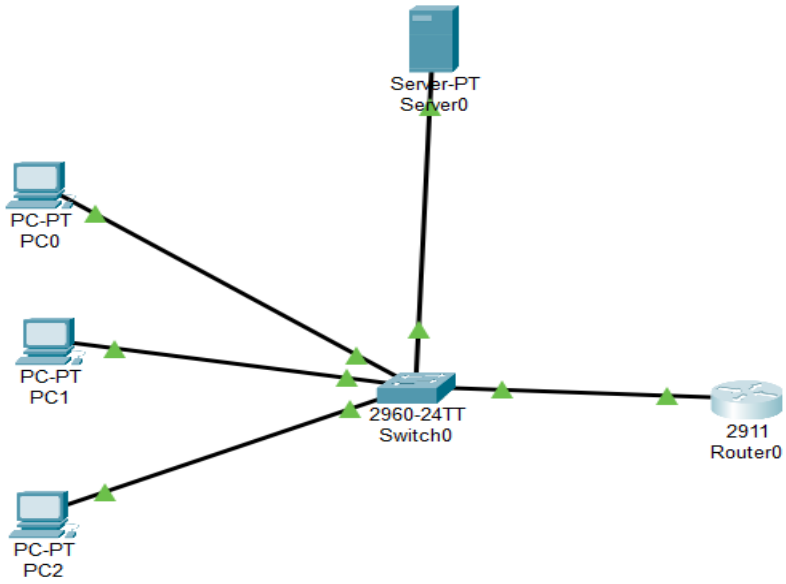
2024-2025 BAHAR DÖNEMİ
BİLGİSAYAR AĞLARI ÖDEV 5

REŞİDE ALTUN
22100011028

ALPEREN EROĞLU

NETWORK – 1 (192.168.1.0/24)

1.



2.

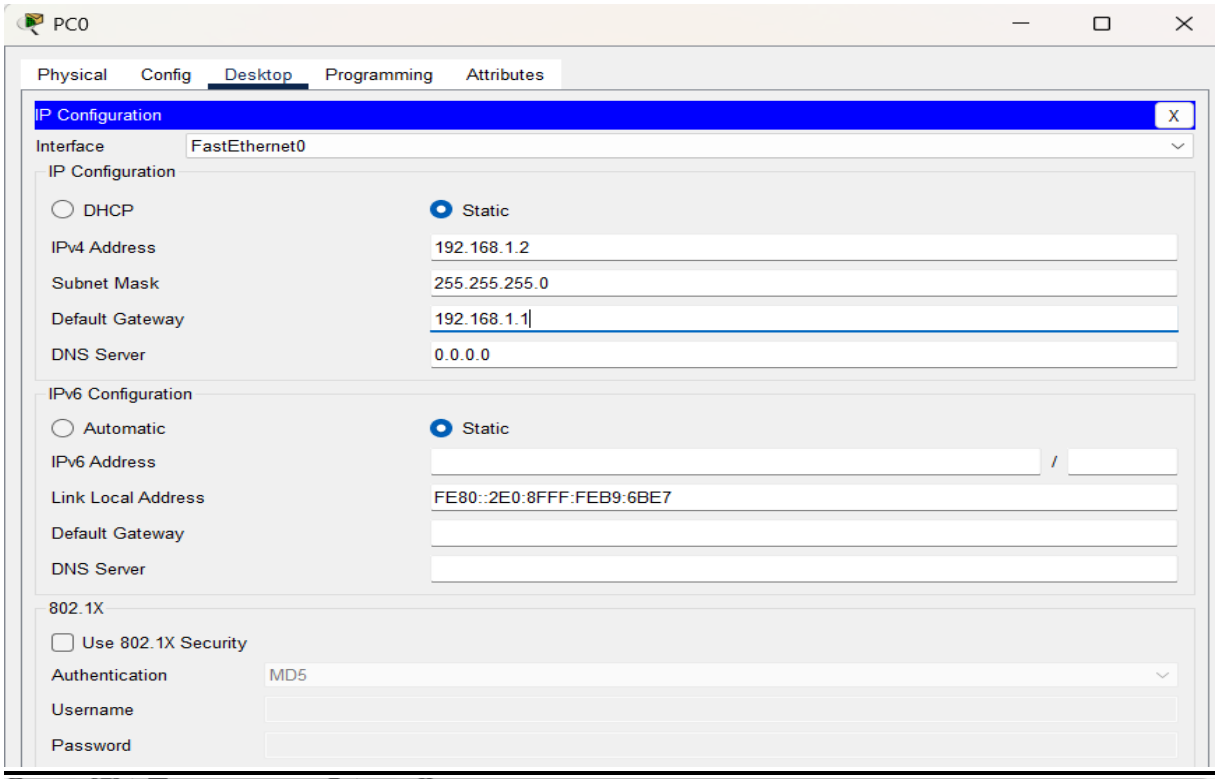
Router0

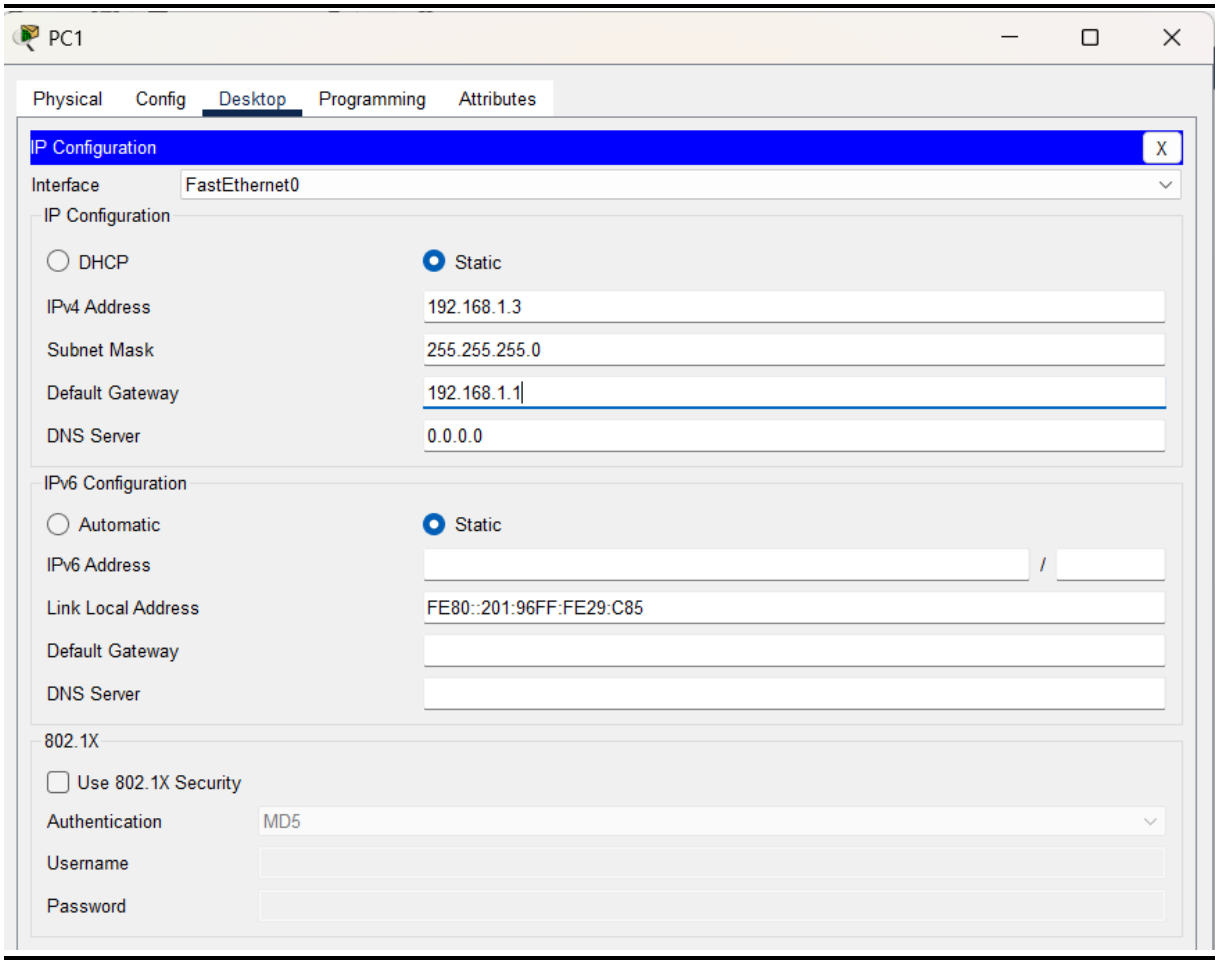
Physical Config CLI Attributes

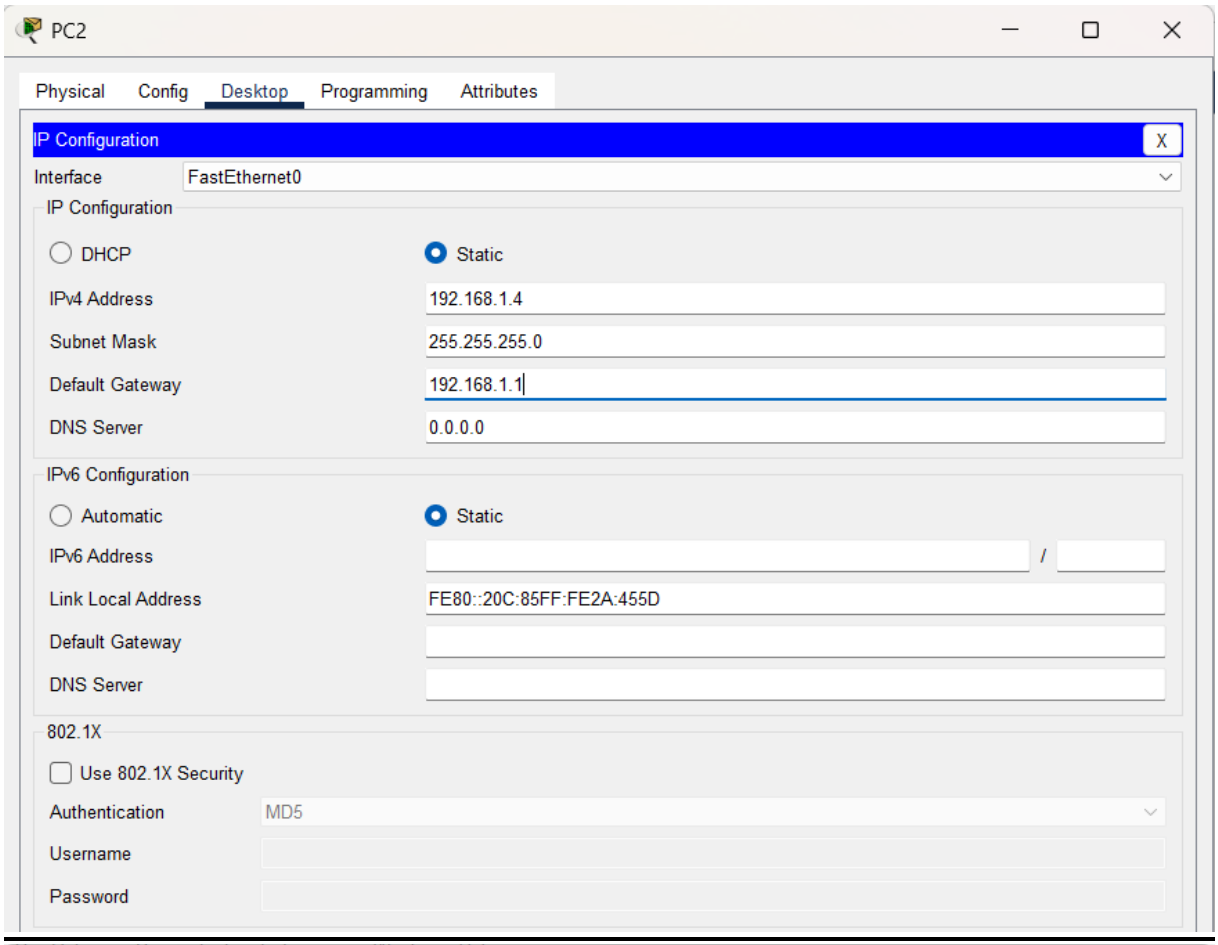
IOS Command Line Interface

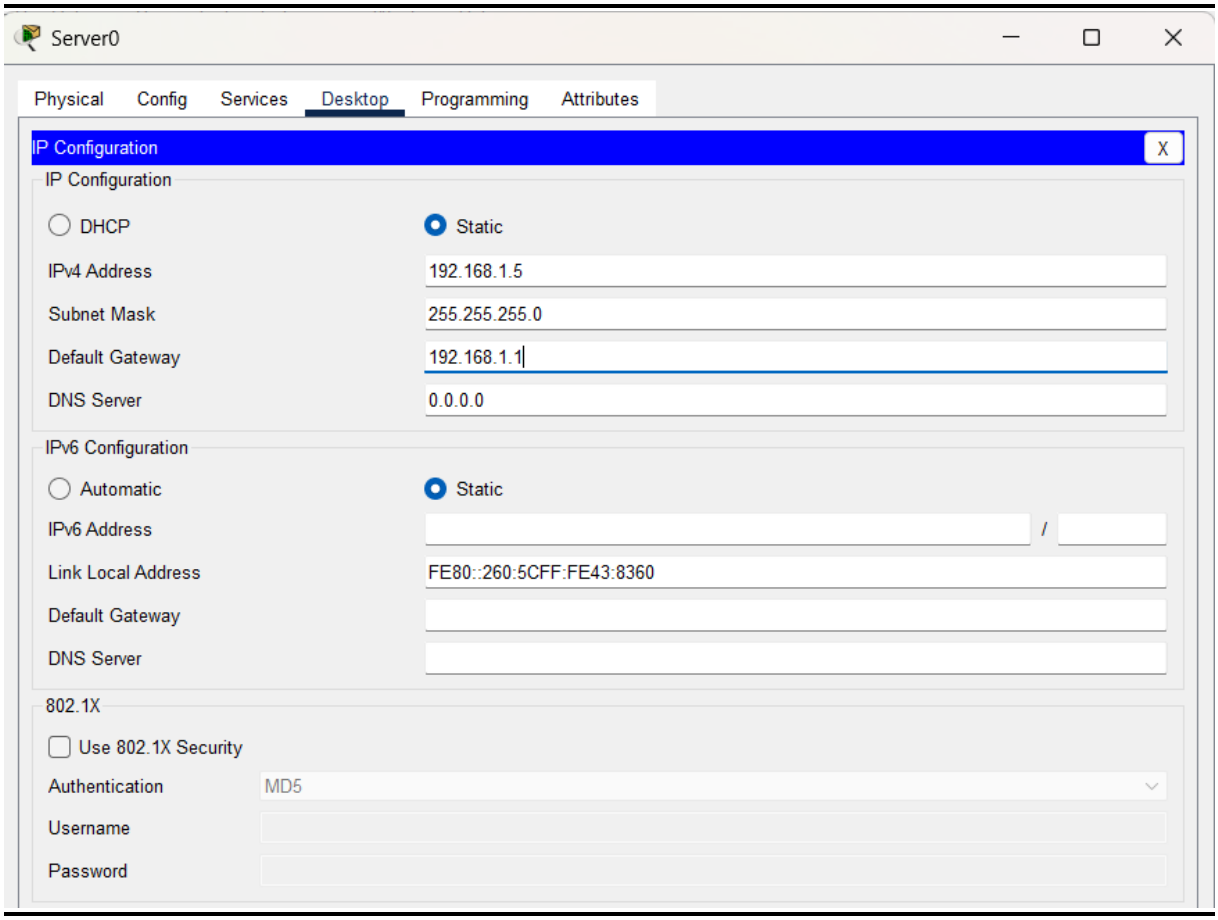
```
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface gigabitEthernet 0/0
Router(config-if)#no shutdown

Router(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

Router(config-if)#enable
                  ^
% Invalid input detected at '^' marker.

Router(config-if)#enable
                  ^
% Invalid input detected at '^' marker.

Router(config-if)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
enable
Router#enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface gigabitEthernet 0/0
Router(config-if)#ip address 192.168.1.1 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#show ip interface brief
Interface              IP-Address      OK? Method Status                Protocol
GigabitEthernet0/0     192.168.1.1     YES manual up                    up
GigabitEthernet0/1     unassigned      YES unset  administratively down down
GigabitEthernet0/2     unassigned      YES unset  administratively down down
Vlan1                  unassigned      YES unset  administratively down down
Router#
```

3.


PC0
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
192.168.1.2
Subnet Mask
255.255.255.0
Default Gateway
192.168.1.1
DNS Server
0.0.0.0
IPv6 Configuration
Automatic
Static
IPv6 Address
/
Link Local Address
FE80::2E0:8FFF:FEB9:6BE7
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication
MD5
Username
Password

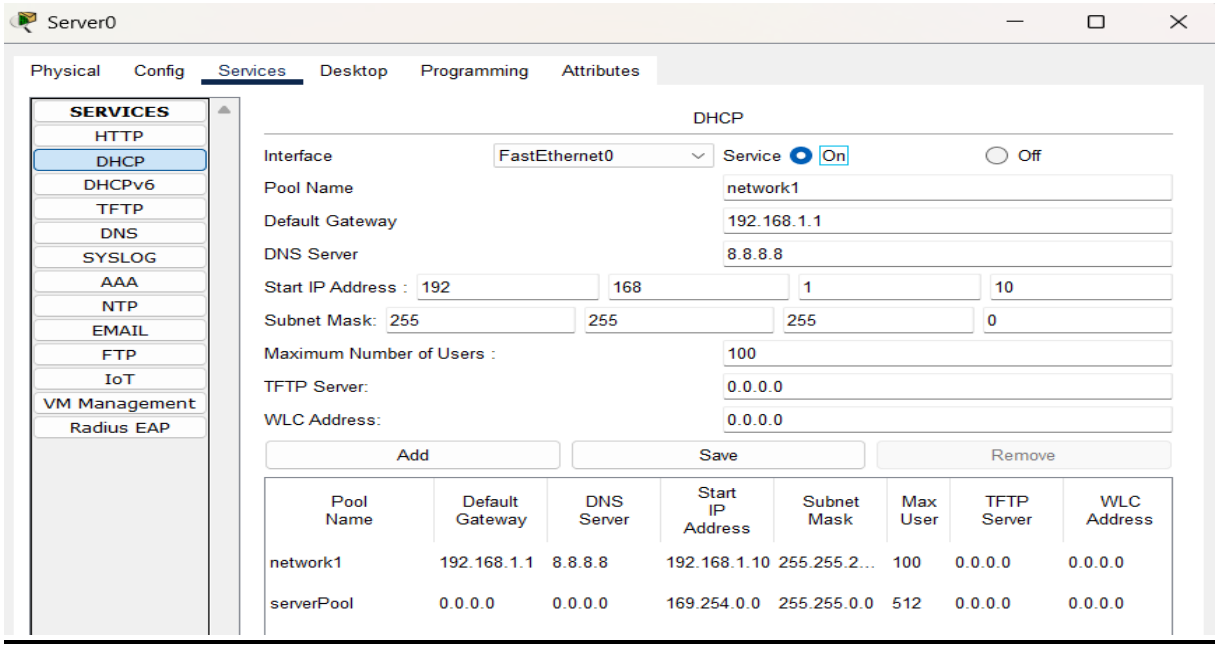

PC1
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
192.168.1.3
Subnet Mask
255.255.255.0
Default Gateway
192.168.1.1
DNS Server
0.0.0.0
IPv6 Configuration
Automatic
Static
IPv6 Address
/
Link Local Address
FE80::201:96FF:FE29:C85
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication
MD5
Username
Password


PC2
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
192.168.1.4
Subnet Mask
255.255.255.0
Default Gateway
192.168.1.1
DNS Server
0.0.0.0
IPv6 Configuration
Automatic
Static
IPv6 Address
/
Link Local Address
FE80::20C:85FF:FE2A:455D
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication
MD5
Username
Password

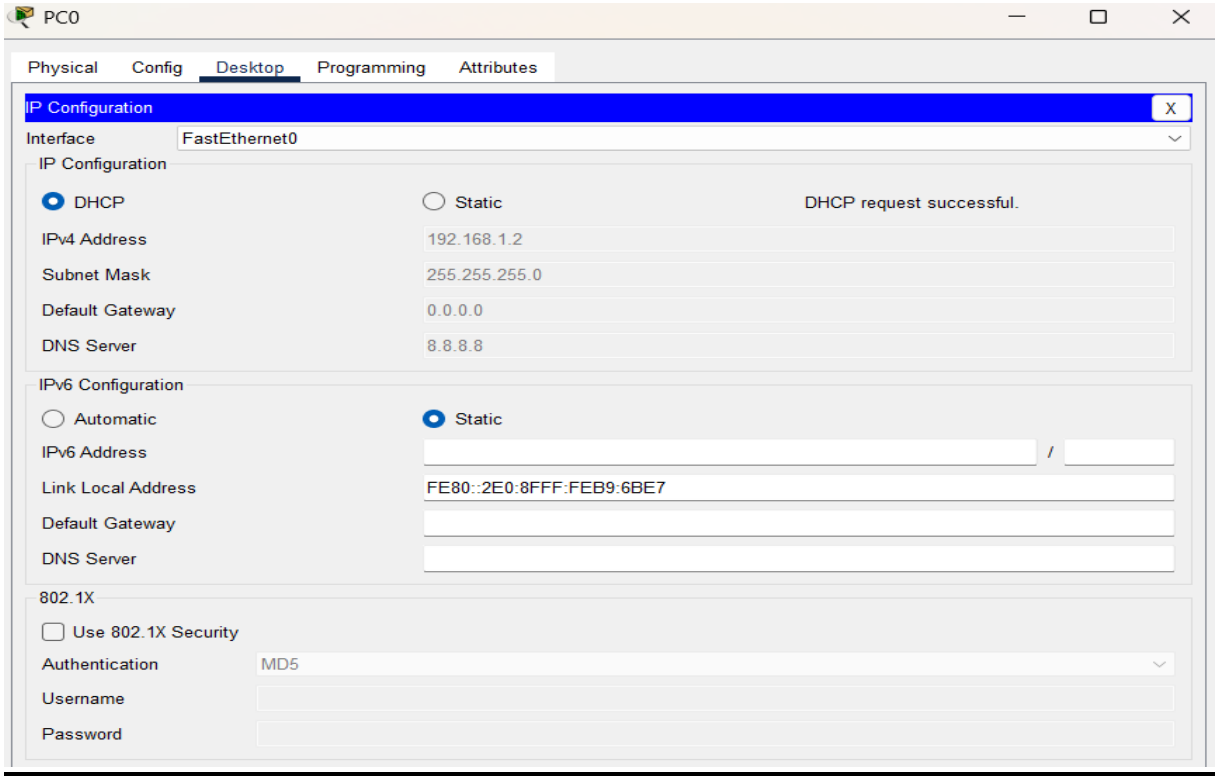

Server0
Physical
Config
Services
Desktop
Programming
Attributes
IP Configuration
X
IP Configuration
DHCP
Static
IPv4 Address
192.168.1.5
Subnet Mask
255.255.255.0
Default Gateway
192.168.1.1
DNS Server
0.0.0.0
IPv6 Configuration
Automatic
Static
IPv6 Address
/
Link Local Address
FE80::260:5CFF:FE43:8360
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication
MD5
Username
Password

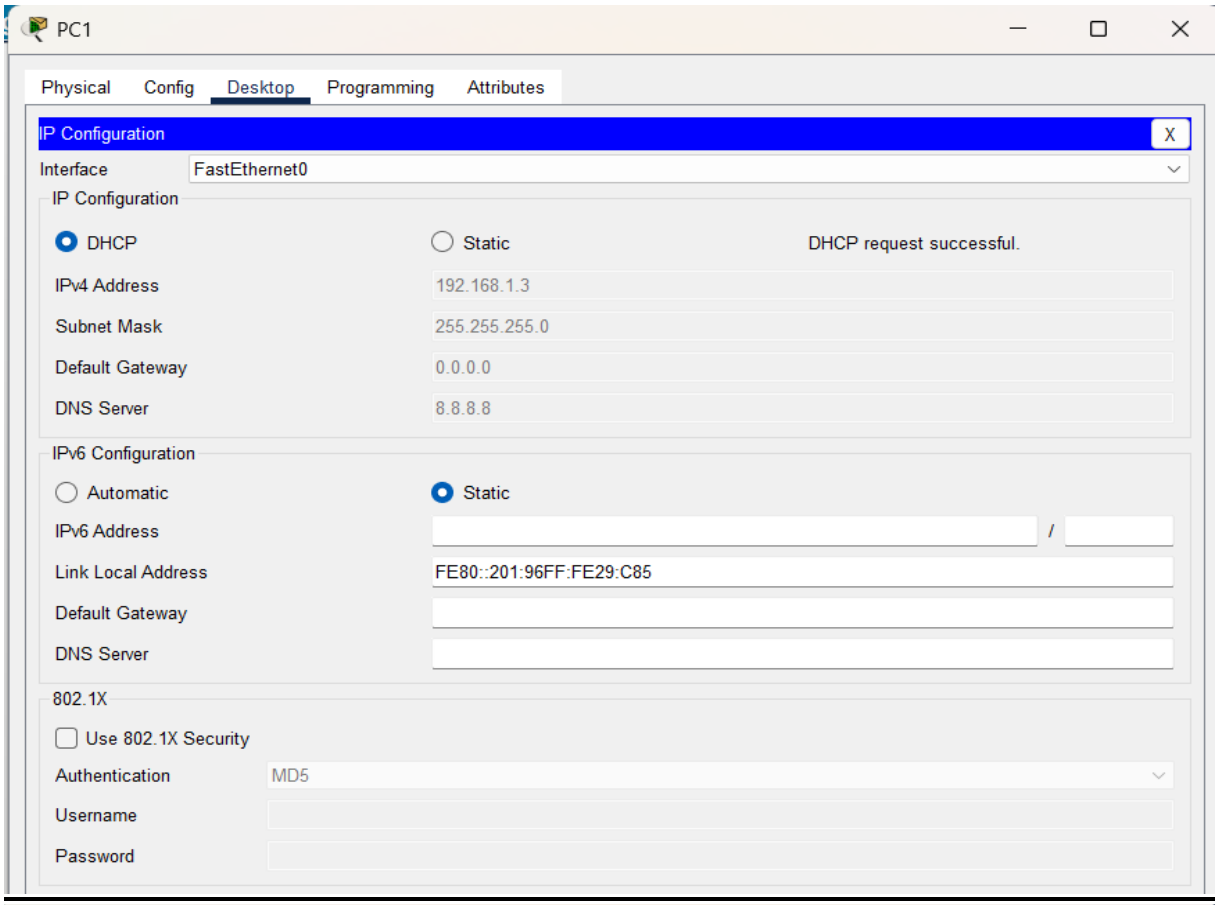
Cihaz	IP Address	Subnet Mask	Default Gateway
PC0	192.168.1.2	255.255.255.0	192.168.1.1
PC1	192.168.1.3	255.255.255.0	192.168.1.1
PC2	192.168.1.4	255.255.255.0	192.168.1.1
Server0	192.168.1.5	255.255.255.0	192.168.1.1

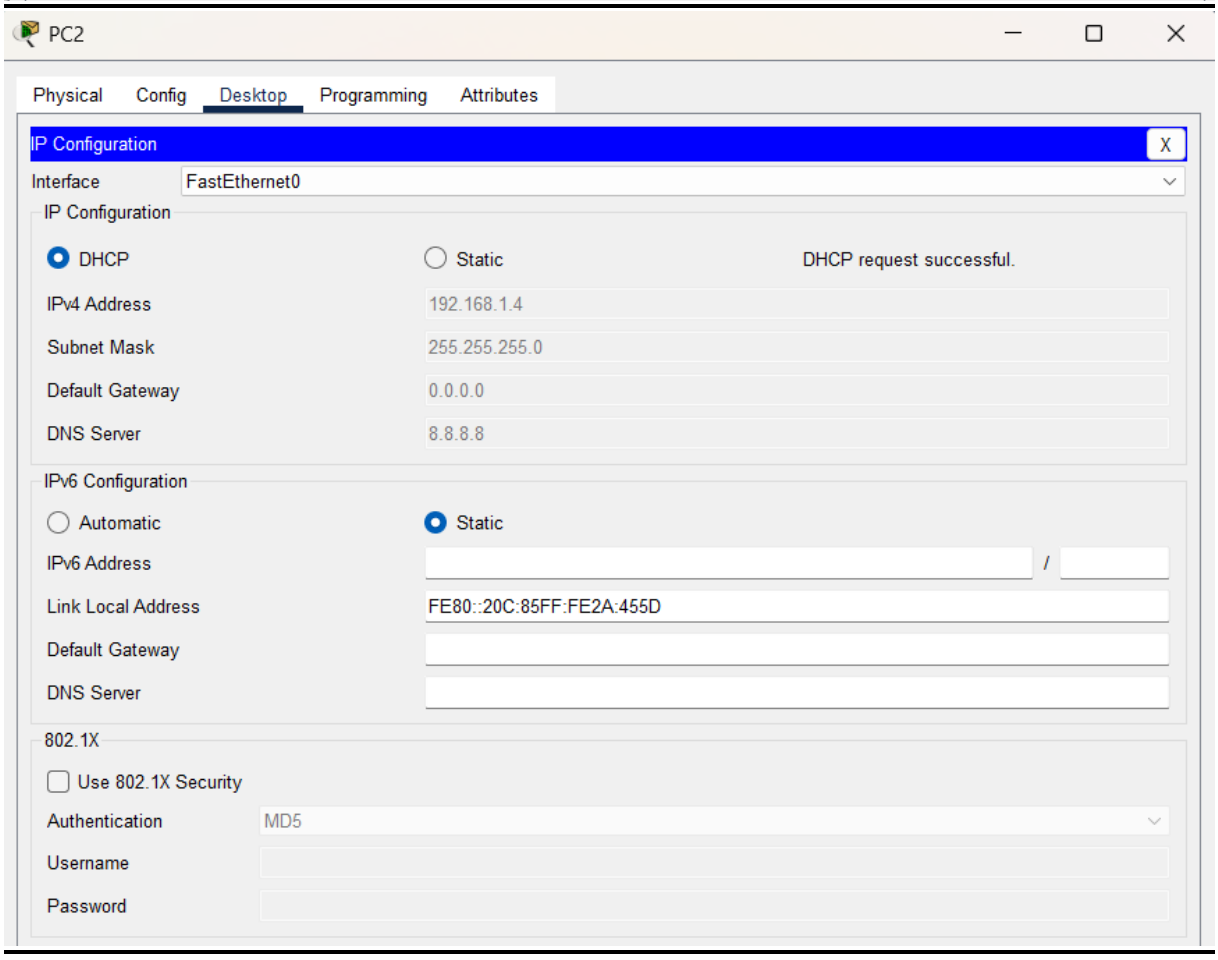
4.



5.

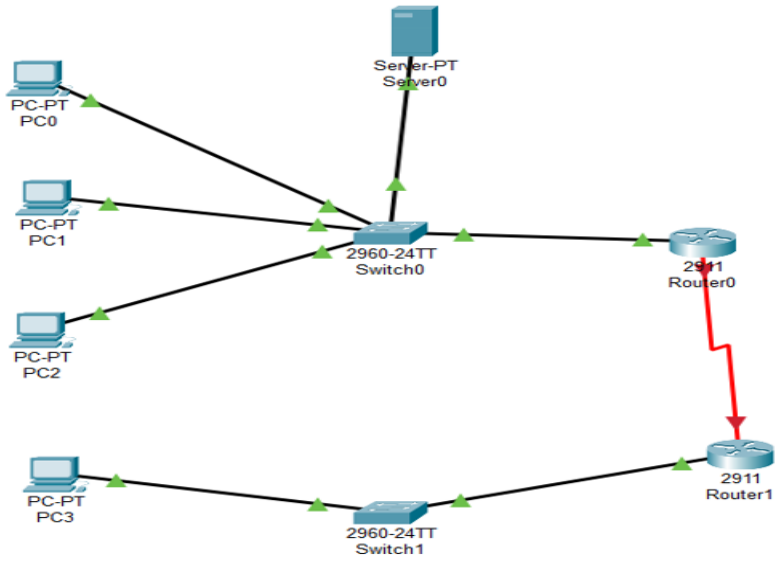



PC1
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
DHCP request successful.
IPv4 Address
192.168.1.3
Subnet Mask
255.255.255.0
Default Gateway
0.0.0.0
DNS Server
8.8.8.8
IPv6 Configuration
Automatic
Static
IPv6 Address
/
Link Local Address
FE80::201:96FF:FE29:C85
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication
MD5
Username
Password


PC2
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
DHCP request successful.
IPv4 Address
192.168.1.4
Subnet Mask
255.255.255.0
Default Gateway
0.0.0.0
DNS Server
8.8.8.8
IPv6 Configuration
Automatic
Static
IPv6 Address
/
Link Local Address
FE80::20C:85FF:FE2A:455D
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication
MD5
Username
Password

NETWORK – 2 (192.168.2.0/24)

6.



7.

R2

Physical Config CLI Attributes

IOS Command Line Interface

```
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#conf t
%Invalid hex value
Router(config)#interface GigabitEthernet0/0
Router(config-if)#ip address 192.168.2.1 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
Router#wr
Building configuration...
[OK]
Router#show interface GigabitEthernet0/0
GigabitEthernet0/0 is up, line protocol is up (connected)
  Hardware is CN Gigabit Ethernet, address is 00e0.b085.b701 (bia 00e0.b085.b701)
  Internet address is 192.168.2.1/24
  MTU 1500 bytes, BW 1000000 Kbit, DLY 100 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full-duplex, 100Mb/s, media type is RJ45
  output flow-control is unsupported, input flow-control is unsupported
  ARP type: ARPA, ARP Timeout 04:00:00,
  Last input 00:00:08, output 00:00:05, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0 (size/max/drops); Total output drops: 0
  Queueing strategy: fifo
  Output queue :0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
     0 packets input, 0 bytes, 0 no buffer
     Received 0 broadcasts, 0 runts, 0 giants, 0 throttles
     0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
     0 watchdog, 1017 multicast, 0 pause input
     0 input packets with dribble condition detected
```

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8.

R1

Physical Config CLI Attributes

IOS Command Line Interface

```
Router con0 is now available



Press RETURN to get started.









Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface Serial0/0/0
Router(config-if)#ip address 10.0.0.1 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#wr
Building configuration...
[OK]
Router#
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#
```

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R2

Physical Config CLI Attributes

IOS Command Line Interface

```
  Keepalive set (10 sec)
  Full-duplex, 100Mb/s, media type is RJ45
  output flow-control is unsupported, input flow-control is unsupported
  ARP type: ARPA, ARP Timeout 04:00:00,
  Last input 00:00:08, output 00:00:05, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0 (size/max/drops); Total output drops: 0
  Queueing strategy: fifo
  Output queue :0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
     0 packets input, 0 bytes, 0 no buffer
     Received 0 broadcasts, 0 runts, 0 giants, 0 throttles
     0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
     0 watchdog, 1017 multicast, 0 pause input
     0 input packets with dribble condition detected
 --More--       0 packets output, 0 bytes, 0 underruns
     0 output errors, 0 collisions, 1 interface resets
     0 unknown protocol drops
     0 babbles, 0 late collision, 0 deferred
     0 lost carrier, 0 no carrier
     0 output buffer failures, 0 output buffers swapped out


?Bad filename
%Error parsing filename (Bad file number)
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface Serial0/0/0
Router(config-if)#ip address 20.0.0.1
% Incomplete command.
Router(config-if)#ip address 20.0.0.1 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#wr
Building configuration...
[OK]
Router#
```

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9.

R1

Physical Config CLI Attributes

IOS Command Line Interface

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface Serial0/0/0
Router(config-if)#ip address 10.0.0.1 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#wr
Building configuration...
[OK]
Router#
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#wr
Building configuration...
[OK]
Router#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#ip route 0.0.0.0 0.0.0.0 Serial0/0/0
%Default route without gateway, if not a point-to-point interface, may impact performance
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#wr
Building configuration...
[OK]
Router#
```

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R2

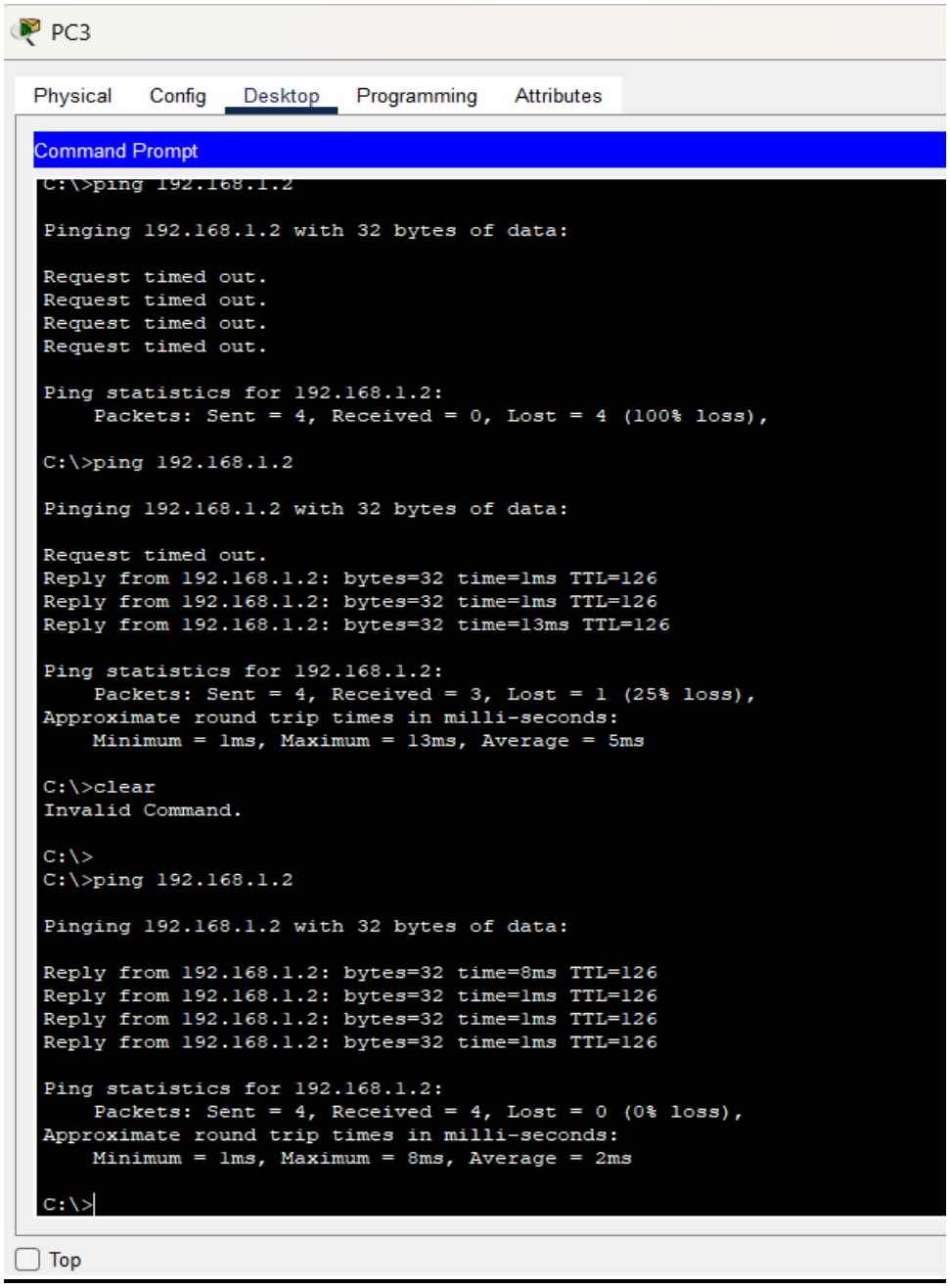
Physical Config CLI Attributes

IOS Command Line Interface

```
     0 packets input, 0 bytes, 0 no buffer
     Received 0 broadcasts, 0 runts, 0 giants, 0 throttles
     0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
     0 watchdog, 1017 multicast, 0 pause input
     0 input packets with dribble condition detected
 --More--       0 packets output, 0 bytes, 0 underruns
     0 output errors, 0 collisions, 1 interface resets
     0 unknown protocol drops
     0 babbles, 0 late collision, 0 deferred
     0 lost carrier, 0 no carrier
     0 output buffer failures, 0 output buffers swapped out


?Bad filename
%Error parsing filename (Bad file number)
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface Serial0/0/0
Router(config-if)#ip address 20.0.0.1
% Incomplete command.
Router(config-if)#ip address 20.0.0.1 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#wr
Building configuration...
[OK]
Router#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#ip route 0.0.0.0 0.0.0.0 Serial0/0/0
%Default route without gateway, if not a point-to-point interface, may impact performance
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#wr
Building configuration...
[OK]
Router#
```

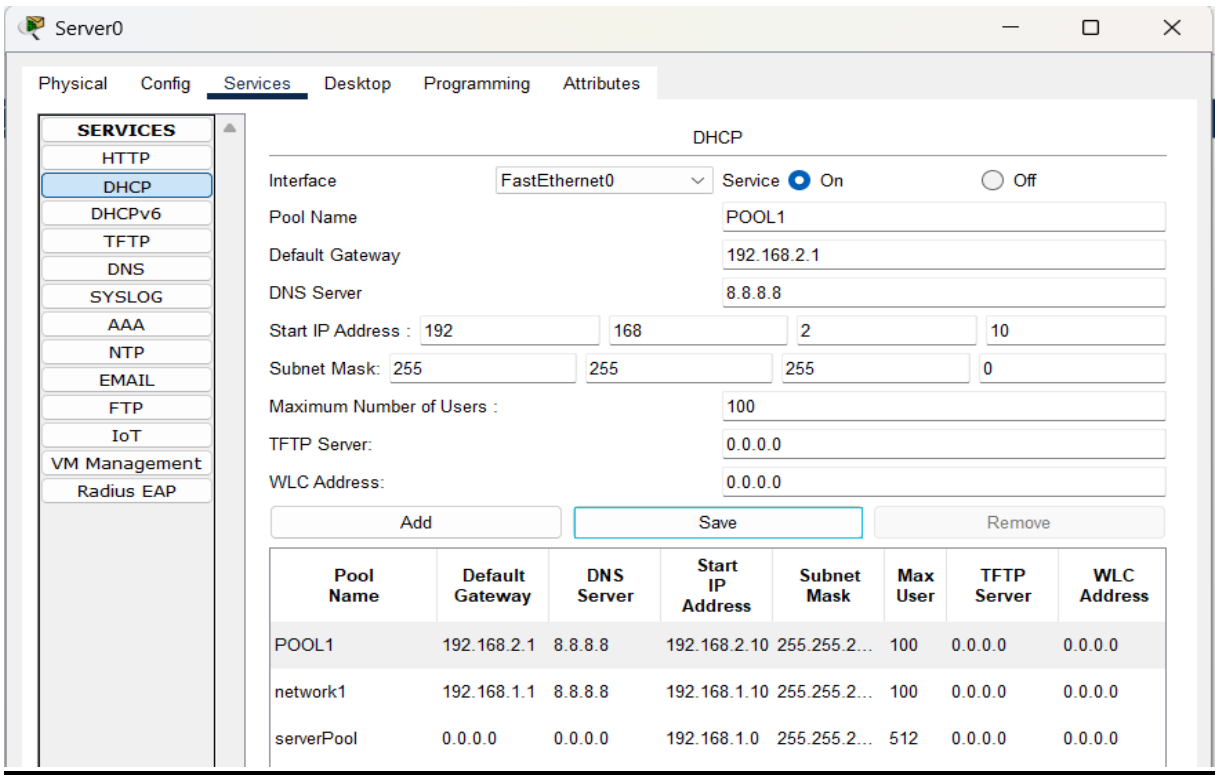
Copy Paste

10.

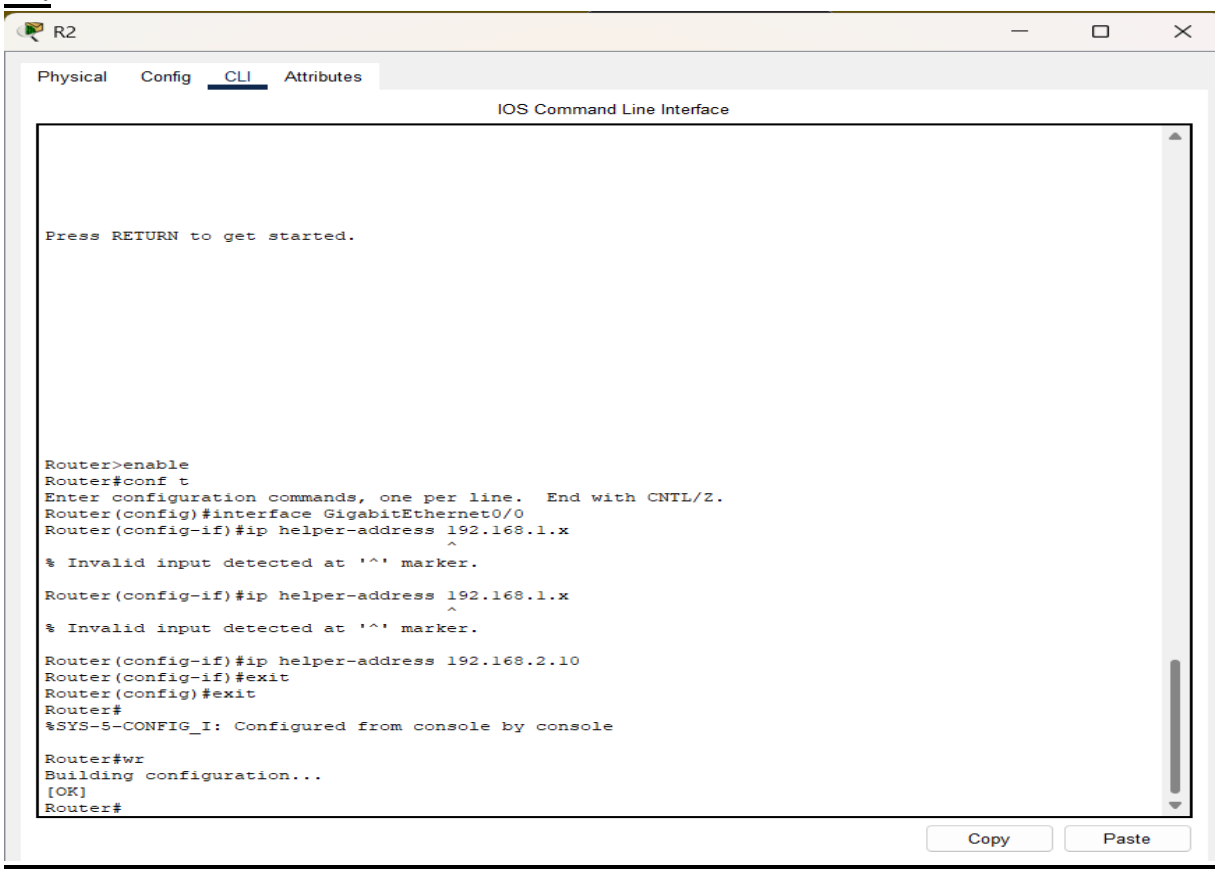

PC3
Physical
Config
Desktop
Programming
Attributes
Command Prompt
C:\>ping 192.168.1.2
Pinging 192.168.1.2 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.
Ping statistics for 192.168.1.2:
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\>ping 192.168.1.2
Pinging 192.168.1.2 with 32 bytes of data:
Request timed out.
Reply from 192.168.1.2: bytes=32 time=1ms TTL=126
Reply from 192.168.1.2: bytes=32 time=1ms TTL=126
Reply from 192.168.1.2: bytes=32 time=13ms TTL=126
Ping statistics for 192.168.1.2:
Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
Minimum = 1ms, Maximum = 13ms, Average = 5ms
C:\>clear
Invalid Command.
C:\>
C:\>ping 192.168.1.2
Pinging 192.168.1.2 with 32 bytes of data:
Reply from 192.168.1.2: bytes=32 time=8ms TTL=126
Reply from 192.168.1.2: bytes=32 time=1ms TTL=126
Reply from 192.168.1.2: bytes=32 time=1ms TTL=126
Reply from 192.168.1.2: bytes=32 time=1ms TTL=126
Ping statistics for 192.168.1.2:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 1ms, Maximum = 8ms, Average = 2ms
C:\>
Top

DHCP Relay Konfigürasyonu

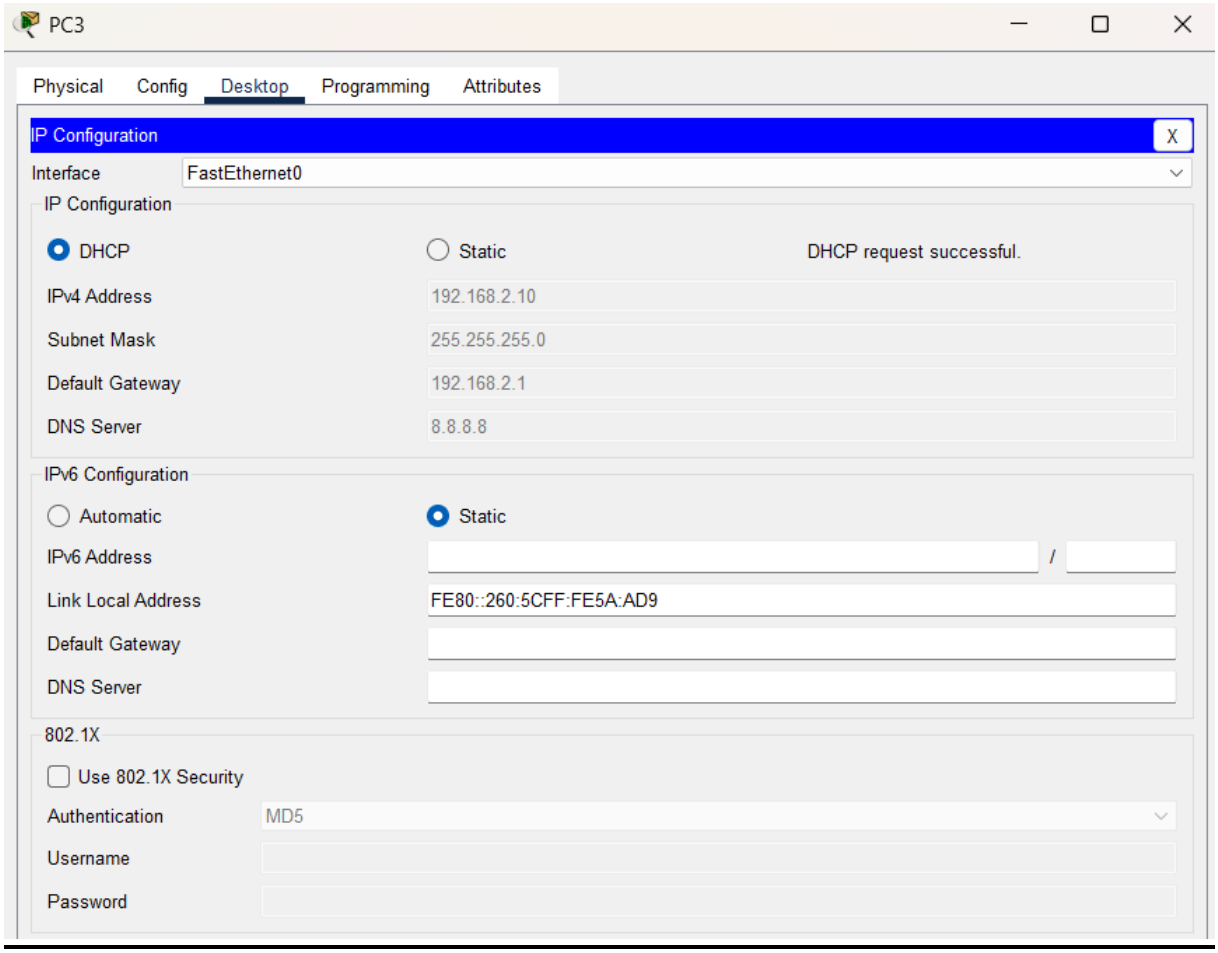
11.



12.



13.


PC3
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
DHCP request successful.
IPv4 Address
192.168.2.10
Subnet Mask
255.255.255.0
Default Gateway
192.168.2.1
DNS Server
8.8.8.8
IPv6 Configuration
Automatic
Static
IPv6 Address
/
Link Local Address
FE80::260:5CFF:FE5A:AD9
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication
MD5
Username
Password