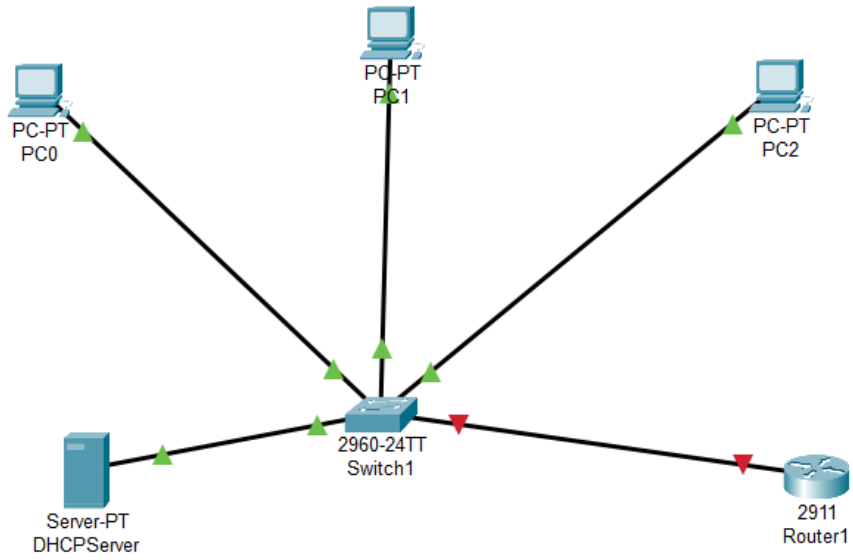
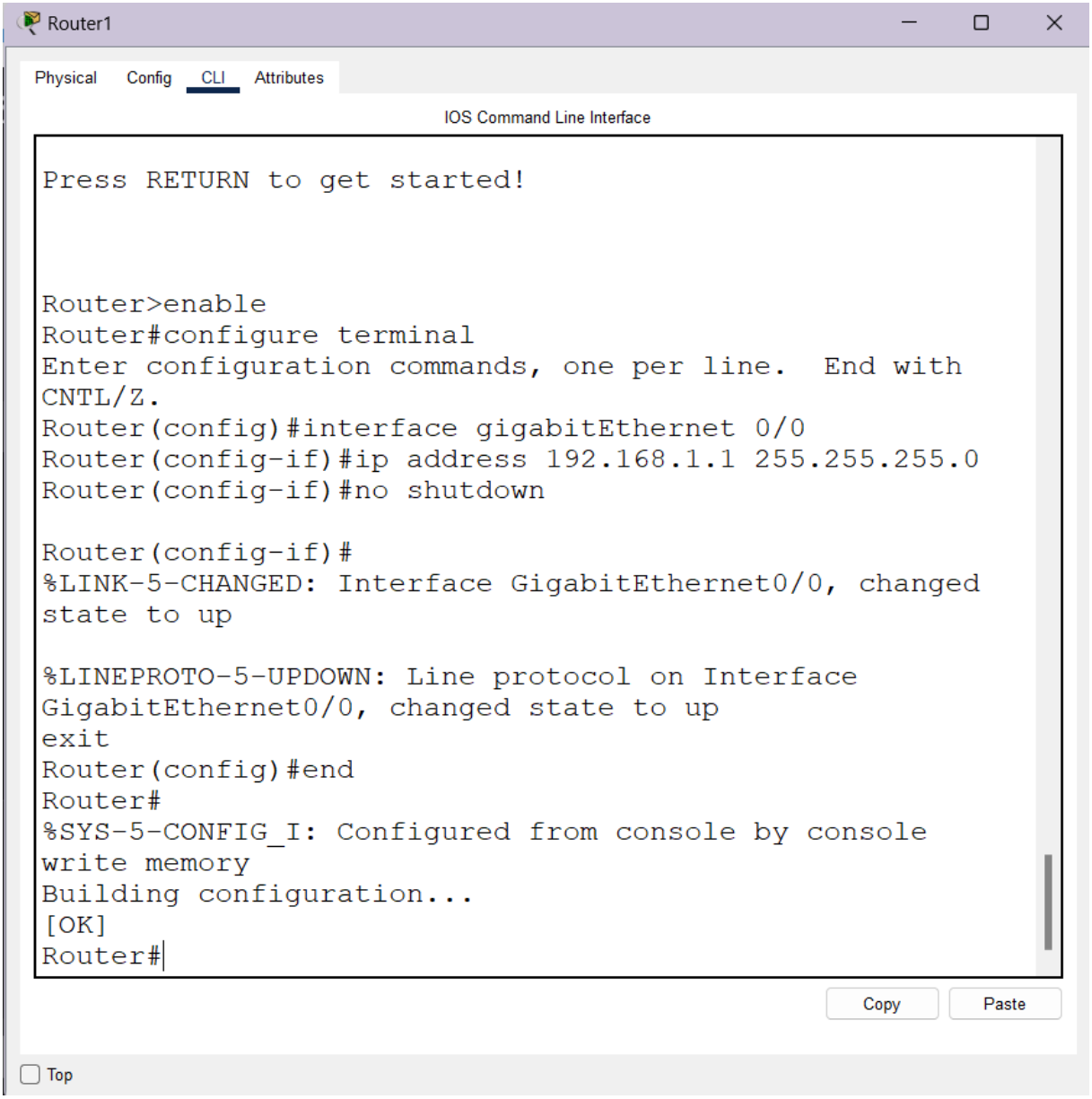
BİLGİSAYAR AĞLARI – TAKE HOME EXAM-IV DHCP

NETWORK – 1 (192.168.1.0/24)

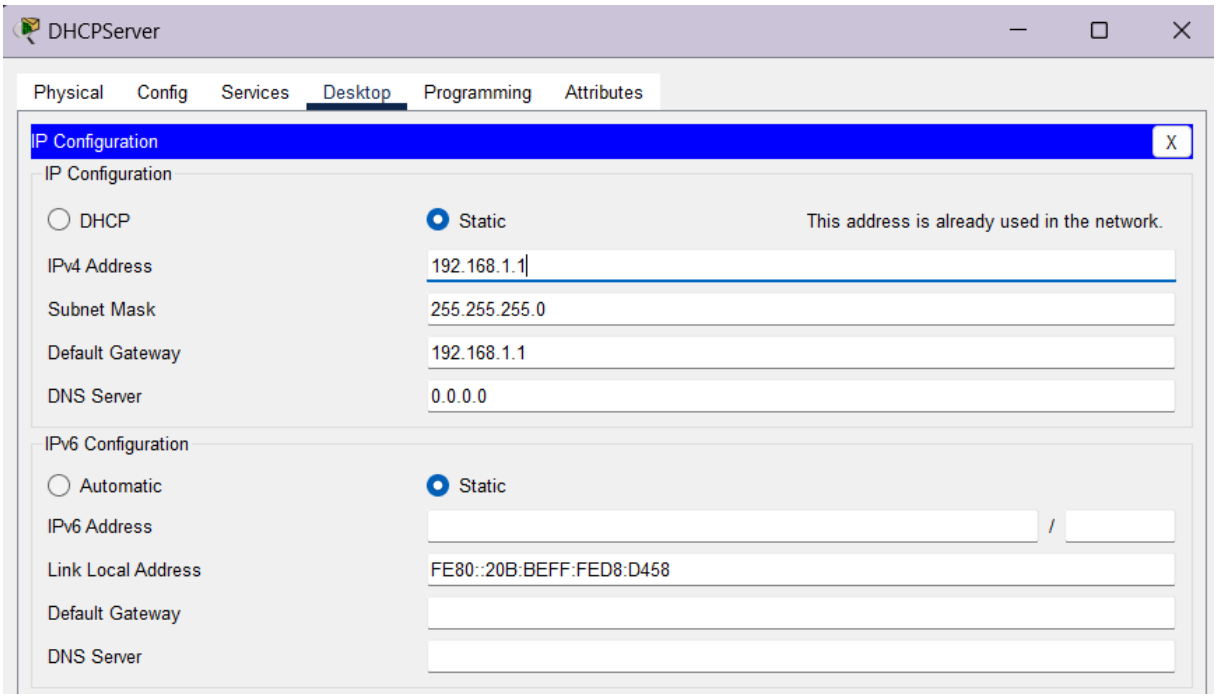
1. Ağın mantıksal görüntüsünü ekran görüntüsü ile gösteriniz

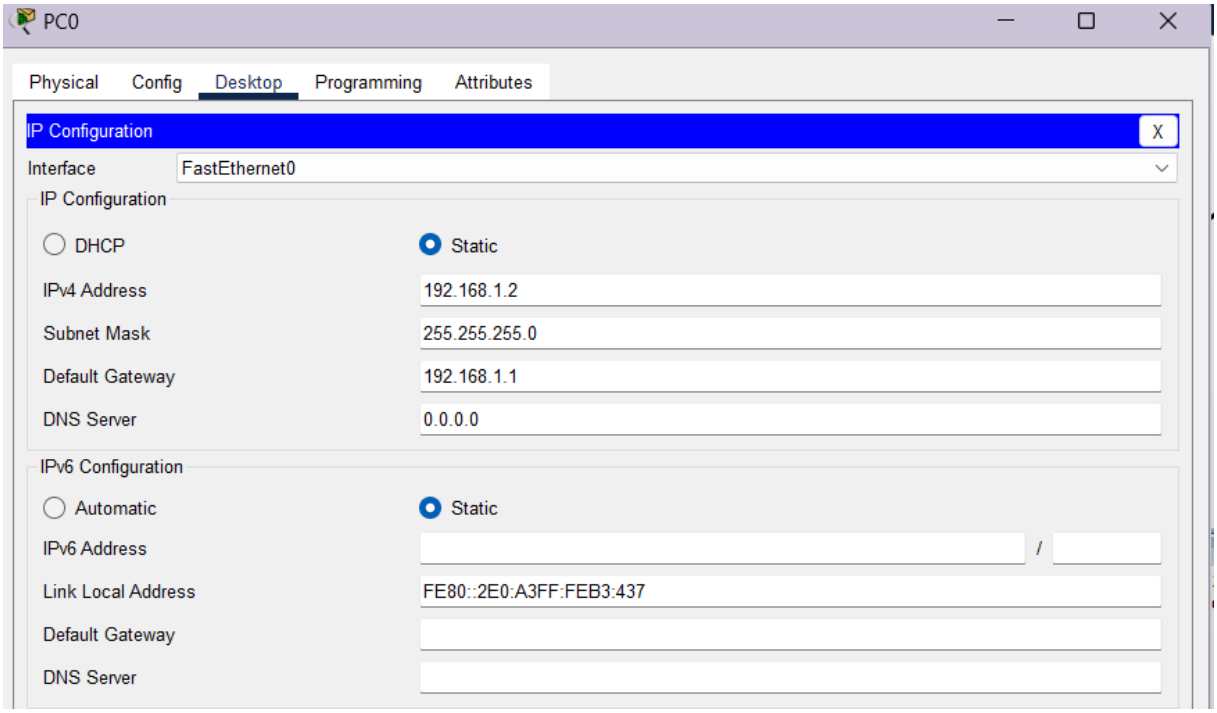


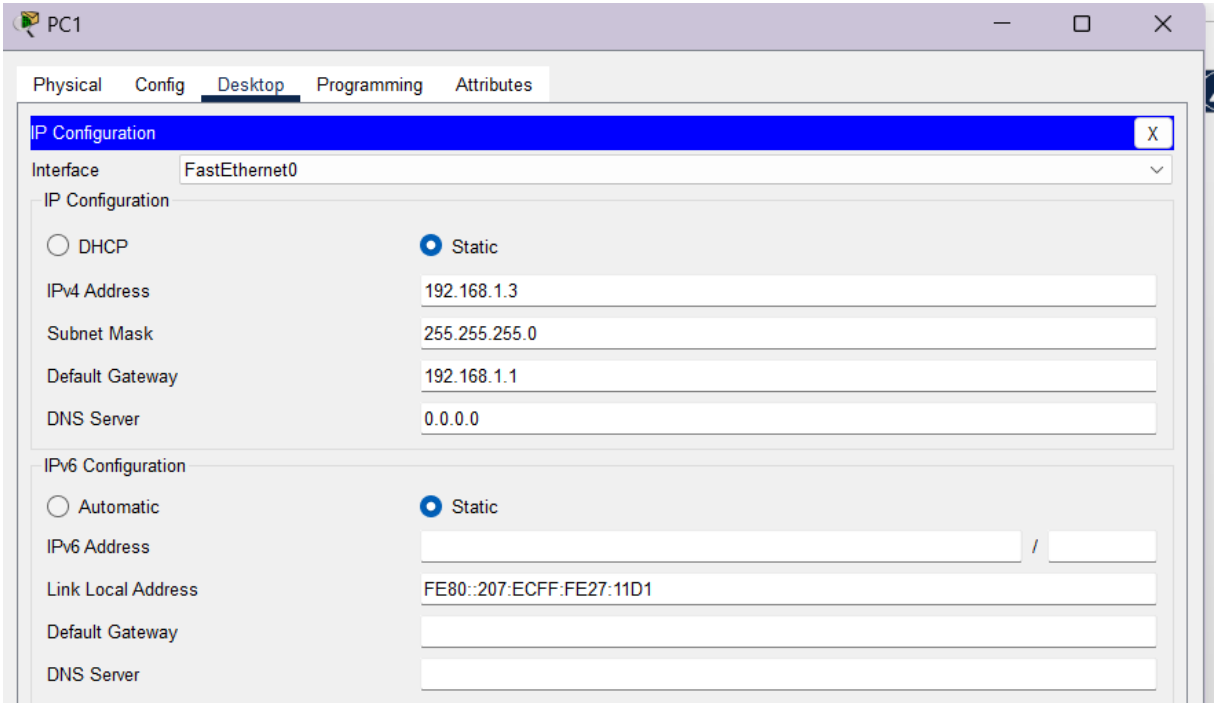
2. R1 routerının ağa bağlanan arayüzüne 192.168.1.1 IP adresini atayınız. Ekran görüntüsü ile gösteriniz.

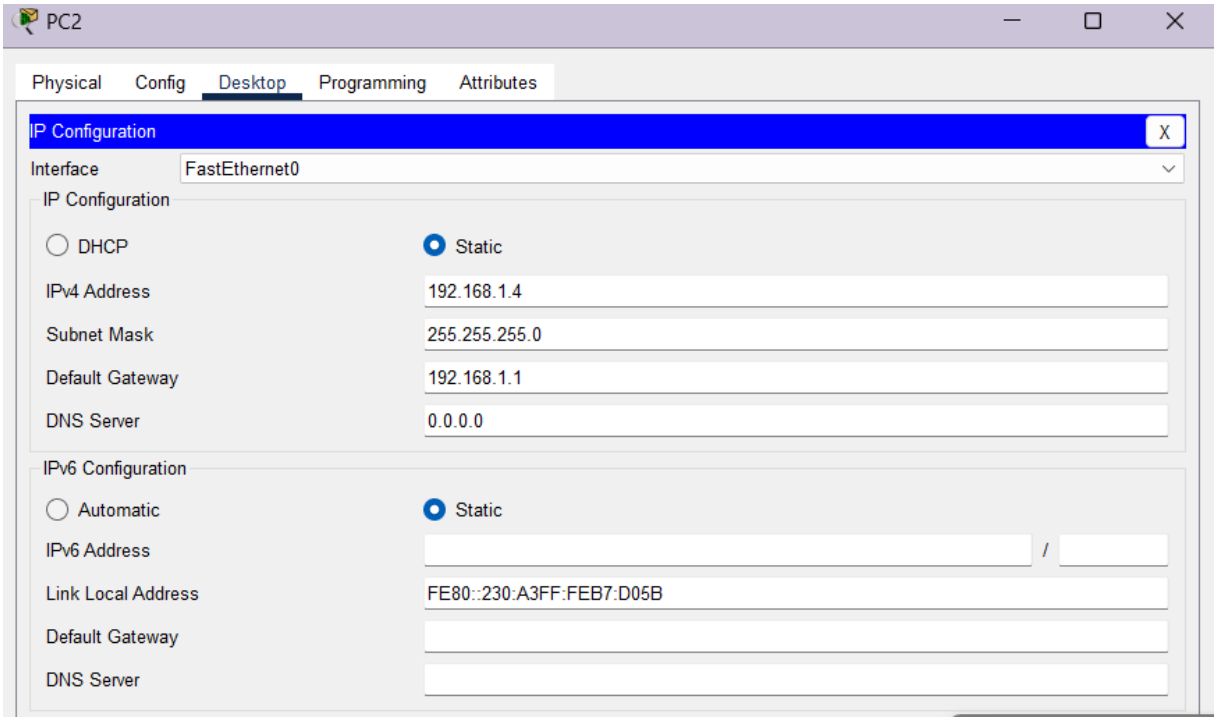


3. Sunucu ve istemcilere statik olarak ağa yuygun IP adresi atayınız. IP değerleriniz için uygun subnet mask ve default gateway değerlerini giriniz. Ekran görüntüsü ile gösteriniz.

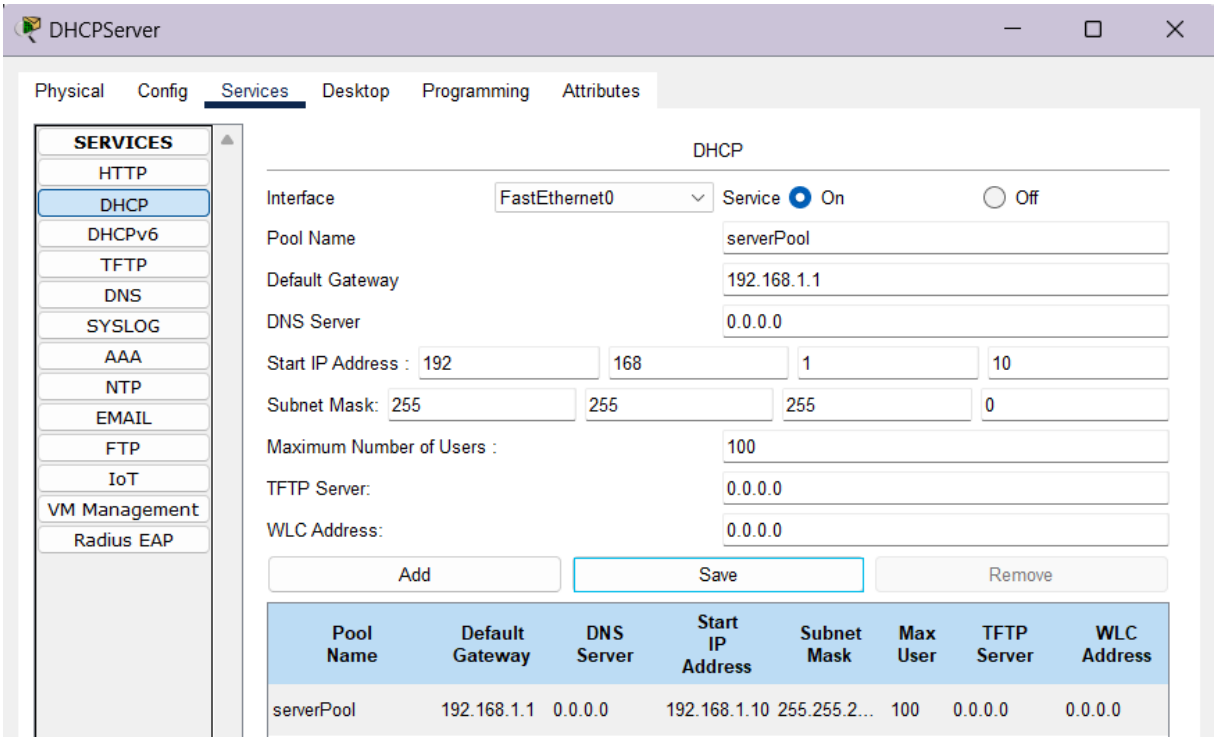




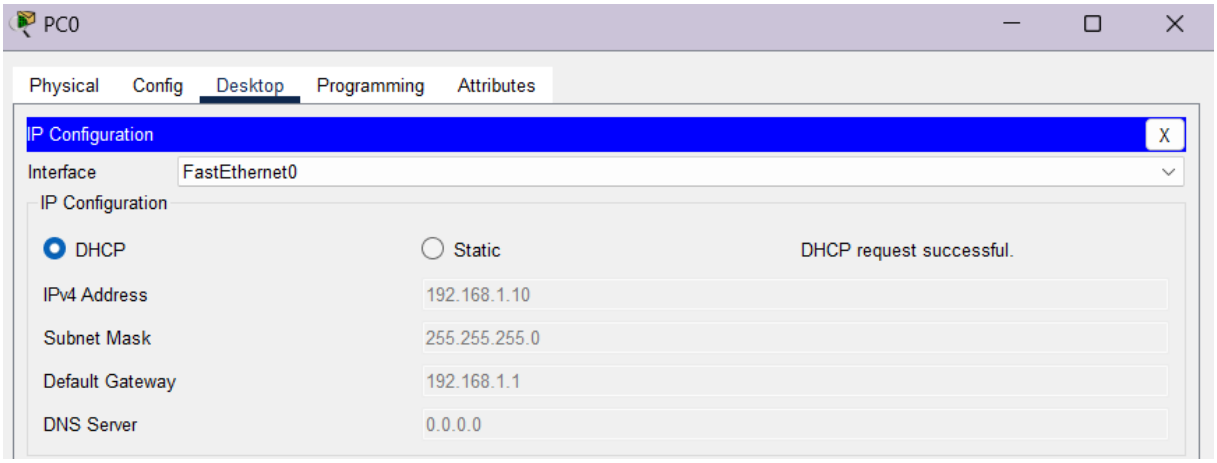

PC1
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
192.168.1.3
Subnet Mask
255.255.255.0
Default Gateway
192.168.1.1
DNS Server
0.0.0.0
IPv6 Configuration
Automatic
Static
IPv6 Address
/
Link Local Address
FE80::207:ECFF:FE27:11D1
Default Gateway
DNS Server

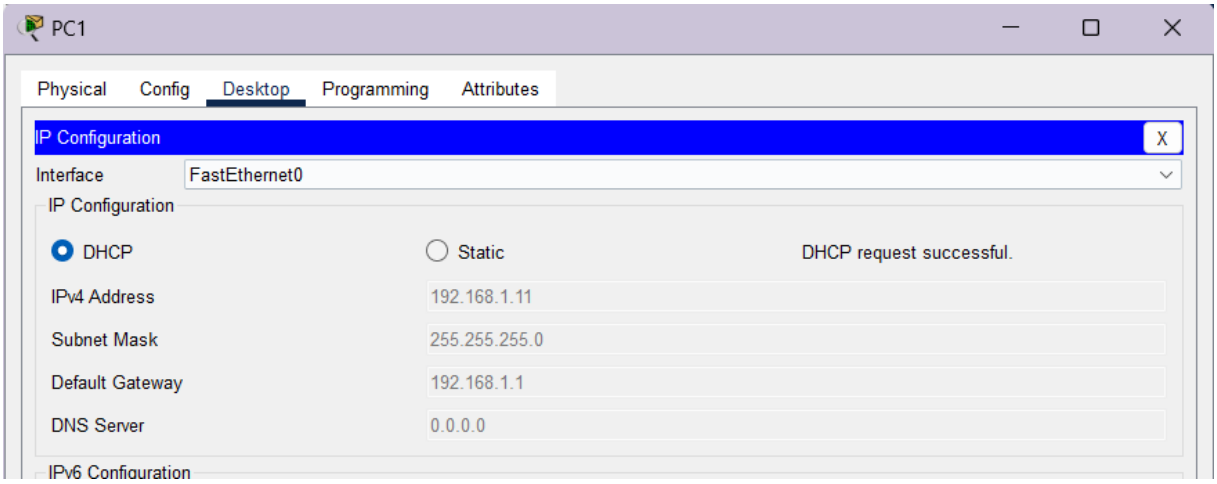

PC2
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
192.168.1.4
Subnet Mask
255.255.255.0
Default Gateway
192.168.1.1
DNS Server
0.0.0.0
IPv6 Configuration
Automatic
Static
IPv6 Address
/
Link Local Address
FE80::230:A3FF:FEB7:D05B
Default Gateway
DNS Server

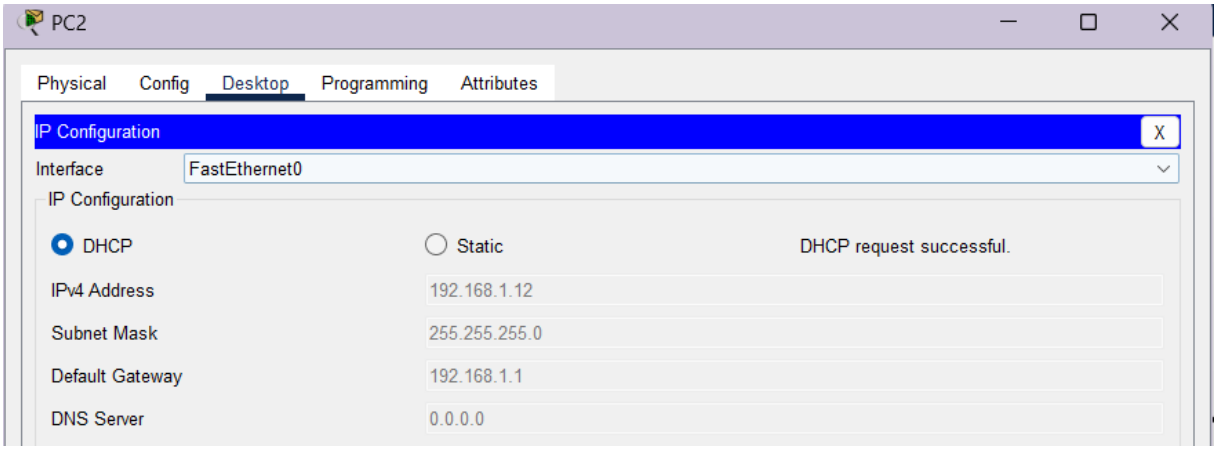
4. DHCPServer sunucusunu DHCP sunucusu olacak şekilde konfigüre ediniz. Ağ için 192.168.1.10'dan başlayan ve 100 adet IP tahsisi yapabilen bir IP havuzu oluşturunuz. Ekran görüntüsü ile gösteriniz.

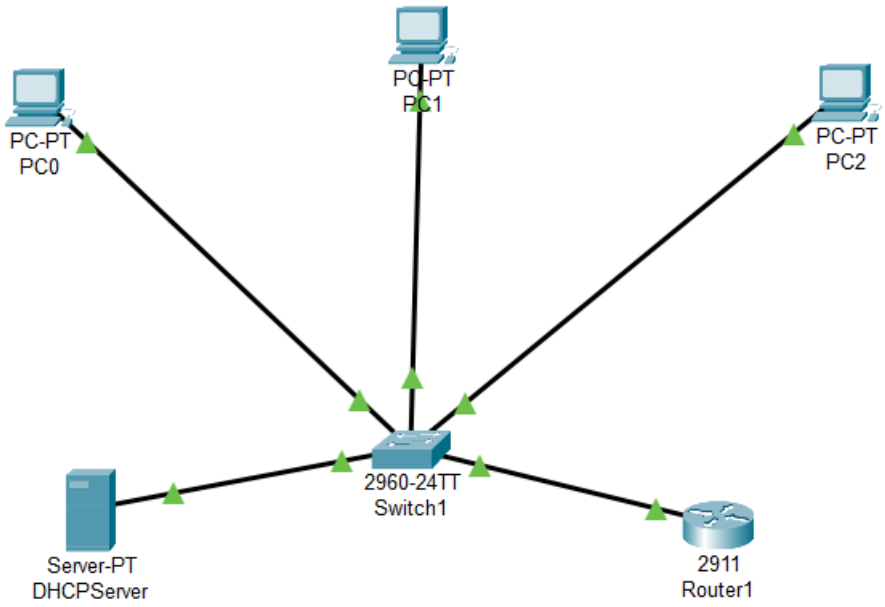


5. Her üç istemciden de DHCP ile dinamik IP tahsisi yapınız. Ekran görüntüsü ile gösteriniz.



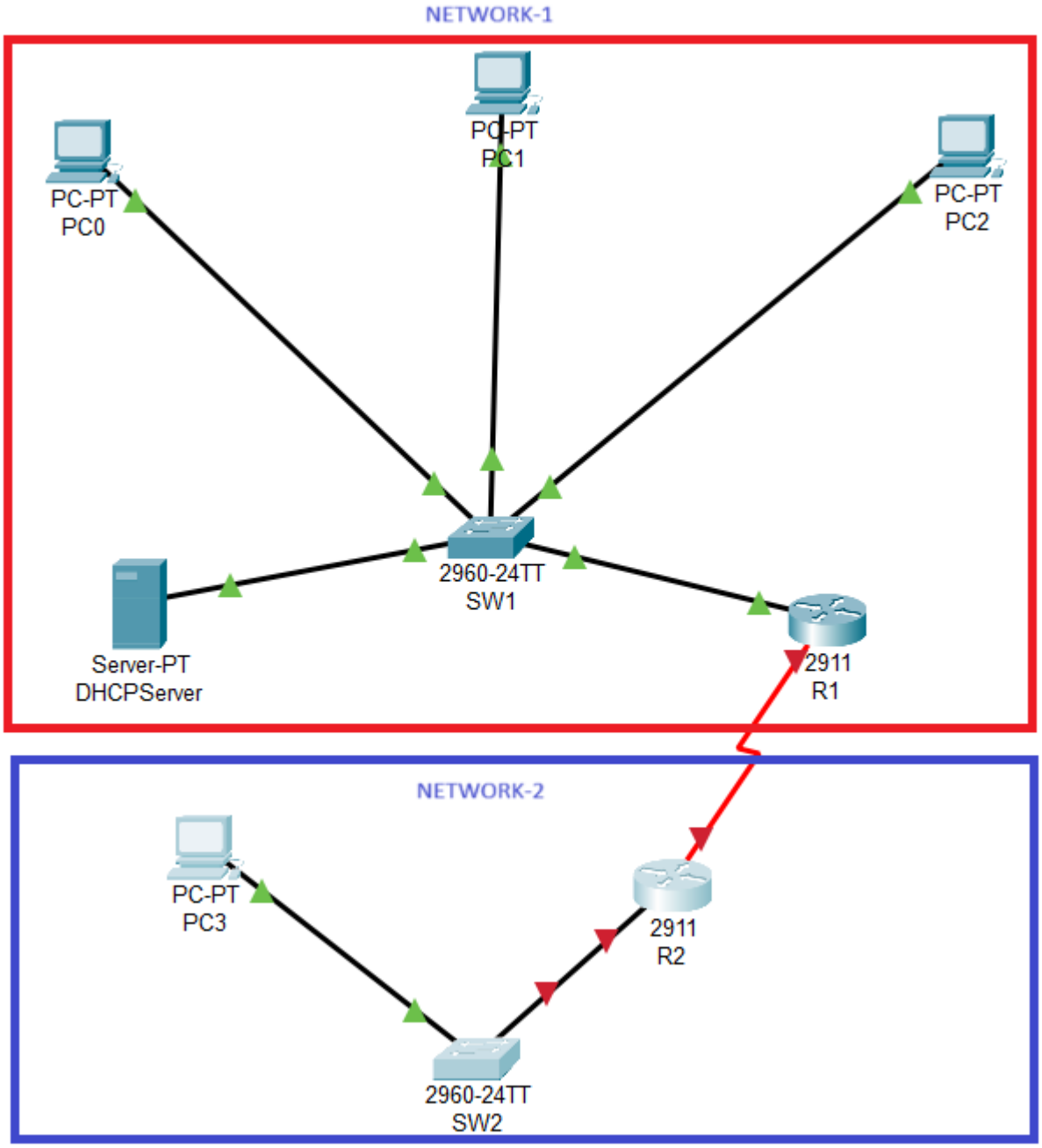




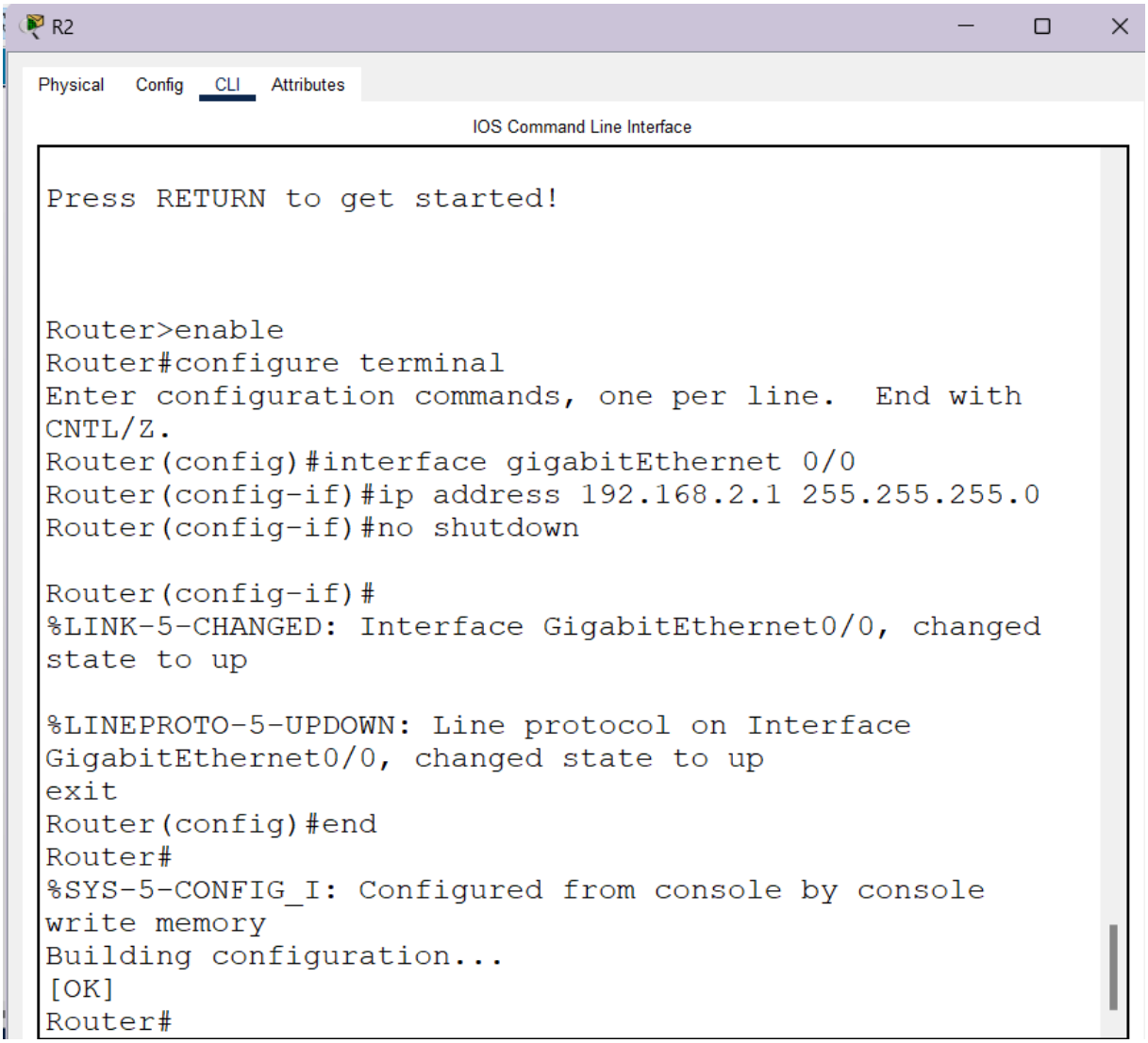

PC-PT
PC0
PC-PT
PC1
PC-PT
PC2
2960-24TT
Switch1
Server-PT
DHCPServer
2911
Router1

NETWORK – 2 (192.168.2.0/24)

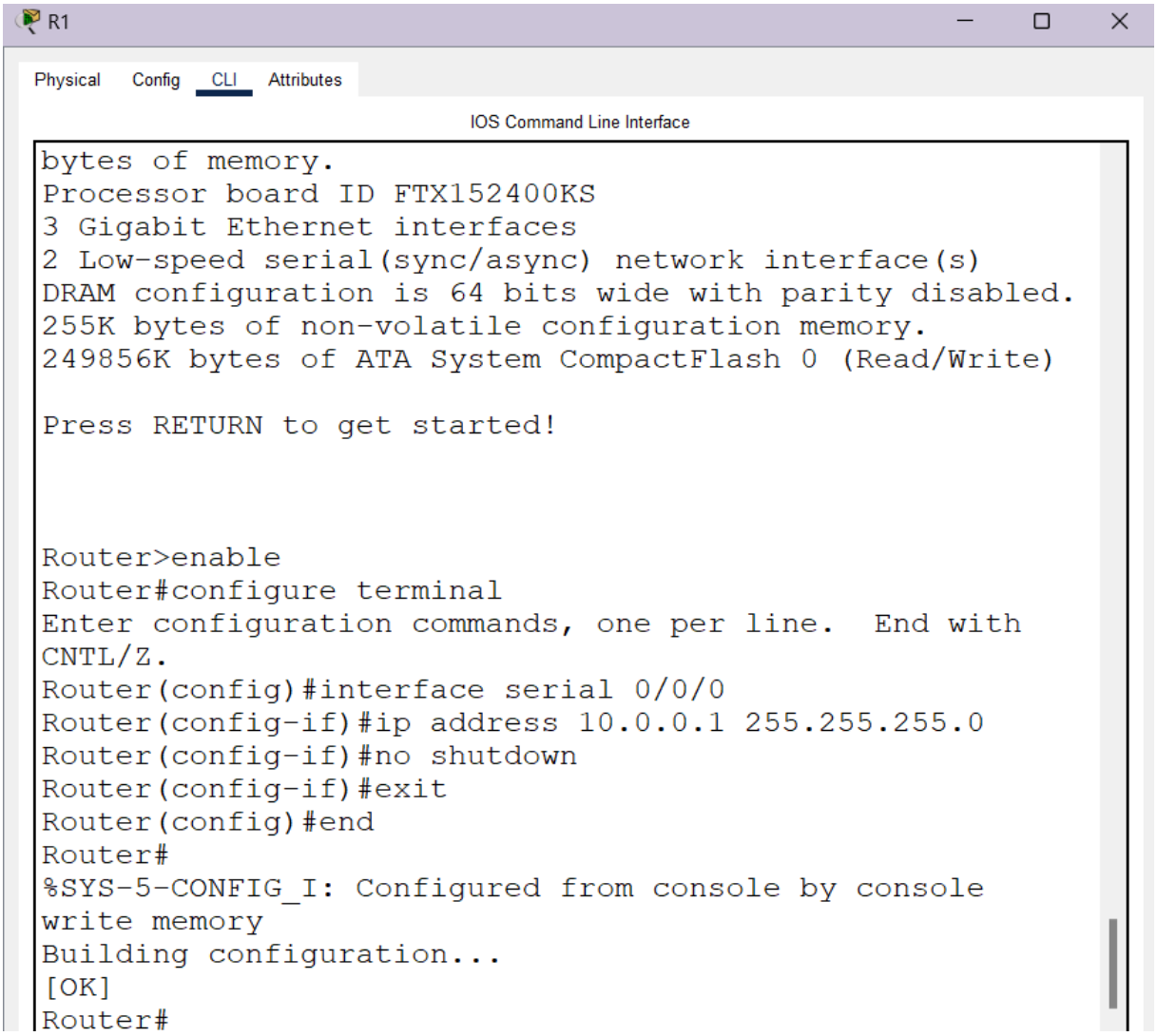
6. Ağı uygun kablolama ile bağlayınız. R1 ve R2 routerlarını “Serial DTE” kablosu ile Se0/0/0 portları üzerinden bağlayınız. Tüm ağın mantıksal görüntüsünü ekran görüntüsü ile gösteriniz

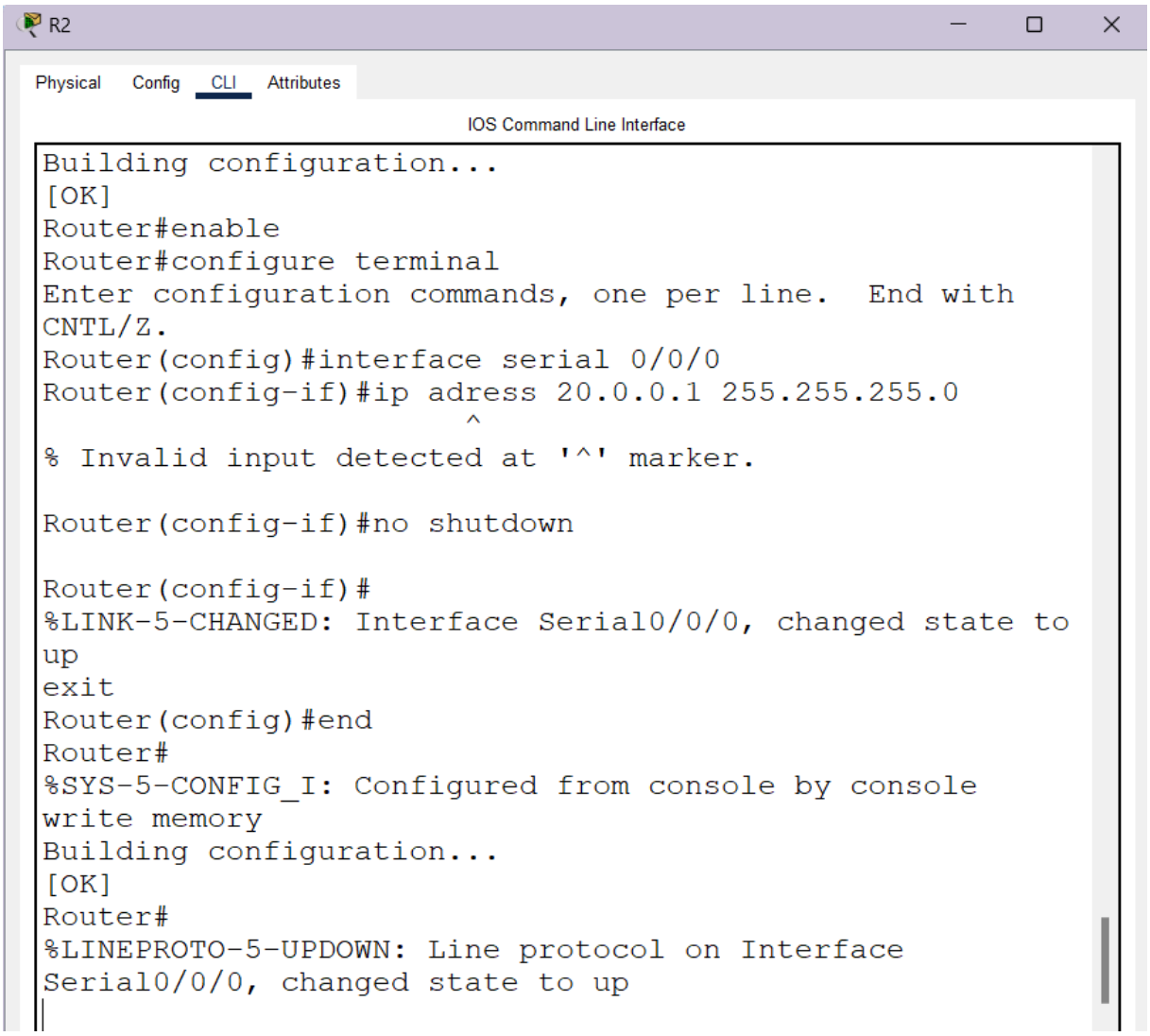


7. R2 routerının ağa bağlanan arayüzüne 192.168.2.1 IP adresini atayınız. Ekran görüntüsü ile gösteriniz.



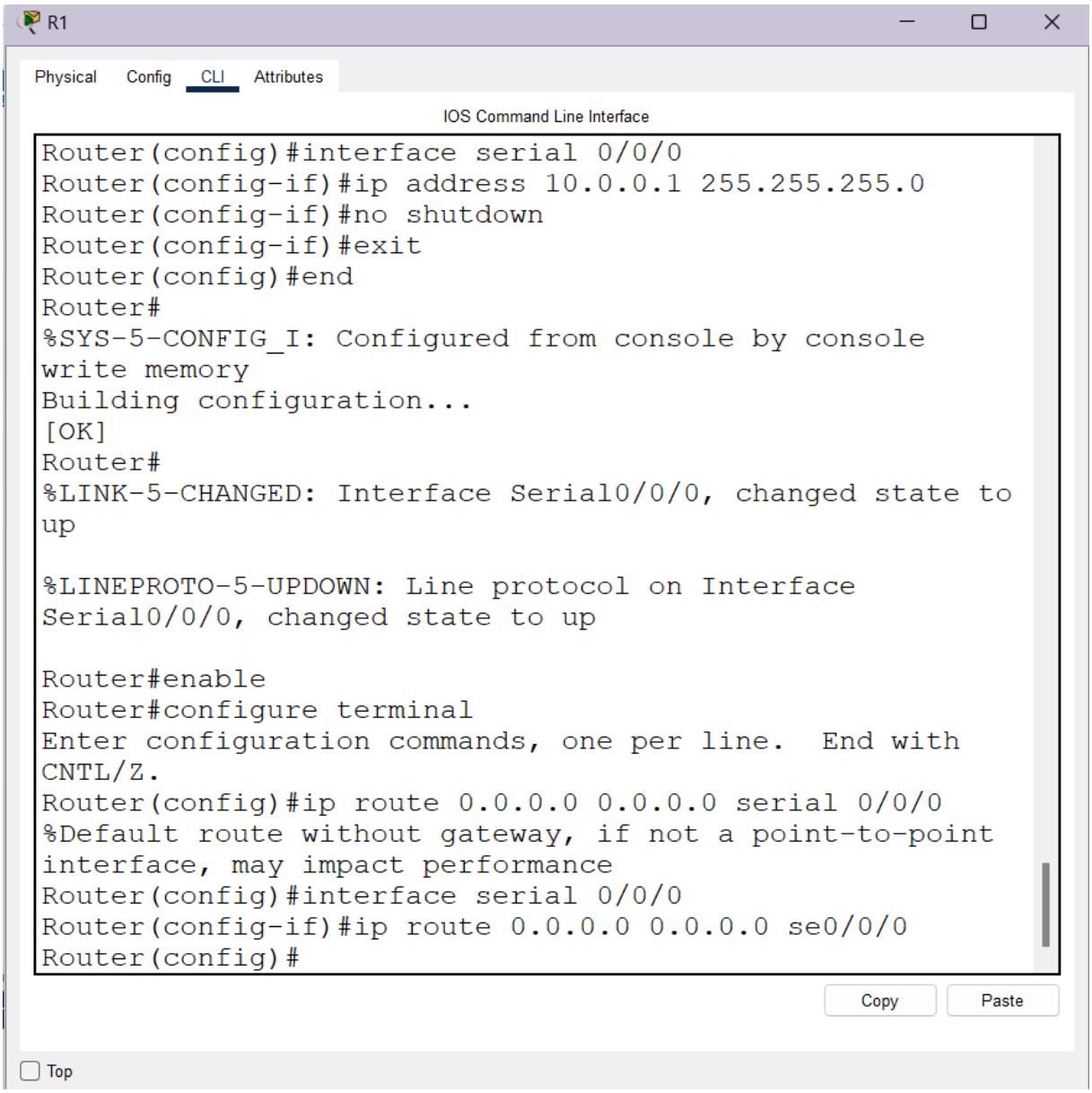
8. R1 ve R2 routerlarının birbirlerine bağlandıkları arayüze sırası ile 10.0.0.1 ve 20.0.0.1 IP adreslerini atayınız. Ekran görüntüsü ile gösteriniz



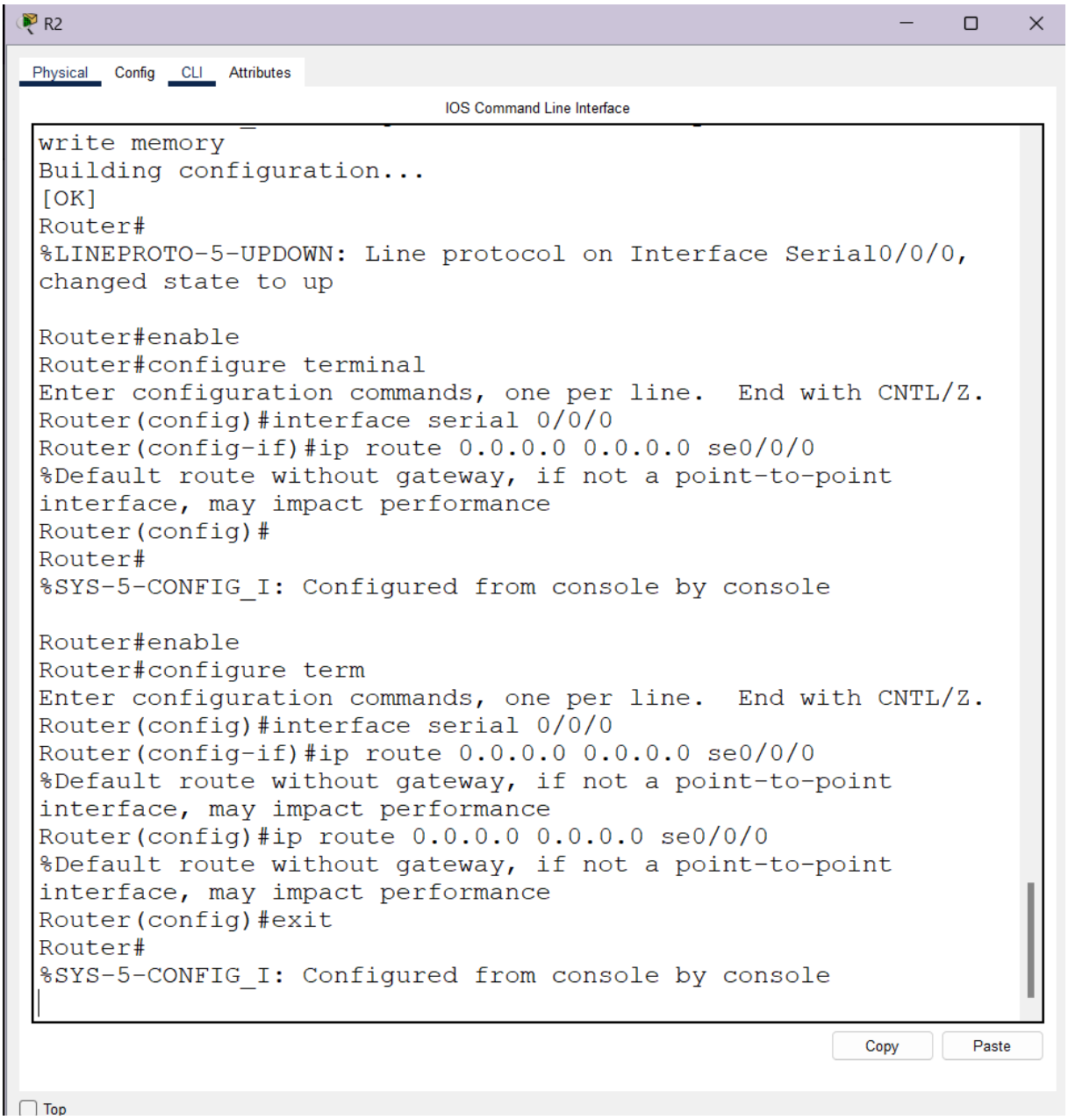


9. Her iki routerın ilgili arayüzüne giriş yaparak routerlar arasında yönlendirme protokolünü örnekteki gibi yazınız

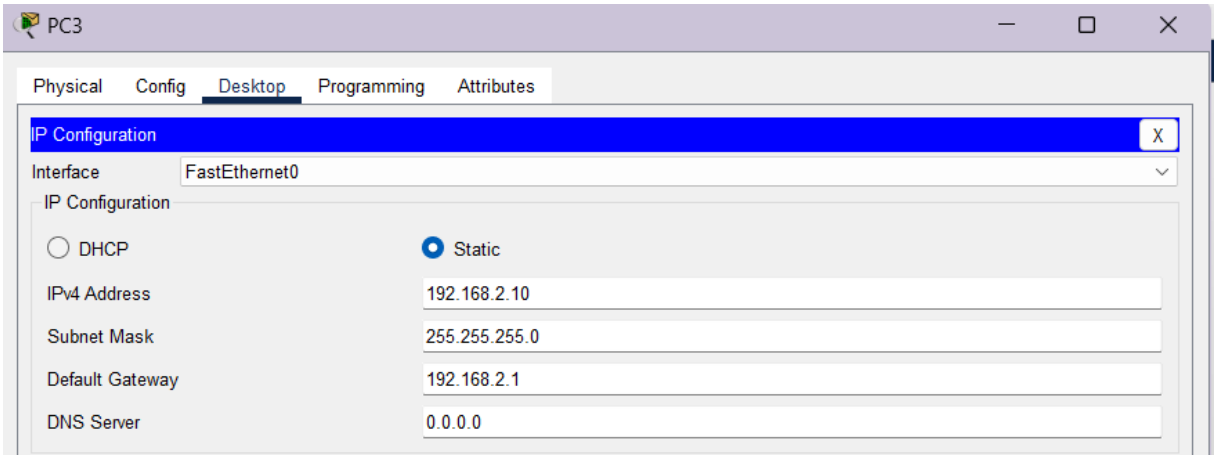
. • R1(config-if)# ip route 0.0.0.0 0.0.0.0 se0/0/0

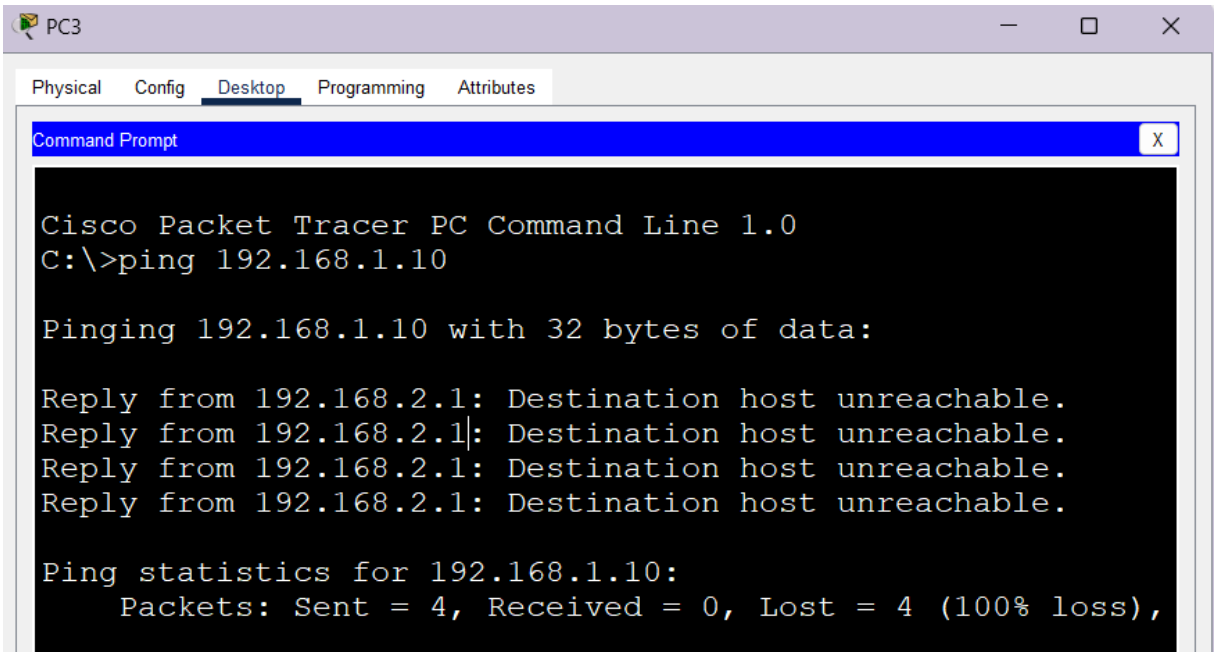


• R2(config-if)# ip route 0.0.0.0 0.0.0.0 se0/0/0


R2
Physical
Config
CLI
Attributes
IOS Command Line Interface
write memory
Building configuration...
[OK]
Router#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/0,
changed state to up
Router#enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface serial 0/0/0
Router(config-if)#ip route 0.0.0.0 0.0.0.0 se0/0/0
%Default route without gateway, if not a point-to-point
interface, may impact performance
Router(config)#
Router#
%SYS-5-CONFIG_I: Configured from console by console
Router#enable
Router#configure term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface serial 0/0/0
Router(config-if)#ip route 0.0.0.0 0.0.0.0 se0/0/0
%Default route without gateway, if not a point-to-point
interface, may impact performance
Router(config)#ip route 0.0.0.0 0.0.0.0 se0/0/0
%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
Copy
Paste
Top

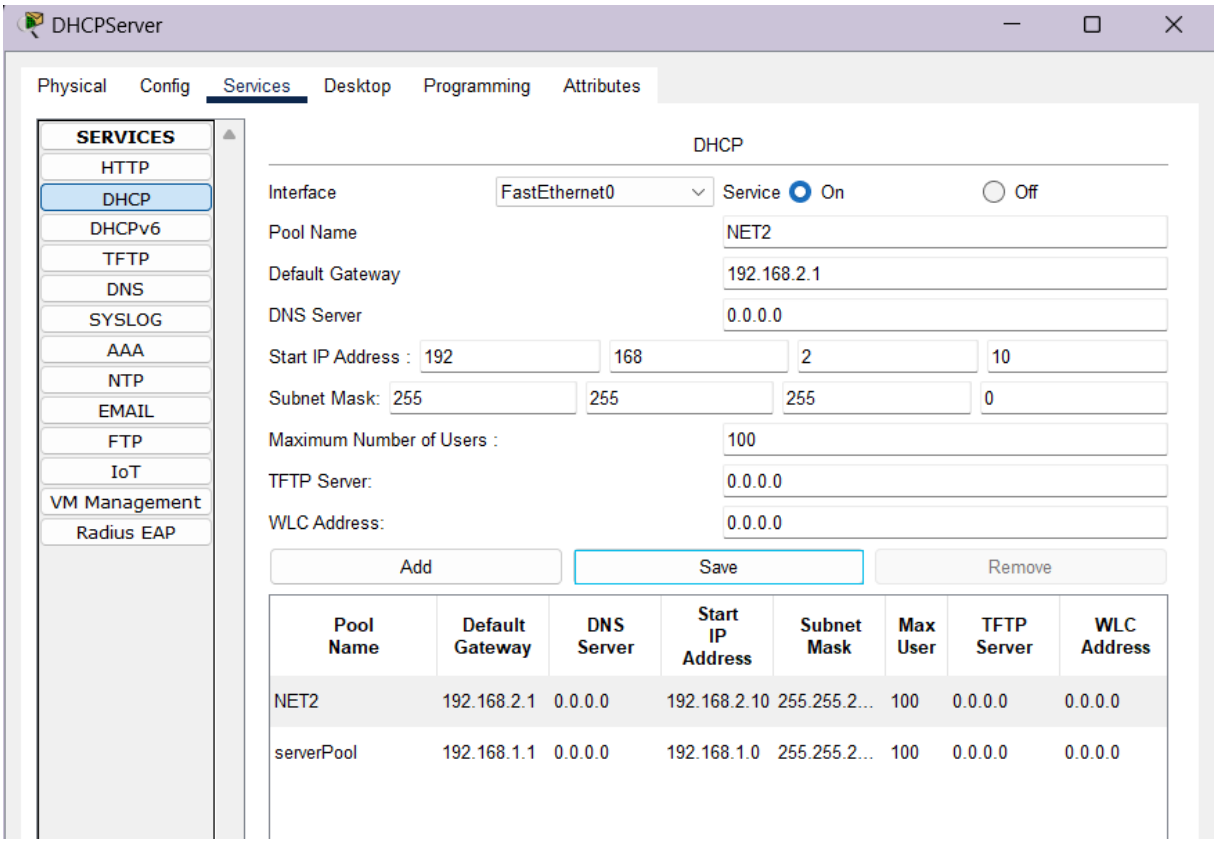
10. PC3 istemcisine uygun bir IP değerini statik olarak atayınız. PC3 bilgisayarından PC0 bilgisayarına ping atarak bağlantınızın sağlandığını teyit ediniz. Ekran görüntüsü ile gösteriniz.





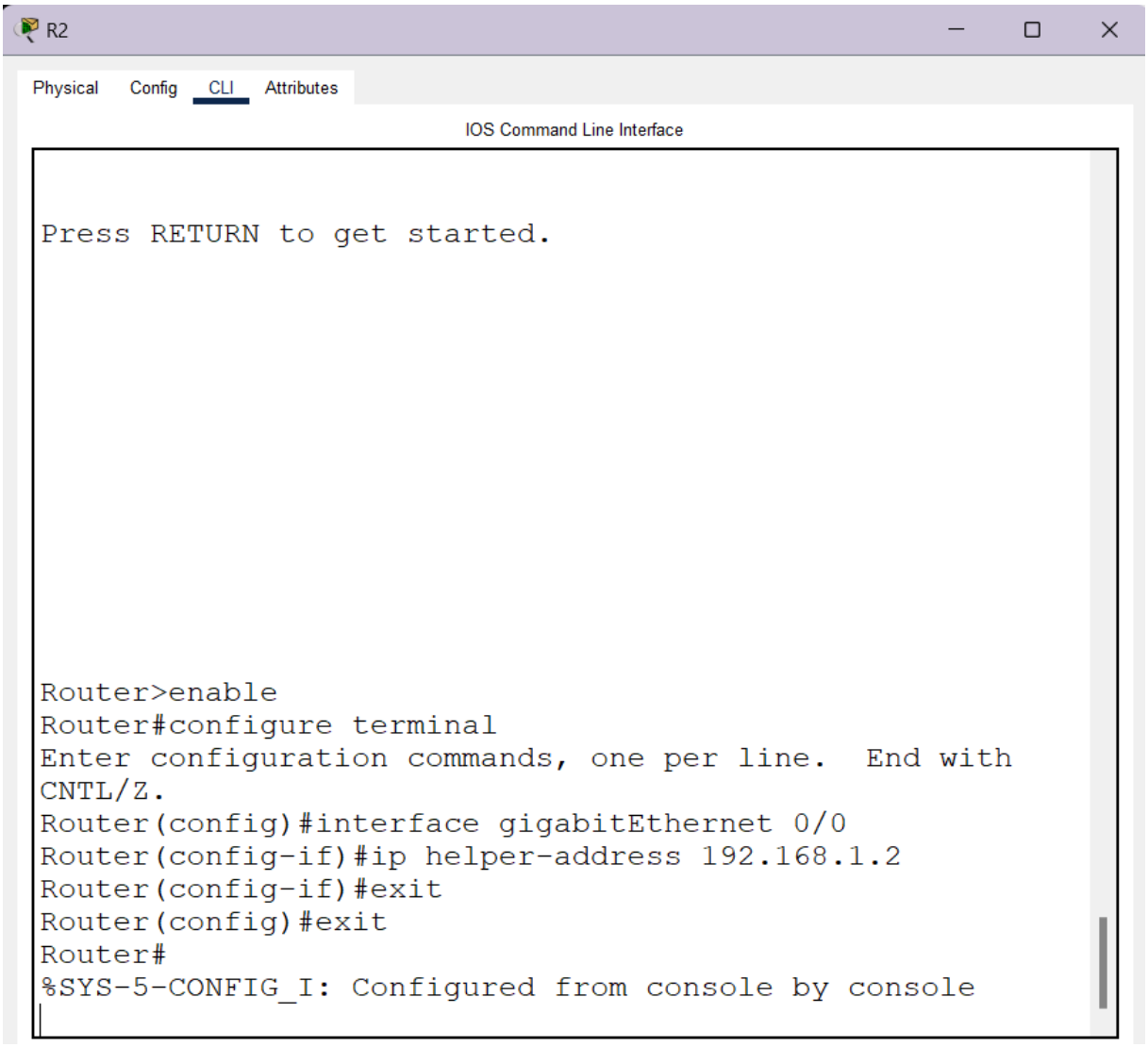
DHCP Relay Konfigürasyonu

11. 1. Ağdaki DHCP sunucusuna 2. Ağ için IP ataması yapılacak bir IP havuzu ekleyiniz. (Başlangıç IP: 192.168.2.10, maksimum kullanıcı sayısı: 100)

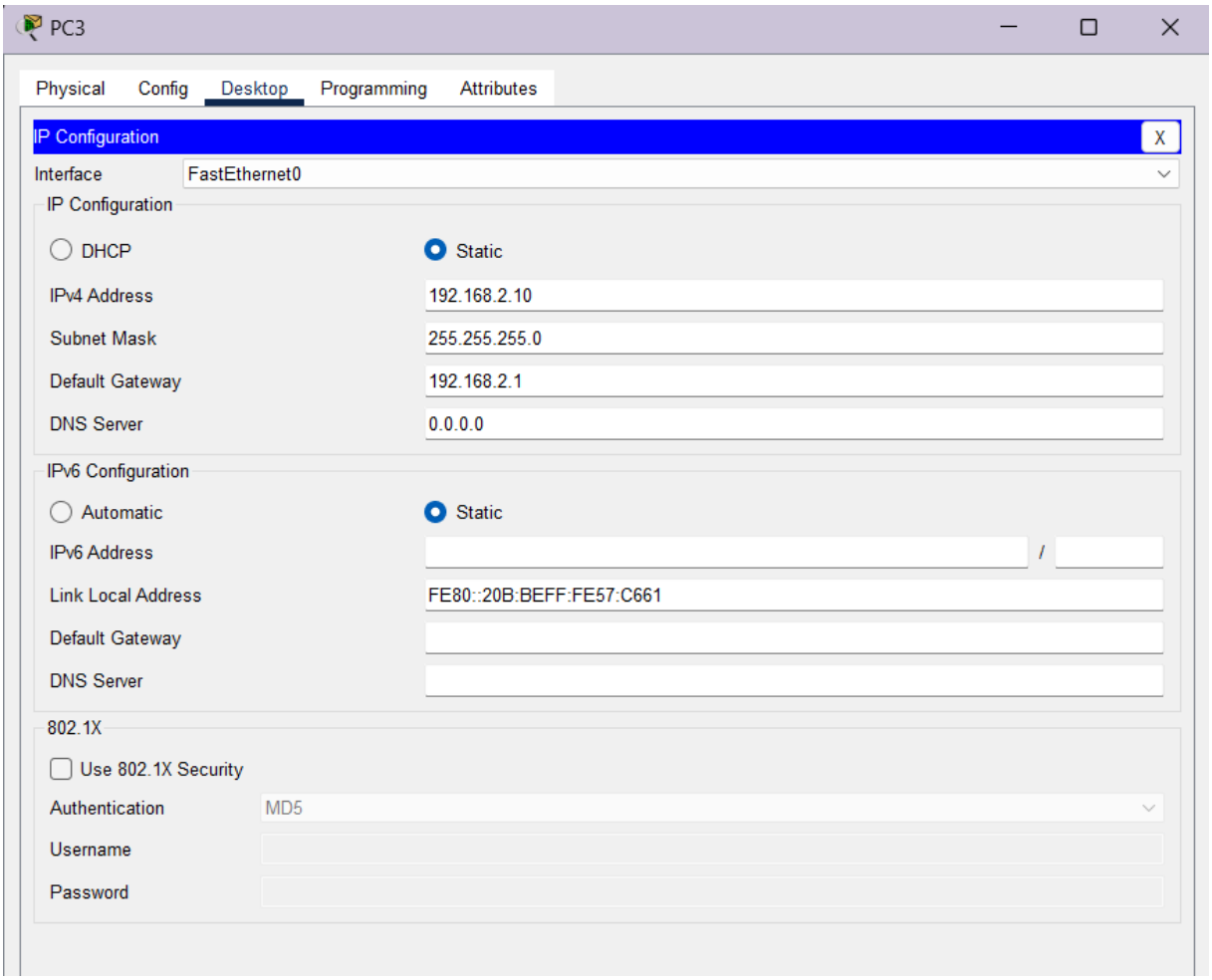


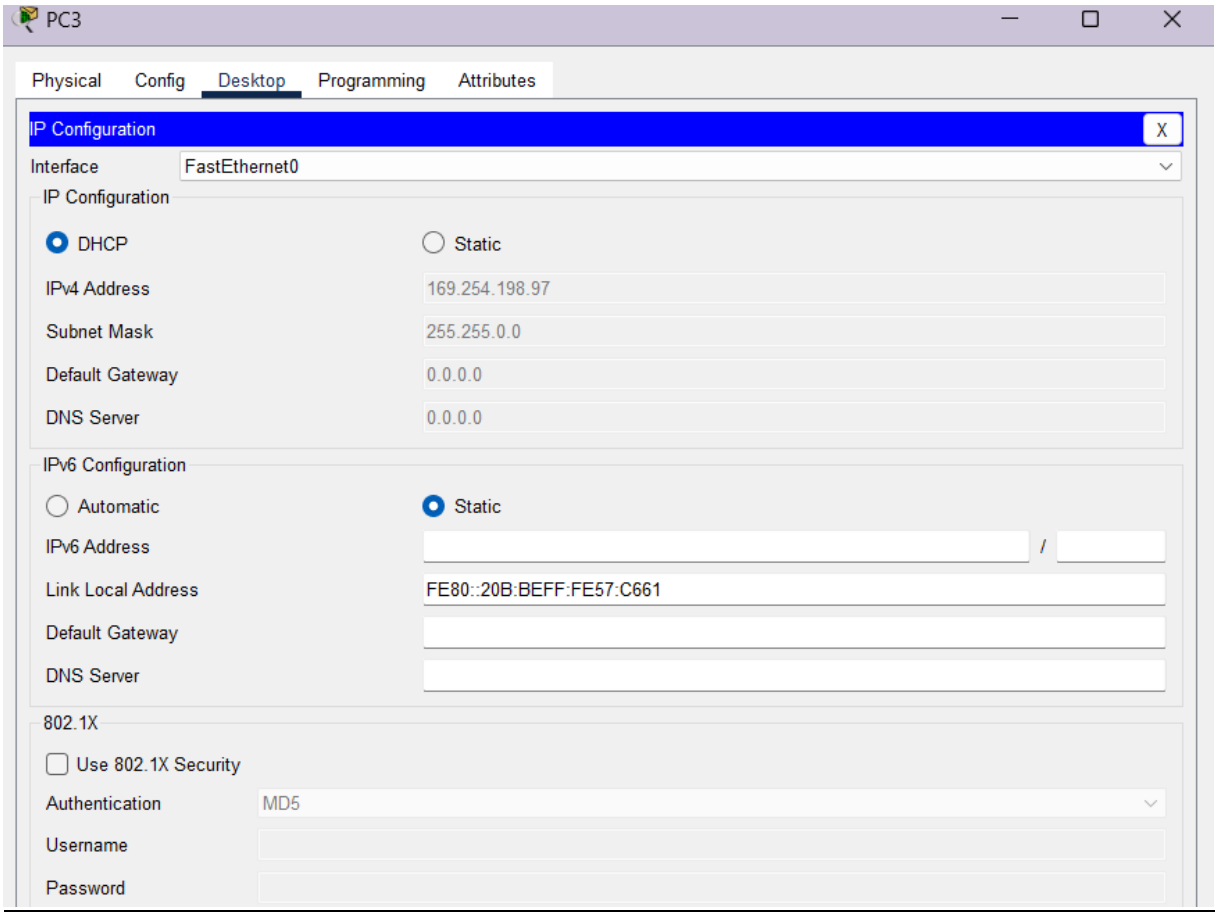
12. R2'nin ağa bağlanan arayüzünde DHCP sunucusunun adresini veriniz.

- R2(config-if)# ip helper-adress



13. PC3 istemcisinde DHCP ile dinamik IP adresi ataması gerçekleştiriniz. Ekran görüntüsü ile gösteriniz.


PC3
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
192.168.2.10
Subnet Mask
255.255.255.0
Default Gateway
192.168.2.1
DNS Server
0.0.0.0
IPv6 Configuration
Automatic
Static
IPv6 Address
/
Link Local Address
FE80::20B:BEFF:FE57:C661
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication
MD5
Username
Password


PC3
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
169.254.198.97
Subnet Mask
255.255.0.0
Default Gateway
0.0.0.0
DNS Server
0.0.0.0
IPv6 Configuration
Automatic
Static
IPv6 Address
/
Link Local Address
FE80::20B:BEFF:FE57:C661
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication
MD5
Username
Password