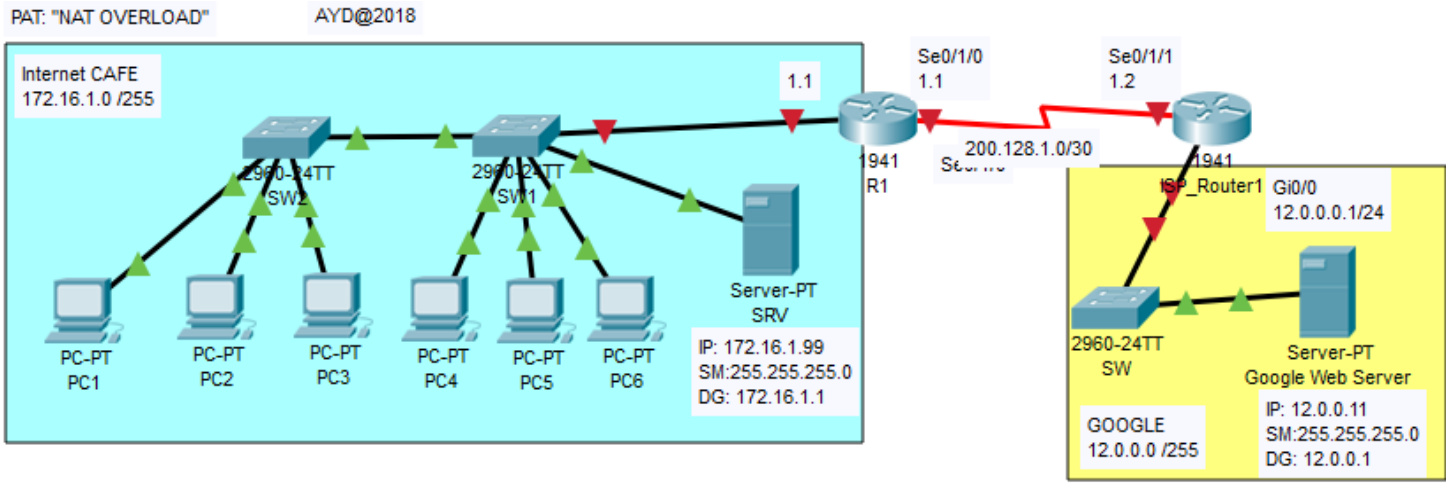
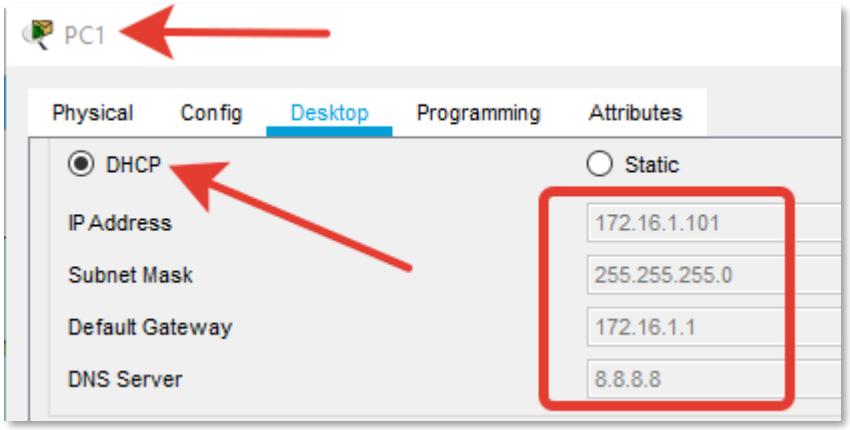
Ağ Yöneticileri Derneği
CCNA3 LAB 04 - PROJE ÇÖZÜMÜ – I
(PAT) NAT OverloadUygulaması



ADIM1:	
//R1 Yapılandırması	//ISP Router1 Yapılandırması
hostname R1 ! interface GigabitEthernet0/0 description Internet_CAFE LAN ip address 172.16.1.1 255.255.255.0 no shut ! interface Serial0/1/0 description ISP_WAN Baglantisi ip address 200.128.1.1 255.255.255.252 no shut ! ip route 0.0.0.0 0.0.0.0 200.128.1.2 // //R1 Bağlantı Testi R1#ping 12.0.0.11 Sending 5, 100-byte ICMP Echos to 12.0.0.11, timeout is 2 seconds: !!!!! Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/2 ms	hostname ISP_Router1 ! interface GigabitEthernet0/0 description GOOGLE NETWORK ip address 12.0.0.1 255.255.255.0 no shut ! interface Serial0/1/1 ip address 200.128.1.2 255.255.255.252 no shut end ! write // ADIM2: R1'de DHCP Yapılandırması **ip dhcp excluded-address** 172.16.1.1 172.16.1.100 ip dhcp pool IP_HAVUZU network 172.16.1.0 255.255.255.0 default-router 172.16.1.1 dns-server 8.8.8.8 domain-name internetcafem.com end wr



Tüm PC'ler DHCP üzerinden IP alacak şekilde ayarlandı ve IP aldıkları doğrulandı

KONTROL KOMUTLARI:

```
R1#show ip dhcp binding
IP address       Client-ID/          Lease expiration   Type
                 Hardware address
172.16.1.101     000A.F30D.D762      --                 Automatic
172.16.1.102     0001.43DA.8B94      --                 Automatic
172.16.1.103     0090.2B3A.8672      --                 Automatic
172.16.1.104     000C.85B4.9879      --                 Automatic
172.16.1.105     0003.E410.D1B2      --                 Automatic
172.16.1.106     0090.2B2E.ACC4      --                 Automatic
```

ADIM 3:

R1(config)# **access-list 3 permit 172.16.1.0 0.0.0.255**

R1(config)# **ip nat inside source list 3 interface serial 0/1/0 overload**

!! "ip nat inside" interface'inden gelen ve ACL 3 ile eşleşen paketler çıkış interface IP'sine dönüştürülerek NAT'lanacak.

R1(config)# **interface GigabitEthernet 0/0**
R1(config-if)# **ip nat inside**
R1(config)# **interface Serial 0/1/0**
R1(config-if) # **ip nat outside**
R1(config-if) # end

```
R1#show ip nat translations
Pro  Inside global     Inside local       Outside local  Outside global
icmp 200.128.1.1:1     172.16.1.101:1     12.0.0.11:1    12.0.0.11:1
tcp  200.128.1.1:1025  172.16.1.101:1025  12.0.0.11:80   12.0.0.11:80

R1#show ip nat statistics
Total translations: 4 (0 static, 4 dynamic, 4 extended)
Outside Interfaces: Serial0/1/0
Inside Interfaces: GigabitEthernet0/0
Hits: 22  Misses: 4
Expired translations: 0
Dynamic mappings:
R1#
```

Şekil 1 "show ip nat translations " ve "show ip nat statistics"

EK (ADIM5: PORT YÖNLENDİRME)

```
R1(config)#ip nat inside source static tcp 172.16.1.99 80 200.128.1.1 80
R1(config)#ip nat inside source static tcp 172.16.1.99 443 200.128.1.1 443
```

Şekil 2 "port yönlendirme komutları"

```
R1#show ip nat translations
Pro  Inside global     Inside local       Outside local  Outside global
tcp 200.128.1.1:1025   172.16.1.101:1025  12.0.0.11:80   12.0.0.11:80
tcp 200.128.1.1:443    172.16.1.99:443    ---            ---
tcp 200.128.1.1:80     172.16.1.99:80     ---            ---
```

Şekil 3 Port yönlendirme sonrası "show ip nat translations "

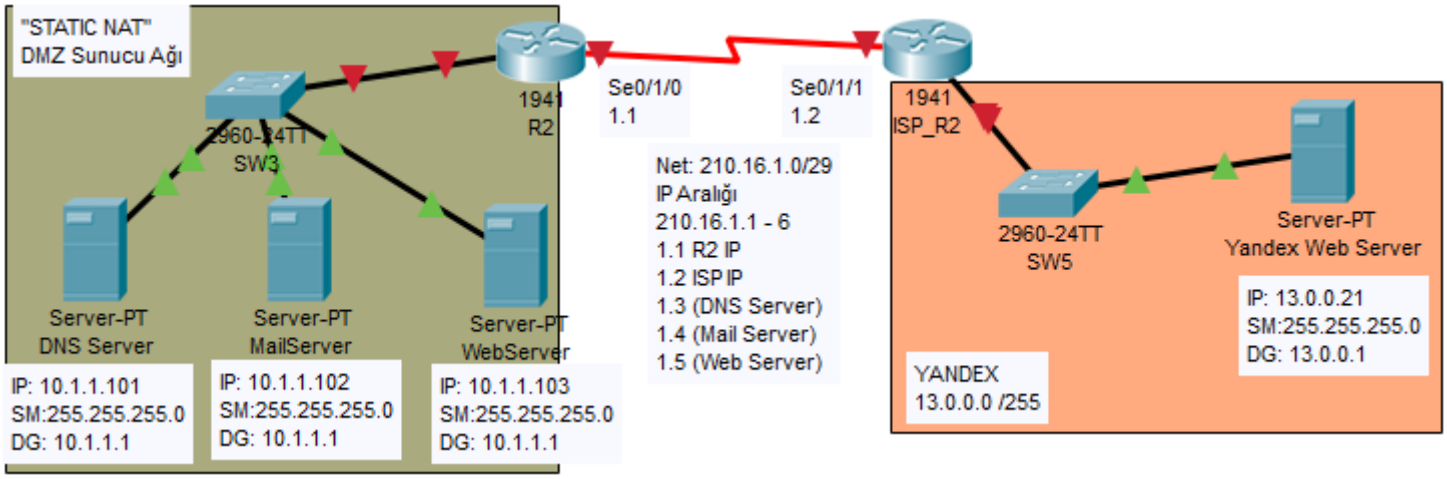
Şekil 4 Google'dan Internet Cafe'deki sunucuya Web bağlantısı sağlandı.

Ağ Yöneticileri Derneği

CCNA3 LAB 04 - PROJE ÇÖZÜMÜ – II

Static NAT Uygulaması

ADIM 6: STATIC NAT



ADIM6:	
//R2 Yapılandırması	//ISP R2 Yapılandırması
hostname R2 ! interface GigabitEthernet0/0 description Internet_SUNUCU_AGI ip address 10.1.1.1 255.255.255.0 no shut ! interface Serial0/1/0 description ISP_WAN Baglantisi ip address 210.16.1.1 255.255.255.248 no shut ! ip route 0.0.0.0 0.0.0.0 210.16.1.2	hostname ISP_R2 ! interface GigabitEthernet0/0 description YANDEX NETWORK ip address 13.0.0.1 255.255.255.0 no shut ! interface Serial0/1/1 ip address 210.16.1.2 255.255.255.248 no shut end ! write

//R2 Bağlantı Testi

R2# ping 13.0.0.21

Sending 5, 100-byte ICMP Echos to 13.0.0.21, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/2 ms

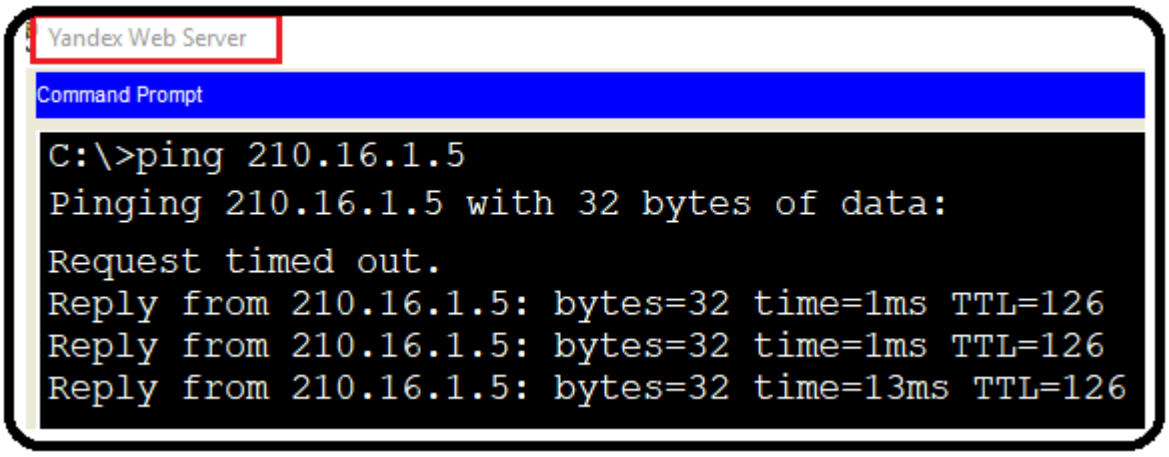
R2(config)# **ip nat inside source static 10.1.1.101 210.16.1.3**
R2(config)# **ip nat inside source static 10.1.1.102 210.16.1.4**
R2(config)# **ip nat inside source static 10.1.1.103 210.16.1.5**

R2(config)# **interface GigabitEthernet 0/0**
R2(config-if)# **ip nat inside**

R2(config)# **interface Serial 0/1/0**
R2(config-if) # **ip nat outside**

```
R2#sh ip nat translations
Pro  Inside global     Inside local   Outside local  Outside global
---  210.16.1.3        10.1.1.103     ---            ---
---  210.16.1.4        10.1.1.104     ---            ---
---  210.16.1.5        10.1.1.105     ---            ---
```

```
R2#show ip nat statistics
Total translations: 3 (3 static, 0 dynamic, 0 extended)
Outside Interfaces: Serial0/1/0
Inside Interfaces: GigabitEthernet0/0
Hits: 0  Misses: 0
Expired translations: 0
Dynamic mappings:
```




```
R2#show ip nat translations
Pro  Inside global     Inside local   Outside local  Outside global
---  210.16.1.3        10.1.1.103     ---            ---
---  210.16.1.4        10.1.1.104     ---            ---
---  210.16.1.5        10.1.1.105     ---            ---
tcp 210.16.1.5:80      10.1.1.105:80  13.0.0.21:1025 13.0.0.21:1025
```

```
R2#show ip nat st
R2#show ip nat statistics
Total translations: 5 (3 static, 2 dynamic, 2 extended)
Outside Interfaces: Serial0/1/0
Inside Interfaces: GigabitEthernet0/0
Hits: 17  Misses: 6
Expired translations: 4
Dynamic mappings:
```