Attraverso l'utilizzo di Nmap, ho condotto una serie di scansioni sul sistema Metasploitable. Inizialmente, ho identificato l'OS Fingerprint, cioè ho individuato il sistema operativo, che nel caso specifico è Linux con il kernel versione 2.6.X, comunemente noto come Linux 2.6.9 - 2.6.33.

Successivamente, ho eseguito una scansione Syn dalla quale ho estratto informazioni significative come il MAC address, i servizi in esecuzione e le porte aperte. Inoltre, tramite una rilevazione delle versioni, ho ottenuto le seguenti informazioni sui servizi attivi:

- FTP (vsftpd): Versione 2.3.4
- SSH (OpenSSH): Versione 4.7p1 Debian 8ubuntu1
- Telnet (Linux telnetd)
- SMTP (Postfix smtpd)
- DNS (ISC BIND): Versione 9.4.2
- HTTP (Apache httpd): Versione 2.2.8
- RPCBIND: Versione 2
- NetBIOS-SSN (Samba smbd): Versioni 3.X - 4.X (workgroup: WORKGROUP)
- Exec (netkit-rsh rexecd)
- Shell (Netkit rshd)
- Java RMI (GNU Classpath grmiregistry)
- Bindshell (Metasploitable root shell)
- NFS: Versione 2-4 (RPC #100003)
- FTP (ProFTPD): Versione 1.3.1
- MySQL: Versione 5.0.51a-3ubuntu5
- PostgreSQL: Versioni DB 8.3.0 - 8.3.7
- VNC: Protocollo 3.3
- IRC (UnrealIRCd)
- AJP13 (Apache Jserv): Protocollo v1.3
- HTTP (Apache Tomcat/Coyote JSP engine): Versione 1.1

Ho anche condotto una scansione tcp connect, notando che rispetto all'analisi Syn scan è più veloce, ma fornisce meno dettagliate informazioni.

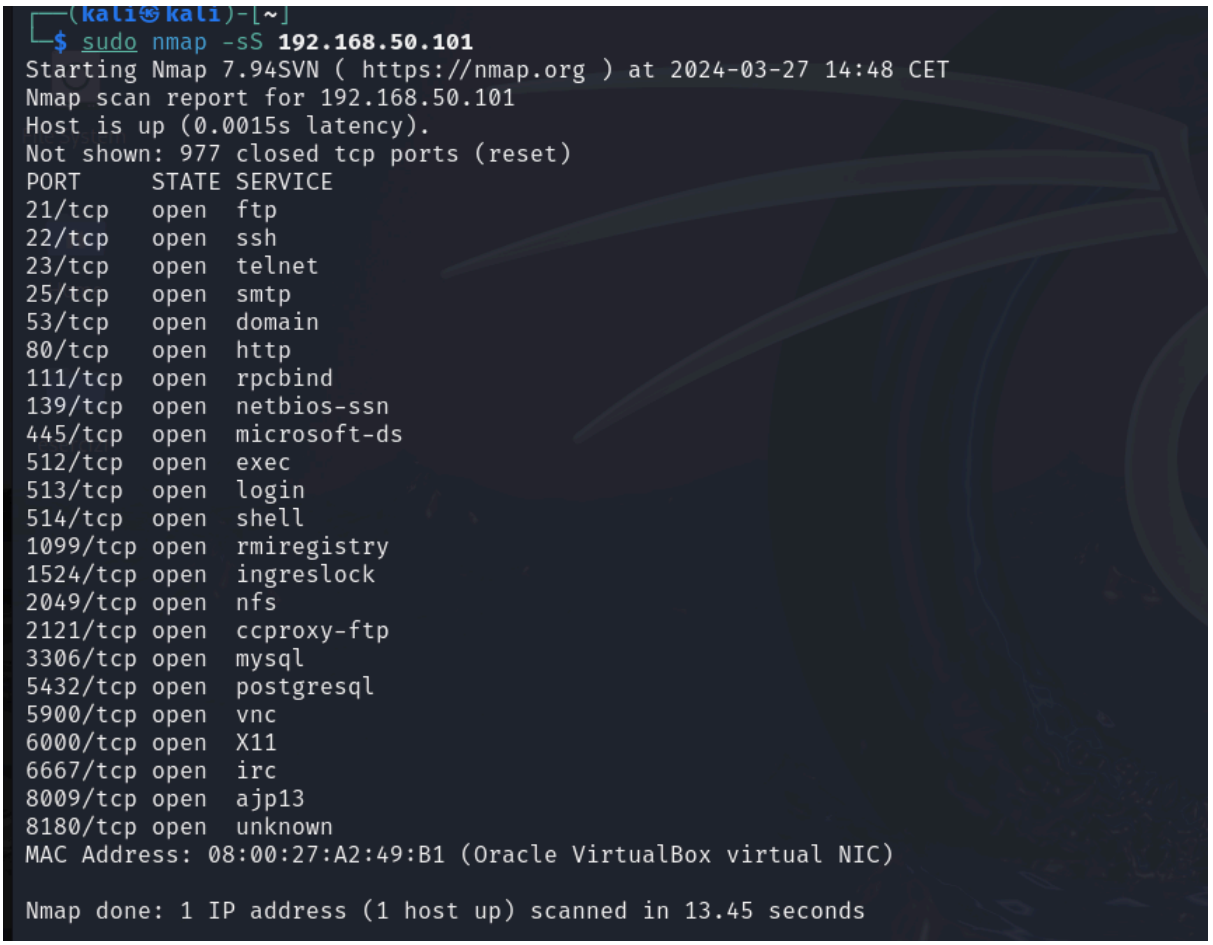
*WINDOWS ALL’ULTIMA PAGINA

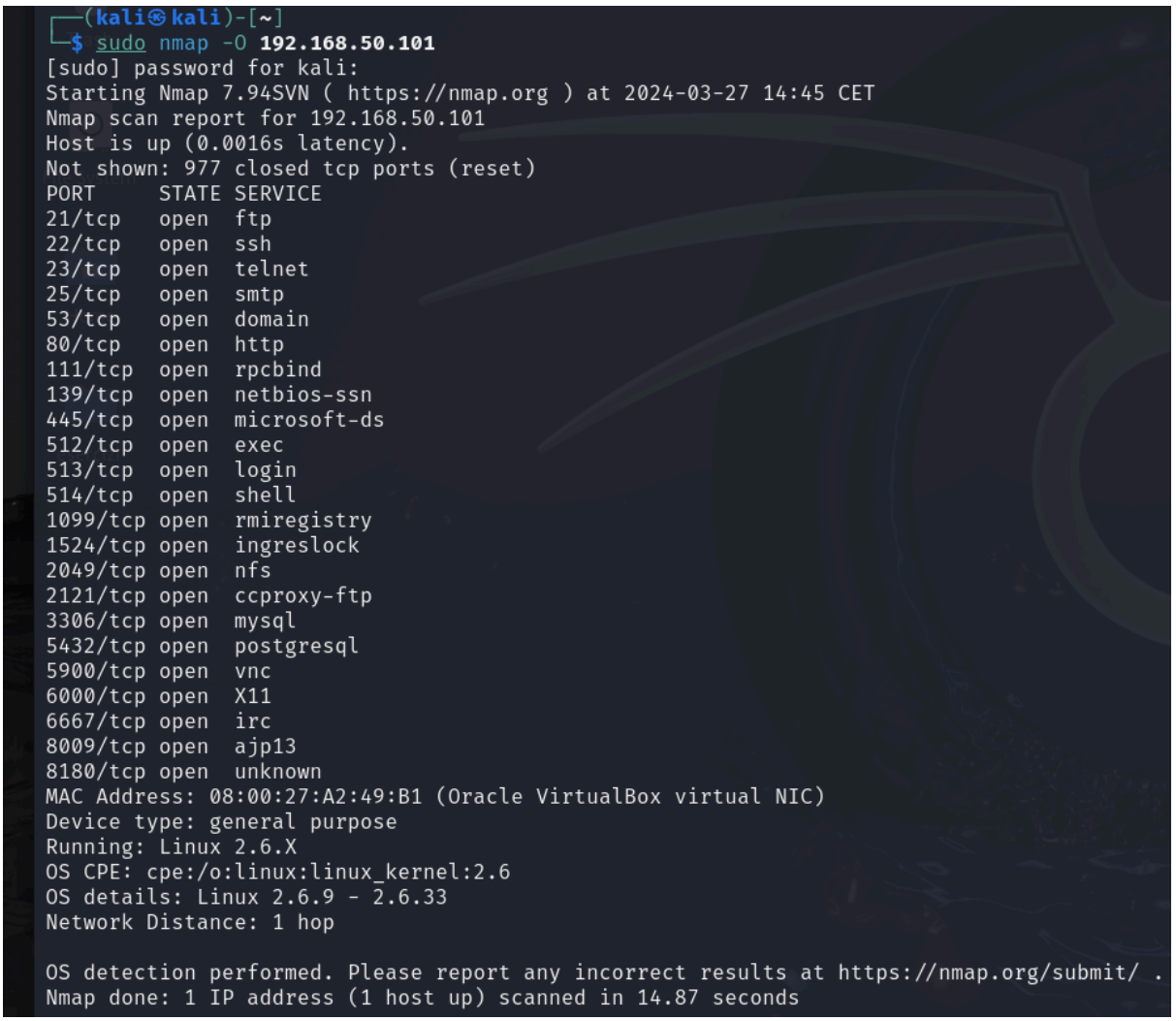
```
┌──(kali㉿kali)-[~]
└─$ sudo nmap -sT 192.168.50.101
[sudo] password for kali:
Starting Nmap 7.94SVN ( https://nmap.org ) at 2024-03-27 15:17 CET
Nmap scan report for 192.168.50.101
Host is up (0.0038s latency).
Not shown: 977 closed tcp ports (conn-refused)
PORT     STATE SERVICE
21/tcp   open  ftp
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:A2:49:B1 (Oracle VirtualBox virtual NIC)

Nmap done: 1 IP address (1 host up) scanned in 13.48 seconds
```

```
┌──(kali㉿kali)-[~]
└─$ sudo nmap -sV 192.168.50.101
Starting Nmap 7.94SVN ( https://nmap.org ) at 2024-03-27 14:54 CET
Nmap scan report for 192.168.50.101
Host is up (0.00047s 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:A2:49:B1 (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 65.80 seconds
```


┌──(kali㉿kali)-[~]
└─$ sudo nmap -sS 192.168.50.101
Starting Nmap 7.94SVN (https://nmap.org) at 2024-03-27 14:48 CET
Nmap scan report for 192.168.50.101
Host is up (0.0015s 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:A2:49:B1 (Oracle VirtualBox virtual NIC)
Nmap done: 1 IP address (1 host up) scanned in 13.45 seconds


┌──(kali㉿kali)-[~]
└─$ sudo nmap -O 192.168.50.101
[sudo] password for kali:
Starting Nmap 7.94SVN (https://nmap.org) at 2024-03-27 14:45 CET
Nmap scan report for 192.168.50.101
Host is up (0.0016s 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:A2:49:B1 (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 14.87 seconds

```
┌──(kali㉿kali)-[~]
└─$ sudo nmap -sT 192.168.50.101
[sudo] password for kali:
Starting Nmap 7.94SVN ( https://nmap.org ) at 2024-03-27 15:17 CET
Nmap scan report for 192.168.50.101
Host is up (0.0038s latency).
Not shown: 977 closed tcp ports (conn-refused)
PORT     STATE SERVICE
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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:A2:49:B1 (Oracle VirtualBox virtual NIC)

Nmap done: 1 IP address (1 host up) scanned in 13.48 seconds
```

WINDOWS

```
┌──(kali㉿kali)-[~]
└─$ sudo nmap -O 192.168.50.102
Starting Nmap 7.94SVN ( https://nmap.org ) at 2024-03-27 15:28 CET
Nmap scan report for 192.168.50.102
Host is up (0.0016s latency).
Not shown: 991 closed tcp ports (reset)
PORT      STATE SERVICE
135/tcp   open  msrpc
139/tcp   open  netbios-ssn
445/tcp   open  microsoft-ds
49152/tcp open  unknown
49153/tcp open  unknown
49154/tcp open  unknown
49155/tcp open  unknown
49156/tcp open  unknown
49157/tcp open  unknown
MAC Address: 08:00:27:D7:BB:A2 (Oracle VirtualBox virtual NIC)
Device type: general purpose
Running: Microsoft Windows 7|2008|8.1
OS CPE: cpe:/o:microsoft:windows_7::- cpe:/o:microsoft:windows_7::sp1 cpe:/o:microsoft:windows_server_2008::sp1 cpe:/o:microsoft:windows_server_2008:r2 cpe:/o:microsoft:windows_8 cpe:/o:microsoft:windows_8.1
OS details: Microsoft Windows 7 SP0 - SP1, Windows Server 2008 SP1, Windows Server 2008 R2, Windows 8, or Windows 8.1 Update 1
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 15.82 seconds

┌──(kali㉿kali)-[~]
```