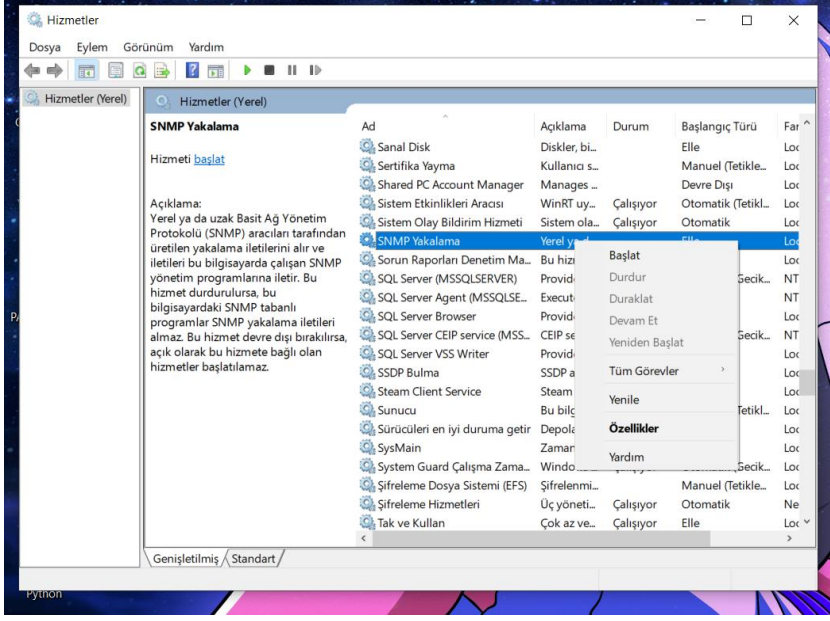
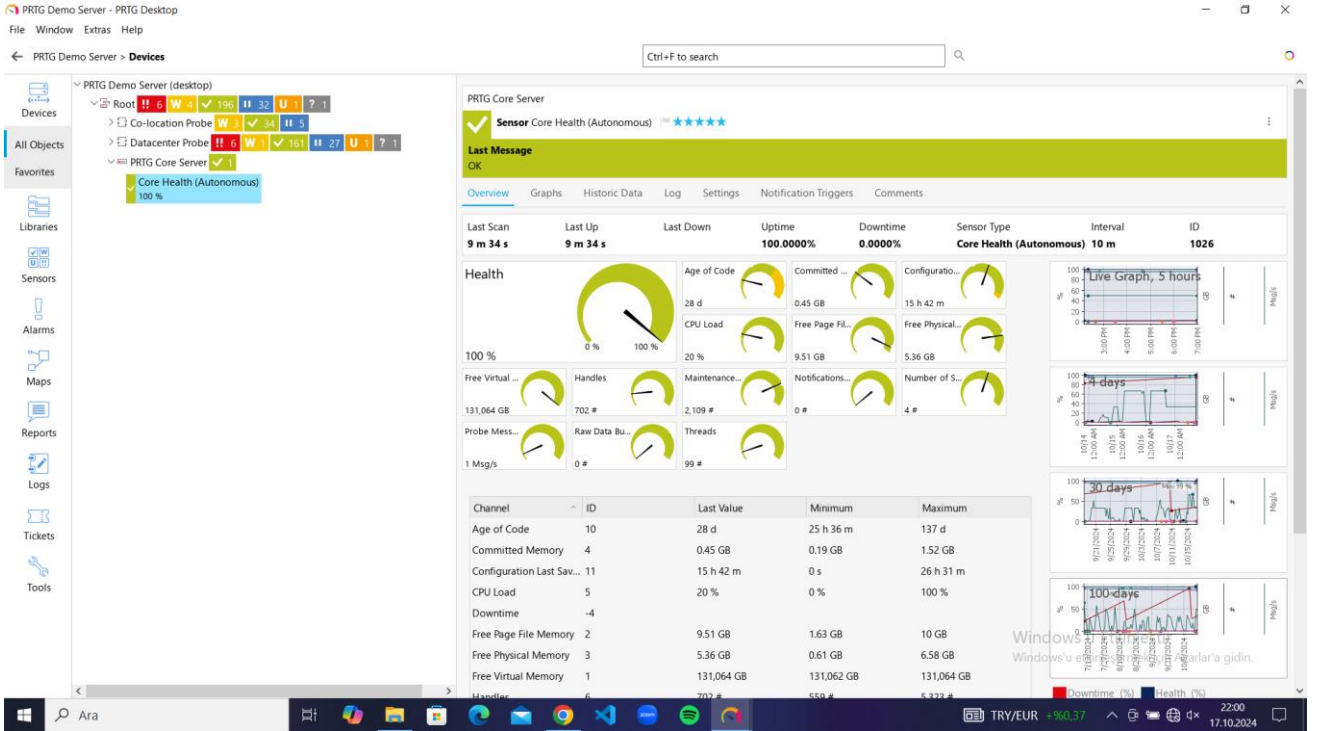


SNMP (Simple Network Management Protocol)



SNMP ağı yönetirken ağ yöneticisine yardımcı olan uygulama katmanıdır. Örnek bir uygulamayla somutlaştıralım. İlk olarak bilgisayarımızdan 'hizmetler' kısmından 'SNMP Yakalama' yı etkinleştirmemiz gerekiyor. Daha sonrasında bilgisayarımızda görmek istediğimiz örneğin ekran kartımızın durumu gibi şeyleri gösterebilecek ve görselleştirebilecek bir uygulamaya ihtiyacımız var. Mevcut altyapı performansını inceleyebileceğiz. Bunun içinde PRTG isimli uygulamayı indirerek kuruyoruz. Kurduktan sonra bilgisayarımız ile ilgili birçok veriyi aşağıdaki gibi elde edebiliriz.

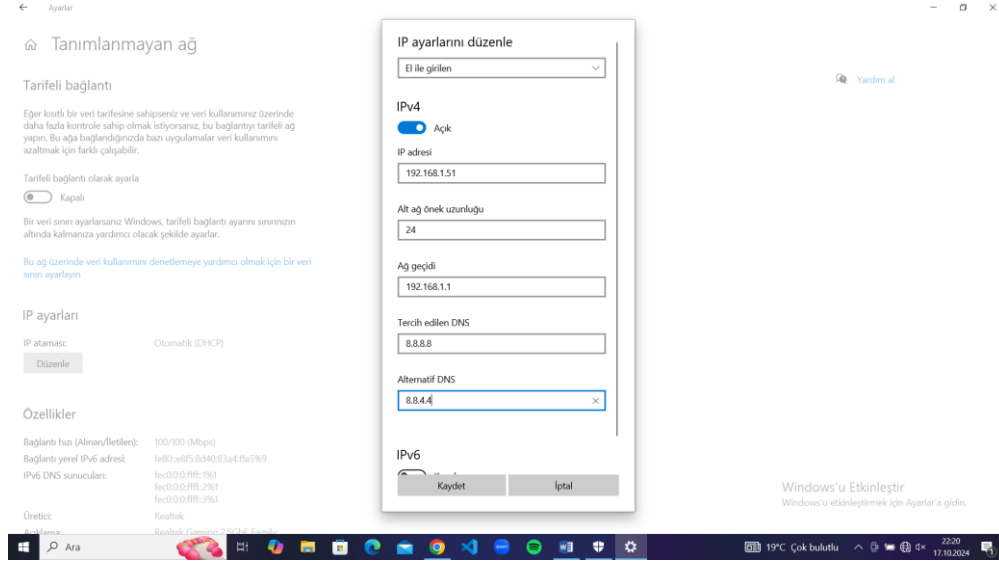
<https://www.paessler.com/prtg> (uygulama indirme linki)



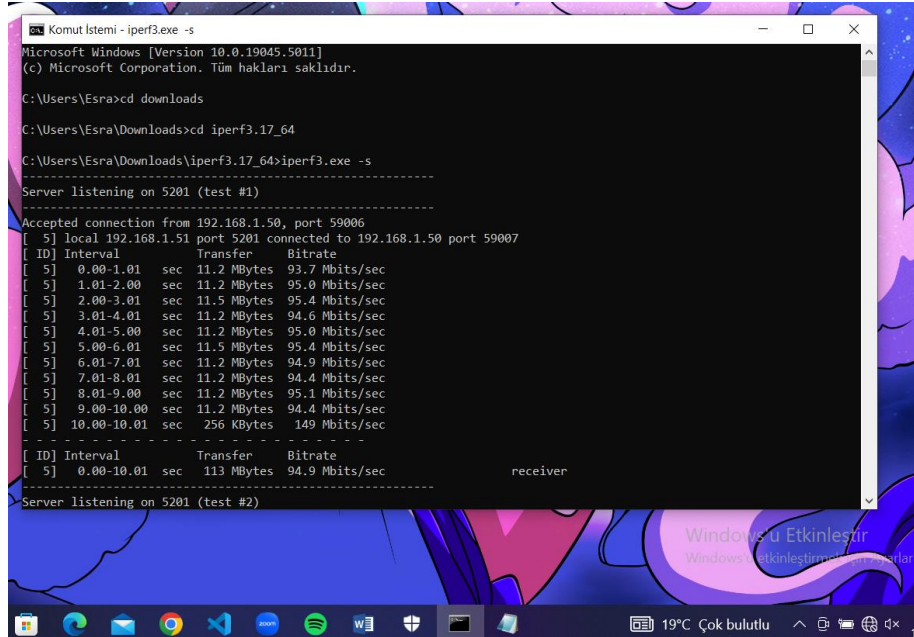
iPERF3 UYGULAMASI

iPerf3 uygulaması 2 bilgisayarı bir CAT6 kablosuyla bağlayarak bize kablo hakkında ağdaki hızını verir. Eğer kabloda herhangi bir şey yoksa ve bir kablo hakkında bilgi almak istiyorsak bu uygulamayı yapabiliriz. Yani ağ performansını verir. İlk olarak iPerf3 uygulamasını indirmeliyiz. (<https://iperf.fr/iperf-download.php>)

Wifi ağıımızı kapatıp tanımlanamayan ağ üzerinde işlem yapmamız gerekiyor. Otomatik ip üzerinden değil elle girmemiz gerekir. Kendimiz bir ip oluşturmamız lazım.



Daha sonra cmd üzerinden iPerf dosyasının içine gireriz. İki bilgisayardan biri istemci diğeri sunucu olmak durumundadır. İlk olarak sunucu örneğini göstereyim. Sunucu olmak için iperf3.exe s komutunu kullanırız.



İstemci kısmında ise iperf3.exe -c ip adresi komutunu gireriz. Ona da bir örnek yapalım:

```
Komut İstemi
Microsoft Windows [Version 10.0.19045.5011]
(c) Microsoft Corporation. Tüm hakları saklıdır.

C:\Users\Esra>cd downloads
C:\Users\Esra\Downloads>cd iperf3.17_64
C:\Users\Esra\Downloads\iperf3.17_64>iperf3.exe -c 192.168.1.50
Connecting to host 192.168.1.50, port 5201
[ 5] local 192.168.1.51 port 4935 connected to 192.168.1.50 port 5201
[ ID] Interval      Transfer    Bitrate
[ 5] 0.00-1.01 sec   11.6 MBytes 96.6 Mbits/sec
[ 5] 1.01-2.00 sec   11.2 MBytes 95.1 Mbits/sec
[ 5] 2.00-3.01 sec   11.4 MBytes 94.3 Mbits/sec
[ 5] 3.01-4.01 sec   11.2 MBytes 95.1 Mbits/sec
[ 5] 4.01-5.01 sec   11.2 MBytes 94.5 Mbits/sec
[ 5] 5.01-6.01 sec   11.4 MBytes 95.2 Mbits/sec
[ 5] 6.01-7.01 sec   11.4 MBytes 95.2 Mbits/sec
[ 5] 7.01-8.01 sec   11.4 MBytes 94.9 Mbits/sec
[ 5] 8.01-9.00 sec   11.1 MBytes 94.5 Mbits/sec
[ 5] 9.00-10.00 sec  11.4 MBytes 95.3 Mbits/sec
- - - - -
[ ID] Interval      Transfer    Bitrate          sender receiver
[ 5] 0.00-10.00 sec  113 MBytes 95.1 Mbits/sec
[ 5] 0.00-10.01 sec  113 MBytes 94.9 Mbits/sec

iperf Done.
C:\Users\Esra\Downloads\iperf3.17_64>
```

iPerf uygulamasını yaparken Windows ile yaparken Windows Güvenlik duvarını kapalı tutmanız gerekiyor. Yoksa istediğiniz bilgileri getirmek yerine error verebilir.

Kablonun veri miktarının transfer hızı 113 MBytes ve veri aktarım hızı ise 95.1 Mbites olarak çıkmıştır.

NMAP/RUSTSCAN

Nmap ve Rustscan ile üniversitelerin anasayfa ve uzm üzerinden kullanılan işletim sistemi, hangi web server kullanıldığı ve hangi güvenlik sertifikasının kullanıldığı ile ilgili bilgi alabiliriz.

İlk olarak NMAP için <https://nmap.org/download> bu linkten Windows için olanı (hangi işletim sistemi kullanılıyorsa indirerek bir kurulum gerçekleştirilmesi gerekiyor).

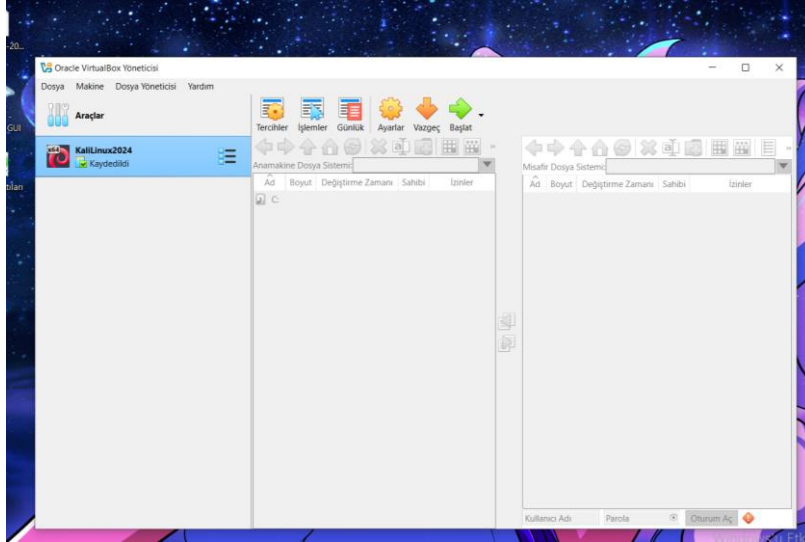
```
Zenmap
Scan Tools Profile Help
Target: ankara.edu.tr
Profile: Intense scan
Command: nmap -T4 -A -v ankara.edu.tr

Hosts Services
OS Host
ankara.edu.tr (80.251.45.231)
Starting Nmap 7.95 ( https://nmap.org ) at 2024-10-17 23:21 Türkiye Standart Saati
NSE: Loaded 157 scripts for scanning.
NSE: Script Pre-scanning.
Initiating NSE at 23:21
Completed NSE at 23:21, 0.00s elapsed
Initiating NSE at 23:21
Completed NSE at 23:21, 0.00s elapsed
Initiating NSE at 23:21
Completed NSE at 23:21, 0.00s elapsed
Initiating Ping Scan at 23:21
Completed Ping Scan at 23:21, 0.00s elapsed (1 total hosts)
Initiating Parallel DNS resolution of 1 host. at 23:21
Completed Parallel DNS resolution of 1 host. at 23:21, 0.06s elapsed
Initiating SYN Stealth Scan at 23:21
Scanning ankara.edu.tr (80.251.45.231) [4 ports]
Completed SYN Stealth Scan at 23:21, 0.00s elapsed (1 total hosts)
Initiating Parallel DNS resolution of 1 host. at 23:21
Completed Parallel DNS resolution of 1 host. at 23:21, 0.06s elapsed
Initiating SYN Stealth Scan at 23:21
Scanning ankara.edu.tr (80.251.45.231) [1000 ports]
Discovered open port 443/tcp on 80.251.45.231
Discovered open port 80/tcp on 80.251.45.231
Completed SYN Stealth Scan at 23:21, 5.90s elapsed (1000 total ports)
Initiating Service scan at 23:21
Scanning 2 services on ankara.edu.tr (80.251.45.231)
Completed Service scan at 23:21, 12.49s elapsed (2 services on 1 host)
Initiating OS detection (try #1) against ankara.edu.tr (80.251.45.231)
Retrying OS detection (try #2) against ankara.edu.tr (80.251.45.231)
Initiating Traceroute at 23:21
Completed Traceroute at 23:22, 3.20s elapsed
Initiating Parallel DNS resolution of 9 hosts. at 23:22
Completed Parallel DNS resolution of 9 hosts. at 23:22, 5.59s elapsed
NSE: Script scanning 80.251.45.231.
Initiating NSE at 23:22
Completed NSE at 23:22, 14.44s elapsed
Initiating NSE at 23:22
Completed NSE at 23:22, 1.60s elapsed
Initiating NSE at 23:22
Completed NSE at 23:22, 0.00s elapsed
Nmap scan report for ankara.edu.tr (80.251.45.231)
Host is up (0.053s latency).
rDNS record for 80.251.45.231: bid45231.ankara.edu.tr
Not shown: 954 filtered tcp ports (no-response)
PORT      STATE SERVICE VERSION
80/tcp    open  http      Apache/2.4.37 ((Red Hat Enterprise Linux) OpenSSL/1.1.1k)
|_http-server-header: Apache/2.4.37 ((Red Hat Enterprise Linux) OpenSSL/1.1.1k)
443/tcp    open  ssl/http  Apache/2.4.37 ((Red Hat Enterprise Linux) OpenSSL/1.1.1k)
|_ssl-cert: Subject: commonName=ankara.edu.tr/organizationName=Ankara University/stateOrProvinceName=Ankara/countryName=TR

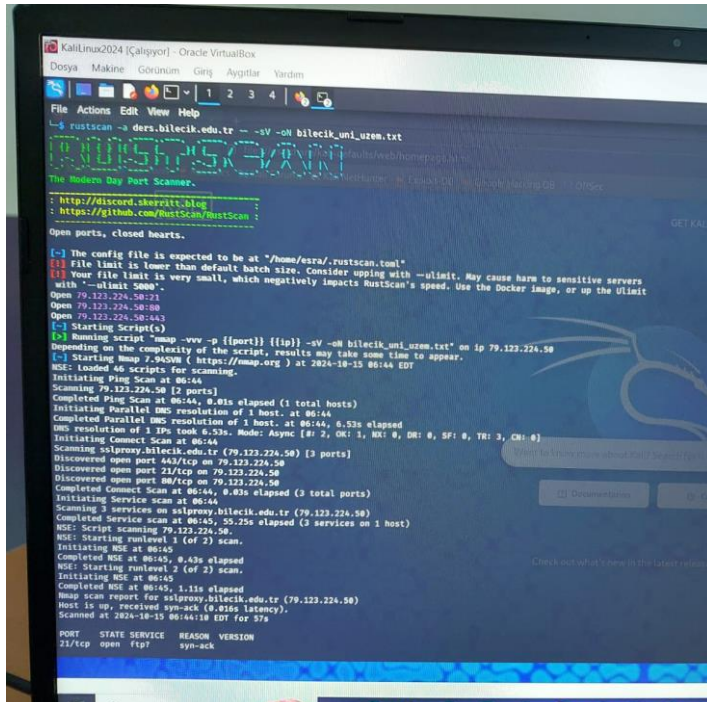
Filter Hosts
```

Windows için olanı Zenmap olarak geçiyor. Target yazan yere üniversite anasayfa veya uzem linkini koyarak scan yazısına basıyoruz. Yukarıda bir örnek yaparak bize çıktı sunmuştur. 7 tane üniversiteye bakılmıştır. Verilen çıktılar ayrı dosya olarak konulacaktır.

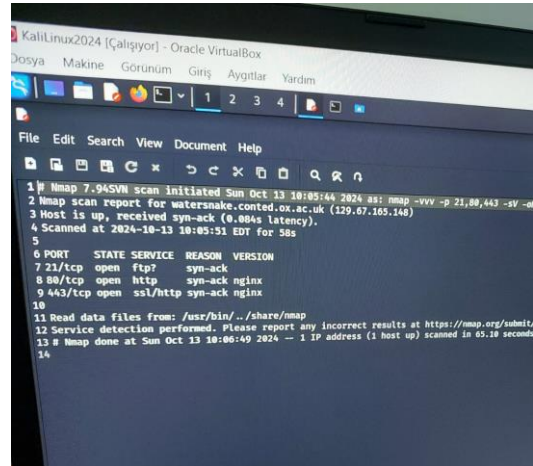
Rustscan ile yapılırken Windows kullananlar için bir sanal makine kurulmuştur. Linux tabanlı daha rahat çalışılabilmesi için gereklidir. İlk olarak sanal makine oluşturucu olan Virtual Box'ı indirerek kurmalıyız. Daha sonra sanal makine için Kalilinux indirerek yani bir işletim sistemi indirerek düzgün şekilde çalışması sağlanır. Burada <https://www.youtube.com/watch?v=H1Pq8avLkIU> ve <https://www.youtube.com/watch?v=sAMnXte56yY> videolarından destek aldım.

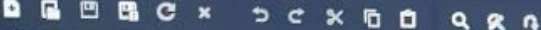


VirtualBox ekranı yukarıdaki gibidir. Başlat dediğimizde sanal makinemiz çalışır ve karşımıza Linux tabanlı ekranımız çıkar. Burada cmd açarız. Daha sonra firefox arama motorundan rustscani indiririz. Cmd ye ise sudo apt install rustscan yazarız. Şimdi ise üniversitelerin anasayfa ve uzem bilgilerini alabiliriz bunun içinde rustscan -a ip adresi -sV -oN kaydedilcek_dosyadı.txt yazarız. Bize çıktıları verir ve bunu txt formatında dosyaya kaydeder. Örnek bir arama yapalım:



OXFORD ÜNİVERSİTESİ UZAKTAN EĞİTİM SAYFASI

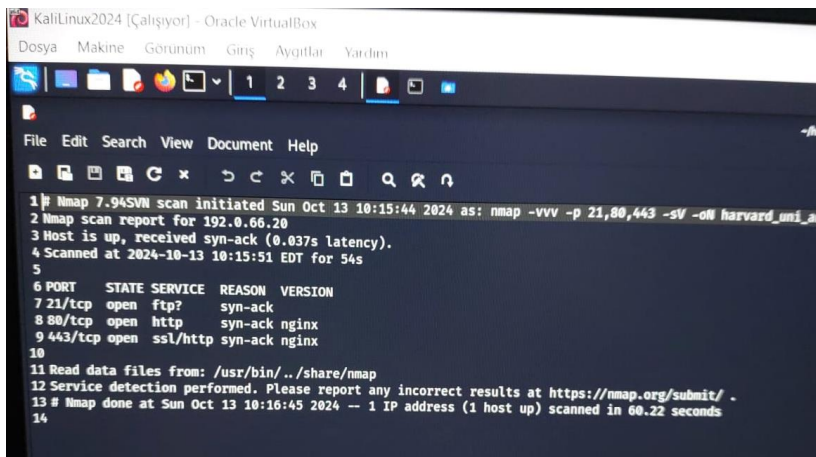


```
File Edit Search View Document Help

1 # Nmap 7.94SVN scan initiated Sun Oct 13 09:12:44 2024 as: nmap -vvv -p 80,21,443 -sV -oN ista
2 Nmap scan report for 194.27.128.98
3 Host is up, received syn-ack (0.0097s latency).
4 Scanned at 2024-10-13 09:12:58 EDT for 0s
5
6 PORT      STATE      SERVICE REASON      VERSION
7 21/tcp    filtered  ftp      net-unreach
8 80/tcp    filtered  http     net-unreach
9 443/tcp   filtered  https    net-unreach
10
11 Read data files from: /usr/bin/./share/nmap
12 Service detection performed. Please report any incorrect results at https://nmap.org/submit/.
13 # Nmap done at Sun Oct 13 09:12:58 2024 -- 1 IP address (1 host up) scanned in 13.19 seconds
14
```

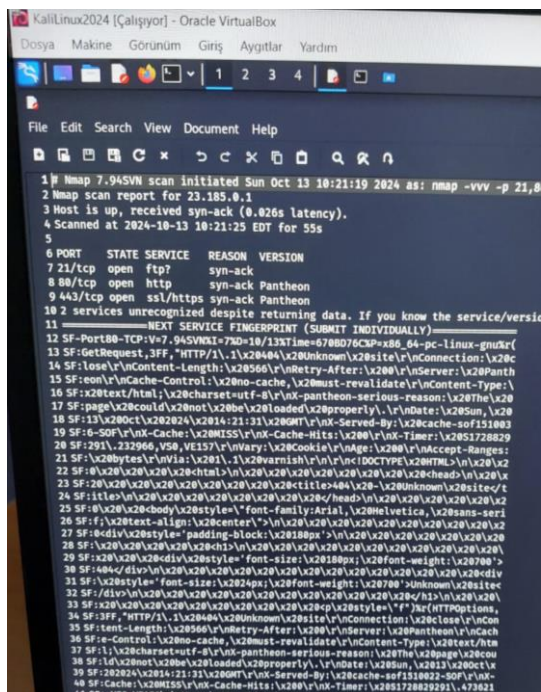
```
File Edit Search View Document Help

# Nmap 7.94SVN scan initiated Sun Oct 13 09:20:07 2024 as: nmap -vvv -p 21,80,443 -sV -oN istanbul
# Nmap scan report for 161.9.143.109
# Host is up, received syn-ack (0.021s latency).
# Scanned at 2024-10-13 09:20:13 EDT for 84s
#
# PORT      STATE SERVICE REASON  VERSION
# 21/tcp    open  ftp?    syn-ack
# 80/tcp    open  http    syn-ack Microsoft IIS httpd 8.5
# 443/tcp   open  ssl/http syn-ack Microsoft IIS httpd 8.5
# Service Info: OS: Windows; CPE: cpe:/o:microsoft:windows
#
# Read data files from: /usr/bin/..share/nmap
# Service detection performed. Please report any incorrect results at https://nmap.org/submit/.
# Nmap done at Sun Oct 13 09:21:37 2024 -- 1 IP address (1 host up) scanned in 90.50 seconds
```

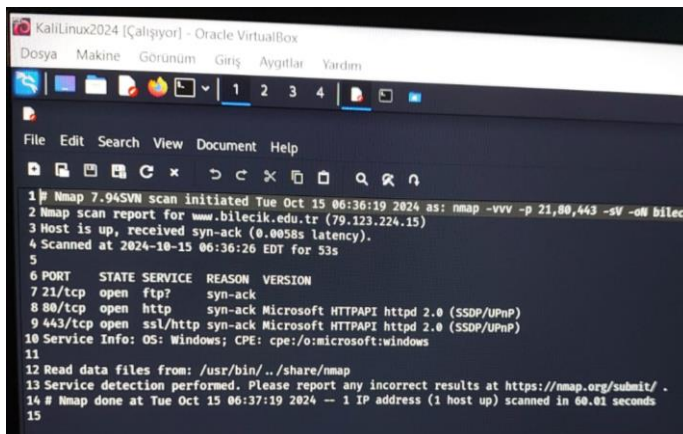
HARVARD ÜNİVERSİTESİ ANASAYFA



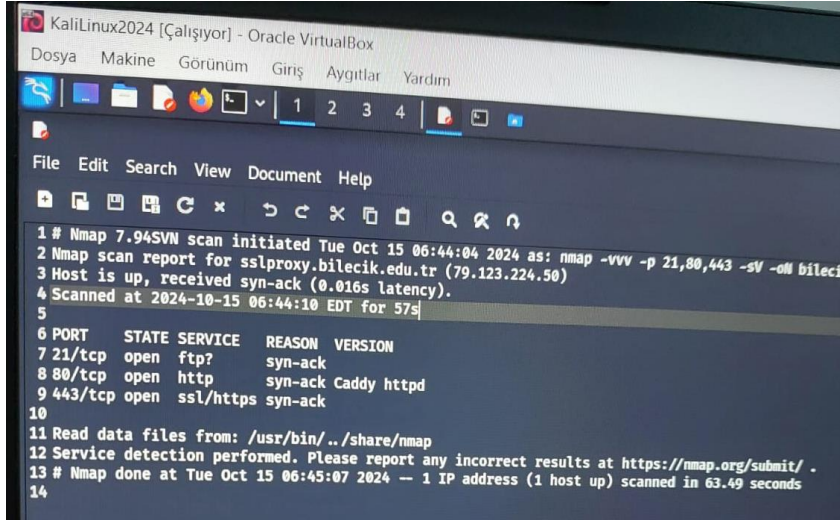
HARVARD ÜNİVERSİTESİ UZAKTAN EĞİTİM SAYFASI



BİLECİK ŞEYH EDEBALI ÜNİVERSİTESİ ANASAYFA



BİLECİK ŞEYH EDEBALI ÜNİVERSİTESİ UZEM

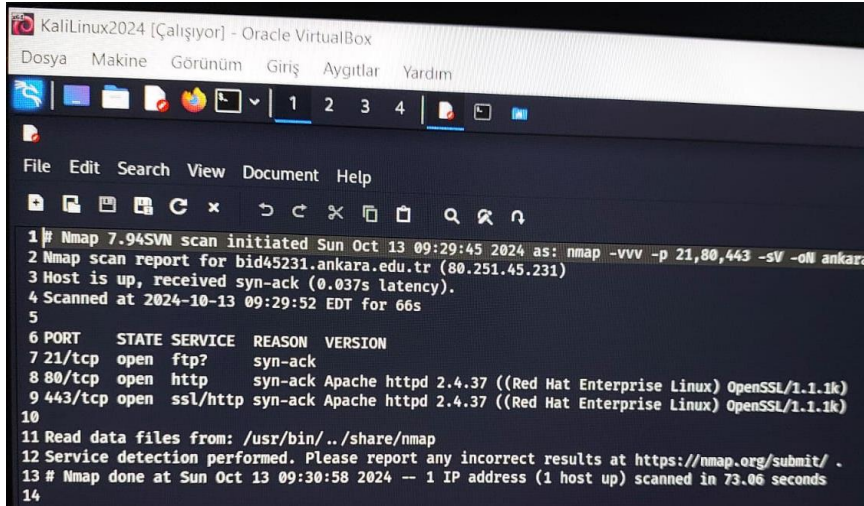


```
KaliLinux2024 [Çalışıyor] - Oracle VirtualBox
Dosya Makine Görünüm Giriş Aygıtlar Yardım

File Edit Search View Document Help

1 # Nmap 7.94SVN scan initiated Tue Oct 15 06:44:04 2024 as: nmap -vvv -p 21,80,443 -sV -oN bilecik
2 Nmap scan report for sslproxy.bilecik.edu.tr (79.123.224.50)
3 Host is up, received syn-ack (0.016s latency).
4 Scanned at 2024-10-15 06:44:10 EDT for 57s
5
6 PORT      STATE SERVICE REASON  VERSION
7 21/tcp    open  ftp?     syn-ack
8 80/tcp    open  http     syn-ack Caddy httpd
9 443/tcp   open  ssl/https syn-ack
10
11 Read data files from: /usr/bin/../share/nmap
12 Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
13 # Nmap done at Tue Oct 15 06:45:07 2024 -- 1 IP address (1 host up) scanned in 63.49 seconds
14
```

ANKARA ÜNİVERSİTESİ ANASAYFA

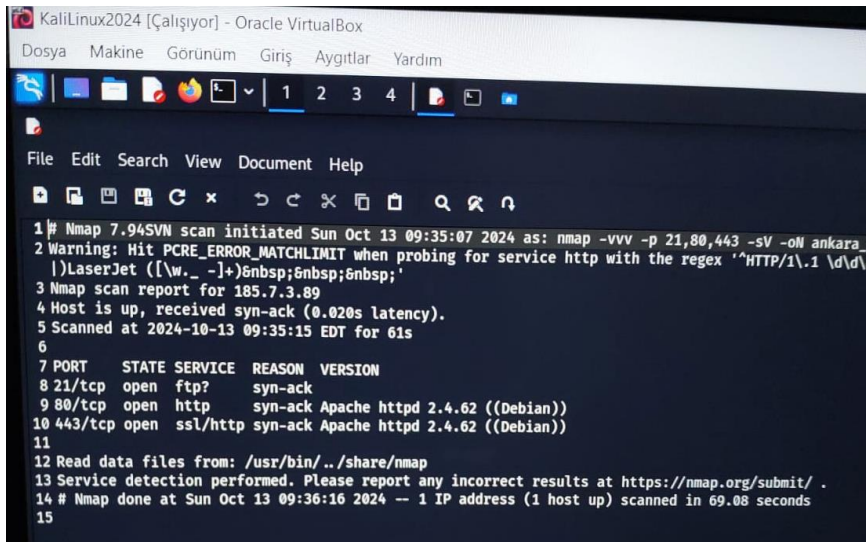


```
KaliLinux2024 [Çalışıyor] - Oracle VirtualBox
Dosya Makine Görünüm Giriş Aygıtlar Yardım

File Edit Search View Document Help

1 # Nmap 7.94SVN scan initiated Sun Oct 13 09:29:45 2024 as: nmap -vvv -p 21,80,443 -sV -oN anka
2 Nmap scan report for bid45231.anka.edu.tr (80.251.45.231)
3 Host is up, received syn-ack (0.037s latency).
4 Scanned at 2024-10-13 09:29:52 EDT for 66s
5
6 PORT      STATE SERVICE REASON  VERSION
7 21/tcp    open  ftp?     syn-ack
8 80/tcp    open  http     syn-ack Apache httpd 2.4.37 ((Red Hat Enterprise Linux) OpenSSL/1.1.1k)
9 443/tcp   open  ssl/http syn-ack Apache httpd 2.4.37 ((Red Hat Enterprise Linux) OpenSSL/1.1.1k)
10
11 Read data files from: /usr/bin/../share/nmap
12 Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
13 # Nmap done at Sun Oct 13 09:30:58 2024 -- 1 IP address (1 host up) scanned in 73.06 seconds
14
```

ANKARA ÜNİVERSİTESİ UZEM



```
KaliLinux2024 [Çalışıyor] - Oracle VirtualBox
Dosya Makine Görünüm Giriş Aygıtlar Yardım

File Edit Search View Document Help

1 # Nmap 7.94SVN scan initiated Sun Oct 13 09:35:07 2024 as: nmap -vvv -p 21,80,443 -sV -oN anka
2 Warning: Hit PCRE_ERROR_MATCHLIMIT when probing for service http with the regex 'HTTP/1.1 \d\d\d
3 Nmap scan report for 185.7.3.89
4 Host is up, received syn-ack (0.020s latency).
5 Scanned at 2024-10-13 09:35:15 EDT for 61s
6
7 PORT      STATE SERVICE REASON  VERSION
8 21/tcp    open  ftp?     syn-ack
9 80/tcp    open  http     syn-ack Apache httpd 2.4.62 ((Debian))
10 443/tcp   open  ssl/http syn-ack Apache httpd 2.4.62 ((Debian))
11
12 Read data files from: /usr/bin/../share/nmap
13 Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
14 # Nmap done at Sun Oct 13 09:36:16 2024 -- 1 IP address (1 host up) scanned in 69.08 seconds
15
```

AĞRI İBRAHİM ÇEÇEN ÜNİVERSİTESİ ANASAYFA

```
KaliLinux2024 [Çalışıyor] - Oracle VirtualBox
Dosya Makine Görünüm Giriş Aygıtlar Yardım
File Edit Search View Document Help
1 # Nmap 7.94SVN scan initiated Sun Oct 13 09:51:58 2024 as: nmap -vvv -p 21,80 -sV -oN agribrahim_uni
2 Nmap scan report for aicuzem.agri.edu.tr (194.27.217.18)
3 Host is up, received syn-ack (0.035s latency).
4 Scanned at 2024-10-13 09:52:04 EDT for 7s
5
6 PORT      STATE SERVICE      REASON  VERSION
7 21/tcp    open  tcpwrapped  syn-ack
8 80/tcp    open  http         syn-ack Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)
9 Service Info: OS: Windows; CPE: cpe:/o:microsoft:windows
10
11 Read data files from: /usr/bin/../share/nmap
12 Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
13 # Nmap done at Sun Oct 13 09:52:11 2024 -- 1 IP address (1 host up) scanned in 13.23 seconds
14
```

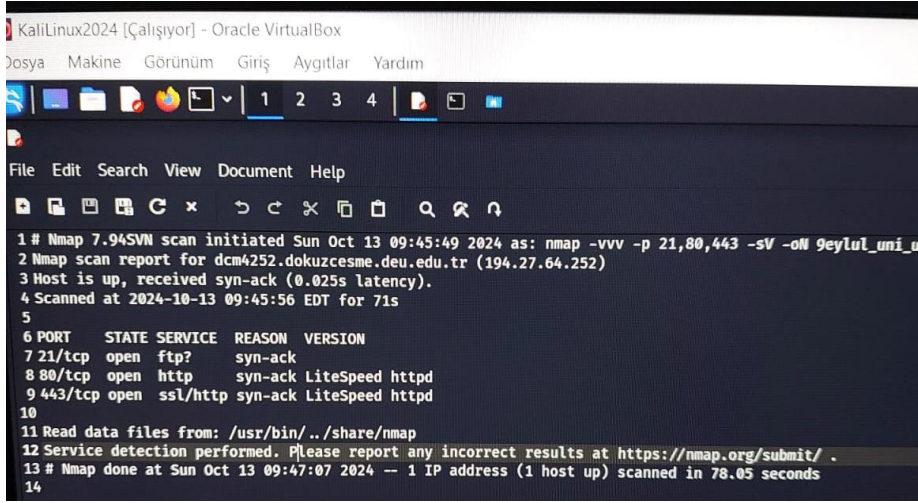
AĞRI İBRAHİM ÇEÇEN ÜNİVERSİTESİ UZEM

```
KaliLinux2024 [Çalışıyor] - Oracle VirtualBox
Dosya Makine Görünüm Giriş Aygıtlar Yardım
File Edit Search View Document Help
1 # Nmap 7.94SVN scan initiated Sun Oct 13 09:55:55 2024 as: nmap -vvv -p 21,80 -sV -oN agribrahim_uni
2 Nmap scan report for aicuzem.agri.edu.tr (194.27.217.18)
3 Host is up, received syn-ack (0.038s latency).
4 Scanned at 2024-10-13 09:56:02 EDT for 6s
5
6 PORT      STATE SERVICE      REASON  VERSION
7 21/tcp    open  tcpwrapped  syn-ack
8 80/tcp    open  http         syn-ack Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)
9 Service Info: OS: Windows; CPE: cpe:/o:microsoft:windows
10
11 Read data files from: /usr/bin/../share/nmap
12 Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
13 # Nmap done at Sun Oct 13 09:56:08 2024 -- 1 IP address (1 host up) scanned in 13.23 seconds
14
```

DOKUZ EYLÜL ÜNİVERSİTESİ ANASAYFA

```
KaliLinux2024 [Çalışıyor] - Oracle VirtualBox
Dosya Makine Görünüm Giriş Aygıtlar Yardım
File Edit Search View Document Help
1 # Nmap 7.94SVN scan initiated Sun Oct 13 09:40:40 2024 as: nmap -vvv -p 21,110,143,995,993 -sV -oN dokuz_eylul_universitesi_anasayfa
2 Nmap scan report for kordon.adm.deu.edu.tr (193.140.151.7)
3 Host is up, received conn-refused (0.025s latency).
4 Scanned at 2024-10-13 09:40:47 EDT for 55s
5
6 PORT      STATE SERVICE      REASON  VERSION
7 21/tcp    open  ftp?         syn-ack
8 110/tcp   open  pop3         syn-ack qmail pop3d
9 143/tcp   open  imap         syn-ack Courier Imapd (released 2022)
10 993/tcp   open  ssl/imap     syn-ack Courier Imapd (released 2022)
11 995/tcp   open  ssl/pop3     syn-ack Courier pop3d
12 Service Info: Host: mail.deu.edu.tr
13
14 Read data files from: /usr/bin/../share/nmap
15 Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
16 # Nmap done at Sun Oct 13 09:41:42 2024 -- 1 IP address (1 host up) scanned in 61.44 seconds
17
```


DOKUZ EYLÜL ÜNİVERSİTESİ UZEM



```
1 # Nmap 7.94SVN scan initiated Sun Oct 13 09:45:49 2024 as: nmap -vvv -p 21,80,443 -sV -oN 9eylul_uni_uz
2 Nmap scan report for dcm4252.dokuzcesme.deu.edu.tr (194.27.64.252)
3 Host is up, received syn-ack (0.025s latency).
4 Scanned at 2024-10-13 09:45:56 EDT for 71s
5
6 PORT      STATE SERVICE REASON  VERSION
7 21/tcp    open  ftp?    syn-ack
8 80/tcp    open  http    syn-ack LiteSpeed httpd
9 443/tcp   open  ssl/http syn-ack LiteSpeed httpd
10
11 Read data files from: /usr/bin/./share/nmap
12 Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
13 # Nmap done at Sun Oct 13 09:47:07 2024 -- 1 IP address (1 host up) scanned in 78.05 seconds
14
```

Sanal makine üzerinden dosyaları kaydettiğim için bu şekilde yükledim.