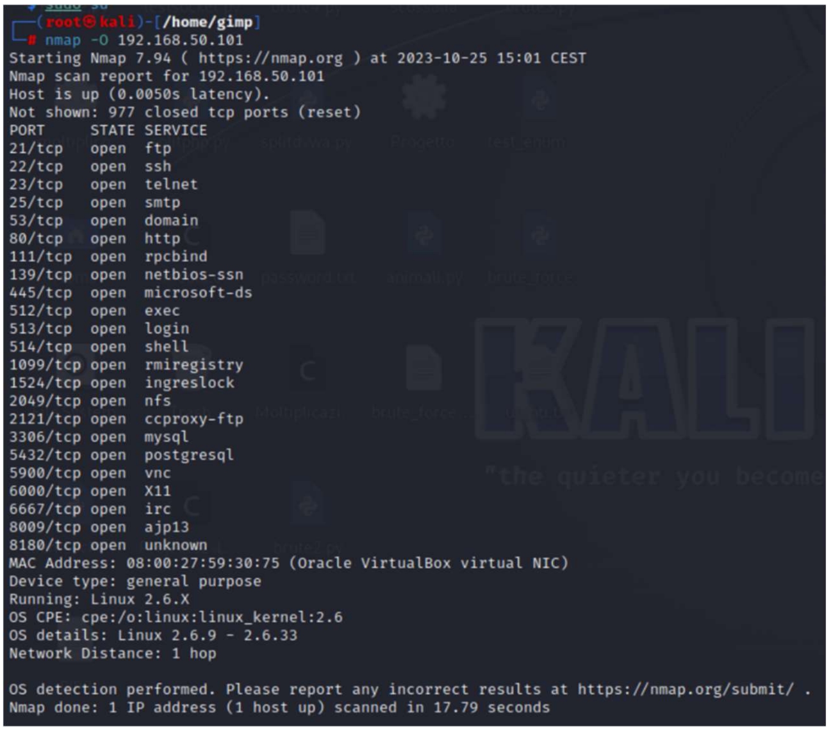
ESERCIZIO S5-L3

Nei seguenti screen è possibile osservare le diverse scannerizzazioni:

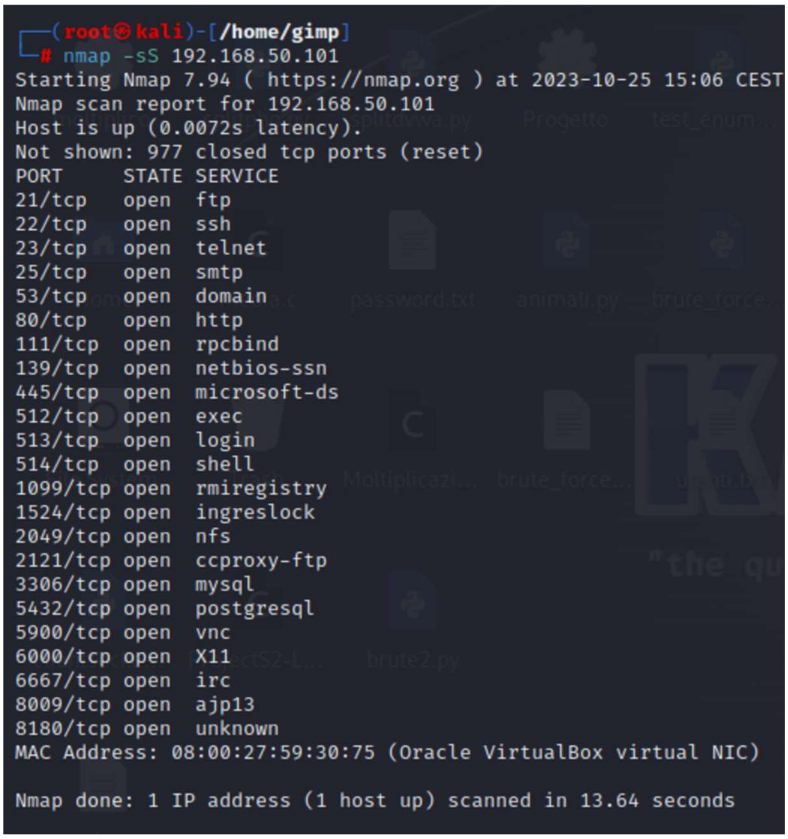
Scan OS FINGERPRINT



```
┌──(root㉿kali)-[/home/gimp]
└─# nmap -O 192.168.50.101
Starting Nmap 7.94 ( https://nmap.org ) at 2023-10-25 15:01 CEST
Nmap scan report for 192.168.50.101
Host is up (0.0050s latency).
Not shown: 977 closed tcp ports (reset)
PORT     STATE SERVICE
21/tcp   open  ftp
22/tcp   open  ssh
23/tcp   open  telnet
25/tcp   open  smtp
53/tcp   open  domain
80/tcp   open  http
111/tcp  open  rpcbind
139/tcp  open  netbios-ssn
445/tcp  open  microsoft-ds
512/tcp  open  exec
513/tcp  open  login
514/tcp  open  shell
1099/tcp open  rmiregistry
1524/tcp open  ingreslock
2049/tcp open  nfs
2121/tcp open  ccproxy-ftp
3306/tcp open  mysql
5432/tcp open  postgresql
5900/tcp open  vnc
6000/tcp open  X11
6667/tcp open  irc
8009/tcp open  ajp13
8180/tcp open  unknown
MAC Address: 08:00:27:59:30:75 (Oracle VirtualBox virtual NIC)
Device type: general purpose
Running: Linux 2.6.X
OS CPE: cpe:/o:linux:linux_kernel:2.6
OS details: Linux 2.6.9 - 2.6.33
Network Distance: 1 hop

OS detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 17.79 seconds
```

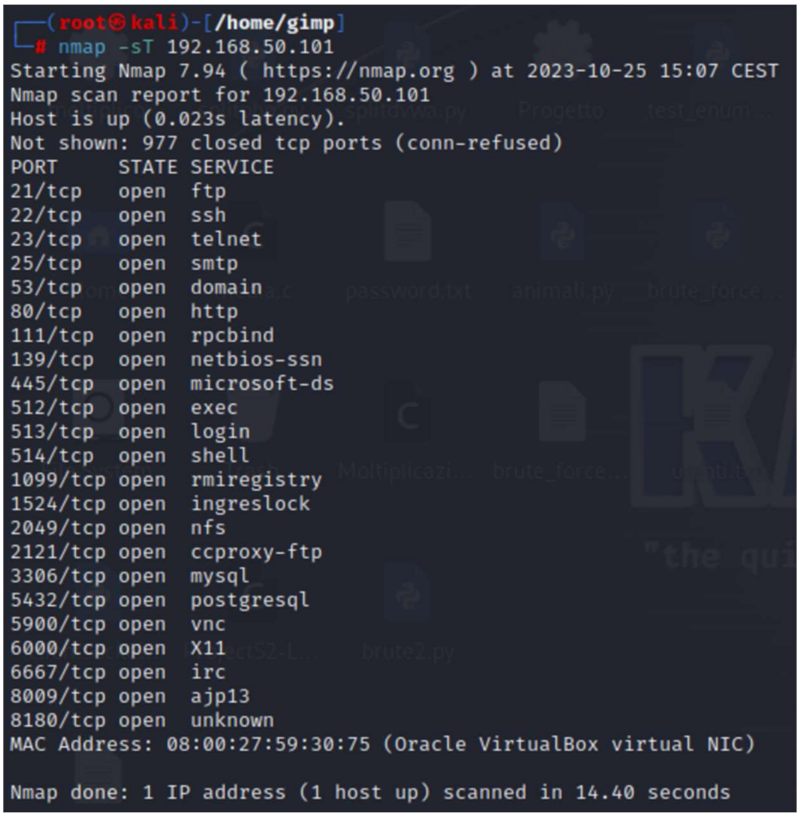
Scan SYN



```
┌──(root㉿kali)-[/home/gimp]
└─# nmap -sS 192.168.50.101
Starting Nmap 7.94 ( https://nmap.org ) at 2023-10-25 15:06 CEST
Nmap scan report for 192.168.50.101
Host is up (0.0072s latency).
Not shown: 977 closed tcp ports (reset)
PORT     STATE SERVICE
21/tcp   open  ftp
22/tcp   open  ssh
23/tcp   open  telnet
25/tcp   open  smtp
53/tcp   open  domain
80/tcp   open  http
111/tcp  open  rpcbind
139/tcp  open  netbios-ssn
445/tcp  open  microsoft-ds
512/tcp  open  exec
513/tcp  open  login
514/tcp  open  shell
1099/tcp open  rmiregistry
1524/tcp open  ingreslock
2049/tcp open  nfs
2121/tcp open  ccproxy-ftp
3306/tcp open  mysql
5432/tcp open  postgresql
5900/tcp open  vnc
6000/tcp open  X11
6667/tcp open  irc
8009/tcp open  ajp13
8180/tcp open  unknown
MAC Address: 08:00:27:59:30:75 (Oracle VirtualBox virtual NIC)

Nmap done: 1 IP address (1 host up) scanned in 13.64 seconds
```

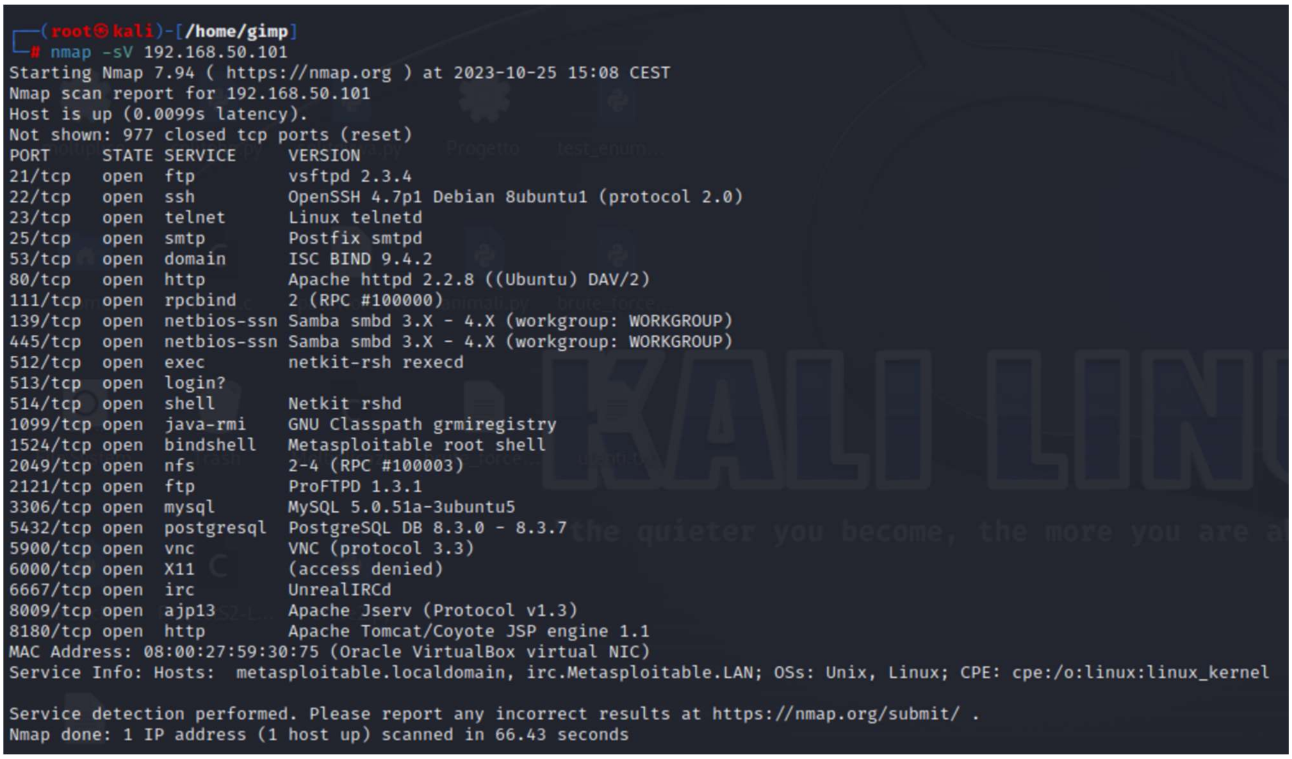
Scan TCP CONNECT



```
┌──(root㉿kali)-[/home/gimp]
└─# nmap -sT 192.168.50.101
Starting Nmap 7.94 ( https://nmap.org ) at 2023-10-25 15:07 CEST
Nmap scan report for 192.168.50.101
Host is up (0.023s latency).
Not shown: 977 closed tcp ports (conn-refused)
PORT     STATE SERVICE
21/tcp   open  ftp
22/tcp   open  ssh
23/tcp   open  telnet
25/tcp   open  smtp
53/tcp   open  domain
80/tcp   open  http
111/tcp  open  rpcbind
139/tcp  open  netbios-ssn
445/tcp  open  microsoft-ds
512/tcp  open  exec
513/tcp  open  login
514/tcp  open  shell
1099/tcp open  rmiregistry
1524/tcp open  ingreslock
2049/tcp open  nfs
2121/tcp open  ccproxy-ftp
3306/tcp open  mysql
5432/tcp open  postgresql
5900/tcp open  vnc
6000/tcp open  X11
6667/tcp open  irc
8009/tcp open  ajp13
8180/tcp open  unknown
MAC Address: 08:00:27:59:30:75 (Oracle VirtualBox virtual NIC)

Nmap done: 1 IP address (1 host up) scanned in 14.40 seconds
```

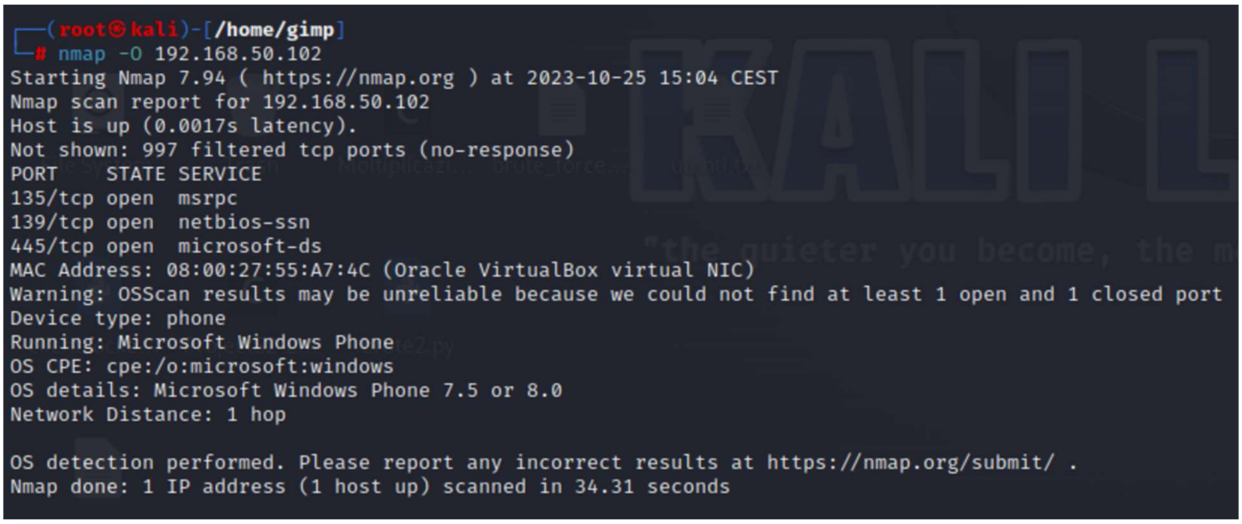
Scan VERSION



```
┌──(root㉿kali)-[/home/gimp]
└─# nmap -sV 192.168.50.101
Starting Nmap 7.94 ( https://nmap.org ) at 2023-10-25 15:08 CEST
Nmap scan report for 192.168.50.101
Host is up (0.0099s latency).
Not shown: 977 closed tcp ports (reset)
PORT     STATE SERVICE     VERSION
21/tcp   open  ftp         vsftpd 2.3.4
22/tcp   open  ssh         OpenSSH 4.7p1 Debian 8ubuntu1 (protocol 2.0)
23/tcp   open  telnet      Linux telnetd
25/tcp   open  smtp        Postfix smtpd
53/tcp   open  domain      ISC BIND 9.4.2
80/tcp   open  http        Apache httpd 2.2.8 ((Ubuntu) DAV/2)
111/tcp  open  rpcbind     2 (RPC #100000)
139/tcp  open  netbios-ssn Samba smbd 3.X - 4.X (workgroup: WORKGROUP)
445/tcp  open  netbios-ssn Samba smbd 3.X - 4.X (workgroup: WORKGROUP)
512/tcp  open  exec        netkit-rsh rexecd
513/tcp  open  login?
514/tcp  open  shell       Netkit rshd
1099/tcp open  java-rmi    GNU Classpath grmiregistry
1524/tcp open  bindshell   Metasploitable root shell
2049/tcp open  nfs         2-4 (RPC #100003)
2121/tcp open  ftp         ProFTPD 1.3.1
3306/tcp open  mysql       MySQL 5.0.51a-3ubuntu5
5432/tcp open  postgresql  PostgreSQL DB 8.3.0 - 8.3.7
5900/tcp open  vnc         VNC (protocol 3.3)
6000/tcp open  X11         (access denied)
6667/tcp open  irc         UnrealIRCd
8009/tcp open  ajp13       Apache Jserv (Protocol v1.3)
8180/tcp open  http        Apache Tomcat/Coyote JSP engine 1.1
MAC Address: 08:00:27:59:30:75 (Oracle VirtualBox virtual NIC)
Service Info: Hosts:  metasploitable.localdomain, irc.Metasploitable.LAN; OSs: Unix, Linux; CPE: cpe:/o:linux:linux_kernel

Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 66.43 seconds
```

Scan OS FINGERPTINT WINDOWS



```
┌──(root㉿kali)-[/home/gimp]
└─# nmap -O 192.168.50.102
Starting Nmap 7.94 ( https://nmap.org ) at 2023-10-25 15:04 CEST
Nmap scan report for 192.168.50.102
Host is up (0.0017s latency).
Not shown: 997 filtered tcp ports (no-response)
PORT    STATE SERVICE
135/tcp open  msrpc
139/tcp open  netbios-ssn
445/tcp open  microsoft-ds
MAC Address: 08:00:27:55:A7:4C (Oracle VirtualBox virtual NIC)
Warning: OSScan results may be unreliable because we could not find at least 1 open and 1 closed port
Device type: phone
Running: Microsoft Windows Phone
OS CPE: cpe:/o:microsoft:windows
OS details: Microsoft Windows Phone 7.5 or 8.0
Network Distance: 1 hop

OS detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 34.31 seconds
```

REPORT

IP:

192.168.50.101 meta

192.168.50.102 windows 7

OS:

Linux 2.6.9-2.6.33 meta

Microsoft windows Phone 7.5 o 8

PORTE APERTE:

21/tcp open ftp

22/tcp open ssh

23/tcp open telnet

25/tcp open smtp

53/tcp open domain

80/tcp open http

111/tcp open rpcbind

139/tcp open netbios-ssn

445/tcp open microsoft-ds

512/tcp open exec

513/tcp open login

```
514/tcp  open  shell
1099/tcp open  rmiregistry
1524/tcp open  ingreslock
2049/tcp open  nfs
2121/tcp open  ccproxy-ftp
3306/tcp open  mysql
5432/tcp open  postgresql
5900/tcp open  vnc
6000/tcp open  X11
6667/tcp open  irc
8009/tcp open  ajp13
8180/tcp open  unknown
```

Non sono rilevate molte differenze tra lo scan SYN e TCP, unica differenza rilevante è conn-refused vicino alle 977 porte chiuse non mostrate. In generale però, la scansione sS permette di causare meno rumore, non eseguendo una connessione completa, ma allo stesso tempo potrebbe essere meno affidabile della scansione -sT.

```
135/tcp open  msrpc
139/tcp open  netbios-ssn
445/tcp open  microsoft-ds
```

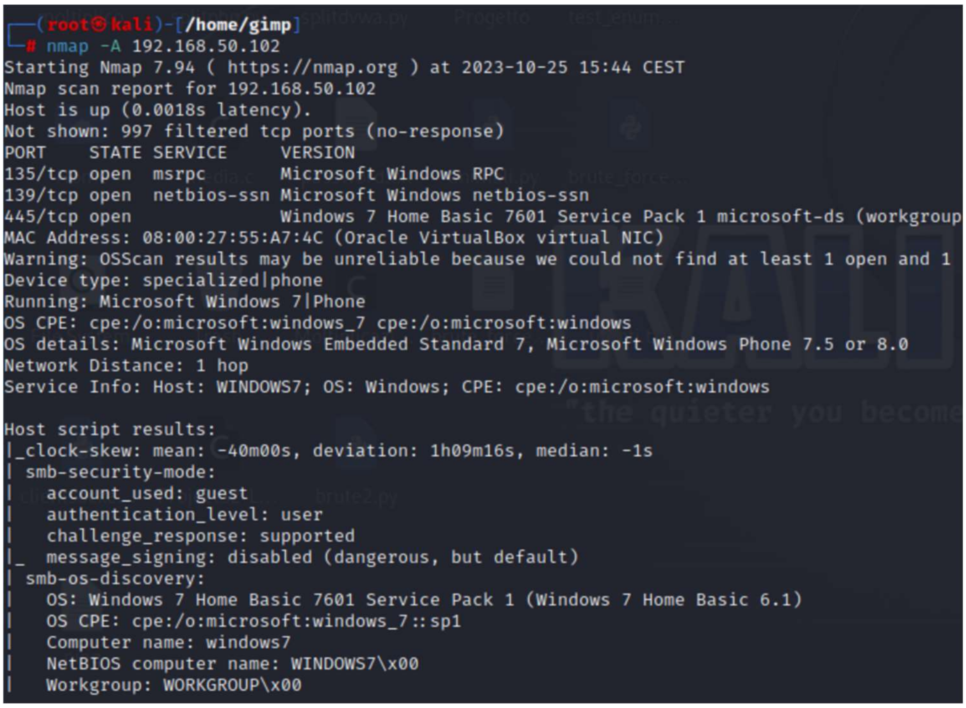
SERVIZI IN ASCOLTO CON VERSIONE:

```
21/tcp   open  ftp        vsftpd 2.3.4
22/tcp   open  ssh        OpenSSH 4.7p1 Debian 8ubuntu1 (protocol 2.0)
23/tcp   open  telnet     Linux telnetd
25/tcp   open  smtp       Postfix smtpd
53/tcp   open  domain     ISC BIND 9.4.2
80/tcp   open  http       Apache httpd 2.2.8 ((Ubuntu) DAV/2)
111/tcp  open  rpcbind    2 (RPC #100000)
139/tcp  open  netbios-ssn Samba smbd 3.X - 4.X (workgroup: WORKGROUP)
445/tcp  open  netbios-ssn Samba smbd 3.X - 4.X (workgroup: WORKGROUP)
```

```
512/tcp  open  exec       netkit-rsh rexecd
513/tcp  open  login?
514/tcp  open  shell      Netkit rshd
1099/tcp open  java-rmi    GNU Classpath grmiregistry
1524/tcp open  bindshell   Metasploitable root shell
2049/tcp open  nfs        2-4 (RPC #100003)
2121/tcp open  ftp        ProFTPD 1.3.1
3306/tcp open  mysql      MySQL 5.0.51a-3ubuntu5
5432/tcp open  postgresql  PostgreSQL DB 8.3.0 - 8.3.7
5900/tcp open  vnc        VNC (protocol 3.3)
6000/tcp open  X11        (access denied)
6667/tcp open  irc        UnrealIRCd
8009/tcp open  ajp13      Apache Jserv (Protocol v1.3)
8180/tcp open  http       Apache Tomcat/Coyote JSP engine 1.1
```

Ho usato diversi programmi per rilevare diversi risultati. -sS e -sT sono abbastanza discreti, ma se avessi voluto rilevare tutte le informazioni con un solo codice avrei potuto usare -A.

Ho usato il metodo più aggressivo -A proprio su windows per vedere se potevo ottenere più informazioni:

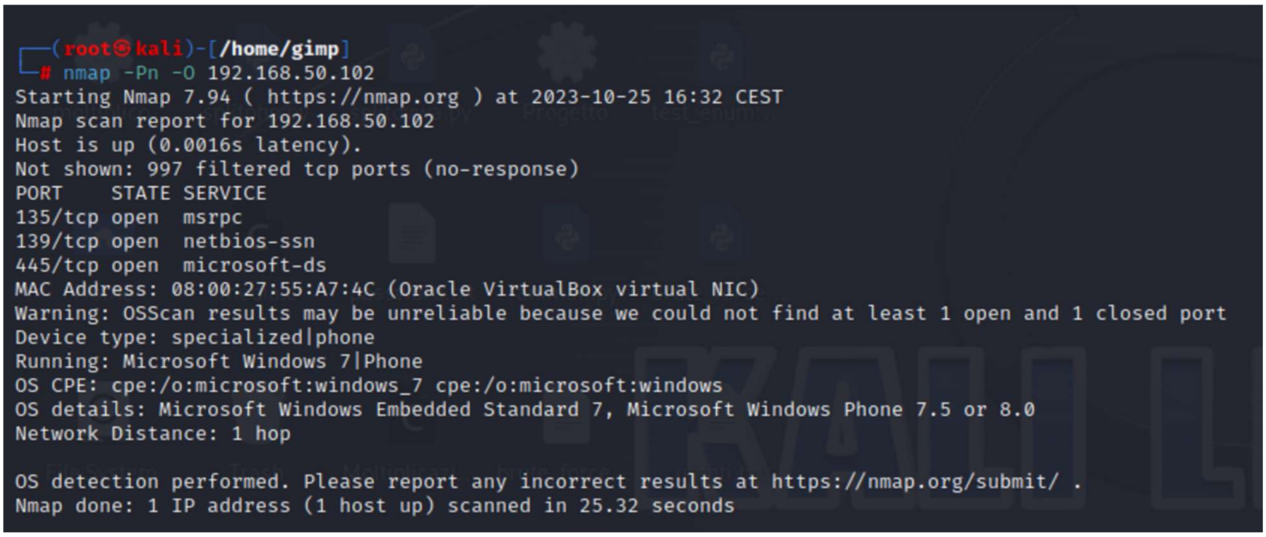


```
┌──(root㉿kali)-[/home/gimp]
└─# nmap -A 192.168.50.102
Starting Nmap 7.94 ( https://nmap.org ) at 2023-10-25 15:44 CEST
Nmap scan report for 192.168.50.102
Host is up (0.0018s latency).
Not shown: 997 filtered tcp ports (no-response)
PORT    STATE SERVICE     VERSION
135/tcp open  msrpc       Microsoft Windows RPC
139/tcp open  netbios-ssn Microsoft Windows netbios-ssn
445/tcp open              Windows 7 Home Basic 7601 Service Pack 1 microsoft-ds (workgroup
MAC Address: 08:00:27:55:A7:4C (Oracle VirtualBox virtual NIC)
Warning: OSScan results may be unreliable because we could not find at least 1 open and 1
Device type: specialized|phone
Running: Microsoft Windows 7|Phone
OS CPE: cpe:/o:microsoft:windows_7 cpe:/o:microsoft:windows
OS details: Microsoft Windows Embedded Standard 7, Microsoft Windows Phone 7.5 or 8.0
Network Distance: 1 hop
Service Info: Host: WINDOWS7; OS: Windows; CPE: cpe:/o:microsoft:windows

Host script results:
|_clock-skew: mean: -40m00s, deviation: 1h09m16s, median: -1s
| smb-security-mode:
|   account_used: guest
|   authentication_level: user
|   challenge_response: supported
|_  message_signing: disabled (dangerous, but default)
| smb-os-discovery:
|   OS: Windows 7 Home Basic 7601 Service Pack 1 (Windows 7 Home Basic 6.1)
|   OS CPE: cpe:/o:microsoft:windows_7::sp1
|   Computer name: windows7
|   NetBIOS computer name: WINDOWS7\x00
|   Workgroup: WORKGROUP\x00
```

E cosi è stato, nmap in questo caso rileva una probabilità più alta che sia Windows 7 standard, piuttosto che windows phone, allo stesso tempo che il tipo di dispositivo non sia al 100% un telefono ma uno strumento "specialized".

Comunque, se si volesse usare un metodo meno invasivo si potrebbe usare il codice:



```
┌──(root㉿kali)-[/home/gimp]
└─# nmap -Pn -O 192.168.50.102
Starting Nmap 7.94 ( https://nmap.org ) at 2023-10-25 16:32 CEST
Nmap scan report for 192.168.50.102
Host is up (0.0016s latency).
Not shown: 997 filtered tcp ports (no-response)
PORT    STATE SERVICE
135/tcp open  msrpc
139/tcp open  netbios-ssn
445/tcp open  microsoft-ds
MAC Address: 08:00:27:55:A7:4C (Oracle VirtualBox virtual NIC)
Warning: OSScan results may be unreliable because we could not find at least 1 open and 1 closed port
Device type: specialized|phone
Running: Microsoft Windows 7|Phone
OS CPE: cpe:/o:microsoft:windows_7 cpe:/o:microsoft:windows
OS details: Microsoft Windows Embedded Standard 7, Microsoft Windows Phone 7.5 or 8.0
Network Distance: 1 hop

OS detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 25.32 seconds
```

Cosi da togliere il ping dal codice, il quale viene bloccato dal firewall di windows, e permettere lo scan OS tramite la 3way handshake.