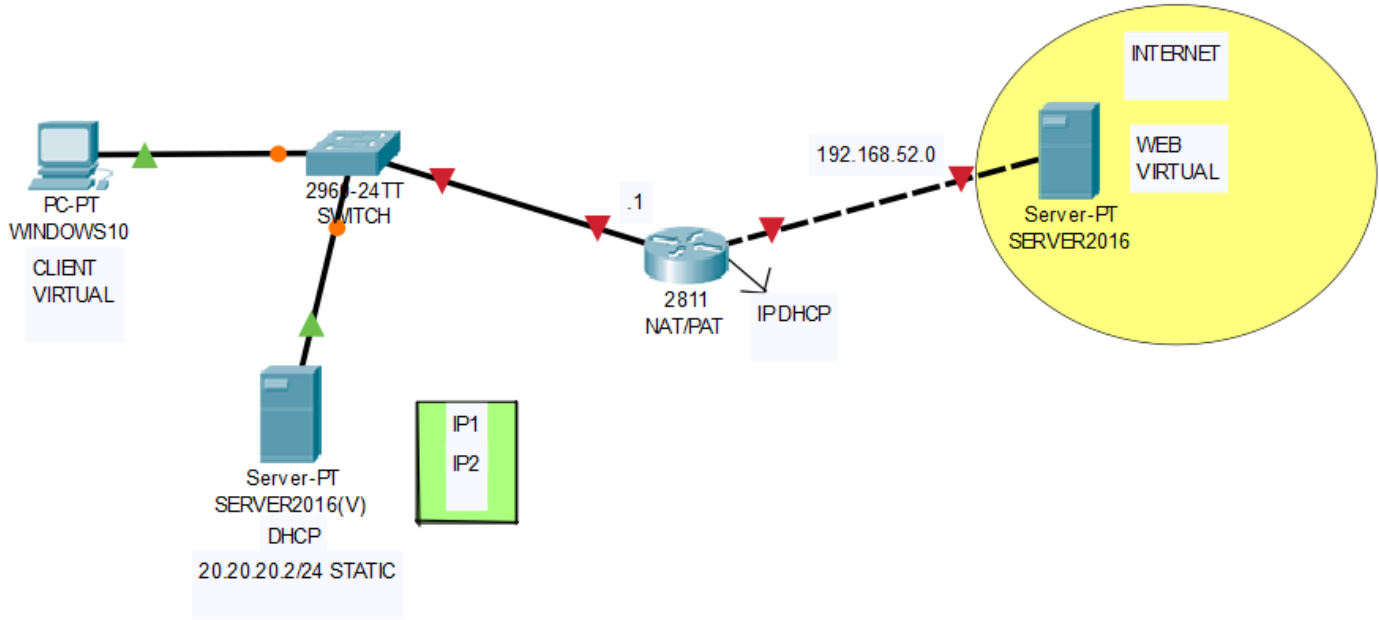
Server 2016 Connect IIS Server (With DHCP Server and Routing Protokol)

1-) Connect IIS Server (With DHCP Server and Routing Protokol)

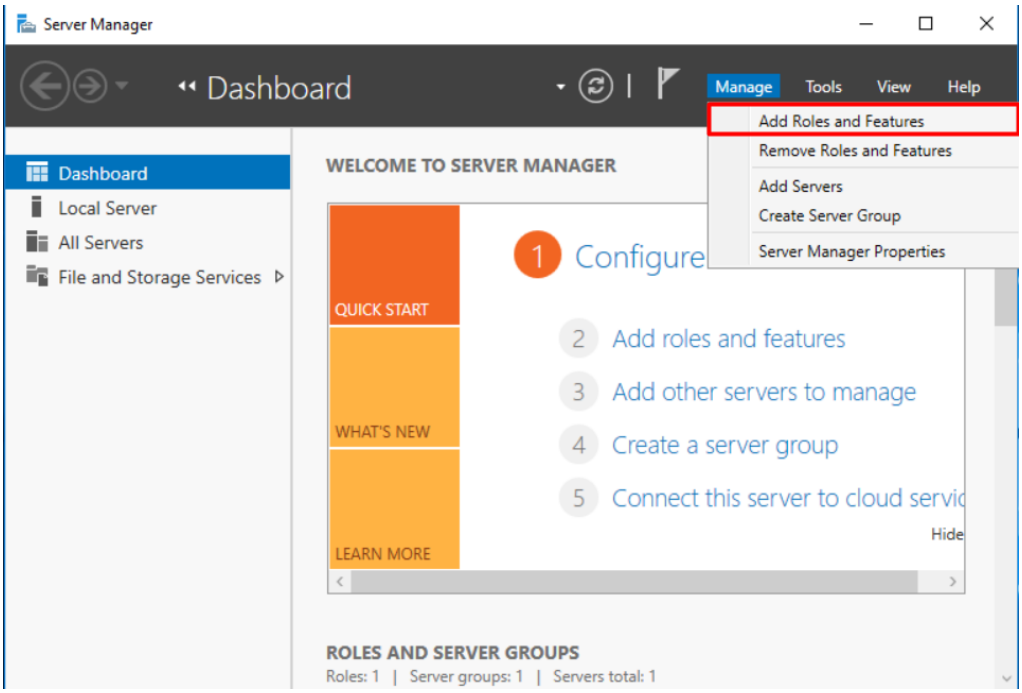
1a-) Amacımız;



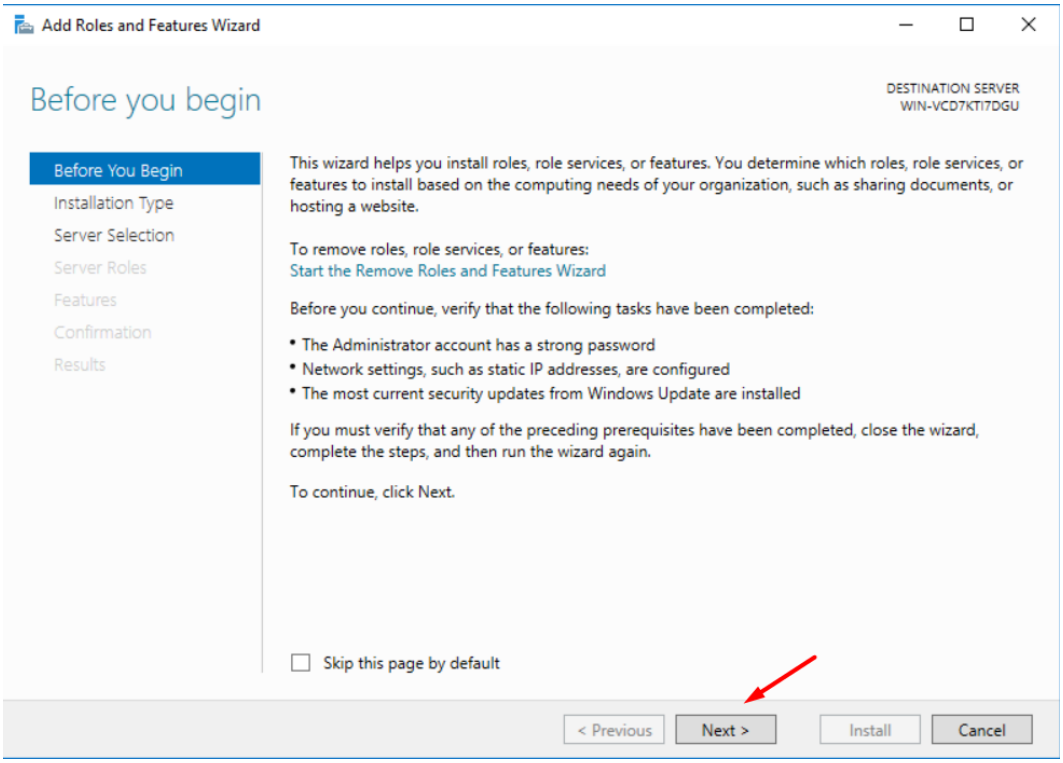
Görünen topolojimizde Windows 10 cihazımızı DHCP Server'ımızdan alacağı IP adresi ile, internet üzerinde kurulacak olan WEB Server'ımıza routing protokoller ile internete bağlayıp WEB Server'a bağlanmak.

1b-) DHCP Server Kurulumu

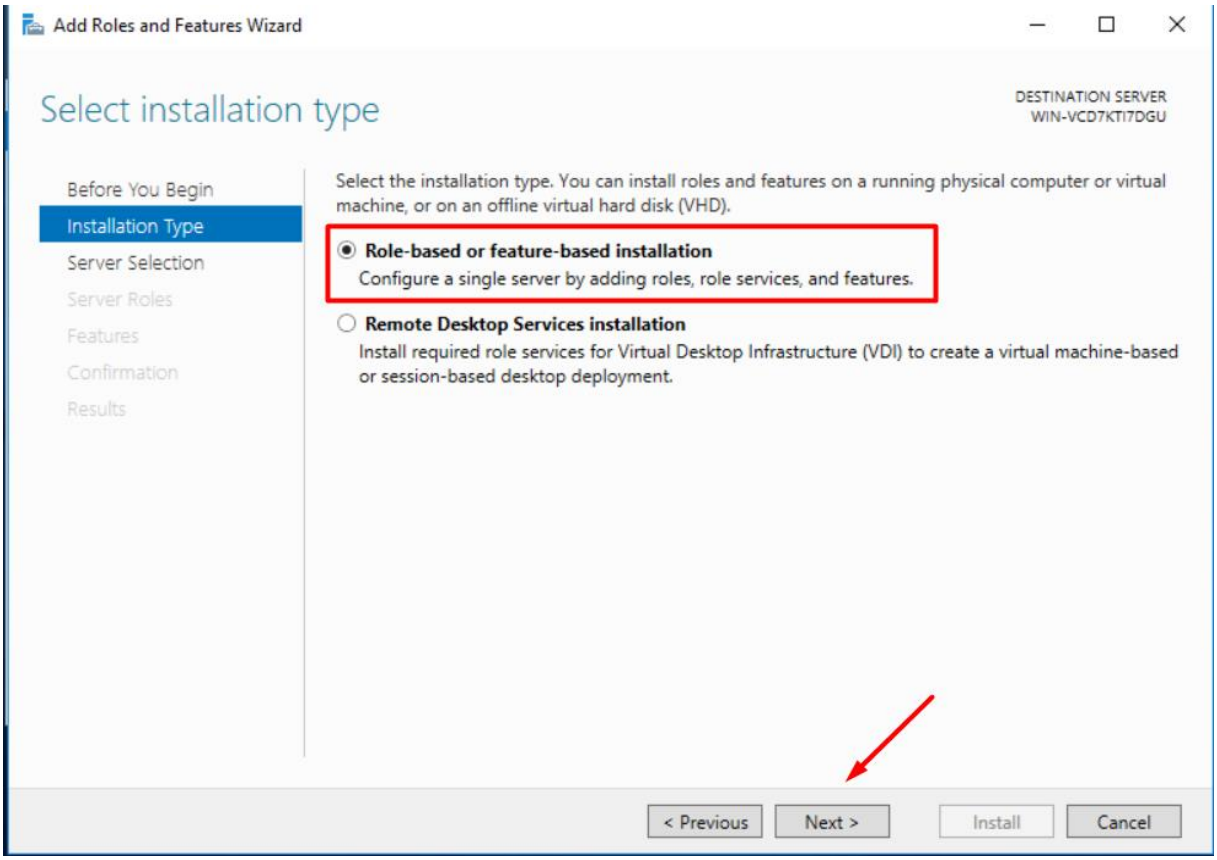
İşlem1-1b = DHCP Kurulumu için Windows Server 2016'da "Add Roles and Features" seçilir.



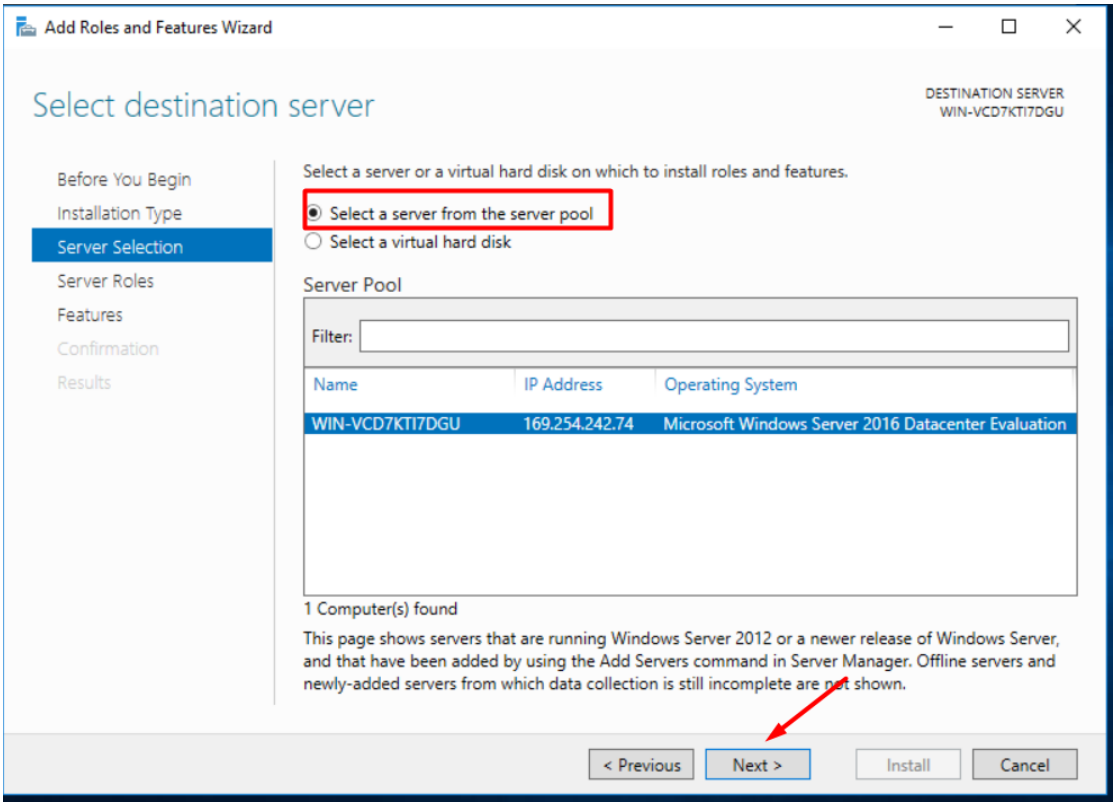
İşlem2-1b = Kurulum için "Installation Type"a gelinir.



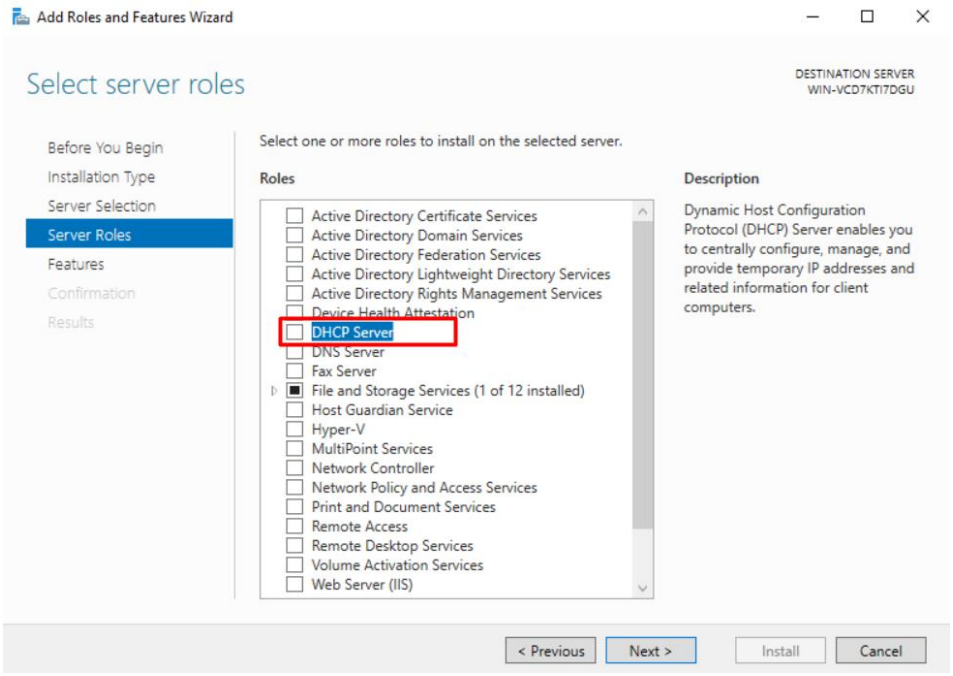
İşlem3-1c = "Role-Based" installation seçilir.

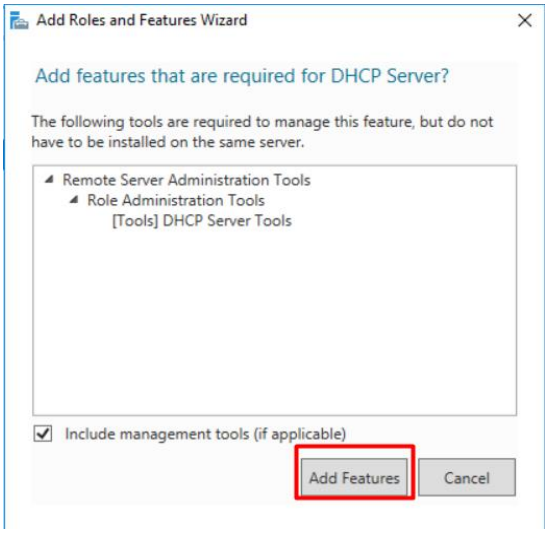


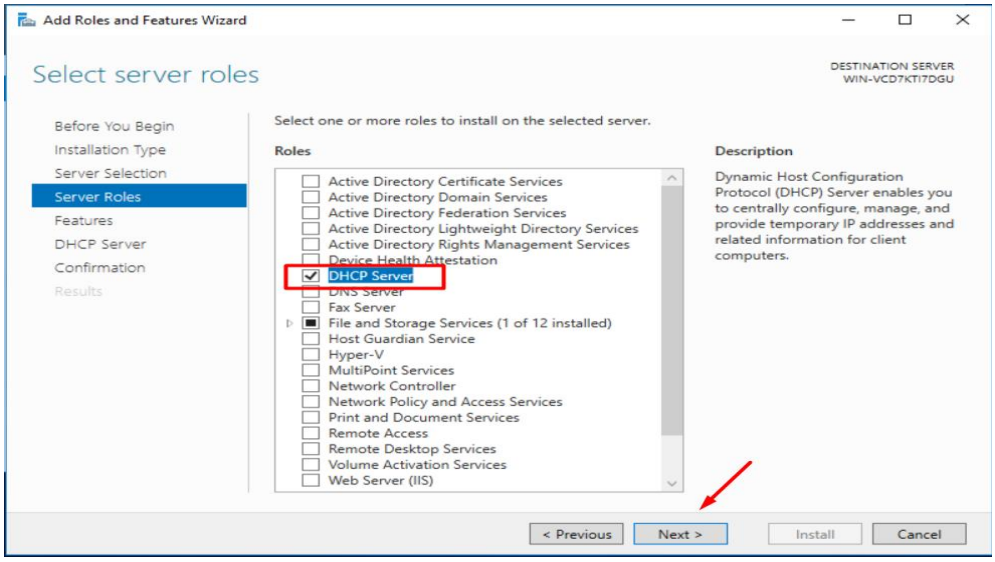
İşlem4-1b = Sanal cihazımız ve cihazın disk'i seçilir.



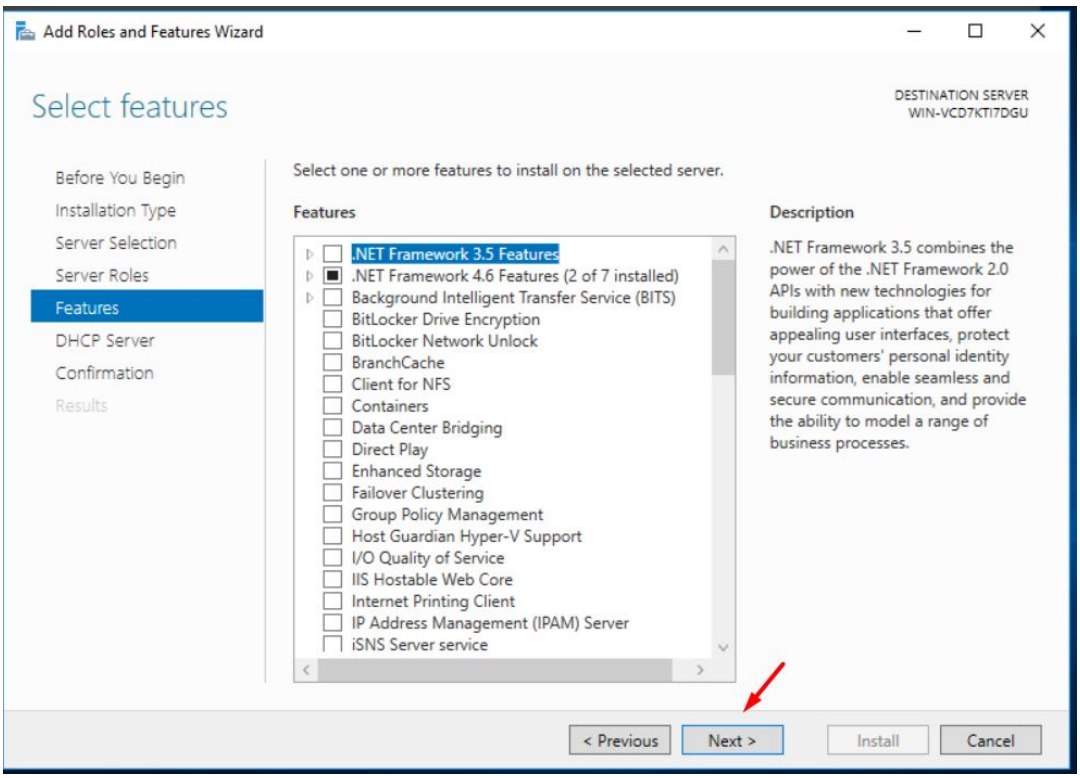
İşlem5-1b = "Server Roles" üzerinden "DHCP Server" Seçilir.



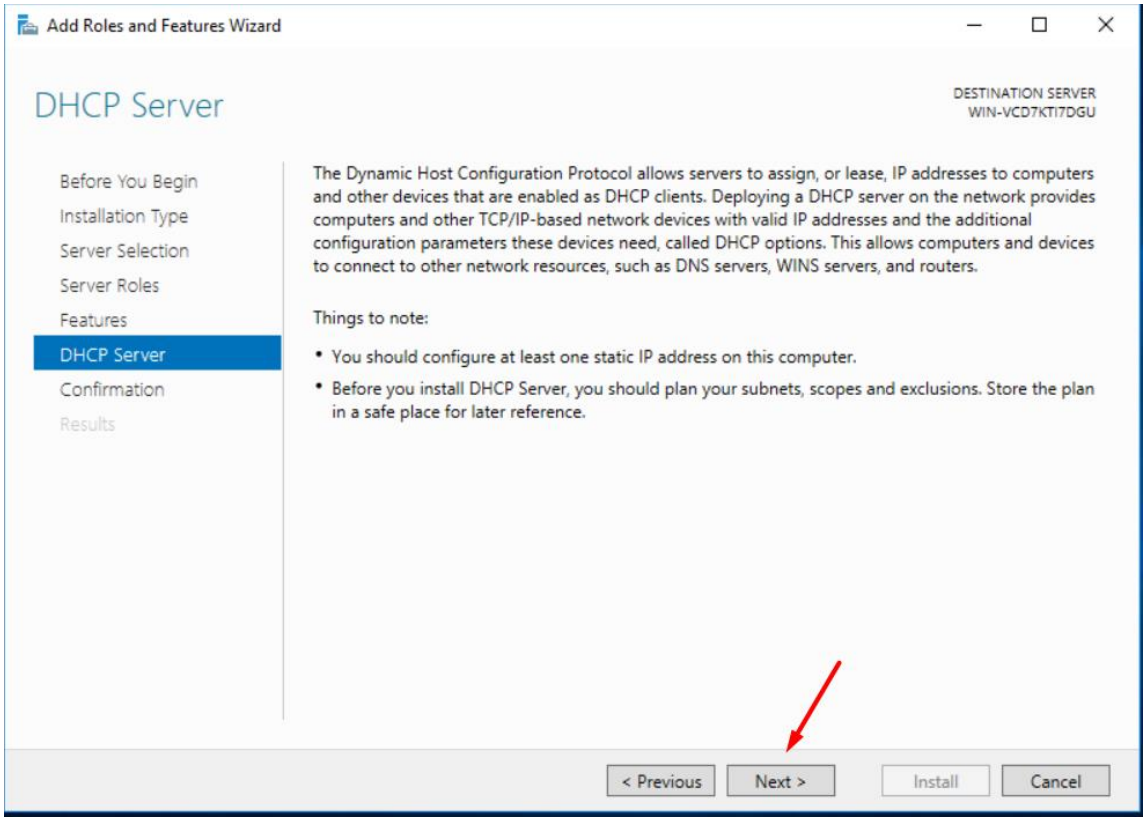




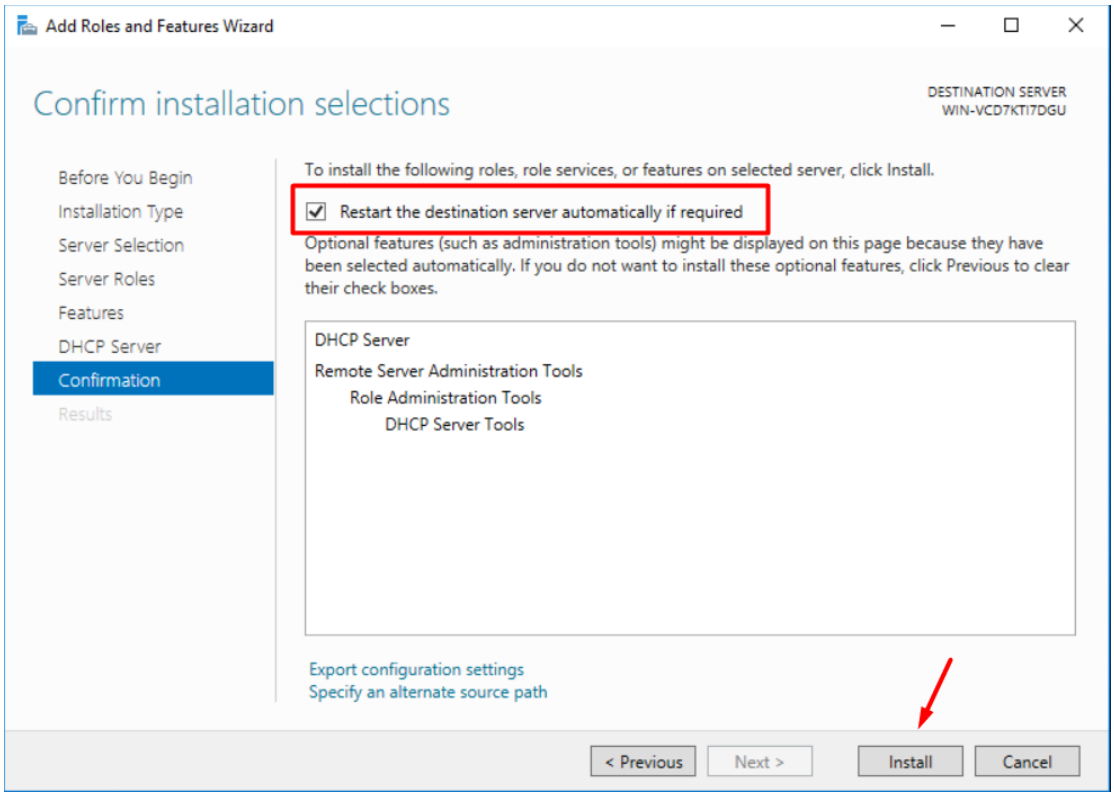
İşlem6-1b = “Features” kısmında bir seçim yapılmadan devam edilir.

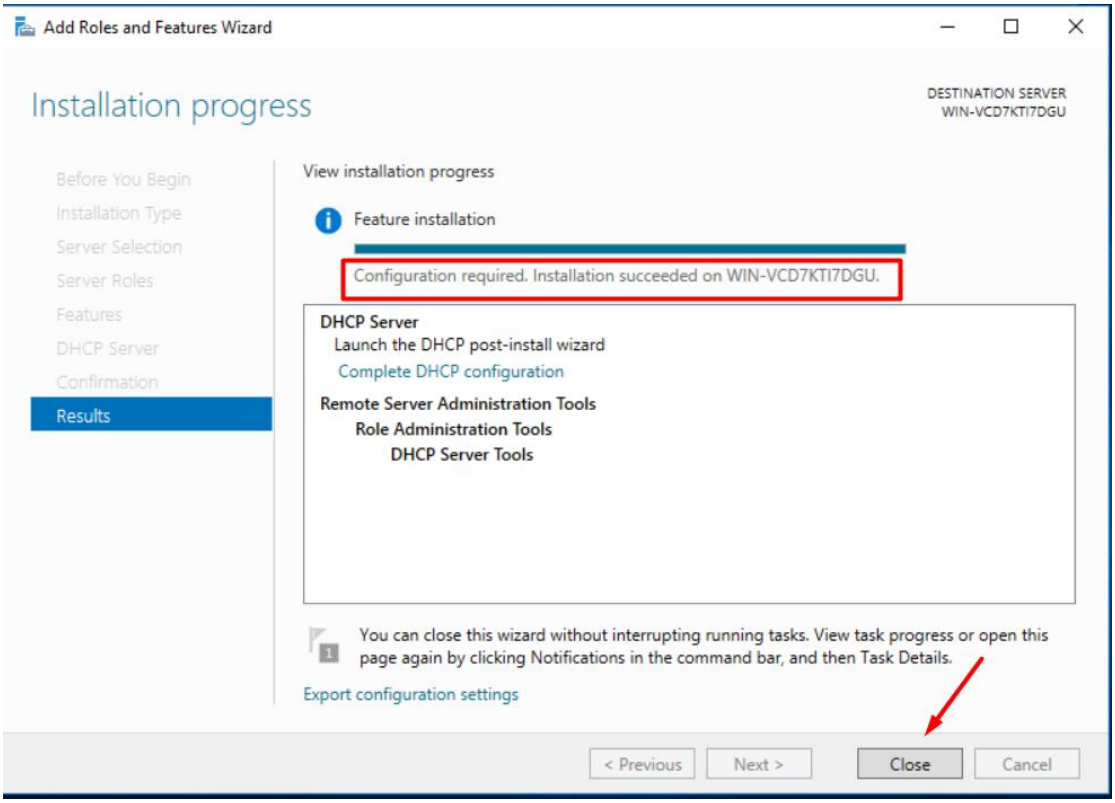


İşlem7-1b = “DHCP Server” Kısmıda geçilip kuruluma başlanır.

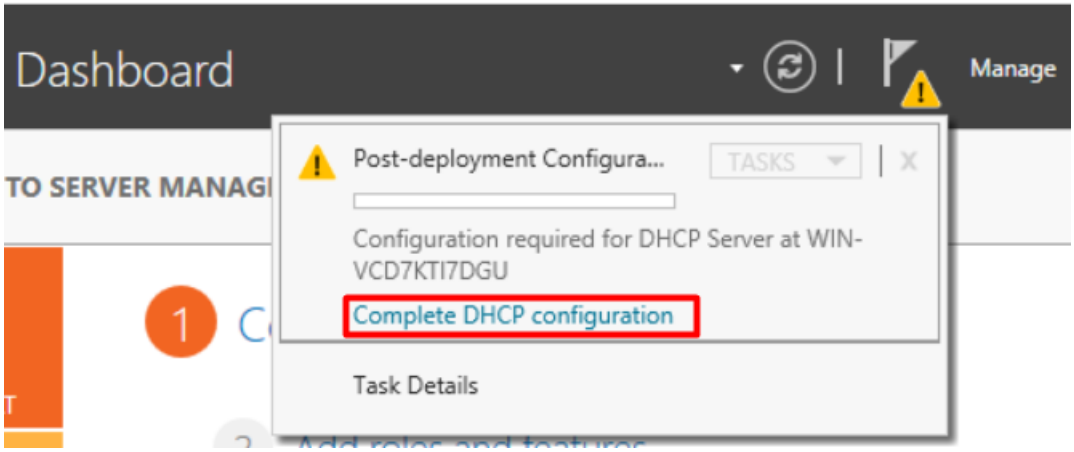


İşlem8-1b = "Restart" kısmı işaretlenerek kurumlumdan sonra cihazın optimize olarak kurulumu tamamlaması için yeniden başlatılması gerekir.

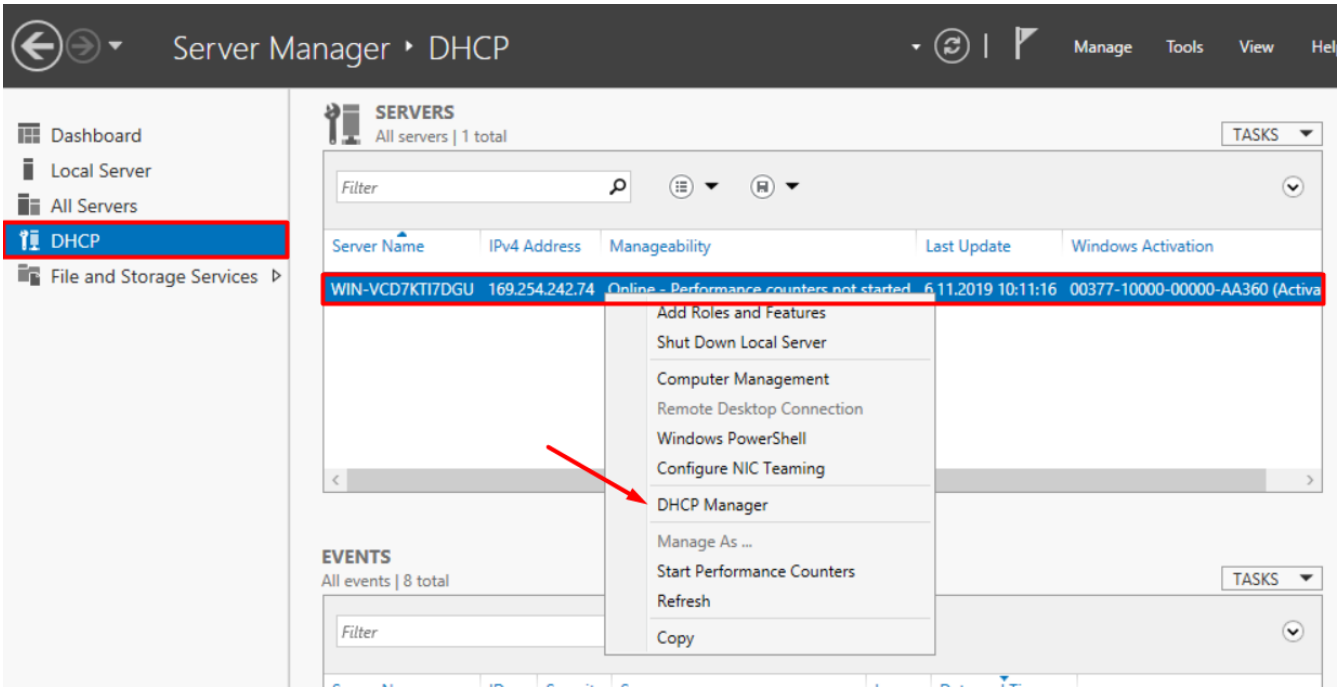




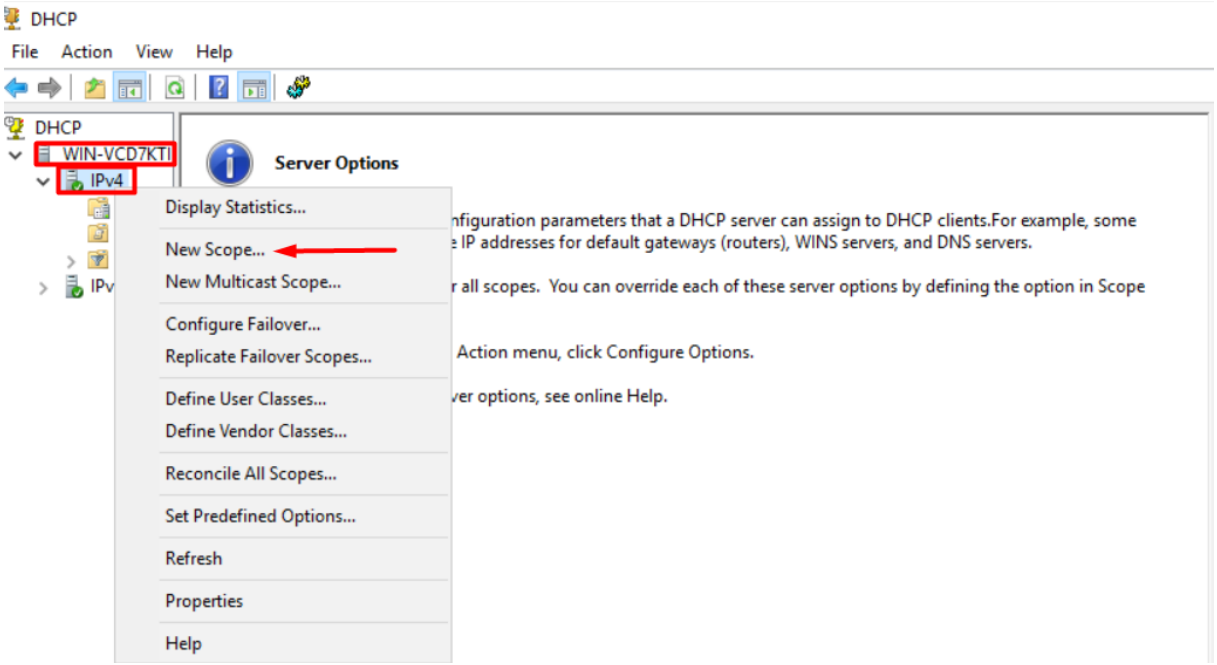
İşlem9-1b = Cihaz yeniden başlatıdıktan sonra “Server Manager” üzerinden DHCP konfigürasyonu tamamlanır (işaretlenecek bir şey yoktur direk “commit” denilerej uygulanır.



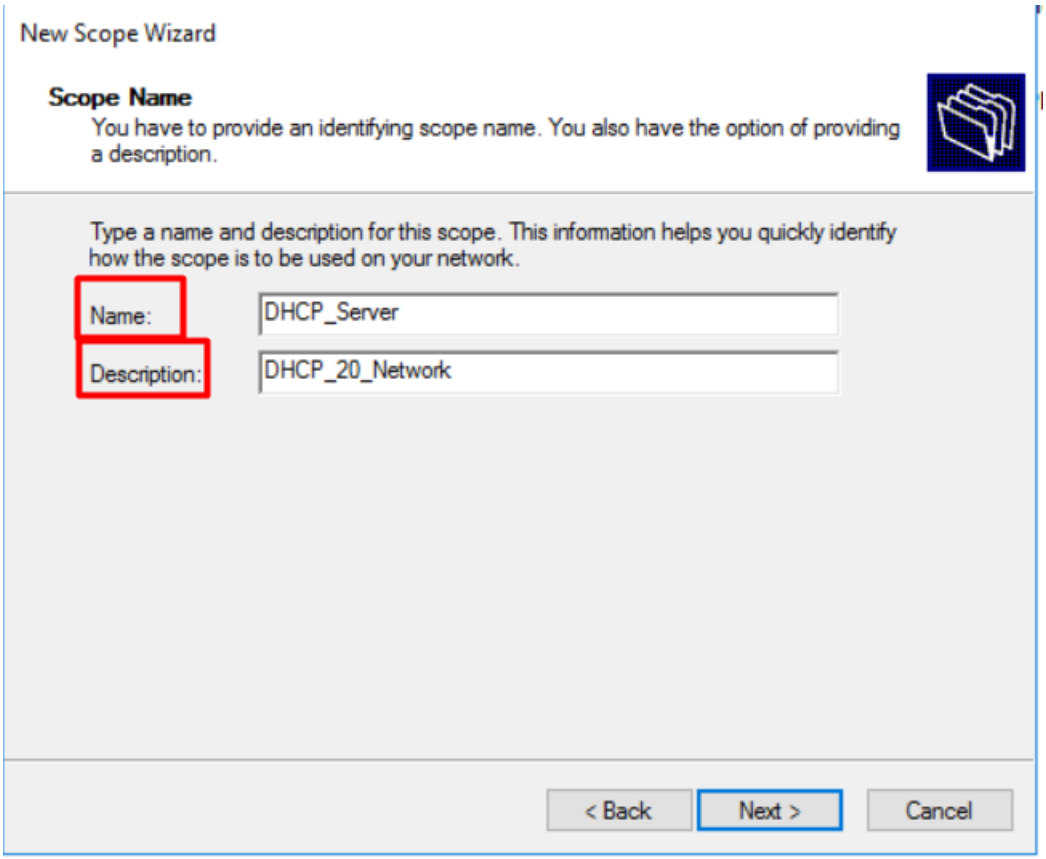
İşlem10-1b = Server Manager’ın DHCP kısmından cihazımız seçilip “DHCP Manager” açılır.



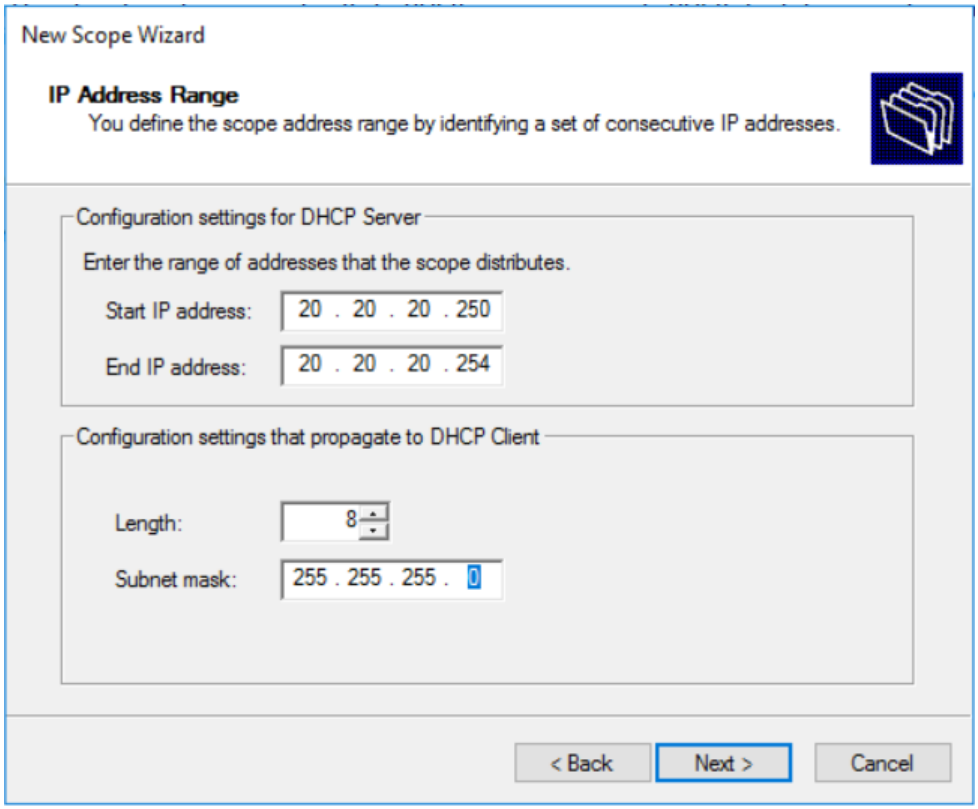
İşlem11-1b = Cihazımızın içine girip “IPv4” kısmına tıklanıp “New Scope” seçeneği seçilir.



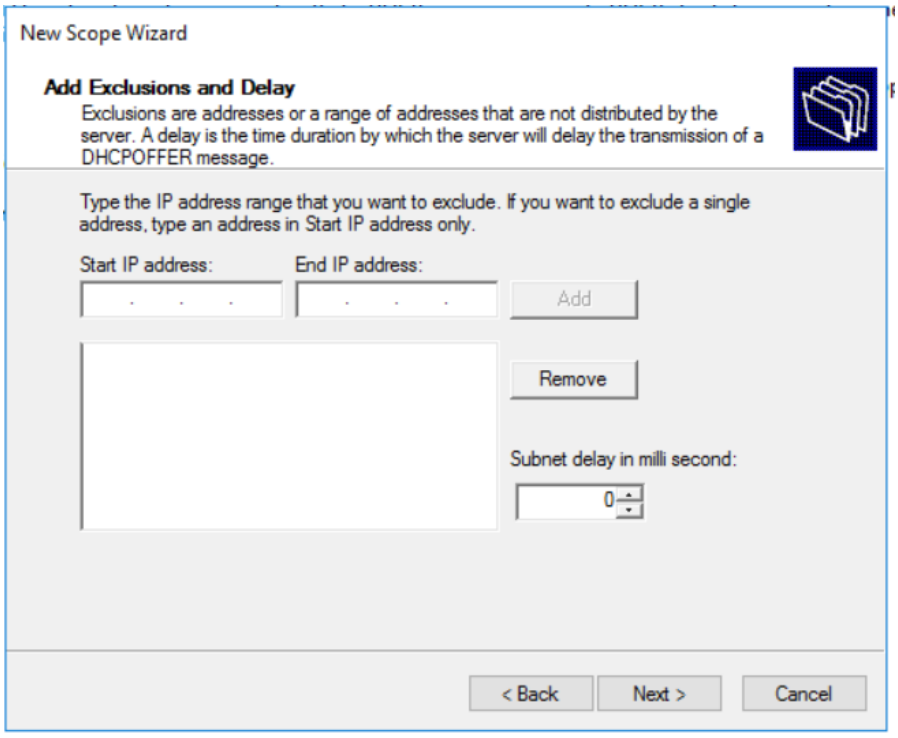
İşlem12-1b = Server’ımızın “Name”i ve “Description” adı girilir.



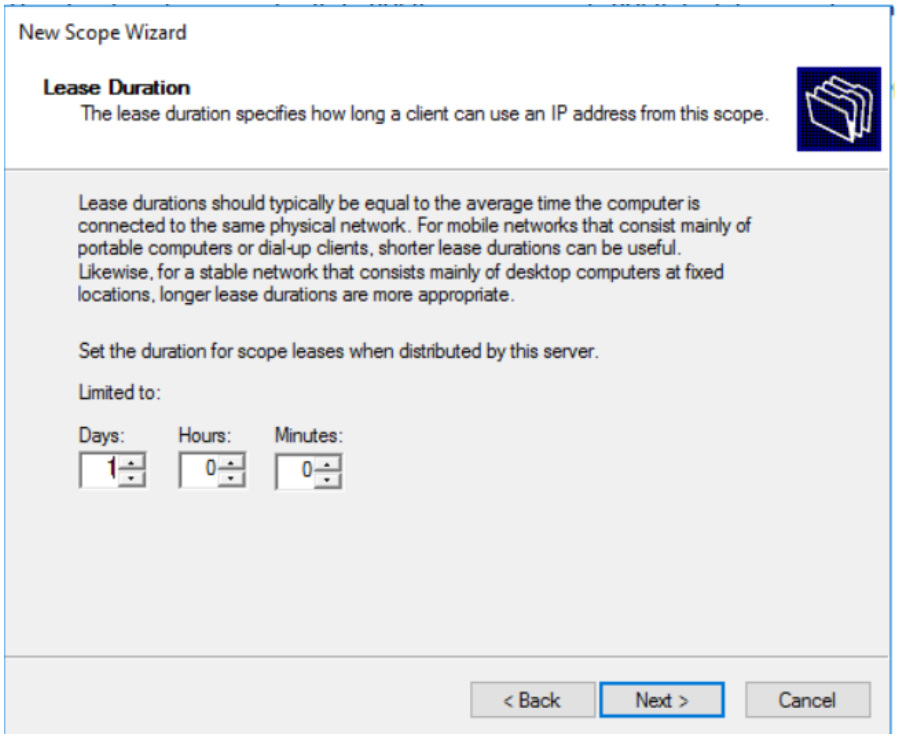
İşlem13-1b = Lokal IP'miz başlangıç ve bitiş IP değerleri girilir. (Başlangıç IP'mizi 250 almamızın sebebi topolojimize göre az IP dağıtımı içindir, duruma göre /24 yerine /29 'da kullanılabilir.



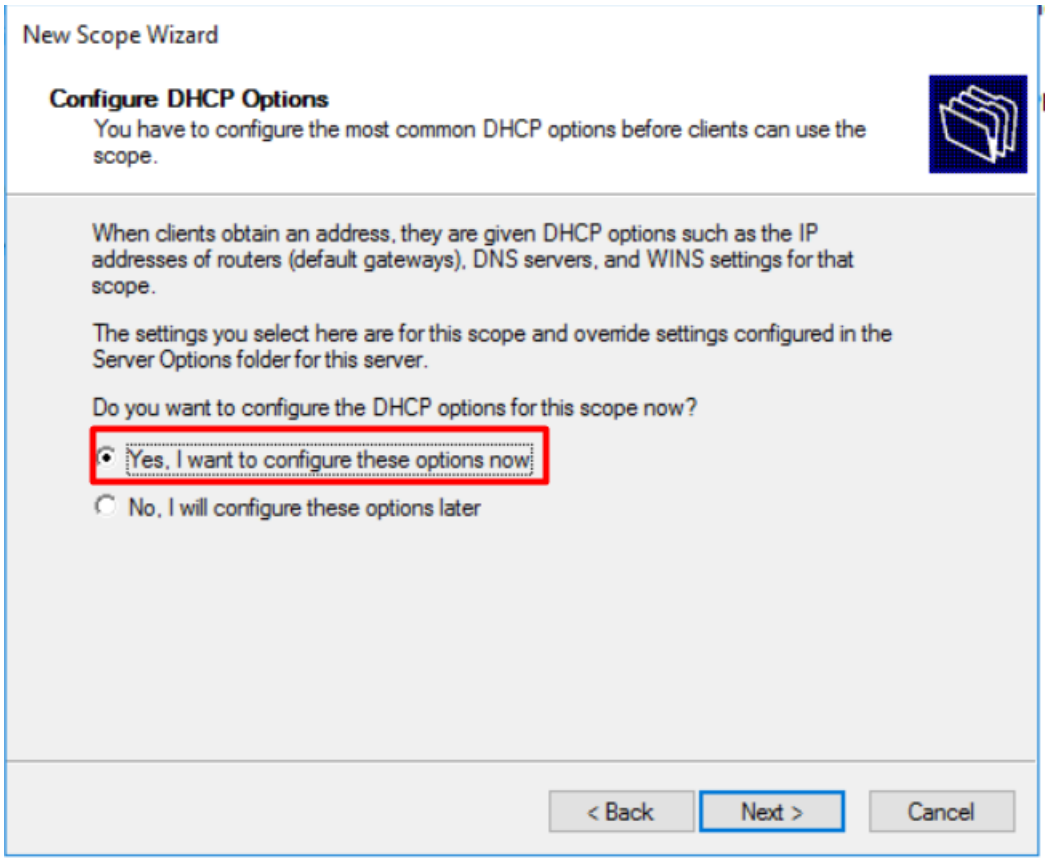
İşlem14-1b = Start IP adresini 250'de başlattığımız için exclude etmemize gerek yok. Teorik olarak 249 adet IP bir önceki adım ile otomatik exclude edilmiş olundu.



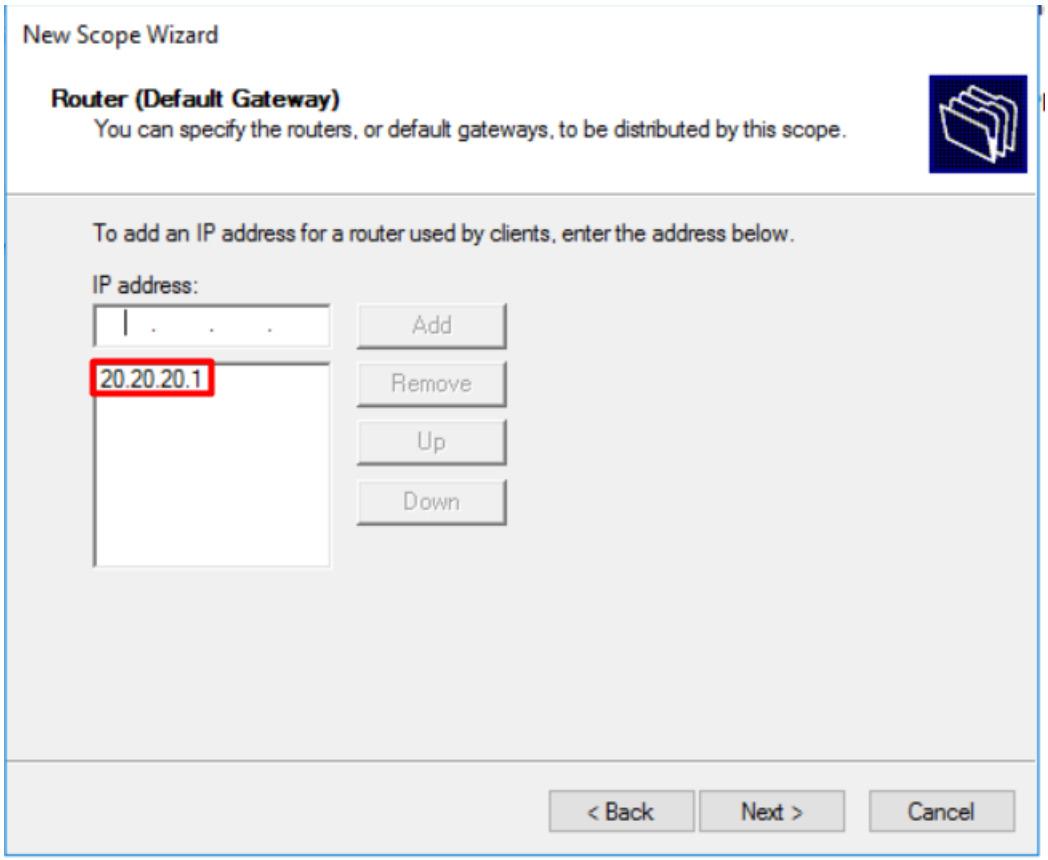
İşlem15-1b = Dağıtılan IP'lerin ne kadar zamanda bir yenileceğinin zamanı girilir.



İşlem16-1b = "Yes, i want to configure these options now" seçeneği seçilir.



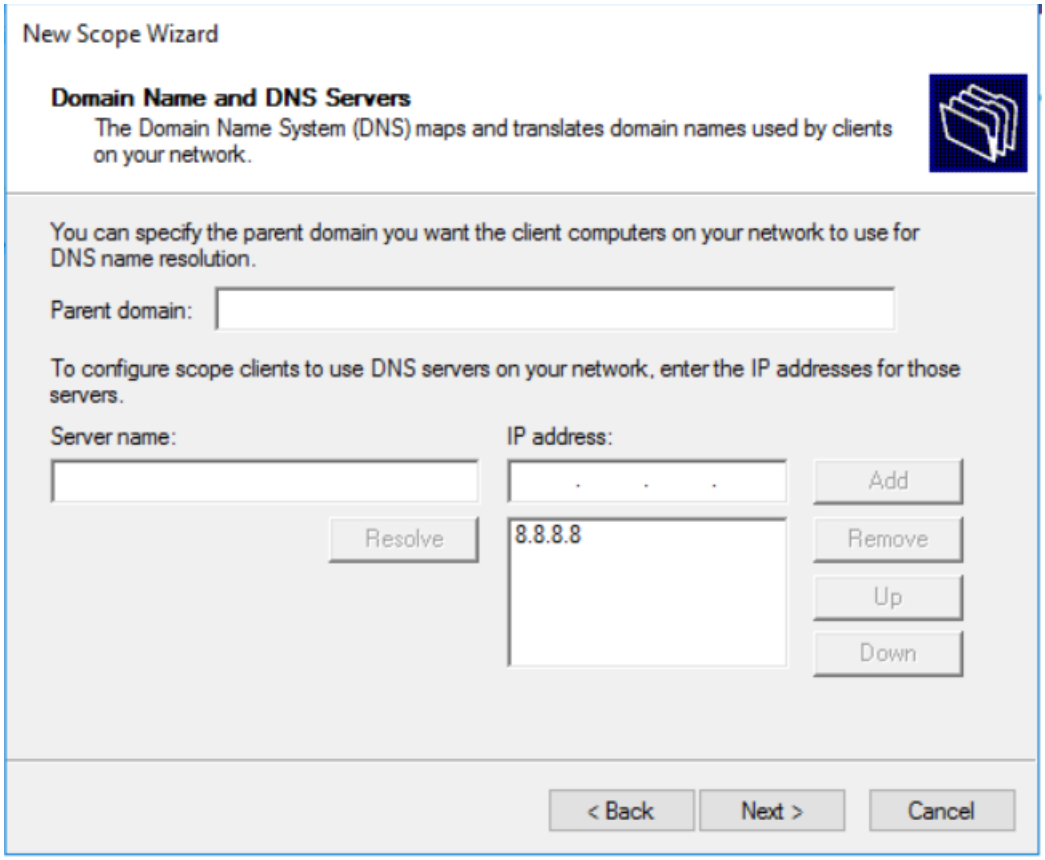
İşlem17-1b = Router'ın internete çıkacak bacağının (Default Gateway) IP'si girilir.



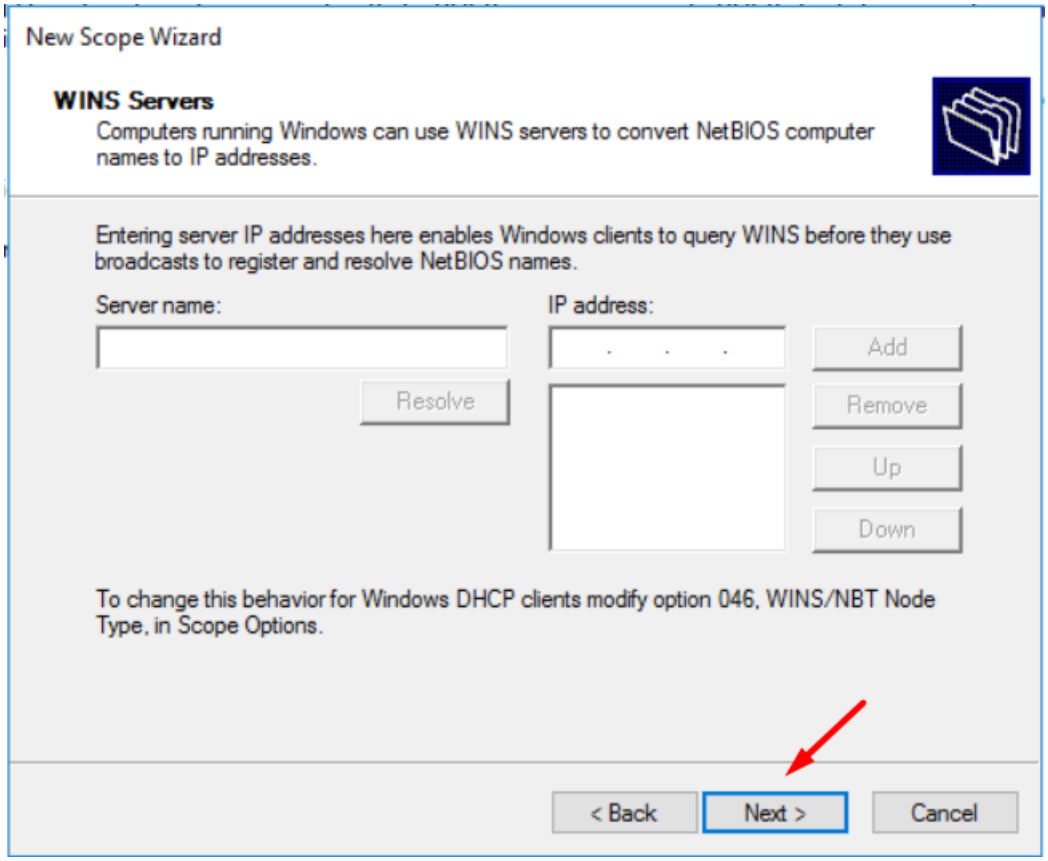
İşlem17-1b (in Router) = Router'ın local networkümüze bağlı bacağına IP adresi verilir.

```
Router#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#int
Router(config)#interface fa
Router(config)#interface fastEthernet 0/1
Router(config-if)#ip ad
Router(config-if)#ip address 20.20.20.1 255.255.255.0
Router(config-if)#no sh
Router(config-if)#
*Jan  1 00:20:32.535: %LINK-3-UPDOWN: Interface FastEthernet0/1, changed state t
o up
*Jan  1 00:20:33.535: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthern
et0/1, changed state to up
```

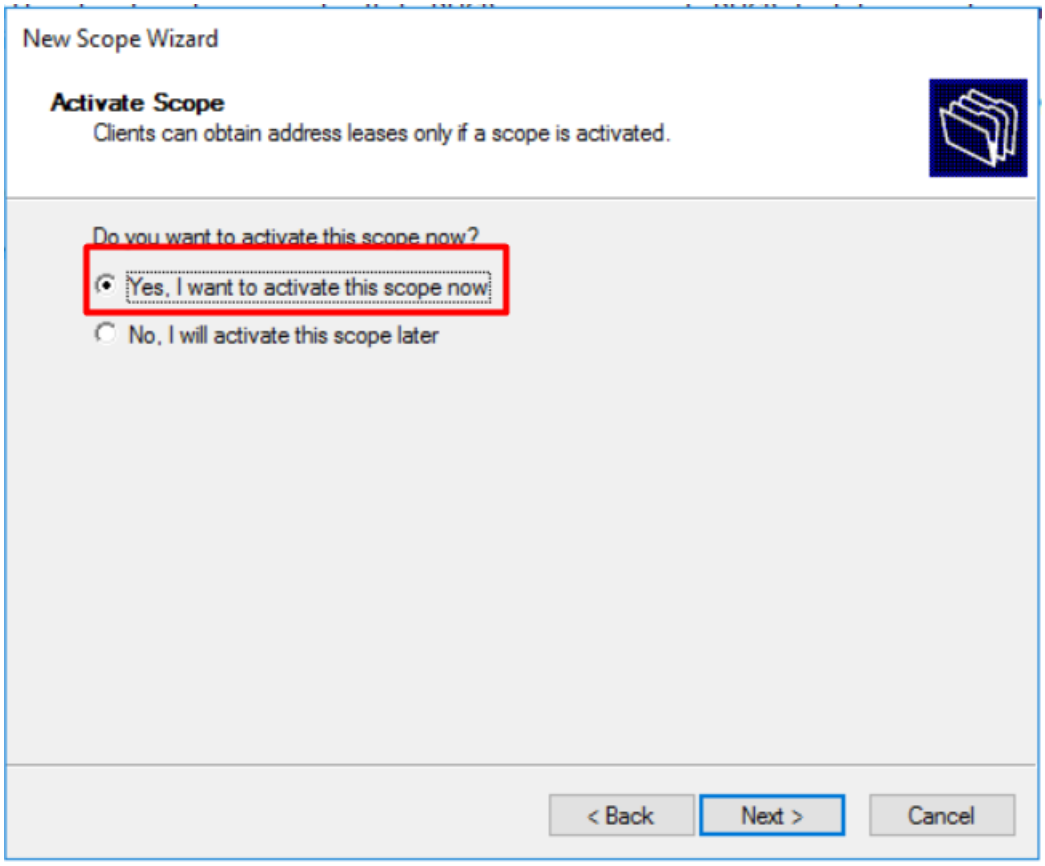
İşlem18-1b = DNS Server IP veya IP'leri girilir.



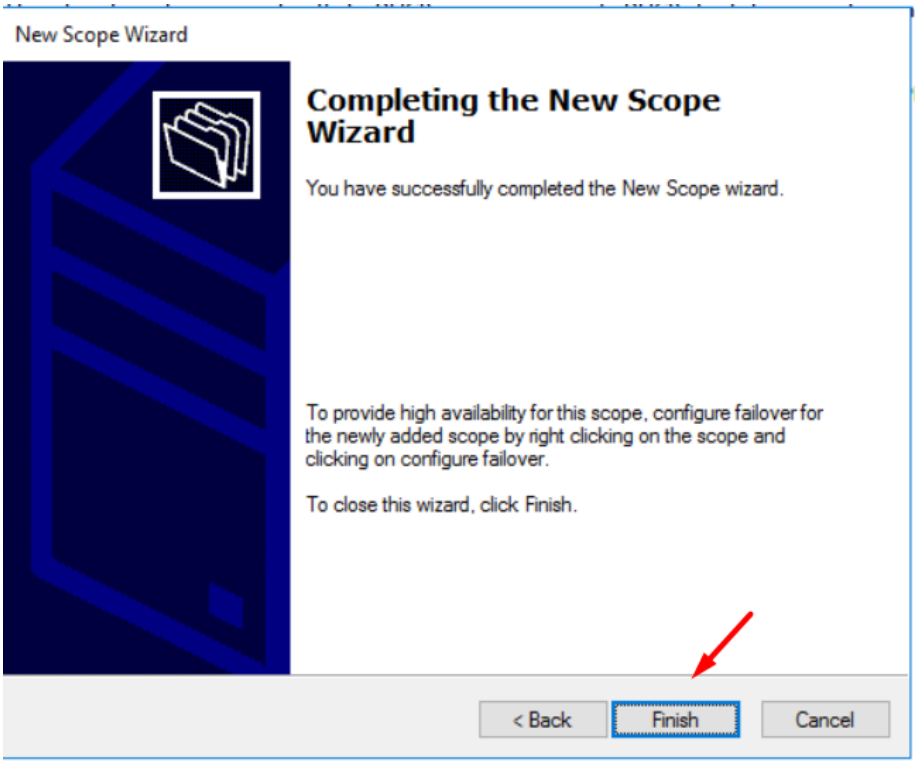
İşlem19-1b = "WINS Servers" kısmı geçilir.



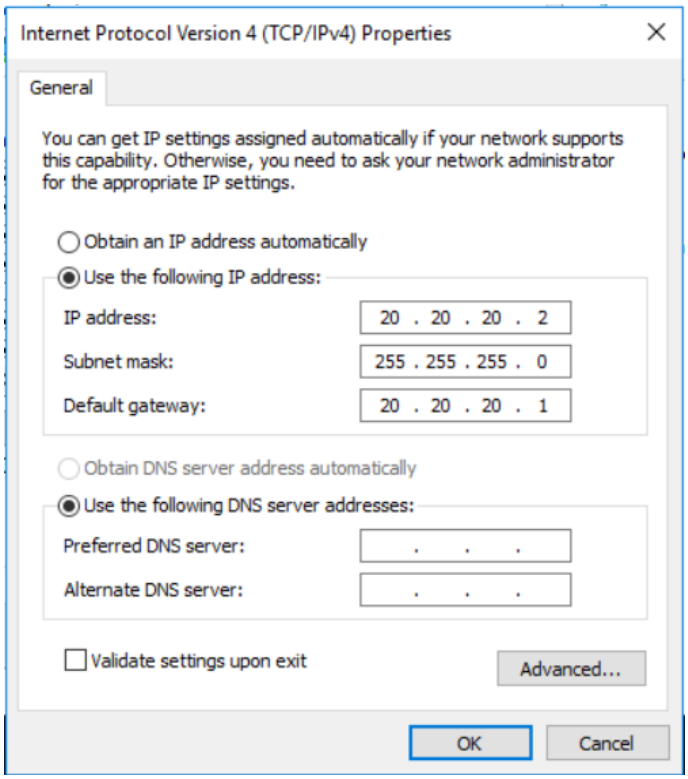
İşlem20-1b = "Yes, i want to activate this scope now" seçilir.



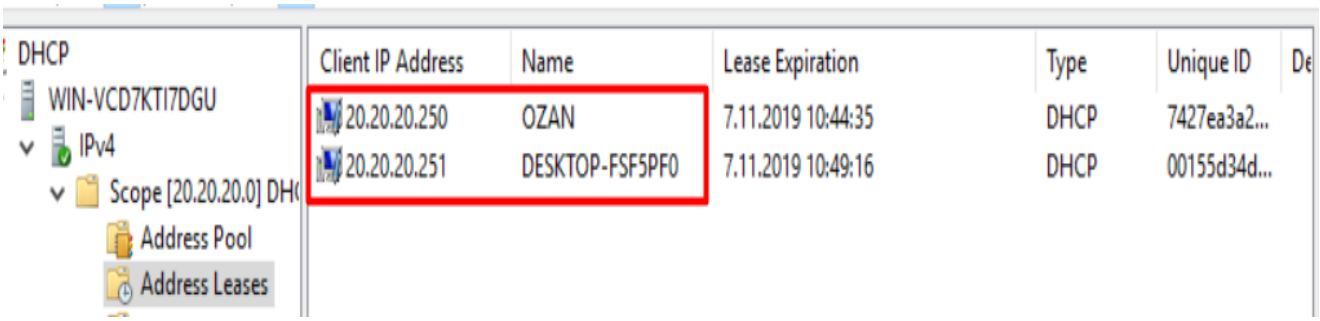
İşlem21-1b = Finish denilip Server Kurulumu tamamlanır.



İşlem22-1b = Cihaz(lar)ın DHCP Server üzerinden IP almas için DHCP Server'ı kurduğumuz sanal cihazımıza "Static IP" atanır. Static IP exclude edilmiş olmalıdır!

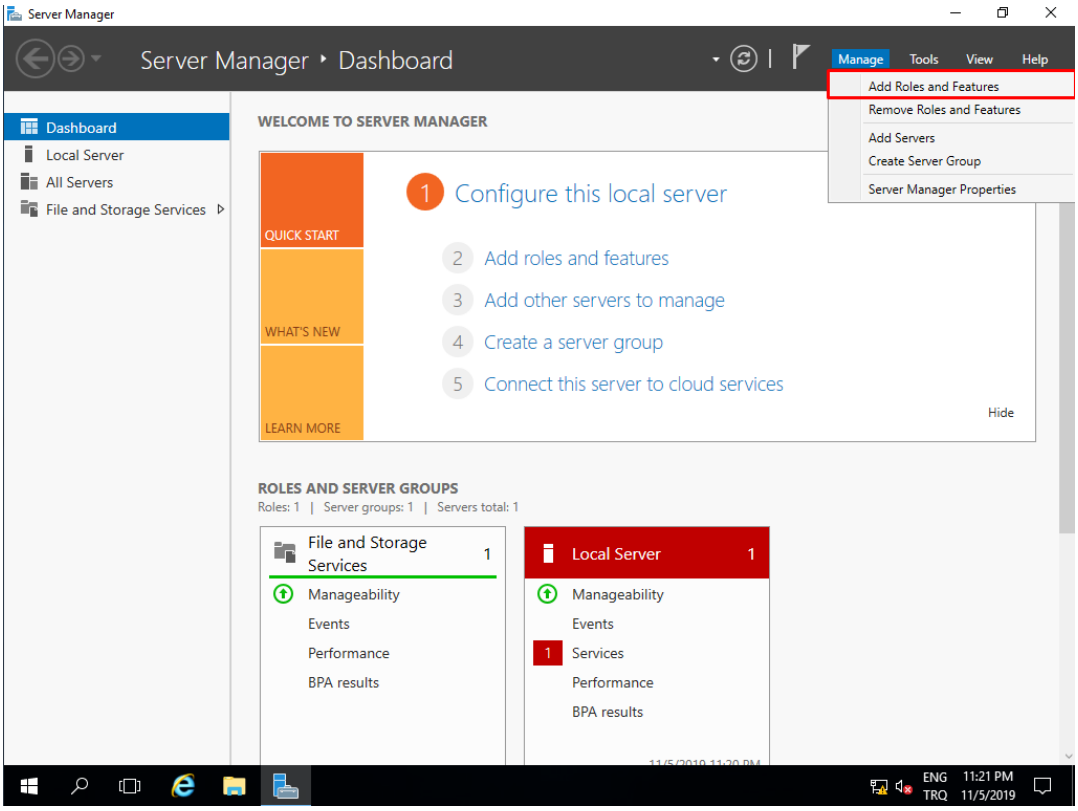


Ve cihazımız DHCP üzerinden otomatik IP almış oldu (.250 IP sanal cihazı kurulu olduğu ana cihaz IP'si, 251 IP'si ise Windows 10 cihazımıza atanan IP). "Address Leases" kısmı boş ise IPv4'e tıklanıp "Deactivate" tıklanır ve yeniten IPv4'e tıklanıp "Active" edilir. Tekrardan Address Leases'a gelindiğinde IP'ler atanmış olur.

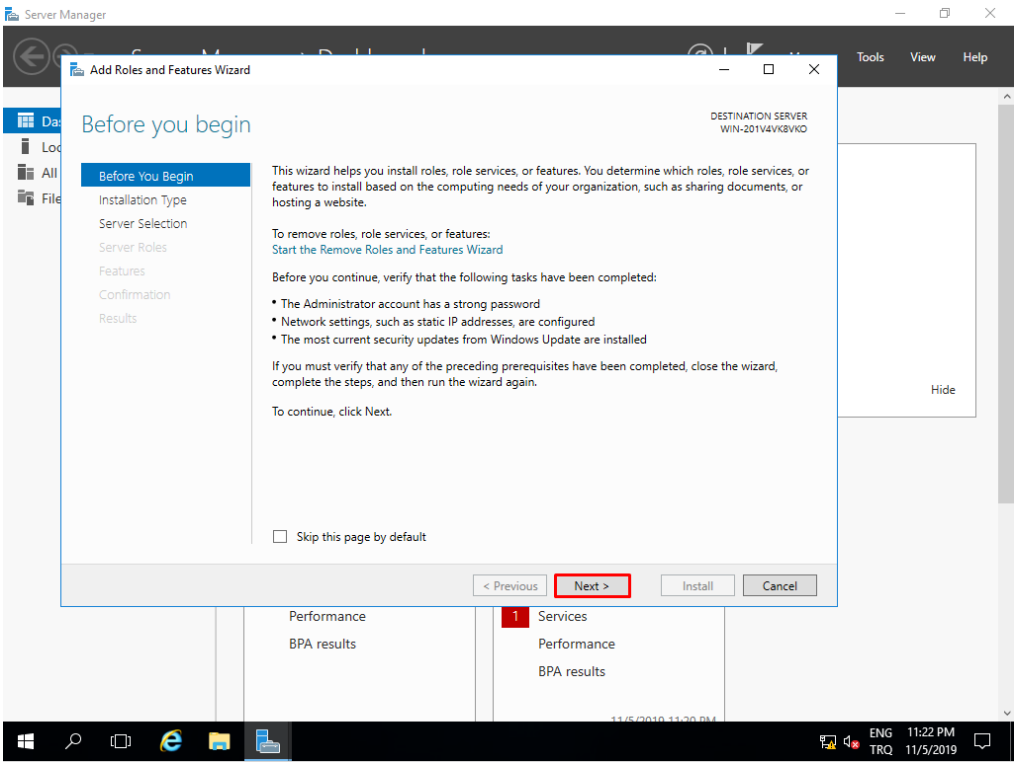


3c-) IIS Server Kurulumu

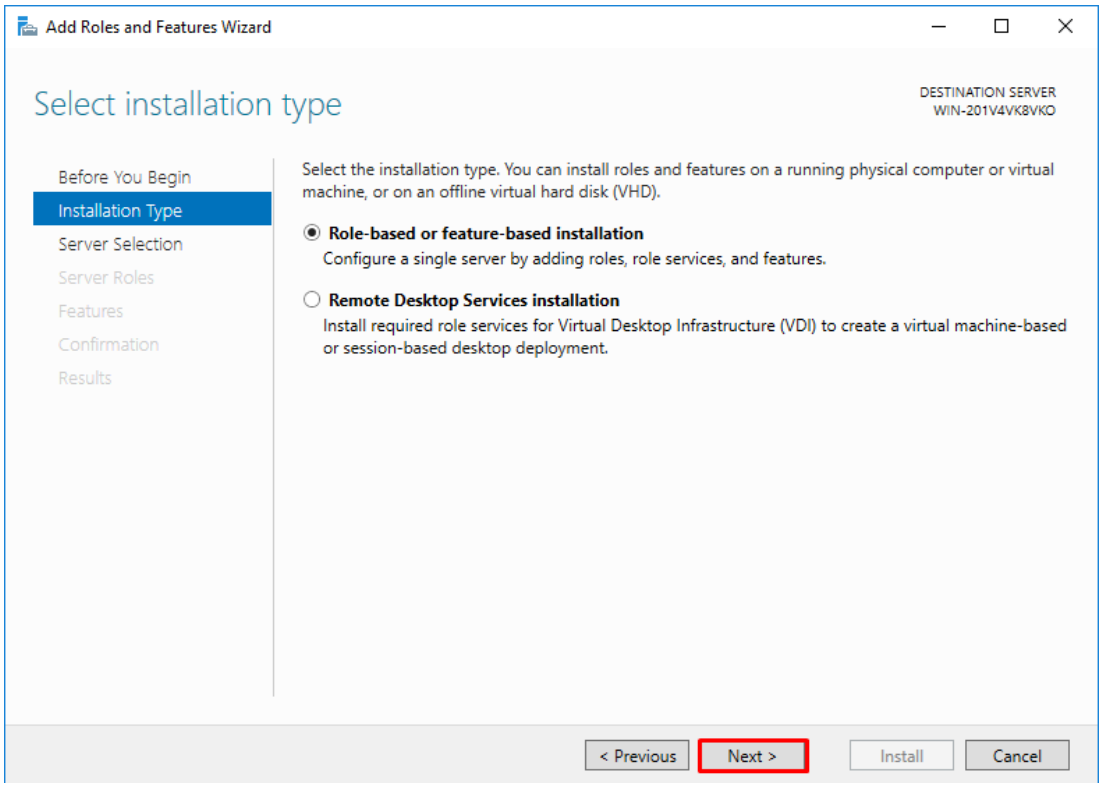
İşlem1-1c = IIS Server'ı için "Server Manager"dan "Add Roles and Features" tıklanır.



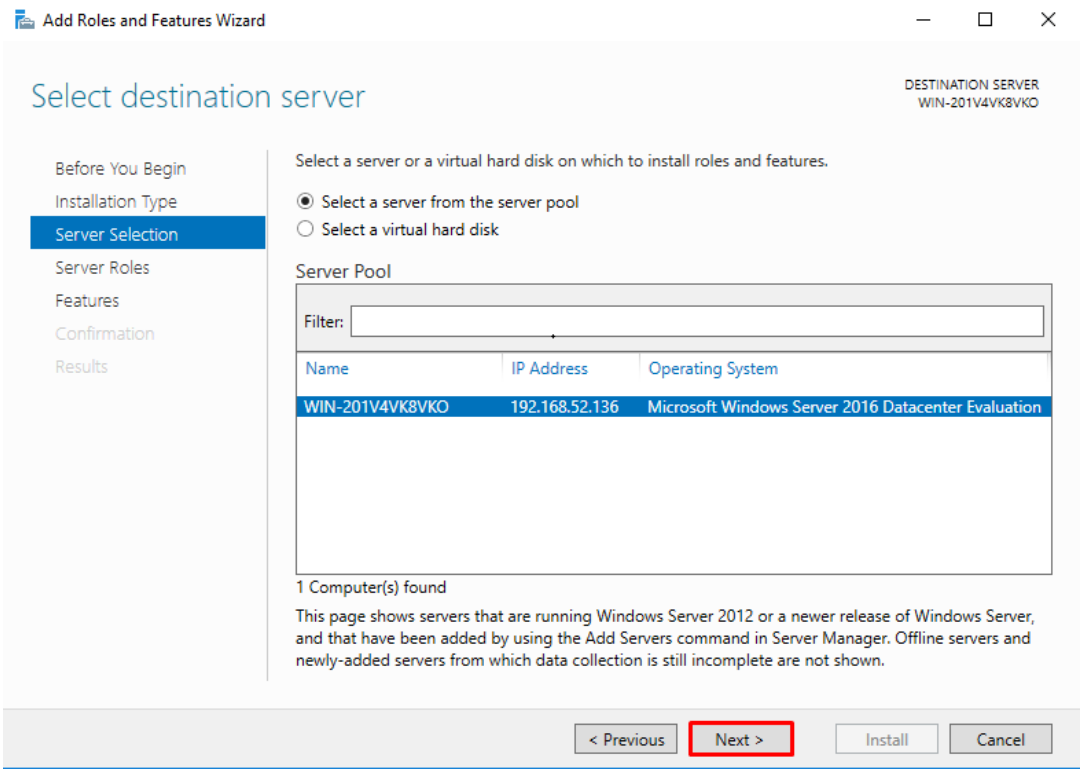
İşlem2-1c = "Next" ile ilerlenir.



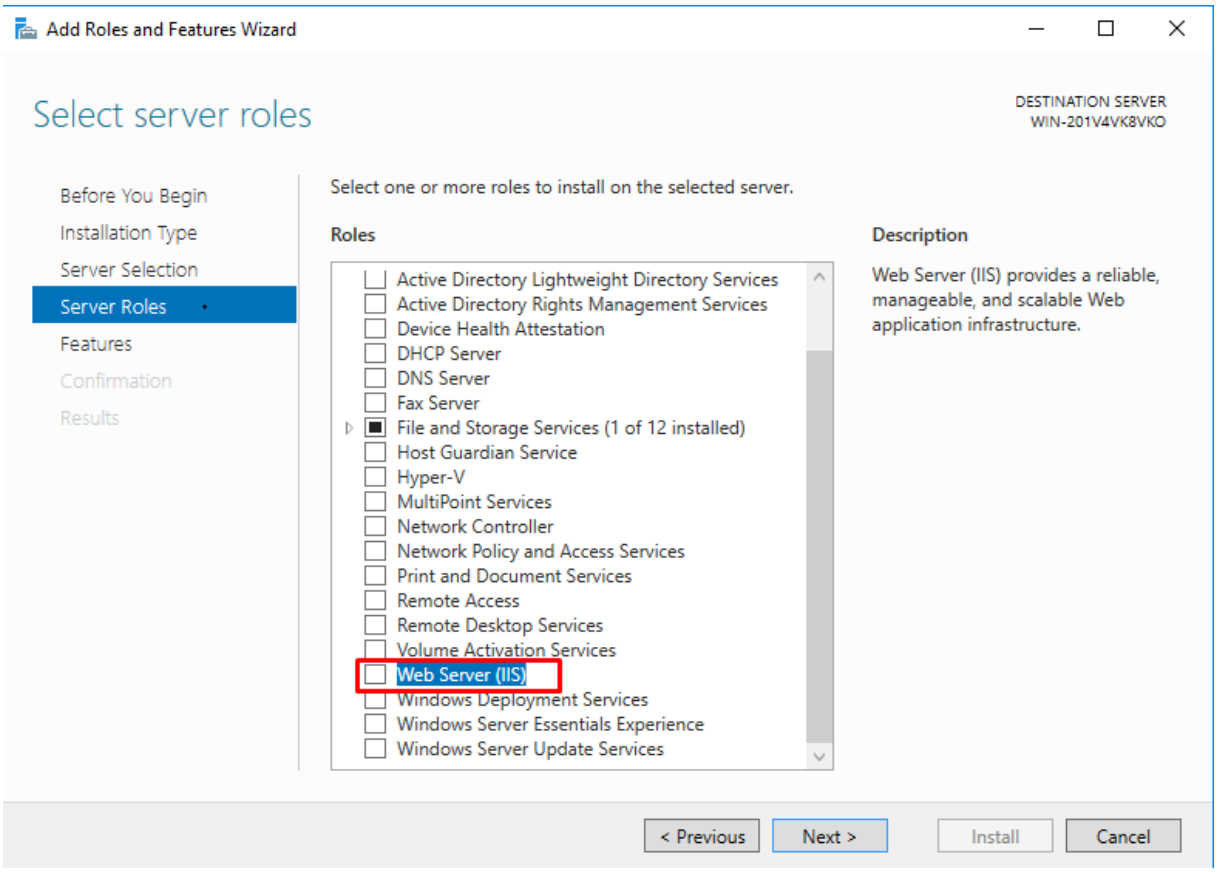
İşlem3-1c = "Role-based installation" seçilir.



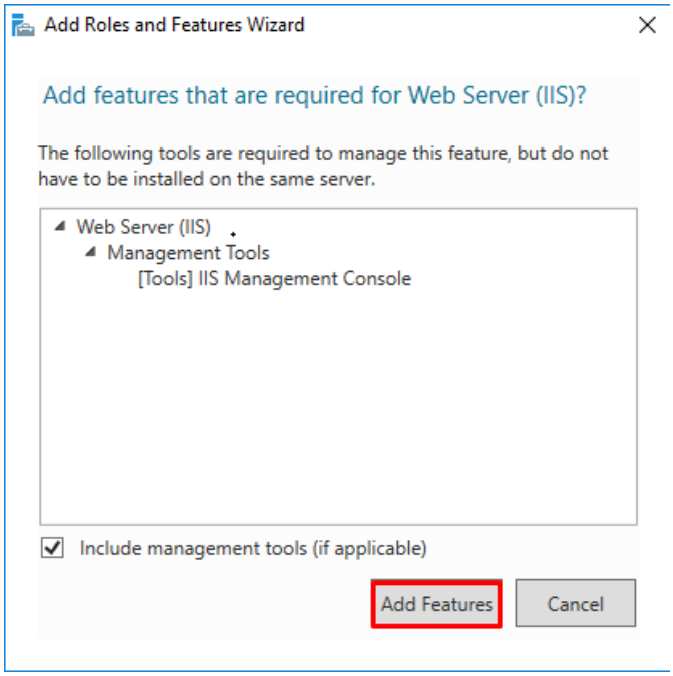
İşlem4-1c = Sanal cihazımız ve cihazın disk'i seçilir.

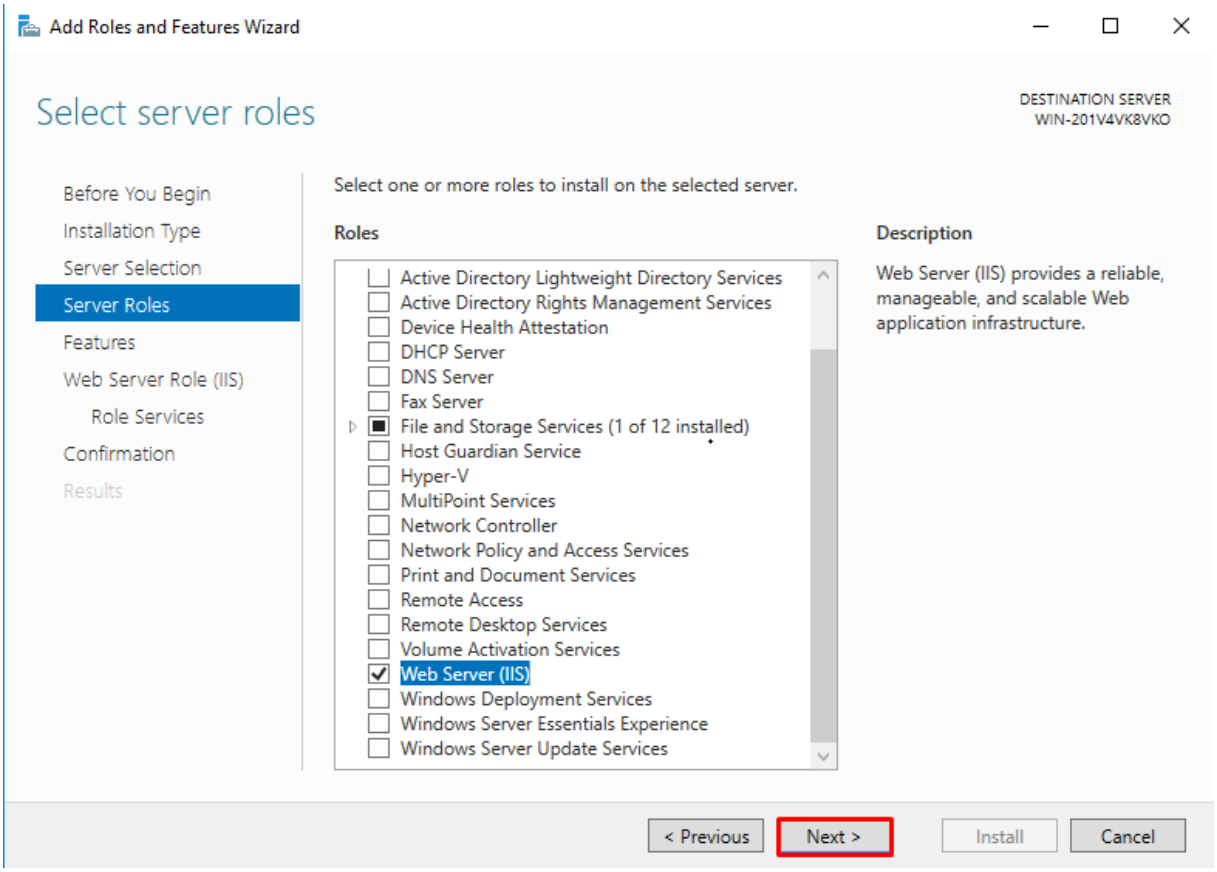


İşlem5-1c = "Server Roles" kısmndan "Web Server (IIS)" seçilir.

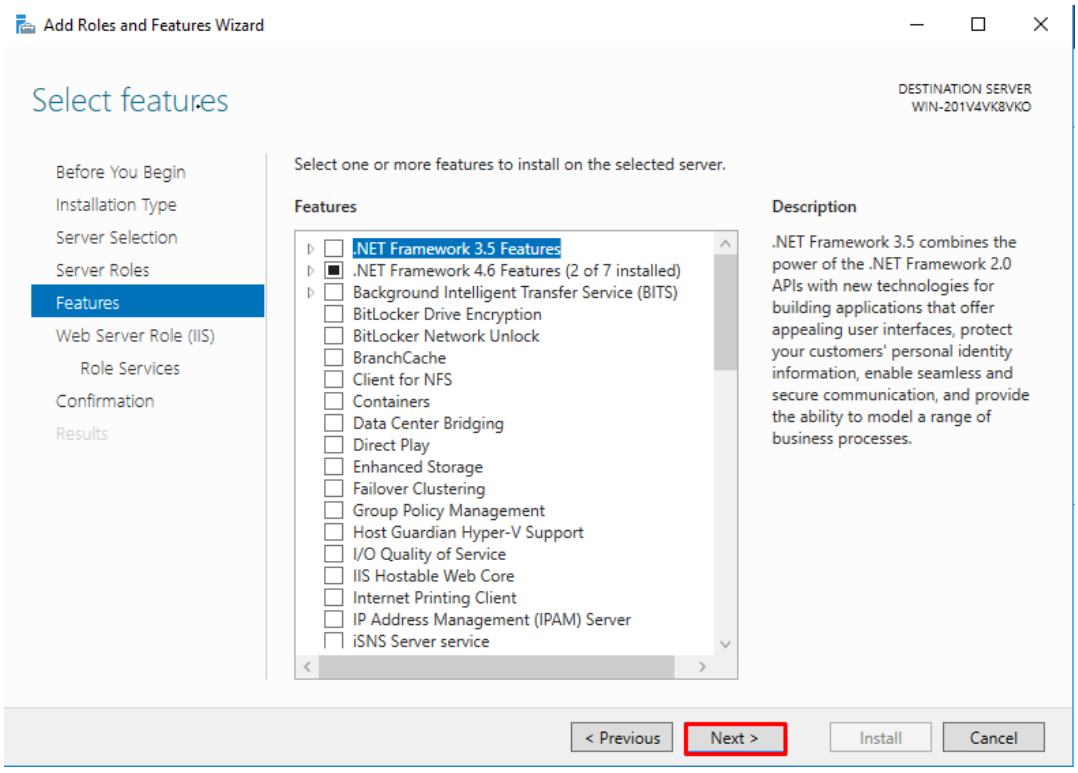


İşlem6-1c = "Add Features" denip eklenmiş olunur.

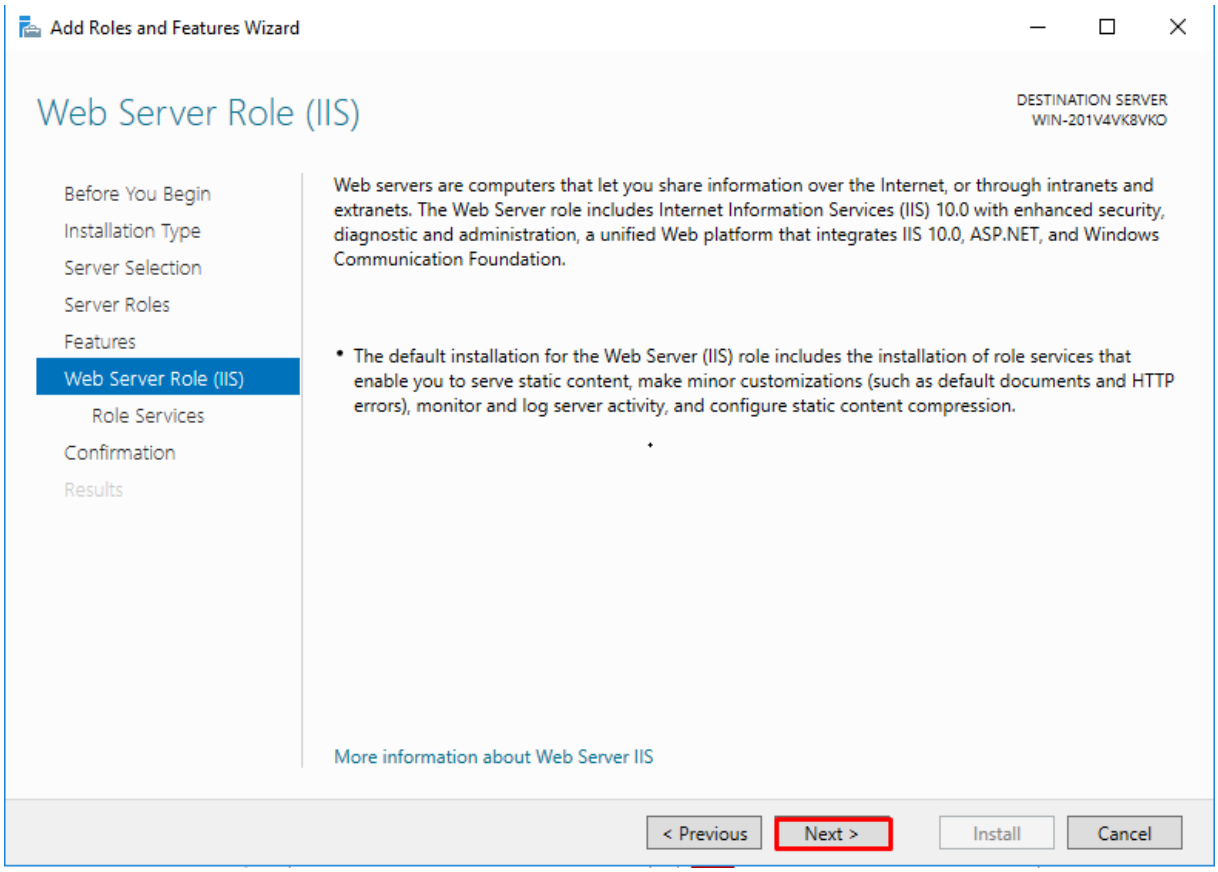




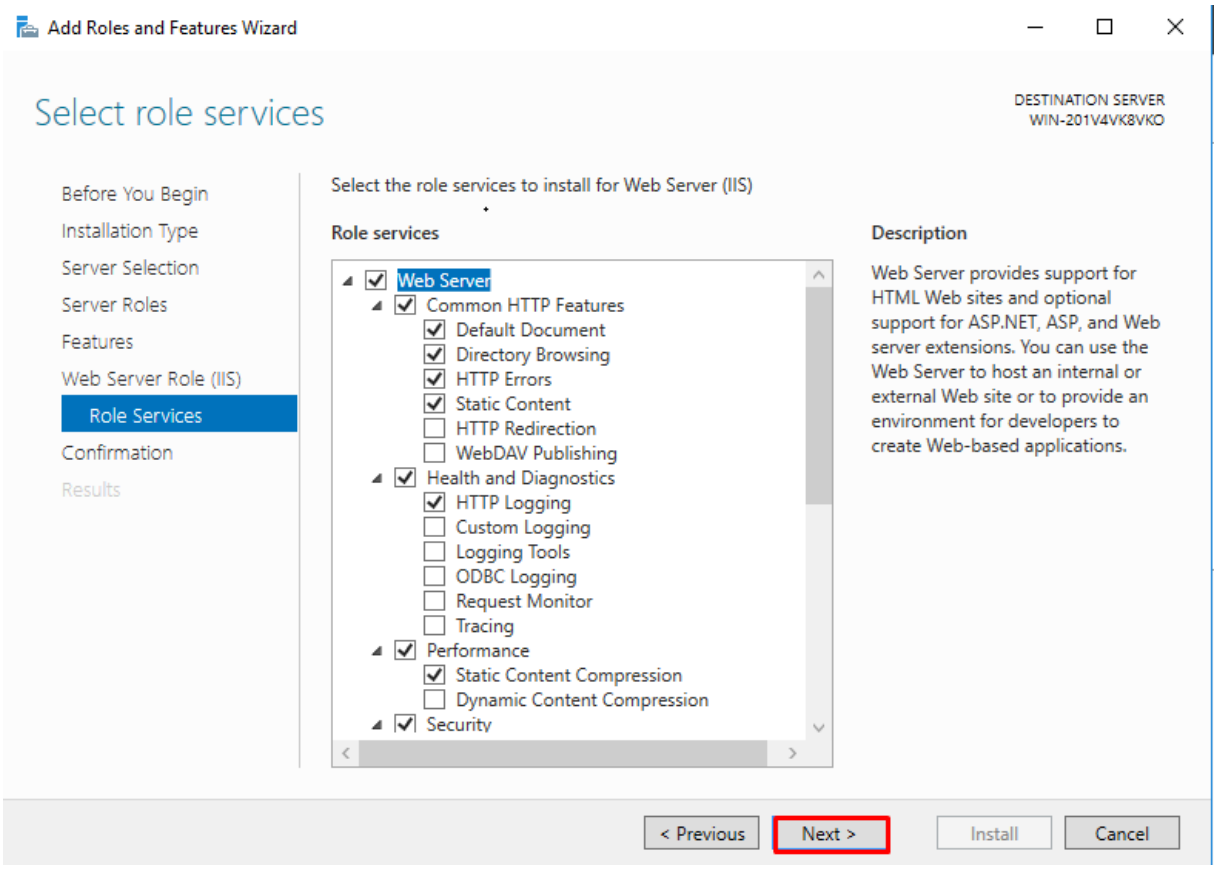
İşlem7-1c = "Features" kısmında seçim yapılmadan ilerlenir.



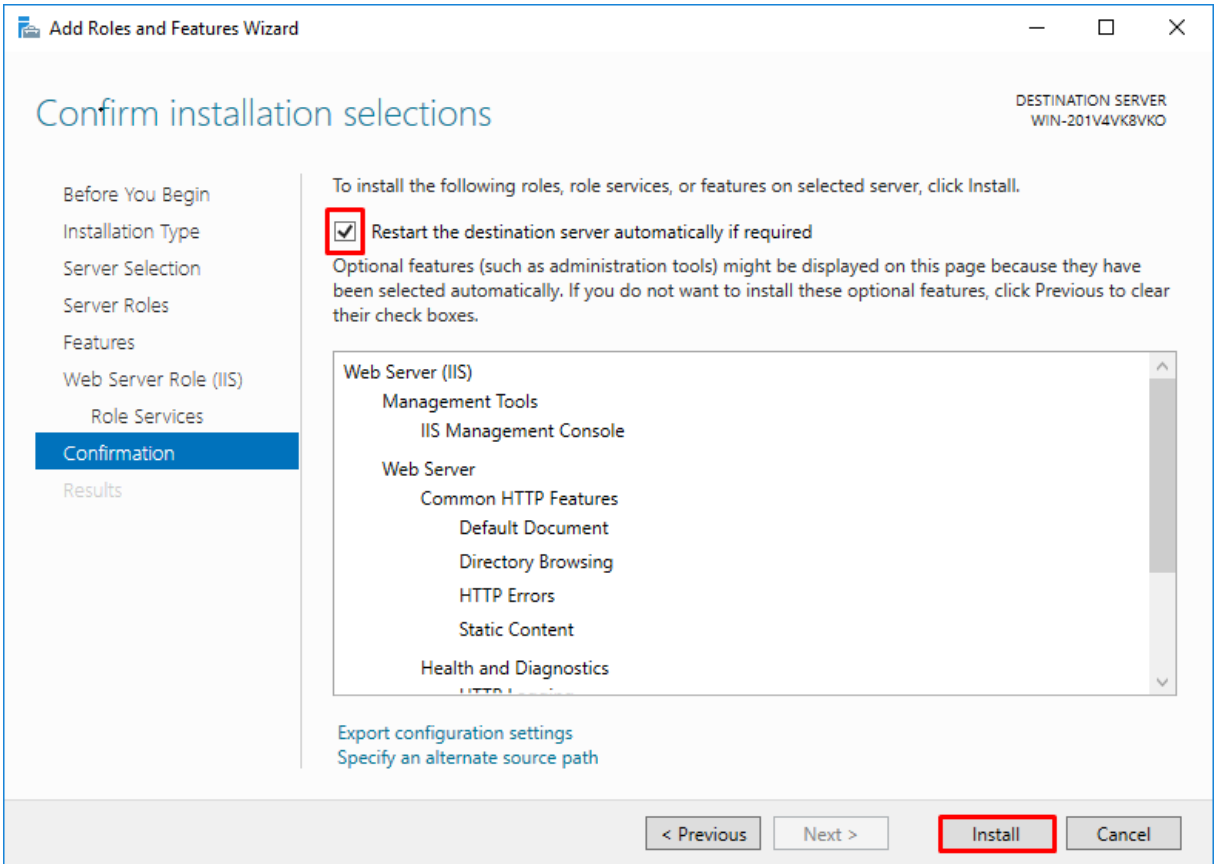
İşlem8-1c = "Next" denir ilerlenir.

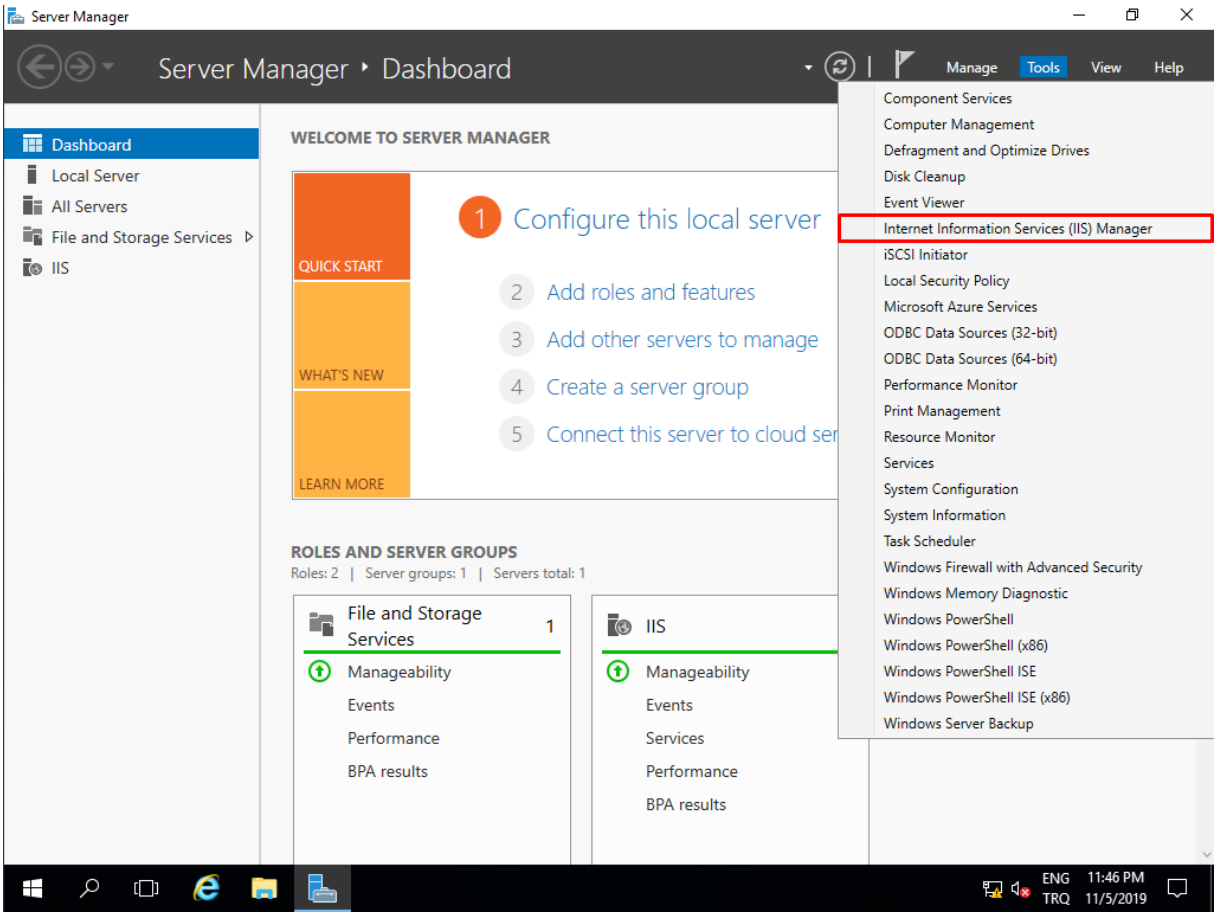


İşlem9-1c = "Role Services" default olarak bırakılıp ilerlenir.

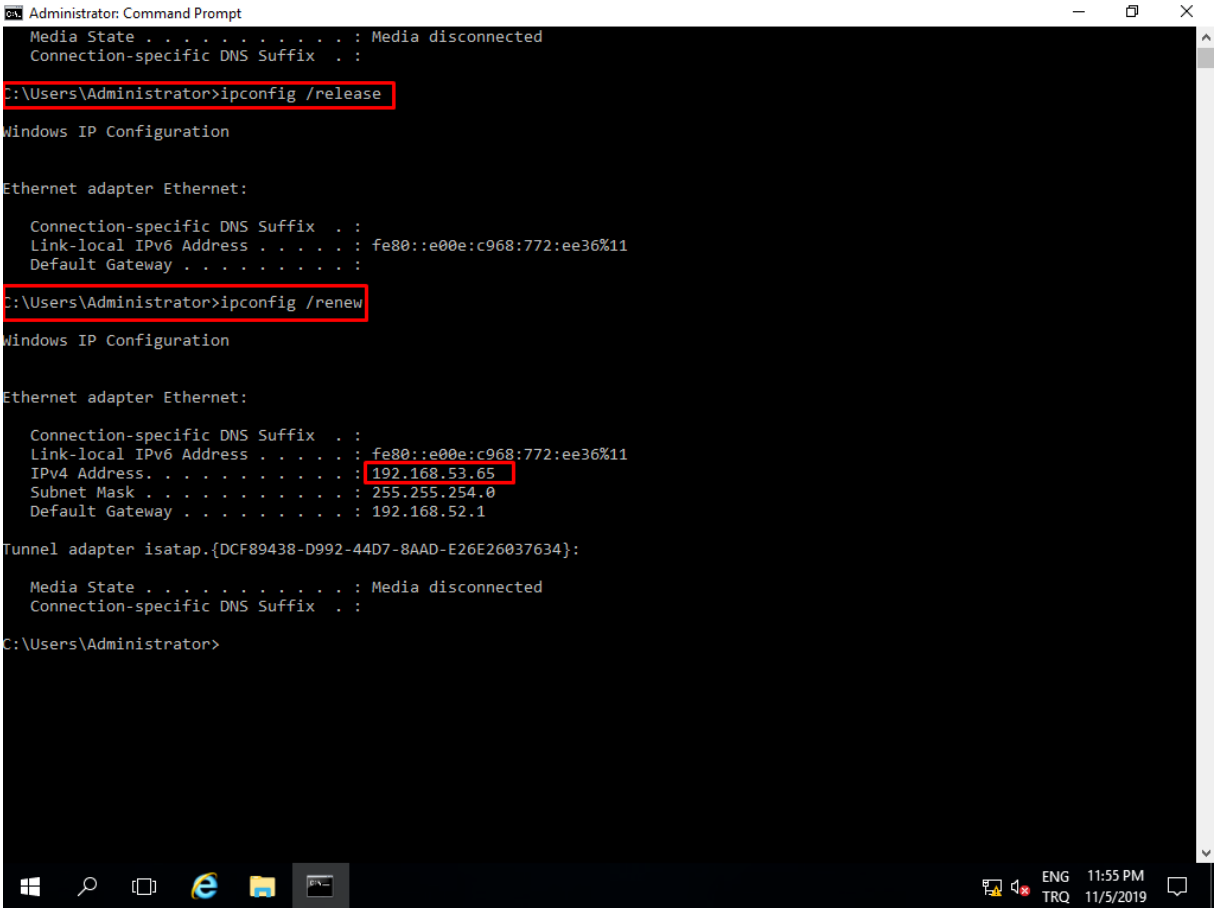


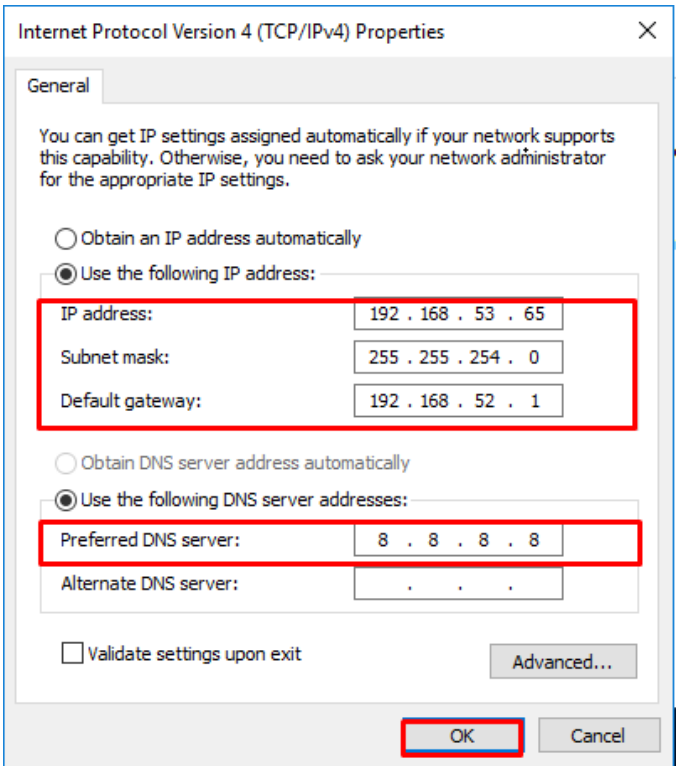
İşlem10-1c = "Restart" kısmı işaretlenerek kurumlumdan sonra cihazın optimize olarak kurulumu tamamlaması için yeniden başlatılması gerekir.





İşlem11-1c = İnternet üzerinden olan cihazımıza “CMD” üzerinden >ipconfig /release , >ipconfig /renew yapılarak kendi IP’si (DHCP’den gelen yeni IP’si) alınır ve bu IP statik IP olarak atanır ve WEB server’ımız hazır hala gelmiş olunur.





1d-) Routing Protokol

İşlem1-1d = Router'ın internete bağlı bacağına IP ataması. İnternete bağlanacak porttan IP ataması rastgele değer veremeyiz, bu IP'lerde internet servis sağlayıcısı tarafından bir DHCP havuzu oluşturularak dağıtılmaktadır, kullanılan bir IP ile çakışmamak için boşta olan IP'lerden atama yapılır. Bunun için "Router" üzerinde "Config" modunda interface'in içine girilir ver "ip address dhcp" komutu yazılır. Bu boş IP exclude edilmiş olmalıdır.

```
Router(config)#int
Router(config)#interface fa
Router(config)#interface fastEthernet 0/0
Router(config-if)#ip ad
Router(config-if)#ip address dh
Router(config-if)#ip address dhcp
Router(config-if)#
```

Router'ın FastEthernet 0/0 portuna hangi IP'nin atandığını öğrenmek için ise "show ip interface brief" komutu girilir.

```
Router#show ip interface brief
Interface                  IP-Address      OK? Method Status                Protocol
FastEthernet0/0            192.168.52.159  YES DHCP   up                    up
FastEthernet0/1            20.20.20.1      YES manual up                    up
Serial0/0/0                unassigned      YES NVRAM  administratively down down
Serial0/0/1                unassigned      YES NVRAM  administratively down down
Serial0/1/0                unassigned      YES NVRAM  administratively down down
Serial0/1/1                unassigned      YES NVRAM  administratively down down
Router#
```

İşlem2-1d = Local IP'lerimizi internete çıkarmak Router üzerinde NAT / PAT yapılmalıdır. Bunun için ilk olarak "access-list" yapılıp sonra "nat/pat konfigür"e edilir. Konfig komutları:

>access-list <Standart no> permit <kaynak IP adresi> <kaynap wild card>

>ip nat inside source list <access list numarası> interface <router'ın portu> overload

Bu komutlar ile PAT yapılmış olunup local networkümüz üzerinden tüm cihazlar tek bir IP üzerinden internete çıkacaklardır.

Bir işlem daha vardır;

```
Router>en
Router#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#ac
Router(config)#access-list 1 per
Router(config)#access-list 1 permit 20.20.20.0 0.0.0.255
Router(config)#ip nat
Router(config)#ip nat in
Router(config)#ip nat inside s
Router(config)#ip nat inside source l
Router(config)#ip nat inside source list 1 in
Router(config)#ip nat inside source list 1 interface f
Router(config)#ip nat inside source list 1 interface fastEthernet 0/0 ov
Router(config)#ip nat inside source list 1 interface fastEthernet 0/0 overload
Router(config)#
```

NAT / PAT yaparken hangi network'ün iç, hangisinin dış olduğununda konfigüre edilmesi gerekir. İnternete çıkılacak port dış, local network'ümüze bağlı port ise içtir

```
Router(config)#
Router(config)#int
Router(config)#interface fa
Router(config)#interface fastEthernet 0/1
Router(config-if)#ip nad
Router(config-if)#ip nat in
Router(config-if)#ip nat inside
Router(config-if)#ex
Router(config)#int
Router(config)#interface fa
Router(config)#interface fastEthernet 0/0
Router(config-if)#ip na
Router(config-if)#ip nat o
Router(config-if)#ip nat outside
Router(config-if)#
```

Ve artık internete bağlıyız.

İşlem3-1d= İnternete bağlandığımızı router üzerinden de "show ip nat translations" ile bakabiliriz.

```
Router#show ip nat translations
Pro Inside global         Inside local          Outside local         Outside global
icmp 192.168.52.159:0     20.20.20.250:0        8.8.8.8:0             8.8.8.8:0
udp 192.168.52.159:123    20.20.20.250:123      40.81.188.85:123      40.81.188.85:123
udp 192.168.52.159:123    20.20.20.250:123      51.145.123.29:123     51.145.123.29:123
tcp 192.168.52.159:49782  20.20.20.250:49782    108.177.127.188:443   108.177.127.188:443
tcp 192.168.52.159:49784  20.20.20.250:49784    52.142.84.61:443      52.142.84.61:443
tcp 192.168.52.159:49785  20.20.20.250:49785    40.67.251.132:443     40.67.251.132:443
tcp 192.168.52.159:49904  20.20.20.250:49904    192.168.53.65:80      192.168.53.65:80
tcp 192.168.52.159:49905  20.20.20.250:49905    192.168.53.65:80      192.168.53.65:80
udp 192.168.52.159:50237  20.20.20.250:50237    8.8.8.8:53            8.8.8.8:53
udp 192.168.52.159:52538  20.20.20.250:52538    172.217.169.100:443   172.217.169.100:443
udp 192.168.52.159:59732  20.20.20.250:59732    172.217.169.131:443   172.217.169.131:443
udp 192.168.52.159:61227  20.20.20.250:61227    40.81.120.44:3544     40.81.120.44:3544
udp 192.168.52.159:61227  20.20.20.250:61227    40.81.120.45:3544     40.81.120.45:3544
udp 192.168.52.159:61227  20.20.20.250:61227    40.81.120.45:65444    40.81.120.45:65444
udp 192.168.52.159:63970  20.20.20.250:63970    8.8.8.8:53            8.8.8.8:53
tcp 192.168.52.159:1108   20.20.20.251:49796    52.142.84.61:443      52.142.84.61:443
tcp 192.168.52.159:49800  20.20.20.251:49800    52.142.84.61:443      52.142.84.61:443
tcp 192.168.52.159:49988  20.20.20.251:49988    13.107.4.50:80        13.107.4.50:80
```

İşlem4-1d = Son olarak Local network'ümüz içinde olan windows 10 cihazımızdan internet üzerinde olan cihazımıza IP adresi ile giriş yaparız (DNS yapmadığımız için IP ile giriş yaparz.