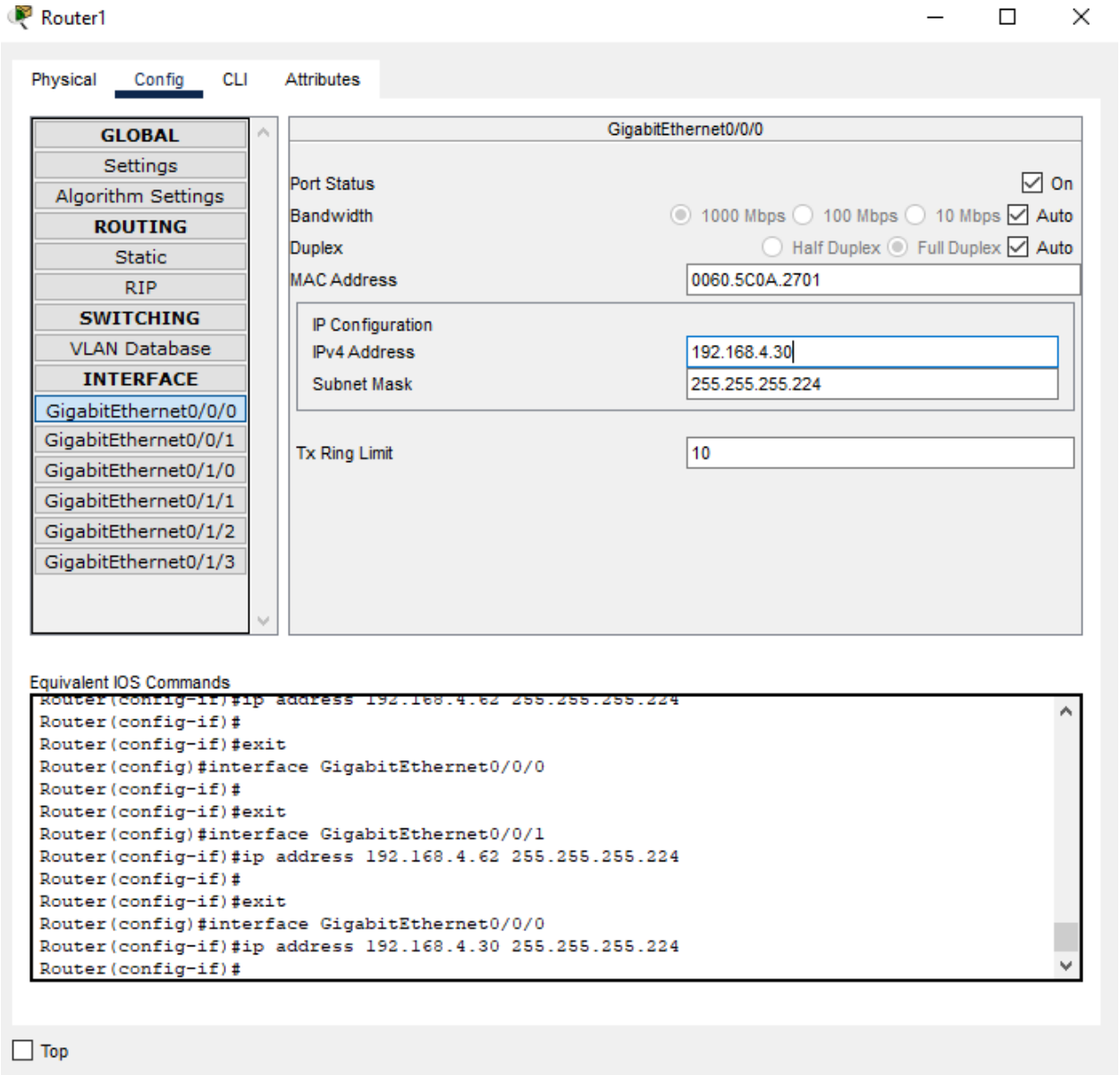
Начальный адрес: 192.168.4.88

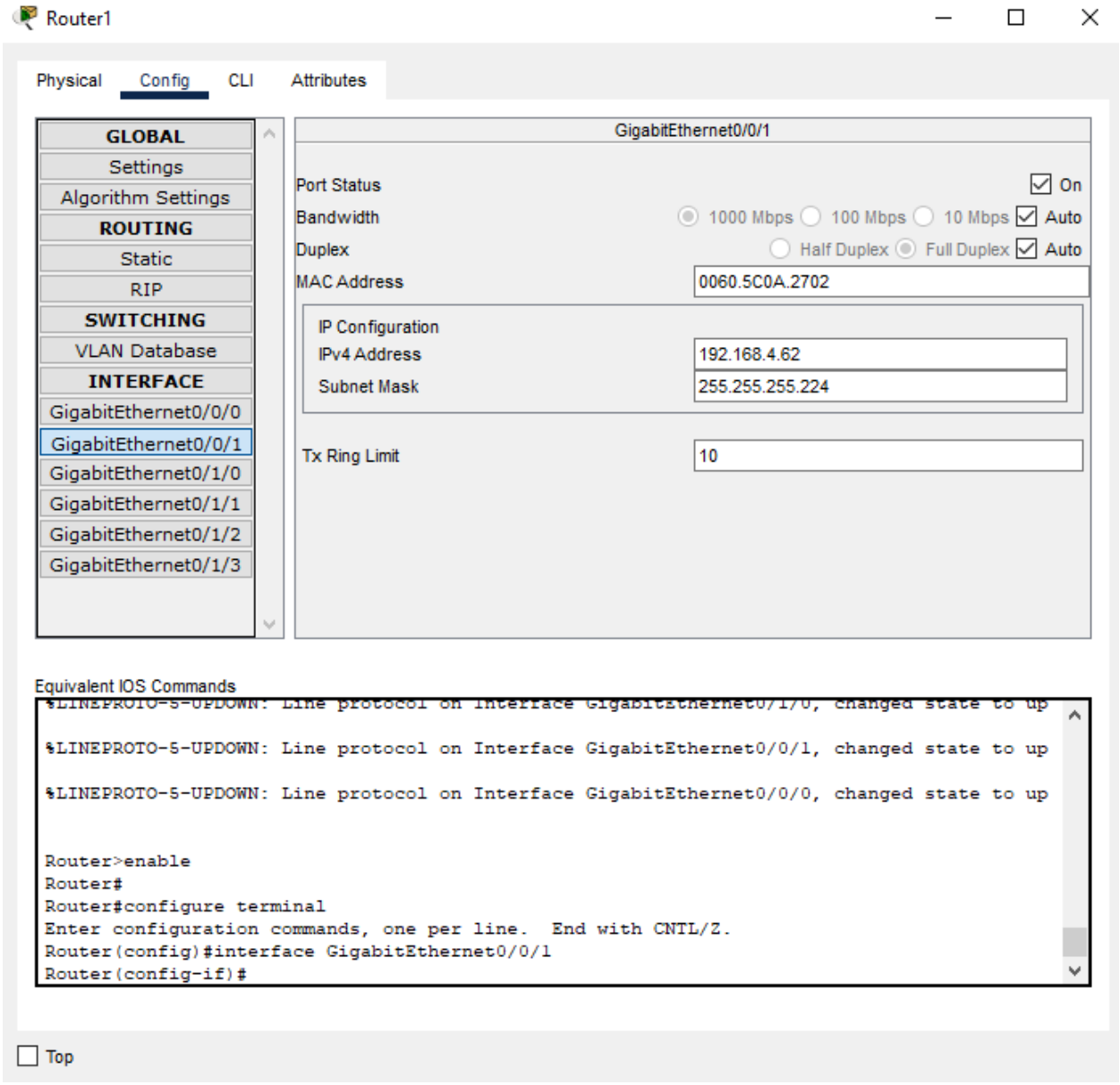
Новая маска 30: 255.255.255.252

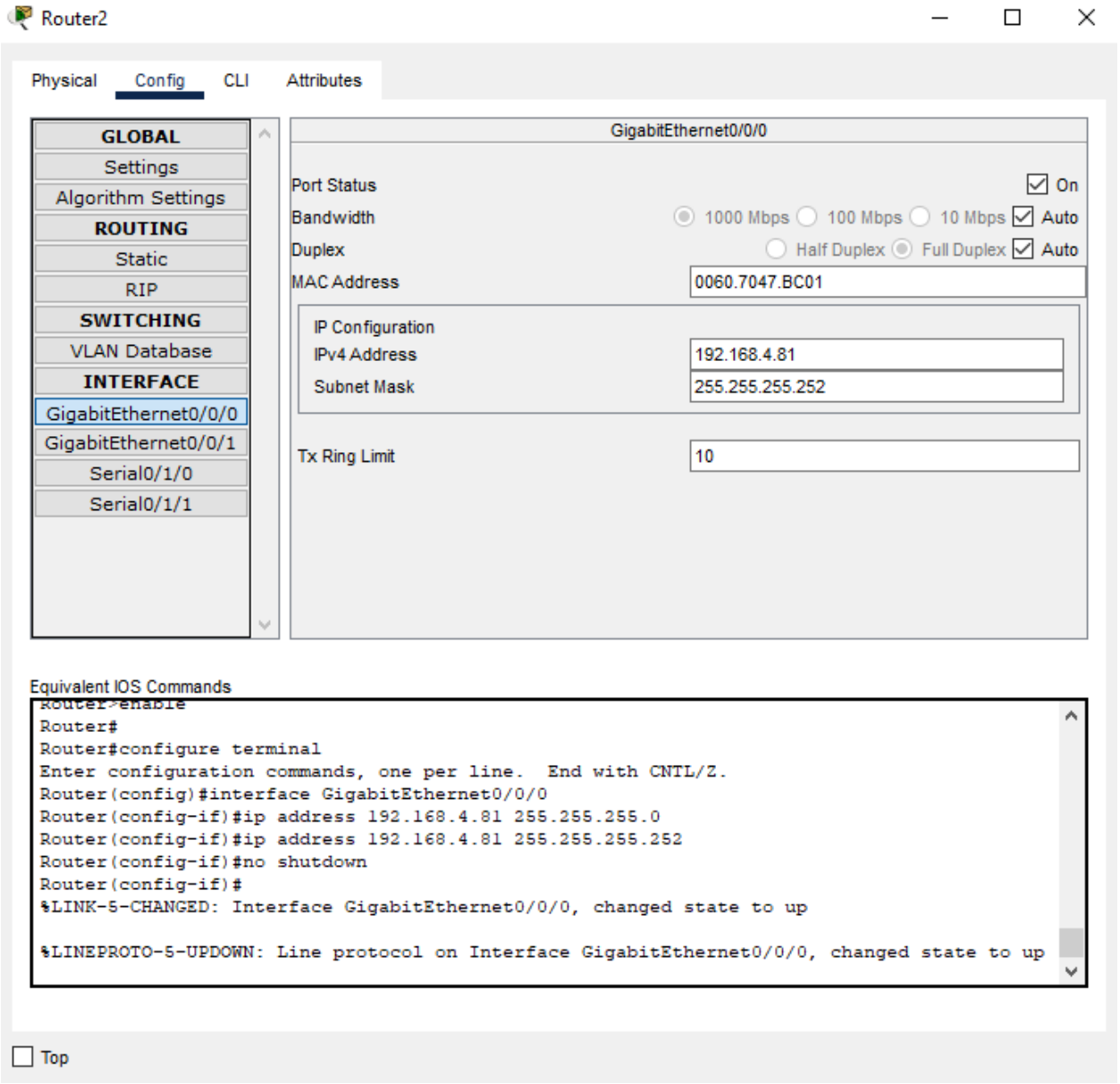
Диапазон адресов: 192.168.4.89 – 192.168.4.90

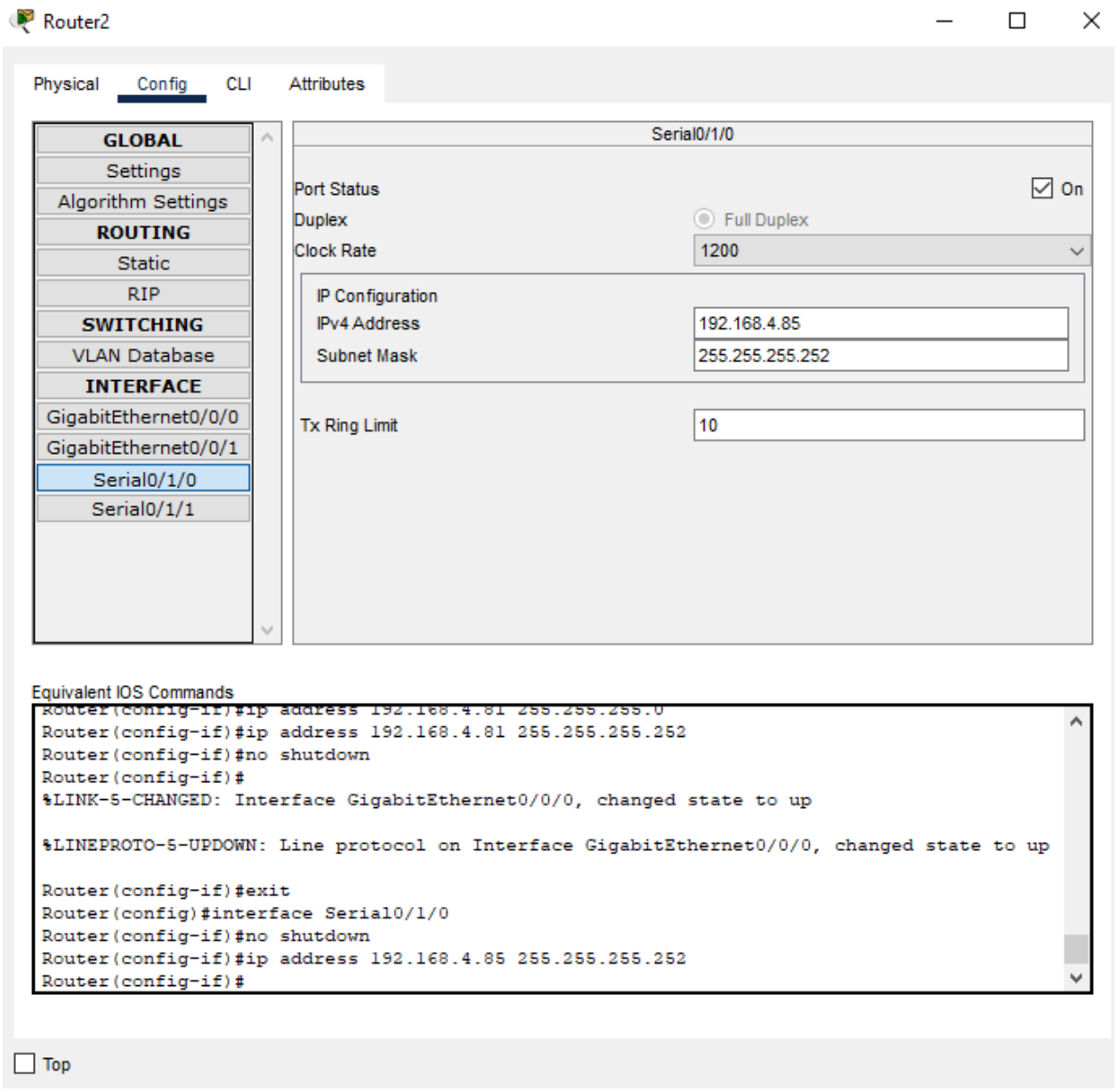
Широковещательный адрес: 192.168.4.91

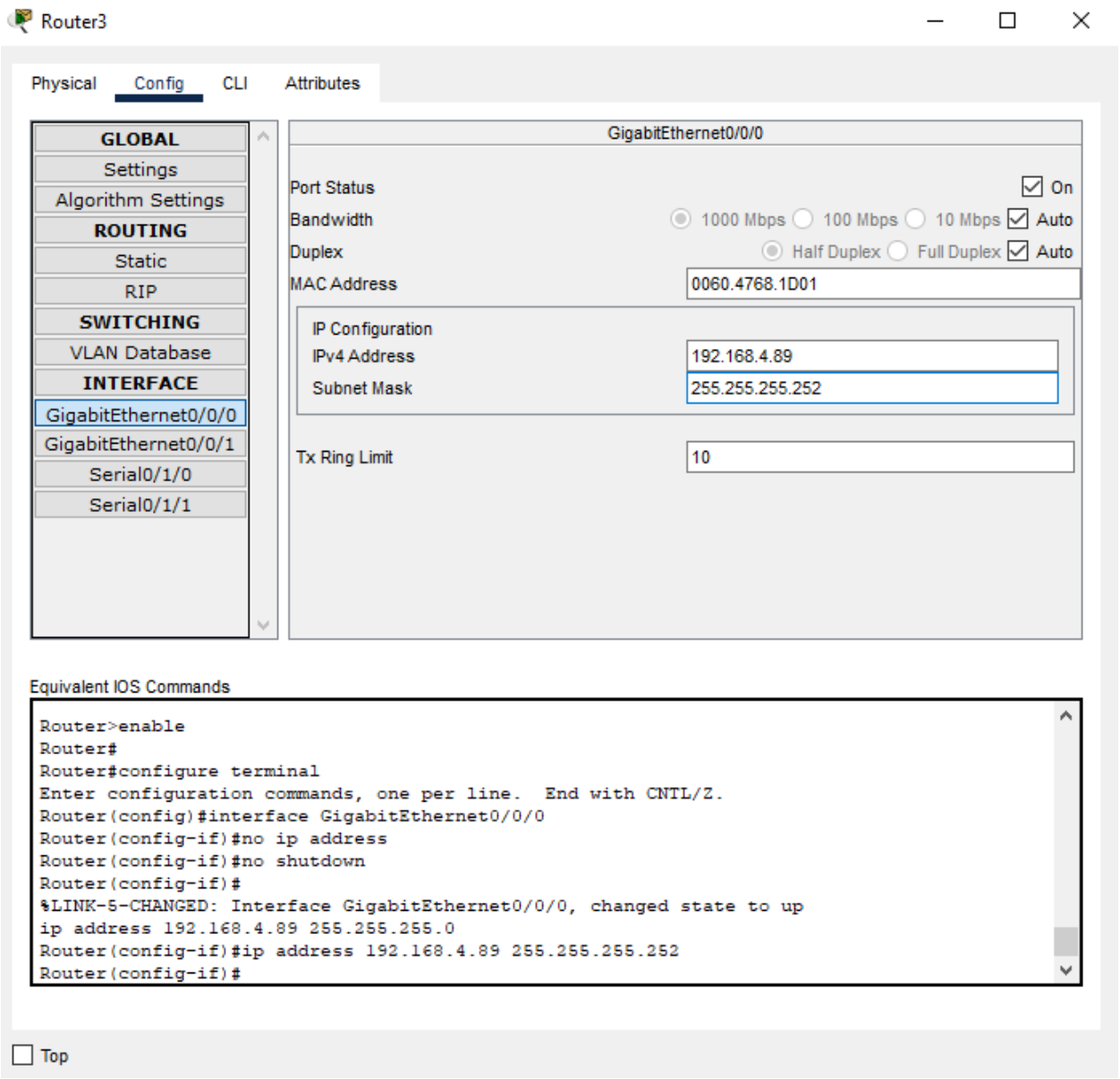
II. Настроить статическую маршрутизацию так, чтобы пинг любым хостом или маршрутизатором любого другого хоста или маршрутизатора был успешным.

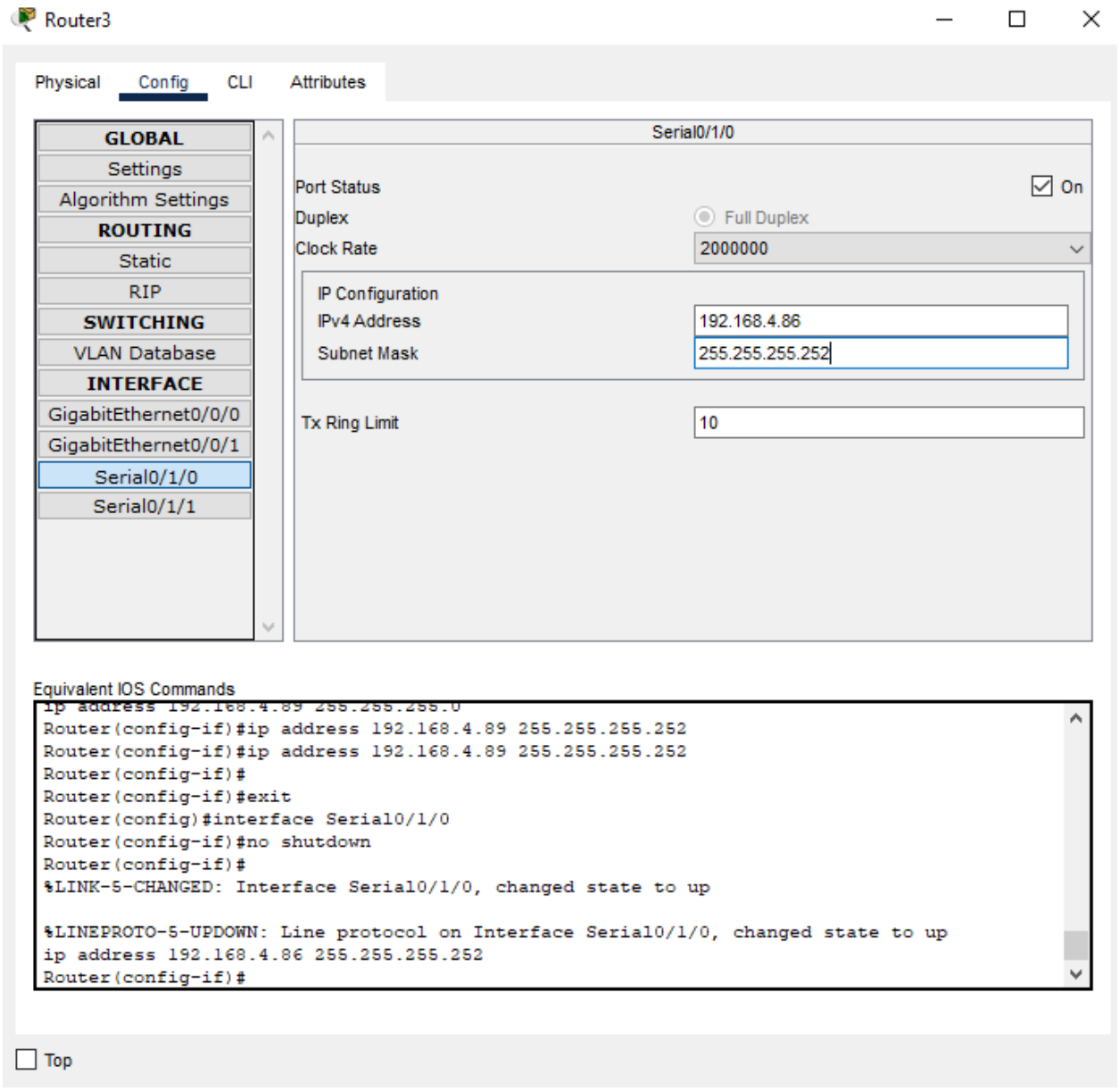

Router1
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0/0
GigabitEthernet0/0/1
GigabitEthernet0/1/0
GigabitEthernet0/1/1
GigabitEthernet0/1/2
GigabitEthernet0/1/3
GigabitEthernet0/0/0
Port Status
On
Bandwidth
1000 Mbps
100 Mbps
10 Mbps
Auto
Duplex
Half Duplex
Full Duplex
Auto
MAC Address
0060.5C0A.2701
IP Configuration
IPv4 Address
192.168.4.30
Subnet Mask
255.255.255.224
Tx Ring Limit
10
Equivalent IOS Commands
Router(config-if)#ip address 192.168.4.62 255.255.255.224
Router(config-if)#
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/0/1
Router(config-if)#ip address 192.168.4.62 255.255.255.224
Router(config-if)#
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/0/0
Router(config-if)#ip address 192.168.4.30 255.255.255.224
Router(config-if)#
Top

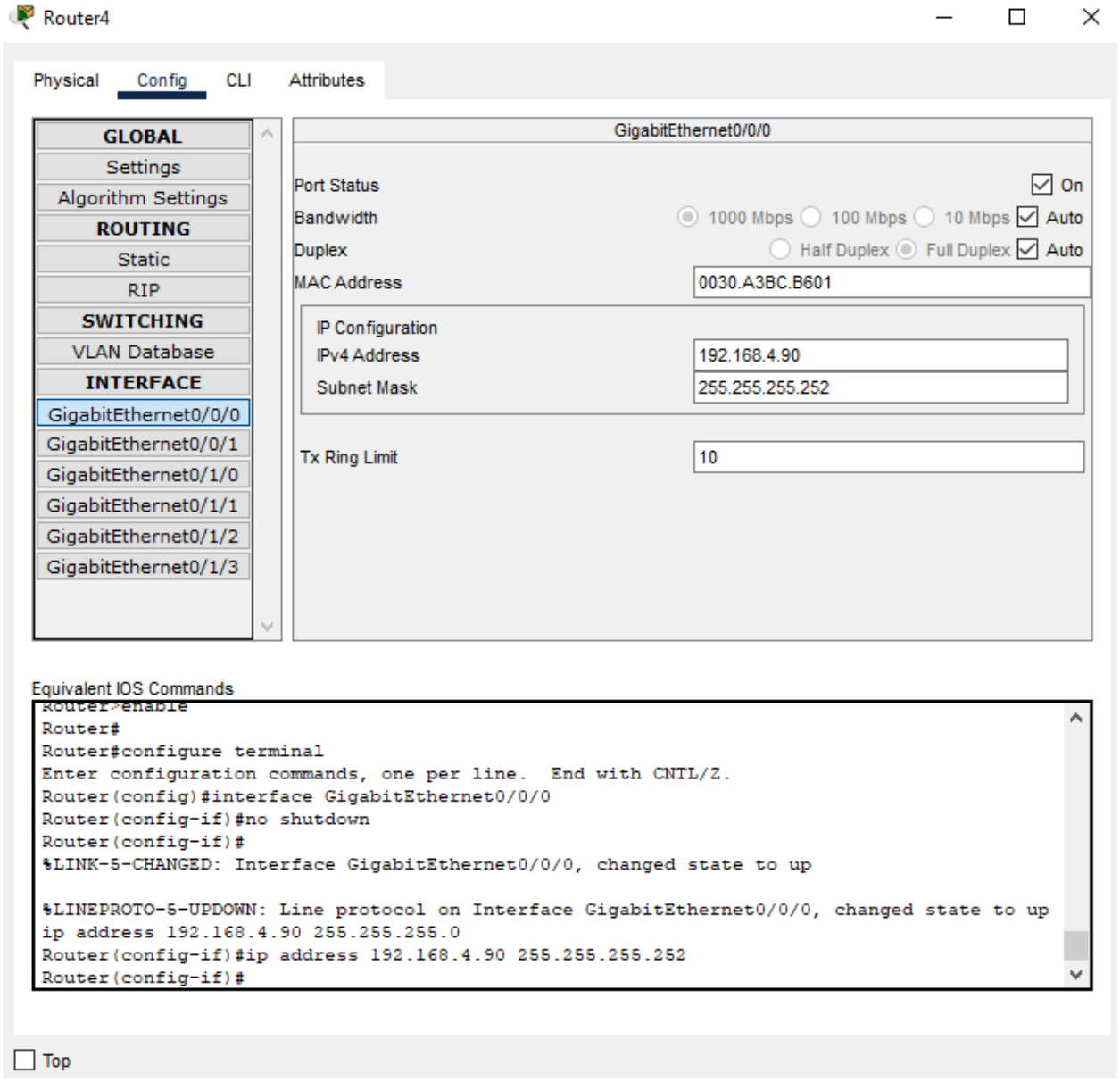

Router1
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0/0
GigabitEthernet0/0/1
GigabitEthernet0/1/0
GigabitEthernet0/1/1
GigabitEthernet0/1/2
GigabitEthernet0/1/3
GigabitEthernet0/0/1
Port Status
On
Bandwidth
1000 Mbps
100 Mbps
10 Mbps
Auto
Duplex
Half Duplex
Full Duplex
Auto
MAC Address
0060.5C0A.2702
IP Configuration
IPv4 Address
192.168.4.62
Subnet Mask
255.255.255.224
Tx Ring Limit
10
Equivalent IOS Commands
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/0, changed state to up
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface GigabitEthernet0/0/1
Router(config-if)#
Top

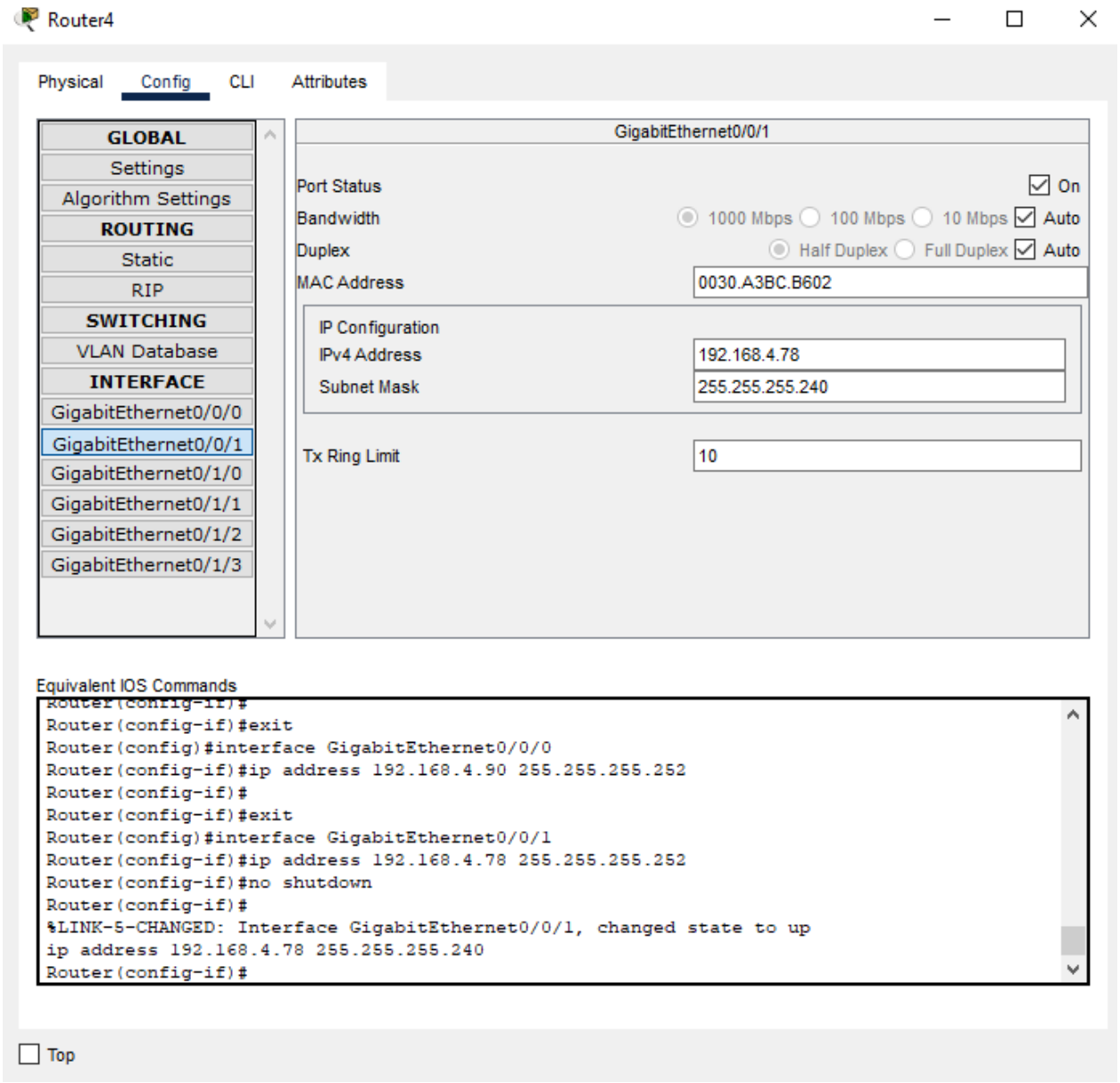

Router2
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0/0
GigabitEthernet0/0/1
Serial0/1/0
Serial0/1/1
GigabitEthernet0/0/0
Port Status
On
Bandwidth
1000 Mbps
100 Mbps
10 Mbps
Auto
Duplex
Half Duplex
Full Duplex
Auto
MAC Address
0060.7047.BC01
IP Configuration
IPv4 Address
192.168.4.81
Subnet Mask
255.255.255.252
Tx Ring Limit
10
Equivalent IOS Commands
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface GigabitEthernet0/0/0
Router(config-if)#ip address 192.168.4.81 255.255.255.0
Router(config-if)#ip address 192.168.4.81 255.255.255.252
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/0, changed state to up
Top

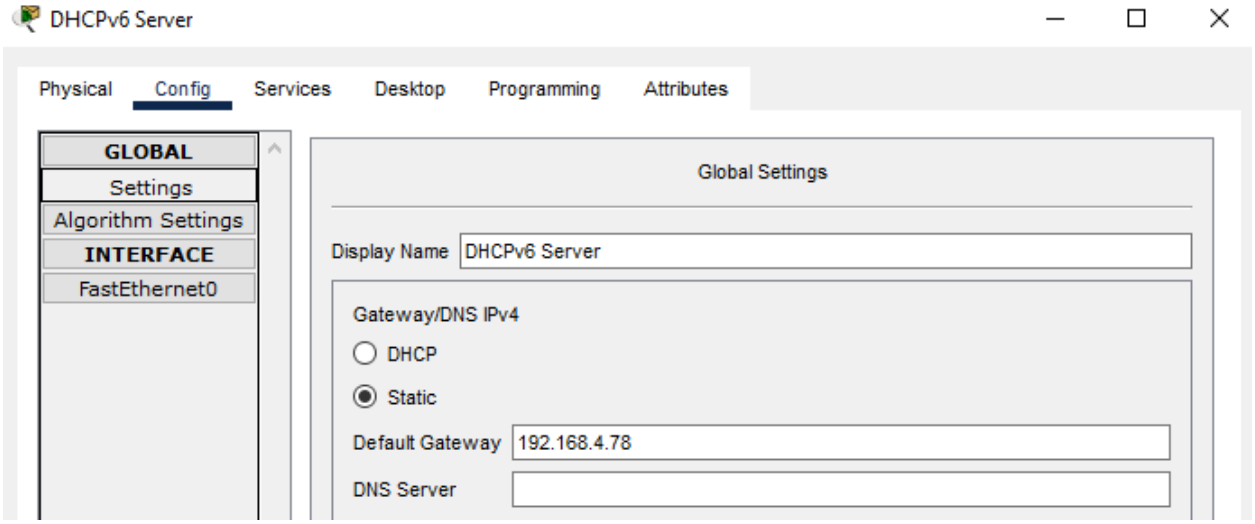

Router2
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0/0
GigabitEthernet0/0/1
Serial0/1/0
Serial0/1/1
Serial0/1/0
Port Status
On
Duplex
Full Duplex
Clock Rate
1200
IP Configuration
IPv4 Address
192.168.4.85
Subnet Mask
255.255.255.252
Tx Ring Limit
10
Equivalent IOS Commands
Router(config-if)#ip address 192.168.4.81 255.255.255.252
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/0, changed state to up
Router(config-if)#exit
Router(config)#interface Serial0/1/0
Router(config-if)#no shutdown
Router(config-if)#ip address 192.168.4.85 255.255.255.252
Router(config-if)#
Top

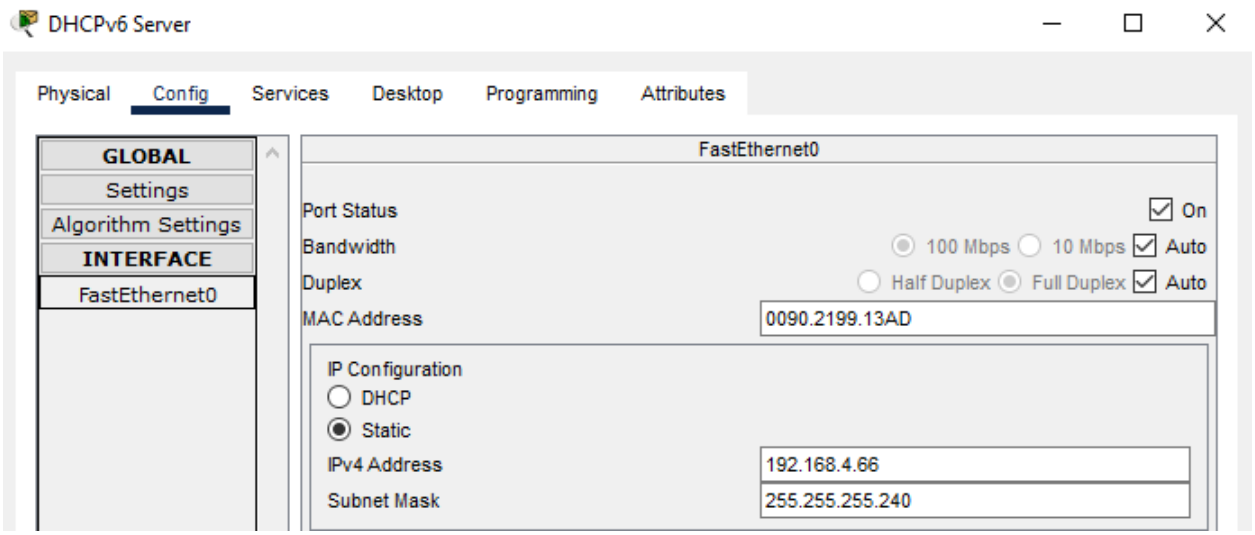

Router3
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0/0
GigabitEthernet0/0/1
Serial0/1/0
Serial0/1/1
GigabitEthernet0/0/0
Port Status
On
Bandwidth
1000 Mbps
100 Mbps
10 Mbps
Auto
Duplex
Half Duplex
Full Duplex
Auto
MAC Address
0060.4768.1D01
IP Configuration
IPv4 Address
192.168.4.89
Subnet Mask
255.255.255.252
Tx Ring Limit
10
Equivalent IOS Commands
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface GigabitEthernet0/0/0
Router(config-if)#no ip address
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0/0, changed state to up
ip address 192.168.4.89 255.255.255.0
Router(config-if)#ip address 192.168.4.89 255.255.255.252
Router(config-if)#
Top

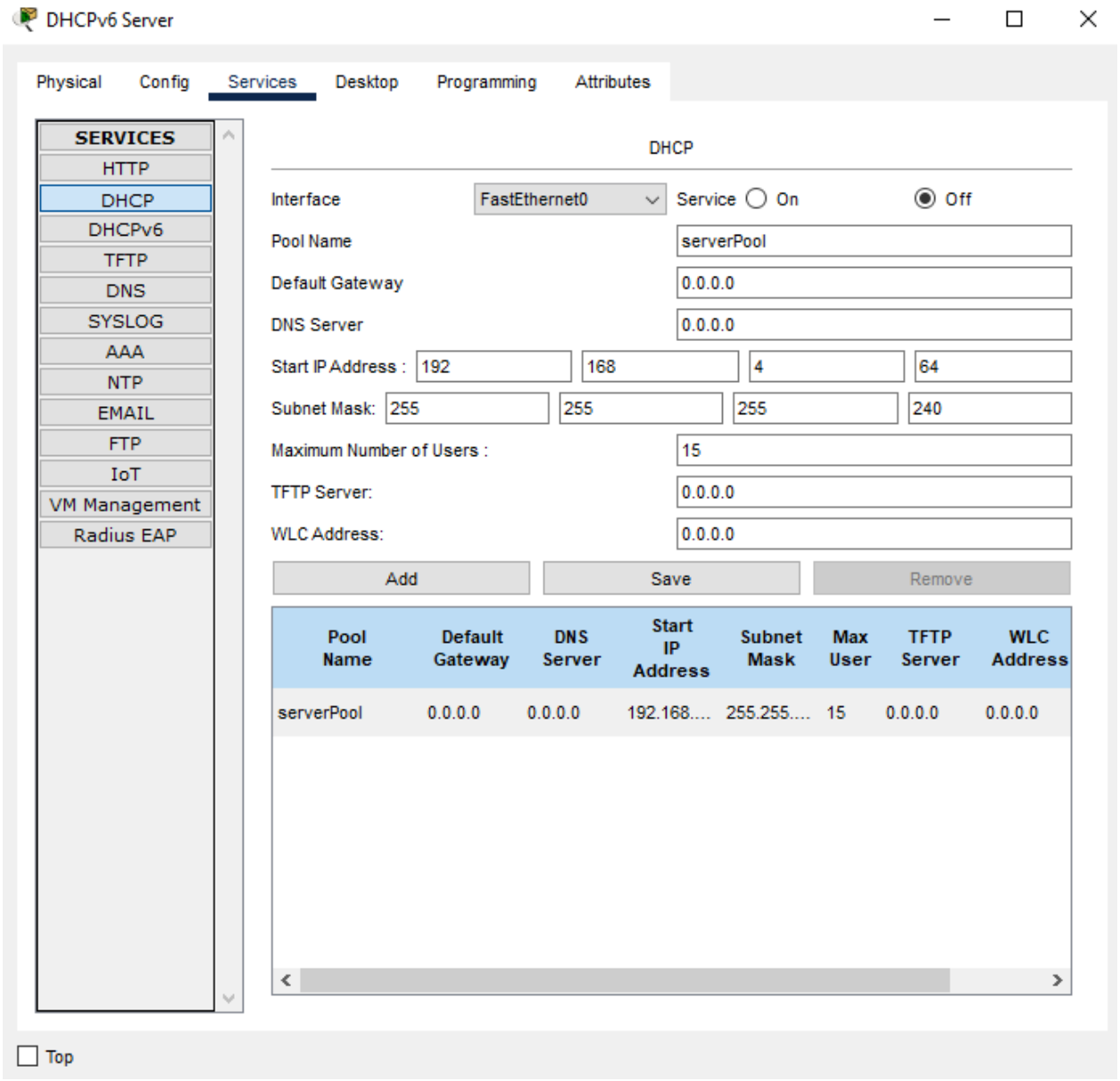

Router3
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0/0
GigabitEthernet0/0/1
Serial0/1/0
Serial0/1/1
Serial0/1/0
Port Status
On
Duplex
Full Duplex
Clock Rate
2000000
IP Configuration
IPv4 Address
192.168.4.86
Subnet Mask
255.255.255.252
Tx Ring Limit
10
Equivalent IOS Commands
ip address 192.168.4.89 255.255.255.0
Router(config-if)#ip address 192.168.4.89 255.255.255.252
Router(config-if)#ip address 192.168.4.89 255.255.255.252
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial0/1/0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface Serial0/1/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/1/0, changed state to up
ip address 192.168.4.86 255.255.255.252
Router(config-if)#
Top

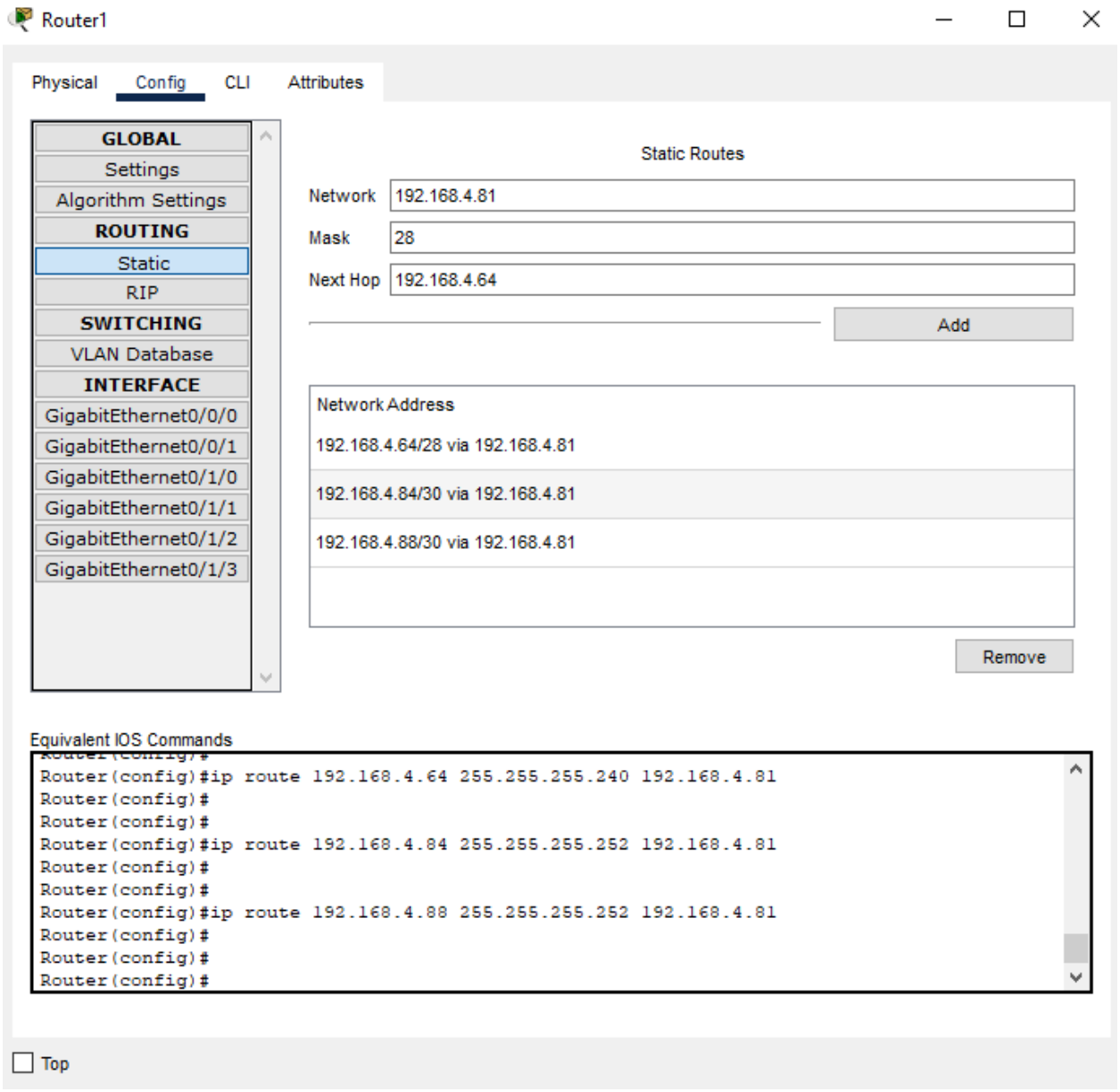

Router4
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0/0
GigabitEthernet0/0/1
GigabitEthernet0/1/0
GigabitEthernet0/1/1
GigabitEthernet0/1/2
GigabitEthernet0/1/3
GigabitEthernet0/0/0
Port Status
On
Bandwidth
1000 Mbps
100 Mbps
10 Mbps
Auto
Duplex
Half Duplex
Full Duplex
Auto
MAC Address
0030.A3BC.B601
IP Configuration
IPv4 Address
192.168.4.90
Subnet Mask
255.255.255.252
Tx Ring Limit
10
Equivalent IOS Commands
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface GigabitEthernet0/0/0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/0, changed state to up
ip address 192.168.4.90 255.255.255.0
Router(config-if)#ip address 192.168.4.90 255.255.255.252
Router(config-if)#
Top

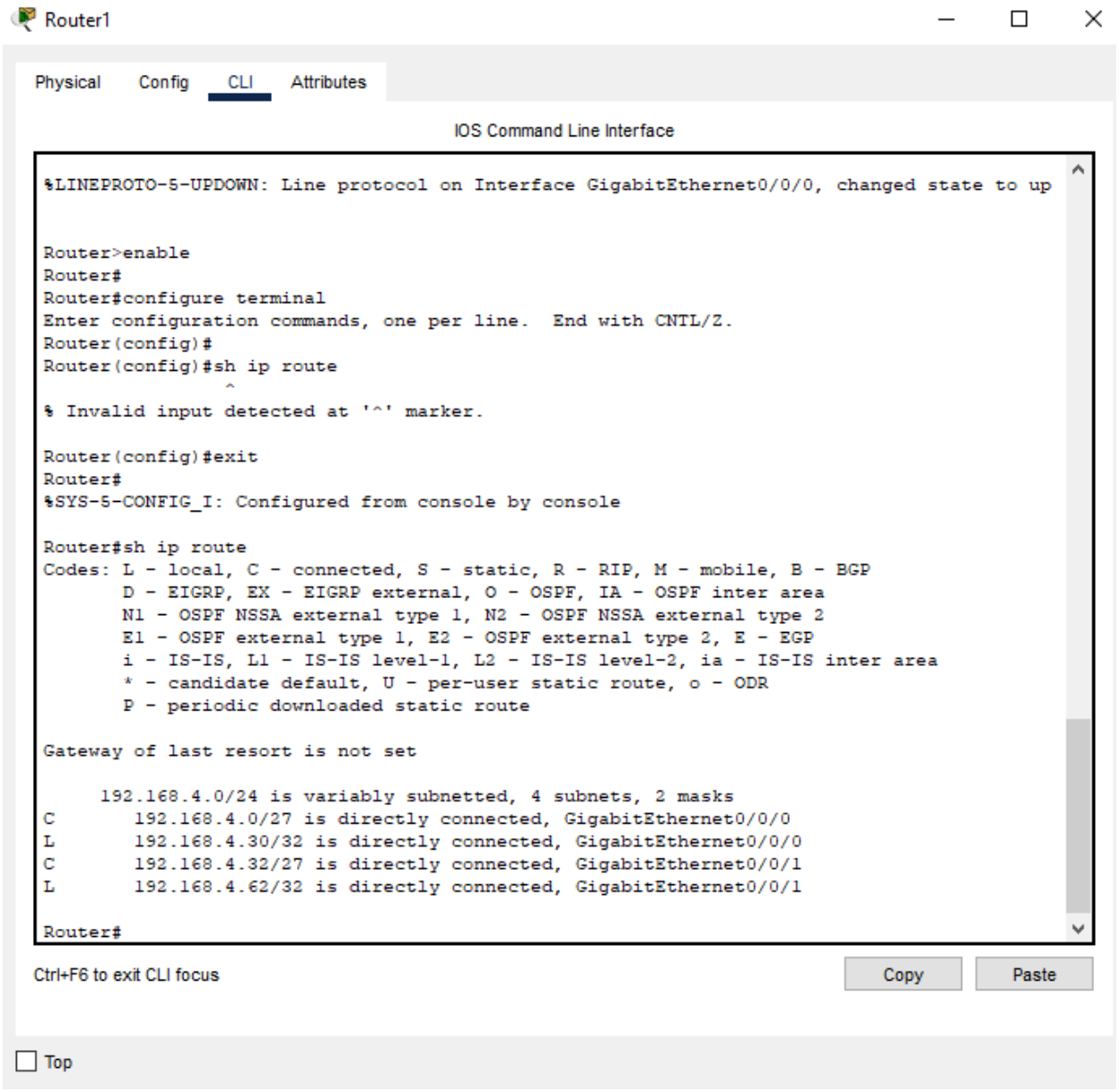

Router4
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0/0
GigabitEthernet0/0/1
GigabitEthernet0/1/0
GigabitEthernet0/1/1
GigabitEthernet0/1/2
GigabitEthernet0/1/3
GigabitEthernet0/0/1
Port Status
On
Bandwidth
1000 Mbps
100 Mbps
10 Mbps
Auto
Duplex
Half Duplex
Full Duplex
Auto
MAC Address
0030.A3BC.B602
IP Configuration
IPv4 Address
192.168.4.78
Subnet Mask
255.255.255.240
Tx Ring Limit
10
Equivalent IOS Commands
Router(config-if)#
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/0/0
Router(config-if)#ip address 192.168.4.90 255.255.255.252
Router(config-if)#
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/0/1
Router(config-if)#ip address 192.168.4.78 255.255.255.252
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0/1, changed state to up
ip address 192.168.4.78 255.255.255.240
Router(config-if)#
Top

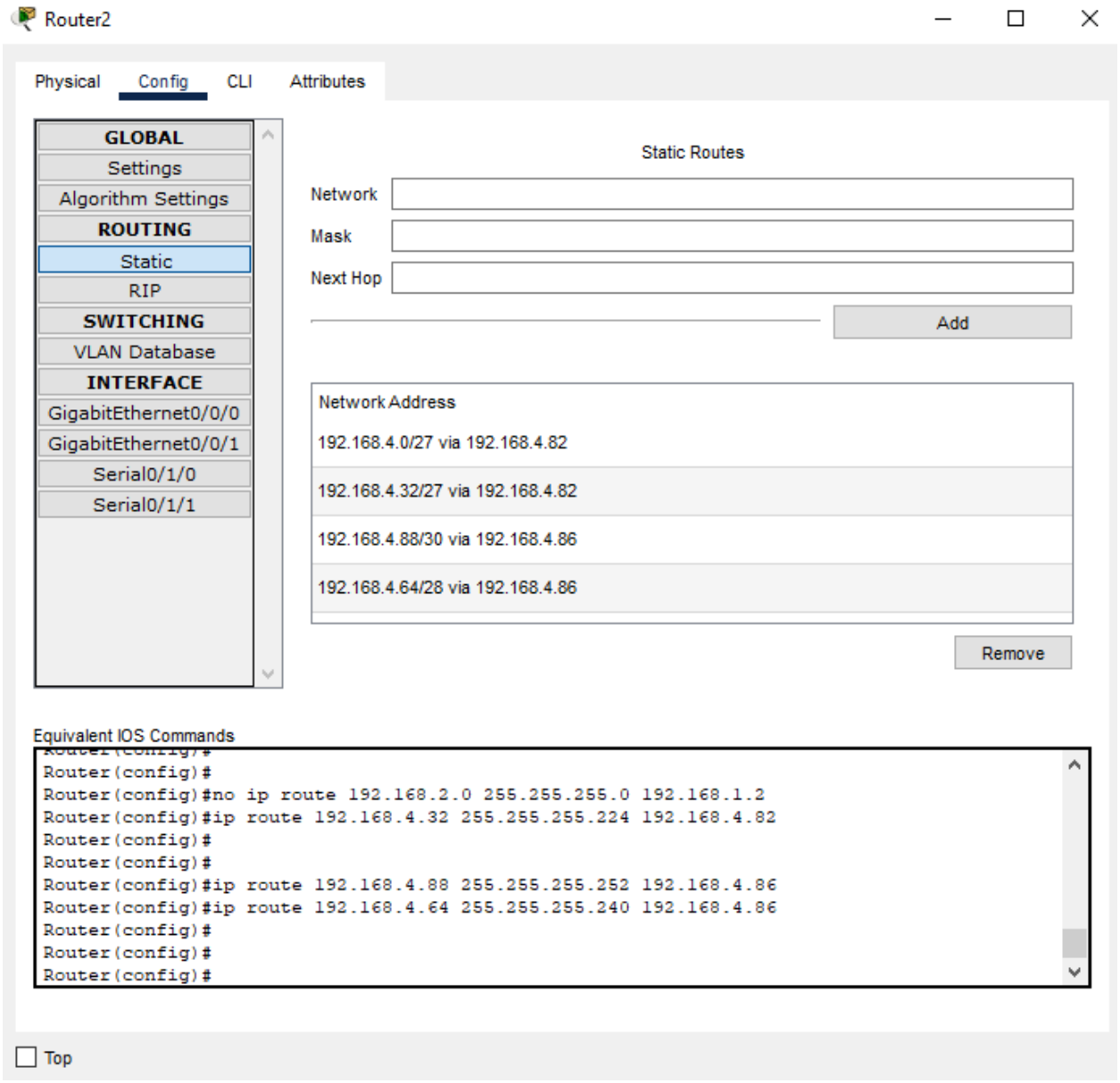

DHCPv6 Server
Physical
Config
Services
Desktop
Programming
Attributes
GLOBAL
Settings
Algorithm Settings
INTERFACE
FastEthernet0
Global Settings
Display Name
DHCPv6 Server
Gateway/DNS IPv4
DHCP
Static
Default Gateway
192.168.4.78
DNS Server

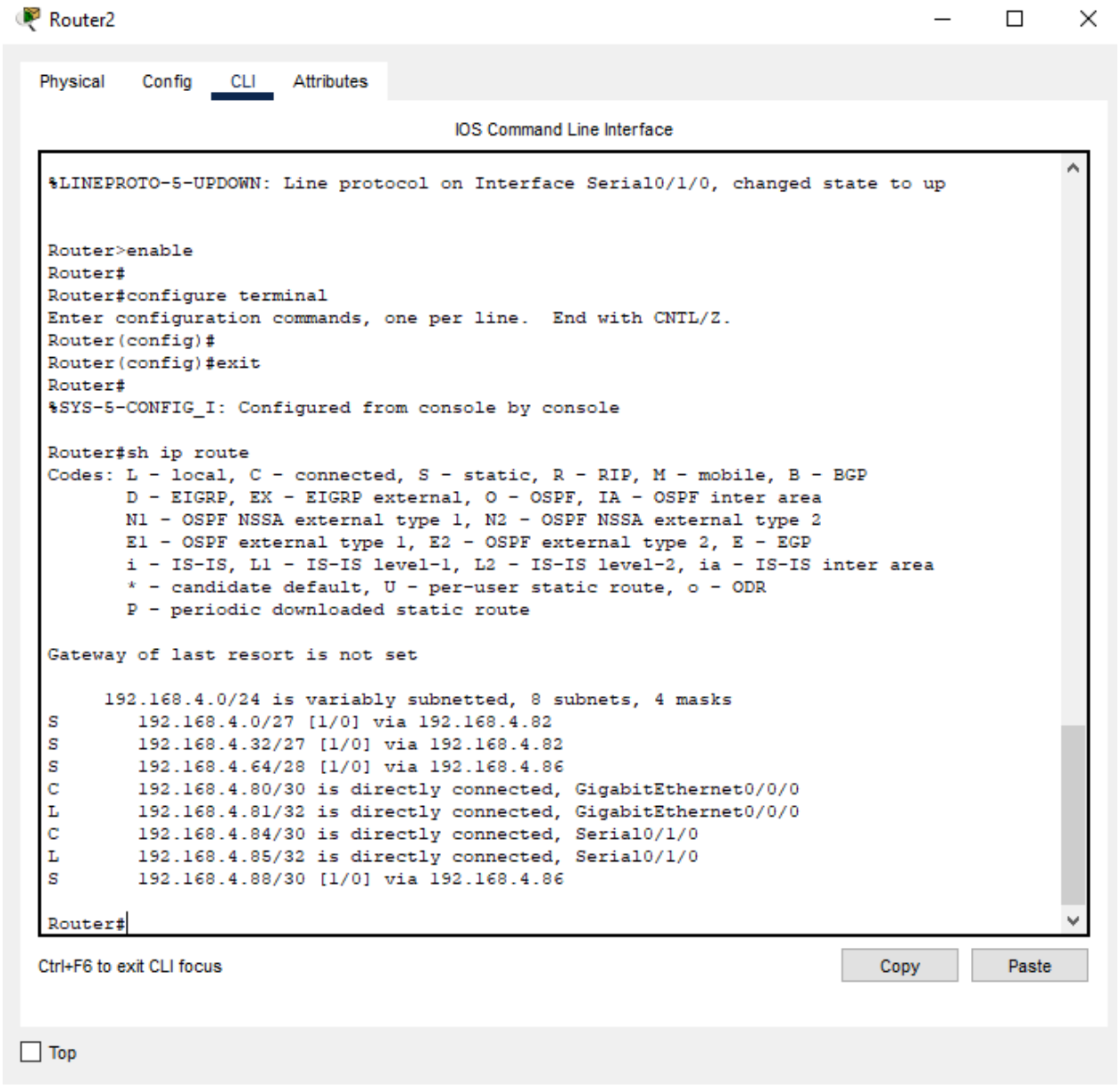

DHCPv6 Server
Physical
Config
Services
Desktop
Programming
Attributes
GLOBAL
Settings
Algorithm Settings
INTERFACE
FastEthernet0
FastEthernet0
Port Status
On
Bandwidth
100 Mbps
10 Mbps
Auto
Duplex
Half Duplex
Full Duplex
Auto
MAC Address
0090.2199.13AD
IP Configuration
DHCP
Static
IPv4 Address
192.168.4.66
Subnet Mask
255.255.255.240

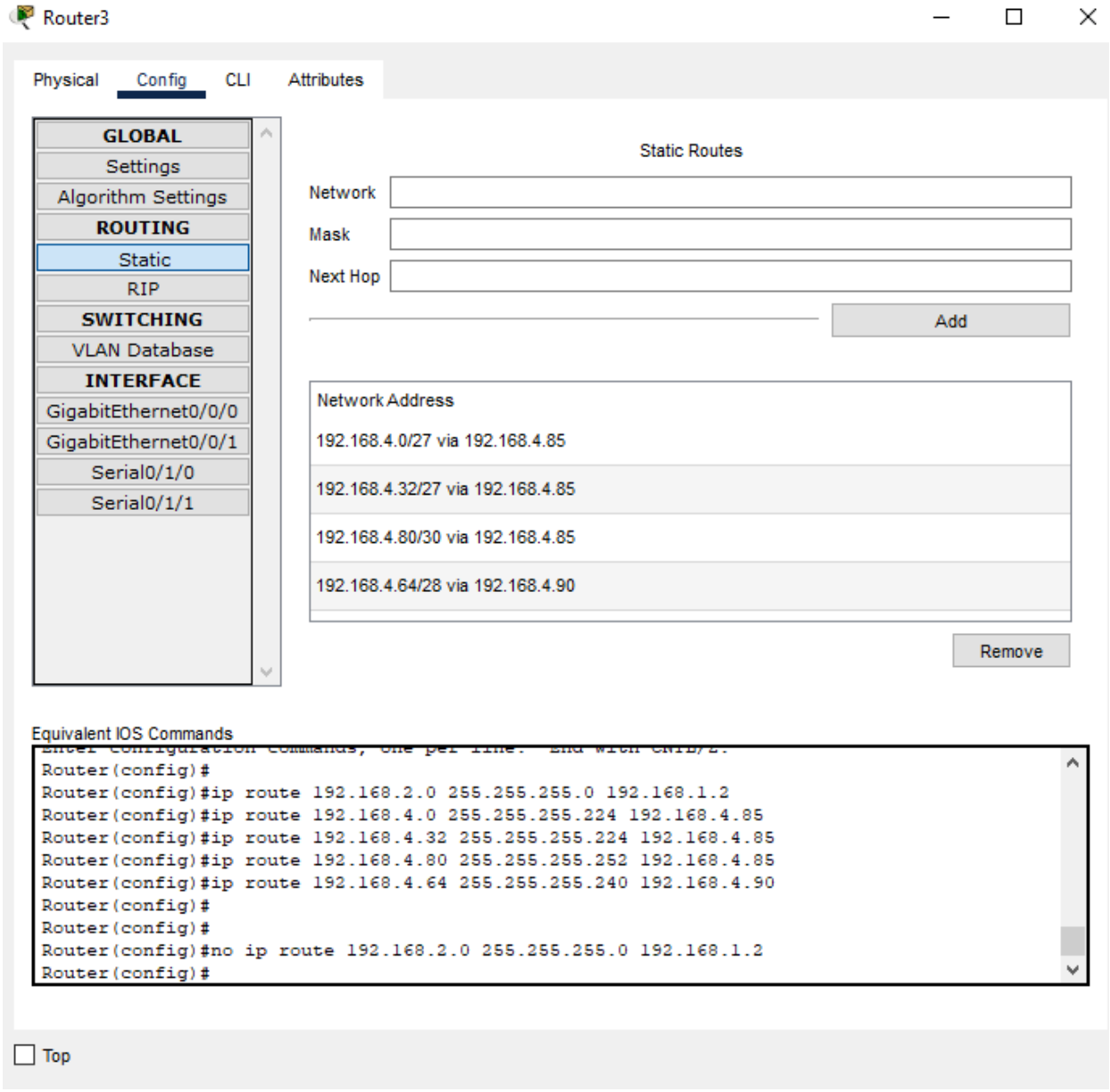

DHCPv6 Server
Physical
Config
Services
Desktop
Programming
Attributes
SERVICES
HTTP
DHCP
DHCPv6
TFTP
DNS
SYSLOG
AAA
NTP
EMAIL
FTP
IoT
VM Management
Radius EAP
DHCP
Interface
FastEthernet0
Service
On
Off
Pool Name
serverPool
Default Gateway
0.0.0.0
DNS Server
0.0.0.0
Start IP Address :
192
168
4
64
Subnet Mask:
255
255
255
240
Maximum Number of Users :
15
TFTP Server:
0.0.0.0
WLC Address:
0.0.0.0
Add
Save
Remove
Pool Name
Default Gateway
DNS Server
Start IP Address
Subnet Mask
Max User
TFTP Server
WLC Address
serverPool
0.0.0.0
0.0.0.0
192.168....
255.255....
15
0.0.0.0
0.0.0.0
Top

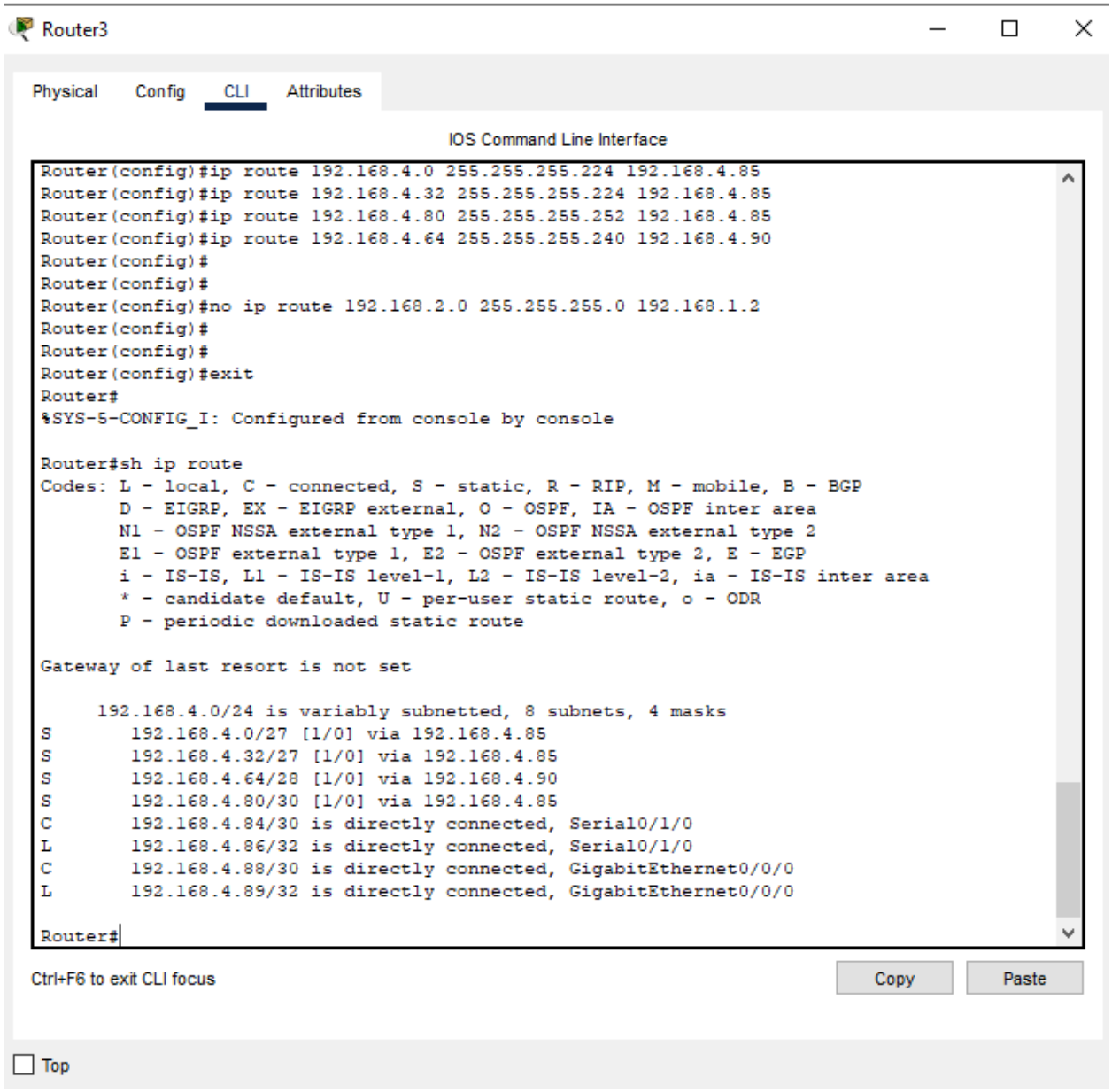

Router1
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0/0
GigabitEthernet0/0/1
GigabitEthernet0/1/0
GigabitEthernet0/1/1
GigabitEthernet0/1/2
GigabitEthernet0/1/3
Static Routes
Network 192.168.4.81
Mask 28
Next Hop 192.168.4.64
Add
Network Address
192.168.4.64/28 via 192.168.4.81
192.168.4.84/30 via 192.168.4.81
192.168.4.88/30 via 192.168.4.81
Remove
Equivalent IOS Commands
Router(config)#ip route 192.168.4.64 255.255.255.240 192.168.4.81
Router(config)#
Router(config)#
Router(config)#ip route 192.168.4.84 255.255.255.252 192.168.4.81
Router(config)#
Router(config)#
Router(config)#ip route 192.168.4.88 255.255.255.252 192.168.4.81
Router(config)#
Router(config)#
Router(config)#
Top

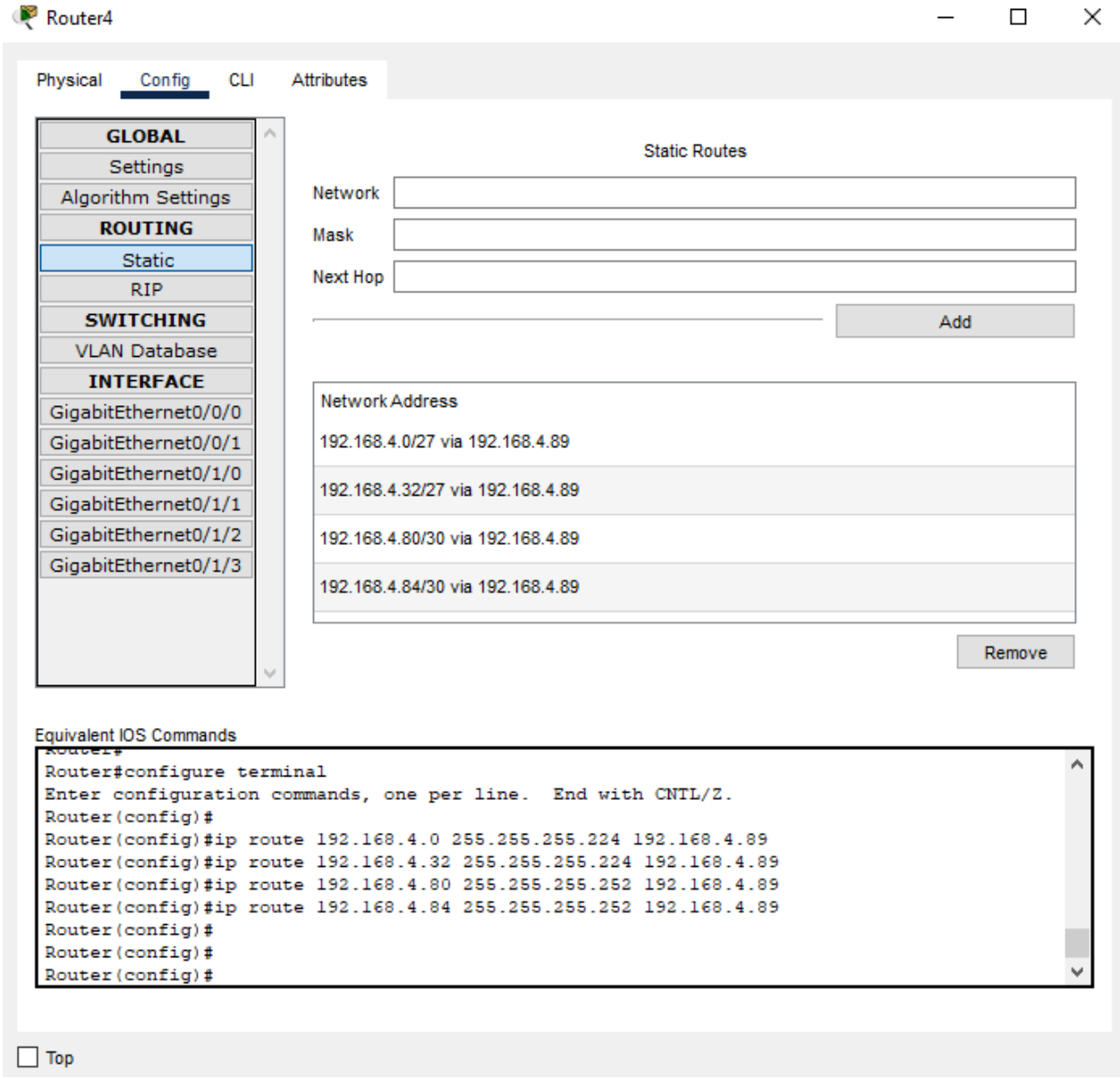

Router1
Physical
Config
CLI
Attributes
IOS Command Line Interface
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/0, changed state to up
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#
Router(config)#sh ip route
^
% Invalid input detected at '^' marker.
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
Router#sh 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
192.168.4.0/24 is variably subnetted, 4 subnets, 2 masks
C 192.168.4.0/27 is directly connected, GigabitEthernet0/0/0
L 192.168.4.30/32 is directly connected, GigabitEthernet0/0/0
C 192.168.4.32/27 is directly connected, GigabitEthernet0/0/1
L 192.168.4.62/32 is directly connected, GigabitEthernet0/0/1
Router#
Ctrl+F6 to exit CLI focus
Copy
Paste
Top

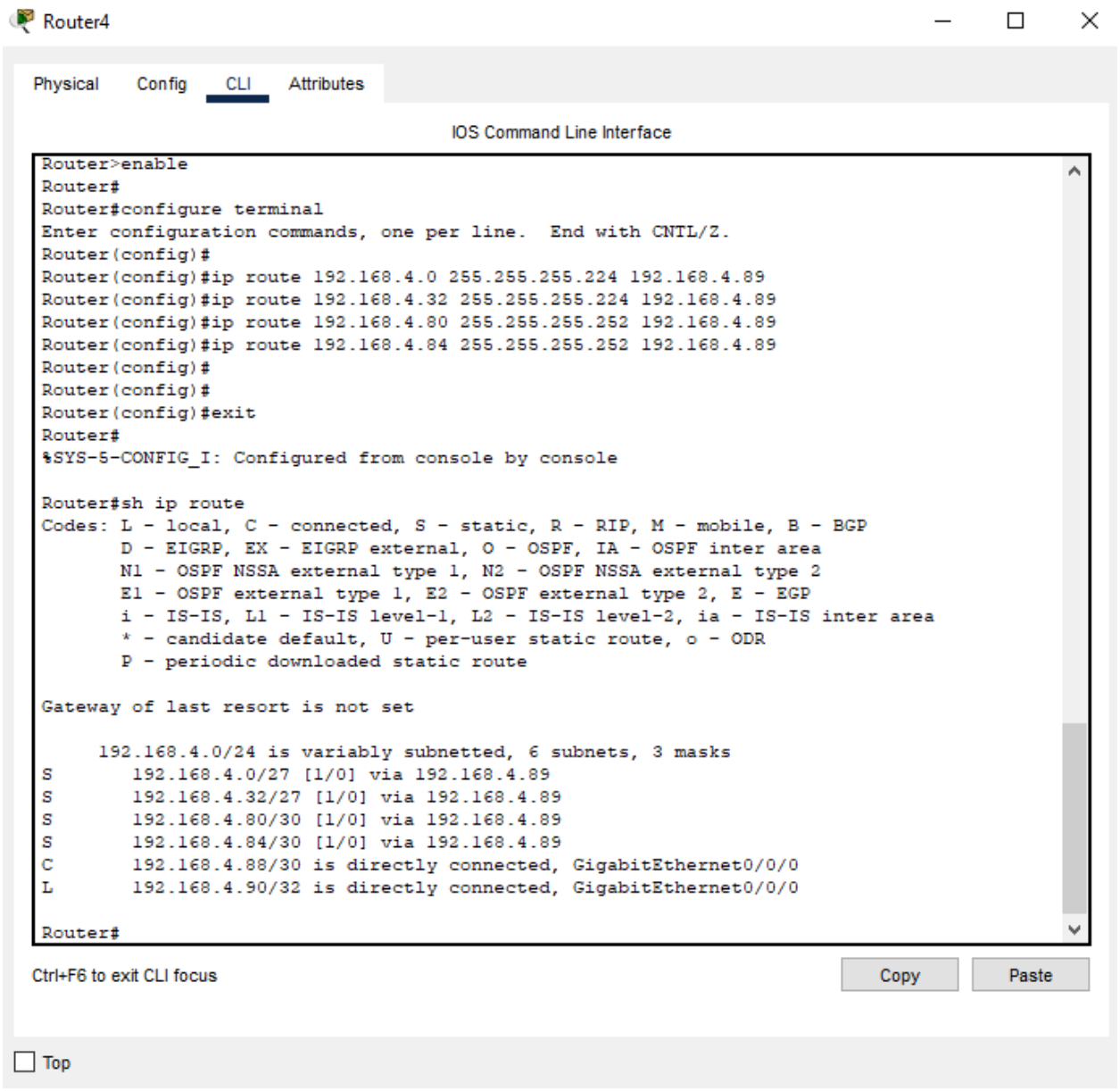

Router2
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0/0
GigabitEthernet0/0/1
Serial0/1/0
Serial0/1/1
Static Routes
Network
Mask
Next Hop
Add
Network Address
192.168.4.0/27 via 192.168.4.82
192.168.4.32/27 via 192.168.4.82
192.168.4.88/30 via 192.168.4.86
192.168.4.64/28 via 192.168.4.86
Remove
Equivalent IOS Commands
Router(config)#
Router(config)#no ip route 192.168.2.0 255.255.255.0 192.168.1.2
Router(config)#ip route 192.168.4.32 255.255.255.224 192.168.4.82
Router(config)#
Router(config)#
Router(config)#ip route 192.168.4.88 255.255.255.252 192.168.4.86
Router(config)#ip route 192.168.4.64 255.255.255.240 192.168.4.86
Router(config)#
Router(config)#
Router(config)#
Top


Router2
Physical
Config
CLI
Attributes
IOS Command Line Interface
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/1/0, changed state to up
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
Router#sh 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
192.168.4.0/24 is variably subnetted, 8 subnets, 4 masks
S 192.168.4.0/27 [1/0] via 192.168.4.82
S 192.168.4.32/27 [1/0] via 192.168.4.82
S 192.168.4.64/28 [1/0] via 192.168.4.86
C 192.168.4.80/30 is directly connected, GigabitEthernet0/0/0
L 192.168.4.81/32 is directly connected, GigabitEthernet0/0/0
C 192.168.4.84/30 is directly connected, Serial0/1/0
L 192.168.4.85/32 is directly connected, Serial0/1/0
S 192.168.4.88/30 [1/0] via 192.168.4.86
Router#
Ctrl+F6 to exit CLI focus
Copy
Paste
Top


Router3
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0/0
GigabitEthernet0/0/1
Serial0/1/0
Serial0/1/1
Static Routes
Network
Mask
Next Hop
Add
Network Address
192.168.4.0/27 via 192.168.4.85
192.168.4.32/27 via 192.168.4.85
192.168.4.80/30 via 192.168.4.85
192.168.4.64/28 via 192.168.4.90
Remove
Equivalent IOS Commands
Router(config)#
Router(config)#ip route 192.168.2.0 255.255.255.0 192.168.1.2
Router(config)#ip route 192.168.4.0 255.255.255.224 192.168.4.85
Router(config)#ip route 192.168.4.32 255.255.255.224 192.168.4.85
Router(config)#ip route 192.168.4.80 255.255.255.252 192.168.4.85
Router(config)#ip route 192.168.4.64 255.255.255.240 192.168.4.90
Router(config)#
Router(config)#
Router(config)#no ip route 192.168.2.0 255.255.255.0 192.168.1.2
Router(config)#
Top


Router3
Physical
Config
CLI
Attributes
IOS Command Line Interface
Router(config)#ip route 192.168.4.0 255.255.255.224 192.168.4.85
Router(config)#ip route 192.168.4.32 255.255.255.224 192.168.4.85
Router(config)#ip route 192.168.4.80 255.255.255.252 192.168.4.85
Router(config)#ip route 192.168.4.64 255.255.255.240 192.168.4.90
Router(config)#
Router(config)#
Router(config)#no ip route 192.168.2.0 255.255.255.0 192.168.1.2
Router(config)#
Router(config)#
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
Router#sh 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
192.168.4.0/24 is variably subnetted, 8 subnets, 4 masks
S 192.168.4.0/27 [1/0] via 192.168.4.85
S 192.168.4.32/27 [1/0] via 192.168.4.85
S 192.168.4.64/28 [1/0] via 192.168.4.90
S 192.168.4.80/30 [1/0] via 192.168.4.85
C 192.168.4.84/30 is directly connected, Serial0/1/0
L 192.168.4.86/32 is directly connected, Serial0/1/0
C 192.168.4.88/30 is directly connected, GigabitEthernet0/0/0
L 192.168.4.89/32 is directly connected, GigabitEthernet0/0/0
Router#
Ctrl+F6 to exit CLI focus
Copy
Paste
Top


Router4
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0/0
GigabitEthernet0/0/1
GigabitEthernet0/1/0
GigabitEthernet0/1/1
GigabitEthernet0/1/2
GigabitEthernet0/1/3
Static Routes
Network
Mask
Next Hop
Add
Network Address
192.168.4.0/27 via 192.168.4.89
192.168.4.32/27 via 192.168.4.89
192.168.4.80/30 via 192.168.4.89
192.168.4.84/30 via 192.168.4.89
Remove
Equivalent IOS Commands
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#
Router(config)#ip route 192.168.4.0 255.255.255.224 192.168.4.89
Router(config)#ip route 192.168.4.32 255.255.255.224 192.168.4.89
Router(config)#ip route 192.168.4.80 255.255.255.252 192.168.4.89
Router(config)#ip route 192.168.4.84 255.255.255.252 192.168.4.89
Router(config)#
Router(config)#
Router(config)#
Top



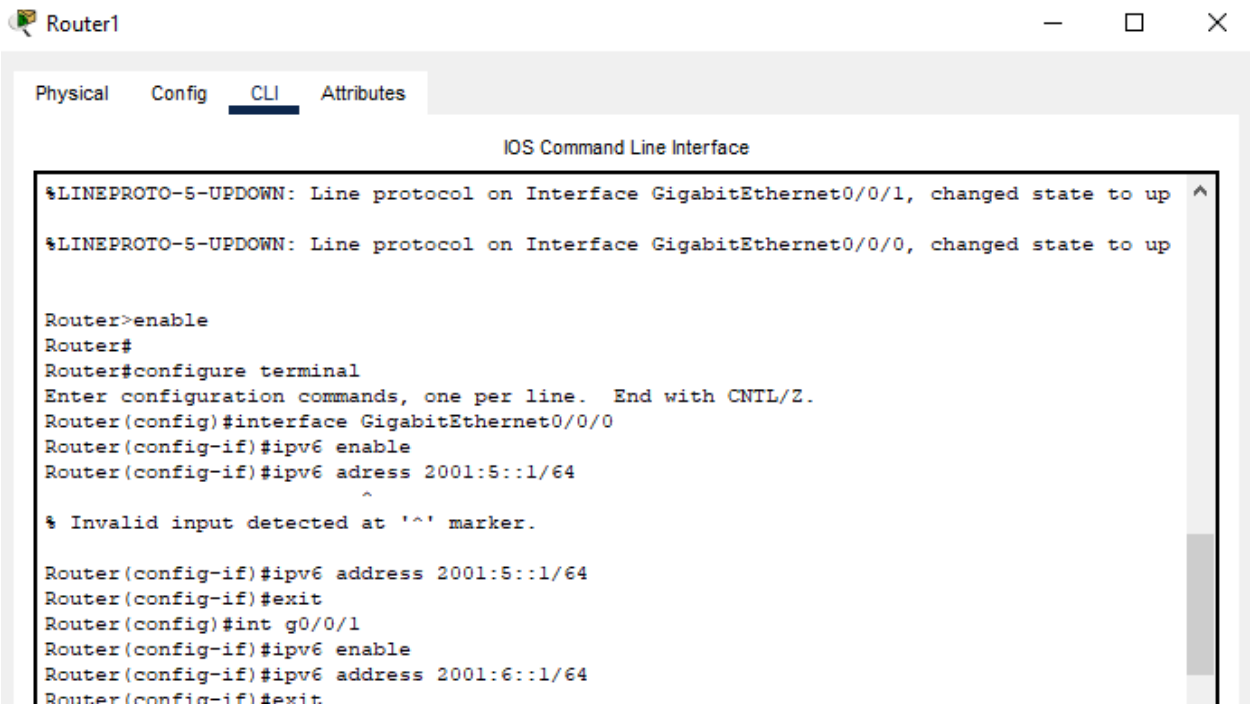
Пример ping:

```
C:\>ping 192.168.4.34

Pinging 192.168.4.34 with 32 bytes of data:

Reply from 192.168.4.34: bytes=32 time<1ms TTL=128
Reply from 192.168.4.34: bytes=32 time<1ms TTL=128
Reply from 192.168.4.34: bytes=32 time<1ms TTL=128
Reply from 192.168.4.34: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.4.34:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

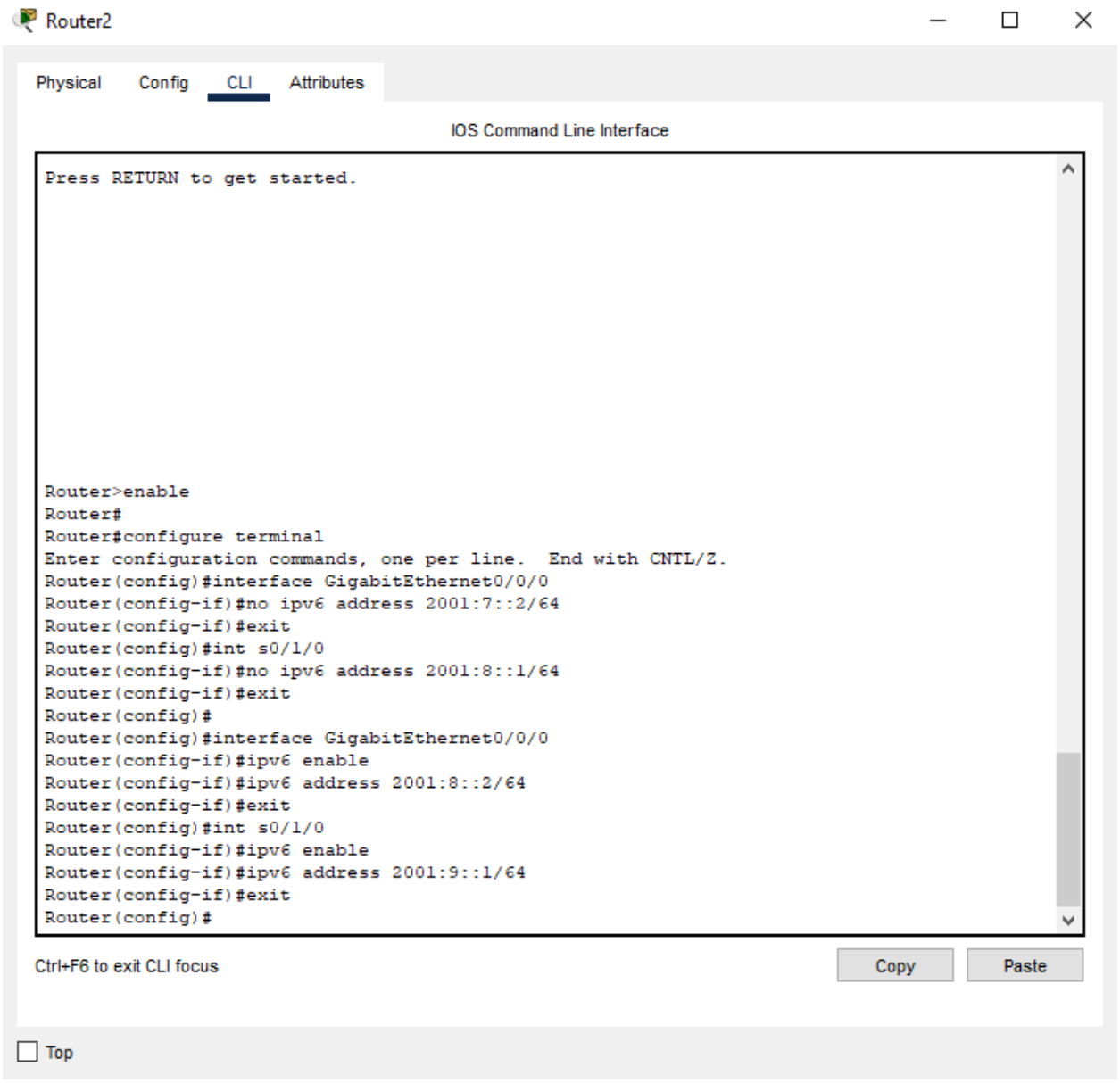
III. Выделить маршрутизаторам IPv6 адреса формата 2001:x+y::z/64

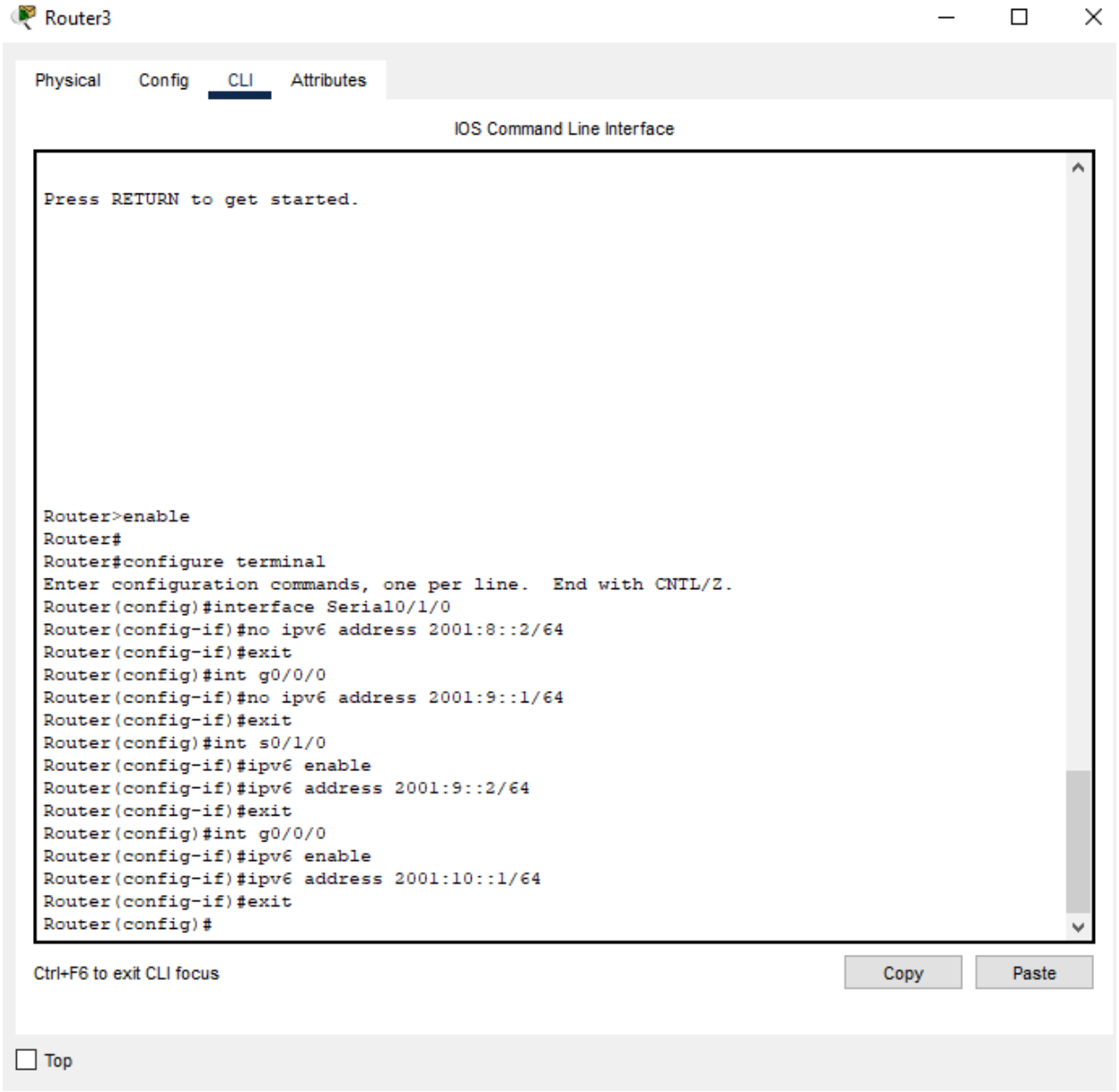
где x - Ваш номер по списку в ЭУ, y - порядковый номер подсети,

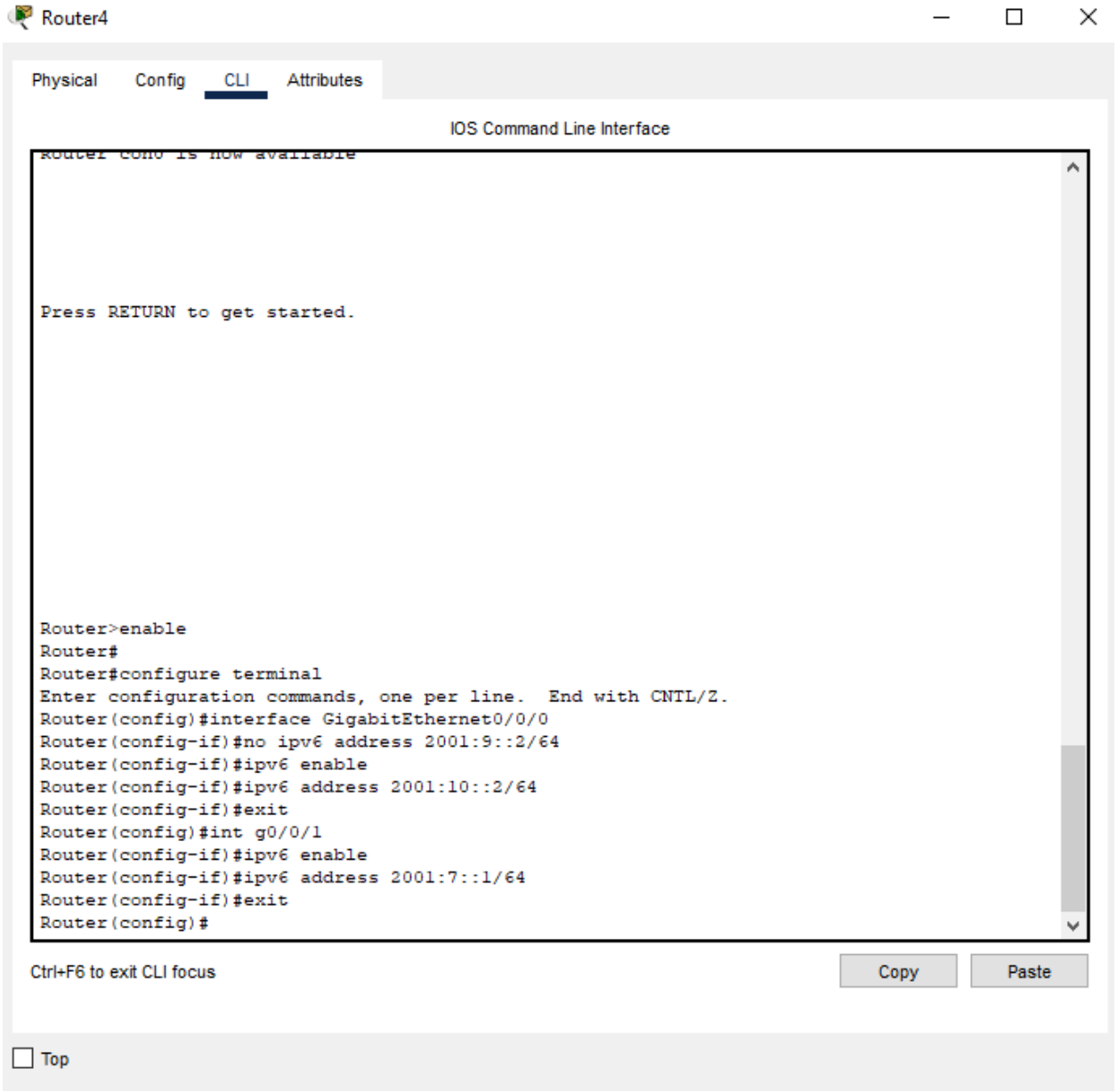
z - порядковый номер интерфейса




```
Router(config)#int vlan 1
Router(config-if)#ipv6 enable
Router(config-if)#ipv6 address 2001:8::1/64
Router(config-if)#exit
```

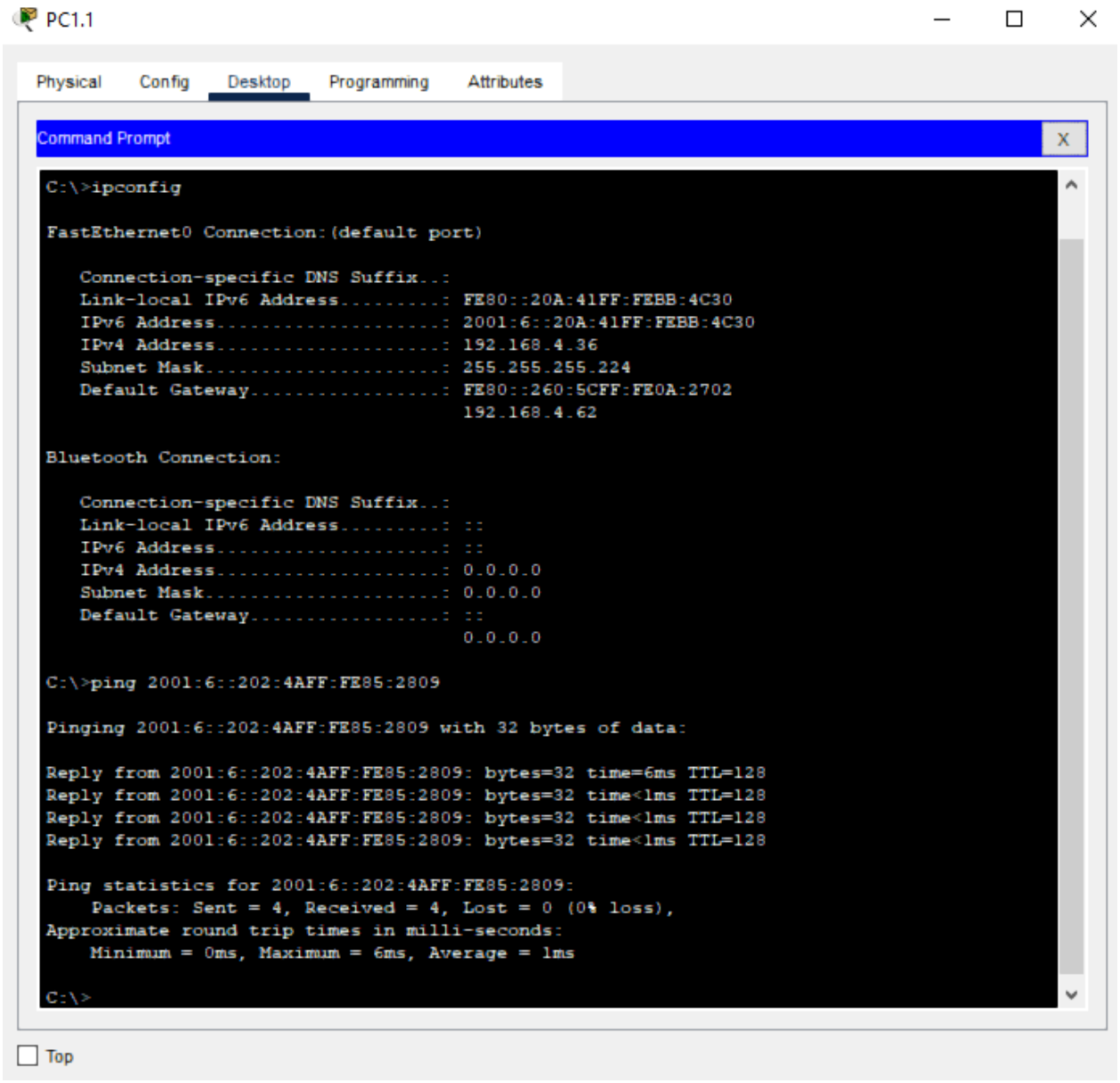

Router2
Physical
Config
CLI
Attributes
IOS Command Line Interface
Press RETURN to get started.
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface GigabitEthernet0/0/0
Router(config-if)#no ipv6 address 2001:7::2/64
Router(config-if)#exit
Router(config)#int s0/1/0
Router(config-if)#no ipv6 address 2001:8::1/64
Router(config-if)#exit
Router(config)#
Router(config)#interface GigabitEthernet0/0/0
Router(config-if)#ipv6 enable
Router(config-if)#ipv6 address 2001:8::2/64
Router(config-if)#exit
Router(config)#int s0/1/0
Router(config-if)#ipv6 enable
Router(config-if)#ipv6 address 2001:9::1/64
Router(config-if)#exit
Router(config)#
Ctrl+F6 to exit CLI focus
Copy
Paste
Top


Router3
Physical
Config
CLI
Attributes
IOS Command Line Interface
Press RETURN to get started.
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface Serial0/1/0
Router(config-if)#no ipv6 address 2001:8::2/64
Router(config-if)#exit
Router(config)#int g0/0/0
Router(config-if)#no ipv6 address 2001:9::1/64
Router(config-if)#exit
Router(config)#int s0/1/0
Router(config-if)#ipv6 enable
Router(config-if)#ipv6 address 2001:9::2/64
Router(config-if)#exit
Router(config)#int g0/0/0
Router(config-if)#ipv6 enable
Router(config-if)#ipv6 address 2001:10::1/64
Router(config-if)#exit
Router(config)#
Ctrl+F6 to exit CLI focus
Copy
Paste
Top



IV. Настроить статическую маршрутизацию так, чтобы пинг любым хостом или маршрутизатором любого другого хоста или маршрутизатора с использованием IPv6 адреса был успешным.

Пример ping:


PC1.1
Physical
Config
Desktop
Programming
Attributes
Command Prompt
X
C:\>ipconfig
FastEthernet0 Connection:(default port)
Connection-specific DNS Suffix..:
Link-local IPv6 Address.....: FE80::20A:41FF:FEBB:4C30
IPv6 Address.....: 2001:6::20A:41FF:FEBB:4C30
IPv4 Address.....: 192.168.4.36
Subnet Mask.....: 255.255.255.224
Default Gateway.....: FE80::260:5CFF:FE0A:2702
192.168.4.62
Bluetooth Connection:
Connection-specific DNS Suffix..:
Link-local IPv6 Address.....: ::
IPv6 Address.....: ::
IPv4 Address.....: 0.0.0.0
Subnet Mask.....: 0.0.0.0
Default Gateway.....: ::
0.0.0.0
C:\>ping 2001:6::202:4AFF:FE85:2809
Pinging 2001:6::202:4AFF:FE85:2809 with 32 bytes of data:
Reply from 2001:6::202:4AFF:FE85:2809: bytes=32 time=6ms TTL=128
Reply from 2001:6::202:4AFF:FE85:2809: bytes=32 time<1ms TTL=128
Reply from 2001:6::202:4AFF:FE85:2809: bytes=32 time<1ms TTL=128
Reply from 2001:6::202:4AFF:FE85:2809: bytes=32 time<1ms TTL=128
Ping statistics for 2001:6::202:4AFF:FE85:2809:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 6ms, Average = 1ms
C:\>
Top