LAB-09

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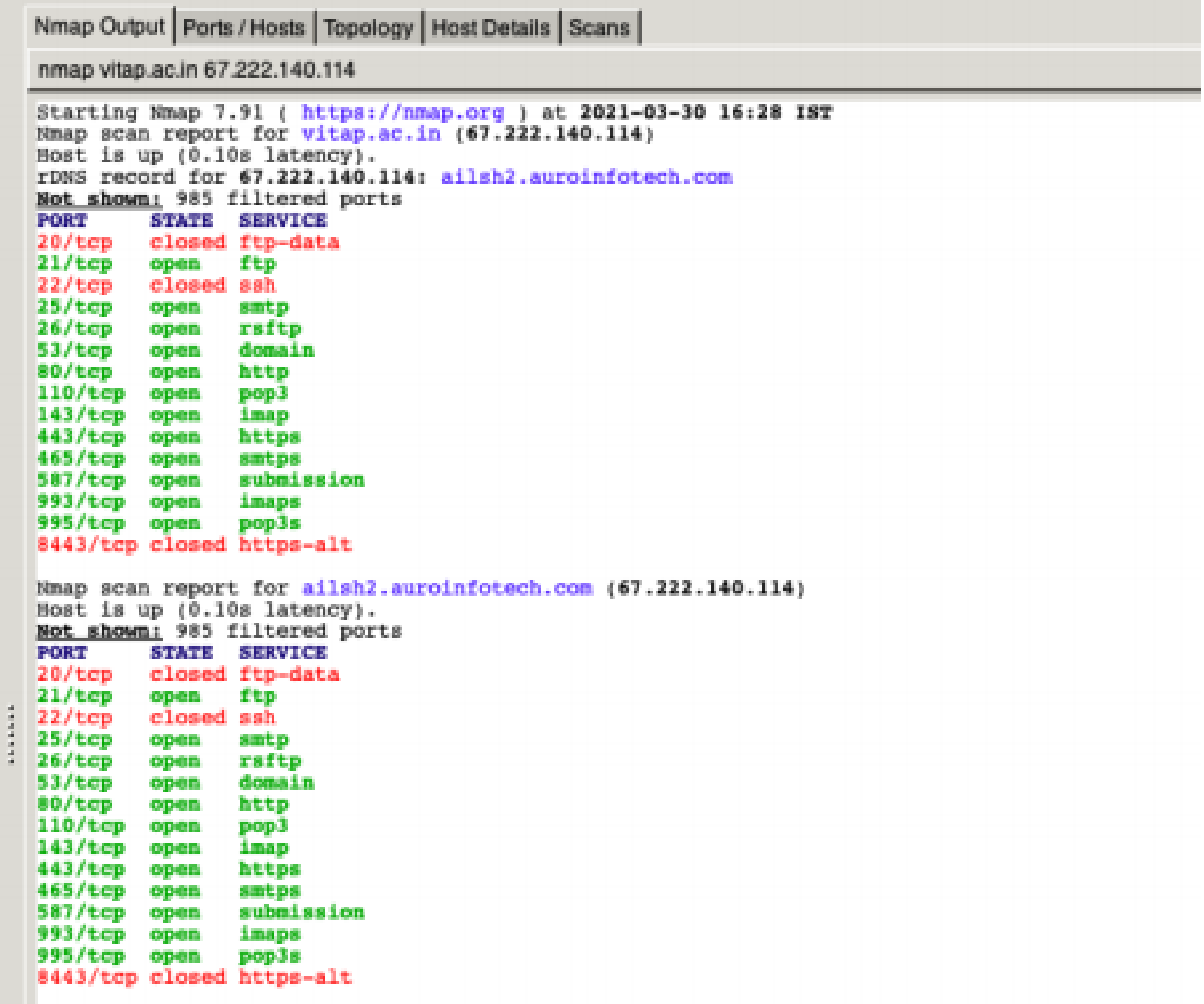
COURSE CODE:-CSE-2010
SLOT:-L39+L40

Nmap

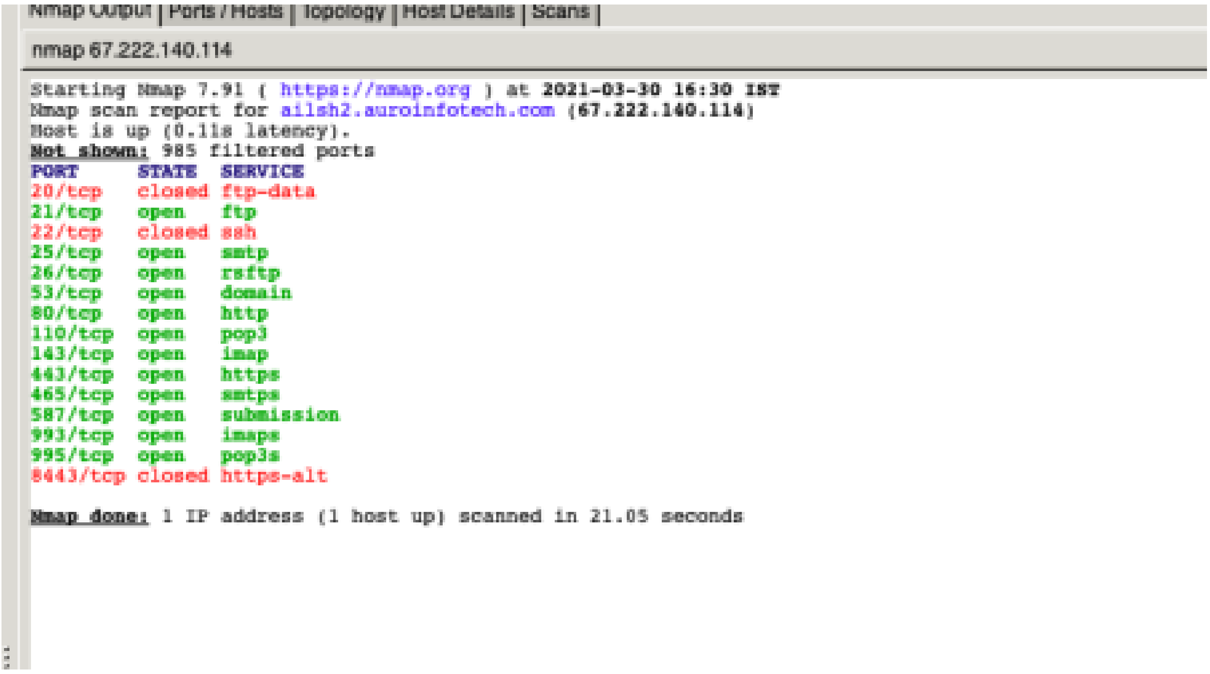
Scan a System with Hostname and Ip Address



```
nmap vitap.ac.in 67.222.140.114
```

```
Starting Nmap 7.91 ( https://nmap.org ) at 2021-03-30 16:28 IST
Nmap scan report for vitap.ac.in (67.222.140.114)
Host is up (0.10s latency).
rDNS record for 67.222.140.114: ailsh2.auroinfotech.com
Not shown: 985 filtered ports
PORT     STATE  SERVICE
20/tcp   closed ftp-data
21/tcp   open   ftp
22/tcp   closed ssh
25/tcp   open   smtp
26/tcp   open   rsftp
53/tcp   open   domain
80/tcp   open   http
110/tcp  open   pop3
143/tcp  open   imap
443/tcp  open   https
465/tcp  open   smtps
587/tcp  open   submission
993/tcp  open   imaps
995/tcp  open   pop3s
8443/tcp closed https-alt

Nmap scan report for ailsh2.auroinfotech.com (67.222.140.114)
Host is up (0.10s latency).
Not shown: 985 filtered ports
PORT     STATE  SERVICE
20/tcp   closed ftp-data
21/tcp   open   ftp
22/tcp   closed ssh
25/tcp   open   smtp
26/tcp   open   rsftp
53/tcp   open   domain
80/tcp   open   http
110/tcp  open   pop3
143/tcp  open   imap
443/tcp  open   https
465/tcp  open   smtps
587/tcp  open   submission
993/tcp  open   imaps
995/tcp  open   pop3s
8443/tcp closed https-alt
```

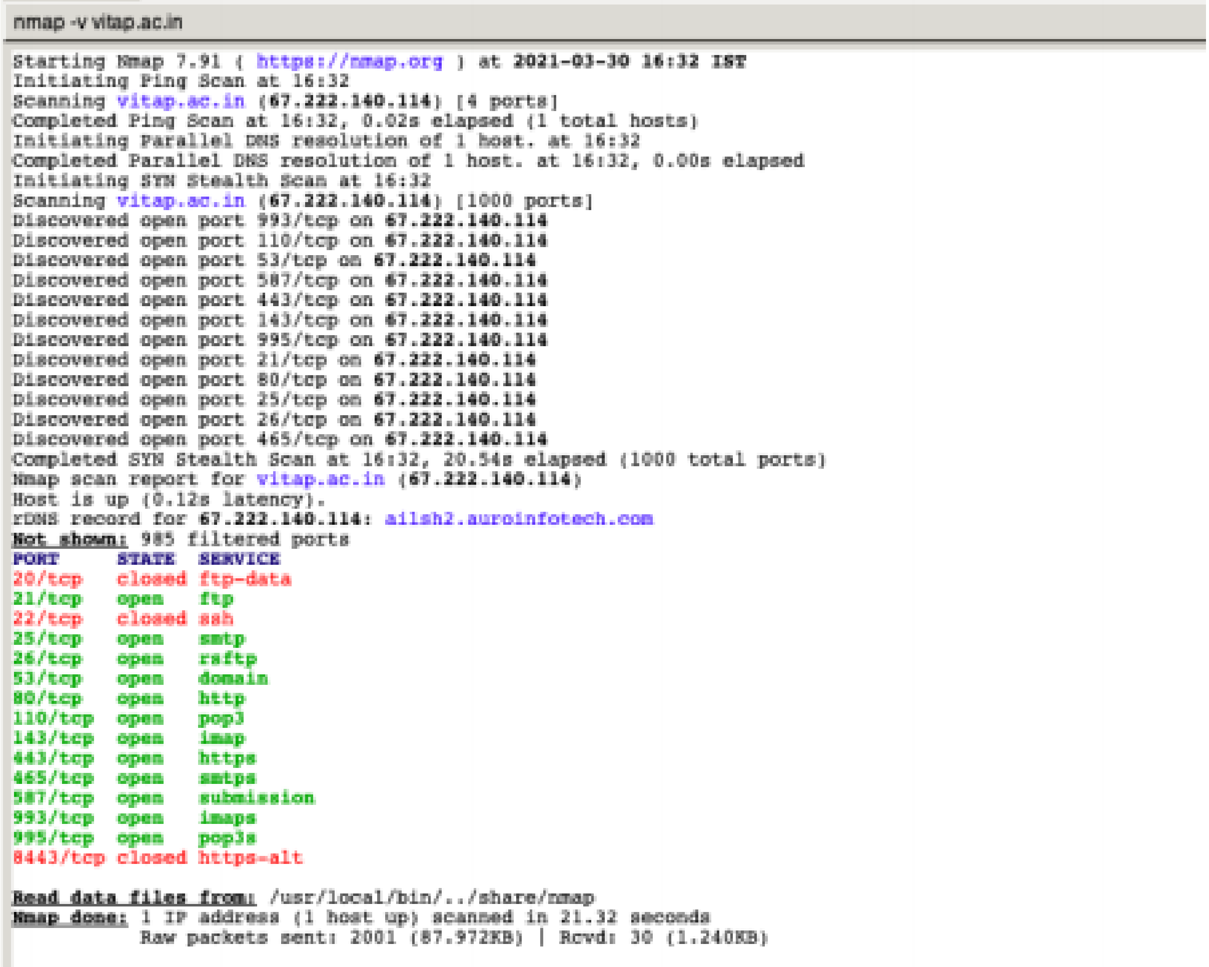
Scan using Ip Address



```
nmap 67.222.140.114
```

```
Starting Nmap 7.91 ( https://nmap.org ) at 2021-03-30 16:30 IST
Nmap scan report for ailsh2.auroinfotech.com (67.222.140.114)
Host is up (0.11s latency).
Not shown: 985 filtered ports
PORT      STATE  SERVICE
20/tcp    closed ftp-data
21/tcp    open   ftp
22/tcp    closed ssh
25/tcp    open   smtp
26/tcp    open   rsftp
53/tcp    open   domain
80/tcp    open   http
110/tcp   open   pop3
143/tcp   open   imap
443/tcp   open   https
465/tcp   open   smtps
587/tcp   open   submission
993/tcp   open   imaps
995/tcp   open   pop3s
8443/tcp closed https-alt

Nmap done: 1 IP address (1 host up) scanned in 21.05 seconds
```

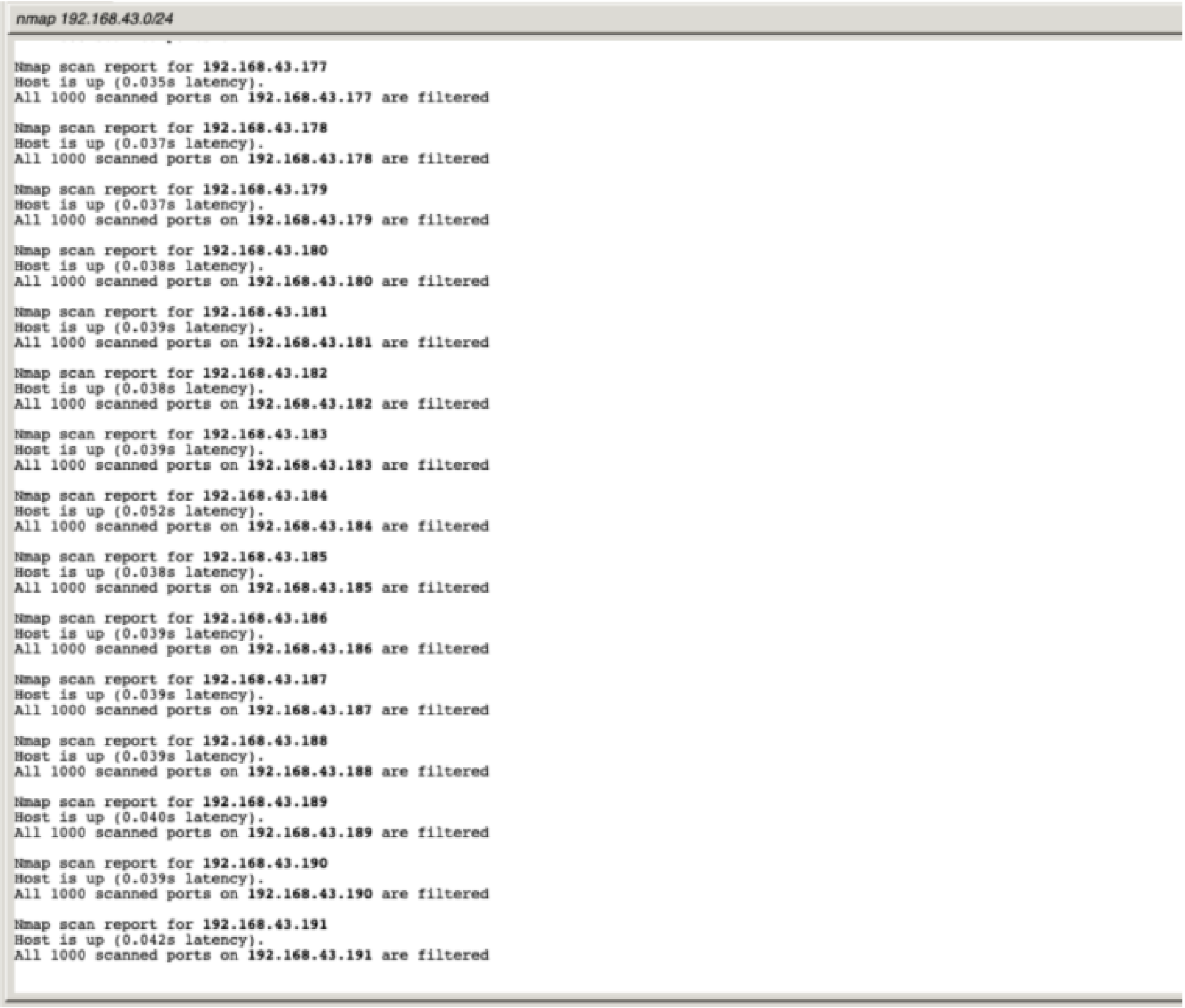
“-v” option



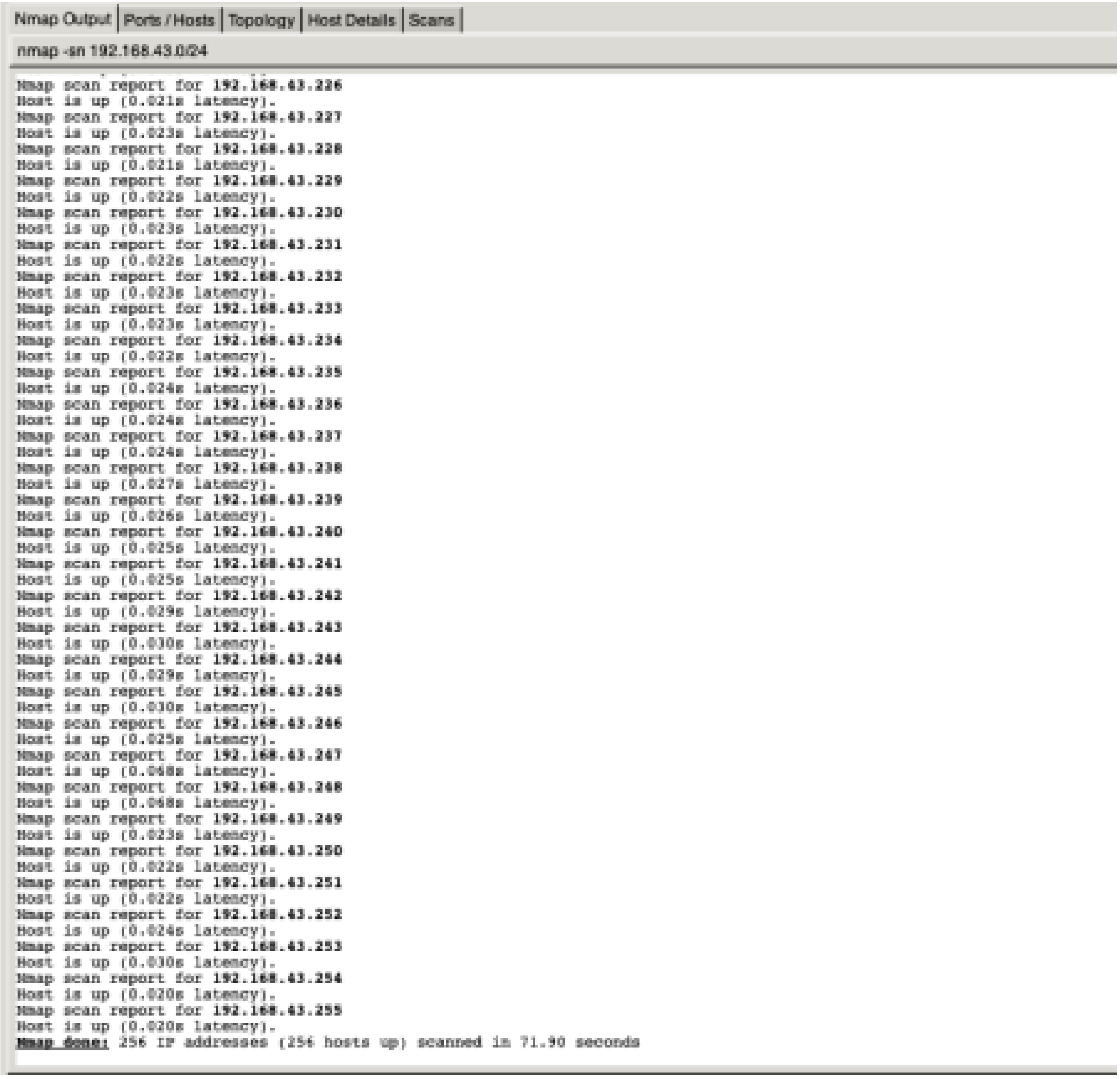
```
nmap -v vitap.ac.in
```

```
Starting Nmap 7.91 ( https://nmap.org ) at 2021-03-30 16:32 IST
Initiating Ping Scan at 16:32
Scanning vitap.ac.in (67.222.140.114) [4 ports]
Completed Ping Scan at 16:32, 0.02s elapsed (1 total hosts)
Initiating Parallel DNS resolution of 1 host. at 16:32
Completed Parallel DNS resolution of 1 host. at 16:32, 0.00s elapsed
Initiating SYN Stealth Scan at 16:32
Scanning vitap.ac.in (67.222.140.114) [1000 ports]
Discovered open port 993/tcp on 67.222.140.114
Discovered open port 110/tcp on 67.222.140.114
Discovered open port 53/tcp on 67.222.140.114
Discovered open port 587/tcp on 67.222.140.114
Discovered open port 443/tcp on 67.222.140.114
Discovered open port 143/tcp on 67.222.140.114
Discovered open port 995/tcp on 67.222.140.114
Discovered open port 21/tcp on 67.222.140.114
Discovered open port 80/tcp on 67.222.140.114
Discovered open port 25/tcp on 67.222.140.114
Discovered open port 26/tcp on 67.222.140.114
Discovered open port 465/tcp on 67.222.140.114
Completed SYN Stealth Scan at 16:32, 20.54s elapsed (1000 total ports)
Nmap scan report for vitap.ac.in (67.222.140.114)
Host is up (0.12s latency).
rDNS record for 67.222.140.114: ailsh2.auroinfotech.com
Not shown: 985 filtered ports
PORT      STATE  SERVICE
20/tcp    closed ftp-data
21/tcp    open   ftp
22/tcp    closed ssh
25/tcp    open   smtp
26/tcp    open   rsftp
53/tcp    open   domain
80/tcp    open   http
110/tcp   open   pop3
143/tcp   open   imap
443/tcp   open   https
465/tcp   open   smtps
587/tcp   open   submission
993/tcp   open   imaps
995/tcp   open   pop3s
8443/tcp closed https-alt

Read data files from: /usr/local/bin/../share/nmap
Nmap done: 1 IP address (1 host up) scanned in 21.32 seconds
           Raw packets sent: 2001 (87.972KB) | Rcvd: 30 (1.240KB)
```

Scan a whole Subnet



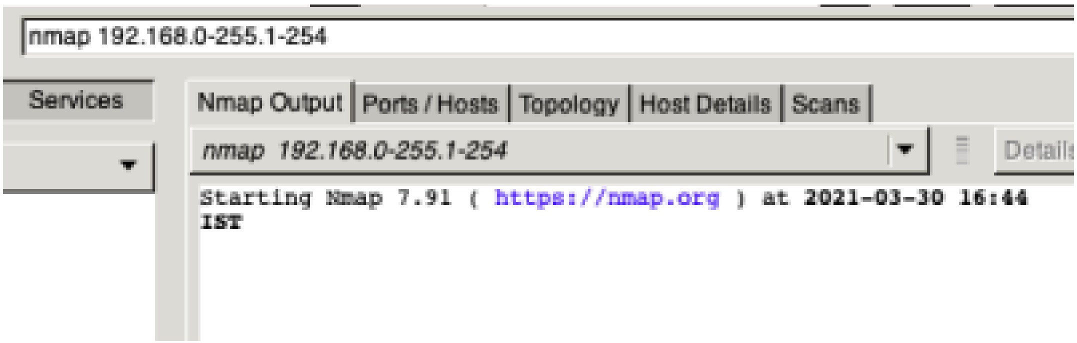
```
Nmap scan report for 192.168.43.177
Host is up (0.035s latency).
All 1000 scanned ports on 192.168.43.177 are filtered

Nmap scan report for 192.168.43.178
Host is up (0.037s latency).
All 1000 scanned ports on 192.168.43.178 are filtered

Nmap scan report for 192.168.43.179
Host is up (0.037s latency).
All 1000 scanned ports on 192.168.43.179 are filtered

Nmap scan report for 192.168.43.180
Host is up (0.038s latency).
All 1000 scanned ports on 192.168.43.180 are filtered

Nmap scan report for 192.168.43.181
Host is up (0.039s latency).
All 1000 scanned ports on 192.168.43.181 are filtered

Nmap scan report for 192.168.43.182
Host is up (0.038s latency).
All 1000 scanned ports on 192.168.43.182 are filtered

Nmap scan report for 192.168.43.183
Host is up (0.039s latency).
All 1000 scanned ports on 192.168.43.183 are filtered

Nmap scan report for 192.168.43.184
Host is up (0.052s latency).
All 1000 scanned ports on 192.168.43.184 are filtered

Nmap scan report for 192.168.43.185
Host is up (0.038s latency).
All 1000 scanned ports on 192.168.43.185 are filtered

Nmap scan report for 192.168.43.186
Host is up (0.039s latency).
All 1000 scanned ports on 192.168.43.186 are filtered

Nmap scan report for 192.168.43.187
Host is up (0.039s latency).
All 1000 scanned ports on 192.168.43.187 are filtered

Nmap scan report for 192.168.43.188
Host is up (0.039s latency).
All 1000 scanned ports on 192.168.43.188 are filtered

Nmap scan report for 192.168.43.189
Host is up (0.040s latency).
All 1000 scanned ports on 192.168.43.189 are filtered

Nmap scan report for 192.168.43.190
Host is up (0.039s latency).
All 1000 scanned ports on 192.168.43.190 are filtered

Nmap scan report for 192.168.43.191
Host is up (0.042s latency).
All 1000 scanned ports on 192.168.43.191 are filtered
```



```
nmap -sn 192.168.43.0/24
```

```
Nmap scan report for 192.168.43.226
Host is up (0.021s latency).
Nmap scan report for 192.168.43.227
Host is up (0.023s latency).
Nmap scan report for 192.168.43.228
Host is up (0.021s latency).
Nmap scan report for 192.168.43.229
Host is up (0.022s latency).
Nmap scan report for 192.168.43.230
Host is up (0.023s latency).
Nmap scan report for 192.168.43.231
Host is up (0.022s latency).
Nmap scan report for 192.168.43.232
Host is up (0.023s latency).
Nmap scan report for 192.168.43.233
Host is up (0.023s latency).
Nmap scan report for 192.168.43.234
Host is up (0.022s latency).
Nmap scan report for 192.168.43.235
Host is up (0.024s latency).
Nmap scan report for 192.168.43.236
Host is up (0.024s latency).
Nmap scan report for 192.168.43.237
Host is up (0.024s latency).
Nmap scan report for 192.168.43.238
Host is up (0.027s latency).
Nmap scan report for 192.168.43.239
Host is up (0.026s latency).
Nmap scan report for 192.168.43.240
Host is up (0.025s latency).
Nmap scan report for 192.168.43.241
Host is up (0.025s latency).
Nmap scan report for 192.168.43.242
Host is up (0.029s latency).
Nmap scan report for 192.168.43.243
Host is up (0.030s latency).
Nmap scan report for 192.168.43.244
Host is up (0.029s latency).
Nmap scan report for 192.168.43.245
Host is up (0.030s latency).
Nmap scan report for 192.168.43.246
Host is up (0.025s latency).
Nmap scan report for 192.168.43.247
Host is up (0.068s latency).
Nmap scan report for 192.168.43.248
Host is up (0.068s latency).
Nmap scan report for 192.168.43.249
Host is up (0.023s latency).
Nmap scan report for 192.168.43.250
Host is up (0.022s latency).
Nmap scan report for 192.168.43.251
Host is up (0.022s latency).
Nmap scan report for 192.168.43.252
Host is up (0.024s latency).
Nmap scan report for 192.168.43.253
Host is up (0.030s latency).
Nmap scan report for 192.168.43.254
Host is up (0.020s latency).
Nmap scan report for 192.168.43.255
Host is up (0.020s latency).
Nmap done: 256 IP addresses (256 hosts up) scanned in 71.90 seconds
```

Scan Multiple Servers using last octet of Ip address

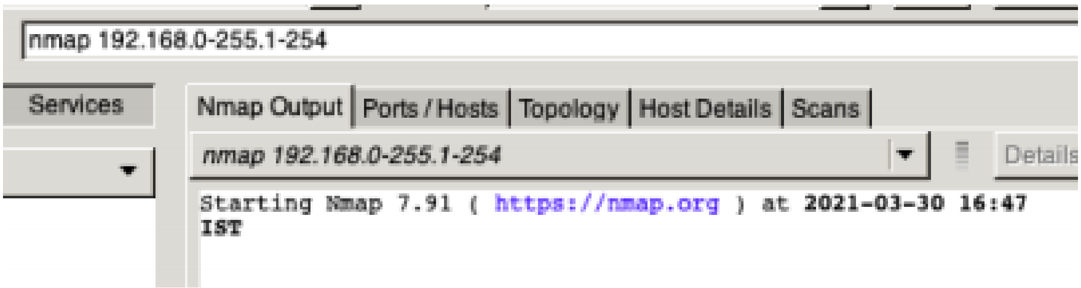


```
nmap 192.168.0-255.1-254
```

```
nmap 192.168.0-255.1-254
```

```
Starting Nmap 7.91 ( https://nmap.org ) at 2021-03-30 16:44
IST
```

Scan an IP Address Range

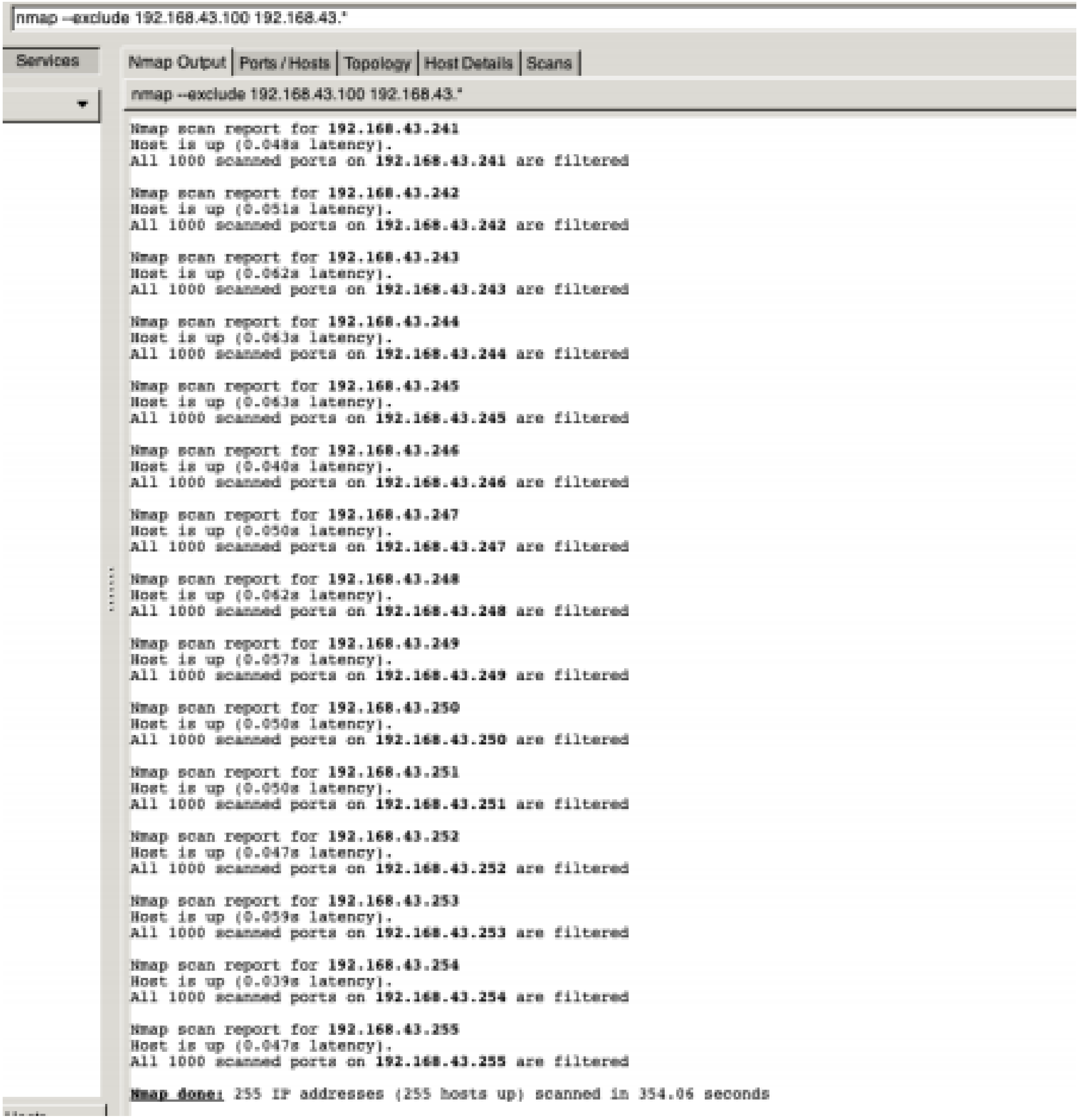


```
nmap 192.168.0-255.1-254
```

```
nmap 192.168.0-255.1-254
```

```
Starting Nmap 7.91 ( https://nmap.org ) at 2021-03-30 16:47
IST
```

Scan Network Excluding Remote Hosts

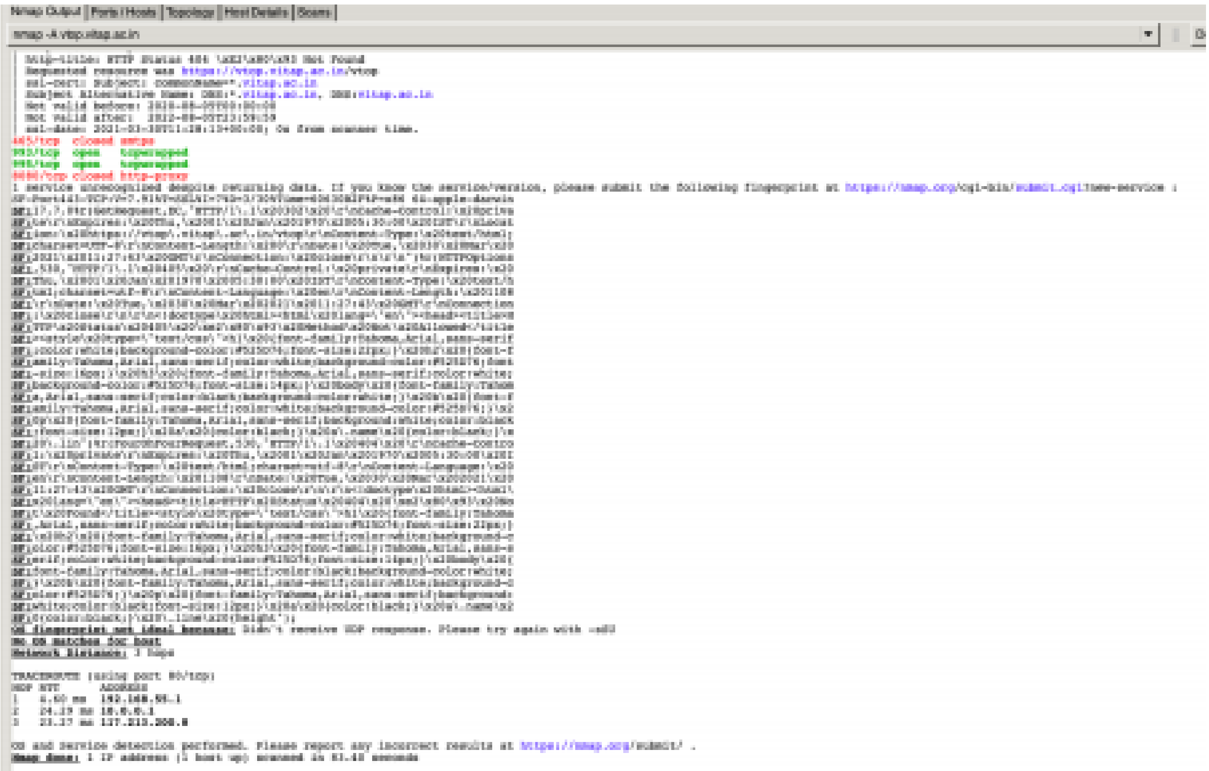


```
nmap --exclude 192.168.43.100 192.168.43.*
```

```
nmap --exclude 192.168.43.100 192.168.43.*
```

```
Nmap scan report for 192.168.43.241
Host is up (0.048s latency).
All 1000 scanned ports on 192.168.43.241 are filtered

Nmap scan report for 192.168.43.242
Host is up (0.051s latency).
All 1000 scanned ports on 192.168.43.242 are filtered

Nmap scan report for 192.168.43.243
Host is up (0.062s latency).
All 1000 scanned ports on 192.168.43.243 are filtered

Nmap scan report for 192.168.43.244
Host is up (0.063s latency).
All 1000 scanned ports on 192.168.43.244 are filtered

Nmap scan report for 192.168.43.245
Host is up (0.063s latency).
All 1000 scanned ports on 192.168.43.245 are filtered

Nmap scan report for 192.168.43.246
Host is up (0.040s latency).
All 1000 scanned ports on 192.168.43.246 are filtered

Nmap scan report for 192.168.43.247
Host is up (0.050s latency).
All 1000 scanned ports on 192.168.43.247 are filtered

Nmap scan report for 192.168.43.248
Host is up (0.062s latency).
All 1000 scanned ports on 192.168.43.248 are filtered

Nmap scan report for 192.168.43.249
Host is up (0.057s latency).
All 1000 scanned ports on 192.168.43.249 are filtered

Nmap scan report for 192.168.43.250
Host is up (0.050s latency).
All 1000 scanned ports on 192.168.43.250 are filtered

Nmap scan report for 192.168.43.251
Host is up (0.050s latency).
All 1000 scanned ports on 192.168.43.251 are filtered

Nmap scan report for 192.168.43.252
Host is up (0.047s latency).
All 1000 scanned ports on 192.168.43.252 are filtered

Nmap scan report for 192.168.43.253
Host is up (0.059s latency).
All 1000 scanned ports on 192.168.43.253 are filtered

Nmap scan report for 192.168.43.254
Host is up (0.039s latency).
All 1000 scanned ports on 192.168.43.254 are filtered

Nmap scan report for 192.168.43.255
Host is up (0.047s latency).
All 1000 scanned ports on 192.168.43.255 are filtered

Nmap done: 255 IP addresses (255 hosts up) scanned in 354.06 seconds
```

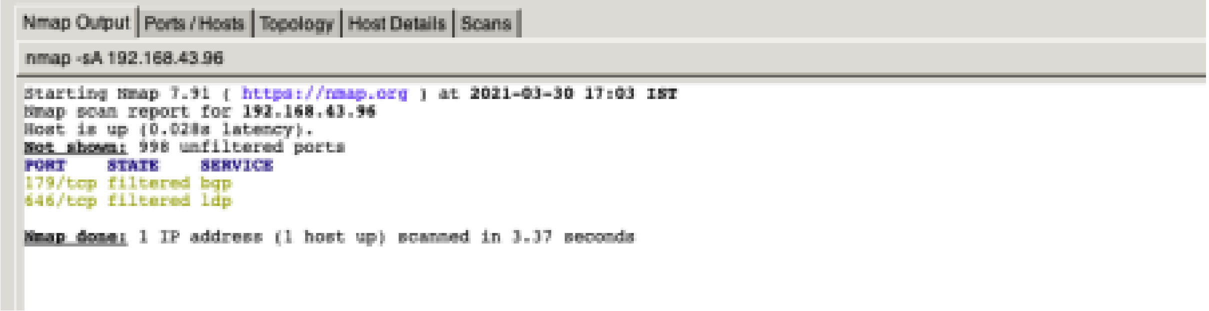
Scan OS information and Traceroute



```
nmap -A vtop.vitap.ac.in
```

```
|_http-title: HTTP Status 404 \xE2\x80\x93 Not Found
|_Requested resource was https://vtop.vitap.ac.in/vtop
| ssl-cert: Subject: commonName=*.vitap.ac.in
| Subject Alternative Name: DNS:*.vitap.ac.in, DNS:vitap.ac.in
| Not valid before: 2020-08-05T00:00:00
| Not valid after:  2022-08-05T23:59:59
|_ssl-date: 2021-03-30T11:28:13+00:00; 0s from scanner time.
465/tcp  closed smtps
993/tcp  open   tcpwrapped
995/tcp  open   tcpwrapped
8080/tcp closed http-proxy
1 service unrecognized despite returning data. If you know the service/version, please submit the following fingerprint at https://nmap.org/cgi-bin/submit.cgi?new-service :
SF-Port443-TCP:V=7.91%T=SSL%I=7%D=3/30%Time=[illegible]%P=x86_64-apple-darwin
[illegible]
SF:f;color:black;}\x20\.line\x20{height:");
OS fingerprint not ideal because: Didn't receive UDP response. Please try again with -sSU
No OS matches for host
Network Distance: 3 hops

TRACEROUTE (using port 80/tcp)
HOP RTT      ADDRESS
1   4.60 ms  192.168.55.1
2   24.19 ms 10.0.0.1
3   23.27 ms 137.213.208.8

OS and service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 81.48 seconds
```

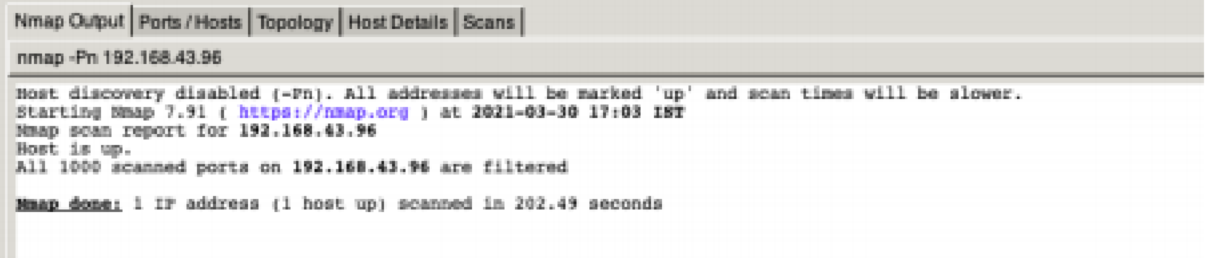
Scan a Hst to Detect Firewall



```
nmap -sA 192.168.43.96
```

```
Starting Nmap 7.91 ( https://nmap.org ) at 2021-03-30 17:03 IST
Nmap scan report for 192.168.43.96
Host is up (0.028s latency).
Not shown: 998 unfiltered ports
PORT     STATE    SERVICE
179/tcp filtered bgp
646/tcp filtered ldp

Nmap done: 1 IP address (1 host up) scanned in 3.37 seconds
```

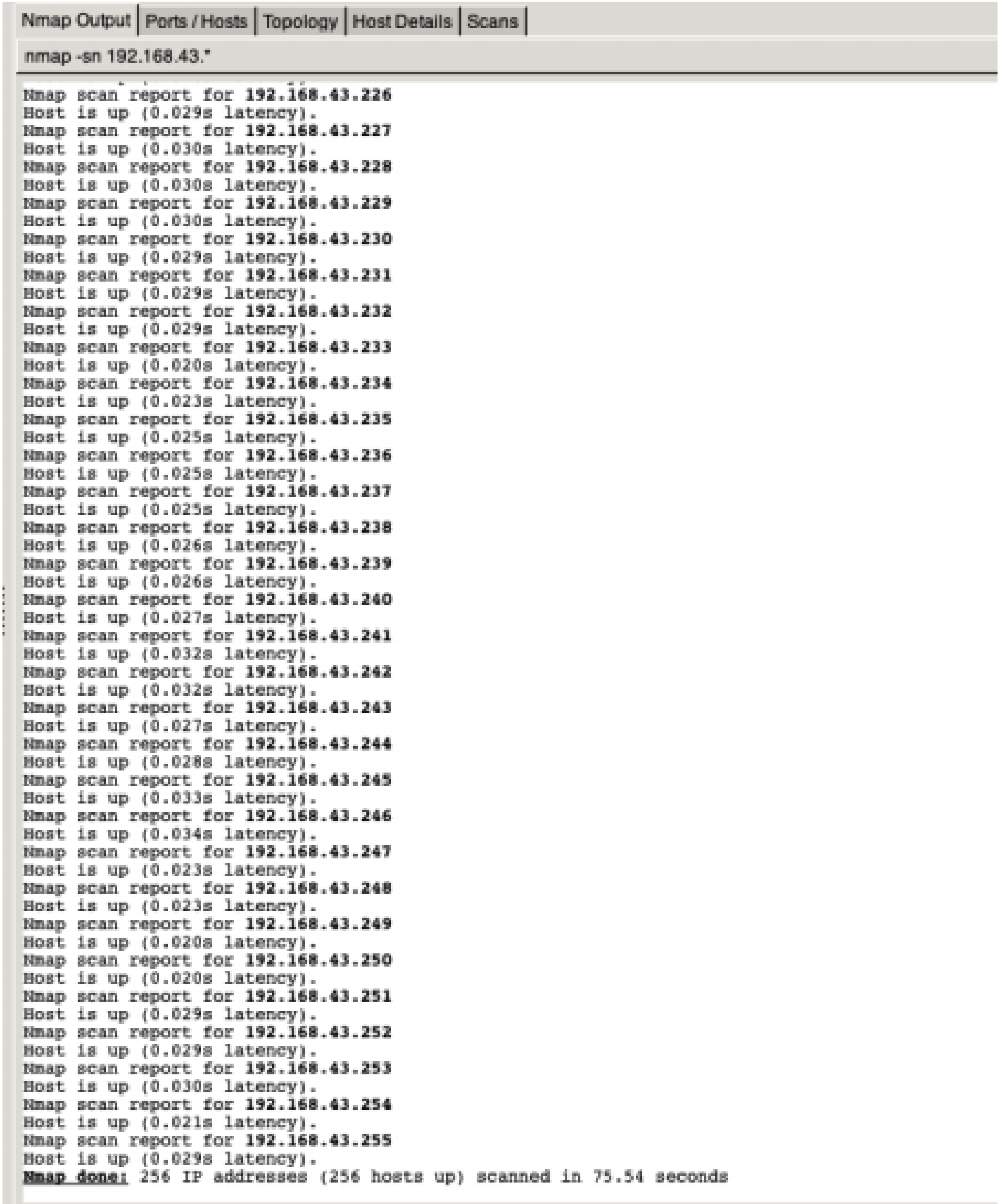
Scan a Host to check its protected by Firewall



```
nmap -Pn 192.168.43.96
```

```
Host discovery disabled (-Pn). All addresses will be marked 'up' and scan times will be slower.
Starting Nmap 7.91 ( https://nmap.org ) at 2021-03-30 17:03 IST
Nmap scan report for 192.168.43.96
Host is up.
All 1000 scanned ports on 192.168.43.96 are filtered

Nmap done: 1 IP address (1 host up) scanned in 202.49 seconds
```

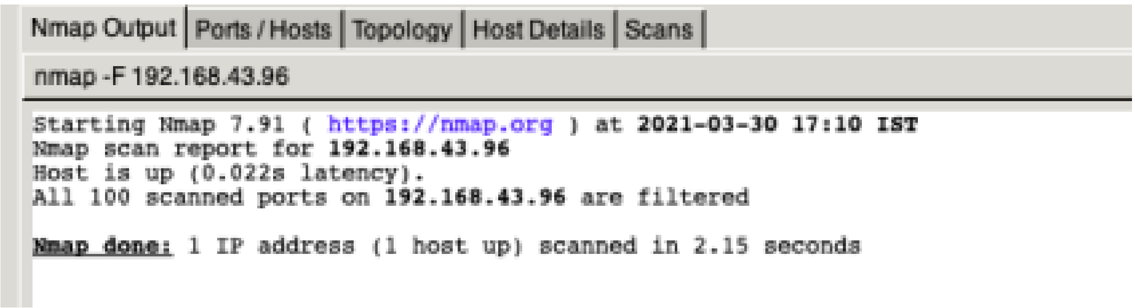
11. Find out Live hosts in a Network



```
nmap -sn 192.168.43.*
```

```
Nmap scan report for 192.168.43.226
Host is up (0.029s latency).
Nmap scan report for 192.168.43.227
Host is up (0.030s latency).
Nmap scan report for 192.168.43.228
Host is up (0.030s latency).
Nmap scan report for 192.168.43.229
Host is up (0.030s latency).
Nmap scan report for 192.168.43.230
Host is up (0.029s latency).
Nmap scan report for 192.168.43.231
Host is up (0.029s latency).
Nmap scan report for 192.168.43.232
Host is up (0.029s latency).
Nmap scan report for 192.168.43.233
Host is up (0.020s latency).
Nmap scan report for 192.168.43.234
Host is up (0.023s latency).
Nmap scan report for 192.168.43.235
Host is up (0.025s latency).
Nmap scan report for 192.168.43.236
Host is up (0.025s latency).
Nmap scan report for 192.168.43.237
Host is up (0.025s latency).
Nmap scan report for 192.168.43.238
Host is up (0.026s latency).
Nmap scan report for 192.168.43.239
Host is up (0.026s latency).
Nmap scan report for 192.168.43.240
Host is up (0.027s latency).
Nmap scan report for 192.168.43.241
Host is up (0.032s latency).
Nmap scan report for 192.168.43.242
Host is up (0.032s latency).
Nmap scan report for 192.168.43.243
Host is up (0.027s latency).
Nmap scan report for 192.168.43.244
Host is up (0.028s latency).
Nmap scan report for 192.168.43.245
Host is up (0.033s latency).
Nmap scan report for 192.168.43.246
Host is up (0.034s latency).
Nmap scan report for 192.168.43.247
Host is up (0.023s latency).
Nmap scan report for 192.168.43.248
Host is up (0.023s latency).
Nmap scan report for 192.168.43.249
Host is up (0.020s latency).
Nmap scan report for 192.168.43.250
Host is up (0.020s latency).
Nmap scan report for 192.168.43.251
Host is up (0.029s latency).
Nmap scan report for 192.168.43.252
Host is up (0.029s latency).
Nmap scan report for 192.168.43.253
Host is up (0.030s latency).
Nmap scan report for 192.168.43.254
Host is up (0.021s latency).
Nmap scan report for 192.168.43.255
Host is up (0.029s latency).
Nmap done: 256 IP addresses (256 hosts up) scanned in 75.54 seconds
```

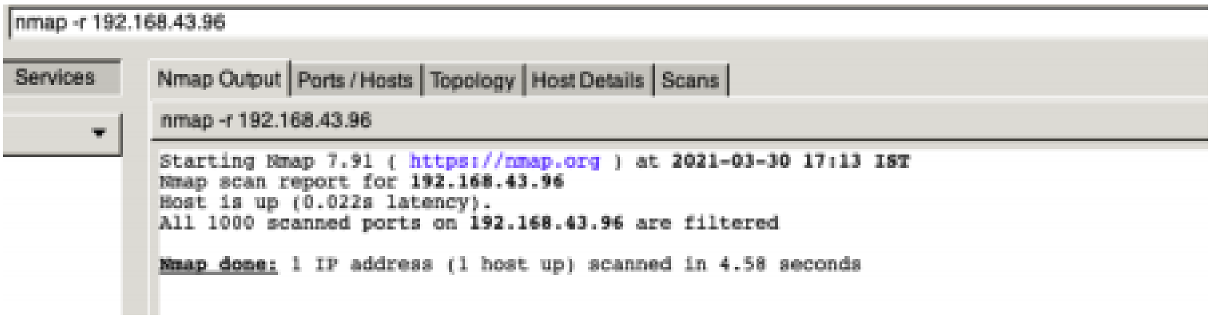
Perform a Fast Scan



```
nmap -F 192.168.43.96
```

```
Starting Nmap 7.91 ( https://nmap.org ) at 2021-03-30 17:10 IST
Nmap scan report for 192.168.43.96
Host is up (0.022s latency).
All 100 scanned ports on 192.168.43.96 are filtered

Nmap done: 1 IP address (1 host up) scanned in 2.15 seconds
```

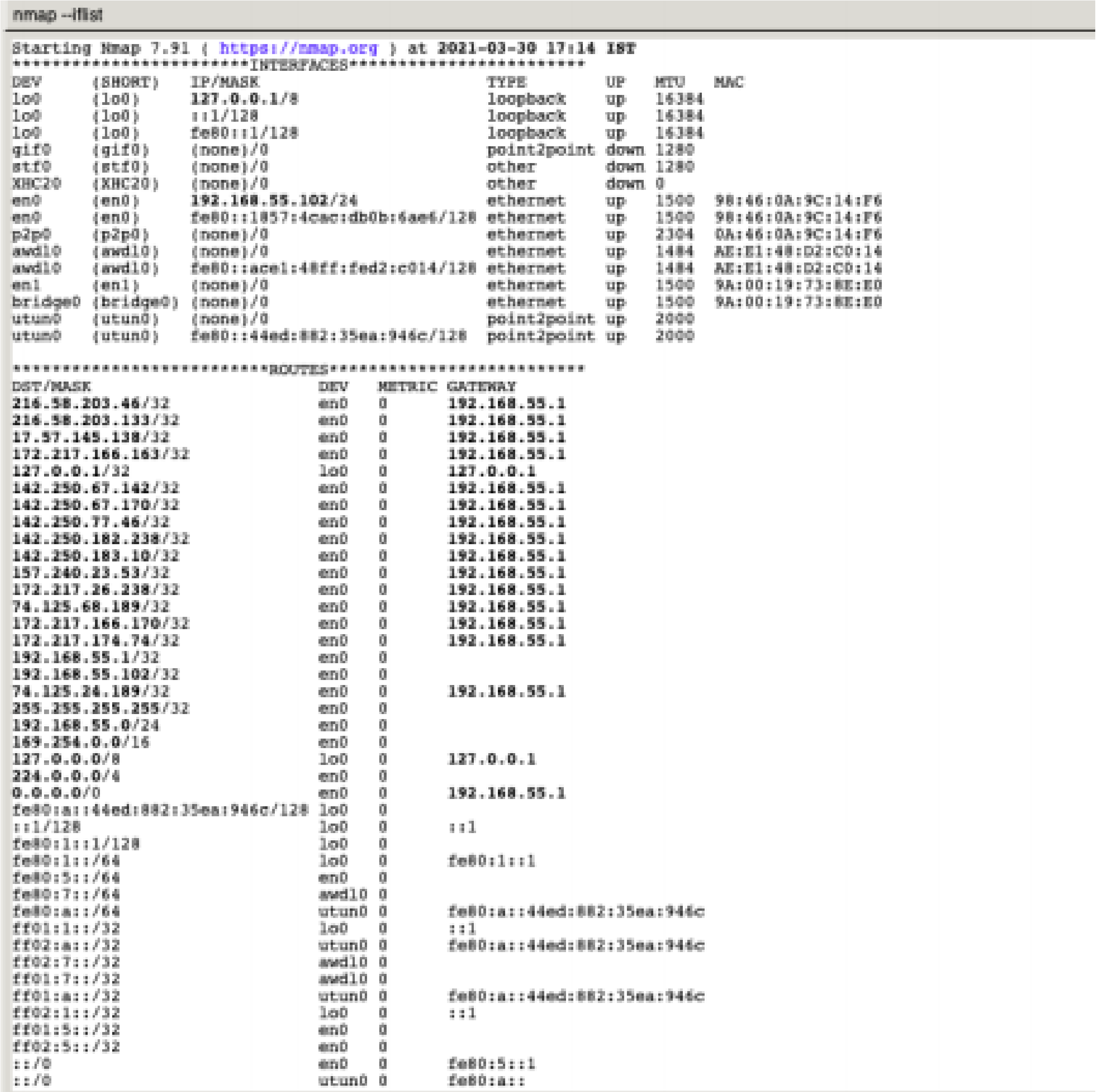
Scan Ports Consecutively



```
nmap -r 192.168.43.96
```

```
Starting Nmap 7.91 ( https://nmap.org ) at 2021-03-30 17:13 IST
Nmap scan report for 192.168.43.96
Host is up (0.022s latency).
All 1000 scanned ports on 192.168.43.96 are filtered

Nmap done: 1 IP address (1 host up) scanned in 4.58 seconds
```

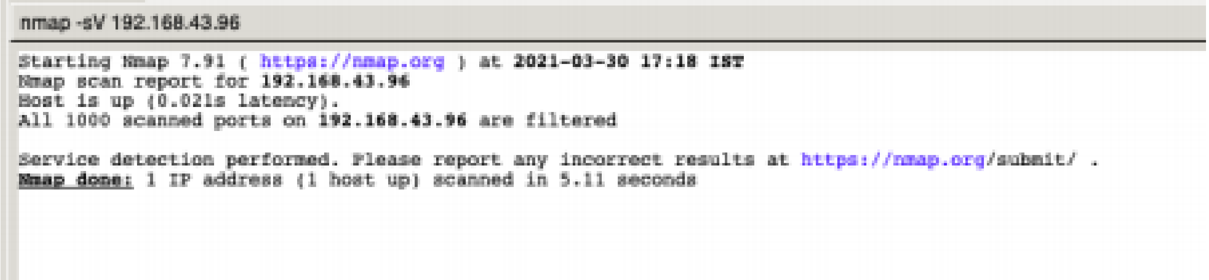
Print Host interfaces and Routes



```
nmap --iflist
```

```
Starting Nmap 7.91 ( https://nmap.org ) at 2021-03-30 17:14 IST
************************INTERFACES************************
DEV      (SHORT)   IP/MASK                           TYPE        UP   MTU   MAC
lo0      (lo0)     127.0.0.1/8                       loopback    up   16384
lo0      (lo0)     ::1/128                           loopback    up   16384
lo0      (lo0)     fe80::1/128                       loopback    up   16384
gif0     (gif0)    (none)/0                          point2point down 1280
stf0     (stf0)    (none)/0                          other       down 1280
XHC20    (XHC20)   (none)/0                          other       down 0
en0      (en0)     192.168.55.102/24                 ethernet    up   1500  98:46:0A:9C:14:F6
en0      (en0)     fe80::1857:4cac:db0b:6ae6/128 ethernet    up   1500  98:46:0A:9C:14:F6
p2p0     (p2p0)    (none)/0                          ethernet    up   2304  0A:46:0A:9C:14:F6
awdl0    (awdl0)   (none)/0                          ethernet    up   1484  AE:E1:48:D2:C0:14
awdl0    (awdl0)   fe80::ace1:48ff:fed2:c014/128 ethernet    up   1484  AE:E1:48:D2:C0:14
en1      (en1)     (none)/0                          ethernet    up   1500  9A:00:19:73:8E:E0
bridge0  (bridge0) (none)/0                          ethernet    up   1500  9A:00:19:73:8E:E0
utun0    (utun0)   (none)/0                          point2point up   2000
utun0    (utun0)   fe80::44ed:882:35ea:946c/128  point2point up   2000

**************************ROUTES**************************
DST/MASK                      DEV    METRIC GATEWAY
216.58.203.46/32              en0    0      192.168.55.1
216.58.203.133/32             en0    0      192.168.55.1
17.57.145.138/32              en0    0      192.168.55.1
172.217.166.163/32            en0    0      192.168.55.1
127.0.0.1/32                  lo0    0      127.0.0.1
142.250.67.142/32             en0    0      192.168.55.1
142.250.67.170/32             en0    0      192.168.55.1
142.250.77.46/32              en0    0      192.168.55.1
142.250.182.238/32            en0    0      192.168.55.1
142.250.183.10/32             en0    0      192.168.55.1
157.240.23.53/32              en0    0      192.168.55.1
172.217.26.238/32             en0    0      192.168.55.1
74.125.68.189/32              en0    0      192.168.55.1
172.217.166.170/32            en0    0      192.168.55.1
172.217.174.74/32             en0    0      192.168.55.1
192.168.55.1/32               en0    0
192.168.55.102/32             en0    0
74.125.24.189/32              en0    0      192.168.55.1
255.255.255.255/32            en0    0
192.168.55.0/24               en0    0
169.254.0.0/16                en0    0
127.0.0.0/8                   lo0    0      127.0.0.1
224.0.0.0/4                   en0    0
0.0.0.0/0                     en0    0      192.168.55.1
fe80:a::44ed:882:35ea:946c/128 lo0    0
::1/128                       lo0    0      ::1
fe80:1::1/128                 lo0    0
fe80:1::/64                   lo0    0      fe80:1::1
fe80:5::/64                   en0    0
fe80:7::/64                   awdl0  0
fe80:a::/64                   utun0  0      fe80:a::44ed:882:35ea:946c
ff01:1::/32                   lo0    0      ::1
ff02:a::/32                   utun0  0      fe80:a::44ed:882:35ea:946c
ff02:7::/32                   awdl0  0
ff01:7::/32                   awdl0  0
ff01:a::/32                   utun0  0      fe80:a::44ed:882:35ea:946c
ff02:1::/32                   lo0    0      ::1
ff01:5::/32                   en0    0
ff02:5::/32                   en0    0
::/0                          en0    0      fe80:5::1
::/0                          utun0  0      fe80:a::
```

Find Host Services version Numbers



```
nmap -sV 192.168.43.96
```

```
Starting Nmap 7.91 ( https://nmap.org ) at 2021-03-30 17:18 IST
Nmap scan report for 192.168.43.96
Host is up (0.021s latency).
All 1000 scanned ports on 192.168.43.96 are filtered

Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 5.11 seconds
```